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CO-CREATING UNDERSTANDING OF THE ROLE OF SENSES  
IN MAGAZINE PAPER SELECTION

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### Tiivistelmä:

Paperiteollisuus, erityisesti aikakauslehtipaperiteollisuus, on kohdannut useita haasteita viime aikoina. Globaali taloustilanne ja tablet tietokoneiden suosio ovat olleet sen suurimmat uhkatekijät. Samanaikaisesti viimeisimmät esimerkit julkaisijasegmentillä kertovat, miten paperi on valittu laatuun, mutta samalla myös aisteihin perustuen. Stora Enso oli valmis tarttumaan viimeksi mainittuun haasteeseen ja samalla astumaan pois teknisten spesifikaatioiden määrittämältä mukavuusalueeltaan. Insinöörikieli ei tue aikakauslehtipaperin vahvuuksia, jos paperi valitaan aistiominaisuuksien perusteella. Lisätietämystä tarvitaan, jotta asiakkaita voidaan palvella paremmin.

Tämä tutkimus suuntaa kohti ainutlaatuisia tuloksia yhteisluomis- ja aistiteorioita yhdistämällä, minkä perusteella sekä paperin toimittajan että julkaisijan on mahdollista oppia uutta näinä haasteellisina aikoina. Empiirinen tieto nojaa kymmeneen, eri puolilla Eurooppaa tehtyihin teemahaastatteluihin, jotka osoittivat julkaisijoiden asenteiden olevan avoimia tutkimusaihetta kohtaan.

Viisi aistiamme toimii jatkuvasti, vaikkakin alitajuisesti. Tutkimuksen empiirinen osa käsittelee tarkemmin aistien osuutta paperinvalintaprosessissa. Tekniset spesifikaatiot eivät ole yksi ja ainoa totuus, minkä vuoksi aistien vaikutuksen ymmärtäminen osana paperin valintaprosessia on tarpeen ja sen tärkeys osoitettiin. Paperin toimittaja pystyy luomaan parempaa arvoa parantamalla tietämystä asiakkaidensa odotuksista ja kriteereistä. Tämä gradututkimus edistää sekä käytännön tietämystä että ehdottaa jatkotutkimusaiheita.

Julkaisijoilla ei ole käytössään tiettyä menetelmää aistiominaisuuksien arvioinnissa. Arviointi tapahtuu kokonaisvaikutelman perusteella. Teknisiä spesifikaatioita tulisi soveltaa sanallisina termeinä, kun taas aistiominaisuuksille puuttuu yhteys teknisiin mitta-arvoihin. Yhteinen kieli odottaa yhä yhteisluomista.

Avainsanat: Co-creation, Senses, Sensory experience

Suostun tutkielman luovuttamiseen kirjastossa käytettäväksi

Suostun tutkielman luovuttamiseen Lapin maakuntakirjastossa käytettäväksi\_\_  
(vain Lappia koskevat)

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### Summary:

The magazine paper industry has faced many challenges lately. Its main threats are caused by the global economical situation and expected success of tablet computers. At the same time, latest cases at publisher customer segment tell how magazine paper has been selected first of all based on quality, but on senses as well. Stora Enso was willing to face this challenge and step out of its comfort zone called technical specification. Engineering language does not support the pros of magazine paper if selection is based on sensory experience, which is why more knowledge is needed to serve customers better.

This research works towards unique results of combining co-creation and sensory theories which offer a great possibility for both the paper supplier and publisher to learn from. Open attitude became obvious in the empirical work where ten publishing houses were interviewed around Europe by using theme interview method.

Our five senses work continuously yet subliminally. This study has empirically elaborated the role of senses in the paper selection process. Technical specifications are not the only truth which is why a deeper understanding of the role of senses in magazine paper selection was needed and its importance was pointed out. By improving the knowledge of customers' quality expectations and criteria, paper supplier is able to create better value. This thesis research contributes to a better knowledge to be used in practice and also proposes ideas for future research.

Publishers do not have any specific process for evaluating sensory properties, it is done on overall impression. Technical specifications should be translated into verbal terms and sensory properties lack the connection to technical measurement. Common language is waiting to be co-created.

Keywords: Co-creation, Senses, Sensory experience

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## 1 INTRODUCTION

*“We must be reactive, and even anticipate, the changing demands from our customers. We must care about them. Not to take them for granted, not to stop support them, but to try to understand their particular challenges where our products are involved.”*

Gunnar Brock, Chairman of the Stora Enso Board of Directors

Referring to Gunnar Brock in Stora Enso Annual Report 2010, customers can not be taken as a receiving part in the markets, not even if the business partner is a traditional, production based paper company. Both Publisher and paper mill have their own judgments about the quality. Product performance needs to meet or even exceed customers' expectations. Sensory factors of paper are important in print media as they support and communicate the brand of the end product. They can support the image of the magazine or they can be crucial when not meeting the image or its purposes.

It has become obvious that the focus from an industrially driven economy where machines are heroes has moved towards customer-oriented economy (Gobé 2001, 13). Knowing what quality factors make the product superior for the customer can lead to better customer loyalty, company reputation and as consequence higher market share (Ulaga & Chacour 2001, 525-526). Offering a customer a sensory experience is about building and facilitating customer treatment based on symbiosis between the product and the individual (Hultén et al. 2009, 156).

If the paper supplier speaks the technical, engineering language whereas the main expressions of the customer lie on the sensory properties, something important is missing. The traditional customer approach needs to be updated. Both the customer and paper producer can learn from each other. The publisher knows how the magazine has to look, feel and sound, even smell and the paper producer knows its product and all technical details. The challenge is to link these two aspects so that they both speak the same language. Bridging the gap is a way to serve the customers

better and help them to keep up the pros of a printed magazine and even create new experiences for the end users who decide whether to buy the magazine or not.

A success story of a product begins with a creative idea that offers something exceptional. This creative or unique idea needs to be perceived as a valuable one first of all by customers and not by a company itself, as the customers are the ones deciding whether to judge or praise the product. It is not a new logic to use the customers as a source of original and new ideas, yet it is seen as a challenging task. (Kristensson et al. 2002, 55-56) Challenging task, but at the same time something to reach for as encouraged by CEO of Stora Enso, Jouko Karvinen, in Stora Enso's Annual Report already in 2009:

*“Paper is a commodity product and there is nothing wrong with that. Our cost and quality position has to be good, and improve every year; we must never stop that. But I do think that we need to consider other aspects from the customer's point of view even more.”.*

Jouko Karvinen, CEO of Stora Enso

It is the intention of this study to take up this challenge and focus on investigating the paper selection process from the viewpoint of the customers. Towards this aim, it conducts an empirical fieldwork in which sixteen people in charge of the paper purchasing at ten publishing houses in six different European countries are interviewed. Alongside this empirical work, awareness of co-creation and senses was gradually evolved by theoretical literature.

## **1.1 Background of the research**

Discussions of the huge arrival and popularity of electronic magazines is related to the success of tablet computers, the leading tablet so far being the iPad. No humming, no heat of the machine, long lasting battery, handy user interface and touch screen to mention a few pros of tablets compared to basic computers or laptops. According to Bernstein Research, these pros have been turned into a success, as the iPad is the most quickly adopted electronic product with its sales of about 4,5 million units per quarter. (Melloy 2010)

No doubt this success and amazing sales reports are seen as a big threat to traditional printed magazines. The role of a supporter or even a messenger of paper industry has changed into a content provider, who needs to be ready to settle for different media channels in order to keep the business profitable and costs as tolerable as possible. Online, mobile and social medias are yearning for their part of the market share.

Songs of praises are about electronic devices and magazines, but printed magazine does have its benefits to return the fire. According to Print Power, a European organization dedicated to promoting print media, the printed magazine has easy access, it is versatile, engaging and effective for advertising; more time is spent by possibly more than one person on each magazine really reading this media. Print media is more targeted than something online that just washes over readers and it can be used as a lure into other medias. It also offers a single, simple message for the reader. Printed magazines are a seductive medium for brands, editorial context, and optimal print quality to be experienced through different senses. Magazines are made of renewable material, which makes the whole package recyclable. The story needs to be defended louder though. (Print Power 2011)

#### 1.1.1 Quo vadis, Stora Enso and printed magazine?

The history of paper industry in Finland began already around the 1700's followed by a strong growth around the mid 1900's, being an important part of Finland's export ever since. The biggest paper companies in Finland measured by production tonnes are Stora Enso, UPM Kymmene, M-Real, Sappi and Kotkamills. In 2007 and 2008 major co-operation negotiations were carried out and many paper machines and mills were shut down as a consequence. The same story has continued ever since. Cost-efficiency, reorganization and continuous changes are to stay within the paper industry which has carried a solid and firm reputation for ages. Dictated by economical decline and new medias, future challenges are particularly big for publication papers and therefore strongly reflected to both Stora Enso's businesses and Finland's paper industry.

Stora Enso is a global packaging, paper and wood product company employing some 26 000 people in 35 countries worldwide. Stora Enso's annual capacity of board and

paper is 11,8 million tonnes. 26% of its employees are located in Finland and 38% of its paper and board capacity also comes from Finland. The company is divided into four Business Areas; Publication Paper, Packaging, Fine Paper and Wood Products. Within this research of Co-creating Value to Magazine Paper Selection, Publication Paper Business Area is the one in focus. It consists of Newsprint, Book Paper and Magazine Paper units which all serve publishers, advertisers and printing houses. (Stora Enso, Annual Report 2010)

The northernmost paper mill in the world, Stora Enso Magazine Paper Veitsiluoto Mill in Kemi, is a part of the Publication Paper Business Area and produces coated magazine paper to both its domestic and global markets. Annual production capacity of the mill is 450 000t. Products are medium weight coated (MWC) and light weight coated (LWC) papers. The paper is called NovaPress and it is a well known brand worldwide. Main customers are printers and publishers, who use the paper for high class magazines and catalogues. In 2010, printers lead the customer segment share by 39%, whereas publishers closely followed with 29%. UK, Finland and Germany were the biggest delivery countries measured by sales volume in 2010 and the total number of countries to where Veitsiluoto Mill exports paper is 55. Veitsiluoto Mill and its biggest publisher customers are starring in this research. (Stora Enso Oyj, Veitsiluoto Mill 2010)

NovaPress has been and is still sold and marketed mainly by technical specifications like opacity, whiteness and bulk, and their measurements. Marketing materials which are handed over to the customers speak the same technical language. Unprinted samples together with many tables and charts seem to be the basis of the paper supplier to support the paper selection at the customer's side. Thousands of unprinted sheets are being sent out on a yearly basis. Technical specifications and these samples lead the way. However, there have been new cases recently where the final paper selection has been done based on sensory properties. How the paper looks, how does it feel in hands and how does it sound. High quality has been the principle in these cases as well, but other, non-technical criteria are becoming as important and paper supplier should not ignore this if they want to stay part of the fascinating world of magazines.

## 1.2 Context of the research

A strong sensory identity is an important element to differentiate even in saturate magazine paper markets in Europe (Gobé 2001, 251). Responsive customer approach is needed to fulfill the expressed needs of customers (Witell et al. 2011, 141). For an individual it is not an appropriate or even possible to compare different products that competitors have copied from each others and have a technical label on top of them. (Kristensson et al. 2004, 5; Shapiro & Spence 2002, 605) Global markets and new technologies have taken us beyond mass production, fragmented markets have taken mass markets over and that is where individualization and even tailor-made products become valuable (Lindstrom 2005a, 3-4).

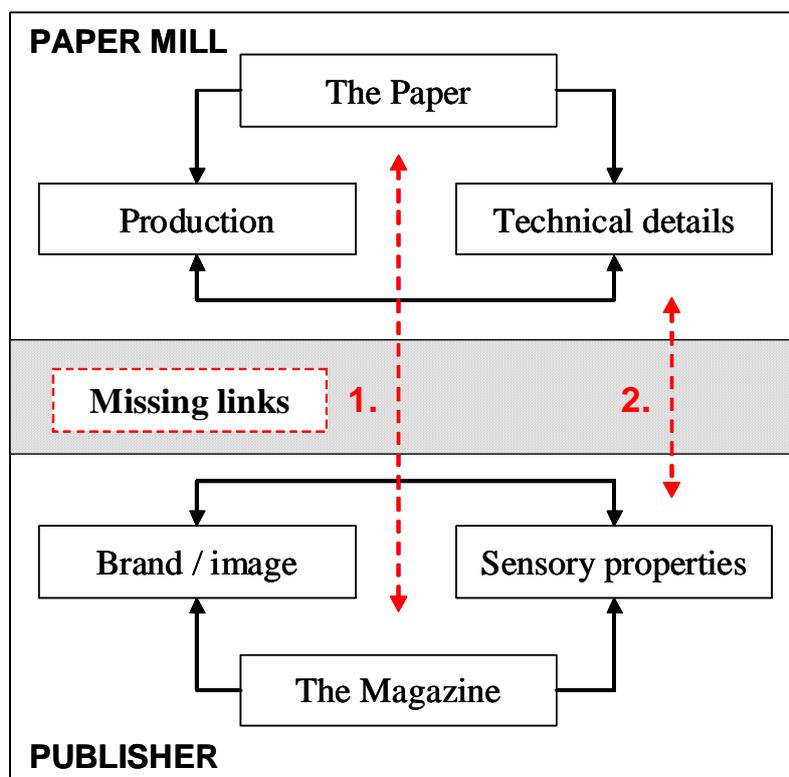
Differentiation has become smaller and smaller which means that comparison only between product price and quality is not an appropriate tool. The brain can be seen as a filter that deletes all the irrelevant details and carries on discovering important differences through the sensory channels of smell, hearing, sight, taste and touch. (Hultén et al. 2009, 21; Citrin et al. 2003, 916) Sensory properties have often more weight in product evaluation than verbal or written technical details as the experience is stronger and people do trust in them. (Shapiro & Spence 2002, 603; Soars 2009, 286) Sometimes evaluation is impossible based on specifications, like Customer C says when asking about product variety these days:

*“It’s not too many manufacturers left these days, but many of the products are what we would call directly competing grades. Just slightly different variation of technical details.”*

Customer C, Finland

The focus of this study is on paper mill, publisher and their end products. General view is shown in Figure 1, where the upper part focuses on the paper mill side and the lower part on the publisher side. Going more into detail, Figure 1 is divided into three sections; process around the paper, process around the magazine and they grey area in between. The paper mill has certain production based strategies, resources and product palette, which often leads to a company led value. In order to keep up the quality, continuous discussions and actions are needed at the paper mill, where

main topics are production and technical specifications. In Figure 1, the paper, NovaPress, carries the intended value which is determined by the producer. The paper has high brightness, excellent opacity and optimal gloss to mention a few of its characteristics. On the magazine side, at the publisher, the paper has high desired value expectations which are grounded on the expectations that the brand or image of the magazine has to redeem. First missing link (1.) is called an information gap; the supplier does not have sufficient knowledge of customer desires and it may focus on wrong customer needs. Co-creating through listening and involving both parties could link this gap. Second missing link (2.) is called perception gap and it reflects the possible lack of common language and expectations. An intangible gap between technical details and sensory properties needs to be bridged. When the paper supplier describes its paper by numbers and the publisher is looking for a paper that looks for example fashionable or feels ecological, something is missing. If the technical specifications do not describe how the magazine will look, feel and sound as an end product, they cannot support the paper selection process. (Zeithaml et al. 1990 via Van der Haar et al. 2001, 629-630)



**Figure 1. Definition of the research** (Completed by Zeithaml et al. 1990 via Van der Haar et al. 2001, 629-630)

In order to create loyalty, it is important to find out what customers care about and show them that you have the same interests. People are looking for brands that know what they want, brands that offer a variety of experiences and respond to customers' aspirations. Being able to add a level of sensory experience into product selection is something to reach for. (Gobé 2001, 143, 151, 161) This level could include verbal expressions of both technical specifications and sensory properties to help the customer imagine and recognize the product more vividly. Reaction will be confirming if customer expectations are satisfied by the product. Satisfaction changes into negative reactions if product performance stays lower than expected, whereas positive confirming will step in when outcome exceeds expectations. (Eggert & Ulaga 2002, 108) Once knowing if there is something too much or some properties are missing, an updated or even a new product could be created to meet the customer expectations (McCabe & Nowlis 2003, 435).

The mill needs to adopt customer perspective approach by offering services and products which match the customer needs. By improving the knowledge of the customers' quality expectations and criteria, the mill is able to create better value. Paper samples can be selected better to help the customer to do the right selection and sales people can justify NovaPress' and other magazine papers' quality factors better in mutual, understandable language. The results of this research could also guide the mill's research and development (R&D) functions towards more specific and efficient ways. Its purpose is not to benchmark Veitsiluoto Mill or compare NovaPress with its competitors, but to find out which relevant sensory quality factors of magazine papers are and how to utilize them in practice concurrently with technical specifications.

*“So sometimes if you pick up a brochure from any paper mill in the world, you pick up their brochure and see this is their high white, high bright, and you think yeah, but they all say that! It is a danger, because if your perception that you put on that is not the customer's perception, then you're going to alienate them.”*

Customer E, UK

The message is clear on the lines of Customer E, how it is all about how the paper is experienced through senses by the customer and understanding their requirements. Silk feels different from cotton, silver looks different from grey, city sounds different from countryside and Vogue has a different image from a weekly celebrity magazine. The purpose of this research is to learn how publishers perceive quality, which perceived quality and sensory properties are important and how they effect on paper selection. The idea is to find out if there is a need and chance to link customer requirements with existing technical details and as a consequence create a common language through a customer-oriented approach for NovaPress and other magazine papers.

### **1.3 Structure of the research**

This thesis is structured as follows. It is divided into five main chapters with different number of subchapters needed on each. The first chapter is the introduction, explaining background details of this research and pointing out its context. The second part leads into the interesting world of co-creation and senses, into the heart of conceptual framework. Why should more co-creation be involved in the paper industry and what does all this have to do with senses? Diverse, but critical selection of scientific articles has been melted alongside the empirical findings in order to create new understanding. The third chapter gives compact reasoning for the methodology of the research. It also explains how this almost exceptional research was done in practice. The fourth part of the research finally opens the doors to all ten interviews carried out around Europe. These interviews were first recorded on the spot and transcribed afterwards. Results are being summarized through thematizing method according to each theme. Finally, there is a fifth chapter summing up all that was learnt through earlier research including the one in question. Findings and conclusions will give new ideas for the reader of this paper, for next research topic as well as for the mandatory. The paper is being enlivened throughout by selected citings from the interviews.

#### **1.4 Position of the researcher**

This research combines my working experience and studies together in an excellent way. I have been working as a secretary for management and sales at Stora Enso Veitsiluoto Mill for just under ten years. Daily routines are spiced up with both internal and marketing communications. I have managed to gather a lot of silent knowledge working behind the scenes and right behind our management. Marketing and brands have been close to my heart for a long time now. Ongoing studies have opened doors into interesting world of co-creation and senses, through which a new era could be available even for a traditional paper industry. Once I was encouraged by my professor and was shown a lot of support by my colleagues at the same time, this up-to-date research topic and my researcher position saw their daylight.

## 2 CONCEPTUAL FRAMEWORK

### 2.1 Co-creation

Co-creation updates the outdated roles of customer and company, consumption and production. It can explore new, additional ways to create value or minimize risk of failure. (Powell 2004, 25-26). Prahalad and Ramaswamy (2004) have pointed out the importance of customer-centricity already in the early twenty-first-century. Paper producers are still leaning on company-centric values, even though in reality the roles should be updated into connected, informed and active ones. Companies should not act alone when consumers are willing defining and creating value which could lead both parties into a profitable solution. Co-creation both changes and challenges the traditional roles of company and customer. At the same time focus on cost conscious, quality and reaction ability is needed. (Leavy & Moitra 2006, 5)

Management has not only the quality of a product to take care of, but also the quality of a co-creation process should be taken into consideration. The co-creation process begins in the company, inside the organization. Good planning of experience environment and network can steer both the company and customer to feel a unique co-creation experience of being one team. (Prahalad & Ramaswamy 2004a, 5-6; Ramaswamy 2009, 32-33) This is an important aspect as customers can be seen as a distant and demanding business party whereas the paper producer is someone who only produces paper with eyes and ears covered. Sharing ideas of product quality and keeping up a continuous dialogue could create more value on both sides. This is something needed, but not necessarily the reality though, as Customer A sums up very curtly:

*“Quality control is very business related, or it is easily taken as a problem based action.”*

Customer A, Finland

The traditional business model in the paper industry is to produce paper and sell it. Customers buy what is offered and trust that evolution takes the quality level as high as possible within certain frames such as price and delivery certainty. As the

marketplace is whole globe, also the customers are located all over the world. Pressure to keep up with the quality expectations and if only possible, take them further away from cutting edge seems to be the main task today. (Ulaga 2003, 682) Good, but especially bad word spreads easily as customers are well informed, connected and networked. Publishers should be seen as a valuable source of knowledge and ideas of co-creating value for both the paper supplier and themselves. (Ramaswamy 2010, 22)

If a company could choose between circling among its own product ideas or listening to its customers and their ideas on how to develop present product and even create new ones, choice should be evident; listen to your customer. Leaning on certain strategies and ways of doing business may drain the creativity inside a company. Professionals may also think too rigidly due to their strong knowledge in their own area, whereas customers are able to provide more valuable, even unique ideas. They are the ones deciding whether the product represents the needed quality and value (Kristensson et al. 2002, 59-60; Kristensson et al. 2004, 5), but like Customer B confirms, expectations increase continuously:

*“Your expectations increase once the quality of paper increases. It’s incremental, probably an endless story.”*

Customer B, Finland

Old product pros may turn into cons in today’s global and saturated markets. By defining what value the customer is looking for and what value the company can get in return, the company is taking the early steps of a co-creation relationship with its customer. Customers are the new source for determining and inventing new competitive advantages. (Ramaswamy 2008, 12) Production led approach and role of a passive receiver is history in present markets. By engaging the customers in co-creation processes, companies are able to invent new possibilities to succeed. (Ramaswamy 2008, 9; Witell et al. 2011, 141) The role of the company is not only to produce services and products, but also to produce something that supports the customer’s operations (Hultén 2011, 257), and in order to survive, create an experience to share (Gilmore & Pine II 2002, 5, Prahalad & Ramaswamy 2004b, 12).

A deeper co-operation between a customer and supplier can raise diverse ideas on both sides (Kristensson et al. 2004, 7). Co-creation does not change the importance of the traditional cost and quality thinking, they are more of a strong business basis. It does not mean either that every demand or suggestion placed by the customer can be implemented. What it could change however, is the source of problem solving and innovation.

Before being able to strengthen its market share or even create new relationships, a company needs to take up on a value assessment to measure its products in the minds of customers. (Payne & Frow 2005, 170-172; Hultén 2011, 259) It is also important to realize that the certain product characteristics have a different importance depending on the customer's needs and uses. A weekly magazine does not necessarily require a high class coated paper, whereas a fashion magazine has set its quality crossbar a lot higher. (Eggert & Ulaga 2002, 110; Van der Haar et al. 2001, 628)

#### 2.1.1 Co-creating quality and value

*“Paper like NovaPress LWC, it is some kind of a general paper that can be used for any product which is probably why everyone produces something similar.”*

Customer F, UK

The above comment from Customer F hits the goal. A Supplier needs to take good care of its product before it turns into a commodity and disappears into an endless variety of similar products. Customers have the final say whether they see enough value in maintaining and developing existing relationship or try another supplier. Differentiation through product or service value is becoming even more important than ever for a magazine paper producer. (Ulaga 2003, 677)

The traditional way of creating value in industrial business is placed on engineering, production and different strategies. Customers' or end users' standpoints may vary from the ones written in company strategy. Value expectations may change over time and increase alongside with product development, which requires the voice of the customer to be listened. (Witell et al. 2011, 154; Van der Haar et al. 2001, 628, 635)

Relationships with suppliers and other partners are seen as self-evident, whereas customers are traditionally put into a box of pricing and tonnages. There is a need to audit and assess customer's needs in order to be able to bridge the gap between buyer's and supplier's value expectations. The internal view of product quality should be supplemented with shared view of quality. (Ulaga & Chacour 2001, 526-527, 529) Traditional roles need to be challenged. Genuine product value originates from the customers which makes them an important source and partner of value creation. (Witell et al. 2011, 140; Hultén 2011, 256; Prahalad & Ramaswamy 2004b, 7)

Quality is always subjective. We use our capabilities and abilities differently; we interpret and practice in unique way (Strati 2007, 64). One product can be valued in multiple ways by various people and in different end-use categories. The product is accepted once its quality meets customer's expectations or it can also offer a positive confirmation if expectations are exceeded. (Ulaga & Chacour 2001, 528-530) This is something where paper suppliers should be careful with product information and not promise something that is not necessarily superior in the eyes of the customer. The message should also be understandable for all people involved in the paper selection process.

Value has different meanings depending on the point of view. Paper supplier values its product highly, but at the same time this value should also bring additional benefits for the customer. Value comparison is being done between competing product offers (Bowman & Ambrosini 2009, 479-483), which is why generating value from customer point of view is seen as essential. In today's challenging business world, discussions of offering value or even added value for customer in order to survive are going on intensely. Researches, descriptions and analysis on the customer surface are mentioned as efficient means to do this, but the most crucial thing is to realize why certain product is seen valuable and more important, how valuable it is for the customer. (Bowman & Ambrosini 2009, 485; Graf & Maas 2008, 1-2)

Like Grönroos (2008) has made it clear, it is the customer who provides the value for a product, not the supplier. Also publishers buy the paper to reach value for their own

businesses. In this respect, if customers are the value co-creators, the role of a paper supplier is more like a creator of value foundation. When paper is bought, value-in-exchange will happen. When paper is used for a magazine, value-in-use has come about which is more important than just the exchange. It is not just about buying paper, but to make the most use and value of it and this points out to how suppliers are dependent on customers' ideas of quality and value.

Even though the product quality would remain close to competitors' products, the future of sustainable competitive advantage can be built once the supplier knows how to offer better overall quality for former, present and potential customers. (Ulaga & Chacour 2001, 529, 537) Witell et al. (2011, 142-143, 154) state that if customers are offered an active and committed role of a team player, their knowledge and skills could provide development projects competence and success. They are the optimum source of new ideas. Once knowing the customers' quality expectations it may be possible even to reduce the unnecessary product characteristics and to decrease costs.

*“I mean if X-magazine is on 60 gram and we're on 80 gram, then there's a question to be asked. I mean we like to be above it, but same time not ridiculously. It's absolutely essential that you do look at competitors.”*

Customer A, UK

As one of the customers interviewed in UK says, it is important to know what your competitors are doing, but it is more important to focus on understanding your customers and the factors that could create more value-in-use for them. Active interaction to keep your own quality level up is needed. (Grönroos 2008, 306-309)

Co-creation, value and new customer approach are not the automatic keys to success and higher profitability. Even though a new or updated product provided with added value is launched at markets, demand also depends on competing offers and products. A product will not be needed or wanted before it can be seen as a choice; producing something that does not meet the expectations does not carry very far. With hardly any exceptions, a decision is based on a choice between two or more competing alternatives, whose technical details are most likely to be almost similar. (Van der

Haar et al. 2001, 628-629) New approach in order to create better service and quality or even added value is needed. Focusing on customers, on publishers and the cases where sensory properties have been in main role could show way to this approach.

One could say that there are two end products involved in this research; NovaPress and the magazine. Magazine could be seen as over 300 different titles of course, but as an end product I would call it the magazine within this study. The magazine urges to be picked up off the kiosk shelf. Its content invites to flip through the pages. The sound of the pages is like music. Fascinating images tempt to take a closer look. Smell tells us that it is a brand new issue which no one else has read through beforehand. Magazine and the paper used for it are obviously full of sensory experiences. Experiences which have not yet been found by scientific researchers. This turned out to be the biggest challenge when gathering theoretical background for the connection between senses and co-creation.

## 2.2 Senses

*“That sensory thing! What you don’t realize is that you are actually doing that every single time, but it’s like a subliminal thing, it’s actually the major selection criteria, but it’s happening without you thinking about it! And that’s the awakening today!”*

Customer D, UK

We experience our lives through senses. Our understanding of the world is based on senses in intimate, personal and corporeal relation which is continuously activated (Strati 2007, 62-63). It is surprising how subconsciously our senses and brain cooperate and yet we justify and defend ourselves and our decisions with rational, numeric and statistical arguments in business life.

People have their senses activated all the time; they smell, hear, see, touch, and so is thinking and processing the sensory signals (Soars 2009, 289). A company should pay attention on how it meets the customer on a personal or even an intimate level through dialogue, interactivity and multidimensional communication. This does not mean only emotions and values, but logic and rationality should be kept along too even though functional product details and specifications do not present the product as a real, as an experience. Sensory properties link the human brain with five senses

at the center of customer relationship, both rational and emotional factors need to be taken into account. (Hultén et al. 2009, 3-6, 30) Rational factors are also pointed out by Customer C:

*“And I think that we mustn’t move away from, any of us, from the fact that quite often the final choice is driven by economic factors. I mean there are always wish lists.”*

Customer C, Finland

Product evaluations that are being done through emotional and sense based experiences are difficult to explain in words. When taking sensory properties along, the surface of the product and the comments need to be scratched deeper. The more sensory links a product has, the stronger remembrances and connection it creates in the minds of consumers. Smell, hearing, sight, taste and touch work automatically together (Lindstrom 2005a, 69-71, 139), which is more or less a subliminal action, like discovered by Customer D in UK:

*“But I haven’t thought about this before; your senses, your vision, your touch and hearing are a definite part of your selection.”*

Customer D, UK

The next idea is to be more specific about each five senses from a magazine paper and paper mill point of view. All senses are involved in paper business even though their importance or more like assumed importance may vary.

### 2.2.1 Smell

Like other senses, smell creates an individual experience. Even our origin, age and sex have an influence on how we smell and perceive our environment daily (Lindstrom 2005a, 92-93). Smell is taken for granted by most of us, yet it has been a crucial and vital sense over the history. It is an alerting sense that works on and affects us more than we realize (Lindstrom 2005a, 24, 92). It detects odours constantly but leaves the brain space to work on other thoughts at the same time (Goldkhul & Styvén 2007, 1298; Soars 2009, 294). A human can remember over

10 000 scents and they are linked to earlier experiences and memories. In this way, scents have a strong effect on our emotions (Goldkhul & Styvén 2007, 1300; Hultén et al. 2009, 7-8, 42-43).

Product scent can enhance the memory of product information and distinguish the product from its competitors (Krishna et al. 2010, 57, 61). Negative smells should obviously be avoided in products where as neutral odor in right place can have positive influence (Goldkhul & Styvén 2007, 1298). Scent trips that include microscopic scents have been used in newspaper and magazine paper advertising in order to give out smells to a reader. It is a common belief that scents have a positive effect on print media adverts (Hultén et al. 2009, 46)

### 2.2.2 Hearing

*“The singing tells it is real paper.”*

Customer B, Italy

People hear a big number of sounds that inform what is happening around them. This happens without any extra effort, sounds are in the background most of the time. Hearing is activated continuously and sounds can be remembered from earlier times. Hearing is something that happens without taking notice, but listening requires concentration. (Hall et al. 2008, 1020; Hultén et al. 2009, 68) Both functions should be activated in positive way as they are emotionally and automatically directed (Lindstrom 2005a, 72).

Sound creates mood and is closely connected to memory and emotions (Lindstrom 2005a, 21; Hultén 2011, 259). Humans react with feelings when they hear voices and this is why it is important to eliminate the possibility of having a negative feeling of certain sound. An excellent example of this is mentioned next by Customer C in Finland. Different voices and music have been found to have a spontaneous force. (Hultén et al. 2009, 8-9; Soars 2009, 293)

*“We used to have SC paper on one of our magazines, but it rustled and that annoyed our people. We set a meeting with the producer. There were technical expertise, mill director and others present, and we told that we want to change the paper because it rustles. You should have seen their faces! Then they browsed the pages and said that there is nothing wrong with the paper. I asked them to close their eyes and do it again. After leafing the pages through again, they noticed the difference and were amazed.”*

Customer C, Finland

### 2.2.3 Sight

Eyes notice changes and differences that we are surrounded by. Sight is strongest sense to gather geometric information. (Hultén 2011, 259; McCabe & Nowlis 2003, 432) Our brains keep up everything that we see and the work is done quicker than we can even imagine. A huge amount of visual information is registered every moment. (Lindstrom 2005a, 82-83) When two-thirds of human being’s sense organs are located in the eyes, sight is the most powerful and seductive sense. It enables us to notice changes and differences as every seen picture is compared with earlier experiences and memories; there is a connection with sensory experiences in the past. (Hultén et al. 2009, 9-10, 89-90)

*“Even if the figures tell that A is better than B, but if B looks better, it is the selection.”*

Customer B, UK

Like Customer B from UK said, sight is the sense that most people trust completely and it is strengthened often with other senses to obtain a deeper understanding of what we see. Visual impression often wins if there are variant signals between different senses. (Hoegg & Alba 2007, 491) It can also tempt against all logic and rationality (Lindstrom 2005a, 18).

It is difficult to stand out and visualize the identity and values of the product in the massive visual information flow that is on all the time. Sight should be taken into account, but not as the only chance to inspire customers. The message can be more

persuasive once attached to other senses than sight only. (Hultén et al. 2009, 87; Lindstrom 2005a, 83)

#### 2.2.4 Taste

Taste is one of our most distinct emotional senses and also considered to be the weakest human sense (Hultén et al. 2009, 10-11, 117). It is closely linked with smell and jointly they create the overall experience (Lindstrom 2005a, 95-96). With a few exceptions, brand seldom tastes (Hultén et al. 2009, 113). It is also maybe the most distinct sense in the paper industry, in magazine paper business anyway. In this research taste has been left out on practical level.

#### 2.2.5 Touch

*“On a silk paper, it’s how it feels, the smoothness between your fingers. The more silky it feels in your fingers, the better it is.”*

Customer D, UK

We feel, know, operate and even see with our hands (Strati 2007, 67). Physical interaction with a product begins with the skin which is the largest organ on the body. Touch tells us material information and it is the only sense that can determine temperature or weight of a product. Touch experience is critical when making a purchase decision as the sensitivity of our hands can be demonstrated on little fingers which take up more brain capacity than our whole back due to mosaic of sensory receptors. (Hultén et al. 2009, 136-138; Citrin et al. 2003, 916-917; McCabe & Nowlis 2003, 432) Even though touch is a physical operation, it leads to an automatic emotional response (Peck & Shu 2009, 439). It can be seen as an origin for our rational decisions (Soars 2009, 294), which gives us confidence in our evaluations (Grohman et al, 2007, 237).

Through touch we create the physical contact with the world around us and three-dimensional pictures of different objects. A human mind can remember how something feels by looking at or thinking about it. Unique touch experiences can help creating a strong identity around a product. Thoughts of material, surface,

temperature, weight, form and stability are attached to touch sense closely. (Grohman et al, 2007, 237; Hultén et al. 2009, 11; Peck & Shu 2009, 434) The feel of a product tells us essential information of the quality in question. Heavy objects are often related to high quality even though light might be more convenient. (Lindstrom 2005a, 87-88) According to Customer C in Finland, touch is very essential when evaluating paper and comparing it to different options:

*“One of the most determinant factors is the thickness, or should I say the feel of a magazine.”*

Customer C, Finland

Including touch element into product details may increase interest of the product. Touch can create an affective response when it provides at least neutral or positive sensory feedback of the product, which can have a strong and positive influence on the decision-making process. (Peck & Shu 2009, 441; Peck & Wiggins 2006, 56-58) Even in the paper industry with the help of today’s print technologies, providing a pleasant surface for a paper should not be a problem. It is important to choose right papers to be compared in the paper selection process. Two extremities are not convenient competitors.

Magazine papers urges one to touch, especially when printed and placed on a kiosk shelf. It is more likely to buy a pleasantly feeling product, even though touch does not provide additional information of the content. (Peck & Shu 2009, 434, 439) Sensations associated with a fashion magazine or TV magazine need to come true once reading or browsing the magazine. Paper should not feel too cheap or too classy, but to feel right, like both customers both in Sweden and Finland described their touch experiences:

*“You want to feel the thickness how 100 pages magazine feels, to compare it with different cover options.”*

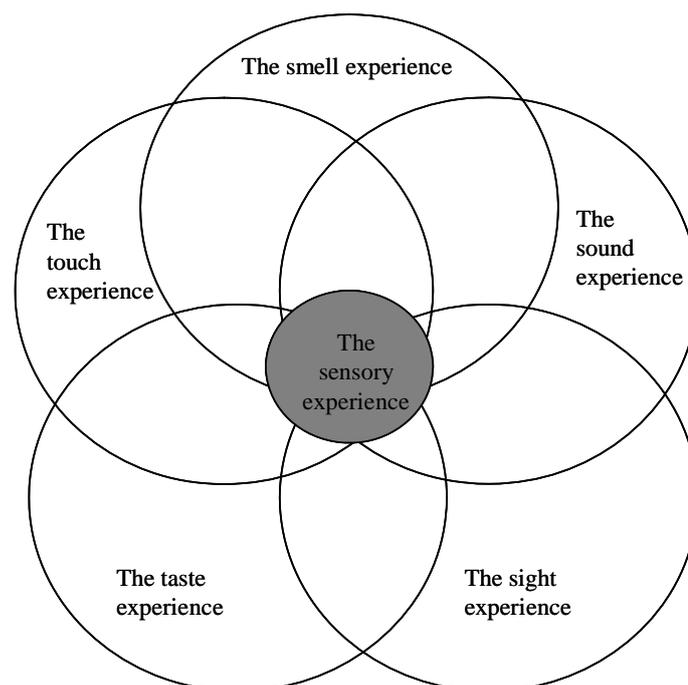
Customer C, Sweden

*“It felt like you were reading something.”*

Customer C, Finland

### 2.3 Sensory experience

Even though all our senses are activated most of the time, sight has been the strongest sense marketing vice. Smell, sound, taste and even touch have been put on the background without better knowledge. Our sense organs on our whole body send immediate signals to the brain. These millions of impulses are received unconsciously. As Figure 2 shows, when two or more senses are affected, it contributes to a sensory experience and all involved senses give us invaluable information about different things. Beyond marketing actions, companies could benefit in long-term by creating a sustainable brand image with the help of sensory values. (Hultén et al. 2009, 1-2, 17-19) There is not a necessity of inventing new sensory attractions, but to find out the existing and possible new benefits (Lindstrom 2005a, 98).



**Figure 2. The sensory experience (Hultén et al. 2008 via Hultén et al. 2009, 17)**

The global marketplace offers great opportunities for a supplier once a way to a customer's heart and soul is found. A sensory experience is one possibility to leave a strong imprint on a customer surface. (Hultén 2011, 265) When product specifications are close to each other or there are not big differences in price or

quality, it becomes very difficult to put one product before all the others. (Hoegg & Alba 2007, 490; Hultén 2011, 263)

*“There are quite many technical specifications and measures. I guess our use of them is a little constricted.”*

Customer F, UK

Product details can overwhelm customers with more information that they can deal or associate with. Details should be delivered in a way that enables people to back them up with their sensory perceptions. Natural materials and products, such as wood and paper, are ideal to be marketed with the support of sensory experiences. The knowledge and understanding of those experiences would lead the company towards more precise products and exact customer segments. (Berger et al. 2006, 42-43). Services and products are not bought alone anymore, emotional and sensory experiences of a certain brand are closely attached. A company can reach a deeper level in a customer’s mind by putting more importance on human senses. (Hultén 2011, 257, 263)

*“So my view is that the key technical details that you need to make available, things that readily need to be available, are the things that people can back up with their sensory properties. Describing them. Explaining things like opacity, gloss level perhaps, whiteness I think is a classic one.”*

Customer E, UK

Thesen et al. (2004) as well as Delwiche (2003) pointed out many research results, where sensory or multisensory experiences were evident and surprising at the same time. Strati (2007) is convinced of this experience too. When someone talks to us, we look at the lips moving and we listen to the voice – a mixture of sight and hearing. We have our presuppositions of certain foods to be of a certain color and to taste accordingly, and we feel shocked if the meat is blue, potatoes green and water purple. Mixture of sight and taste, and expectations. If one drink is clear and another one is red, we expect the red one to taste more like strawberry or similar, even though both drinks would taste exactly the same. Also a colored product is expected to have more smell even if it was odourless. Mixture of sight and taste, sight and smell. Or when

we work on computer, we look at the screen, type on keyboard, feel and hear each keystroke. It is seldom that we trust on only one of our senses but on many of them at the same time, like Customer B commented:

*“Once we have two papers to choose from, it will be the one that pleases eye and finger more.”*

Customer B, Finland

Sensory experiences should be taken into account if a company wants to take its brand identity and value to a deeper level in a customer’s mind. All five senses have a strong effect on contributing to a final purchase and consumption decision, but still they have been ignored in marketing. Once the senses are involved, the way closer and deeper to a customer’s brains and mind is available, yet not automatically. Through senses every individual becomes conscious of, it is important to look right and give right values to attract the customers. (Hultén et al. 2009, 1, 12-13) Our senses are adjusted more on danger than pleasure perception and this leads us to a careful research of senses in order to provide customers with positive experiences and not to strengthen the automatically occurring protective detection (Lindstrom 2005a, 9).

*“It doesn’t matter if something is two points higher on gloss, what matters, is how does it look like. People very much just look at it!”*

Customer E, UK

The quality and performance of a magazine paper may not be able to be detected if all relevant sensory experiences are missing. Focusing on sensory experiences cannot be done separately from the business itself. Earlier product advantages, associations and positions should also be supported. (Lindstrom 2005a, 103)

### **3 METHODOLOGY**

#### **3.1 Qualitative research**

The research method in this research is qualitative and this leads to a material based analysis which means building theory on empiric material. Analysis based on material is essential when further knowledge of a certain phenomenon is needed. The target is not to create a statistical generalization but to describe a certain episode, understand a certain action or give meaningful interpretation of the phenomenon in question. (Eskola & Suoranta 2000, 19, 61; Tuomi & Sarajärvi 2009, 85; Wilkka 2005, 97.)

#### **3.2 Focused interview**

Pros for choosing a focused interview as a data collecting method are for example to give the interviewee a chance to create meanings by being active, to place the interview results into a larger context, to clarify presumptions and to deepen one's own knowledge. Focused interview proceeds according to certain themes that are chosen in advance and that are based on the theoretical context of the research. Themes are the same for each, but the order and exact form of the questions may vary. (Eskola & Suoranta 2000, 86; Hirsijärvi & Hurme 2009, 48; Tuomi & Sarajärvi 2009; 75) Themes need close criticism in advance so that every sector of the phenomenon in question will be taken into account (Kananen 2008, 73).

On a general level, offering the interviewee a chance to share his or her opinions and experiences are seen as essential factors to get people interested in participating in the research. It is important that the interviewees know as much as possible of the phenomenon in question. Weak knowledge may cause wrong research results and in this research experts and people in charge of paper selection are crucial. (Aaltola & Valli 2001, 25-26; Tuomi & Sarajärvi 2009, 85; Kananen 2008, 37) The interviewer forgets easily that his or her actions and comments are also being followed by the interviewee and this may affect the final results. A neutral as possible approach is something to strive for. By recording the interviews it is possible to re-examine and

analyze them again and more precisely afterwards. (Ruusu vuori & Tiittula 2005, 14-15)

The number of interviews required is difficult to specify in advance. Saturation is reached once new interviews do not provide any new or essential information. Before this point it reached, it is necessary for the researcher to know what to look for in the material. (Hirsijärvi & Hurme 2009, 59-60; Tuomi & Sarajärvi 2009, 87; Eskola & Suoranta 2000, 63; Wilkka 2005, 127-128)

### **3.3 Empirical materials**

Material that is collected by focused interview is usually substantial and part of it can be left out from analysis. However, the sooner the material is analyzed the better. Material is still fresh and inspiring, but also the importance of wide perspective and entirety must be pointed out. A hermeneutical approach does not make clear difference between classifying, analyzing and decoding the material. This kind of division is not necessary and may not be even possible. (Hirsijärvi & Hurme 2009, 135-136)

As a whole, hermeneutics is related closely in the analytical process. Hermeneutics means on a general level the theory of understanding and interpretation. Possible rules are tried to be found in order to be able to talk about wrong or more right interpretations. Finding meanings for the phenomenon is the main target. (Tuomi & Sarajärvi 2009, 35) The hermeneutical circle is based on an open and understanding dialogue between the researcher and the research material. A critical and reflective approach is required. (Wilkka 2005, 146-148)

An inductive approach and processing is characteristic for this research. Inductive or material based approach is taken as a common way to handle the results in qualitative research. A single observation is the sign towards more common and theoretical arguments. Theory can be seen as a tool to build interpretations as well as a target where single observation leads to. (Eskola & Suoranta 2000, 83; Kananen 2008, 20)

Thematizing as an analysis tool emphasizes what has been said of each theme. It also requires an interaction of both theory and empiricism to succeed. Thematizing is an advisable tool in solving practical problems. (Eskola & Suoranta 2000, 175, 178-179; Tuomi & Sarajärvi 2009, 93) Citing the interview material gives the analysis a vivid touch, but it should not be used without deeper analysis or conclusions (Kananen 2008, 91).

### **3.4 Quality, creditability**

Quality can be reached by creating a good frame for the interview in the first place. It should be considered how certain themes can be taken deeper as well, if possible or needed. In order to make sure interviews and results received from them remain repeatable, recordings must be of good quality and the transcribe has to follow the same rules from the beginning to be able to create reliable material that has no conflicts. (Hirsijärvi & Hurme 2009, 184-185; Hirsijärvi et al. 2009, 231)

To ensure the analysis is systematic and reliable, all selections, exclusions and other guiding principles have to be opened. Research as a whole as well as reasons for main perceptions need to be described in order to create creditability. (Ruusu vuori et al. 2010, 26-27)

Each theme interview followed the same structure and was recorded to be transcribed afterwards. A more detailed description of this empirical study will follow.

### **3.5 On the field**

The planning of the focused interviews began at Veitsiluoto Mill within a team consisting of a mill director, a director of product management, an R&D manager, a technical customer service manager and lastly me as a researcher. Based on recent cases where publishers had chosen paper by sensory properties, latest theories from the University of Lapland and practical experience of each, the frame of the interview was established.

Interviews were based on four themes; 1) paper selection in general, 2) key quality factors, 3) samples and 4) sensory properties. In the *paper selection in general* theme the idea was to assure by whom, when and how the paper selection is done. The *key quality factors* theme was expected to reveal the importance of the technical specifications and the most important factor when selecting the paper. The *samples* theme was planned in order to learn how the present sample service could be improved. The *sensory properties* theme was built according to cases where technical specifications had been put aside. Last but not least, a set of unprinted dummy magazines were evaluated.

As it was obvious at this stage of planning the interviews, that the topics of co-creation and senses was likely to be new for the publishers as well, four main themes were cut up into various possible questions to be used if needed. Paper qualities to be used in this research were selected from a wide variety of publication papers, all being Stora Enso brands between super calendered (SC) 56gsm and wood free coated (WFC) 115gsm. Unprinted dummy magazines were an obvious choice as the sample service at Veitsiluoto Mill leans strongly on unprinted sheets which are sent out all over the world when requested. However, to provide the interviewees with a real magazine feel, it was decided to produce a dummy and not to go ahead only with loose sheets.

Ten interviews were conducted in Finland, Sweden, UK, France, Spain and Italy. All these markets are important for both Veitsiluoto Mill as well as for Stora Enso as a whole. Including this many markets was going to be time consuming, but it was seen as the best way to obtain the big picture. Publishers were invited with the help of field sales people, who keep up the customer contacts regularly. After informing the field sales with the background details, they sent out the invitation letter which was received with open and positive attitudes. The idea was to interview people who are responsible for the paper selection in their companies, and this target was well reached; interviews were conducted with 16 experts and key representatives of publisher organizations (production directors, commercial directors etc.) and this could not have happened without the knowledge and help of our local professionals.

Each interview lasted approximately 1-1,5 hours and were held at the customers' offices to make them as efficient and convenient as possible. Researcher alone or together with local contact was in attendance. It was discussed whether to form a small team to undertake all the interviews, but in order to create as neutral impression as possible to obtain honest answers, it was decided that the researcher alone would travel to each interview. Interviews were recorded and later transcribed into about 200 pages of text. Interviews covered over 300 magazine titles based on rough calculation on the internet pages of the publishers in question.

Behind all this interview planning and preparation was the context of the research; learning from customers through co-creation and senses through which updated information, services and products could be created. More than one country had to be involved as the paper in question, NovaPress, is delivered around the world.

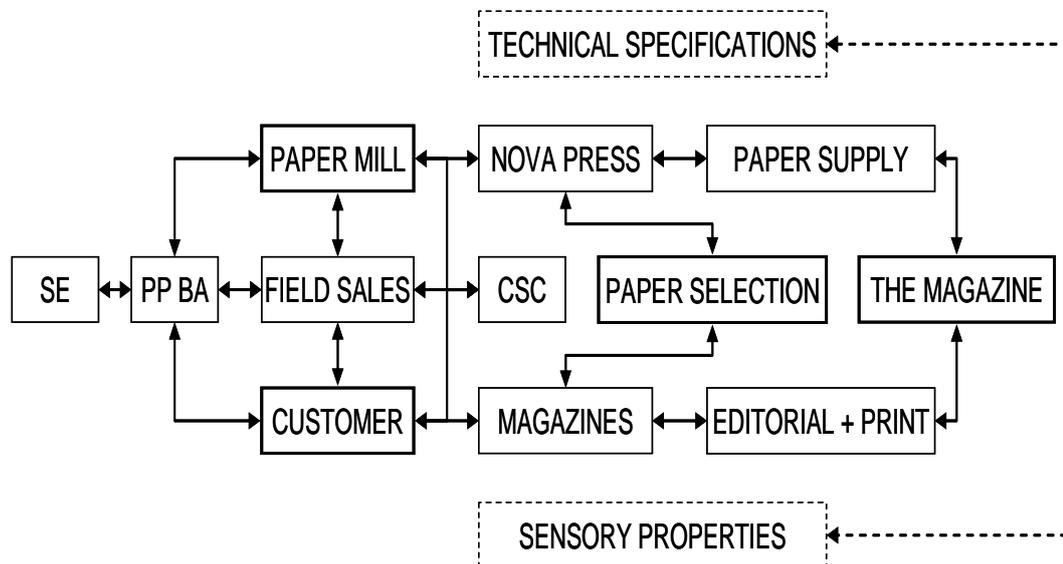
In order to have as open and honest comments as possible, a promise of confidentiality was given at each interview by the researcher. All interviewees accepted that discussions were recorded to support interview notes and it was agreed that publishers would be mentioned only on a country level. Interviewees by country are shown in Table 1.

<b>UK</b>	<b>Finland</b>	<b>Sweden</b>
Customer A Customer B Customer C Customer D Customer E Customer F	Customer A Customer B Customer C	Customer A Customer B Customer C
<b>Italy</b>	<b>France</b>	<b>Spain</b>
Customer A Customer B	Customer A	Customer A

**Table 1. Interviewees by country**

#### 4 GATHERING SENSIBLE KNOWLEDGE

Even though the purpose of this research is to find out if there is a need and opportunity to link sensory properties with existing technical details and as a consequence create a common language through a customer-oriented approach, focused expert interviews were built on a wider scale to be able to gather sensible knowledge. Before being able to create any expectations of sensory experiences, a deeper understanding of the whole paper selection process is needed. The basic model of industrial paper selection process is summarized in Figure 5.



**Figure 3. Industrial paper selection process**

Stora Enso as a global company is divided into four Business Areas, in this case the focus is on Publication Paper Business Area (PP BA). The Business Area (BA) leads the functions of both paper mills and field sales. In each country there is local field sales organization that runs everyday communications with local customers, including publishers. BA and field sales negotiate with customers for price, delivery and other terms. They also co-operate with the paper mill according to the needs and wishes derived from publishers. The Customer Service Center (CSC) sends out samples received from the paper mill according to customer requirements. The publisher considers different paper options according to several magazine

expectations. Once the paper selection is done, an order is placed into the production system by the CSC and the paper is produced at the paper mill. Produced paper in this case is called NovaPress, whose characteristics support the end product, the magazine. On the publisher side, each magazine turns into the end product through editorial and print work.

The purpose of this research is to learn how quality is perceived, which quality factors are important and how they affect paper selection. The alliance between technical specifications and sensory properties is another key interest, therefore the definition of the research described earlier focuses on the relation between the paper mill, publisher, paper selection and the magazine itself.

At the beginning of each theme (paper selection in general, key quality factors, samples and sensory properties) a short description of how that theme is related to the paper selection process and why it was included in the interview draft.

#### **4.1 Paper selection in general**

Field sales people keep up their customer relationships on a regular, daily basis. Once customers are willing to order magazine paper from Veitsiluoto Mill or any other Stora Enso mill in Europe, they contact one of the three customer service centers (CSC). CSC people place the orders into the mill production system. Once the order is ready based on quality, grammage and delivery requirements, the order will be delivered on a ship, train or truck.

Before any steps of this process can be achieved, the paper selection must be undertaken at the publisher. By who, how and based on what? Of course it is known that field sales people try to support this selection with the help of samples and any other details needed, but there seems to be a black hole in the customer-sales-mill information chain. Some answers are therefore taken for granted by the paper supplier.

First magazine paper considerations are being made based on different factors like a magazine's target group and volume, advertisers, delivery costs of subscriptions and

paper grammage. To start with, a rough selection between different options is made on technical specifications, by either the production director, production manager, commercial director or someone similar. Discussions may continue together with editorial staff, but pre-selection seems to be done same way despite the publisher or market, like the four customers comments below.

*“I would say the more money we put into editorial, images and photography, the better the paper. Otherwise it is a waste of money.”*

Customer B, Sweden

*“It’s absolutely up to us to tell them, the rest of the company, what is the best paper to use. It’s up to us to steer them through the right route with the help of our paper suppliers.”*

Customer A, UK

*“We will get some requests sometimes from editorial staff but I think we tend to work though them and the commercial side of business as well.”*

Customer F, UK

*“First options are selected on technical specs, sort of reduction of options. Final decision is based on softer values, and I do not mean that they are any worse criteria!”*

Customer A, Finland

The final decision is based more or less on softer values, on a general sensory experience. It is a business decision though and is mainly done on an individual basis. International or other corporative agreements have effect on the decision if they exist. Editorial staff can comment and offer an opinion whereas advertising agencies have no straight involvement in paper selection. Printing houses and their technical comments are also taken into account, however, the final decision is a business decision.

*“If we look at the paper supplier, we want them to have control of the whole chain. What you call the certification, is just something you pay as a fee or... But it’s that you really know what you are doing and act environmentally friendly in all the ways you can.”*

Customer A, Sweden

Like customer A from Sweden points out, publishers are concerned about environmental and sustainability issues which are seen as important, although priority is with economical and commercial realities. Various environmental certificates are seen virtually as a commercial pressure. Certificates do not prove the whole paper or magazine chain to be right or that their absence would mean irresponsible actions. Nevertheless, a credible sustainability image is wanted and required. There are some reservations whether environmental certificates would make people purchase more magazines.

*“It’s been on a similar sort or types of paper to give the sort of consistency of what the brand is. It’s better that the brand has in itself a sense of what it should look like.”*

Customer F, UK

Like customer F summarized, paper has to match the magazine’s brand and image, which makes the publishers balancing between readership and advertisement expectations. These expectations are the ones steering the papers selection, they are like the umbrella beyond all other details. It is the brand and content of the magazine which sells and therefore the inside text pages are to be selected before the cover pages. Text pages also carry the biggest share of the costs.

All in all, this theme demonstrated who really are involved in the paper selection process. It also gave some understanding on how the paper selection involves both technical specifications and sensory properties. It also ensured that right people were interviewed; they all were experts and had influence in their own area. These results both clarified and confirmed some earlier expectations.

## 4.2 Key quality factors

*“No one said that hey, this paper has a nice opacity or nice silk, but hey, this is the X-magazine paper!”*

Customer C, Finland

The quality of a paper originates from production processes based on certain methods and recipes at the paper mill. The quality system is built on various certificates which are followed closely and which guarantee certain quality level. The outcome, the paper itself, NovaPress, is sold and marketed mainly on technical specifications and measurement results; brightness, opacity and gloss to mention a few. The idea behind this theme was to find out how important and practical publisher customers see the technical specifications.

Technical specifications rule the discussions of qualifying magazine paper. Publisher experts are familiar with the specifications even though they are valuable only when discussed with paper suppliers, not among publishing people. Brightness, whiteness, opacity and gloss are the key quality factors from a customer perspective. Orders may vary a little but almost every interviewee mentioned the same specifications. After these almost universal technical specifications, more interest and importance is put on bulk and shade of the paper. Also runnability is seen as a key factor, yet it is more on the printing house to look after.

*“I think you need this kind of information for the like of yourselves but when you get into things like LAB values, like the color and things like that, I think you’re actually over confusing the publishers. You’re almost giving them a reason to say like your value is a little bit lower than your competitor’s equivalent grade or what ever.”*

Customer D, UK

Just as customer D expressed his concern, there is some confusion between measurements and standards used by different paper producers. Product details can not be compared directly. Each paper supplier should be careful with superlative descriptions like high white or super gloss, as it became obvious in senses, one man’s white is not another man’s white. Each experience and image is individual. Also

differences for example between original opacity figures versus printed opacity figures were confusing.

Technical specifications are seen as concrete proof for the quality of the paper and so one has to be able to trust on the numbers given by the paper supplier. They are an essential first source of information. But once rough paper selection is made, these factors become more of background information giving a comfort factor. Key quality factors give only the first chapter of the story of a paper and it is only the final print that counts in the end.

*“I’m trying to think of the basic specification sheet that you might deliver. It probably has enough if not perhaps sometimes too much information.”*

Customer E, UK

Citing Customer E, a limited list of technical specifications that can be related to the sensory properties would be preferable. To some extent the specification list can be compared to a list of confusing details. Despite the expertise in question, it was challenging to understand and explain what does a one or two point higher specification mean on a printed magazine. Even though specifications come first, they do not explain how the paper looks, sounds, smells or feels, explanations would be advisable, like customer B from Finland thinks:

*“It is a little difficult to describe with technical specifications how the surface, the paper feels in you hands. Plus this page turnability, does it feel metal like or nice and soft.”*

Customer B, Finland

Many paper suppliers have directly competing paper qualities and grades which have only a slight variation in technical specifications. Responsibility of product development is first of all for the paper supplier to take care of and he should then remember that publishers’ expectations increase alongside with paper quality. It is a common opinion though that quality control and development actions have been emphasized on problem solving and cost cutting actions.

It is obvious that technical specifications are the key to quality paper selection, but they do not tell the whole story. Some serious thinking should be done on how to describe them in an understandable way to a customer in question. Customer B from Sweden sums this need:

*“But the coating, the feel of the paper, you can’t really find it on values. The sound, you can’t really read it from details. You have to compare two different papers to say this is maybe smoother.”*

Customer B, Sweden

### **4.3 Samples**

The paper mill provides customer service centers and field sales offices with unprinted, A4 size sheets. Systematic service of commercial samples or other printed samples is missing and when asked, sales and customer service people do their best to get these samples from printers or even from magazine kiosks. The purpose of including this theme in the interviews was to find out whether the current sample service is wall-to-wall and whether the right kind of samples are being provided.

*“What could you do with unprinted samples? Draw on them? Take them home or to kindergarten?”*

Customer C, Finland

*“We don’t make any selection on white sample.”*

Customer A, France

Belief of the current sample service being up-to-date is almost shot down by the comments from two customers from Finland and France above. Publishers point out the importance of printed samples very clearly. Ink is needed to give sort of lift on the paper as opposed to an unprinted sample. Printed samples show the final result, there is nothing like a commercially printed sample and the bigger the brand, the better. It is the overall sensory experience that is crucial and therefore own trials are often used before final decision.

Unprinted samples are used side by side with printed samples. As mentioned in key quality factors which were seen as background information, unprinted samples have a similar role when comparing different papers; they are used but no final selection is done on white, loose sheets. There is too much white surface area compared to the end product, the magazine itself. Loose sheet samples give limited impression also in physical essence. It is difficult to perceive the thickness of the magazine on a single sheet or page, which reflects clearly from the comments of Customer E and F below:

*“I’m not a massive fan of these unprinted dummies either, because people would look at it and very often what they will do, is pick it up, look at it and say, well, it’s not very white isn’t it? Because it’s next to this, the cover. And it’s got no print on it, nothing. They are used to looking at magazines.”*

Customer E, UK

*“It’s just really difficult to communicate between the sensory things and technical details. I mean it’s always been the problem and that’s why you end up doing dummies and trials and that stuff. It’s very difficult to persuade the publishers, the magazines.”*

Customer F, UK

Competitors and their magazines are being followed, but not copied. Publishers do count and know that it is the content that sells, not the paper alone.

This theme revealed some major deficiencies in the sample service. Unprinted sheets are sometimes used as a type of starting point when compared to printed samples. Alone they are hardly of any help.

#### **4.4 Sensory properties**

When talking of the sensory properties of paper, terms like page turnability, silk, gloss, stiffness and smoothness among many other common words are being used at the paper supplier. A deeper understanding is missing. There does not seem to be any fixed process to evaluate the sensory properties, yet the recent cases told how paper was selected based on how it looks, feels in hands and even on how it sounds. These

new criteria seem to cause almost a subliminal selection which is difficult to point out. Yet they are there, like Customer D realized during our interview:

*“We never use, we never say the sensory properties in what we do, but since you said that, it’s exactly what people and our customers do. You actually summed it up!”*

Customer D, UK

The feeling of the paper cannot be found on technical specifications, yet it is important how the paper surface feels in your hands. It is also important that the magazine feels substantial, like you are really reading something real. You need to have a counterword for the money you paid.

Sensory properties are challenging entity, yet paper suppliers’, publishers’ and consumers’ perception should be able to communicate. More challenge on this brings the fact that negative impressions come out easily, as Customer B has noticed:

*“I think it’s always the other way round, people probably judge the negative things. You pick up the negative things. So we almost do it by the elimination of the paper that feels thinnest or...”*

Customer B, Sweden

Publishers do not have any specific process for evaluating sensory properties. Assessment and ranking is done on the overall impression. Technical details are mainly discussed with paper supplier people only but after that, the figures are tried to be translated into feelings, into sensory experiences. Common language is missing though.

Interviews were brought to a close with a set of unprinted dummies which were browsed through and evaluated with frank and free comments.

#### 4.4.1 Unprinted dummies

Interviews were supported by a wide range of unprinted magazines which each had 100 pages and same covers. It was not a ranking but it was easy to back up some

comments on comparative notice. Paper types were super calendered (SC) 56gsm, light weight coated (LWC) 60gsm gloss, light weight coated (LWC) 65gsm silk, medium weight coated (MWC) 80gsm gloss, medium weight coated (MWC) 100gsm silk and wood free coated (WFC) 115gsm gloss.

Mass-circulation titles and supplements are being printed on SC paper which is also being used for inserts and flyers. LWC and MWC are similar type of papers which both are mainly used for elegant magazines and supplements as well as for brochures and advertising. WFC paper is recommended when the need is for high class catalogues, brochures and demanding direct mail. Gloss papers are often chosen for magazines that have an advertisement based content. Silk papers are ideal for magazines that urge one to read. These examples show only the common starting point of the use of paper samples involved in the evaluation.

Most interviewees evaluated the samples following almost an identical procedure. Customer B from UK put this into words:

*“I mean anyone who’s involved in producing these dummies, does the same thing. We pick it up and then get down to one page and start doing this, feeling it. But it’s only once they’ve picked it up, looked at it, had a good look and then they do this, leaf the pages through. That is almost without and exception.”*

Customer B, UK

Papers were selected based on an assumption that a wide scale and big differences are needed in order to get specific descriptions on each. The lack of sensory terminology together with the wide scale of papers leads to a sort of comparison. Also the segments of certain magazines could be concluded from the comments. TV and fashion magazines use different types of papers and comments were in accordance to this difference. All comments are shown in Table 2.

<b>SC 56</b>	<b>LWC 60</b>	<b>LWC 65 Silk</b>
<ul style="list-style-type: none"> <li>- Thin and flimsy</li> <li>- Don't look nice</li> <li>- Ruffly</li> <li>- Not qualified</li> <li>- Too hard</li> <li>- Yellow</li> <li>- Cheap feeling</li> <li>- Crispy sound</li> <li>+ Singing</li> </ul>	<ul style="list-style-type: none"> <li>- Flimsy</li> <li>- Don't look nice</li> <li>- Too dirty</li> <li>- Too grey</li> <li>- Thin, not much to expect from magazine</li> </ul>	<ul style="list-style-type: none"> <li>+ Soft</li> <li>+ Smooth feeling</li> <li>+ Goes with almost anything</li> <li>+ Easy to read</li> <li>+ Classy</li> <li>+ Nice silkyness</li> </ul>
<b>MWC 80 Gloss</b>	<b>MWC 100 Silk &amp; WFC 115 Gloss</b>	
<ul style="list-style-type: none"> <li>+ Thick and heavy</li> <li>+ Good page turnability</li> <li>+ Very expensive look</li> <li>+ So white and blue, like a cooled paper</li> </ul>	<ul style="list-style-type: none"> <li>+/- Don't feel like magazines</li> <li>+ Time resistant</li> <li>+ Coffee table -type</li> </ul>	

**Table 2. Comments of unprinted dummy magazines**

Unprinted samples were evaluated and when going through the evaluation comments (Table 2.), it becomes clear that not a single technical specification related comment nor measurement numbers were mentioned. This deduces into the original research plan and confirms that a bridge between the gap of engineering and customer language, the gap of technical specifications and sensory properties is needed.

As mentioned earlier, engineering language and marketing language are seen as one language from the paper supplier's point of view. Constricted number of people understands or uses this language at publisher side, or it is used when discussed with paper supplier. Afterwards terms like opacity and bulk with their measurements are not being used.

When super calendered paper creates a cheap feeling or it sounds crisp, or when light weight coated paper has nice silkyness and feels classy, paper supplier should be able to back up and understand these sensory experiences in order to serve its customer

better and help him or her by offering better tools to select the right paper. A list of specifications and measurements alone can not do that. The following comment from Customer A from France gives even certitude for this outcome:

*“People are using more words like this paper is chic. This paper is yellow, creamish. Yellow means it is negative. They don’t know anything about figures, they want chic paper.”*

Customer A, France

## **5 CONCLUSIONS**

The main purpose of this research was to find out how publishers perceive quality, which perceived quality and sensory properties are important and how they effect on paper selection. By learning more of these processes, the paper supplier would be provided with knowledge whether there is a need and opportunity to link customer requirements with existing technical details. This customer-oriented approach could lead to a common language between technical specifications and sensory properties of magazine paper, and as a consequence improve the level of customer service.

As described in Figure 1, the paper mill keeps producing paper according to intended values. It also relies strongly on its technical paper specifications, but once first signals of sensory properties being major factors at markets, it was time to react and learn how wide the gap between sensory perception and specifications is and how to bridge it.

As mentioned at the beginning, silk feels different from cotton, silver looks different from grey, city sounds different from countryside and Vogue has different image from weekly celebrity magazine. We all feel, see, hear and think differently, which is why there is a big gap between the sensory properties and technical specifications of paper, but it is not impossible to bridge. Both have a big effect on the paper selection which is why either of them should not be underestimated.

### **5.1 Theoretical conclusions**

According to the purpose of this research, senses are no doubt at the center of this paper. In this respect, another deep investigation after the co-creation literature was needed to achieve knowledge of senses. This research was done using many scientific journals and books. Fashion, food, medical and psychology literature refers to senses in their own specific and broad area continuously, whereas in co-creation literature senses are almost neglected. Journals of product development and marketing try to take senses into consideration and the flood of studies seem to be increasing, but there is a shortage of deeper knowledge. Not to mention the bond of paper and senses; there seems to be a lack of scientific literature on the subject.

Hultén (2011), Hultén et al. (2009) and Lindstrom (2005a, 2005b) have produced valuable information of brands and senses, but otherwise there is a big area still to be researched. Saying this, it was challenging to create the hermeneutical circle around this case, but eventually it became understandable. A wide selection of scientific articles was read, of which many had to be declined and the rest were finally accepted to be part of this research to provide it with up to date knowledge and advance current understanding between senses and magazine papers. As a consequence and concurrently a reason for the first sensory signals from the markets was found; we live and create understanding through of our senses, which is why better service is needed to help the customers in their paper selections. Reasoning came stronger after theme interviews and this asserted the inductive approach for this case.

The Technical Research Centre of Finland (VTT) and former Central Laboratory (KCL) have done objective researches in this field. However, these studies are based for example on competitor comparison, laboratory measurements, specialist panes and theoretical issues, but not on a specific paper brand and its customer surface. VTT and KCL reports offer diverse and valid background information, but the idea is to go closer on customer surface.

Co-creation is a well known and widely handled subject, especially Ramawsay and Prahalad seem to be pioneers in this field. Kristensson et al. (2002, 2004) have created a strong input, which is closely related to co-creation, on how customers can bring new kind of creativity into the product development. The same message can be found in Grönroos' (2008) writings; value is created by the customer, not by the supplier alone. Co-creation needs the input from the customers and this message points out to the cornerstone of this research of Co-creating Understanding of the Role of Senses in Magazine Paper Selection.

Customers are seen as negotiation partners. Co-operation or projects like this research are seen as distant, even impossible even though customers value being able to take part and affect the service or product development process. The outcome is not obvious in most cases, but the script needs ideas from the publisher side too. (Eichentopf 2011, 656) Despite the fact that the topic of this research was something

new from a traditional business partner, customers were keen and interested to take part. Prahalad (2004) and Ramaswamy (2008, 2009, 2010) have announced some excellent ideas of customer co-operation. In their statements co-creation is new co-operation method. In co-creation guidelines doors should be open to both directions so that the flow of ideas can run free. Also this research confirms that theories of co-creation could add knowledge on information and perception gaps (Figure 1.). Being realistic, to be able to follow the guides of co-creation, a lot more work than this thesis research in question needs to be done. This could lead the paper supplier on its first steps of co-creation, but a traditional, industrial company has a lot to learn from this new method for finding innovations.

The focus of innovation has traditionally seen to be inside the company. The traditional approach of product innovation could be updated with experience innovation. Paper is an old innovation, but adding more sensory experience on top of it could make it go on for another long period. It is not about the company or the customer, or about traditional business models and new innovations, it should be about both when creating unique value (Leavy & Moitra 2006, 4-6, 8). Value for both could be created mutually when knowledge is shared from the first co-creation plan. Expectations on the first blueprint should not be set too high as it takes time and effort to implement and use co-creation as a new way to pin-point new ideas for services and products. (Eichentopf et al. 2011, 652-654)

There were hardly any results found when trying to create understanding of the connection between senses and co-creation. What made this observation even more surprising was that the genuine product in question was paper which is an old innovation, a natural product, yet facing demanding challenges on global markets. Hultén (2009, 2011) together with his colleagues has provided good general information of sensory marketing. It was easy to agree on his findings together with Lindstrom's (2005) ideas of sensory branding.

This study confirms in many ways the chance of adding more sensory experiences into paper business. Senses are closely related to natural products like magazine paper and understanding the deeper meaning of them in the paper selection process is something to reach for in order to create added value for both customer service and

products. Research points to the importance of customer involvement. Particularly Kristensson et al (2002) as well as Grönroos (2008) made it very clear, how customers are the ones deciding whether the quality of a product brings them added value, or any value in the first place. This decision is not on the paper supplier to make; the publishers' aspects are also needed.

Smell, hearing, sight, taste and touch work subliminally all the time, the presence of these five senses in our every day actions is obvious. As obvious as the effect of senses on our decisions and experiences is, it was surprising how the theoretical part of this research revealed the lack of sensory theory available. The study has empirically elaborated the role of senses in the paper selection process. It thereby contributes to the existing literature on co-creation (Prahalad, Ramaswamy etc.) which has, despite its extent, paid insignificant attention to sensory aspects. This study links two literatures; co-creation and senses.

Sensory properties are a challenging subject as it is still unclear what factors contribute certain experiences. This could be facilitated by offering the customer an understandable method to back up the sensory properties. (Shapiro & Spence 2002, 604-605) Formulas have been created and instrumental measurements have been done but the genuine connection is still open. The challenge of sensory properties cannot be solved by paper supplier or publisher only. Both points of view are needed to take into account when bridging this gap. A company can only fulfill those needs of the customer which are known and understood (Anderson et al. 2005, 21).

## **5.2 Co-creating understanding of magazine paper selection**

Pressure is high to provide added value for customers to stay alive in a demanding economical world, yet to keep the paper business alive and kicking. In the results of empirical study it became obvious that a lot better value could be provided by the paper supplier for the magazine paper selection. The main foundation of the research results is built on the outcome of theme interviews and investigating them which was reflected on theoretical information.

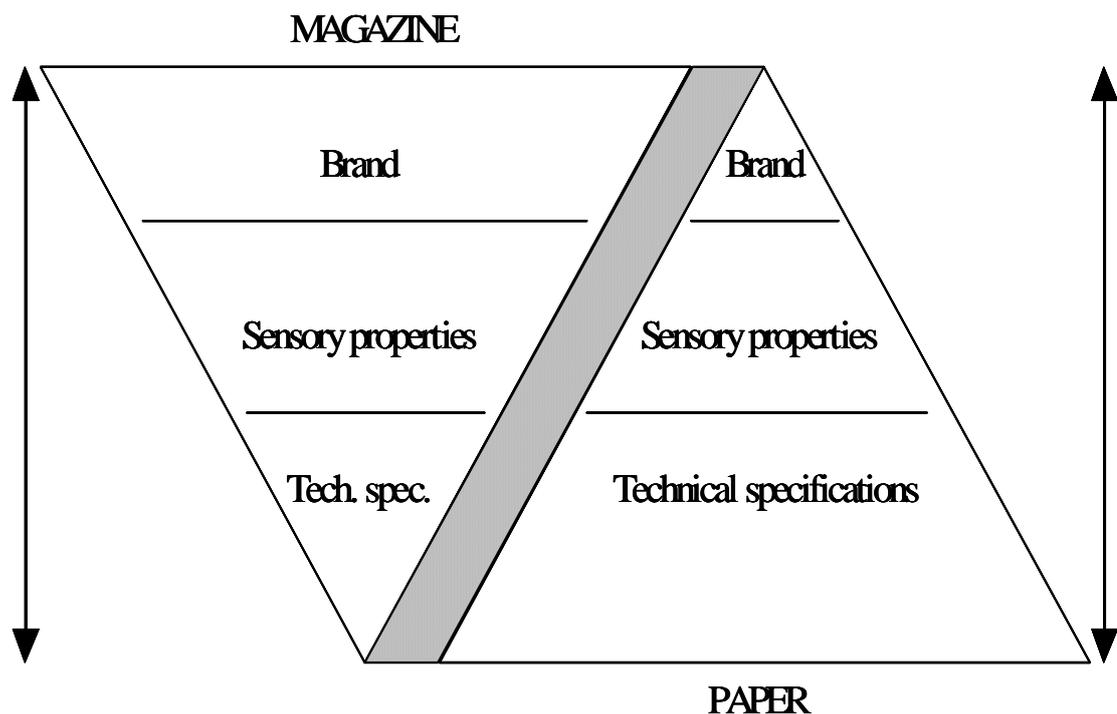
The target of the research was to add knowledge of the paper selection process on customer segment of publishers. Research confirms signals of cases where the final paper selection has been done based on sensory properties. To start with, magazine and technical specifications define the criteria, but the rest is on softer values. This outcome establishes the existence of two missing links between the paper supplier and publisher; information and perception gap. As conclusion can be discovered that information gap is not that wide after the results of this research, but the perception gap needs more efforts in order to be bridged.

The concept of the research framework, co-creation and senses, was proven a fruitful way to explore and explain the research domain. Understanding the importance of sensory experience is something that should be present in addition to the technical specifications of magazine paper. Paper selection process is three-pronged. The brand of the magazine, technical specifications and sensory properties are all taken into account on a wide scale. The brand and technical specifications exist in the selection process already. What is missing is the support or back up of sensory properties. A simple way to serve the publisher better in this respect is to provide printed samples. A challenging way is to learn more about senses together with customers.

Quality is always complex and subjective which makes first of all defining and afterwards measuring it difficult. Product quality within this research is two-way. Manufacturing-based quality is measured by specifications and its goal is to reach conformance. Saying this, operational and production management are at the focus point. Quality measurement is greatly internal why engineering language has been the native language. User-based quality relates to perceived quality which is asserted through all senses; smell, hearing, sight, taste and touch. The product should meet or exceed customer expectations, but it cannot be achieved by technical specifications only. (Sebastianelli & Tamimi 2002, 442-444, 452)

As shown in the definition of the research (Figure 1.), both the paper supplier and publisher act and focus on their own specific areas of knowledge and experience. Language on each processes have been different; one focusing on engineering terms and other on perception and sensory experiences. This study of Co-creating

Understanding of the Senses in Magazine Paper Selection proves that both parties have shown interest to create something mutual to make everyday co-operation more efficient. Based on research findings, the start point of this research was updated into two triangles shown in Figure 3. In this figure both end products, magazine and paper, actually share the same levels of interests on their internal processes; brand, sensory properties and technical specifications. Only the importance and internal points of interest of these subjects varies.



**Figure 4. Three layers of magazine and paper**

Magazine and paper both consist of three main layers: brand, sensory properties and technical specifications as shown in Figure 3. On the publisher side, the brand of a magazine sets the quality bar of paper on requested height. It carries certain expectations and has to be redeemed on each issue. Sensory properties of the magazine have to match with those expectations, not too high nor too low quality. Technical specifications are of high importance to keep the trial of a magazine standing.

A similar trial can be found on the paper supplier side but upside down. Technical specifications are the main criteria which lead the production and sales actions. The quality of these specifications and paper itself can be experienced through sensory properties, yet the connection and communication between the two is missing. These two layers are glazed with the brand name, NovaPress.

Both triangles focus on their own expertise, on each layer. Signs of internal communication between the layers can be found and shown by vertical arrows on Figure 3. Nevertheless the bridge between technical specifications and sensory properties is missing even though both layers are captivating a major area of the triangle. Horizontal arrows are missing almost completely, which is why the results of this research are needed and valuable for future actions.

The grey area between the two triangles, between the publisher and paper supplier represents the lack of understanding. Not necessarily lack of communication, but lack of terms being used. This gap should be bridged in order to express their origin in everyday business, to create value for both. Value can be reached by co-creating understanding of the role of senses in magazine paper selection, by co-creating understanding of the share of technical specifications behind sensory properties.

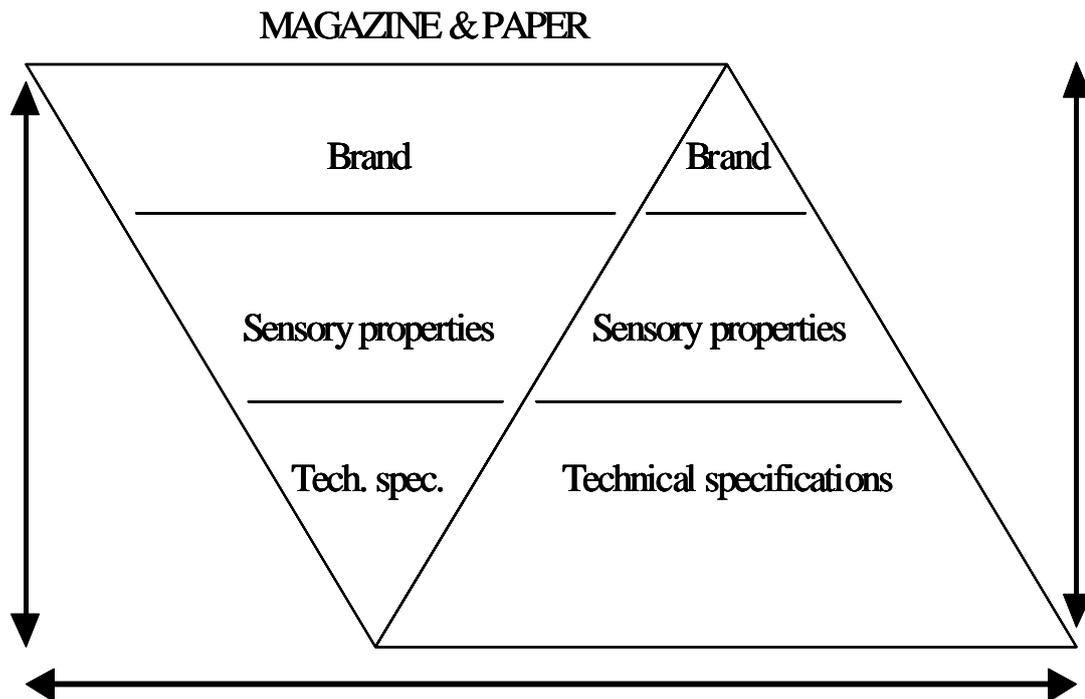
Brand is something that helps both the magazine and the paper itself stand out from their competitors. Both brands have to redeem the expectations that are targeted towards them. Publishing houses have both their overall brand to look after as well as brands that each magazine has. The paper supplier looks after its paper brands in order to survive as a company but in order to keep print media alive. Understanding the requests that have brand related reasons behind can be crucial. Brand theory was not the focus point of this study, but the content and results are closely related to it.

We are affected by sensory properties of everything that we are surrounded by non-stop. We detect negative sensory signals more easily than the ones creating positive feelings. Signals are often directed at more than one sense which leads us into sensory experience. As earlier illustrated, magazine urges one to touch and look. The smell of a new magazine guarantees that you are the first one to read it and once you do so, the sound of turning pages affirms it is a real, natural product. The end product

is full of sensory properties which are to be supported by magazine paper. If publisher wants paper that is up-market, classy or chic, paper supplier should understand is really meant by these terms. Product descriptions that are explained in numbers and measurements only, do not create this sensory experience and can overwhelm us among great inflow of brands. Labels of classy or chic can be placed on top of a paper reel, yet it can be fatal, when not meeting customer requirements. Co-creating understanding is needed.

Quality of the magazine paper and magazine itself originates from the technical specifications of the paper. They can not be put aside but should be enlivened as mentioned in the previous chapter. Terms such as opacity, bulk and brightness speak the engineering language, but in the majority of cases they are not necessarily being backed up in the minds of customers. Numbers and measurements should be written into words and expressions so that all parties understand them and as a consequence they create added value. And vice versa; sensory properties should be tracked all the way into the basics of technical specifications. Neither of these can be done alone which is why the big part of conceptual framework of this study is essential; co-creation. The grey area between the publisher and the paper mill cannot be bridged from one side only, both parties are needed.

It became obvious in this research of Co-creating Understanding of the Senses in Magazine Paper Selection that it is very difficult to describe the sensory properties in the first place, yet to be able to tell why they think so. Creating customer value is essential for a long-term customer relationship and company survival. Understanding which way the customer judges and values the product is of knowledge to achieve. If the company learns and finds out which sensory properties describe certain technical specifications best and how they could be used to support customer service, such information would help in product improvement and even give ideas on creating a new product. A shared goal could be a magazine paper that redeems both the quality and sensory expectations. This goal could be seen not as two separate triangles, but as an alliance shown in Figure 4.



**Figure 5. Alliance of magazine and paper**

The purpose of co-creation within this research and future research is to enable and open discussions and bring these triangles closer to each other. There is no value in keeping these two processes too distant. Processes should be mutual and symmetric ones to create best benefit for all participants (Eichentopf et al. 2011, 654). Before being able to create added value, understanding the connection and continuum of those three layers internally is needed, but internal knowledge can not be added without customer involvement which proves this subject being 100% a co-creation case. Both parties, Stora Enso and publishers, are needed.

Both the paper supplier and the magazine have their own brands to look after. When the paper is judged by its sensory properties, various details in the background lead subliminally into its technical specifications. When a paper supplier judges the paper, the same details are involved, but described in numbers. Both publisher and paper supplier do the same but with different words. Horizontal co-operation is needed to make vertical communication efficient.

This research of Co-creating Understanding of the Role of Senses in Magazine Paper Selection has identified the gap between co-creation and senses in theoretical

literature, it is also linked in the conceptual frame. The gap is identified in the paper selection process (Figure 1. and 3.) that of technical specifications and sensory properties as well as through this empirical case study.

The customer perspective is a critical role, especially when times and markets are challenging for paper suppliers. It would be fatal to try to create something new based on speculations, statistics and earlier experiences only. Both product portfolio and services need to match the expectations rising from the customers. Without the input from the customers, distinct customer relationship and awareness are just words. Paper suppliers need to realize that they are part of the whole process of printed communications, not only a raw material supplier. It is time to look forward and welcome customers on board.

Stora Enso Veitsiluoto Mill has to know its product, NovaPress, from the beginning of production process until it becomes part of the end product, the magazine. Customer centric evaluation is an important and valuable tool to learn more and develop services and products further. Creating a deeper understanding of the role of senses in magazine paper selection would be a shared target of paper supplier and customer to reach for.

### **5.3 Limitations and future researches**

The understanding of the paper selection process deepened, but there was one big limitation in the research; unprinted samples. Looking back, printed samples would have provided more information. Unprinted dummies were produced based on the fact that mill's sample service sends numerous amounts of blank sheets as a quality reference. Yet if we focus on the end product, it should have been obvious to dress up the paper with ink, text and pictures to provide the interviewees with sensory experiences. As Lindstrom (2005b, 84) writes, we have to go back to the basics and identify what actually appeals to human beings on an ordinary, everyday basis. It is challenging for anyone to focus on senses, on each sense alone, not to focus on a piece of white paper. In this respect as much sensory knowledge as assumed could not be created, but the value and need of understanding this layer became obvious.

Future researches on a wide scale should focus on senses and co-creation. As mentioned earlier, sense knowledge for this research was constructed from multiple but narrow thematic entities. Our understanding of the world and products around us is not based on one sense only, but on a sensory experience involving generally speaking more than only one sense.

Specific future research in magazine paper business should definitely concentrate on sensory experiences of printed dummies. Our senses guard us more from danger than prepare us for pleasure. (Lindstrom 2005b, 84), why it would be essential to design a layout of high quality for printed sample. This sample should contain both text pages and image pages; light, dark, decoration, skin, fashion and car images to mention a few. Printed samples together with focused questions and product evaluations related only to senses would certainly provide deeper understanding for future business models, customer service and challenges. Understanding would not come along automatically though; questions or high quality samples alone do not provide new knowledge before challenging and intent research before and afterwards in the background. Answers and reasons behind them need to be understood before they lead the paper supplier any further.

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## APPENDICES

### Appendix 1: Invitation letter



Dear Customer,

We all learn something new every day and at Stora Enso we are trying to find even more efficient ways of improving our operations. Print media is facing big challenges and in order to maintain and improve the quality of magazines and also sustain enjoyable reading moments to the end users, we need to widen our visual field.

The key criteria of NovaPress have been based on technical details and this basis will continue in the future as well, but however other, non-technical criteria are becoming as important. Publishers know how the magazine should look and feel, whereas the paper producer knows its product and all technical details. The challenge is to link these two aspects so that they complement each other. In order to learn which quality and sensory factors are the most important ones when selecting a paper, we need your assistance and would like to invite you to take part in this “research of sensory properties”.

Silk feels different from cotton, silver looks different from grey and a fashion magazine has different image from a weekly celebrity magazine. Knowing the customer’s quality expectations and criteria better, Veitsiluoto Mill is able to improve its development functions towards more specific and efficient ways and to serve its customers better.

The research will be carried out together with Stora Enso Veitsiluoto Mill, the University of Rovaniemi in Finland and publishers in Sweden, Finland, UK, France, Germany, Spain and Italy. The purpose is not to benchmark Veitsiluoto Mill or compare NovaPress with its competitors, but to create a link between customer requirements and existing technical details. In this respect, Ms Laura Ryhänen will interview the customers as a part of her Design, Media & Markets Master’s thesis. Each interview lasts about 1,5 hours and to make them as efficient as possible for

you, they will be held at your office or at a location nearby if more convenient. They will be carried out between December 2010 and February 2011 and are built on open questions together with assessing unprinted and printed samples.

Your local Stora Enso representative will be in contact with you to ascertain your availability and to discuss the practical arrangements in the very near future. Your participation in this research would be highly appreciated.

With best regards,

Harri Kurppa

*Director*

*Product Management*

Juha Mäkimattila

*Mill Director*

*Veitsiluoto Mill*

Laura Ryhänen

*Secretary*

*Veitsiluoto Mill*

## **Appendix 2: Theme interview frame**

### 1<sup>st</sup> THEME: PAPER SELECTION IN GENERAL

Describe your paper selection process?

Editorial staff's influence?

Final decision as team or individually?

Cover and inside pages: which one first, how affect on each others?

Sustainability issues? FSC, carbon footprint etc.

The brand's or the target group's influence?

### 2<sup>nd</sup> THEME: KEY QUALITY FACTORS

How familiar are you with technical specifications and details?

How important are they to you? How practical?

What quality factors are in key role in paper selection? Assessment?

Has some quality factor been left behind?

Has some quality factor been developed too much?

### 3<sup>rd</sup> THEME: SAMPLES – UNPRINTED AND PRINTED

Unprinted, printed, dummies etc. as a support of your paper selection?

Different qualities, number of pieces?

'Real' magazine or dummy?

Trials as a part of paper selection?

Monitoring the trials? Importance of the results?

Competitors' magazines?

### 4<sup>th</sup> THEME: SENSORY PROPERTIES

Do you take sensory properties into account in the paper selection?

In practice: jury, comparison, rating?

Connection between technical specifications & sensory properties?

Do technical specifications and sensory properties have to match? Which one more important?

**SAMPLES**

What kind of images do these unprinted samples invoke?

What kind of magazines would you print on these papers?

What kind of role does the paper has as a part of the brand of the magazine?