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Weak signals and future strategic uncertainties

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Abstract

Title: Weak signals and future strategic uncertainties

Seminar date: 22nd of January 2010

Course: Master thesis in Strategic Management, FEKP01, 15 ECTS

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Key words: Weak signals, Trends, Intelligence, Change, Leadership

Purpose: Our purpose with this thesis is to find out how weak signals can be spotted on the market and which effective methods the companies can use to detect them. The importance is also to know how to manage weak signals and how to implement it in the organization. This purpose requires a big amount of resources and a well studied analysis about the business markets strengths and weaknesses and the external environment. The reason for this thesis is that we are observing a changing world with emerging trends founded from weak signals in every aspect, thus the companies need to be aware of what guarantees survival and what measures to take in order to achieve competitive sustainable advantages.

Methodology: In order to fulfill our purpose in our master thesis we will use qualitative methods to approach the research problem. We will perform in-depth interviews and case studies. These case studies are focused on two mini cases.

Theoretical perspectives: The central focus of this chapter in our master thesis is to enlighten the phenomena of weak signals by using new found theories concerning how to detect and scan for weak signals. Thereafter we will as well present relevant theories regarding how to manage these signals and what theories of implementation that could contribute to the understanding.

Empirical foundation: Our empirical data collection is gathered through our in-depth expert interviews and our case studies. In this chapter we will present our material from the research and use the material as a platform for our analysis along with valid theories.

Conclusions: Companies with clear strategies that possesses the searching behavior for weak signals implemented in the business core, have an advantage in picking up weak signals for strategic future. Based on the result we have obtained, we believe that there is no superior method for all concerning picking up weak signals. Companies should therefore pursue a method that regards each individual company's different conditions and be perceptive on changes in the surrounding environment.

Preface

First and foremost we want to thank our supervisors Leif Edvinsson and Per-Hugo Skärvard who have supported us with helpful advices and suggestions during the whole process. Our journey through our thesis has been very intense and challenging. However, the subject has been very exciting and interesting to explore, which was the reasons for us to keep on struggling.

We faced difficulties in finding valuable information about weak signals, which is why we are very happy for the positive responses and help from our experts.

Further, we want to thank all the people that contributed and gave us inspiration to our master thesis. Especially thanks to all our respondents who took the time from their hectic schedule to assist us with their expert knowledge and interesting thoughts about the subject of this thesis.

Lund, January, 2010

Linh Cay   Caroline Fang   Henrietta Hermansson

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1. Introduction

In this chapter we will present an overview and a background of strategy and the history of weak signals. The problem and need for how to detect and manage weak signals are also emphasized and discussed in this text.

1.1 Background

The history of strategic planning has during the last twenty five-thirty years been a well explored research field and also central for companies' survival. The term "planning" is referring to how companies can assume the development of trends and project today into the future. It was assumed that tomorrow could be an extension of today only with small differences but still have the same basic configuration. However, assumptions made today are most likely unique, which results in a problematic issue as unique events cannot be planned. Instead one should take advantage of the unique event to be prepared and shape strategies of tomorrow because strategy aims to explore new and different opportunities in the future.[1] The concept of strategy was applied on businesses later in the 1950s and has since then ascribed greater importance by time.[2] Today it is crucial for companies to have a successful strategy to penetrate and exist on the market. The strategy needs to be of relevance and align with its current circumstances in the surrounding environment. In addition, the strategy should be executed as a continually process of revision and reconstruction. The process is based on the recognition of changes that can be detected and interpreted through signals from the external environment. Strong signals of emerging changes on the market are often easier to identify and utilized by many corporations but it is the ability to pick up weak signals that is gradually growing into a significant impact for companies, because weak signals are harder to distinguish. It is often these signals which lead to valuable competitive advantages. A highly developed ability to see and understand the future is required to form a sustainable and successful strategy for corporations. The phenomena of weak signals is therefore of great importance as companies are facing harder competition and technological developments in a rapid pace.[3]

The history of future trends in strategic management are a well explored research field and have contributed to a wide range of methodological base. Igor Ansoff is one of the prominent figures in this field from 1970's, who is described as the father of strategic management. He was the first to explore weak signals by formulating the idea that there are symptoms that can be found for possible changes in the future.[4] Furthermore, he discusses how one can manage strategic surprises by responding to weak signals by using different methods of conduct. He defines strategic surprises as *"sudden, urgent, unfamiliar changes in the firm's perspective which threaten either a major profit reversal or loss of a major opportunity."*[5]

In order to treat strategic surprises, Ansoff describes two primary approaches. The first one refers to the importance of developing a capacity to handle crisis management in an efficient way and the

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[1] Drucker, P. F. (1980)
[2] http://www.igi-global.com/downloads/excerpts/ITB12038.pdf (2009-11-17)
[3] Rossel, P. (2009)
[4] Ibid.
[5] Ansoff, I. H, p.22 (1975)

second approach is to deal with the problem before it occurs and thereby minimize the chock for strategic surprises.[6] The theory of weak signals has further been elaborated by Coffman who paid attention to the conditions and changes of weak signals where he defined them as an idea or trend with potential impact on a business or its environment. Followed by Kamppinnen, Kuusi and Söderland, who perceived the weak signals as individual events or a group of inter-related events. Both statements have had significant meaning to the development of weak signals.[7]

Weak signals have attracted a lot of attention from corporations as well, due to the emerging changes in today's increased information society. Globalization has contributed to a wider range of innovations and shorter product life cycles which have pushed companies into adjust faster to the changing business environment. This environment is constantly affected by economical, social, technological, culture and political challenges. These dynamic challenges have major impacts on corporations' strategic future and innovation development, therefore it is important to understand the weak signals in the market in order to predict future changes. These analyses in strategy are critical for corporations in order to maintain their competitive position and gain market shares. A well known theory from Darwin reflects the importance to understand the environment where those who are fittest to the environment will survive and succeed; meanwhile other who does not adapt to it will fail.[8]

Companies are exposed to a more intense competition and increased pressure from stakeholders. A significant reason behind this is that people nowadays have access to increased information through extended distribution channels as the internet, which enables them to get more insight in companies. Therefore it requires that companies consider more aspects to stand out from the rest, as for example to put more emphasis on social responsibility. To be able to meet the needs of stakeholders they must understand their values which differ over time, see new patterns of behavior and recognize weak signals that could be interpreted and a foundation of decisions and actions. A successful recognition of weak signals could be valuable especially if it leads to spotting trends.[9]

1.2 Problem discussion

The weak signal management is a complex study area where many researchers in the field have studied several aspects and focused on different angles. The definition of the weak signal itself is not very simply to define, little less how to manage the weak signals phenomena and explore what these can achieve. One of the problems lies in that a weak signal for a company can be interpreted as a strong signal for somebody else and also that many earlier researches tend to forget that it is simply a metaphor and in reality, as a matter of fact, no one is sending signals to us.[10] Another problem discussion is if you can tell the difference between a weak signal and meaningless noise and how to make the difference between the two. New evolving technological changes worldwide leads to intense and aggressive competition which pressures business environments to increase their perceptiveness and become superior in the field of picking up weak signals in order to keep up with the development. Ansoff, which has proposed concepts concerning tackling uncertainties and surprises also discuss the problem in earlier studies that many assume that the signals can deduced

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[6] Ansoff, I. H. (1975)
[7] Rossel, P. (2009)
[8] Darwin, C. (2006)
[9] Rossel, P. (2009)
[10] Ibid.

the future based on the past and the present from the future. A known saying is that the past is a guide to the future, emphasizing the importance for corporations to have knowledge of your past in order to understand the future. However this is not always the case. The awareness of the past and present is significant to predict the future according to Ansoff but not always a safe bet on what the future might bring. He suggest that as soon as we leave the past behind, surprises may appear and there exist little evidence at the present, that shows how futures will shape and hence the difficulty to identify them. If organizations focus on the notion of weak signals they can in another dimension learn and use the weak signals in an effective way before it gets to strong. The trend has been to see these signals as an object distinguished from the business environment instead of the capacity of perception and interpretation of the analyst.[11] It is also important to have the right behavior to approach weak signals and to discuss humans' fallacies. The mind set of people controls how to interpret the external surrounding and awareness of the fallacies we tend to fall into. This could increase opportunities to find the unexpected. The theory of black swan treats this matter and describes how the unawareness of the unknown appears and how to deal with it.[12]

Today, institutions and corporations are situated in a fast-growing environment with constant changes. New threats and opportunities arise and corporations focus on "winning in the turns" rather than on the top of the curve on the volatile market. In order to adapt and become more flexible, most corporations must consider reinventing their business models and finding a strategy that is aligned to cope with changes.[13] Another way of adapting has been shown by innovation companies, which put big emphasize on research and development to work in an innovative manner in order to be intact with the changing phases. However, during recent years, many studies have shown that to keep up with the changing world, corporations need to be more innovative which in turn are very expensive for them. Following that many companies cannot manage to earn money as fast as they can spend it on investment for research and development. The result of this leads to an open innovation business model where corporations can interact and learn from each other and receive support to problems and difficulties. [14] It is often these types of businesses that are successful in discovering and managing weak signals, although the problem lies in that only a few numbers of corporations are innovative.[15] This is why companies have to learn how to be capable of innovation today as it is important to have a business strategy that allows and facilitates innovation such as an open business model.[16]

1.3 Research question & problem

How can companies pick up weak signals for strategic future? And how can they manage it?

1.4 Purpose

Our purpose with this thesis is to find out how weak signals can be spotted on the market and which effective methods the companies can use to detect them. The importance is also to know how to manage weak signals and how to implement it in the organization. The reason for this thesis is that

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[11] Rossel, P. (2009)
[12] Taleb, N. N. (2007)
[13] Johnson, M. W. & Christensen, C. M. (2008)
[14] Chesbrough, H. W. (2007)
[15] Furth, T. (2009-11-19)
[16] Chesbrough, H. W. (2007)

we are observing a changing world with emerging trends founded from weak signals in every aspect, thus the companies need to be aware of what guarantees survival and what measures to take in order to achieve competitive sustainable advantages.

1.5 Delimitations

Due to a broad research area and limited timeframe, we are focusing on specific areas to clarify and to help the reader understand weak signals. It should be mentioned that limitations were also made to better match our results with our purpose. The delimitations made are the following:

- The main focus lies on the study of weak signals on a general business level, where we will study and explore the subject area with assistant from our expert interviews from Sweden and abroad to gain national and international aspects.

- The number of expert interviews is numbered to 11 persons. These experts have been particularly selected based on their knowledge and experiences in the field, which we will discuss further in our selection.

- The research problem is concentrated on weak signals in the business environment and to concretize our research study, we have chosen to perform mini cases within the food business to illustrate the subject and make it easier to grasp.

1.6 Outline of the thesis

Chapter 1 will constitute of an introduction that gives short background about strategy and the importance of weak signals will be discussed. It will give insight of the complex subject and problematic factors that appears in these types of research studies.

Chapter 2 represents the methods used in our study. We refer this as the methodology of our master thesis concerning weak signals where we will explain the way of conduct and process throughout our paper.

Chapter 3 refers to the theoretical framework where we have utilized theories that we find interesting and related to our research question. By applying these theories to our research will help the reader gain a deeper understanding and an explicitly view of how it is connected.

 In **chapter 4,** we will present our empirical material and the results from our in-depth interviews and our case studies.

Chapter 5 will consist of our analysis, where we will analyze and draw parallels between our empirical results and our theories.

Chapter 6 is a concluded chapter where we will present our conclusions about our research question in our master thesis.

In our last part, **chapter 7** we will leave room for our suggestions for further research. Following, we will mention and discuss what will be of interest to follow up in extension to our research.

2. Methodology

In this chapter we will describe the following steps and measures of our master thesis and motivate for which methods we have chosen to perform. The importance is to find answers to our research question in an optimal way.

2.1 Scientific approach

Our focus in this research study is to understand and grasp a clearer picture of weak signals and the way to discover things that are visible but not seen. According to Jacobsen, there are different approaches to form a research where he describes an inductive, deductive and pragmatic approach. Where the deductive approach illustrates how researches studies theories and thereafter applies this on reality, the inductive approach focus on the opposite.[17] In our thesis we will be using an inductive approach where we will collect data from the reality through among others in-depth interviews and then relate this to new found theories within the area. The reason for this approach is the fact that our research problem is very complex and not very clear. In order to grasp the problem better we therefore prefer an open relation to what we are going to study without any influences from earlier studies of what we are supposed to think and assume beforehand. In this way we may also find or discover things about weak signals that we would not have with a deductive approach and gain more scientific depth. However, the difficulty of doing so requires a good analytical process throughout our thesis. Some researches argues that it is simply naive to believe that anybody can collect data and see reality with a complete open mind, with the argument that every individual has its social and psychological limitations whether they are aware of this or not. As all approaches have its benefits and its disadvantages, the importance should therefore be focused on what approach that is the most suitable one for the research problem. Well aware of these limitations and disadvantages, we will therefore execute a case study in accordance to our in-depth interviews in order to create as undistorted picture as possible of this research problem. The interviews will consist of in-depth qualitative interviews with "experts" within the field and two mini cases will be performed to enhance validity in our paper and to concretize our research problem with reality-based situations.[18]

As our aim in this thesis is to explore the weak signals in the market we will be using a qualitative method. The reason for this is because it allows us to analyze the world in terms of words instead of numbers. The best way to understand the environment and the organizations surrounding the subject of weak signals is to study, observe and analyze individuals and let them speak and express themselves with their own words. With a complex research problem as the one we are studying, it is also easier to have flexibility in our process of the paper because it will facilitate for us when we need to adjust to unexpected circumstances that may appear when collecting data. In order to reach more theoretical depth and methodological awareness we also felt that giving stated answers in form of surveys and other quantitative methods will restrict the answers and provide disadvantageous results. Therefore we wanted to let the individuals speak about what they wanted through in-depth interviews without too much influence from us as we need flexibility to dig deeper in our research

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[17] Jacobsen, D. I. (2002)
[18] Ibid.

and produce a good analysis. Companies and organizations in today's society act and think differently which is why it is interesting for us to explore different perspectives of weak signals. As qualitative research can in contrast to quantitative research see in a better way how parts work as a whole, we consider that this will provide a better holistic perspective on the problem. However, the difficulty lies in to summarize the collected data received from qualitative data because the main part of it consists of words.[19]

2.2 Research strategy

Different kind of research problems requires different research strategies. It is important though to choose the appropriate one as this will determine and structure what set of tools we will be using when collecting data and effect which way we want to approach our problem. Merriam describes a frame of qualitative research that is commonly found in the sense of education. This is the following: basic or generic qualitative study, ethnographic study, phenomenology, grounded theory and case study.

We have chosen to do a case study based on expert interviews as a qualitative research gives us the possibility to study the weak signals from their observations and point of views. As a complement to our expert interviews, we will as well perform mini cases to focus on specific contemporary events. We think that this would be a highly suitable way to complement our data collection from our interviews. Many writers have referred to different types of qualitative research throughout the years although there is one philosophical key assumption that all types are based on, which is that reality is constructed by how individuals interact with their social worlds and about describing their experiences within the world.[20]

2.3 Case study

A case study concerns the notion of one specific case and a specific situation. The most common forms of case studies are either about a certain organization, a certain place, special person or a specific occurrence. It is usually focused on the surrounding environment or the current occurrence in question. Yin describes it as:

 "A case study is an empirical inquiry that investigates a contemporary phenomenon with its real-life context, especially when the boundaries between phenomenon and context are not clearly evident"[21]

In our thesis we will complement the empirical findings from expert interviews with two specific case studies, which we refer to as mini cases. These are performed because we wanted to concretize the subject and study how companies work with weak signals in reality. The case studies will be performed on Ica & City Gross and Espresso House & Barista because we wanted to concentrate on the change of consumer buying behavior in terms of Fairtrade products and food without additives. By focusing on several companies and situations, the result gathered will be more compelling and able to serve more trustworthiness thus our research is based on more than just one case. A case study is the most convenient way for us to examine a deep and specific aspect of our problem under

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[19] Jacobsen, D. I. (2002)
[20] Merriam, S. B. (1998)
[21] Yin, R. K, p.13 (1994)

a limited timeframe and study the interactions between different variables and factors in the given situation.

Strength and weaknesses has long been discussed around the case study method. The strength is the enablement to concentrate on one given and specific event as in the food industry and peoples demand for healthier eating habit and products. It is a better way to get insight and interpret rather than hypothesis testing. It gives us the possibility to focus on finding significant factors concerning weak signals which sometimes can be hidden and not very clear, especially when it is put in a context that everyone can relate to. It is interesting for us to study our mini cases and relate it to our expert interviews because it allows us to reveal knowledge that we otherwise would not have access to or know about. Furthermore, it gives us the opportunity to make better analysis as we are studying the reality ourselves and our experts' opinions and knowledge through deep interviews. The disadvantage with a survey would therefore make it more difficult for us and tend to be more confusing in this type of research problems. The weaknesses of a case study concern the notion of the general and researchers limitations. In other words, the disadvantages of choosing to perform a case study are the difficulty to do a selection of what detailed situation to study without the risk of the research becoming skew and presenting unfair results, something that we will discuss later on in this chapter. This also leads to the uncertainty that results from case studies cannot be generalized and applied to the whole reality.[22] The limitation discussed is that the result of this study would be limited to only describe and analyze a case rather than the research problem per se. This is among other reasons why we wanted to perform more than just one case and increase the trustworthiness and validity of our thesis.

2.4 The Research Design of case study

A research design provides a framework of tools and data collection. There are many approaches in how to design a case study, which is why we decided to present the following ways of conduct that we made in our paper.

2.4.1 Expert interview

In our thesis we are going to perform qualitative interviews with specific persons that we feel have expertise within this area and can contribute to us approaching our answer to our research problem. In qualitative interviews, it is easier for the interviewed to not be guided by the interviewer, which is why we considered this as a justified method for reaching unlimited and undistorted answers. Another reason for this approach is the focus on the persons own perceptions and perspectives. As well as to increase the reliability and validity, we will interview several proficient experts concerning weak signals and ways to detect and manage them from different areas such as military defense, business and organizational markets. Due to that we will execute mini cases based on the food industry, especially on Fairtrade and products without additives, we will also interview two experts from Lund International Food Studies to receive their opinion in the matter. Qualitative deep interviews often include a face to face contact, where it is possible for us to not only study the verbal interpretation but also the body language or other expressed feelings and facial expressions.[23] However, due to limited time and cost aspects as some of our experts are situated abroad, we only

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[22] Bell, J. (1995)
[23] Seymour, D. T. (2007)

had the opportunity to perform phone interviews with the majority of our experts. Therefore it was of great importance for us to ask as clear and goal oriented questions as possible because good answers requires good questions. We managed to perform few interviews with a face to face contact which in contrast to our phone interviews facilitated the process of asking more questions and getting more time together with the expert in a more relaxed environment. The goal is to constantly maintain a good flow throughout the interview and be attentive of what signals the interviewed is giving. The deep interviews will be tailored in some extent to experts from different areas to match the experts' backgrounds and receive as necessary and in-depth information as possible.

According to Bryman & Bell, a semi structured interview is defined by having a predestinated purpose or theme that will be concerned but still allowing the respondent to have the freedom to answer in the way that suits them. In addition, semi structured interviews gives us the flexibility and opportunity to ask new questions to follow-up the answers of our respondents in order to reach depth and understanding in the answers.[24] The motivation for choosing to have a semi structured interview as oppose to a completely open or a completely closed, is that in order to make good interviews and to gain as much useful information as possible, it is better to make the interviewed feel free to express themselves in whatever direction that they feel is important by asking open questions. However, we feel that it was necessary to avoid having a complete open structured interview because of the difficulty and confusion that will arise in our experts in what areas or in what sense we want to study weak signals, which will result in inefficient interviews.

2.4.2 Interview process

Our questions to our experts consist of nine main questions with space to expand and increase the number of new ones. Although performing qualitative deep interviews over the phone have not been without complications. We must consider difficulties by not hearing as clearly as in real life contact and because of this, maybe miss the interpretation of the respondents. The phone interviews will be executed from Skype so that the responds will be heard and interpreted by all of us. During the interview one of us will lead and hold the interview and the rest will note what the respondents say. This is done due to decrease confusion for the interviewed. After each interview, we will also discuss and digest the collected information together in order to avoid our material being distorted. The limitation that we will be struggling towards is to receive as much good information as possible within short time as a dominated part our respondents have little time to spare.

2.4.3 Mini case

Throughout our paper we have decided to make mini cases between Ica & City Gross and Espresso house & Barista. The reason for this was because we want to have direct contact with the market and to observe by ourselves what the reality looks like. We want to get anchored in real-life situations and not base our paper only on what we read and what our experts say about the reality. To gain a justified and better picture of weak signals it is important for us to study the market by ourselves. Therefore, the motivation for performing mini cases in a subject concerning healthier food that everyone can relate to, was justified. These four companies are as well successful and established companies that many people are familiar with and probably have visited. Ica and City Gross' company size as food chains have contributed to the big impact that they have on society and individuals in Sweden. It is therefore interesting to see their perspective on weak signals concerning

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[24] Bryman, A & Bell, E. (2005)

healthier food and whether or not Fairtrade products and additives-free products were discovered through signals or just imposed by the people. Since these food chains have big impact and are well distributed all over the country making them available for every customer, they also have great influence over what products that are available for their customers and what to purchase from their suppliers. The purpose is in addition to concretize and contrast the two companies to each other to see if there are any patterns, similarities and differences that can be revealed. The other mini case is based on two coffeehouse chains, Espresso House & Barista where we as well have seen the rise of Fairtrade products and less additives in coffee and cookies. We find these companies interesting as we see an increase in people drinking more coffee and eating cookies and lunch at the cafés. Since we are going towards the trend of having coffee as a social way to interact with other people, these two companies also have great influence over what people drink and eat in the everyday life. In our qualitative interviews we lack the ability to observe our respondents, which is why it is important for us to observe our companies by studying the stores, the appearance and the amount of products. We believe that by comparing these four companies to each other, it will provide a deeper understanding of the subject and a better insight in our experts' perspective on weak signal and in the end provide a platform to make a good analysis.

2.4.4 Comparative design

A qualitative research study based on more than one case can be described with different terms depending on the writer. Familiar terms of this design are among others collective case-studies, cross-case and multicase. It involves collecting and analyzing data from several cases rather than just one. This provides more variation and enables you to gain better understanding of looking at similar and contrasting cases. The more cases, the more compelling interpretation will be, which following will strengthen the validity and generalizability of the study. This is why we have decided to make two mini cases and study in total four companies concerning Fairtrade products and food without additives. The advantage of having multiple sources of information is preferable because it enables us to have a better comprehension of our research question. It as well increases the reliability of our result from our cases.[25]

2.5 Empirical data collection

2.5.1 Sources of information

According to Merriam, there are three types of data collection techniques- conducting interviews, observing and analyzing documents. However, in educational purposes it is most common to use one of these, sometimes two. Understanding the research problem in general will contribute to more depth and breadth of the data collected.[26]Our research paper is focused on how companies can pick up and manage weak signals, and in order to find reliable and good quality data, we have collected information from numerous sources. We will use a database based on researchers' articles, published literature, internet pages, expert interviews and our mini case studies.

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[25] Merriam, S. B. (1998)
[26] Merriam, S. B. (1998)

2.5.2 Selection

When executing qualitative data in form of deep interviews, it is important to make a selection or otherwise the amount of collected data will be too grand for us to analyze. As these qualitative methods are time consuming, it is also desirable to have a selection that will enhance the unique and special factors of the phenomena. Our selection of experts has specific expertise within the same or different research fields. Our focus is to enlighten their answers as the bigger part of our experts work with or are surrounded by detecting, sensing and understanding signals in the market or in the surrounding world. It should also be mentioned that not all of our selected experts could take part of our thesis due to lack of time, which leads to a few numbers of disappearance. It is discussed that the process of selection can be described by several stages. However, in or thesis we have the following criteria that most of our experts fulfills and achieves, as in qualitative approaches often includes various criteria.[27] These points are:

- People who work with different analytical tools to analyze the world and business environment.
- People who work with monitoring, detecting and using various strategies for companies
- People who share a common experience and knowledge within different fields
- People who together as a whole contributes to a better holistic picture for us

2.5.3 Primary Data

Primary data consist of the data that is collected for the first time and for a specific purpose.[28] There are several ways to do this but we will focus on collecting primary data from our deep interviews and our mini cases. In contrast to collecting secondary data which is often easier and faster, primary data requires a lot of time and resources. Especially as we have open ended questions that we will summarize later in the empirical studies. However, as we mentioned above, the limitations of having performed the most part of the interviews over the phone is something that we have taken in consideration when we analyze the primary data.

2.5.4 Secondary Data

Secondary data refers to data that have been collected by other researchers and has a purpose that is different from our specific research.[29] However, the data found is useful for us and a good source for our paper. Our most important source of secondary data consists of published articles by known and successful established researches. In addition we will use published literature concerning among others strategic intelligence, analyze of the world and threats and opportunities that companies are facing and furthermore use the internet to have access to the latest within the field, monitor and use news articles and forums.

2.5.5 Criticism of the sources

The sources we have used are not all relevant and useful for our research problem and we will be critical for things that we will read. We have discovered that sources can be different in quality and characteristics but since we are aware of what we are looking for and of limitations that exist in

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[27] Jacobsen, D. I. (2002)
[28] Merriam, S. B. (1998)
[29] Jacobsen, D. I. (2002)

articles, literature and deep interviews, the sources still could succeed in providing good information.[30] Our research paper is based on acknowledgeable researchers' articles. However, in spite of this we must consider that researchers see and attacks problems in different ways. Although the subject of weak signals is known, we must also be critical to that there are other ways of studying future happenings than by weak signals. The critic against internet sources often arouses the questions; Who has written it? Who has published the information and what do we know about that person?

The demand for urgency and updates are also an interesting aspect. It is important to discuss critics although there might not be many. One should always value and be critical against the sources as we will be using them in our study.[31] However, based on the fact that most of our sources are published articles and experienced and competent individuals, we think that they will make a good foundation and process for us to answer our research problem. Since the researchers' status and reliability is recognizable, we feel that this is of great importance for us.

2.6 Data analysis

Data analysis is a simultaneous relation between data collection and analysis. It can sometimes be somewhat misleading to separate the data analysis from validity, reliability sections when in reality, it is a constant non-linear process that emerges together. The first data analysis starts with the first interview or the first articles to read, as you develop hunches and sense what is important for the research problem. We believe that it was important for us in order to proceed, to analyze our data as it is being collected to know how to take the next step, as researchers do not always know what they will find and all questions to ask beforehand. There is also the difficulty to understand where certain insights arise from and how it was detected. It exist several data analysis techniques in how to analyze data as Merriam mentions, however this is not something that we will go further with.[32]

2.7 Quality of research

It is significance for all research and studies to have a high validity and reliability with the purpose of achieving trustworthy knowledge that can be applied in an ethical manner. In this way, within the educational fields, it is easier for the researchers to know what to have confidence in and what information that can be accounted for.[33] Below we will clarify how we have adapted the issues to reach a high quality of research.

2.7.1 Internal validity

The internal validity concerns the notion about how your findings from the research study match the reality. Does it capture what is really out there? Data does not speak for itself, there is always a translator or an interpreter. Then what is reality? Reality is something individuals create and is a part of their mental construction. It is therefore important that we take into account how our theories match our case studies and deep interviews and that there may be other theories that we can have in consideration. As our research problem is revolving around a fairly complex topic, we find

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[30] Holme, M. I. & Solvang, B. K. (1997)
[31] Rienecker, L & Jörgensen, P. S. (2006)
[32] Merriam, S. B. (1998)
[33] Ibid.

difficulties to refer to earlier studies as no exact study has been made before, thus the obscurity to be complete certain that this will be the most valid way to perform this study.

2.7.2 Reliability

To know the importance of to what extent a study is replicable, you look at how reliable it is. The higher reliability, the more ensured researches will be that a repeatable study will yield the same result. This can however be a problem within the social area in qualitative studies thus human behavior is never static and cannot be isolated. Therefore different researches based on the assumptions on the same study can lead to different result because they seek to describe the world as they experience it and interpret it individually. The relation between the internal validity and the reliability is that the more repeated measures of the same study leads to higher internal validity. Although, this do not have to be true because we know that observations can repeatedly be wrong.[34]

2.7.3 Extern validity

First of all, good external validity presupposes a good internal validity. There is no point in finding out if useless information is generalizable. The external aspect is regarding to what extent the result of a study can be applicable on other studies. The obstacle for qualitative studies is the fact that they assume that it cannot be generalized due to investigators, designs and that conditions may vary in different situations when repeating the observation.[35]This is one of the reasons why we will perform a comparative design, mini cases to study weak signals with predeterminated and equal questions to each case study to enhance the generalizability.

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[34] Merriam, S. B. (1998)
[35] Ibid.

3. Theoretical Framework

In this chapter we are going to present our theoretical framework that will help us understand weak signals. Recognized theories about how to handle weak signals will be described. The information will assist us to analyze our empirical results.

3.1 Weak signals framework

The systematic need for early identification of weak signals and response to emerging trends have big impacts on organizations. This theoretical framework is a way to provide a deeper and clearer picture of the phenomena by having theories about Weak signals, Intelligence, Black swan and scanning the peripheral vision and monitoring the environmental environment. It is a way to enlighten how these different theories treats the methods of how to detect and manage the process of weak signals on individual and organizational level. This is as well of importance in order to see how it is related between each other.

3.2 Definition of weak signals

In earlier studies the complexity of the definition weak signals has been highly discussed, as all researches have their own interpretation of the definition.[36] Therefore it is important to clear out what the definition of weak signals includes or excludes before going deeper into how to detect weak signals. Many researches, especially in Finland have raised the interest of defining what weak signals actually are and what challenges that is caused by concepts close to these signals such as emerging issues, wild cards and early warning signals. The characteristics of weak signal are current oddities that are assumed to have a key position and anticipate future changes in organizational environments.[37] However, there is a problematic issue of the definition thus a wide variety of different researchers have different concepts which following creates confusion about the subject.[38]

 Ansoff who is considered to be among the first researchers exploring the field of weak signals describes it as a way to predict strategic surprises and future discontinuities by responding to weak signals and strategic planning.[39] Weak signals are both internal and external warnings that are uncompleted in order to determine their impact on companies' responses. He also discusses the signals strength by grading it into categories in relation to its intensity.[40] Lüken mentions that early warning signals is a measure to support the strategic decisions that companies choose and describes it as a company's eyes and ears to the surrounding world.[41] Zolli states that in order to recognize tomorrow's hot ideas today, corporations must be alert of weak signals in today's ideas that will become tomorrow's mission. The ideas concern 1. Embracing ecovation, by noticing how the revolution of the system ecology and material science is unraveling what happens in the world, 2. To play for change meaning that organizations are outgrowing there context and the need for change is

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[36] Hiltunen, E. (2008)
[37] Ibid.
[38] Ansoff, I. H. (1975)
[39] Ibid.
[40] Ansoff, I. H. (1982)
[41] Lüken, M. & Baisch, F. (2009)

crucial. 3. To make the invisible visible by exploring the social networks and analysis of maps of innovation networks as these are maturing in a rapid pace.[42] The two latter can be described as a more business environmental and organizational approach to the issue. The discussions are many and following the variety and obscurity of weak signals will reveal a more general model that can be expressed and is needed.[43]

According to Hiltunen, the Finnish researchers within the field such as Kuusi, Pitkänen, Moijanen and Linturi have actively debated the issue and taking it one step further. This has lead to increased significance for developing a more general model of weak signals. This is executed by using semiotics, which is explained as a philosophical theory and study of the functions of signs and symbols of their meaning and use. It is also discussed that although semiotics have in a little extent been utilized in future studies, Hiltunen introduces the concept of future signs based on semiotics. As weak signals is considered to be signs of what the future may bring and by doing so foretell what events that may occur, the semiotics are applicable and justified in this situation because it is focused on the understanding of signs. By using semiotics to create and find a more general model, Hiltunen presents Peirce's triadic model of a sign. Since Peirce is considered to be one of the first major contributors in semiotics, Hiltunen uses the triadic model as a function of future signs that can be utilized to understand the concept of weak signals and to illustrate its characteristics. This model concerns three dimensions of a sign which is the *object*, the *representamen* and the *interpretant*. In the meaning of future signs the *object* in the model is referring to an emerging issue, something that is happening right now, for example Fairtrade products in grocery stores. The *representamen* is the signal or a concrete form and actual example of the signs appearance. These signals can among others take the form of stories on TV news, news articles in the morning paper, an image or even a rumor. It connects the signal to the issue. The third dimension concerns the *interpretant* and the meaning that the future potentiality of the sign creates. In other words, it allows an interpreter of the signals to make assumptions of potential future events based on the sign. Interpreters are socially constructed and make their own conclusions and context about the signals and therefore the context are included in this dimension.[44]
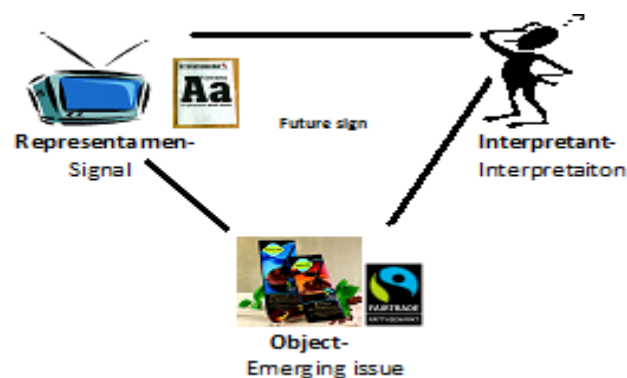

Figure 1. The model of the future sign adapted from Peirce's traidic model (Cobley, P. & Jansz, L. 1998, p.21)

Although it is possible to apply semiotics on future fields, semiotics is not unambiguous and have faced critique due to its loosely definition of critical practice and for being too abstract and arid. One

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[42] Zolli, A. (2006)
[43] Hiltunen, E. (2008)
[44] Ibid.

of the disadvantages is the abstractiveness of future signs. However, if the primarily purpose of the model is to understand its important dimensions of signs from a futuristic perspective, thus in this case the future signs fills its function.[45]

It is also important to describe the three-dimensional cube model in order to deepen our understanding. Here, 1) the signal is referred to the number of visibility of signals, 2) the issue to the number of actual events and 3) the interpretation as the receivers' perceptiveness and understanding of what the future signs means. The subject of the signals duration is also discussed and divided in two categories. The first one state that the weak signals only last for a very short period of time while the other last longer, which means that some signals are of phenomenal character and the others just signals for change. According to the triadic model of the future sign, the duration is related to each dimension. Therefore the duration can be measured from the first time the signal appears to its development to a strong respectively weak sign or perhaps even vanishing. Through the cube model it is possible to measure the time from a weak sign turning into a strong sign or alternatively disappearing. However, this is not easy to execute in practice. A good example of a signal that last longer are newspapers articles. Although specific articles are published on specific dates, the accessibility to libraries and internet has made it possible for everybody to read old news and in this way extend the lifecycle of news articles. The questions about the objectivity and subjectivity of weak signals and whether it can appear weak for one person and strong for another contributes to the obscurity and problematic discussion. According to the fact of weak signals, it is described that the context are dependent of how it is interpreted and by whom and this confirms that it can appear differently to persons. Although it is argued by Hiltunen that there is a two-dimensional objective in the model, consisting of a signal and an issue that is visible to all, meaning that the actual events and number of signals exist and is available for everybody to notice. The only subjective part of this three-dimensional model is the third dimension which concerns the interpretation of the sign because it includes the context aspect of the interpreter and therefore leads to subjectivity.[46]
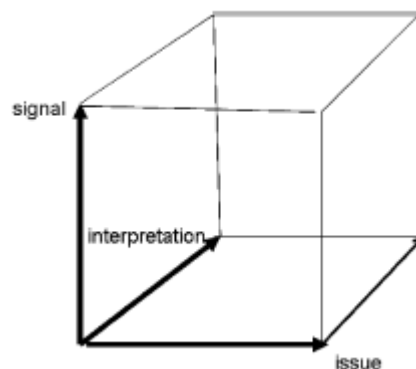

Figure 2. Three dimensions of the future sign: signal, interpretation and issue (Hiltunen, E. 2008, p.250)

3.2.1 Strengthening of the sign

The strength of a signal over time can be measured by looking at the changes in the coordinates in the three dimensional space. A signal is considered to be strengthened if any of the three dimensions

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[45] Hiltunen, E. (2008)
[46] Ibid.

rises. If for example there is only a few numbers of news articles about an issue, the level of visibility and the signal is graded low. In contrary, the more visible the signal is and the more increased number of actual events, the stronger the signal becomes. Following the more likely it will lead to a new trend. This creates a high level of interpretation as it is more or less clear for the interpreter what will happen. The last dimension is strengthened when the meaning of what the sign could foretell about the future, becomes clear and obvious for the interpreter.
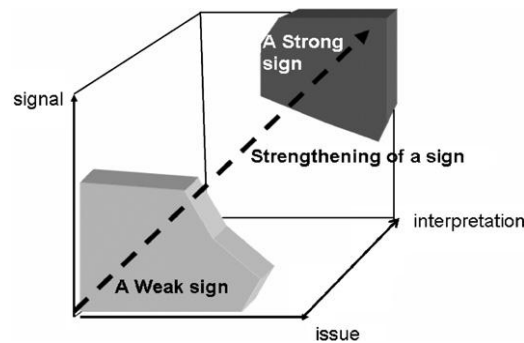

Figure 3. Strengthening of the future sign (Hiltunen, E. 2008, p.255)

If the visibility of the signal is high and the issue level is low, the signal does not necessarily mean that the interpretation level is high, quite the opposite. Although it is very visible but has a few numbers of events, the signal tends to be weak as the interpreter is unclear of what sense to make of the signal. This can also be described by mentioning the two types of weak signals that has been presented in earlier studies by Hiltunen named 1) *early information* and 2) *first symptoms*. The *early information* refers to a low level of visibility and a few numbers of events, which leads to a weak sign. Examples of this can be new inventions or innovative ideas. The *first symptoms* refers to a high level of visibility with a large amount of events but still the problems with interpreting what the sign could mean for the future remains. This can be described as a change that we might be accustomed, like changed behavior of an individual and therefore hard for the interpreter to read the signal.[47]

3.3 Scanning the periphery of weak signals

The peripheral vision is important and appears in sensing and acting on weak signals. It is described as something abstract and elusive and not always easy to tell the difference between the core and the periphery. Every time you turn your head a new periphery is created. Due to new international markets, companies transforming their structure by reinventing their business models and sudden financial downturns; the peripheral vision facilitates and helps managers to know what the right signals are and what the right thing to focus on is in the periphery. Otherwise managers may face difficulties in what to pay attention to without being too distracted or lose focus on the current task. However, when companies reinvent their business model or change direction, blind spots will be created in other directions. The dot-com era is a way to exemplify this where many managers shifted from having paid no attention at all on this peripheral activity, to being fully concentrated on it, which made them forget about the fundamental factors. Every time organizations change or shift directions there is a price to pay as they cannot see the new periphery clearly.[48]

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[47] Hiltunen, E. (2008)
[48] Schoemaker, P. J. H. & Day, G. S. (2004)

The optimal way would be to zoom in and out and look around to see the whole picture, however in practice it is not so easy because organizations are difficult to change. Yet in turbulent times and when changes come from different directions all at the same time, it is crucial for companies' long-term survival to be able to balance the organizational focus with a wide perspective. Although the view of the periphery may never be clear, it does not mean that we should be looking for our lost keys only near the streetlight because we could see better there. Thus the vision of the periphery is needed in order to succeed in a world with high uncertainty. Many companies have during a longer period of time been concentrated on the mantra to focus, focus and focus and therefore forget that this focus comes at the sacrifice of the vision. Furthermore, the focus can create a greater risk for strategic surprises in a rapidly changing world.

By having a peripheral vision, management's abilities to reflect and expand their area of focus will increase. They will be more aware of that the focal area can create blind spots and realize that the periphery becomes more essential with change which will assist them to ask the right questions. The importance of reflection is fundamental for companies as we limit our sight in many ways. It is necessary to recognize that the peripheral vision is a byproduct of what our focus are, there is no right peripheral vision for all. Some companies built its business around the customer while others build their business around its own organizational operations. Organizations focus is embedded in the organizational structure and the DNA of the company. It is also important to look at the focal area of blind spots, where the complex and changing environments impact is big enough to turn the blind spots into danger areas. The highly focused vision in one market, can create severe danger in another. One example of this is the emerging economies such as China and India which does not have a specialized focus yet and are instead specialized in finding opportunities of tomorrow. Following, many western companies may be blind sighted by new innovations and competitors from these countries.[49]

3.4 Detecting and sensing weak signals

How can managers then develop their peripheral vision and act on weak signals? According to Day& Schoemaker, managers who have the ability to decrease their organizational and personal biases are the ones who succeed to be less blind sighted. By scanning and looking at distant threats and opportunities and applying different means to find general results will prepare you better for what lies ahead in the periphery. The findings should then be fitted in frameworks in order to see what the implications imply. It is argued that it is not the case that organizations fail to see signals and therefore gets blindsided but rather that the problem lies in that many of these organizations jump to the most convenient and probable conclusion that fits them the best. According to their own research, less than 20 % of global companies have the ability to spot, interpret and act on weak signals. This approach is concentrated on cognitive biases that organizations may not have knowledge about.

Earlier decision-making literature states that human weaknesses based on among others individual and organizational biases have impacts on our sense-making skills.[50] When managers see a change or a specific picture, they often reshape their reality so that it fits within a preferred and known frame. If multiple changes and issues will point at the opposite direction, our minds will plausibly interpret

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[49] Schoemaker, P. J. H. & Day, G. S. (2004)
[50] Schoemaker, P. J. H. & Day, G. S. (2009)

the facts so that it confirms and match our preconceptions. The personal biases make us think in a certain way without us even being aware of it. A well-known trap that many managers fail to see is that signals we pay attention to is shaped by what we are expecting to see. This selective perception furthermore concerns that things that do not fit into our mental model often gets sorted out and skew because of the reluctance to challenge our traditional assumptions. Another personal bias is rationalization, meaning that we interpret signals in relation to our desired beliefs. It is easier to see the world only in a pleasant way, denying things that are too disturbing to realize. Still, if any information gets through these filters, the increased distortion of it still remains. Not only do we limit our perspective when we scan for signals and information but it is also desired to find individuals and factors that supports the same view. This contributes to strengthening of the information found when we also search specifically after information that will bolster our perspective. The organizational biases concern the danger of groupthink. Individuals in groups should logically be able to determine and act on signals better than individuals, however they may fall into the trap of tunnel vision and getting along, narrow-minded analysis, which makes the information distorted. In order to get relevant information from the scanning of weak signals, it must be debated with others and combined together. Social biases as well as organizational biases contribute to the sense making in complex societies where we not only judge what information we see but also who the sender is. This is especially strong when the signal is considered weak or incomplete. According to the presented model below, making sense of weak signals can be described with three stages to improve the periphery.[51]
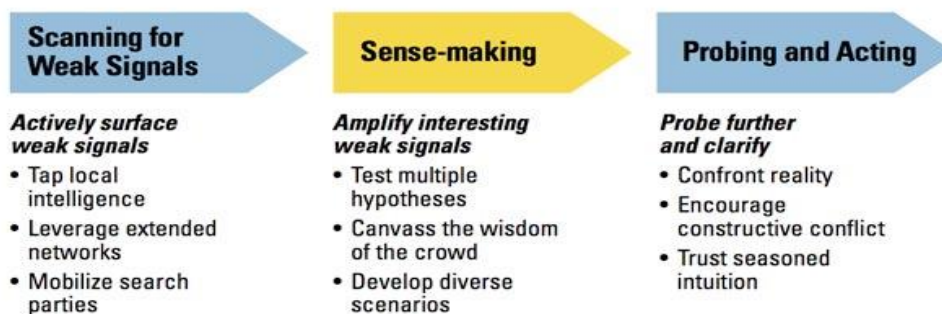
Figure 4. Three stages to improve sight in the periphery (Schoemaker, P. J. H & Day, G. S. 2009, p.84)

The first step treats the detecting for signals where companies should confide in "localized intelligence". To build structure based on local networks as the operative system Linux has done successfully with their open-source and local design with a global brand conduce the drive of the sense making. Additionally, a valuable tool to use in the intention to reveal weak signals is to take advantage of a company's ecosystem such as the networks of consumers, competitors and suppliers. By doing this, companies extend their networks as different ones covers different areas of the periphery. One problem that appears though in extending your network with nods in many other networks, is the increase of weak signals received which following leads to vagueness and confusion. The internet has intensified this problem and led to a hurdle of what signals the managers should be alert of within the companies' capacity of absorption. Companies should also mobilize search parties in separate tasks where weak signals can be detected and scan activities.

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[51] Schoemaker, P. J. H. & Day, G. S. (2009)

Once the organizational scanning of the periphery of weak signals is performed, companies should focus on making sense of the importance of signals which directs us to the second step of the model. By testing multiple hypotheses, managers may avoid to fall in the trap of having one single interpretation of the weak signals, which often is wrong. Although they often tend to sort out signals to overcome the ambiguity of information found, it is necessary to do tests to avoid being stuck on just one view. The wisdom of the crowd is referring to organizations opportunity to use the distributed intelligence of group thinking with right methods in order to create forecasting skills. If the danger of groupthink can be dodged, groups usually make better judgments than individuals. As well as making multiple hypotheses to be better prepared and expand the narrow-minded perspective, companies should also develop various scenarios. Similar to hypotheses, diverse scenarios allows companies from being locked in limited interpretation of what signals might predict about the future but still share a common framework of methods in discussing signals, as no method is flawless.

The last stage of the model is the acting and probing of new signals. Companies should confront reality when searching for new information and clarify weak signals. It is stated that bigger failures in business is not due to poor management skills, rather the lack of reflecting the reality. It is effective to have some constructive criticism and dissent in organizations. However, it is important that conflicts are raised among ideas and not people. Various studies have shown the efficiency of having moderate constructive conflicts often leads to the best result and decisions. Managements must give the opportunity to team members to contribute to the peripheral observation and to participate in discussions because it leads to a better result in gathering intelligence. In order to trust seasoned intuition, it requires several years of experience and good feedback. Many leaders in organizations today hold this reliable intuition although they many times undervalue it and are unaware. Therefore it is crucial for them to know when and how to rely on the hunches for the process of acting and probing. Further, these hunches should be considered valuable and used as analytical tools for the process.

To get a broadening perspective as a whole, we must expand our peripheral vision by making organizations use multiple lenses when seeing weak signals. Even though all individuals have biases in an organization, their view captured by their own two eyes is combined together with thousands of other eyes by other individuals. This result in an increased ability for companies to explore what the signals really means and recognizes new opportunities of tomorrow.[52]

3.5 Intelligence

In the society today we are well aware about the constant change that is taking place and there is a recognized pattern of it for progressing in even faster speed by time. Stevan Dedijer has described all changes to be affected by cultural impacts, which in his definition is everything that individual creates in the society from values, norms, politics, social structure, habits, personalities to technology. The notion is shared by many previous researches who also further perceive evolution in intelligence to generate cultural developments. Intelligence lies within our minds and it is the human brain which according to scientist Stephen Gould is the primarily uniqueness of human beings and of

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[52] Schoemaker, P. J. H. & Day, G. S. (2009)

cultures.[53] Richard Right has further explained the inclination toward changes that lies within the human nature to continuously modify as "*Human beings find themselves playing non-zero-sum games with more and more of other human beings. Interdependence expands and social complexity grows in scope and depth.*"[54] People are more related and dependant on each other and increased interaction leads to more complex circumstances which could cause changes and developments. The intelligence revolution that could be seen today which also indicates about the future is the global impact of intelligence, where intelligence will be regarded as an international resource to assist humanity to identify and solve problems. There will be required that individuals will be willing to negotiate and also mobilize in corporations to achieve intelligent development. Flow of information is important as well and the emergence of information technology has facilitated to transfer information between time and space. Hence it stimulates individuals to seek more information to gain knowledge and understanding of their surroundings and also to solve problems that they come across.[55] According to Stevan Dedijer there are some basic conditions that are important to amplify evolution in culture and society in future. These important improvements are democratic, social and individual developments. [56]

For companies to be able to handle the shifting world, they have to filter the macro- economic environment to find changes that are sustainable. Even if organizations believes that the noise indicates a temporary change it is still important to be aware of that the impact could in some cases lead to such losses that it damage companies severely before the noise ends. Therefore changes of temporary kind should also be observed and analyzed because it could force companies to reinvent their business model. In order to prevent surprises from the changes, organizations need to devise forecasts about their economic environment and how it could develop. Companies can use intelligence as a tool to understand and analyze how their external environment changes.[57] Even though the analysis provides general information for the companies without elucidating specific problems, it could still assist management in their decision-making. A lot of information found is of relevance, therefore there should be special designed systems to process it. There are three acknowledged approaches that facilitate the access to information. The first one is the focus on acquirement, preparation and the distribution of the information because the procedure for management of information decides which information that will be delivered throughout the organization. Information flow which is conducted by communication as a linkage between intermediaries, is essential for the reason that it otherwise could lead to that important information could fall off. Other aspect is to make researches continually and to use information from both inside organization such as knowledge and also outside information such as market researches. The second approach is a system that provides management with analyses and information that gives them deeper insight within their own organization. The last approach is to value information and appraise if it could function as analytical tools for strategic decisions. The management uses this gathered and valued information to base long term strategic decisions. A well functioned system for information needs to have management with experience and individuals that are open-minded to spot changes.

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[53] Dedijer,S (2003)
[54] Right, R. (2003)
[55] Dedijer,S (2003)
[56] Dedijer, S (1991)
[57] Oxelheim, L. (1998)

The specific questions that managements need to answer with the information are the ones that specifies on the threats and opportunities that can influence companies in future.[58]

There is an increased global competitive environment which makes it even harder for companies to maintain their sustainable competitive advantages.[59] The key to uphold competitive advantage is to collect and analyze early signals that indicate competitors' future actions within competitive intelligence. [60] Attention should be paid to strategic moves of competitors, customers and government. This information is important because it creates forecasts that prevent surprises from markets and also for companies to make costly mistakes.[61] It is then possible for companies to detect and work proactively instead of reactively or even merely at all.[62] There are many other intelligences besides competitive intelligence, such as political, market and technological that companies needs to consider.[63] Political intelligence has great impact on how companies operate and what markets to enter. Political decisions and restrictions as laws and regulations must be followed in order to exist and a change within the industry is therefore to highest extent crucial to note.[64] Market intelligence gives better understanding of what the markets and its customers require. These demands are seen as challenges for companies because it varies widely and changes quickly. However, predictions made from weak signals about markets do not necessarily lead to successful investments due to that some companies are situated in mature markets. Companies should instead invest in markets that are not fully captured.[65] The technological intelligence deals with changes in technology that could lead to competitive advantages in the form of efficient manufacturing or new innovations.

The intelligence is functional in decision-making about business strategy, business development and market entry decisions and is regarded both as a process and a product of information. The process lies in the action of gathering, analyzing and applying information and the product is defined by the knowledge within organizations. Companies emphasizes on finding information that assist to understand the competitive landscape within their industry. Some sources of information that companies gather is about products, suppliers, partners, regulations and customers. All of the information will be valued in terms of threats and opportunities and what strengths and weaknesses it creates for companies. This is also known as the SWOT analysis.

There are five key phases in how to process information, the first is by *planning and directing*, which defines what information companies needs and this can be accomplished if decision makers in organizations can locate the needs and translate those into specific intelligence requirements. The second phase is activities within the *collection* of information. Where management needs to identify potential sources to make researches within and find vital data. *Analyze* should be made of the collected data to identify patterns and relationships that could indicate potential trends that could emerge on the market. To reach maximal interest, the analyst should be able to look beyond the obvious. Information should be used to further analyze competitive and environment analyses. *Dissemination* of the important information of weak signals should be done throughout the entire

[58] Pagels-Fick, G. (2000)
[59] Ranjit, B. (2008)
[60] Adidam, P. T. et al (2009)
[61] Calof J. L. & Wright S. (2008)
[62] Ranjit, B. (2008)
[63] Pagels-Fick, G. (2000)
[64] Hamrefors, S. (2002)
[65] Crescenzi, A. (2003)

organization to create a larger value of products. The more people who share information, the more reflection, thoughts and ideas could be shaped and presented as *feedback* for management to assist their planning and directing processes. [66]
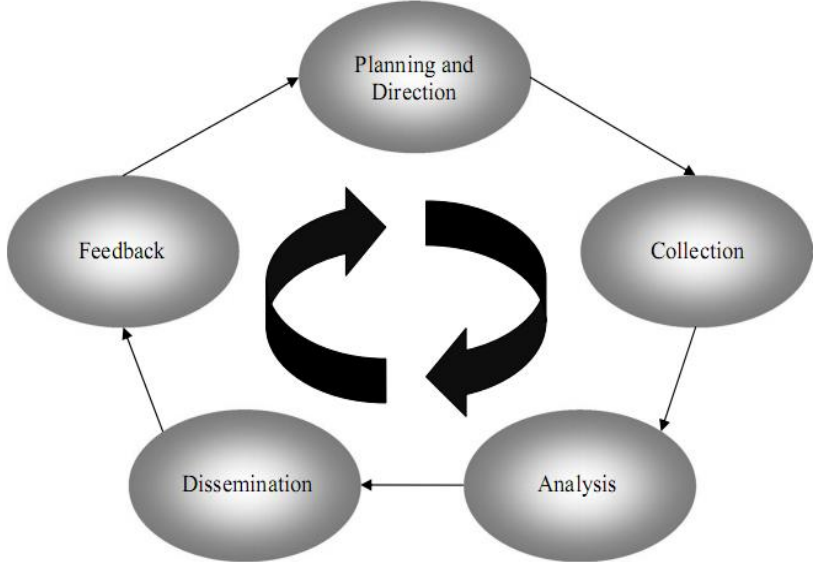

Figure 5. Competitive intelligence process and tools for intelligence analysis (Bose Ranjit, 2008, p.513)

Management plays an important role in how to implement a well-supported corporate function which results in a successful process and product. The arrangement of intelligence could be devised successfully if the organizational culture which reflects the entire organizations philosophy and behavior supports it. This is because the assembly of human capital brings the intelligence for the entire organization, where culture has great influences on how the individuals perceive themselves and also how their intelligence matches the organization. For intelligence to be able to spread within the company there should be a knowledgeable management that creates environment and organizational culture that encourage employees to share information.[67] To be able to use the information in the best way the management need to have experience and be open to spot changes. There are many tools to use when picturing the environment. Some of them are, as mentioned above, the SWOT analysis and Porter's five forces that identify the power of suppliers, the bargaining power of buyers, threats of substitutes, barriers of entry and rivalry among existing players. A well managed intelligence could give competitive advantages that are sustainable.[68] When companies acknowledge a change, it should not be done by simply adjusting the structure of the industry, instead they should try to find an intelligent behavior to build the structure, with help from employees. Then it will be more likely that the company accomplishes to create a successful solution to the change.[69]

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[66] Ranjit, B. (2008)
[67] Liebowitz, J. (2006)
[68] Ranjit, B. (2008)
[69] Hamrefors, S. (2002)

3.6 Monitoring the environmental scanning

There is a lot of information available in the surroundings and it can be difficult for companies to determine which ones that is of relevance. The work process to gather information is performed usually throughout the whole organization from employee level to executive level. A lack of communication within the organization and between the levels can cause imbalance in information flow and also that the individuals in the frontier, which have the ability to process information, might miss important indicators of patterns or weak signals in the external environment. The strategy should be communicated within the organization so that every employee can handle and utilize the information right and detect those weak signals that are aligned with the organization. A well developed monitoring system facilitates and provides management with better information. It usually needs to include the whole organization because there is no corporate wide agreement on relationship between the environments, hence environmental scanning solely on corporate-wide level is rarely successful.

Every individual have their own experiences from their field and perspective to interpret the external factors, which navigates their vision of information toward a specific direction. All these individuals present information with different angles and a combination of these, results in gained understanding of the external environment. There are some acknowledged defects that affect the performance of detecting valuable information. Individuals with wrong attitude and lack of desire, creativity and mental ability to gather information will not achieve the goals of the operation. A method that could be used to handle the defaults to search and collect information, is to advocate a selective retrieval. The big amounts of information rate endorse in some cases a professional approach to search for a set of selective and more precise elements to assist people in distinguishing significant data. Some points out that the conception that all information of significance are abundance leads to a false image of that it is possible for companies to constantly be completely informed. The most important components to monitor environmental scanning are to be creative and to recognize the best sources of information and methods to manage it.

Management of monitoring environmental scanning has three central aspects to regard. Companies need to consider how to gather relevant information, how to stimulate the inflow of it and also how to convert it to generative actions. The answer will set a guideline and framework for how companies choose to work in the continuing process. Organizations should also proceed the environmental scanning from customers' point of view and their interactions in the environment because their habits and thoughts constantly changes. This should therefore be regarded as a persistent process that companies should put focus on.[70]

An approach to environmental scanning is to consider different factors related to companies that influence their condition. If they succeed to understand the external environment and also to process and exercise the information in the planning process, companies are esteemed to be strong in the market. In order to make environmental scanning more concrete and easier to handle, it can be conceptualized into task environment and general environment. Both of them include several elements used to approach awareness of their surrounding sphere. Task environment comprise of factors that affect business directly as competitors, suppliers, customers and technology. If companies do not for example consider changes among their competitors they might miss important

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[70] Frankelius, P. (2001)

signals of changes and will consequently fall behind. Same result will come about if they do not understand consumers' demands. Other parts as suppliers and technology are important as well, especially in the sense of cost and quality aspects. Suppliers distribute products and components to companies and the selection of arrangement is essential for the outputs' quality and profit margin. Innovation through technology gives competitive advantages when unique products could be delivered and improvements could be made in the process or the products. The other classification apart from task environment is the general environment which consists of a wider sphere of elements with indirect effects on companies. These factors are economic, political, demographic, cultural, regulatory and social sectors. Economical factors could be related to the overall economic situation of the world, the financial crisis is an example for why companies need to regard the economical state nationally and globally. Companies need to follow regulations and other criteria from the governments in order to be approved to operate in the market. Other countries regulations are important to understand as well when businesses operate across countries. Demographical factors concern the assembly of people in means of age, culture, gender, allocation, education, occupation and income among other things. This information could be valuable for companies when they decide for example where to operate and what products to supply with. When companies mapped out and analyzed the environmental elements, it informs about what sort of relationship it has to the external environment factors. It also informs what opportunities and threats that could be found and make us of. The scanning process of the environmental surroundings is a continuing process for companies today, due to its constant change of appearance. The dynamical and unstable condition leads to uncertainties. These are considered to be caused by the complexity of the surrounding and its level of heterogeneity in the external environment of relevance. Another factor that decides the degree of uncertainty is the rate of change. This is referred to how frequent changes are. If the level of complexity and rate of change are high, then it will be required to assemble more information. Elements in the task environment changes ordinary faster than the general environment and therefore need to be observed first. These are perceived to be more complex and important to consider because many of the factors change fast and unpredictably. General environment is on the contrary more stable and changes take place progressively over a period of time, hence its indirect affect on organizations.[71]

3.7 The Black Swan

The term "black swan" originally comes from the belief people had for centuries that all swan were white, it was an assumption based on the fact that no one in the West had seen a black swan until the 17th century when a black swan was discovered. The incident is a metaphor to illustrate the unpredictable that Nassim Nicholas Taleb uses to discuss the unknown of the future.[72]

The definition of the black swan is occurrence, of the unexpected that lies outside our imagination of possibilities.[73] The black swan could be described as unknown of the unknown that is pure accidental and unforeseen. Extreme events such as financial and environmental crises could easily be confused for black swans since they are extraordinary and have very low likelihood to be realized. However, the extreme events are incidents that people could visualize happening and therefore should be distinguished from black swan. There are according to Taleb ways to better understand the unknown

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[71] Temtime, Z. T (2003)
[72] Dearlove, D. (2009)
[73] Taleb, N. N. (2007)

of the unknown, and reduce the surprise of black swans by converting them into gray swans. It is difficult to compute the possibilities of black swans but to get a general idea about its occurrence could provide insight in the black swan. It is impossible to frame the future but an idea of it could be accomplished by incorporate elements from the present with the past which requires the ability to elaborate with what discovers will be made in the future. The mind set will automatically allow us to start develop for example future technologies where the outcome is unknown; therefore we do not know what we will know. Discoveries are mostly made by serendipity, which could be explained with the classical model where you search for something you know and find something you did not know. The discovery of America can be used to exemplify this. The original motive for the expedition was to reach India, a destination that was known at that time, but ended up at finding a new continent, America. What is common in discoveries is that those who are looking for evidence does not find what they are looking for, and those who are not, finds it. Most of the discoveries that have lead to radical changes are revealed by coincidences of unpredictable discoveries.[74]

Although the black swan appears as surprise it does not necessarily need to be instantaneous. It could as well be a result of a historical or technological incremental change. This leads to difficulties to recognize and interpret the signals right and it is common to either overestimate or underestimate the importance of the black swan. One example is the innovation laser, which was originally explored for a primary purpose to generate light, but the inventor did not know any other functions it could be applied to. It was not until later that the potential of laser technology was revealed for being underestimated and is today one of the most important technologies in machines such as computer discs and microsurgeries.[75]

To get a general idea of the black swan, the human nature and its fallacies needs to be discussed. They are all grounded in the narrow-mindedness of us and reduce possibilities to observe changes in our surroundings. To begin with, there are three distinguished opacities of human mind. The first is the *pathological thinking* which leads us to believe that the world is more understandable and explainable, hence predictable than it actually is. That affects our approach to handle new information since we already have preconceived visions of the world, and are likely to look for facts that confirms it. The secondary opacity is the *retrospective distortion,* where we believe that it is possible to explain discontinuities in chronology events based on data that we already have access to after an event has occurred. This means that we reconstruct explanations after the outcomes. *Over evaluation of facts* is the third opacity. An event is caused by interactions of millions of factors but there are few of them that are relevant to in some sense understand why it has occurred. Human brains filter relevant information from their overall ideas formed by experiences and memories from past. What is considered to be as relevant differs between individuals and their perspective which could lead to either an over and under evaluation of facts. Humans are victims of asymmetry in the perceptions of randomness events. If a successful recognition of prediction is made, then we will likely ascribe it as skills of ours, but if we fail to predict it will be considered as an external event that lies out of our control. Therefore it is considered to be something that cannot be described or explained for the reason that it is caused by pure randomness. We have a propensity to believe that we are better and more capable to understand the world and to put more importance on our existence. That could limit us from finding further information to explore the randomness and the

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[74] Taleb, N. N. (2007)

[75] Ibid.

black swan, because it is more comfortable to believe that the world is structured. This is explained as *platonic fallacy*.[76] The *platonic fallacy* leads to three distortions of how to manage information. A common method is the *narrative fallacy*, to create stories after what has already happen to explain the cause and to reassure that it is possible to identify those. Another is the *ludic fallacy*, where structural randomness found in games are applied on randomness of reality. The reality is more complex and cannot be explained by any rules. We often simplify the truth to a level which is considered to be reasonable and try to predict the possibilities for an event to occur based on a set of data which could be defined as the *statistical fallacy*.[77]

There is a natural asymmetry between the past and the future that needs to be understood in order to understand that the relationship between them cannot be learned from previous predictions and outcome. Usually when picture a tomorrow it is projected as another yesterday, where the result is already given and revealed. There is a defect when creating a prediction that we do not think of tomorrow referred to what we thought about yesterday or the day before yesterday for example. If the forecasting is not related to the thoughts and ideas of the future that we had at a specific time when the past was predicted and concentrated on the result of it, we will fail to learn about differences between past predictions and subsequent outcomes.[78]

There are methods that can be used to make it easier to predict and see the black swan. To get a general idea it is important to not exclude possibilities. This can be accomplished by a specific mind-set that for example, collaborations of facts do not necessarily leads to evidence. Take the example of black swans. Seeing a white swan does not confirm the non existence of the black swans. However, if a black swan is observed, then it is possible to confirm that all swans are not white. It is possible to approach the truth by negative instances but not through confirmation of it. It could mislead to shape general rules and theories that are based on the facts that are observed. Taleb claims that the consequences of observations is one-sided, which simplifies the decision-making. For example if a person is searching for certainty to if he or she has a disease, it is possible to confirm after the examination that the person in question do not have the disease but it does not necessarily mean that the person is healthy.

There are ways to get around the inherent unpredictability and sometimes also explore it. The procedure to better understand the unpredictable is modest.In the procedure it is important to make a distinction between positive and negative contingences. The black swan could both be positive or negative. The importance and consequence of black swans strikes differently in dimensions depending on whether it causes a positive or a negative effect. Negative occurrences that are unpredictable damages more severely in sections as homeland securities and banking. The positive occurrences on the other hand such as technological changes include uncertainty that would benefit one rather than hurting one. It is easier to better understand the black swan if there is an open minded way to look at it and not to look for the precise and local factors. In the same time there should be awareness of that infinite vigilance is impossible. There should also be a contingence to attentively and active search for anything that looks like an opportunity and seize them, because they are rarer than we think. The occurrence of positive black swans only happens if someone is

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[76] Taleb, N. N. (2007)
[77] Dearlove, D. (2009)
[78] Taleb N. N. (2007)

exposed to it and grasps those opportunities. It is suggested to collect those possible opportunities to something that looks like positive black swans and not discard them. In this way it will gain greatest exposures and opportunities of black swans. Another important aspect is to beware of the precise plans of the government. The predictions of the government should be regarded but not taken for granted, because the provided information from this theory is for survival and self-perpetuate and not to get the truth. An example of it is the banking system where some information is being hidden and it is not possible to see the exposure of rare events because the performances are not observable in short-term perspectives. The last suggestion is to not waste time to in trying to fight forecasters and instead consider their views. [79]

It is impossible to understand the unknown because of the definition of the unknown but it is possible to imagine how it could affect oneself. Therefore the decisions should be based around that. Since we could create an idea of what consequences of an event could be, but not how likely the occurrence of it is, the focus should be put on the consequences. An example of this is an earthquake where probabilities are difficult to calculate because of its rareness and randomness. It should instead be focused on the consequences that it causes a society where it is easier to understand how the earthquake affects. This could eliminate the importance and the effort put in to predict probability and instead focus on consequences. Prepare and equip for black swans and the benefits of it could give more valuable information than predicting when it happens.[80]

3.8 Methods of implementation of weak signals

When weak signals of importance are found it is many times requested that those should be realized and put into actions to gain advantages of it. Implementation of new ideas and rearrangement needs supportive business models that back up the changes. Systems that endorse flexibility to adjust to weak signals and successful leadership are as well essential for companies when the implementation process of signals begins. This is the reason why it is significant to regard the following theories.

3.8.1 Open Business Model

For a company to survive on the market it needs to innovate, if not the consequences will be that their core business will disappear. To create a successful innovation environment, the company should open their business model. They do this by actively exploring and searching for outside ideas and allowing unused internal technologies to flow to the outside where they can share their unused ideas with other companies.[81]

Open business models contribute to the increase of innovation and efficiency in creating and as well capturing value for companies. It creates value through exploring more ideas and competences by using their external concepts and by allowing more value to be captured by using its key competencies, not only in the organizations own operations but in other companies as well. As different businesses possess different competencies and experience, their goals and views on opportunities also differ. Therefore through an open business model, value can be created by utilizing the firm's key assets, position and resource while simultaneously expanding the perspective on external ideas and influence from other companies' businesses as organization can have a hard

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[79] Taleb, N. N. (2007)
[80] Taleb, N. N. (2007)
[81] Chesbrough, H. W. (Jan 2007)

time following ideas or patterns that are unfamiliar to them. [82] Because of the rising cost of technology development in many industries and the shortening life cycles of new products, the open model is important for a business survival. The Open business model help companies to attack the cost side of the problem by leveraging external research such as better use of external technology and development resources to save time and money in the innovation process. The companies could gain new revenue opportunities by a combination of cost and time saving which following allows them to bring their innovation to the market more quickly and less expensive. The organization can as well widen its segment and serve other parts of the market with the help of licensing fees, joint ventures and spinoffs. These different streams of revenues will create an overall increased income from the innovations and secure a competitive advantage in an increasingly dynamic global economy, which will result in that the innovation again will become economically attractive. [83]

One difficulty that appears in having open business models is the company's resistance to experiment with their business model. Another problem is that in most organizations there is not a single person that wants to take responsibility for the business model, thus the reluctance of management teams to explore and in cases run risky experiments with the model that might not pay off. Additionally, most organizations do not want to take risks that can damage the established brand by launching a product that do not fit in their business model. Although, the company can work around these difficulties by using the approach of white boxes. To be able to experiment with the products, the manufacturer has created a "white box" that has no clear or obvious connection to the company. The company can observe how well the "white box" develops with the specific business model and take advantage of the useful information about the viability of the model.[84]

When building a new business model, the company needs to have knowledge about the capabilities and limitations of their existing model. Even if the company decides to change their business model, they still have to consider and take the traditional model in account, as this play an important role. A successful process to begin moving towards an open and effective business model is to follow different stages to implement the new business model. The first stage describe that the company needs to scale up the model, bringing it into high volume across the organization and its customers. The second stage focus on that the business model needs commitment and the resources that will support the new model. It takes a lot of courage and vision for a company to try out new idea during a time of financial difficulties. The company needs to take in to account that the new business model may not be easy to apply on the organization but it will provide them with the potential pathway to greater innovation activity an increased growth.[85]

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[82] Chesbrough, H. W. (Winter 2007)
[83] Chesbrough, H. W. (Jan 2007)
[84] Chesbrough, H. W. (Winter 2007)
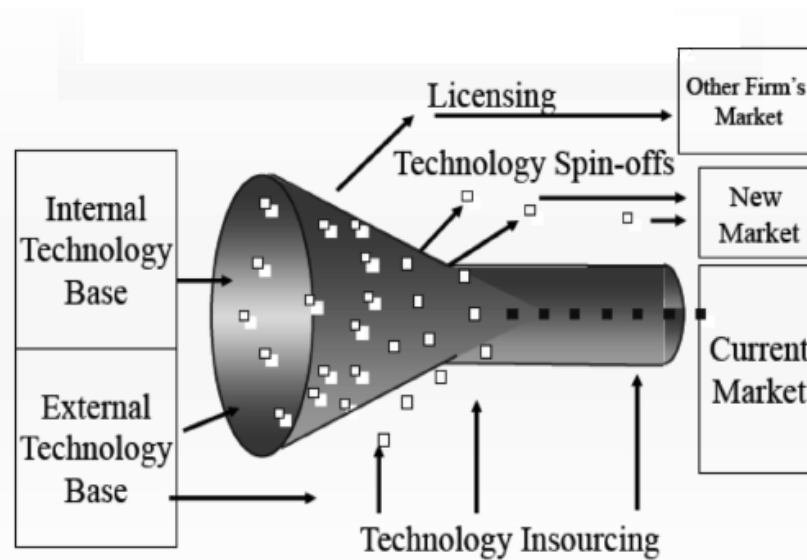[85] Chesbrough, H. W. (Winter 2007)

Figure 6. The Open Innovation Paradigm (Chesbrough, H. W. 2006)

3.8.2 Reinventing your business model

Business models are used to define values for companies and a method to reach and adjust to customers' needs. Studies show that many companies either fail to define their business model or do not fully understand the content of it which restrains their fully capacities.[86]

A new business model requires from companies to consider several aspects and criteria. The main motive is to create a model that can meet opportunities to satisfy real customers without any losses for the company. Value can be created for customer through a value proposition, where the value-creation lies in the solution to problems. The better solutions that are found, the higher customer value proposition it brings. Value for customers and companies can be delivered by the arrangement of resources and process. The choice of a set of resources depends on the characteristic of the business and the combination of it with processes is unique. A successful assembles leads to competitive advantages. This is formed after the definition of value proposition and profit formulas, followed by rules, norms and metrics constructed after the development of products or services. This is the reason why the model needs flexibility to adjust and improve functions in order to reach a complete result. When companies decide to make an extensive strategic move or rearrangement, it often requires significant changes within the company and its business model.

There are according to Mark J. Johnson et al, five strategic circumstances that create large profits for both customers and companies which affect the organization to the extent that a new business model should be considered. The opportunity of *disruptive innovation* is to satisfy a larger group of customers by offering products or services to a lower price or with less complicated functions. It will enable customers who are shut out of the market to consume the products or service and many of the new potential customers are from emerging markets. Introduction of technology to *whole new markets*, (both brand new technologies as well as established technologies on other markets) need a supportive business model that assists the process of production. Another strategic circumstance which adds more value to customers is the *job-to-be-done-focus* among employees. The business model could in this case facilitate the management to form new direction that supports a continual

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[86] Johnson, M. W. et al (2008)

work to refine existing products and profitability for companies. *Fend off low-end disrupters* is a strategic move to produce products with significant lower costs and demands, reorganization of functions and systems to efficient the production. The last circumstance is when companies *respond to shifting basis of competition*. The competition on markets has moved to a global level and for companies to adjust to the changes in production and marketing, they sometimes need new models.[87]

It is important for companies to be confident about the opportunities that a new business model creates. The profits need to be assured and the changing process should lead to some kind of new or game changing strategy to the industry. Criteria for customer value proposition, profit formula, key resources and key processes need to be fulfilled and united. Otherwise company will lose both time and money on the actions. Companies also need to see how the business model affects other parts of the company to reassure that it does not affect other parts in a negative way. In addition it must as well be aligned with the core business to work successfully. [88]

3.8.3 Customers as innovators

Markets consist of a wide range of preferences that are difficult to understand and detect for companies. This is due to the fact that people demand more customized products and service because of the frequent change of preferences. Companies work continually to make research, analyze and interpret markets which decide how well companies understand their business environment. If they fail to identify the right needs of customers, it often results in costly expenses with incorrect processes.[89]

Some companies have abandoned the effort to put on emphasis in understanding their customers and instead equipped them with a tool kit, allowing them to make their own design and products. In the same time the company can concentrate in how to manufacture these products. In this way they could build prototypes and introduce it faster to markets with fewer expenses. Some examples of when customers are used as innovators can be found in the software industry, where companies let customers add custom designed modules to standard products and launches the best of those components. Companies that use the approach of having customers as innovators, need to develop right toolkits for usage that is user friendly. Customers should be familiar with the design language and have a system that enables them to make trials and errors efficiently. The system redefines the relationship to customers because they are more involved in the development process and companies need to make changes in their business models and also in the mindset of the management in order to support the customers as innovators approach.

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[87] Johnson, M. W. et al (2008)
[88] Ibid.
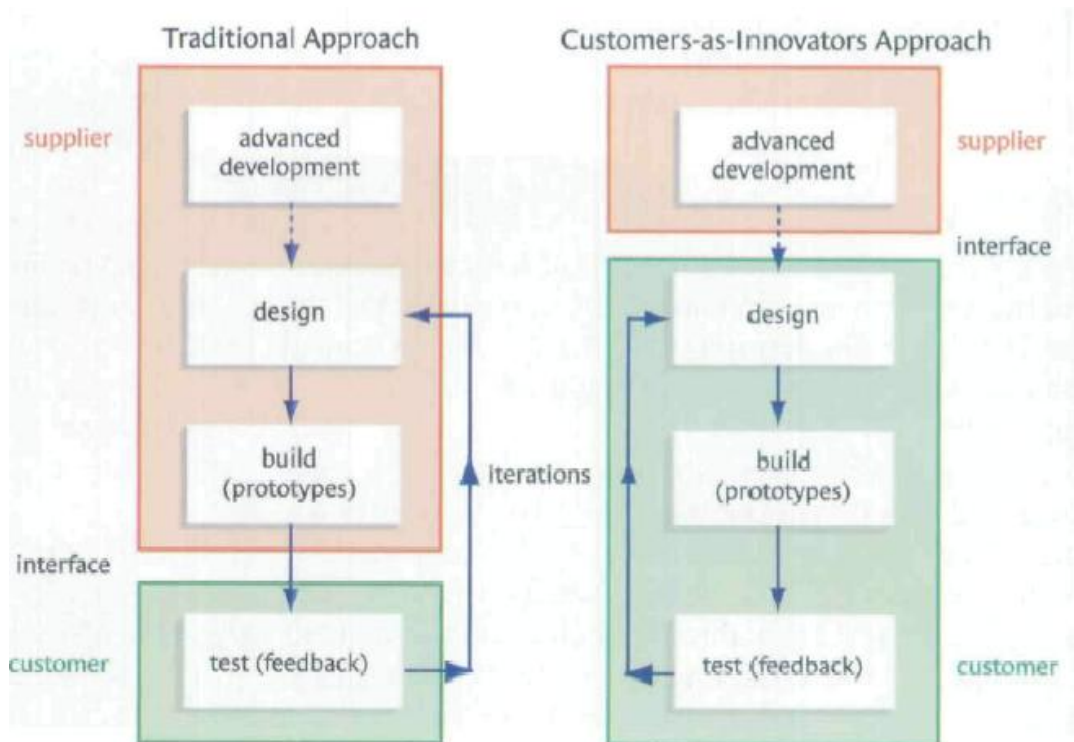[89] Thomke, S & von Hippel, E. (2002)

Figure 7. A new approach to developing custom products (Thomke, S. & von Hippel, E. 2002, p.76)

The traditional product developments have units specialized to pick up, gather and analyze signals of customers' preferences on markets. Companies gather information in order to provide solutions. It is often regarded as a difficult process because the needs are complex, subtle and frequently changing. This leads to many trails and errors where prototypes are built, then tested by customers to receive feedback. Adjustment will be made before testing the products again until it reaches satisfactory solution because of the iteration between suppliers and customers is time consuming and costly.

The customer-as-innovators approach outsources the product development to customers. Divisions for designing, building prototypes and testing are allocated to customers. Trials and errors could be reduced because the iteration is solely done by customers, which makes the process faster and more efficient. Seen from customers' perspective the approach could both satisfy the needs of customers significantly and reach larger numbers of them, to include even smaller customers.
Drawbacks with the customer innovative approach are the limitation of tool kits. They cannot handle all kinds of designs and products that require more sophisticated technical solutions that might be better supported and solved by experienced engineers. There are according to Thomke and von Hippel signs that indicate when industries might move to a customers-as-innovators approach. Industries might be pressured to shrink market segments where customers ask for more customized products that only can be covered by increasing costs that cannot be passed over to constumers. Another indication of industries that might rearrange the approach is when lot of iteration is necessary before finding a solution. This is because of failure to understand customers or when companies respond too slowly. Delays and faults of products erode loyalty among users. Signs can also be found in industries that have high-quality computer based simulations, with fast tools to

produce prototypes and adjustment processes that can be used in computers and manufacture customized products. [90]

3.8.4 Tipping Point Leadership

Kim & Mauborgne believe that changes within an organization do not always have to be complicated. They believe that through successful leadership and inspiration, leaders can turn an organization from demotivated employees, limited resources and strong and lasting interest to acceptance and change. Tipping point leadership refers to that once you have reached the tipping points and is surrounded by a critical mass of engaged people with right beliefs and right mindsets, the new idea will spread quicker than ever throughout the organization and bring fundamental change. This kind of leadership requires a manager that is willing to take risks and not be afraid to take extreme measures and unforgettable strategies to achieve change. The manager should in addition be focused on what resources that really matters in the organization, which is why this is considered as the only way to create such a movement of change in an organization. The task is as well to find organization's key players and successfully silence the most vocal naysayers to ensure managers successful leadership.

The theory presents a four-step process to bring about rapid, dramatic and lasting change with limited resources. The cognitive and resource hurdles take into account the difficulties that organizations face in reorienting and formulating strategy while the motivational and political hurdles antagonize the strategic changes. If the manager can treat and handle the hurdles in a successful way, it could lead to rapid strategy reorientation and execution.[91]

One of the hardest battles when changing a strategy is to get people to accept the need for change and to motivate them to agree upon the current existing problems, which can be described as the cognitive hurdle. Many CEO's often falls into the trap of emphasizing and having to much focus on numbers and results in their desperate attempt to implement change instead of focusing on the need to win over the line managers. By insisting that the company needs to increase their results and perform better in the case for change will lead to a feeling of remoteness and indifference with line managers. The problem is that those units that performs well and have achieved good results feel unaffected of the critic because they perceive that it is not directed to them. In contrast the units that performs poorly and has bad results feel that their job security is threaten and would rather scan the market for new jobs than solving the company's problems. For a tipping point leader to be able to avoid the cognitive hurdles they should focus on putting their key managers face-to-face with the operational problems so that the managers cannot ignore the reality. The poor performance in for example units will then a concrete problem and something they witness rather than something they have heard about. It is therefore of great interest for the CEO's to find a new way to communicate the change in order for the line managers to understand that the importance of the turnaround is necessary and that they can be a part of achieving it.

The second hurdle concerns the resources within a company. When employees in the organization have accepted the need for change and agree on what measures that have to be taken, another problem may arise. Once the cognitive hurdle is won, managers often face the hard fact of limited resources. In many organizations they do not have the financial means to implement an expensive

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[90] Thomke, S & von Hippel, E. (2002)
[91] Kim, W. C. & Mauborgne, R. (2003)

change which is why tipping point leaders should concentrate to put emphasis on the places that requires the resources the most and the places that is considered most in need of change. The key is to focus on the hot spots and to bargain with partner organizations. The CEO's can then try to fight for more resources from their bankers and shareholder, although this process is very time-consuming and drive the attention away from the underlying problem. However, tipping point leaders often know how to reach for their goal without extra resources.[92]

In order for the organization to have a smooth turnaround, they must surmount the motivational hurdles in a company. The significance of motivating the employees is crucial due to that they have to recognize the change and feel the desire of performing it as well. To make the employees wanting to execute the change, the tipping point leader should get the key persons motivated and influenced by the change because they will in their turn motivate the rest of the employees. By using this approach, the embracement of change will increase throughout the whole organization and the CEO's saves a lot of time and costs because they do not need to motivate all employees by themselves.

The last hurdle is the political aspect of it. Even if an organization has reached the tipping point, there will always be negative internal and external influences. Strong and powerful interest will resist the new reforms because the closer the process of change approaches, the more they will fight to protect their position. For example in the public sector, a change of strategy would have impact on many surrounding actors such as competitors and partners and they may be very satisfied with the status quo in the environment which is why the change is likely to be resisted. One way for the managers to overcome this hurdle is to build a broad coalition with other independent powers.[93]

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[92] Kim, W. C. & Mauborgne, R. (2003)
[93] Ibid.

4. Empirical results

This chapter will introduce our results in empirical studies. The material is collected from deep interviews and articles. A case study of companies will be presented in the end of the chapter to further illustrate how weak signals can be managed.

4.1 Interview sources

The research field of weak signals has been studied during the last decades by many researchers, although it is still considered to be a rather unexplored field. Some defined methods and approaches in detecting weak signals have been presented by earlier researchers however, many of these were formed in the past when companies operated under other conditions. The fast change of environmental state that reflects the society today causes previous studies to be outmoded and requires new explored foundation of data. For that reason the majority of our empirical data consist of expert interviews and their sources of information in today's situation. The collected empirical material is new and situated in a current state which gives a higher news value and is related to challenges within weak signals that businesses face today.

Wilhelm Agrell

Wilhelm Agrell is a professor of Social Intelligence at Lund University, Sweden. He has conducted several researches in the field of military Research and Development, intelligence and non-military aspects of security. Furthermore he has published several books and articles.[94]

Eli Aspelund

Eli Aspelund is the executive of the analytical process of the company Mandag Morgen situated in Norway. Monday Morgen is a publication particularly targeted to decision-makers and provides their customers with strategic tools in order to take control of a changing world by using competences from media, research and consultancy. The company tries to challenge readers to think outside the box.[95]

Mats Benner

Another expert is Mats Benner who is professor and director at the Research policy Institute at Lund University, Sweden. His specialization is in Research policy where he focuses on policy formation and implementation in Sweden and abroad. He has also studied research organization, organizational change and leadership within the academic system.[96]

Thomas Fürth

Thomas Fürth is the research director and the senior consultant of the company Kairos future. His knowledge and competence derives from working with future studies for 25 years and having great

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[94] http://www.lu.se/o.o.i.s/2431 (2010-01-11)
[95] http://www.mandagmorgen.no/artikkelannonse.shtml?id=2060 (2010-01-11)
[96] http://www.lu.se/o.o.i.s/9699 (2010-01-11)

experience from arranging big innovation conferences concerning future related subjects. He has also published several books and articles and is known for his lectures. After having a wide experience of working among others at the institution of the future studies as the chief executive, he is now working at Kairos future, which is an international research and consult company that helps organizations to understand and build their future.[97]

Linda Genf

The Business Intelligence Expert at WideNarrow is the position of Linda Genf. The company provides organizations with an entire chain of services to find opportunities presented by the changing world. Their focus is to help companies discover and take advantage of new opportunities in the surrounding world and offer quantifiable benefits.[98]

Sven Hamrefors

He is a professor at Mälardalens University in Sweden. His main focus is in innovation with a special concentration on how organizations functions and how their ability to communicate can increase and drive the innovation to create new business opportunities. In addition, Sven Hamrefors has a broad academical background in behavioral science, finance and law.[99]

Jan Willem Honig

Jan Willem Honing is a professor of Military Strategy at The Swedish National Defense University. His background consist of a wide international experience of researches at the University of Utrecht, New York University, the institute for East-West security Studies and Centre of International Studies at Princeton University.[100]

Lars Jannick Johansen

Lars Jannick Johansen is the COO and director of Mandag Morgen in Denmark. Both Mandag Morgen in Norway and Denmark is considered as independent companies with Mandag Morgen in Denmark as the largest stockholder. The company identifies important events and trends to transform and develop them into strategic knowledge. The mission is to create opportunities through risks and use the company's competence and independent think tank to find shared solutions to common challenges.[101]

Alan Webber

Alan Webber has great knowledge and a wide experience from working and managing as the editorial director of Harvard Business Review for many years. During this period the business magazine was named finalist three times for the National Magazine Awards. Since then, Webber has continued his success and cofounded Fast Company, which is an organization that publishes magazines and articles on websites to empower innovators to challenge convention and create the

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[97] http://www.kairosfuture.com/konsult/thomas-f%C3%BCrth (2010-01-11)
[98] http://www.widenarrow.se/ (2010-01-11)
[99] http://www.norstedts.se/Forfattare/Alfabetiskt/H/Sven-Hamrefors/(2010-01-11)
[100] http://www.fhs.se/sv/Om-Forsvarshogskolan/Nyhetsarkiv/Nyhetsarkiv-2007/Jan-Willem-Honig-ny-professor-vid-Forsvarshogskolan/ (2010-01-11)
[101] http://www.mm.dk/om-mandag-morgen (2010-01-11)

future of businesses. Fast Company sets the agenda, charting the evolution of businesses through a unique focus on the most creative individual change in the marketplace.[102]

Magnus Lagnevik

Professor Magnus Lagnevik is a scientific leader and the head of Lund International Food Studies LIFS in Sweden. LIFS purpose and goal is to create a platform influenced by researchers from different parts of Europe to increase the understanding of among others the consumer demand changes in the European food industries. The organization wants to study the future dynamics of the Swedish food chain in relation to the international markets.[103]

Sofia Ulver-Sneistrup

Sofia Ulver-Sneistrup works as assistant professor for Lund International Food Studies. She is ethnographic researcher within consumer and brand culture. She has interest in global consumption and how consumer trends change society locally and globally.[104]

4.2 Importance of signals

Today it is all about the customers, they are making decisions faster and more holistically, customers want it all and want to know it all. For companies to stay relevant, they need to deliver on all desires and expectations before they emerge. To meet the costumers' needs and demands, companies have to be attentive of the weak signals in the market because they will lead the companies to the new trends. Trends does not just occur, they are emerging from weak signals surrounding people, social context, economies, companies in movement. The problem is that these signals are hard to detect, tricky to understand and a challenge to share, although to catch one would create competitive advantage for the organization. If the company wants to do the smartest and the safest move, they should try to track the signal as early as possible in order to increase the understanding. This gives them more time to understand the subject and also to prepare for potential future.[105] It is not enough to do research into traditional literature, the companies also need to do trend tracking and scan for weak signals in social media, language and traditional observations.[106] The method has its origin during the Second World War when American and British military intelligence studied German journals to get an advantage and knowledge about factory building, industrial dereliction and number of German soldiers that had died in battle.[107]

According to our experts there are different measures on how to pick up the weak signals for strategic future. Thomas Fürth mentions the importance of having knowledge about your surrounding environment and to monitor the happenings in the world. He also makes a distinction between what a strong- respectively weak signal is and emphasizes the notion of the receiver's perceptiveness. To determine whether a signal is strong or weak depends on the company's perceptiveness and how it affects the company's competitive situation.**[108]** It depends on every

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[102] http://www.fastcompany.com/events/realtime/monterey/mentors/awebber.html (2010-01-11)
[103] http://www.lifs.se/forskare/lagnevik (2010-01-11)
[104] www.lifs.se/forskare/ulver (2010-01-11)
[105] http://www.trendspotting.com/ (2009-12-06)
[106] Marydee, O. (2009)
[107] Wahlström, B. (2004)
[108] Fürth, T. (2009-11-19)

individual company on what they want to measure and what factors that are affecting the company. These factors can be in terms of climate issues, different preferences, the digital market and production methods and happenings within these critical areas. Linda Genf additionally discuss that some companies care less about some factors that may be important for others. Through analysis and by looking at the driving forces will show us which signals that are of importance. The more forces that stand behind a signal, the stronger the signal is respectively weak if the signal have less driving forces. Further, after establishing which signals that are essential for the company in question, it is also good to perform an opposition analysis. This will show which factors that will resist and oppose to the potential trend. Another useful analysis is to see what trends that is connected and dependent on each other, as well as to see what trends that drive each other. By using the knowledge from monitoring different markets and their trends, it may facilitate the detection of weak signals on companies and how they relate.[109]

Lars Jannick Johansen looks at signals in a different way in comparison to Fürth, he refers to that signals could be either strong or weak depending on whether the signals is seen several times in different industries. To be able to spot weak signals, he refers to pattern recognition and combinatorics as useful tools. He states that every news is a part of something bigger in the world. By studying new media agendas and other news related sources, you can map the pattern of the signals that will lead you to the next emerging trends.[110] The importance of monitoring the web and other media is also significant for Eli Aspelund, because she believes that whether a signal is strong or weak depends on how it relates to the company's position in the market and their vision.[111]

Within the military defense, detecting weak signals differ from the mentioned methods. Jan Honig, professor of Military Strategy, explains that the military does not in practice pick up weak signals very well until it becomes very strong. To prepare yourself before a battle, the military defense focus on analyzing past conflicts and historical facts. The similarities in relation to the business environment can be seen in old theories where many companies should understand their past in order to see the future. The military force is extremely conservative and bureaucratic. For instance the Iraq war in 2003, when American soldiers invaded Iraq, they had a clear vision and strategy of what to do and a strong purpose. However in reality this was not in line with the expectations and therefore they failed to accomplish their goal, which was to end the war. It was not until several years after they became more adaptive to the environment and began to understand what competitive wars required. Although, this was not an effect on weak signals, rather a response to the high mortality rate of soldiers. However, the business environment in contrast to the military environment is constantly changing and affected by challenges in the surrounding world.[112]

Alan Webber states that the main factor to pick up signals is to have a wide range of information sources and emphasizes the importance of having your eyes and ears open. Attention and activity in being updated by reading newspapers, magazines, web and communicating with people is required in order to obtain the ability to spot signals. When for example, seeing a news report or other, one should be attentive to the little signals that often are hidden and implies that there is more going on than just the obvious signals of the report. It is significant to screen out the noise and search for the

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[109] Genf, L. (2009-12-03)
[110] Johansen, L. J. (2009-11-23)
[111] Aspelund, E. (2009-12-09)
[112] Honig, J. W. (2009-11-23)

real signals and to track them in more than just one area. Although, what signals that are strong or weak is dependent on the individuals' interest and preferences. It is difficult to draw the line of signals relevance because of the ignorance of how it will connect to others information. Furthermore, you have to be open-minded and patient as the signal can be in a too early and undeveloped stage to clarify the information. The mistake that people often do is that they try to be right too soon. By putting focus on the wrong things, individuals are more concentrated in being right than being wrong. Instead of seeing the bigger picture and recognizing the possibility that things that do not appear to be important or relevant may become so in the long perspective. This is why the eyes and "detective-manner" should be alert at all times. The financial crisis is an example of a weak signal that many ignored because they were too busy following the herd. However, when the collapse occurred, countries like India suddenly appeared as geniuses because they did not go for the easy money in the first place. The importance of having an open mind is crucial because if you get locked in into a too early stage or follow the herd, you are not being innovative.[113] However, it is not always easy to not be locked in the "being right" thinking as most managers have to consider the precautionary principle which is discussed by Wilhelm Agrell. The principle concerns the level of safety that should be confirmed and stated before taking any measures. In the business environment it is significant for managers to consider all aspects before responding to signals, especially the cost aspects of the measures. If these costs exceed the profits, it is not profitable for the company thus the higher costs the weak signals implies, the higher reluctance from managers to respond and react to them. There are great risks in misinterpreting weak signals or interpreting the wrong signals as it could damage the company's tangible and intangible assets such as prestige and image of the brand. If the company fails, it will be expensive for them to repair the damage made. Following, Agrell mentions the importance of separating the signals from the noise in order to avoid the mentioned consequences and to sort out what is central. The difficulty with weak signals is not to find them because they exist everywhere around us but to sort it out from the noise based on their relevance. There is a force in the noise that resists the signals which makes it harder to distinguish. A part of the information may be interpreted as noise because it is competing with the current information that you already have.[114] This perspective is also shared by Mats Benner who discusses the impossibility to answer all the signals on the market, as this will tear you apart in the end. He mentions Sony Ericsson as an example of being very successful in picking up the signal of customers demands for a superior camera in their mobile phones and in contrast how unsuccessful they have been in individualizing the mobile phone by applications that Apple on the other hand have been very successful in. In this case, it is crucial to have a clear picture of the users and the market and embrace the changes by using communities and using customers as innovators like Iphone instead of resisting them and risk the chance to fail as Sony Ericsson has in this case.[115]

In any case, it is always easier to find the weak signals afterwards and know the consequences of it. One could even find a course of events and create an image of the occurrences birth. Another complication lies in the fact that the interpreter of the signals can affect the outcome, which leads us to the discussion of non-occurrences. Since the interpreter's actions towards the signal become a part of the process, it is hard to prove that the signals that was reacted on, was the right signals in the start. An organization that has faced these difficulties is the Intelligence agency where they have

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[113] Webber, A. (2009-12-17)
[114] Agrell, W. (2009-12-15)
[115] Benner, M. (2009-12-17)

had complications and problems in proving that they have been effective in their actions in preventing dangers. Agrell resembles this with momentum 22, where individuals interfere after personal judgments on signals to non-occurrences. As non-occurrences are hard to prove, it is difficult to know whether the signals were wrong or right or even the possibility of there not being any dangers regardless of the actions taken? The problematic issue here is the obscurity of knowing whether a non-occurrence is an occurrence.[116]

Sven Hamrefors has another approach to the discussion concerning weak signals. First and foremost there are two perspectives that should be considered in this matter, the individual perspective and the organizational perspective. The individual aspect deals with the negotiation environment of individuals. Whether or not the signals are perceived strong or weak is dependent on three factors; the distance, the geographical factor and conceptuality. The distance is explained by the time perspective and how long it takes before the change or signal occurs. The second factor is whether or not the individual perceive the signal as near or far. Conceptuality is described as something that emerges in environments that the interpreter is unfamiliar with. From the organizational perspective, it exist many forces that can affect the peoples way of detecting respectively not detecting signals. The better an organization is in receiving weak signals, the more transparency and closer you get to the goal-oriented searching behavior. However, if the organization wishes to stop this searching behavior, it is easy for them to resist it as they have the ability to affect the individuals in a wide extent. If the mentioned factors are fulfilled, a function can be added such as business intelligence in the search of signals. Although, the consequence of this may be that increased amount of information will appear. In some cases, too much information leads to a less successful company. Increased information does not necessarily equal the best information, sometimes the best information is the one that makes the individuals act.[117]

4.3 Weak signals framework of methods

Earlier researchers concerning weak signals management have different methods on how to approach the phenomena and so does our different experts. They use different tools to reach and to understand the same signals on the market. Kairos future´s strategic process in picking up signals is first and foremost to create an advantage cycle that consist of three steps. The first step consists of to map the surrounding world in order to obtain a general picture of central trends and contingencies that will affect the company in question.[118] By executing this you will gain more knowledge and awareness of what potential threats and weaknesses companies can expect. To concretize what this mean in practice, Fürth suggests that companies can use surveys both internally and externally to see what changes employees detects and how they perceive it. In external relations, companies can compare their perceptiveness on changes to other companies and see if they can distinct any differences. The information found from the surveys can differ due to that the employees perceptiveness looks differently in companies. The second step is the route to success. It is important for the companies to have a clear vision, central ideas and strategic measures to take the right direction and handle changes in the surrounding world in an efficient way. Furthermore, Fürth discuss that to be able to take a successful route, the company should develop workshops and focus groups. The advantages with workshops are that corporations could work directly with the

[116] Agrell, W. (2009-12-15)
[117] Hamrefors, S. (2009-12-14)
[118] www.kairosfuture.com/om-oss (2009-12-11)

organization and together discuss the potential changes on the market. Instead of being told what the changes are from "above", employees feel more engaged and appreciated when they are allowed to participate in the development. Focus groups is a good tool to collect key persons from different functions within the company and take advantage of each individuals expertise and discuss current issues together. Following this will lead to a better general view of what signals and changes the company is facing. Additionally, focus groups can get in direct contact to their customers in order to increase the way to monitor the surrounding world. The last step is the actions to implement the information found and constantly be updated and continue to be attentive of happenings in the world.[119] Fürth mentions that difficulties will arise when the implementation process begins due to that companies' perceptiveness differ and their openness to accept and embrace changes. This is a time-consuming process especially in times of economic excess booms, as this will contribute to companies' reluctance to change because the company is doing well and have good profit margins. Therefore they try to hold on to their traditional business model because there is no reason to change. In times of recessions, the companies is situated in a more sensitive position where they feel an increased need to consider the surrounding environment and therefore their willingness to change will grow. Key persons in the company should be allowed the needed time and space to reflect and monitor changes in the world. This should be integrated in the company's business strategy.[120]

Mondag Morgen in Denmark have two key competencies, pattern recognition and combinatorics. The first mentioned competency concerns the ability to make out patterns from different occurrences and connect them to each other to see signals. This is of course not easy but should be considered as a process where you train and improve your skills. It is a self assuring circle where the more patterns you see, the easier it is to discover and recognize new ones. In order to spot weak signals, we must keep ourselves updated by reading daily papers and look for particular events in the business world and try to clear out what patterns exists. Through this we might see a pattern in emerging news that will not be discovered nor emphasized until 6 months later. However, the most important news is the ones that have already taken place, but through bigger news we can recognize and extract weak signals. The ability to pick up weak signals and combine them to new agendas and interpret them is what this pattern builds on. Combinatorics is the ability to combine new emerging trends with each other and with key agendas for changes and productivity. For instance we might see in the welfare industry that according to the productivity, efficiency and development we can extract patterns of innovation. The same patterns can be seen or used on several markets and even in other industries. Those patterns or weak signals that can be applicable and combined to different cases may lead to new megatrends. Desk research is another complementary and efficient tool to find weak signals. This type of research includes reading, watching and phoning people and observing offline and online media. To talk to networks of experts and interviewing many segments is necessary to gain relevant information. They also make systematic media watch and analyze what other newspapers are writing about. After gathering all information it is necessary to sit down and digest the information together to see what signals that are of importance. Mandag Morgen have publications, online- and offline reports that their customers use to stay alert. This is a good measure to stay well informed and find the signals that they think are important. Once every three months they deliver an idea or insight that will be substantial and may lead to changed behavior within

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[119] www.kairosfuture.com (2009-12-11)
[120] Fürth, T. (2009-11-19)

organizations. The goal is among others to maintain an ongoing level of ideas because they want to be on top of the development and customers should observe what is of significance matter to them on a regular basis. They want to find shared solutions to shared problems and look for opportunities, development and interaction between partners. Companies should be able to use Mandag Morgen as a platform and impact on what other companies think. [121]

In relation to Mandag Morgen in Norway, Eli Aspelund additionally mentions that surveys are executed in Norway as a mean to find signals. They do not only look within the borders but also follow and analyze surveys made in other countries by others. They use a lot of international source information. When detecting weak signals, Aspelund believes that in earlier stages the process is more ad-hoc whereas in later stages or in specific situations, it becomes more systematic in how to analyze weak signals. It is also essential that the employees work close to each other and discuss what is important as different companies have different strategies and goals. Employment ads that companies publish are also studied because it can reveal which directions companies are heading towards. This could be interpreted as a weak signal of what will happen next in the company and why they are investing in some specific functions.[122]

At Wide Narrow, the methodology of gathering information is something that all organizations needs and executes for future strategic decision-making. There are several methods that current companies are using, however Wide Narrow emphasizes the importance of having established routines in how to collect information to decrease the lack of relevant information about companies threats and possibilities. As they state on their webpage, *"If information isn't useful, it isn't really information"* [123]

Therefore the process of filtering and sorting information is crucial to obtain the best results. The difficulty according to Linda Genf is to find what it is you are searching for and the

Figure 8 (www.widenarrow.com, 2009-12-15)

complex problem of what we need to monitor. After this process when you are aware of what kind of information you need, successful way to execute this is to monitor, analyze and draw conclusions. The companies need to identify how the actors, occurrences, trends and tendencies look like in their specific situation and from that point proceed to find out what answers they are looking for. However, the difficulty does not lie on how to perform this rather on what area to execute this on.[124] This is a common problem and discussion that many of our experts share. Webber emphasizes the significance to have effective tools to clear out what signals that are relevant which is considered to be a big part of the process, as tools are different things for different people. One typical tool for him personally is to collect articles where he finds interesting signals and put these in computer files and

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[121] Johansen, L. J. (2009-11-23)
[122] Aspelund, E. (2009-12-09)
[123] www.widenarrow.com (2009-12-11)
[124] Genf, L. (2009-12-03)

further explores specific signals on changes. The key is to find questions that are of interest concerning for example a company, industry and country etc. and notice questions that keep coming back to you. Start with a set of questions that you want to find answers to through collecting relevant information. In a later phase you will discover dots and see how they are connected to each other and form a pattern. As you will have developed own theories that can be tested, you will also gain more information by testing these and discussing the subject with friends that challenge your views. In this way the collected data and theories formed will be more robust.[125] According to Agrell, the most central part of having efficient methods is to have a clear hypothesis. When the destination and the research area are known, it is much easier to find weak signals. In summary, a precise hypothesis will result in an increased awareness of what to measure and the researcher is required to have an expertise within the area to be able to spot the signals. It will also facilitate the understanding of weak signal if the researcher puts the signals in a context. An interesting aspect that Agrell mentions is to know whether the signals are controlled by coincidences rather than by structural character. By taking an example of the book industry, where publishers struggles to find the new bestsellers and performs several surveys on customers to find out what they are demanding. However, this may result in a complete flop as customers are not always aware or have knowledge about what they want to read beforehand. In addition, a book may receive terrible reviews because of a coincidence of the reviewer simply having a really bad day. It is better for the publishers to trust their experience and knowledge to know what books that will become successful.[126]

One common factor that all our experts agree upon is the fact that there exist no general set of tools that will be successful for all. Hamrefors means that it is like a jungle filled with tools and that there is good and bad depending on how it connects with a company's strategy and business model. The optimal measure is to find tools that match the individuals or the organization in the best way. The better an organization can spot signals, the more they will affect what they are monitoring. However, Hamrefors argues for a specific view that he means that everyone seems to have forgotten about. It is the notion of that an analysis of the surrounding world are not a question of technique, little less something that you can adapt to. He explains the fact that if you monitor a specific signal, this signal will in the end change as the searcher will affect it, which could be related to Agrell's theory of non-occurrences. The thought of to study signals of changes in the world in order to adapt to it in the best way is simple naive and wrong. Companies should instead focus on to study weak signals and embrace the results of it in order to affect it in the most successful way. Our actions and communication to each other, whether it is a supplier or a competitor affects the world, therefore companies should impact the world in a way that will lead to sustainable competitive advantages for its network.[127]

4.4 Difficulties with implementation of weak signals

It is important for companies to be update about changes in the business environment. An important course of action to gain understanding about it is suggested by Genf, to keep writing reports about the conditions and changes within it. She says that it is important to integrate the analysis about the environment in relation to companies' strategic goals and decisions. Companies that only use general reports to form a view about the environment and a general method to detect weak signals, often

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[125] Webber, A. (2009-12-17)
[126] Agrell, W. (2009-12-15)
[127] Hamrefors, S. (2009-12-14)

have difficulties to align the information with the strategic plans, since it is not seen from companies' perspective. Hence it will be harder to implement the weak signals.[128] Benner says that companies often choose to reject weak signals because of the difficulties to handle and implement it and that it is common that companies do not want too much inflow of weak signals. Even if it will facilitates for companies to reject weak signals in the short term , they will be damaged in the long term.[129]

Another factor that Wilhelm Agrell points out that is important to consider when companies decide to what extent the weak signals should be implemented is the precautionary principle. Before companies chose to take actions about weak signals that are detected, they want it to reach a certain degree of probability to be realized. Within business aspect it is important to take into account the costs for actions, if it succeeds the benefits then it would not be profitable, hence no implementation will be made. The precautionary principle implies that companies' manner will be more reductive the higher the costs are. Companies would have to consider the risks that could arise with implementation of weak signals. If a misjudgment is made due to misinterpretation of the weak signals, it could damage the companies' profits.

When companies find weak signals they should question whether to acknowledge it in public or not. Agrell mentions that if companies or other actors chose to announce weak signals it should have substance and also be somewhat reliable. If companies for example present too much weak signals instead of selecting fewer and important signals it could affect their credibility. Some of these weak signals are not realized. If companies on the other hand acknowledge too few weak signals, then they risk of being associated with less credibility because they have failed in finding signals. Companies need to find a balance between acknowledging too few or too many weak signals. [130]

4.5 Examples of current and future weak signals

A signal that has been recognized by many of the respondents is that society has moved into a direction where interaction and networking has become more significant. Genf has seen this shift evolve from a preceding information society and from a digital development that has made it possible for people to interact more and create networks and communities. Social media has lately been appraised with more value for companies and they use it more frequently to gather ideas to innovate. Companies could use these sources to find smarter ways to innovate by approaching markets with open innovation thinking. [131]However, Aspelund points out that all available social media are not of interest for every company and should therefore be used wisely.[132]

The business environment is believed to be more complex where more aspects need to be considered with more emphasis put on networks. It will be easier to have access to information and this subsequently makes the companies more sensitive. Therefore it is according to Hamrefors, necessary to have a well established leadership that works well both on horizontal breadths as on vertical ranges within organization.[133] Johansen agrees that the leadership will have a more significant role in organization and he mentions two additional intellectual signals that can be seen

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[128] Genf, L. (2009-12-03)
[129] Benner, M. (2009-12-17)
[130] Wilhelm, A. (2009-12-15)
[131] Genf, L. (2009-12-03)
[132] Aspelund, E. (2009-12-09)
[133] Hamrefors, S. (2009-12-14)

within management and welfare. Leadership and management should put more emphasis on a good purpose of their existence that should favor the stakeholders and the society. Companies had in earlier periods concentrated on profits as their main focus aspect and Johansen believes that the future is predicted to require more.[134] According to Webber, large corporations today have already challenged the traditional business philosophy to only earn money and that they are doing so much more in non-economical terms. He regards that the key concept for companies is to be more than just benefits in terms of profits.[135] Companies situated in the "2000's year" thinking are focused on maximizing companies' potential profits and efficiency. This is believed to be one of the reasons behind crises that can be seen today.

 One aspect that more companies regard is the emerging agendas of climate change and resource preservation. These issues within corporate social responsibility are likely to pressure companies in the future to include these aspects in the companies' missions and purposes and also to expand these. Companies' task will be to contribute to improve the situation of the world. Genf sees several signs of people caring more for environmental issues. This can be recognized especially within the food industry where people are more conscious about how their personal consuming affects the climate issue.[136]

Social value is another emerging agenda that has increased its meaning. Johansen has observed in the public sectors and in welfare, a gradually barrier between the sectors that is breaking down. He mentions that people care less about where health care services are produced and more about the purposes of it. Social entrepreneurship and non-profit activities could be reinforced and social issues will be solved based on voluntary work with public purposes. However, Webber claims that the expression of the government and non-profit activities have lost its meaning and do not mean much anymore. Therefore he suggests that a new language need to be invented when people talk about how to solve problems. In addition, Johansen points out that the definition of weak signals in form of growth and GDP index could be redefined because of the increased influences to put more emphasize on social return of investment and social value.[137]

Organizations emphasize on sustainable development and in order to fit the changing conditions companies is believed to change from heavy and stable distribution systems to more flexible ones. Benner further explains that this is necessary because consumers, who are the driving forces for companies' progress, often change their preferences and that people request more individualized products and solutions. [138] Another solution to deal with the future and its complexity that Johansen mentions is to use a hybrid structure of organizations. It is a structure that combines features from public and private sectors.

Genf believes that companies near consumers are in general better in detecting weak signals. They are usually interested in fast changes in markets and works flexible. These companies are often more willing to adjust to changes and therefore their line of actions makes it easier to detect weak signals.[139] Webber mentions that companies in immature markets are more sensitive and susceptible

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[134] Johansen, L. J. (2009-11-23)
[135] Webber, A. (2009-12-17)
[136] Genf, L. (2009-12-03)
[137] Johansen, L. J. (2009-11-23)
[138] Benner, M. (2009-12-17)
[139] Genf, L. (2009-12-03)

to changes because they act in unstable market and needs to absorb more information and knowledge in order to exist. Younger employees with less experience about industries and markets are easier to form and they do not have predetermined ideas about industries. They are in general more open for ideas and look at weak signals from other angles. This makes them better to pick up weak signals. Organizations that accomplish to integrate the young people with older to share information, are therefore more successful to find new influences.[140]

Fürth explains that younger employees are more inventive and inspired and hence it easier to adapt to changes. IT business is a good example of industries that are successful in sensing weak signals.[141] Johansen mentions Google as an exceptional good company to pick up signals because they possess the world's biggest knowledge base. Google have access to valuable information about individuals based on their searching patterns. It provides information about people´s habits, interests and what they want. In addition Google is informed with the latest news which makes them updated about changes and has access to the material that could be regarded as weak signals in the society. Facebook is as well considered as a powerful market machine as they have information about among others, people's opinions, thoughts and preferences. [142]

Companies on international markets can according to Hamrefors collect more information through studies and exploration to compare the different markets. They can base their analysis on better information and could also relate conditions between countries. It is a great advantage to detect weak signals from different markets and see relations. He further sees leadership and the personalities of individuals as important for how well organizations work to see signals and the next big trend.[143]

Benner describes companies that are good in detecting weak signals, find indications oh change that many other companies within their industries misses. He mentions Apple and Toyota as some of the few companies that are good in picking up and making sense of signals. Apple is skilled to pick up weak signals because they understand their segments of users and know how they are utilizing their products. 10 years ago Apple had the same focus as Dell and HP but realized pretty quickly that they could not compete in the same markets as the competition was too fierce. Apple found another concept and business idea that will differentiate them from their competitors, which gradually led to an increased perceptiveness of weak signals. Toyota has in contrast to the rest of car industry picked up signals about political turns, variation and changes that other companies in the industry missed. Procter & Gamble and General electronics are able to pick up signals easier since they can adopt more when they have an open business model. Benner also gives an example of industries that are less successful in detecting signals. Pharmaceutical industries focus on solving welfare problems in the rich and developed countries that yields big profits instead of putting their emphasis on improving and performing researches in products or medicine that could serve a higher purpose. This leads to less trustworthiness among customers and also that the social value of pharmaceutical companies will decrease.[144]

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[140] Webber, A. (2009-12-17)
[141] Fürth, T. (2009-11-19)
[142] Johansen, L. J. (2009-11-23)
[143] Hamrefors, S. (2009-12-14)
[144] Benner, M. (2009-12-17)

4.6 Weak signals of the food industry

Many literature regarding costumer's habits express that people want to eat healthier food, but this is not something that can be directly observed in people's behavior. Therefore it is important to understand that what people say, sometimes differ from their actual behavior.[145] Customers view their food as an enjoyment and the health aspect has had less meaning, but there is an overall change among customers of provisions that have started to be more aware of ingredients within products and also demand information about its origin. The focus on food has begun to change and brand loyalty is not as relevant as before, customers pay more attention to taste, quality and price. Another trend that has emerged during the last years is local food.[146] It means that the companies chose suppliers of products in areas nearby to reduce emission. Although, one problem with local food is that there are no strict regulations evolved and the concept is still unclear for many costumers. One reason behind costumers' preference with local food is because of their belief of that it these products are healthier.[147] An interesting question is if the customer would sacrifice the taste and price for it.[148] Even if the health aspect has started to be a more important factor in consumers' everyday life, taste and price it is still what matters in the desire of food. New criteria have started to arise such as demand for more information about products. People are conscious about there consumptions and demand safe food because of the global activity within the food industry. Customers have drifted further away from the origin of food, partly because of all intermediaries. Customers knew much more about the products before and find it more difficult in today's situation. This has awakened a large group of customers to take an interest in locally produced and organic food. Another example is that people are conscious about consuming food without additives because of possible adverse health effects of certain additives. Food companies have already started to respond to these needs from customers, although there is no scientific ground that proves that all additives are bad. Usually customers make that mistake to think that additives are bad in general, just because most of them are. It is important though to point out that some additives are harmless. Not to mention that there are strict regulations about food additives, therefore manufacturers cannot put whatever they want in products. They have to prove and demonstrate that the used additives serve a significant purpose for the specific product.[149] Many customers are unaware of these regulations, which is why they are search for alternatives. Due to that the demand for more safe food has increased during recent years, this has led to the blossoming of many labels.

Within the Swedish food industry there are today several labels that assure customers about that certain criteria are fulfilled to meet customer demands. Some of these labels are Krav, I love Eco, Nyckehålsmärkt, Fairtrade and food without additives. The existence of several labels and many more to come, creates confusion among customers because many of them cannot remember what the label stands for, because there are too many. This can in turn have an adverse effect creating ignorance rather than information and awareness from the labels.[150] Magnus Lagnevik discusses this problem further and means that there are other ways to increase information about products without a label. He presents an example of a small, local store in London, where the owner despised

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[145] Marydee, O. (2009)
[146] Lempert, P. (2008)
[147] Halttunen, T. et al (2009)
[148] Lempert, P. (2008)
[149] Halttunen, T. et al (2009)
[150] Eriksson Y, M. (2009-12-21)

labels. The storeowner expressed his opinions through a big sign in his store where it stated that labels sucks to illustrate the unnecessary for him and confusing labels. Instead, the storeowner had pictures of himself together with farmers in their coffee plants, where he picks the coffee beans together with farmers and said to his customers "*I was there when José picked the beans*". This creates a sense of authenticity, which makes customers feel safer. This also inspires customers and gives them information about the products, because they have seen the owner study the manufactures and approved the products. Lagnevik thinks that this personal touch is one way to secure food and its origin and believes that this could be a big trend in the future for more luxurious products.[151]

The food chain City gross, has started a project to market food without additives. The label is called "Äkta vara" and marks products that contain no additives with an exception of two additives. These are fruit pectin and baking powder. All kinds of aromaticum are excluded except extracts. Other ingredients that are industrial, that is not included in the ordinary food as vitamins and amide, are not allowed as well. [152]

Another label that is visible in stores and coffee shops is Fairtrade. This food trend is a way to consume with a good purpose. The label support manufacturers in less developed countries and set a fair price of their products. Because of the difficult international market conditions, it is hard for many farmers to compete with limited resources. These pressures on price will affect labor conditions to the worse and the intermediaries earn greater profits. The criteria for Fairtrade products are that their manufacturers get at least a minimum level of wage for products and long lasting contracts where better labor conditions are agreed. [153]

Another trend that has emerged is that consumers define themselves with the food they are eating. People are trying to take a stand on ethical and social subjects with food. This could lead to that the food products will become more individualized to fit the need for a specific customer. Lagnevik believes that this is a trend that could emerge in the future and that food will become an experience more than it is today.[154] Sofia Ulver Sneistrup has observed new trends that indicate that food has started to become more of a meeting place for people. It could be seen today in restaurants where people rather meet people as a way to socialize, rather than to just eat dinner. She has spotted that some restaurants in London offer bigger tables for single persons, where it is possible for them to meet new interesting people. This is believed to be caused by globalization and urbanization. People travel more nowadays and many times they eat by themselves, which is quite boring. Therefore building social communities over food could be a good business idea. There are also patterns that show that the increase of single people and the new change have lead to the development of single portions and smaller packages in food stores. [155]

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[151] Lagnevik, M. (2009-12-18)
[152] http://www.aktavara.org/pages.aspx?r_id=50110 (2010-01-05)
[153] http://www.rattvisemarkt.se/cldoc/opml8.htm (2010-01-05)
[154] Lagnevik, M. (2009-12-18)
[155] Ulver Sneistrup, S. (2009-12-10)

4.6.1 Trend or fad?

When a company has spotted signals they need to look for patterns and cross-category connections to see if the new development indicates an emerging trend.[156] With the help of forecasting and technological breakthroughs, companies can separate trends from fads. Although, this is not an exact science.[157] A fad is described to be something that is not sustainable or here to stay. It is a temporary fashion, notion or manner of conduct.[158]

In the food industry, it is described to have many fads, especially influenced by international markets. Only a few years ago, there was a big hype concerning GI- products and different "diet" products. Healthy food was also not so long ago related to "light" products, which is pretty far from how it is defined today by customers. These products are considered as fads because it was only popular during a period. While other products such as Fairtrade products are considered to be sustainable and expanded further in the future.[159] The difference between a fad and a trend is that the trend can give the company competitive advantages and the fads helps the company with customer acquisition. Ignoring the difference could affect the company negative because it can lead to misdirected sales and marketing decisions.[160]

To get a better understanding, companies should apply a series of filters that will determine whether it is a trend or a fad. The more connection you can find of a specific signal, the more likely it is that it will develop into a trend. This will also help the company to determine when the mainstream will be ready for the product, so that they can launch it at the right time.[161] To recognize trends you have to be active and get out where the action is taking place. For example you should stop and observe what your customers are buying and listen to them so that your thoughts are identical to your customers.[162]

4.6.2 How to spot trends within the food industry

Professor Magnus Lagnevik mentions that it is hard to know if signals make any difference for companies, but it could be of great interest to be able to spot changes in the market in advance.

To spot signals within the food industry, you need to study the people and the markets that are in the frontline. One city that are known for creating food trends are London due to its variety of cultures and people. He explains that when big cities like London where groups come together and get influenced by each other, new ideas and thoughts are awakened. For example, Turkish food gets affected by Chinese spices and decides to try how the two match together. This is how many trends start. Other methods to gain knowledge about weak signals in the food market are to work with knowledgeable people. At the same time, it is as well important to have people around the world that can study and report about interesting shifting that occur on markets.[163] Observations are crucial in order to reach a deeper understanding and to study customers, restaurants and different

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[156] Zandl, I. (2000)
[157] Marydee, O. (2009)
[158] http://dictionary.reference.com/browse/fad
[159] Eriksson, Y. M (2009-12-21)
[160] Koco, L. (2008)
[161] Zandl, I. (2000)
[162] Osborn, S. B. (2000)
[163] Lagnevik, M. (2009-12-18)

food stores. To get the right information, it is also good to interact with customers and communicate with them to find out their habits and not just observe.[164]

At Skåne Food Innovation network, they are working with different scientists and companies in order to discuss results of the trends they have found and potential signals on new trends. The purpose is to spread ideas where the companies can work in an open innovation system, instead of a closed one which they usually do. This open innovation system let people challenge each other and it allows the unexpected to happen. One example of such an innovation network was that a doctor brought up the problem of starvation in the eldercare. AGDA, an elderly and her personal assistant that shares a close relationship, got the chance to talk and visualize the problems of starvation and food issues in eldercare in front of the group at the conference. This made it understandable for all present individuals. It then became clear to the group of people what the problem was and what the situation looked like when they had to face the problem in such a concrete way. During this presentation it also showed that the elderly had a problem with swallowing their pills because their throats was to dry. After the meeting, the group of knowledgeable people from different parts, whether it was a scientist or a doctor got the opportunity to consider the problem. Eventually someone from this conference could call and say that they have found a possible solution to the problem and suggest creating a team that can develop this further. In AGDA's case, they suggested the insertion of protein bars and a liquid medicine that would facilitate for the elderly to take their pills. After this information conference, the birth of new project also appeared such as the focus on healthier food at Bladins School in Malmö.

4.7 Case studies

4.7 1 ICA

ICA corporate group is one of the Nordic regions leading retailing concern with 2 230 stores around, Sweden, Norway and the Baltic states. It is a joint venture, where 40 percent is owned by the Swedish Hankon Invest AB and 60 percent by the Dutch Royal Ahold N.V. ICA is today a successful and well known food chain and is known for its good products and funny, sarcastic commercials. The company's business idea is to make every day a little easier for their customers.[165] To get a better understanding of the company and its strategy, we interviewed ICA's Swedish trend expert Malin, Y. Eriksson.

Eriksson started to explain the changes in costumers' purchasing behavior and the changing habits that start to develop. People are nowadays more aware of their food consumption and their health. The information society has also contributed to the consciousness of what people really are eating and what it contains. This factor has created a bigger demand for natural products without any additives, local products and ecologic products. Costumers have also showed an interest in how their products are produced and their origin as well as their history. Eriksson believes that this new found interest of products origin is derived from the distance that consumers has to their food. Most

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[164] Ibid.

[165] http://www.ica.se/FrontServlet?s=om_ica&state=om_ica_dynamic&viewid=1419051&showMenu=om_ica_0 (2009-12-21)

customers' lives in the cities with little knowledge of the farm life and because of their lack of knowledge, the costumers start to demand the stores to provide this information.[166]

It is not easy to know what the next food trend is going to be. She further mentions that the food industry is affected by many fads that easily shift and when they do it could go very fast. If you just look back four -five years ago, you could spot the demand for "light" products. The "light" products were purchased and seen as a healthier choice of consumption. However, these products today would be a bad concept due to the fact that it often contains many additives, which is considered as unhealthy. Fads like this are often affecting the customers' behavior under a short period of time and therefore also the stores sell patterns. This change of sell patterns will disappear after a short time while others patterns tend to stick. One example of this is the consumption of milk and pasta. For 30 years ago people was buying more milk and less pasta but today it is quite the opposite. Eriksson believes that new trends with healthier food will come and go, however the trend that will stay is the request of knowing the products origin. There are also some signals that indicate new fads of less salty products and products with fewer aromas.[167]

ICA uses different methods to track weak signals of trends and fads in the surrounding environment. One tool that the company uses is to perform customer researches in form of surveys and others. The information from these researches is later used to analyze and spot changes, as well as study how their customers think and reflect. Eriksson thinks that this is a good method to identify ICA's customers and their consumption behavior. Although, when using this sort of tools, it is important to understand that what their customers demand, can differ from what they are actually buying. It is for that reason vital for the company to use other tools as complements. One of these complements is to study sale numbers through among others their membership cards. This will help them detect what their customers are buying and what they are not buying. They also study national and global magazines to see how different food trends changes in the world and what customers worry about. Sweden is often a few years late when it comes to food trends, ICA therefore try to study the surrounding environment to see which trends that could influence the Swedish market in a few years. The company put most of their energy in studying markets in New York and London. This is because of these cities are famous for creating new food trends. In addition, ICA also studies other markets like the German and the Scandinavian. However, it is important to mention that even if the company studies other markets, it does not necessarily mean that it will be successful. A food trend that is successful in New York may not have the same impact in Sweden due to that the customers have different shopping behavior in different countries. Not to mention, cultural differences. Example of this could be the intense and big discussion about additives in Sweden where in other countries this is an unknown phenomenon.[168]

Furthermore, the company scans weak signals by visiting different stores and study the placing and presentations of certain products. Eriksson also emphasizes the importance of being alert to trendsetters that could change their customers' behavior. Celebrity chefs that express their food opinions and favorite products in the media often have impacts on customers. Other factors that influence trends are the government and the national food administration. If they publish bad

[166] Eriksson Y, M. (2009-12-21)
[167] Ibid.
[168] Eriksson Y, M. (2009-12-21)

recommendations about certain products, this will affect customer's purchasing pattern. It is therefore important for ICA to also study the changes and the debates that the national food administration discusses. An example is the recommendation from the national food administration that advised people to eat wholegrain. This did not only affect customers' behavior but also the food that schools serve to their students. ICA has their own dietitian that provides the company with information about products and what they can and cannot include.

After detecting signals and analyzing what their customer wants, the company use the information found to offer products that can satisfy their customers' needs. Today, customers often demand that products should follow their ethics and social thoughts, which means that their products should be produced in a humanly way. They also want to have the choice to do an active decision and be able to stand for the purchased products. Eriksson has as well seen a higher demand on Faitrade and ecologic products, although due to the depression the product segments have not increased in the same extent that ICA forecasted. The company believes that these products will become even more attractive in the future, which will lead to smaller gaps between the prices. However, it is important to point out that not all customers are interested in Fairtrade or ecological products. Therefore ICA is determined to continue to have a wide range of products because they want to serve all customers. Everybody should feel welcomed. There are stores that provide their customers with 100 % Fairtrade products but this only attracts a specific segment of customers. ICA is a chain with a big variety of customers and wants everyone to be able to shop what they want and are looking for. Therefore they going to keep their range of products until all their customers demand a change.[169]

According to Eriksson, she has as well noticed the big discussions and trend concerning food with less additives. She is aware of that it exist a great demand for this types of products. Although the reason why the company has ignored to develop a label that indicates no additives, is the uncertainty and confusion that it can cause. It is hard to introduce another label without confusing or misleading their customers. Especially when the existing "Äkta vara" label is so ambiguous. The Swedish national food administration has also raised the question of whether or not the "Äkta vara" label is too confusing and untrue to some extent. The label could mislead the customers to think that the product is completely without additives while this may not be necessarily true since the label allows two food additives. Another issue is the definition of "Äkta vara" which could indicate that these specific products are "real" and the rest is "unreal" products.

 ICA is the largest food chain in Sweden and does not want to jeopardize their reputation. Therefore they strictly follow and listen to the recommendations of the national food administration. Eriksson is skeptic against the discussion about food additives and wonders if it has not gone too far because all additives are not bad. Some of them have been used for ages and it is important to not exclude all of them.[170] Instead of using the label "Äkta vara", ICA has provided a good function on their homepage where customers can check the products and read about different E- numbers and what they stand for.[171]

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[169] Ibid.
[170] Eriksson Y, M. (2009-12-21)
[171] www.ica.se (2009-12-29)

ICA wants to be a company that not only put their focus on earning money but as well to help society to improve. Therefore they have started a project called "We can do more" and the projects purpose is to give people with disabilities a chance to work at ICA. The company's ambition is to recruit 500 to 1000 people within three years.[172]

4.7.2 City Gross

City Gross was established in 1993 by BergendahlsGruppen. The background is that the company had seen a demand for a low price department store and therefore established City Gross that became a big success in Sweden. City Gross today puts a lot effort in quality and environmental issues in order to affect the surrounding environment as little as possible. They want their customers to feel safe, happy and aware of their products and services.[173] This in one of the reasons why the store decided to introduce the "Äkta vara" label in 2009. We interviewed Carola Grahn at City Gross, Bergendahlsgruppen to gain a better understanding of City Gross' way to detect weak signals and to explain the label further.[174]

Grahn starts to explain that the label is very new and still under a process of change. For City Gross, this was a response to the weak signals that they had seen in the Swedish food market. This means that the many debates and discussions about additives have lead the store to realize that a label is needed to help customers make a conscious choice. Before the labeling, many customers already were looking for products without too many additives but they did not always knew how to do this. Many of the producers put out names instead of E-numbers on the products, which sometimes can aggravate for customers to know if it is an additive or not. Customers should be able to buy the products they want in an easier way and by having this label, it will facilitate for customers to make conscious choice when buying food. Even for those who do not have the knowledge or is experts in food additives.

The label "Äkta vara" is not a new selection of products. The company and Grahn have started to go through their existing products to see which ones that fulfill the criteria for the labeling. This is a very time-consuming process and is therefore expected to continue for a longer time perspective. A product will get the label "Äkta vara" if they are free from food additives, except for baking powder and fruit pectin. These products could be anything from bread to chocolate. Since the label does not imply new products, there is no specific category of prices or quality of goods where "Äkta vara" is more accentuated. Following this states that these products are not necessarily more expensive.[175]

Grahn is well aware of the criticism against this label and explains that it is not a marketing trick to accentuate certain products. The name of the label and the criteria are founded from an external actor which is the Äkta vara organization. The national food administrations critic against City Gross' misleading campaign is mainly based on the name and the definition of no food additives. She states that the label "Äkta vara" do not mean that all of their other products are unreal. It is just a name for the label to help customers know what products that do not have unallowable additives. She is also well aware of that the label does allow two additives which can cause confusion among their

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[172] Ibid.
[173] http://www.citygross.se/om-city-gross/historia;jsessionid=C104E313EEC9C5CA0FE688F23897BBAF.localhost (2009-12-29)
[174] Grahn, C. (2009-12-16)
[175] Ibid.

customers. However, City Gross has embraced the criticism and can understand that all their customer might not know the criteria for a "Äkta vara".

When scanning for weak signals in the market, City Gross in general does not do any market researches themselves. Instead they study their market by taking part of big customer researches nationwide and internationally. These are researches that all actors in the food industry can use. It is important to study the national and international aspects to be able to get a wider range of information. Another way to keep themselves updated is to be active on reading blogs and newspapers and other media. One significant factor is also to be perceptive to the surrounding world and what their needs are.

Grahn further means that they saw several weak signals indicating the demand for food without additives. There was or still is a great interest from their customers concerning this subject. People were asking questions in the stores, they were calling to gain more information and sent several emails. After the establishment of the label, customers have also contacted City Gross to give them suggestions on products that could be "Äkta vara".

City Gross has seen an increase in the sales of "Äkta vara" products but because they are still in the development process, it is hard to know the exact numbers. It is as well difficult to state what customer segments that are buying these products. To be able to have knowledge about this, it will require more time and development of the label in the stores. However, they are planning in the near future to connect the label to customers' membership cards in order to see how the products are selling. Today, the stores have around 200 products that have the label "Äkta vara" and they hope that it will increase. Although, it is not a fast process because they have to send their products to a third part that study the products content. City Gross believes that the third part with its expertise can make better judgments and examination of the products, hence the increase of reliance of the products. The company has also educated their employees in the marking so that they could assist the customers that want more information about the label.[176]

Other signals or trends within the food industry that Grahn has spotted is the weak signals for higher quality in products. She believes that the focus on price has been the central point for many years which have lead to that the quality of many products has been lost. Therefore she thinks that this is on its way back. Following, she explain that "Äkta vara" is going to be a label that will bring quality and food happiness back. *"We think that this is a sustainable trend that is here to stay."*[177]

City Gross want to contribute to reducing the environmental destruction by using environmental trucks and education of eco-driving is provided for the drivers. Many of their products are also coming from local farms to reduce the driving distance.[178]

4.7.3 Espresso House

Espresso House is a Swedish coffee chain that is owned by Palamon Capital Partners. They offer an attractive meeting point for people that are looking for a break in the everyday stress. The company has 85 different coffee shops but is planning to expand with 100 more within the three coming years.

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[176] Ibid.
[177] Grahn, C. (2009-12-16)
[178] http://www.bergendahlsgruppen.se/bergendahls/kvalitet-och-milj_ (2009-01-05)

To learn more about Espresso House's strategy and company, we interviewed the CMO Anders Jonsson.

One substantial change that Jonsson sees in the customers purchasing behavior is the Latte trend. This is hardly a new trend but it is still considered as an expanding one, due to the increased attractiveness in the suburbs. The Latte trend started in New York and later began to spread over the Atlantic Sea to Scandinavia, Stockholm. This is usually how the process looks, where we, in Sweden especially in the big cities get influenced by even bigger cities like New York. However, the products that work in coffee shops in the New York may not always work in Sweden, which is something that they have to take in consideration. In addition, it is difficult to know what the weak signals are of the new trends since Espresso House products are very affected by what season and climate it is. This means that this market is constantly facing new things in the coffee shops and most of the time it is fads. Another emerging change in customer habits is the so-called "breakfast trend". This trend can be explained by the changes in customers' behavior concerning eating breakfast outside of their homes. In today's society, many working people do not find the time to eat breakfast at home. The result of this is therefore that they eat breakfast at the office or sometimes in the coffee shops to save time and because it is convenient. This behavior have also contributed and forced on the trend with takeaway paper cups which has become a big trend in Sweden.

In order for Espresso House to detect or sense what their customers are demanding, they collect raw data through surveys and interviews of their customers. Although, 98 persons out of 100 answered and said the health aspect is important for them, but when Espresso House study what their customers are buying they spot quite the opposite. *"People are irrational"*[179]. So it is important for the company to also take into account what customers are buying to be able to draw the right conclusions. He also states that the local managers in addition to the surveys, studies what products that is more attractive than others and what sells. To spot weak signals of trends before they emerge, Espresso House constantly analyze the international markets from New York to Italy, to see if they can find any signals that could be important from them. Jonsson mentions that, if you want to be able to find a new trend you should use multiple tools as one is insufficient. This will give you a better base and a broader perspective. When analyzing the different findings, it gives you the possibility to see if the tools have any common denominator. It is easier to find the megatrend because they are often very visible and easy to grasp. In order to be able to find weak signals successfully and implement them, the management of the company needs to be perceptive for changes and aware of when the market will be changing.

When analyzing the emerging trends it is very hard to find specific products that would be successful within the market. Although, Jonsson can see a substantial trend that customers get more aware of what they are eating and drinking. He can therefore anticipate that Fairtrade and ecological coffee will become even more popular and increase. Fairtrade is believed to be something that will be important for all companies in the future. Although, it is important to mention that companies cannot transform over night. In order to create maximum value, companies need to reflect and consider over their decision carefully. For example, it is easy for a company to just buy Fairtrade coffee and put up a big sign in the window but this do not guarantee success or sustainability for the company.

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[179]Jonsson, A. (2009-12-10)

Jonsson points out the importance with Fairtrade but emphasizes that Espresso House mainly put their focus on ecological products and fewer additives. This is a well-aware strategic decision in spite of the Fairtrade hype because they believe that this is the first step to overcome the bad human aspects and because they believe that it will be a more profound strategy. Ecologic food will help the farmers to be protected from poison because farmers today do not have the appropriate equipment that they need to be handling that sort of toxics. This will contribute to a longer and higher standard of living for the farmers and parents will then be able to take care of their children. In turn, this will contribute back and help the society.

Corporate Social Responsibility is essential in Espresso House's strategy. They will launch and develop products in the future that will support this. Their focus is on sustainability and to contribute to the social aspects. Jonsson explains that coffee is a critical product and Espresso House is very happy and pleased with the coffee beans that they have today. This quality coffee consists of a good mix of coffee beans that result in a rich taste which is important. The taste in Latte's and espresso's should taste good. Therefore they want to be precautious with changing all their coffee into Fairtrade or to change suppliers. Instead Espresso House tries to affect the suppliers today and get them to change into ecological plants. Concerning the bakery products in the coffee shops, the company is trying to make them as pure as possible, which means that they are restricting as many additives as possible. Their vision and goal is to give their customer a pleasant experience and be able to enjoy good coffee and good bakery products. Authenticity will become very important and they believe that people will get less toxics in them through a sustainable strategy of authenticity.[180]

4.7.4 Barista

Barista was established in 2006 by Björn Almér, Nina Forsberg and Maria Andersson with the ambition to offer quality coffee that regards environmental and ethnical responsibility. Barista is in contrast to Espresso house a smaller coffee chain and is controlled under same the management team. To get an better insight of the company, we interviewed Nina Forsberg, who is the establishment chief of Barista.

When Barista started with their business concept they had not seen any clear signals on that customer were especially demanding for Fairtrade coffee. Although, they recognized weak signals that customer were more conscious about coffee and food and demanded more quality. Customer started to show interest in questions about quality and origin of products at the coffee shops. Since the members of the management team all have working experience from other coffee shops, they could easily find a pattern that indicated demands for a new type of coffee shop. The Fairtrade was highlighted by the bigger cities such as New York and London between 2006 and 2007, which spread awareness among people to take more responsibility for everyday life by changing for example consumer and purchasing behavior. Barista's has focused on their segment of Fairtrade products because they believe that people want to do more when they purchase products as coffee. They want to make a good cause in daily life by consuming right products besides the alternative to donate money directly to organizations. Forsberg mentions in the interview that one of the biggest reasons behind the successful recognition of Fairtrade today, is mainly because of the marketing of these products within cities. Therefore she believes that the demand of Fairtrade will increase as long as the marketing of this type of product does it. Barista has no specific segments of customer.

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[180] Jonsson, A. (2009-12-10)

They are defined as anyone from the range of young people, businessmen and mothers to elderly. The common denominator among the customers is that most of them are aware of their consumptions and also want to make differences in society.

The company does not make any extensive market research, instead they choose to look at other markets that lie in the frontier of emerging trends as England and the United States.These countries are expected to be about 3 to 4 years ahead of the Swedish food market. Therefore Barista follows trends on these markets to be updated on what signals that could perhaps emerge in Sweden in the near future. Information are gathered and analyzed from magazines and visits to other countries. Forsberg mentioned England as a country where Fairtrade products are very successful today. Another tool to make researches about weak signals is through membership cards, which collect data about customers' preference and buying pattern. Statistics could show which product that sells well respective bad. These cards are anonymous and therefore more specific information about customers' gender, age etc cannot be found. Comparisons with other coffee chains and within the company are made as well. Recognition of customer preferences is also done between different geographical areas.

Marketing is seen as an expensive cost for Barista, hence there are little marketing done to reach new customers other than performed campaigns through collaboration with local newspapers where coupons are handled to offer readers two coffees at the price of one. When these are used by customers it is possible for Barista to both gain new customers as well as studying the information from the users. Sometimes Barista also distribute free tests of bakeries and coffees to make people taste their products and hopefully like them. The motive behind the intention of low marketing costs is to use the money to donation instead. Observations made from our visits shows that Barista market their purposes as donation of money to less beneficial countries and other actions to improve their lives are made by display of notes with information. One example we found was a fund in Ethiopia where Barista provides 300 children with school meal every day. Other aspects that Barista concerns are the climate issue where they have chosen to use GodEl, an electrical power supplier with intentions to beneficial purpose.

Within the health aspects they think it will become bigger but not in the sense of products as GI and less fat, but instead in eating and drinking organically products without toxics. Trends with GI and slim muffins are therefore according to Forsberg seen as fads rather than trends, because food without additives is predicted by them to last in long time. Barista think that the demand for products without additives in the coffee shops industry is not as strong as Fairtrade. However they have decided to include food without additives to their selection of products such as some pasta dishes. Forsberg believes that the trend will continue to strive against more healthy and pure products and the signals that she have seen as future trends are less fast food, more Fairtrade and less additives.[181]

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[181]Forsberg, N. (2009-12-15)

5. Analysis

In this chapter we will analyze about weak signals based on our theoretical material and empirical evidence that we have found. It will give the reader a deeper insight of our reflection and thoughts about the subject and our case studies.

To make successful strategic decisions and decrease future uncertainties, companies need to be active and alert on detecting and managing weak signals. There exist no set of magical tools that works for every company due to the fact that each company is unique. In order to find weak signals, it is important to begin with two factors that are essential concerning picking up these signals. The factors constitute of who the researcher is and what kind of answers the company wants to reach. According to our empirical evidence in relation to our theoretical framework, the important part of the individual's perspective is crucial as this will affect the interpretation of the signals. The researcher is affecting the results of the signals due to fact that his perceptiveness allows him to see the signals that matches his view of the matter. As mentioned in our theory, it is hard for managers to look outside their comfort zone because it is too difficult for them to accept and embrace the extreme signals and therefore it is easier to ignore signals that do not fit into the mental picture of the managers. In other words, what you search for is what you find. This results in the signals found is the signals that are special and lies within the interpreter's imagination. We have in several cases discussed why some signals are visible but not seen and in contrast why some signals are seen but ignored. The answers that we have found are complex and ambiguous as the human minds tend to search for information that confirms what they already know or wants to believe. In excess of our empirical results as our study presents, we have found that there exists a basic distinction between individuals in all situations. This means that some individuals are more open and perceptive towards change and innovative ideas than others. There is a founding base of fear in taking risks that arises when weak signals challenge the traditional views of a company among others, which makes it easier for management to reject them than to embrace them.

Other individuals use their earlier experiences and memories to find the signals that relates to them. If a name or company rings a bell of something you have heard or seen before in any situation, it is often easier to choose that specific name or company. A signal becomes clearer when you have something to refer it to. For example if anyone stated that they have seen signs that indicates that pigs will fly in the near future, you will stand critical to this opinion and consider it as a an absurd idea. However, because of the extreme opinion, it is easier to disregard its possibility and therefore not even bother to search for facts or signals that would indicate it either. The possibility of this extravagant view being true is also greatly opposed to due to that you have not seen this before in accordance to earlier experience and your knowledge about pigs. In spite of our experiences and ideas about how reality really looks, it is impossible for us to have knowledge about everything in the surrounding world. Therefore it is also impossible for us to reject the fact that it is an impossible view, like the black swan. People only see what they want to see simply because they are not prepared for unexpected occurrences as the black swan. It is according to the black swan theory also easier to search for an one-sided result of a research. An individual can be tested for a specific illness such as pneumonia and receive a diagnose who confirms that you pneumonia or not. However, it

does not necessarily means that you are healthy. This result in a limited and narrow-minded searching behavior which can also can be observed by many people who consider themselves being well experienced and better, thus the lack of concern for continued searching for weak signals. In the contrary, many leaders today often doubt and undervalue their intuition that they have gained by having several years of experience. It is essential for a company to have a good mix of people because it can stimulate the group and develop a deeper understanding. However, this is difficult in practice as humans tend to surround themselves and employ people that are like-minded which results in a bigger part of many companies today consisting of a homogenous group of people. Following, whatever the situation is in a company, we believe that it is crucial of being aware of your disabilities and your limitations as this will contribute to a clearer view of themselves and a broader perspective. After analyzing individual's perceptiveness and their limitations, we continue on with our second factor which revolves around having a clear hypothesis in order to know where to search for the signals. Depending on what questions a company wants to answer determine what information that is relevant. In addition to an interpreters perceptiveness and the research area that the company wants to focus on, we can thereafter start picking up weak signals. You have to ask the right questions and clear out the noise that our experts emphasize. We believe that the main key lies in the fact to find information that is useful for you or the company in question. If you ask the wrong questions you will receive the wrong signals or even miss important ones. To ask right questions will facilitate the process of detecting weak signals if you have a direction. In addition, Alan Webber says the fact that activity in searching and being alert on signals that keep coming back to you are probably important signals that you should embrace. Sometimes when searching for specific signals, others signals will appear.

Many of our researches have stated an expression concerning weak signals and future strategic uncertainties which is that you have to know the past in order to understand the future. We agree on some extent to this perspective as we ourselves have experienced how we several times have to understand what has happened before interpreting the future. This pre-study of the past also gives us a better base to start from. Although, a saying that we feel is more suitable and better matched in this matter is that you have to know the present to understand the future. We understand the importance of recognizing the past but we consider the understanding of the present to be even more significant. Since our research problem is of a very complex and obscure nature, the focus should be projected from the past to the present as it is right now that we can pick up signals, not in the future or the past. Therefore the constant need to be alert and active in scanning for signals is crucial. If we cannot make sense of our signals in the present or know what the present looks like, it is extremely hard to make a fairly good interpretation of future uncertainties and occurrences and at last gain sustainable competitive advantages.

5.1 Pattern of signals

We have discussed the difficulties in finding signals on the market due to the researchers and the information found. Although, even if the individual find signals that are of importance it could be difficult to know if it is a strong or a weak signal. Johanssen states that the company can identify the nature of the signals with the help of pattern recognition. This indicates that for a signal to be strong it should be seen several times in different industries. We thought that the importance of seeing how they are connected and related to each other also constitute an essential part of the analysis. When analyzing the different signals you might in the end see a pattern that can lead you to the next

emerging trend. If you do not see a pattern or if the signals only are spotted in a few markets it could indicate that the signals you have seen will lead you to a fad and not a sustainable change.

5.2 Leadership

For a company to be able to implement signals in their organization it is essential that the organizational culture has the possibility to embrace the information found. The tipping point leadership framework refers to that if the employees have the right beliefs and energy, information and changes could emerge quickly within the organization. This is of great importance when companies want to detect and implement changes due to the fact that the signals could get ignored and overlooked if the management and the employees do not have the right mindset. One of the problem that could emerge within the company is the cognitive hurdle, this factor suggest that the problem should be expressed in a way that everyone can understand. When studying our empirical evidence we found that in the case of the elderly starvation they used a real story AGDA for the project group to understand the importance of the problem. This was a successful way of inspiring the group to react and to create innovative solutions. Due to the problem being presented right in front of them, contributed to a great impact and realization, especially when told from a primary source perspective which is referring to Agda's personal care taker rather than from a secondary source which is the doctor. After the group saw the signal of the problem, innovative solutions was found such as energy bars and liquid means in order to facilitate the intake of medicine and lower the dryness in the throat. The driving force behind Agda's case easily developed new forces that could be referred to the changing lunch meals in Bladins schools. The project group could thereafter see what drives that lies behind certain signals and also what trends that drives each other on the emerging market.

Even if the individuals understand the problems character it does not mean that they have the motivation to act on it. For a company to pick up signals they need all their employees to be open-minded and motivated to take in information that could lead them to the future signals. It is therefore an advantage for the management if they could develop workshops where the employees could discuss potential changes on the market. One reason why the companies fail to engage the employees in the decision making is due to the resource hurdle. Because companies do not want to put resources on factors that do not have a clear outcome and finding signals is everything except a exact science. Although , for the company to be able to have a strategic future they need to keep themselves updated of the changing world, and put their resources on places that can transfer into advantages for the company.

 Additionally a workshop would not only gain the organization but the workers would also get more motivation. This is due to that they would feel more important when they have the ability to contribute with their specific knowledge which would help the company surmount the motivational hurdle. It is not only crucial to have an experienced management team but also a team that are close to the market where they can spot new signals and trends. The problem that often occurs when search for signals are that they are vague and hard to predict, the management team could therefore never know if the signals they have spotted actually are going to happen. Even if the company has found a signal and changed their strategy after it, it could be difficult for them to know if it was a occurrence or not. As we have discussed in our empirical evidence it could be hard to prove that a occurrence has happened with or without your interference. Although some signals can show

themselves very clear like a Fairtrade trend, because the company can see its impact on their customers, but when studying signals in preventing crimes and terrorism it could be hard to prove that it was you interference that lead to a none occurrence.

The risk of being wrong can prevent the management to implement the trend in their business strategy. It is therefore rare that a management would listen to employees' ideas if the signals are not strong. This could be a disadvantage for the company because when mixing management's great expertise and employees' knowledge of the market it could lead to the company's strategic future, due to the fact that young people are closer to the market and can often see new emerging trends before they come to the management's awareness. When detecting and implementing signals within your organizations you have to consider the political factors as different countries have different political structure.

5.3 Implementation of weak signals

When companies have found what signals that are useful to them and what they mean for the company per se it is significant to implement it in the company's strategy and business model. It should be integrated in the organizational structure and be a part of the company. This process of detecting and making sense of weak signals should be self-evident to prepare the company better to handle future threats and opportunities. The willingness to change and to implement the signals found is however another problem. It is discussed among several of our experts that this process is extremely hard to fulfill as most companies are unwilling to change. A typical example is the military defense and other bureaucratic organizations. Their traditional planning process and organizational structure makes it almost impossible to embrace change and to be flexible. The military force is described as a big organization that consists of many people, thus the incapability to respond to changes. The implementation process will require enormous planning, a big choreography and a long time perspective. As size matters, Jan Honig believes that one measure to decrease the bureaucratic and slow process, is to divide people into smaller groups and create an unity through all levels. It is important to make people understand the language of the company and to be aware of the shortcomings and possibilities which will lead to increased efficiency.

We believe that another factor can in addition to create smaller units in bigger companies, to also mix different generations of employers. Because it isimportance to have both well experienced leaders and to have young people who are new thinking and works close to the market. Discuss the interesting signals in groups as this will contribute many different perspectives being included and talk to people that challenge your views to receive a better and broader result. It is as well as essential to integrate people from all levels in the hierarchy as our empirical results also states. Weak signals in the periphery according to the theory of Shoemaker means that managements must allow all members to contribute to this peripheral observation. This will result in better gathered intelligence. This does not necessarily mean that it will guarantee success, but it will create a more heterogeneous group that will consider many views in contrast to one. If a management leader have discovered a relevant signal for the company, it is more likely that this signal will be heard in contrast to if the receiver of the signal would be detected from an employee working in a lower range. Following, depending on the trustworthiness of the receiver and the signal will determine the result of the signal being implemented or not. Therefore Alan Webber emphasizes that employees at all levels should be given equal attention in order for an organization to be good in picking up signals.

Fürth mentions that smaller companies or companies who are in immature industries are more perceptive and more able to be flexible to change. A younger team is more inventive and is more adjustable and easier to adapt to emerging environments. They furthermore challenge presumptions that others may necessarily not do. We consider that many competent leaders also face the risk to have a narrow-minded thinking as they are traditional and used to a certain way of thinking and acting. If something has worked for 15 years, you would very much like continue with the same measures and strategy. However, it is important to point out that many competent leaders in management teams are very successful, thus the factors of being a well experienced and traditional leader does not necessarily equals resistant to change at all times. In contrast to traditional leaders, younger members have the advantage of not having a predestinated view of what works and what measures that do not work because of the lack of experience in the market. This could be one of the reasons why a younger employee is easier to shape, thus the perceptiveness is enhanced and the flexibility is increased. It is hard for management to change something that they are unfamiliar to. Management teams have difficulties in agreement which are why what they all agree upon are the occurrences that already happened. Many companies would also like to believe that some signals are not worth implementing because it is considered a fad and something that will disappear in the near future. However, if the fad turns out to be of a sustainable character it could consequently lead to bankruptcy. It is an easier measure to reject weak signals because of the difficulty to handle them and implement them in a company's strategy rather than to embrace them. It is not enough that some leaders are agree upon which signals to implement, the challenge is to make every employee in the organization willing to change and see the benefits from signals. This is however a very difficult process and we can maybe argue that it is an impossible process as it is a time-consuming measure that requires a lot of resources to reach this unity. We believe that people in business environments or others wish to feel safe and want to stick with what they know, therefore when weak signals enters the picture and indicates some form of change it is important to consider risks and consequences of it. We feel that this is a logical reaction and can relate to the given situation and as well see the complex problem and reluctance to change. Change is a step out to the unknown and does not guarantee a winning situation. Fürth furthermore means that this could be connected to the economic cycle of a society. Companies that are situated in an economic boom have a higher unwillingness to change and companies in recessions are more open for new ideas and approaches as our empirical results show. Many companies set up strategies for how to cope with future uncertainties and occurrences that they believe will happen. The disability however, is the fact that they do not set up strategies for uncertainties that they do not believe is going to happen. When that day comes, they stand there completely helpless. We think that it is a substantial aspect to consider and put more emphasis on. It is important for organizations to deploy the old thinking of scenario planning but even further and to a deeper level. In fast changing environments it is important to have innovative methods that work for the organization in question. Benner mentions an example of Lego where they are using their customers as innovators to get an insight of what customer wants and requires. You invite customers to develop the products and form communities.

## 5.4 Methods to facilitate implementation

When new signals are found or new innovative ideas surface that indicates change it is not enough to have met all the above mentioned factors, the organizational structure and organizations business model are factors that have substantial impact. We have argued above that the structure of leadership have a great impact on how well the signals are embraced or met. To have a well

established leadership that works well in both horizontal breadths and on vertical ranges will increase the process and implementation of signals found. We thereby believe that a company's business model is as essential as the leadership. New methods are required when organizations are willing to change due to detected signals. An open innovation business model is one of the methods that can help an organization to be more efficient in creating and capturing the value of signals. It allows companies to focus on their key competences while at the same time using their network and receiving great competence from other companies. By having a concentrated group of competent and experienced people both internal and external will contribute innovations entering the market quicker and to a decreased expense as everybody contributes to the development. In having an open business model leads to integrated relation between actors as we can see in Magnus Langevik's food network. Skånes food innovation network performs an open business model where they occasionally hold conferences and invite different interesting persons that may be concerned by the issue or problem and together discuss the matter. Through interactions and networking, the process to change and be alert in open business model facilitates the process of gaining good information. Due to the open business "thinking" and to the digital development of our society, people can interact and create networks that in the end will strengthen a company's strategy and sustainable competitive advantages. We think that the social media also plays a big role in the development of emerging environments. Linda Genf means that companies should take advantage of the social media and make use of the information to find smarter ways to innovate and find signals. They should also approach markets that enhance open innovation thinking. This is connected to the idea of reinventing you business model due to that many companies today do not have a business model that is suitable nor applicable on new emerging trends or changes. As it is hard to change a whole organization it could be emphasized that the entire structure should be changed to facilitate the new processes or the new way of thinking and producing. If the signals of changes are not implemented in the core of the business model, they jeopardize to be stuck having a traditional business model while at the same time trying to implement new ideas and innovations to improve strategic future. As the business environment is believed to be more complex in the future, it is important that they have knowledge whether the company's business model will work or not. Otherwise it is needed for the company to reinvent it to better match the business environment. However, if companies choose to stay indifferent the consequences will be that they fall behind and risk the company's chance to survive in the market.

In our empirical result, an interesting and strong opinion was expressed about companies approach in analyzing the surrounding world in order to prepare for future uncertainties and adapt to it. It was argued that this is impossible to do as we affect what we are analyzing or searching for. The signals that we see will be shaped or changed when we react on them. We believe that this is partly true but not completely as this cannot be categorized as yes or no. This means that we think this opinion is right but the possibility to adapt to the surrounding is still possible. We are aware of the fact that companies together change the environment but it does not necessarily mean that they all are in the frontier of change. Some companies can be superior to pick up weak signals and act on them in relation to others and when companies sees what works they will follow. In other words, adapt to the new environment. We consider that this will in a later stage contribute to the change of the market as a whole. We also see a new birth of companies focusing on the purpose aspect instead of the profits, which was discussed by Lars Johansen. Because of the companies are situated in a position where they have a lot of competitors, more aware customers and facing new emerging

markets such as China and India it is not enough to continue in the same pattern. Detecting signals is therefore very substantial because it gives companies an indication of what changes and uncertainties they can expect. However, the signals that we can see and analyze today are that companies take more social responsibility and put greater emphasis on giving back to the society. As many companies today look and act similar, they face difficulties in being special and being unique. Therefore we feel that in the future, companies will not be able to compete on the same conditions but rather compete on having a higher meaning and good purpose that will be in the center of attention that customers feel connected to.

When studying the analyze, a preliminary pattern of tools and methods can be formed that could help the researcher to pick up the weak signals. To clarify the analyze we will present a mind-map that will give the reader a better picture of the key points that will help him on his way for a strategic future.
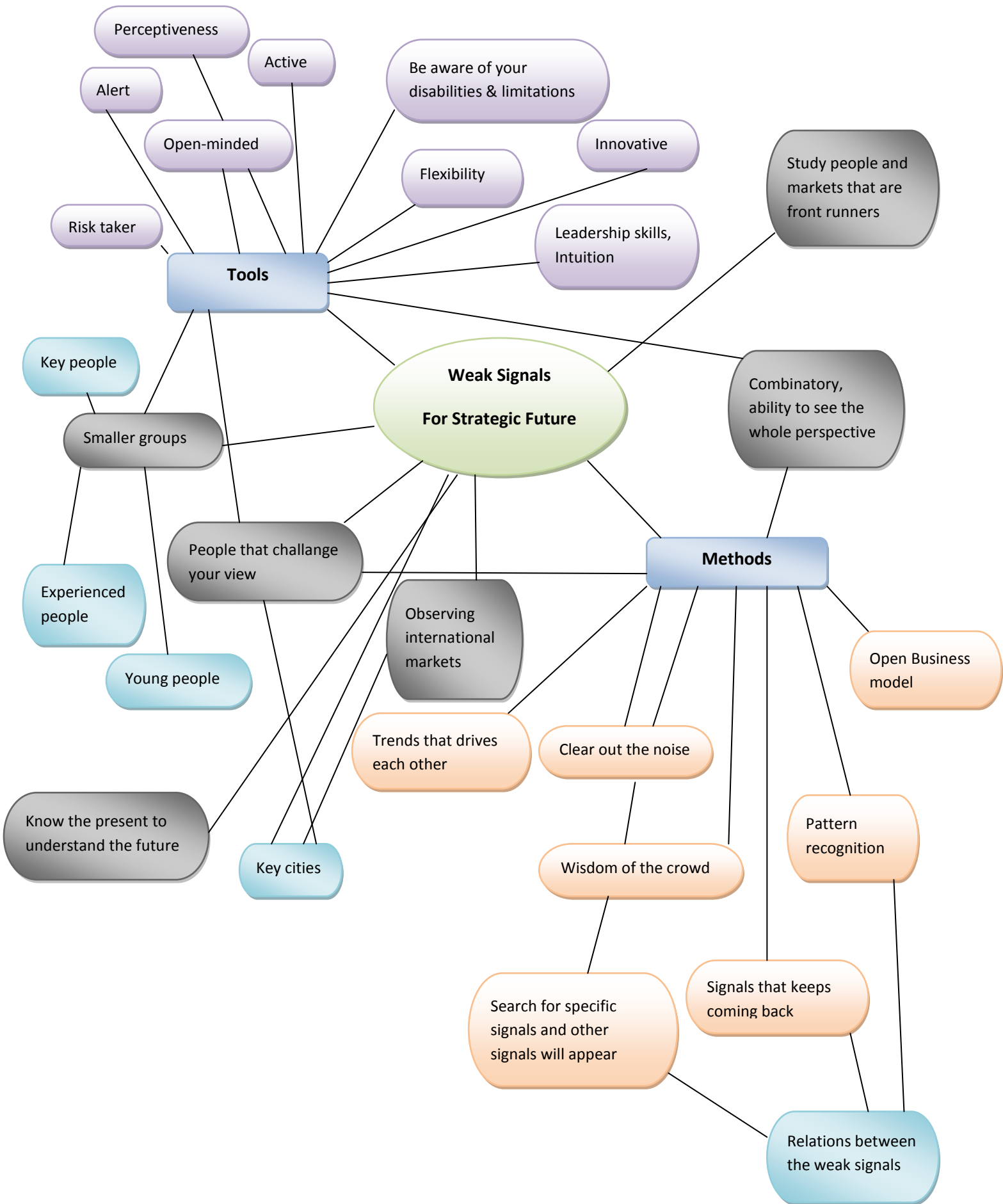
5.5 Analysis of our case studies

A matrix will be introduced to show how the chosen case companies have detected and implemented signals found in the food market. The matrix is categorized into five major fields of weak signals that we distinguished; food without additives, Fairtrade, social status, social responsibility and purpose. Under each of the fields we made evaluations of how the case companies approached and implemented these. The signal of social status refers to whether products are associated to social status such as exclusive and differentiated products that express buyers' conscious choice of lifestyle. The column social responsibility alludes companies' actions to support environment. These responsibilities are defined as the common view in society about us being conscious about and counteract damages and negative influences caused by our consumptions behavior. Some of these actions are obliged, other optional. Our evaluation of social responsibility is based on optional efforts made by companies. The signal of purposes describes companies' higher aim to fulfill a purpose to contribute society, which means that they consider parties beyond the directly related ones as; customer, suppliers, competitors, employees etc. It should be noticed that it differs from social responsibility because the purpose is a choice to fulfill something that is not regarded by society to lie within their responsibility. Our result from the case companies and their methods to detect and implement weak signals follows.

	Food without additives	Fair Trade	Social status	Social responsibility	Purpose
ICA	To some extent	Yes	Yes	Yes	Yes
City Gross	Yes	Yes	To some extent	Yes	To some extent
Espresso House	Yes	No	Yes	To some extent	No
Barista	To some extent	Yes	Yes	Yes	Yes

An overall study of the matrix shows that all case companies have to some extent detected and implementing some of the signals. ICA and Barista have almost covered all of the signals meanwhile Espresso house has detected and implemented smallest numbers of signals. The analysis below will be based on the matrix together with interviews and theories. Comparison will first be made between City Gross and ICA followed by Espresso house and Barista.

5.5.1 ICA & Citygross

ICA is successful to detect and implement most of the weak signals except food without additives, which they have implemented to some extent. According to Eriksson, ICA have spotted the trend concern food without additives but choose not to further implement it because of the problems that arise from confusion with new markings of products. It could be of the reason that ICA already has

several markings as their own ICA brand and I love eco etc. In contrast to City Gross which has practiced the project to mark products without food additives "Äkta vara" to inform customers in stores about food contents, ICA has instead approached services about products' contents through internet or over the phone. City Gross has therefore put more effort into food without additives because they have involved external partners to make research about food contents and also marked it to make it more visible in stores. There are as well other methods for the grocery stores to meet the trend about food without additives that could be suggested, which is to embrace findings that Lagnevik made in London. He observed that there are other ways to create trust among customers as infuse reliance to the company that assures that actions and choices are made with great consideration. The requirement of food without additives arises from customers being concerned about the contents of food which could be reduced by offering information about products. However, Lagnevik's observations involved a shop with pictures on the walls that showed visits made by the owner to different farms that they cooperate with. This created a feeling of trust and safety among customers because it was believed that the offered products have been approved by the owner himself. Therefore reliance on companies to strive to offer products that are best for consumers in aspect of quality and health, could be an approach for companies to meet the trend about food without additives. It could either be regarded as complementary method to implementation as in case of City Gross, or an alternative method as for ICA. Some manners to process and create reliance are through commercials which illustrates companies' relation and interaction to the origin parties of food, or other actions that show that companies consideration for customers.

Status among people is usually associated with material objects such as expensive clothes, cars etc. However, we have seen additional indicators today as health aspect to express status as well. Living a healthy life and also to make conscious choices of products to consume regarding their origin, production and purpose have increased its importance. The empirical studies show that ICA detects and implements social status better than City Gross. The reason behind it could be that the grocery stores have different segments. City Gross has a reputation and history of being price oriented meanwhile ICA's products are more exclusive and directed to other segments than low price. Hence, it is a natural move for ICA to attention signals about social status because it is aligned with their concept. Some examples of that ICA emphasize the social status is through their more specific collection of I love Eco and the product line ICA selection. Both are more exclusive and have separate intentions; provide with ecological products and to supply products with finer taste, finer design and more unique function compared to regular products. Lagnevik suggests individualized options for grocery stores to offer customers product that defines social status. Some ideas could be to give customers the opportunities to create their own mixture of coffee beans or müsli as ICA has done. It could also give ICA valuable information about what customers ask for in a müsli mixture, by experimenting with contents by adding flavors they could use information to produce their own ICA brand müsli. Customer could function as innovators because tools are given to combine contents to make customized products with individual taste.

Fairtrade is a signal that both ICA and City Gross detected and implemented but they consider it not to be as strong as ecological products. Previous selling statistic from ICA shows that that the buying pattern for ecologic products are higher than for their Fairtrade products. Therefore both companies have focused more on ecological products in front of Fairtrade. But these studies does not necessarily means that people values ecological products higher than Fairtrade because even if

customers says that they are interested to buy Fare trade it is does not need to reflect their actual behavior. Even if companies have not seen signs in Sweden that indicates growth of Fairtrade products it does not mean that it would not emerge, because it is in fact a big trend in England at the moment that could later on influence Swedish market. According to Eriksson Sweden is often few years late when it comes to trends within food industry and it might not have the same impact in Sweden because of cultural and behavior differences between countries. Fare trade products are relatively new on Swedish markets and customers' behavior pattern can change fast.

As seen from the matrix both companies embrace the signal of social responsibility. Their primary focus in that field is to reduce their transports affects on the environment, and find new ways that will reduce the electrical use within the stores. They have also started to supply the stores with local food distributors which make the transport distance shorter. Although, this does not indicate that the products would be better for the environment and healthier that most customers believe. This has to do with the fact that local farms may not have developed distributions cycle which in the end leads to an increased number of transports that will pollute more than before.

Johansen mention that he believes that one big trend that are going to be crucial for companies in the future is to have another purpose than just earning money, companies should also contribute to a better society. ICA detected and implemented this signal by introducing a project called "We can do more" where they offer employment for people with disabilities. We have not found any information that would indicate that City Gross are active in any projects that would contribute to the society more than taking social responsibilities. One way for City Gross and ICA to be more active to contribute for a better society could be to get involved in a project like Skåne Food Innovation network. They can collect important information about innovations that can be crucial for a specific group of people and how to help them, like the case with starvation in the geriatric care. For the companies to easiest apply this in their strategy they need to have an open business model that let them share and contribute with information to other companies within their field.

5.5.2 Espresso House and Barista

Espresso house and Barista look at the international market to detect weak signals and trends. Reason behind it is because they agree with many within food industry that Sweden is late to absorb trends. United States and England are some countries that were mentioned. The coffee chains use different tools when it comes to understand the national market. Espresso house makes own researches compared to Barista. They collect information from questioning and interviews. The studies include data about customer's actual behavior apart from the answers that are presented in researches. To better understand customers. Barista choose to use available information from overall reports, news and internet as tools to scan environment. They don't make any researches on their own but collaborate with campaigns with partners to find information about customers.

Both of the coffee chains agree on that health aspect is becoming more important. People are more conscious about their choices. Ecological and Fairtrade is trends that they predict will be highly valued by people. One thing that we have observed is that they have seen different signals of how to meet the trends. As the matrix illustrate, Barista have detected the signals of Fairtrade and integrated it to their concept. Espresso house on the other hand sees stronger signals in Food without additives, but it does not exclude the other signals about Fairtrade. They have within their range of products included a Fairtrade coffee in filter coffee. The move from Espresso house is made

on basis of their own studies that shows that people want Fairtrade products but do not behave that way in the consumption of coffee. Companies choose to implement weak signals that are aligned with their strategy. Barista was established with purpose to give customers another feeling of coffee shops that took more responsibility of the environment and also of lives of the Third world. The emphasize is on the ethnical aspects and therefore they collaborates with associations like FN and programs as "Save the children". From that point of view Fairtrade fits Barista's strategy better than Espresso house. Espresso house declare that their strategy with focus on sustainability and CSR is not compatible with Fare Trade. The coffee chain looks at the value chain for possible ways to improve the environmental state and that system fits ecological food better because it reduces environmental pollutions. Barista have to some extent implemented food without additives because we found that they provide several bakeries, salads within the concept. Another reason for Espresso house to not further implement Fairtrade is because of the quality standard. They have not yet found good alternatives for their mixture of coffee beans within Fairtrade which would bring the exquisite taste.

The coffee chains have more specific segments of customers. They describe the majority of customers to be a wide of range from teenagers to people under the age of 60. They have recognized some kind of patterns depending on locations of coffee shops from business people to students. A social status within coffee shops could be made because they offer different tastes and atmospheres. Barista stands for coffee shop with ethnical and environmental purposes and that could attract people to sponsor their purpose. But there is as Forsberg says always a choice to either visit for a good cup of coffee or good cup of coffee and making good deed. We think that coffee shops posses some kind of social status because it describes a certain life style.

Within the social responsibility both Espresso house and Barista concerns the environment in operations. Barista does it with making conscious choices of suppliers and materials used in operation, as environmental friendly coffee cups and collaborate with energy supplier God El. Some of the furniture are produced and imported from Africa, even though it is a good deed to support African workers with jobs and capital it could have negative side effects on environment due to long distance of transport. In other words this decision could counteract the social responsibility. Espresso house focuses on environment and CSR and work continually to find ways to improve their value chain in the aspect of environment.

When analyzing the purposes of the coffee chains we have considered Espresso house for be lack of detecting and implementing signals of purposes that reaches further than the sphere of environment that they act on. Espresso house describes their purposes to be sustainable in the aspect of protecting environment and also to keep and develop the company. Espresso house main goal is to offer customers coffee with good quality and fine taste. Barista has a higher purpose because they engage themselves with organization as FN, it might not be as profitable but it serves a higher purpose. Customers make a active choice because they also helps the society. It is interesting to reflect if customers actually choose the Barista over Espresso house even if Barista has a higher purpose that contributes more to the society.

5.5.3 Analyze of the matrix

We can see that there is a different view of the Fairtrade trend between our case companies. Barista has seen an indication that Fairtrade will become an important trend in Sweden and City Gross and ICA believes it is a trend but that for example ecologic are going to be greater. None of the

companies have to be wrong due to the different factors that depart from a café visit and grocery shopping. Customers might be more open for buying Fairtrade coffee when it has the same price as their regular coffee then buying Fairtrade groceries that are much more expensive than their regular products, due to the fact that the taste and the price factors are the most important criterions for consumers. So when the companies has reflected upon customers wants to make a active chose it should indicate that most costumers would buy their coffee at Barista. Although, when studying Baristas and Espresso House customers rate of turnover we have observed that customers still chose Espresso House instead of Barista. Even though Barista have detected and implemented more signals than Espresso house, it could be discussed why Barista is not a more successful. Our thought in the subject is that the signals in the matrix have different proportion of importance and one of these signals could be much more valuable than the others. Although, the weak signals that are found today might emerge to a stronger signals in the future and it is hard to tell which weak signals that will lead the company to successful strategic future. What we cannot forget when we study the food industry is that the top criterions are taste and price, this factors could explain the relation between Barista and Espresso House.

As seen in both comparisons the more established and bigger companies have a structure that in general makes it more complex to change and follow weak trends. Both Espresso house and ICA have acknowledged the trends of Fairtrade and food without additives but it could be difficult to fit to strategies and their positioning. These signals are relatively new and it could be seen as jeopardizing if companies follow if they have not made clear whether it is a trend or fad. This could explain why ICA have had a careful approach to "Äkta vara", because they do not know if it works and seen from City Gross they are still developing it and adjusting it regulations and recommendations. Espresso house have introduced few Fairtrade products even though they are not according to Jonsson fully aligned with their strategy. This could be signs that they are willing to adapt the concept if there is more researched done on it and if there are coffee beans that could stand to the quality and taste of their coffee. As Webber mentioned younger and smaller companies are in general more willing to experiment and have a more flexible structure that allows it. Maybe this could be from ICA and Espresso house seen as projects and experiments with risks that they are not willing to take.

The structure of the research about our case companies was formed based from our general ideas about the cafes and grocery stores. There were for example assumptions about Espresso house for not being involved in Fairtrade or food without additives. The idea was to compare companies within the same industry with different views of food trends. After the interviews we found out that the studies can be linked to Agrell who mentioned that when companies and organization search for weak signals they should decide what they want to find and use it as base to further studies. We followed it and found that Espresso house for example saw Fairtrade signals but chose to not implement it. This confirms Taleb's idea about that we search for something that we knew but found something we did not know.

6. Conclusion

In this chapter we will present our conclusions drawn from the findings of our thesis. We will further discuss the concluding meanings of weak signals and the answers to our research question. The conclusion will be based on our empirical and theoretical studies in relation to our individual learning from this journey.

The process of picking up, sense-making, acting and implementing weak signals are substantial and not to mention confusing and ambiguous. The demand for having this searching behavior implemented in the company's business model is a way to help companies overcome and easier cope with changes and emerging trends. Companies need some kind of insight about their future in order to prepare for potential changes. In a fast changing business environment that we face today, companies should use signals as means of forming better purposes and strategies and to take advantage of the signals found. This should be executed in order to survive on the existing market and to gain market shares. It is believed that weak signals of an occurrence can either develop slowly or come as a complete shock. However, we think that the conclusion of this depends on if the signals have been heard or not, and by who. We can take the financial crisis as an example of the transparency where it was impossible for us to see the same signals that many finance people saw. The ones who failed to see the signals experienced the crisis as a shock while others that detected weak signals were more or less prepared for it. Some individuals even warned and claimed that a financial crisis will take place although the signals of this became ignored and unheard. A tremendous occurrence like the financial crisis does not only affect the financial industries but also have impact on other actors in societies that go beyond national borders.

	Scanning for Weak Signals	Sense-making	Probing and Acting
Agrell	* Have clear & precise hypotheses * Put the weak signals found in a context to increase understanding	* Difference depending on object and subject, the difficulty of non*occurrence/occurrence * Clear out noise	* Includes precautionary principle, cost and brand aspects
Aspelund	*Observe the web, international companies, other media companies, political issues etc.	* Own analyses, surveys in nationally and abroad. Use of international information sources	* Discussions and relation to the position of the company
Benner	* Clear picture of your users, the market and communities	* Sort out what is important for your company	* Build in the signals found in the company's business model * Customers as innovators
Fürth	* Knowledge about your surrounding environment and monitor relevant markets * Perceptiveness	* Surveys, workshops and focus groups that works directly with the organization	* Develop systems that allow key persons the time and space to reflect and monitor changes in the world.
Genf	* "Monitoring maps" that is used to locate critical areas * Monitor, analyze and draw	* Look at actors, trends and tendencies. * Driving forces, forces of	* Integrate analyses of the surrounding world with the company's strategic goals and

	conclusions	opposition analysis and relation analysis	decisions. * Be active and updated on occurrences.
Hamrefors	* Individual perspective: Distance in time, geographic relation& conceptuality * Intelligence tools	* All is depending on your situation and the sense making should be made in relation to the company in question.	* Focus on how to impact the market and not how to adapt to it.
Honig	* Must have knowledge and understand ages, races & trends etc. to be able to keep up with the environment (however in the military force they are picky and do not pick up weak signals very well)	* Discuss meaning through how we can contribute and what we contribute through these signals.	* Smaller groups * Understand the language of the organization * Understand shortcomings and possibilities
Johansen	* Pattern recognition, combinatorics * Desk research, reading, watching and phoning people * Extend networks	* Different segments should watch what is important to them regularly	* Maintain an ongoing level of ideas * Find shared solutions to shared problems
Webber	* Wide source of information, eyes and ears open! * Newspapers, magazines, web, talk to people that challenge your views * Collect information to answer your questions * Be attentive for questions and signals that keeps coming back to you	* Screen out noise and notice small, unclear signals * See how the dots are connected with the answers * Look for how the signals connects to other information	* Keep minds open * Talk to friends to fill in "blanks" * Be careful of being too right too soon, have patience and extend judgments about signals outcome

Companies can pick up weak signals for strategic future by following a chain of process and considering different factors that will have impact on your procedure. First and foremost, companies need to know who or whom that are performing the searching and scanning for weak signals since this will influence what signals that will be found and perceived by the interpreter. It is as well important to have clear hypothesis and be aware of what signals to look because it gives direction to process weak signals and also find those of value. By asking right questions it will lead to significant information for the companies and gives the possibility to clear out the noise. Weak signals in the business market can be detected within different sectors such as economical, political, demography, cultural, regulatory and social sectors. When having a clear view of whom the interpreter is and what questions we want answers to, it is also good to make sense of the signals and find out the meaning of them. Perceptiveness constitutes a significant part in this factor because it is necessary to be open-minded and be free from preconceptions. Without predetermined definitions, it will facilitate to see signals that may be hidden and not be controlled by your own ideas about reality. It is easier to establish that something is not, rather than to establish that something is. In addition, companies need to react and implement the signals found. One way for the company to be able to implement the changes more rapid is to form smaller units within the organizational structure. These units will improve the organizations opportunity to pick up innovative signals that will navigate them in the changing environment. By having smaller units it will create a bigger flexibility and the

increase the ability to be innovative and creative. The communication will as well be improved as this process will decrease the gap between higher and lower position in an organization, which is necessary in order for something as complex as weak signals to take place.

It is usually the smaller companies that are most innovative and successful in detecting weak signals because they are more willing to adjust to changes and to take risks. During times of weak economic climate companies are in general more adaptive to change which could be referred to that when we feel that the condition is unstable, we tend to be more sensitive to observe environment around us.

Even though the presented views above are important, we have drawn the conclusion that it does not exist one superior method for a company in their search for weak signals. This is due to the fact that each company is unique thus the methods of scanning and implementing of weak signals should be considered in each individual case and find the superior framework of methods that match the specific company's business model and strategic goals. If the company fails to implement the method, it could get a reverse affect, which indicates that the signals could get ignored or rejected due to that it does not match with the company's structure and culture. However, recommendations that we have concluded can be given that would improve the organizations possibility to pick up signals.

The recommendations that could improve organizations ability to pick up signals and to handle them in an efficient way is to be more attentive on the social media in every possible forms and have knowledge about happenings around the world, even those who are considered to be far away. Even though an extreme happening in India would seem very distant at first, it does not exclude the fact that you may be affected. Once the more information you possesses about the society or surrounding environment, the easier it is to find connection and see patterns of weak signals. In the end, the understanding of the changes in the world will increase. In our empirical material we could clear out a common factor among our experts, which was the emphasis on young people in organizations. Young people tend to be more adaptive and willing to take risks and they often work closer to the market in contrast to leaders. This is a valuable advantage in picking up weak signals that should not be overlooked. Organizations should have a culture of mixed employees where young people will influence with new thinking approaches and openness and where experienced leaders will contribute with their great experience and competence in the field. Together, it can create a superior group of innovation thinkers and increased perceptiveness for sensing weak signals. It should as well be mentioned that in a group of mixed backgrounds and abilities, the best way to find signals of importance is to discuss and digest the information together. This will decrease the limitations of having one interpreter and one set of eyes where instead in superior groups you have several. We believe that the best results and the most relevant weak signal for a company is best found among ideas and discussion. Through discussions with people who challenge or agrees with your view, is the best way to generate new perspectives and less narrow-mindedness.

To make the invisible visible you should explore and take advantage of your social networks. In a subject like weak signals, you can analyze, integrate and draw conclusions of what the weak signals of future changes might turn out to be through networks. In social networks information, thoughts, ideas are shared, discussed and through it sublimed. When people integrate and share experiences and knowledge, the possibilities to pick up weak signals is greater. A wider sphere of weak signals could be found through different angles which improve the outcome, which we could also see in the

case of Skåne Food Innovation network. A network allows innovation to grow and develops an open mind, whether it is in companies, individuals or cities. Through openness and innovation, weak signals can easier be spotted. Many of our ideas concerns the need to integrate social networks as individuals, organizations and cultures etc, as mentioned above, can be similar to an open business model, with the difference that it is applied on for example cities and individuals instead of organizations. The central focus is to be open to what happens in external environment where both external and internal information and knowledge is used to process the detection. Ideas that an individual has could be refined by themselves and outsourced to other people to further develop ideas. The process contributes to others as well as oneself when many of new ideas turn out as innovation to be shared. In this way it is possible to be attentive as well as add value through own contribution. It is when different when these different elements converge that weak signals emerges and could be found.

Information from networks should be used, although an important aspect is to not ignore the individuals situated in them. Our experts' talks about the meaning of finding key persons that are exceptionally good in detecting signals. We conclude that this is an important part of the process of weak signals. These key persons in the society are the ones who are in the frontier in detecting signals with innovative attitudes and have right mind sets. They should be observed and could inspire companies to creative solutions and recognize weak signals. We believe that companies should look for key persons both inside and outside the organization due to the fact that these persons can be teachers, writers and have a profession outside the company in question.

In extension, another conclusion is to find key cities. We mean that emphasis should not only be focused on key persons but also on cities as they tend to be very successful in seeing weak signals. Cities like New York and London have several times been mentioned in our paper and are considered to be place where the birth of weak signals takes place. In our case studies, these cities indicate possible future trends within the food industry that later spread to different countries. They usually look at signals from these markets to form a depiction about potential changes. These prominent cities are generally big and also a place where many cultures meets. It allows different ideas, influences and habits to convergence which could result that weak signals could easily be detected. Companies could thereby look at these places and other markets to see weak signals that might occur on their own, but they should be aware about that some of the signals found in other markets are not always applicable in their own market as cultures and environment differs. Global companies who are situated in several markets have the advantages and better abilities to draw parallels between cities and countries. These companies can find weak signals use it more successfully due to their existence on several markets. They have the capability to see clearer relations between markets that could imply weak signals, compared to companies situated within national borders. The reasons for this are because of their wider base of knowledge and information. Multinational companies can therefore recognize pattern of smaller signals which is an advantage since trends are influenced and spread globally.

7. Further Research

A theoretical framework has been introduced to the readers about ways to find and implement weak signals. Although, we have tried to illustrate how some chosen companies within the food industry detects and manage weak signals, there is still limited information in this thesis about how the companies actually and internally work with weak signals. Further studies could therefore be made by making a research within a particular company to gain deeper insight and internal information as well as insider information. This could lead to a more detailed depiction of how methods are used. During the process it is also more likely to better understand problems that might occur, hence more explicit suggestions and recommendation could be made.

A part from the qualitative studies, we also suggest a quantitative approach to study weak signals. These studies are more general and could be emphasized on weak signals on a national level. The process could be proceeding through chosen factors and parameters to examine the subject in many companies. The result gives information about relations that gives an overall depiction about how companies work with weak signals in general. Classification could be done of industry structure and size because these methods could differ. An even extended research could be to make comparison on international level, between two or more countries.

Moreover, we found out that trends on Swedish food market are a few years later than England and America. It could of that reason be appealing to study global leading companies in countries that lie in the frontier of detecting food trends. This is interesting because the prerequisite with information about emerging trends can differ from other companies that are followers. Furthermore, these companies may have even more complicated processes and methods in detecting weak signals, which adds to the excitement of the phenomena.

Another idea for further research is to enlighten the increased importance of social media as a source to pick up weak signals. For example, internet and the digital world have grown into a significant platform to communicate and share information. Google and Facebook are often discussed as successful companies in the frontier because they have enormous amount of data about people's interest, habits and preferences, which is considered as valuable information.

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Appendix

Interview questions to experts

1. How does your company work to pick-up weak signals on future changes?

    - Where does the information come from?

    - Which focus areas are most important for example competitors, the market, political change, technological changes?

2. What sort of tools do you use to analyses future changes?

    - For example what sort of strategy do you use?

    - What does the process look like, which steps do you use?

3. How does your company decide what is relative signals? And what are the criterions?

    - How do you think companies implement the information of the analyses, can you give us any examples of measures that companies are using? (What does the companies do with the information?)

    - What challenges and difficulties do you see with the implementation of the signals?

    - How do you choose which signals to implement?

4. Do you see any weak signals today? What are the new trends?

5. Do you see any companies/ branches that have been successful on weak signals?

Interview questions to mini cases

1. What can you tell us about changes in your company concerning costumers habits and purchasing behavior? What signals did you find or discover?

2. Do you perform any market researches? Or how do you detect or sense what your customers are demanding?

3. What are the reasons for choosing to have the specific products segments? (For example Fairtrade products / Food without additives etc)

4. Who are the customers that purchases Fairtrade products and food with no additives? What customer segments?

5. What is important for the company? What are your values? (Such as climate issues and health aspects)

6. Do you see any factors of threats and opportunities that affect your company? (Competitors, Suppliers)

7. How important is it to have Fairtrade products and food without additives in your stores? Coffeehouses?

8. Have you seen an increased demand Fairtrade products and food without additives in your company?

9. Do you see any trends today or weak signals that indicate future trends or changes?