Developing an understanding of users through an insights generation model

How insights about users can be generated from a variety of sources available in an organization

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Sammanfattning

Målet med användarcentrerad design är att skapa förståelse för användarbehov genom att använda olika verktyg och metoder. Detta är utmanande när resurser i organisationer är begränsade och företag inom industrin har begränsade tillgångar att utföra användarcentrerade metoder. Därför finns det ett mellanrum i hur användarcentrerad design utförs i praktiken i jämförelse till teori. Designers och specialister i användarupplevelse måste använda verktygen som finns tillgängliga, förbättra dem och komma på kreativa sätt att förstå användarnas behov.

Insikter svarar på frågor om konsument- eller användarbeteende som varför och bakomliggande motivationer, och dessa är mindre tydliga och ogripbara, dolda sanningar som resulterats av fortsatt utforskande. Insikter kan dras från flera olika källor, från data och kvalitativa källor. Denna avhandling utforskar från vilka tillgängliga källor i en organisation insikter kan genereras från för att förstå användare och designa bättre upplevelser.

Avhandlingen använder en innovativ samarbetsworkshop metodologi för att svara på forskningsfrågan och som resultat presenterar en insiktsgenererarmodell. Forskningen har utförts specifikt för ett företag och med deras tillgängliga källor, men metodologin och modellskapandeprocessen kan utnyttjas för andra domäner och projekt.

Abstract

User centered design is a process which aims to understand user needs and desires by using different tools and methods. This is challenging in the industry as companies have different goals compared to the academic discipline of user centered design. As companies have different goals, common UCD methods which are used in the academic field are often not used. Therefore, there is a gap in how UCD is done in practice compared to theory. Designers and user experience specialists must use the tools which are available, capitalize on the opportunity to use existing resources in the organization in order to understand users and their needs.

Insights explain the why and the motivation of the consumer or user, and they are less apparent and intangible, hidden truths that result from continuous digging. Insights can be draw from several different sources, from data and qualitative sources. This thesis investigates from what available sources in an organization can insights be generated from in order to understand users and design better experiences, specifically from the organizations perspective. The purpose is not only to understand users but to drive the organization’s objectives and goals.

This thesis uses an innovative collaborative workshop methodology, working with digital designers, to answer the research questions and as a result presents an insights generation model. The research has been specifically conducted for an organization, and from their available sources, but the methodology and model creation has the potential to be used in similar settings, domains or projects.

Keywords: insight, user-centered design, data, insight generation sources
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1. Introduction

1.1. Background

There is great demand for user experience designers and researchers in the industry, from start-ups to multinational corporations. These companies preach to be ‘user driven’, ‘user centered’ and ‘user-focused’. Companies strive for this but being user centered and driven is not as straightforward in practice as imagined, “use of user centered design (UCD) methods for involving users in context highlight a gap between the theory and the design practice” (Eshet, E., 2016), there is a breach between theory and practice. The gap between theory and practice is not because UCD methods are poor or not able to be utilized, but rather because the goals and aims of the organization are not in line with the results that UCD methods generate. When using UCD methods in an organizational setting, understanding the goals, priorities, aims of the business direction (Rosenbaum et al. 2000) are needed in order for the results from user centered methods to be valuable. These business goals are extremely different to the goals of UCD research in the academic field, for example in academia scientific rigor is important and often a requirement for methods (Roto et al. 2009). Additionally, in the industry the requirements for UCD methods for different stages of product or design development lifecycles are different than in academia (Roto et al. 2009). For example, fast and lightweight qualitative methods are preferred in development phases in order to provide constructive feedback and quantitative tools are preferred for marketing purposes (Roto et al. 2009). Occasionally these companies in the industry also have temporal limited resources during the design lifecycle, and common UCD methods as interviews, ethnographies, user testing etc. are often not possible to be performed as in depth or properly as wished. Organizational obstacles to use field-orientated methods limit the ability to understand users and contexts as well as the ability to involve users (Rosenbaum et al. 2000; Vredenburg et al. 2002; Ji and Yun, 2006; Bak et al. 2008; Bygstad et al. 2008; Eshet, E., 2016). As UX specialists how is it possible to design, develop and iterate if common tools and methods are not feasible or available for use? This leaves UX experts having to find other means to get closer and understand users within company boundaries.

There are plenty of data and insight sources available for companies and designers to access, can these sources as well as UCD methods help designers in understanding the users they are designing for. From an organizational perspective currently no in depth research has been completed which explores how available data sources, insights and traditional UCD methods are combined to understand users, their needs and designs. Data sources and insights, combined with UCD methods can help to try to answer these types of questions when designing digital experiences.

When creating digital experiences taking the users into account in all touch points is crucial. A digital experience can be described as any interaction between a user and an organization which is possible due to digital technology (LifeRay). Digital experience is an inclusive term, which contains all the digital experiences a company should be involved in and managing. Digital experience can be defined as “any interaction, including ones with no physical interaction, that might alter the way your customer feels about your product, business or service” (Interaction Design Foundation, Customer Touchpoints, 2017), for example “if a user reads a review of your service online” (Interaction Design Foundation, Customer Touchpoints, 2017). A digital experience can be provided through mobile applications, websites or any devices which are connected digitally. Numerous companies in the industry have teams or large amounts of resources that are responsible for these touch points, from creation, to evaluation and iteration. This research is conducted in a company, for a team which specializes in designing these digital experience. The focus is to investigate what types of insights and
data together can help designers establish knowledge and an understanding of users to help designers make decisions and design better touchpoints.

An insight is not data, an observation or a customer wish or statement - an insight explains the why and the motivation of the consumer or user (Dalton, J., 2016). Insights about consumers can be derived from several different sources, which already exist and are accessible in an organization. A way to generate insights is through traditional and nontraditional sources which are available in an organization. Traditional sources in this research refer to common sources: usability testing, a/b testing, interviews. Nontraditional sources consist of innovative methods of exploring users as: data analytics, YouTube videos, SEO etc. How can the generation of insights from different types of sources, traditional and nontraditional, qualitative and quantitative, be valuable when creating digital experiences? More specifically, how can data and insights about users be generated and combined in practice, to help design digital experiences?

1.2. Problem description

1.2.1. User-centered Design

User-centered design (UCD) is an iterative design approach to produce better designs for users through a deeper understanding of user needs through different ways (Interaction Design Foundation, User-centered design). UCD aims to understand user needs, by using a variety of methods and tools from investigation (e.g. surveys, interviews) to generation (e.g. brainstorming). Ideally in UCD users are involved throughout the design and evaluation cycle (Interaction Design Foundation, User-centered design), not only for gathering data but to empower the users to have a say on what is being designed for them. UCD plays an important role in all phases of design, which includes context understanding, requirements gathering, actual design, and analysis. According to Vredenburg, “there is need for practical UCD guidelines based on the collective wisdom of the industry-wide community of UCD practitioners” (Vredenburg, K., et al, 2002), thus there is demand for methods on how to practice UCD in the industry.

Companies and the industry desire to become user centered and understand users better. Companies and businesses occasionally develop and design by business goals, but by looking at what users and consumer want and need, so that users do not need to adapt their behavior in order to use their product. By understanding users and being user centered companies can offer that which support user’s need. By understanding the goal and the journey users take to achieve their goal, helps when designing. This means the organization aims to address these requirements of the user in terms of their goals. In order to understand these goals and journeys, user centered design methods are used. To make it attainable, the industry and companies must to come up with creative techniques to explore users and their needs to be able to strive for an improved UCD approach. The key is to understand user needs by using different tools and methods, which is challenging when resources are scarce. Designers and user experience specialists must use the tools which are available, enhance those and come up with creative ways to achieve UCD. This thesis explores the means of understanding users and needs through available sources, used for analysis and to drive user insights.

1.2.2. Insights

An insight can be described as the act or result of apprehending the inner nature of things or of seeing intuitively (Merriam Webster dictionary), or as the capacity to gain an accurate and deep understanding of someone or something (Google Search). An insight explains the why and the
motivation of the consumer or user (Dalton, J., 2016). Insights are less apparent and intangible, hidden truths that result from continuous digging (Dalton, J., 2016). Dalton defines company’s insights as unrecognized fundamental human truths, observations of human behavior from a new perspective and discovering the actual motivations of people's actions (Dalton, J., 2016). Additionally, Dalton describes insights being heavy work and need creativity, persistence and deep thinking, “the most powerful insights come from rigor and serious analysis to translate large amounts of data into concise and compelling findings” (Dalton, J., 2016). Data itself is not enough, and according to Danny Brown “we do not need more data we need more insights” (Brown., D, 2013). There is a variety of different ways and resources to generate consumer insights to find out motivations and needs of users, from quantitative analytics to qualitative YouTube videos, which are explored into in this research.

1.2.3. Data, Insights, and UCD

Insights are the basis for design and innovation as well as a basis for what should be done next, a “catalyst for creating new value for your customers” (Dalton, J., 2016). An approach to get closer to users is through insights and data. As the amount of data is increasing more than ever, as specialist in the industry it is mandatory to know what can be done with this information and how to drive insights from this. Insights should be used as sources for UX designs or as Marrs states “insights provide the ‘ah-ha’ light bulb that sparks streamlined UX designs” (Marr., M, 2016). Establishing insights through nontraditional sources and generating an understanding about users could be considered as a method of practicing UCD in industry. This can be a technique of establishing a more practical UCD design approach in the industry and closing the breach between understanding users. Combining insights and data, and using them conveniently in design - is the challenge. As insights are used to find out why and motivation of users, this thesis investigates the sources from which insights can be generated from to understand users and aims to look into ways of combining data and insights, and how these can be used in practice when designing digital experiences.

1.3. Objective and Research Question

This research aims to answer which type of insight sources can be used, the reasons for use, when during a design lifecycle to use and tangible ways of how to use these types of sources which provide understanding about users. Starting by looking at what value do the sources bring, what is wanted to know from that source and why should it be used. After this focusing on when during a design cycle or in which situation should these sources be used. Finally validating how in practice could some of these sources be utilized. By considering these factors this research strives to answer the following research questions:

What method can an organization use to produce an understanding and usage of relevant data sources available?

What do designers need to know about users and their interaction with digital experiences in order to improve their designs with organizational objectives?

And to further explore, how and what existing sources are valuable for insights generation in order to understand users better and improve digital experience design?

There are plenty of information and data sources from which insights about users can be developed, but which sources are the most valuable? Which sources are valuable depends on what is being designed and what the goal of the design is. Therefore, this research has been specifically conducted
for a specific company and the sources are viewed from their perspective, but this methodology and view can be used for any company, organization or project. The research focuses on the creation of digital experiences, which vary from campaigns, mobile applications to in store experiences, from a user experience design and creation perspective. This thesis will result in presenting an insights generation model of how to utilize traditional and nontraditional insight sources when creating digital experiences.

1.4. Background of the company and team
This research has been specifically conducted as research for a company, to respect their privacy there are limitations to what information can be shared. The company is a global corporation, with main business functions being sportswear, operating in wholesale, retail and e-commerce. The research is conducted for the digital experience team in the company, whose main responsibilities are to support the business units in creating digital experiences in understanding, ideating, evaluating and iterating the designs. The company’s key product categories are classified into sports categories, managed by a set of business units. In other words, a business unit is a semi-autonomous organization which develops, manages and promotes a specific sport product, such as footwear and apparel. Digital experiences vary from one off, seasonal digital experience, mobile apps to in store activations. The digital experience design team is responsible for mapping out the ecosystem journey of the experience, understanding the goal and the consumer, designing, iterating, collecting insights and analyzing the experience. As some experiences have several drops in a season the digital experience team needs to provide recommendations and findings to improve the next one.

1.5. Delimitations
The delimitation to this research is that the research has been conducted from a specific company's perspective, and if redone for another company most probably other results will arise depending on their domain and sources for insights.

1.6. Outline of the thesis
The aim of this research is not only to develop an analytical strategy for the organization, but to present an innovative methodology and model, to understand users through insight sources. Previous and relevant research are discussed in chapter 2, covering user centered design, HCI, data driven designs and insights. In chapter 3 the methodological approach is explained, the execution and reasoning behind it. In chapter 4 the outcomes from the research methodology are presented. Finally, in chapter 5, the design process and final model are presented, leading up to the conclusion and discussion.
2. Previous and Relevant Research in Field of UCD

In this section, previous work is scrutinized to see what bears relevance for the research question. First difficulties with HCI and UCD in the industry are discussed. Then previous research on data driven designs are examined which after other types of data and design are presented. Finally based on these explorations the knowledge gaps are presented.

2.1. Difficulties with HCI and UCD

In HCI more and more emphasis is been put on the holistic user experience, which includes the emotional, psychological and social aspects of “people before, during and after the use of a system” (Forlizzi et al. 2008; ISO, 2010). In UCD, the design of any system or interface should be based on an understanding of users and context, which can be fully established through active involvement of users throughout the design process and development as well as evaluation of the final design (ISO 9241-210, 210). By doing this UCD puts users into the center when generating designs and evaluating usefulness, usability and user experience (Karat, 1996). Example when designing mobiles devices or application the contextual use is extremely important and “quite possibly the most essential skill necessary in creating great mobile experiences” (Hinman, 2012) Understanding the users and context is extremely challenging for designers (Bentley and Barrett, 2012) which is why they need to learn and develop new tools for understanding the users and contexts (Hinman, 2012). Additionally, the increase in the amount and diversity of users as well as the variety of contexts of use require more tools to understand users and contexts (Eshet, E., 2016). For these reasons this research explores why insights and other sources of data can be used as tools to understand users.

Interaction and user experience design projects completed in organizations often include various stakeholders. Established methods within HCI fail to take into account the different stakeholders. These projects and stakeholders require complex collaboration and include also social systems where some stakeholders are part of a different function or discipline in the organization, as well as external stakeholders. Additionally, all stakeholders come from different educations and backgrounds (Suchman, 2002). Especially when working in an organizational setting, stakeholders often have different motivations and expectations as well (Krippendorf, 2006). These types of aspects can emerge in conflicts when trying to pursue designs and projects with a UCD methodology. Also, the organizational perspective cannot be forgotten, the organization has its own goals and financial objectives they want to achieve which also limit various aspects of projects (Krippendorf, 2006). According to Norman, the main problem is not the lack of methods or expertise (of HCI or UCD) but rather social and organizational (Norman, 1986). Therefore how can methods be integrated into the design process in practice?

2.2. Data driven designs

Constantly more and more research is conducted on sources of data and how they can be implemented in design. “Availability of data can be an opportunity for the design community to develop insights into defining new types of content” (Arslan, P., et al.). In service design understanding human behavior, attitudes and emotions are crucial and can change the way users make choices and decisions (Arslan, P., et al.), this is similar in HCI, UCD and digital experience design. As said by Fisher, D., et al. data is useful for HCI researchers, but the challenge is for them to leverage the data available which requires selection and interpretation (Fisher, D., 2012). The struggle is to find out what data is available and how to use and draw conclusions from it (Fisher, D., 2012). This research tries to
concretely find out which sources of data are valuable for insight generation and when and how to use them.

A way of explaining types of data is to divide it into *structured* and *unstructured data*. *Structured data* can be described as data displayed in columns and rows in databases that is seamless and easy to search through by data mining tools. This data is easily accessible and structured data is becoming more important in every domain and professional role, and people are looking constantly for new sources of data online, but the challenge is to find relevant data (Koesten, L. M., et al 2017).

*Unstructured data* consists of a ton of unorganized data which is hard for data mining tools to grasp but which specialized tools can handle, and example of unstructured data is text or product reviews. *Unstructured data* takes more time to dig into as it is diverse and the breadth is huge, mechanisms to approach and investigate unstructured data are needed.

According to Arslan, P., et al. big data, which is data generated from around us all the time through different devices (IMB), can be used in either initial or later phases of a design process to frame a problem, understand user needs and interpret data into ideas (Arslan, P., et al., 2013). Big data can also contribute to the methods and tools which are used in a design process (Arslan, P., et al., 2013). Arslan, P., et al. discuss the service design approach, which starts by identifying and understanding the user to define the problem, similarly to UCD and design thinking (which are considered in this research).

Clickstream data is a data source for insights which has been investigated by researchers. Wang et al. researched how clickstream clustering can be used for behavior analysis. By clustering clickstreams, they strived to understand user behavior on the Internet and through analysis improving their user experience by either better performance or customized user interface features (Wang, G., et al. 2016). They also conclude that as there are limited amounts of user-studies, especially in the industry, therefore they can be accompanied and addressed by data-driven approaches to understand user behavior, in their case clickstreams (Wang, G., et al. 2016). Wang, G., et al. explored clickstreams to understand user behavior, but there are other sources available as well.

Clickstream data can also be used when creating personas. Personas are a core methodology in UX and UCD used to understand user work-flows through their goals, needs, wants and behaviors. Even system designers use personas as design methods in interface design and use data from qualitative and quantitative sources (Brickey, J., et al. 2010). To create personas designers and researchers often rely on data from surveys, interviews or observations which often “do not directly reflect the actual user workflow and is costly to collect and is outdated as soon as a persona’s workflow evolves” (Zhang, X., et al. 2016). Also, a common problem with personas is that they are “not based on first-hand customer data” (McGinn, J. J., & Kotamraju, N., 2008). Clickstreams in persona creation can be derived by converting clicks into clickstreams which are then analyzed and structured into user workflows. Not only is this data driven method cost effective, but also the personas are based on big sample sizes and the data is already available (Zhang, X., et al. 2016).

Another way to understand workflows or purchasing behavior can be done through investigation of personality traces through analytics, especially personality analytics. Liu et al. explored a data driven approach to understand user's purchasing behavior. According to them purchasing behavior is linked to personality traits, consumption preferences and product attributes (Liu, X., et al. 2017) and that intrinsic needs and personality traits play a huge role when making purchasing decisions (Liu, X., et al. 2017). Liu et al. investigated a case study on Amazon’s product reviews and metadata, and
explored whether this source of data and information be used for to trace personality-driven product recommendations. By looking at consumption preferences, personality traits and product attributes they could find a new perspective to investigate how personality traits correlate with products bought through customer reviews. Information like this can be beneficial for digital experience designers when designing experiences for a specific target.

While research has been done on specific data sources, very little exists in terms of how existing data can be combined to serve the needs of a complex organization as well as designers in an organizational setting.

### 2.3. Other types of data and design

The availability of data can be an opportunity and resource for design in several fields of work, to develop insights and to define new ideas and content (Arslan, P., et al., 2013). Data can reveal vast amounts of hidden patterns from human behavior and attitudes which are used when users make decisions. Information like this is extremely relevant to businesses (Arslan, P., et al., 2013). According to Arslan insights like this can be used in early and later phases of design processes to “frame problems, understand user needs, visualize data analysis and interpret them into ideas” and contribute to “methods and tools used in the design process” (Arslan, P., et al., 2013). Arslan suggests that the service design process, like UCD, with the identification and discovery phases to understand the problem, user needs and data tools, help in extracting insights and knowledge which can be used for design (Arslan, P., et al., 2013).

Similarly, big data, structured and unstructured data, and data from other sources can also be used in design. For example, data from a personal step counter has been used in design (Feinburg, M., 2017). According to Feinburg all data collection needs to have a infrastructure to have meaning, a type of collection process and meaning aggregation (Feinburg, M., 2017). Also, data requires on deciding what to record (Feinburg, M., 2017). Looking at this research deciding on what to collect and through which sources is one of the main focuses of the research.

Data available from search queries or web history can also be beneficial for design purposes. Karanam, S., & van Oostendorp, H investigated age related differences in search queries. The younger audience used specific strategies compared to older participants when completing search tasks (Karanam, S., & van Oostendorp, H., 2016). Another finding was how younger participants would reformulate their search queries compared to the older participants (Karanam, S., & van Oostendorp, H., 2016), therefore age related differences in search queries in worth taking into consideration in design. This research demonstrates how search queries and age differences are an important factor to take into consideration, for example in digital experience design in SEO and search query matters. Additionally, Adar, E et al., explored web revisitation patterns, as users revisit web pages but for different reasons. They analysed revisitation patters and supplemented by a survey aimed to identify the reasons for revisitation (Adar, E et al, 2008). All webpages have different revisitation patters which depend on user intentions, the content of the page and the structure of the site. Analysis of revisitation patters can be implemented in web site navigation design or other design elements.

### 2.4. Knowledge gaps

The previous researches discussed provide an overview about relevant explorations which concern the research question. The data driven design examples provide sufficient proof that different methods used for data collection about users can be useful and valuable in design. There is research on big data,
clickstreams, personality traits through data but still overarching research on how insights can be generated through sources is missing. There is also a deficiency in research in regards to how and through what sources and ways do designers create and gather insights about users in organizational contexts in order to practice UCD methods. For this reason, this research has been conducted. The model developed from this research does not guarantee that it will be accepted as a UCD design method but at least proves an innovative methodology and way to tackle the knowledge gap which currently exists from an organizations perspective.
3. Design Research Method

Design research was established through the design methods movement, because of the complexity of system design designers face (Zimmerman, J., et al 2007). The design methods movement focuses on generating knowledge rather than producing artefacts and designs for consumption (Zimmerman, J., et al 2007). Design research focuses on analysis of design artefacts or methods of design, in order to address different design challenges, which is what this research aims to do. The product of design research is not necessarily an artefact but rather contribution to the knowledge pool for design in HCI. The outcome of this research is not the design of a product, but the design of a method and a knowledge framework model – the insights generation model. This design research method aims to answer the first research question.

3.1. Methodology

The chosen methodological approach for the research was innovative in order to answer the research questions. The methodology is an overarching method of user-participatory design through workshop interventions. In user-participatory design real users participate and are in charge of making design decisions (Gulliksen et al. 1999). The difference in the methodology used in this research is that the participants are not the users, rather the designers who the framework model is designed for. Several other methods, as brainstorming and different creative techniques were used as well as design thinking.

The design thinking methodology is also used in the design of the framework. Design thinking is an iterative process where the aim is to understand the challenge or problem, and to identify alternative strategies and solutions (Interaction Design Foundation, Design Thinking). Design thinking is a solution based approach as well as a hands-on method of working (Interaction Design Foundation, Design Thinking). There are four phases used in design thinking in this research; understanding, ideation, evaluation and iteration. The design thinking methodology helps the digital experience team to create experiences. In the understanding phase is the problem and what and who are we designing for is explored, the ideation phase is for brainstorming different designs and possibilities, the evaluation phase is for evaluating the designs and the iteration phase is for implementing changes from the evaluation findings.

The research methodology is illustrated in figure 1. The starting point for the research is to investigate what resources for insight generation (for digital experience creation) are currently internally available in the organization. Discovering and collecting what resources are currently available helped to set the focus and starting point for the research. A suitable methodology to answer the questions: which type of insight sources can be used and the reasons for use, when during a design lifecycle to use and to discover tangible ways of how to use, were collaborative workshops. As seen in figure 1, the questions are represented by the workshop objectives. Each workshop had a different structure and collaborative method to answer the research objectives.

The objective of the first workshop was what sources and why can they be used. This was done through brainwalking, examining and discussing each source, and brainwriting, looking at gaps and possibilities of what is missing, and finally clustering the sources into groups. The second workshop was developed based on these findings.

The second workshop aimed to answer the objective, when to use the sources, and also to validate the findings from the first workshop. Validation of the categorization was done by a reverse grouping
exercise, when to use through design thinking exercise. The design thinking process model is used by the digital experience designers, the groups of insights were mapped against use cases onto the design thinking process model.

The final workshop’s objective, exploring how to use those insight sources, was explored by a hands-on research exercise. Each workshop built on each other, in an iterative manner, and the decision and information gathered was passed from workshop to workshop.

After collecting the findings from the collaborative workshops the next phase was the design of the model, which included several iterations. The resulting product from the workshops and design iterations was the model, the insights generation model, which explains and demonstrates the groups of sources and when they should be used in the digital experience design process. This is presented in chapter 5.2.

3.2. Starting point - available sources

The first step of the research was the exploration of what resources for insight generation are currently available in the organization. Discovering and collecting the resources that are available helped to set the starting point to the research. The list of the available resources is listed below, consisting of 15 internal sources and 5 external sources (see appendix 1 for explanation of all sources). The internal sources, represent the sources which are accessible internally in the company and external sources which are open and accessible to the public. The workshops and the methodology try to answer the question, is it possible to develop a deeper understanding of users and thus produce better designs through these source? The twenty sources listed below were the starting point for the research and the first workshop.
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<th><strong>External Sources</strong></th>
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<td>A/B testing</td>
<td>Blogs</td>
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<td>Analytics</td>
<td>Google AD Words</td>
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<tr>
<td>Batterii (research collection tool)</td>
<td>Google Trends</td>
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<tr>
<td>BazaarVoice (consumer product reviews)</td>
<td>Review Sites</td>
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<tr>
<td>Creator - Amplifier - Value Receiver (specific consumer profiling strategy by the company)</td>
<td>YouTube videos</td>
</tr>
<tr>
<td>Decks on products (marketing and product direction decks)</td>
<td></td>
</tr>
<tr>
<td>Heat Maps</td>
<td></td>
</tr>
<tr>
<td>Intangible Data</td>
<td></td>
</tr>
<tr>
<td>Market Research</td>
<td></td>
</tr>
<tr>
<td>Qualitative interviews</td>
<td></td>
</tr>
<tr>
<td>RISE – profiles (specific consumer profiling strategy by the company)</td>
<td></td>
</tr>
<tr>
<td>Search Words</td>
<td></td>
</tr>
<tr>
<td>SEO</td>
<td></td>
</tr>
<tr>
<td>Trends</td>
<td></td>
</tr>
<tr>
<td>User Testing</td>
<td></td>
</tr>
</tbody>
</table>
3.3. **Workshops**

To understand what all team members view as the value in the insight sources a collaborative workshop was a suitable approach to the problem. In collaborative workshops researchers and participants work together but the researcher is in control (Cornwall, A. and Jewkes, R., 1995). A collaborative interactive workshop involves and gives all participants an equal opportunity to express their opinions and thoughts, share and reflect experiences, transfer knowledge and feelings (Feldman, A., 1999). All team members have a different professional background which meant contribution to discussions and ideation were from dissimilar perspectives. Additionally, a collaborative interactive workshop is a mean to share ideas and to understand thought processes. According to Ørngreen, R., & Levinsen, K., workshop participants become a part of the research design and the data-producers. Furthermore, workshops “inspire new insight into the research domain in question, and that they do so in ways that other research methods cannot” (Ørngreen, R., & Levinsen, K., 2017). The data collected from workshops is very different from any other methods used, but it is not easy to document all data and findings from workshops (Ørngreen, R., & Levinsen, K., 2017), due to this the presentation and documentation of the findings from the workshops is done in an exploratory manner. Image and data references collected from the workshops can be found in appendix 2. Workshops are applied as a part of research design, which means that this type of methodology helps the researcher to identify factors and relationships between, which the researcher and participants have not been aware of previously (Ørngreen, R., & Levinsen, K., 2017).

The objectives of the collaborative workshops were the following:

i. To share knowledge and expertise.

ii. Engage in collaborative discussions regarding insight sources.

iii. Propose solutions and ways of utilizing these sources to create maximum value in order to acquire a deeper understanding of users.

### 3.3.1. Workshop I

The goal of the first workshop was to answer what and why: what information are we looking for from the sources and why are the sources valuable. Also, to eliminate sources which are not valuable, group the sources based on resemblances or themes, and discover gaps and possibilities. Additionally, the goal was to create discussions and have the team talk out ideas and thoughts. The whole digital experience design team was included in the workshop.

The workshop room was set up with all the necessary equipment and materials. Each insight source was represented by white poster which was on the wall (see appendix 2 image 2d). Additionally, a writing board was labelled ‘Parking lot’ where further ideas and notes could be noted down which could be discussed later. Post it notes and pens were provided and a PowerPoint presentation was also prepared.

**Exercise 1 - Brainwalking**

*Brainwalking* was the first exercise, which is a form of brainstorming, but participants walk around the room staying active, keeping energy levels up and assuring that participants can easily change to a next part if they get stuck (Interaction Design Foundation, *Learn how to use the best ideation*).
methods). As all the insights were placed on posters on the walls, the task was for each participant to walk around the room with sticky notes and answer the following two questions:

1. What kind of information are we looking from that source?
2. What is the added value?

The upper half of the poster was to answer the first question and the second half for the second question.

**Exercise 2 - Brainwriting**

*Brainwriting* was used for the gaps and possibilities part of the workshop. In *brainwriting* participants write ideas onto pieces of paper and these are then moved around in circular motion, which allows participants to build up on other ideas (Interaction Design Foundation, Learn how to use the best ideation methods). *Brainwriting* removes the obstacles and tension which often comes from traditional brainstorming (Interaction Design Foundation, Learn how to use the best ideation methods). As at this point of the workshop all posters had the added value and were grouped accordingly. Each participant had time to individually look and think of aspects that are missing. Writing ideas by themselves on notes, sharing them with others and then discussing afterwards.

**Finalization**

The first workshop answered the questions *what* and *why* - what information is needed and considered from that source, and why is that source valuable when creating digital experiences. The sources which did not provide any additional value to the designers were eliminated from the list. Also the sources were grouped accordingly. Any additional sources which came from *brainwriting* were added onto the list. As the workshop research questions were answered with the team, each source had a defined purpose and value. By having this defined for all of the sources the next step was to see *when* during the digital experience design process could each of the sources be utilized, which was done in the second workshop.

### 3.3.2. Workshop II

The goal of the second workshop was to solve through use cases *when* in the digital experience design process should the sources be used and at which point would they be valuable. This was done through *use cases*, which can be described as series of interactions that an actor initiate. Also *use cases* are used to capture requirements and drive development of systems or designs (Ivar Jacobson, 2011). The *use cases* were presented within the *design thinking process*, which is the process used by the team for creating digital experiences. Use cases make the situations concrete and relatable. The *use cases* were real situations which the digital experience team members deal with from a daily to seasonal basis. Before the use cases a review exercise of the group clustering was done, to validate the conclusions and findings (the groupings) from the previous workshop.

**Exercise 1 – Re-grouping exercise**

The *re-grouping exercise* was to review the groups which were created in the first workshop in the previous workshop with the participants. This exercise was done to validate whether the groups are suitable representations for the sources. To execute this, the grouping exercise was done in a reverse manner. Blank posters were placed on the wall with the name of the group. Each participant was responsible for a certain number of groups. The participants went through the list of sources (which
was shown through a PowerPoint presentation on the screen in the room and decided which of those sources fit into each group. By using sticky notes the participants wrote the sources which belong to their group. This would display if the groups were the same as in the last workshop. Also whether the participants remember which sources belonged to which group, an aid to refresh their memory. After the exercise was completed, each participant presented the group and the sources with reasoning.

**Exercise 2 - Design Thinking exercise**

The design thinking exercise represented 9 use cases through the design thinking process, which is a process used by the digital experience team. The use cases mimic real life situations which the digital experience team deals with, the 9 use cases were mapped against the methodology. These use cases were brainstormed with the team, based on their design process during a season and a full year, and then mapped onto the design thinking process. The use cases are presented with the outcomes in part 4.2.2. Each participant had to write down on sticky notes the insight group which they would use for each use case. These were posted onto the design thinking poster on the wall. The task would bring out possible similarities and differences between the sources used by the participants in different scenarios. Discussions and decisions would then be made as to what are the most valuable insight groups to be used per use case.

**Finalization**

The second workshop provided concrete use cases which through, when to use the insight sources could be answered. Re-grouping exercise established common ground and exercised the memory of the participants, about what had been decided on in the first workshop. After the second workshop there was clear common ground for the team when to use the sources when designing digital experiences. This lead to the final step of how to use the sources concretely.

### 3.3.3. Workshop III - Validation

The objective of the final workshop was to discover ways how to use untraditional insight sources. The Untraditional insights sources included were: blog posts, review sites, social (twitter, Instagram), YouTube. These insights were most unfamiliar for the team, which is why the final workshop focused on them. There was limitation of time and resources to consider how to use all of the sources, which is why only the untraditional ones were the focus point. By doing the exercises the aim was to see how team members approach the research questions by using these sources. Also, to see what can be found by using these sources and what is valuable. The goal is to familiarize these sources to the team, give hand on experience to see if they can be valuable in their line of work and share their thoughts. This workshop was a validation method of the research, whether these insights sources are of value and help for the team.

**Exercise 1 - Warm up research question**

The first exercise was a warm up exercise to use the insight sources. All participants had to answer the same research question which was provided by the moderator. The research question was about an area which none of the participants work with directly. This was done to familiarize the participants with the sources and how to use them. For this exercise, participants had a certain amount of time which after they had to present their findings and conclusions for the research question, and to share what they found to inspire and give recommendations to others.
Exercise 2 - Individual research question

For the second exercise the participants had provided a research question of their own preference for their own category of work already before the workshop. This meant that they had a concrete motive to answer their research question and would find the workshop valuable. The moderator did not interfere with the research questions as this could also be a learning point for the participants to iterate their questions if they could not answer them. For this exercise, the participants had a certain amount of time after which each had to present their findings, conclusions and learnings.
4. Outcomes of the Workshops

4.1. Workshop I

The outcome of the first workshop provided answers to the questions *what information is looked for* and *what is the added value* for all the insights. Results can be found in tables 1, 2 and 3. An example of a poster from the workshop can be found in the appendix 2.

4.1.1. Brainwalking and brainwriting outcomes

What

Table 1 represents the posters from the first workshop. The last column in table 1 ‘grouping’ symbolizes the numbers of the groupings. What can be concluded from the tables is that there are four main aspects which are the most important factors for the Digital Experience designers. Answering the objective what, *what are we looking from that source*, the digital experience designers desire to know:

i. The behavior of users
   a. Interaction behavior
   b. Journey behavior
   c. Language behavior

ii. The profiling of users according to their needs
   a. User needs

iii. The business direction

iv. The competition
   a. Trends
   b. Technical and digital aspects

From table 1 it can be seen that all sources have added value except one, *search words on .com*, this source was eliminated from the insight source list.

Why

For the second objective why, *the reasons for use*, the four main reasons for use are:

i. Behavior

ii. Profiling

iii. Business perspective

iv. Competition

To generate an understanding, influence and design.

The behavior, profiling, business perspective, and competition are the four main aspects why the digital experience designers desire to know through the insight generation sources, in order to generate and create an understanding that will influence and design the experiences.

Grouping

As table 1 displays (see appendix 2.) there are fourteen different groups that were established in the workshop to represent the insights. These groups are also visualized in table 3, the y-axis represents the groups, from 1 to 14, and the x-axis represents the number of sources included to that specific group.
Group 1. *Hard facts*, is the largest group with the most (five) sources. Six groups only include one source. This visualization signifies that the groupings of the sources are not the most representational considering the amount of groups. Also, the group names are overlapping or the difference between them is difficult to understand, for example *campaign focus* and *campaign targeting*, or *consumer background* or *consumer background brought to life*. The parking lot represents ideas which came up in the brainstorming session.

![Parking lot visualization](image)

*Table 1. Parking lot notes.*

![Number of sources chart](image)

*Table 3. Number of sources per category.*
4.2. **Workshop II**

The outcome from the second workshop was the *re-grouping* of the insights and the *design thinking process method with the use cases*. The outcomes from the re-grouping exercise can be found below in table 4 and the outcomes from the design thinking exercise after.

4.2.1. **Re-Grouping outcome**

The *re-grouping exercise* turned out to be challenging and the results (the sources mapped to each group) varied compared to the ones in the first workshop. This clearly indicated that the categories were not the most logical, feasible and more importantly not clear to the digital experience designers. All of this resulted in the upcoming design thinking exercise not being able to be completed successfully. The outcomes of the *re-grouping exercise* are represented in table 4, an example of the poster from the workshop can be found in appendix 3. The sources highlighted in blue (table 4) represent the new insight sources which were generated in the workshop and red represents the sources which were eliminated.

Table 4 shows that from *Google trends, digital trends* was created as a new insights which would consist of digital trends across industries and platforms (see group one hard facts). *Capabilities of .com* were split into *internal* and *external* (see competitor research). *Consumer behavior* was split into two parts, *digital* and *non-digital* (see group two consumer behavior). *Innovations and strategy* was added to *internal coordination* (see group 7 internal coordination). Group number nine was eliminated as there were no insights which belonged to this group. *Batterii missions with influencers* was eliminated completely as a source, as it is hardly used and is a very costly platform.
### Table 4. Workshop II Results

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Sources</th>
<th>Additional points</th>
</tr>
</thead>
</table>
| 1. Hard facts | • ab testing  
  • Analytics  
  • Heat Maps  
  • Google Trends - Digital trends  
  • Google AD words  
  • SEO |  |
| 2. Consumer behavior | **Digital**  
  • ab testing  
  • Analytics  
  • Heat Maps  
  • SEO  
  • User Testing  
  • Trends  
  **Non-digital**  
  • Batteri missions with influencers  
  • Creator/Ampifier/Value receiver  
  • Google Trends  
  • RISE  
  • Qualitative research |  |
| 3. Campaign focus | • ab testing  
  • Decks on products  
  • Key Objectives  
  • KPI’s  
  • Market Research  
  • SEO  
  • User Testing  
  • Tone of Voice - aesthetic direction  
  • Review Sites  
  • RISE  
  • Qualitative Interviews |  |
| 4. Product Insights & BU Knowledge | • Batteri missions with influencers  
  • Bazaarvoice  
  • Blogs  
  • Comms direction  
  • Market Research  
  • Review Sites  
  • RISE profiles  
  • SEO  
  • Trends  
  • Youtube |  |
| 5. Competitor Research | • Internal.com capabilities/framework  
  • BU knowledge  
  • Competitor.com capabilities  
  • Google AD words  
  • Google Trends  
  • Tone of Voice - aesthetic direction  
  • Trends  
  • User Testing  
  • Review Sites  
  • Qualitative Interviews |  |
| 6. External Factors | • Athlete/Influencer/Positioning  
  • Branding  
  • Comms direction  
  • Intangible data/Internal BU knowledge  
  • Tone of Voice & creative |  |
| 7. Internal Coordination | • Analytics  
  • Brand Identity  
  • com capabilities/UX  
  • Framework  
  • Innovations/Strategy |  |
| 8. Consumer language | • Bazaarvoice  
  • Blogs  
  • SEO  
  • Social  
  • Review Sites |  |
| 9. Campaign targeting | • Batteri missions with influencers  
  • Bazaarvoice  
  • Blogs  
  • Creator/Ampifier/Value receiver  
  • Market Research  
  • Review Sites  
  • RISE profiles  
  • Social  
  • Qualitative interviews | • Critique  
  • Unbiased  
  • Past |
| 10. Consumer background | • Batteri missions with influencers  
  • Bazaarvoice  
  • Blogs  
  • Creator/Ampifier/Value receiver  
  • Market Research  
  • Review Sites  
  • RISE profiles  
  • Social  
  • Qualitative interviews |  |
| 11. Consumer background brought to life | • Batteri missions with influencers  
  • Bazaarvoice  
  • Blogs  
  • Creator/Ampifier/Value receiver  
  • Market Research  
  • Review Sites  
  • RISE profiles  
  • Social  
  • Qualitative interviews | • Critique  
  • Unbiased  
  • Past |
| 12. Primary data | • Batteri missions with influencers  
  • User Testing  
  • RISE  
  • Qualitative Research | • Biased  
  • Controlled context  
  • Hear them talk interact |
Through the exercise some group names were altered. The final twelve can be found below in table 5. *Product insights* and *BU knowledge* was changed into only *product insights* (number 7). Number 10 *consumer background brought to life* was merged with *consumer background*, because of similarity (number 5). Number 11 *internal coordination* was renamed to *internal capabilities and tools* (number 10). Number 13 *external factors* was renamed to *BU knowledge* (see 12) and finally *campaign targeting* number 14 was eliminated as there were no insights to fit this category after all. From additional notes, a few important factors were brought up, biased and unbiased, controlled context and the past. This represents that these are important factors to take into consideration when grouping the sources for insights, and that through the grouping this does not come apparent. Table 5 shows all the 12 groups that were established through the exercise.

|------------------------|--------------------------------------------|-----------------|--------------------------------|

**Table 5. Source Categorize**

### 4.2.2. Design Thinking outcome

The second exercise, design thinking with use cases, consisted of 9 use cases. For each use case the relevant insight category was chosen. The use cases are presented in figure 2 below.

![Design Thinking process with Use Cases](image-url)

**Figure 2. Design Thinking process with Use Cases**
The use cases:

1. **New Category.** The company has divided their core business activities into the business units and these business units consist of different categories. Each digital experience designer has been assigned a few categories from the company which they are responsible to create the experiences for. This use case reflects on the situation that a designer receives a completely new category which they have not worked with before. Therefore, having to understand the complete picture for the consumers, the products and the business unit. A new category in this context means that a team member gets assigned to a completely new category, therefore starting from the beginning with limited knowledge.

2. **New Season.** The company has split the business activities into two seasons, spring summer and fall winter. Each season can consist of several experiences and updates. A new season therefore means the whole 6-month period which can consist of multiple experiences.

3. **New Experience.** A new experience design is a single drop in one season.

4. **Provide an agency with more background on the desired solution in a brief.** For certain digital experiences, external agencies are used and these agencies must be briefed. These briefs need to consist of detailed information about various things from the consumer needs, the objective of the experience, the tone of voice, the design or visual direction etc.

5. **Feedback on an experience.** Giving feedback on any experience, that you have not worked personally on but need to give feedback on.

6. **Evaluate an experience.** Evaluating an experience which you have worked on, a single experience in a season.

7. **Experience wrap up.** Combining all the learnings, outcomes, findings and insights from a single experience.

8. **Season wrap up.** Compiling all the findings and insights from a complete season.

9. **A team member leaves and you must take up the next experience.** A scenario where you must continue what someone else has been working on.

The second exercise, *design thinking with use cases*, as mentioned was not completed as planned as the participants brainstormed new groups for the sources. The 12 insight source groups (table 5) were overlapping, confusing and not explaining the sources properly, which is why the participants ran into problems when trying to complete the *design thinking exercise with use cases*. The grouping was therefore started from the beginning, by thinking what are the main sources of information and perspectives when creating a digital experience, which are:

1. The business unit (BU)
2. The consumer
3. The actual digital experience
The different *layers* of information and insights were thought of around these perspectives. A low-level design was sketched in the workshop, a representation of the first iteration of the model can be seen below in figure 4. The change of approach to the groupings helped to stir the model and the exercise into the correct direction. After sketching out the groups, the use case exercise was done successfully, the numbers in figure 4 represent the use cases.

**4.3. Workshop III**

As described the third workshop consisted of exercises of how to utilize *nontraditional insight sources: blogs, review sites, social* (Instagram and Twitter) and YouTube. The main conclusions and take away from the final workshop was that these *nontraditional insight sources* are an important and valuable source of consumer knowledge which can be used in several stages of experience design, from an understanding to evaluation. Additional remarks were that this type of consumer research is timely and, the formation of a specific research question is important and might need several iterations. In the workshop one of the digital experience managers had a wide and complex research question, which meant it was hard for the them to focus their research terms and answer the question. Additionally, what was found was that a collaborative way of a few people researching and sharing findings is a beneficial, as participants have different search words and ways of approaching problems. Therefore, sessions like this are important and valuable to be executed in digital experience design. For example, in understanding phases, when there is a lot of room for investigation of what users are looking for and what are their needs these sources are extremely valuable. Also in the iteration or evaluation phases, when compiling findings from how the experience performed or worked through the user’s viewpoint. The workshop did not necessarily contribute to the insights generation model design, but rather provided a hands on exercise with the sources for the team.
5. Design process and Insights Generation Model

5.1. Design Process

As mentioned the initial sketch, figure 4, was the foundation for the design of the model. The rough sketch completed in the workshop symbolized the direction of the model. As seen in the workshops, only classifying and grouping the sources into similarities was not sufficient. More structure was needed for the sources to be sorted/grouped in a constructive manner. Therefore, the team changed the view on how to organize the sources.

The team concentrated in thinking about what are the main pillars and focus points for creating digital experiences, what are the main sources of information through which insights are generated in order to develop a deeper understanding of users. This chapter will briefly describe how the final model was designed. By going through the design process of the model, the aim is to explain how the model was designed but also to inspire and guide others through a similar process.

Central main view points

The core of the model, consist of the three most important viewpoints for the digital experience designers when creating experiences. The central main view points of the model can therefore be classified as why, what and who. These are represented by, the digital experience (what), the business unit (why) and the consumer (who). These three information and direction perspectives concerning the design of digital experiences are essential.

- **Digital Experience – What.** The business unit establishes the demand for the digital experience. From the digital experience perspective, it is important to understand for what reasons is the experience created and what should the digital experience communicate.
- **Business Unit – Why.** The business unit is in charge for creating new products, as well as the marketing and targeting direction for the products. The importance is to understand from the business unit who is the product the digital experience is created for targeting.
- **Consumer – Who.** The user is the one who the experience is targeted at.

Layers

The model develops after the central main view point to layers, which are the next steps in the design process of the model. The layers closest to the middle are the core values, the most important fundamental values and directions for that focus point. Layers are created one after another, from the core outwards, the naming of the layers is important. The layers closest to the central main viewpoints are the core information and then expanding outwards.

The naming’s of the layers should be descriptive and obvious for all stakeholders who the model is designed for. For example, the first layer of the consumer is the core behavior, which consists of the
RISE profiles and Creator, Amplifier, Value Receiver, which are a part of the consumer profiling strategy and consist of consumer behavior. The strategy and these sources aim to combine the attitudinal and behavioral aspects of the consumers.

Sources

After the layers, the sources which belong to each layer are chosen. These sources were mapped with the team, the sources which they were familiar with were easy to be mapped and the new sources were mapped through discussions. The sources which are chosen for each layer are the basis to create the understanding of e.g. the core behavior. Meaning that the sources in the layer are the tools which to use to generate the understanding about that layer. Therefore, the layer names should represent the sources which belong to it. A source can belong to several layers and categories if needed, but this is not advised since this might make the model complex.

Use Cases

When the circular model and layers are finalized the use cases are mapped on to the model. In this research the use cases were mapped onto the design thinking process model, which was seen in figure 2. In order to create a coherent understanding the use case numbers (figure 2) are likewise used on the model, as in the sketch in figure 4. The design thinking process model represents when during the design process these cases happen, and the model represents which sources to consider in the situation. Therefore, when a digital experience designer comes across one of the 9 use cases, they can reflect to the model based on the use case and understand which sources to apply in that specific situation.

Evaluation and Iteration

After establishing the central main viewpoints, layers and sources, evaluation and iteration is needed and necessary changes should be made to any points of the model. Image 1 and 2 below show the iteration process of the model, changing names and layers as well as use cases.
5.2. **Insights Generation Model**

The final model is presented and explained in this chapter. The complete model can be found in appendix 2.1 and the model with the use cases in appendix 2.2, and the use cases can be found in figure 2. The insight sources belonging to the layers are represented besides the models and color coordinated according to layer.

5.2.1. The Model

The model is explained by describing each central main viewpoint, the layers and insight categories which belong to the group. The model is designed and perceived from the digital experience designer
perspective, which is an important factor to keep in mind when going through the model. The model should be read by first looking at the layers and understanding what they mean, then moving to consider which sources can be used in order to generate this knowledge.

The Digital Experience

The digital experience consists of four different layers. The core is the digital experience, which as mentioned, can be any interaction between a user and an organization which is possible due to digital technology (LifeRay). A digital experience can be provided through mobile applications, websites or any devices which are connected digitally.

The first layer of the digital experience is the (1) comms direction, the communication direction, which is the business unit’s communication strategy for the experience. The comms direction is the first core layer because the digital experience is created based on the comms direction strategy. The sources which belong to the comms direction layer are the creative direction, the tone of voice and the aesthetic direction of the digital experience. Based on these guidelines the digital experience designers design and guide the experience design.

The next layer is the (2) objectives and goals. These are the qualitative and quantitative goals and objectives of the experience. The goals which the digital experience aims to achieve through the comms direction. The sources which are included into the objectives and goals are the key objectives and the KPI’s (key performance indicators). Both of these are measures of the experience. Key objectives are either quantitative or qualitative objectives, while KPI’s are quantitative. Examples of key objectives are: creating awareness, drive traffic, brand identity etc., and examples of KPI’s are number of sign-ups, downloads, visits, clicks etc. The objectives and KPI’s are important as these are the basis for designing the experience.
The third layer represents the (3) *product or offering* for which product or offering the digital experience is designed for. The source category which belongs to this is *decks on products*. The decks on products are provided by the business unit. The decks underlining what product or offering is the digital experience created for.

The final outer layer is (4) *capabilities* for building the experience, which are split into *internal* and *external capabilities*. Internal capabilities consist of the company’s internal .com capabilities and the internal framework for building experiences. The external capabilities consist of competitor .com capabilities, digital trends and innovations/strategies.

The Digital Experience part of the model demonstrates that the core strategy and purpose of the digital experience comes from the *comms direction* and that the outermost layer, *capabilities*, focuses on the technical building of the experience. All these four layers are needed to create a digital experience as these are the sources to understand the direction and capabilities required for designing engaging experiences for users.

**BU**

The **business unit** consists of five layers. The different franchise categories in the company are divided into business units, for example one business unit is responsible for football, another is in charge of running and the third of basketball. These business units are responsible for the launch of the
products and marketing strategies, they are also responsible for making decisions on which products digital experiences are created for. The request and demand for the digital experience starts from the business unit.

The first layer is the (1) **direction/positioning** of the business unit. It is important to understand the positioning the business unit has in the company and who their target group is. The insight sources are the **athletes, influencers** and the **positioning**. This is the first layer because these elements describe and help understand the business unit is and what their aim and function in the organization is.

The next layer is (2) **business unit knowledge**. This consists of intangible information of the business unit, as ways of working, previous experiences, stakeholders and other factors which are needed to be understood in order to execute design and work with the business unit.

The next layer is the (3) **brand and tone of voice**. This layer includes the **branding** and **tone of voice** sources, which describe how the business unit brands their products and themselves and what is the way they communicate to their target group.

The fourth layer is (4) **product offering**, which is about the actual products the business unit is designing and selling. The sources included in this group are **market research** and **trends**, as these are included into the business unit’s strategy and products.

The final layer of the business unit is the (5) **seasonal and experience direction**, The direction they wish to design the digital experiences towards, who they are designing for and why.

**Consumer**

The **consumer** consists of four layers. The first layer is the (1) **core behavior** of the consumer, and the sources for insight generation are **creator/amplifier/value receiver** and the **RISE profiles**. These sources describe the core behaviors of the consumers.
The second layer is (2) **perceived behavior**. *Perceived behavior* meaning the way consumers view and perceive the products, the brand and the experiences. The sources: *bazaarvoice, blogs, review sites, social, YouTube and news* are the source categories from which insights on how consumers are perceiving concepts and products can be established.

The third layer is (3) **qualitative behavior** which consists of *user testing* and *qualitative interviews*, therefore qualitative collected data about consumers.

The final layer is (4) **quantitative behavior**, in other words measured interaction behavior. The sources belonging to this group are *a/b testing, analytics, Clicktale, SEO, google AD words, google trends, social and news*. Measured interaction behavior meaning the way consumers interact with for example google search (SEO) or how they interact with elements on the experience.

### 5.2.2. Model with use cases

In order to understand the model and how digital experience designers apply the model in their work use cases were established. Nine use cases were mapped against the design thinking process. All use cases on the *design thinking process* can be seen below, after each use case will be explained and mapped on the insights generation model. The use cases were briefly explained on pages 17-18.

![Design Thinking process with use cases](image)

The model is used based on these 9 use cases in figure 4. When one of the nine use cases happens, the designers reflects on the insights generation model, finds the same use case number, and discovers which insight sources to use in that situation from the model. Therefore, there are two parts to utilize the model, the *design thinking process with use cases* and the *insights generation model*. Because the use cases are business and organization specific, they will be modestly presented and one of them (Use Case 1: New Category), will be explained in more detail.
Use Case 1: New Category

The first use case is a new category, which is in the understanding phase of the process. The company’s key product categories are classified into sports categories, managed by a set of business units. In other words, a business unit is a semi-autonomous organization which develops, manages and promotes a specific sport product, such as footwear and apparel. This use case demonstrates when a designer has to work with a category (for example ice hockey) which they have never worked with before. Therefore, in the understanding phase, for a new category, they have to understand the aims, needs and objectives of the new category which they have never worked with before.

This use case is represented on the insights generation model below. If a team member receives a new category they must start from the core of the business unit and the consumer and go through all layers.

**Business Unit**: Understand all the layers of the business unit. Starting from the direction and positioning, what is the positioning of that category, who is their target consumer.

After understanding the direction and positioning, the second layer is the business unit knowledge. This consist of the ways the business unit works, what has been done previously, how many drops do they have in a season etc.

The third layer is the brand and tone of voice, which means the designers has to understand what type of branding and tone of voice does this category use.

The fourth layer is the product offering, which includes trends and market research, what products does this category have and for which products are the designs developed for.

The final layer is the seasonal or experience direction, what does the category aim to communicate on the experiences, how many times a year etc.

After going through all these sources and layers, the designer should have a good understanding of what the goals and aims for this new category are and can start to think about designing.

**Consumer**: In order for the designer to understand who they are designing for, the designer must go through all the consumer layers. Starting from the core behavior, the designer needs to reflect on the RISE profiles and the creator, amplifier and value receiver. These sources help to encompass what is the target consumer, their values and needs.

After understanding the core value of the consumer, the designer should look at the perceived behavior, how the current target audience is perceiving the products. The sources used for this are range from bazaarvoice to YouTube and review sites, where consumers express their opinions and thoughts.

The next layer, the qualitative behavior allows the designer to use qualitative interviews or user testing, to understand what the target audience of this category are looking for, what their mindset is etc.

The final layer is the quantitative behavior, which is the measured interaction behavior. The designer can either look at existing experiences for this category and analyze analytics, or do in depth research on how the target consumers are searching for the products through SEO. By
going through all these layers the designer should have an understanding of who the target consumer is.

Use Case 2: New Season

The second use case, new season, is likewise in the understanding phase of the process. A new season means the experience designer is familiar with the category and has worked with the business unit on past experiences before.

Use Case 3: New Experience

A new experience, the third use case, is a single experience within a season. This means that the designer is already familiar with the seasonal direction and planning which is why they do not need to consider anything from the business unit.
Use Case 4: Provide agency with more background on the desired solution in a brief.

The fourth use case is in the ideation phase, as designers have already understood needs of the users in the understanding phase, in the ideation phase different design possibilities are brainstormed. Some experiences are designed by external creative agencies, in these cases experience designers sketch design possibilities and wireframes and creative agencies execute the final designs. For this reason, the experience designers need to provide the agencies with a detailed brief including aims, goals, user needs, wireframes etc.

Use Case 5: Feedback on an experience.

The fifth use case, feedback on an experience, is during the evaluation phase of the process. Therefore, understanding what worked and what did not in the experience. Providing feedback on an experience can be requested by anyone in the organization, which means that the team member has not been working with the experience themselves but needs to provide feedback for.
Use Case 6: Evaluate an experience.
In contrast to the fifth use case the sixth use case, evaluating an experience, is assessing a complete experience with the designer has themselves worked on.

Use Case 7: Experience wrap up.
The seventh use case is wrapping up an experience. For the designers wrapping up an experience means collecting insights on how the experience performed and was perceived.
Use Case 8: Season wrap up.

Similarly, to the previous use case the eighth use case, season wrap up, consists of the same layers and sources. The difference is that for the season wrap up all of the findings from all season will be combined, findings from the perceived, qualitative and quantitative behavior.

Use Case 9: A team member leaves and you have to take up the next experience.

The final use case that a team member leaves and the next experience from that category is your responsibility. This means that the new business unit, experience and consumer need to be understood fully and for this reason the designer needs to start from the center of all three view points and layers.
6. Discussion and Conclusion

6.1. Conclusion

There is a difference in the use of methods and ways of developing an understanding about users in research and in the business context. This research has indicated and especially challenged that there are other sources in addition to traditional UCD methods which can be utilized to comprehend users, their needs and how they perceive designs in an organizational setting.

Through this thesis answers to the research questions can be concluded. What method can an organization use to produce an understanding and usage of relevant data sources? As presented in this research, the use of user-participatory design through workshops is an appropriate and wholesome method to produce an understanding and explore the use of relevant data sources.

To answer the second research question, What do we need to know about users to understand how they interact with our digital experiences and through this design better experiences? As presented in the findings from the workshops the main aspects the designers need to know in order to design better experiences can be split to the four main categories: the behavior of users (including interaction, journey and language behavior), the profiling of according to their needs (user needs), the business direction and the competition (trends and technical and digital aspects). These four aspects are what designers find essential to know in order to design better experiences and the reasons is to generate an understanding and be able to influence and design experiences.

Finally the third research question, how and what sources are valuable for insights generation in order to understand users better and improve digital experience design? The answer can be concluded by the insights generation model. The model is split into the three main focus points which are the basis for insights generation for designers. The model guides designers in which insight sources to use in specific situations. The model answers the question what and how the sources are valuable.

This research provides two main central findings, the methodology and the insights generation model. The methodology, collaborative workshops, has proven not only to be a suitable method to answer the research questions, but a way to work as a team and educate others of new ways of developing insights. The collaborative workshops worked as a wholesome method to understand, discuss and analyze all insight sources among the team. All the digital experience designers who participated in the workshops were able to share their experiences, opinions and thoughts. This methodology can be used in any similar domains, organizations, teams or projects where new ways of understanding users is desired through existing and possible insight sources. Especially when aiming to generate
understanding through new methods, as traditional or nontraditional insight sources as well as data driven sources. What can be also learned from this research is that a collaborative methodology is difficult to document and express, which presents challenges as researcher. Furthermore, that workshops do not always go as planned and as a researcher to be ready for changes.

The insights generation model presented in this thesis is a vital finding for the team this research has been conducted for. The model was constructed from the workshops, through which the insight sources were defined and understood. The model was built through several steps and the insight sources mapped onto the model. The process of building the model from the central main viewpoints is a novel way to concretely present the valuable sources in a tangible and usable way for the domain. This proves that research concerning this area, is beneficial to any team or project, where analysis of user methods and ways is needed.

To conclude, with the amount of data and sources available in organizations, there are novel ways to generate insights about users to influence and understand designs. In order to understand which sources are valuable and when and how to use them a similar methodology as presented in this research can be used. An insights generation model, based on the findings, provides concrete help in when to use which sources. This research provides evidence to the fact that there are plenty of sources available from data to normal UCD methods from which insights can be generated from. The challenge is to come up with a way to generate knowledge from these insights and how these insights influence design decisions.

*What method can an organization use to produce an understanding and usage of relevant data sources?*

*What do designers need to know about users and their interaction with digital experiences in order to improve their designs with organizational objectives?*

And to further explore, *how and what existing sources are valuable for insights generation in order to understand users better and improve digital experience design?*

### 6.2 Discussion

Since the beginning of the research the innovative collaborative workshop research methodology was known to be challenging but full of opportunity. As the results demonstrate the methodology can be used in several circumstances from companies to projects where new ways of creating an understanding of users through insight sources is needed. Although the exact results will not be similar, the core outline of the method can be used. The steps of the method are:

1. Collect all available sources
2. Workshops to answer – *what, why, when and how*
   a. Analysis and categorization (what and why)
   b. Re-grouping, naming and mapping (when)
   c. Validation (how)
3. Model creation - central main viewpoints & mapping sources
4. Iteration
The creation of the model, with the three central viewpoints, can be linked to other organizational models. The MacKinsey group represented a model on design driven culture (MacKinsey Group), the four walls, where different stakeholders in an organization are brought together in order to consider experience, technology, business operations and planning. The MacKinsey model represents how stakeholders from the organization are brought together to achieve design, which is similar to what the insights driven design model aims at. The model represents the information and data which is needed from all different stakeholders in order to improve and design.

This collaborative workshop methodology is an approach which able teams to actively and collaboratively to explore possibilities and opportunities. The methodology allows all participants to express their opinions and thoughts, and to be a part of the collaborative outcome. The exercises which are done in the workshops can be altered according to needs and capabilities. Additionally, the methodology is easily implemented and possible to be done relatively easily with the only cost being time and dedication.

The benefit of the methodology as mentioned is the collaborative approach, which allows team or project members to explore sources which are accessible for them but perhaps are not familiar or used in practice. Also allows the participants to express their opinions, and experiences of working with the sources, what they find valuable and beneficial. With the different exercises in the workshops the methodology explores team work and collaboration, but also gives space for individual ideation. The methodology allows for a way to establish how data and insights can be used to make decisions about design.

There are aspects from the workshop which also need to be taken into consideration. The workshops are time consuming and require a lot of planning beforehand. Also although they are planned ahead, often workshops do not go as planned, as a researcher and moderator this needs to be prepared for and accepted. As a moderator it is important to keep to the schedule and plan of the workshop, but if the workshop takes an opposite turn this should be encouraged as well. This should be considered as a learning point, and essentially looking at the factors why the workshop took another turn and the plan could not be completed. This happened during the second workshop in the design thinking exercise, but in the end resulted in the design of the insights generation model. Additionally, the collection and reporting of findings from workshops is difficult, and this needs to be taken into consideration in the planning process. For this research the findings from the workshops were compiled digitally immediately after the workshops were completed, but the original materials (posters and recordings) were stored in case they were needed. The most helpful aspect in planning the workshops and the data gathering is to do a trial workshop, go through the exercises and tasks with someone, to see if they understand it.

The insights generation model was found to be extremely beneficial and helpful by the team. The creation of the model is a concrete way of mapping out what are the capabilities and possibilities in the company from which user insights can be generated from. The model is a tool the designers can reflect on when they face any of the 9 use cases when designing digital experiences. The model encourages and provides the designers with all the possible sources which they can use in that situation in order to generate a coherent understanding. Often when designers face a certain scenario they often use the sources they are most familiar with, but the model encourages to use a variety of sources. The model has also the capability to be iterated and new sources or ideas to be added if needed. This means the model is open and accessible to modifications.
It might be possible for an insights generation model to be established for other fields or practices, but this cannot be confirmed as this research has only been developed for one specific company. But by following the methodology steps and the model design process, this could be experimented.

1. Central Main View Points
2. Layers
3. Sources
4. Use Cases
5. Evaluation & Iteration

6.3. **Ethical Considerations**

For this research a non-disclosure agreement was signed between the company and the researcher which stated several aspects which needed to be considered in the research and publication. The company which the research has been conducted for cannot be mentioned as well as participant names, and other sensitive and confidential details of the company. These aspects have been taken into consideration in this research, which also create limitations when describing the research. Before submitting the thesis, the company has approved that the thesis can be submitted.

Additionally, the audio recordings of the workshops are kept only for the researcher to refer to when analyzing workshop results, no quotes from participants were referred to in the research, if this would have happened written permission would have been asked from the participant. Permission for photography from workshops with participants which are included in the research have been asked permission for from the participants.

6.4. **Research Limitations**

*Evaluation of model*

The evaluation and iteration of the model was done by the researcher presenting the model to the team. The model was gone evaluated with the use cases. The team gave feedback and comments to the researcher on possible changes and iterations. This evaluation of the model could have been done more in depth and in practice. All the use cases and the model could have been evaluated in the actual stages and seen how the digital experience designers use the model and evaluate based on actual findings. This is a limitation, but this complete evaluation of the model would have consumed half a year to a year, as complete seasons of the experiences would have needed to be gone through in order evaluate the whole process.

*Documenting findings and results*

Another limitation to the research is the documentation of findings and results. The recordings of participants from the workshops and discussions have not been attached to the research due to non-disclosure. Which means there are limitation to the presentation of findings and results as most of these have been through discussion, therefore the research aims to present the findings and results through the figures, the model and descriptions.

Additionally, due to the non-disclosure agreement there is limited amount of information and data which can be provided about the company, which might lead to miss understandings. Examples of digital experiences cannot be presented and the name of the company cannot be published.
Specific Company

An additional limitation to the research is that the research has been conducted for a specific company, with a certain organizational structure with specific ways of working and with access to certain sources. The research cannot be identically replicated, which means that if re-done for another company the outcome will be dissimilar. Which is why it is important to view the research and methodology from a higher perspective.

Changing Environment

The organizational environment and resources are constantly changing, which means this can immediately affect the model. Additional insight sources may appear, roles and responsibilities of digital experience designers may change, etc. which mean that the model might need to be iterated or altered in the future.

6.5. Future Research

There are several prospects for future research. Most importantly the future research is needed in order to verify the methodology in other organizational contexts.

Additionally, within the specific organization in this research, the model should be taken into practice in the work of the digital experience designers and after a season of going through all the use cases and using the model, evaluate the model and change accordingly.

Also the third workshop concentrated on evaluating how to use some of the nontraditional sources through the research question exercises. This could be done for all the sources, which after clear evaluation, guidelines, learnings of how to use those sources could be compiled and shared among the designers.

Another future research aspect is to consider how to document all of these insights the designers find from designing experiences. Where should the insights be document, shared and how? This is an important aspect of the future research, as these insights may be extremely valuable for other people in the organization as well.
Reference list


http://info.localytics.com/blog/difference-between-data-analytics-insights


https://www.merriam-webster.com/dictionary/insight


https://uxdesign.com/assets/user-centered-design-industry-survey.pdf


## Appendix 1. Explanation of Insight Sources

<table>
<thead>
<tr>
<th>Internal Insight Sources</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/B testing</td>
<td>Comparing two versions of a design or prototype to see which performs better (<a href="https://vwo.com/ab-testing/">https://vwo.com/ab-testing/</a>).</td>
</tr>
<tr>
<td>Analytics</td>
<td>The analysis of data, typically large sets of business data, by the use of mathematics, statistics, and computer software(<a href="http://www.dictionary.com/browse/analytics">http://www.dictionary.com/browse/analytics</a>).</td>
</tr>
<tr>
<td>Batterii</td>
<td>A tool to collect research and combine insights through global teams. Ability for users to directly upload videos and content onto the platform. (<a href="https://batterii.com/">https://batterii.com/</a>)</td>
</tr>
<tr>
<td>Bazaar voice</td>
<td>Consumer product reviews, through a platform to help analyze and gather user generated product reviews. (<a href="http://www.bazaarvoice.com/">http://www.bazaarvoice.com/</a>)</td>
</tr>
<tr>
<td>Creator - Amplifier - Value Receiver</td>
<td>A consumer model and consumer profiling strategy created by the company (limited information for sharing).</td>
</tr>
<tr>
<td>Decks on products</td>
<td>The in depth information provided by business units about the products and launches for the season.</td>
</tr>
<tr>
<td>Heat Maps</td>
<td>Platform which captures mouse move heatmaps, mouse click heatmaps, attention heatmaps, scroll heatmaps (<a href="https://www.clicktale.com/">https://www.clicktale.com/</a>)</td>
</tr>
<tr>
<td>Intangible Data</td>
<td>Intangible information which are non physical and not documented, for example ways of communication between two stakeholders.</td>
</tr>
<tr>
<td>Market Research</td>
<td>Gathering, analyzing and drawing conclusions from several information sources about a market or a product or service. Researching the past, present and potential customers, in their habits, needs etc. (<a href="https://www.entrepreneur.com/encyclopedia/market-research">https://www.entrepreneur.com/encyclopedia/market-research</a>)</td>
</tr>
<tr>
<td>External Insight Sources</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Blogs</td>
<td>Pages or websites updated frequently by individuals or small groups of people.</td>
</tr>
<tr>
<td>Google AD Words</td>
<td>Paid by markets to show recommended pages as the first displayed results.</td>
</tr>
<tr>
<td>Google Trends</td>
<td>A tool used to analyse popularity or related search terms, for languages and geographic locations.</td>
</tr>
<tr>
<td>Review Sites</td>
<td>Pages or websites frequently updated with unbiased or biased product or service reviews.</td>
</tr>
<tr>
<td>YouTube videos</td>
<td>Videos watchable on YouTube, which often consist of product reviews.</td>
</tr>
</tbody>
</table>

| Qualitative interviews   | Used to gain an understanding of reasons, opinions and motivations through descriptive data. |
| RISE - profiles          | A part of the consumer profiling strategy created by the company (limited information for sharing). |
| Search Words             | Search words used on Google search on any search engines, terms and ways of search. |
| SEO                      | Focuses on increasing the visibility of organic (non-paid) search engine results, by using technical and creative techniques. The goal is to improve rankings, drive traffic and increase awareness. ([https://moz.com/beginners-guide-to-seo](https://moz.com/beginners-guide-to-seo)) |
| Trends                   | Marketing, UX, product trends. |
| User Testing             | Platform to execute user testing ([https://www.usertesting.com](https://www.usertesting.com)) |
### Appendix 2. Workshop I Results. Internal and External Insight source outcomes.

#### Workshop I Results - Internal Insight sources

<table>
<thead>
<tr>
<th>Source</th>
<th>What kind of information are we looking from that source?</th>
<th>What is the added value?</th>
<th>Grouping</th>
</tr>
</thead>
</table>
| a/b testing                     | • Behavior + Interaction for A&B                                                                                                                                                                                                                                                                                                                                                 | • Which version meets KPI  
• Solve discussions  
• Fact based                                                                                                                                                                                                                      | 1. Hard facts                                                                                       |
| Analytics                       | • Key sales funnels  
• Page Depth, Page Interactions  
• Traffic: bounce, exit, visits  
• CTR (click through rate) where do they go?  
• Where does traffic come from (geographic)?  
• Geographic opportunities  
• Traffic analytics  
• Journeys (how it affects KPI’s)  
• Tangible Insights (recommendations)  
• What devices are used throughout the journey                                                                                                                                                                                                 | • Understand sources of traffic  
• Understand on page behavior  
• Understand traffic flow  
• Provides immediate and empirical evidence                                                                                                                     | 1. Hard facts  
2. Consumer behavior                                                                                                                                                    |
| Bazaarvoice                     | • Top 3 most common feedback  
• Consumer language  
• Consumer benefits and downsides  
• Regional variations                                                                                                                                                                                                                                         | • Influence product communication  
• Influence on how to display a product                                                                                                                                      | 13. 1st hand consumer knowledge                                                                     |
| Batterii missions with influencers | • a/b test whether reasoning is received  
• Consumer behavior + mindset                                                                                                                                                                                                                                                                                    | • Same as interviews but remote  
• In context use of product  
• One-off understanding of approach  
• Device approach: more or less product focused                                                                                                                                   | 12. Primary data                                                                                     |
| Creator/ Amplifier/Value Receiver | • Understand what it means  
• Why do we target xyz?                                                                                                                                                                                                                                                                                        | • Page structure priority  
• Which areas receive the most attention  
• Page consumption (behavior)                                                                                                                                             | 10. Consumer background                                                                            |
| Heat Maps                       | • Live browser application  
• In page drop off  
• Attention  
• Specific component interaction                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                             | 1. Hard facts  
2. Consumer behavior                                                                                     |
| Intangible data                 | • Effective gender specific content  
• PR tie in  
• RISE profile campaigns  
• BU: set up, history, WOW  
• Who is involved  
• How to best work with them  
• Organizational culture  
• Inspiration from other BU’s                                                                                                                                                                                                               | • What is the problem, how can we help, the added value                                                                                                                        | 7. Internal coordination                                                                             |
| **Market Research** | • How much is too specialist?  
• Effective category positioning (ex running)  
• Learning what works in other examples  
• What is the shopper in the market  
• What is the competition + positioning  
• Customer mindset at POS  
• What are USP’s in the landscape  
• How others are resolving similar problems | • Learn overall consumer behavior  
• Full overview of successful competitor campaigns  
• Better knowledge of what is working | 5. Competitor research  
6. External factors |
| **Qualitative Interviews** | • Understanding the whole user journey  
• How does the environment effect the journey?  
• Devices, blocks  
• React to unknown behavior | • Understand the why behind behavior  
• In which moment is what relevant | 11. Consumer background brought to life  
12. Primary data |
| **RISE profiles** | • What are the looking for in a product?  
• Who are they? How do they perceive themselves?  
• How do they interact with the environment?  
• What context are they most likely to share?  
• Context on the use | • Differences in behavior between creator-amplifier-value receiver  
• Best channels, journeys, moments to reach consumers | 9. Campaign targeting  
10. Consumer background |
| **Search Words on .com** | • Consumer language & terms  
• Popularity on searches  
• People don’t know specific products  
• Traffic behind searches - what do we need to fix? | 1. Hard facts  
8. Consumer language | |
| **SEO** | • Keyword list by region  
• Topical suggestions on insights  
• Keyword research insights  
• Traffic behind keywords  
• How product relates to consumer queries  
• Does content & copy meet the needs | • Contribute to map optimal journey  
• Define ecosystem PLP, PDP, etc.  
• Understand consumer language towards products  
• ‘Health check’ pre-post launch | 1. Hard facts  
8. Consumer language |
| **Trends** | • What is happening in the market  
• Shifts in the behavior  
• What is next and how does it influence  
• Understand what people are used to (to innovate)  
• Technical trends, OOPs | • Bring in new topics/ideas to reach consumers | 6. External factors |
| User Testing | A. Explorative  
- Unbiased opinions  
B. Usability  
- Understanding of components  
C. Testing competitors & looking at other markets  
- Messaging, education, understood, effective | • Validate concept  
- Consumer feedback  
- Validate experience  
- BU’s love it | 2. Consumer behavior  
5. Competitor research  
14. Interaction behavior |

| External insight sources | Blogs  
- Context is shareable for target blogs  
- Consumer language on products  
- Pre-release value  
- USP’s  
- This drives traffic  
- Buzz (pre & during)  
- Release info  
- Real content - trusted by consumers  
- Can be used as UGC on experience? | • Represents the lifestyle | 13. 1st hand consumer knowledge |

| Google AD Words | • How do we target  
- Competitive landscape of terms  
- Which search words are we targeting | • Influence KPI’s with paid words  
- How it influences KPI’s & journeys | 8. Consumer language |

| Google Trends | • Timeline search data/peaks (reactive events)  
- Traffic behind searches  
- Related searches  
- Geographical influence | 8. Consumer language |

| Review Sites | • Compare to competitors (missed attributes)  
- Positive & negatives  
- Review and evaluation approach  
- Keywords, angle, features  
- Products used in context  
- Detailed information of when receiving product | • A lot of consumer knowledge  
- Key expected takeaways  
- Compared mentioned features | 13. 1st hand consumer knowledge |

| Youtube | • Same as review but visual  
- Pros & cons  
- In context and real life  
- 1st hand consumer experience  
- Who is looking into this context  
- Evaluation criteria | • What is missing in the communication  
- Educate yourself  
- Get up to speed with products & BU’s  
- Better understanding of what is the comms target and their perspective | 13. 1st hand consumer knowledge |
Appendix 3. Images

Appendix 3.1 Workshop I Image

Image 3. Workshop I with participants

Appendix 3.2 Workshop I poster example

Image 4. A poster from workshop I.
Appendix 3.3 Workshop II poster

Image 5. A poster from workshop II.
Appendix 3.5 Insights Generation Model with use cases