Collaborative Business Model for Logistics Cluster

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This project has been a journey. The first tentative steps towards what you now hold in your hands were taken at the beginning of October 2013. Now, at the end of May we are proud to present what has constituted our world for over seven months and we would like to express our gratitude to those person who have been with us on this trip.

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With that said, we want to welcome you as a reader to what has been our world for over seven months, in the hope that the thesis will give you all the inspiration, the knowledge and awaken the thoughts it brought in us.

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ABSTRACT

TITEL: Collaborative Business Model for Logistics Cluster.

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PROBLEM: Clusters seem to not only contribute directly to productivity of the nation as a whole but seem to have a positive effect on other clusters. Yet there has been no research made by researchers that look into the development of business models or joint value propositions made by a cluster as a whole. The authors have failed to identify any common view on the research field today of just how a business model for an industrial logistic cluster should look like as well as what components are essential and must be included.

PURPOSE: Explore the contextual conditions for developing BM for industrial cluster in the logistic area.

RESEARCH METHODOLOGY: Inductive based approach was used when trying to investigate a cluster in Halmstad called “Innovative Logistic in Halmstad”. The cluster is in an early stage at this moment. Data was collected through interviews and secondary data was collected to complement our findings as well.

CONCLUSIONS: The authors offer a value package proposal where the cluster offer a client a joint value proposition as the main majority of companies buy their logistic transports. This could result in e.g. more eco-driven means of transportation. The authors create a conceptual business model for industrial cluster in the logistic area.

THEORETICAL IMPLICATION: Contribution to the cluster field in form of introducing the business model perspective to the theory

MANAGERIAL IMPLICATION: The authors present their view of how important it is for a cluster to function that three different components are being dealt with, there has to be an engine in the form of a project- manger or co-ordinator, there has to be fuel in the form of funds and there has cluster ownership.

KEY WORDS: Cluster, Logistic, Business Model
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1 INTRODUCTION

This chapter give an introduction to the thesis and problem discussion, which will lead to the purpose and research questions. Finally, we describe the thesis outline.

1.1 BACKGROUND

Market economy is the driving force for why transport and logistics\(^1\) are constantly under development as well as why it constantly has to become more effective, rational and develop a more environmental friendly solution (Harrison & Hoek, 2011). Today's businesses in Sweden are facing challenges that are consequences of changes in the world (Mattsson, 2002). The market demands higher quality, shorter lead times and higher delivery capability in order to act competitively. Greater efficiency of information flow and material flows, but also the effectiveness of interventions in the processes between customers and suppliers are important (Mattson, 2002). The increasingly stiffening competition from the outside world has exposed the companies for increased pressure for change not least companies in logistics. (Pfohl & Buse, 2000).

Logistics is a dynamic field. It is constantly changing due to both external changes in the world and internal in terms of knowledge development. According to Harrison and Hoek (2011), logistics has been noted to have become increasingly important for resource utilization and competitiveness, both from a business and economic perspective. (Harrison & Hoek, 2011) Logistics is crucial for the environmental and can have a both positive and negative impact. Basically, the logistics is all about to finding the best possible relationship between resource consumption and attained results. It also includes quite naturally environmental aspects (Harrison & Hoek, 2011). Bowersox and Closs (1995) argues that logistic costs for individual companies normally vary between 5-35% of sales, depending on business, geographic distribution, and value relation for products and materials. Improvements in logistics can lead to reduced costs, at the same time customer service is increasing. Even from an environmental perspective, it is advantageous if the transport and logistics solutions become more efficient and reduce the burden on the environment. (Bowersox & Closs, 1995) This makes it interesting to investigate how future logistic solutions can be developed and adapted to the demands of society and its changes.

We live in a world where globalization means that companies no longer just compete at the local and or regional market but competition has increasingly become global. This has meant that there has been a fundamental redrawing of the global economic map. (Etzkowitz &

\(^1\) Logistics is the mindset and principles which is placed as a basis to design, develop, organize, coordinate, manage and control the material flows from raw material supplier to the final customer. (Björnland, Persson, & Virum, 2003)
Leydesdorff, 2000) In theory, more open global markets and faster transportation and communication should reduce the importance of location in competition. Everything that can be collected efficiently at a distance through global markets and industrial network is available to all companies and is thus neutralized as a source of competitive advantage. (Edling, 2010) Despite this, there are in our global world many examples of the opposite conditions; likelihood of finding an investment in world-class, for example, is much higher in Boston than in practically all other locations. The same applies to a successful car company in southern Germany or trendy footwear in northern Italy. (Carrie, 2000) A competitive advantage in a global economy lies increasingly in local phenomena such as knowledge and relationships that distant rivals cannot match (Porter, 1998). Today’s economy is therefore determined by what Michel Porter (2000) calls for clusters, which he defines as:

”... geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, standards agencies, trade associations) in a particular field that compete but also cooperate.” (Porter, 2000, p.15)

One of the most famous examples of clusters is Silicon Valley, which is located southwest of San Francisco, with a high concentration of computers and electronics; About 40% of the workforce is engaged in the thousands of high-tech companies. (Porter, 2000) Silicon Valley is seen as a precursor for clusters in general and specifically for clustering in information and communication technologies. It was established after the Second World War by firms originating from Stanford University such as Varian and Hewlett-Packard. It has since then expanded with the defense and electronics companies such as Lockheed and Xerox. Later also computer companies such as IBM, Apple, and Intel joined. During the 1980s, Silicon Valley became a symbol of concentrated and rapid growth place, based on high technology. (Hospers, Desrochers & Sautet 2009) The success of Silicon Valley has led to that clusters received much attention from researchers and even on the public policy arena (Porter, 2000; Hospers, Desrochers & Sautet 2009).

In spite of the fact that it has been published a large quantity of scientific articles on the subject of cluster, there is no clear agreement about the definition of cluster. This makes it important for us to define what we mean with cluster as the term does not have the same meaning to all the readers. Therefore we define cluster according to our own perspective as: ”as strong and competitive groups of enterprises, with a specified profile of activity, closely connected to surrounding institutions (scientific, service oriented and administrative), compete and also cooperate to improve business opportunities”

The cluster concept illustrates how a collaboration with competition can grant companies opportunities to expand and grow in an economy that is increasingly knowledge-oriented. It also describes the importance of the dynamic interaction between actors from different contexts. (Etzkowitz & Leydesdorff, 2000) However, in the studied literature we noticed a great need to develop common forms of collaboration on research and interaction on sustainable innovation-driven clusters in the logistics area.

Like we already mention, one way to develop the local industry is, the concept of clusters. There are currently many examples of regions, which by applying a cluster perspective
increased its competitiveness and attractiveness (Hallencreutz, Lundequist & Andersson, 2002). “Sweden can also point towards some examples where one from a cluster perspective managed to generate involvement and renewal in the regional industry. TelecomCity have been one of the strongest influence powers towards the development of Karlskrona. Another good example would be the audiovisual cluster in Fyrbodal who participated in placing the region on the international map within movie- and video production. Here, 80s smaller companies were created in the region. If considering the companies who indirectly can gain benefits from the cluster the numbers will be even higher.” (Hallencreutz, Lundequist & Andersson, 2002, p.3).

Already at an early stage when information about the cluster concept is collected, there is a clear confusion about that. Therefore the question about differences between network and cluster are essential in our opinion in the beginning of this thesis. According to Vinnova (2009, p.10) the network "... is a co-operation between different players who have a common interest to co-operate. The network is not necessarily geographical or representative of a specific cluster or innovationsystem." A network does not necessarily need to hold a geographic boundary or be contained to a certain sector. But when a network contains both of these two features, it is regarded instead as a cluster (or a cluster initiative). (Vinnova, 2009)

In Halmstad for example the members of “Innovative Logistics in s” tries to create a cluster, which they call “Innovative Logistics in Halland”. Here different companies within the logistics sector are trying to build up, together with help of the “Halmstad University”, “Science Park” and the “Halmstad municipality business development centre Inc.”(Halmstad Näringsliv AB), a genuine collaboration between themselves. The companies which interact in “Innovative Logistics in Halland” are as follows: “GN Transport”, “Hallands Harbours Inc.”, “Halmstad City Airport Inc.” and “Halmstad City Network Inc.”. Reason for this cluster formation is to help stimulate the growth potential of the region.

This could in turn result in that more businesses would operate in Halland region and they in turn would need logistics and as such a growing cycle of symbioses is created between the different logistical firms and the region’s different organisations. Those that are part of this cluster “Innovative Logistics in Halland” are as follows: Hallands Harbours Inc., which represents the water. With the “five pillars” we mean, road, aviation, harbour, railroad and lastly internet, which Halmstad got.

1.2 PROBLEM IDENTIFICATION

Transport and logistics in Sweden need to become more effective, rational and develop a more environmental friendly solution in order to act competitively (Mattsson, 2002). “Innovative Logistics in Halland” is a group of companies who each work in the logistic sector; air, road, rail, port, and fiber optics, with the aim to find different types of co-operation and collaborative business on the local and regional level. They have formed a cluster that has the intention to do joint business that no one can do on their own. It is about trying to find
opportunities and partners to create added value for the customers. Currently it is unclear just how that should be done.

According to Zott and Amit (2010) designing a business model (BM) is a key activity for all individuals who have a thought about starting up a business. BM is a starting point for any business to be able to make strategic decisions in the belief that there is an opportunity to create profitable. To succeed, it is important that the BM assume to satisfy potential customers needs. (Teece, 2010) A lot of research has already been done in this field when looking at single companies BM but BM in the cluster perspective is a relatively unexplored area of research. (Zott & Amit, 2010) Therefore we argue that the BM for the cluster is key activity to have the opportunity to jointly find new business and opportunities.

As we already mention our paper investigate the cluster called "Innovative Logistics in Halland". They have good ambitions to grow and bring more income to each company by collaborating. However, without a functional BM they will not know in which direction to pull and which decisions to make. Teece (2010) argue that a BM is particularly important for innovative companies when their BM should solve the problems that every other company has but also the problems that are specific to innovative companies. Researchers such as e.g. Chesbrough (2010), Teece (2010), Amit & Zott (2010), Morris et al (2005), Johnson et al (2008), Osterwalder & Pigneur (2010), have each went about in their own ways when identifying BM's elements, architecture, economics, contents and so forth, but such a model does not exist for cluster. We therefore argue that it is interesting to get a better understanding of the challenges and opportunities that the cluster “Innovative Logistics in Halland” face and, with that as the starting point have a better understanding of how the BM for “Innovative Logistics in Halland” cluster can be formed.

1.3 PURPOSE

The purpose of this thesis is to:

Explore and identify the components for developing the collaborative business model, which guides logistics cluster in doing business.

In order to fulfil the purpose, the following research question is set:

- How a logistic cluster in the industrial area can define a joint value proposition to customers?²

² In our case, with customers we mean everyone who wish to buy the value proposition from "Innovative logistics cluster in Halmstad"
1.4 THESIS OUTLINE

The thesis layout is presented below:

- **Theoretical framework:** Will deal with the study's theoretical framework, here Porters diamond model, triple-helix and success factors are described deeper in theory. The reader will also find value co-creation as we will explain later in the thesis how this can help the cluster to deliver a common value proposition to the customer. We also go into detail about the current business models that a selection of researchers has explored on the field of business model. We also summarize this with offering a table of each researchers finding.

- **Methodology:** Here we offer and give a clear overview of how the course of the work have been done, which steps were taken and we give an explanation to why these steps were done. Justifications for the methodological choice are also handled here for all the different steps of the thesis. Here the reader can read about “Innovative Logistics in Halland” and its many participants, the author will here present secondary data as information

- **Case analysis and discussion:** Here we will present primary data as well as give the reader our analysis of the case. Here we will give primary data as well as our analysis can be read here, we also discuss our findings here.

- **Conclusion:** Here the reader can read what we drew as a conclusion from the data, theory and analysis of the data with the help of theory. We present an answer to our research questions.
2 THEORETICAL FRAMEWORK

This chapter presents the study’s theoretical framework. The purpose of this study is to explore and identify the components for developing the collaborative business model, which guides logistics cluster in doing business. This will be obtained by describing the industry logic through the Porter’s diamond model, the triple helix, the model of “Success factors in regional clusters”. We also present a section named “value co-creation” which deals with how value is created. We also present different researchers within the BM academia field of science to try to give a broader view of the many different definitions, which exist to define BM. Finally we integrate BM and success factors in regional clusters and build an analytic model for our case.

The definitions and the concept of logistics vary, as it can be found in different areas extending from industry, trade and business activities. Additionally the area itself is in a constant state of change, which leads that definition that is used, reflect what logistics means for the specified period and for the person who defines the term, rather than that gives a general explanation of what the subject stands for and means. As we mentioned in the introduction we defined the logistics as: mindset and principles which is placed as a basis to design, develop, organize, coordinate, manage and control the material flows from raw material supplier to the final customer. (Björnland, Persson, & Virum, 2003)

2.1 CLUSTER - AS A NEW WAY TO BUSINESS CREATION

Porter (1990) as first has introduced classical business or industrial cluster theory, in his book The Competitive Advantage of Nations. To our understanding Porter (1990) is making an industrial analysis, it is not the cluster in itself that he presents but the industry that his model is created for. The early steps within a cluster and in the theory presented by Porter (1990) take the starting point in inner conditions o relationships between the actors. Porter (1990) emphasis that it is important that industries collaborate with each other for the benefit of them all. “Every cluster not only contributes directly to national productivity but also affects the productivity of other clusters” (Porter, 1998, p.89).

Porter (1990) developed a diamond model to describe the important factors, which influence the companies that are involved. These can be seen in figure 1, the model aims to identify the factors that are the basis of a nation’s success and especially everything related to a specific industry.

The model describes how enterprises collaborate in clusters similar business communities where industry community creates competitiveness and advantages. In relation to specific industries where different companies co-operate, Porter emphasizes that the co-operation which is similar to the cluster are the most advantageous. (Porter, 1990) The model for this industrial dynamics emphasizes, that macro environment of a country is rather similar for all
industries in the country, but however, clusters strongly may differ in the degree of development and level of international competition. Clusters represent a new and complementary way of understanding an economy, organizing economic development thinking and practice, and setting public policy. (Porter, 2000)

Porter’s Diamond Model

![Porter’s Diamond Model](image)

**FIGURE 1: PORTER’S DIAMOND MODEL (PORTER, 1990)**

According to Porter (1990), most important for competitive advantage is the ability of companies to constantly remain innovative. The so called "Porters Diamond Model" is five interlined factors: Factor Conditions, Home Demand Conditions, Related and Supporting Industries, Firm Strategy, Structure, and Rivalry, Government and Chance. Government and Chance are also important factors in his model.

**Factor Conditions:** Describes the factors that a country can create to obtain a competitive advantage in a particular industry.

- Infrastructure (Transportation possibilities, communications ways, health care possibilities, etc.)
- Human capital (skills, development, etc.)
- Capital Structure (Financiers, access to capital)
- Physical resources (natural resources, climate, geographical size, etc.)
- Knowledge Resources (Scientific, research, university, institutions)

**Demand Conditions:** Describes the state of home demand for products and services produced in a country. Product or service demand in the domestic market had some impact on almost all
industries, according to Porter's studies. Three significant characteristics can be identified, the needs of consumers in the domestic market, the size and demand of the domestic market as well as how well you can transfer domestic products in international markets. (Porter, 1990)

**Related and Supporting Industries:** The existence or non-existence of internationally competitive supplying industries and supporting industries affect businesses in the highest degree (Porter, 1990).

**Firm Strategy, structure and rivalry:** The conditions in a country that determines how companies are established, organized and managed, as well as the characteristics of domestic competition industries. Objectives, strategies, and how well the company is organized can vary between companies but also depends largely on how the nation's system is built. A well-functioning combination between the companies and the nation's goals create the conditions for competition and rivalry, which in turn affect and accelerate the process of innovation that leads to economic success. (Porter, 1990)

**Government:** Governments have a major role in today's society and this role is seen as a vital part, if not one of the most important international competition. Governments can affect all parts of the model, both positively and negatively by example restrictions in the communication channels that companies use to compete effectively. Governments also determines over education and national economy, policies, laws, and much more, which together sets a standard that companies must follow. (Porter, 1990)

**Chance:** With this concept, Porter means that there are opportunities that can happen but do not have as much to do with conditions in the nation, and that is outside the corporate power to influence. Examples of such phenomena can be war, political decisions by foreign governments, shifts in the global economy and so on (Porter, 1990).

Porter (1990) analysed why some countries have successfully managed to establish long-term competitive advantage. The orientation of these successful companies varies between countries. Germany has many world-leading manufacturers of printing presses, the U.S. has several world leaders in patient monitoring systems, software industry and gene technology as well as Japan has several leading robot manufacturers. (Porter, 1990) Countries with world leading companies are characterized, according to Porter of that they have companies that succeeded to defend its leading market position. The companies’ ability to constant innovate has proved to be essential for them to be able to maintain its world leading position. (Porter, 1990) Porter could therefore formulate a conclusion that successful nations are characterized by that they have companies that through continuous innovation are able to defend its market position. The answer brought a new issue: what is it that allows businesses in some nations to achieve a successful innovation that makes it possible for them to defend their world leading position for a long time? Clusters are Michael Porter's unequivocal answer to this question. The company’s ability to innovation is strongly influenced by the context in which they operate. Successful companies are part of the cluster of other competitive and complementary businesses to be able to establish long-term competitive advantage (Porter, 1990). It is not the
cluster itself which is Porter’s model, but his model is for the industry and industry logic is summed up. Porter take the cluster discussion in another level, he shows that if you understand how the industry logic works then we can see that the cluster is a way to manage industry dynamics.

According to Porter (2000) clusters are concentrations of highly specialized skills and knowledge, institutions, rivals, related businesses, and sophisticated customers in a particular nation or region. Proximity in geographic, cultural, and institutional terms allows special access, special relationships, better information, powerful incentives, and other advantages in productivity that are difficult to tap from a distance. As a result, in a cluster, the whole is greater than the sum of the parts. (Porter, 2000)

Clusters represent a new and complementary way of understanding an economy, organizing economic development thinking and practice, and setting public policy. The state of clusters reveals important insights into the productive potential of an economy and the constraints on its future development. A cluster’s approach to economic development encourages behaviour that is pro-competitive. (Porter, 2000)

Globalization and the ease of transportation and communication have led to a surge of outsourcing in which companies have relocated many facilities to low-cost locations. However, these same forces have created the location paradox. Anything that can be efficiently sourced from a distance has essentially been nullified as a competitive advantage in advanced economies. Information and relationship that can be accessed and maintained through fax or e-mail are available to anyone. Although global sourcing mitigates disadvantages, it does not create advantages. Moreover, distant sourcing normally is a second best solution compared to accessing a competitive local cluster in terms of productivity and innovation. Paradoxically, the most enduring competitive advantages in a global economy seem to be local. (Porter, 2000)

However, there is no clear agreement about the definition of cluster, therefore we will develop our own perspective based on all those definitions above and define the cluster as:

”as strong and competitive groups of enterprises, with a specified profile of activity, closely connected to surrounding institutions (scientific, service oriented and administrative)”

Porter’s view is considered to be more of an overview of the branch analysis and this is where the diamond model comes in. As Porter (2000) mentioned the most enduring competitive advantage in a global economy seem to be that of the local economy. We would like to introduce Etzkowitz & Leydesforff (2000) triple helix to this. We would like to argue that they complement each other quite well in describing just how complex the system really is and just each stakeholder is expected to deliver.
2.1.1 TRIPLE HELIX

With the advance of globalization, maintaining the international competitiveness of the economy becomes more and more challenging. It might even demand an extensive modification of business strategy and economic policy. The outcome, a new way of creating competitiveness of enterprises and regions is the concept of clusters, which are an effective way to seek synergies arising from the co-operation between the different entities in the so-called triple helix (see Figure 2), there industry, science and public authorities are involved. (Etzkowitz & Leydesdorff, 2000)

Etzkowitz and Leydesdorff (2000) shows in their article three distinct different figures of Triple Helix, which each gives a complete different resolution between the relationships between academia, state and industry. The goal remains the same, to help “generate alternative strategies for economic growth and social transformation” (Etzkowitz & Leydesdorff ,2000, p.110). We have placed them in our thesis and called them figure 2-4. They represent an historical evolution of the triple helix.

![FIGURE 2:TRIPLE HELIX 1 | FIGURE 3:TRIPLE HELIX 2 | FIGURE 4:TRIPLE HELIX 3](taken from ETZKOWITZ & LEYDESDORFF, 2000)

As have been mentioned the Triple Helix contains three dimensions where the first describes how organizations in each Helix creates relationships and interact with each other. The historical evolution (figure 2-3) of the Triple Helix, and the conflict over how relationship and interaction between actors can be seen at the figure 2-4 above. The first dimension (see figure 2) focuses on the authority (i.e. the state), being the dominant force. Figure 2 shows a version of triple helix where the state is the one dictating and encompasses both the industry and the academia. This version could be found according to Etzkowitz and Leydesdorff (2000) in nations such as former Soviet Union and many Eastern European nations, who embraced socialism. However, weaker versions of this model could be found in nations such as Norway and in many nations in Latin America. According to Etzkowitz and Leydesdorff (2000), figure 2 has been seen as a failure due to fact that very little room for “bottom up initiatives” and that innovation were not encouraged but instead discouraged. The basic idea of this model is that the state keep its own national industry separate from the outside world and that the
university is only intended to provide other actors with qualified personnel and conduct (controlled) research (which is not intended to create growth) (Etzkowitz, 2002).

In the second dimension (see figure 3) the industry is the dominant actor and focus on the situation when the players are separated and do not have any significant relationships with each other Etzkowitz & Leydesdorff, 2002). This may for example involve co-operation between industry and universities in the form of e.g. Careers day.3

The third dimension (see figure 4) includes the new mechanisms designed to manage and create opportunities for co-operation between the three players. A form of network organizations whose purpose is to improve interactions and ultimately accelerate the development and knowledge creation (Etzkowitz & Leydesdorff, 2002). According to Etzkowitz and Leydesdorff, 2000 figure 4 where players overlaps, generate a “knowledge infrastructure in terms of overlapping institutional spheres…” (Etzkowitz and Leydesdorff, 2000, p.111). The different players (the government, industry and university) sometimes take on the role of the others just as can be seen in figure 2. This can bring new organisations into the fold as knowledge from all three spheres connect at the interfaces and sometimes can function to aid and assist each other.

Etzkowitz and Leydesdorff (2000) argue that an innovative environment is made up of many different players. To the identified one can count special spin-off firms, which are starting out in university incubators, government laboratories as well as research groups found in the academia. What is interesting is that these arrangements often get encouraged without being strictly controlled by the government. This can be with financial backing just to give one example of this.

As presented above, there is some conflict regarding the correct definition of a Triple Helix relationship, then at least three different forms of the model were identified during a scientific conference -98 (Leydesdorff & Etzkowitz, 1998). In this study, the authors make use of the definition of Triple Helix, presented by the Etzkowitz (2002). A definition we would argue is consistent with the Figure 2, which was presented in 1998 and which we consider provides the most correct picture of Swedish conditions. There are uncountable examples of how the various actors in the Triple Helix model connects strong ties and even take responsibility for the areas which was originally defined in others business. Examples such as career-days, government research activities, company-sponsored training programs, profit making activities initiated within the university / colleges etc. A relationship which we consider is best illustrated in Figure 4. This structure of a Triple Helix model give the impression of that these three players have an equal role in the collaboration, development and international relations. However, considering that the reports from e.g. NUTEK and VINNOVA have influence our view the definition of triple helix which we will use in this thesis is as follow:

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3 Careers day is organized by Halmstad University every year and gives students the opportunity to meet potential employers, and companies to find competence. [http://arbetsmarknadsdag.wordpress.com](http://arbetsmarknadsdag.wordpress.com)
"Triple Helix is based on active participation and interaction between the regional actors within academia, states and industry. Through developing a shared vision and co-ordinate the development of needed resources within a region, the aim is to achieve an increasing innovativeness and larger return of investments" (VINNOVA, 2008, p. 10)

Co-operation between these three players is something that we see as important for the cluster to be able to both develop and grow. At the same time it is also the initiative of the cluster that keeps the three actors together.

2.1.2 SUCCESS FACTORS IN REGIONAL CLUSTERS

Hallencreutz, Lundequist and Andersson (2002) argue that clusters generally is based on a core business area, such as Telecom or heavy vehicles and what is really required to produce the core product. Within a cluster exists not only core producers, but there are other stakeholders and actors in the local environment, who also participates in one way or another. Those suppliers and other players, which in various ways are involved, and support this production system. What has come to be significant for clusters, are supporting actors such as universities, where continuous co-operation gives rise to a broader knowledge and a more specialized focus. (Hallencreutz et al., 2002) With this close contact with universities and colleges, the research is also conducted where different research institutes contribute with valuable information and technical development. Although industry associations and regional public sector involvement increases competitiveness. In Sweden, many competitive products have emerged as a direct result of successful regional clusters. Despite the fact that clusters can be very different, they often have some common features which distinguish them. (Hallencreutz et al., 2002)

According to Hallencreutz et al., 2002 research, these success factors can be summarized as follows:

According to Hallencreutz et al., (2002) a cluster emerge from a specific core area, that is needed to particularly produce this core product/process. Accordance to Hallencreutz et al., (2002), one can also except the core producers also find their core suppliers as well as different actors who in one way or the other support this manufacturing system. According to what has been mentioned earlier in triple helix by Etzkowitz and Leydesdorff (2000) and also by Hallencreutz et al., (2002) the university, industry and state can be mentioned as supportive actors.

Interesting to note is that in Sweden, according to Hallencreutz et al., (2002), many competitive products have been developed and introduced to the market and this much thank to successful regional clusters. With this being stated, we argue that this is a perfect reason for further looking into how “Innovative logistics in Halland” could become a successful cluster when it comes down to logistics.

According to Hallencreutz et al., 2002 research, these success factors can be summarized as follows:
According to Hallencreutz et al., (2002) and their model “Success factors”, there are nine important steps that each successful regional cluster seems to fulfill. These are (1) effective meeting places where people can meet and discuss ideas; (2) clear and long-term vision it should be not just short term gain that a cluster reach for but forming a successful cluster takes time so it is important that each participant is well aware of the long term vision; (3) a common language and measurement basis, each participant in the cluster need to communicate in the same language and values that everyone can understand and agree upon; (4) a clear worksharing between public services and markets; (5) brands that strengthens cluster companies own marketing, and that functions as a cohesive force; (6) identifying the local strengths, they need to identify what are their geninue strenght and utlize this for best effect; (7) leading and energetic companies, which drives the process continuously forward in the cluster; (8) common activities that strenghten the clusters common competence it can be visiting eachothers facilities and learning from each others; (9) Cluster engine significance can be described as the individual, the individuals or the organization that creates new contacts and engage in networking between companies and other actors in the cluster.

The above described nine factors should not be seen as isolated from each other, but rather engages the hold of each other and strengthen ties between them. If you compare a regional cluster to a wheel, you can say that these nine factors get the wheel to spin faster and in the right direction. (Hallencreutz et al., 2002). With this we argue that for a cluster to be successful it needs to fulfil these nine important steps seen in the figure 5.

A cluster of companies also needs to create value for their customers. So following the success factor model we argue that a cluster can create something called value co-creation. In
this many aspects can take form such as increased relationship-building and new solutions can emerge as people start to communicate with each other. The creation of value together could result in a growing relationship between parties involved in the value co-creation between companies and therefore we will explain more now about value co-creation.

2.2 VALUE CREATION AS PART OF DESIGNING A NEW RELATIONSHIPS BETWEEN COMPANIES

Co-creation of value (called value co-creation) is increasingly appearing in the business world. It was introduced to the market a decade ago by Prahalad and Ramaswamy (2004) but still raises more doubts than simple solutions. Saarijarvi, Kannan and Smith (2013) came to a simple model, which dismantle the concept in three areas:

Reflecting on the "value" co-creation in the first place we should define what value is created and for whom it is created. Is it the value created for the customer? Whether for companies? Or for both? Or maybe it's about the multidimensional value created for broad range of stakeholders on the company? The concept of value co-creation does not clearly explain the different schools and show different points of view. It is also unclear whether it is a use-value or emotional. So when we talk about co-creation of value we must first answer the question for whom this value is (co-) created and we think that no less important is the thing about question of what kind of value is created? (Saarijarvi et al., 2013) However, in this work we focus on value for the cluster.
"Co" - defines the actors who are involved in the processes of co-creation. They may be single clients, companies, group of customers, communities and other entities. It is important that beyond the abstract statement that value is co-created, name the expected co-creators, i.e. what resources should co-creating this value (B2B, B2C, C2B, C2C, or maybe just simply say H2H as a Human 2 Human, at the same time clarifying what kind of people). (Saarijarvi et al. 2013) Saarijarvi et al. (2013) argue that by maintaining a continuous dialogue among all involved, where everyone actively participates, the chances of success increases significantly. The discussions and joint action among actors must have innovation and networking as an overriding theme, in order to effectively develop in a positive direction (Saarijarvi et al., 2013).

"Creation" - The word creation refers to the processes through which different resources (including human) are integrated in order to build a new value. Under this concept integrates operations and the way they are integrated. These mechanisms can be created by the company, customers and community. It is about collaboration on what to do, and a condition for this is that partners trust each other. It is these mechanisms which reconfigure the traditional role of the different actors in the chain of delivering the values. "They reconfigure the traditional roles of customers and firms in order to harness the resources of each in new and innovative ways". (Saarijarvi et al., 2013, p. 11) Trust and confidence are often used as a key concept in creation of value and is seen as essential for complex collaborative relationships to work (Hallencreutz et al., 2002).

If companies realize that effective value creation is not their domain, but that is the customer may be an effective co-founder of the offer, it will come to the conclusion that they must design the business processes, which will be focused for this fact. (Saarijarvi et al. 2013) However, the basis of this is, (1) naming the values and define its target group, (2) determining the resources that this value can co-create, and (3) to build mechanisms for its creation.

Chesbrough (2010) argues that develop and innovate your business model would be equally important as that of developing an innovative technology. It might be possible for the cluster to offer a common package solution to their customers, which in turn would prove to be a competitive advantage for the region as a whole. For this cluster it is important to understand just for whom they create value and that answer is for the customers. And each business model need to explain how a company can identify a need, offer a solution, deliver that solution and then capture profit for the company. As of right now each company are operating on their own, it works as a single company and now they wish to develop a competitive and common business model. Chesbrough (2010) argues that it is highly important to allow experimentation when a new business model is to be innovated. However, it is not clear just what this model will turn out to be. According to Chesbrough (2010, p.356) "Business model innovation is not a matter of superior foresight ex ante - rather, it requires significant trial and error, and quite a bit of adaptation ex post." For this reason we will now present some of the business models which were studied to better help figure out how to handle this problem.
2.3 BUSINESS MODEL - EVERYTHING IS ALL ABOUT PERSPECTIVE

It is quite interesting that there exist no commonly agreed upon definition of BM, which is backed up by the researchers Morris, Schindehutte and Allen (2005). The researchers emphasizes that there is no consensus regarding the evolution, which BM’s have undertaken over the course of years, nor are there any consensus regarding the definition, structure, nature of the BM’s. Morris et al., (2005) argues that still, the BM is promising when as an unifying unit of analysis, which according to the researchers “can facilitate theory development in entrepreneurship” (Morris et al., 2005 p.726). The researchers also offer in their articles something, which they call a six-component framework when to characterize a business model and this is regardless of the venture type (Morris et al., 2005).

Despite the different views that some researchers have, which can be seen in the Table 2, we would like to point towards the similarities, which have stepped forward. When looking over the table a clear picture of that the business need to somehow, identify an opportunity to satisfy the customer then delivering a means to do this, finally, to deliver and capture value for the company. Here below we intend to give our understanding of the different researchers papers, which have been studied and how they define BM. After this section a section called conclusion will be done under, which we explain what conclusion is drawn from these researchers.

Teece (2010) argues that the core of the BM is how the enterprise go about when defining how the enterprise delivers value to its customers, how it attracts its customers to pay for that value and finally how it convert that into a profit. Teece (2010) also lifts up that BM will reflect the management’s view and their hypothesis about just what the customer needs. How they want it and how to best organize means of meeting these ends. Then also how transfer these needs to the customers, while at the same time gaining a profit in the enterprise.

According to Teece (2010), it doesn’t matter, which sector one operates in, there exists clear criteria, which will help enable one to “determine whether or not one has designed a good business model” (Teece, 2010, p.174). According to Teece (2010) a good BM should help yield value propositions, which are quite compelling to its customers. It should also achieve advantageous cost and risk structures and help enable a significant capture of value to the enterprise that created and delivered the service and product. (Teece, 2010)

Other researchers that were studied are Zott and Amit (2010), which in their article define BM as something as “a system of interdependent activities that transcends the focal firm and spans its boundaries” (Zott and Amit 2010 p.216), they later use a different definition, which is “the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities” (Zott and Amit 2010 p.219).

The activity system enables, according to Zott and Amit (2010) the focal firm, in agreement with their partners to actually help create value and to share that value. This is quite similar with that of Johnson et al., (2008) as it are activities around creating value and capture this value. Zott and Amit (2010) suggests two different parameters, which they call design
elements, which can be broken down into “content, structure and governance” (Zott & Amit 2010 p.220).

Zott and Amit (2010) describes an activity in a focal firm’s business model as “viewed as the engagement of human, physical and/or capital resources of any party to the business model [...] to serve a specific purpose towards the fulfilment of the overall objective” (Zott & Amit 2010 p.217). They then continues with defining the activity system as a set of interdependent organizational activities centred on a focal firm, it is suppliers, customers partners etc. Zott and Amit (2010) states that the BM contains certain design elements as mentioned above and these goes beyond the interdependencies, which otherwise are among activities or believes about network structures.

Zott and Amitt (2010) argues that the design elements contain three aspects, which are *content*, which the Amitt and Zott (2010) argues are the selection of, which activities that will be housed in the activity system. The next is *structure*, which deals with exactly how linkage in the activities are. The third is *governance*, which Amitt and Zott (2010) state references to exactly who is performing the set activity.

Zott and Amitt (2010) also use design themes that are configuration of the design elements or "degree to, which they are orchestrated and connected by distinct themes." (Zott and Amitt 2010 p.221). They arrange these themes in Novelty, Lock-in, complementarities and lastly efficiency (Zott & Amitt, 2010).

Zott and Amitt (2010) argues that a BM can be seen as a template of just how the business will go about when conducting business and capture revenue for its stakeholders, as well as how the firm "links factor and product markets" (Zott & Amit 2010 p.222). This while activity system, has as goal to address all vital issues and also provide managers with a conceptual toolbox, as well as researchers in the academic world, a language to address the issues. Zott and Amitt (2010) gives three reasons why their perspective on activity system is advantageous for academics and managers who are concerned with the past, the present as well as the future of BM.

1. It helps the person who has to take decisions about the BM design and decide which activities to use. This can be as to decide, which activities to keep inside the company and which to out-source.

2. It helps to give the company a holistic and systematic way of thinking when designing the BM. Zott and Amitt (2010) describe this very metaphorically as “The message to the managers is clear: look at the forest, not the trees – and get the overall design right, rather than optimizing details.” (Zott & Amitt 2010, p.223)

3. Focus on activities Zott and Amitt (2010) argues is “a focus on activities allows us to relax several assumptions made in the transaction cost economics (TCE) literature – for example that the governance challenges of firms involved in an exchange will be homogeneous” (Zott & Amitt 2010 p.223).
If study the perspective offered by Johnson, Christensen and Kagermann (2008), BM should contain elements such as profit formula, customer value proposition, key resencers and key processes. According to Johnson et al., (2008), these elements, stated above are interlocked and by far the most important. These were pointed out in their article to be CVP (customer value proposition). Together they play a crucial role in creating value for the company. As customers have needs, which can be all from service need to need of a specific product, the company who can successfully identify and satisfy this need will generate a profit. This is then captured by the company itself, which is really the reason for any company to exist as long as its profit oriented. One could summarize it all up with that a customer has a job, which needs a solution that the company can satisfy, it can be service or product such as special skill or a technological product just to give an example. This is then generating revenue, which then can be captured by the company who sold the solution and then returned to the company as profit. (Johnson et al., 2008)

(CVP) Customer value proposition: The successful company is the one who has found a way to create value for its customers. This will be a way to assist the customer in getting an important job done. Johnson et al., (2008) define job as “a fundamental problem in a given situation that needs a solution” (Johnson et al., 2008 p. 52). After have got an understanding of the job, how to formulate all the dimensions for getting it all done, an customer proposition can be made where an offering of solution to the customer can be made. According to Johnson et al., (2008), an offering is something that the customer needs to fulfil a need it have such as a solution to its problem it is currently facing. It is not just defined by what it is but just as important to keep in mind how it is sold to the customer. It is given that if the customer sees this problem as very important, this will effect the level of customer acceptance to other solutions such as current ones will be. Exemple given if the customer sees this problem as very important, the customer acceptance of current solutions will be quite low. This together with according to Johnson et al., (2008) the new solution offered by the company if it is better that is taken into account the pricetag of this new solution the better the company’s CVP will compete.

Profit formula: This can be seen according to Johnson et al., (2008) as a blueprint, which describe just how the company goes about to create value for itself and still delivering much needed value to its customer. Profit formula consist of the following according to Johnson et al., (2008).

1. Revenue model: price x volume
2. Cost structure: this will mainly be influenced by the costs coming from the key resencers, which are required by the BM. To this Johnson et al., (2008) mentions varibles such as: economy of scale, direct and indirect costs.
3. Margin model: “given the expected volume and costs structure, the contribution needed from each transaction to achieve desired profits.” (Johnson et al., 2008 p. 53)
4. Resource velocity: is how fast inventory turnover need to be, fixed assets and other types of assets, how good utilization of resourcers need to be “to support our expected volume and achieve our anticipated profits” (Johnson et al., 2008 p. 53)

**Key resourcers:** These are assets in the company such as facilities, products, people etc. which is required to actually deliver the value proposition to the customer who has the job. According to Johnson et al., (2008) focus here should be on key elements, which actually create value for both “the customer and the company and the way those elements interact.” (Johnson et al., 2008 p. 53).

**Key processes:** The researchers take up here processes that is essencial for being able to deliver value repeatable, it also contains the ability to increase scale and covers such areas as operational and managerial processes. Towards key processes company rules, metrics and norms can be counted. (Johnson et al., 2008 p. 53)

According to Johnson et al., (2008) these above mentioned elements can be seen as the blocks by with any business operates where customer value proposition and profit formula is defining the value for both the company and the customer while the key resourcers and key processes deals with delivering and capture value.

### 2.3.1 BUSINESS MODEL CANVAS

*It is our best knowledge that Osterwalder’s and Pigneur’s model canvas is well spread and used among practitioners and due to the fact that we found it very useable and easy to follow when conducting our second interview we decide to use Osterwalder’s and Pigneur’s definition of BM in this paper.*

Osterwalder and Pigneur (2010) define a business model as "A business model describes the rationale of how an organization creates, delivers and captures value”. To better understand the relationships that appear between the components, Osterwalder and Pigneur (2010) presents business model with a figure 7, which we present and describe bellow. There are different customers, customer segmentation involves identification of the customers, identifying their needs, wishes and create different types of value proposition in order to satisfy different customers’ needs. The different value proposition requires different let's say relationship-building channels, which in turn various resources. Key activities in order to deliver that require different partners.
CUSTOMER SEGMENTS

A customer is defined as the various groups or organizations that the company wants to reach. According to Osterwalder and Pigneur (2010), the customers are the heart of every business model because the company cannot survive without profitable customers. Customers are divided into different segments if needs so require. They provide a specific offer because; they can be reached through different distribution channels; they require different types of client relationships; they have different profit potential; they are willing to pay for various aspects of value proposition. (Osterwalder & Pigneur, 2010)

VALUE PROPOSITIONS

Value propositions describe the combination of products and services that create value for a specific customer segment. Value proposition is the reason that customers choose the company over another. Osterwalder and Pigneur (2010) argue that the value that is created can be quantitatively or qualitatively. A quantitative value can be the price or speed of service while a qualitative value may be the design or experience. (Osterwalder & Pigneur, 2010)

A value proposition can satisfy a need, which the customer did not know that it had, because there was a similar offer earlier. It is often related to technological solutions, Osterwalder and Pigneur (2010) take the cell phone as an example that a whole industry has been created.
around it. Value can also be created by increasing and developing the performance of a product or service where many industries are living in continuously, developing better performing products to attract customers to update. Computer components and cell phones are examples where better graphics or a better camera creates value for the customer.

Osterwalder and Pigneur (2010) argue that the potential for adaptation for individual customers or segments creates value. They argue that the concept of mass customization and co-creation has increased in importance in recent years, where personalized products and services can be accomplished and still take advantage of economies of scale. They also claim that value can be created by helping the client to "do its job", aero engines is an example that Osterwalder and Pigneur (2010) highlight. Here, customers buy flight hours and not just an engine. The manufacturer provides products and services and gets paid for every hour the product works. (Osterwalder & Pigneur, 2010) The design of value proposition is a major factor however we argue it can be difficult to measure.

A value can be created by a brand or status where the customer indicates that they belong to a particular group; by the clothes they wear or show that they have money through an expensive watch or sports car. The price of the value proposition is a common way to create value for the customer. By offering something similar at lower price than a competitor can create value among price-sensitive segment. Osterwalder and Pigneur (2010) argue at the same time, that a low price offer has important implications for the business model designing. Airlines, for example, designed the entire business model specifically to be able to offer cheap flights (Osterwalder & Pigneur, 2010).

Free offer is also increasing in various industries such as free newspapers. Another dimension of the value proposition is that it can reduce costs and risks for the customer, which is an important way to create value (Osterwalder & Pigneur, 2010). According to Osterwalder and Pigneur (2010), a value can be created by providing a product or service to a segment that previously not had the opportunity or access to it. They argue that this can be done through the development of the business model, technological development, or both. There is also a value in helping the customer, it can be done by making the service or product easier to use.

**CHANNELS**

Distribution channels describe, how a company communicates and delivers value proposition to the customer segments. According to Osterwalder and Pigneur (2010), the channels fills several functions to increase knowledge among customers about the company's products and services; helps customers to evaluate the company's value proposition; allows customers to purchase specific products or services; delivers value proposition to customers; provides service after a purchase to customers (Osterwalder & Pigneur, 2010). There are different types of channels, direct and indirect. A direct channel may consist of a sale force or Internet sales. An indirect channel can be your own business, partner sales or wholesale.
Osterwalder and Pigneur (2010) argues that the channels have five distinct phases where each channel can cover some or all phases; 1. Awareness, how the company can raise awareness of their products and service; 2. Evaluation, how the company can help customers evaluate value offer; 3. Purchase, how can customers buy specific products and services; 4. Delivery, how the value proposition is delivered to customers; 5. After sales, the company offers support to customers after a purchase. (Osterwalder & Pigneur, 2010)

**CUSTOMER RELATIONSHIPS**

Customer relations describe the types of relationships it maintains with specific customer segments. The company should make clear what kind of relationship pursued by each customer segment. According to Osterwalder and Pigneur (2010), customer relations are being driven to acquire new customers, retain customers and increase sales. Personal assistance means that the relationship is based on human interaction and the client can communicate with a representative from the company and get help both during the purchase and even support after. This can be done at the point of sale, through telephone support or email. (Osterwalder & Pigneur, 2010)

To make the relationship deeper, you can also appoint a specific person for each client that handles client issues. This is the most intimate type of relationship that is built up over a long time. (Osterwalder & Pigneur, 2010) Self-service means that the company has no direct relationship with the customer, but offers the ability for the customer to help himself. It is also possible to automate the self-service in order to personalize it, for example on the internet. Forums and societies can be used to connect customers who can share experiences and help solve each other problems. It also helps the company to understand their customers. Co-creation goes beyond the traditional relationship between a customer and the company by creating value together with the customer. (Osterwalder & Pigneur, 2010)

**REVENUE STREAM**

Revenue Stream represents money that the company generates from each customer segment. Osterwalder and Pigneur (2010) argue that there are two different types of revenue streams. Revenue from a transaction from one time customers and recurring revenue from ongoing payments for the delivery of a value proposition or support for the aftermarket. Revenue can be generated by different types of payment for goods or services. The most common way to generate revenue is to sell a product and a service and the revenue is charge after use. Advertising is a revenue source that is common and crucial for companies in the media industry. Other example of sources of revenue is licensing, subscriptions and leasing. Each source of revenue may be priced differently and in such a way, vary in effectiveness. (Osterwalder & Pigneur, 2010)
KEY RESOURCES

Key Resource describes the most important assets the company owns. It is these resources that will enable the company to create value proposition, reaching out to the market, retaining relationships with customer segments, and create revenue (Osterwalder & Pigneur, 2010). Osterwalder and Pigneur (2010) categorize key resources such as physical, intellectual, human and financial. Depending on the business model and the company, the key resources can vary.

KEY ACTIVITIES

Key Activities describes the most important activities a company needs to do, to be successful. Like a key resource the activities are required to create and deliver value proposition, hit the market, retaining relationships and generating revenue. Activities vary depending on the business model and operations. Osterwalder and Pigneur (2010) categorize activities as production, problem solving, and platform / network. The production aims to design, create and distribute a product in sufficient quantity and / or quality. Problem solving is aimed to finding new solutions to individual customer problems. A platform or a network aimed to the networks or platforms that are important to the business model and the company. (Osterwalder & Pigneur, 2010)

KEY PARTNERS

Key Partners describes the network of suppliers and partners. An alliance can be created to benefit the company's business model, reduce risk or gain resources. Osterwalder and Pigneur (2010) distinguish between four different partnerships, strategic alliance between non-competitors, the strategic alliance between competitors, joint venture to develop new business and relationship between customer and supplier to ensure delivery. Reasons for forming a partnership may be to optimize the allocation of resources and activities, reduce risk or gain access to special resources, and activities. (Osterwalder & Pigneur, 2010)

COSTS STRUCTURE

The cost structure describes the key costs a company has by using a business model. Through the defined key factors, activities and partnerships, the costs can easily be calculated (Osterwalder & Pigneur, 2010). Osterwalder and Pigneur (2010) argue that the cost structure is either cost or value driven. A cost-driven business model focuses on reducing costs by creating a cost effective value proposition, automation and outsourcing. A value-driven business model is focused on creating a premium value proposition and a high degree of personal service. According to Osterwalder and Pigneur (2010), the cost structure is characterized as fixed costs, variable costs and economies of scale.
2.3.2 SUMMARY OF THE BUSINESS MODEL THEORY

As we have pointed out under the heading “Different views on BM” there is no common definition of BM in the world of academia. However, there is no clear agreement about the definition of BM, therefore we have decided, after having studied the different perspectives among the researchers seen in table 1, that Osterwalder’s and Pigneur’s view will be used.

In table 2 we present a summary of the BM perspectives. The main reason for this table is to help the reader get a clear and quick overlook of how different researchers in the field of academia define BM.

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Summary of business model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morris, Schindehutte &amp; Allen (2005)</td>
<td>&quot;A business model is a concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture and economics are addressed to create sustainable competitive advantage in defined markets.&quot; P.727</td>
</tr>
<tr>
<td>Teece (2010)</td>
<td>Core of the BM is how the enterprise delivers value to its customers, how it attracts its customers to pay for that value and finally, how it converts that into profit.</td>
</tr>
<tr>
<td>Zott &amp; Amitt (2010)</td>
<td>“the content, structure and governance of transactions designed so as to create value through the exploitation of business opportunities” p.219</td>
</tr>
<tr>
<td>Johnson, Christensen &amp; Kagermann (2008)</td>
<td>Combination of elements that are interlocked such as; profit formula, customer value proposition, key resources and key processes. All for the sake of creating, delivering and capture value for the enterprise</td>
</tr>
<tr>
<td>Osterwalder &amp; Pigneur (2010)</td>
<td>How the enterprise do to create, deliver and capture value.</td>
</tr>
</tbody>
</table>

**TABLE 1: SUMMARY OF THE BM PERSPECTIVES.**

As can be seen in the table 2 below there are many different perspectives and definition about the business model. All those BM focus on the enterprise and how they can manage their businesses. After all the research which we done, we could not identify any researchers who have offered a business model (BM) for a cluster. There are those that exist for separate businesses but not for a cluster as a whole, which is what we are looking at in our thesis. Taking Osterwalder’s and Pigneur’s canvas model as an example, this is used for single separate businesses. The thesis discuss cluster formation within a live case containing the “Innovative Logistic in Halland”. This could be seen that each single business is now trying to together experiment with potential partners in how to best collaborate within this cluster to form a beneficial business model for the cluster as a whole. According to Chesbrough (2010,
p.362) “Organizations must address these leadership issues to ensure effective governance of business model experimentation, and that the results of their experiments lead on the action within the organization”.

The concept of business model has been used frequently and since 1995 at least 1177 articles about business models was published in academic journals, this has made the business model to a new analysis unit (Zott, Amit & Massa, 2011). In spite of the fact that it has published a large number of scientific articles on the subject, there is still a problem, authors and users cannot agree on what a business model actually is (Zott et al., 2011). This makes it important for us to clearly state and define what they mean by BM as the term does not mean the same to all readers. The present study is based on Osterwalder’s and Pigneur’s (2010) definition of a business model that is: "A business model describes the logic of how an organization creates, delivers, and captures value." When the operating environment of logistics has changed as a result of technological development and environmental awareness, their business model must also be renewed. To modify an existing business model or develop a new one, to bring it to the outside world is a complex and difficult task (Zott & Amit, 2010). Osterwalder and Pigneur (2010) argue that customers are the heart of the business model and value proposition is the reason that customers choose one company over another. If it comes down to BM in the logistics area we argue that BM can be a tool to understand a specific company’s business, elements and relationships. In addition it is seen as a way to create a better overview of the company's external environment and through this improve the company's ability to adapt to change (Osterwalder, 2004).

It is clear to us when studying the different researchers that was selected when writing this paper, that there are no clear definition about BM. Researchers such as e.g. Chesbrough (2010), Teece (2010), Amit & Zott (2010), Morris et al (2005), Johnson et al (2008), Osterwalder & Pignuer (2010), have each went about in their own ways when identifying BM’s elements, architecture, economics, contents and so forth. We noticed that, the different researchers just mentioned, seem to agree upon the fact that BM is the framework in just how the companies go about when value is created for the customer, delivered to the customer and finally converts that into profit by the company. When discussing business model innovation (BMI), researchers such as Chesbrough (2010) argue that it is important for companies if they wish to stay competitive in the future to “develop the capabilities to innovate their business models” (Chesbrough, 2010, p.354) which in turn will increase the potential economic outcome for the company “the same idea or technology taken to market through two different business models will yield two different economic outcomes” (Chesbrough, 2010, p.354). According to Francis and Bessant (2005), who argues that “innovation is widely seen as a critical imperative for survival and growth of firms” (Francis & Bessant, 2005, p.182). As well as “A change in business model can have revolutionary implications”, “Hence, the test of the efficacy of business model is whether it provides the necessary conceptual architecture for a firm to gain and sustain competitive advantage” (Francis & Bessant, 2005, p.178). One can see that the increasing competitive advantage is something that comes back quite often. In our case we looked upon “Innovative Logistic in Halland” almost like a company containing different types of logistic companies all bound by a single mind and will, to do better business
and find new ways to do businesses which would grant the cluster as well as themselves, a competitive edge over their competitors. Therefore because we see this “Innovative Logistics in Halland” as a company containing many different companies we want to use Osterwalder’s and Pigneur’s (2010) model called canvas to try to create a BM for the whole cluster. Before we looked upon this case developing a BM for a whole cluster has never been done before, therefore this will be our theoretical contribution to the field of BM. In our examples of clusters we mention such famous clusters as Silicon Valley, we would like to emphasise the importance for the reader of this paper to fully understand that Silicon Valley is built up by many different clusters and the size of Silicon Valley is huge. It is also interesting to note that one of the goals with this “Innovative Logistics in Halland” is to help create what is found in Silicon Valley and other clusters throughout the world, it helps create possibilities for other players to come and establish themselves in the region as well. If being successful we would like to argue that a functional cluster will help create potentials for developing a competitive edge for different areas, in our case this area is about logistics. This is something that was something the commune was very interesting to see happen, which we will deal with later in the paper.

From all the studied approaches BM canvas gave us a clear picture of all the components, which are needed to identify the blocks to be able to form a BM for cluster. Therefore BM canvas approach is used as the basis for collaborative business model for cluster which can be seen in figure 8 below.

![Diagram of Collaborative Business Model for Cluster (CBMC)](image)

**FIGURE 8. COLLABORATIVE BUSINESS MODEL FOR CLUSTER (CBMC)**

In figure 8 above a changed version of BM canvas is presented. In comparison to BM canvas developed by Osterwalder and Pignuer (2010) (see figure 7), within collaborative business model for cluster figure 8, cluster block are clearly shown to be a separate block beside key partners.

Cluster describes the network of partners, an alliance which is created to benefit the cluster business model.

Key partners describes the partners which cluster will forming a partnership, to optimize the allocation of key resources and key activities, reduce risk or gain access to special resources
and activities to be able to create a value proposition to customers. When the value proposition has been formulated it can be presented to the customer segment with the help of channels and with the help of good customer relationships a good business foundation can be formed.

When the cluster has a functional BM, the cost structure can be easily calculated. Revenue stream is not only generated from each customer segments but it also comes from each of the key partners.

2.4 ANALYTIC MODEL

The theories that are described in this chapter include all the elements that we consider to be of great importance for our subject area. However they also include a lot of which of a certain extent falls outside of what we intend to do. Here we will highlight those aspects of the theories that we will be using in our future work and we will also present our analytical model which we will make use of.

The purpose of this study is to explore and identify the components for developing the collaborative business model for clusters, who guides the cluster in doing business. The main focus is to understand how the “Innovative Logistics in Halland” can define the value proposition to customers as well to design the possible business model in the logistic area. As we discussed earlier a BM can be used to describe just how the organization will go about when it creates, delivers and finally captures value. (Osterwalder & Pigneur, 2010) Looking at Teece (2010) BM is something, which business enterprise use to explain the architecture in value creation, delivery and the capture mechanisms, which the business enterprise is using. One could summarize it by stating that you should fulfil some needs from a customer that you can deliver and then reap the revenue, which then can be returned in value to the company. The BM will remain according to Teece (2010) an innovative business model until competitors can catch up and adapt to you so your BM become standardized among the enterprises operating on the market. Above mentioned authors, highlight factors that can be used in the development of a value proposition, which is one of the components of a business model. However, in our case we have been looking at a cluster, what is important to remember is that we have not been looking into a specific company’s business model but trying to look at means of helping a cluster of companies who wish to collaborate.

According to the model of Hallencreutz et al., (2002) there are nine factors that can influence how the cluster is formed and its function (see figure 2.1.2). We divided those factors into key activities and key resources (see figure 10). This will be our guidelines to be able to develop and create the value proposition for the “Innovative Logistics in Halland” cluster. According to Hallencreutz et al., (2002) the quicker the “Innovative Logistics in Halland” cluster, can fulfill these factors, the quicker and more precise the cluster can move in the right direction. We strongly emphasise the importance of these factors existence in the cluster. All these factors help the cluster get to the vision and create the value proposition to the customers. As mentioned in Osterwalder and Pigneur (2010) a value proposition is that which is offered to the customer and what is supposed to grant the customer a solution, in return and capture a
profit. For our case we are looking at creating a joint BM for a cluster, which means a joint value proposition that can help strengthen the competitiveness of the cluster as a whole.

**FIGURE 9. ANALYTICAL MODEL**

As can be seen in figure 9, we deal with components such as cluster, key partners, key activities, key resources and value proposition. We will use the definitions made by Osterwalder and Pigneur (2010) when describing the different components. If we compare the model developed by Osterwalder and Pigneur (2010) we have added cluster to ours. In our model we are looking at a cluster perspective, this is one of the main differences between our model from Osterwalder’s and Pigneur’s (2010) model, which are only focusing on a single company.

It is important for any cluster to have a value proposition that they can offer to the customer. This value proposition in our model should be developed together with the key partners, through key activities and key resources. Different customers will in a cluster have different needs and therefore we strongly argue that different value propositions might be developed. The value proposition is the most important part to develop. After a cluster have developed a value proposition it can start to develop other areas as well, such as customer relationship, channels, customer, revenue stream and cost structure can be developed.

As we have mention earlier BM canvas helps us to identify key elements and to be able to understand how the BM for “Innovative Logistics in Halland” cluster could be formed. At the same time we need to get a deeper understanding of, which key activities and key resources they need. Therefore with the help of ”Success factors in regional clusters” adapted from Hallencreutz et al., (2002) we will analyse key activities and key resources from the adapted BM canvas, which we present in figure 10 below and describe further. We argue that by using the nine steps a greater understanding and better analysis of the cluster can be made.
In figure 10 above we would argue that key resources and key activities are those two components which are the most important for our case. These components cover the most important parts and it is here that value is created, which will lead to a value proposition. The nine success factors in the success factors model developed by Hallencreutz et al., (2002) can be divided into either key resources or key activities. To key activities we would like to count; effective meeting places; clear and long-term vision; a common language and measurement basis; a clear worksharing between public services and markets and lastly common activities that strengthen the clusters competence. For key resources we would like to argue for having; brands that strengthens cluster companies own marketing, and that works as cohesive force; identifying the local strengths; leading and energetic companies that works actively in the process; and clusters engine significance can be described as the individual, the individuals or the organization that creates new contacts and engage in networking between companies and other stakeholders in the cluster.
3 METHODOLOGY

This chapter presents the methodological framework, which forms the basis for the study. Methodological choices follow the “research onion” model of Saunders, Lewin and Thornhill (2009). Here the reader can follow, the choices we decided on, when we went about to write this paper. We explain in as much detail as was seen necessary, what paths were picked, all from the inductive approach to the means of collecting data and analysing it and in finally, in the end, we present a quick summary.

3.1 METHODOLOGICAL CHOICES

According to Saunders et al., (2009) researchers make several methodological decisions, and go step by step through several different stages.

Figure 11 presents the different stages that a researcher goes through.

![Diagram of the research onion model]

**FIGURE 11:** METHODOLOGICAL STRUCTURE BASED ON THE "RESEARCH ONION" FROM SAUNDERS, LEWIS AND THORNHILL (2009)

3.1.1 RESEARCH APPROACH

When conducting research, researchers have different tools to apply to a problem when trying to find an answer. Deductive means that the researcher’s starting point is on the existing
theory and it made assumptions that are then tested on the empirical data which have been gathered. The disadvantage of this method is that the researcher is not open to any new information but focus on the theories which were chosen. (Arbnor & Bjerke, 2004). In the inductive approach the researcher develops its own theories based on empirical data. (Saunders et al., 2009).

The purpose of our study is to explore and identify the components for developing a collaborative business model. The intended use of this model is to, help guide logistics cluster in doing business. Our problem and the research question came to surface during a meeting with some of the representatives from “Innovative Logistic in Halland” cluster. In today’s competitive world we argue that it is a competitive edge, to be able to deliver logistic solutions together with different partners. The reason why is to get access to many new channels which you previously did not have access to. Together with other companies that become partners, companies will be able to offer package solutions to their customers that the companies on their own cannot offer. These offers can in turn generate a satisfied client and therefore help strengthen all those who collaborate in offering this to the customer. Our research question and what answer we will find, is therefore of great interest to the people who live in this reality but today don’t have a fully developed answer just yet as no research have been conducted on specifically our field of study. Therefore the inductive approach is more suitable for our study because it has a more exploratory purpose.

3.1.2 RESEARCH STRATEGY

The research strategy means the type of study, we plan to do. The choice of approach depends on what we wish to review, how the data in the study are collected and analysed. The most common strategies are case studies. “The case study is a research strategy which focuses on understanding the dynamics present within single settings” (Eisenhardt, 1989, p.532). Case study as a research strategy was something that we went with because we found that the phenomenon that our case is revolving around is quite unique. The reasoning why we like to argue that this is a unique case is because we conducted a search for articles about similar cases and could not find any articles that discussed BM for clusters.

"Case research has consistently been one of the most powerful research methods in operations management, particularly in the development of new theory” (Voss, Tsikriktsis & Frohlich, 2002, p.195). The researchers point out that case research is one of the most powerful methods and with that comes the possibility for both developing a new theory but what we noticed was that case study also granted us a much more deeper understanding of the case being studied. Understanding the case is vital in our case as we want to formulate a new BM for the cluster “Innovative Logistics in Halland”. Case study is according to Voss et al. (2002, p.195), the ultimate user of research “It can lead to new and creative insights, development of new theory, and have a high validity with practitioners – the ultimate user of research”
"It can include data from direct observation and systematic interviewing as well as from public and private archives. In fact, any fact relevant to the stream of events describing the phenomenon is a potential datum in a case study, since context is important" (Leonard-Barton, 1990, p. 249). We followed this by interviewing all the participants in "Innovative Logistics in Halland" as well as collecting data from their homepage and making sure to take advantage of the field research archives. There we could study about clusters, how they emerge and function. According to Yin (2003) case studies are often used when you want to study a current phenomenon based on given issues, where the research questions in the nature of "how" and "why" and when the researcher does not have as much control over research object. Flyvbjerg (2006) points out that the case study method allows a deeper picture of the reality you want to study. In our study, it seemed reasonable to seek answers to our questions by examining a number of companies who cooperates in "Innovative Logistics in Halland." By conducting a case study, we are able to study the depth of our questions, rather than using quantitative methods to gain a broad general analysis (Flyvbjerg, 2006).

According to Robson (2002) referred in Saunders et al., (2009) a case study can be defined as “a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence” (Saunders et al., 2009, p.145-146). This type of strategy will be of great interest to the researcher when trying to obtain knowledge of understanding both contexts of the research as well as the process being enacted (Saunders et al., 2009).

Flyvbjerg (2006) argues that the case studies is not about proving anything, but rather, learn about a phenomenon and its context. Regarding the researcher view, according to Flyvbjerg

"(...)
most advanced form of understanding is achieved when researchers place themselves within the context being studied” (Flyvbjerg, 2006, p. 236)

The purpose of this study is to reach an understanding and to explore the contextual conditions for developing BM for industrial cluster in the logistic area. Therefore we argue that the case study is the appropriate strategy of our research.

3.1.3 RESEARCH CHOICE

During the process of writing a thesis, data collection is an important part of the process. There are two different approaches to choose from when something is to be examined, there is qualitative and quantitative. Qualitative research has the aim to generate and develop new theories, whereas quantitative research has the aim to verify and test previous theories (Bryman & Bell, 2007). According to Miles and Huberman (1994) the common characteristic of qualitative methods is that the researcher seeks to build a comprehensive understanding where the context is significant. Qualitative data have an associated meaning with the possibility of exploring the area or subject you wishes to look closer at Saunders et al., (2009). Quantitative data according to Saunders et al., (2009) deals with numerical data or "contain
data that could usefully be quantified to help answer your research question(s) and meet your objectives” (Saunders et al., 2009, p.414). The quantitative method is a means for collecting measurable data that can be calculated and that can undergo statistical analyses (Saunders et al., 2009).

When we conducted our research into the topic we could find nothing about the topic of BM for logistic clusters. Therefore we deem this thesis to be quite unique in that aspect. We have had access to a cluster of participants who together form “Innovative Logistics in Halland”. Together we set out trying to come up with the answers needed for developing a BM for them. Each of the companies in the cluster exists for various customers who each need different aspects and value different offer from the participants who together form “Innovative Logistics in Halland”. However, it is important to note that it is hard to measure that one customer value as important compared to another customer. For this reason it is up to a managerial level to describe what they see as important for their customers. So conducting a qualitative study against “Innovative Logistics in Halland” was deemed the most effective way of getting the answers we felt we needed. Interesting to note is that there are “no one ‘best’ way of interviewing business owners or managers (…) Methods vary for different situations, (…)” (Healey & Rawlinson, 1993, p.339). Conducting a qualitative research is according to Voss et al (2002, p.195) “Unconstrained by the rigid limits of questionnaire and models, it can lead to new and creative insights, development of new theory, and have high validity with practitioners – the ultimate user of research”. After the initial interview a secondary interview was conducted to obtain more necessary data to be able to answer our research question.

3.1.3.1 CASE SELECTION

There are many examples of how innovative and boundless thinking works today. In “Innovative Logistics in Halland” exist the ideas, visions, and, not least, ambition and passion, for the work to put Halland on the map as a top listed logistics area. But, above all, there are already specific examples of how “Innovative Logistics in Halland” works - as a result of close co-operation between the commune, business community and schools, both regionally and locally. The innovation is in the way of thinking, new forms of co-operation and constellations and creates unique offerings to the national and international market. In “Innovative Logistics in Halland” co-operates innovative and driven representatives from all channels - road, air, water, rail and IT. The interaction between those is the precondition for Innovative Logistics to start talking about development of logistic area in Halland.

According to “Innovative Logistics in Halland”: “in our cluster participates driven entrepreneurs, marketers, various representatives from the business and university and community - all with the desire to collaborate and create platform and ground for innovative solutions in logistics”. (http://innovativelogisticinhalland.se)
3.1.3.2 CASE COMPANIES

In the "Innovative Logistics" cluster participate:

<table>
<thead>
<tr>
<th>Representative and its position</th>
<th>Company</th>
<th>Represented area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Björn Alvengrip, CEO</td>
<td>Hallands Harbours Inc.</td>
<td>Water</td>
</tr>
<tr>
<td>Per-Olof (Pelle) Nilsson, CEO</td>
<td>GN Transport</td>
<td>Roads</td>
</tr>
<tr>
<td>Eric Ericsson, CEO</td>
<td>Halmstad City Network Inc.</td>
<td>IT</td>
</tr>
<tr>
<td>Magnus Edman, CEO</td>
<td>Halmstad City Airport Inc.</td>
<td>Air</td>
</tr>
<tr>
<td>Ulf Andersson, CEO</td>
<td>Science Park</td>
<td>Represent the company, which helps develop a business idea</td>
</tr>
<tr>
<td>Karolina Davidsson, CEO</td>
<td>Halmstad municipality business development centre Inc.</td>
<td>Represents the part of commune</td>
</tr>
<tr>
<td>Mike Danilovic, Ph.D.</td>
<td>University of Halmstad</td>
<td>Represents the university</td>
</tr>
</tbody>
</table>

TABLE 2. THE "INNOVATIVE LOGISTICS IN HALLAND" CLUSTER PARTICIPANT.

Further we present a brief background of each company which is part of "Innovative Logistics in Halland" cluster.

HALLANDS HARBOURS INC.

The Port of Halland is one of Sweden's 10 biggest ports and the modern day logistics company. The company offers customer-orientated, comprehensive solutions in terms of ports, terminals and transport services, and will be developed to create growth, provide good long term profitability and boost development in the region.

In the autumn of 2012, Varberg and Halmstad municipalities took the decision to merge their ports and create something completely new. The port companies in Varberg and Halmstad have long been amongst the leaders in forestry products, especially timber, recycling, metals and imports of cars, but the merged company has now created a competitive alternative for the container sector, rail services and RoRo.

The Port of Halland has a significant intermodal position with a focus on development and the future and is Sweden's most customer-orientated, effective and forward thinking port.
At the Port of Halland, soft values are just as important as hard values. Combining these values distinguishes them from other players and ensures that their customers not only like them, but see them as a natural part of their own business development. In other words, they want to be more than just a supplier, but a partner when it comes to addressing all issues relating to customers logistics.

In term of cluster perspective Hallands Harbours Inc. contribute with resources and knowledge about customers, comprehensive solutions in terms of ports, terminals and transport services.

**GN TRANSPORT**

GN Transport is a transport and logistics company which started 1986 in Halmstad, Sweden. Since then GN has been entirely focused on the French market with part and full load shipments. Their mission is to be a niche company in the transport industry with a strong focus on the French market with Scandinavia as a base. They built up a complex distribution network which allows them to say that they know France and its culture very well.

In 2011, they also have developed a climate friendly alternative, known as intermodal transport - a combination of road and rail transport, both nationally and internationally.

GN Transport vision is to work with continuous improvement as well as to be a unique carrier with a company culture that places the employee at the centre and creates a business acumen that provides a long-term profitability.

Their objective is to be the leading carrier in Europe with delivery reliability and quality for road and rail transports to and from France.

In term of cluster perspective the GN Transport contribute with resources and knowledge about international business in the transport industry.

**HALMSTAD CITY NETWOORK INC.**

Halmstad city network Inc. was previously known as Halmstad IT-Network Inc. and was founded 2002. They have a clearly marked out objective that is to maintain an active local network. They wish to see that all residents, businesses within the community of Halmstad, and public administrators to have access to Halmstad open local network on equal terms. Then the many different service providers can access Halmstad open local network to offer to sell their services to those who is connected to it. The network will offer, interactive meeting place between user and society, the service is characterized by independence, choice and limitlessness.
Halmstad city network Inc. offers a local infrastructure of data communications, they tend on all residents as well as all businesses in the region of Halmstad offering, on equal terms access to both the existing and any forthcoming services. They can do this by having no own service delivers but instead they allow the various service providers to market themselves and sell their services on Halmstad city network’s network. By doing this they free market is obtained where the free competition rules applies. In doing this, you as a customer will benefit by gaining access to a wide range of services and to a low price as the service providers have to compete harshly for you as a customer.

In term of cluster perspective the Halmstad City Network contribute with resources and knowledge about a local infrastructure of data communications.

HALMSTAD CITY AIRPORT AB

Halmstad City Airport was first a military airport and was officially opened 1944 for the military air force division F14, by 1958 civil aviation was started between Bromma airport and Halmstad City airport. By the year 1962 the military F14 was decommissioned yet services to educate personnel was still and is still to this day being done here. 1992 SAS bought Linjeflyg and handled for a couple of years the civil aviation and soon Transwede moved in to take over those services, after this many more companies have started utilizing Halmstad city airport for their target destinations. In the end of the 1990s charter flights started to become more common and now you could go from Halmstad city airport to Turkey, Mallorca and the Canary Islands. 2003 they started handling domestic flights to Arlanda airport. Up until spring 2012 this was being handled by Skyways but it was later replaced by Kullaflug and NexJet. Today Kullaflug uses Halmstad city airport to reach Bromma airport. Interesting to note is that Halmstad city airport is owned and run by the commute and has been since 2006.

From Halmstad city airport, both charter and business trips are done. They can also transport goods by planes through Halmstad city airport. They have approximately 12 000 take-offs and the airport is only located 3 Km from centre of Halmstad city.

In term of cluster perspective the Halmstad City Airport contribute with resources and knowledge about transportation through air traffic.

SCIENCE PARK

Since Park is a comprehensive innovation centre created to offer resources for development of project ideas and potential growth companies from high school, research and business. This with the aim to recruit a wider range of growth companies with knowledge-intensive entrepreneurship in Halmstad.
Science Park Halmstad will become Scandinavia's best incubators for innovative people and businesses. Science Park Halmstad shall therefore have a support system in world class, and through this become the obvious first choice for innovators and entrepreneurs who want to build growth companies.

Science Park Halmstad shall actively contribute to the formation of 10 new potential growth companies per year. Businesses must have a commercial survival rate and good potential to be 10-20 employees with export sales within five years after they have left the Science Park Halmstad.

In term of cluster perspective the Since Park contribute with resources and knowledge about the strategies and development opportunities for different types of companies.

HALMSTAD MUNICIPALITY BUSINESS DEVELOPMENT CENTRE INC. (Halmstad Näringsliv AB)

Halmstad municipality business development centre Inc. help and function as a platform to assist with advice and services to trade and industry as well as market Halmstad as a very good place to start up business. They offer to help with all manners of business related questions either through direct contact and mail. They offer to help companies find the solutions to problems that may arise when relocating or setting up for business in the area or even expanding.

They can make contact with companies and key figures with the help of their vast contact network in the local commerce, trade and industry organizations as well as municipal services. They also offer to provide training for individuals who wish to start up their own businesses as well as arrange different types of meeting places for different business communities. They have as a goal to offer to create the best possible conditions for growth and start-ups for businesses in Halmstad.

Halmstad municipality business development center consists of selected members of the economy section from Halmstad commune. They represent different areas of businesses such as industry, service and trade. They constantly work with trying to ensure that certain viewpoints are highlighted in the debate. It is the board of Halmstad municipality business development centre Inc. who appoint the participants of the council and has an advisory role to fulfil. Their main purpose is to be a natural connection between commune and economy. They wishes to strengthen the brand of Halmstad in all it meanings therefor help create a better environment for trade to exist.

In term of cluster perspective the Halmstad municipality business development centre contribute with resources and knowledge about the strategies and services about the trade and industry in Halmstad.
HALMSTAD UNIVERSITY

It was in 1983 that Halmstad got an independent university. Then it was a few hundred students and somewhere around 40 staff personnel. Today the University has about 9,300 students, 580 employees and offers more than 80 degree programs and 250 courses at different levels. The college has also postgraduate rights in innovation science, information technology, and health and lifestyle.

Innovation is a concept that has characterized Halmstad University from the start. The employees in the university have advanced innovations for decades by thinking differently and working differently, innovation and trans boundary. Today when people talk about the University of Halmstad they say that it is "the innovation-driving university". Innovation happens in the meeting between different knowledge, skills and experience. Being innovative means to foster new ideas, behaviors and approaches. Everybody can drive innovation in their business by being innovative in their tasks. It is also through innovative thinking and creative as we develop new knowledge - knowledge that is evident in society.

In term of cluster perspective the Halmstad University contribute with resources and knowledge about creating value, driving innovation and developing the society.

3.1.4 TIME HORIZONS

According to Saunders et al., (2009) cross-sectional research is much more like a snapshot from a camera of a particular time horizon. Cross-sectional research was useful as it accounted for time constraints. According to Saunders et al., (2009, p.155) “Cross-sectional studies often employ the survey strategy”. Cross-sectional study research is a technique can also be used for a qualitative study, especially when conducting interviews with a short horizon to work with. (Saunders et al., 2009). The Longitudinal study covers a longer period of time then the cross-sectional study. Longitudinal studies explore the change and development with the basic question "Has there been any change over a period of time" (Saunders et al. 2009, p. 156).

Due to time constraints, longitudinal studies (which examine cover longer periods of time) were not feasible. The research required short period observation and study. The reason for this steams from the requirement to follow each CEO in their daily routines at work and observes what is being done to further the advancement of the cluster.
3.1.5 DATA COLLECTION TECHNIQUES

3.1.5.1 SECONDARY DATA

When looking at just when to interview, we would like to argue that not only did we conduct interviews but other source of data was also obtained and used. This because interviews are very time consuming and can only be done at fixed time frames that demand time efficiency from us. Therefore it can be seen as sensible time wise to collect the data needed from other sources as much as possible (Healey & Rawlinson, 1993, p.341). We followed this by reading up brochures on journals, articles and took usage of the internet to visit the case companies stakeholders’ homepage, all to save time when collecting much needed data for the thesis. This was done to help us to get a deeper understanding, which in turn will help us answer our research question. According to Saunders et al. (2009) certain research projects which might require national or international comparison the researcher will most likely be using secondary data to provide him/herself a source to best be able to answer his/her “research question(s) and to address your objectives” (Saunders et al., 2009, p.257).

3.1.5.2 PRIMARY DATA

Primary data means that it was collected for the purpose of the study, while secondary data were collected for a different purpose (Miles & Huberman, 1994). We decided to go with collecting as much primary data as possible to get a better holistic view of what each individual was thinking about the cluster "Innovative Logistic in Halmstad". We argue that the best way to better understand the thoughts and ideas that reside within the members of "Innovative Logistics in Halland" were to conduct interviews with each representative. These representatives were CEO's or important people who could influence the future outcome of this "Innovative Logistics in Halland". We would like to argue that this is supported “Interviews with owners and managers are a prime source of information (…)” (Healey & Rawlingson, 1993, p.339). Primary data was collected through all in all twelve interviews (for more details see table 4). We visited both governmental bodies and those who actively build up this cluster. This is supported by Healey and Rawlinson (1993) who argues that of the grave importance to obtaining a more holistic view which can only be obtained by interviewing more then one side. During the interviews as well as the follow-up interviews, some conflicting information emerged, it need to be handled with “academic detachment will be required in assessing and interpreting the information collected” (Healey & Rawlinson, 1993, p.340).

The semi-structured interviews as well as the follow-up interviews were fulfilled with representative from companies in the “Innovative Logistics in Halland” cluster as well as from representative of Halland Region and Halmstad Commune. In table below (Table 4) all the interviews are presented as well as setting and duration.
### Table 3. Interview Details First and Second Interview

<table>
<thead>
<tr>
<th>Case company</th>
<th>Participant position</th>
<th>Setting and duration first interview</th>
<th>Setting and duration second interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region Halland</td>
<td>Jeanette Larson, Department Manager - Infrastructure</td>
<td>Face to face at Region Halland office, 1h 30min</td>
<td>Has not been made</td>
</tr>
<tr>
<td>Hallands Harbours Inc.</td>
<td>Björn Alvengrip, CEO</td>
<td>Face to face at Hallands Harbours office, 1h</td>
<td>Face to face at 55min</td>
</tr>
<tr>
<td>GN Transport</td>
<td>Per-Olof (Pelle) Nilsson, CEO</td>
<td>Face to face at GN Transport office, 40min</td>
<td>Face to face at 40min</td>
</tr>
<tr>
<td>Halmstad City Network Inc.</td>
<td>Eric Ericsson, CEO</td>
<td>Face to face at Halmstad City Network, 1h 50min</td>
<td>Face to face at Halmstad City Network, 55 min</td>
</tr>
<tr>
<td>Halmstad City Airport Inc.</td>
<td>Magnus Edman, CEO</td>
<td>Face to face at Halmstad City Airport, 1h 10min</td>
<td>Face to face at Halmstad City Airport, 35 min</td>
</tr>
<tr>
<td>Science Park</td>
<td>Ulf Andersson, CEO</td>
<td>Face to face at Science Park office, 40 min</td>
<td>Has not been made</td>
</tr>
<tr>
<td>Halmstad municipality business</td>
<td>Karolina Davidsson, CEO &amp; Niclas Simonsson, business</td>
<td>Face to face at Halmstad municipality business</td>
<td>Has not been made</td>
</tr>
<tr>
<td>development centre Inc.</td>
<td>sector developer</td>
<td>development centre, 1h 30 min.</td>
<td></td>
</tr>
<tr>
<td>Halmstad Commune</td>
<td>Sabina Andersson, Transport Strategist</td>
<td>Face to face at Halmstad Commune, 50min</td>
<td>Has not been made</td>
</tr>
<tr>
<td>University of Halmstad</td>
<td>Mike Danilovic, Ph.D.</td>
<td>Received ongoing information during all tutorials and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>conversation</td>
<td></td>
</tr>
</tbody>
</table>

As can be seen in table 4 here above time difference in the interview could differ quite a lot. This was because all participants who we interviewed have seats in high positions that require their time as well. Therefore we could only get a certain amount of time to get all our answers that we required to get answers on our main questions, some therefore could offer us more time others said that they could only offer a certain amount of time from their busy schedule. Some had a possibility to offer us a follow-up interview if we needed more in depth questions.
that might have emerged after we continuously processed the answers that we received during the first interview.

INTERVIEW GUIDES

Our interview guide was developed based on our analytical model shown in figure 9.

![Analytical Model Diagram]

**FIGURE 9. ANALYTICAL MODEL**

We structured the questions after the themes selected for the exploratory question which was, emergent of clusters in the logistic sector and network co-operation between different stakeholders (see appendix 1 and 2). Questions were polished and adapted for each interview with the same general theme. According to Saunders et al. (2009) it is important that the researchers have a theme of one or more general questions which can be related back to the research topic. It is important that the questions asked have a logical thread that follows a comprehensible language that the participant will understand so to avoid misunderstandings.

SEMI-STRUCTURED INTERVIEWS

The authors went about to conduct semi-structured interviews which may if need arise be followed up by further interviews the interviews were all done face-to-face in accordance with (Healey & Rawlinson, 1993, p.340). The authors had a list of themes and questions that were covered, this is supported by Saunders et al. (2009). During the semi-structured interviews questions were read out loud for the participant and if questions arose it was answered so to eliminate any question marks or misinterpretations that can otherwise result in errors when trying to code the answers. This is supported by Saunders et al. (2009) as well as Bryman and Bell (2007) who explains that this is because it is possible for the authors to forget important information.

At first we had a list of questions for the business manager that followed our theme and was identical with only minor changes such as the name of their organization. The questions were meant to aim at different topics that all followed our main theme of questions. As new information was revealed to us, we proceeded with analysing it and due to having received a positive answer on our final question if it was okay to come back to them with more questions and a new interview. This is supported by (Healey & Rawlinson, 1993, p.340) who argues
that “Business interviews range from asking the same list of questions in an identical form to all respondents to discussions of a series of topics in which the questions asked vary from respondents to respondent, depending on the answers previously given and the nature of the interaction process in the interview.”.

During the whole interview notes were taken on the participant’s body language, eye contact as well as recording of the interview with the help of dual cell phones. This was done to help minimize the risk of any technical malfunction which otherwise could help render problem with the coding afterwards. We also asked the participant if it was possible to record the interview. This was met with a positive response due to that each participant understood the importance that we could go back and trace the answers as well as listen to just exactly had been said during the interview.

After the interview was done we extended their deepest gratification and asked if they might come back if need arise to ask further clarification questions. The interviews have been conducted in the authors native language which is Swedish, the interview was translated to English.

FOLLOW-UP INTERVIEW

The authors would like to state that even if interviews has been conducted at each company involved in “Innovative Logistics in Halland”, which is where the authors is trying to find an answer to our research question, certain information were lacking. It soon surfaced that we needed more data still. The focus group interview was going to fill this part but was cancelled in last minute notice and it turned out to be close to impossible to find a day which worked for all participants. This toppled our plan of having the focus group. Instead we had to improvise up a new plan and decided after careful consideration and counselling what to do next. The next best thing would be to make a follow-up interview instead. Here similar aspects would be touched down upon here as would have been in the focus group case but with the difference that we would not be able to collect the interaction aspect which is otherwise very much sought after in a focus group. (Morgan, 1996)

The authors instead of having the focus group went back to each of the partners in “Innovative Logistics in Halland” were this follow-up interview was conducted. We followed Osterwalder’s Canvas model in this part. The authors found Osterwalder’s and Pigneur’s (2010) business model Canvas to best suit our intend as it, to our best knowledge well spread and well used among practitioners. The authors found that Osterwalder’s and Pigneur’s (2010) model with its building blocks will help us to answer our purpose, which is to explore the contextual conditions for developing a BM for industrial cluster in the logistic area. Osterwalder’s and Pigneur’s (2010) gave a nice overview and clear picture when trying to help the companies develop a new alternative business model, therefore we will put this model in the context of cluster, to be able to design a possible business model for a logistic cluster.

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We still believe that our follow-up interview generated good information which helped increase the value of this paper and solidify our answer to our research question.

Another reason why we felt a need to conduct a follow-up interview except that we saw a new potential way of collecting necessary data needed, was that now we have meet the different CEO’s and been reading up on their business and now the authors thought that new insight could be both shared and won by conducting this new follow-up interview. Together with the participant, their current business model was studied and with the help of the Canvas model the authors tried to understand how a new more efficient BM could be developed?

3.1.6 DATA ANALYSIS PROCEDURES

The interviews were written down word for word immediately after, or close to, the interview. Already at the first conversation with the supervisor the analysis began (Merriam, 1994). The next step in the analysis was when the interviews were written down, then the empirical material was sorted and participants' stories were structured. Thereafter we considered the appropriate way to present the empirical material, as well as what conclusions could be drawn from the study.

The analysis in this paper is based on Miles and Huberman (1994) description of how the analysis can go to. We divide the analysis into three different categories; to reduce the information, to present information and to draw conclusions and to demonstrate the study's results. Reduction of information takes place during the whole process. It starts from the time when we choose the theoretical framework and the case study, until the writers have finished writing the report (Miles & Huberman, 1994).

The next category in the analysis was to present the empirical material in an appropriate manner. Miles and Huberman (1994) suggest that the empirical evidence must be presented in a pithy way, for example by matrices, graphs and tables. This is to make the information more clearly arranged than if only text is used, which is common in qualitative studies (Miles & Huberman, 1994). During the analysis of the study, conclusions have been developed.

Another key aspect in the analysis of qualitative studies is how the researcher interprets the empirical material. Boland (2005) have concluded that it is difficult to describe how interpretations are done in qualitative studies. Furthermore, he mentions that interpretation takes place through the entire research process not only in the analysis. The interpretation starts with choice of research question, the choice of informants and how empirical data collection was conducted (Boland, 2005). The interpretation of a qualitative study is based on the theories that are used to (interpret) to make empirical data meaningful. On the basis of Bolands (2005) argument, we concluded that it is not always easy to describe how interpretations in a study have been conducted.

In this study, we have interpreted the participants' descriptions and compared them with each
other but also against the reports and internet information that has been gathered. This paper is partly descriptive and partly of interpretive nature, which means that the participants' descriptions have been interpreted to both answer the study's research questions and also to meet the study's purpose to explore and identify the components for developing the collaborative business model, which guides logistics cluster in doing business.

“(…) qualitative findings may be used to extrapolate beyond the data and to “make modest speculations about the likely applicability of the findings to other situations under similar, but not identical conditions (…)” (Healey & Rawlinson, 1993, p.345). By looking at this and putting it into the context of our findings, after having conducted a qualitative study on “Innovative Logistics in Halland”. The findings could suggest being applicable on other cluster models as well, who are in a similar situation as that of “Innovative Logistics in Halland”. They might experience the same dilemma as “Innovative Logistics in Halland” is doing right now and could therefore learn from this paper and what “Innovative Logistics in Halland” is doing wrong and right thus saving both time and money.

3.2 RESEARCH DESIGN

Here we will give a short description of the path undertaken when conducting the paper.

The thesis followed an inductive research approach that can be referred to an inductive qualitative method. To help shape the method we used of the “onion model”, which can be studied in Saunders et al., (2009). The inductive qualitative approach was deemed appropriate for this thesis. The researchers have discovered a problem, tried to understand it and analyse it and in the end draw a conclusion from it.

Case study was picked as a strategy because we wanted to explore and understand the development and the importance of logistics in the region. Furthermore we wanted to explore the importance of developing logistics on an innovative way as well as explore the cluster's importance for regional development.

We conducted a case study on all members in the cluster also known as “Innovative Logistic in Halland”. We have only conducted non-standardised, interviews where one of us paid extra attention towards body language while the other one focused more on reading the questions.

Follow-up interviews were required for this thesis in order to collect all the data necessary as the focus group, which was planned to happen, never took place. During the interviews, both the primary but also the secondary, recordings were used to help with the transcribing later on. All this can be said had been the primary data collection in the thesis.

Secondary data was of course also required, for this we used written materials e.g. journals and books. After the interviews were done, both for the primary and the secondary,
transcription was conducted as soon as possible, so that we would not forget certain aspects which otherwise could have been forgotten.

3.3 CREDIBILITY AND TRUSTWORTHINESS

“Credibility refers to the trustworthiness (...) of the research findings” (Tracy, 2010, p.842); “(...) credible reports are those that readers feel trustworthy enough to act on and make decisions in line with” (Tracy, 2010, p.842-843). With this we would like to emphasis the outcome of our work, and point towards e.g. the three important areas this collaboration needs to implement all from engine, fuel to ownership of the cluster. To give a qualitative credibility to our work we have given it as much thick description as possible.

We have tried to give a deep and clear picture for the reader to form their opinion of our work and its outcome so they can see if they will agree with us or not based on the data we collected throughout our work. This is supported by Tracy (2010) who also talks about how important it is to illustrate data complexity and the importance to show the reader so that he or she can draw their own conclusion about the findings. “To illustrate data’s complexity, researchers are advised to show, meaning that they provide enough detail that readers may come to their own conclusion about the scene.” (Tracy, 2010, p.843)

Credibility will also increase if we allow participants to look at all the “findings and providing opportunities for questions, critique, feedback, (...)” (Tracy, 2010, p.844). During the work, we have not had the opportunity to have a dialogue about all the findings because of time limitation. But in order to increase the credibility of the thesis, all participants will have the opportunity to read the finished paper and provide feedback and comments before we send it in to be published.

We will listen to the feedback from the participants that where interviewed, to make sure that the researchers understood the answers given from the participants correctly. We will also listen to what they found to be interesting as to see what is meaningful and contribute to their process as well as contribute towards the academia world. This can be done by following what is being written by Tracy (2010) that we should take note whether or not the participants will even care to read our work, if they find the result interesting, is it enlighten and the goal is to get reflections from the participants if they agree, disagree, find problems with the work etc. “Answers to these questions speak volumes about the research process and its contributions” (Tracy, 2010, p.844). This is also in term with the ethics of leaving the scene and how the findings are shared Tracy (2010).

As stated earlier in the paper and according to Saunders et al., (2009) if one is not careful during data collection such as interview can become infected with bias. There are some guidelines in Saunders et al., (2009), which we followed to our best ability. We informed the participants about why we wanted to have an interview. We informed the participant that
they had the possibility to at any time terminate the interview and if they felt that some questions were not a probable to answer they would have the rights to pass on them.

We phrased the questions as clearly as we could and with as neutral tone as we possible could so as to not “guide” the participant in any direction depending on what previous participant might have answered not to hint in any direction really. This is backed up by Saunders et al., (2009). During the interviews we took great care of making sure that recordings took place, this to help prevent any type of misunderstandings such as forgetting vital parts. Notes where carefully taken as well during the interviews which follows Saunders et al., (2009).

3.4 RESEARCH ETHICS

According to (Healey & Rawlinson, 1993, p.340) “business organizations are bounded institutions to which the research worker has to seek, negotiate and gain access”. This is also supported by (Tracy, 2010, p.847) “(...) such as do no harm, avoid deception, negotiate informed consent, and ensure privacy and confidentiality”. Tracy (2010) also states that there is also importance in not to fabricate, commit fraud, omissions, the importance of accuracy and contrivance. The authors have done our best to follow all these by always playing with open cards with the participants and answering any questions that they might have for us as well as informing about everything we do.

We never felt it was any objections from the manager to allow us access to them or their organization. We proceeded to explain once more about what we were studding, who we were and more once more, why we needed to interview them. This was followed by that we ensured them of the confidentiality part. That if they wanted we could keep them anonymous, we also stated that the recordings would be kept safe without sharing them with anyone as well as in the end, when this paper was all done, we would destroyed the recordings if they wanted it. “Once entry has been secured a workable relationship need to be established with the representative(s) of the business in which to gather information by interview”; “Various ethical issues, concerned with explaining adequately the purpose of the investigations, the confidentiality of the responses (...)” (Healey & Rawlinson, 1993, p.340).

Before researchers begin to collect empirical data it is important to consider how they get access to the information and materials needed for the thesis. It is important when carrying out a study like this, to understand the ethical dilemmas that may arise. It is important to get the consent of the respondents, to treat the material as confidential, and collect and manage data from respondents in ways that prevent this potential damage. (Saunders et al., 2009)

Before the interview took place the authors asked the participants if they could provide with a possibility to be participant. The information was given in a neutral tone, was written in simple and understandable language and contained no overriding or insistent formulations for participation. This e-mail covered facts such an explanation about the purpose of the paper, as well as sending out the questions which would be asked during the interview.
When a positive response was replied by the participant we proceeded with sending out the interview questions.

Before the interview started, the participants were asked if they would prefer to remain anonymous. None of the participants have said they minded the fact to appear in the paper with their full real name. The authors also asked the participants if a recording could take place of the interview. The authors have also made it clear that any recording or notes would be contained in such a way that it would not fall into the hands of anyone outside of this thesis or even be destroyed after the paper was done.

### 3.5 SUMMARY OF METHODOLOGY

*Here we will give a short description of the path undertaken when conducting the paper.*

The thesis followed an inductive research approach that can be referred to an inductive qualitative method. To help shape the method we used of the “onion model”, which can be studied in Saunders et al., (2009). The inductive qualitative approach was deemed appropriative for this thesis. The researchers have discovered a problem, tried to understand it and analyse it and in the end draw a conclusion from it.

Case study was picked as a strategy because we wanted to explore and understand the development and the importance of logistics in the region. Furthermore we wanted to explore the importance of developing logistics on an innovative way as well as explore the cluster's importance for regional development.

We conducted a field study on all members in the cluster also known as “Innovative Logistic in Halland”. We have only conducted non-standardised, interviews where one of us paid extra attention towards body language while the other one focused more on reading the questions.

Follow-up interviews were required for this thesis in order to collect all the data necessary as the focus group, which was planned to happen, never took place. During the interviews, both the primary but also the secondary, recordings were used to help with the transcribing later on. All this can be said had been the primary data collection in the thesis.

Secondary data was of course also required, for this we used written materials e.g. journals and books. After the interviews were done, both for the primary and the secondary, transcription was conducted as soon as possible, so that we would not forget certain aspects which otherwise could have been forgotten.
4 CASE ANALYSIS AND DISCUSSION

In this chapter, the empirical data will be analyzed and this provides the basis for the study’s conclusions. The first section focuses on clusters and the factors that help a cluster to spin in right direction. In the second section describes all the nine blocks from the table which was developed in the theoretical section. In the meantime the reflection and interpretation of results are provided. Finally, the business model for the studied case is presented.

4.1 “INNOVATIVE LOGISTICS IN HALLAND”

"Innovative Logistics in Halland" is as we mentioned earlier a cluster composed of different logistic sectors with the addition of “Halmstad University”, “Science Park” and the “Halmstad municipality business development centre Inc.” The goal is to find new innovative means of together delivering value to the customer that neither can do on their own.

4.1.1 BUSINESS MODEL COMPONENTS

“Innovative Logistics in Halland” different BM components will be presented further in following structure; Cluster, Key Partners, Key Resources, Key Activities, Value Proposition.

4.1.1.1 CLUSTER

In the “Innovative Logistics in Halland” we count “Halmstad University, Science Park, Halmstad municipality business development centre Inc., GN Transport Inc., Hallands Harbours Inc., Halmstad City Airport Inc., Halmstad City Network Inc. Currently they only have their own customers within their own businesses but there are no customers for the cluster. As time progresses and the cluster hopefully develops further we hope to see future
customers join as well as other players to fully create a network where clients and cluster members can interact and conduct business. This will increase both the knowledge of the logistic cluster but also its future opportunities to capture more business opportunities discover new potential customers and partners.

“We also believe that it is possible to improve the opportunities, we also believe that we are capable (...) in this cluster to improve our co-operation, work together to find new logistic solutions, which in turn will generate more business opportunities, (...) competent labour and thereby taxpayers, which will benefit Halmstad and Halland as a region, that is the overall objective” GN Transport.

4.1.1.2 KEY PARTNERS

When looking at Key Partners for the logistic cluster, it covers the clusters network of suppliers and partners such as potential future members and customers. There is a possibility for the cluster to jointly cover more area of the logistic section than any single member could do. This is where the cluster’s BM steps in. It is important according to the members:

"It is important for us to pull in key personnel (...) broaden the network” Halmstad municipality business development centre.

We can identify different reasons for why the individual company would benefit as well as the logistic cluster as a whole. One reason for the individual company would be that it would gain the ability to offer their clients something special, something that only the cluster together with key partners could offer. Osterwalder and Pigneur (2010) talks about Co-creation where one tries to, together with the key partners create a value for the customers.

"If we declare some type of strategy that we want more logistic companies to come here (...) then maybe there will come more? And that is really how it all started. How can we develop a strategy to lure these companies to come here and make this industry more attractive? (...) clever and innovative logistic companies. We can collaborate together so that there are environmental gains as well” Halmstad municipality business development centre.

4.1.1.3 KEY RESOURCES

“Innovative Logistics in Halland” needs several key resources to be able to create the value proposition to the customers as well as to be a successful regional cluster. As we have mentioned earlier we analyse key resources based on success factors from Hallencreutz et al., (2002)
BRANDS THAT STRENGTHENS CLUSTER COMPANIES

In accordance with Porter (2000) clusters is a concentration of highly specialized skills and know-how, institutions etc. in a particular nation or region. By looking at what the region of Halmstad has to offer in the terms of logistic cluster, we were able to pin-point five pillars, harbour, railway, roads, airport and finally the invisible logistic factor, the IT infrastructure. Invisible to the naked eye but still important for a functional logistic cluster.

“People actually look at, if a region has a well-developed IT section now before they set up a business there, we can see that this is becoming more and more a must instead of a “good to have” kind of a thing when they are scouting for a region where to set up their business” Halmstad City Network.

With all these 5 pillars we would like to argue that this cluster possesses all possibilities to obtain and become a huge success. Now it all comes down to, can they make this happen? However, after the interviews were conducted we soon discovered that there are some cracks in this collaboration to form a functional cluster between different logistic parties. To give an example would be the speed, at which this build-up is taken place. We would like to point towards Amit and Zoot (2010, p. 217) who writes “serve a specific purpose towards the fulfilment of the overall objective”, and Francis and Bessant (2004, p.171) “It follows that enterprises that are better able to manage innovation than others (…) plays a key role in survival and growth of enterprises”. This would mean that “Innovative Logistics in Halland would not be stronger then its weakest link just like one of the participants pointed out previously. Right now however there is some gravel in the machinery as the fifth pillar of this cluster that they are building up are starting to look elsewhere for other partners.

“It has almost come to a complete halt, there you got yet another reason why I’m instead more engaged in south-link, it has taken way to long time (…) don’t do anything then, I will not be standing here and waiting on the sideline while everyone passes me by!” Halmstad City Network.

This could have dire effects on the future collaboration if one so important partner leaves this cluster formation. Questions that have circulated among the current cluster members have been just how do go about to best spread the news of their existence. The reasons for this is to help “Innovative Logistics in Halland” to really communicate outwards to potential customers for the future when the cluster is well-developed. We noticed that they currently have a webpage as a window outwards towards their customers. Here customers can see how to contact the “Innovative Logistics in Halland” if they want to get more information about this collaboration. “Innovative Logistics in Halland” are promoting themselves with the help of word of mouth.

”The possibly which are presented with here in Halmstad are unique. A formation without any gaps. Where each participant can develop his game but for us to come up into multi-digit results we have to consider ourselves as a team. It is when we get teamwork that we become unbeatable on the arena and takes off! Much is all about passion for what you are doing. To never be content but always want to move onwards.” Halmands Harbours homepage.
As well as using the internet where they write:

"In Halland region we have access to all "Roads" that deals with logistics – air, road, water, railroad and IT and therefore the best opportunities to create innovative logistic solutions." – Hallands Harbours homepage.

It is quite interesting to see that they are working upwards and down instead of down and up, they created a vision first and then looked on it like, how can we reach there?

"We inflated the vision what we want, that is something we been working on, this have resulted in this homepage. What we want (...) what we are good at (...) and then what is the steps to complete in order to achieve that vision?" Halmstad municipality business development centre.

However, we can see that the region has failed in marketing itself as good place for establishing new types of logistic businesses.

“(...) one of the weaknesses I believe is that this region don’t communicate outwards that it is a growth region, in some aspects poor identity” Hallands Harbours.

Interesting to note is that advertisement for the “Innovative Logistics in Halland” is mainly being done through mouth to mouth method. Where they talk and speak about it with their current customers.

“Could tell about the industry of this network” Halmstad municipality business development centre.

IDENTIFYING THE LOCAL STRENGTHS

“Companies are blossoming in Halmstad, the university is expanding and the population is growing each year. The favourable geographic location in southern Sweden, with its close proximity to the rest of Europe benefits tourism and industry. Halmstad attracts thousands of tourists each year with its miles of sandy beaches, fishing, numerous golf courses and rich variety of entertainment and culture.” (www.halmstadsnaringsliv.se)

As Halmstad municipality business development centre Inc. pointed out on their webpage Halmstad have the benefit of having an already well-established and developed infrastructure when talking about roads and quite well if we discuss railroad connections that spread out in all directions. To add to this mix, Halmstad is a city located near the west coast of Sweden granting it access to the water logistic in the form of having their own harbour and they have their own airport. This is why we can argue and state that all the logistical needs can be fulfilled. Add to this that Halmstad is developing their infrastructure when it comes to information too. We talk naturally now about the internet, which is offered in this mix by Halmstad City Network. Together these 5 pillars of infrastructure as we have called it previously in our thesis, grants Halmstad a unique logistic position and business opportunity if, the act now and do not miss the window of opportunity.
Halmstad is located in the middle of the west coast of Sweden as well as being one of the most growing the region.

“The logistic location is worth gold, in geographical terms. With a developed infrastructure consisting of roads, rail, port, airport, and it so it is close to everything; rest of Sweden, Scandinavia and Europe” Halmstad municipality business development centre.

Here one will find positive business climate as well as having a rich entrepreneurial spirit, which is much thanks to the most successful co-operation between Halmstad municipality business development centre Inc. and the University of Halmstad.

Halmstad is located in the middle of the west coast of Sweden as well as being one of the most growing the region. In Halmstad one will find positive business climate as well as noticing a rich entrepreneurial spirit, which is much thanks to the most successful co-operation between Halmstad municipality business development centre Inc. and the University of Halmstad.

According to Halmstad municipality business development centre Inc. there is some disadvantage in Halmstad. One of them is that the harbour has a limited depth which means Hallands Harbour loses some of the possible trade if this problem did not exist. The West Coast Railway (Västkustbanan, see appendix 3)\(^4\) has a limited capacity for handling logistics for goods as it lacks a fully expanded double track. This puzzled us and we highly recommend resources to be put in here as we see a great need for this, the problem is politicians do not think outside their own election district. West Coast Railway is one of Sweden most important railroad connections. (www.trafikvärket.se)

Like every one pointed out, the biggest strength of Halmstad is that the business sector, which consists of, the road, railway, aviation, harbour and IT, are all represented in Halmstad. Cluster creations can be seen in both the logistic sector in form of “Innovative Logistics in Halland”, whole sale business and finally within the manufacturing industry. (www.halmstadsnaringsliv.se)

They have a great position as a logistic area, Halland being located where it is, between Oslo and Copenhagen, which they call the 11 million city.

“We believe that Halmstad or the region of Halland you say, as a localisation is an excellent spot for logistic for northern Europe because we’re located between Oslo and Copenhagen and which is frequently being called the 11 million city (…)”

GN Transport

**FIGUR 12: HALMSTAD LOCALISATION**

\(^4\) West Coast Railway runs between Gothenburg and Lund. West Coast Railway is one of Sweden's most important rail links. Together with other courses creates an efficient rail network, which is the precondition for future sustainable transport of goods and people. (www.trafikverket.se)
According to Osterwalder and Pigneur (2010) key resources could be human capital. The clusters main resource as we see it, after have conducted the interview is human capital but not only that, the infrastructure is also an important assets that the cluster could claim to possess.

"(...) the infrastructure. The proximity to population concentration, you could say right between Gothenburg and Malmo. Good access to surfaces. Most likely good access to labour." Hallands Harbour.

We would also like to argue that this “Innovative logistics in Halland” sits in a good position due to that Halmstad is located where it is being like a stepping stone out to the continent of Europe.

“(...) Halland county is in a very positive position, because we are quite significant for logistic solutions, that is why we have so many companies here in Halland region who deals with logistics. We are located in a good geographic area for distributing goods throughout the whole of Sweden really (...) but also from Sweden out to the rest of the continent, Halland is also then located in a very favourable location also both in terms of railroad and sea transports and stuff and so forth with roads, trucks and stuff like that” Science Park.

Halmstad also holds something unique, here in Halmstad there are both well-developed roads, a harbour exist, an airport and finally railroad connection is somewhat well developed as well. Now Halland also have something called the fifth infrastructure which is broadband and together with the rest this can prove to help bring this infrastructure into becoming something special, this because companies now days look at so many factors what the commune can offer before they start up their businesses in that particular area.

"The fifth pillar of logistic in world class is fiber optic. That is also something one forgets about, at least that’s how I experience it. The whole logistic chain depends on well-developed communication in multiple steps” Halmstad City Network.

LEADING AND ENERGETIC COMPANYS THAT WORKS ACTIVELY IN THE PROCESS

The seventh success factor in the success factor model is about having leading companies in that sector (logistics), which are interested in developing this cluster further. "This encourage me and I know that we are many that works to improve this climate even further. Success leads to success and therefore it feels extra motivating to work in a cluster such as “Innovative Logistics by Halland” Hallands Harbours homepage.

In accordance with the participants, we managed to gather information that this cluster have been working for approximately two years and the interest for seeing this cluster grow among both participants and outsiders seem to be quite high.
"(...) We have been doing this for a year or two (...) don’t know the exact number but it is a huge interest, (...) and afterwards it will hopefully spread, and it is mainly around Halmstad (...)" Hallands Harbours.

One however said he had lost faith in this project due to lack of action being taken by its members.

"It has almost come to a complete halt, (...) don’t do anything then, I will not be standing here and waiting on the sideline while everyone passes me by! It is all about regional development, Skane, Smaland, Halland and of course Blekine” Halmstad City Network.

This brings us to consider that it might be a huge business potential here for new businesses come to Halmstad and move their operations here. As pointed out by the participants in the interviews and “Innovative Logistics in Halland” they have managed to see business opportunities when the logistic communication improve and companies with large import and export ratio move closer to Halmstad. Sweden has can be seen as an island that have the harbour and Oresund bridge as its only connection to the continent if we argue that many companies would want to have their warehouse close to any communicating links to the market both in inland Sweden but also out to the continent of Europe. We mean that there is a huge interlink between having all five pillars of communication and potential regional growth.

“And there is a reason why companies such as Biltema, AJ products, Lidl and those have chosen to position themselves in Halmstad. The reason for this we believe to be that Halmstad is located in a good logistic position and also that we’re good on logistic. We have a tradition to be good at logistic in the region. We also think that we can improve the opportunities,(...)” GN Transport.

This also points towards that we strongly found factors that speaks for Halland being located in a good logistic position when looking at the geographical map of northern Europe. We would like to argue that this may have played a role in why logistic companies and companies alone have positioned themselves here in the region of Halland. Not only that, other counties points to Halland being in a good spot logistically.

"We have an amazingly well-established logistic in the region, we have a completely different region stating that ours is a very important region for communication with other areas and the continent. We have good infrastructure on all these five pillars. So if we fail now well then we are probably conducting the wrong type of business. The biggest strength we got as a region is clearly our localization. We are located between the 11 million cities. A challenge that we can sense might be when we get the industry to join in might be that we get two freight companies, then it might be a challenge to actually drop this competition.” Halmstad City Network.

The cluster should function as a mean of attracting new potential customers to come to Halland and set up their business here or at least use the cluster instead of other means of transporting.
"Our role is to be like a catalyst for the business industry, our whole existence is over there, if we didn’t exist to create these opportunities for the industry to establish itself and operate from Halmstad (...) So it is all about creating opportunities to build the invisible logistic or communication paths." Halmstad City Network.

As well as trying to keep those businesses as customers within the cluster. However, there is no specific relationship that is currently upheld with the customers, as there exists no functional cluster at this very moment.

According to Osterwalder and Pigneur (2010) put into our case, the cluster should have to proclaim what type of relationship it want with each individual company, later on it could also appoint a specific person to handle the service and support and all relation questions for a specific customer. This is something we hope to see that “Innovative Logistics in Halland” will do when they are operating on all cylinders and maybe each individual company could take it upon itself to handle a specific customer with the help of a common database where all data could be collected that could be of need to give full support. But the step between their current position and being able to provide full service support to their customers are far into the future. But they have to start to prepare the people, both those involved directly but also those indirectly which could be politicians all to help the wheel turn faster.

"That is how it was from the start (...) we focused on creating this mentally for people, politics, politicians and everyone, (...) create a sense that here things are happening, that was more the goal rather than we were supposed to have a lot of activities” (...) many are positive now towards this because they see that something is taking place and the wheels are turning (...)” Halmstad municipality business development centre.

We would argue that the cluster would need to have employees who work with the questions regarding the clusters development and questions that are needed to be answered to strengthen the cluster as a whole. These employees should have know-how about the BM and ideas of how to integrate this into the cluster as well as how clusters operate.

CLUSTER ENGINE

The last and final factor deals with the engine of the cluster, in this case it would be the chairman and CEO for Hallands Harbours, Bjorn. It is important according to Hallencreutz, et al., (2002) that the engine networks for and between new contacts and the participants in the cluster. Currently the engine of the cluster has stated that there is not unlimited time to spare for this cluster, as each individual also runs his or her own company.

“One of the problems we have had when we’ve tried to build up this network, most of us who are sitting with this network are in a similar position like I, we are running a business so we don’t have unlimited time to spare for this(...)” Hallands Harbours.

If looking at what Hallencreutz et al., (2002) argues in their work that clusters can generally be based on core business areas. We would like to argue that if we compare this with Porter’s
(1990) diamond model we can find the majority of the stakeholders in “Innovative Logistics in Halland” located in the “related and supporting industry” box. What these stakeholders that build up this cluster “Innovative Logistics in Halland” have succeeded to locate is that there is a great business opportunity here.

Just as Hallencreutz et al., (2002) points out, there are other stakeholders and actors in the local environment as well, that participate in one way or the other. We found that as no one is fully committed towards this innovative cluster anymore. It seems like a great business opportunity is passing them by, as there is no clear engine that can push for this cluster to make things happen even if they have this remarkable situation with well-established logistics already in place.

“We have an amazingly well-established logistic in the region, we have a completely different region stating that ours is a very important region for communication with other areas and the continent” Halmstad City Network.

In current days the engine has been pointed out to be one member of the cluster by the name of Bjorn who is the CEO of Hallands Harbours. Having the CEOs for small organisation take the role upon them self to lead this change of the businesses model could prove problematic. As pointed out by Chesbrought (2010) these CEOs typically got into power “via the current business model, which is now deeply familiar – even comforting – while potential alternative models will be unfamiliar and may even seem threatening.” (Chesbrought, 2010, p.361).

Chesbrough (2010) continues with stating that “Organizations must address these leadership issues to ensure effective governance of business model experimentation, and that the results of their experiments lead on the action within the organization.” (Chesbrough, 2010, p.362).

It was pointed out to us during the many interviews that there is a lack of leadership in the cluster as well as a clear will to be a clear engine for the cluster. Having a clear cluster engine is something of grave importance both according to us but also to other researchers such as Hallencreutz et al., (2002) who in the model Success factor name cluster engine as an important step. We also tried to hold a focus group where the goal was to try to figure out an innovative business model for the cluster but in the last minute it was cancelled by the engine of the cluster. This proves that the cluster lack discipline and maturity to actually function fully.

There is currently an engine who clearly points out that he is tired and not so interested in being the engine at this current moment.

"right at this moment I’m trying to take a step back from the role as the engine, right in this moment we’re trying to put it in the lap of Halmstads municipality business development centre (...)I would claim that Niklas Simonsson and Mike when he is home (...)in the beginning it might have been mainly Pelle Nilsson, me and Mike (...)” Hallands Harbours.

The engine has expressed that with the new situation he is facing when running two harbours Halmstad Harbour and Varberg Harbour he got too much outside of the cluster to work with
to effectively being able to be an effective engine. People still look to him as the engine but also understand that he is very busy at this moment.

“(…) Bjorn got too much to do and growing businesses (…) He could no longer prioritize to participate and at the same time we could not contribute with anything if he was not participating” Halmstad municipality business development centre.

There are also concern that there is a lack of clear roles which is something we would argue is very important especially in the initial and early phase until the cluster becomes almost a self-playing piano. We would like to argue that clear roles and some type of project-owner or – manager would help this cluster tremendously when it comes to holding it together and driving the development forward. Lack of clear roles is something that also was raised as a concern by some of the participants.

”There were no obvious roles, no one that clearly stated that this is a project manager, this is what I wish from a network, that is how it is if it is a project organisation. Then there are a project co-ordinator. (…) so was not the case here, (…) Bjorn were chairman but he was not supposed to hold in everything (…)” Halmstad municipality business development centre.

When we tried to locate who was the engine the driving force all the participants seem to agree that it was Bjorn. There were also others who clearly could hold the role as the engine. Or who have been located to having contributed tremendously to the cluster in its initial phase.

”The major driving force have mainly been Bjorn in the harbour, Pelle, Caroline, Mike (…)” Halmstad City Airport.

With cluster engine we mean that it is important to have a person who are like a project-owner or manager and try to help this cluster develop. As well as fuel, with this we mean capital, funds, which to run this cluster with. The last part is ownership. It is important according to us that the cluster themselves hold the future power over this cluster and decide where to go with it. This demands that they own it and run it without outside influence such as outsourcing should be forbidden.

4.1.1.4 KEY ACTIVITIES

“Innovative logistics in Halland” needs several key activities to be able to create the value proposition to the customers as well as to be a successful regional cluster.

EFFICIENT MEETING PLACES

The cluster as it stands today did not clearly state they had any efficient meeting places such as a pre-designated debriefing room or other such areas or what should be discussed or happen during the meetings.
"(...) it is about creating forums (...) seminars, breakfast meetings, study visits at each other, where there will be some room in the schedule for sitting down or standing and discussing with each other (...)" Hallands Harbours.

Here we would like to point towards that it seems like cluster is well aware of the lack of efficient meeting places.

They have held some type of workshop before but it was far and wide between, in accordance with Hallencreutz et al., (2002), it was important that a cluster holds continues meetings so to check-off how things are developing within the cluster.

One way to know how to improve themselves would be to first analyse their current situations and see how they can improve their current work. This is best done with evaluations that can be done in the meeting places the first couple of times before the cluster is fully developed so each know where to put his or her money where their mouth is.

"We have not had any evaluations actually." GN Transport

"No, there have been no evaluations as this is a voluntary activity, between the companies we are trying to help now and then. But there have been no evaluations." Science Park.

This is how everyone has answered however we picked only these two. Clearly there is a lack of meetings where important evaluations can take place. How else will they know if they are on the right track if they do not communicate with each other and hold group meetings?

“(...) Bjorn got too much to do and growing businesses (...) He could no longer prioritize to participate and at the same time we could not contribute with anything if he was not participating” Halmstad municipality business development centre.

We suggests maybe telephone conference could be held while the different members are on the road. That or each member could hire a key person, who will represent that company for this project of developing a collaborative cluster. Currently we would like to emphasis on that right now it is important for the cluster to create awareness as well as after that is established and the wheels are turning, to help in assisting the customers to solving their questions in logistics areas.

CLEAR AND LONG-TERM VISION

If looking at the next part of the model we find “Clear and long term vision” and quite clearly the cluster as it is today, lack any type of overall agreed upon vision. They do however possess some main goals but not a clear and long-term vision, it is actually quite unclear. According to their webpage They state that their main goals for this cluster is to; become top 10 as a logistic location in northern Europe; To become Sweden’s most efficient location for 4th party logistic; That they have developed a specialisation to handle and receive establishment who are looking for unique logistic solutions. As we see right now “Innovative Logistics in Halland” do not possess any customers however, according to Osterwalder and
Pigneur (2010) the customers are to be seen as the very essence of the organization, in our case there is no full-fledged functioning cluster just yet. However, there is nothing to stop them from trying to improve the business environment for potential customers by keep working in this cluster to make it advance forward.

"(...) to create a regional asset for harbour and logistic businesses, (...) we shall be a regional growth engine, (...) we shall be an asset that creates opportunities for companies, which exist here to develop and for companies who wishes to move here shall be able to do so, (...)” Hallands Harbours.

Here it can be noted that they are aware of the importance to lubricate the machinery of trade as much as they possibly can to make the region of Halland as attractive to new businesses as possible. And to bring in people who sit on specific much needed know-how information or otherwise hold influence that can help the wheels turn easier and faster,

"It is important for us to pull in key personnel (...) broaden the network” Halmstad municipality business development centre.

This is further strengthen by the statement made by Halmstad City Network:

“Our role is to be like a catalyst for the business industry, our whole existence is over there, if we didn’t exist to create these opportunities for the industry to establish itself and operate from Halmstad (...) So it is all about creating opportunities to build the invisible logistic or communication paths.”

The problem as we have seen it is that there is a lack of communication between the members of this “Innovative Logistics in Halland”.

A COMMON LANGUAGE AND MEASUREMENT BASIS

If looking at the third success factor we could notice during the interviews that it seemed like that they actually used the same language as they all want the same. Everyone agreed upon that they all wanted to capture more business potentials, however how to get to that point was a little less clear. We would like to argue, that the first step is always to do a full evaluation. The participants of “Innovative Logistics in Halland” have raised the concern both among themselves but also in us, we could discover that there is a huge lack of evaluations of the progress made in the cluster. Let us remind the reader that without evaluation there is no measurement to use whether you are doing the right thing or not.

”None! We have not reached that point yet” Hallands Harbours.

We would argue that any businesses need to have a board meeting now and then and evaluate the strategy set out before them, a cluster is no different. In our viewpoint of this cluster we would like to argue that going blindly into the dark is quite economical dangerous no matter how good opportunity you have discovered and that is why we argue that evaluation is “and or” (A or O) so that you know if you are actually doing it right. They are all well aware of the
fact that they still have a long way to walk and that each factor in logistics have to be
interlinked for the best outcome possible, as logistic collaboration is also about good
information flow.

"We are trying to start to construct this co-operation in this innovative logistic. We have just
started on this path and there is quite a lot to deal with here (...) how can we manage to
interlink the different aspects such as fiber optic, transportation of goods, and transportation
of people and so on? If it is supposed to be more extensive then we will need more
participants (...) if this is going to grow and become a strong long lasting collaboration,
which the companies can benefit from, (...) ensuring that there are good business
opportunities to conduct together." Halmstad City Airport.

A CLEAR WORKSHARING BETWEEN PUBLIC SERVICES AND MARKETS

Next up is the factor in the success factor model developed by Hallencreutz et al., (2002) that
deals with work sharing between public services and markets. As mentioned we would like to
point towards the quotation from Halmstad municipality business development centre that
"there were no obvious roles". We dare to argue that without clear defined work roles
confusion can easily arise and question such as who is responsible for delivering what or who
is supposed to do what in the cluster. This all points towards that they need to really divide the
roles among themselves and that they need to do this right at this very moment.

We would strongly like to stress the grave importance of seeing the commune and trade and
industry working close together for the common good of all of Halmstad, as we could identify
that there is future potential businesses to capture for “Innovative Logistics in Halland”. They
could be to try to steer other logistical arrows to go through Halmstad.

"(...) forgotten about the region of Smaland, they have a HUGE logistic arrow pointing
outwards towards Halmstad (...) Then I asked myself, how can we take care of this that comes
from Smaland? “Halmstad City Network.

As stated from theory section Porter (1990) managed to formulate a conclusion that a
successful nation can be characterized by the fact that they have companies that through
continuous innovation is capable to fend off attacks on their market shares and positions.
Porter (1990) came to a new answer. However that answer however discovered a new issue,
which was: what allow businesses in certain countries to achieve successful innovations that
help cement and hold their positions as world leading for such great length of time? He drew
upon the answer to this question, which was unequivocal to his question, Clusters. As the
collaboration between the partners and the commune grow in strength it is our hope and that
of the cluster’s, that we will be able to witness a growth of strength and opportunities in the
region of Halland. This will improve the brand Halland as being a very successful logistic
centre in Sweden. It might be so that more companies will place their businesses in the region
of Halland instead of other regions if proven that the best logistic area is located in Halland.
"It is mainly the development. To be able to discover new business opportunity (...) where collaboration can benefit each other, and in the end create a strong region, that one becomes a stronger region versus other regions. That through collaboration we can capture new business (...) which results in that benefits in this, that I believe is the driving force behind this” Halmstad City Airport.

FIGURE 13: TRIPLE HELLIX OF “INNOVATIVE LOGISTICS IN HALLAND” CLUSTER

As we already mentioned, Triple Helix “is based on active participation and interaction between the regional actors within academia, states and industry”. We could draw upon the conclusion that Halmstad is meant to be a natural centre for the regional trade and industry development and growth potential. (See figure 2: Triple-Helix) There is a great need to use the know-how from the University in Halmstad to its greatest extend as it is here a lot of knowledge exist. It could be so that maybe some students who just finish a second year master and have done a thesis where they under the guidance of their mentor could start looking on how to best give support to this. The region of Halland should also actively try to assist the industries in improving all of the logistic forms (see the five pillars), and keep a living dialogue with the trade and industry and the university in Halmstad in how to best situate the current work situation and how to keep improving the current logistic situation for Halland region. The next step in Triple-Helix should be recognized by a high spirit and attitude towards industry establishment and also to those industries that are currently operating in Halmstad region.

COMMON ACTIVITIES THAT STRENGTHEN THE CLUSTERS COMPETENCE

The next factor of the success factor model, deals with common activities that has as a goal to strengthen the cluster’s competence. There are no competence development being done currently but they are aware of the need to hold different means of developing their skills in this area.
"(...) what we do, is the activities (...) to help this cluster to find a direction, to discover the questions they want, (...) need to work with (...). Except that we meet now and then and people in this business meet and talk with each other (...)." Science Park

As we mentioned earlier “Innovative Logistics in Halland” cluster, are currently in the development stage. They would need to start being more active if we are going to witness any type of general growth of the “Innovative Logistics in Halland”. It is currently very important for this “Innovate Logistic” to start meeting between them and after that start to invite outside businesses to the cluster so to attract other businesses. But as we already stated it is currently the most important activity they can currently do is to start becoming more active as this will not come on its own.

“(...) more exchange of ideas, have brainstormed a little about how we should move on, whom to invite, (...) what forum to use, are we going to conduct focusgroup? It seems to be a lot of talk but no action. Then you have to let everyone get a chance to express themselves and debate how we should move on from here...”GN Transport.

After they have started with these means of offering a whole package value proposal to the customer would step in as to help the cluster expand and grow. In accordance with Osterwalder and Pigneur (2010) this cluster could after they have started to operate start to solve means of transporting goods and people in a more environmental friendly way

“(...)What, how can, this industry in Halland develop means of conducting business so that it will affect the environmental less?” Science Park.

4.1.4 VALUE PROPOSITION

In our case we have been looking at “Innovative Logistics in Halland” and they currently need to work on building up this cluster. And together with customers and the cluster new value proposition that is sometime unknown but will prove very valuable for the customers will emerge that can help capture profit for the cluster.

"(...) we’re trying to build up some sort of cluster (...) around logistics. To be part of and co-ordinate the logistic development, (...) we wish to contribute with and create a forum where we can work together, have meetings, exchange experience, or conduct business (...) together (...) Logistics is far larger in than one first can believe” Hallands Harbours.

If we start by looking at what “Innovative Logistics in Halland” wish to accomplish they have all said to us during the interviews that they want to expand and grow as a potential catalyst for the region of Halland. They can see the potential in bringing in new future business partners into this cluster, and they all understand the economic benefits of working together closely to somehow discover means of delivering a value proposition together to the customer. To best reach this goal we have managed to locate some problems within the communication and time frame that each CEO have on his or her schedule free for developing this cluster any further. Yet they seem to agree that this could potential be a very beneficial
tool in bringing a new economic boom to the region by becoming almost like a magnet for attractive companies.

"(...) And harbours and logistic, transportation, they exists to fulfil something, they partly exist for the exportation of the products that are produced in this country, or for the products, which we import, which helps to create value for this nation. We shall be able to handle all the flows which go both in and out of the country. If we look in the overall of Sweden, 95% of all import goes through a Swedish port (...)” “(...) So our role, that is, partly do we involve ourselves in this network in e.g. logistic-cluster out of our own gain in this (...)” Hallands Harbours.

This quotation argues for this standpoint that logistic plays a major role in making a county more alive by creating more jobs money can come into the commune and unemployment will go down.

“We also think we can improve in this cluster, improve our collaboration, work together, discover new logistic solutions that can capture more businesses. That will result in that it will become easier to attract competent labour, as well as taxpayers that will benefit the city of Halmstad and the region of Halland, so that is our main purpose” GN Transport.

It can be noted that there is a split in opinion whether or not this cluster already exist or not among the participants. On the one hand the GN Transport says that:

"(...)Yes we do, we got Halmstad our, the airport and so forth. We have a Cluster that goes under the name of Innovative logistic (...)”

On the other hand Hallands Harbours states:

" (... we’re trying to build up some sort of cluster (...) around logistics. To be part of and co-ordinate the logistic development. “

According to Osterwalder and Pigneur (2010) value proposition describes a combination of products and services that is offered to the selected customer, which creates value for the customer. They continue by stating that value proposition is the reason for why customers choose a specific company over that of the other, in our case cluster, would be how the cluster can create a value proposition so attractive for its customer that it will accept to pay the price to get it.

"(...) I don’t think we have one (...) a fully developed product but we are trying to build it continuously, and exactly how and when it will happen (...) that I do not know, that is something that the power of the network has to display.” Hallands Harbours.

Osterwalder and Pigneur (2010) proceed by telling us about two different value proposition and we would like to argue that this cluster can offer both actually. Both the qualitative and the quality value proposition, the former is characterised by price or speed of service while the latter may be more about design or experience (Osterwalder & Pigneur, 2010).
This is also backed up by the fact that with their unique localisation they have a pure unique opportunity presented here before them like one say “a chance in a lifetime” and they know it

”(…) Our idea with this cluster was to together with the different transportation teams work together to lock-in more businesses (…) We believe that Halmstad or the county of Halland (…) is a perfect place for logistic for northern Europe, because we’re located between Oslo and Copenhagen (…)” “(…) Halmstad is good at logistics and we are located in a logistic sweet spot (…)” GN Transport.

It seems that right of this moment one of the important factors they have to deal with if they wish to see this cluster grow except talking amongst themselves and putting actions to their word would be that, which is presented by Halmstad municipality business development centre:

“Our purpose is to strengthen the business community, attract more companies, promote Halmstad as a good location to put up business in”.

The cluster could also offer to work with tomorrow’s logistic questions of becoming more eco-friendly. As more and more businesses wish to use that in their advertisement that they are more environmental-friendly but also that they see the potential of working together to strengthen Halland Region as a whole.

”(…) I think that there are very good potentials. But one has to possible discover new means of conduct business on (…) perhaps relate to the environmental aspects just to give an example? How are we going to manage transportations and the logistic to live up to the environmental aspects of tomorrow?” Science Park

Osterwalder and Pigneur (2010) argues that there are to be five different phases where each channel could cover some or all of the phases, this is something we holds to be true for our case as well. First phase was about creating awareness this is currently done with word of mouth method and “Innovative Logistics in Halland” webpage. The remaining steps are none-existent however we can see that there is potential in offering some sort of package value proposal and working on reducing the CO₂ emissions, which is and will be a huge question for both today’s and tomorrow’s logistic firms. This is something that they begin to ponder about:

”How shall one adapt the transportation and logistics factor to better live up to the environmental demands of the future? (…)The requirements will be stricter and stricter for such a solution and then this type of combination of information technology and more environmental friendly engines (…) so you increase the efficiency yet decrease the affect you have on the environment from all directions (…) One has to work with slightly new means, figure out new business models (…). To decrease the environmental effects in different ways? And this is both a problematic situation and an opportunity for the industry. Because something has to be done!” Science Park

There is a need for support, here the cluster offer service and a personal salesperson exist for each customer that this specific customer can turn to for support. There is also a logistic
solution portfolio where the customer can buy a complete logistic solution that fit his or her need the most. Here we have eco-friendly as an example of what could exist in the cluster package value proposal. In accordance with Osterwalder and Pigneur (2010) and our case about “Innovative Logistics in Halland” we would like to argue that adaption of potential customers to the cluster can bring value to that particular customer.

As the service would be to offer a complete cluster for logistic where a customer would not need to negotiate with a single person in different companies the customer could now receive a specific contact person who handles all the need that specific company would have. So to create a personal relationship between the two parties. The product that we can see this cluster in the future develop and offer to their clients would be something in the term of a “logistic cluster package value proposal” where everything that the cluster is handling is offered in maybe different layers, one more exclusive and more expensive then the other? This goes in accordance with Osterwalder and Pigneur (2010) they also claim that value can be created by helping the client to "do its job".

### 4.2 SUMMARY OF ANALYSIS SECTION

*Here we would like to give the reader a summary of what have been dealt with in the analysis with the emphasis of findings.*

**CLUSTER:** Currently there are Halmstad University, Science Park, Halmstad municipality business development centre Inc., GN Transport Inc., Hallands Harbours Inc., Halmstad City Airport Inc., Halmstad City Network Inc. who all belong to “Innovative Logistics in Halland”. They are trying to form a strategic alliance where they together work to make Halland a stronger logistic area and therefore attract more businesses to come to Halland.

**KEY PARTNERS:** Currently we would argue that ”Innovative Logistics in Halland” is not a fully developed cluster just yet. They are currently in a development stage. International collaboration can also become something that the cluster could count towards having as a competitive advantage as it grows and expand.

**KEY ACTIVITIES:** As we mentioned earlier the Triple Helix show that co-operation is very important between industry, commune and academia world in our case the University of Halmstad. “Innovative Logistics in Halland” already possess good established connection with the University of Halmstad and the commune but in our opinion they should establish better connection with the region. Here we would argue that it would fit the cluster to demonstrate innovative solutions to today’s and tomorrow’s questions about logistics. Such as more eco-friendly transportation. This is something they can handle later when the cluster have developed fully, currently the main issue is to bring in more stakeholders into this “Innovative Logistics in Halland”.

**KEY RESOURCES:** Based on success factor, which we divided under the key resources, we discovered that one of the most important factors that the “Innovative Logistic in Halland”
cluster very clearly lack is the engine. Other important factors are that each stakeholder in the cluster should have one individual, who each speaks for that particular pillar during the meetings. If the CEO’s decide they will not be spending their time working as an engine on this. Develop an established meeting place between the pillars of this “Innovative Logistics in Halland” and that all participants work actively in the process that this will demand to make this vision come true. We would also like to emphasis the location that Halland has between Oslo and Copenhagen a perfect spot which need to be lifted up to clusters customers.

We argue that employees within the cluster will need to work with questions that deal with the development of the cluster. These employees need know-how about the BM as well as understand how to integrate it into the cluster and how the cluster operates. The engine is a project-owner or manager who pushes and helps develop the cluster further. Fuel we mean funds which is needed to hire people to work with the cluster and its projects. Ownership we mean it is important that the cluster holds the future power over themselves not letting outside project-managers decide what they should do.

VALUE PROPOSITION: There is a need for support here the cluster offer service and a personal salesperson exists for each customer that this specific customer can turn to for support. There is also a logistic solution portfolio where the customer can buy a complete logistic solution that fit his or her need the most. Here we have eco-friendly as an example of what could exist in the cluster “package value proposal”. In accordance with Osterwalder and Pigneur (2010) and our case about “Innovative Logistics in Halland” we would like to argue that adaption of potential customers to the cluster can bring value to that particular customer.

As the service would be to offer a complete cluster for logistic where a customer would not need to negotiate with a single person in different companies the customer could now receive a specific contact person who handles all the need that specific company would have. So to create a personal relationship between the two parties. The product that we can see this cluster in the future develop and offer to their clients would be something in the term of a “logistic cluster package value proposal” where everything that the cluster is handling is offered in maybe different layers, one more exclusive and more expensive then the other? This goes in accordance with Osterwalder and Pigneur (2010) they also claim that value can be created by helping the client to "do its job".

From the citations above you can see a contradiction between the participants about whether or not there exist a cluster today or if they are still in the creation stage of the cluster. This is something they have to come to an understanding over so they know what to focus their work on.
5 CONCLUSION

In this section we will formulate possible answers to our research question. In addition we wish to provide new insight into the field of cluster field in form of introducing the business model perspective to the theory.

The business model for industrial logistic cluster is a complex phenomenon, there the all components are difficult to identify. In order to be able to create the collaborative BM the cluster need to have the value proposition as a starting point. In our study we focused in exploring the following question:

*How a possible business model can be designed for a logistic cluster?*

As we mentioned earlier the “Innovative Logistics in Halland” cluster have currently the integration and inspiration parts, which can be applied and used in the joint value proposition.

We would like to argue that firms, which jointly create logistic clusters, can pave the way for both an increase of their own revenue but also that of their customers as well as the development of the region that the cluster is spanning over. We argue that the revenue might increase for its members as well as the cluster and those members as well as their customers will also increase their competitiveness by getting a competitive advantage. Due to the fact that we see environmental issues growing and the need to find answers in how to improve the eco-friendly solutions in transporting goods, services and people.

We would like to argue for a need of finding new innovative and better ways of connecting logistic organizations in formations such as clustering, can have an impact on these issues. When companies merge together in an alliance such as this “Innovative Logistics in Halland” would be when it becomes successful, the strength of it could be tapped for the benefit of the client. They could offer their customers a package value proposal, which best fit the need of the customer. We call this package for a “logistic cluster package value proposal”. With this we mean different layers of solutions as a whole package solution, for a situation, offered for different costs depending on the needs of the client to the cluster.

We would like to argue that a well-developed and functional cluster such as that we can see in e.g. Silicon Valley, can offer access to resources that are hard to tap from a distance and therefor improve the competitiveness of companies that are either customers for this cluster or direct members of this cluster. Clients and cluster alike would also find it easier to become more eco-friendly and financial strong as tomorrows question of finding environmental solution is something that is being very much discussed by politicians nowadays. This can grant a competitive advantage over other parties, and it can also help reduce risk and you share know-how in this cluster, which can develop to become a fully-fledged functioning cluster.

The cluster could by then offer means of smaller companies to become more competitive and also able to compete with larger organizations, as they become more cost efficient and not so rigid as large organizations might be. This might lead to market shares being taken. We also
argue that the cluster could help increase the strength of the brand “Halland” in international market, then “Innovative Logistics in Halland” cluster could work together with international platforms for the benefits of themselves and their clients. We argue that the value that the cluster can offer its future customers can be all of these above.

We argue that because this is a qualitative study our findings could be implemented and used by managers who are sitting in a similar position as that of those in “Innovative Logistics in Halland”. We call this model (see figure 8) for a collaborative business model for cluster.

BM for cluster is a complex phenomenon, which little have been researched about before. We found that for a BM for a cluster to be able to be successful, three main areas need to exist. These are an engine that will drive the idea of a functional cluster forward. Fuel, which we mean is the same as cash. The reason to involve a cost from its members to by having them pay a membership fee would be to create a certain engagement and pressure, which in turn leads to the expectation and results. The cluster needs to own the concept and not put it out on outsiders to solve this problem of forming it and organising it for them.

5.1 THEORETICAL IMPLICATION

We have developed the collaborate business model for cluster (see figure 8) based on Osterwalder’s and Pigneur’s (2010) canvas model. Our model was formed to assist clusters in forming a BM for a cluster instead of a single company.

5.2 MANAGERIAL IMPLICATIONS

- We suggest for managers who are experience similar situations that “Innovative Logistics in Halland” have experienced take notice of our findings such: as having dedicated supportive group that backs up the cluster engine, that they each contribute with funds and finally that they make sure they own the cluster so no one from the outside will influence too much.
- The cluster has to own the cluster, their own actions. One cannot just outsource this on consultants. The problem as it looks right now is that they cannot just insert consultants and hope they can do the work for them. We identified yet another problem, which was that no one in this cluster seems to understand how to resolve the situation as neither had any know-how about it. They do not seem to know how to solve this problem that is why they try to find someone else outside the cluster in this case a consultant who can solve this problem for them. We dare to argue that this is doomed to fail.
- Implication, the engine and fuel has to be available. If looking at the engine there has to be one of the partners who take it upon them to organize and drive this whole cluster forward. For the fuel part that equals money, their own cash so to speak. The companies need to pay money from their own pockets to create a larger motivation for moving this
cluster forward. If the money is not theirs there is little the company has to lose if they don’t feel the need to spend the time to invest into it. We would like to argue that if each participant pay a membership fee to be part of this cluster it might help to create a bigger motivation because then you have a higher dedication to see this cluster develop and breaking new ground.

- Motivation, commitment inner force has to exist within the cluster, they have to themselves own this concept, their BM not outsource it on someone else to solve the problems for them!
- Sharp business development: With companies, for the companies, by the companies.
- We would argue that “Innovative Logistics in Halland” have to use their homepage where they can create a forum where everyone who works with logistic should be able to go in and join in that debate and discuss how to best develop this “Innovative Logistics in Halland”. If they are not capable of meeting face to face they should at least utilize their homepage in a way more efficient way then they are currently doing.
- So if asking the question just why are nothing happening? According to our findings we would argue that it is mainly because 3 different factors. For a cluster to be successful they need to have an engine who is a person that drives the cluster forward; they need to have fuel, which is the same thing as money because without having a membership fee no pressure will come on the cluster members and they need to own the concept and not put it out on outsiders to solve this problem of forming it and organising it for them!

“There is no owning, it is the group in itself which are in charge” Halmstad municipality business development centre.

- The fact together with that there is no demand to contribute with “fuel” to be part of the cluster makes us question whether or not the members really are whipped or encouraged enough to be committed for this to be successful in the end. We do not think that involving someone who is outside the cluster such as an entrepreneur, or Science Park in Halmstad Campus can help the cluster to be any more successful. With other words, it comes down to the cluster itself to make this into a successful cluster that can help generate profit. It is very important that the cluster is developed with companies, for companies by the companies themselves with of course external assistance but we would like to emphasize that it is important that the liability lies with the companies and not some outside force. It is equally important that the money used to develop a successful BM for the cluster is taken from the members of the clusters and not money coming from outside. This to help create an engagement towards its development and we discovered in our interviews and when we analysed it that right now there is a lack of all three of these components.

5.3 FUTURE RESEARCH
• A future research question could be, how well does the developed model function in practise with a well-developed and established cluster network? Are there any major differences between certain types of cluster and how would that affect the developed model?
• The developed model lacks evaluation mechanisms in terms of the business model profitability and revenue potential. An interesting question for future would be to study the BM from a financial perspective.
REFERENCES

PRINTED SOURCES


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DIGITAL SOURCES

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Hallands Harbours http://hallandshamnar.se (visited 2014-04-15)
Halmstad City Airport http://www.halmstadsflygplats.se (visited 2014-04-15)
Halmstad municipality business development centre http://www.halmstadsnaringsliv.se (visited 2014-05-10)
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APPENDIX 1 – INTERVJU GUIDE – FIRST INTERVJU/DISCUSSSION

Regional Development
1. Do you have a logistic collaboration in Halland? (Who is a participant?)
2. What is your part for the logistic collaboration in region Halland?
3. How does the development of logistics (Harbour) look like over the course of history in region Halland?
4. What do you identify as the incentives for the different participants for this collaboration?
5. What do you identify as the barriers for collaboration between the participants?
6. Vilka ser ni som aktörernas olika hinder för samverkan?
7. What are the region’s main strengths/weaknesses for logistic development according to you?
8. Are you collaborating with other regions except region Halland? If so, how does these collaboration look like?

Network / Logistics Collaboration
1. What is the size and structure for the network?
2. Do you have a logistic centre/network? (follow up this question with this one: Does it still exist? Yes/No, for how long has it existed?
3. What is the main goal with this network? (What is your need for collaboration? And what benefits do you have for collaborating?)
4. How has the strategy for logistic collaboration changed, past, present and future?
5. What have logistics (harbour) played for role in the development of the region of Halland?
6. How many works within logistics (harbour) in the region of Halland?
7. What activities are being done to support this network? (how are they structured
8. On which ways do you support the Cluster
9. What type of information about the regions prerequisites exists? And what information about the regions need exists? And how are this information best put into action?
10. How often do you evaluate collaboration? And how is it measured?
1. Value proposition:
Describe the company's business offer.
What the company offers?
What do you do to be different?

2. Customers Segment
Describe the various types of clients that the company sell its offer to.
For whom / which the company creates value?
Where are the company's customers?
What are the company's most important customers?

3. Channels
Describe how the company sells and delivers its offer to the customer. Ex - own stores, e-commerce, vendors, etc. .. (Here describes also how the company works with marketing and customers care)
How do we create attention among customers for the company's product / service?
How can the customer buy the product / service? How the company delivers to the client?

4. Customer Relations
Describe your contact with the customer.
What relationship the company needs to have with their customers?
How the company acquires new customers?
How the company will retain existing customers?

5. Revenue Stream
Describe the company's revenue. Ex unit price, license fee, subscription, etc..
How much is the customer willing to pay for the product / service?
Does the company have other revenue earning opportunities?

6. Key Resources
Describe the most important resources the company needs to function (people, physical environments, financing and possible patents / licenses, etc.)
What resources the company must have in order to deliver products / services to the customer?
What skills / functions company needs?
Do company need the brand protection / patents?

7. Key Activities
Describe the most important things the company must do in order to deliver customer offering
and make revenues?
How should the product / service be produced?
How should the product / service be marketed?
How should the company develop the product / service so that customers come back?

8. Key Partners

Describe your company network suppliers and partners.
What are the company key partners? (Master Contractor / skills ...)

9. Cost Structure

Describe all the costs that the company has to deliver and develop the offer to the customer.
What does it cost to produce and deliver the product / service to the customer?
Which variable costs and fixed costs the company has?

10. Follow-up questions:

What value proposition would you rather see in terms of innovative logistic?
Who / which are the engine of the entire cluster?

APPENDIX 3 - WEST COAST RAILWAY
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