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# The critical factors for the local government when implementing sustainability

*- A Case Study of City of Vancouver*

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## **Abstract**

**Title:** The critical factors for the local government when implementing sustainability: A case study of City of Vancouver

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**Keywords:** Sustainable development, Sustainable cities, Local government, Public management, Implementation, Change management, Critical factors

**Purpose:** The purpose of this thesis is to increase the understanding of the important elements for the local government when implementing sustainability in a city. By increasing the understanding of the important elements local governments are able to realize the critical factors in the implementation.

**Methodology:** Qualitative case study that combines an inductive and a deductive approach. A theoretical framework was developed based on existing theory. 20 semi-structured interviews was conducted in City of Vancouver. Pattern matching between our theoretical framework and the empirical findings resulted in an extended framework.

**Theoretical perspectives:** Sustainable development, Sustainable cities, Public management theory, Change management

**Empirical foundations:** Interviews with regional government, local government, businesses, non-profit organization as well as citizens, in City of Vancouver.

**Conclusions:** This study has resulted in an extended framework that has been elaborated by theory and empirical findings. The extended framework presents a description of the critical factors for the local government when implementing sustainability in a city.

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# 1. Introduction

## 1.1 Background and problematization

The world is facing big climate changes and due to the urbanization, cities need to carry the challenges that the climate change causes. The rapid global urbanization puts pressure on cities to handle all it entails (Statens offentliga utredningar, 2012). According to the United Nation, the world's population will increase from 3,5 million in 2008 to 6 million in 2030. In addition it is estimated that 60 % of the population will live in cities (United Nations, 2010). The global economy is also growing. In the year 2100 the economy will be 80 times greater than it was one century ago (Jackson, 2009).

In Europe, cities are responsible for 75 % of the energy consumption and greenhouse gas emissions. This puts pressure on the cities to take actions to become a more sustainable city. The urbanization is one of the most challenging and complex issues of the 21st century. Even so, there are not only negative aspects with the urbanization. Urbanization can contribute to increased productivity and efficiency as well as increased economic growth, which is beneficial to a country (Bouton, Cis, Mendonca, Pohl, Remes, Ritchie & Woetzel, 2013).

The developed countries normally use 25 % more renewable resources than the planet is able to reproduce. If everyone would consume in this manner, the earth needs to be three times as big in order to meet the needs. This is clearly not a sustainable way of living and it is important to change the behavior in order to give the next generations a chance to live in a prosperous world (Riddlestone & Simmons, 2008). Therefore there is a need to establish cities with structures, functions and contents that can contribute to a country without net emissions of greenhouse gases. In order to reach this target, it is important to understand that humans are the most important actor in a city (World Commission of Environment and Development, 1987). Along with the increased consumption, the concept of a sustainable society has been given more attention (Joss, 2011a). Moreover, the development of a sustainable society is depending on the ability to solve problems and change behaviors. It is also important to possess good leadership, communication and decisiveness together with a long-term perspective. It is a time consuming process to change behaviors and develop climate smart solutions. Therefore it is important to take actions immediately, before it is too late (WCED, 1987). The capacity of the society to handle these issues will determine how the

development will proceed and the outcomes of it (Statens offentliga utredningar, 2012).

The concept of sustainable development has been elaborated during the last decade (Jepson, 2004; Paterson & Saha, 2008). Efforts have been made to describe sustainable development and the WCED describes it as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 43) This idea contains two fundamental concepts (1) the concept of needs and (2) the concept of technical and social limitations that might determine the environment’s ability to meet the needs of today and tomorrow. This is due to the fact that the satisfaction of human needs is important in sustainable development. The sustainable development demands to meet all basic needs of all people and give them the opportunity to achieve a better life. If the standard of living goes beyond the basic needs, it must possess a long-term perspective in order to be sustainable. Broadly defined, sustainable development work in order to achieve harmony between humans and nature (WCED, 1987).

Although lots of different initiatives have been done it is commonly known that sustainable development search for consensus between the three pillars of economic development, social equity and environmental protection (UN, 2010). The first attention towards the importance of sustainable development in cities was portrayed in the Brundtland Report, 1987 (Herschel, 2013). The concept is hard to capture but it requires people to encounter changes in their lifestyles and that is a challenge for every city (UN, 2010). According to Alusi, Eccles, Edmondson & Zuzul (2011), the reason to the increased awareness and demand of sustainable development rise from two different factors. The first is the increased consciousness of threats towards the environment. The second is the fact that more people move into cities. Together, these factors demand huge development of infrastructure and new housing accommodation. This needs to be combined with social institutions, in order to accommodate city dwellers and make everyone a part of the society. Increased population and economic growth in the developed countries contributes to major implications for the human society. This has resulted in the development of sustainable cities (ibid).

The development of sustainable cities entails to change the way of living. This implies that the government, organizations and citizens must be involved in the process. Every actor has to prepare for changes in behavior, beliefs, policies and practices in order to adapt to a sustainable city (Doppelt, 2010). The development of a sustainable city often includes



reductions of co<sub>2</sub> emissions, improved resource allocation and efficiency, economic development and an appropriate design of the city in order to promote social sustainability as well as economic and environmental sustainability (Alusi et al., 2011). The development of sustainable cities means to think of opportunities in new and sustainable contexts (Roseland, 2000). Furthermore, the term sustainable city can promote a city beneficially and this increases the incentives for the local government to become a sustainable city (Joss, 2011b). At the same time it is possible to create new jobs due to new technological developments (Organisation for Economic Co-operation and Development, 2008).

Moreover, the local government has been more emphasized in sustainable development expansion (Paterson & Saha, 2008). That is because the local government has the power to act in areas important for the development, as land use, energy and water treatment (Thompson & Joseph, 2012) hence the local government can be seen as a linchpin in sustainable development (Wan, Van Wart & Lebrede, 2014). In order to meet the struggles with urbanization, the municipality needs to offer new buildings and improvements in the infrastructure, without harming the nature (Alusi et al., 2011). The local government also needs to develop more sustainable transportation, energy efficient buildings and systems for waste management. Moreover they need to increase the use of renewable resources, work within water conservation and lower the co<sub>2</sub> emissions. If performed successful, this can lower the operation costs and free up capital that can be used to make further improvements (Thompson & Joseph, 2012).

In order to successfully implement a sustainability initiative, it is advantageous to have support from the government (Roseland, 2000). The local government can be viewed as a tool to drive the work towards a sustainable city development (Thompson & Joseph, 2012). According to UN (2010) the local government needs to take a leading position in the sustainable development. Furthermore, the local government can be seen as a driver to economic growth, but they are also able to drive sustainability. Hence, the local government works close to the public and can make their policies visible to the people but they also have the juridical power to make decisions (Thompson & Joseph, 2012). It is beneficial to have a local government that acts as a pioneer in order to find solutions of how to approach the sustainable development (Roseland, 2000). This implies that the politicians should remove obstacles for collaboration between public and private interests (Statens offentliga utredningar, 2012). Relationships, knowledge and mobilization of businesses and citizens are

other important factors in order to become an environmentally sustainable city (Magalhães, Healey & Madanipour, 2002).

## **1.2 Theoretical problematization**

Even though there is a vast amount of research done regarding motives and practices of sustainable development, there is a lack of literature focusing on the management of how to receive the best outcome of an implementation (Wang, Van Wart & Lebrede, 2014). The concept of sustainable cities is new and complex, which complicates the process of the development. More research needs to be done in order to achieve the full potential of sustainable cities development (Alusi et al., 2011; Joss, 2011b). Statens offentliga utredningar (2012) in Delegationen för hållbara städer means that there is a need for more research about the development but also for innovation and demonstration of solutions concerning different techniques of the sustainable development. Boyle, Head, Hood, Lawton, Lowe, O'Connor, Peet, Schreier & Vanegas (2013) advocate that more research needs to be done primarily regarding how to execute the development of sustainability. The role of the public managers has largely been ignored in the existing literature regarding sustainable development (Wang, Van Wart & Lebrede, 2014). This lack of research is mainly vital when the local government moves their sustainability plan from idea to the actual implementation. Because of the complexity in the issue, it puts pressure on the local government to understand the needs and restrictions of sustainable development in order to implement it successfully (ibid). We have also found a lack in that literature that elaborates the critical factors when implementing sustainability in cities. This is probably due to that it is a new area that is multifaceted and not many cities have fully implemented sustainability successfully yet.

In this thesis, we will elaborate the critical factors for the local government when implementing sustainability in a city. In order to achieve this we have chosen to use theories of sustainable development, public management and change management. We have searched for literature that address all three parts and by that, we found plenty of research concerning sustainable development in a city context as well as motives for the local government to act within this field (Wang, Van Wart & Lebrede, 2014). There are case studies performed on sustainability in cities as well as in nations (Paterson & Saha, 2008). There is also research done where sustainability initiatives are analyzed and compared, through the U.S. (Conroy, 2006; Jepson, 2004; Portney, 2003). However our study will focus on City of Vancouver, located in Canada. Although huge efforts have been done to find literature that covers all of

these areas, we have not been able to find appropriate literature in line with our research.

We hope that our study will contribute to a greater understanding of the critical factors for the local government when implementing sustainability in a city. We also aspire to come closer to important aspects in the sustainable development and fill some of the gaps in the literature. Hopefully, the results of our study will be useful to local governments that want to implement sustainability in their respective cities.

### **1.3 Purpose**

The purpose of this thesis is to increase the understanding of the important elements for the local government when implementing sustainability in a city. This implicates the critical factors in the process of implementation.

### **1.4 Research question**

What have been the critical factors for the local government in order to make the implementation of sustainability in a city successful?

### **1.5 Delimitations**

This study is limited to only one case, which is City of Vancouver. This makes the thesis limited in its scope since it only addresses the purpose in one context. However, the examined critical factors in the implementation could be applicable in other cities as well. Hence it is difficult to measure the success of an implementation in an objective manner because different actors focus on various aspects (Saarinen, 1996). Our focus is on the subjective aspects of the critical factors in the implementation of sustainability in City of Vancouver. We have studied City of Vancouver at specific point in time since the study has a limited time frame. This implies that the development is in process and a complete implementation has not been made.

### **1.6 Research program: Sustainable Society**

This thesis is a part of the research program, Sustainable Society (SuS) and is written at the school of Economics and Management, Lund University, Sweden. The research program was started to improve the understanding of the foundation of the phenomenon sustainable society. Within the program it is undertaken that a sustainable society cannot emerge without cooperation between different parts and sectors, thereby the purpose of the program is to gain an understanding of the different actors involved. The program considers that the sustainable

society concerns different areas such as transportation, production of energy and consumption and architecture (Institute of Economic Research, 2013).

## **1.7 Disposition**

This thesis present an answer to the research questions on the basis of the chosen theories and empirical findings. The thesis begins by describing the chosen theories for the study in order to give a theoretical understanding of the subject. The chapter ends with a theoretical framework as a first theoretical answer to the research question. The third chapter explains the method used in the empirical study and a motivation why the chosen method is found most appropriate for the study. The fourth chapter presents the empirical findings. Further an analysis follow in the fifth chapter, where the theories and the empirical data are put in relation to each other. Due to this an extended framework is elaborated. Finally the study ends with a conclusion presented in the sixth chapter.

## 2. Theory

*The theoretical chapter will begin with a clarification of sustainable development. Hereafter follows a description of the concept of sustainable cities. The chapter will continue with a presentation of public management, which involves different aspects for the local government to consider within the issue of sustainable development. We will thereafter elaborate important factors that the local government needs to consider in an implementation process. After presenting our theories, we will consolidate these into a theoretical framework that provides a first theoretical answer to the research question.*

### 2.1 Sustainable development

*It is helpful to understand the meaning of sustainable development in order to comprehend the concept of sustainable cities. In this section we will therefore orderly describe sustainable development.*

The area of sustainable development is elaborated of many different authors. It is a wide concept that has obtained several meanings in the literature (e.g. Egger, 2006; Hopwood, Mellor, & O'Brien, 2005; Joss, 2011b; UN, 2010). Broadly defined it refers to the ability to enable human welfare in a long-term perspective (Paehlke, 2006). The definition that has been accepted worldwide is the one provided by the WCED (Glavič & Lukman, 2007; UN, 2010), which says: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43). This definition is stated in the report, Our Common Future, made of the WCED, the report is also recognized as the Brundtland Report, and was written in 1987 (UN, 2010).

Sustainable development often emphasizes on the environmental aspect. Nevertheless sustainable development aspires to reach an agreement between the three pillars economic-, social- and environmental development (UN, 2010). The concept of the three pillars is also frequently called the triple bottom line or people, planet and profit (Sloan, Simons-Kaufman & Legrand, 2012). Due to the three pillars, the environmental aspect implies that the damage in the nature should be kept to a minimum. The economic dimension regards the fact that due to the increased production and economic growth, there will be implications. The inequality in income is a big issue today and if not everyone can make a living, they are not willing to make an effort. In terms of the social dimension it comes to involve the entire world population. This is based on that social housing as well as different communities proceed well

(Sloan, Simons-Kaufman & Legrand, 2012).

## **2.2 Sustainable cities**

*In order to understand how to successfully implement sustainability in a city, it is important to understand the concept of sustainable cities, which is a complex issue. In this section, we will describe some of the different definitions and explanations of the term that are developed by several different authors. By explaining the main features of the concept as well as some important factors in the development this will help to understand the phenomenon and its complexity.*

The main objective of a sustainable city differs among cities (Joss, 2011b; Riddlestone & Simmons, 2008). However, common for all is that a sustainable city aspires to make it easy for the inhabitants to adopt a sustainable lifestyle. It entails the city to offer buildings, employment opportunities and infrastructure in an energy efficient manner (Alusi et al., 2011; Thompson & Joseph, 2012). One of the most important issues to deal with in order to become sustainable is to reduce the CO<sub>2</sub> emissions. The emissions need to be reduced in order to foster the protection of the environment, but also since the demand for resources will grow in line with the increasing population and consumption. In order to enable the citizens to reduce their CO<sub>2</sub> emissions, the cities must be built in a manner that facilitates a more sustainable lifestyle. It could be helpful for the city to develop a master plan that describes their actions towards sustainable development (Riddlestone & Simmons, 2008).

### **2.2.1 Development of sustainable cities**

As a result of the last hundred years urbanization, the theory of protecting the environment has evolved. The development of sustainable cities has been one answer of how to handle the potential problems with the urbanization and the climate change. Furthermore when one started to understand that the local government influenced the behavior of the citizens the concept of sustainable cities was developed (Portney & Berry, 2014). The term sustainable cities (eco-cities, eco towns, urban sustainability, ecopolis etc.) emerged in the 1980's by Richard Register as the first writer of the concept. This was the official start of the development of the term. The publishing of Eco-City Berkeley was a part of the urban ecology invention that Register had established (Register, 1987).

During the period between 1980 and 1990 the scope of the term sustainable city was rather diffuse and included lots of different thoughts about how to describe the term. The main task

during this period was to create a conceptual framework that could describe it. In the 1990's some international conferences were held for the first time, which covered the subject of sustainable cities. Through that, the term definitely became well known (Joss, 2011b). Furthermore, in the 1990's the words about sustainable cities were turned into action. In the UN's Earth Summit a system was created, which included a program that made cities more sustainable. Hence the framework became more standardized and the concept of sustainable cities obtained a general meaning (Sitarz, 1994). During the 21st century people have been more conscious about different standards of living. This comes in hand with the increased globalization and the emphasis on sustainability is more important than ever before (Joss, 2011b).

### **2.2.2 Definition of sustainable cities**

To find a general and commonly accepted definition of the term sustainable cities is rather difficult though it is a very complex concept. However, several different organizations and associations have tried to reach a comprehensive definition. Even if the definitions we have found are quite similar it seems to be hard to find one that is completely shared between all of them.

The nonprofit organization Ecocity Builders argues that since every city has different attributes there is no single model that every city can adopt in order to become sustainable. The concept is very complex. However, sustainable cities have some common features and Ecocity Builders suggest the following explanation of the term “an eco-city is an ecologically healthy human settlement modeled on the self-sustaining resilient structure and function of natural ecosystems and living organisms that includes its inhabitants and their ecological impacts. The city is a subsystem of the ecosystems of which it is part — of its watershed, bioregion, and ultimately, of the planet, but even of the regional, national and world economic system” (Ecocity Builders, 2010. Working definition adopted by Ecocity Builders and the International Ecocity Standards advisory team, 2/20/10, Vancouver, Canada.). In short it means that a sustainable city is a community that enables its residents to live with a good quality of life while using minimal natural resources.

The world city summit in San Francisco was held in 2008, and is another association that has explained the phenomenon sustainable city. They present the following: “an ecologically healthy city. Into the deep future, the cities in which we live must enable people to thrive in harmony with nature and achieve sustainable development. People oriented, sustainable city

development require the comprehensive understanding of complex interactions between environmental, economic, political and socio-cultural factors based on ecological principles. Cities, towns and villages should be designed to enhance the health and quality of life of their inhabitants and maintain the ecosystems of which they depend” (Miller, 2008. Conference held May 15th). This definition is similar the one provided in the World Bank Eco-City report, which also emphasizes the ecological aspect in order to protect the nature in the future (Suzuki, Dastur, Moffatt & Yabuki, 2009). However, Haughton and Hunter (1994) argue that a sustainable city is a multinational, integrated concept.

Joss (2010) claims that the three following criteria define a sustainable city (1) scale: the concept of sustainable city concerns an urban sustainable development in the region but also the infrastructure and modernization are needed, (2) sectors: the progress involves different sectors such as housing, waste, water and transportation and (3) policy: policy progressions does in multiple ways surround the development in a certain way. Notwithstanding, these criteria only correspond with developments of larger size and not single projects, like individual plants (Joss, Tomozeiu & Cowley, 2011). In conclusion, sustainable cities in common, concern the innovation of cities and emphasize a sustainable approach both socially and environmentally (Joss, 2011b).

### **2.3 Categories of sustainable cities**

*It exists plenty sustainable cities today, initiated of different reasons. Hence, the cities can be grouped into different categories depending on the attribute of the city.*

Sustainable cities can be divided into three different categories depending on how the development has been made. If the city is totally new and built from scratch it is called a greenfield city. A new district that is developed from an existing urban area is called a brownfield city. A retrofit city references to an already existing urban infrastructure that is restructured to be more sustainable. It is shown that greenfield and brownfield cities stand for one quarter respectively and retrofit cities stand for half of all attempts to create a sustainable city (Joss, 2011b).

The development of sustainable cities is grounded in some of the following external objectives that the city wants to enhance: environmental matters, socio-economic factors, branding, business developing, governmental leadership or partnership with other countries (Joss, 2011b). Joss (2010) claims that sustainable cities initiative is based on different



objectives and their purpose might differ. However, the developments have some common characteristics. Initiatives can be intended to involve the citizens and are then derived from the government. An alternative manner is to concentrate on technological innovation (three quarters of all projects). Integrated sustainability planning is the third way to target the initiative (Joss, Tomozeiu & Cowley, 2011). It implies that the development can be made in different ways depending on the target. Moreover sustainable cities are no longer rare rather there are plenty of them established around the world (Joss, 2011a).

## **2.4 Public management**

*In this section we will explain the important role of the local government in the implementation of sustainability in a city. Furthermore we will elaborate the models for sustainability governance and describe how public managers coordinate the implementation process. We will also explain how the area of public management has received some changes in attributes during the last years.*

### **2.4.1 Models for sustainability governance**

There are different models that the local government can use in order to govern and implement sustainability (Bulkeley and Kern, 2006; OECD, 2008). Good governance is regarded to be essential in sustainable development (Kemp, Part & Gibson, 2005). The first is self-governing. It is present when the local government has the capability to control its own behavior and consumption. One example is to make the local governments own buildings more energy efficient. Self-governing seeks to reorganize and make strategic investment. It is driven by both economic and environmental factors. The second form of governance is governing through enabling. This implies that the local government collaborates with private organizations and promotes civic participation. This form of governance emphasizes encouragement and motivation for sustainability. Awareness campaigns, promotion and guidance of sustainability are central activities. It also includes enabling co-operation between different stakeholders and involves private public partnership. Third is governing by provision, which considers that the local government is in a great position to make actions towards sustainability. They control areas as energy and transportation. This gives them the opportunity to develop infrastructure that contributes with lower greenhouse gas emissions. It contains to create practice by delivering specific resources and services, which includes financial policies and infrastructure development. The fourth form is governing by regulation. This includes traditional forms of governance as control and sanctions. The local government

uses their authoritative power to make the city more sustainable. It is possible that these models have some common characteristics and is used in a combination of each other, but they create a framework for urban governance for the local government (Bulkeley & Kern, 2006; OECD, 2008).

#### **2.4.2 The role of the local government when implementing sustainability**

Local governments play an important role in the world economy and can be described as an engine towards developing a sustainable economy. They drive the economic growth (Thompson & Joseph, 2012) and could be seen as a linchpin in sustainable development (Wang, Van Wart & Lebedo, 2014). The federal government control many activities in the overall country but the local governments possess the autonomy to organize themselves. However, there are a lot of differences among local governments (Knutsson, Mattisson, Ramberg & Tagesson, 2008). They differ in factors as size, legal and political issues, geography, economy and power (Rosenzweig, Solecki, Hammer & Mehrota, 2011). Furthermore the local government is framed with economic, political, social and legal features that give them an important role (Rydin, 2010). These differences should be taken into account and therefore one should not over generalize their respective capability to make changes (Rosenzweig et al., 2011). However this contributes to the fact that the local government is virtuous when it comes to action and they are motivated to make improvements within their boundaries (PWC, 2012). The local government is affected by the climate change in three different ways. First, big amount of greenhouse gas emissions are produced in the city. Second, the effect of the climate change affects the city, which need to adapt to these changes. Third, linkages between climate change and sustainable development is most vital in cities and this produces motives for the local government to act in order to decrease the impact. Many local governments across the globe have started to develop their own sustainability agenda. Furthermore, these cities often collaborate with one another join different networks, both national as the Svenska klimatkommunerna and international as the C40 cities (OECD, 2008). The local government operates close to the public and can therefore place their policies of sustainability in a concrete context that is visible to the people (Thompson & Joseph, 2012). A large part of the problems regarding the environment and the social aspects exist in the area where the local government operates. Therefore the local government is significant in sustainable development (Jepson, 2004; Portney, 2005; Sitarz, 1994; WCED, 1987). Through their operations and activities, they are able to make people more aware of sustainability. This is often done through education in schools, facilitation of

sustainable choices and regulation. The government has the power to develop policies and they work near environmental subjects (Wang, Van Wart & Lebrede, 2014). Furthermore, they are often a key actor in environmental questions related to transportation, waste, sprawl and buildings, which are essential aspects of sustainable development (Thompson & Joseph, 2012). However, the local government operates in a dynamic environment and is affected by economic, political and social factors. Different governments operate under different conditions, which affect the implementation of sustainability (Rothstein, 1994). Despite these differences, there are some key aspects for the local government to consider when implementing sustainability. One thing to contemplate is to act locally. This implies that local governments control a big part of the greenhouse gas emissions. By choosing local alternatives and renewable energy sources, it could be possible to reduce the emissions. It involves possessing a long-term perspective in order to develop more sustainable infrastructure, transportation and energy efficient buildings. Another important aspect is to create value for money in order to make sound investments that are supported by rich and valid information. This involves connecting economic incentives with value and investing in the future. It also implies to have a long-term plan that adapts to the climate change and to improve the knowledge of sustainability. Besides this, it could be valuable for the local government to collaborate with the public and test their ideas on the market in order to examine whether they are successful (Thompson & Joseph, 2012).

Even though the local government possesses several valuable qualities in order to implement sustainability, some governments believe that businesses have a better chance to drive sustainability. Businesses have better opportunities than governments to develop new technologies and be resource efficient (Torgerson, 1995). Furthermore, there are some challenges specific for the local government when implementing sustainability. This involves the need for transparency. The decisions made in the controlled area needs to be transparent and the local government is accountable to make information publicly accessible (Devas & Grant, 2003). When the sustainability issue is initiated from the government, the character of the project is embedded in the political process (Joss, 2011a). Above this, local governments are also found to have more resource restrictions than private organizations, and the process towards sustainable development needs to be adapted to this (Sundberg & Sandberg, 2006). Additionally there might be intrinsic restrictions in what one single local government can implement, since they are dependent upon others to participate. There is therefore a need for collaboration with different stakeholders (Jepson, 2004).

### **2.4.3 Public managers in the coordination of implementation strategies**

The public managers, also called city staff, play an important role in the implementation of sustainability. There is found to be a positive connection between the commitment from public managers and sustainability actions (Jepson, 2004). The understanding of the need for sustainability is based upon knowledge of climate change and its implications. There is a public need to change the lifestyle in order to provide a good environment for future generations. In addition organizations need to manage competing goals, economic stress and governance structure. All of this entails consequences for sustainability. It could therefore be useful to consider the need for sustainability in the light of organizational challenges. It is the important role of the public managers to understand the need for sustainable development, as well as the challenges. This is a difficult and complex task that puts pressure on the managers to respond to a wide range of needs from different stakeholders and provide long-term sustainable solutions. The public managers have the responsibility to create a vision towards sustainable development. If this is performed well, it will help to enable organizations and people to focus on sustainability with proper economical and technical resources (Wang, Van Wart & Lebrede, 2014).

There are different approaches towards implementing sustainability and different municipalities use different methods. However, it is common that cities use public participation, which enables the society to help frame the implementation (Geczi, 2007; Portney, 2005). This method is referred to the bottom-up approach and it is characterized by allowing different stakeholders to present their needs and opinions in the arrangement and implementation of the change. This approach enables the government to cooperate with the citizens and convince them with the value of sustainability. Civic engagement is often regarded to be essential in order for a decision to be supported and eventual resistance reduced (Kemp, Parton & Gibson, 2005; Portney, 2005). Initiatives that are elaborated in joint collaboration with government, businesses, citizens and non-profit organizations, possess a robust base for a successful implementation of sustainability (Vig & Kraft, 2006). There seems to be a link between civic engagement and sustainability adaption. This is based on the idea that one is often more willing to agree to a change if there has been a possibility to be involved at the planning stage (Hawkins & Wang, 2012; Innes & Booher, 2004; Portney, 2005). This strategy comes in hand with today's social science, where networks and decentralization is highlighted. The importance of collaboration and relationships has also been more emphasized (Smedby, 2013). Despite all these advantages with public engagement

in the decision and implementation of sustainability, it also contains obstacles. Sustainability is a complex issue, and one has to consider political and economical difficulties. When allowing the public to participate in political issues, it becomes a question of how to spread the information to the public through good technology (Geczi, 2007). Due to its complexity, it requires knowledge, which the citizens sometimes do not possess (Hawkins & Wang, 2012).

Another implementation strategy is the top-down approach. This method implies that the people who possess technical expertise in the subject make the decisions. It is based on the assumption that many aspects of sustainability are technically complex and therefore there is a need for professionals in order to find suitable solutions. Sustainability is about the objective goal and this approach questions the need for participation when the experts already know what needs to be achieved. However, it does not necessarily imply that the public is unimportant, but the technical experts are found to be more suitable to solve the sustainability issue (Portney, 2005). There have been some critique towards this approach, arguing that it is very elite in its method and therefore it gives different stakeholder low chances to participate (Farazmand, 2002).

The implementation used is often a combination of both bottom-up and top-down approaches. The public manager has the responsibility to interlace the technical expertise with the public involvement in order to find an appropriate balance between these methods (Wang, Van Wart & Lebrede, 2014). However, it is vital that there is an alignment between the strategy, the organizational structure and processes as well as a concrete guideline for how to implement sustainability (Taylor & Taylor, 2013). The public managers play an important role in the implementation of sustainability and can be considered as a mainstay in the process. Their task is to perform activities that might lead to a more desirable outcome of sustainable development. They are important due to the thought that leadership affects the results of the implementation (Wang, Van Wart & Lebrede, 2014).

#### **2.4.4 The rise of NPM and NPG**

The issue of sustainability has moved from the federal government to the local government (OECD, 2008; Paterson & Saha, 2008). As described above it values public participation (Geczi, 2007; Portney, 2005) and uses a decentralized approach in the decision and implementation of sustainability (Vig & Kraft, 2006). It also values relationships and networks (Magalhães, Healey & Madanipour, 2002). By developing more sustainable solutions, one is able to make cost reductions in a long-term perspective and to be more

resource efficient (Thompson & Joseph, 2012). These ideas come in hand with the changes in the area of public management that has been developed during the last decades. As an answer to economic, political, environmental and institutional changes, the area of New Public Management (NPM) has evolved (Moraru, 2012). There has been several attempts to illuminate and define New Public Management, however they all contains that management concepts from the private sector have been implemented in the public sector (Haynes, 2003). It has resulted in new viewpoints concerning governments and public management (Moraru, 2012). NPM uses several ideas from the private sector framework where institutions are seen as the market or the company. The public sector has moved towards being more market oriented (Almqvist & Wällstedt, 2013) and see citizens as consumers or customers (Wiesel & Modell, 2014). NPM was first elaborated Christopher Hood (1991). According to Hood (1991), NPM is characterized by entrepreneurial management, measure of achievement, control of results, desegregation, devolution, competition among public services, implementation of private management styles and savings among resources (Hood, 1991). It focuses on public management instead of traditional public administration (Larbi, 1999). Instead of advocating centralization, bureaucracy and control, focus is upon a public market management approach (Moraru, 2012). Compared to normal public administration, NPM contains a bigger client focus and it allows provisions due to competition. It is more attracted to develop cost saving alternatives and see results in the light of efficiency and effectiveness. Due to the decentralized environment, the people responsible come closer to the actual service (Keating, 2001). However, there has also been some critique directed towards NPM. There has been some difficulties adapting to this reform and the new ways of organizing has been inefficient and sometimes even destructive for the public entity (Lapsley, 2009). The critique has contributed to a change of focus from management of individual institutions to governance of advanced systems of providing services (Osborne, 2006; Wiesel & Modell, 2014). This shift towards New Public Governance (NPG) can be regarded as an answer to the necessity to enhance civic value by combining notions of effectiveness and efficiency with ideas of democratic justice and reliance. Whereas NPM can be seen as focusing on faith in management accounting system, NPG focuses on faith in networks of different abilities and the ambition to serve the common good. NPM see citizens as consumers or customers, while NPG regards them to be co-producers (Wiesel & Modell, 2014). It involves collaboration and horizontal control (Almqvist & Wällstedt, 2013). Instead of focusing on efficiency and financial performance, the main emphasis is directed towards effectiveness and citizen satisfaction and it possess an increased orientation towards the public good (Wiesel & Modell,

2014). According to Osborne (2006) NPG will be the management paradigm in the public sector in the future. However there is a lack of empirical research done in this area to ensure that statement (Almqvist & Wällstedt, 2013).

## **2.5 Factors that affect the implementation of sustainability in cities**

*The development of a sustainable city is dependent upon several different factors. In order to make the implementation of sustainability as successful as possible, it is valuable for the local government to possess knowledge of these factors in order to manage them successfully. A factor can both be a factor for success and a barrier for the implementation, depending on the local condition. These factors are divided into different groups below which are; leadership, understanding of sustainability, vision, motivation, collaboration, mobilization of people, culture, resources, politic and regulations and monitor and follow up.*

Implementation refers to the processes that affect the enforcement of pertinent policies. The processes can be applied as intended, but it is also possible that it faces obstacles. In order to overcome potential obstacles there is a need for interactive and collaborative governance. Good support and governance system might help to defeat obstructive values and build relations between important partners. Implementation is characterized by social interaction between the government and stakeholders as businesses and citizens, which needs be seen in the light of its context, due to its complexity (Lafferty, 2004). The implementation of sustainability do not only contain a considerable shift to a more comprehensive understanding of sustainability in order to meet the targets, it also involves changes of processes, structures, planning, traditions and choices at every level (Gibson, 2003). Sustainability concerns the change of behavior and routines. It is therefore valuable to identify the areas where the change is needed and what is affected by this change (Kemp, Part & Gibson, 2005).

Moreover, a change process can be described with an ice cube metaphor, according to Lewin (1951), who is regarded as one of the founders of change management. The first step is to melt the ice cube, which implies to prepare for the change. The second step is to perform the change, while the ice cube is melted. Once the change is implemented, the third and final step is to refreeze the ice cube and by that the change is implemented and consolidated in the organization. The outcome of the process depends on the ability to meet any possible resistance (Lewin, 1951 through Hatch, 2002).

### **2.5.1 Leadership**

Good leadership makes it possible to overcome potential resistance from citizens and business towards the implementation of sustainability. Resistance can emerge when people do not understand the need for the change or do not realize any benefits from it (Wang, Van Wart & Lebrede, 2014). According to change management, opposition to change is often rooted in people's emotions and reactions. Skilled and experienced leaders are able to guide and monitor their own and other people's emotions. If they perform the leadership successfully, it could be possible move people towards a more positive direction (Battiliana, Gilmartin, Sengul, Pache & Alexander, 2010). If top managers are enthusiastic, there is a better chance that the employees will feel more optimistic and keen towards the change as well (Soltani, Lai & Mahmoudi, 2007). Furthermore, support and leadership from senior managers is also seen as a crucial factor in order to defeat cultural perceptions (Sundberg & Sandberg, 2006).

When implementing sustainability, sustainability leadership is often performed. Sustainability leadership can be described as the process of encouraging economic, social and environmental practices (Wang, Van Wart & Lebrede, 2014). This comes in hand with the definition of sustainable development, which involves balancing these three pillars (Adams, 2006). Sustainability leadership is performed along with different stakeholders as citizens, council, federal regulators and public managers who all benefit from a more sustainable city. The view of leadership as a process is not a newly elaborated concept. Portugal & Yukl (1994) has defined environmental leadership as an organizational process that is performed in the presence of stakeholder interaction. They view leadership in two dimensions, which are individual and organizational. These two dimensions allow environmental leadership to be regarded "both as an influence process between individuals and as an organizational process of mobilizing forces to change and reform social systems" (Portugal & Yukl, 1994, p. 272). Sustainability leadership contains social change leadership. Social change leadership involves the idea that the common good is achieved through collaboration. Similar to this, sustainability leadership is process oriented and it coordinates individual efforts into common goals. Sustainability leadership becomes important when the local government implements sustainability, since it is helpful in order to involve citizens, create capacity to perform the change and promote an adaptation towards a sustainable lifestyle (Wang, Van Wart & Lebrede, 2014).

### **2.5.2 Understanding of sustainability**

People need to understand why sustainability is important in order to support it. Even though



people generally realize that sustainability is important, the term sustainable development is a confusing issue to many people and that hampers the process. It is for example hard to define the future generation's needs (Harding, 2005). Sustainable development is a complicated subject that involves technological, environmental and social issues (UN, 2010) and their future development will play a huge part in defining the needs. It is therefore important to use a proper language when informing about sustainability. The language used by project leaders need to engage the public, which it often fails to do (Harding, 2005). A proper language and good communication help to increase the understanding of sustainability and there is a need for both horizontal and vertical communication. This implies a challenge for the management as well as to the infrastructure of the organization since the communication system needs to be effective throughout the organization (Soltani, Lai & Mahmoudi, 2007). It is important that the local government communicate the issue of sustainability well, in order to make sure that everyone affected by the plans are fully informed about them. The government can benefit from identifying the crucial stakeholders in order to make sure that they possess enough knowledge about sustainable development (Lafferty, 2004) since insufficient communication can lead to confusion or a loss of interest, which complicates the process. Good communication might help to lower the resistance towards sustainability (Schiemann, 1989). Communication enables information and knowledge, which are important aspects in the sustainable development (Magalhães, Healey & Madanipour, 2002). Many businesses and other institutions communicate sustainability as a way of market themselves and enhance their image. Sustainability communication then becomes a marketing tool (Benoit-Moreau, Larceneux & Parguel, 2011). Change management literature explains that communication is important in order to achieve commitment from the people (Schiemann, 1989). There have to be a feeling of urgency present in order to make the organization understand why they need to act fast. Furthermore, it is beneficial to let people integrate with the guiding alliance instead of only having a one-way communication (Kotter, 1995)

### **2.5.3 Vision**

The vision ought to guide the implementation process and it generates an image of what the implementation will result in (Kemp, Part & Gibson, 2005; Lafferty, 2004; Svenningsson & Sörgärde, 2013). It is therefore important to have clear and consistent plans that are easy to follow (Harding, 2005). The local government needs to be supportive and produce a structure that will make the vision of sustainability easy to reach (Grant, 2009). Besides this, it is important to have an overall structure and holistic approach towards sustainability (Harding,

2005). The primary step is to develop a framework for sustainability based on the local governments criteria. It is also essential to have a shared vision. The vision can generate an idea of what a normal day in the future will look like (Riddlestone & Simmons, 2008). In order to create a unitary vision, it is beneficial to integrate all different sustainability policies into one joint policy that address all aspects. It is good to have overall common objectives for the implementation of sustainability (Kemp, Part & Gibson, 2005). It is also useful for the local government to consider both vertical and horizontal policy integration. Vertical policy integration refers to specify the main policies, plans, activities and strategies. Horizontal integration indicates coordination and management of the interaction, communication and long-term sustainability agenda (Lafferty, 2002). The importance of a vision is also elaborated in the change management literature. Kotter (1995) claims that it is beneficial to have a vision that is easily communicated and appealing to stakeholders. Without a vision, it is likely that people feel confused, which can lead the process in an undesirable direction. It also demands strategies for how to reach the vision (Kotter, 1995). A failure could be dangerous to the organization since a misunderstanding of the initiative could lead to incorrect practices (Soltani, Lai & Mahmoudi, 2007).

#### **2.5.4 Motivation**

In order to make the implementation of sustainability more than a symbolic policy, it is essential that there is commitment from both the government and other parties involved. Motivation is seen as a predictor to determine the outcome of the implementation. Hence motivation can be increased by allow participation and negotiation (Lafferty, 2004). People have different motivation factors. Depending of how they experience their personal and general benefits of environmental, social and economic development (Patzelt & Shepherd, 2011). In change management it is described that in order to motivate a change initiative, there are three factors that need to be present: (1) a dissatisfaction with the existing status quo, (2) strong attractiveness of a more pleasing condition and (3) a comeliness of a well-developed strategy in order to reach the vision. If any of these factors are absent, the managers will find it difficult to motivate the change (Derveniotis, 1998).

#### **2.5.5 Collaboration**

It is difficult for the local government to alone implement sustainability. The local government co-operate with different organizations in order to reach environmental economic and social sustainability (Hawkins & Wang, 2012). It is valuable to build relationships with partners and collaborate in the process towards sustainability. It is also beneficial to have

partners and stakeholders that are informed with the sustainability agenda and thereby include sustainability criteria in the contracts (Riddlestone & Simmons, 2008). Relationships can be described as networks that are characterized by trust. These relationships contribute to social capital and are important since they can contribute with knowledge (Magalhães, Healey, & Madanipour, 2002). Hawkins & Wang (2012) divide networks into two categories, which are external support and local support. The external support is composed upon a wide range of non-governmental organizations and private businesses. They support the sustainability policy and are able to strengthen the capacity of the local government to implement sustainability. They can for example contribute with resources that facilitate the local government to be more resource efficient (Hawkins & Wang, 2012). External support and cooperation with organizations, universities and other institutions are regarded to be important in the implementation of sustainability. Universities can provide the local government with important knowledge and research of how to approach sustainability that the local government might not have knowledge or resources to handle (Knuth, Nagle, Steuer & Yarnal, 2007). Networks of local support contain local organizations with the mission to create policies in the city. It involves non-profits, neighborhood organizations, and chambers of commerce. Sustainability might not be their main focus but they have substantial impact on local activities (Hawkins & Wang, 2012).

Different actors often have different roles in the development. The public managers coordinate the actors and make sure that there is a collective approach towards the implementation of sustainability (OECD, 2008; Van Wart, 2011).

### **2.5.6 Mobilize the people**

In order to implement a change initiative, a large number of people have to be involved in the process. It is valuable to mobilize the people in order for them to implement the change in their daily routine (Battiliana et al., 2010) as well as develop links between activities and outcomes (Magalhães, Healey & Madanipour, 2002). The guiding coalition needs to make it easy for the people to adapt the change (Battiliana et al., 2010). Obstacles for the transformation need to be removed. It is common that the people understand the vision and want to act according to it but something is blocking the way, for example mindset or organizational structure (Kotter, 1995). It therefore involves changes in current norms and behavior that the people possess (Lewin, 1951 through Hatch, 2002). Lewin (1951) points out that knowledge, learning and commitment are important factors in order to reduce the resisting forces towards change.

A transformation process is time consuming and risks to lose momentum if it does not reach any short-term goals. People easily give up without any short-term wins. One could therefore plan and create visible performance improvements. Beyond this it is also important to recognize and reward people involved in the progresses (Kotter, 1995).

### **2.5.7 Culture**

Culture is a broad subject, which contains aspects of traditions, beliefs, experience, history, norms, religion and lifestyle among others. It is therefore beneficial to identify the values and practices of the citizens. The values and practices create a link to the environment (Kotane, 2011) and the culture is reflected in people's behaviors (Malach-Pines, Levy, Utasi & Hill, 2005). Culture is the overall result of a long-term interplay. It is also depending upon location, resources, nature and climate. The holistic culture has a long-term purpose of ensuring well being, peace and social integrity for relevant people. It strives to contribute to a balanced development of sustainability in a local context (Hiwaki, 2012) Culture can be an important driver to sustainable development with local impacts on social, economic and environmental development. It is possible that the culture might act as a strategic tool for implementing sustainability (United Nations Educational, Scientific and Cultural Organization, 2012). Change management also shows the importance of cultural considerations in order to understand the people's value and how they interact. It is argued that many transformations fail due to the lack of a cultural focus (Svenningsson & Sörgärde, 2013).

### **2.5.8 Resources**

In order to implement sustainability, there is a need for sufficient resources in order to manage the investment costs. If there is a lack of money, it will be difficult to make investments. It is often argued that anything besides business as usual is more expensive, which implies that sustainable options can be expensive (Williams & Dair, 2006). One example is green buildings, these are often found to be expensive to develop due to advanced technique that often comes with costly material. Even though this is an investment, which can contribute with lower maintenance cost, there needs to be money in order to manage the initial cost (Hwang & Tan, 2010). Public institutions as local governments are found to have more resource restrictions than private organizations (Sundberg & Sandberg, 2006; Torgerson, 1995). It is therefore important to create the much value for money as possible and make sound investments (Sundberg & Sandberg, 2006, Thompson & Joseph, 2012). Furthermore, there has been emphasis on the technology to facilitate sustainable development. There have been big developments within this area and through technological advancements it

is possible to find new approaches and more sustainable alternatives (Beder, 1994).

### **2.5.9 Politic and regulation**

It is not possible for the local government to implement sustainability without international and national policies that support them (OECD, 2008). There are also differences in what a city is allowed to decide themselves and what federal or provincial government decides. This makes the local government dependent upon their regulations. If the federal or provincial government has a deep understanding of sustainability and care about all three pillars of sustainable development, there will be a greater opportunity for cities to get support in their sustainability plans. A challenge for the local government when incorporating sustainability is therefore the lack of political power in certain areas. The local government has often little or none power over questions regarding transportation as highway routes or waste systems. These are important areas of sustainable development and lies in the hand of the federal or provincial government (Mercer & Jokowiz, 2000). It is also valuable that the politicians have a long-term mindset when it comes to develop a sustainable city. They therefore have to think outside of their political cycle and elections, in order to make the choices that are best for the city and its citizens in a long-term perspective. Benefits will not be shown in three years time but in 10, 20 or 40 years. However, that is no excuse for the council to not incorporate sustainable development (Grant, 2009). Tax regulations, education programs and obligation laws are also factors that affect the implementation (Kemp, Part & Gibson, 2005)

### **2.5.10 Monitor and follow up**

Monitoring and follow up activities of the implementation is regarded to be a fundamental part of the implementation process of sustainability (Lafferty, 2004; Riddlestone & Simmons, 2008). Goals, schedules and milestones are therefore important in order to constantly be updated with the implementation process. This will enable the government to analyze the development and outcome of the sustainability plans, and help them to secure a successful implementation. Further improvements and developments are also valuable. If the initiators of sustainability do not sincerely try to continuously live up to their policies, their sustainability status could be removed. It is therefore valuable for the local government to ensure that they have skilled advisors who support the sustainability plans and work in order to achieve their vision. It is also good to have impartial evaluators that continuously monitor the implementation. The monitors have the task to deliver results of the implementation process (Riddlestone & Simmons, 2008). Kotter (1995) describes in change management that when institutionalizing change in the organizational culture, it is important to show people how the

change has contributed to improved performance and to certify that the following generation can personify with the new behaviors. A change initiative is not fully implemented until it is rooted in the social norms and behavior (Kotter, 1995). Therefore, there is a need for continuous training towards the goal of the change initiative (Oakland, 1998)

## 2.6 Theoretical framework

A wide theoretical foundation has been elaborated from the literature review. It has elaborated theories of sustainability, public management and change management. These theories have been seen in the light of the purpose of the thesis.

Successful implementation is a dependent variable. The implementation is affected by several independent variables. These independent variables are found in the theories of sustainability, public management and change management. The theories provide a base of factors that can contribute to a successful implementation, which might lead to sustainability. Based on the theories above a theoretical framework has been created. The critical factors for the local government when implementing sustainability are summarized below.

*Table 1. Theoretical framework: Critical forces for the government when implementing sustainability*

Critical factors	Sources
<b>Local government</b>	(Jepson, 2004; Portney, 2005; Sitarz, 1994; Thompson & Joseph, 2012; Wang, Van Wart & Lebrede, 2014; WCED, 1987)
<b>Leadership</b> <ul style="list-style-type: none"> <li>• Supportive</li> <li>• Enthusiastic</li> <li>• Sustainability leadership</li> <li>• Public manager</li> </ul>	(Grant, 2009; Kotter, 1995; Lewin, 1951; Portugal & Yukl, 1994; Soltani, Lai & Mahmoudi, 2007; Sundberg & Sandberg, 2006; Wang, Van Wart & Lebrede, 2014)
<b>Communication</b> <ul style="list-style-type: none"> <li>• Rise awareness</li> <li>• Not only emphasize one-way</li> </ul>	(Battilana et al., 2010; Benoit-Moreau, Larceneux & Parguel, 2011; Derveniotis, 1998; Harding, 2005; Kotter, 1995; Magalhaes, Healey

<p>communication</p> <ul style="list-style-type: none"> <li>• Marketing tool</li> </ul>	& Madanipour, 2002; Soltani, Lai & Mahmoudi, 2007)
<p><b>Information</b></p> <ul style="list-style-type: none"> <li>• Language</li> <li>• Knowledge</li> <li>• Learning</li> <li>• Understanding</li> </ul>	(Lafferty, 2004; Lewin, 1951; Magalhaes, Healey & Madanipour, 2002; Wang, Van Wart & Lebrede, 2014)
<p><b>Vision</b></p> <ul style="list-style-type: none"> <li>• Policy integration</li> </ul>	(Grant 2009; Harding 2005; Kemp, Part & Gibson, 2005; Lafferty, 2004; Kotter 1995)
<p><b>Culture</b></p>	(Hiwaki, 2012; Kotane, 2011; Malach-Pines et al., 2005; Svenningsson & Sörgärde, 2013; UNESCO, 2012)
<p><b>Motivation</b></p> <ul style="list-style-type: none"> <li>• Short-term goals</li> </ul>	(Kotter 1995; Lafferty, 2004)
<p><b>Collaboration</b></p> <ul style="list-style-type: none"> <li>• Relationship</li> <li>• Network</li> <li>• External and local support</li> </ul>	(Magalhaes, Healey & Madanipour, 2002; Portugal & Yukl, 1994; Riddlestone & Simmons, 2008; Smedby, 2013; Van Wart, 2011)
<p><b>Mobilize people</b></p> <ul style="list-style-type: none"> <li>• Engage</li> <li>• Commitment</li> <li>• Remove obstacles</li> </ul>	(Battiliana et al., 2010; Harding, 2005; Kotter, 1995; Lewin 1995; Portney, 2005; Svenningsson & Sörgärde, 2013; Vig & Kraft, 2006)
<p><b>Resources</b></p> <ul style="list-style-type: none"> <li>• Economic</li> <li>• Technical</li> </ul>	(Sundberg & Sandberg, 2006; Svenningsson & Sörgärde, 2013; Thompson & Joseph, 2012; Wang, Van Wart & Lebrede, 2014; Williams & Dair 2006)

<p><b>Politic and regulations</b></p> <ul style="list-style-type: none"> <li>• Power</li> </ul>	<p>(Harding, 2005; Knutsson et al., 2008; Mercer &amp; Jokowiz 2000)</p>
<p><b>Monitor and follow up</b></p> <ul style="list-style-type: none"> <li>• Measure</li> <li>• Schedule and milestones</li> </ul>	<p>(Battiliana et al., 2010; Lafferty, 2004; Riddlestone &amp; Simmons, 2008)</p>



### **3. Methodology**

*In this section we will present the chosen research structure and approach for our thesis. Hence, the choice of method and collection of empirical data is motivated by the purpose of our study.*

#### **3.1 Research approach**

The purpose of this thesis is to increase the understanding of the important elements for the local government when implementing sustainability in a city. The following research method has been used in order to attain the purpose of this thesis. Firstly, with help of the appropriate theories used in the study, the aim was to give a theoretical answer to the purpose. As a result of that, the theoretical framework was developed. Secondly, the collected empirical data contributed to develop an extended framework that was corresponding with the empirical findings. The ambition of this was to give a more comprehensive answer to the purpose, but also to contribute to further development of the existing theory.

#### **3.2 Induction and deduction**

When describing how to approach the thesis, one usually distinguishes between induction and deduction. A qualitative case study is often performed using an inductive approach, but it can also be accomplished with the deductive method (Yin, 2011). The inductive approach takes its stand in the empirical cases, and the created theory is presumed to be an outcome of the empirical data. The deductive approach focuses on hypothesis testing of the theories. Even if these two approaches often are described as exclusive methods, a combination of them is often used in reality. They could therefore be thought of as guidelines instead of two separate approaches (Bryman & Bell, 2013). In our thesis, we have used a combination of the inductive and deductive approach. This combination is called abduction. Our study has been based on our chosen theories and thereafter our empirical data has been collected. The study has detected whether the theoretical expectations are consistent with the empirical findings. This methodology is deductive. By collecting empirical data, we hoped to fill some of the gaps in the theories. By collecting empirical data, we have also used the inductive approach. Even though our research has originated from the theory, we have been careful not to make assumptions and conclusions before the theories were empirically tested, since we wanted a result that was not influenced by any assumptions. Instead we have let the purpose of our study and the empirical data guide us.

### 3.3 Qualitative case study

There are two main research methods explained in the literature, the qualitative and the quantitative method (Bryman & Bell, 2013). In this thesis, we have used a qualitative method since our field of study is very complex and broad. Hence, we wanted to ask detailed questions in order to achieve a comprehensive picture of the case. Contrary, a quantitative method suits the research when one is able to describe its data with numbers or develop hypotheses (Bryman & Bell, 2013). Our choice of method was based upon our theories and the need for detailed data, hence, we did not find it suitable to perform a quantitative research. Qualitative research can be described as an interpretation perspective where the focus is on the understanding of the social reality on basis of how the participants interpret this reality (Bryman & Bell, 2011). There are different procedures to collect and analyze data in a qualitative analysis but when one wants to study an object in depth, case studies are an appropriate research method (Bell, 1995). Our research questions emphasize the real-life context and then case studies are advocated to use (Yin, 2011).

Our qualitative case study has been performed by in-depth interviews but also by collection of empirical documents. When performing a qualitative research one needs to be curious, open-minded and a good listener in order to collect the correct answers (Hennink, Hutter & Bailey, 2011). Central themes in case studies are openness and ambitious empirical data (Alvesson & Sköldberg, 1994). Moreover, the qualitative method seeks to embrace and comprehend coherent influences on the research issue (Hennink, Hutter & Bailey, 2011) and this is done from the respondent's perspective (Alvesson & Sköldberg, 1994). In contrast the quantitative method emphasizes an ontological view of objectivism and believes that the social reality is autonomous of social actors (Bryman & Bell, 2013). Due to the purpose of our study, we have found it suitable to study the perceptions of the object. The results of our study have therefore been reflected by how the interviewee perceives the reality.

Since the covered area is a multifaceted concept, we needed rich empirical information in order to understand the individual case. Additionally, we needed a wide and plenteous base of theory that allow us to be flexible in our empirical approach. Though we have been able to study the participants of our research in their natural environment, it has contributed to a more realistic picture of the complexity and multiplicity of the issue (Yin, 2011).

The collection and analysis of documents is an iterative process. It means that the analyze

starts already when some parts of the data is collected. This initial analysis affects the following step in the data collection (Bryman & Bell, 2013). We have had that in mind and have been careful to distinguish between theories and analysis. Moreover a theoretical selection has been made in our data collection in order to comply with the purpose of the thesis. The theoretical selection in the data collection is a continuous process (Bryman & Bell, 2013) and has been progressed until we could not find any more theories relevant for our purpose.

Even though case studies make it possible to closely investigate a situation, there has been some criticism directed towards the method. The criticism has primarily focused on the fact that it would not be possible to draw general conclusions based on case studies. It also questions the value with just study one single situation (Bell, 1995). In fact, the same question regarding generalizing is current in other methods (Bell, 1995). Moreover the criticism is directed to the fact that the researcher himself has made a selection on what information to use and present in the final report and that it is difficult to control the information through independent sources. For that reason it does always exist a risk of distorting results (Bell, 1995). Furthermore a case study is not equivalent to a sample but, Yin (2003), means that by compare the empirical findings with existing theory the study is analytical generalizable. Nevertheless, since our study focus on the implementation of sustainability in one city, we have found case studies as the most appropriate method to use.

### **3.4 Selection of case**

When executing a case study one, single case is often studied completely and in-depth (Bryman & Bell, 2013). The difficulty with that is to know what case to select. There are different motives to only studying one case; one could be that the particular case has several features that are representative for the purpose of the study (Yin, 2011). The case selected for this thesis is City of Vancouver. City of Vancouver is prominent within the subject of sustainability and has made big efforts to make the city more sustainable. Moreover City of Vancouver is mentioned several times in different research reports that regard sustainability (Cooper, 2006; Groc, 2011; Holden, Mackenzie & Van Wynsberghe, 2008; Joss, 2011a; Joss, 2011b; Scerri & Holden, 2013). City of Vancouver has also been the most livable city in the world between 2007 and 2011 (Reuter, 2011; Centre for digital media, 2014) and is still the most livable place to live in in North America (Huffpost British Columbia, 2013; Gulliver Business travel, 2011; Clark, 2014). Furthermore City of Vancouver is a retrofit city, under

construction. The city is concentrating on a technological innovation with main focus on sustainability, livability and affordability (Joss, Tomozeiu & Cowley, 2011). Furthermore, the local government has initiated the sustainability project in City of Vancouver. Therefore it is a suitable city to examine, due to our research question. We have chosen to only include one case in this thesis, because we considered the marginal utility of another case too low. Hence it would require too much effort and resources compared to the utility.

### **3.5 Selection of interviewees**

In the selection of interviewees it is significant to consider that the interviewee can contribute with different but appropriate views of the topic (Yin, 2011). When a complex topic is studied it is important to get a comprehensive picture and thereby listen to people within different sectors. Due to the fact that the selected interviewees operate in City of Vancouver and are involved in the sustainability project, sustainable development is in their interest. We strived to involve people from several different sectors in order to obtain a thorough view of the subject. Even if our research question concerns the critical factors for the local government when implementing sustainability in a city, we claim that the issue requires different perspectives to achieve a complete picture. Further, the purpose of the thesis is not to describe how the government practice the implementation rather what is worth to consider in the implementation process. Therefore we claim that different actors are important in order to present an ultimate answer. Hence, we have included different companies whereof all of them work with sustainability in one way or another. Naturally the local government and the regional government also are included as interviewees. In addition non-profit companies and citizens have contributed as interviewees. We believe that the selected actors are helpful and suitable and will contribute with perceptiveness and different point of views to the topic.

Furthermore we have performed twenty interviews. We considered the marginal utility of performing one more interview too low, compared to the resources needed. We have included a lot of different sectors and obtained a wide and comprehensive picture of the different actors' opinions. This implies that the received information gave us a throughout idea of the critical factors in the implementation process in City of Vancouver.

### **3.6 Sampling**

In the sampling phase we started to contact the local government in City of Vancouver and through them we received an intention of the important actors in the city. We reached the

number of 12 different actors that were available during our stay in City of Vancouver. This process is called convenience sampling (Bryman & Bell, 2013). Even if there are some consequences with the use of convenience sampling, for instance one cannot distinguish the threat of misrepresentation and inadequate in the sampling (Yin, 2011), we consider this as the most appropriate sampling process for our thesis. Moreover we visited the Globe Conference that was held in City of Vancouver this year and where the focus was on sustainable cities, energy, green buildings and water. At the conference we performed eight interviews with companies operating in City of Vancouver and were very committed to the topic of sustainability.

### **3.7 Data collection**

#### **3.7.1 Travel to City of Vancouver**

After the desk research was executed we obtained a theoretical picture of the selected city. We aimed to examine the collected information and see how well it converged with the reality. To achieve this, but also to get a personal experience of the city, we visited City of Vancouver in March 2014, between the 19th and 31st. During our stay in City of Vancouver we visited different sustainability initiatives, for instance the Olympic Village which was built in a very deliberate manner, but also the water plant with pipes that carry warm water to the city. This resulted in a greater understanding of how City of Vancouver works with projects related to sustainability. Moreover the empirical information was conducted during our stay in City of Vancouver. We performed personal interviews and visited the Globe Conference 2014, where we held interviews as well.

#### **3.7.2 Qualitative interviews**

Collection of data can be made in several different ways within qualitative studies. Our thesis is based on two of these, which is qualitative interviews and collection, and qualitative analysis of documents (Bryman & Bell, 2013). Due to the complexity of our subject, we have found it suitable to perform interviews. A qualitative interview tries to understand the issue from the respondent's perspective (Brinkman & Kvale, 2009) and by perform interviews it was possible for us to ask detailed questions as well as following questions (Svenning, 2003).

We have performed personal interviews and one of the positive aspects with that is that it is possible to see how the interviewee reacts on the questions by reading its body language. The disadvantage with personal interviews is that the researcher affects the answers, just by being

present (Svenning, 2003).

### **3.7.2.1 Semi-structured interviews**

There are two main forms of qualitative interviews, unstructured- and semi-structured interviews (Bryman & Bell, 2013). The unstructured interview allows the researcher to take sporadically notes and the respondent is able to freely discuss the subject. During the semi-structured interview on the other hand, the researcher uses a list of items that should be discussed (Bryman & Bell, 2013). The semi-structured interview focus on the interviewee's experiences and the questions are open ended. It attempts to give a cognitive clarification of the interviewee's experiences and makes it possible to have a deeper discussion about the subject (Daymond & Holloway, 2011). We chose to made semi-structured interviews. When we performed the semi-structured interview we had a list of specific topics that should be discussed in the interview guide. The interview process was flexible and the emphasis lied on what we as researchers found to be important in the explanation and understanding of behaviors (Bryman & Bell, 2011).

We found semi-structured interviews most suitable in order to reach the purpose of our research. Our interviews were based on the theoretical framework and we used an interview guide with topics that ought to be covered. However, we left room for the respondent's own perceptions to be expressed. The questions were open and flexible in order to not guide the interviewees in their answers and during the interview they became more concrete and specified in order to get more detailed answers.

Since organizations generally want to focus on the positive features of their work, there is a risk that the information received from the interviews will be slightly one-sided. Nevertheless, we have performed interviews with people from different organizations and sectors, which reduce the risk of misleading data.

### **3.7.2.2 Interview procedure**

The study has been conducted of twelve semi-structured personal interviews and eight informal interviews that all have taken place in City of Vancouver. All of the twelve interviewees were asked when they wanted to have the meeting within the dates we were in town. They were also asked in what location they wanted to have the meeting in order to make it convenient for them. In order to confirm the interviews we had booked, the interviewees received an email in proper time before we left for City of Vancouver. Some of

the interviewees wished to receive the actual interview questions in advance and we sent them these in good time before the interview. The eight informal interviews were made during the Globe Conference. Hence, ten of the twelve semi structured interviews took place at the interviewee's office and the other two were at a restaurant. All of the interviews lasted for approximately 60 minutes except for the group interview with Metro Vancouver, which took two hours in order for them to clarify their position, and the one with TransLink, which, due to the limited period of time of the interviewed respondent, lasted for half an hour. The eight informal interviews were held in separated zones in the conference hall.

On the basis of our framework we formulated an interview guide that assisted as a memorizing list for us to address our questions. When preparing an interview guide, it is valuable to incorporate flexibility and ensure that it is possible to acquire an understanding of the interviewees' descriptions (Bryman & Bell, 2013). The guide was not meant to be completely followed, rather to coordinate the direction and we were allowed to put in supplementary questions. The interview guide consisted of comparatively open questions due to that we wanted the interviewees to talk freely about what they find important according to the selected topic. In order to do so the discussions were open even if we made sure to address the central questions for our thesis.

### **3.8 Method of presenting the empirical findings**

The information we received from the interviews has been presented due to what we find appropriate for our purpose. When we summarized the obtained information we could see that there were several similarities, but also dissimilarities due to the different interviewees. The empirical data was divided based on the content of the information, in line with the theoretical framework. Since the research has been made by several interviews with the same topics discussed we considered this to be an applicable method. Furthermore it would facilitate the understanding of the content as well as provide a better flow in the reading.

We believe that a full presentation of the received information from the interviews would be exaggerated because all information is not relevant for the purpose. It would also be too extensive for the reader and potentially the reader would miss the substantial information then. Therefore the empirical chapter consists of an extract from the interviews.

### **3.9 Method for analysis**

The analysis is based on the content of the information received from the empirical chapter.

Furthermore we have compared the theories with the empirical findings in order to in a accurate way clarify the differences as well as the similarities. The analysis has been made with the aim to be consistent through the entire thesis. In order to use the same titles as in the theoretical framework and the empirical findings the purpose is to facilitate for the reader.

### **3.10 Evaluation of sources**

Below gives a brief explanation for and against the choices of theories and empirics.

#### **3.10.1 Theory**

The sources that the theories are based on have been examined critically and are careful selected. The theories have been based on the most prominent authors within the fields of sustainability, change management and public management since they have elaborated the most accepted and used theories. However, complementary researchers have also been included though they have contributed with significant science for our thesis. In addition our thesis contains of well-referenced articles that cover the topic of our thesis. Hence, the theory is based on literature and articles where the contents are collaborated by several authors within the field, thus the content is considered reliable. For the reason that several of the authors have referred to each other and used each other as sources in their diverse work, the audit is evidenced. Even so, there may be a risk to accede to their common view because it makes it easy to overlook other important aspects in the area written by other authors. With this in mind the thesis is supplemented by different authors, not least in the field of sustainability where there is a description of different accepted definitions of a sustainable city. This is made in order to get the possibility to draw parallels between their definitions of a sustainable city.

The thesis also emphasizes alternate models of public management and change management, written by authors with various views of the implementation. This is done in order to reach a more comprehensive picture of the issue. The advantageous by having a common picture collected from different authors is that one gets a better, basic understanding of the concept. This gives one the ability to more critically highlight other perspectives in order to complement the understanding.

There are few theories with connection to all three areas of sustainability, public management and change management, lots of them are connected to each of the individual theories. In order to make the thesis justice we have used the theories in cooperation and taken all three



theories into account. Further justifications of the theories have been justified in the theory chapter.

### **3.10.2 Empirics**

The empirical data is based on the information collected from the interviews held with different actors in City of Vancouver, but also from internal information from City of Vancouver's official website. We do not consider the information as unreliable or beautified thought we have been talking to many different actors in the city, this includes city staff, business within different areas and citizens. Even so, there is always a risk that the researchers misunderstand or interpret the interviewed respondent in a wrong manner. For the reason that we have been two researchers and performed the interviews together, we feel confident in this question though we have carefully discussed every single sentence used from the interviews.

To obtain the critical factors in the implementation of sustainability in a city we have adapted the questions so every interviewee should feel comfortable. This has resulted in open interviews where the interviewees could feel free to express their opinions.

### **3.11 Reliability and validity**

When determining what kind of sources to use in a qualitative research it is of great importance that they are reliable and valid. The reliability is a measure of the extent to which a procedure gives the same result when it is done in two different times but in the same conditions. There are different ways to test the reliability in an investigation (Bell, 1995). We have performed different actions in order to increase the reliability. Inter-rater reliability implies that more than one researcher interprets the results and that increases the reliability. This thesis is written as a part of a larger research project, which enables other researchers to interpret the results. Furthermore we are two researchers writing this thesis and doing the interviews and are thereby able to interpret the results. This has contributed to a more reliable and comprehensive approach of the interviews. Moreover we have talked to the interviewees more than once but also obtained the same result from several different sources. This action is called cross checking. Hence we have used respondent validation since we have sent the summarized interviews back to the interviewee in order to make sure that we have interpreted the information in an accurate way. Even secondary data was collected during our stay in City of Vancouver. Secondary data implies that the data already exist (Jacobsen, 2002) and is for instance our experience of City of Vancouver.

On the other hand, validity is a measurement of what degree a specific question measure or describes the fact you want it to measure or describe (Bell, 1995). This means that the researcher studies that phenomenon he or she purports to do (Bjereld, Demker & Hinnfors, 2002). In order to measure the validity one relates the three validity criteria of relevance, explanatory power and integrity (Glaser, 1978). The integrity implies to what the degree the study is coherent. Explanatory power means what benefits the study has in relation to other studies. Further the relevance refers to how useful the study is for other practitioners and researchers that would like to do supplementary studies

We have operationalized the concepts that we would like to investigate based in the theories we have described above. Our opinion is that there are no validity problems for the concepts even though the definition of a sustainable city may differ among different authors. That is because we have attempted various definitions and chosen those that we believe are most appropriate for the purpose. Rather the place for validity problem may be in the interpretation of the interviews we have completed during the research. We are aware of that the interpretation may have been affected of our attitude to the concepts or the question, even if it is totally unintentionally. Nevertheless, this kind of problems may be prohibitive though all observations or measurements of a phenomenon or situation, regardless of research area, have to be recited by interpretations (Merriam, 1993).

### **3.12 Method ethic**

In accordance with good practice, we asked all of the interviewees beforehand if they felt comfortable with being recorded during the interview, since this can conduce anxiety and cautiousness (Bryman & Bell, 2013). All interviewees permitted that the interview was recorded. The reason to record the interviews was that we wanted to ensure the accuracy of what we heard during the interview. This simplified the analysis of the material we had received. The issues that were discussed during the interviews were not sensitive and we do not contemplate the answers to be restrained and even if there might be withheld information we do not consider this to be of significant importance for our thesis. Furthermore, we asked if the interviewees wanted to be anonymous, which no one preferred to be. Some of the interviewees wanted a copy of the thesis when it is completed, which they will receive in June 2014.

## **4. Empirical findings**

*In order to understand how City of Vancouver is governed we will begin this chapter with a clarification of the government structure in Canada. Hereafter we will describe how the sustainability issue in City of Vancouver has arisen and what the main target of the project is. We will continue with the findings from the interviews, categorized according to our theoretical framework.*

### **4.1 Government structure in Canada**

There are different layers of government in Canada and each level is responsible for different areas. The system is built upon the federal, the provincial, the regional and the local governments. The federal government is responsible for ensuring the environmental quality, national defense, federal taxes, shipping, railways and employee insurance to mention a few. These laws affect the whole country and are listed in the Constitution act, 1867 (Parliament of Canada, 2014). The provincial governments are able to control planning and set out policies that the local governments need to follow (Grant, 2009). They control areas as healthcare, education and some road systems. Their responsibilities are also explained in the Constitution act 1867. There are ten provincial governments in Canada, with responsibilities that are given to them from federal level (Parliament of Canada, 2014). City of Vancouver is located in the province of British Columbia and is therefore affected by their regulations. The regional government is Metro Vancouver, which is comprised of one electoral area, 21 municipalities and one treaty first nation. Metro Vancouver operates under the regulations issued by British Columbia and controls water, waste, regional planning and air quality (Metro Vancouver, 2014). The local governments are responsible for areas as land use, community water systems, library and parking spaces. The provincial government gives them power to act among these areas (Parliament of Canada, 2014). Land use is an important issue in sustainable development. The zoning of the land needs to conform to policies that are laid out by the regional or local government. There is legislation and guidelines that describes what one is allowed to build (Hodge & Gordon, 2008).

### **4.2 The sustainability project in City of Vancouver**

#### **4.2.1 History**

City of Vancouver is a fairly new developed city. The city began to grow rapidly during the 1980's. In 1980, City of Vancouver had a population of 410,000. Today, there are

approximately 603,000 inhabitants in the city, which makes City of Vancouver the eighth largest city in Canada. There has been a big immigration to City of Vancouver, which contributes to the fact that a big part of the population has a foreign background. Many of the immigrants are from Hong Kong, who came to City of Vancouver when Hong Kong became Chinese. They were afraid of the Chinese government and choose to move to City of Vancouver instead. There are also immigrants from many parts of Europe. The increase in population has contributed to huge infrastructure- and buildings development in the city during the last decades. However, there is still a high yearly growth in population, and Downtown City of Vancouver has a high density. There has been a big interest towards sustainability ever since the expansion of the city. Furthermore, City of Vancouver has been influenced by the hippie culture, which came to the city in the 1970's, and City of Vancouver became a mecca for people with an alternative lifestyle. There was a feeling of freedom, rebellion and positivism in the city. In this atmosphere there was a movement towards protection of the nature along with values of peace and love. Through these beliefs, hippies in City of Vancouver created the organization Greenpeace. This contributes to a long history of the sustainability issue in City of Vancouver.

#### **4.2.2 Greenest City 2020 Action Plan**

The passion for the nature has lately led to a more concrete environmental sustainability plan. The city began to talk vague about sustainable development in the beginning of the 21st century but as Vision Vancouver won the election and got the power in 2008, the council explained that they wanted actions and hard targets in order to mitigate the climate change. Above the power shift at City Hall, City of Vancouver won the hosting of the 2010 Winter Olympics. This made the city motivated to show off City of Vancouver and promote its sustainability work. The Olympics has had a big impact on the city and contributed to further sustainable development. It was not hard to be the leader of sustainability in Canada, but to be the best in the world is challenging. It requires aggressive and tough targets that are constantly measured and challenged. City of Vancouver built the Olympic Village, using technology as district energy and passive design, in order to lower the environmental footprint in the village. As a result, they created the most sustainable Olympics ever made (at that point in time). This made the city even more motivated to work further with sustainable development. The city became very aggressive in the climate change issue and started to measure the greenhouse gas emissions every second year. The council recognized the success with the measurements and hired Sean Pender to develop a plan with hard targets towards sustainability. This plan was

called the Greenest City 2020 Action Plan. However, Sean Pender did not develop this plan alone, since there were a lot of different stakeholders involved in the creation of the plan. The city promoted civic engagement and more than 35,000 people was involved and contributed with ideas. The city created an online forum where people could come up with ideas concerning sustainability and other people could vote for or against different ideas. More detailed, every citizen received ten votes each to distribute between the proposals. The city also hosted workshops and other events where people could discuss sustainability and explain their opinions. The civic participation has motivated people to follow the plan.

Moreover, the city found it important to consolidate with different important stakeholders and identify the multi-stakeholder group, in order to make them involved throughout the process. They also hired consultants in order to receive essential expertise knowledge. Sean Pender and other public managers at City of Vancouver coordinated the plan and different ideas in order to balance the desires from the public with technical experts, who possess the right knowledge about sustainable development. The different ideas resulted in a unitary plan, called the Greenest City 2020 Action Plan. The plan is composed of ten different areas which are: (1) green economy, (2) climate leadership, (3) green buildings, (4) green transportation, (5) zero waste, (6) access to nature, (7) lighter footprint, (8) clean water, (9) clean air and (10) local food. The vision is that by reaching these targets, City of Vancouver will be the greenest city in the world by 2020. There have been many improvements in the areas that the plan addresses, some have been more successful implemented than others. The Greenest City 2020 Action Plan is their short-term goal. Sean Pender at City Hall explains that they also have long-term goals for 2050. The long-term goal describes that they will continue to enhance sustainable development in a longer perspective than the Greenest City 2020 Action Plan covers. He describes that this long-term goal is important in order to make sustainability a norm in the city.

The Greenest City 2020 Action Plan does not address the triple bottom line and mainly focus on environmental sustainability. According to Vickie Morris at Social Infrastructure at City of Vancouver, environmental sustainability alone will not motivate people enough. If it is combined with economic sustainability, people have more incentives to make better choices, but Sean Pender means that environmental sustainability is economic sustainability. One example of how economic sustainability can arise from environmental sustainability is the lack of highways in Downtown. Due to this there is a low number of cars and 70 % of the

people walk in Downtown. The biggest increase in population is concentrated to Downtown. This is also where most of the jobs are located. In order to decrease the distance of transportation the city has to build accommodations near the jobs. Land use is therefore a central issue in sustainable development. This made improvements both environmentally and financially, and proved by that, it is possible to enhance the economy by working with environmental issue. The city also works with social sustainability. This is accomplished through affordable housing. As a result of their sustainability work, City of Vancouver is regarded to be the most sustainable city in Canada.

### **4.3 Government**

The general opinion from businesses and citizens in City of Vancouver is that it is critical to have the local government as leaders and initiators of a sustainability project in a city. This is due to the fact that the people choose the government through elections. According to that, the government represents the people and thereby is the people. However, only one third of the citizens in City of Vancouver vote in elections regarding the local government. In 2011, Vision Vancouver won the election by receiving 77,000 votes (53 %). Therefore it is doubtful to claim that the local government is the people due to the low participation rate. The citizens do not engage themselves in the local politics and tend to be skeptical to ideas coming from the government. It is common that the citizens do not trust the local government. According to Alfred Guenkel at NORAM Engineering and Constructors Ltd, the citizens prefer to make decisions on their own, instead of being told what to do. Some believe that the sustainability plans are PR and propaganda and something the government makes in order to make them look good.

Furthermore, the government is not driven by financial profit, which makes it beneficial to have them as the main project leader in a project like this. Julien Fruchier at LIFE: Vancouver explains that traditional businesses focus too much on financial performance and are established to make profit. If profit, in terms of money, is the main objective it is not possible to reach sustainability. Sustainable development is more than the bottom line and comprises a long-term perspective as well as the standard of living, which gives a broader focus on the social aspect. Noteworthy, since the government is a public institution, they must be transparent in their activities. This means that they have to be reasonable and work with consideration. If they do anything too aggressively they live with the fear that it will be on the front page of the newspaper. Doug Smith at City Hall explains that it is a challenge for them,

since it demands them to be careful in their decisions because there is a concern that the media will emphasize their mistakes or twist an actual happening.

City of Vancouver is not the largest municipality in British Columbia due to the area, but it is the most densely populated one. It is one of the most well known cities in Canada because of the Winter Olympics that was held in the city in 2010. According to Ann Rowan at Metro Vancouver these reasons have contributed to the fact that City of Vancouver can determine more on their own than other municipalities in Metro Vancouver. This implies that City of Vancouver is more influential than other municipalities in the region. Moreover it is often a time consuming process to make a decision within the government because they are often slow moving. One of the reasons to that is that their decisions affect lots of people and therefore require a comprehensive consultation process. Furthermore, even if City of Vancouver has a lot of power, they do not have responsibility of all levels of governing. The federal and provincial government are responsible for the areas mentioned above. This is a limitation for the local government though the local government is dependent upon upper levels of government.

However, it is fantastic to have a government that drives change and is dedicated to sustainability. This is the belief from several actors in the city. The government has the power to decide upon important areas and they are for example able to decide upon the land use in the city, measure tap water consumption, update buildings and create bike lanes. Private businesses do not have the power or permission to make decision within these areas. Besides that, the government is able to show leadership from the city center. In some issues, the government can force the people to do certain things or chose more sustainable options. It is more difficult for a private company to do that. Even so, in aspects, for example regarding the behavior during leisure time, the government is not the greatest actor to engage the people in order to make them want to be sustainable.

When implementing sustainability, City of Vancouver combines different governance structures. Doug Smith explains that the local government is self-governing since they work in order to control their own emissions and make their buildings more energy efficient. They also promote civic participation and collaboration and therefore govern through enabling. Especially, the development of the Greenest City 2020 Action Plan involved a lot of different actors. Governing by provision is present since they are able to control and regulate areas that

are important within sustainable development. Finally, they also govern by regulation since they use their power in order to implement sustainability, for example write by-laws saying that people have to meter their energy consumption. By combining these different governance structures, the local government takes advantage of their role as a political body and their power but they also want to involve the citizens in order to make them feel involved and responsible. At the same time, they realize that their own activities can affect sustainability and therefore the local government uses car sharing and makes their buildings more energy efficient.

#### **4.4 Leadership**

A sustainability initiative needs to be driven by leaders who are fully committed to the subject. The city benefits by have a champion who possesses great leadership, stirs the development in right direction and pushes it even further. These factors contribute to a successful implementation of sustainability. Councilor Andrea Reimer at City of Vancouver is described to be a champion in sustainable development and she is described as an absolutely critical factor within the sustainability project in City of Vancouver. She is highly admired in the city. Andrea Reimer was adopted at a small age and lived on the street between the ages 14-19. During this time she experimented with drugs and got arrested several times. However, after moving around through different countries she got in contact with projects concerning affordable housing and this was the start of her awareness and concern of sustainability. A lot of the pressure for sustainability in City of Vancouver is due to her deep involvement. Andrea Radlovacki at Women Advisory Committee describes that Andrea Reimer is very encouraging and supportive in her leadership style and does a good job with motivating people to adapt sustainability. She constantly pushes the issue forward in order to make sure that sustainability is on the top of people's mind. Due to her background, she has proved that it is possible to change, which has inspired people. The Mayor, Gregor Robertson is also highly dedicated to sustainability. That is an important aspect in sustainable development, since it provides support for sustainability from the top level in the local government. His involvement sets the standard for sustainability at a high level. Erik Cuzzolino at CSA Group describes that in comparison to other cities as Toronto, where the Mayor do not value sustainability, City of Vancouver is far more developed within sustainability. Along with public managers at City of Vancouver, the Mayor and councilors practice sustainability leadership. Their leadership encourages people to perform activities that are sustainable in terms of economical, social and environmental aspects. Due to the encouragement of civic



involvement they allow stakeholders to give input on ideas and participate in the decision process. City of Vancouver feels like they are acting upon desires from the community. The citizens are involved in many areas in the range from transportation to affordable housing. However, due to the civic engagement and different targets within sustainability, there is a need to have a central group that is responsible for the sustainable development. These are the public managers and they coordinate and oversee the implementation. They also make sure that the budget is kept since the budget is tight with limited financial resources.

Gwendal Castellán at Tourism Vancouver describes that The Greenest City 2020 Action Plan is a great sign of the good leadership in City of Vancouver. Through this plan the local government does a lot of actions in order to fight the climate change and increase the sustainability in the city.

#### **4.5 Communication**

In order to make people and businesses aware of the sustainability plans, there is a need for good communication. Even if people agree that there is a need for sustainability in the city, people will not adapt to the new behavior if they do not receive proper information about it. City of Vancouver communicates their sustainability plan through social media, workshops, meetings, discussions, e-mail and advertising. The type of communication used depends on what actor one wants to reach and the language used is dependent upon the situation and receiver. Older people are more averse to change their behavior and rather continue with their normal habits. Therefore it is valuable to raise awareness of sustainability at an early age.

Since Vision Vancouver got the power in 2008, the amount of communication to the public has tripled. By providing more communication, there is a bigger chance that people actually adapt to the plan. If people are not aware of it or do not understand it, there is low possibility for acceptance. According to Doug Smith, the city has a big network with different stakeholders and by that they are able to identify the people who need to be informed and involved in different issues. Key actors are primarily informed through meetings and workshops. The meetings and workshops encourage engagement from the stakeholders in order to receive their opinions but it also allows the local government to elaborate their ideas and inform people about the plans. The Mayor, Gregor Robertson, is also active and involved in the communication of the plan. Gwendal Castellán describes how the Mayor shows goals on a screen and explains them one by one through annual meetings and presentations. This

gives people a chance to reflect and react upon it. The goals are discussed from both a business and citizen perspective and physical copies of the Greenest City 2020 Action Plan and the implementation process are handed out in connection to the meetings.

When communicating the plan, it is also beneficial to involve the stakeholders, in order to make them feel a responsibility towards the plan. Communication is sometimes described as a key to a more positive attitude but according to Sean Pender, the most important thing is to create an understanding for the subject. Therefore the communication needs to be done in a way that increases the understanding. However, when communicating, it is not only important to communicate the plan but also to communicate the results and explain the outcomes. It is valuable to keep the document alive, in order to use it as a guiding document and constantly reference to it. Otherwise people tend to forget about it and the government needs to defend the plan every year. Moreover, people are generally skeptical towards the information that comes from the government. Due to the low participation rate in the elections not everyone agrees with the politic that Vision Vancouver performs and therefore might find other issues more important.

#### **4.6 Information**

The government implies that they do a good job communicating the vision of sustainability to the public, especially in the Greenest City 2020 Action Plan. However, they can always improve the communication and information. It is a mistake to consider that people are informed enough, this makes them satisfied too soon and therefore do not drive the information any further, which is dangerous. Many people in City of Vancouver are familiar with the Greenest City 2020 Action Plan, however, few are actually aware of its different parts and targets. If the information is inadequate, people will be skeptical and questions will arise. Therefore the most significant with the information is that it is understandable. The local government needs to focus more on palpable solutions than the complications informing about sustainable options. One area that has met a lot of resistance is the creation of bike lanes. The bike lanes are very discussed in City of Vancouver and a lot of people are against the development of bike lanes. The most of the bicycle paths are newly developed and five years ago there were almost no bike paths. Green transportation is important in sustainable development and bikes are a good example of green transportation. Bike lanes make it safer to cycle and could encourage cycling. Through a survey sent out to businesses in the city, they asked how people came to work and it turned out that more people came by foot or bike than

expected. The city then saw an opportunity to develop bike lanes. However, it has been a lot of opposition towards the bicycle paths. People are afraid to lose their parking spots and that it will be more difficult to drive in the city. However, Andrea Radlovacki explains that in regards to the bigger picture, the bike lanes only represent 25 million CAD, which is less than half of the money (56 million CAD) invested in road systems. Many people do not consider, or are aware of this. According to her the government could work more with ensuring that the people in the city are well informed about different projects since it is dangerous to relax in this matter and believe that they already do a good job regarding information.

#### **4.7 Vision**

The Greenest City 2020 Action Plan implies that City of Vancouver has the vision to become the greenest city in the world by 2020. It is believed to be important to have a long-term vision in order to gain the trust from the public. Because even if short-term goals are important when motivating people, a long-term perspective give a more serious impression. Hence, it provides a picture of a well planned and thought out plan. Even so, a lot of instructions that are coming from the government are based on the short-term perspective. This is due to the coming election this autumn. The term of office in City of Vancouver is three years. Due to elections, the local government makes plans for more years than they might be in power, however they want to perform well and show great results soon. The Greenest City 2020 Action Plan is very concrete and so are the vision and the goals of the plan. According to Gwendal Castellán it is important to always be guided by the vision of the plan and keep reference to it. It could be difficult for the people to understand what needs to be done in order to become the greenest city in the world by 2020. Therefore, the Greenest City 2020 Action Plan consists of ten areas that aspire to make it easier for people to relate to it and understand what needs to be done. These different policies are concluded into the vision that is to become the greenest city in the world. Doug Smith describes that the local government also emphasizes horizontal policy integration by meetings, where representatives of all of the parts of the plan sit together and discuss the current situation and implementation process.

#### **4.8 Motivation**

City of Vancouver is located in a beautiful area surrounded by mountains and water. The city is far away from other larger cities (227 km to Seattle and 971 km to Calgary), which complicates the process of traveling to other cities. According to Julien Fruchier this leads to

the fact that the most of the citizens spend large parts of their time in the city. The outcome is that the people are very concerned about what is happening in their city and that makes them protective of the nature. Therefore there is a high motivation to adapt to the sustainability plan. Hence the engagement of over 35,000 people in the development of the plan contributed to make people motivated to start working towards the targets. Doug Smith believes that people become motivated when they are able to be a part of the process. However, Sean Lyons at Lotus Pro Water means that there are bad motivational factors for businesses and citizens to adapt sustainability. The government could provide incitements in order to motivate citizens and business to adapt a sustainable lifestyle. One example is that paying lower taxes could reward those who follow the sustainability plans. Sean Lyons explains that the tax rate is 54 % in City of Vancouver, and a decrease in tax could work as a motivator. However, the local government means that motivation is good to one extent, thereafter the costs for motivation exceeds the benefits and does therefore not see a need to expand the motivation factors.

Furthermore there will always be differences between people and some adapt easier to changes, while other require more conviction. Some people are very skeptical towards the concept of creating a sustainable city. Alfred Guenkel claims that this idea is propaganda and PR. He believes that sustainability will only be achieved by cutting the world's population by half. According to Alfred Guenkel, the government only emphasizes sustainability in order to be popular and by that he is not motivated to live more sustainable.

Even though there are several advantages of having the local government as the main driver in the sustainability project, it also contains a disadvantage in some occasions. For instance, Julien Fruchier explains that this regards the perception of being cool. People base their decisions on what is regarded to be cool. It is therefore an issue to make sustainability cool in order to motivate a sustainable lifestyle. Even more, peer pressure plays a significant role and is reflected in people's behavior. There is a desire to fit into the surroundings. Many choices is based on what other people do. In order to not be left out, one adapt to the peer pressure. The government needs to understand what motivates people, but furthermore it is valuable to understand how to make sustainability cool and how to elaborate peer pressure with sustainability. If other people do not take actions towards sustainability, one is not so attracted to make an effort. However, the government is not the most suitable actor to describe what is cool. Therefore they collaborate with different actors who try to market sustainability. LIFE:

Vancouver is one big actor who promotes sustainable living and link together businesses with customers who wants to be sustainable.

#### **4.9 Collaboration**

City of Vancouver has a strong network. According to Jeff Carmichael at Metro Vancouver, the city collaborate with Metro Vancouver and the other municipalities in the region and through monthly meetings, they explain what is happening in the region. It also gives a chance to learn from each other and get guidance in different ideas. Furthermore, City of Vancouver collaborates with cities like Seattle, Portland and San Francisco, who also work with sustainable development. Vickie Morris describes that these cities have a close relationship, due to their geographic location. The collaboration exceeds the country borders and follows a more natural line. The area is called Cascadia, which reaches across the Pacific coastal line in Canada and the United States. It involves British Columbia, Washington, Oregon and the northern parts of California. City of Vancouver also looks at business cases in Europe, such as Copenhagen, in order to get ideas and understand what has been critical in their sustainable development. There is more to learn outside Canada. Collaboration among cities makes them able to share information and practice between each other. They visit and talk to each other in order to receive ideas. The collaboration also gives the cities the motivation to really do things. If an idea has been successful in one city, it is more encouraging to implement it in another city as well. Sean Pender describes that even though City of Vancouver has the goal to become the greenest city in the world by 2020, there is no real competition between the cities. They do not want to beat each other. Rather they aspire to help each other adapt sustainability.

Doug Smith explains that City of Vancouver is not able to implement sustainability alone. It is therefore essential to cooperate with different actors who possess valuable knowledge within sustainability. The collaboration involves both big and small actors. Big actors are those with more influence like Metro Vancouver, BC Hydro, BC Forest and TransLink. These actors contribute with local support and are necessary elements in the project. Small actors are nonprofits, communities and citizens that contribute with local support. They are important as well. Theresa Beer at the non-profit organization David Suzuki Foundation describes that they have a close relationship with City of Vancouver and they discuss different ideas with each other. Samantha Collins at Fortis BC claims that it is important not to ignore the smaller actors because every little help make sense in the end. Particularly in a large project as

sustainability that involves the whole city, everyone and everything counts. Therefore the city seeks to collaborate with all different kind of people and businesses. Peter Smith at Environment Canada describes that to be able to reach the goals of the plan, people have to feel that they are a part of the process and that they can contribute to the goals. It would be difficult to reach the targets without this inclusion or a lack of cooperation.

According to Conor Reynolds at Metro Vancouver, the local government sometimes hires consultants who make research and contribute with important knowledge that the government might not possess. Karen Storry at Metro Vancouver also describes that universities play a big role and contribute with research and ideas for sustainable development. Through CityStudio, students from University of British Columbia and Simon Fraser University are able to participate in workshops and develop real solutions for different sustainability ideas. It requires comprehensive research in order to understand the business case and realize what works in sustainable development. Doug Smith claims that they have to be smart and through collaboration with universities and consultants, it is possible to facilitate the research process. Thereby the government is able to focus on other parts of the implementation process. Collaboration with universities is a good and inexpensive way to increase the understanding of sustainability and get comprehensive information. Besides this, students often feel motivated to contribute with ideas and develop real solutions. Therefore, both the government and universities feel that the collaboration is an advantage.

#### **4.10 Culture**

The culture has played a very big role for the sustainable development in City of Vancouver. A result from the high immigration to the city, City of Vancouver has a very diverse culture. Most of the immigrants came from Hong Kong and France, but also from other parts of the world. This has resulted in the fact that people are affected and influenced by different cultures. Worth to mention is also the gay culture that they enhance in different areas by having pink bus stations, post boxes and painted streets. Hence, it has taught the people to respect each other, and to adapt to new ways of living in order to become a part of the society. Mark Guay at BC Insulators gave an example if this. He told us that it was highly debated to build a highway through Chinatown, but the Chinese people refused to do it and made lots of opposition against the proposal. This resulted in a no highway policy in City of Vancouver. That is because no one wants to destroy the friendly and respectful spirit in the city and the

citizens listen to each other. However this has contributed to a balanced development of sustainability, means Mark Guay.

#### **4.10.1 Nature**

Water, mountains and a lot of green spaces surround City of Vancouver. Due to that the people are likely to be found outdoors and spend a lot of time in the nature. One of the targets in the Greenest City 2020 Action Plan is to create so many green spaces in the city that wherever one are, one will just have a five minutes walk to the closest park. Today you can find over 220 parks in City of Vancouver and that accounts for 11 % of the land area in the city. Though the city is encircled by water, they have utilized the littoral and developed it to a beautiful seawall. The seawall lines City of Vancouver's waterfront and is well planned over the 22 km it extends. Further the seawall is divided into one section for joggers combined with walkers and one for bikers. Moreover the seawall is a popular tourism attraction. City of Vancouver also accounts for eight beaches that are spread around the city with a total length of 18 km and one lake with fresh water.

According to Heather Lee at Call2recycle the beautiful nature makes the inhabitants aware of the consequences of their behavior and they do not want to risk destroying the environment. Hilary Antonson at Electronic Arts describes that the location of City of Vancouver also matters. City of Vancouver is located is the very west of Canada and due to the long distance to other cities people are even more protective of the nature. In short, the nature in City of Vancouver affects the citizens to take responsibility and to feel that they are responsible for their actions. Eric Aderneck at Metro Vancouver describes that the local government has benefitted from their local condition.

#### **4.10.2 Mindset**

Due to the beautiful nature that surrounds the city, people are very concerned and proud of their city and its nature, and want to conserve it. Dennis Carr at Social Infrastructure at City of Vancouver describes that people generally are mindful of its city's well being. There are a lot of green spaces, water and mountains that characterize the city. There are no freeways in Downtown. This reduce the noise and emissions from cars that otherwise would be emitted in the city. The streets are built in a manner, which makes it possible to see the water from any point in the city. The people are therefore always surrounded by the nature and they do not want to destroy it. Since it is a long drive to the nearest city, the citizens spend a lot of their time outdoors in the nearby surroundings. According to Karen Storry, the location of the city

and its nature has contributed to a good mindset of the citizens, who are conscious of their behavior and their impact on the environment. The good mindset has been an important factor for the local government when implementing sustainability. It has contributed to make people more susceptible for sustainable development. Furthermore, Andrea Radlovacki explains that people in City of Vancouver are more health conscious than in other parts of the country. The need and quest for a better lifestyle is another factor that contributes to a more sustainable standard of living. The citizens often run and walk along the waterfront. Luke Kong at Gasmaster describes that this is not common in other Canadian cities. More people cycle in City of Vancouver compared to other cities in North America. Furthermore, yoga was developed in City of Vancouver, which also contributes to a healthy lifestyle of the inhabitants.

On the other hand there, Julien Fruchier explains that traditional businesses are used to measure performance according to the bottom line. By only focusing on financial performance it is difficult to reach sustainability. Furthermore, when people make a purchase, the decision is often based upon cost, convenience or quality. Sustainability is rarely on the top of the mind. Therefore Doug Smith declares that City of Vancouver work with changing the prioritization of the citizens, in order to make them value sustainability even more. They work with creating an understanding that sustainability can create lower costs and thereby imply financial advancement. It boils down to understand that there is more that is important than the bottom line.

Even if there is a good mindset towards sustainability, the government has to struggle with the conservatism in the city. People tend to be quite conservative and are often skeptical to new ideas, such as the creation of a sustainable city. It is challenging for the government to make people more open to new ideas. Julien Fruchier believes that by reducing the conservatism, more people would be positive to adapt sustainability.

#### **4.10.3 Social factors**

According to Vickie Morris there are high differences in income in City of Vancouver. Some people have a high income, while others have to survive on a small amount of money. In order to accommodate the poorer citizens, the local government emphasizes social sustainability by providing affordable housing. Their policy is that one fifth of the houses in each neighborhood should be affordable housing. Dennis Carr explains that City of



Vancouver has worked with providing affordable housing during the last 20 years. Big parts of the Olympic Village are affordable housing. However, they meet a lot of resistance. Some people think that it is too nice buildings for poor people to live in. The wealthier people do not spend time in the areas with the highest rate of homelessness. Therefore they do not see the need to make actions in order to accommodate the homeless and believe that it is badly spent money.

City of Vancouver is the warmest city throughout Canada, due to its location in the very west. This has resulted in the high rate of homeless people, since City of Vancouver is the only place in Canada where they can survive. Vickie Morris explains that people without a home wander across the country and conclude in City of Vancouver where they stay. Since the early 2000's, the number of homeless people has accelerated and today, there are almost 3000 homeless people in the city. East Hasting is an area located in the outskirts of Downtown City of Vancouver. It is the poorest area in Canada and most of the homeless people "live" there. Homelessness, drug addicts, violence and crime characterize the neighborhood. A lot of work is done in order to improve the standard of living in this area and make it safer. However, many citizens do not spend time in this area and would prefer to make the efforts somewhere else. As mentioned above, the people in City of Vancouver feel proud of their city and like to enhance the nature. However, according to Andrea Radlovacki a subject as the high rate of homelessness is rarely talked about. She believes that since people are proud of the city, they would probably be even more proud if they could defeat the homelessness, which would contribute to better reputation of the city. According to Doug Smith at City Hall the homelessness has to be considered in the implementation since it hampers the project.

#### **4.11 Mobilization of people**

Sean Pender explains that in order to achieve the targets of the Greenest City 2020 Action Plan it is important to make everyone work in same direction. It requires that the government is capable to persuade the people and support them to do the right things. There will always be some kind of resistance from some people since everyone has their own opinion about different aspect. Often, people think that a proposal sounds good on the paper but when it becomes reality people start protesting about it. According to Peter Smith this is due to the fact that people do not have enough knowledge when accepting a proposal. When they become aware of the actual changes, resistance arises. Therefore it is a problem when people make decisions based on insufficient knowledge. This entails that they make statements,

which they are not able to support in the end.

However, Doug Smith claims that there have not been any problems mobilizing the people. Due to the good mindset and consciousness of the nature, people want to participate in the sustainable development. Hence mobilization is about the adapting to the issue and that is determined by the attitude towards the subject. It involves motivation and values. Since the development of the Greenest City 2020 Action Plan involved 35,000 people, it indicates a high rate of civic participation. Nevertheless, Gwendal Castellan claims that there are always some issues with mobilization of people. There are different wills and the people who contributed with ideas to the plan, might be those who are dedicated to sustainability. Other people might not have the same positive attitude towards sustainable development. For instance, there are a lot of conservatism and opposition in City of Vancouver. According to Alfred Guenkel the opponents protest a lot, which complicates the development and the proposals from the local government. However the local government does not work with mitigating the opposition since they not consider this as the most important issue in the implementation. This is due to the fact that they do not view as a problematic question.

#### **4.12 Resources**

In order to implement sustainability, City of Vancouver needs financial resources. Doug Smith explains that funding is always an issue and there is a fight over money when a project of larger size is implemented. This implies that if the local government cannot access enough money, there will not be investments that favor sustainable development. It is possible to apply for financial resources at the federal and provincial government, but it takes long time before anything happens. Earlier City of Vancouver received money from the provincial government of British Columbia to make improvements within sustainable development. However, they have withdrawn from the project and City of Vancouver is more dependent upon their own activities to generate money, which can be invested in sustainability. Even though City of Vancouver has a lot of money, the fight over money is always a struggle in order to make further developments. However, Vision Vancouver is very dedicated to sustainability and therefore contributes with a lot of money in this field. Today, the city is able to do investments worth 200 million dollars. This was not possible a few years ago when there was another party in power who did not support sustainable development as high as Vision Vancouver does.

Sustainable development is also dependent upon the economy. In a recession, people become more aware of saving their own money and think more of themselves than on the environment. Luke Kong explains that City of Vancouver has benefited from the economy, which has been rather good since they started to make wholehearted efforts towards sustainability.

Vickie Morris explains that the local government's main objectives are sustainability in terms of the Greenest City 2020 Action Plan and affordable housing. There have been big investments in these areas. Since the initiators of sustainability in City of Vancouver, is a political body (Vision Vancouver), they need to be transparent in all of their decisions. They also have more resource restriction than a private business since they are not driven by the profit in terms of financial result. The citizens sometimes believe that sustainable investments are waste of money, which could be invested in other areas that they find more appealing. Many citizens would like to develop car roads in order to facilitate access and speed to work. The transportation is an important issue to deal with. There are no highways in City of Vancouver and many people work in Downtown. However, Downtown is a very expensive area to live in and the wages in City of Vancouver are relatively low, in comparison to accommodation prices. This contributes to the fact that a vast amount of people lives outside of Downtown and drives to work every day. Since there are no highways that lead into downtown, the streets easily get clogged. This contributes to a time consuming commute, and in busy traffic hours it could take more than two hours to drive from Delta to Downtown Vancouver, which is a distance of 30 km. This implies that there is a need for good public transportation. There are three skytrain lines in Metro Vancouver. There is a plan to create a new sky train line, which is supposed to be ready in 2016. However, this development requires huge financial investments. City of Vancouver is in charge of the roads in the city, but the public transportation is planned and managed and by TransLink. TransLink is the transportation authority in Metro Vancouver and they fund their operations by fares, gas taxes, government funds and they also receive money for the land they own. City of Vancouver is therefore not able to alone make decisions concerning the transportation; they are dependent on other municipalities in Metro Vancouver and TransLink.

The population of City of Vancouver increases by 50,000 people each year. This provides the local government with more tax money, but it also put pressure to provide accommodation and it stresses the transportation issue further. Due to the yearly increase of inhabitants,

people argue that the skytrains are underbuilt. According to Alfred Guenkel there are not enough wagons to carry all the people. In rush hours people have to wait for several trains to pass before they can enter, and therefore tend to choose other transportation options. Green transportation is one of the goals in the Greenest City 2020 Action Plan. Due to this goal it has been an increase in the use of public transportation, except in 2013, when there was a decrease. According to Sarah Buckle at TransLink this was due to increased fare prices and one new public holiday, which implies less workdays. As a part of this goal, the local government has invested in alternative transportation as electric cars (Car2go) and car sharing (Zipcar). These transportation alternatives have become more available and are a part of the city's infrastructure. There are parking lots created solely for these cars and there are plenty of electric charging stations. In light of this, technology is constantly developed and the technical knowledge has increased. Therefore, sustainable development do not only request resources in financial terms, there is also a need for technical resources. These enables the development, since many aspects of sustainability involves new technical solutions. Due to increased technological knowledge, the government is able to make more sustainable investments in areas that have been difficult before.

Furthermore, the city tries to make the most out of their assets. Therefore, City of Vancouver focuses much on their nature and wants to take advantage of this as much as possible. Due to the big amount of water, they use a lot of hydropower, which is a clean and cheap energy source for them. According to Leo Rivas Diazgranados at Ramada Inn & Suits the incentives to use alternative energy sources are very small.

#### **4.13 Politic and regulations**

The federal government in Canada is not highly dedicated to sustainable development. According Rakhi Jethi at Amec they rather value the financial economy. However, they signed the Kyoto agreement, which is an international agreement created to reduce emissions of harmful greenhouse gases. Even so, the Canadian government is one of the most active parts in trying to stop the issues concerning the environment when having discussions with other countries. Therefore Doug Smith explains that the lower levels of government do not obtain much help from the federal government in the policy creation regarding sustainable development. This limits the local government's possibilities towards sustainability. The local governments do not have much to say in issues controlled by the federal government and must abide their regulations.

City of Vancouver is prominent in Canada regarding sustainability and make big efforts in this field. Sean Pender describes that in the beginning of the sustainability process the city negotiated for power at the higher levels of government. The provincial government then supported the sustainability project in City of Vancouver. However, after a while the provincial government withdrawn their involvement and the support decreased. City of Vancouver wants to make change fast and therefore the city is different to other municipalities in Canada and more prominent within sustainable development. The federal and provincial government slows down the local government and their sustainable development.

City of Vancouver works with changing the policies regarding information about different buildings. They have made it mandatory to benchmark energy data about every building in the city, in order to increase the perception of which buildings are energy-efficient. The new policy implies that the owner of the building has to provide the energy data, which is not always appreciated of the owners. According to Doug Smith this is a difficult process because in order to force the owners to disclose how much energy their buildings use, the local government needs to write a by-law. The procedure of writing a by-law is complicated and time consuming. The councilor must approve the by-law, and after that the councilor reports to the public. The public is very sensitive to changes and must be told in advance. Consequently, the process takes two years because the public needs time to prepare and understand what is required of them. Hence, it takes time to implement policies and the result is that every plan cannot be implemented as fast as desired.

#### **4.14 Monitor and follow up**

When implementing sustainability in a city, it is valuable to have hard target and constantly challenge them. City of Vancouver has included hard targets in the Greenest City 2020 Action Plan, and these targets constantly guide them. Sean Pender explains that if one does not measure the results and report back the outcomes, the value of a plan is lost. It is also important that there are people responsible for each target, in order to know who is responsible for what and who to turn to if questions arise. The people responsible have the duty to report the result, so the councilor knows exactly how the implementation process evolves. The councilor is then able to identify and talk to the departments that perhaps have not reached the targets.

According to Doug Smith the specific targets need to be unique to each city, due to different local conditions. Some cities have no problems with producing local food, while other cities import a lot of food. City of Vancouver is shipping a vast amount of food, due to its limited agricultural land. Local food is therefore a challenging target to reach and if they do not measure the result, it will easily just become symbolic and it will lose its relevance. Moreover, City of Vancouver uses numbers to measure the targets. It is told to be very difficult to measure some outcome. One example is the measurement of ecological footprint. It is a complex issue to measure and it is hard to know the amount of water, heat, food, transportation each citizens use. The individual has little power to influence the overall ecological footprint in the city.

City of Vancouver produces an implementation plan every year. The implementation plan describes the process and measures the outcomes. The current numbers are compared to the origin (2011), which gives a clear picture of the progress in different areas. This plan is very detailed performed and it is easy to follow to improvements, even for people not familiar with the subject. City of Vancouver is very prominent in some areas like clean water, while others need further improvements in order to reach the different targets.

However, it could take longer time than year 2020 to incorporate a sustainable lifestyle and make it the norm. According to Doug Smith, it is therefore essential that they do not to stop the sustainable development after year 2020, when the Greenest City 2020 Action Plan is supposed to be implemented. Therefore it is beneficial that they also have a long-term goal that reaches to 2050.

## 5. Analysis

*In this chapter we will analyze the empirical result in the light of the used theories. We will compare the theoretical findings to the empirical, in order to test our theoretical framework. Finally this will end up in an extended framework.*

### 5.1 Government

*The government operates close to the public and they have the power to make important decisions (Wang, Van Wart & Lebrede, 2014). The management style moves towards public participation and see the citizens as co-founders, according to the development of New Public Governance (Almqvist & Wällstedt, 2013; Almqvist & Wällstedt, 2013). Public managers coordinate the implementation process (Wang, Van Wart & Lebrede, 2014)*

The local government in City of Vancouver operates close to the public and makes visible actions within education and police force, among others. Their activities in these areas have a big impact on the citizens and their daily life. Furthermore, the local government has the power to act in important areas, for instance they control the land use, road maintenance, water systems and parking spots. The local government is also able to make regulations favorable for sustainability, as measuring the energy efficiency in buildings. The empirical findings therefore comes in hand with the theory, which points out that the government operates close to the public and they have the power to make important decisions. The fact that the government has the power to act within important areas has been crucial in the implementation of sustainability. It would not be possible for a private company to force people to measure the energy efficiency in their buildings. It has therefore been significant for City of Vancouver to have a local government that is dedicated to sustainability.

According to the theory, the management style of a public institution has moved from Public Administration to NPM and NPG. Thereby public institutions value public participation and recognize citizens as customers (NPM) or co-founders (NPG). The emphasis towards NPG, is found to be present in City of Vancouver as well. When initiating the Greenest City 2020 action plan, the city promoted civic engagement and thereby sees the citizens as co-producers. This comes in hand with NPG. Citizens are regarded to be valuable in the process towards sustainable development and the civic engagement is considered to be one of the reasons to the successful outcome of sustainability in City of Vancouver. Along with the emphasis towards NPG, City of Vancouver used a bottom up approach when initiated the Greenest City

2020 Action Plan. As explained in the theory, there is a link between public engagement and sustainability adaption. This is due to the fact that many people feel motivated to adapt to the plan if they have the possibility to contribute with ideas.

The idea of NPG is to increase the common good. This is the belief from City of Vancouver as well. They believe that through sustainability, there is a chance to increase the standard of living and thereby also increase the common good. City of Vancouver emphasizes networks and collaboration with different actors. These are also central parts of NPG. It has been beneficial for City of Vancouver to emphasize NPG in their management style when implementing sustainability. It has contributed to increased motivation through civic participation and increased knowledge and capacity through collaboration. It is therefore one factor for success in the implementation process.

Due to the fact that the local government is the initiators of the sustainable development in City of Vancouver, they are the leaders of the project. The public managers in City of Vancouver coordinate the implementation process and are responsible for the result. Their commitment is important in the sustainability project in City of Vancouver. This comes in hand with what is described in the theory. According to the theory, the public managers must understand the need for sustainability and the challenges it implies. The public managers in City of Vancouver are highly dedicated to sustainability. They have a supportive leadership style and work hard in order to mitigate the opposition and other challenges concerning sustainable development.

As explained in the empirical findings, the public chooses the local government in City of Vancouver. However, there is a low participation rate. The low participation rate might be due to the fact that many citizens do not trust the government. The people are skeptical to the government, which has not made enough effort in order to create trust from the citizens or worked in order to increase the participation rate. We have not found theories which support that even though it is a democracy, there might be issues with trust. Increased trust could contribute with a more successful implementation process in order to make people adapt sustainability. Therefore we see a need to expand the existing theory with creating trust for the government.



## 5.2 Leadership

*Through good leadership it is possible to change people's perceptions and make them more positive towards sustainability. Sustainability leadership contains social change leadership, which implies that common good is achieved through collaboration (Wang, Van Wart & Lebrede, 2014). The leaders support and coordinate the implementation (Sundberg & Sandberg, 2006).*

Since the Vision Vancouver won the local election in 2008 there have been huge differences around the city. Vision Vancouver has sustainability as one of their main issues and has started the sustainability project in the city. Thereby the support and leadership comes all the way from the top of the local government with a very engaged Mayor, Gregor Robertson. Even if the citizens in City of Vancouver in general have a good mindset and are interested in sustainability, the leadership from the local government has been crucial. Not least in City of Vancouver, where there is lots of opposition, the leadership becomes important in order to control and mitigate the resistance. Therefore the enthusiastic leadership in the city has contributed to motivate the people to adapt to the sustainability plan. The empirical findings therefore come in hand with the theory, which claims that it is possible to change people's perceptions through good leadership.

Compared with other cities in Canada, City of Vancouver is gaining ground and advancing within the field of sustainability. Other cities do not have leaders who are enthusiastic about sustainability and thereby do not have the support from their local government. Contrary, in the case of City of Vancouver the leaders are highly enthusiastic about sustainability. The empirical findings show that enthusiasm leads to a supportive approach.

The theory describes that public managers often perform sustainability leadership in the implementation of sustainability. The public managers coordinate the work downwards and thereby collaborate with many different actors. This contributes to a smooth implementation where the people feel contributing to the common good. However to perform sustainability leadership has lead to a successful implementation.

One of the dominant reasons that has contributed to make City of Vancouver successful within sustainability, is the fact that the city has a champion, Andrea Reimer. The existing theory does not indicate the advantage of having one respected leader. Even if the leadership

not only is practiced from this one person, she is highly admired and dedicated to sustainability. Andrea Reimer is a leader that numerous people look up to and adore. She is regarded as a role model who is critical for the city and its sustainable development. Due to her dramatic background, the citizens feel that she is down to earth and that they are able to associate themselves with her. The local government could utilize this and emphasize her even more in order to gain trust from the public. For the reason that the existing theory does not focus on the fact that one single person can be such significant for a city that Andrea Reimer has been, we see a need to expand the existing literature with the importance of having an admired champion.

### **5.3 Communication**

*Communication is important in order to make people aware of the concerned issue (Lafferty, 2004). It enables a change in attitudes and behaviors that could contribute to less opposition (Battiliana et al., 2010; Derveniotis, 1998) towards sustainability (Schiermann, 1989). Hence communication can be used as a marketing tool (Benoit-Moreau, Larceneux & Parguel, 2011), which requires a good communication system (Soltani, Lai & Mahmoudi, 2007).*

It is clear that City of Vancouver works with communication tools in order to implement sustainability. Moreover City of Vancouver believes that communication is key in order to make people understand the concept and need of sustainability. Their belief therefore comes in hand with the theory. Vision Vancouver works a lot with communication, both internal and external. Since the city has tripled the amount of communication over the past six years, they have managed to create a sense of urgency and awareness of the importance of sustainability, which has been important in their sustainability work.

According the theory, communication enables a change of attitudes and might contribute to less opposition. Through communication and involvement of businesses and citizens, the local government in City of Vancouver has managed to lower some of the opposition towards sustainability. Primarily the local government has rather involved businesses and citizens in their processes than only emphasized one-way communication. This has given people outside the local government a chance to give their opinions of sustainability. Due to the theory this contributes to reach a more positive attitude and a more successful outcome of the implementation process.

Hence communication can be regarded as a marketing tool, according to the theory. City of Vancouver markets themselves and their sustainability plan frequently. Marketing is also a way to raise awareness of the issue, which City of Vancouver emphasis. They like to be seen in a positive context and through that become associated with something good. This requires a good communication system. As described in the empirical findings City of Vancouver uses several different communication tools. Which enables the city to communicate to the different stakeholders. Marketing and communication have contributed to a bigger acceptance and awareness of sustainability. However, there is a point when the marginal utility of marketing decreases and becomes too expensive due to its benefits.

Furthermore, City of Vancouver finds it important to not only communicate the plan, but also communicate the result of the plan. In some aspects this might be even more important in order to keep the plan alive and therefore not need to defend it every time it is mentioned. We have not found any theory that supports the empirical finding that communication of the result is equally important as communication of the plan. Therefore we see a need to extend the theory that exists today.

## **5.4 Information**

*If people do not understand the need for sustainability, it is challenging to gain support from them. Furthermore it is essential to use a proper language that is understandable for the receiver (Harding, 2005) in order to create knowledge learning and understanding.*

According to the theory it is difficult to gain support from the people if they do not understand the need for sustainability. This comes in hand with the beliefs in City of Vancouver. Therefore the local government works a lot with informing people about the importance of sustainability. Hence they also need to create an understanding of what the outcomes might be if nothing gets done. The local government has managed to make many people positive to sustainability, but still there are a significant number of people who are skeptical and need to be convinced.

The theory describes that in order to create a proper understanding for sustainability, it is important to use a language that suits the receiver. Through distributing the information in different ways and through various systems, City of Vancouver tries to adjust the language depending on what group of people they aspire to reach. This also contributes to make the

sustainability plans as something the citizens can relate to. Since sustainability is a very complex topic, it has been valuable for City of Vancouver to reach diverse groups through the systems and use a language adjusted to the receiver. This implies that City of Vancouver has worked according to the theory.

Furthermore the theory claims that knowledge, learning and understanding are important in sustainable development. However, these are very broad subjects and are too cursory according to our empirical findings. According to the empirical findings, it becomes suitable to elaborate them into understand the concept and the need for sustainability. City of Vancouver creates the need for sustainability by working a lot with the concept of getting to yes. This implies to make the people understand that sustainability is what they need even though it might not be what they want. By understanding why sustainability is important, there is a bigger chance to create commitment towards it. We have not found the concept of getting to yes in the literature and therefore see a need to extend the theory in this aspect but also through elaborate knowledge, learning and understanding into understand of the concept for sustainability and understand the need for sustainability.

## **5.5 Vision**

*A vision guides the transformation process (Lafferty, 2004; Kemp, Part & Gibson, 2005). Because of that it is important to have clear and consistent plans, which are easy to follow (Harding, 2005). The vision creates a feeling of urgency and creates the need for a change (Kotter, 1995). In order to create a unitary vision, it is beneficial to integrate all different sustainability policies into one joint policy that address all aspects (Kemp, Part & Gibson, 2005).*

City of Vancouver is constantly guided by their vision in the implementation of sustainability, which is a must in an implementation phase due to the theory. The city promotes their vision of becoming the greenest city by 2020 frequently. This helps them to create an understanding of their target with the sustainability agenda. The local government finds it important to both have a short-term vision and a long-term vision. This is valuable since it allows the city to show short-term improvements but it also contributes to a long-term mindset.

Hence the city claims that there is no competition between the cities and even though City of Vancouver has the vision to become the greenest city in the world by 2020, they do not claim

if another city wins instead. However, it is questionable whether they do not bother if another city becomes the greenest city since their goal and vision, loose some of its power if they do not care about winning. As mentioned above, it is important to be guided by the vision, but if the government in reality do not care whether they are the greenest city or not, the vision becomes doubtful and people might start to question it. Moreover it also becomes questionable whether the empirical findings therefore correspond with the theory, which claims that the vision ought to guide the implementation process, if that is not the case in the reality.

According to the theory it is valuable to integrate all policies of sustainability into one joint vision that entails all policies. When addressing environmental sustainability, City of Vancouver has interconnected all different parts into one common vision of becoming the greenest city in 2020. All parts of the plan have contributed to reach that vision. However, City of Vancouver has not created a joint vision that covers all aspects of environmental, economic and social sustainability. However they claim that environmental sustainability is economic sustainability. Furthermore they work with social sustainability through providing affordable housing and defeat the issue with homelessness. Hence, these are different policies and there is no overall vision that covers environmental, economic and social sustainability. This implies that City of Vancouver has not done in the same way as the theories describes. City of Vancouver covers all three parts individually but has not one comprehensive plan covering the three parts assembled. However, we can not find any evidence that implies that it would be better for City of Vancouver to have one vision that address all three parts. Rather it becomes ambiguous to make an integrated vision. By separating them, it becomes more concrete and tangible.

## **5.6 Motivation**

*People have different motivation factors (Patzelt & Shepherd, 2011). One way to increase the motivation is to allow participation and negotiation (Lafferty, 2004). Motivation can also be increased by dissatisfaction with the status quo, an attraction of a more pleasing condition and a well-developed strategy of how to reach the vision (Derveniotis, 1998).*

People have different opinions and thereby different motivation factors. The norms and values affect what contribute to motivate people. According to the theory people become motivated when they are given the opportunity to participate in the process and feel that they are a part

of the development. The participation of more than 35,000 people in the development of the Greenest City 2020 Action Plan contributed to make the citizens motivated to start the journey towards a more sustainable city. This implies that City of Vancouver has acted consistent to the theory and involved people in an early stage, of course to achieve a better result but also to motivate them in the coming progress.

Further the theory describes that motivation is found in dissatisfaction with the status quo, a desire of a more pleasing condition and a well-developed strategy that describes how to reach the vision. The citizens in City of Vancouver are very proud of their nature and want to conserve it. However, in order to feel dissatisfaction with the status quo, they need to be more informed about the consequences of the climate change and how this would harm City of Vancouver. This would increase the motivation of adapting to sustainable development. It is also beneficial to promote the outcome of sustainability and show how the citizens could value from sustainable practices. This could also be achieved by increased information in order to point out the advantages with sustainability. People in City of Vancouver generally feel content with the current situation and by increasing the motivation for change, there is a good chance to receive an even more successful outcome of the implementation. However, the city has developed a good and comprehensive plan of how to reach the vision with sustainability, which is beneficial and important in the implementation process. Furthermore, the empirical findings imply that motivation might not be the most important factor. The local government believes that through public participation they have made people motivated to adapt to the issue.

Due to the empirical findings, people want more substantial incitements to be motivated. Many people do not believe that civic participation is a sufficient motivation factor, and the stimulus need to be more apparent. People tend to rather be egoistic and want personal rewards or lower taxes for sustainable activities. Therefore the motivation factors are not easy and there is a need for better incitements. It is essential for the local government to understand what drives and motivates people, as the theory says people have different motivation factors. Therefore there is a need to expand the existing theory with the fact that many citizens believe that personal rewards or benefits are needed in order to increase their motivation.

## **5.7 Collaboration**

*In the process towards sustainability, it is valuable to build relationships with partners and*

*collaborate in the implementation (Bioregional, 2008). Networks can be divided into external and local support that contributes with different knowledge and capacity (Hawkins and Wang, 2012).*

The theory states that in order to implement sustainability it is important to build relationships with partners and collaborate during the process. City of Vancouver agrees and includes different stakeholders already in the development in the plan. They had the opportunity to be involved in the creation of the sustainability plan, which have contributed to a close relationship and plenty of valuable knowledge. Furthermore the city values collaboration and networking with other cities that work towards implementing sustainability. They claim that because of the close relationship with other cities there is no competition between the cities. Even if City of Vancouver has the vision to become the greenest city in the world by 2020, they do not claim if another city “wins” instead. However if City of Vancouver hopes to aspire other cities to make efforts towards sustainability, it shows that they are dedicated to the subject and value the networks more than winning a title.

City of Vancouver emphasizes external support and local support. Through external support they receive knowledge and capacity to implement sustainability. This is obtained through collaboration with actors as BC Hydro, TransLink and other businesses, but also through collaboration with students. The local support is created by collaboration with NGO's as The David Suzuki Foundation, who work with improving and conserving the environment in City of Vancouver and Canada. They also receive local support through cooperation with communities in the city, which focus on improving the standards of living in their neighborhood. City of Vancouver therefore agrees with the theory that external support and local support are important as it contributes with knowledge and capacity.

City of Vancouver also shares the beliefs with the theory that partnership, networks and collaboration are important. They realize that they are not able to implement sustainability alone. However, City of Vancouver is careful not to lay too much attention on the big actors (BC Hydro, BC Forest, TransLink etc.) since they realize that the individual citizen is important in sustainability. In an implementation process in a city every single actor counts and it is therefore important to understand what the citizens value and how they are approach sustainability. It is easy to overemphasize big actors since they alone are more powerful and important in the implementation process. However, since sustainability also depends on the

behavior of all the citizens together it is significant to pay attention to small actors as well. The emphasis towards small actors has been operative in City of Vancouver's sustainable development and might be one of the reasons for the good outcome of the implementation process. They realize that they do not possess all the right knowledge and that value the opinion from the citizens. Emphasis towards small actors is something that we have not found in the theory and therefore see a need to extend the theory.

## 5.8 Culture

*It is possible for culture to drive sustainable development. It entails local impacts on social, economic and environmental development. Culture might act as a strategic tool for implementing sustainability (UNESCO, 2012). Culture is reflected in people's behaviors (Malach-Pines et al., 2005). It is the overall result of a long-term interplay (Hiwaki, 2012).*

The theory describes that the culture is the result of a long-term interplay. This comes in hand with the empirical findings in City of Vancouver due to the history. There is a long history of sustainability in the city, which has influenced the culture and contributed with a positive mindset towards sustainability. According to the theory culture can also be a driver in sustainability issues. This is evident in the case of City of Vancouver. City of Vancouver has a very distinctive culture, which has played a critical role in their sustainable development. The nature and location of the city has contributed with a lot of cultural aspects. Since City of Vancouver is located far away from other cities, the citizens spend a lot of time in the nearby surroundings and they care about the nature. They want to keep the nature in a good condition, since harmful actions of the environment would only harm themselves. This implies that the citizens have a good mindset towards sustainability. The good mindset towards sustainability and caring of the nature has been absolutely crucial in the implementation process. This implies that they are more susceptible for sustainable actions. Furthermore, the culture is reflected in the behavior of the citizens and therefore sustainability becomes a part of their life. Since sustainability is in their mindset it becomes something the citizens value and becomes motivated to adapt to. Furthermore, due to the history of the city the hippie culture has influenced a lot. The people take care of the environment and it has been a part of the city's culture for decades. Due to this, sustainability has become a norm in the city. Sustainability has characterized City of Vancouver for a long time and the culture has worked as a strategic tool in the implementation of sustainability. They take advantage of the nature and they make the most out of it. Therefore, the culture and especially the mindset is



the most important factor that has contributed to the successful sustainability implementation in the city. The theory does not emphasize the significance of nature and mindset. We therefore see a need to extend the theory with these factors. Primarily according to City of Vancouver the culture has been very contributing in the implementation. However it can be stated that City of Vancouver has used the culture as an implementation tool.

Furthermore, City of Vancouver is characterized by a high number of homelessness. This affects the sustainability issue in the city. It implies that a lot of money is invested in order to accommodate the homeless and provide affordable housing. The social exclusion entails that many people do not participate in the process towards improving the environment and become the greenest city in the world. Instead the homeless cost the government plenty of money. By defeating the social exclusion, they could make a wider range of people adopt sustainable practices. Homelessness is an important issue for City of Vancouver and it has become a social aspect of their culture. The empirical findings of homelessness and peculiar social factors are not found in the theory. We therefore see a need to expand the theory with social factors that need to be considered in an implementation.

## **5.9 Mobilization of people**

*Mobilize the people in order to implement the change in their daily routine (Battiliana et al., 2010). It is also valuable to demonstrate links between activities and outcomes (Magalhaes et al., 2002) The guiding coalition encourage the implementation and make it easy for the people to adapt to the change (Battiliana et al, 2010).*

According to the theory mobilization of people is important in order to make the change as a natural part in the daily routine. Because the nature is a big part of citizens' life they are very caring about it and value it highly. Because they care about the nature Doug Smith at City Hall claims that is not difficult to mobilize the citizens into a more sustainable lifestyle. People are interested about sustainability and it is a norm in the city. Furthermore they are committed to learn how they can change their behavior to protect the nature even more. The local government do not believe that mobilization of people is a problem for them in order to implement sustainability. Mobilization is therefore not the main issue.

However, the empirical findings show that people are more willing adapt a new behavior if they understand why it is needed. If they are conscious of the consequences and the benefits

of a sustainable behavior, it is more motivating to make a change. People want to see the links between activities and outcome. However, the local government does not demonstrate this as clear as the citizens' desire. We have not find any empirical result that supports the theory in this aspect. By demonstrating links between activities and outcome, there is a chance that even more people would adapt to sustainable practices. Even though the government translate the vision of becoming the greenest city in the world by 2020 and break it into small parts that are easy to understand, they do not demonstrate how the actual behavior leads to sustainability. It would be valuable for the local government to give concrete examples of how the individual behavior leads to sustainability, since this could be one reason to the opposition and to why not all people find it appealing to make changes in their life.

According to the theory it is essential to make it easy for the people to adapt the new behavior. The government in City of Vancouver tries to make it easy for the citizens to adapt a sustainable lifestyle. They create bike lanes and provide public transportation, but they also facilitate recycling and build energy-efficient buildings. There have been lots of changes in the city, due to the sustainability initiative. The implementation plan indicates that the city is on track in order to reach their vision of becoming the greenest city in the world. It entails that the government actually has managed to mobilize the people to adapt to the plan and therefore do not see mobilization as a problem. Hence it is clear that the local government search to make it as easy as possible for the citizens and therefore act according to the theory.

The theory also explains that there are obstacles that need to be removed before implementing the change. This is of special interest in the case of City of Vancouver because there is a lot of opposition in the city. This is due to the conservatism towards change and skepticism towards the government. This causes resistance, which is an obstacle to the implementation of sustainability. However it could be discussed whether the government has failed in their market research and missed the opposition that exists in the city because any clear directions towards it has not been deposited.

## **5.10 Resources**

*There is a need for sufficient resources in order to manage the investment costs (Williams & Dair, 2006). Public institutions often have more resource restrictions than private organizations (Sundberg & Sandberg, 2006; Torgerson, 1995). Create value for money and make sound investments (Sundberg & Sandberg, 2006, Thompson & Joseph, 2012).*

According to the theory, it is essential to possess the right resources in order to make investments within sustainable development. This comes in hand with the opinions from City of Vancouver. City of Vancouver has a lot of money and is therefore able to make many of the needed investments within sustainability. By having a local government that is dedicated to sustainability, the sustainability department receives a lot of support and money. Through their commitment, there will be financial resources available. However, due to the low support from upper levels of government, they are more depending upon their own activities to generate money that will be invested in sustainability.

Since City of Vancouver is a public institution and a political body, they are not driven by financial profit and have to be transparent in their decisions. As the theory says this contributes to restricted resources and they need to use their money wisely. Otherwise people will question their activities. It is therefore essential to evaluate investments options in order to examine which alternative contributes to the most value for money as possible. Even though a sustainability investment entails an initial cost, it often pays back with lower maintenance costs. City of Vancouver explains that it becomes important to make sound investments that are supported by accurate and rich information. Also this comes in hand with the theoretical view, which emphasize the importance of sound investments.

However, as explained in the theoretical as well as in the empirical findings, there is a need for technical resources in order to develop more sustainable approaches. It is not only essential to have money or human capacity when implementing sustainability, technical resources are important as well. Technical advancements can be achieved through research, which City of Vancouver emphasize a lot with the cooperation with universities and students who contribute with research and knowledge. This is valuable in the implementation of sustainability.

Another important aspect for City of Vancouver is the utilization of their assets. They have a lot of possibilities to generate hydropower due to the big amount of water in the mountains. Therefore they emphasize this source of energy in order to make the most of their assets. It is important for City of Vancouver to highlight their properties. Furthermore, they utilize the nature by building the roads in a way that makes it possible to see the water and mountains from every street. This contributes to an awareness of sustainability and it is therefore

beneficial to emphasize their special characteristics in order to enhance their competitive advantage, which also can generate money, for example the emphasizing of the nature contribute to make City of Vancouver a popular for tourists. The importance of emphasizing of their assets and utilize these as much as possible is not elaborated in the theory. This has been very important in City of Vancouver and therefore we see a need to extend the theory with this aspect.

### **5.11 Politic and regulation**

*There is a need for international and national policies that support the local government in sustainable development (OECD, 2008). The local government is not able to make decisions in all areas, connected to sustainability, which puts them in a depending situation. It is important to think beyond elections and have a long-term mindset (Mercer & Jokowiz, 2000).*

International and national policies that support sustainable development could help the local government when implementing sustainability. City of Vancouver would sometimes appreciate more support from the federal and provincial government in their sustainability work. The federal government in Canada performs vague actions towards sustainability and it is not a subject on their main agenda. The provincial government of British Columbia has also withdrawn their support. Because City of Vancouver wanted quick actions they became different from other cities in the country. As they become different, they got less support from higher levels of government. The insufficient upper support towards sustainability has been a disadvantage for City of Vancouver. It has contributed to the fact that they have not been able to do all of the things they would like to, since they lack the authority to make decisions in some areas. Furthermore, they receive little financial resources due to the small support. It is possible that they would have received an even more successful outcome if they had better support from higher levels of government. This could contribute to more financial support and the possibility to enhance policies that comes in line with sustainability. However, the local government still possesses more power than a private business to make decisions and regulations in some areas that affects sustainability. It has therefore been valuable to have the local government as the main project driver instead of a private business.

The theory claims that it is important for the local government to have a long-term perspective and think beyond elections. Through their visions with sustainability, City of Vancouver shows that they are able to think beyond the term in office and instead focus on

sustainability in a longer perspective. Their short-term goal is to be the greenest city in 2020 and their long-term goal runs until 2050. However, due to the elections, the Vision Vancouver wants to receive fast improvement in order to indicate a successful initiative and investment towards sustainability. By demonstrating enhancements, Vision Vancouver hopes to gain trust from the citizens in order to for them to continue to be the leading party in City of Vancouver.

## **5.12 Monitor and follow up**

*Monitor and follow up activities of the implementation is regarded to be a fundamental part of the implementation process (Lafferty, 2004; Bioregional, 2008). Measurements are important in order to constantly be updated with the implementation process. Further it is also good to have impartial evaluators that continuously monitor the implementation (Bioregional, 2008).*

The theory says that monitor and follow up activities are fundamental parts in the implementation process. This comes in hand with the view from City of Vancouver. The city uses hard targets as numbers when measuring the implementation process. Even if measurement in terms of numbers is good, it is also important to consider that the implementation process is not fully ready until the change is incorporated into the people's values and behavior. It could take more time than until year 2020 to incorporate a sustainable lifestyle and make this a norm. The fact that the city measures sustainability and its implementation in numbers contributes to the possibility to demonstrate real and distinct improvements. The people are then able to understand that actions and improvements are being made. The fact that City of Vancouver continuously measures and follows up the implementation by using hard numbers has been a contributing factor for the successful outcome of their sustainability work. Since they measure the outcome, they are always updated with the implementation. Even so, they find it important to always challenge the goal in order to not feel contented too soon, since it could be dangerous to believe that something is good enough. Therefore they have developed goals that are challenging to reach. By continuously developments the city aspires to be in the front of new technological sustainable solutions that might help them with a more efficient implementation process and a high ranked city within sustainability.

It has been important for City of Vancouver to be persistent and always challenge the goal. There are obstacles along the implementation process, but it has been valuable for City of

Vancouver to always be guided by their vision. When reaching a successful result, there is a tendency that some people takes out the winning in advance and not realize that it takes time for a sustainable lifestyle to be implemented. This realization has been valuable for City of Vancouver and we have not found this in the theory. We therefore see a need to extend the theory. Furthermore, we have not found any theory that supports the belief to not be content or satisfied too soon. Instead it is valuable to always make new improvements. We would therefore like to develop the literature with this as well.

We have not found any theories that emphasize the importance of evaluate and communicate the results in terms that are easily understood by the citizens. The yearly implementation plan is very concrete and easy to understand, which is beneficial in order to make people aware of the changes being made. Hence we would like to develop the theory with this aspect.

Finally, we have not found any empirical evidence that City of Vancouver uses impartial evaluators who monitor the implementation process. They could value from having a third party that controls the process, since this would contribute with an impartial view. A third party that monitor and evaluate the result could create confidence and trust, since the people are often skeptical to the government.

### **5.13 Extended framework**

Our theoretical framework is rather wide and elaborates many important parts in an implementation of sustainability. After collecting our empirical findings in City of Vancouver, we have been able to make the framework even more detailed. However, after conducting the analysis we considered it necessary to simplify the framework. Due to Occam's razor theory, a theory should be as short and narrow as possible and not multiplied more than necessary (Domingos, 1999). Therefore we have consolidated the framework. This would facilitate the understanding of the critical factors since some of the critical factors have common characteristics. The critical factors that partly cover each other have been allied.

#### **5.13.1 Explanation of extended framework**

Below follows a brief presentation of each critical factor in the extended framework.

##### **5.13.1.1 Leadership**

Because the empirical findings showed that the government and leadership have a lot of common characteristics we have chosen to put these factors together. This is due to the fact

that the local government is the leaders of the project. They have initiated the sustainability issue in the city and are responsible for the ongoing project.

#### ***5.13.1.1.1 Supportive***

After performed the interviews we found it appropriate consolidate public managers, support and enthusiasm. That is because the public managers in City of Vancouver are dedicated to sustainability and very engaged in the issue. For that reason they are both supportive and enthusiastic. However due to our findings an enthusiastic leader becomes supportive in its leadership style and therefore we have put these terms together.

#### ***5.13.1.1.2 Sustainability leadership***

This term is kept and by that we refer to processes that encourage sustainable actions.

#### ***5.13.1.1.3 Trust***

The empirical findings indicate that many of the citizens do not trust the local government. Even though it is a democracy, few people vote in the elections. This is due to the fact that they do trust the government and are skeptical to their ideas. People rather make decisions on their own than being told what to do. By increasing the trust, the local government could get more support in their initiatives.

#### ***5.13.1.1.4 Admired champion***

By an admired champion we refer to a person, in this case councilor Andrea Reimer, who is able to drive the sustainability issue further and inspire people to adapt to sustainability. Through her big involvement and dedication to sustainability she has managed to encourage people to adapt to sustainable development. The literature does not focus on the impact of one champion and therefore we extend our framework with an admired champion.

### **5.13.1.2 Understanding**

After received the answers from the interviews we saw a need to merge communication, information and vision into one joint factor. All of the three factors imply to create an understanding of sustainability.

#### ***5.13.1.2.1 Not only emphasize one-way communication***

This term is kept and by that we mean the importance of enabling different stakeholders bring their opinion.

#### ***5.13.1.2.2 Marketing tool***

After collecting our empirical findings we find it suitable to merge raise awareness and

marketing tool. This is because through marketing of sustainability, it is possible to raise awareness of the issue. By marketing tool we refer to actions that intend to make people aware of the plans.

#### ***5.13.1.2.3 Language***

This term is kept and by that we refer to the importance of using a language that is appropriate for the receiver.

#### ***5.13.1.2.4 Policy integration***

This term is kept and by that we refer to integrate all different policies into one common vision.

#### ***5.13.1.2.5 Communicate the results and refer to the plan continuously***

Our empirical findings show that it is of great importance not only to communicate the plan but also to communicate the results of the plan. Moreover it is important to refer to the plan in all committed actions in order to keep the plan alive.

#### ***5.13.1.2.6 Getting to yes***

Getting into yes is something that has been significant in City of Vancouver. It implies to create and understanding of the concept and the need for sustainability, even though it might not be what the citizens want. If the citizens understand why they need sustainability, it is easier to create an acceptance for the issue.

### **5.13.1.3 Norms and values**

As a result of our empirical findings, we find it appropriate to consolidate motivation, culture and mobilization into norms and values. Motivation and mobilization is about changing the norms and values into more sustainable actions. By having sustainability as the norm it becomes something the citizens value and thereby more easily adapt to. When the sustainable actions have been a norm and a daily routine it is also a part of the culture.

#### ***5.13.1.3.1 Nature***

The nature in City of Vancouver is one reason to the successful implementation. The city has some special attributes such as mountains, lots of water and green space, which have contributed in the implementation.

#### ***5.13.1.3.2 Mindset***

The citizens in City of Vancouver have a very good mindset. They are very health conscious and do really care about the standard of the city. They realize that harmful actions in the



environment only hurt themselves since they spend much time in the city. Therefore the mindset has been one of the most prominent critical factors to the successful implementation.

#### ***5.13.1.3.3 Social factors***

By social factors we refer to the big income differences and the homelessness that is very relevant in this issue according to City of Vancouver. This affects the city and the sustainable development since it contributes with a large social exclusion.

#### ***5.13.1.3.4 Short-term goals***

This term is kept and by that by having short-term goals it is possible to show fast improvements and thereby increase the motivation.

#### ***5.13.1.3.5 Create personal incentives***

The obtained information from the interviews showed that lots of people need personal incentives to be motivated by sustainability.

#### ***5.13.1.3.6 Put extra focus on the individual***

The empirical findings showed the importance of emphasizing the individual. By that we refer to the fact that people want to be acknowledged for their behavior and contribution to sustainability.

#### ***5.13.1.3.7 Peer pressure***

After conducting our interviews we realized the importance of peer pressure. By this we refer to the fact that people want to do things that other do, in order to not be left out.

### **5.13.1.4 Collaboration**

City of Vancouver emphasizes that collaboration is very important for them and has been a key in the implementation of sustainability. After performing our interviews we found it appropriate to consolidate relationships and networks with collaboration. This is because all of the terms focus on collaboration and thereby are very equal in their characteristics. Moreover because the implementation concerns the whole city it is not possible to make it without including the people operating in the city.

#### ***5.13.1.4.1 External and local support***

This term is kept and by that we refer to activities that contributes with external support as capacity and local support and policy creation.

#### ***5.13.1.4.2 Big and small actors***

After conducted the interviews we found that something that has been critical for City of Vancouver is to emphasize both small actors and big actors. This means that all different actors in the city are important and should be included in the implementation.

#### **5.13.1.5 Power**

After performing our interviews we saw a need to merge the terms regulation and power. This is because the local government is able to make regulations since they have the power to act in certain area. However, they lack power in some areas that are controlled by federal, provincial or regional government.

##### ***5.13.1.5.1 Resources***

By having the right resources one gets power to perform different activities. Hence resources can be of different types depending on what the situation requires, for instance economical and technical.

##### ***5.13.1.5.2 Utilize your assets***

Our empirical findings points out that it is important to utilize your assets. By this we refer to emphasize and take advantage of the local condition and the resources this implies.

#### **5.13.1.6 Monitor and follow up**

This term is kept and by that we refer to activities that monitor the implementation and follow up the outcome.

##### ***5.13.1.6.1 Schedule***

We saw a need to merge schedule and milestones into the term schedule. That is because we could not distinguish between them according to the case in City of Vancouver. The empirical findings show that the schedule consists of different milestones and obligations that will be performed during the scheduled period.

##### ***5.13.1.6.2 Be persistent***

After the interviews were conducted we realized that it is important to not be satisfied, rather be persistent and make continuous improvements. However to be persistent and not be satisfied are two terms with the same meaning and therefore we have consolidated these.

##### ***5.13.1.6.3 Evaluate in terms the people understand***

Our empirical findings emphasize the importance to evaluate the outcome in terms that people understand. This is because if the people do not understand the evaluation, the purpose of the

evaluation gets lost.

*Table 2. Extended framework: Critical forces for the government when implementing sustainability*

<b>Critical factors</b>
<b>Leadership</b> <ul style="list-style-type: none"><li>• Supportive</li><li>• Sustainability leadership</li><li>• Trust</li><li>• Admired champion</li></ul>
<b>Understanding</b> <ul style="list-style-type: none"><li>• Not only emphasize one-way communication</li><li>• Marketing tool</li><li>• Language</li><li>• Policy integration</li><li>• Communicate the results and refer to the plan continuously</li><li>• Getting into yes</li></ul>
<b>Norms and values</b> <ul style="list-style-type: none"><li>• Nature</li><li>• Mindset</li><li>• Social factors</li><li>• Short-term goals</li><li>• Commitment</li><li>• Remove the obstacles</li><li>• Create personal incentives</li><li>• Put extra focus on the individual</li><li>• Peer pressure</li></ul>

**Collaboration**

- External and local support
- **Big and small actors**

**Power**

- Resources
- **Utilize your assets**

**Monitor and follow up**

- Schedule and milestones
- **Be persistent**
- **Evaluate in terms the people understand**

**5.13.2 Evaluation of the extended framework**

The factors that our theoretical framework points out to be important in the implementation process have a moderate support from the empirical findings of our study. The theoretical framework has been extended with factors that were emphasized in our empirical findings but not as clearly elaborated in the theory. By extending the theoretical framework with the empirical findings, there is a strengthened image that creates a better understanding of the critical factors for the local government when implementing sustainability. However, after collected the empirical findings we saw a need to consolidate some of the critical factors since they had common characteristics. By merging some of the factors we received a more accurate framework with a clearer interpretation of the meaning of the factors and it facilitates for the reader, as well as for future research within the area.

The answers to the research question: what have been the critical factors for the local government when implementing sustainability shows the different actors' opinion in this matter. It also gives an image that reflects the respondents even in the other questions as well. An actor that believes that resources are important when implementing sustainability tends to emphasize resources in other questions as well. This is probably due to the fact that depending on how an actor is involved in sustainability the actor possesses a certain view. This contributes to different perspectives in the matter. Furthermore, it also indicates that the

implementation of sustainability is integrated in the city's overall operations.

Regarding some aspects we received consistent answers while some questions led to different response. All of our interviewees thought that it is important to have the local government as the leaders in a project that affects the whole city. However, the question concerning motivation gave us different answers. Due to these different beliefs motivation has not been the most important factor in the implementation process. There are two factors that are described to be of special importance in the process towards creating a sustainable City of Vancouver. These are the mindset and the leadership. These parts give a more nuanced picture of the implementation of sustainability than the theory describes. It really shows what are important and special in the case of City of Vancouver. Due to the location of the city, the citizens spend much of their time in the city. This implies that they care of the well being of the city and realize that harmful actions of the environment only hurt themselves. The beautiful nature is also very present, which contributes to raise an awareness of environmental issues. This leads to an interest for sustainability among the citizens who are willing to make more sustainable actions. Likewise the hippie culture and the creation of Greenpeace contribute to a long history of sustainability and caring of the environment. Lots of people are dedicated to conserving the city's nature and its well-being. Hence, the overall mindset has been an absolutely critical factor in the implementation since it contributes to a rather smooth acceptance and implementation of the sustainability agenda. This implies that without the mindset toward sustainability, the local government would face more challenges in the implementation process.

Furthermore, leadership has also been a critical factor in the implementation process. Particularly councilor Andrea Reimer is regarded to be critical in the sustainable development in city. She is a champion in the city and is truly dedicated to sustainability. Above this, she shows that it is possible to make changes, as long as there is a desire for a more pleasing condition. Her troubled history inspires the citizens and since they look up to her she is able to drive sustainability and make people adapt to it. Many cities do not have a role model, as councilor Reimer in the local government and City of Vancouver has been able to make many improvements within sustainability, due to her engagement and enthusiasm. Since the people admire her, her involvement has contributed to make it easier to motivate and mobilize people to adapt to sustainability. This implies that good leadership enables other factors to be present.

However, these factors are just two aspects that have contributed to the extended framework and the outcome of the implementation of sustainable development in City of Vancouver. Some factors might only be important to a certain extent. One example is that motivation is naturally good but it comes a point when the costs of motivation exceed the benefits. The same fact concerns communication and marketing. It is important to create an understanding of the issue but by emphasizing it too much there is a risk that people get tired of it and the efforts get opposite effect.

## **6. Conclusion**

*In this concluding chapter we will start by giving a brief explanation of the results of the study. We will continue with a clarification of the validity criteria. Finally we will present a suggestion for future research.*

### **6.1 Result in the light of the purpose**

The purpose of our study was to increase the understanding of the critical factors for the local government when implementing sustainability. In order to achieve an increased understanding of the critical factors for the local government when implementing sustainability, a framework has been elaborated. The theoretical framework in section 2.5 described the issue from the literature and gave a first theoretical answer. With the aim to get a complete answer to the research question, an extended framework was developed through an analysis in section 5.13. This framework complements the theoretical framework with the empirical findings obtained from 20 interviews performed in City of Vancouver. Many of the critical factors found in the extended framework originates in the theoretical framework. However through our empirical findings we were able to detect some new critical factors that were not elaborated in the existing theory. Furthermore there was a need to consolidate some of the factors since they had similar characteristics that overlapped each other.

### **6.2 Validity**

The validity of the study is based on Glaser's (1978) three validity criteria. These are integration explanatory power and relevance.

#### **6.2.1 Integration**

Our extended framework points out the critical factors for the local government in the implementation of sustainability. The framework has integrated the theoretical aspects with our empirical findings that explain the issue from City of Vancouver's point of view. It is a model that elaborates important aspects of the implementation process. The theoretical framework is rather wide and covers a broad aspect of theory. In order to get more precise answers to the critical factors for the local government when implementing sustainability, based on our case City of Vancouver, we consolidated the extended framework and removed the common characteristics. This gave us a clearer idea of the case and the important aspects.

#### **6.2.2 Explanatory power**

This study elaborates the critical factors for the local government when implementing

sustainability in a city. This subject was selected since there is a need for more research to be done in the area of sustainable cities (Wang, Van Wart & Lebrede, 2014; Alusi et al., 2011; Joss, 2011b). It is rather difficult to ensure that our framework has a strong explanatory power, compared to others. This is because we have not found any study that elaborate a framework with the critical factors for the local government when implementing sustainability in a city. Therefore we consider that our study contributes with important knowledge in the field of sustainable cities.

### **6.2.3 Relevance**

Sustainability is an important issue in today's world and due to the urbanizations, cities are important in sustainable development (Statens offentliga utredningar, 2012). It is therefore of special importance to know how to most suitable approach the implementation process. Cities have different attributes and therefore the framework is more relevant to cities similar to City of Vancouver. As the time passes, new developments are elaborated and therefore this study is more applicable the closer in time it is used. Moreover the study is not statistically generalized. However since we have developed a theoretical framework and compared this with our empirical findings, the study can be analytical generalized (Yin, 2003). By emphasizing the critical factors in City of Vancouver, other researchers can use our framework as a tool when implementing sustainability in other cities. The study is therefore relevant primarily to other local governments that aspire to implement sustainability in their city. The critical factors explain what is of most importance in an implementation process.

### **6.3 Future research**

In order to increase the understanding of sustainable cities, it would be valuable to perform future research within the subject. The study has proven that City of Vancouver has a strong culture that emphasizes sustainability, which has been beneficial in the implementation process. Therefore it would be valuable to test the framework in another city with another culture in order to investigate whether the culture is significant even there. The city is not required to be equal to City of Vancouver and can be a city in another country or continent. Moreover it would be interesting to focusing on one of the critical factors and more detailed investigate how it has affected the implementation. For instance leadership has played a big role and could therefore be of interest to perform a similar study with emphasis on leadership theory. Future research could also be performed by a quantitative method. One example is to send out a survey where the respondents can rank the significance of the critical factors.



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## 8. Appendix

### 8.1 Interview guide

#### Introducing questions

- First of all, we would like to know what sustainability means to you?
- How would you describe a sustainable city?
- Do you considered Vancouver as a sustainable city?
  - In what way?
- We understand that you have are involved in the sustainable development project that is going on in Vancouver, but what more precisely do you do?
  - How do you operate in order to be sustainable?

#### • **Main questions**

- How did the sustainability subject in Vancouver emerge?
- Would you please tell us more about the development of the Greenest City 2020 Action Plan?
  - How did you experience the involvement?
  - Who have been the most important partners in the process?
  - How do you mobilize businesses and citizens to adopt the sustainability plan?
- What decisions have been important during the process?
  - What have been the important events and milestones?
- What are the critical factors in the implementation process?
- Did you experience any challenges/barriers in the implementation process?
- In the role of leadership, what is important?
  - How have you experienced the leadership during the implementation?
- The local government means that collaboration is of great importance for them. How do you collaborate with the local government?
- How have you experienced the communication during the implementation?
  - How have you been informed about the sustainability plan?
- How does the local government motivate you to be more sustainable?
  - How would you like to be motivated?
- How do you communicate with your partners?
- How has the culture affected you in the project?
- What resources have been used during the development?

- How does the government follow up the targets in the Greenest City 2020 Action Plan?
  - Are you well informed about these?
- Have you changed your behavior in order to adapt to the plan?
- What is your opinion about having the local government as the main driver?
  - How about regulations?
  
- **Concluding questions**
- Finally, we wonder if you would recommend other cities to implement sustainability in the same way as Vancouver has?
- Is there anything else you would like to add regarding the sustainability project in Vancouver?
- Do you mind if we send you an e-mail if we have any further questions?

## 8.2 Interviewees

### **Alfred Guenkel, March 24th, 16.30**

Partner and the principal chemical engineer of Noram Engineering and Constructors Ltd. They develop, engineer, and commercialize technologies within chemical processes.

### **Andrea Radlovacki, March 24th, 12.00**

Intern at Women Advisory Committee in City of Vancouver, which is a subcommittee of the local government. Her work is to analyze the budget from a gender perspective.

### **Dennis Carr, March 31st, 13.00**

Assistant Director of Social Infrastructure at City of Vancouver. He works with developing and maintenance of affordable housing, childcares, and public facilities in City of Vancouver.

### **Doug Smith, March 20th, 14.00**

Assistant director of the sustainability group at City of Vancouver. Works with environmental sustainability and is responsible for several goals in the Greenest City 2020 Action Plan.

### **Peter Smith, March, 27th, Globe Conference**

Project engineer at Environment Canada. Their work is to conserve the nature. They also inform the people in Canada about the meteorological situation, in order to keep the people updated.

**Erik Cuzzolino, March 27th, Globe Conference**

Business Development Manager within Sustainability at CSA Group. CSA Group is a business that provide product assessment, testing, verification of energy efficiency for the international market.

**Gwendal Castellan, March 25th, 11.00**

Tourism Energy Specialist at Tourism Vancouver. Tourism Vancouver is provide tourism information in City of Vancouver. Their ambition is to be a global leader within destination sales, marketing and visitor experience.

**Heather Lee, March 27th, Globe Conference,**

Account Coordinator at Call2recycle. It is a company that is operating within the recharge battery recycling industry. Today, there are more than 1,600 places to recycle batteries in British Columbia.

**Hilary Antonson, March 28th, 14.00**

Senior Manager of Facilities & Corporate Services at Electronic Arts. She is responsible for managing processes, projects, people and other day-to-day activities in the corporation. The company provide sports related video games.

**Julien Fruchier, March 29th, 11.00**

Entrepreneur who have developed a marketing concept of sustainability called LIFE: Vancouver. LIFE: Vancouver is a business that links together businesses and citizens that wants to make sustainable choices but sometimes do not know how.

**Leo Rivas Diazgranados, March 25th, 17.00**

Piccolo at Ramada Inn & Suits located in downtown, City of Vancouver. The hotel is Green Key Global certified and work with sustainable practices in order to reduce their impact on the environment.

**Luke Kong, March 27th, Globe Conference**

B.A.Sc., Engineer at Gasmaster. Gasmaster is a company that works with high efficiency condensing boilers/water heaters. Their products are environmentally responsible.

**Mark Guay, March 26th, Globe Conference**

Project manager at BC Insulators Contractors Association. The company supply and manufacture mechanical insulation material. Their product are most commonly used in the marine, commercial, industrial and multi-residential industries.

**Metro Vancouver, March 26th, 11.00**

Metro Vancouver comprises of 23 members which are 21 municipalities, one electoral area and one treaty First Nation. Metro Vancouver operates under the provincial government as a regional district. It is a political organ and a corporate entity.

**Ann Rowan**

Sustainability Strategist, work with planning, policy and environment at Metro Vancouver.

**Conor Reynolds**

Senior Project Engineer at Metro Vancouver.

**Eric Aderneck**

Senior Regional Planner in the regional planning division at Metro Vancouver.

**Jeff Carmichael**

Division Manager within Utility Research and Opportunity Projects at Metro Vancouver.

**Karen Storry**

Project Engineer at Metro Vancouver.

**Rakhi Jethi, March 26<sup>th</sup>, Globe Conference**

Senior Marketing Coordinator Environment & Infrastructure at Amec. Amec provides engineering and consultancy services within mining, oil, energy and gas.

**Samantha Collins, March 27<sup>th</sup>, Globe Conference**

Government Relations & Public Affairs Manager at Fortis BC. Fortis BC is a company, which provides natural gas, alternative energy and electricity to people in British Columbia.

**Sarah Buckle, March 26<sup>th</sup>, 14.00**

Corporate Sustainability Strategist at TransLink. She is responsible for TransLink's sustainability policies and the implementation of these goals. TransLink is the transportation authority in Metro Vancouver.

**Sean Lyons, March 27<sup>th</sup>, Globe Conference**

Director of Sales and Marketing on Lotus Pro Water. It is a company, which provide 100 % chemical free cleaning solutions.

**Sean Pender, March 28<sup>th</sup>, 13.00**

Director of the sustainability group at City of Vancouver. Responsible for four of the targets in the Greenest City 2020 Action Plan.

**Theresa Beer, March 25<sup>th</sup>, 15.00**

Communication Specialist at David Suzuki Foundation. David Suzuki is a non-profit organization that works with the topic sustainability mostly connected to the nature.

**Vickie Morris, March 31<sup>st</sup>, 13.00**

Senior Social Planner of Social Infrastructure at City of Vancouver.



## Vancouver - ett unikt hållbarhetsprojekt

**Omvärlden är ovetande om de ogynnsamma förhållande Vancouver egentligen besitter för att implementera hållbarhet. Trots att den största hemlöshet i hela Kanada återfinns i Vancouver och att inkomstskillnaderna är extrema så har den kommunala regeringen lyckats implementera hållbarhet i staden.**

**Konsumtionen ökar ständigt** och naturresurserna förbrukas utan att fyllas på. I en tätbefolkad stad är det, och kommer det att bli, extremt viktigt att överväga sitt konsumtionsbeteende. Begreppet hållbarhet börjar ta mark på riktigt och ges mycket uppmärksamhet i dagens samhälle. Det är en utmaning för en stad att få med sig invånarna i projektet mot hållbarhet.

**För individen är det inte lockande** att behöva ändra sina rutiner och sitt beteende till något som är mer tidskrävande, dyrare eller svårare. Något många är ovetande om är att hållbarhet

inte behöver vara speciellt svårt, eller dyrt för den delen. Problemet ligger oftare i bristfällig information. Det är viktigt att tydligt informera invånarna om hur alla små förändringar tillsammans gör skillnad. Det handlar inte om att vi behöver sluta äta, endast köpa de dyraste produkterna eller promenera överallt. Människor är ovetande om vilka förändringar de kan göra och motiveras inte tillräckligt av att höra att det är just hållbart, de vill ha mer

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### FAKTA

Namn: Vancouver

Antal invånare: ca: 600.000 st

Area: ca: 115 km<sup>2</sup>

Kommunal regering: Vision Vancouver

Typ av stad: Retro-fit

Start av projekt: 2008

Status idag: Under konstruktion

Delmål: 2020

Förväntad slutdag: 2050

Främsta fokus: Greenest City 2020 Action Plan och





konkreta motivationsfaktorer än så. Ofta ger det mer hållbara alternativet lägre underhållskostnader, längre livslängd och är en investering för framtiden. Det är viktigt att poängtera det för invånarna.

**Summa summarum**, hållbarhet blir allt viktigare i våra liv. Den stora frågan är hur en stad går till väga för att bli hållbar. När Vision Vancouver kom till makten i Vancouver år 2008 började den ordentliga hållbarhetsplaneringen. The Greenest City 2020 Action Plan initierades med målet att Vancouver ska vara den grönaste staden mätt år 2020. Vi bestämde oss för att ta reda på vilka som är de mest kritiska faktorerna för den kommunala regeringen vid implementation av hållbarhet i en stad. För att undersöka hur Vancouver har lyckats med detta åkte vi dit och intervjuade tjugo aktörer från olika delar och företag i staden för att se vad de tycker är viktigt vid implementationen. Under resan passade vi även på att besöka olika hållbarhetsprojekt som var i bruk men även sådana under konstruktion.

**Vancouver är en intressant** och annorlunda stad belägen på Kanadas västkust. Under första hälften av 1980-talet var det en stor immigration till staden, och Vancouver är en stad med många olika nationaliteter och små kulturella områden som Chinatown. Dessutom har staden inspirerats av hippie kulturen och Greenpeace grundades i staden. På grund av stadens lokalisering finns det mycket vatten så väl runt som i staden, mycket grönområden och parker. I kombination med att staden ligger långt ifrån andra storstäder har invånarna i Vancouver blivit väldigt måna om sin stad. Eftersom det är tidskrävande att resa därifrån tillbringar invånarna mycket tid i sin stad. Därför är de väl medvetna om att deras agerande för endast konsekvenser för dem själva. Det har lett till att människorna har utvecklat en mycket bra attityd till hållbarhetsfrågan. De bryr sig **SÖNDAG** om sin stad och

vill att den ska fortsätta vara grön eftersom de kommer att spendera mycket tid där. Utöver det är invånarna mycket hälsomedvetna i jämförelse med resterande Nordamerika och motionerar mycket i naturen. Det här har hjälpt den kommunala regeringen och gynnat staden mycket i implementeringen.

**Något som inte många** är väl insatta med innan de besöker Vancouver är att det även finns en mörk sida av staden. Här möter man nämligen den högsta siffran av hemlösa i hela Kanada. Den största förklaringen är att för att överleva vandrar de hemlösa genom Kanada som är ett mycket kallt land. De sluter upp på västkusten som är den varmaste delen av landet och här passar en storstad som Vancouver utmärkt för ett liv på gatan där mycket folk rör sig. Hemlösheten är ett stort problem för Vancouver och några delar av staden är väldigt täta på hemlösa. Det delar staden i två delar och det rikare skiktet rör sig inte runt de mörkare kvarteren. Därför ser de inte heller att det behövs göra satsningar på de områdena för att staden som helhet ska bli mer hållbar. Det skapas motstånd till att göra någonting åt hemlösheten och de rika ser hellre att pengar spenderas på andra faktorer. Över lag finns det mycket opposition i staden mycket eftersom där finns ett stort antal intressegrupper. Intressegrupperna är ofta konservativa och skeptiska mot hållbarhetsidéen.

**En regnig förmiddag vandrade** vi genom East Hasting som är det fattigaste området i hela Kanada. Här samlas de hemlösa som håller på med tyngre droger och som kan betraktas som farliga. Längs med husfasaderna låg det hemlösa i de äldre tonåren och uppåt, vissa med sina hundar, och sov eller tittade med dystra ögon ut över de förbipasserande och tiggde pengar. Vi möttes av en stark frän doft av gammal alkohol blandat med urin och svett. Det var riktigt obehagligt och avskiljer sig

”Sustainability is propaganda, it is only PR”

Alfred Guenkel, NORAM Engineering

från övriga delar av Vancouver som ofta är mycket välplanerade och rena. Varmvattnet som förser staden upphettas mitt i staden och även det går att besöka. Denna kraftstation är välbevarad och i bra skick trots sin placering.

**Under vår vistelse** träffade vi Alfred Guenkel, ingenjör på NORAM Engineering. Alfred har sitt kontor beläget med en fantastisk utsikt över vattendraget som skiljer städerna City of Vancouver och North Vancouver. Alfred är skeptisk mot hållbar utveckling och hållbarhet



*Vi med Alfred Guenkel, en skeptiker till hållbarhet.*

Han anser att det inte är ett område värt att lägga pengar på. Han menar att hållbarhet endast kan uppnås om jordens befolkning halveras.

- ”Sustainability is propaganda, it is only PR”, avslutar Alfred Guenkel vår intervju och framför tydligt att han inte tror Vancouver

kommer se någon nämnvärd skillnad under de kommande åren.

**Långt ifrån alla** är skeptiska till hållbarhetsidén. För trots den annorlunda och intressanta intervjun med Alfred finns det betydligt många fler som tror på konceptet. Enligt Doug Smith och Sean Pender som är ansvariga för miljöaspekten i Greenest City 2020 Action Plan har det skett stora förbättringar under de senaste åren. En person som har haft stor betydelse för

”It is easy to associate with her. She is only human. I love her!”

Gwendal Castellan, Tourism Vancouver

utvecklingen i Vancouver är Andrea Reimer. Andrea är den näst högsta politikern i staden. Efter en turbulent uppväxt där hon blev adopterad vid åtta månaders ålder och flyttade ut på gatan som trettonåring har hennes karriär gått spikrakt uppåt. Andrea lyckades ändra sitt beroende och har istället tagit lärdom av sitt beroende och av sina erfarenheter.

**Trots att Andrea Reimers** bakgrund karakteriserats av hemlöshet och droger är Andrea extremt omtyckt av invånarna i staden. Hennes annorlunda förflutna har inspirerat människorna och nästan alla verkar se upp till henne. Under flera av våra intervjuer kommer vi in på betydelsen av ett starkt ledarskap och då dröjer det inte länge innan Andrea Reimers namn kommer på tals. När vi sitter på Gwendal Castellans, energispecialist på Tourism Vancouver, kontor och intervjun har pågått omkring en halvtimme utbrister han:

- ”It is easy to associate with her. She is only human. I love her!”

Det tyder definitivt på Andrea Reimers betydelse för utvecklingen vi trots allt sett i Vancouver under de senaste åren. Att ha en ledare som Andrea, som verkligen brinner för



ämnet, är en stark bidragande faktor till framgång.



*Cambie bridge som sträcker sig över False Creek.*

**En annan faktor som** har motiverat stora delar av befolkningen är att allmänheten tilläts delta i utvecklingen av Greenest City 2020 Action Plan. Inte mindre än 35.000 människor världen runt deltog i processen att skapa planen. Den här formen av involverande har varit en stor anledning till att invånarna lättare motiverat sig att anpassa sig till de förändringar planen avser. De har känt att de varit betydelsefulla för processen och att de haft möjlighet att bidra med sina åsikter. Dock är inte deltagande en tillräcklig motivationsfaktor för alla och de som har svårast att omstrukturera sitt beteende kräver mer personliga incitament som till exempel att de får betala mindre i skatt om de lever på ett hållbart sätt.

**Vancouver visar att med** engagerade ledare är det möjligt att uppnå ett hållbart samhälle. Trots ogynnsamma förhållande med hemlöshet och stora inkomstskillnader har stadens kommun använt sina resurser på bästa sätt och lyckats få människorna att tillsammans stå upp för det de tror på – hållbarhet-



Sofia Andersson



Mathilda Härner

