



The right to know

Access to information through visual communication

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Abstract

Among all everyday choices, food consumption has the largest environmental impact on biodiversity and the global warming. Organizations and politicians have long tried to find a communication strategy to change behavior in this area but with no effect. It is a fact that peoples positive attitude in sustainable living do not match with the actual behavior and that this discrepancy is hard to bridge. The researchers at the Interactive institute believes that the theory of visualizing product information through graphical software and technological tools will help consumers put products in relation to each other and reflect over their consumption and decrease this gap between attitude and behavior. The tools future on the market is questioned and has been investigated and discussed with the executives from Sweden's leading retail chains along with the researchers at the Interactive institute through qualitative research methods. Through the research Its learned that creating a perfect functioning communication strategy for consumer behavior is not just as easy as finding the most effective one, it also has to be made with the consideration of ethtics and other countries situation.

Keywords: Behavior: Communication strategy, Consumers, Discrepancy, Environmental impact, Visualization, Retail chains

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Table of contents

1. Background

- 1.1 Discrepancy 5
- 1.2 The Interactive institute 5
- 1.3 Existing environmental labeling strategies 6

2. Aim 8

3. Method

- 3.1 Iterative development method 9
- 3.2 Background research and development of ideas 9
- 3.3 The making of the thesis 10

4. Theory

- 4.1 Retail chains and environmental technology 12
- 4.2 The visualization theory 12
- 4.3 Swedish recycling: A successful behavior change 13

5. Empirical discussion 15

- 5.1 Interview with ICA: Climate change executive Anna Carlsson 15
- 5.1 Interview with Coop: Environmental executive Mikael Robertson 16
- 5.1 Comments from low-cost retail chains Willy's and Lid 17
- 5.4 Interpretations 17

6. Conclusion 20

7. References 21

- 7.1 Reports that gave inspiration 22

1. Background

This section will present information about the communication difficulties to bridge the discrepancy between consumer's attitude and behavior and the existing environmental labeling strategies on the market

1.1 Discrepancy

According to the United Nations Intergovernmental panel on climate change (IPCC) the world is heading towards a global warming that will affect the next coming generations in environmental, economic and social terms. The reasons for this global warming is complex but evidence is strongly pointing to the fact that human activities stands for much of the causes by green house gas (GHG) emissions where large parts comes from the food industry that is linked to the transportation sector, the agriculture sector and the industry sector (IPCC 2007, p.3). People's interest in sustainable consumption and environmental issues has with no doubt increased through media, environmental journalism, communication campaigns and the work of several retail stores. But according to a study by the Swedish consumer agency, peoples attitudes concerning sustainable food and sustainable development and their stated willingness to act in sustainable ways for the environment have not so far been proven to have any real effects on their behavior (SCA 2006, p.10). Even though people often have a good will and intentions they do not act in ways that lowers the impact on the environment. There is common in questionnaires and in surveys that people tend to answer in ways that often reflects to what they as consumers really consider desirable, but that these goals may be very difficult to live up to (Axelsson & Lönngrén 1995; Nyberg 1999).

Surveys made by the Swedish consumer agency shows that half of the Swedish households prefers ecological products and more than a third of them claim to always choose such products when they are at hand, but still the consumption of sustainable food remains at a very low percentage compared to the total food purchased in Sweden (SCA 2006, p.10).

The root of the problem according to researchers at the Interactive institute is that there exists a discrepancy between the willingness to live in a sustainable way and the actions that is taken to actually do it. The problem is therefore how to translate these positive attitudes in to daily behavior and to develop a communication strategy that bridges this (Gullberg, 2009).

1.2 The interactive institute

For a consumer shopping usually requires the negotiations of a range of diverse labels and often conflicting sources of information on signs, on screens, in newspapers, in

commercial advertisements and in the store. All this information influences the buying decision when the consumer tries to understand the environmental, money and health aspects of a product (SCA 2006, p.33).

The team of researchers at the Interactive institute in Stockholm specialized on pervasive visual analytics for reflective consumption believes that labeling the environmental impact is one important part of the solution but that its not enough to change consumer habits. They believe instead that the technology of visual analytics can support the consumers before, during and after buying a product. By supporting the consumer through the whole chain from planning a buy via the actual act of purchase, to the follow up of the last month's consumption the behavior can slowly change.

Visual analytics is about the use of visualizations to support the understanding and the decision making in situations where the amount of messages and information is hard to grasp or overwhelming. Communicating with visual analytics is done by taking the technology from consumer analyze methods and present the information of "the everyday life " for ordinary people. Consumer analyze methods is today used by several retail chains to understand consumers buying preferences so marketing can be more specified. With our pay cards, member cards we are without knowing it registered and analyzed. By democratize this visualization, consumers are allowed to reclaim their data. Product information and purchase patterns will be reviled for the consumer so also they can reflect over their behavior (Löfström, Gullberg, Palm, 2009).

The practical idea from the interactive institute is to combine environmental product information with the technology of consumer analyze methods and give the information back to the consumers through visual communication on mobile phones, computers, and displays located in the stores. With the tools people who want to care for the environment can reflect over their consumption in the stores but also before, during and after the purchase. Through these steps its possible for the consumer to understand its environmental impact (Gullberg 2009).

1.3 Existing environmental labeling strategy's

In the year 2007 the European Union initiated a new energy and global warming policy to reduce EU s GHG emissions with 20 % until 2020 (Oresund environmental institute 2008, p.6-7). As a result of this decision and the demand from consumers retail chains over the world including the British and American retail chains Tesco, Mark & Spencer's and wall-mart have tried to develop a communication strategy in helping consumers understand their environmental impact in the products they buy by trying to promote concepts as "Food miles" and "Carbon labeling". The carbon label strategy builds on a detailed and precise collation of data of the carbon embodied in the product which later is conveyed to users by a label. This carbon analysis is based on a life cycle analysis (LCA) that includes carbon data from all stages in the products life cycle with the objective to reflect the total carbon impact. By understanding the emissions and the life cycle from the raw material through production to distribution to the consumer use and to the

recycling or disposal, the purpose is to increase the knowledge and consumers perspective.

The method has been criticized in several ways because of communication difficulties and the fact that even if a product has a very low impact on the global warming does not mean that it creates other difficult impacts. By only measure the GHG emissions with labels in the stores or on computer displays there is a concern that the attention from other environmental problems are diverted. With all the focus on GHG emissions would probably distract attention from other factors such as the water required in the manufacturing method or how much waste a product generates or chemicals in the products. (UKERS, 2007).

” Food miles” is less complex then carbon labeling and was made to encourage people to buy food that was locally produced and with the idea that less food miles will create less impact for global warming. The method became very criticized since the transportation just represents one component of the whole environmental impact . The classical example is that imported tomatoes from Spain during winter generates less GHG emissions then growing tomatoes in greenhouses in Sweden under the same period (Oresund environmental agency 2008, p.7).

The other main critique of this method is the political and economical protectionism created. Since the message to the consumers is to buy products that is locally grown and food that is not air freighted, creates unofficial import barriers for some countries to export their products because of the long distances. This have mostly very negative effects to poor farmers that depends on selling their products to developed countries (Soil association, 2008).

Even though these different concepts have gained ground in the United kingdom and in USA (Tesco 2008,p. 2-3) retail executives from the Swedish food market have not yet accepted these communication strategies and are seeing difficulties with LCA and the misleading information from ” Food miles” (ICA, Lindvall 2009).

2. Aim

The aim of this thesis is to investigate how different Swedish retail chains executives answered when asked about their view of the communication strategy tool from the Interactive institute and to discuss its future on the market as well within the context of sustainable development, consumer behavior and existing labeling methods.

3. Method

This section will refer to the techniques used for investigating the aim and what has been done during the creation of the thesis.

3.1 Iterative development method

During the work with this thesis an iterative development method was used. Instead of basing the processes on work where each step in the development process was isolated and dependent on the quality of the former work, the work instead has been developed by a cycle of adjustments. By letting the thesis improve by repeating adjustments and comments from students and colleagues the thesis has the possibility to improve after every cycle (Wenell, 2001). By letting the work circulate through development blocks it was possible to identify the problems and change them after they occurred. The blocks consisted of 1, Background research and the development of ideas. 2, Making. This block was characterized by interviews with executives at ICA and Coop and meeting attendance with the researchers at the Interactive institute. Comments were also gathered from the information managers at the low-cost retail chains Willy's and Lidel. Follow up interviews were done with the Swedish data inspection board. This block also consisted of analyses of data and the structuring of the report. 3, Report writing and documentation.

3.2 Background research and development of ideas

The idea of this thesis came from the course communication strategies at SLU and was organized in connection with the interactive institute C-studio in Norrköping and Stockholm Kista in Sweden. With the help of University lecturer Lars Hallgren and engineer Eric Gullberg the plan and structure of the thesis was conducted between March and April 2009.

The first literature studies consisted of persuasive technology. Methods designed to change behavior of the users through persuasion, but not through coercion. The most identified persuasive technology that was read about was mostly computational and interactive technology like Internet services, mobile devices and computers that aim to communicate results with methods of experimental rhetoric and psychology (James, Cook, 2005, p.30).

To understand how the visualization strategy could function on a consumer market, the thesis was based on a pre study from the Swedish consumer agency and scientific papers and reports from the Interactive institute. The conclusions from these pre studies were the foundation for the thesis work. Results from the pre study told that there is a large upcoming market and a will for helping consumers to make choices that do not have a small impact on the environment. There has long been a demand for a way to describe the impact of a product in detail since ecologically produced food does not necessarily need to have a low impact on the environment when it comes to GHG emissions (ICA, Lindvall 2009).

To be able to discuss the future of the visualization tool and how the Swedish retailers reason about new technology and environmental labeling, it was necessary to learn about the critique of existing labeling methods such as Life Cycle Analysis, Carbon labeling and Food miles since the information that is presented in the visualization tool must be gathered in similar ways as with these methods.

3.3 The making of the thesis

The making of the thesis began after a month of background studies and planning. After interviews with the employees and meeting attendance at the interactive institute about the purpose and theory of the visualization tool, could more specific literature be analyzed and be hand picked after the aim of the thesis. The Interviewees were chosen after their job position in environmental issues and in relevance to the thesis aim. Two of the leading Swedish retail chains were picked. First ICA with the environmental executive Kerstin Lindvall and their climate strategic manager Sara Carlson and the environmental executive Mikael Robersson from the competing retail chain Coop. Comments were also gathered from the European low-cost retail chains operating in Sweden, Willy's and Lidl.

The method that was used under the interviews was qualitative research with experts in the field of retail business, food products, and interactive technology. The purpose of using the qualitative research method was to interpret the interviewee's thoughts, experiences and feelings about the visualization tool. By doing this was it possible to increase the knowledge and the understanding of the topic and investigate what the future of the technological visualization tool could be. The general disadvantages by using a qualitative method is that a small group of interviewed individuals cannot be taken as representative (Kvalitativ metod, 2008). This has tried to be bridged by interviewing the environmental executives of ICA, Coop, and the information managers in Lidel and Willy's in Sweden with the motivation that they are representing policy's and the environmental decisions that concerns the whole company on the Swedish market.

Since the thesis was about a complex topic that brought together advanced technology as well as psychology was an e-mail send out to the interviewees with a presentation of the subject and a request for a in person meeting. The reason for this was also to give the interviewees time to speak with colleagues and other executives about the issue, witch also was encouraged in the e-mail.

In the beginning there was very hard to arrange interviews as planed by E-mail. The tactic was then changed to contact the interviewees by phone to set up an interview. Due to the interviewees job position as executives and their already big work load was it not possible to arrange a meeting in person. This led to the decision of doing phone interviews. The information from these interviews where later gathered on paper and then rewritten after the interview. In person meetings and Interviews with engineer Eric Gullberg was conducted under several occasions to clarify the theory of the visualization tool and the aim of the Interactive institute.

The influence i had on the actors I worked with during these ten weeks and their

influence on me became most obvious with the very near collaboration with the researchers at the Interactive institute which may have led to a more positive attitude to this visualization tool and their work. The Interactive institute has the aim to sell the theorys of the visualization tool in order to get it implemented. So when presenting the visualization tool to the retail executives my goal was to not sell their communication strategy but be very clear that I was doing this investigation for my thesis. My role as a Enviromental communicator student was to explain my knowledge of communication strategies and perspektives for the enginers and help them focus on the complexity of environmental problems and not just the technical aspects.

During the interviews with the retail executives I believe my investigation purpose was influencing the answers very much. Since I was asking questions concerning the retail stores environmental policy I had in all cases the feeling that the answers from them mostly was very formal and carefully expressed. If I had done in person interviews instead of phone interviews and had got closer to them during several ocations this might had been bridged.

4. Theory

This theory section will explain retail chains current view about environmental technology and the communication strategy from the Interactive institute and why it has the possibility to help people make choices that lowers the impact on the environment by decreasing the discrepancy between attitude and behavior.

4.1 Retail chains and environmental technology

Retail executives engagement concerning environmental technology and mitigation have increased rapidly due to the potential effects that is associated with global warming. To prove the commitment to fight global warming and limit impact on biodiversity have retail executives started initiatives that includes energy conservation and more fuel efficient transports. The view on technical methods have also become more positive since modern equipment saves money as well as energy. (Carbon trust, 2006). Company's have also noticed that reducing energy costs can in another sense improve competitiveness since investors are more willing to cooperate with companies that actively fights global warming (Carbon Disclosure Project).

The largest retail chains in Sweden Coop and ICA have so far showed interest in implementing new technical equipment to lower their energy consumption that builds on transport and energy efficiency and by linking their environmental policy to suppliers. ICA have worked with the Institute for food and biotechnology (SIK) to make carbon analysis on 100 of their own products with the objective to use the knowledge in the dialog with suppliers and to reduce environmental impact (ICA, 2009). Even though LCA have been notified by Swedish retail executives have Coop or ICA not followed the American and British retail chains examples and used LCA in communication strategies that aims to change consumer behavior. The methods used in this field is instead so far aimed on marketing of ecological products and to make already know and trusted labels more visible (Coop, 2008).

4.2 The visualization theory

The researchers at the interactive institute believes that a vital component to develop a environmentally sustainable behavior and lifestyle is to make the systems that are supplying the resources, like the production and transport system more visible and show where products have been manufactured and how. In order to change the behavior its first necessary to visualize the routine consumption in the every day life situation that makes it possible to enhance the visible connection between the natural resources in the product and the environmental impact. For the consumers this could mean that the connection between attitudes and the actual behavior becomes stronger. Its impossible to know for a consumer if he or she has chosen products that make a small environmental impact without first finding a way of identify and measure the consumption (Löfström, Gullberg, Palm, 2009).

The term information visualization gathers all developments in information graphics,

visual design and data visualization that focus on to create approaches for conveying abstract information in a simpler way. By using graphical techniques this could help people to understand and analyze environmental information. Example of this is graphs, tables, maps, and texts that can find relations but also to show things that were not clear before in other forms. Through this technology it is possible to allow users to understand large amounts of information in a very short notice (Fogg 1998, p. 225-232).

One of the main objective with using information visualization on computer screens is that it amplifies the human cognitive capabilities by using visual resources to expand human working memory, support relationships and patterns that are otherwise more difficult to understand, all this makes it easier to reflect over the consumption behavior (Thomas, Kristin 2005, p.30).

When using new technologies to help people improve the environment its also important according to the researchers at the Interactive institute to remember that this will not guarantee to change peoples behavior as intended for optimal environmental improvement. For example if a negative behavior is changed that is affecting the earths climate by the introduction of a new technology, but do not relate to the "Intension" to decrease the global warming" this behavior will disappear if a different technology is introduced for the consumers. It is therefore very important to not just trust fully on the technology tools to create behavior changes among consumers. There is still a need to bridge the gap between consumer's intentions to make a small impact on the environment and to put this intention into practice (Löfström, Gullberg, Palm, 2009).

4.3 Swedish recycling a successful behavior change

One example of putting the intention in to practice could be understood by relate to Swedish recycling were norms have changed effectively in to behavior. According to a study made 2008 by the consulting firm Rewir for the Swedish protection agency shows that over 50% of the Swedish citizens increased their waste sorting over the previous two years. This could be through successful campaigns but could also be explained with the so called "spill effect theory" where the act of putting sorted waste in to recycling containers in public areas shows that other people in the same area act in sustainable ways (Swedish environmental protection agency 2008,p.14). The result is that the behavior from one group of people is transferred to other persons. The goal for the interactive institute is here to use these theories to achieve sustainable food consumption. If it's possible for consumers to see on a computer if people in the same area are buying products with low impact on the environment this might transform attitude to behavior (Gullberg, 2009).

In stores and in the super market consumers do several choices before leaving. The choices during this time are often performed routinely and could be known as every day actions whitch most of the times are not reflected on. Because they are not reflected on were the product come from, how many miles it has been transported, the manufacturing methods, the labor conditions, its also very difficult to influence consumers and change their behavior permanently. Consumer's behaviors are in the most of all cases automatic. Rewir" points to the fact that most of the times when people goes in to a store they already know what to shop and are very hard to influence through environmental

information. There are so many other factors that consumers have to consider such as health aspects, price, freshness, product availability, trends (SCA 2006, p.33). With a communication visualization tool linked to a mobile phone or computer, could the consumers get the product information before, under and after the purchase and increase the possibility to reflect. The discrepancy between willingness to act in a sustainable way and the actual act and behavior can therefore be bridged (Löfström, 2008).

5. Empirical discussion

This section will discuss the visualization tool and the interviews made with retail chains executives and managers from Coop, ICA, Willy's and Lidl about the communication strategies tool future on the market.

5.1 Interview with ICA: Climate change executive Anna Carlsson

The climate executive Anna Carlson at Sweden's largest retail chain ICA AB, first impression of the visualization tool is that she thinks its a good idea. Carlson have under her almost ten years at ICA worked with solutions to present environmental products to consumers in a good way. Carlson has through the years followed the examples of carbon labeling and the food miles concept on the British/American market and are very doubtful to these ideas since both methods present information to the customers in a very compromising way, Carlson believes that making information simple will not do any good.

ICA has in the latest years tried to profile them self's as environmental caring by having a broad range of ecological products and as few air freighted transports as possible. According to Carlson its very important that consumers get complete and correct information so not other labels like ecological products lose their credibility. Carlson explains that ICA did one hundred LCA of their own products to analyze the carbon impact. The experience of that was that it was very expensive and some times not necessary to know the complete LCA when it was obvious that the transport was the real problem, "it wont be possible to do these kind of LCA or to put information on every single product" (ICA, Carlsson 2009).

A own study made by ICA shows that customer's don't associate global warming impact with stages in the products live cycles but mostly with transportation. The head executive of the environment department at ICA, Kerstin Lindvall explain under a interview that it is first necessary to educate people about the general impact the different product makes and when knowledge has been reached its first then possible to consider implementation of a communication strategy as the visualization tool or carbon labeling. It should not either be taken for granted that all consumers have the knowledge of how carbon dioxide effects the global warming. Retailers are afraid that the formula CO₂ could be associated with a dangerous chemical (ICA, Lindvall 2009).

One of the most important concepts with the visualization tool is to allow consumers to use consumer analyze methods and the reclaim of data in order to get product information. Like the theory about "spill over effect " it should be possible to improve consumer's behavior if the neighbor's sustainable food purchase was visualized. It would also be possible to receive information on how to improve the consumption and results from the past months. But according to Lindvall could this method be very hard to implement since the laws of information in this filed are very restrictive and that its not allowed to save information under longer periods.

The cost of this instrument and promotion would in the short term be very expensive for ICA to develop alone and would just probably work for them that already are interested in environmental issues.

Under the interview points Carlsson out that letting people know about information in advance and after the purchase could be a very good idea since there already are many messages for consumers to consider. Carlsson said "The visualization tool is good at presenting information without pointing with the stick but there is not any future for the visualization tool in Sweden for the moment" Carlsson believes the costs would be very high and that the information in the tool is too complex to assemble correctly enough at the moment and that it in this context will have the same disadvantage as Carbon labeling. Carlsson assumes that ICA would be open to suggestions if several countries and retailers would agree to use one common labeling system. ICA is currently supporting that ecological label "KRAV" plans to include climate aspects in their labeling. When asked if ICA had a communication strategy cooperation with Sweden's second largest retail chain Coop the answer was no "We don't work together in these issues so far but we still have contact with the same labeling associations operating in Sweden. (ICA Carlsson, 2009).

5.2 Interview with Coop: Environmental executive Mikael Robertson

Coop has the past as the pioneer of ecological products since 1980s and claim to have the goal to help the consumers choose the products that makes the least impact on the global warming by offering the markets largest range of ecological and environmental certified products (Coop, 2009).

Under a short interview with Coops head environmental executive Mikael Robertson he expresses critique both to the visualization tool and the carbon labeling methods. Robertson believes more labels could make things complicated for the customers. KRAV is already a climate label since there are no pesticides or artificial fertilizers added in the production that generates lots of GHG emissions. It is also possible to read on the label where the product is manufactured and use the sense after that. Climate labeling and using mobile phones in the store might be very complex for consumers that already are stressed and have lots of shopping to do. Coop can be willing to work for a type of climate labeling but believes that it's important not to compete against ICA and release different labels or technical concepts. This would make it even harder for the consumers. He believes very much that a political decision in this issue would be good to speed up the process. But according to Robertson is Coop more welcoming to the suggestion to include climate labeling in KRAV and believes that it's better to make one certification very strong that people already are familiar with.

Mikael Robertson believed that the consumer analyze method tool that sends information back to the consumers have potential. However, is it a question of money and the linking of information to the product. He thinks the idea about letting customers reflect is a good idea and that this is already made in Coop in a way by giving customers a receipt with the ecological products which they buy (Coop, Robertsson 2009).

5.3 Comments from low-cost retail chains

After investigating the opinion from the largest retail stores in Sweden, were also information managers from the foreign low-cost chains Willy's and Lidl asked about their communication strategy and their view on the visualization tool and environmental labeling. The summary of these comments was that none of the chains had any plans of implementing this theory's since the delivery time and price is the most important for them. Willy's have increased their ecological supply of products and Lidl chose not to sell them with the motivation to prioritize fair trade products. Willy's information manager do not believe that this kind of tool will be implemented in their store since the costumers are looking for quality food to low prices. New technological systems like the visualization tool will cost much to implement and to run witch in the end will affect the prices. Lidl's information manager could not answer on how their environmental profile would look like in the future and if environmental labeling will be accurate. The information manager at Lidl says that the market and the customers will be determent in this issue (Willy's, Lidl, 2009).

5.4 Interpretations

Even if the retail chains views of environmental technology is positive in a general sence, it is clear through the interviews with the environmental executives at ICA and Coop and the information managers at Lidl and Willys that they do not have any plans of implementing theory's based on the visualization tool within the nearest future. Retail chains positive view about implementing new energy saving technology do not meet with the technology of the visualisation tool.

The reasons for this seems to be high costs, consumer confusion, implementation difficulties, lack of cooperation and the experiences with the life cycle analysis method or the trust of already existing ecological labels. It has been said many times that the only way of solving global environmental problems is through communication and collaboration. None of these retail chains have any communication with each other concerning environmental communication strategies or plans for how to tackle issues like the climate change, the depletion of biodiversity, or how to implement a system on how people can reflect on their behavior.

If the visualization tool should have any chanse to be implemented on a future market its first necessary that all the retail chains start to communicate with each other. To do this it might be necessary with a helping hand from politicians or an authority that can help implement laws and norms for how this system should be developed. For willys and Lidl the environmental issues come far down on the priority list since they compete with low prices. The interpretation from the information managers was that the only way for low cost retail chain to implement a communication strategy like the visualization tool would be if it was just necessary. The responce from the information managers where very brief and some questions concerning the companys role and the environment was not answered at all.

Investigation have shown that it is a concern from all the retail chains that the visualization tool will just reach them who already care for the environment. This leads back to the research made by the Swedish environmental protection agency were 81% of the people asked was prepared to reduce their own climate impact. The reason why the consumers not shop as they answered was according to 66%, the lack of product information (Swedish Environmental Protection Agency, 2007). According to another survey among 1000 people interviewed in UK by the consulting firm Populous, showed that 50% of the respondents were more likely to buy a product with a carbon label (Climate change corp, 2007). Even if these answers might be to good to be true its still a sign that retailers should try to work harder to implement a communication strategy that help consumers reflect on their consumption.

After more research about consumer analyze methods and a short interview with Ulrika Harnesk at the Swedish computer inspection board it's also clear that Anna Carlsson at ICA has wrong, and that its possible to arrange a system that is based on the theory's from the Interactive institute. According to Ulrike Harnesk its legal to let people take part of other persons consumer information just along as they give permission for it. With this conclusion its possible for the interactive institute to continue developing the idea of letting people learn about other peoples environmental behavior which might give the visualization tool a large opportunity in the future (Swedish computer inspektion board , Harnesk,2009).

After have analyzed this topic for ten weeks its learned that the visualization tool may establish a good way for the consumers to learn and reflect and show different sides of a problem, witch is important to reach reality. According to Lars Hallgren is peoples understanding of the world what they see and sometimes our social structure, tricks us to believe certain things. If it's possible to see a product through a different angle we might learn something and change our behavior. What supports the tool even more is that we often are focused on one task and that we are excluding 85 % of all the information we get. By this technology it would be possible to understand the same product and problem in different ways and reveal misunderstandings and presumptions by its capabilities to expand the human working memory and support relationships and patterns.

When we see a picture or a product we relate to things outside the product, not just the information, but earlier experiences, we test our own theories and experiences. These theories comes from the meeting with the world, the intuition, we feel and compare with things we know. To understand that a product can be harmful for the environment we must first experience that. The visualization tool might give the possibility for consumers to do that (Hallgren, 2008).

The experience of working with the communication strategy from the interactive institute and explaining it to other persons was a big challenge, which is an obvious weakness from the tool or from the interview presentation. Was it the complexity of this tool that made only 2 retail executives take part of longer interviews? I share this experience with engineer Eric Gullberg. He explains that some times it even can be a challenge for him to explain to his colleges on the other departments what kind of research he is doing.

I believe that to present a visualization tool with all its components and theory's would best be performed by paintings or animated movies to increase imagination and understanding. Because these theories sound very complex, we are tricked to believe that they are automatically complex to implement. A picture or a movie could visualize the opposite.

Another important aspect to discuss is the danger with this visualization tool. When a communication strategy aims to change peoples behavior its important that this is done without losing the focus on other global issues. Like the concept of food miles has the visualization tool the possibility to lead consumers to low GHG emission products or locally produced food, witch could affect poor farmers opportunities to sell their products.

We must for example first look at the enormous impacts of our own food system before we cut down on the import from developing countries. What would do little to mitigate environmental problems could affect the development in Africa, Asia and Latin America very negatively. This is something that developers of the visualization tool need to have in mind when putting in product information in the tool. The visualization of products becomes even more complex since we have to bring in the ethical aspects in to the problem. If the visualization tool can bring in these aspects such as fair trade, exakt labor conditions, other type of information that is not possible to show just by a paper sticker have this tool a large advance before existing tools and labeling methods. If its possible to reflect its also possible to learn i believe. My overall experience of working with this environmental communication project is that communication strategy's concerning the food industry is something that is done within the company and not in collaboration with other businesses. This is something that has to change in order to implement a successful national communication strategy.

6. Conclusion

The visualization tool from the Interactive institute is a communication strategy that can make people feel empowered with valuable environmental product information rather than overwhelmed by the large diversity of products and information. Through graphical software combined with mobile phones, computers and in store displays its possible for the consumer to get information analyzes connected to issues on how they can contribute to a more sustainable development in the every day life.

How ever is this communication strategy according to the leading retail chains in Sweden, not ready for the Swedish market since the mistrust of existing environmental labeling methods like carbon labeling and food miles and due to lack of initiative takers and high costs. There is a will to start working with these issues but the communication and the collaboration between retailers and politicians must become stronger if an implementation will succeed.

Organizations and politicians of the world have made great efforts to reach out to people through communication strategies and information campaigns with the aim to change consumption behaviors that limits the pressure on biodiversity and affects earth's climate. At the same time its told that many people want to live in a sustainable way and would improve their sustainable consumption if it were more easy. This is a clear sign that a communication strategy needs to be implemented that bridges the discrepancy between attitude and behavior. This might be very hard to solve and its learnd that it will take time before the global food market share a common labeling system since some retail chains prioritize low price products and not envrionmental issues. During the way to the perfect communication strategy for solving environmental consumer issues its important not to forget other issues such as poverty and the export needs from other conturies. These issues along with ethical aspects also needs to be bridged in order to reach a sustainable development and a functioning communication strategy.

7. References

Axelsson & Lönngrén (1995) Nyberg (1999) Hinder och möjligheter för miljöarbeten kartläggning av centrala aktörers problembilder Uppsala:Uppsala University <<http://www.norden.org/pub/ebook/2003-540.pdf>> Available 2009-05-23

Carbon disclosure project (2008) Climate Change in the Time of Global Recession: How businesses and government can work together to cut greenhouse gas emissions, reduce carbon footprints and stimulate a green economy <www.cdproject.net> Available 2009-06-07

Carbon trust (2008) Guide to PAS 2050 How to assess the carbon footprint of goods and services < <http://www.bsigroup.com/en/Standards-and-Publications/Industry-Sectors/Energy/PAS-2050/>> Available 2009-05-23

Climate change corp (2007) Carbon footprinting standard: Ready by 2008 <www.climatechange.org/content.asp?ContentID=5007>

Coop (2009) Head environmental executive Mikael Robertsson Interview, 2009-05-12

Coop (2008) Coops climate profile <www.coop.se/includefiles/moduler/ccms/show_page.asp?iMappeID=10071&sSideNavn=Klimatet> Available 2009-06-07

Fogg, B. J (1998) Persuasive computing: perspectives and research directions, Proceedings of the SIGCHI conference on Human factors in computing systems, Los Angeles, California, United States

Gullberg, E (2009) Meeting attendance at the interactive institute between 2009-04-10 and 2009-05-20

Hallgren, L (2008) Seminar: course Learning perspective and knowledge

ICA (2009) Climate executive Sara Carlsson, Interview 2009-05-10

ICA (2009) Head environmental executive Kerstin Lindvall, Interview 2009-05-09

ICA (2009) Environmental policy <www.ica.se/file_archive/pdf/kval_miljo_policy.pdf> Available 2009-06-07

IPCC (2007) Summary for Policymakers In: Climate Change <www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf> Available 2009-05-20.

Oresund environmental academy (2008)

<www.oresundfood.org/files/1a5d40e38e_oefn-oeea_rapport_v04.pdf>

Available 2009-06-07

James J. Thomas, Kristin A. Cook (2005) *Illuminating the Path: The R&D Agenda for Visual Analytics* National Visualization and Analytics Center

Kvalitativ metod (2008) <www.kvalitativmetod.webs.com> Available 2009-06-07

Lidl (2009) Interview with information manager, 2009-05-15

Löfström E, Gullberg E, Palm J (2009) *Environmental Consciousness and its Relationship with Everyday Behavior* Dept of Technology and Social Change Linköping University

Löfström, E (2008) *Visualisera energi i hushåll metoder att synliggöra: Avdomiceringen av sociotekniska system och individ-respektive arkefaktbunden energianvändning*, Dissertation Linköping University

SCA, Swedish consumer agency (2006)

<www.konsumentverket.se/Documents/rapporter/2006/rapport_2006_13_061222.pdf>

Available 2009-06-07

Swedish computer inspektion board (2009) Interview with Ulrika Harnesk 2009-05-17

Swedish environmental protection agency (2008) *Hållbara hushåll:*

Miljöpolitik och ekologisk hållbarhet i vardagen Slutrapport till Naturvårdsverket

<<http://www.naturvardsverket.se/Documents/publikationer/978-91-620-5899-9.pdf>>

Available 2009-06-07

Soil association (2008) *Air freight consultation*

<www.soilassociation.org/web/sa/psweb.nsf/a71fa2b6e2b6d3e980256a6c004542b4/0777428074797c4280257287005ce1ec!OpenDocument> Available 2009-06-07

Tesco (2007) *Carbon labeling Report on symposium One Birdcage Walk, London*

<www.ukerc.ac.uk/Downloads/PDF/07/0705UKERCTescoCLSymposimrep.pdf>

Available 2009-05-25

UKERS (2007) *Appendix: Carbon Labels: evidence, questions and issues*

<http://www.ukerc.ac.uk/Downloads/PDF/07/0705_Carbon_Labelling_Appx.pdf>

Available 2009-06-07

Wenell, T (2001) *Wenell om projekt: Vattenfalls metoden*, Uppsala publ

Willy`s (2009) Interview with information manger 2009-05-15

7.1 Reports that gave inspiration

Food and agriculture organization (2006) *Livestocks long shadow: environmental issues and options*

Rewir (2008) *Kommunikativa målgrupper i klimatfrågan, February 2008, a report for the Swedish Environmental Protection Agency*, Stockholm: SEPA