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Operationalization of Social Sustainability in the Construction Industry from a Client Perspective

How the concept of social sustainability in the construction industry is defined and communicated by Skanska's proposed clients?

Master's thesis in the Master's Programme Design and Construction Project Management

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ABDURRAHMAN TORYALAY

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ABSTRACT

Today's construction industry is one of the highly impacting industries on the society in all three dimensions of sustainability; environmental, economic and social. Since a few years ago, sustainability within the construction industry has been a significant issue recognised by both industries professional and academicians. However, most of existing sustainability studies in construction as well as efforts of achieving sustainable built environments have extensively been focused on environmental and economic aspects, hence little achievements have been done in social terms. This thesis aims to investigate how different clients within the construction industry operationalise the concept by exploring their definitions of social sustainability and their input and actions in the context of social sustainability. A qualitative approach was adopted in order to collect empirical data, where interviews with three different actors; politicians, public clients and private clients formed the basis for data collection. The result clearly shows that the majority of all interviewed organisations are not able to give one common or universal definition of the concept, rather each organisation define the concept based on their own contribution towards achieving social sustainability. The fact that social sustainability is a multifaceted concept and can be defined context dependent, was reflected during the acquired interviews.

Based on the existing literature, the authors compiled various social sustainability criteria that are taken into account at various stages of the project life cycle. The data acquired from the interviews was analysed based on the compiled social sustainability criteria model. The results and the analysis of the data showed that most of the identified social sustainability criteria are considered by the interviewed clients, regardless of expressing them as social sustainability criteria.

The maturity of the interviewed organisations indicates their current status in operationalizing the concept. Assessing the maturity was based on two main factors, the frequency of criteria taken into account and the experience in communicating social sustainability requirements in procurement. The maturity of the interviewed organisations appeared to be relatively medium. However, the organisations who communicated social sustainability with other stakeholders by setting social sustainability requirements in procurement appeared to be more mature. Although some of the interviewed clients turned out to be mature on individual level in terms of having internal policies and well understanding of the concept, we still observed that communicating social sustainability on inter-organisational level is as important as on intra-organisational level.

Key words: Social sustainability criteria, Construction, Clients, Maturity assessment, Social responsible procurement

Operationalisering av Social Hållbarhet inom Byggbranschen utifrån Kundens Perspektiv
Hur begreppet social hållbarhet i byggbranschen är definierad och kommunicerad av
Skanskas förslagna kunder?

Examensarbete inom mastersprogrammet Design and Construction Project Management

ISLAM MIREÉ

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Institutionen för bygg- och miljöteknik

Avdelning för Construction Management

Chalmers Tekniska Högskola

SAMMANFATTNING

Dagens byggindustri är en av de industrier som i högsta grad påverkar samhället i alla tre dimensioner av hållbarhet; miljömässiga, ekonomiska och sociala. Sedan några år tillbaka har hållbarhet inom byggbranschen varit en viktig fråga som erkänts av både yrkesverksamma och akademiker. Men de flesta av de befintliga hållbarhetsstudier inom byggsektorn samt de insatser som gjorts för att uppnå en hållbar byggindustri har i stor sträckning fokuserat på miljömässiga och ekonomiska aspekter, därav har lite framsteg gjorts inom sociala termer. Detta examensarbete syftar till att undersöka hur olika aktörer operationaliserar konceptet genom att ta reda på deras definitioner av social hållbarhet och deras insatser och åtgärder inom ramen för social hållbarhet. Ett kvalitativt tillvägagångssätt antogs för att samla in empiriskt data, där intervjuer med tre olika aktörer; politiker, offentliga kunder och privata kunder låg till grund för datainsamlingen. Resultatet visar tydligt att majoriteten av alla de intervjuade organisationer inte är kapabla i att ge en gemensam eller allmän definition av konceptet, snarare definierar varje organisation konceptet utifrån sina egna insatser i att uppnå social hållbarhet. De faktum att social hållbarhet är ett mångfacetterat begrepp som kan definieras kontextberoende, var ett tydligt budskap som avspeglades under intervjuerna.

Baserat på befintlig litteratur, sammanställde författarna olika sociala hållbarhetskriterier som generellt beaktas i olika skeden av projektets livscykel. De data som erhöles från intervjuerna analyserades i efterhand baserat på den modell för de sammanställda sociala hållbarhetskriterier. Resultatet och analysen visade att de flesta av de identifierade sociala hållbarhetskriterier tas i hänsyn av de intervjuade kunderna, och oftast utan att bokstavligen uttrycka dessa kriterier eller insatser som sociala hållbarhetskriterier.

Mognadsgraden av de intervjuade organisationerna indikerar deras nuvarande situation i att operationalisera konceptet. Bedömningen av mognadsgraden baserades på två huvudfaktorer, frekvensen av kriterier som beaktas och erfarenhet i att kommunicera sociala hållbarhetskrav i upphandlingar. Mognadsgraden av de intervjuade organisationerna visade sig vara relativt medium. Dock visade det sig att de organisationer som kommunicerade social hållbarhet med andra intressenter genom att ställa sociala hållbarhetskrav, vara mer mogna. Även om vissa av de intervjuade organisationerna visade sig vara mogna på individnivå när det gäller att ha intern policy och en väl förståelse för begreppet, så observerade vi fortfarande att kommunikation av social hållbarhet inom organisationen är lika viktig som mellan organisationer för att eventuellt kunna beaktas som mogna.

Nyckelord: Sociala hållbarhetskriterier, Bygg, Kunder, Mognadsgrads bedömning, Socialt ansvarsfull upphandling

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PREFACE

This master thesis of 30 ECTS has been performed during the spring of 2016 at the Department of Civil and Environmental Engineering at Chalmers University of Technology. The thesis was conducted in collaboration with Skanska Sweden AB at the department of buildings in the Gothenburg's region.

We would like to initially thank our two supervisors at the university, both Göran Lindahl and Sjouke Beemsterboer in specific for academic guidance and support. Additionally, the contact we had with Skanska has brought us substantial knowledge and experience to undertake this thesis in the best possible way. Mainly within Skanska we would like to first thank Olof Peterson, District Manager at Skanska building Gothenburg for his regular coordination and guidance throughout the thesis work. Further we would also like to send our gratitude's to Jonas Naddebo, development Manager – Social sustainability, Anna Lind, HR-Manager and Andrea Pap de Pestény, Group Manager Environmental Certification & Environmental Coordination all at Skanska.

We would like to send a final thank to all the participated interviewees during this thesis for their time and willingness to shear knowledge and experience for the purpose of building socially sustainable built environment, despite the difficult nature of the topic.

Gothenburg June 2016

Islam Mireé and Abdurrahman Toryalay

1 INTRODUCTION

This introducing chapter aims to outline the preconditions of this thesis. Initially, the background of the thesis is presented which describes the foundation of the problem. Thereafter in the purpose and research question section, the aim of why this research is performed is determined and the purpose behind it, further the resulted research questions are presented. Finally, in this section the limitations the study has taken into consideration are outlined.

1.1 Background

Although the concept of sustainability might have emerged in the 1960s in response to environmental degradation caused by poor resource management (McKenzie, 2004), it was the Brundtland report also known as *Our common future* which gave a definition to the term sustainability or sustainable development and is considered as a base for our attempts to formulate bio-physical, environmental, social and economic policy goals (Vallance, et al., 2011). The “overlapping circles” model is a relatively recent and frankly dominant model of sustainability in today's world which emphasizes on considering all three spheres environment, society and economy as interrelated for achieving sustainable development. Despite the efforts of John Elkington 1997 for developing the expression “triple bottom line” and including all three dimensions of sustainability, the role played by the social element is rarely equal to that of environmental and economic elements (McKenzie, 2004).

According to Almahmoud & Doloi (2015) sustainable development is premised on system theory emphasizing on all three dimension to be functioning properly to ensure the maintenance of the large system as a whole. McKenzie (2004) asserts that pursuing social sustainability requires defining and scrutinizing the concept of social sustainability distinctly from environmental and economic sustainability, in order to develop its own models and achieve best and optimum pragmatism. Despite many efforts for defining and scrutinizing the concept of social sustainability, no consensus has been accomplished on providing a universal definition. Almahmoud & Doloi (2015) further elaborate the issue by stating that; social sustainability includes subjective attributes, affected by multifaceted social values and various stakeholders.

The construction industry is one of the hugely impacting industries on the society in all environmental, economic and social aspects. The efforts of achieving sustainable built environments have extensively been focused on environmental and economic aspects, little achievements have been done in social terms. In addition, the existence of a relatively recent trend towards achieving social sustainability in the construction sector and integrating social sustainability to the built environment has pushed the academia and professionals in the industry to excel in building thoroughly sustainable built environments. Moreover, the construction industry is comprised of various stakeholders i.e. client, consultants, contractor, subcontractors, end users, etc., who carry diverse interests. As a result, the operationalization of the concept “social sustainability” in the construction sector is based on subjective presumptions of these stakeholders which has resulted into diversified approaches taken by various stakeholders.

Skanska building department in Gothenburg is one of the prominent contractors in the region executing several types of projects on various scales for both public and private clients. In addition, Skanska have their own internal sustainability agenda comprising all three pillars of sustainability. Achieving social sustainability and excelling in delivering socially sustainable

projects is a significant concern for Skanska Building department in Gothenburg. Thus, a mutual understanding for operationalization of the concept “social sustainability” and aligning the client and contractor efforts for delivering socially sustainable projects are the main inspirations for carrying out this study.

The role of a client as one of the key stakeholders, having direct interests in a construction project is indicated by Newcombe (1999). Moreover, Strand, et al. (2014) points to the “business in society” as a concept and approach originated in Scandinavia and widely adopted by Scandinavian corporations. They add that the “business in society” concept embraces the engagement of all stakeholders i.e. the company, clients, state, community and so on, which result to the creation of “jointness of interests” or what have Porter & Kramer (2011) referred to as “shared value”. Moreover, Freeman, et al. (2010) advocates that great companies share their interests with their relating stakeholders which can facilitate into a collaborative approach where more value can be created for more stakeholders, ultimately benefiting both company and the society.

The nature of social sustainability of being a multi-faceted paradigm (Almahmoud & Doloi, 2015), affected by various stakeholders in the project requires a collaborative approach of multiple stakeholders to deliver effective and optimum results. The focus of this study is on exploring the operationalization of “social sustainability” from the proposed construction clients’ perspective. The effort to comprehend the operationalization of the concept social sustainability by the clients of Skanska building department in Gothenburg can lead to the “jointness of interests” of two prominent stakeholders, the clients and the contractor. Consequently, this effort can lead to the creation of “shared value” among the stakeholders which is a dominant approach within Scandinavian corporations (Strand, et al., 2014) and ultimately benefit the company, the stakeholders and the entire society.

1.2 Purpose and Research Question

The purpose of this study is to investigate how different actors operationalise and utilize the concept by exploring their definitions of social sustainability and their input and actions in the context of social sustainability during the project life cycle. Moreover, the study attempts to discover the maturity level of the interviewed organisations in operationalization of the concept. While discussing maturity level, the determination of the maturity will be based on two main assessment factors mainly the frequency of criteria mentioned during the interviews and the experience of setting social requirements during procurement. Thus, the authors attempt to meet the purpose of the study by formulating and answering the following research questions.

- *How do the proposed clients of the Skanska building department in Gothenburg define social sustainability?*
- *What social sustainability aspect/actions are considered as relevant by the proposed clients of the Skanska building department in Gothenburg during the project life cycle?*
- *What is the maturity level of the proposed clients of the Skanska building department in Gothenburg in operationalization of the concept social sustainability?*

1.3 Limitations

Since social sustainability is a broad concept and can be applied in various contexts, industries and different levels of the society. This thesis is thus limited to the context of construction

industry in the Gothenburg region, focusing on specific proposed clients who only procure building contracts from the Skanska building department in Gothenburg. The findings derived from the interviews are limited to the interviewees experience and perception of operationalization of the concept social sustainability. Furthermore, while discussing the operationalization of the concept it is essential to note that it is restricted to the actions and contributions of the respective client and how the concept is communicated by the clients with other stakeholders.

2 METHODOLOGY

The following chapter outlines initially the process of which this thesis has been accomplished in accordance to. Subsequently, the research approach adopted for this particular thesis is described and justified. Finally, the section elaborate how data was collected, which methods were used and how the collected data were analysed and discussed.

2.2 Research Process

While conducting a research it is essential to identify the steps that the research will be following. According to Sreejesh, et al. (2014) a research commonly involves a series of steps, which he describes as following: problem/opportunity identification and formulation, planning a research design, selecting a research method, selecting the sampling procedure, data collection, evaluating the data and preparing the research report for presentation. However, he further adds that it is remarkable to notice that the sequence of the activities generally varies depending on the demand of the research project. The sequences of the steps followed in this thesis are illustrated in the Figure 1 below.



Figure 1 - overview of the research process

An initial step in this thesis were to identify a research problem, which were done in collaboration with different managers at Skanska. The intention from Skanska point of view was to examine their clients view of social sustainability, and how they are evaluated in terms of social sustainability actions by the clients. However, the problem definition was further gradually developed by the authors in collaboration with both the industry in terms of Skanska and and the academy in terms of the university. After developing the research problem, it is essential to chose a proper research method in order to be able to answer the research question. Sreejesh, et al. (2014) introduces tow basic research strategies concerning data collection that can be utilized while conducting a research study – qualitative and quantitative.

In terms of this thesis, a qualitative approach was applied in order to answer the research problem, a more comprehensive explanation of the qualitative approach is explained in the next section. After deciding upon the research method, the authors started the most consuming part of this thesis which is the data collection process, and it was accomplished by reviewing different literature and thereafter conducting interviews. Subsequently when all the required data was collected, it was then analysed and discussed in relation to the theory. Finally, a conclusion was drawn based on the analysis of the data.

2.3 Research Approach and Design

As before mentioned, while attempting to answer a research question, different researchers generally differs between two basic research approaches, both qualitative and quantitative.

Hence, when choosing the most appropriate approach to utilize, it is recommended examine the nature of the research problem. A quantitative approach principally relies on quantifying a research problem, by measuring and counting issues and then generalizing these findings to a broader population (Hennink, et al., 2011). It is obvious that such approach will not be suitable for this thesis. Since this thesis attempts to examine how the concept of social sustainability is operationalised and utilized, by exploring how clients define social sustainability and further their maturity level in setting social sustainability requirements, a qualitative research approach appears to be most suitable to adopt. According to Hennink, et al. (2011) a qualitative approach allows the researchers to explore people's opinion, experience, behaviour and perspective in depth concerning a particular set of issue. In addition, this is generally done by using a specific set of data collection methods such in-depths interviews, observations, focus group discussion etc.

There are several different research designs identified in the various literature. Exploratory research is one identified research design which is as it sounds, aims to explore, provide insights and understanding of a problem or topic that has not been clearly defined (Bryman & Bell, 2007). Due to the limited amount of existing research conducted around social sustainability within the construction industry and the appeared dispute among industry professional and academician in giving a universal definition, the research conducted in this thesis is of exploratory empirical character. Such method is suitable for an evolving topic such as social sustainability in the field of construction.

2.4 Data Collection

In order to answer the defined research problem, a collection of various necessary data is performed. There are different methods of data collection, although before deciding upon which data collection method to use it is essential to consider the type of the data to be collected. According to Kothari (2004), data can be divided in two comprehensive categories of which is either primary or secondary. Primary data is defined as fresh data collected for the first time for the intention of solving the research objective, while on the other hand secondary data is classified as already collected data by someone else which is available to be obtained (Kothari, 2004). Data such as primary and secondary has been collected while conducting the master thesis, the secondary data in terms of reviewing frameworks of social sustainability performed by other researchers. The primary data was collected by the authors themselves by conducting a number of interviews. A more complete explanation of the literature review and the interviews performed, is established in the following sections.

2.4.1 Literature Review

Once conducting a research, it is essential to understand and scrutinize the literature in the field in order to be able to perform a significant research (Boote & Beile, 2005). The main purpose of a literature reviews according to Boote & Beile (2005) is to establish a theoretical framework for the subject and to outline definitions and terminology, key terms, models, case studies etc. Additionally, while conducting a literature review, Creswell (2014) indicates that it should meet three criteria: "to present result of similar studies, to relate the present study to the ongoing dialogue in the literature, and to provide a framework for comparing the results of a study with other studies".

Initially in order to gain an understanding of the concept social sustainability which causes the main foundation of this master thesis, a literature framework of the concept has been performed.

Since social sustainability is a vague concept and has not been broadly studied in comparison to the other dimensions of sustainability, consistent and comprehensive research material has been challenging to find. However, a widespread amount of studies has been found by the authors but it is essential to note that most of these conducted studies has been based on discipline-specific criteria or study perspective.

The literature review was performed before the collection of the empirical data which in case of this thesis was in terms of interviews. The reason behind that was to gather sufficient information about the topic before conducting the interviews. While searching for relevant literature, multiple databases were utilized in order to find relevant sources. Reliable databases such as Chalmers University of Technology's library search engine Summon as well as Studentarbeten, Google Scholar, Google were used to identify the appropriate literature. The main sources that were used was articles, journal articles, reports, books, student thesis, PhD dissertations.

In order to narrow down the scope while searching for literature, keywords concerning the selected subject and theoretical framework were identified and used. Keywords such as social sustainability, sustainability, social sustainability consideration in procurement, assessment and measurement of social sustainability, CSR, socially responsible procurement, social sustainability criteria, etc.

2.4.2 Interviews

Conducting interviews is generally the most common technique of collecting qualitative data, where the purpose in the case of this thesis is to integrate different actors experience and interpretations of the social sustainability concept. Additionally, the objective of the interviews is to acquire a wide spectrum of opinions and actions taken by different actors, concerning procuring construction contracts with consideration to social sustainability. The selection of the participating interviewees was made in consultation with Olof Peterson, Mikael Hammarfjord and Eva Torberger, all the three are district managers at Skanska buildings. Skanska building is one of the five departments at Skanska construction contractor in Sweden. The department operates in the region of Gothenburg, and deals with both commercial and residential buildings.

The selection of proposed clients was based on factors such as, their scale of business, long-term relationships with the department and the frequency of contracts acquired from the clients by the department. Based on the aforementioned factors, better understanding of the topic by the contractor from their clients' perspective is necessary to deliver long-term and positively impacting results and consequently contribute to building a socially sustainable society. The table below illustrates the different interviewed actors, their role and what organisation they belong to. In order to facilitate the presentation of the empirical data provided by the interviewees, each participants are given a specific reference-code as shown in Table 1.

There are generally various types of approaches to follow while conducting interviews, although according to Bell (2000) there are mainly two types of interviews; structured and unstructured. In a structured interview a checklist or a questionnaire is used where the responded has to answer, but on the other hand in an unstructured interview the respondents are free to talk about what they consider significant. However, in the case of this thesis semi-structured approach were applied while running all the interviews which is a combination of the two interview types.

<i>Type of Actors</i>	<i>Organisation</i>	<i>Role</i>	<i>Reference-Code</i>
<i>Politicians</i>	Partille Municipality	Municipal Director	P-1
	Partille Municipality	Mayor	P-2
<i>Public Clients</i>	Västfastigheter	Project Manager	PC-1
	Västfastigheter	Real Estate Director	PC-2
	Poseidon	Procurement Manager	PC-3
	Lokalförvaltningen	Procurement Manager	PC-4
	Egnahemsbolaget	Project Manager	PC-5
	Partille Bo	CEO	PC-6
	Egnahemsbolaget	Purchasing Manager	PC-7
<i>Private Clients</i>	Skanska Real Estate	Project Manager	PrC-1
	Skanska Real Estate	Human Resource Manager	PrC-2
	Sverigehuset	CEO	PrC-3
	Skanska Nya hem	Market developer	PrC-4

Table 1 - Interviews respondents

According to Knox & Burkard (2009) semi-structured interviews can be describes as a way of developing protocol using open-ended questions based on the study's central focus. The questions should thus be asked to each respondent but for each respondent, specific areas that emerge during the interview might be pursued in more depth. Flick (2002) argues that the protocol in semi-structured interviews should serves as a guide in which the interview is built on. Although in order to ensure that each interviewee's opinion and experience of the subject matter is fully covered, creativity and flexibility is allowed during the interview.

In order to adapt a relevant set of questions which suits the role of the interviewees, the authors established two different sets of interview questions. One set of questions suitable for the politicians and one for the construction clients, and each set of the questions addressed two issues concerning social sustainability, the definition of the concept and the establishment of social sustainability requirements in procurements. All the interviews were face-to-face meetings which lasted from 45 minutes to 1,5 hours, and the questions were sent to the respondents some days before in order for them to prepare and have a clear idea of what issues be discussed.

2.5 Data Analysis

Since qualitative data generally emerges from conducted interviews or observations, it is typically characterized by being unstructured textual material that is not straight-forward to analyse (Bryman & Bell, 2003). However, in order to gain and facilitate for an in-depth understanding of the research it is essential to extract rich, detailed and valid data (Bryman & Bell, 2007). Once all required data were collected and summarised by the authors which for this particular thesis was consisted of theory and empirical data, the analysis process was subsequently performed. The empirical data which had its origin in interviews were summarised as following, initially all interviews were audio-recorded and then successively transcribed by the authors. The transcribed was further used for summarising the finding and presenting the analysis. Figure 2 below illustrate how the data analysis process was proceeded.

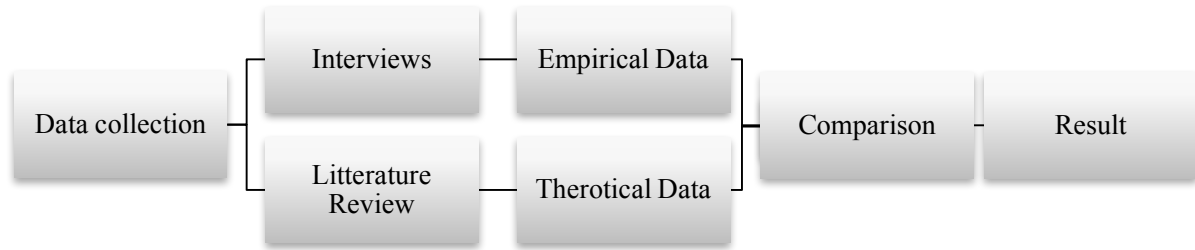


Figure 2 - Data analysis process

The analysis was done based on a comparison between the collected empirical data and the data collected from previous literature, in order to comprehend how the concept social sustainability within the construction industry is discussed in the academia and how it is operationalized and utilized in the industry.

3 SOCIAL SUSTAINABILITY FRAMEWORK

The following chapter outlines substantial frameworks concerned with sustainability and social sustainability in specific. Initially the concept of sustainability is described in terms of its origin and definition. Further thereafter, the concept is examined in the context of construction where criteria throughout the project life cycle and criteria based on stakeholder perspectives are identified. Lastly the chapter ends by addressing the complex nature of social sustainability measurement followed by the social sustainability consideration taken during construction procurement.

3.1 Sustainability – its Origin and Definition

The concept of sustainability can be traced back to 1960s, when it emerged in response to concerns about environmental deterioration due to poor resource management (McKenzie, 2004). It was *Our Common Future* known as the *Brundtland Report* by the World Commission on Environment and Development in 1987, which formulated the definition of sustainable development as,

“Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs”.

Extensive research, discussions and usage of the concept since then has resulted into the recognition of three fundamental aspects of sustainable development; Economic, Environmental and Social aspects (Harris, et al., 2001). The Earth Summit conducted in Rio, Brazil in 1992, has motivated organizations to take initiatives for structuring policies around developing economic, environmental and social goals (Omann & Spangenberg, 2002). Harris, Wise, Gallagher, & Goodwin (2001) in their book, have attempted to deliberately define the Economically, Ecologically and Socially sustainable systems.

- An economically sustainable system should produce goods and services continuously, to maintain manageable levels of government and external debt, and avoid sectorial disparities that may hurt agricultural or industrial production (Harris, et al., 2001).
- An environmentally sustainable system should preserve a stable resource base, do not overexploit renewable resource systems or environmental sink functions and the usage of non-renewable resources should be constrained to the extent that investment is made in sufficient substitutes. It includes, maintenance of biodiversity, atmospheric stability, and other ecosystem functions which are not classified as economic resources (Harris, et al., 2001)
- A socially sustainable system should provide with some of the fundamental elements to the society as a whole, fairness in provision and distribution of opportunity, sufficient provision of social services, such as, health and education, gender equity, and political accountability and participation (Harris, et al., 2001).

The dilemma concerning sustainable development, discussed in various literature and addressed by the World Bank is the conflicting nature of objectives derived from the three dimensions. (Soubbotina, 2000) asserts that the development can be sustainable only if it comprehensive and can successfully balance the economic goals with social and environmental ones. Vallance, et al., (2011) and Silvius & Schipper (2010) believe that the expression “triple bottom line “or triple-p (People, Planet, Profit) developed by John Elkington in 1997, is adopted internationally

as the commonplace corporate reporting style which encompasses all the three, environmental social and economic concerns of sustainability. This realistic and pragmatic view of sustainability is described by Elkington as,

“we need to bear in mind that it is not possible to achieve a desired level of ecological or social or economic sustainability (separately), without achieving at least a basic level of all three form of sustainability, simultaneously”.

According to Harris, et al., (2001) the original idea of development was based on pushing the societies from traditional to modern mass-consumption which resulted into the development of a vivid tension between economic growth and fair provision of basic needs. The ecological aspect points to the fact that human population and consumption of resources should be restricted to a desirable level and the integrity of ecosystems and diversity of species must be maintained (Harris, et al., 2001). Furthermore, it is essential to conserve the ecosystems and natural resources so that the development can be sustainable and intergenerational equity can be maintained, however the idea of mass-consumption arises the need of consuming the existing resources severely. In addition, the existing market mechanisms do not strive sufficiently for conservation of the natural capital (Harris, et al., 2001), thus putting forward a conflicting scenario. Moreover, social equity, fulfilment of basic health and educational needs, and participatory democracy are pivotal ingredients of development (Harris, et al., 2001), must be considered when discussing sustainable development so that all the three pillars are included and the development is sustainable.

Often, the social pillar of sustainability has either been neglected or the focus on it has been relatively weak (Murphy, 2012); (Omann & Spangenberg, 2002). Vallance, et al., (2011) believe that the social dimension of sustainability is relatively chaotic in terms of defining the concept itself, and the approach taken by researchers for implementation of the concept. Moreover, according to some authors the social pillar of sustainability has not been comprehensively implemented in practice; i.e. Murphy (2012) criticizes the social measurements in sustainable development indicators sets (SDIs) for being a function of power rather than policy coherence, as the influential parties can exploit by including their own concerns. He adds that these indicators reflect various sociocultural priorities and therefore are often picked for political rather than scientific reasons. The social pillar of sustainability is often observed as human development in general, which could be defined as provision to all the essential needs of all human beings, acquiring a satisfactory level of comfort, living lives of meaning and interest, fairly share of social opportunities of health and education (Harris, et al., 2001).

The need of defining the social pillar of sustainable development raises in order to scrutinize the embedded details in the concept and assist the practitioners of the concept for achieving palpable results. According to McKenzie (2004), in much literature two main assumptions govern the role of social pillar, such that; sustainable development programs are observed as to achieve high living standards measured against least possible environmental degradation, thus promoting careful balance between social development and environmental protection; as well as, many definitions of sustainability in environmental and economic contexts inspect social sciences as useful disciplinary tools for promoting the message of environmental and economic stability. Moreover, Omann & Spangenberg (2002) claim that research done in social sciences have developed massive amount social objectives, strategies and measurement tools, but with little regard to sustainability perspective. Murphy (2012) believes that some of the recent works done for clarification of social pillar of SD is promising and suggests that a broad understanding

of key concepts and policy objectives is likely to be emerging.

Vallance, et al., (2011) and Murphy (2012) claim that obtaining a single definition of social sustainability arises as many or more complexities rather than acquiring a universal approach and add that breaking down of the concept would lead to better understanding. They classify social sustainability into three major components, i.e. *Development*: addressing the issues of poverty and equity”, *Bridge*: encouragement to vigorous environmental ethics for safeguarding the environment” and *Maintenance*: preservation of social and cultural identities “. Spangenberg & Omann (2006) in their study, suggest the following definitions as alluring from the perspective of functional analysis.

- *“A socially sustainable society is one that is just, equitable, inclusive and democratic, and provides a decent quality of life for current and future generations”* (Partridge & Emma, 2014)
- Social sustainability is *“the orderly progress of society”* (Ahmad & Ahmad, 2000)
- Social sustainability of a city is the *“development and/or growth that is compatible with the harmonious evolution of civil society fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population”* (Polese & Stren, 1999)
- Social sustainability *“includes achieving a fair degree of social homogeneity, equitable income distribution, employment that allows the creation of decent livelihoods, and equitable access to resources and social services, [...] a balance between respect for tradition and innovation, and self-reliance, endogeneity and self-confidence”* (Sachs, 1999)
- *“Social sustainability is a life-enhancing condition within communities, and a process within communities that can achieve that condition”* (McKenzie, 2004)
- *“Social sustainability occurs when formal and informal processes, systems, structures and relationships actively support the capacity of future generations to create healthy and liveable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life”* (Barrsin & Gauntlett, 2002)

The aforementioned definitions of social sustainability shed lights on the fact that the existing tension of comprehending the concept is not only a struggle of maintaining social objectives against environmental and economic ones, but as well as the lack of consensus on defining the social aspect itself. Vallance, et al., (2011) argue that further clarification of the concept of social sustainability is needed and can be done by close collaboration of various sciences (physical and social sciences), to make the objectives obtained from the three elements of sustainable development integrated and offer pragmatic solutions. Moreover, the social pillars may be expanded to embody a vigorous emphasis on environmental, international and intergenerational dimensions (Murphy, 2012), so that the ultimate goal of sustainable human development is obtained. Consequently, the human development is seen as the ultimate goal when sustainability is explored in social terms, where economic and environmental pursuits are seen as means to achieving the end.

3.2 Social Sustainability in the Construction Sector

In the context of construction, the term sustainability is generally referred to as the objectives of achieving a balance between economic, environmental and social impact of projects.

Principally, a balance in terms of improving the lives of human beings by means of achieving social and economic goals without cost to the environment (Zuo, et al., 2012). Despite the fact that substantial literature on economic and environmental sustainability is available, little has been done to examine social sustainability of construction, and no common consensus seems to exist on the issues underpinning the social dimensions of sustainable construction (Sourani & Sohail, 2005). Although in order to contribute to a better understanding of the interpretations of social sustainability, a number of attempts has been conducted by different scholars (Farzanehrafat, et al., 2015). Each scholar or author base their understanding and definition of social sustainability on discipline-specific criteria or study perspective, which has led to difficulties in achieving an agreed definition (Colantonio & Dixon, 2009).

Valdes-Vasquez & Klotz (2013) defines the concept social sustainability in construction as the engagement between employees, clients, local communities and the supply chain with the intention of meeting populations and communities current and future needs. On the other hand, Hill & Bowen (1997) presents in their study a broader definition of the concept, by describing it as the way of improving the quality of human life, making provisions for social self-determination and cultural diversity, implementing skills training and capacity improvement of disadvantaged people, seeking intergenerational equity and seeking equitable allocation of construction social costs and benefits. Moreover, according to Farzanehrafat, et al., (2015) social sustainability can be described as the ability of a community in maintaining a healthy community, and that is by improving and developing approaches and structures in which meet the needs of both its current and future generations.

A further explanation was developed by Almahmoud and Doloï (2015), stating that the concept social sustainability in the context of construction is reflected through meeting and managing the needs of the sectors different stakeholders such as industry-, users- and neighbourhood communities. Further they add, considering the construction projects impact on future user's life situation, but also the impact during construction for instance on worker's health and safety and working conditions is a way of achieving social sustainability. However, it is still essential to note that the concept possess various interpretations in the context of construction, and that generally depends upon the stakeholder's perspective and where it is applied during the project life cycle (Klotz & Valdes-Vasquez, 2013). Hence, much of the literature conducted emphasize core criteria and indicators by which social sustainability is operationalised rather than theoretical definitions (Åhman, 2013).

3.2.2 Social Sustainability Criteria throughout Project Lifecycle

In order to acquire a more inclusive understanding of the concept in the perspective of construction, it is valuable to consider the entire project life cycle (Valdes Vasquez, 2011). At various stages across the project life cycle there are several different performance criteria representing the social dimension of sustainable construction. Previous studies concerning social sustainability have advocated a number of criteria, although the most frequently discussed and most influential one will be presented in each phase of the project life cycle. However, before introducing the social sustainability criteria (SSC) the following sections provide a short overview of the different sequential phases of a construction project.

A construction project commonly comprises five serial phases; *inception, design, construction, operation and demolition*. At the stage of inceptions multi-scenarios about the necessity and possibility of investment are investigated, the issues concerning the investment are addressed in such a way as why, when and how to invest (Shen, et al., 2007). Feasibility studies are further

conducted in order to extract enough information for investment decisions. Such activities are crucial for clients in deciding whether they need to progress forward with their work (Valdes Vasquez, 2011). The second phase is the design stage, where the concept of the project is presented as construction documents comprised of specifications, detailed drawings and models. The design process generally has a large impact on the project sustainability performance, and it is in this phase processes and technique such as Social Impact Assessment (SIA) are included to assess the consequences of the planned project (Klotz & Valdes-Vasquez, 2013).

At the stage of construction, the objective is to transfer the project design documents and plans into reality and that's by utilising different types of resource such as labour, construction equipment, materials and financial resources (Vanegas, 2003). During construction a number of organisations are involved, including consultants, various subcontractors, material suppliers and designers, which makes this stage features management challenges in terms of coordinating the various stakeholder to work towards a common goal (Valdes Vasquez, 2011). As soon as the construction is finished, the project enters the phase of operation. The operation phase which generally also includes a maintenance phase are by far the longest phase of the project life cycle (Pearce, 1999). The objectives during this phase is to fulfil the requirements, needs and function for which the project was designed for. Lastly, the final phase of the project life cycle is the demolition phase, which indicates the completion of the project's life. Once the construction project exhibits a deficit in performance with respect to its initial requirement, two possible approaches are available, either the constructed product is being refurbished or demolished (Pearce, 1999).

As mentioned above, social sustainability criteria can be found in each phase of the project life cycle. According to Shen, et al. (2007) at the inception stage of the project there are six potential social sustainability criteria to be considered. The *land use*, where developers should take into account the protection of cropland and natural resources while selecting the land. Additionally, Conservation of cultural and natural heritage is an additional criterion that can be embedded within the land use, where clients and developers should avoid any negative impact on any cultural heritage. Moreover, the implementation of the project should cause opportunities for *local employment*, whereas often individual which are far for the labour market are considered. In the stage of inception more criteria such as *improving local infrastructure capacity* can be taken into account, including for example activities as drainage, road and communication, sewage systems, power, transportation and education. The project should further give provision to *community amenities* in terms of providing parks, social interaction places, schools, parking places etc. *Safety assessment* should also be implemented at this phase of the project, where future risks concerning safety among public and project users are identified and further assessed. Finally, *social consideration in procurement* is an aspect that can be considered at the stage on inspection, where clients should identify the needs of the society or community and reflect upon how they can be achieved by the implementation of the project.

Once entering the design phase, new social sustainability criteria are acknowledged that has to be taken into recognition while conducting design documents. Since health and safety issues concerning project participants and surrounding community or public have been a common concern of social sustainability in construction projects, it is essential to consider *safety design* and *security design* (Shen, et al., 2007). Safety design refer to the protection and promotion of well-being through a healthy and safe working environment. The objectives of safety design during construction is to reduce injuries and fatalities of construction workers as well as increasing construction works health (Valdes Vasquez, 2011). On the other hand, security

design can be applied to the facility itself, where consideration is given in designing emergencies such as fire, earthquake, flood, radiation and eco-environmental accidents (Shen, et al., 2007). The consideration of security in the design phase has as before mentioned been defined as a SSC, which refers to the security of the finished project (Zuo, et al., 2012).

SSC- Inception phase	Land use	SSC- Design phase	Safety Design
	Social consideration in procurement		Stakeholder engagement in design
	Local Employment		Secuirity Design
	Infrastructure capacity-building		Social Design
	Community amenities		
	Safety assessment		

Figure 3 - Social Sustainability Criteria during Inception and Design phase of the Project Life Cycle

Additional criteria to be considered during the design phase are the engagement of *stakeholder in design* and the concept of *social design*. Stakeholder engagement, also known as public participation or community involvement, refers to the demands of indirect external stakeholders. According to Valdes Vasquez (2011), by involving external stakeholders in a transparent decision-making process, they are more likely to have their desires and preferences mirrored in the overall solution. The inclusion of the community is essential to improve the information flow about the projects from the developers to the community and vice versa. In terms of social design, the term encompasses a range of components associated with different users. The intention of social design is to ensure a design that is inclusive by considering the end user's safety, health and productivity (Valdes Vasquez, 2011). In addition, social design focuses on inclusion of the end users, meeting the functionality needs of the users and on improving the decision-making process of the design team (Almahmoud & Doloi, 2015); (Valdes Vasquez, 2011). In addition, Klotz & Valdes-Vasquez (2013) argues that social design is also related to such design perspective required to ensure inclusion by taken into account underrepresented groups, such as accessibility for elderly and the disabled.

During project implementation such criteria as *employment opportunities* should be considered. The construction phase of the project should give provision for providing working opportunities to the local market, including construction workers, professionals and engineers. Moreover, the *health and safety in construction* refers to increase the health and safety performance of the project during the construction phase. It has been agreed that health and safety is a very important requirement for workers and surrounding community to be provided. In terms of construction workers, they should be provided with efficient information and necessary protection in order to be able to perform the work under safely conditions (Almahmoud & Doloi, 2015). Such protection generally includes provisions of personal protective gear, including safety boots, hard hat, highly visible clothing, safety glasses and sunscreen (Zuo, et al., 2012). In addition, the workplace itself should be designed and constructed in a safely manner. Thus, implementation of safety barriers, signage and communication of hazards is of high importance. The health and safety of the surrounding community should also be taken into consideration, which could fall below the factor *public safety*. By provision of warning boards, adequate fencing and signal systems the public can be kept out of the construction site because they might not be aware of the safety risks on site (Valdes Vasquez, 2011). Moreover, the health

and safety of the community or the public can be reached by providing alternate walkways when footpaths are blocked off, control of noise and dust pollution as well as a safe disposal of hazardous materials (Almahmoud & Doloi, 2015).

SSC - Construction phase	Employment opportunities	SSC - Operation phase	Public accessibility
	Health and safety during construction		Provision of services
	Public safety		Local community development
	Education and Training		Social equity
	Using local resources		Social interaction
	Minimizing neighbourhood disturbance		

Figure 4 - Social sustainability Criteria during Construction and Operation phase of the Project Life Cycle

Education and training should be provided to workforce and surrounded community during construction (Hill & Bowen, 1997). According to Brent & Labuschagne (2006) in order to develop professional workforce, they should be provided with training and education opportunities. Apprenticeship program is also a way of educating and training people from the surrounded community, which have difficulties in entering the labour market (Håkansson & Jeppsson, 2015). Furthermore, Farzanehrafat, et al. (2015) argues that construction projects should have the intention of *using local resources* during construction in order to contribute to the local community. In addition, Almahmoud & Doloi (2015) holds a similar position and argues that construction projects should have the intention of utilizing locally produced materials. *Minimizing neighbourhood disturbance* is an additional criteria to acknowledge during construction. The construction of the project should aim to reduce the noise level, pollution glare and waste produced by the project (Almahmoud & Doloi, 2015).

During operation such criteria as the *Public accessibility* that can be taken into account. The provision of secure and safe open places, connections to public transport and surrounding amenities and provision of adequate infrastructure, are such factors that enable achieving public accessibility (Zuo, et al., 2012) (Almahmoud & Doloi, 2015). Furthermore, according to Shen, Hao, Tam & Yao (2007) *provision of services* is an additional criterion meaning that when a construction project is initiated within the area, the community should benefit economically from it by providing new jobs, services etc. Provision of places that enable social interaction and group formation is essential during the operation phase in order to increase the integration (Almahmoud & Doloi, 2015). Social equity during operation can also be taken into account, where

SSC - Demolition Phase	Investment opportunities
	Communication to the public
	Job opportunities
	Operational safety

Figure 5 - Social sustainability Criteria during Demolition phase of the Project Life Cycle

Shen, Hao, Tam & Yao (2007) identified four different criteria that can be considered during and after demolition of a construction project. Project demolition should enable *investment opportunities* according to the demands of the local community. During demolition, jobs should be provided to local community for site work, transportation and disposal. In addition, consideration of safety risks concerning both labours and public during project demolition is of high importance. Such safety risk that might be crucial to take into account during demolition are explosions, dismantling, toxic material and radioactive materials. A final criterion is the *communication to the public*, which covers such activities as promoting awareness of possible impacts that can be derived from the project demolition.

3.2.2 Social Sustainability Criteria Based on Stakeholder's Perspective

As before mentioned, social sustainability in construction has various interpretations where it provides importance and value to stakeholder at different levels. However, before considering any social sustainability criteria associated with different stakeholders, there is a need of identifying diverse stakeholders associated with construction projects. According to the stakeholder theory established by Freeman (1984) the term “stakeholders” is described as:

“any group or individual who can affect or is affected by the achievement of the organisation's objectives”.

Savage, Nix, Whitehead, & Blair (1991) holds a similar position where they define stakeholder as groups or individuals who;

“have the interest in the actions of an organisation and ... the ability to influence it”.

It is argued in the literature that stakeholders can be identified and classified in different ways and groups, depending on their roles and responsibilities played in the project (Gao & Zhang, 2006); (Almahmoud & Doloi, 2015). Waddock (2001) categorised stakeholder into two different types; primary stakeholder whom the business is established around (owners, employees, customers and suppliers) and critical secondary stakeholder, on whom the business depends for infrastructure (e.g. government, communities, users). On the other hand, Henriques and Sadorsky (1999) grouped stakeholder into four critical groups; regulatory stakeholders (e.g. governments, trade associations, informal networks, competitors), organisational stakeholder (e.g. customers, suppliers, employees and shareholders), community stakeholders (e.g. community groups, environmental organisations, and other potential lobbies) and the media.

Construction stakeholder in specific can be according to Ma (2011) divided into three simple groups: interested (including neighbour's society), involved (includes contractor/ suppliers/ consultants/ client) and committed (includes investors). Additionally, a well defined categorisation of construction stakeholders, who forms the base for the introduced criteria were introduced by Almahmoud & Doloi (2015). The study highlights three communities of stakeholders, *user's community*, *industry community* and *neighbourhood community*. These three stakeholders communities are further explained below and are presented in relation to their defining criteria, see Table 2 below.

The *Industry community* includes the people involved in construction activities such as developing, designing, constructing, manufacturing and supplying. All the supply chain members of construction are covered by this community including clients, developers, architects, project managers, engineers, all types of contractors, suppliers and consultants (Almahmoud & Doloi, 2015). The *user's community* are the one mainly involved in the stage of operation who's supposed to use the constructed facility. Their interest is generally related to the comfort and functionality of the facility. The *neighbourhood community* involves the people beyond the boundary of the project (Valdes Vasquez, 2011), residential neighbours, commercial neighbours and people who use the surrounding paths and roads are typical examples of neighbourhood community (Almahmoud & Doloi, 2015).

Social core functions	Criteria	Stakeholder community
Capital Performance	Job opportunities Investment opportunities Using local resources Improving local infrastructure capacity	Neighbourhood, users and industry community
Integration community	Conservation of cultural and natural heritage Communication to the public Stakeholder engagement in design Education and Training	Neighbourhood
Accessibility	Security design Community amenities Public accessibility Public safety	Neighbourhood, users and industry community
Usability	Social design Safety assessment Local community development	Users community
Operation health and safety	Health and safety during construction Safety design Operational safety	Industry community
Health and Psychological comfort	Social equity Social interaction Minimizing neighbourhood disturbance	Neighbourhood, users and industry community

Table 2 - Social sustainability core functions and criteria related to stakeholders communities

As illustrated in Table 2 some social sustainability criteria created by the project are multi-faceted and therefore, the three different communities might benefit from it.

3.3 Assessing and Measuring Social Sustainability

The aforementioned definitions of social sustainability declare that the core of the concept relies to some extent on the notion of achieving a satisfactory human development level. However, the existing trade-off of the social and environmental pillars in a market driven economy and lack of consensus on identifying universally accepted social sustainability criteria (Omman & Spangenberg, 2002), have led the practitioners to identify such criteria subjectively based on the local environment, specifically for each project. In addition, Omman & Spangenberg (2002) believe that four vivid reasons advocate for the struggle of deriving social sustainability objectives and their corresponding indicators. The reasons summarised as lack of conceptual clarity, complexity of the concept, hesitance of social scientists for formulating normative targets and unsuccessful integration of the concept to the current development model in Europe, has made it difficult to formulate a measurement framework which could evaluate successful or unsuccessful implementation of the concept.

Social sustainability is often observed as economic development of a society and individuals, thus seeing the regarding criteria as an integral part of the economic development domain. Besides, Omman & Spangenberg (2002) argue that sustainable economic growth is contemplated to be an essential component for increasing income and providing employment, thus satisfying one or more elements of social sustainability. On one hand, some may observe the existence of excessive natural resources as the crucial key to economic development, while on the other hand, efficient and productive usage of limited resources have proven to be a leading factor to economic development, such examples are Korea and Japan (Soubbotina, 2000). Soubbotina (2000) further emphasizes that productive and efficient usage of resources such as: physical capital, human capital and natural capital are key indicators to successful and sustainable economic development.

Omman & Spangenberg (2002) conclude that selection of proper policy measures could lead to achieving an increase in economic prosperity, reaching satisfactory environmental objectives as well as contributing to social sustainability. They advocate for multi criteria analysis (MCA), aggregated of 8 steps, to be an appropriate evaluation tool for assessing social sustainability. Multi Criteria Analysis often mentioned as Multi Criteria Decision Analysis (MCDA) is a decision making tool which covers multiple disciplines such as: mathematics, management, informatics, psychology, social science and economics that can assist with making significant decisions whether it be tactical or strategic (Ishizaka & Nemery, 2012). Spangenberg & Omman (2006) further add that MCDA is an ideal approach for assessing social sustainability since it differs from other conventional methods in terms of taking into account a set of objectives and criteria, which can be uncertain, conflictual, multidimensional, incomparable and incommensurable. Consequently, lack of transparency in definition and the qualitative nature of social sustainability recommend the fact that MCDA can be an ideal solution for assessing social sustainability.

Several tools have been used or proposed for measuring and assessing social sustainability, such as: indicator checklists and composite/integrated indices (Glasson & Wood, 2009). Glasson & Wood (2009) claim that the usage of some of the composite indicators may result into unsatisfactory consequences such that they “hide more than they reveal” and “can be off-putting to anyone other than experts in the field”; however, some of the recently introduced approaches e.g. ‘Societal Index’ are well developed. Additionally, tools like: social impact

assessment (SIA), health impact assessment (HIA), equality impact assessment (EqIA), regulatory impact assessment (RIA) and sustainability appraisal (SA) are some of the tools being currently in practice. According to Glasson & Wood (2009) SIA is one of the broadly utilized tool which is observed significantly different by various researchers, such that, some see it as an integral part of Environmental Impact Assessment (EIA); while others see it as an independent field of study and process. The social dimension of sustainable development is relatively new field whose impact is assessed by some within social, and by some within socioeconomic domains (Glasson & Wood, 2009). The obtained measurement frameworks have proven to be generic rather than being specific, and has partially answered the question of how to assess and measure social sustainability. However, the ongoing research seems to be optimistic and promising, that could result to identification of all the necessary criteria and demanding indicators and lead the practitioners to achieve satisfactory results.

3.4 Social Consideration in Public Procurement

In the study conducted by Sourani & Sohail (2005), they address the increased importance of introducing social sustainability principles into construction procurement. Thus, in the context of construction procurement, it's argued that sustainability is one of the most emergent issues which are expected to grow significantly. In recent years there has been an increased discussion on a EU-level around the importance of taking social consideration while procuring services, supplies and construction work (Andersson, 2014). In the European Commission's interpretative communication on the 15th October 2001, they set out the possibilities offered by the community law to include social consideration into public procurement procedures (European Commission, 2010). Accordingly, the legal framework was established in 31 of Mars 2004 by the procurement directives 2004/17/EG. The directive mentioned ways of incorporating social considerations into technical specifications, selection criteria, award criteria and contract performance clauses.

“(55)- a contracting entity may use criteria aiming to meet social requirements, in particular in response to the needs - defined in the specifications of the contract - of particularly disadvantaged groups of people to which those receiving/using the works, supplies or services which are the object of the contract belong.”

The Swedish interpretation of the EU's directive 2004/17/EG was established in Sweden in 2007 in the public procurement law (2007:1091). To set social requirements was given in the law, chapter 6 § 13 a minor attention by formulating it as a “may” requirement. However, public authorities were by the amendment given the possibility to ask for social requirements, but no direct call in the law text were given (Andersson, 2014).

13 § A contracting authority may set specific social, environmental and other conditions of the contract to be fulfilled. Act (2007: 1091)

Three years after the interpretation of the EU directive the Swedish procurement legislation were updated in the law SFS (2010:571). The modification made the concept acquire more attention and a greater importance. Social consideration was introduced in 1 chapter 9 a §, but this time the consideration went from “may” to “should” requirements. The significance became both greater and encouraging than before (Andersson, 2014).

9 a § A contracting authority should take into account environmental and social

consideration into public procurement as long as the nature of the procurement allow that. Act (2010:571)

The European Commission have supported the development of social sustainability during the last 20 years, as they continuously develop new approaches and strategies for including social sustainability into the procurement procedures within the public sector (Andersson, 2014). In 2010 the European Commission published a report guide with a vision of promoting awareness and usage of the social aspects in public procurement among the different EU countries. Thus, the guide introduces the concept Socially Responsible Public Procurement (SRPP) and the potential benefits it can deliver. SRPP entails a number of social consideration that can be relevant for public procurement, depending on their nature, they can be applied at certain stages of the procurement procedure. Although, it is significant for the contracting authorities to decide case by case which social consideration are relevant to include, depending on the objectives and subject-matter of the contract (European Commission, 2010). According to the European Commission a definition of socially responsible procurement, covers procurement activities that takes into consideration one or more from the following social aspects:

- *Employment opportunities* – contribute to an increased employment among vulnerable and disadvantaged groups such as: young people, long-term unemployed, elderly, migrants, ethnic-, religious minority, low-skilled and people with mental or physical disabilities.
- *Decent work* – the concept of decent work is based on the promotion of work under the conditions of freedom, equality, security and dignity.
- *Compliance with social and labour rights* – promotion of procurement that comply with national laws and collective agreements, as long as they are compatible with EU legislation. In addition, avoid discrimination and promote equality between men and women at the work.
- *Social inclusion* – equal access to public procurement for organisations owned by or employs persons from ethnic/minority group - cooperatives, social enterprises and non-profit organizations.
- *Accessibility design for all* – promote mandatory provisions in technical design in order to ensure access for disable people.
- *Ethical trade* – requirements in tender specifications and conditions of contract that taken into account ethical trade issues.
- *Corporate social responsibility (CSR)* - in procurement promote and encourage companies to take a broader social and environmental responsibility on a voluntary basis (CSR).
- *Human rights* - protecting against human rights abuse and encouraging respect for human rights.

In January 2014 new EU-directives were updated and adopted that embraces implementation of new award criteria, which emphasises innovation and social requirement on a broader scale (Håkansson & Jeppsson, 2015). The aim is to facilitate for contracting authorities to integrate social aspects in the procurement, by allowing application of social requirements as award criteria. Consequently, the procurement approach “most economically advantageous” or “best-value tender” will be applied, which means that the award criteria will be taken into account in addition to the price (Christ-Lind & Öhrström, 2013). The EU directives 2014/24 paragraph 97 is formulated as following:

“(97)- with a view to the better integration of social and environmental considerations in the procurement procedures, contracting authorities should be allowed to use award criteria or contract performance conditions relating to the works, supplies or services to be provided under the public contract”

However, until today there is no structured approach for evaluating and rating tenders with social requirements and their effect on the project. Instead the rating is done by giving contractors points based on the contracting authority's individual assessment (Håkansson & Jeppsson, 2015). On the other hand, in order to assess and measure environmental impact on the procured project, a lifecycle assessment can be conducted. A lifecycle assessment is a tool that takes into consideration the product or the service system environmental impact through out all stages of its life cycle (Lin, et al., 2012). Lastly in order to procure with social consideration, it is essential for the contracting authority to formulate the specification and the predetermined award criteria accurately to facilitate for a proper evaluation (European Commission, 2010).

4 FINDINGS

The following chapter narrates the information which has been originated from the thirteen conducted interviews with various clients within the area of Gothenburg. Since social sustainability is a relatively new concept and subjectively defined from various perspectives, one of the main objectives of the interviews was to gain the current understanding of the concept, its definition and observance in the industry. Additionally, the implementation of the concept both during the project life cycle and procurement stage has been brought up to investigate the maturity of the client in dealing with social sustainability questions.

4.1 Definition of Social Sustainability from Various Clients Perspectives

The results of the interviews revealed, that the term Social sustainability is not defined comprehensively and there is no common consensus among the interviewees on providing a universal definition. However, all the interviewed organisations have tried to define and scrutinize the term from their own perspective and their own contribution to sustainable development. In addition, it is remarkable to notice how the strategies of implementing social sustainability could differentiate depending on roles and positions of various actors within the Swedish construction industry. As mentioned before in the methodology chapter, the interviewees have been categorised into three main groups, thus it would be important and helpful to see how the arising definitions align or conflict with each other.

4.1.1 Politicians' Perspectives

Two active politicians in the Partille municipality were interviewed for the study with the attached set of questions in Appendix 2. The two definitions gained from both politicians are relatively different in words but similar in meaning.

P-2 assumes long term sustainable development as an important factor that can be provided through social sustainability.

“We try to build a society for everyone and which is sustainable in the long run.”

P-2 elaborated his answer regarding the concept, as building a society where all individuals can independently fend for themselves and various political views are included in making decisions. He contemplates social sustainability as a way to creating a strong society with individuals independent of social welfare who have access to sufficient education, are able to find jobs, can adapt and function well in the society. Furthermore, having a social welfare system for those who are in extreme need, should be existing so that everyone's need can be sufficed.

P-1 considers safety and security as two important elements when discussing social sustainability.

“For me a socially sustainable society is about building a safe and secure society.”

P-1 further explained that all individuals in a socially sustainable society should feel included by having a system of community engagement where all voices can be heard and all individuals have access to various types of amenities and public services. All the differentiating factors such as gender, age and religion should not be hindering the social integration of these individuals. Their solution for the issues is creating collective meeting and interaction points.

4.1.2 Public Clients' Perspectives

Östrasjukhuset is an ongoing construction project of Västfastigheter, where a specific investigation study was done to define and detail all three dimensions of social sustainability. The definitions gained from both managers, PC-1 and PC-2 are a reflection of the results acquired from the study. The results of the study have concluded that social sustainability should be defined in terms of the following fundamental statements.

“The existence of dignified living conditions for everyone in a society.”

“The existence of social processes which lead to and/ or the maintenance of the above conditions.”

The definition puts human and human rights at the centre of focus so that all plans and actions can be achieved accordingly. PC-1 believes that the implementation of social sustainability should stimulate collaboration and equal opportunities for all individuals, such that everyone's rights are protected and respected and all social interactions are based on the principles of non-discrimination, equality, transparency, participation etc. PC-2's perspective of social sustainability was very similar. According to him, buildings should be appealing, accepting and welcoming all individuals who visit. For the specific case of Östrasjukhuset, he believes that the building should be adapting to and welcoming all, among others, patients, visitors and healthcare workers. Both managers concluded that social design is an important aspect of social sustainability where all such soft issues can be touched.

Additionally, PC-2 believes that social sustainability can be well implemented when it is extended throughout the whole supply chain. The example provided by him was their effort to get in compliance with “fair-trade agreement” and ascertaining that the contractors and subcontractors should also be complying with fair-trade. A similar position was held by PC-3 emphasizing on “fair-trade”, to preserve human rights, law abiding, transparent taxation and so on, in day to day business operations. Additionally, provision of employment opportunities, which can lead to integration of various clusters of society was observed as an important aspect of social sustainability.

The organisation represented by PC-4 is relatively advanced in detailing and implementing social sustainability. Although, they admit not to have defined the concept very precisely but their approach and accomplished results indicate to be a success story. Additionally, they presume social sustainability as a tool of integration, focusing on the aspect of employment and engagement of individuals into the labour market. A model called “social consideration model” is developed by them in order to confine their projects within social sustainability. Their contributions and actions concerning social sustainability during project life cycle and utilization of the model are presented further in the second section of this chapter.

PC-6 emphasizes on safety and security as two essential parameters when discussing social sustainability. Their approach is based on identifying short, middle and long term perspectives, where a society should be sustainably developed in social terms. In the short run, they focus on wellbeing of individuals' in terms of security and safety while in the middle run, provision of amenities, accessibility to all type of public social services and integration of various clusters in the society is emphasized on. According to PC-6, maintaining social sustainability within short and middle term perspectives can lead to a society which is socially sustainable in the long run.

PC-5 and PC-7 observe social sustainability as a tool of improving the overall status of a community or a society. Their approach is based on integrating rental apartments with owned condominiums. They build condominiums, to be sold in areas where mostly rental apartments are located. They claim that their approach can lead to integration of people having various financial status, age, culture and so on. The ultimate outcome according to them is; an increase in the real estate value of that particular community.

PC-3's view on social sustainability stands for a society where all inhabitants feel safe, secure and have access to sufficient amenities. He added that integration and interaction of various groups in a society mitigates the risk of segregation, discrimination and societal and personal failures.

4.1.3 Private Clients' Perspectives

PrC-1 and PrC-2 represent a private real estate developer operating mainly in the three biggest cities in Sweden. Their definition of social sustainability is reflected through the concept "CCI", where a big emphasis is laid on community involvement. CCI stands for Cooperate Community Investment, which is a part of the social agenda within the company. They further claimed that social sustainability in general is about our way of being and our process to engage and interact with people and society in a city or in a project for the benefit of all involved. Within the Gothenburg region which is one of their biggest market area, Skanska real estate have chosen to focus on youth, integration, education and labour market by formulating visions and strategies of how to deal with these areas. Since every project is unique and have different local conditions and challenges, their community involvement will differ from project to project but will always be based on one or more of the followings:

- Reduce exclusion and promote employment by creating opportunities for achieving work experience and employment
- Prevent exclusion by inspiring and motivating
- Direct their efforts towards young people and foreign-born
- Collaborate with partners and associations working towards achieving social sustainability

PrC-4 defines social sustainability as a human issue, identifying human as the resource and the focal point that should be sustained. In addition, the importance and long term impact of social sustainability that can bring to a society, was emphasized on. The long term impact was related to seven focus areas such as; safety and security, culture and diversity, community benefit and commitment, health and wellbeing, children and youth, green and finally meeting and participation. According to PrC-4, in order to become long term sustainable, the environmental, economic and social dimensions should be considered within the context of each other and the effective way of achieving sustainability is extending and applying the concept within the supply chain, that provides collaboration and coordination for achieving a common goal.

The focus areas identified by the PrC-4 organisation are constituted into three perspectives, residential developer, client and employer. One perspective is when operating as residential developer, sustainability plans in the project should then be conducted in order to comprehend how to apply the seven focus areas. While operating as client, requirements on contractor and subcontractors should be communicated in order to obtain the focus areas within the supply chain. Finally, while operating as an employer a responsibility should be taken internally within the organisation in relation to the identified seven focus areas.

PrC-3 defines social sustainability as a tool of integration for occupancy and promotion of local development of the community. Their interpretation of integration and local development is acquiring mixture of tenancy apartments and condominiums. In addition, they put an effort to design and build apartments that could be rented to the municipality and which can serve for a special purpose to a specific group of people such as disabilities and so on.

4.2 Social Sustainability Consideration/Criteria during Project Lifecycle

The general impression captured from all interviewed respondents is that social sustainability criteria are not completely defined. However, throughout the interviews all of the interviewees communicated various number of different social sustainability actions which in the theory has been defined as criteria. These actions have been applied by various clients throughout different stages of the projects life cycle, but most frequently during the inspection and design phase. The main reason claimed by PC-1 that the actual outcome of the actions done during the design is generally tangible and can clearly be recognized when the facility is completed. Although, it was noted that various actions done by the different client has not been necessarily considered to be concerning social sustainability by them, whereas the literature indicates such actions to be considered as criteria.

Moreover, certain actions were taken into account by various clients at different stages depending on the nature of their organisation. For instance, PC-1 claimed that actions such as engaging the end-users were applied during the design phase of a project, whereas both P-1 and P-2 argued that as a municipality, engaging various stakeholder such as citizens and end-users is central already at the inspection phase. The following subsections aims to introduce the emerged criteria by the different interviewees at different stages of the project lifecycle.

4.2.1 Inspection Phase

At the stage of inspection, respondents brought up various actions that are generally taken into account. The two interviewed politicians mentioned community amenities as an important issue to consider. Both P-1 and P-2 believe that aspects such as right lighting, public transport, social interaction places, bicycle- and footpaths and sufficient number of kindergartens and schools are significant concerns to reflect upon in relation to city development. Moreover, as mentioned earlier, the engagement of different stakeholders is according to both P-1 and P-2 something that they have been implementing within the municipality. The process was done by allocating a cottage in the middle of the city centre where people had the opportunity to leave their opinion on upcoming project. PC-5 and PC-7 hold a similar position on engaging stakeholder at the stage of inspection, or as they called at the zoning stage. Since PC-5 and PC-7's organisation builds only condominiums, their approach of doing it were done by engaging the interested end-users/buyers in order to get their view regarding the area and the buildings and act accordingly. However, PC-5 clearly indicates that they should be cautious while conducting such dialogue because if all the interests are fulfilled the cost of the condominiums will be above what the buyers can afford. PC-7 adds that the extraction of information has generally been done by conducting surveys and workshops. Likewise, PrC-4 also mentioned stakeholder engagement at the stage of zoning where they attempt to create a dialogue between different stakeholder such as politicians, institutions, the public, end-users etc.

The municipality of Gothenburg established a target in the budget of 2014 that 50 percent of all service procurement should be performed with social consideration, where in the case of construction it has been applied both on land allocation agreements and on procurement of

construction contactors. Social consideration has been defined by the municipality of Gothenburg as the promotion of employment opportunities for individuals who are far from the labour market, a more comprehensive explanation of the social consideration model introduced by the municipality of Gothenburg is found later on in this chapter.

PrC-1,2, and PrC-3 are all clients who generally acquire lands from the municipality, where the municipality recently in their land allocation agreements establish project specific requirements concerning social sustainability that has to be accepted by the project developer. According to before mentioned clients, providing job opportunities has been a common and a frequent requirement in recent land allocation agreements. The project developer in his turn has to accept such requirements and further transfer it to the contractor, thus all of the interviewed clients who operates as project developers pinpointed the hardship of formulating such requirements when procuring the contractor.

Social Sustainability Criteria at Inspection Phase	Identified by the following actors
Community amenities	P-1, P-2
Social consideration in procurement	PrC-1, PrC-2, PrC-3, PC-4, PC-5, PC-7, PC-3
Stakeholder engagement	P-1, P-2, PC-5, PC-7, PrC-4
Mixture of rental apartments and condominium	PrC-3, PC-3, P-2, PC-6, PC-5, PC-7, PrC-4
Security consideration	P-1 , P-2

Figure 6 - Social sustainability criteria during inspection phase emerged from interviews

In order to build a socially sustainable neighbourhood community with a variety of different individuals, families and couples, all of the interviewed clients who deals with residential housing mentioned the “mixture of rental apartments and condominium” as a significant aspect to pay attention to at the stage of inspection. PC-5 elaborates that by developing condominiums in areas dominated by rental apartments, the community or the area will be developed in terms of its economical status and the value of the area will increase. Security consideration was a factor brought up by the two politicians that stated in order to develop a secure community, an area should encompass various types of buildings. For instance, residential housing should be build within the central city, which would increase the security within the area. Moreover, they further mentioned the case of developing a new city centre within the city where their intention was to build residential housing which is directly overlooking the centre.

4.2.2 Design Phase

It is generally during the design phase where clients have great influence on project performance, and the cost of making changes at this stage is relatively low. Hence, the outcomes of the interviews clearly indicate that the majority of opportunities to influence and consider aspects concerned with social sustainability occurs generally during the planning and design phase of the construction project. Principally all interviewed clients consider social sustainability in the design phase, although different client had different consideration.

PC-6 argues that aspects such as security is highly considered during the design phase, in their organisation they continuously strive to develop safe and secure buildings and neighbourhood communities in order to create a socially sustainable community and by that increase the value of the real estate. Security design for PC-6 organisation concerns implementation of operative

systems to the facility such as alarms, CCTV-cameras and emergencies exits. PrC-4 argues for the same and reveals that they always want to create safe and secure environments and areas, build residential housing with technical security solutions and innovations. Accessibility and social design are additional features that are taken into account by all of the interviewed respondents. Accessibility in terms of constructing a facility where disable people can operate and fulfil their needs is something that is always considered when design a facility, argued by all the respondents. In addition, accessibility is described by PC-1 which is a project manager working for a public client who are building a children hospital, in terms of providing securing paths, monorail, bicycle- and car pool, customized walkways, roads that facilitate bicycling etc. PC-1 summarizes accessibility as designing a hospital area that is accessible for everyone.

Social Sustainability Criteria at Design Phase	Identified by the following actors
Security Design	All of them
Accessibility	All of them
Social Design	All of them
Social interaction	All of them
Public engagement	PC-1, PC-5, PC-7, PrC-4, PC-4
End-user amenities	PC-1
Evaluation of CCI – actions	PrC-1, PrC-2

Figure 7 - Social sustainability criteria during design phase emerged from interviews

Social design is an aspect which has been brought up by all interviewees, which includes a number of different actions. Thus, different clients applied social design on a broader scale whereas other includes miner actions. According to PC-4 social design is always taken into account while conducting design documents, where actions such as offering gender neutral toilets and avoiding signs that discriminate particular groups of people are for instance included. PC-1 claims that in terms of social design, human rights have been a main challenge throughout the design phase for his project. He further argues that in order to perform a socially sustainable design, designers had always to take into account how the building, the surrounded environment and the operation can be accessible, understandable and appealing to those people who are going to use the facility. PC-5 and PC-7 perceived social design as designing apartments where cultural differences are taken into account.

Social interaction is an additional criterion that is considered during design, which in some cases might be included within the social design criteria. Most of the interviewees associated social interaction with designing a facility which includes interaction places, common places, path- and motion ways which enable for both spontaneous and planned interaction between people. All the interviewed respondents indicated the importance of promoting interaction between people by creating attractive meeting places and opportunities for interaction.

The public engagement is an additional criterion mentioned by some clients and for the case of PC-1's project, public engagement was achieved by allowing children which are the main end-user of the hospital to draw up their own perception of the hospital and the rooms in specific. PC-5 and PC-7 argued that engaging stakeholders is something they again perform during the design, but in this case they attract other type of stakeholders than in the inspection phase. In this stage the surrounded community are target in order to have their view on what is missing

within the area such as interaction places, playgrounds etc. Additionally, they further add that's it is a way of communicating what is going to be build to the surrounded community.

Creating end-user amenities is an aspect that has been considered by PC-1 organisation in order to facilitate the accessibility within the hospital project. Such amenities has been walk paths, hotel for visitors, car pools, parks, public transports etc.

CCI - actions is a term brought up by both PrC-1 and PrC-2 where CCI stands for "Corporate Community Investment". CCI is an initiative taken by Skanska Real Estate which is a part of the Social Agenda within Skanska's Sustainability Agenda; "We help build communities". Skanska Real Estate recently acquired a land from the municipality of Gothenburg and as before mentioned, within the land allocation agreement taking social responsibility had to be accepted by the project developer. Subsequently, Skanska in consulation with the municipality of Gothenburg developed a CCI overall plan which runs over the four phases of the project, from signing the land allocation agreement until the building goes into operation. Both PrC-1 and 2 introduced various actions that has been evaluated during the design phase of the project, and some of them implemented as pilot activities. The intention is to evaluate the actions during design in order to further implement them on a bigger scale during the construction and operation of the project. The target group these activities concern are young people up to age 25, where the main ambition is to counteract exclusion. The activities were locally based, and were formulated as following;

- Support young people who haven't started or fulfilled their secondary education.
- Support of young people in the districts Askim – Frölunda – Högsbo and Western Gothenburg, age group 13-20 years
- Angeredsutmaningen
- Cooperation with Fryshuset and Öppet hus
- Investigate opportunities for research

4.2.3 Construction Phase

During construction the most frequent and mostly emphasised criteria brought up by various clients was the labour market initiative. The public clients who is connected to or owned by the municipality of Gothenburg had to apply social sustainability actions during construction in terms of labour market initiatives. Labour market initiative can be fulfilled by providing jobs and internships for people who is far from the labour market, or apprentices who have a practical education.

Social Sustainability Criteria at Construction Phase	Identified by the following actors
Health and Safety	All of them
Labour market initiatives	PC-4, PC-5, PC-7, PC-3, PrC-4, PrC-1, PrC-2, PrC-3
Inspiring and motivating activities	PrC-4, PrC-1, PrC-2
Disturbance, pollution and public safety	All of them

Figure 8 - Social sustainability criteria during construction emerged from interviews

Health and safety during construction were considered by all the interviewed respondents, but all of them also indicated that it is the contractor's responsibility to implement it. According to PC-6, today almost all contractors consider health and safety during construction, although he also mentioned a case where health and safety were lacking in one of their projects where they had to assign two people from their organisation in order to keep track of the health and site on site. Additionally, aspects such as disturbance, pollution and public safety are all considered and taken into account by client and contractors. Mainly all the interviewed respondents indicated that it is the contractor responsibility to make sure that such criteria are fulfilled during construction.

During construction PrC-4, PrC-1 and PrC-2 all mentioned inspiring and motivating activities as actions that can be preformed or taken into account. By giving opportunities for young people to visit the construction site, an awareness and an interest can arise. In addition, lectures can be conducted on site for young people in order to give opportunity for them to ask questions, establish contacts, develop their Swedish language, inspire and attract them to the construction industry.

4.2.4 Operation Phase

Since the social sustainability aspects of the building are decided in the design phase, the outcome of it could be seen during operation and utilization of the project/building. In the investigation study conducted for the hospital project PC-1 works for, some social sustainability criteria were identified.

A studio for individual creativity, where the purpose of such studio in a hospital project is to facilitate and make it possible to shift the focus from the promotion of physical health to include the promotion of physiological health. The studio can also be used by the hospital staff who is in need of expressing themselves which will lead to a reduction of the stress level.

Safety and security during operation is an aspect brought up by all interviewees. In relation to social sustainability many of the interviewed respondents related the concept with safety and security. Safety and security in operation reflects how end-users feels and interact with the facility. As interviewees revealed, once end-users operate and enter a facility they should feel the sense of safety and security the facility is communicated.

Creating a science-centre in the hospital project is an additional feature that will be utilized during operation, which in turn will increase the social sustainability within the project. The purpose of the science-centre is that youngsters and elderly have the opportunity to take part of exhibits that have a focus on health care, by that an interest can be brought up and positive memories are built.

Social Sustainability Criteria at Operation Phase	Identified by the following actors
Science centre	PC-1
A studio for individual creativity	PC-1, PrC-1, PrC-2
Mentorship	PrC-1, PrC-2, PrC-4
Safety and security	All of them
Language café	PrC-1

Figure 9 - Social sustainability criteria during operation emerged from interviews

Both PrC-1 and PrC-2 mentioned activities that can be performed during the operation phase, which contribute to social sustainability. When the facility is a commercial building such as hospital, office building, hotel etc. end-users working within in the building can act as mentors for young students. The students will have the opportunity together with their mentors to visit their working places, and by that get an interest and an understanding of how is it like to be working in an office or a hospital. Language café is an additional activity that can be taken into consideration which were mentioned by PrC-1, interaction sessions in the buildings café for newcomers can be arranged with a purpose of improving their Swedish language.

4.3 Social Sustainability Requirements in Procurement

According to some of the interviewees, social sustainability requirements were not included within the procurement process in their respective organisations at all. But according to PC- there are intentions within the organisation of applying social sustainability requirements in procurements, mainly on collective agreements and fair trade. Although, he further indicates the hardship of doing it since it is hard to formulate and evaluate such requirements. On the other hand, companies owned by the municipality of Gothenburg, have experience in applying social sustainability requirements in some of their projects. The most common formulated requirements which had been demanded from contractors, has been providing employment opportunities. In addition, private project developers who's acquiring land from the municipality are and will in future be applying social sustainability requirements, since the municipality in their land allocation agreement are demanding social sustainability requirements. Since all the requirements that has been established in procurements has followed the model introduced by the municipality of Gothenburg, the next section is introducing the model in a more comprehensive manner.

4.3.1 Gothenburg City Social Consideration Model

As aforementioned, the municipality of Gothenburg decided in 2014 a target in the budget that 50 percent of all service procurement should be performed with social consideration. In order to facilitate for administrations, companies and industries within the city of Gothenburg working with social consideration, a pilot project was executed with the intention of developing working methods concerning social consideration. The pilot project lasted for two years where seven of the cities owned administrations and companies were involved in both designing and assessing developed working methods and templates for requirements- and conditions formulation. The focus during the pilot project was limited to the four aspects below, which has been introduced by the EU-commissioner as aspects to be included while procuring with social consideration.

- Employment opportunities
- Compliance with employee's right
- Social integration
- Equal opportunities

The pilot project resulted in a labour market related model which create employment opportunities for groups which stands far from the labour market and thus stronger the social integration within the city and finally provides equal opportunities for everyone. The identified prioritized target groups are the following;

- Young people

- Foreign-born
- People with disabilities

The model guides contracting authorities to formulate requirements and provides requirement alternatives to utilize. However, before introducing the alternatives, it is essential to have knowledge of how the requirements can be formulated. The contracting authority might choose formulating the requirement in accordance with the following options;

- Requirements on the suppliers
- Evaluation criteria
- Specific contract condition
- Award criteria for renewed competition

The type of requirements suggested is only “requirements on the suppliers” and “specific contract condition”.

Alternative 1 – Documentation requirement in the tender

Since Gothenburg city works with social sustainability, their suppliers should be able to explain and outline how they within their organisation works with social sustainability. This alternative is a “requirements on the suppliers” type and can be incorporated in procurement as an attachment to the tender where the bidders explain how they work with social sustainability. During the contract period the city of Gothenburg will then continuously follow up the development of the suppliers work with social consideration in their organisation.

Alternative 2 – Future discussion

The second alternative can be used as a specific contract condition, which gives the contracting authority the right to raise a discussion with the prospective contractual supplier about the opportunities of providing employment to people who is far from the labour market. However, it is essential to note that such requirements don’t bind the supplier to any commitment expect participating in the discussion. The contracting authority is given the right to present a proposal for the supplier where they together process it in order to achieve the prioritized goal.

Alternative 3 – Employment

This alternative should be used as specific contract condition where the contracting authority can approach it as a “should-requirement” about general temporary employment. This requirement binds the supplier to employ X persons up to 720 days or the maximum time that the central collective agreement statutes, where their duties should primarily be related to the implementation of the actual contract. During the recruitment process the supplier will be supported by the labour market function within the city in which will be in charge of the recruitment process. Although, this specific contract condition can still be met even though the recruitment process is not performed via the city’s labour market function. Instead, the supplier himself can independently carry out the recruitment process if preferred.

Alternative 4 – Apprentices

This requirement should also be used as a specific contract condition where the contracting authority may require that the supplier must employ X amount of apprentices under the current

contract, who have completed a construction programme on high school level or a validation programme. The apprentice employment should correspond to a fulltime job during the contract period, but only up to 4000 hours according to prescribed rules and collective agreements for each profession. However, this requirement or condition will not be valid or applied as long as the supplier can prove that they already have apprentices employed equivalent of 1 to 10 employees.

4.3.2 Example of Social Sustainability Requirements in Procurement

As stated previously in this chapter, only a few of the interviewed clients applied social sustainability requirements in their procurement of construction contracts. The requirements were all similar in purpose but occasionally different in formulation. The findings from the interviews clearly confirms that labour market initiative is the most common requirement client applies in procurement. However, other requirements were mentioned, but these weren't considered as social sustainability requirement by the interviewed actors whereas in the theory that might be the case.

Egnahemsbolaget is a public real estate company which is owned by the city of Gothenburg and according to both PC-5 and PC-7 they have taken the initiative to establish social requirements in all their procurements. Since the company is owned by the city of Gothenburg the social consideration model has been utilized. Alternative 3 has been used mostly by Egnahemsbolaget where they have set requirements on the contractor to employ two individuals from the identified groups. The requirement has been formulated as a specific contract condition, and approached as a shall-requirement except once where they formulated the requirement as evaluation criteria. The requirement was communicated as if anyone of the bidders can afford more than two job positions, they will be rewarded with a deduction from their bid during the tender evaluation.

Poseidon is an additional real estate company owned by the city of Gothenburg, and they have also set social requirement in their procurement of construction contractors. Unlike Egnahemsbolaget, Poseidon have mainly utilized alternative 2 in their procurements. The authors of this thesis were given the opportunity by PC-3 to look into the administrative regulation for a project where the tender process is ongoing. The requirement concerning social consideration was formulated as following;

“In this construction, the aim is to employ one person from the prioritised group during the construction period. When signing the contract, the client addresses the issue of the contractor's ability to provide employment.”

Since this issue will be addressed once the contract is signed, the contractor has to agree upon participating in the discussion of employing one person already at the stage of tender. However, this requirement clearly indicates that the contractor is not bounded to employ as long as he can show that he is not able since there is a lack of need, or that he recently have employed someone else in other projects. Moreover, Poseidon have in the same construction set requirements on social and ethical conditions. The requirement was formulated as if the contractor or anyone of the subcontractors hires foreign staff they should be able to afford certificate showing which social security legislation they are covered by in their respective country, if the non-wage labour costs are not paid in Sweden.

Lokalförvaltningen has also taken into account social consideration in their procurement, and since they are owned by the city of Gothenburg they have followed the social consideration model where alternative 1,2 and 4 has been utilized. According to PC-4 in recent procurements alternative 2 is the most common one used since they believe that a future discussion generally satisfies both parties.

In addition, Skanska Real Estate and Skanska Nya hem are private clients which have communicated social sustainability requirement while procuring construction contracts. Providing job opportunities, internships and apprenticeships has been common requirements demanded by these clients. However, PrC-4 claimed that they do not set definite requirements on the contractor but it is more done in collaboration with the contractor. Since Skanska operate both as project developer and contractor, it is fully understandable that they do not set direct requirement in their procurement of themselves. Instead for each project a social agenda plan is established with the purpose of creating a consensus for the project strategy and common social promoted activities between the client and the contractor.

5 ANALYSIS

The subsequent section of this thesis aims to analyse the result emerged from the interviews. Initially the different suggested definitions are analysed in relation to what has been studied by other researchers, and further why different clients define the concept differently. In the second part of this section the different criteria emerged are analysed in relation to the one identified by the literature. Finally, a maturity assessment of the interviewed actors is performed in the last part of this section.

5.1 Social Sustainability Definition – An Analysis from Various Perspective

The literature review carried out earlier in this thesis clearly shows that the social sustainability dimensions is a multi-lateral concept embracing a variety of different definitions, and the same applies for the case of the findings emerged from the interviews. The findings from this study indicates that different clients define social sustainability differently, and their definitions are mainly concerning their own contribution and actions towards achieving social sustainability or the interviewees personal view of the concept. In addition, previous studies confirm the fact that the concept of social sustainability in the context of the construction industry, has various interpretations depending on the stakeholder's perspective and the phase of the project life cycle (Valdes-Vasquez & Klotz, 2013). The two interviewed politicians clearly indicated the importance of considering the community or the society as a whole, where they perceive social sustainability from a broader perspective. The indicators of social sustainability brought up by the politicians, when defining social sustainability align with some of the definitions reviewed during the literature review of this study.

A comprehensive literature review carried out by Åhman (2013) elaborates that themes such as: Basic needs and equity, education, quality of life, social capital, social cohesion, integration and diversity and sense of place are the indicators which have been covered within several definitions in the academia. The indicators represent defining social sustainability and exploring the concept from the social science point of view. Since the decisions taken by politicians impact the overall society, their approach of accomplishing social sustainability should be relatively comprehensive which can foster the society as a total. Fortunately, the politicians who were interviewed throughout the study, have a broader view and approach of defining the concept which is aligning with several definitions acquired throughout the literature review. Moreover, the term “development social sustainability”, developed by Vallance, et al. (2011) can be observed within the implications extracted from the interviewed politicians' standpoint where the tangible and less tangible necessities in a society are tried to be captured. Vallance, et al. (2011) have assembled the comprising elements concerning “development social sustainability” from several literature and mentioned them as: inter- and intra-generational equity, distribution of power and resources, employment, education, provision of infrastructure and services, access to influential decision-making fora and so on. Consequently, the interviewed politicians took a similar standpoint by emphasizing on some or all of the aforementioned elements as significant for developing a socially sustainable society.

McKenzie (2004), claims that in general sustainability has been defined as a condition and is measured with a series of indicators. He addresses the definition, “*Social sustainability is a life-enhancing condition within communities, and a process within communities that can achieve that condition*” as a “working definition”. The associated indicators are listed as: equity of access to key services, equity between generations, preservation of positive aspects of disparate cultures and the support of cultural integration when desired by individuals or groups,

widespread political participation of all citizens in various political activities, system of transferring the awareness of social sustainability among generations and sense of community responsibility to preserve this system, a collective mechanism for the community to identify its strengths and needs, a mechanism which fosters community action for fulfilling their needs, mechanisms for political advocacy to fulfil the needs that can not be fulfilled by community action. In addition, PC-1, PC-2 and PC-3 presume the wellbeing of human as the focal point, when discussing social sustainability. The features, criteria, factors or indicators brought up during the interviews for defining social sustainability are clearly incorporated within the aforementioned indicators which can lead to the achievement of the condition social sustainability. In addition, PC-4's organisation solely emphasizes on providing employment opportunities when procuring construction contracts. Since PC-4 represents a public organisation, their procurement strategy comprises the elements of SRPP (Socially Responsible Public Procurement), a guideline developed by the EU commission for promoting socially responsible procurement within public authorities. The guideline clearly identifies the potential considerations that can be taken into account when procuring contracts, while the contracting authorities are allowed to take the decision of which considerations are relevant and should be taken into account during their procurement, depending on the subject-matter of their contract and objectives. PC-4 has opted to concentrate on providing employment opportunities as a key criterion for executing social consideration, partly due to the current influx of newcomers to Sweden and urgent demand of integrating them to the labour market and ultimately to the society.

Patil, et al. (2016) identifies local development as a constituent to sustainable development and categorises it into two fundamental elements, increase in property value and residential development of locality. The approach taken and experience gained by PC-5 and PC-7's organisation resembles what Patil, et al. (2016) argues for. Their approach and initiative of building new residentials in financially disadvantaged areas can lead to physical and emotional integration of several clusters in a society, resulting into sustainable development.

PC-6's vision for accomplishing social sustainability is broken down into three perspectives in terms of time length. They believe that, executing goals in short term and maintaining their accomplishments in medium term can lead to long term sustainable achievements. Since the social dimension of sustainable development is effective in the long run and tangible impacts can be seen when the social actions are preserved, PC-6's approach can lead to a lasting sustainable development in social terms.

The organisations represented by PrC-1, PrC-2 and PrC-4 are two business divisions of a leading construction company in Sweden. Although the two organisations might have a slightly different approach in tackling social sustainability, their actions determine to be a reflection of the overall social agenda existing within the company. Since, the two divisions operate in two different business areas, commercial buildings development and residential buildings development, their actions regarding social sustainability are shaped accordingly. As mentioned before, CCI actions are an existing social agenda within various divisions of Skanska, while the approaches taken for executing the agenda vary, depending on the business areas, conditions of the project and needs of the community. For example, Skanska Nya Hem, who develop residential buildings emphasize on the human element, individual and communal wellbeing, inclusion and so on, while Skanska real estate take into account external factors as well e.g., employment opportunities, education, capacity development of youth and so on.

PrC-3 focus on social integration of varying clusters in the society, by providing mixture of occupancy conditions, through which they believe can make the area attractive and appealing. This approach can lead to increase in property values in the area which Patil, et al. (2016) has refer to as local development.

5.2 Consideration of Various Criteria throughout Project Lifecycle

The various conducted literature associated with the concept of social sustainability, have identified a number of different criteria that can be taken into consideration throughout the project lifecycle. During the interviews, the authors attempted to extract criteria from the explanatory answers received rather than asking directly for rating or grading the importance of criteria. The interviewees were given the opportunity to elaborate their answers and talk freely around the subject and their actions associated with social sustainability. Around 21 different actions and considerations along the project lifecycle were brought up by the different clients, however in this thesis these actions or considerations will be referred to as social sustainability criteria, since the literature also refer to it either as factors, indicators or criteria.

A construction project lifecycle generally consists of five different stages, however only four different stages were considered for this study which is inspection, design, construction and operation. The stage of demolition which in the literature was identified as one of the stages where social sustainability criteria can be considered, will not be considered in the case of this study since no one of the respondents brought up any actions or consideration related with the demolition phase.

All the criteria brought up are summarised in the Figure 10 below, the figure illustrate further the frequency of the criteria brought up. The frequency indicates the number of the respondents considering the criterion as related and corresponding to social sustainability. A criterion with high frequency does not necessarily possess high level of importance, but indicates that it is frequently considered by multiple clients. On the other hand, a criterion with a low frequency can still be important from social sustainability perspective, but not considered or executed commonly by the interviewed clients. In overall, the criteria emerged from the interviews have largely been supportive of the criteria identified in the literature. However, there has been some newly identified criteria by the interviewed clients, which were mostly project specific and not that generic.

At the stage of inspection five different criteria were identified by the different interview respondents. As can be seen in the figure below, the criteria “Mixture of rental apartments and condominium” has been frequently brought up, mainly by the real estate clients who are involved in developing residential housing. Such criteria have not been mentioned in the literature, but it can be referred to as effects of local development since the purpose of this criterion is to mix two type of people with different economic status, and improve the value and the economical status of the community and the area. Effects of local development is a criteria introduced by Patil, et al. (2016), and the purpose or the intention of such criteria is very much similar to the” Mixture of rental apartments and condominium” criteria. According to Patil, et al. (2016) projects should result in positive impact on local economy such as increased property value and residential development of locality. This criterion is very generic in its formulation, but gives possible options of obtaining its purpose by executing other actions. Since all of these clients deals with residential housing, it is obvious that they will be executing actions that aligns with their portfolio in order to achieve local development within the different communities.

According to Shen, et al., (2007) community amenities is a criterion that can be taken into consideration during the phase of inspection and that criteria were brought up only by the two interviewed politicians. Since politicians have a greatly impacting role on developing the infrastructure of the built environment, it is obvious that they take such criteria into account in an early stage of the project life cycle, unlike the public and private clients. Stakeholder engagement at the inspection phase gained around 31 percent of frequency by the interviewees. Engaging stakeholders was performed by the different clients, but mainly at the stage of zoning. Since a conformance among surrounded community, local authorities and other stakeholders is crucial to avoid appeals against the construction, engaging stakeholder in early stages and communicating with them can ease the construction process and satisfy the needs of stakeholders.

<i>Phase</i>	<i>Social Sustainability Criteria</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Inspection</i>	Community amenities	2	15,4 %
	Social consideration in procurement	7	53,8 %
	Stakeholder engagement	5	38,5 %
	Mixture of rental apartments and condominium	7	53,8 %
	Security consideration	2	15,4 %
<i>Design</i>	Security Design	13	100 %
	Accessibility	13	100 %
	Social Design	13	100 %
	Social interaction	13	100 %
	Public engagement	5	38,5 %
	End-user amenities	1	7,7 %
	Evaluation of CCI – actions	2	15,4 %
<i>Construction</i>	Health and Safety	13	100 %
	Labour market initiatives	8	61,5 %
	Inspiring and motivating activities	3	23,1 %
	Disturbance, pollution and public safety	13	100 %
<i>Operation</i>	Science centre	1	7,6 %
	Mentorship	3	23,1 %
	Security and safety	13	100 %
	Language café	1	7,6 %
	A studio for individual creativity	3	23,1 %

Figure 10 - Frequency of social sustainability criteria raised by interviewees

Dempsey, et al. (2011) argues that security and safety of the neighbourhood community is a fundamental part of social sustainability. He further elaborates that if a neighbourhood is safe and secure, residents will feel secure in their social interactions with other people and participate in community activities. Security consideration during inspection, security design during design phase and safety and security during operation are all criteria mentioned by interviewees, which is associated with developing a safe and secure community or neighbourhood. Security consideration was mentioned by the tow politicians, where they emphasised the importance of developing a transparent neighbourhood with a variety of different types of buildings, such as residential housing which overlooks the commercial buildings and business within the city centre. This is aligned with what Dempsey, et al. (2011)

explains as active frontage, which includes installation of windows directly overlooking streets which in turn is supposed to increase comfort, safety and security among people while interacting by one and another.

Including security consideration for the final users in the project design is an action performed by some clients. However, it is still believed that other clients also take security into consideration while designing the facility, regard the fact that they did not mention it during the interviews. Design for security or security design is frequently mentioned in the literature, which emphasizes installation of security alarm and security screen etc. (Shen, et al., 2007). According to PC-4 a question of how is always asked while discussing safety and security, and in their organisation they always strive to build secure and safe communities taking into account lighting, window placement, entrances, alarm- and locking system, technical advice and social impact analysis for the area.

Accessibility and social design are two criteria during the design phase who gained 100 percent of frequency, which means that they were mentioned and considered by all the interviewed respondents. This is indeed also consistent with findings of existing literature and studies, where both accessibility and social design has been identified as a major concern of social sustainability in the context of construction (Klotz & Valdes-Vasquez, 2013) ; (Valdes-Vasquez & Klotz, 2013). The concept of social design was not directly mentioned by the interviewees instead their actions towards achieving a design which places the final-users in centrum was considered by all interviewees. However, the client approaches of applying social design differed from each other. For instance, in the case of PC-1's project, social design was applied in a very comprehensive way unlike the other interviewed clients. Since PC-1's project is a hospital project which is commercial and should be accessed by everyone, it facilitates and gives more opportunities for applying such concept as social design in a more comprehensive way. In addition, a comprehensive feasibility study was conducted for that specific project by a number of actors both academicians and industry professionals, with intention of developing a strategy of how to include sustainability in the physical planning. This in turn made it possible to consider a lot of social sustainability aspects throughout the design of the hospital area.

In terms of accessibility in the built environment, the literature associates it through actual provision of services and facilities or by the means of accessing them (Dempsey, et al., 2011). In addition, accessibility is also referred to as provision of a built environment that allow all types of people, both the one who have full mobility and people with reduced mobility- or orientation capacity of fully utilizing the built facility. As mentioned previously, accessibility is always taken into account by all interviewed clients during the design phase of the project. The reason that accessibility gained that much attention is partly due to existence of accessibility requirements in the Swedish planning and building act (PBL). These requirements are generally limited to include people with reduced mobility- and orientation capacity, but there are no such requirements which is related to the provision of surrounded services or the facilitation of accessing them. However, some clients indicated the importance of providing accessible path walks and so forth in order to create a sustainable and attractive community.

Social interaction is an aspect that has gained a huge attention by different literature in relation to social sustainability. According to Almahmoud & Doloi (2015) providing places that enable social interaction and group formation is vital for creating a sustainable community or neighbourhood. In addition, Klotz & Valdes-Vasquez (2013) argues that during the project design, human interaction consideration for the final users should be included. Both the literature and the findings from the interviewees are consistent with each other in terms of the

great significance social interaction can contribute to social sustainability. What has been extracted from the findings illustrate that social interaction can be obtained by applying different approaches, such as common meeting points, cultural centres within the community, mixing different types of people within the same building etc.

In construction projects, the health and safety issues concerning project participants and surrounded community or public have been a common concern of social sustainability, acknowledged in various conducted literature (Zuo, et al., 2012). The health and safety criteria during construction gained a high level of frequency by the interviewees, although the majority of the clients indicated that the aspect of health and safety should be the responsibility of the contractor. One interviewee respondent confirmed it by arguing that if the contractor is not able to take such responsibility during construction, then we as client should act. However, apart from the inherent frequency of health and safety, the high level of frequency given to this criterion could be partly due to existence of relevant regulations and higher level of education and awareness with regard to health and safety in today's construction.

Same applies for the disturbance, pollution and public safety criteria which is considered by the clients to be the contractor's responsibility. Since all interviewed clients unanimously agree that their contractors are sufficiently aware of the importance of such criteria, they do not necessarily have to take them into account since the contractor is already doing that. However, they still agree that such aspects are of huge importance in terms of achieving social sustainability in the projects. In summary, this is aligned with finding from a study conducted by Farzanehrafat, et al. (2015) where the criteria of health and safety gained a higher level of importance from industry professional point of view than academics and students. The reason argued by Farzanehrafat, et al. (2015) could be due to the main responsibility of this criteria implementation which goes to construction contractor firms and thus more taken into account by the industry professionals.

Labour market initiative is a criterion which has been demanded from contractors by clients as social sustainability requirements in procurements. The intention of such action has been to provide job opportunities for either identified groups of people who are far from the labour market or locally identified labour. Comprehensively, all literature identified employment opportunities as a major social sustainability feature, where Klotz & Valdes-Vasquez (2013) argues that a construction project should be designed so that employment opportunities are provided for women, young people, unemployed and other minority groups within the surrounding community. Patil, et al. (2016) holds a similar position by identifying employment of labour as a sustainability development criterion, where he describes it as the promotion of employment opportunities for local labours within the community. As seen, the literature always relates employment and job opportunities with local labour and surrounded community, which has not been the case for some of the interviewed clients and the Gothenburg social consideration model. They provided jobs for already identified groups of people within the whole city, and did not consider the community itself where the construction was supposed to be performed.

The criteria and actions applied during the operation phase were relatively different than that defined in the literature. The literature emphasised on criteria such as social equity, public accessibility and social interaction. However, these criteria are taken into account by the respondents at the design stage which can be seen and utilized during the operation and therefore were not particularly associated with the operation phase. For instance, in terms of social equity PC-4 mentioned that the hospital during operation should be accessible by

everyone and all people should have the same right to all hospital services. This aspect has been taken into account already at the design stage and can be experienced at the stage of operation. Therefore, the social sustainability criteria concerning the operation stage are very much depended on the design stage. Instead during operation, the actions considered are more creativity oriented and sometimes not directly linked to the operation of the facility. Mentorship for example which were brought up by both Skanska Nya Hem and Skanska Real Estate, is an action that reflect the fact that it is not directly linked to the operation of the facility. However, it is an action that contribute to the social sustainability of the community and the society.

5.3 Maturity of Organisations in Operationalizing Social Sustainability

In order to determine a maturity of an organisation in utilizing a certain system, different maturity models have been developed. Hynds, et al., (2014) argues that a maturity model, explains over time an organisations development and improvement of specific capabilities. They further claims that a maturity model for a specific capability is based on empirical data emerged by studying the organisations current capability comprehensively. The overall purpose of all developed maturity models is described by Masalskyte, et al., (2014) as “it shows where you are today, where you should go in the future, what is the value of doing so, and how to get there”. Maturity models generally consists of either four or five levels of maturity, with each level illustrating the capability of an organisation against an agreed scale. In the context of the construction industry, there has been a limited development of sustainability maturity models. However, numerous sustainable assessment systems such as leadership in energy and environmental design (LEED) and building research establishment’s environmental assessment method (BREEAM) have been developed, but most of them have been limited to the project level. These assessment system has also been restricted to assess environmental aspects rather than soft aspects such as social (Goh & Rowlinson, 2013).

Since this study is carried out in Skanska Gothenburg house department, who is a major construction contractor in the region, the aim of the study was focused on identifying the utilization and operationalization of the concept and procedures of communicating it by their clients. In addition, assessing the maturity of each organisation interviewed during this study would require a comprehensive and detailed investigation of the internal policies and strategies, performances and capabilities of executing social sustainability, which was not in scope of this study. Thus, the maturity of each interviewed organisation based on a specific model is not carried out, but a maturity overview is presented concerning the usage of various identified criteria of social sustainability and communicating the concept during procurement. The overall maturity assessment of each organisation is based on a combinations of pervious mentioned factors.

Once discussing maturity of clients in operationalization of the concept social sustainability, it is essential to initially justify what is maturity in the context of this study, how is it measured and how the concept can be operationalized. According to the oxford dictionary maturity can be described as the state, fact, or period of being reached in the most advanced stage in a process. In addition, as mentioned in the limitation part in section one earlier in this thesis, operationalization of social sustainability has been restricted to the actions and contribution of the respective client and how the concept is communicated by the clients with other stakeholders. Two main factors concerning operationalization of the concept for this study are identified to determine the maturity of the interviewed organisations. Namely, the frequency of criteria mentioned during the interviews and the experience of setting social requirements during procurement are the main assessment factors. It should be underlined that the maturity

assessment carried out below is not an absolute determination for rating the maturity level of the entire organisation. However, the assessment done below which is based on the data extracted from the interviews can give a maturity overview of their accomplishments in terms of social sustainability.

A first maturity assessment will be associated with the set of actions and criteria each client has been considering throughout the project life cycle. A total of 21 social sustainability criteria in the inspection, design, construction and operation phases of a project are compiled, from both literature and conducted interviews. The ratio of the number of criteria considered by a single organisation to the total number of criteria compiled throughout the study can illustrate the contribution of each organisation to social sustainability. Since the acquired percentage is based on the numbers of criteria rather than the importance of them, the result does not necessarily indicate that contribution to social sustainability of an organisation with higher ratio is valued more than one with a lower ratio.

As can be seen in the Figure 11 below, the maturity ratio of each organisation in relation to the total maturity ratio is relatively low, although the ratio range do not differ that much between the organisations. However, there are a significant difference between the one acquired high percentage of maturity ratio and the one who acquired the lowest maturity ratio. The organisations rated with lower ratio of maturity have during the interviews acknowledged the fact that their knowledge concerning the concept is low and do not have a specialised group or person dealing with it in the organisation.

<i>Interviewed organisations</i>	<i>Number of criteria considered out of total</i>	<i>Experience in setting social sustainability requirements</i>
Partille Municipality	10/21= 47,6 %	NO = 1 %
Västfastigheter	11/21= 52,4 %	NO = 1 %
Egnahemsbolaget	12/21= 57,1 %	YES = 100 %
Lokalförvaltningen	10/21= 47,6 %	YES = 100 %
Poseidon	10/21= 47,6 %	YES = 100 %
Partille Bo	8/21= 38,1 %	NO = 1 %
Sverigehuset	10/21= 47,6 %	NO = 1 %
Skanska Real Estate	14/21= 66,7 %	YES = 100 %
Skanska Nya hem	13/21= 61,9 %	YES = 100 %

Figure 11 - the table illustrate the number of criteria considered by a single organisation out of the total number of criteria compiled throughout the study and which of the interviewed organisations have set social sustainability requirements

On the other hand, the organisations who have incorporated social sustainability in policies and strategies on institutional level or have a predefined social agenda were observed to be having more knowledge about operationalizing the concept in day to day practices. Since the concept of social sustainability is still in a development phase and there is yet no agreed consensus among academicians as well as industry professionals on how to tackle the concept, it is understandable that the maturity level of the organisations is low. As one of the interviewees expressed it;

“we are now at a baby stage regarding social sustainability, as we were few years ago concerning the environmental sustainability”.

As mentioned above, this study clearly indicates that in organisational term, a wide spread of how much resources each clients possess in terms of social sustainability is curial for obtaining effective social sustainability efforts.

The second maturity assessment will be associated with the experience of each client in setting social sustainability requirements. The findings from the interviews have illustrated that some of the interviewed clients have concretely defined the social requirements that they are willing to incorporate into their social agenda while others are still on the way to scrutinizing the aspects of social sustainability that they want to work with. According to this study and all the interviewed clients, while discussing social sustainability requirements, labour market initiative has been a common requirement to include in tender documents in order to increase employment in the city. However, this action dose not necessarily has to be formulated as requirements in construction procurement, but instead can be done on own initiative by respective organisations within the industry. Some clients who still have not demanded social sustainability requirements in procurement believe and indicate the fact that contractors should take own responsibility in terms of providing job opportunities, internships and apprenticeships. Not only labour market initiative has been formulated as social sustainability requirement, other requirements concerning social and labour rights has also been formulated. Furthermore, there are intentions from different organisations in formulating fair-trade requirements on construction materials.

As can be seen in Figure 11 above, majority of clients both public as well as private have some experience in establishing social sustainability requirements in procurement. Since public clients are very much affected by decisions taken by the state or local political administrations, their approach towards initially introducing social sustainability requirements in procurement slightly differs from the private clients. One public client who has no experience of setting social sustainability requirements, argued that for his organisation in order to set such requirement as labour market initiative it should first be introduced from governmental intuitions above them in the hierarchy. They further claimed that they are afraid of setting such requirements since it can affect the competition among bidders, therefore it is essential to formulate the requirements in a way that it dose not affect competition. On the other hand, private clients approach is more related to the internal policies, strategies and interests in taking social responsibility towards the society. In addition, the study shows that private clients and public clients see different benefits with the establishment of social sustainability requirements, which has led to different formulation of the same requirements. In the case of the public clients, they perceived the benefits of social action such as labour market initiative to promote the unemployment within the whole municipality. While for the case of the private clients, they more associated the labour market requirements with the local community where the construction project is located.

The clients who do not have any experience of requiring social sustainability actions in procurements are struggling with the formulation of the requirements. In order for clients to be able to set social sustainability requirements on their suppliers, it is essential to first have an internal, well established social sustainability agenda which can easily be communicated. Furthermore, the requirement should be clear, and the organisation should in advance determine what kind of requirement to demand and how to formulate the requirement. In the European Commission publication, *Buying Social – A Guide to Taking Account of Social Consideration*

in Public Procurement, examples of areas where social sustainability requirements can be established are provided for procurement authorities in order to facilitate the formulation of the requirements. One of the interviewed client have utilized the guide in order to formulate their requirements, and more client should be encouraged to act in a similar manner.

As can be obtained from both maturity assessment figures, the clients who have taken into account several criteria and have experience in setting social sustainability requirements can be observed as having come further in the process of operationalising the concept. Moreover, the most effective way of utilizing the concept social sustainability and obtaining a comprehensive impact of the concept on a society, as confirmed by some of the clients, is integrating the concept into the whole supply chain. Thus, communicating social sustainability during the procurement phase, could push all the actors of a project to strive towards a common goal and mature the industry as a whole. A similar approach can be seen in carrying out environmental sustainability in the construction industry, where every aspect of it is communicated in deep details with all the actors, accomplishments are followed up and measured which allows and facilitates improvement.

The overall maturity assessment for each of the interviewed organisations was performed by combining the two main assessment factors, frequency of criteria taken into account and experience of setting social requirements in procurement, as can be seen in the equation presented in Figure 12 below. Each interview respondent was asked to rate the importance of the two assessment factors from a scale of 0 to 10. The total amount of the both values should be equal to 10, as illustrated below.

Importance value of considering criteria during project lifecycle + Importance value of having experience of social requirements in procurement = 10

While calculating overall maturity level of each organisation the below presented equation was utilized. The mean value of each assessment factors was calculated by considering the answers received from the interview respondents and these values were used as weighing factors for each assessment factor to obtain the overall maturity level. The “MVC” was calculated to 7 and the “MVSR” was calculated to 3. The frequency of criteria for each organisation was extracted from Figure 11, under the second column in the table which illustrate the number of criteria considered by each organisation out of total. Social requirement in procurement was also extracted from Figure 11, under the third column which illustrate each clients experience in setting social sustainability requirements. The value used for the organisations with no experience in setting social sustainability requirements is 1 %, this in order to be able to illustrate it later in Figure 13. If zero was used for no experience in setting social sustainability requirements, it will not be shown in the overall maturity assessment table. An organisation who have considered all the criteria and have the experience of putting social requirements in procurement would get a value of 100 % corresponding to overall maturity level.

$$\text{Overall Maturity Level} = (MVC \times X) + (MVSR \times Y)$$

Figure 12 - The developed equation for assessing the overall maturity level of the interviewed organisations

MVC (%) = Mean importance value of considering criteria during project lifecycle

X (%) = Number of criteria considered out of total

MVSR (%) = Mean importance value of having experience of social requirements in procurement

Y (%) = Experience in setting social sustainability requirements

As can be seen below in Figure 13, the three different maturity values are presented. The purple coloured horizontal line shows the overall maturity of each organisation, which combines both assessment factors that are presented in form of blue and orange horizontal lines. Skanska real estate turned out to be the most matured among the interviewed organisations. However, this can not be generalised since this assessment is based on one time interviews and with one or two representatives of each organisation.

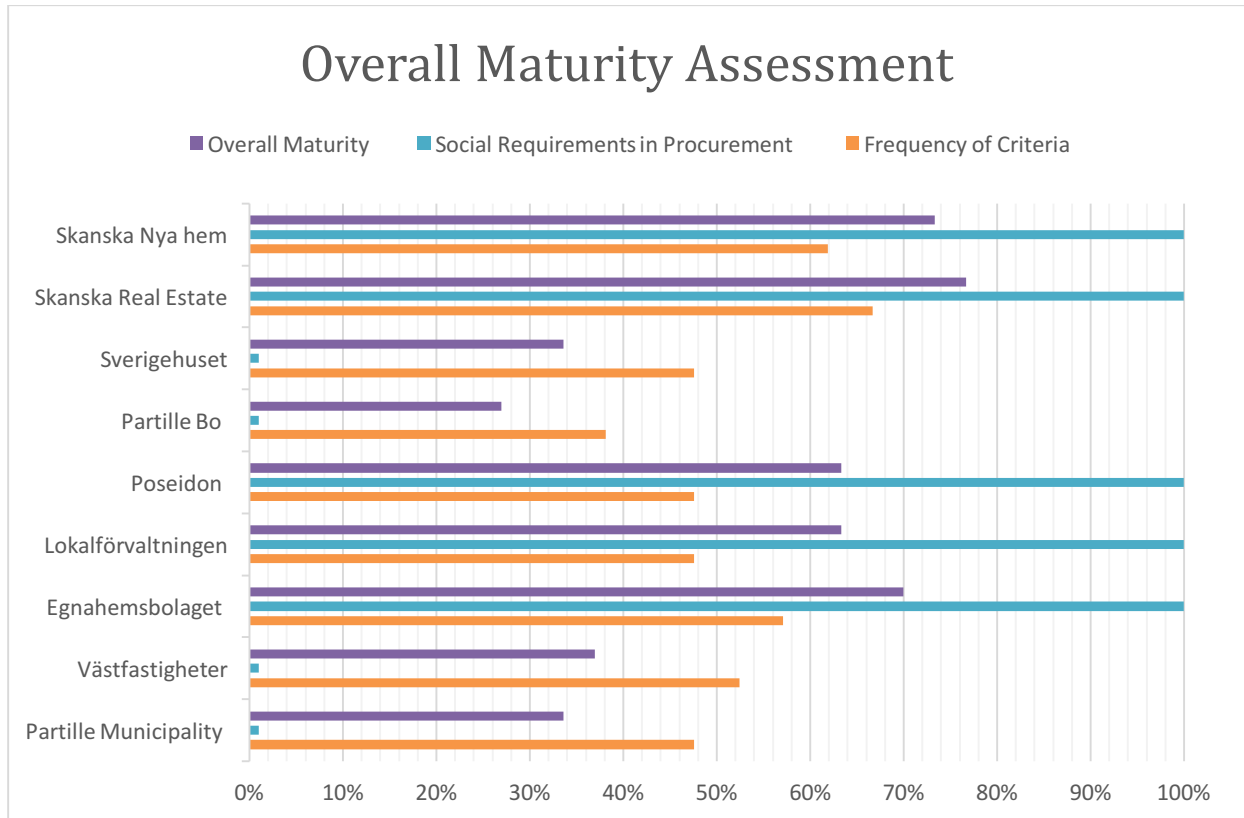


Figure 13 – The diagram illustrate the overall maturity level of all interviewed actors combining the two assessment factors

The need and will of incorporating social sustainability into construction projects can be easily observed in today's practices. However, the achievements of the interviewed organisations are not on the same level, while an inclination towards having a parallel progress is existent. Since, social sustainability is pragmatically in the development phase, the concept has not been institutionalized on strategic level of all the interviewed organisations. Consequently, a need in the society, political decisions and efforts of the industry professionals signal an optimistic progress of the concept social sustainability in the construction industry.

6 DISCUSSION

Social sustainability today is a concept in chaos, where no universal definition of the concept can be provided either by academician or by industry professionals. As the sustainability concept itself, social sustainability is neither absolute nor a constant. The concept of social sustainability has to be observed as dynamic which will change over time in a place. As we could observe during the study, many of the interviewed persons connect often social sustainability with providing employment opportunities. This for us clearly indicate that the concept is very dynamic, since there are a change in today's Swedish society and people from all around the world are immigrating to Sweden. This in turn increases the unemployment rate within the country and therefore there is a need of decreasing that, and based on this fact many of the interviewees related social sustainability with employment. Moreover, the concept as mentioned previously is dynamic depending on the community and area. Therefore, social features should not be applied on every area or be of concern for every community. Instead each community and area have its own social needs and it should be clearly investigated in what these needs might be and approach them accordingly.

The findings of the thesis illustrated that social sustainability can be defined differently, based on perspective and depending on the context. The three main parties on the client's side, politician, public and private clients, who have direct or indirect impacts on construction projects and built environment were interviewed during the study. All three parties, politicians, public clients and private clients defined social sustainability based on their respective roles in the society and their own perspectives. For instance, the definitions acquired from politicians are generic and covering the needs of a society in terms of social sustainability as a whole, by emphasizing on social and economic wellbeing, social equity, accessible services, safety and security and so on, while public clients who deal directly with construction projects have a more "construction specific approach". In addition, the achievements of public clients in terms of social sustainability vary, based on the roles they play in the built environment and the type of projects that they undertake. Moreover, private clients have defined social sustainability based on their own understanding of the concept which depends on the existence of intra-organisational policies and strategies concerning social sustainability. Consequently, the clients, who deal with big scale projects and have a well established internal social agenda were observed to be having a more comprehensive approach of social sustainability.

As could be extracted from the findings of this study, some of the clients are afraid from setting social sustainability requirements in their procurements since the work with social consideration in procurements is relatively new and not that established. For the case of public clients where the public procurements Act should be followed, some of them are afraid from formulating requirements that might affect competition. If contractors find it hard to deliver the requirements, this might in turn decrease the amount of bids clients receive and only big contractors will be able to live up to such requirements. Another factor that we believe might hinder public clients from setting requirements are the value these requirements might bring. For instance, in the case of Gothenburg municipality one of the main purposes of introducing social consideration with focus on labour market initiatives in public procurement is to decrease the unemployment rate within the city which in turn will lead to less welfare benefits paid out. On the other hand, other public clients who do not have such responsibility as decreasing the unemployment rate or paying out welfare benefits do not observe labour market initiative as a main requirement to include in procurement.

If clients do not have sufficient experience in formulating social requirements, we believe that they should be encouraged to utilize the European commission guide “*Buying Social – A Guide to Taking Account of Social Consideration in Public Procurement*”. The city of Gothenburg has been inspired by the guide and have showed excellent progress in formulating social requirements. The guide introduces a number of several areas where social requirements can be demanded in procurement, therefore each client has to identify the needs of social contributions in relation to the contract matter. In the case of Gothenburg city, they identified employment opportunities as a major concern where they believed that it could be mitigated through procurements. Social impact analysis in these cases is very useful in order to determine the social needs of the surrounded community or area. Before formulating any requirements, we believe it is beneficial for clients to conduct a social impact analysis on the community and surrounded neighbourhood where the construction is going to occur in order to identify the actual social needs of the community.

7 CONCLUSION

The following chapter attempts to answer the three research questions established in the introducing part of this thesis. Later in the end of this chapter recommendation for future studies are presented.

How do the proposed clients of the Skanska building department in Gothenburg define social sustainability?

Sweden is a diverse society in terms of age, gender, religion, culture and so on, demanding a holistic perspective of the development paradigm comprising inter and intra-generational equity, the distribution of power and resources, employment, education, the provision of basic infrastructure and services, freedom, justice, access to influential decision-making fora and general ‘capacity-building’ as determined by Vallance, et al. (2011). The aforementioned elements are considered as crucial in terms of social sustainability by most of the interviewees, and incorporated in one way or another into the acquired definitions, while the approaches taken to implementing them in the context of construction varies, depending on the role, understanding, potential of impact and contribution of each organisation. Thus, as explored during the literature review, there is no “one common definition” of social sustainability among the interviewed organisations, while their efforts clearly show that these definitions are shaped in accordance with the contribution that each client can do.

What social sustainability aspect/actions are considered as relevant by the proposed clients of the Skanska building department in Gothenburg during the project life cycle?

The findings from the interviews clearly shows that a great amount of different criteria are considered by the different clients. Although some of these criteria has not been considered as social sustainability criteria by interviewed actors, the literature has identified such aspect to be observed as contribution towards social sustainability. In addition, there is a clear consensus and similarities between the different identified criteria. Some of the interviewed actors took into account very similar criteria, or performed similar action towards achieving social sustainability. An additional aspect that can be further concluded is that different actors considered different criteria depending on the nature of their operating organisation. For instance, one criteria were taken into account by almost all of the real estate clients who build residential building, but not taken into consideration by anyone else of the other interviewed actors. The different summarised criteria can be found earlier in this thesis, both in the findings and analysis sections.

What is the maturity level of the proposed clients of the Skanska building department in Gothenburg in operationalization of the concept social sustainability?

The maturity was decided based on the amount of criteria taken into account and the experience in setting social sustainability requirements in procurement. All interviewed actors work in one way or another with social sustainability, but not all of them have experience in setting social sustainability requirements in procurements. This has led to a decrease in a collective collaboration of various actors for achieving social sustainability in construction projects. Some of the interviewed clients appear to be mature on individual level in terms of having internal policies and well understanding of the concept, while we observed that communicating social sustainability on inter-organisational level is as important as on intra-organisational level.

7.1 Recommendation to Skanska

The following section attempts to provide recommendation to Skanska on how to benefit from the study, based on what has been extracted from the interviews. The social sustainability approaches and perspectives of various clients who were interviewed during this study were observed to be varying in small details, while a general inclination towards achieving social sustainability is existent. Since Skanska Gothenburg is a general contractor acquiring construction projects from various clients, this study can help them have a vantage point of the understanding of the concept social sustainability of their current and potential clients.

The following table presents an overview of different focus areas the various interviewed organisations communicated during the interviews. These focus areas have been summarised by the authors.

Organisation	Focus areas
Lokalförvaltningen Egnahemsbolaget Poseidon	- Employment opportunities - Suppliers control - Decent working conditions
Västfastigheter	- Social aspects in the physical design - Fair trade - Stakeholder engagement - Decent working conditions
Partille Bo Partille Municipality	- Safety and security - Stakeholder engagement
Skanska Real Estate Skanska Nya Hem	- Employment opportunities - Inspiring activities - Education
Sverigehuset	- Employment opportunities

Figure 14 - the table illustrates the different interviewed organisations focus areas

7.2 Recommendation for Future Studies

Social sustainability is an emerging concept in the construction industry, where stakeholders have adopted various approaches to contribute to a socially sustainable built environment. This thesis was carried out specifically for Skanska building department in Gothenburg, where the focus of the study was to investigate the experience and performance of their current and potential clients in terms of social sustainability requirements, so that the efforts of two major stakeholders, client and contractor can be aligned for building a sustainable built environment. Hence, this thesis explored the definition of social sustainability and the criteria that are considered during a project life cycle from different interviewed clients point of view. A continuation of this study could be, studying various stakeholders of one construction project in terms of social sustainability, where the efforts of these stakeholders are analysed, the alignment and conflict of interests are defined and which are the success factors for delivering a socially sustainable construction project can be identified. The methodology of conducting such study can be done by carrying out a case study on one specific project, the project should

be characterized by social sustainability meaning that the objective of the project is to achieve social sustainability.

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9 APPENDIXES

9.1 Appendix 1

Interview questions – Public Clients

Definition av socialt hållbarhet

- 1) Vad vet du om begreppet social hållbarhet?
- 2) Vad är din personliga syn på social hållbarhet?
- 3) Hur definiera ni social hållbarhet i er organisation? Varifrån kommer den definition?
- 4) Vad har bolaget för visioner och mål vad gäller social hållbarhet? Långsiktiga så som kortsiktiga?
- 5) Finns visionerna och målen nedskrivna i affärsplanen eller policies? Code-of-conduct?
- 6) Hur arbetar bolaget för att förmedla sina visioner ut gentemot olika intressenter? Samhälle? förfrågningsunderlag?
- 7) Har bolaget någon specifik person eller grupp som arbetar med social hållbarhet?

Om Ja: Har personen eller teamet inflytande i frågor som rör social hållbarhet?

Om Nej: Har ni tankar på att införa detta?

Sociala hållbarhetskrav

- 1) Har ni tillämpat sociala hållbarhetskrav vid upphandlingar? Om Ja: Hur?
- 2) Har ni ställt sociala hållbarhetskrav vid upphandling?

Om JA:

- a. Vilka var dessa sociala krav? Hur tillkom/uppstod dessa krav?
- b. Vad är syftet med att ställa kraven?
- c. Baserat på vad ställer ni dessa krav?
- d. Dessa krav ni ställer, vad för typ av krav är de? Skall-krav, bör-krav eller tilldelningskriterier?
- e. Var det generella, projekt-specifika eller organisations specifika krav?
- f. Vad blev det för effekt? Gav det något mervärde?

Om NEJ:

- a. Har ni någon idé på vad som skulle kunna utgöra ett socialt hållbarhetskrav?
 - b. Finns det ett intresse hos er i att ställa sociala hållbarhetskrav i framtiden?
 - c. Vad hindrar er i dagsläget?
- 3) Vad ser ni för möjligheter/fördelar med att ställa sociala hållbarhetskrav?
 - 4) Ser ni några utmaningar med att ställa sociala hållbarhetskrav?
 - 5) Hur vill ni att arbetet med att formulera sociala hållbarhetskrav ska se ut? Finns det något som entreprenören kan stötta med?
 - 6) På vilket sätt tror ni LOU kommer påverkas av EU nya direktiv (2014/24 paragraf 97)?
 - 7) Kommer ni fortsätta ställa sociala hållbarhetskrav i framtida upphandlingar?
 - 8) Hur ser ni på entreprenörernas bidrag till arbetet med social hållbarhet i byggsektorn?
 - 9) Hur värderar ni och följer upp kraven ni ställer i upphandlingsfasen?
 - a. Använder ni er av någon särskild metod eller kriterier för att bedöma/mäta

- insatserna av social hållbarhet? Om ja; Hur funkar denna metod?
- 10) Vilka rutiner har ni för att följa upp de sociala kravställningarnas inverkan under- och efter avslutad entreprenad?
 - 11) Utvärderar ni betydelsen av social krav baserat på och under hela projektets livscykel?
 - 12) Har ni någon metod för att värdera insatserna för social hållbarhet på samhällsnivå?

9.2 Appendix 2

Interview questions – Politicians

Definition av socialt hållbarhet

- 1) Vad vet du om begreppet social hållbarhet?
- 2) Vad är din personliga syn på social hållbarhet?
- 3) Hur definiera ni social hållbarhet på Partille kommun? Varifrån kommer den definition?
- 4) Vilka visioner och mål har ni på kommunen vad gäller social hållbarhet? Långsiktiga så som kortsiktiga?
- 5) Hur arbetar ni för att förmedla visionerna ut gentemot olika upphandlingsmyndigheter?
- 6) Har ni någon specifik person eller grupp på kommunen som arbetar med social hållbarhet?
- 7) Vad har ni för erfarenhet när det gäller social hållbarhet?

Sociala hållbarhetskrav

- 8) Vilka förväntningar har ni på upphandlingsmyndigheterna när det gäller sociala hållbarhetskrav i upphandlingarna?
- 9) Har ni någon idé på vad som skulle kunna utgöra ett socialt hållbarhetskrav?
- 10) Hur vill ni att eran upphandlingsmyndigheter formulerar social hållbarhetskraven? Skall-krav, bör-krav eller tilldelningskriterier?
- 11) Vad för sorts krav anser ni är lämpligast och ställa?
- 12) Hur mycket stöttning får de upphandlingsmyndigheterna när det gäller kravställning?
- 13) På vilket sätt tror ni LOU kommer påverkas av EU nya direktiv (2014/24 paragraf 97)?