"The development of a research method that enables Philips to obtain and leverage rich insights on end-users experience in early value creating stages of the product development process."
1// PREFACE

This report is a result of the graduation research that I have executed to finalise the Master Design for Interaction at the Faculty of Industrial Design Engineering from Delft University of Technology (TUDelft). The document gives an overview of the research I have undertaken in the last half year in collaboration with the Application Research Centre of Philips. Equal to the Master Design for Interaction, the Application Research Centre investigates how end-users needs can be incorporated in products. Both deal with every day products, in which interaction between these users and products is of utmost importance.

I would like to thank everybody that has been involved during this graduation project. Pieter Jan Stappers and Frans van Mourik as my mentors from the TUDelft for their critical view and supportive guidance. Froukje Sleeswijk Visser for sharing her experience of applying contextmapping at Philips and her helpful advices. Her doctoral thesis has been a great source of inspiration as well as information throughout my research project. I would also like to thank Flip for his assistance, while developing the website he has been a great help to me.

Next to that I would like to thank all ARC colleagues that have helped me throughout the research and have contributed to a pleasant and exciting time in Drachten and Groningen. In specific I would like to thank Bas Berga, my mentor at Philips. During the past half year he has always supported me enthusiastically, despite the (many) other commitments.

Furthermore I would like to thank my family and friends for their encouragement. In specific, my parents for their everlasting faith and Matthijs for his patient support and his energetic and positive attitude!

Willemijn Westendorp,
Delft, July 2010
2// EXECUTIVE SUMMARY

In this graduation research it has been investigated how end-user experience knowledge can be obtained and leveraged in the early value creating stages of the product development process within Philips, to support consumer centricity of their product concepts.

2.1// BACKGROUND

Royal Philips Electronics, most commonly known as Philips, is a multinational Dutch electronics corporation. Philips aims to evolve from a technology based company into a consumer focused company. The Application Research Centre (ARC) has been established in 2004 to support this shift. They represent the end-users throughout the product development process to ensure that the products meet the end-users needs. Philips is currently trying to improve the early value creating stages of this product development process to ensure that their products are based on a deeper understanding of the end-user experience.

At the moment this knowledge is obtained by means of interviews and observations during so-called “HomeVisits”. Interviewing and observations primarily provide explicit- and observable knowledge of the end-users. However next to explicit and observable knowledge, the experience of an end-user is also determined by less tangible aspects such as aspirations, values, fears, memories, dreams, wishes and feelings. These types of contextual aspects are often more difficult for people to put to words. As displayed in the image 2.1 this type of (tacit and latent) knowledge can be obtained by means of generative research techniques.

Figure 2.1: Different levels of experience knowledge of people can be obtained by different types of research through different actions. (Sleeswijk Visser, Stappers, van der Lugt, and Sanders, (2005). The tacit and latent knowledge is obtained by generative methods (as represented below the surface by Bennink (2007).

The purpose of this graduation assignment is to develop a research method that enables Philips to obtain rich experience knowledge of the end-users and leverage this knowledge into the early value creating stages of the product development process.

An explorative study has been executed to investigate Philips itself, its product development process and the methods which are currently applied during this process. Additionally existing generative methods have been investigated that could serve as input for developing the method for Philips. The method that is as most appropriately to support Philips’ current development process is contextmapping. It has been developed at the faculty of Industrial Design Engineering at Delft University of Technology. The method combines several generative methods. It is divided into six steps (Figure 2.2). In the first three steps knowledge is obtained about the contextual aspects that influence the end-users experience during product use. The last three steps offer an approach to inform and inspire product development teams with this rich experience knowledge that has been obtained.

Figure 2.2: Six steps of the contextmapping method (Sleeswijk Visser et al., 2005)

1) see Appendix 13.2 for the total graduation assignment as written at the start of this graduation project
The six steps of the contextmapping method:

1) The preparation stage aiming to define the goal, the targetgroup and the planning of the research.

2) The sensitising stage during which the participants are being prepared for the session by means of sensitising packages containing inspirational and evocative tasks.

3) The session itself during which a group of participants is asked to execute several expressive tasks and consequentially explain the outcome to the group.

4) The analysis stage aiming to support a group of researchers in analysing the data obtained during the session.

5) The sharing stage is meant to support the communication of the analysed data to the project team.

6) The final conceptualisation stage, where this knowledge is supposed to be used to create new consumer focussed concepts.

A focus study has been executed to investigate the requirements for the contextmapping method and product development process of Philips to merge. For this study several interviews were conducted with members of the departments involved during the product development process and an expert of the contextmapping method. The biggest challenge that became clear during these interviews is to fit the contextmapping method within the time constraints set by Philips. Product development projects within Philips cope with severe time restricting deadlines and cost lowering pressure whereas the contextmapping method aims at obtaining and leveraging rich qualitative knowledge, which requires time (and costs) to realise. Therefore consenting adjustments to the contextmapping method and the product development process of Philips are inevitable to enable a fit.

A set of requirements has been established both to sustain the qualities of the method and meet the demand within Philips. Based on these requirements several decisions were made concerning the adjustments to the method and process. The adjusted contextmapping method has resulted from these decisions.

2.2// ADJUSTEMENTS CONTEXTMAPPING METHOD

The main difference with the conventional contextmapping method (as proposed by F. Sleeswijk Visser, 2005) is that the members of the project team will execute the analysis (step 4) of the data themselves when applying the adjusted method. This enables the method to become more time efficient as the subsequent sharing step (step 5) of the conventional contextmapping method has become redundant. It will however remain important for the different project team members to share their individual findings amongst each other in order to align and learn more from each other. This alignment will be incorporated in the conceptualisation stage in a face-to-face meeting. To streamline the method extensively with the process of Philips, the last conceptualisation step (step 6) has been combined with a step that currently already exists in the process of Philips, the Insight Generation Workshop. This is the name of the workshop currently applied during the process of Philips to generate new product concepts.

A website has been developed to support the members of the project team in analysing the data and translating these analyses into concepts. The website provides each member of the project team with a section of the data. The website guides them in the analysis of this data through several tasks. The tool is accessible online, enabling the members of the project team to execute the analysis in their own time in any location they prefer.

2) In the conventional contextmapping method these analyses are executed by a research team
3) The project team is already acquainted of the knowledge during the previous step
2.3// ADJUSTEMENT PRODUCT DEVELOPMENT PROCESS PHILIPS

For as far as the adjustments to the product development process of Philips, four additional steps will be added in the early value creating stages when implementing the contextmapping method (Figure 2.4) as the last step of the contextmapping study is merged with the insight generation workshop.

The following three departments will be intensively involved in the execution of this method:

- As the ARC is responsible for representing the end-user in the product development process they will play a significant role and execute the first three steps of the contextmapping method.
- The involvement of the Consumer Marketing Management ("CMM") is essential as they are superintendent of a product development project and its budget. CMM can support in the determining the goal for a study as it has a good overview of the knowledge (already obtained and still missing).
- The Consumer and Market Intelligence ("CMI") department can support the ARC in executing the research. They are experienced in defining the goal of a research are experienced in the formulation of a questions or tasks in qualitative research and have several connections with external research companies.

Next to that the other project team members will be more actively involved in the analysis and applying the research data .

To support Philips in carrying out the research, a cookbook has been developed during this graduation project. This cookbook consists of guidelines to support the execution of the different steps of the method.

2.4// EVALUATION

The adjusted contextmapping method has been evaluated by means of a case study, interviews and feedback questionnaires. During the case study the role of the ARC-er was performed by the student executing this graduation research. All steps were taken according to the guidelines of the Cookbook. To test if the Cookbook would provide sufficient guidance for the ARC to execute a contextmapping study, several members of the ARC were asked to work with the Cookbook.

The analysis and conceptualisation steps of the adjusted method were executed in collaboration with two groups consisting of employees from Philips. One group executed these two steps in the analogue way (in line with the conventional contextmapping method). The other group executed these last two steps by means of the website. The observations and feedback of these two groups have been compared and conclusions have been withdrawn from this comparison.
2.5 // CONCLUSIONS

The adjusted contextmappings method is an appropriate method for Philips to generate more consumer centred product concepts in the early value creating stages of the product development process. Some adjustments in the method and concessions made in the development process of Philips enabled a merge.

The adjusted contextmappings method leads to various and more consumer centred platforms in comparison to the conventional Insight Generation Workshop of Philips.

Extensive/full involvement of the project team members in the analysis stage supports their engagement towards the project and enhances their empathy towards end-users.

When improved, the website contributes to a proper and efficient execution of the contextmapping method within Philips.

The website improves the empathy towards the end-users and engagement towards the project. It stimulates that selections of artefacts and quotes of participants from the session are better captured and used throughout the early value creation process.

The website contributes to a better alignment of knowledge amongst the members of the project team, as they were better capable of visualising and remembering the story behind the visuals and quotes (also in other posters). This also evokes discussion as they are better able to find differences in their interpretations.

As a result of analysing the data by using the website, the members of the project team were less capable to switch over to ideation. As the members were actively involved in the analysis of the end-user knowledge and there visuals and quotes were captured precisely, they experienced difficulties to detach from the analysis and immersion.

The CookBook supports a proper and efficient execution of the contextmapping method by the ARC.

2.6 // RECOMMENDATIONS

Philips should execute contextmappings studies at the beginning of each Advanced Development (AD) project to support consumer centricity in the early value creating stages of the product development process of Philips.

The ARC should be superintendent of the execution of the adjusted contextmappings study at the early value creating stages of a product development project as they represent the end-users needs throughout the process. The ARC should maintain close collaboration with the Consumer and Market Intelligence department.

The ARC should aim to take away the doubts of other departments like CMM and CMI concerning the contextmappings method. This should be done by executing a contextmappings study applied to an actual product development project, serving as a ‘best-practice’.

The ARC should further develop the proposed website to support the project team members with guidance during the analyses of the obtained data. Once improved, the ARC should do a pilot test with the new website were sufficient incubation time is provided to investigate whether the inspiration of the members can be enhanced.

The ARC should use the Cookbook during the execution of contextmappings studies, as it has proven to be a helpful guide in the execution of the contextmappings method in a time-efficient way.

The ARC should stimulate a small group of ARC-members to extend their knowledge and skill concerning the contextmappings method. This should be done through education, training and execution of the method.

The StudioLab should investigate how developments concerning co-creation can enrich contextmappings and the other way around to extend user involvement throughout the process in an efficient way.

StudioLab should investigate how recent developments on the market (such as a touchscreen) or a cabinet as created by Keller4, could be applied in a product that supports the clustering of digital items and ideation during group sessions.

4) For his PhD research, Keller (2008) has created a Cabinet that supports the collection of inspirational visuals through more “bodily interactions”. He created a product that allowed designers to cluster visuals and play around with them. Also additional item’s could be attached.
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4// INTRODUCTION

One of the key topics in the field of industrial design engineering at this moment is the improvement of interaction between users and products. As technologies are expanding in complexity, focus on interaction design is becoming inevitable. Improving the usability of products and enhancing the experience of users is therefore on top of mind of most product development companies.

4.1// CURRENT SITUATION

Philips is such a product development company that aims to evolve from a technology based company into a company that develops products based on a deeper understanding of its end-users needs. The Application Research Centre (ARC) has been established in 2004 to ensure this shift. (This is the department for which this graduation research has been executed.) They represent the end-users throughout the product development process to ensure that the products meet these end-users needs. Their responsibilities used to be focussed at the later stages of the product development process, but is gradually shifting towards the earlier stages of this process. Philips is currently trying to improve the consumer centricity in the early value creating stages of the product development process to ensure that their products are based on a deeper understanding of the end-user experience. At the moment this knowledge is obtained by means of interviews and observations for which the members of the product development team visit the end-users at home. Interviewing and observations primarily provide explicit- and observable knowledge of the end-users. However next to explicit and observable knowledge, the experience of an end-user is also determined by less tangible aspects such as aspirations, values, fears, memories, dreams, wishes and feelings. These types of contextual aspects are often more difficult for people to put to words.

The master Design for Interaction, provided by the Delft University of Technology, educates in the development of products that fit the end-users’ needs and expectations by creating a better understanding of the users experience. The master emphasises the importance of applying iterative cycles of user research along the product development process to accomplish this. Throughout the master, students are being familiarised with many different types of research to support product development processes with knowledge concerning the interaction between people and everyday products.

Several techniques can be applied to improve the consumer centricity in the early value creating stages of the product development process. Contextmapping is one of these techniques and has been studied in several (other graduation) researches. From researches derived that the application of the contextmapping method with Philips’ product development process, will lead to concepts which are more consumer centred. Therefore contextmapping will be used as a starting point for this graduation research. However, also other methods will be taken into consideration during this research. The contextmapping method combines several generative techniques to investigate the context of product use. The main goal of the method is to obtain knowledge on the contextual aspects that influence the end-users experience during product use and to inform product development teams on and inspire them with this rich experience knowledge. It consists of three data collecting stages where the data is obtained. This is followed by three data leveraging stages where this data is analysed and translated into product concepts.

4.2// PURPOSE GRADUATION RESEARCH

This graduation research will investigate how contextmapping can support the consumer centricity in the early value creating stages of the product development process within Philips'. This is relevant for Philips because it enables them to develop products based on rich end-user insights that evolve from deep experience knowledge of its end-users. This graduation project is also relevant for the master Design for Interaction because it contributes to research investigating how (methods like) contextmapping can be applied in large companies like Philips. This report can also be valuable for others interested in the support of analysis by digital inspiration-tools or web-applications, the support of consumer centricity during ideation workshops, contextmapping or in the implementation in a large multinational product development company.

1) See appendix 13.2 for the full graduation assignment as written at the start of this graduation project.
4.3// STRUCTURE GRADUATION REPORT

After the executive summary (chapter 2) and introduction (chapter 4), chapter 5 gives the background on the Philips organisation and its current early value creating stage of the product development process. In chapter 6 several research methods to investigate end-user experience will be discussed, after which the contextmapping method will be described in more detail. Chapter 7 lists the requirements for the method based on the situation within Philips and the contextmapping method. Chapter 8 outlines the adjusted contextmapping method for Philips based on these requirements, followed by the evaluation of this method by means of a case study and several interviews in chapter 9. The main conclusions and recommendations are discussed in chapter 11 and 12 respectively. To finalise this graduation project this report will end with the most relevant learning’s for the student in chapter 13.
5.1/ COMPANY

Philips is founded in 1891 in the Netherlands under the name of N.V. Philips Gloeilampenfabriek (meaning light-bulb factory). Nowadays it is a multinational Dutch electronics corporation, with a broad product portfolio spread over three sectors: Healthcare, Lighting and Consumer Lifestyle. In 2007, the sales of Philips reached almost €27 billion and it employed nearly 124.000 people in more than 60 countries. Currently Philips aspires to change from a technology driven company towards a consumer-centric company, to stimulate further growth. This is communicated through the brand promise 'Sense and Simplicity', supported by the following mission;

"By understanding trends in society and obtaining deep insight into issues that confront people in their daily lives", Philips aims "to ensure that people’s needs remain at the heart of everything they do".

Improving the end-users experience is currently priority within Philips. This is confirmed by the following message from current CEO and President Gerard Kleisterlee;

"Delight with Simplicity” is the goal!
Yet to deliver fully on our brand promise and make it central to our decision-making, we need to significantly accelerate the transformation both of the company and ourselves as leaders. We have come far together, but we need to go further, and deeper. The surest and quickest route to sustainable growth is to become customer-centric. That means you must truly 'live the brand' if we are to embed sense and simplicity and become a genuinely market-driven organisation.

5.2/ ORGANISATIONAL STRUCTURE

This assignment will be executed within the sector Consumer Lifestyle ("CL") and to be more specific, within the Innovation & Development ("I&D") group of the Business Unit Domestic Appliances ("BU-DA"). The mission of I&D is to become a world-class organisation by leveraging the latest technological insights to help create new products and manufacturing processes. The main focus within the BU-DA in general is the execution and on-time delivery of new DA-products within agreed specifications, costs and quality levels. Within the BU-DA there are several Innovation Teams that develop a specific range of products within the Domestic Appliances unit (e.g. in Drachten: Kitchen Appliances, Floorcare and Beverages (image 5.1)).

Within I&D an internal transformation program (called "Accelerate!") was launched in January 2010 to stimulate the evolvement into a more consumer-centric organisation. The three main objectives are to focus:

- Speed
- Open innovation
- Consumer Centricity

Especially the last objective is of interest for this graduation assignment as it aims to further improve the end-users experience. According to Hidalgo (Executive Vice President and Chief Technology Officer at Philips Consumer Lifestyle): "The main issue for I&D, is the initiation of projects based on incentives from the market, to accomplish the improvement of Consumer Centricity.”

5.2.A/ PROJECT TEAM
The process for the development of new products for an Innovation Team are executed by multidisciplinary teams, ensuring economical and technological feasibility, consumer-centricity, the embodiment of the latest innovations and an attractive and consistent appearance. In one Innovation Team (for example Floorcare, see image 5.1) there are several project teams working on the development of different products.

Image 5.1: the Innovation Team of Floorcare consists of several multidisciplinary project teams. In this image these teams are all seated together in one room but normally they are working separately with their group on one product.

The number of people that these teams consist of varies between five to twenty people. This depends on the scope of the project and the phase that the project is in. Several people from different departments join or leave the project team throughout the different phases. The teams typically include a project leader and disciplines such as Quality, Application Research Centre, Consumer Marketing Management, Consumer & Market Intelligence, Purchase, Design, System Architects and a lead engineer. The different member of the project team are often situated in various locations (e.g., Amsterdam, Drachten, Klagenfurt). The most common forms of communication amongst the different members of the team is through email, telephone calls, meetings and conference calls. When more elaborate information needs to be communicated containing visual as well as text this is mostly done by means of PowerPoint slideshows.

The Consumer Marketing Manager ("CMM") is officially the owner of a project; taking care of the budget, planning, different stakeholders and communication of results to higher management. The project leader is responsible for a sufficient collaboration amongst the different members of the product development team, consisting of the Engineers and System Architects. Design is responsible for the aesthetics of products, making it attractive and ensuring a constant and recognisable appearance. The Application Research Centre ("ARC") and Consumer & Market Intelligence ("CMI") department are responsible for collecting and leveraging end-user knowledge for the different product development projects. The CMI-department executes several market analyses per year, to keep track of trends in consumer behaviour (end-users) and its competition (market). Because of recent internal changes in the organisation responsibilities and capacity have been taken away from CMI. Therefore they are only involved in arranging the execution- and not in preparing it determining goal and scope etc) or interpreting the data. Resulting in a shifted of their tasks to other parties such as CMM, who consequentially has more work to do. This was confirmed in interviews with both CMI and two CMMs. ARC is the discipline for which this graduation assignment will be undertaken. This department will therefore be discussed more elaborately in a separate chapter on the next page.

1) These interviews are attached in appendix 13.5.A
2) These departments and their main responsibilities will be discussed in Appendix 13.3
5.2. B// APPLICATION RESEARCH CENTRE

The Application Research Centre ("ARC") is responsible for ensuring that all new products meet the "Sense and Simplicity" brand promise of Philips. They focus on representing the end-user during several stages of the innovation process. The ARC used to be involved only at the end of this process. This is mainly done through testing and validating products (-components) and providing suggestions for improvements, based on findings of all sorts of quantitative and qualitative research.

Their main responsibility during the process consisted of:
- Creating end-user requirements (usability, performance and experience)
- Steering and tracking consumer satisfaction during the process
- Validating the user satisfaction and experience

Currently the involvement of ARC is shifting towards the beginning of the innovation process. This is also encouraged by I&D with the recent launch of an internal transformation program called "Accelerate!". The program stimulates ARC to evolve into a "product consumer intimacy organisation" that is actively involved in the value validation as well as early value creation stage3. Therefore it can be expected that this transition program will have a significant impact on the intensity, moment and type of involvement of ARC in the innovation and development process. Especially changes in involvement of ARC during the early value creation stage are of particular interest for this assignment.

Image 5.2: The Innovation and Development Site in Drachten were several Innovation Teams are located. On each floor one Innovation Team is located. For example; the FloorCare team is located on the first the ARC members are working for the Floorcare team are seeted behind the big window on the first floor in the red part of the building.

5.3// PRODUCT DEVELOPMENT PROCESS

A standard process for product development projects is formulated, to ensure the execution and on-time deliverance of development projects within agreed specifications, costs and quality levels. The process consists of a standard product development process, called the Integrated Product Development ("IPD") process.

The IPD-process can be preceded by the Advanced Development ("AD") process, in case of more radical innovations projects. The objective of the AD-process is to ensure that the IPD-process is entered into with proven, meaningful and functional solutions and components, supported by feasible technological options, selected suppliers and with sufficient knowledge of risks. Figure 5.3 displays the main stages that these processes consist of, indicated by a different colours, with their corresponding milestones.

3) See Chapter 5.4 Early Value Creation stage for more elaborate explanation of this stage.
The way in which Philips currently obtains knowledge about its end-users and leverages this throughout this product development process has been extensively investigated. The different methods and tools that are currently applied to support the product development process of Philips with knowledge about the end-user are displayed in figure 5.4.

Figure 5.4: Steps applied to obtain and knowledge on the end-user and leverage in Product Development Projects of Philips.

This figure represents all steps that are ideally taken according to Philips. In practice, the budget assigned to a project, determines if and how elaborate the different steps are executed.

Figure 5.4 shows that within Philips both qualitative and quantitative research is executed to obtain knowledge about the end-user. However both quantitative as qualitative researches is often outsourced to professional research companies (such as Synovate and BrainJuicer).

5.4// EARLY VALUE CREATION STAGE
As discussed in the previous chapters Philips currently aims to initiate projects mainly based on incentives from the market where before the projects were mainly based on technological stimuli. Therefore both the AD- and IPD-process are supposed to be entered with a value proposition (in case of IPD even validated VPH). A value proposition should describe how the proposed concept for the product will create value for the end-user. These concepts should therefore be based on so-called end-user insights. End-user insights are statements that express the targeted end-user unmet needs, dilemmas or aspirations. The constitution of a value proposition is not indicated in the image of a standard product development process as displayed in figure 5.3. Therefore this stage of the process does not carry an official name but within Philips it is often referred to as the early value creation phase. When looking at figure 5.4 several actions can be identified which support this early value creation stage.

When zooming in on the early value creating stage, 5 action can be identified which belong to this phase (Figure 5.5). These actions are displayed below and will be described extensively in the following chapters.

Figure 5.5: The five steps of the current early value creation stage applied to obtain and leverage knowledge on the end-user.

5.4.A// PROJECT BRIEF

A product development project is usually initiated by CMM setting up a project brief. This brief follows from the analysis of the research of CMI and is based on a roadmap. A roadmap for a certain innovation team (for example Beverages or FloorCare) describes the planning of an upcoming product for the next 5 years. The project briefing describes the project objectives, target group, competitive market, deliverables and the required resources. Obviously all steps of the project should be taken into consideration when developing the planning. Therefore the ARC should also be involved at this stage because they have to estimate the necessary intensity of consumer research and testing. The content of the project brief must be agreed upon by those in the core project team and the relevant management responsibilities.

5.4.B// HOMEVISITS

HomeVisits is the name of a research method often applied within Philips when big innovation project are initiated. The aim of this method is to obtain more knowledge about the target group and the context in which they use a certain product. The outcome of the HomeVisits is mainly very functional and provides practical information about the context of use of current products. It serves as input for the formulation of the target group and for the generation of end-user insights.

A HomeVisit consists of 15 to 20 visits to the end-users in their home environment. During the HomeVisits most members of the core project team are invited to attend, they are however not always able to be present due to lack of time. For the HomeVisits little to no preparation is required especially not by the participants or members of the project team. Members of the project team that are present are split up in pairs of two. These couples separately visit several end-users in their home environment.

4) A more elaborate explanation of how a value proposition is constituted is described in appendix 13.4.
couples then have the opportunity to take pictures and ask the participants several questions. These questions are mainly about topics such as reasons for buying, physical environment of use, ease/troubles in use, cleaning, storage etc. The outcomes of these visits are often recorded in a PowerPoint presentation.

Participants receive about €60 each for participating in such a visit. The total budget needed for such a research is €1000 to €2000. In case of large projects or when the HomeVisits are executed outside of the Netherlands an external company is approached (often Synovate) which will result in higher costs.

5.4.C// INSIGHT GENERATION WORKSHOP

The PowerPoint presentations from the HomeVisits and other knowledge obtained about the end-user is discussed and processed during the so-called Insight Generation Workshop. This workshop is a group session that aims to create several end-user insights, which will be developed into new concepts. To ensure that new concepts indeed fit the end-user, the insights should originate from knowledge about the end-user experiences.

The workshop is often facilitated by a CMIer or in case of sufficient budget by a professional facilitator from an external company. An Insight Generation Workshop often takes up a full day. It starts in the morning with a knowledge sharing stage, followed by a diverging stage. In the afternoon the teams converge, selecting some clusters to develop into themes. Preferably the day is concluded with several formulated insights.

Usually the workshop is kicked off with the sharing of knowledge about the end-user from the HomeVisits and other researches and learning’s from previous projects by several members of the project team. They share their knowledge with the rest of the team by means of oral presentations (sometimes supported by a PowerPoint slideshow). Inspired by the knowledge sharing phase, the team diverges, trying to generate more ideas. They do this by writing everything down on post-its that comes to their minds concerning the needs, dilemmas, desires/aspirations, beliefs, insights and observation of end-users. After this all related post-its are clustered, creating broader, overarching themes. Then the team will converge, selecting only the most interesting themes. These themes are portrayed visually on mood boards. For each theme one picture is then chosen and a key word is assigned to it. This is extended into small sentences (still relating to the end-user experience, not the product solution). Then the project team is divided into couples, who will extent on several sentences trying to formulate insights. These insights are then discussed within the group, and if necessary adjusted accordingly. If necessary the insight will be finalized after the workshop as often time is short. This is done by the CMMer often in collaboration with the CMIer.

The outcome of the workshop is often preserved so they can recall the decisions made during the insight development and inform the team members that join the project in a later stage. In order to preserve the work done during the workshop, several members of the team are asked to document all post-its and posters digitally afterwards. They are expected to digitally store all the text and make pictures of all the visuals. The captured data is processed in a PowerPoint presentation which is shared with the different members of the team, who save this data digitally in their mailbox or hard disc. Image 5.6 displays two results of this.

![Image 5.6: Two PowerPoint sheets capturing the outcome of the Insight Generation Workshop, developed by a CMM of Floorcare at Philips](image-url)
During several interviews\(^5\), members of project teams indicated that they find it a time-consuming task which they would rather skip. However they do see the relevance of it, as they find it important to capture the actions and store the different outcomes of the session.

5.4.D// PROPOSED INSIGHT

Once the formulation of the insights is finalized they have to be approved by all members of the project team and management. At this point about six insights remain. These approved insights are then ready to be confronted with the end-users.

5.4.E// CONCEPTLAB

The confrontation of the insights with the end-users is done during a ConceptLab session. The aim of this session is to verify the formulated insights with the end-user and rewrite them if necessary. These sessions are facilitated by an external research company (often Synovate). This research company describes the outcome of the sessions by means of a report. Preferably, all members of the project team are present during this session. This way the insights can be adjusted accordingly already in between sessions, providing the opportunity to immediately verify the adjusted versions with the ConceptLab. Philips also urges the importance of all members of the team to attend, for the continuance of the project. As this will create more empathy amongst the team towards the end-user and provide more knowledge to make a better formulation of the insights. Ones the insights are confronted with the end-user and updated accordingly they can be consolidated for the quantitative validations in the continuance of the process.

5.4.F// INVOLVEMENT

The early value creating stage is organised (and owned) by CMM. However, the actions of this process are ideally done in collaboration with the other (core-) members of the project teams as well.

The CMM used to be extensively supported in the coordination of this process by CMI. However recent changes in the organisation have taken away responsibilities and tasks from CMI and shifted them to other parties. The only task left for CMI is the execution of the researches. In line with the Accelerate program, ARC is becoming more and more involved in this process. For example, ARC has executed some cultural probes to investigate the context of use of products more extensively (e.g., diary workbooklets). From all other (core-) team members (e.g., design, project leader, lead developer) active participation is not expected however attendances during the different consumer contact moments is highly appreciated. However, as the maximum time spend on HomeVisits and the (preparation for) the Insight Generation Workshop is 20 hours per project team member, they will not be able to attend all these sessions, even if they are willing to do so. During several interviews\(^1\) with project team members this time constraint has also been confirmed.

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\(^5\) The interviews with members from several departments involved during the early value creation stage are attached in appendix 13.5.A.
This chapter describes several research methods to obtain (and leverage) user experience knowledge. This information is relevant for this graduation project because it aims to develop a research method to obtain and leverage rich experience knowledge of the end-users into the early (value creating) stages preceding the product development process of Philips. Knowledge about the current situation within Philips and other research methods is needed to determine the requirements and consequential characteristics of the research method this graduation project aims to develop.

As described in the previous chapter Philips currently executes HomeVisits to obtain knowledge about its end-users. During these visits interviewing- and observation techniques are applied. These research techniques primarily provide insights on the explicit- and observable knowledge of the end-users experience. Next to explicit and observable knowledge, the experience of an end-user is also determined by less tangible aspects such as aspirations, values, fears, memories, dreams, nightmares, wishes and feelings. These types of contextual aspects are often more difficult for people to express. Knowledge about these aspects is often defined as the tacit and latent knowledge of the end-user (tacit knowledge is difficult to express and latent knowledge is possessed unconsciously). This knowledge is of particular interest in the early value creating stages of the product development process as it more widely explores the various contexts surrounding a product’s use. By focussing on the context a higher abstraction level can be reached that goes beyond the current product. This is especially relevant to support consumer centricity in the early value creating stages as it looks at the abstract functions that a product should support, which avoids fixation. The envisaged (desired) future at the context level can be translated into a future user-product interaction resulting in a product designed for the future.

Several types of research methods have emerged over the years to investigate the deeper levels of user experience knowledge. It started in the mid-1940s with new disciplines such as the Ergonomics and Human Factors, which focused on the fit of technology and human performance. In the Human Computer Interaction (HCI) field, the user experience appeared and soon became a main focus for designing websites and product interfaces. In the book “The Design of Everyday Things”, by Norman (1986) he uses the term “user-centred design” to describe the approach to create products based on user experience knowledge. This approach is centred around the product, focusing on task related issues (Norman, 2005).

Several qualitative research methods have been developed to support this user-centred design approach with experience knowledge such as observations, field visits, interviews, focus groups and applied ethnography. Most of these methods originate from classical research-orientated disciplines (Sanders and Stappers, 2008).

Currently, research methods are emerging from the design discipline. Examples are generative techniques (Sanders and Stappers, 2008), cultural probes (Gaver et al., 1999) and design probes (Mattelmaki, 2006). These methods attempt to involve the end-users more actively into the design process, to widely explore the various contexts surrounding a product’s use. This principle is based on participatory design (as well as cooperative design in Scandinavia), which emerged in 1970. This approach aims to involve various stakeholders in the product development process in order to integrate more aspects, e.g., the user's needs, beside the technology alone.

Based on this user-involvement the method called “co-creation” emerged (Prahalad and Ramaswamy, 2000). In their published work (“Co-Opting Customer Competence”) they state that co-creation is not only about customers that are helping to design products and services (co-designing). It is also a tool to really engage these customers throughout product design. An example is the current initiative of the NS to co-create new railway stations together with an online community(www.mijnproefstation.nl, see image 6.1).

Everybody can subscribe to this community and collaborate in building a new railway station of the NS. This way the NS taps into a community of loyal, engaged users, who suggest new and vote on proposed features. This way the project team will stay up-to-date on new ideas and comments through RSS feeds. Discussion with and amongst users provide rich insights and helps the team to prioritise new features. The co-creators are consulted throughout the process, engage the co-creators as they will feel appreciated and heard by the company, maybe even part of the team or company itself. Word-to-mouth is stimulated as the co-creators will function as ambassadors before and ones the stations are build.
Image 6.1: Online community set-up by NS to stimulate co-creation within the organisation. Project teams and co-creators (end-users) work together in creating the new railway station of the future.

The generative research methods (Sanders, 2000; Sleeswijk Visser, Stappers, van der Lugt and Sanders, 2005) aim to involve all stakeholders in the early value creating stage of the design development process. The basic principle behind generative research techniques is to let people make things and then tell a story about what they have made. Generative tools are provided to support the people to do so. These generative tools are similar to the cultural probes (Gaver et al., 1999; Mattelmaki, 2006a). Examples of the materials used in these probes are disposable cameras with instructions for use, diaries, open-ended postcards and cognitive mapping tasks etc. The difference between generative research and cultural probing method is that with the cultural probing method the contact with users stops after receiving these probes. During generative research the ‘probes’ serve to prepare people for the upcoming creative session. During the creative sessions similar tools will be used as a basis for the end-users to talking about their experiences (Stappers and Sanders, 2003). These stories contain rich experience knowledge. According to Sanders (2001) generative techniques can be applied to obtain the tacit and latent knowledge, as also shown in the figure 6.2.

Figure 6.2: Different levels of experience knowledge of people can be obtained by different types of research through different actions. (Sleeswijk Visser, Stappers, , Lugt, van der, Sanders, (2005). The tacit and latent knowledge is obtained by generative methods (from below the surface as represented by Bennink (2007)).

Contextmapping is a method which combines several generative techniques (Sleeswijk Visser et al., 2005). It is created at the Delft University of Technology (“TU Delft”) on the Faculty of Design Engineering. The method aims to obtain rich experience knowledge and equip project teams with this knowledge from inspiration down to conceptualisation. The overarching goal of contextmapping is to enhance the empathy of project teams towards the end-user, stimulate their inspiration for conceptualisation and increase their engagement towards the end-user and project.
The contextmapping method is a good base to create a research method to obtain and leverage rich experience knowledge in the product development process of Philips. Main reasons:

1) Next to an approach to obtain the rich experience knowledge, this method also offers an approach to leverage the knowledge into the early value creating stages of a product development process.
2) Several employees within ARC of Philips are familiar with Contextmapping method.
3) Several researches and case studies by former graduates of the TUDelft have shown that contextmapping is useful for Philips to obtain and leverage deeper insights on the end-user experience.

After the implementation of contextmapping, it would be interesting to extend this with the method of co-creation. The main reason for this is because it supports extensive involvement of the end-users throughout the entire product development process, offers direct added value to these end-users and creates loyal customers. Ramaswamy writes: “The key learning, from thousands of executives from all over the world, that have begun to explore value co-creation was this: Every organisation needs a systematic approach to engage not only its customers, but also employees, partners and other stakeholders at large, to both unlock value co-creation opportunities and execute them. Sanders (2009) confirms that co-creation is an alternative way of seeing and being in the world. Existing and thriving in the emerging co-creation landscape will require the creation and application of new tools, methods and methodologies for collecting, innovating, making, telling and sharing. A total mindshift of an organisation. Therefore this method currently does not seem feasible for this graduation research, as it requires a cultural change within the organisation. The application of contextmapping within the Philips organisation will contribute to this shift in mindset.

6.1// CONTEXTMAPPING

The overarching goal of contextmapping is to inform and inspire product development team with rich experience knowledge of the end-users. To do so the method guides end-users in small steps to deeper levels of knowledge about their experience around product use. The method uses generative tools that enables the users to express this knowledge in expressive artefact. The name 'generative toolkits' refers to the creation of a shared design language that designers/researchers and the stakeholders use to communicate visually and directly with each other. Examples of materials in the generative toolkits are disposable cameras, diaries, activity log-books, open-ended postcards collages and cognitive mapping tasks supported by a collection of words and images etc. The design language is generative in the sense that with it, people can express an infinite number of ideas (e.g., dreams, insights, opportunities, etc.) and consequentially are asked to explain the expressive artefacts. These explanation consist of rich experience data. The method propose approaches to analyse this data and share the knowledge obtained with project teams. This team is suppose to use this knowledge for the creation of concepts that fit the needs and expectations of the end-users.

This chapter describes the different steps that the process of contextmapping consists of. These steps (as proposed by Sleeswijk Visser, 2005) are displayed in figure 6.3.

Figure 6.3: Six steps of the contextmapping method (Sleeswijk Visser et al., 2005)

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1) For extensive information about such a researches see the reference in appendix 13.1. to Christa van Gessels, master thesis on Consumer Driven INnovation for Radical Innovation at Philips Research.
6.1.A//PREPARATION

This first stage of contextmapping describes the necessity of adequate preparation in order to obtain rich knowledge. A good preparation consists of a clearly defined goal of the research and targetgroup and the constitution of a feasible planning.

Goal
Because this type of research (about the experience of people) greatly depends on asking the right questions and creating the right assignments to subtract useful information it is important to clearly define the goal of the research. This way a session can be steered into the right direction. Sleeswijk Visser (2009) indicated that in general, people associate research results with validation of information, or with evaluating product concepts. The results from user experience studies are quantitative and the aim is not to present validated information, but to inform and inspire the design process. It is therefore important to provide the stakeholders with a clear vision on the goal and the function of the method, right from the start and repeated at several stages (Sleeswijk, 2009; van der Lugt, Bakkeren, De Lille, 2009).

Targetgroup
When the goal is defined the target group for the session can be determined. The participants for the group sessions need to be recruited. Depending on the scope and formality of the study, the total number of participants can vary between 6-60 participants. Four to six participants per session works best (it is large enough to create a group feeling and have group discussions and small enough to pay attention to every individual). Two or more sessions are a safe choice when a small study is done. Doing one single session is dangerous, because if things go wrong, you have nothing.

Planning
Because this method consists of several stages which overlap and/or require (preparation) time a realistic planning should be made, describing key events and deliverables.

6.1.B//SENSITISING

The sensitising stage is established to prepare the end-users for the generative session in which they will participate. The participants receive sensitising packages in preparation of the session. These packages are similar to the cultural probes (Gaver et al., 1999; Mattelmaki, 2006a). The difference with the cultural probing method the contact with users stops after receiving these probes. For generative methods such as contextmapping the 'probes' will be succeeded by a session. The packages contain expressive tasks. These tasks are created and developed based on a solid understanding of the context of use that has been ethnographically informed. The tasks aim to attract the curiosity and stimulate the interest of the participants and encourage them to think about and play with the topic. This will enhance the quality and quantity of the contribution by the participants during the generative sessions (Sanders and William, 2001).

The sensitising packages usually consist of a collection of evocative tasks composed in a work booklet about a certain aspect of life daily. Examples of these tasks are the development of for activity- or emotional logsbooks, diaries, collage-making and cognitive mapping. However a package can have many appearances. Such as disposable camera combined with day to day instructions, open-ended postcards to write, a dollhouse to fill etc (Image 6.4 on the next page). The materials provided to execute these tasks are emoticon stickers, images- and words collections, paper, three dimensional Velcro-modelling sets etc.

Incubation
Incubation time is necessary in order to prepare the participants for the creative session. This idea is based on the description of the creative process by Graham Wallas, an American reformer of the early 20th century, in his book “The art of thought” (Wallas, 1926). He described the creative process in four stages:
1) Preparation
2) Incubation
3) Illumination
4) Verification

The theory of Wallas (1926) describes that, to stimulate the creative process, the "creator"
should prepare and allow these preparations to incubate. The participants should therefore receive the sensitizing materials about a week before the scheduled session. This requires distribution of these packages amongst the participants, at least a week before the actual session takes place.

Image 6.4: An example of a sensitising package for end-users to express themselves. In this case the package provided the users with generative tools to express themselves such the camera and and task card to fill in.

Creation
Research implies that project teams should create the package collaboratively. According to Gaver et al. (2004) the personal interpretation of each member in a team is the result of a probe study. Dealing with user experience in the probe method is not so much about representing data, but the process itself the team members go through.

Appearance
To stimulate action by the participants, it is important that the packages have an attractive appearance, as this evokes interest and enhance acceptance. The design should be playful yet professional (Sleeswijk Visser, 2005). Playful because it must be fun for the participants to work on the package and because it invites participants to take initiative, bring in their own perspective and express freely (Sanders, 2002). On the other hand it should also be professional because the participants need to feel that they are being taken seriously.

The most common form of the sensitising packages is the paper printed type of package. These packages consist of several tasks and questions which the participants have to execute or answer. They can do this by writing and/or drawing, with images and words from other media and with the attached set of images and words. These types of packages often come as an A5 sized booklet or an A6 foldable map.

Content
The topic of a sensitising packages is usually more broad then the topic of the sessions, so that participants do not come to the session with a finished story (Sleeswijk Visser, 2005). The tasks have an expressive nature, aiming to trigger creativity for the subsequent session stage. The tasks should be accompanied by an introduction note, instructions, an area to add extra remarks and a “thank you” note accompanied by a reminder of the date and location of the session. Also images and words should be attached to the packages which should support the execution of the tasks.

There have also been researches investigating the opportunities of sensitising digitally and even through Internet (Kaptein et al., 2008) in oppose to the physical, analogue type of sensitising. The digital types of sensitising or inspiring both have advantages as well as disadvantages. Kaptein stated that if the sensitising is done online the expressive nature can be maintained when enabling participants to freely add text, drawings, and images to assignments. In the evaluation of the online workbook, that Kaptein developed, the participants
indicated to enjoy using the application. Kaptein states that the samples illustrated that the level of expressiveness of the paper and online versions is similar in terms of usage of visuals and texts. In the paper version people seemed to be unhappy with the time demands of the sensitizing package while this was not the case for the online version. Other advantages of digital sensitisation are that it is provides easy means of storage and distribution of results (Kaptein et al., 2008). The Internet offers the advantages of asynchronous research (Sharf, 1999), reaching remote or rare group of participants (Hamman, 1996), economical benefits (Steward, 1998) and likelihood of discussing more sensitive subjects (Clarke, 2000). This research also indicated several disadvantages, namely the absence of personal contact and its lack of non-verbal cues. Internet also has ethical constrains as it is hard to assure privacy, anonymity and confidentiality. Other researches impose extended disadvantages such as that digital tools don’t support the conceptual phase of design because they expect the users to know what they want in advance (Stappers and Hennessey, 1999) and it does not support the expressive gestures and bodily interaction that is such an important aspect of creativity (Hummels, 2000).

6.1.C//SESSION

The session stage aims to obtain the rich experience knowledge about the end-users. In group sessions the users are asked to make creative artefacts. By making the artefacts people are able to access and express their experiences more easily. The creative process makes them aware of how they feel about their experiences and how they perceive a product use and its context. After making the collages, the participants explain what they have made. The explanations contain rich experience knowledge.

The sessions usually consist of a focus group with four to six participants, in which a facilitator will ask the participants to perform several expressive tasks (image 6.5). The sessions usually take about two to three hours during which the participants have to execute three to four tasks. The resulting artefacts may be in the form of drawings, collages, maps, models, stories, storyboards, plans, and expressed memories. After each task they are asked to tell each other what they have made and why.

Image 6.5: the participants (highschool girls) in this session had to execute several expressive tasks about shamefull experiences in class. They were asked to create a poster a shamefull experience they ones encountered in class. They were then asked to present the poster to one another. Their stories (and they way they reacted on one anothers stories itself) provided rich experience insights. The following assignment they were asked to show their feelings before during and after this shamefull expereince.

Techniques

Usually a range of different techniques is used together in one session (Sanders, 2000). A session typically starts with a warming-up or icebreaker to make the participants feel more at ease and to warm them up for the continuance of the session. A warming-up can be anything that forces participants to do something unusual and out of the ordinary, preferably with a
creative touch to it (Tassoul, 2009). Then often association assignments are executed in the beginning of the session to support the participants to open up their minds, stimulating them to make associations in different ways. For example chain- or flower associations are frequently applied. This is usually followed several individual exercises during which the participant execute evocative tasks aiming to reflect on the context of product use. The tasks proposed usually comprise of collage making and cognitive mapping supported by images- and word collections. Three dimensional Velcro-modelling can also be used when for example the context might comprise special aspects. Then they are asked to explain their creation to the rest of the group and discuss it with the other participants. It is an accessible technique for eliciting emotional responses and is often used as a start. This technique is especially suitable for calling up emotions and memories. The materials for collage making are A3 sheets and sets of images and words. The components should be ambiguous so they can be interpreted and used in a variety of ways. The range of meanings of the components can be extended through the use of coloured pens, markers, glue and scissors. Other techniques are flowchart mapping and cognitive mapping are good for eliciting intuitive relations of patterns or processes. Modelling enables participants to express functional needs and is often used as a last summarizing exercise. Only in the last exercise, and not before, it is advisable to ask the participants to express their needs and dreams for the future (Sleeswijk Visser, 2007).

Facilitator
The role of the facilitator is to guide the participants through the expressive tasks by encouraging creativity, stimulating them to speak their mind and foster full participation. Therefore the facilitator should aim to create a relaxing and informal environment is very important. The person that facilitates the session should not be the one who also does the analysis (Sleeswijk Visser, 2005). It requires full attention to lead the group through the session, asking the right questions at the right moments and taking care of group dynamics. To ensure such a experienced and professional approach it is preferable that the session is facilitated by a professional facilitator. If that is not possible it is highly recommendable that a pilot test is executed to see if instructions and composed materials are working and how long the session really takes. The plan and tools should be revised accordingly.

Researchers
The people who will analyse the data must be able to concentrate, listen and observe what the participants say and do, while making interpretations. Therefore they are often seated separately from the session itself. This will also contribute to the creation of right environment as it could be intimidating if the room would be filled with researches when participating in the session. The session should also be audio- and video recorded so there is some flexibility in who will do the analysis and it can be reviewed for extensive analysis.

6.1.D//ANALYSING

The aim of this stage is to analyse the date and select rich and relevant knowledge (about the experience of end-users) for the continuance of the product development process. This knowledge is not meant to support or reject hypothesis but to find blind spots in the context of product use, to inspire and create engagement and empathy amongst members of project teams (Sleeswijk Visser et al., 2007). Usually transcripts are made of the recorded sessions, to analyse the data of the session. These transcripts are then studied to abstract interesting quotes. These quotes are then clustered to identify structures in associated quotes. Collages and transcripts of the presentations can also be analysed using elementary statistical methods, such as counting the co-occurrence of images and words. More sophisticated analysis, such as using multidimensional scaling to reveal patters in chosen words and images, can also be performed.

Data
Apart from the records of the session, the data of a contextmapping method also consists of the artefacts created by the participants before and during the sessions. According to Graver at al., the returned booklets are not designed to be extensively analysed or summarised. This raw data is incomplete, ambiguous, personal and biased, providing inspiration not information. Therefore rather their authenticity and personal trace of people’s everyday reality are an open brief for design. Other practitioners advocate the value of creating representation of (a selection of) the returned materials plus interpretations of the team to support team communication. Also Stappers and Sanders (2003) indicated that the presentations carry much information that may not be directly apparent from the collages. According to Mattelmaki (2005) returned probe materials need to be shared with other representatives of the company, who might not be directly engaged with the study,
to communicate throughout the process of design. Mattelmaki (2005) reports, for example, about representing the interpreted data into narrative and user portraits in multidisciplinary workshops (Mattelmaki, 2005). Photographs and short quotes frame the probe results should be used to explain the data to others. They trigger the imagination and link it to the everyday reality and authentic situation’ (Mattelmaki, 2005).

Elaborateness
Thorough analysis is necessary to discover these hidden insights. If analysis is executed too hastily, it will easily lead to superficial and obvious results. However in practice time is often too short to execute elaborate analyse. Therefore often shortcuts are made. For example, transcribing is skipped. In those cases the noting of relevant statements of the participants is started during the session or while the videotape is running (van der Lugt, Bakkeren and De Lille, 2009). According to the research of Sleeswijk Visser (2007) it is necessary to at least review the recording of the session once and create an overview by checking which themes the participants mention most often.

Incubation
The research by van der Lugt, Bakkeren and De Lille (2009) indicated that deeper insights are only concealed and perceived after a certain time of incubation.

6.1.E//SHARING
This stage aims at supporting the communication of the obtained knowledge from the researchers to the product development team. This stage is often necessary because, although it is widely addressed in literature that close contact with the users supports the understanding of them, it is unfortunately not common practice that all members of a project team have direct contact with users. Sleeswijk Visser (2007) stated that in practice, designers (and other project team members) often are little involved in the research activities. Therefore the knowledge obtained during the session should be shared with these stakeholders. Just leaving data and hanging the created artefacts on the wall of a project teams workplace is also a loss of information, because the stories of the participants carry vast amounts of knowledge about their experiences and the context (Sleeswijk Visser, 2007).

Tools
A variety of tools, from written reports to presentations, workshop and visual representations, is currently used in design practice to communicate information. However direct contact with the end-users cannot be matched by any of these forms of communication. A large share of these tools provides rather abstract outcomes without sharing the everyday details that could inform and inspire the project teams (Porter and Porter, 1999).

Therefore Sleeswijk Visser (2009) extensively investigated the way to communicate experience information (by the researchers, who perform the user research, those that have to deploy the results in creating product ideas) in such a way that designers2 will use this information throughout their product development process. From this research five guidelines3 derived for successful communication of the rich experience knowledge. These five tips and tricks of Sleeswijk Visser are:

1) Making a good communication plan
This guideline comprises the preparation and focus of communication. Having insights into the needs of team members and what their preferences are, helps to support an effective use. When developing a tool it should fit the current channels of the communication in the company (Sleeswijk Visser, 2009).
Setting up a strategy for communication helps to decide what means to use and what mechanisms to address and what aims to strive for. She states that the form in which the information is presented has much impact on the degree of acceptance and use.
The challenge is to develop a communication tool that encompasses the best elements of the two extremes; rich ‘raw user data’ and manageable interpretations. The aim is to find ways of presenting both information and inspiration, to give freedom of interpretation and provide direction to stimulate ideation and argumentation in the project teams (Sleeswijk Visser, Stappers & van der Lugt, 2007).
Playful yet well cared for aesthetics seem to invite designers to naturally add their own notes, sketches and ideas (Sleeswijk Visser, 2009).

Other research indicated that when time is short, reducing the amount of formal reporting can

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2) In her research Sleeswijk Visser refers to designers as the person who receive the information and has to deploy the results in the creation of new products. Besides designers, other people such as marketeers, managers, strategists and engineers, can also be in this role. In my research I will refer to them as members of the project team.

3) In my research I have assigned another meaning to the word guidelines. Therefore in the continuance of this report, I will refer to the guidelines of Froukje Sleeswijk Visser as "tips and tricks".
save time. Informal communication, such as workshops and persona posters, proved to be a good alternative (van der Lugt, Bakkeren and De Lille, 2009).

2) Representing real people
Explicit references to real, individual people support the members of a project team to understand the experience. Representations of the actual users trigger the mind’s powerful ability to extrapolate from partial knowledge of people and to create coherent wholes and project them into new settings and situations.

3) Sensitising members of the project team
Understanding rich experience information needs immersion time, creating space for immersion, incubation and connecting with the information. In a way for communicating, the same process as sensitising the participants can be applied to support the recipients’ thinking process and support their awareness about their own experience, the users’ experience or the topic of investigation, days to weeks before the presentation moment.

4) Making team members addressing their own experience
When members of a project team are stimulated to become more aware of their own experiences, they are better able to connect and relate to the users’ experiences.

5) Making the communication participatory
Rich experience information is individual, fragmented, ephemeral and multi-layered information. The meaning of the knowledge is best understood when the receiver of the information is not a passive recipient but is actively involved in the sense making of the information. Interactivity facilitates browsing, choosing, discussing the information in such a way that they can use it the way they prefer themselves. As not all designers are skilful researchers, nor do they have enough time to analyse the data from scratch (van Vegel, 2005; Bruseberg and McDonagh-Philip, 2002) a tool should be provided to support and guide the sense-making of information. Tools that allow team members to be participative in interpreting the message are most fruitful for a deep understanding of the users (Sleeswijk Visser et al, 2007).

6.1.F//CONCEPTUALISING

The goal of the last stage of the contextmapping session is intended to support the creation of new concepts that fit the end-users. This requires creativity. The rich experience information obtained during the session should serve as inspiration for these new concepts.

Individual creativity
Creating ideas individually can enhance the effectiveness of the creative process. It takes time for people to fully process and develop new ideas; individually people have the opportunity to state what first pop up their minds (Diehl & Stroebe, 1987). Individual creativity develops from an interaction of personal and situational factors (Ambile, 1996). Personal skills consist of domain- and creativity relevant skills and task motivation. It can be disrupted by psychological factors; shifting away from the task, extrinsic rewards, evaluation apprehension and getting stuck in ones paradigm.

Group creativity
Problem solving or idea generation often needs to be done in teams as they require a multidisciplinary approach. Research on the effectiveness of idea generation in teams often shows that it is not superior to individuals working alone (Mullen, Johnson, & Salas, 1991). Groups spend too much time evaluating and criticizing ideas and not enough time generating ideas. Group interactions limit the ability of individuals to verbalize ideas. When trained facilitators run these brainstorming sessions, groups generate more creative ideas (Offner, Winter, & Kramer, 1996). Therefore teams should also use facilitators to structure the group interaction and apply the basic rules of brainstorming (Osborn, 1975) to avoid disruptive communications and premature evaluations:

a) Criticism is strictly forbidden
b) Free thinking and wild notions are encouraged
c) Numerous ideas are sought
d) combining and building on the ideas of others is good.

Research on virtual brainstorming suggests that computer-based forms of brainstorming are more effective than traditional brainstorming in improving group creativity (Dennis & Valacich, 1993). Using communication technology minimizes problems of production blocking and evaluation apprehension. In virtual brainstorming, people are able to review others’ ideas and develop and modify their own ideas at their leisure.
Participation Stakeholders
Sleeswijk Visser (2009) emphasises the importance of the process of sense-making of information in relation to creating ideas. Structuring the information, identifying patterns and creating product ideas are all creative activities, in which new combinations are tried out. Involving stakeholders in interpretation activities allows them to make intuitive interpretations themselves and create structures which are meaningful to them for idea generation. An interactive tool and the feeling of freedom and responsibility that this brings is an important condition for inspiring the stakeholders (Sleeswijk Visser, Stappers and van der Lugt, 2007). Next to that, by showing ambiguity and surprise in incomplete and various sets of data, designers are challenged to 'fill in' and make associations, which trigger their creative process.

Incubation
An incubation period is important for both individual and group creativity; when again looking at the description of the creative process by Wallas (1926), the following four stages appear to be key for this process;

1) Preparation
2) Incubation
3) Illumination
4) Verification

This suggests that, similar to the sensitizing of the participants before a generative session a certain period of time is needed to let the information incubate before the project team members attend a insight generation workshop.

Convergence
Groups should mainly use organisational techniques to reduce the number of alternatives (image 6.6) to be evaluated after the idea-generation stage (Levi, 2007). One approach to this is multiple voting (Scholtes, 1994). A team reviews the alternatives generated by the brainstorming session and combines items that seem similar. Each team member then selects two to five alternatives that he or she would like to support. When all team members have completed their selections, the votes are tallied and items that receive zero to one vote are removed. The alternatives that have been selected are discussed, and if necessary the group considers new ways of combining or synthesizing alternatives.

Image 6.6: During ideation workshops, creativity is necessary to create new, and innovative ideas and concepts. During the conceptualisation stage of a contextmapping study the rich experience knowledge should be used as a source of inspiration. This aims at creating user centered ideas and concepts.
Requirements

As discussed in the introduction, the contextmapping method will be adjusted to ensure a good fit with the Philips organisation. This chapter describes the requirements for this adjusted method, taking the following into consideration:

- The current early value creation stage of the product development process within Philips and all departments involved\(^1\).
- The overarching goal and characteristics of the contextmapping method and relating researches\(^2\).

This has resulted in the following requirements:

1\) The adjusted contextmapping method should obtain a comparable richness in experience knowledge as the conventional contextmapping method.
   a. The elaborateness of the collecting stages (to obtain knowledge) should be maintained.

2\) The adjusted contextmapping method should support engagement, empathy and inspiration amongst the team members towards the end-users in order to leverage the knowledge effectively into the product development process.
   a. The members of the project teams should be actively involved in the process of sense-making of the end-user knowledge.
   b. The members of the project team should be stimulated to address their own experience towards the topic.
   c. The project team should be allowed time for incubation in between immersion and ideation.
   d. It should be possible to store the obtained and analysed knowledge.
   e. The project team should be supported to share and align the obtained experience knowledge of the end-user.

3\) The adjusted method should be as time- and cost efficient as possible, to ensure a good fit with the Early Value Creation process and enhance the acceptance within the Philips organisation.
   a. If possible the steps of the contextmapping method should merge with the existing stages of current processes of Philips.
   b. The involvement by the project team members should not exceed 20 hours. (This is currently the time spent during the early value creation stage.)
   c. The costs of this research should not exceed the current budget of €2000 per project (excluding internal labour cost). This budget is currently accepted within the organisation.

4\) A clear communicate plan should be developed, to ensure a proper implementation of the method in the Philips organisation.
   a. The method should be clearly introduced, for example by developing a clear figure of the framework to show all the steps of the method and a condensed explanation
   b. There should be one department responsible for the execution of the method. This department should currently be involved in the early value creation stage.
   c. The method should be supported by the necessary materials (e.g., CookBook containing guidelines, standard layouts).
   d. The adjusted method should fit the current approach within Philips to obtain, analyse and share knowledge and create new product ideas.

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\(^1\) see chapter 5 for more information about Philips, its processes and departments involved
\(^2\) see chapter 6 for more information about contextmapping and related researches
8// ADJUSTED CONTEXTMAPPING METHOD

This chapter will outline the adjusted contextmapping method. This adjusted method aims to sustain the required qualities described in the chapter 7 “Requirements”. To meet these requirements several decisions\footnote{These decisions are attached in appendix\ref{appendix:decisions}, called “Decisions”} were made concerning the adjustments to the contextmapping method and the process of Philips.

This chapter will explain the adjusted method in a concise manner to enhance the readability of this report. Per step of the method the main goal(s) of this step is (are) described. Next to that, the necessary actions in order to accomplish a step are listed. An explanation of the purpose of these actions is added.

More information about these actions and a more elaborate substantiation of their purpose can be found in chapter 6.1. This chapter describes the conventional method of contextmapping in more detail, extended with knowledge distilled from other researches of related topics.

A CookBook has been developed for Philips that describes these actions and their purpose more elaborately\footnote{This CookBook is attached to this final report as a seperate document (to support usage of this booklet during execution of the method)}. The main goal of this booklet is to support a proper execution of the method when implementing it within the Philips organisation.

8.1// FRAMEWORK

Part of this graduation assignment is to capture the adjusted contextmapping method in a framework. The goal of the framework is to ensure that all stakeholders, involved in the execution of the method, understand the overall structure of the method and the goal of the separate stages. The framework outlines the adjusted method, describing the different stages it consists of. Considering all requirements and consequential decisions this framework consists of the following stages (displayed in figure 8.1);

1) The preparation step aims to do all preparations for the contextmapping study.
2) The sensitising step aims to prepare the participants for the session through the execution of evocative step preceding the session.
3) The session step serve to obtain the rich experience knowledge from end-users.
4) The analysis step supports the members of the project team in analysing the data. The sharing stage of the conventional contextmapping method is therefore not included in this framework, because the extensive involvement of these members will make the sharing of knowledge with this project team redundant. This is the main difference in comparison with the framework of the original contextmapping method developed by Sleeswijk Visser (2005).
5) The conceptualisation step is conducted after analysing the data individually the members of the project team. To do so it is important for the different project team members to discuss their individual findings within the team in order to align. The alignment will be incorporated in the conceptualisation stage during a face-to-face meeting.

This contextmapping study is executed at the start of the early value creating stage of an Advanced Development (“AD”) project. A contextmapping study can also serve as support for other purposes, such as redefining the mission of an innovation lead or as source of inspiration for the aesthetic of a totally new line of products by design. However, this report focus the
use of contextmapping to support the early value creation stage of product development projects in conformity with the aim of this graduation assignment. A contextmapping study is especially useful to support AD-projects for which functionalities have not been determined or in case functionalities have been determined but lack sufficient knowledge of the end-users experience.

To support the early value creating stages of Philips projects, the knowledge obtained during a contextmapping study should provide input for the Insight Generation Workshop. This is at present the step within the process of Philips to create “value” (or in other words concepts for new products). The aim of this workshop is equal to the conceptualisation step of the adjusted contextmapping method. Therefore these steps are coincided. This results in the following fit of the adjusted method into the current process of Philips, displayed in figure 8.2.

Image 8.2: The way in which the adjusted contextmapping method will fit into the current Early Value Creation Phase of Philips.

8.1.A/ PREPARATION

The aim of the preparation stage is to clearly define the goal and targetgroup and create a feasible planning and approach of the different stakeholders of a study. The ARC will execute this step in collaboration with the Consumer Marketing Manager (“CMM”) and a person of the Consumer and Market Intelligence (“CMI”) department.

APPROACH OF STAKEHOLDERS

It is important that the ARC involves the different stakeholders of the contextmapping research. It is important that this is done during this first stage of the process because it will enhance the engagement of these people throughout the continuance of the research study. The following chapter describes the stakeholders and the aim of their involvement. The CookBook supports the approach of these stakeholders extensively.

Project Team

When ARC defines the necessity of a contextmapping study they first approach the Consumer Marketing Manager (“CMM”) of the team. The CMM is the superintendent within Philips responsible for the general product development process including the early value creating stage. It is important that the CMM is approached because this person determines the budgeting for research and development throughout the process. Therefore the CMM should be informed on the added value of this research and convinced of the necessity of this research for their project. Once agreed that a study will be executed, the Consumer and Market Intelligence (“CMI”) department should be involved. The role of CMI is to support CMM with sufficient knowledge about the relevant market, target groups and competition. Although these researches are mainly done through large quantitative research companies, it is relevant that 3) an overview of the involvement by the stakeholders throughout a study is attached in appendix 13.11.
CMI is involved as they are experienced in defining the goal of a research and outsourcing. It is important to do this collectively because CMM has a good overview of the knowledge already obtained for a project and the gaps that need to be filled. Following the determination of the goal these parties determine the targetgroup. This should also clarify the scope of the study and the necessity to approach an external party. Then, next to CMM and CMI also the other members of the project team are informed of the research at this stage. This will support their engagement in the continuance of the research process. To do so, they should be provided with a clear vision of the function of the method and the goal of the study and the purpose of their involvement during the data analysis. The Cookbook provides suggestions to do so.

Support
Together ARC, CMI and CMM investigate the internal capacity for executing a contextmapping study. A contextmapping study executed internally will cost approximately €1000 euro. This is excluding internal labour cost of the members of the ARC and CMI arranging the research. These expenses relate to three sessions executed with four to six participants. Each participant will receive €35 for their participation. So together with the travelling expenses, the costs for materials such as magazines, pencils, markers, food, drinks and some contingencies the internal execution of such a study will not exceed €1000. Parameters that should however be considered to determine the capacity for internal execution are:

- Number of people and amount of time available to prepare and execute research
- Level of experience with generative research of these people (involved in prep. and ex.)
- Language and cultural differences (when target group from abroad)
- Facilities abroad (when executed abroad)

If this is not sufficient it is necessary to outsource the research to a specialised company in generative and co-creating research. Outsourcing the research will cost approximately €4500. This is based on quantitative researches outsourced by Philips (which differs a lot but CMI estimated/rates this at €5000 in Western European countries) and the costs of a Dutch generative co-creation company (two workshops and a session for €3500-€4500, [www.muzus.nl](http://www.muzus.nl)). The CMI and ARC can contact an agency collectively for a quotation given the goal, scope and planning of the project. When both parties have come to an agreement on the quotation, the ARC can elaborate on the goal and target group of the research and if not yet done, compose a detailed planning in collaboration with this party.

Participants
The recruitment of participants for the generative session is also done during this step of the study. Normally 4 to 6 end-users are invited to participate per session (this is large enough to create a group feeling and have group discussions and small enough to pay attention to every individual).In total at least three sessions are executed of a contextmapping study (one pilot and two “real” sessions). Depending on the type of party supporting the research, the participants are abstracted from the internal Philips database or from a database of an external company. Either way, ARC should make sure that these participants comply with the defined targetgroup. Next to that they should also be available at the indicated time, meaning during the session itself and an hour during the preceding week.

GOAL AND TARGETGROUP
A clearly defined goal and targetgroup are important because contextmapping greatly depends on asking the right questions and creating the right assignments to subtract useful information from the right participants. The project brief can serve as input for this. In the current process of Philips, both the goal of a project and the goal of planned researches have already been described in this project brief. In case the project brief or one of the descriptions has not been provided by CMM yet, this should be defined by the ARC, in collaboration with CMM and CMI.

An example of a goal for a contextmapping study is: “map the context of use for quick cleaning and create a product that will diminish frustrations” or “develop a concept that will enhance the positive experience of people around bread-making”.

For a contextmapping study the targetgroup depends on the goal of the research. In most cases the targetgroup of a contextmapping study corresponds with the target group of (future) product. Within Philips this targetgroup is normally set per Innovation Team. (e.g., within Floorcare, the market segment called Happy Homers is targeted). However considering the goal of a study, it might be interesting to choose for a specific group of people from within or outside of this targetgroup. For example experts, such as chef cooks for the Kitchen Appliances, of cleaning-mates for Floorcare or bartenders and their guests for Beverages.

PLANNING
A feasible planning for the research is important because time is an important aspect of contextmapping research (for incubation of information and inspiration). Therefore the ARC, CMM and CMI determine a planning in advance of the execution. The Cookbook provides a general planning listing all activities and an estimate the time needed.
8.1.B// SENSITISING

The aim of the sensitising stage is to prepare the participants for the generative session. This preparation is important because it will enhance the quality and quantity of their contributions during this session (Sanders and William, 2001). To sensitle the participants they have to execute expressive and evocative tasks preceding this session. These tasks are comprised in so-called sensitising packages. These sensitising packages can be composed of many different generative tools (such as disposable cameras with instructions for use, diaries, daily activity logs, open-ended postcards to write, images- and word collections for collaging and cognitive mapping etc).

For the implementation of contextmapping within Philips, the ARC will be responsible for the creation of these sensitising packages. The CookBook provides a standard layout and guidelines for the creation of a workbook to enable this (image XX, left). This aim of a layout is to support the ARC in a fast yet proper creation of a sensitising package. Suggestions for other types of generative tools are proposed in the CookBook.

SENSITISING BOOKLET

A workbooklet consists of several expressive and evocative tasks for the participants to execute. To determine the right tasks, the main goal of the research should be considered extensively. The topic of the tasks in the sensitising packages should be more broad then the tasks proposed during the session. This is important to prevent that the participants come to the session with a finished story. So for example when doing a session for shavers the topic of the booklet could be body care.

The aim of the tasks is to guide the participants in reflecting on their experiences. The booklet starts with the somewhat easier tasks, the more difficult tasks are proposed later on. This will prevent discouragement amongst the participants and enable them to ease into the topic. The tasks can be accomplished by the participants by means of writing, drawing and the creation of collages or cognitive mappings (image XX). For these tasks a selection of (ambiguous) images and words is attached to the booklets. This collection should enable the participants to express themselves when executing the tasks.

The participants are supposed to execute one task each day during the week preceding the session (image 8.3). This enables the participants to execute one task each day, spread over a week, which is necessary to allow them to reflect on knowledge and let this incubate. The participants should receive the sensitising materials a week before the scheduled session. Each task takes about 5 to 10 minutes to accomplish.

Image 8.3: Examples of booklets filled out by participants
DEVELOPMENT BY ARC

The layout of the sensitising booklet is supposed to be filled by the ARC with content (image 8.4, right). The layout is available in PowerPoint and InDesign (image 8.4, left). Next to the workbook layout, a layout for the development of a sensitising map is provided on the CookBook CD (image 8.4, right). The development of a booklet is preferred over the map because the booklet enhances the engagement of the participants more. However the development of the map requires less time. Therefore the layout for the creation of a map has also been provided and can be applied when time is rare.

Image 8.4: (left) layout for the creation of the sensitising workbooks the content (questions, tasks and supporting images) is added later by Philips employees they are supported in this (right) with images by the CookBook CD. This also provides a layout for the sensitising map.

Ones the type of layout has been chosen by the ARC they fill this with content. This content comprises the six tasks with several supporting visuals (not too many or too prominent) and a collection of images and words. The tasks are accompanied by an introduction, clear instructions, an area to add extra remarks and a “thank you” note accompanied by a reminder of the date and location of the session. The content (i.e. tasks, instructions and visual materials) that the sensitising packages consist of, should be pilot tested before being send out the participants and be adjusted accordingly. This is important because the way in which these items are proposed or phrased influence the answers. Ones the booklets have been developed they should be send out to the participants one week in advance of the session. The participants are asked to bring the booklets to the session.

The Cookbook will support the development of this sensitising booklet extensively with a guideline for the development, tips and tricks and an example of a sensitising booklet.

8.1.C// SESSION

The aim of the session stage is to stimulate participants to access and express their experience knowledge concerning the execution of a certain ritual or the handling of a certain type of product. This is done during a creative session with four to six participants. The participants are first asked to make expressive artefacts, such as collages or three dimensional mock-ups. The creative process will stimulate them to access deeper levels of knowledge and make them more aware about their experiences. The participants then are asked to explain the artefacts that they have made and discuss their experiences together. Rich experience knowledge is obtainable from these discussions and the artefacts made.

SET-UP

A thorough preparation before the sessions will lead to deeper levels of experience knowledge from end-users. There is no standard set-up for such a session as it depends on the goal of the study. In general a session consists of three to four expressive tasks. These tasks are preceded by an introduction and warming-up assignment. The tasks should guide the participants from more superficial levels of knowledge slowly to their deeper levels of experience knowledge (see image 8.5, left). Only the final task will address their needs and dreams for the future. The ARC is responsible for setting up this session for Philips. They can ask the CMI for their support. Collectively they first review the goal of the study in order to set up a proper session. With this goal in mind they determine the different assignments for the participants and facilities (for example the location where the session should be executed). Ones the assignments are determined a pilot test is executed to evaluate if the set-up of the session leads to the intended goal. The set-up is subsequently adjusted accordingly. For the eventual study at least two,
but preferably three, sessions are executed per research. This is important because it could happen that a session does not go as auspicious as expected (when for example the group dynamics is off and cannot be balanced). In case this happens the other sessions can serve as back-up or the setup can be improved for continuing sessions.

The CookBook supports the execution of this stage by providing a list of the procedures that need to be carried out in preparation of this session, to determine the set-up of a session and arrange all facilities (see image 8.5, right). Next to that an example of the set-up for a session is provided in this CookBook.

Image 8.5: Examples of artefacts made during the session (left) and the proposed setup for a session (right).

FACILITATION
The session is facilitated by one person. The aim of the facilitator is to guide the participants in the execution of the tasks, stimulate an open and creative atmosphere and evoke discussion amongst the participants when they are explaining their artefacts. Preferably this is a professional facilitator, if not it should be the person most experienced with facilitating qualitative, preferably generative sessions. All other members of the project team will be invited to attend the session on a voluntary base. The members present (and not involved in the act of facilitating) will follow the session from the observation room. This will prevent that the presence will distract the participants from the session. The session is video and sound recorded.

The CookBook will support a proper facilitation by providing tips and tricks and the text of the facilitator from a test session that can serve as an example.

8.1.D// ANALYSIS
The analysis stage aims to analyse the data from the sensitising and session stages. The goal of these analyses is to abstract rich experience knowledge from this data that can be used to create new concepts (during the conceptualisation stage). The data consists of the completed sensitising booklets, the artefacts made and the discussions amongst the participants recorded during the session.

For the implementation of the contextmapping method within the early value creation stage of Philips, the members of the project team will be part of the sense-making of the obtained data. This is important because it will enable the project team to create an understanding of the end-users (empathy), prepare them for the Insight Generation Workshop where new concepts are created (inspiration) and ensure that the members of the project team feel motivated and committed to use the information (engagement) (Sleeswijk Visser, 2009).

ANALYSIS TOOL
An interactive analysis tool will support the project team members in analysing the data. The aim of this tool is to offer a section of the data and guide the project team members through the sense making of this section. This data and the sense making assignments are offered to the project team digitally and online, providing more flexibility for the members, as the analysis can be spread out over a certain amount of time and executed at any location. This contributes to a proper preparation of the members for an Insight Generation Workshop, as it allows time for incubation of the obtained knowledge amongst the members of the project team. The fact that the tool is provided online as a website stimulates that (intermediate)
results are saved and stored for use afterwards.

The CookBook supports this stage with a guideline for the use of the website. This guideline mainly concerns the support of the administrator in the preparation of the website (create profile, input material etc) and supporting role towards the project team.

The domain name of the analysis tool is www.ContextQuest.nl. “Context” refers to the experience of end-users which determines the context of use. Whereas “Quest” denotes the aim of a contextmapping study to seek for this knowledge with the overarching goal or quest to leverage this into the product development process. The layout of the website is displayed below (Image 8.6).

![Image 8.6: Layout of the website.](image)

GUIDING ASSIGNMENTS

The members of the project team are guided in the analysis by means of seven assignments.

1) Section of session
2) Participants
3) Address own experience
4) Evaluation items (in Personal Page Results)
5) Top ten items (in Personal Page Results)
6) Personal poster
7) Common Page

The website first proposes the members of the project team to abstract knowledge from the data. During these assignments the members have to select all relevant (parts of) artefacts and stories from the data selection that they have received (respectively image 8.7, left and right).

This is done in two assignments with different approaches. Assignments one asks the participants to review part of the session. And artefacts discussed during that part. Assignment two asks the members to focus on one participant. This will increase their empathy. They have to use a crop tool to select parts of the scanned images and type in quotes from the stories heard while reviewing the video records.

4) For the explanation of the creation of this layout and structure of the website see appendix 13.7. These developments are based on the decisions added in appendix 13.6.
In assignment three the members are asked to reflect on their own experience. This will enable them to connect and relate to the users' experiences (SleeswijkVisser, 2009).

All items selected during these assignments are imported into one worksheet (image 8.8 left). This worksheet asks the members to evaluate the items in a visual manner on type (emotional or functional and positive or negative) and relevancy (assignment 4). This is important because it will stimulate the members to think about the items extensively and relate them to the goal of the project. This will sensitize the members for the following conceptualisation stage. The evaluation is done visually. This aims to have an inspirational effect and allows spectators to interpret it in a different way to evoke discussion. To prioritise, the members have to assign a certain size to the text or thickness to the frames of images. The members of the team can indicate whether the items are functional or emotional by adjusting the type of fonts of the text or line of the frame. By adding positive and negative emoticons they can indicate whether the item is addressing a (current) problem (-) or a positive experience that can be enhanced (+).

The outcome is displayed in image 8.8, left.

For assignment five the members are asked to select a top ten of the most relevant items for the project. These items will be uploaded to the digital Common Page. This page will support the clustering and ideation of the group based on the user experience knowledge during the workshop.

For assignment six the participants have to organise all items that they have selected during assignment one, two and three in one big sheet. This sheet is printed and used during the workshop (See image 8.9 on the next page).
Image 8.9: An example of the Personal Poster as proposed, and a real poster created by an employee of Philips by means of the prototyped website. This will be displayed and discussed more elaborately in the chapter evaluation.

In assignment seven the top ten (selected for assignment five) is uploaded from all members into one sheet (image 8.10). This sheet will support the project team during the workshop. It will be discussed more elaborately in the next chapter “Insight Generation Workshop”.

Image 8.10: The Common Page after one upload (left) and when uploaded by all project team members (right)
8.1.E// INSIGHT GENERATION WORKSHOP

The aim of the conceptualisation stage is to align the obtained knowledge of different project team members, stimulate ideation and generate end-user insight based on the rich experience knowledge of the participants.

For the implementation within Philips this will be done during the Insight Generation Workshop. Currently all members of the project team, that are involved in the early value creating stage, attend this workshop.

The workshop is facilitated by one of the team members. The CookBook supports this with an action sheet that describes all necessary preparation of the workshop. It will also provide a generalised set-up for this brainstorm workshop and a tips & tricks list for the facilitator of the session.

The session is supported by the material that came out of the analysis stage. The website supports the provision of this material in two ways:

1) The Personal Page
2) Common Page

The Personal Posters (image 8.9) enable the individual members to present rich experience knowledge obtained (during the previous analysis stage). The Personal Page will be printed on A2-sized paper and hung on the wall during the first part of the workshop. The members of the project team present their finding by means of the posters.

The Common page (image 8.10) contains the top ten most relevant items from all members of the project team. The page will remain digital and is displayed during the second part of the workshop on a large television screen or beamed on a wall. The website enables collaborate clustering of the items during the workshop. The clusters serve as a base to create end-user insight.

The workshop lasts one day. The morning covers the divergence and alignment of the members of the project team. The afternoon is used to converge and create insights.

The set-up of the meeting is as follows:

1// ALING
Each member of the project team will first present their individual poster. They have to describe all knowledge obtained during the analyses to the other members of the project team. The facilitator asks evocative questions during and after the presentations, addressing differences and similarities in interpretation by the different members. The discussions will allow them to share and align knowledge. The stories may stimulate the members to diverge and generate more ideas through association. The ideas that come to their mind should be written on post-its (for the time-being) and can be digitally added to the Common Page afterwards.

2// CLUSTER
During this stage clusters are made of the selected items. These clusters will serve as a base for the generation of insights. The clusters are created in the common page of the website. This page contains the top ten selection of items from all members of the project team. First all items will be discussed collectively and structured into clusters containing related items (image 8.11). While structuring, additional ideations may come to mind of the participants. The tool supports that these ideations can also be added. The project team should then discuss whether an overarching theme, title or image can represent the cluster or that its richness should be maintained by the collection itself.
3/ INSIGHT GENERATION
Subsequently the team should decide collectively which clusters are interesting to further develop. The facilitator should guide this process. This facilitator should also guard that all interesting clusters are entrained, not only the evident ones. These clusters are further extended in platforms showing the context around a certain aspect of product use (Image 8.12). From these platforms insights can evolve. Similar to the current process, this is done in couples. These couples should aim to consist of at least one person that is experienced with fuzzy front aspects. The facilitator walks around to support.

The couples have sufficient time to play with clusters, for example by enriching it with extensive images and words from internet or making metaphors. This freedom will support ideation. For example sports were compared to vacuum cleaning as both activities call for resistance in advance. Once doing it, the activity make you feel healthy and proud. The group started to look into motivation tips for sports and adds of fitness schools to see if these could apply for motivation of vacuum cleaning. Vacuum cleaners derived from this metaphor counting calories burned, producing active music or enabling “vacuumdating” with friends.
Image 8.12: from the clusters derive platforms serving as base for the insight generation of the creation of concepts (called within Philips "End-User Insight")
9// EVALUATION

For the evaluation of the adjusted contextmapping method and adjustments to the process within Philips a case study and several interviews are executed. The set-up of this evaluating research is described in the following chapter called “Set-Up”. All findings from this research have been combined and discussed in the subsequent chapter named “Findings”.

9.1// SET-UP

The method is mainly evaluated by means of a case study. The findings deriving from this case study are checked (or supported) by means of feedback from the people involved in the study or other people who will eventually be involved in the future. This feedback is obtained by means of questionnaires and interviews.

9.1.A//CASE STUDY

To evaluate the adjusted contextmapping method it has been decided in consultation with both the ARC and TUDelft to conduct a case study. A case study approach aims to investigate a phenomenon within its real-life context. The aim of this case study is to evaluate the adjusted contextmapping method for Philips, its supporting tool (website) and guide (cookbook).

For this case study the adjusted contextmapping method was carried out within the Philips organisation. Although a case study also aims to keep the execution as genuine as possible, the extensive role of the ARC (in collaboration with the CMI and CMM) in the execution of these steps is simulated. This role was filled by the student executing this graduation project.

OBTAINING KNOWLEDGE

The first three steps of the proposed method to obtain the rich experience knowledge are the preparation, sensitising and session step. During the execution of these three steps, the guidelines from the CookBook are followed exactly as proposed. This aims at investigating the results of obtained knowledge by the proposed guidelines in the CookBook. Note: in order to create the CookBook during this graduation project, the sensitising- and session step have already been pilot tested several times in advance of the study. The total cycle of the sensitising and session step was pilot tested once in total in advance of the case study. This session was videotaped and reviewed afterwards. The results of this review have been used to improve the set-up of these two steps.

LEVERAGING KNOWLEDGE

The last two steps (the analysis of the data and translation of this analysis into concepts) will be executed for this case study during two workshops. These workshops will also be facilitated by the student executing this graduation research and will be attended by employees from different departments within Philips. These workshops will differ from one another. During one workshop the attendees execute the analysis and subsequent conceptualisation in the analogue way (as proposed by the conventional contextmapping method). This group will be called the analogue group. The group, attending the other workshop, will execute these last two steps digitally by means of the website developed during this graduation project. This group will be referred to as the digital group. The assignments given to support the analysis and conceptualisation during both session were kept as similar to one another as possible. Therefore the assignments written for the website were only “translated” for the analogue workshop adjusting the text to the differences in tools. The setup for both workshops is described below.

The assignments for the analysis by the analogue group are printed on paper and provided at the beginning of the workshop. These attendees are seated at a table were laptops are installed only for displaying the movies from the session. Materials provided were magazines, post-its, stickers, scissors, paste, tape, (coloured and different sizes) pens and paper. The attendees of the digital group were asked to bring their own laptop to do the analysis assignments by means of the website. These attendees are also seated at one table. The only materials lying on this table are a multiple socket outlet, some paper, post-its and pens. The computer of the facilitator was connected to a television display in the corner of the room, visible for all attendees.

Both workshops will be divided in two parts. During the first part the data is analysed by the attendees individually. They will however be doing this in one room, sitting together on one table. The facilitator will be present to kick-off the session, the attendees are asked to execute the assignments as proposed by website of assignment-form. The facilitator will remain in the room during the analysis and will assist if needed.
Note: this is not in accordance with the proposed guidelines as the analysis should normally be done individually in advance of a session. However because the responses of the members while analysing the data carry valuable information and because the piloted website requires extensive support this step has been executed collectively. After two hours the attendees are given a short break to re-energise.

During the second part of the workshop the conceptualisation step is simulated. For this step collaboration within a group is necessary. Therefore the facilitator can facilitate the workshop as proposed by the guidelines in the CookBook. No further simulation is needed for the sequence of the assignments or facilitation of this step in this case study.

WEBSITE
The website that is supposed to support the analysis and conceptualisation stage of the digital group is partially prototyped for the execution of this case study. The essence of the website and its assignments have been maintained as much as possible in this prototype. However certain assignments can only be accomplished through complex actions (image 9.1). Also the structure of the website could not be presented as intended.

Image 9.1: What was suppose to be intuitive evaluation had to be prototyped by this editing form. As the development of such large freedom in website use requires expertise in webdevelopment.

The freedom that is supposed to be provided at the end of the analysis and during conceptualisation stage has also not been accomplished in the prototyped website. The personal poster must be captured with the print screen button. This is send to the facilitator through email (image 9.2). The facilitator prints out the posters during the break and copies all analysed items from the common page into a prototyped common page in the PowerPoint sheet.

Also the common page of the website supporting the workshop digitally had been prototyped, this was done in PowerPoint. The items generated by the different attendees. Need to be copied into from the website into one powerpoint sheet.
9.1.B // INTERVIEWS/QUESTIONNAIRES

The findings that are derived from the observations during the case study will be extended or supported with knowledge obtained from feedback through questionnaires and interviews. The people actively involved in the execution of the case study are asked to fill out a questionnaire about their involvement after this participation. These questionnaires contain multiple choice as well as open ended questions about their experience during their involvement. Next to that people that will be involved during the future studies are interviewed. These interviews are set-up semi-formal. This means that only certain topics or key questions are determined in advance however the conversation follows the answers of the recipients. The different people that are asked for feedback are listed and discussed below.

End-User Participants
Participants from the internal testpanel of the ARC are involved during the second sensitising and third session step. The footage of the contextmapping session with these participants will be observed with respect to their behaviour towards the proposed assignments, the other participants, the facilitator and the environment. Next to that, this group is given a feedback questionnaire after the session (see image 9.3). The aim of these questionnaire is to receive information about their experiences during these two steps.

ARC
Short interviews are executed with members of the ARC, as they will be doing the execution of these steps by means of the CookBook for future projects. The results of these interviews will be used to evaluate the level of guidance provided by the CookBook for these members of the ARC. The CookBook will be adjusted accordingly.

Attendees Workshop
The footage of the workshops from both groups will be reviewed to observe their behaviour with respect to the proposed assignments to analyse the data, the group session to conceptualise the data, the other members, the facilitator and the environment. Next to that both groups are given feedback questionnaires after each workshop. The aim of these questionnaires is to receive information about their experiences during the two steps.

The way in which the proposed method fits into the product development website is evaluated by means of interviews. This is done in advance of the case study with several members from different departments. For these interviews the process and way in which the method is proposed to fit into the process is visualised. During the interview the visual is displayed. These interviews are also conducted semi-formally as the conversation follows the answers of the recipients.

1) See Appendix 13.5.B for these questionares an the responces of the participants
2) See Appendix 13.5.C for these questionaires and the answers of the atendees to the questions.
9.1.C// DATA ANALYSIS

The data obtained during this evaluation study consists of:

- the notes made during the interviews with future stakeholders
- the videos and artefacts made during the case study
- completed feedback forms by the people involved during the case study

The notes from the interviews will be typed out fully immediately after each interview. The videos and artefacts are reviewed and interesting quotes are written down in a note book. The observations (including feedback) during the digital and analogue workshops are compared with one another.

Also the feedback forms were read extensively and notes were made of relevant feedback. The abstracted data (read quotes and notes) are then clustered according to the steps of the method. The data is listed per cluster after which combinations can be made between the different quotes and notes. The result of these analyses can be found in the next chapter “Findings”.

Note: For the analysis of this data it has been chosen not to use the website which has been developed during this graduation project. Reason for this is that the knowledge should be used purely for information and not inspirational purpose.

![Image 9.3: returned questionnaires of the participants](image)

3) The results can be found in appendix 13.5.A
4) See 9.2 for these observations
5) See appendix 13.5.B for the responses of the participants
9.2 // OBSERVATIONS

This chapter describes the key observations from the evaluation study. These observations are done during the execution of the case study, interviews and feedback questionnaire.

First, a some general observations are given. After this, the observations are clustered per stage of the adjusted contextmapping method. Each observation has been summarised in one sentence (written in black) and below this sentence the supporting explanation for this observation is added (in grey).

9.2.A// GENERAL

During several interviews, Consumer Marketing Managers ("CMM") indicated the relevance of this type of research to support consumer centricity during the early value creating stages. They also indicated that they expect ARC as initiating department for the executions, supported by the Consumer and Market Intelligence ("CMI").

The four Consumer Marketing Managers ("CMMers"), who were interviewed, all acknowledge the lack of rich experience knowledge from consumers to support the early value creating stages of the product development process. After explaining the method of contextmapping and showing them some examples, they regarded this method as being appropriate to support in the obtainment of this knowledge. They embraced the fact that the ARC would initiate and execute such a research. All, independent from each other, referred to the internal strategy program called Accelerate, which aims to involve the ARC extensively during the early value creating process of product development. Two CMMers asked for the role of the CMI department in this research and found it important to include this department in the execution of the study. All four would support the execution of such a research study at the beginning of their project.

From the questionnaires it appeared that the members of the project team had the impressions that an insight generation workshop resulted in more diverse and consumer centered platforms and insights then the original Insight Generation Workshop.

"In this research members of the project are more involved with the consumer by doing it this way, more inspired and creative which hopefully leads to better output. As we already did so much market research for Floorcare, it is really difficult to come up with really new things, maybe the more emotional ones, which are more focused on the end result on a higher level, as this fits with our positioning and competition is not using this approach."

CMI was enthusiastic about this research method and was willing to support it.

The CMI of Floorcare was enthusiastic about the research method. A quote from the questionnaire:

"Of course doing yourself home visits and being present at focus groups is always the nicest! But this is more efficient. If you cannot attend the focus groups or participate in the home visits, this is a nice alternative. Main advantage is that you are more involved, resulting in stronger interaction with the consumer, normally you just listen to someone presenting the consumer feedback, now you really have to do something with the consumer input."

She was willing to support in the execution of the method and already proposed some research companies to involve for future studies.

Both CMM and CMI found the application of a contextmapping study for a combination of projects more likely than for a single project.

The introduction of this method at the beginning of each AD-project still causes doubt and encounter some resistance. Both CMM and CMI found the application of a contextmapping study for a combination of projects within an innovation team more likely. Their doubts are mainly caused by the expenditures necessary to execute such a research in comparison to the results. As a result of these doubts they proposed the application of such a study for an innovation team and thus for several projects at ones.

"I would rather see such a study being executed for the total Floorcare range than for one project in specific. This could provide insights for several projects, making the cost worth spending... Otherwise the result will not meet the high costs that are connected to this type of qualitative research."

During the workshop, one of the attendees (CMMer) was distracted several times throughout the analysis of the data. However, during the conceptualisation he was engaged.

The CMMer was distracted during the analysis session. He walked out of the workshop several times to answer telephone calls or talk to people outside. As a result he could not finish his work before lunch. During the workshop in the afternoon he tried to finish his analysis causing him to the presentation of the other attendees.

Afterwards he indicated to appreciate the opportunity to have close contact with consumers.
(especially the movies were a good opportunity to get back in touch with the consumers). However he did not see the need to do the extensive analysis assignments. According to him he was paying more attention during the afternoon session because some interesting insights were presented according to him. When asked whether these insights might have been the result from the data analysis assignments he answered: “Could be.”

All members accomplished the analysis step within two hours (except for one person). However, the two hours reserved for the conceptualisation workshop were not enough for the group to create en-user platforms and insights.

Except for one person the analysis assignments were executed by the attendees within the time provided (2 hours). This one person was distracted several times and had missed at least 15 minutes by doing other things. For the conceptualisation stage of the case study also two hours were reserved. This was too little to execute all steps. To win time, the facilitator had already shortened assignments and started converging earlier then proposed. However still there was not sufficient time to generate concepts (called end-user insight) based on the created platforms.

9.2.B// PREPARATION

During the case study it appeared to be difficult to set a goal for one project. Normally, the roadmap of an innovation team (such teams are Floorcare, Kitchen Appliances, etc.) describes the upcoming Product Development Project. Only rarely, some Advanced Development projects initiate without any prefixed requirements (requiring for IPP). This also caused difficulties for the determination of the goal of this case study, as the only project that was coming up, was a second generation of a Robot Vacuum Cleaner. The features of this product were mostly already determined, only the emphasis on one of the features was to be examined. The person responsible for this graduation project of the Application Research Centre (“ARC”) (Bas Berga) also indicated that the case study would be more valuable when applied for the Floorcare lead in general instead of assigned to one specific project.

Taken all this into consideration the goal of this case study was not set to one specific project but served to support the innovation steam in general.

The planning as proposed was not accomplished for this case study.

The first three steps were executed as planned. The last two steps were postponed many times and shortened to one day (instead of several hours spread over one week and one day fulltime). The postponements were due to unexpected problems with the supporting website.

The decrease in time in between these steps occurred because of two reasons:
1) necessary guidance during analysis of the data, requiring presence of a facilitator to support attendees in the use of the website (functioning as prototype).
2) busy schedules of the people invited to attend. This might be different in case of a project were these people would have been real stakeholders.

Employees from departments involved in the early value creation stage were willing to attend the workshop of a contextmaping study. However, for the case study it was difficult to recruit these employees.

When asking for the reason why people were not able to participate or cancelled last minute the main reason was time. Quote from email response: “In future projects I will definitely want to be involved in these studies therefore I wanted to show my willingness by attending the workshop for your case study. I am really busy at the moment! And since this is just a trial... it would have been different, if it would have been for a real project.”

This quote indicates that if this workshop would have been executed for an actual product development project, the invitees might have been more engaged, as they would have been real stakeholders.

The ARC testpanel showed sufficient interest for the participation in this type of research. However, 4 out of the 18 participants cancelled last minute.

In total about 100 people reacted to the three requests send out to the ARC panel for participation in the sessions. Most reactions were very enthusiastic:
“Dear Madame/ Sir, In response to your request for the creative session on 21 of May I am sending you this email because I would love to participate. I have not participated in any of the other researches yet because I have been very busy. My apology for that! I can imagine that other people will get priority because they are actively participating in other researches as well. But still I am hoping to be selected and if necessary for that I am willing to become more active in the future.”

From the 18 participants recruited for the three sessions, 4 people cancelled shortly before the start of the session, for unclear reasons.
The group of people participating during the session was not representative for the targeted and requested segment (Happy Homers)
A large share of these participants was aged above 60 (6 out of 14) or out of job (3) and working part-time (3). Only two participants were under the age of 60 and working full time. This composition of participants does not reflect the targeted segment. The segment Happy Homers has an average age of 40 years. Only 12% is aged above 55. Their income is above average.

9.2.C// SENSITISING

All three ARC-ers were capable of creating a proper sensitising booklet (using the CookBook and supporting layout).
They all indicated that they found the explanation in the cookbook easy to understand and the supporting layout easy to use. However they all asked for more freedom in the layout and more fixed assignment, tasks and images for the content.

The participants were enthusiastic about the booklet.
All participants were eager to talk about and show the content of their booklets. Flipping through the pages while taking about them, they casually showed their work to their neighbours. In response to the questionnaire all participants were positive about the booklet. They liked to fill in the booklets, calling them creative and surprising. Their enthusiasm was also reflected in the way the booklets were personalised by them (image 9.4):
1) All participants completed the six tasks in the booklet
2) 10 out of 14 had also taken the effort to add personal pictures6. Two participants had even taken the effort to make pictures especially for the booklet.

The participants indicated in the questionnaires that they found the assignments in the booklet fun to execute yet sometimes experienced difficulties.
All participants that had returned the questionnaire (11 out of 14) have labelled the assignments as fun to execute. Two participants designated that they did not fully understand the assignments in the booklet. However when looking into the booklet of these participants all assignments were executed as intended by the creator of the booklet. One of the participants responded about this in the questionnaire: "The assignments were hard to execute. But sometimes it is nice if you are motivated to think hard about something! It made me realise new things about cleaning."

6) See appendix 13.8 for some resulting booklets
All facilities necessary to execute generative sessions were present in the ARC-lab. The facilities provided a comfortable and relaxing atmosphere, with sufficient light and air to support activity. There was enough space for the participants to execute the tasks and the whole session was recorded appropriately for the subsequent analysis.

Asking the right questions by the facilitator triggered the participants to share their deeper knowledge. Executing the pilot sessions helped the facilitator to improve asking these explanations.

At first the facilitator lacked experience, but after executing two pilot tests the facilitator was able to explain the assignments in such a way that the participants understood them right away and did not hesitate to start. Next to that the facilitator was better able to ask questions that triggered a conversation amongst the participants. These conversations contribute to an enhancement of quality and richness of the session.

In the questionnaire the participants indicated that they appreciated the session. During the session the participants worked hard to accomplish the tasks. Their engagement was also reflected in the work they did afterwards. Out of 14 participants 11 returned the feedback questionnaire that was given to them at the end of each session (together with the reward for participation). They gave a lot of feedback, positive as well as suggestions for improvement.

During the session the participants worked hard to accomplish the tasks. Their engagement was also reflected in the work they did afterwards. Out of 14 participants 11 returned the feedback questionnaire that was given to them at the end of each session (together with the reward for participation). They gave a lot of feedback, positive as well as suggestions for improvement.

7) See appendix 13.9 for several of the resulting artefacts
9.2.E/ ANALYSIS

Both the attendees of the analogue and digital session did not fully follow the guidelines on the website or printed form. The attendees of the analogue session did not read the explanation nor the guideline form and started doing the assignments immediately. They did however return to the explanation several times when they got stuck.

Also during the digital analysis none of the attendees finished reading the explanation of the tool. At first all attendees did start reading the explanation as proposed by the introduction. After about a minute or so one person stopped reading the explanation and continued doing the assignments. Ones the other attendees noticed that this person had already begun the assignments they also stopped reading and started with the assignments.

The reason why the first person stopped reading the explanation could well be because he was already a bit familiar with the functionalities of the tool. Therefore this person might consider it not to be necessary to read the whole text of the explanation.

Afterwards one of the other attendees indicated that he did not feel like reading the whole text so after scanning through the text, he felt like starting the assignments. A quote of one of the attendees:

"I got impatient because it was such a long text. Also because I could not really depict what the explanation was about. I thought; lets first see what they are talking about... Lets first start and then we’ll consult it if difficulties arise."

During the analogue analysis the attendees executed the assignments without hesitation, whereas it seemed that attendees of the digital analysis group were indecisive and looking for confirmation of the facilitator.

In analogue analysis workshop the attendees started executing the assignments without any hesitation. For the digital website analysis the attendees felt a bit lost in the beginning. They were doubting if they were doing the right thing, constantly asking the facilitator for confirmation. It was not clear to them what to do when entering the main sheet, despite the introductory text when entering the website. One of the attendees answered in his questionnaire:

"At the beginning I had no idea what the end goal was of the whole session. So I felt a bit uncertain if I was doing the right things?"

Interesting to notice was that the same person also first wrote down quotes on paper and then entered them into the website. When asking for the reason why this person stated the following:

"Just to make sure that they will not get lost... in case anything goes wrong."

This indicates that the attendee even took precautions because he did not trust the website or was not sure on whether he was doing the right thing himself.

The analogue analysis group seemed to experience less trouble during the analysis the data, while it took them longer to accomplish it then the digital group.

For the execution of the analogue analysis, the attendees wrote down the quotes of the participants from the video on post-its. They pasted these post-its onto a big sheet; immediately after writing a post-it they pasted them together with corresponding post-its into clusters. And then continued analysing.

As soon as the attendees, doing the analyses digitally, had started the assignments the first problems arose. Most of the difficulties were due to insufficient or unclear support of the prototyped website. Because the prototype of website was not reacting as expected it caused frustration amongst the participants.

For both sessions the facilitator had proposed two hours for the analysis. When the analogue analysis group realised they were taking longer they decided to continue till they were done. The digital analysis group managed to finalise the analysis within two hours, except for one person. This person was distracted several times during the analysis session. He had spend over fifteen minutes doing other things such as calling.

The digital analysis group captured visual data from the artefacts (made during and before the session) in the outcome of the analysis, whereas no visual data was captured in the outcome of the analogue analysis session.

For the analogue analysis the visual data was reviewed. Some used stickers to select interesting
parts of the poster. To incorporate these aspects in the analysis, one participant added two extra sentences and one person added four extra post-its after reviewing the artefacts (booklet and collages). All was done in word, and nothing was done with visuals or images.

For the digital analysis lots of visual selections were extracted. The participants also selected text in some cases:

“The way it is written down tells a story on its own. Now that I see it in the poster I actually think it is a nice element of the poster, it makes it more exciting to read than when it's typed. Plus website did not allow me to add that text by typing, so I was forced to do it this way.”

There was a big difference between evaluations of the items in both the analogue and digital group.

For the evaluation of the items in the analogue analysis session one person wrote down a representative quote or a title next to a cluster of post-its. He used the colour green to indicate a cluster with positive aspects of cleaning, red to address the cluster containing post-its with troubles, blue for all neutral quotes.

The other person only wrote down titles on top of clusters. She processed these titles in the final presentation poster where also used colour, font and size of text to show her evaluation of the items. This person however did not apply green for positive aspects and red for frustrations but seemed to apply colours randomly; to make it a whole. did this as well eventually re-wrote the most interesting words or

For as far as the digital evaluation of the items, two people had edited the text adjusting the size, font and colour whereas the other two did not do anything but clicking the edit button to save the quote. The other two people who had adjusted the size, colour and font of the text seemed to have done this randomly as no consistency or pattern could be identified.

The posters that came out of the analogue analysis session differed considerably from one another in layout and type of content, whereas the posters made during the digital session where consistent in layout and type of content.

During the analogue analysis workshop the translation of the analysis to the "sharing" presentation posters by both attendees differed greatly from one another (image 9.6).
One attendee (right in image 9.6) had only rewritten the post-its in English for his presentation poster. This poster was made by the technical person (less experienced with this type of research). Whereas the other attendee (more experienced with these types of researches) had created a visually attractive poster (left in image 9.6). This poster contained mainly own interpretations of this person whereas the other poster only contained bit of data (quotes in this case). Representative words/sentences were used to describe these interpretations, which were supported by images which this person had selected from several magazine. This person had also used different sizes and colours in text and lines to cluster items. Next to that, this person had also build several layers of abstraction in the poster. Looking into motivations, feelings, needs and problems.

For the posters that came out of the digital analysis the attendees had all used text and images to create them (although the participants could choose to leave items out of display). None of the participants had organised the items in their posters in a specific way, for example by create clusters making use of the arrows or dots in the screen. This might well be due to lack in time as they were had only had about ten minutes to finalise their poster within the two hours. All posters from the digital analyses mainly contained bits of data (consisting of quotes as well as pieces of artefacts). One person had added a robotics vacuum cleaning in response to one of the quotes in his poster he had added this image (image 9.6 The additional vacuum cleaner is circled).

Image 9.6: the posters to share the rich experience knowledge that resulted from the digital analysis had an equal appearance.  

9.2.D// INSIGHT GENERATION WORKSHOP

Unlike the digital group, the analogue group was not aligning during the poster presentations. During the alignment phase of the analogue group both attendees were a bit hesitant to present their poster. As said their posters differed considerably. The facilitator addressed the difference and tried to ease both attendees by reassured them that it was ok, that everybody expressed him/her self in his own way. While presenting none of them commented on each other. The facilitator tried to start up a discussion by asking evocative questions about both differences and similarities in content. They kept addressing the differences in approach of working and persisted that no comparison could be made because of it. Both presentations only lasted for two minutes each.

8) These posters have been attached for review in appendix 13.10
During the alignment amongst the attendees of the digital analysis workshop three out of four attendees were very enthusiastic and proud about poster. Their presentations all lasted about five minutes. One person had not finished his poster and did not present the result. He did however readout or describe the items that he saw in front of him in the screen of his laptop. This took about 2 minutes. The visuals in the poster helped the attendees of the digital workshop to remember and explain story around the items in the poster. It also helped the other attendees to recognise them. This supporting discussion as some had interpreted items differently or had not seen it as something relevant. They were not afraid to address these differences and even had fun in finding differences and similarities.

Sharing their own/personal experience in the poster sessions leaded to a more open atmosphere of trust.
Both the digital as well as the analogue analysis group were stimulated to address their own experience towards the topic. No differences can be detected between the group that had made this collage digitally and the one making it analogue. Within both groups the execution of this assignment and the presentation of the results lead to a more open and personal atmosphere. According to Sleeswijk Visser this also stimulates the members to connect and relate to the users experience. No distinct evidence or differences were found for this between these two groups.

Quotes and visuals were better retained during the digital analysis then in the analogue analysis session.
Another interesting observation was that during the digital session quotes were iterated more precisely. Also while discussing a certain aspect into more detail the different attendees kept repeating the exact words of the participants. During the analogue presentations they only talking about the general line of the poster and did no quotes from the movie were repeated.

The digital group did not cluster the items on the screen, but wrote down the clusters on the wall instead. (Participants complained during the workshop that they were unable to see the items on the screen.) The group preferred to first write the clusters on the wall and then use the sheet to create the clusters separately. The facilitator wrote the cluster on the wall the attendees called out terms or items that they found relevant for clusters. The facilitator was joined by one of the group members to support the voting of clusters. Ones returning to the screen to talk about the items that could be part of the clusters, attendees complained there were not able to see the screen properly. They preferred organising the items in the sheet once the clusters were determined. “This gives a better overview of the clusters,” stated one attendee. Another

Image 9.7: The clustering was done on the wall instead of using the digital tool displayed in the videoscreen
Unlike the analogue group, the digital group strictly repeated aspects from the analysis while discussing the clusters. During the analogue clustering they did not discuss the clusters which they had already created in their individual posters. They just started all over, generated totally new clusters together. While proposing a new cluster this was preceded by words like “Maybe we could…” and “What about…”. During the clustering of the analogue group they came up with 8 new groups. During the digital workshop they all started to call out different items that derived from the presentations. Those items that were discussed the most during the presentation or were addressed extensively during discussions were named first. Also interesting; some clustering’s were supported by visuals to explain their link to the data extensively. The digital group had created fifteen clusters. The fact that this is almost twice as much as in comparison to the analogue group might also be due to fact that this group consisted of 4 instead of 2 people.

The analogue group skipped the elaboration of the cluster and immediately started to generate product ideas, mainly based on one cluster. The digital group elaborated the cluster by returning to the data from the session. After clustering the groups were suppose to diverge on the clusters however due to lack in time the facilitator (in consultation with the attendees of the workshop) decided to first converge. Both groups selecting three clusters. The groups did this by voting. All attendees had three votes to spend. The items with most votes were picked out for further elaboration. The attendees were asked to extend the clusters and diverge by generating several ideas based on the cluster.

The analogue group immediately started ideating when asked to extend or enrich a cluster. The facilitator tried to guide them back to extending the cluster first. However they had no clue how to do this or with what material (also when the facilitator suggested to use the magazines). And although they indicated to agree with the facilitator they continued generating ideas but now by visualising them as well. For each cluster they generated three product ideas. For one cluster they generated four more ideas. Eventually they had forgotten about the other two clusters and where only talking about this one cluster (addressing the time issues). When asking why they were only working on this cluster they explained that it was most various. The digital group created the clusters using the items from the digital sheet. They felt the urge to extend the clusters with data from the session and therefore kept analysing the data extensively. One group took about 15 minutes to find back a section in the video and review several times to have the sentence precisely as the participant had said it they included an image of this participant in the clustering sheet. The other group also used items from the common sheet and added two pictures from internet to the cluster to explain the cluster extensively.

The analogue session only generated product related ideas whereas the digital group only remained talking about context related aspects and abstained from ideation. The analogue group generated several product-related ideas. Some of these ideas were quite innovative or creative (see image 9.8). Image 9.8: The analogue group had generated several product concepts, that were directly translated on the left.
from some insights (extensions that were very function related)

Image 9.9: the digital group remained talking about and extending the phenomena. They were trying to find more data referring to the topic. Real concept ideas did not derive from their ideations (yet). Time was short.

The digital group was thinking more on a contextual scale. However, they were not translating this into concept ideas as they remained talking about phenomena. They kept referring to the analysis, quoting the members or describing images. They did make some metaphors to other fields in which these phenomena also occurred.

For example. When talking about the cluster health the following quote one of the participants was repeated; “It is just like sports; in advance you experience a strong feeling of aversion. You rather would stay home and relax. You have to encourage yourself to start. But once you are doing it you are happy you went and feel better afterwards.”

When discussing the cluster during the workshop one of the attendees said; “Maybe we should look for example sporting school motivate their clients or what kind of products are in the market for this and translate that to our vacuum cleaners.” Another metaphor was made about the feeling in advance of vacuum cleaning. It’s like bungee jumping or going to the dentist, in advance you have to encourage yourself... But afterwards is not so bad or might even be fun!

From the case study it derived that the digital group was more enthusiastic about the session than the analogue analysis group.

When it became clear there was no time left to finalize the clusters during the session, the digital analysis group expressed their enthusiasm about the session and emphasized their curiosity towards the outcome. The analogue group had less interest in the result and felt fine with returning to their desks.

The digital group asked the facilitator several times to extend on the outcome of the workshop. In return, they offered to provide feedback on the session. On the right the outcome of the clusters is displayed. All attendees of this digital group returned the questionnaire.

9) Appendix 13.10 shows the resulting outcome with several platforms that they can use as a base for the generation of end-user insights.
10// CONCLUSIONS

This chapter will discuss the main conclusions based on the observations from the case study and relating interviews. These conclusions are clustered following the three main end-products (i.e., the adjusted contextmapping method, the website and the CookBook).

10.1// ADJUSTED CONTEXTMAPPING METHOD

The adjusted contextmapping method is an appropriate method for Philips to generate more consumer centred product concepts in the early value creating stages of the product development process. Some adjustments in the method and concessions made in the product development process of Philips enabled a merge.

The conceptualisation workshop leads to more diverse, consumer centred platforms than the current Insight Generation Workshop of Philips when it is preceded by the adjusted contextmapping method.

The adjusted contextmapping method supports active involvement of the project team members in the sense-making of the knowledge. This results in extensive engagement and empathy of these members towards the end-users and the project.

CMM acknowledges the relevance of this type of research to support consumer centricity during the early value creating stages.

The adjusted contextmapping method for Philips maintained an equal richness in obtained user experience knowledge. This is mainly because the elaborateness of the collecting stages (to obtain knowledge) remained equal to the conventional contextmapping method.

The time required for an adjusted contextmapping method is acceptable of the organisation. This is mainly because the conceptualisation step has been merged into the Insight Generation Workshop. Besides the involvement by the project team members does not exceed more than 10 hours (20 hours is currently accepted).

If the research will be executed internally the costs of this research does not exceed €1000 per project (excluding internal labour cost). Currently €2000 is spent on research in the early value creating stage (HomeVisits).

The role of the facilitator has a relatively high impact on the outcome of the session.

ARC is an appropriate department for the execution of the contextmapping method
- ARC is responsible for representing the end-users need in the product development process.
- The ARC lab provides good facilities to execute the research.
- Consumer Marketing Management ("CMM") expects ARC as initiating department.

CMI can support ARC in executing the adjusted contextmapping study
- CMI has an extensive network amongst external research companies and they are experienced in determining the goal of a research.
- From an interview with CMI derived that this department is willing to support the ARC
- Members of CMM indicated in several interviews that they expect CMI to be involved in the execution of the research

CMM and CMI prefer the application of a contextmapping study for a combination of projects within an innovation team instead of one single project.

The fact that some department prefer input of a contextmapping study for several projects reflects the general attitude within the Philips organisation towards end-
user research. Since 2004 the company is trying to evolve from a technology based company into a consumer centred company, aiming to let all products evolve from end-user knowledge. Subsequent to the Accelerate strategy, the aim of Philips is to become (even) more consumer centred organisation. This requires extensive involvement of the end-users throughout the total product development process as co-creators of the product. Ramaswamy (2000) writes about co-creation: "Every organisation needs a systematic approach to engage not only its customers, but also employees, partners and other stakeholders at large, to both unlock value co-creation opportunities and execute them."

The internal testpanel of the ARC is suitable for the recruiting of participants for the session of a contextmapping method. However when recruiting from this panel there is a significant chance that participants do not show up or that the group does not reflect the targetgroup.

The fact that the CMMer was distracted several times throughout the analysis during the workshop, reflects the general attitude within the Philips organisation towards end-user research.

Since 2004 the company is trying to evolve from a technology based company into a consumer centred company, aiming to let all products evolve from end-user knowledge. This change in focus already required a major shift in mindset in the company. The end-user knowledge is often obtained through (traditional) researches that have been outsourced to professional research companies. This research is then shared with the organisation through presentations and reports. This requires a rather passive involvement from the employees within the company of Philips.

10.2// SUPPORTING TOOL (WEBSITE)

When improved, the website contributes to a proper and efficient execution of the contextmapping method within Philips.

The website increases empathy as quotes and visuals were better conserved with the result that these analysis where recalled more easily by the members of the project team.

The website supports engagement because the result of their findings was captured in attractive and homogeneous (in graphic design) posters. This make the members proud on the deliverable and supports easy sharing.

The website supports the creation of an open personal and safe environment as posters enables them to easily share their reflections.

The website stimulates alignment of end-user knowledge within the project team as the posters are easy accessible and discussion is evoked because visuals and quotes appear in several posters.

The attendees of the workshop experience difficulties to detach from the analysis and immersion as the website causes that visuals and quotes are recalled more easily. As a result the members of the project team are less capable to switch over to ideation to generate new product concepts. Note: It might however also be that due to circumstances\(^1\) there was no time in between immersion and ideation for incubation. Incubation stimulates detachment from the analyses allowing ideation.

\(^1\) The prototype of the website required presence of the facilitator during analysis resulting in an contiguous analysis and conceptualisation step
10.3// COOKBOOK

The CookBook supports a proper and efficient execution of the contextmapping method by the ARC. The figure of the framework and supporting explanation have proven to provide the members of the ARC with a sufficient understanding of the method. The supporting materials (layout for booklets, examples etc) have proven to enable the members of the ARC to make appropriate sensitising booklets and set-up a proper generative session.

A sufficient support for the introduction of the method to other departments is still missing in the CookBook.

The results of the case study do not guarantee that all guidelines in the Cookbook will be executed as proposed, because it provides guidelines, but not the required skills and experience to execute on these guidelines.
11/ RECOMMENDATIONS

This chapter describes the recommendations based on this graduation research. Both recommendations are made to the Application Research Centre (“ARC”) of Philips and StudioLab of Industrial Design Engineering at the Delft University of Technology (“TUDelft”).

For the ARC the recommendations mainly concern the suitability, application and implementation of the adjusted contextmapping method, supporting website and CookBook. For the StudioLab, recommendations are made about extensive research to further develop the contextmapping method and relating areas.

11.1/ PHILIPS, ARC

First the recommendations for Philips are listed with regard to the adjusted contextmapping method and supporting tools for the ARC department.

11.1.A/ SUITABILITY

Philips should execute contextmapping studies to support consumer centricity in the early value creating stages of the product development process of Philips. The adjusted contextmapping method is a suitable method to support the Insight Generation Workshops with rich user experience knowledge. The case study has proven that an Insight Generation Workshops preceded by a contextmapping study leads to more diverse and more consumer centred platforms.

11.1.B/ APPLICATION

ARC should stimulate that a contextmapping study is executed at the beginning of each Advanced Development (AD) project. This will enable that the members of the project team can be actively involved in the analysis and insight generation workshop, resulting in support of engagement towards the project and increases of empathy towards the end-user. Besides this will also contribute to the future extension of the contextmapping method towards co-creation throughout the total product development process. The ARC should extend this graduation research project to investigate the opportunities of expanding the adjusted contextmapping method with co-creation and consequently write a plan to communicate this to the other departments within the organisation.

The biggest challenge for ARC will be to convince the other departments that a contextmapping study should be executed for every single project. Some departments still have doubts concerning the application for a contextmapping study for every single project. These doubts are mainly caused by the expenditures necessary to execute such a research in comparison to the results. Therefore they proposed the application of such a study for a total innovation team (meaning department such as Floor Care or Beverage) and thus for several projects at ones.

The ARC should aim to take away the doubts of other departments like CMM and CMI concerning the contextmapping method. This should be done by executing a contextmapping study applied to an actual product development project. Results of the Insight Generation Workshop and the resulting concepts/product should be used as a best practice example to communicate the relevance of method towards these departments.

For some AD-projects it is possible to apply one study for several projects, when these projects build on one another (for example with “second generation products”). However this is only possible when the members of the project team (for the second generation project) have already been appointed at the time of execution of this study. This sequel project team should be involved in the analysis and attend the workshop executed for the first generation project. If this sequel project team has not been constituted yet, the members of this team cannot be actively involved in the analysis and conceptualisation steps. These projects should have their own contextmapping study.

11.1.C/ INVOLVEMENT

The ARC should be superintendent of the execution of the adjusted contextmapping study at the early value creating stages of a product development project as they represent the end-users needs throughout the process. The ARC should maintain close collaboration with the Consumer and Market Intelligence department. This will improve the preparation step of the method, reduce the workload for the ARC and will support acceptance within the organisation.
The other members of the project team should be approached during the preparation step and involved during the analysis and conceptualisation steps of the study. The case study has proven that the involvement of the other members of the project team leads to enhancement in empathy for the end-users and engagement towards the project (team). However the ARC should investigate the (long-term) impact of the extensive involvement of the different department during the analysis. The case study could only evaluate the impact of their involvement during the workshop and resulting platforms. However the impact on the resulting end-user insights (validation) and the engagement and empathy of these project team members in the continuance of the product development process could not be investigated. The ARC should further investigate what the long term effects will be.

11.1.D // WEBSITE

The ARC should use the website to support the project team members with guidance during the analyses of the obtained data. Next to that the ARC should use the website to support the creation of end-user insights during the Insight Generation Workshop as the empathy and engagement of the team members was increased and it lead to more diverse and consumer centred platforms.

ARC should involve a professional web development company to extent the developed prototype website into a well functioning website. One of the reasons to improve the website is to support the individual analysis. This will allow incubation and therefore stimulate ideation (The project team members experienced difficulties to switch to ideation, as a result of the analysis by means of the website). Main issues that should be improved are:

- Usability (many assignments still require extensive actions to accomplish)
- Clarification of the structure of the website
- The functionalities to adjust items the add text and visuals to the personal poster
- Realise the functionalities of the common page (upload of all members in one sheet, access by all members at ones saving of structure.

Once improved, the ARC should do a pilot test with the new website were sufficient incubation time is provided to investigate whether the inspiration of the members can be enhanced.

To support ideation extensively during the workshop, the facilitator should stimulate that all participants are actively participating during the clustering of the items in the website. These clustering activities are displayed on a screen, which appeared to be too small for this goal. The ARC should arrange a bigger screen and preferably even a beamer providing a better sight on the items (larger projection) and easier clustering (more space).

11.1.E // COOKBOOK

The ARC should use the Cookbook during the execution of contextmapping studies, as it has proven to be a helpful guide in the execution of the contextmapping method in a time-efficient way.

A best practice example should be developed as this can be very helpful for the communication of the method and its result to other departments, especially to the Consumer Marketing Management department. The first real study executed by Philips should serve as this best practice. The ARC should capture all results of this study and consequential concepts/products to support the communication.

The ARC should track all expenditures made during the contextmapping study and in the continuance of the product development process. It would be of great value to make a cost comparison between the project (initiated with a contextmapping study) and a project lacking this profound end-user knowledge in the early value creating stages. The comparison should focus on the expenditures made on end-user research throughout the total process and costs of the consequential adjustment made on the product.

The ARC should stimulate a small group of ARC-members to extend their knowledge and skill concerning the contextmapping method. This should be done through education, training and execution of the method. The ARC should be aware that the CookBook only provides guidelines and not the required skills or experience.

The ARC should keep the CookBook up to date, based on new insights, learnings or possible updates of the contextmapping method or other researches.
11.1.F// OUTSOURCING

The ARC should investigate the opportunities of involving an external research company to support the execution of this type of research. This will provide several advantages:

- It will require less time from the ARC (or supporting CMI)
- It will provide professional facilitation
- It will allow for internationally applicable; appropriate for investigation of foreign markets

The ARC and CMI should however take some important aspects into consideration when approaching such a company:

- The execution and facilitation of generative sessions is different from qualitative researches such as focus groups. The ARC should seek for a company familiar with and experienced in the execution of contextmapping or co-creating sessions.
- Outsourcing to external companies will result in a considerable rise in cost (at least €4500 per study)

11.1.G// RECRUITING PARTICIPANTS

The ARC should ask for a short motivation for participation and some questions when recruiting participants from the ARC internal panel, to ensure that the participants are motivated and reflect the target group.

11.2// TUDELFT, STUDIOLAB

Here, the most important recommendations towards the TU Delft and the Studiolab in specific are discussed.

11.2.A// CO-CREATION

The StudioLab should investigate how the developments concerning co-creation can enforce Contextmapping and the other way around. As recommended to Philips, the contextmapping method can be applied within companies to stimulate evolvement to extensive involvement of end-users throughout the product development process (co-creation). The StudioLab should do extensive research in how such a process should evolve in a company, from applying only contextmapping into the full application of co-creation.

11.2.B// DIGITAL DATA ANALYSIS

It would be interesting for the Studiolab to investigate the long term influences of digital analysis on the engagement, empathy and inspiration amongst project team members.

From the case study it derived that the digital analysis supported engagement and empathy amongst the project team members towards the project and the end-users. This mainly seemed to be the result of the extensive use of the visuals (abstracted from the artefacts) and maintenance of the quotes from end-users. This however decreased the inspiration of the project team members as they experienced difficulties to detach.

11.2.C// DIGITAL GROUP IDEATION

StudioLab should investigate how recent developments on the market (such as a touchscreen) or a cabinet as created by Keller1, could be applied in a product that supports the clustering of digital (user experience) knowledge and consequential ideation in groups (based on this user knowledge).

1) For his PhD research, Keller (2008) has created a Cabinet that supports the collection of inspirational visuals through more “bodily interactions”. He created a product that allowed designers to cluster visuals and play around with them. Also additional item’s could be attached.
This also stimulate (consumer centred) creativity as it supports expressive gestures and bodily interaction (See Hummels\(^2\)).

During the digital analysis session the attendees chose to do the clustering on the wall. They indicated that the display of the items on the video-screen was not big enough and therefore did not provide sufficient space to create the clusters. Also on person had access to the digital file, aiming to support the group ideation. By enabling active involvement of all participants to move and play around with the items that is “on the table” ideation may be stimulated.

\(^2\)Hummels (2000) indicates that the lack in creativity may result from digital support; "Moreover computer tools currently don’t support the expressive gestures and bodily interaction that is such an important aspect of creativity.”
12// EPILOGUE

A quick ride through my experiences during this graduation project....

Delft...A note.....on the “wall-of-graduation” at the faculty of Industrial Design Engineering...next to all those other graduation assignments......User Research...Explorative Methods......Multidisciplinary teams...Philips...Wow...Thats it...A letter..........“I would really like to work on this graduation project, as it supports me in all my interests”!.....an invitation...to talk...to graduate... at Philips ARC.....And then, a supervisory team...an experienced team...January.....moving to Groningen and work in Drachten...-10 degrees...ov...adjust...focus...the assignment is great...fun...product development process...abbreviations...guidelines...cookbooks....diplomacy...the ...literature ....new methods, fast developments....users...who?....communication... explanation...involved in the early stages of....creativity...product development processes...convice.....website....just do it....Help?...do not forget to breath...enthusiasm...workshop...exciting....fun....hard work...tudelft meetings.... challenges......testing....do not forget to enjoy!...convice....write...and then a graduation date....pffff...ok.....finalise....improve... accelerate...holiday... prepare...and then....26th of august 2010...

This project has been a great kick-start for a QUEST that I am hoping to continue in the future...A QUEST to understand in what way user experience research can support product development processes in (multinational) product development companies.

Hopefully this Final Report has been as inspiring and interesting for you to read, as it has been for me to create throughout this Graduation Project!

Willemijn
13/ APPENDIX

13.1/ REFERENCES

13.2/ ASSIGNMENT

13.3/ PHILIPS DEPARTMENTS

13.3.A/ Global Marketing Management (GMM)
13.3.B/ Consumer Marketing Manager (CMM)
13.3.C/ Consumer Marketing Intelligence (CMI)
13.3.D/ Lead Engineers & NPI/Architecture & Concept Development (A&CD)
13.3.E/ Design
13.3.F/ Application Researcher (ARC)
13.3.G/ Quality
13.3.H/ Purchase

13.4/ OBTAIN AND LEVERAGE

13.4.A/ Analysis
13.4.B/ Home Visits
13.4.C/ Insight Generation Workshop
13.4.D/ ConceptLab
13.4.E/ Value Proposition House
13.4.F/ Concept Validation
13.4.G/ Simplicity Experience Test
13.4.H/ Net Promoter Score

13.5/ INTERVIEW

13.5.A/ Members of project team
13.5.B/ Participants of the session
13.5.C/ Attendees of the workshop

13.6/ DECISIONS

13.7/ WEBSITE STUDIES

13.8/ RESULTS SENSITISING

13.9/ RESULTS SESSION

13.10/ RESULTS DIGITAL ANALYSIS

13.10/ RESULTS DIGITAL WORKSHOP

13.11/ STAKEHOLDER INVOLVEMENT DURING STUDY

13.9/ STAKEHOLDER INVOLVEMENT
13.1// REFERENCES

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13.2// ASSIGNMENT

“Create a research method that enables Philips to obtain and leverage rich insights on the end-users experience in (the early stages of) the product development process”

13.2.A// PROBLEM DESCRIPTION

In the current product development process of Philips, mainly interview- and observation techniques are applied to obtain knowledge about the end-users experience. These types of research provide limited insights on the deeper knowledge levels of the end-users in respect to their experience (consisting of tacit and latent knowledge). Next to that, the research applied is only limitedly executed during the early stages of the product development process, were end-user insights are created. As a result Philips is not ensured that end-user insights are based on a deeper understanding of their end-users experience. Consequentially newly developed products might not originate from rich end-user insights and thus not be as consumer-centred as Philips aspires.

In January 2010 an internal transformation program (called “Accelerate!”) was launched within CL. The aim of this program is to stimulate the evolvement into a more consumer-centric organisation. According to the Accelerate! program deep insights into the consumers and their experience are required, in order to anticipate on and exceed consumers expectations. The program therefore encourages an extensive participation of the ARC during the product development process, especially during the value creation stage of this process. In line with the objectives of this Accelerate! program, Philips needs to have a proper understanding of all levels of knowledge with respect to the end-users experience (i.e., explicit, observable, tacit and latent knowledge). Besides, this knowledge should be applied early in the product development process.

13.2.B// ASSIGNMENT

Therefore the goal of this graduation project is to create a research method that enables Philips:

a. to obtain rich insights on the end-users experience
b. to leverage these insights (early) in the product development process.

This research method will be based on the process of contextmapping, as this method has proven to be an appropriate method for Philips to obtain rich insights. To ensure proper implementation of this research method, it will be adjusted to the circumstances of the ARC department.

For this graduation project, the created research method will be captured in a framework. This framework will describe the general structure of this method, so it can be apply easily for future projects. Next to that it will contain guidelines for the different stages of the method to support the ARC to successfully apply the method. These guidelines will support the preparations, the creation of the sensitizing booklets, the setup of the session itself, analysing the data and leveraging the obtained insights into the product development process. To leverage the obtained insights during the product development process, the insights must be easy accessible for all other departments involved during this process. Therefore a tool will be developed during this graduation project to support the leveraging of the insights towards these departments. The fact that different type of departments will interact with this tool should be taken into account when developing it.

This graduation project will conclude with a case study to evaluate if and how the developed framework enables the ARC to obtain rich insights on the end-user experience, and whether the tool ensures a proper leveraging of these insights into the product development process. Consequentially the case study will evaluate if this results in concepts that are more usercentred.
13.2.C//RESULTS AND DELIVERABLES

A method for Philips to obtain and leverage rich insight on the end-users experience
A framework and a tool to support this
An intermediate report describing the framework and tool
An evaluated framework, tool (case study), providing suggestions for improvement
A master thesis, a presentation poster and a final presentation at the Faculty of IDE

13.2.D// PLANNING

Exploratory Research Exploration of subject (PfG) and problem identification
(4 weeks)
Specific Research Focus research stakeholders, serviceability
(2 weeks)
Preliminary Method Develop framework and tool (& presentation)
(3 weeks)
Test Prelim. Method Set-up test(s) & execution test(s) of framework and tool
(3 weeks)
Intermediate Report Write intermediate research report (& presentation)
(1 week)
Update method Adjust method according to results test
(2 weeks)
Case Study Set up case study and execution of Case Study
(4 weeks)
Master Thesis Finalise Master Thesis
(2 weeks)
Final Presentation Prepare for Final Presentation & Poster
(2 weeks)
In Total
(23 weeks)
13.3// PHILIPS DEPARTMENTS

Consumer Lifestyle
For this assignment only the Consumer Lifestyle ("CL") sector is considered. The aim of CL is to develop innovative solutions that help fulfil people’s lifestyle needs and desires. Their core values are to delight customers, to deliver great results, to develop people and to depend on each other. Their brand promise is to empower people to benefit from innovation by delivering on our brand promise of “sense and simplicity”. This brand promise aims at delivering solutions that are advanced, easy to use, and designed around the needs of their users.
The Business Units (BUs) of CL are the teams within the sector which specifically focus on developing and managing their product portfolios. They are responsible for consistently understanding our consumers better than the competitors and ensuring product innovations, aligned with the needs and desires of consumers. The BUs of CL are: Domestic Appliances; Shaving & Beauty; Health & Wellness; Television; Audio and Video Multimedia; and Peripherals and Accessories.

Domestic Appliances
This assignment will be executed for the BU Domestic Appliances (“DA”). The vision of DA is that consumers seek value-added domestic appliances from reputable brands that enhance their quality of life and well-being whilst allowing them to spend less time on domestic tasks. Their mission is to create passion with consumers and retail by translating superior consumer and retail insights into advanced and convenient product experiences in the areas of home care and personal well-being. Within Philips the department of DA is subdivided into the product categories of Beverages, Floor care, Garment care, Kitchen Appliances and Water & Air. The Innovation and Development (“I&D”) site for DA is mainly situated in Drachten. Here products for categories such as Beverages, Kitchen Appliances and Floor Care are developed.

The development of new product within Philips is accomplished by the collaboration of multidisciplinary team. These teams consist of several disciplines including the ARC. These different disciplines and their most significant functions throughout the AD and IPD process are explained here;

Project Managers/Project leader
The project managers focus on delivering complete TFC’s. Next to the TFC projects, the project managers often also facilitate IPD projects. Activities range from executing the full project including project lead or participating in it with architects and concept developers (A&CD).

The project manager is responsible for creating and ensuring approval of
• Voice of Customer tree
• Project Risk summary

The program manager ensures timely availability of mature deliverables required for the several gates. In parallel with formal gate approval, the program manager organizes the VPD and PPC milestone and invites the core project team.

13.3.A// Global Marketing Management (GMM)
The primary role of Philips the Global Marketing Management (GMM) is to deliver on the companies marketing objectives. They are responsible for managing and measuring the Philips brand and marketing capability, to provide ongoing marketing direction to CL. The GMM creates and ensures review and approval of a Global Marketing Plan, the proposed version of a 3 years strategic marketing plan and business case. They mainly focus on the 3 priorities in the company’s management agenda: growth, talent and simplicity. They are also responsible for a harmonised ways of working across other marketing functions. They manage the marketing strategy and operation by developing and supporting these strategies, competencies and the tools required. These will be used and implemented into the innovation projects by The Consumer Marketing Manager (CMM, to be explained in Appendix X).
13.3.B// **Consumer Marketing Manager (CMM)**
The Consumer Marketing Manager (CMM) for the implementation of the strategies and tools (provided by GMM) in all AD and IPD processes. During these processes they are owners for the VPH and SET requirements documents. They initiate AD and IPD projects and carry responsibility throughout the process.

13.3.C// **Consumer Marketing Intelligence (CMI)**
The main goal of the Market Intelligence Community is to support the CMM in gaining consumer and market information. They mainly facilitate market research or execute design research, often in collaboration with a number of suppliers on a global contract basis (TNS, Research International, Ipsos ASI/Vantis).

13.3.D// **Lead Engineers & NPI/Architecture & Concept Development (A&CD)**
The group architecture and concept development focuses its activities on the early concept generation and advanced development for CL. Their objectives are to define, compare and check feasibility of architecture options, select and document future product or platform architectures incl. business justification, subsystem / module requirements and interfaces. They are mainly involved in AD/TFC processes.

13.3.E// **Design**
Philips Design is responsibility orchestrating a competitive, consistent, attractive and distinctive design of the Philips brand proposition across all market sectors and touch points. They secure the creative direction of the company’s brand design identity so that consumers recognize and experience the company as a single entity. Their aim is to ensure a consistent brand identity and experience across all of the touch points of the Philips brand. In order to do so Philips Design offers a full range of design services by delivering Programs, Projects and Consultancy in 3 different Value Propositions; Design Exploration & Innovation, Design Strategy & Planning and Design Realization of products, communication materials, interfaces and solutions for internet & new media. Within Philips they are mainly involved in the process during the realization phase of innovation processes, mainly focusing on the finalization of the appearance.

13.3.F// **Application Researcher (ARC)**
See Chapter 3.1.C

13.3.G// **Quality (QPL)**
Not relevant for this project

13.3.H// **Purchase**
Not relevant for this project
13.4// OBTAIN AND LEVERAGE

Before a project officially kicks off several steps have already been taken by Global Marketing Management (“GMM”), Consumer Marketing Management (“CMM”) and Consumer and Marketing Intelligence (“CMI”). CMI has conducted several researches to obtain general knowledge on the consumers of Philips and investigates the market. This knowledge serves as general input for several projects. With this input GMM then formulates a global marketing plan, based on the strategies set to enable the optimisation of the BU- and category project portfolio. This plan consists of a three year strategic marketing plan and a one year activation plan for a product development project. Based on the global marketing plan, CMM will write a commercial brief that provides the formal basis for a new project, outlining its scope and main ideas. The commercial brief defines the specific target audience, the product category, and the project’s objective.

13.4.A// Analysis

CMM will then define what information is already available and determines the knowledge gaps that should still be filled. The missing information can be obtained via several researches. CMI often support by carry out or outsourcing these researches.

Market

To get a better understanding of the developments in the relevant market CMI may support the general analysis with extensive research on a specific market. A clear overview on the competitive environment should be generated during this stage. CMI can support by providing information about what is currently happening or available in the market and what the most relevant (in)direct competitors are as seen from an end-user point of view.

Target group

A target group is defined as the primary group of people (buyers/end-user) for which a certain product or service is supposed to be appealing. The profile of a target group should be defined clearly to get a better understanding of the group whom the product has to fit. Within Philips the target group originates from the market segment, which is determined by GMM and CMM. A market segment (or several segments) is specified for each product category (e.g. Floor Care focuses on the “Happy Home” segment). Within this segment a more specific target group is defined, by CMM, for each product development project clarifying more specific characteristics e.g., attitude towards green products, allergies, ownership of any animals. When a clear view on the target group is obtained, it needs to be captured for continuance of the process. There are different methodologies used within Philips to describe the target group, but the most common way is by developing personas.

13.4.B// Home Visits

If the budget is sufficient (mainly for radical innovation projects), a more elaborate research of the target group is arranged. The aim of this research is to obtain more knowledge about the target group and the context in which a product is used. The outcome of such a research serves as input for the formulation of the target group and provides inspiration for the generation of end-user insights. It also aims to enhance the empathy amongst project teams towards the end-user. The research consists of 15 to 20 visits to the end-users in their home environment. CMM (often supported by MI) sets up these home-visits (also referred to as consumer safari’s, in-home visits) but ideally all members of the project team attend these visits. During these Home Visits the team members have the opportunity to take pictures and ask questions. These questions mainly concern topics such as reasoning during buying, physical environment of use, ease/troubles in use, cleaning, storage etc. (The budget needed for such a research is €1000 to €2000, participants receive about €60 each.)

13.4.C// Insight Generation Workshop

End-user insight

An end-user insight is a statement that expresses the targeted end-user unmet needs, dilemmas or aspirations. Within Philips an end-user insight is stated as follows; an end-user insight should enable Philips to make a connection with its end-user through its products. The insights should therefore address the needs and problems of these end-users and fits the
brand positioning of Philips, meaning to be “Designed Around You, Easy to Experience and Advanced”.

“A discovery about customers that enables us to establish a connection between Philips and their lives, and elicits the emotional reaction of: ‘wow, you obviously understand me!’ Good insights are clear, fresh, exciting, relevant, enduring and actionable.”

The process of creating an end-user insight is officially organised and owned by CMM, but ideally creation is done in collaboration with other disciplines. The elaborateness and depth of this insight creation process depends on the scope and budget of a project. For smaller IPD-projects, CMM will first try to identify needs/problems based on knowledge of the competitive landscape and the available information on the target group. These needs/problems are then translated into the initial end-user insights.

For AD- or bigger IPD-projects the CMM will initiate the creation of such insight by means of an insight generation workshop.

The Insight Generation Workshop is an interactive brainstorming session during which information (gathered by the different members of a project team) are presented, digested and then clustered, based on commonalities. The aim of such a workshop is to create several end-user insights. The workshop is facilitated by CMM or by an external party (when budget is sufficient). Several members of the project team will give a presentation, after which the facilitator will ask the team to write down needs, dilemmas, desires/aspirations, beliefs, insights and observation on post-its. After all presentations are done, the facilitator will help to combine related ideas, which are then clustered to create broader, overarching themes. These themes are then portrayed visually on mood boards. For each theme one picture is then be chosen, after which a key word is assigned to the theme. Then the facilitator will ask the team to extend these words into small sentences (relating to the end-user, not the product solution).

After the workshop CMM will use the themes and corresponding sentences, which come out of the workshops, to formulate end-user insights. After reporting the formulated insights back to the team and with their approval these end-user insights are then ready to submit to the end-users during a ConceptLab session.

13.4.D// ConceptLab

A ConceptLab session is executed to qualitatively review the insights with the end-users during focus groups. The aim is to confront the formulated insights with the end-user. During these sessions the insights are shared with 4 to 8 groups of end-users, each consisting of 6 to 7 people. This qualitative research is initiated by CMM and executed by CMI, often supported by an external research company such as GFK or Synovate. Ideally this confrontation is also attended by the other disciplines, involved in the project, to support their engagement towards the end-user. During these sessions the end-user insights are often rephrased for improvement according to the input of the end-users.

Insight Validation

After the end-user insights have been reviewed during the ConceptLab sessions, the insights are validated quantitatively by CMI by means of a quantitative research. The key supplier for the validation of the end-user insights within Philips is Brainjuicer. When the insights are validated quantitatively they can serve as input for the Value Proposition House.

13.4.E//Value Proposition House

The Value Proposition House (“VPH”) is a tool that supports a standardised way of representing a value proposition for the end-user. The aim of this tool is to create a solid base that will stimulate the communication of a coherent story towards the end-user. Philips provides this tool to make sure that all initiatives are new and meaningful innovations, based on a real understanding of the end-user, trends, market demands and technologies. The image on the left displays the VPH tool and the different requirements it consists of. The VPH tool starts by analysing from outside-in (green) by defining the target group, the competitive environment, and end-user insights. This should be based on the brand positioning...
(blue) of Philips, meaning to be "Designed Around You, Easy to Experience and Advanced". It then continues by analysing from the inside-out (orange), stating the end-user benefits, Reasons to Believe ("RtB’s") and discriminator.

The end-user benefits should describe the way(s) in which the proposition offers an improvement in some aspect of life or solves a problem of the end-user. The functional benefit states what the appliance or service actually does, the emotional benefit states how the target feels or what it means in their life when they experience the benefit. These two benefits are logically linked to one core idea and relate directly to the end-user insight and at least one of them needs to be distinctive and unique. The benefits can be abstracted from the input of the end-users during the ConceptLab session.

A discriminator is then determined, by combined the benefits with the benchmarking information of the quantitative research. The discriminator is what makes the proposition unique and distinctive and should have an immediate relation to the insight. It is supposed to explain the benefit from an end-user point of view and contains the essence of the added value. Thus in order to determine the discriminator the one, key compelling reason from the benefit for the target group to prefer the Philips product over the competition should be pinpointed.

The Reason to Believe ("RtB"), can then be defined, which should be the evidence why the proposition delivers on the stated discriminator. Often this is what buyers refer to when they explain their choices.

ARC
The process of creating a VPH is organised and owned by Consumer Marketing Intelligence and the ARC does not have any responsibilities in this. ARC was not involved into this process at all and normally was not invited to attend Insight Generation Workshops. And if so, mainly to share learning’s from previous products. However at present ARC is taking over many of the tasks of the CMM in this stage of the process. Their involvement in the early stages of the VPH constitution has proven to be of value. Also the I&D management is now insisting on involvement of the ARC in this stage early stage of value creation of the process.

13.4.F//Concept Validation
After all the individual elements are validated a VPH-template is composed on a one page sheet8 to provide an overview of the total concept proposal.

If the budget for a project is sufficient, this concept proposition is again validated quantitatively with the end-user. This is analysed with proper benchmarking information (thus next to the competitive environment -along with some previous products of Philips itself- as a point of reference). This validation is executed by CMI, but often outsourced to an external party (such as IPSOS). The validation involves all the core elements of the proposition – the insight, benefit, RtB’s and the discriminator. The aim is to isolate the winning proposition(s) from the set of qualitatively tested concepts. It should also provide information about the extent to which the proposition matches with the Philips brand pillars, and its overall appeal to the end-users. If the outcome of this research flags winning propositions that match the brand pillars of Philips the concept is ready to go into the next stage of the AD- or IPD-process.

13.4.G//Simplicity Experience Test
From the (relatively abstract, high-level) VPH, more specific requirements are then to be withdrawn to serve as input for product development. Within Philips’ Consumer Lifestyle, the official name for this process is Consumer Lifestyle Harmonized Requirements Development process. The purpose of this process is to generate and analyse consumer-, product- and product component requirements in order to develop products, product architectures, product platforms, product functions and know-how.

Voice of the Consumer Tree
To come to these requirements a tool has been developed called the Voice of the Consumer Tree ("VoC-Tree"). The VoC-Tree defines the Critical To Quality ("CTQ") requirements with
measurable parameters, with a clear linkage to RtB and the Discriminators of the VPH. Sometimes this tool requires extensive involvement of the end-user to accomplish the development of a requirement based on more profound definition knowledge. Apart from these occasional extensive user-tests, the end-users are not involved anymore during this stage.

ARC
In this stage ARC lists and generates user and application requirements from the VPH creation process (based on Home Visits and ConceptLab session), FCP tests, previous application tests and NPS feedback.

Simplicity Experience Tool
Within Philips a tool is developed to track the capabilities defined in the VOC tree during the innovation process, which is called the Simplicity Experience Tool ("SET"). The tool stimulates the formulation of the SET requirements from the VPH and VoC-Tree, consisting of both functional as well as a user experience requirements on the capabilities of the products, sub-systems or components. A SET-plan is then written to describe the set-up for the tests that will be executed to validate these requirements.

ARC
In this process ARC is document owner, overall responsible for content and document. ARC supports the constitution of the SET requirements with content creation as they complete the document with all inputs and copy CTQ’s from VOC tree (Functional & User Experience). They also review whether the requirements align with output from the VOC Tree and if valid targets have been defined for both User Experience and Functional requirements. ARC is also responsible for writing the SET plan.

SET-Tests
After all requirements are embedded in a product proposal the SET-Tests will be executed to verify and validate whether the requirements, specifications and brand delivery are met by the proposal. The type and scale of the SET-tests depends on the scope and budget of a project and will therefore not be explained more elaborately in this report.

ARC is responsible for the validation of both (Functional and User Experience) requirements which follows the plan. During these tests the ARC is mainly involved in the validation of the user experience requirements. The functional requirements especially the basics, are “outsources” to departments such as quality (QPL) – but always with support of ARC.

SET-Home Placement test
When the product proposal scores sufficient during the SET-Tests a set of engineering samples will be produced. These samples are then tested during a Home Placement Test ("HPT"). The aim of a HPT is to test the product experience in the most natural environment. Therefore the samples are placed at the homes of end-users and preferably delivered together with the Direction of Use ("DFU") in its final packaging. During these tests a small group of end-users is asked to use the engineering samples for four to five weeks. They receive an elaborate questionnaire along with it which they will have to fill in during the several stages of product interaction (unpacking, installation, use, cleaning etc). This questionnaire mainly gives feedback on the VPH, whether the end-user perceives the proposed RtB’s, benefits and the discriminator of the product. It also tests if the most important requirements of the CTQ’s of the VoC Tree are met, mainly concerning user experience.

When the outcome is evaluated and approved upon the Mass Volume (Ramp-up) phase is entered. Everything is prepared for the product launch, such as the marketing etc.

ARC
During this stage ARC is responsible for the HPT. They conduct the test, mainly through external parties (such as Metrixlab, GFK). The ARC is also responsible for creation of a DFU.

13.2.H//Net Promoter Score
Net Promoter Score ("NPS") is a tool to determine how likely it is that a consumer will recommend a certain product to others. The aim of NPS is to obtain feedback from the end-user about their experience with a product. The main goal of the NPS is to stimulate the continuous improvement of the product experience. Currently NPS is the most important tools for Philips, to gain information about the end-user experience, which therefore is interesting for this graduation assignment. NPS can only be measures after a product has been launched, as it uses the end-users feedback about their experience with the product. The consumer is asked the following question:

"Based on your experience with your Philips product, how likely are you to recommend it to a friend, relative or colleague?"

The NPS tool then compares the amount of promoters with the number of detractors. Promoters are consumers that are so enthusiastic about the product that they can drive growth (by increasing their own purchases and stimulating others). Detractors, on the other hand, feel dissatisfied leading to decline (by cutting back on purchases, switching to competitors and discourage others).

For Philips, the real challenge is not in the measurement, but in doing the diagnostics on how to improve these scores. They ask the consumer for the reason why they have submit a certain score in order to get more information on the end-user experience. This question is asked, as often as possible, to distils information about whether someone is actively behaving differently after a specific touch point experience (becoming aware, unpack, buy, install, first time use, prepare, process, cleaning and require service).

The NPS score is used as input for the Win Promoter Plans ("WPP"). A WPP is a report that describes a plan of action for future products to improve on user experience. This serves as input for the Improvement and Learning’s report for future projects.

ARC

The ARC will process the NPS in the Improvement & Learning’s report for future projects of which they are responsible of writing.
Figure XX: Steps applied to obtain and knowledge on the end-user and leverage in Product Development Projects of Philips.
13.5// INTERVIEW

13.5.A// Members of project team

Who:
Elise Michel Paulsen
Bas Berga
Willemijn Westendorp

Where:
ARC Drachten

When:
27 January 2010

What:
Introduction meeting CMM

Insights generation is done in several ways;
CMMer
CMMer + CMI
Workshop (Several attendance, such as ARC, Project Leader, TFC)

Input for IGW is competitive environment, Home Visit, Target group, R&D Innovations ->
technology push.

HomeVisits;

"I think that they would be more effective if they would already be linked to projects. But now
it is just about general observations which are not that effective."
Homevisit costs about 1 K it is executed by external company. The participants get 60 Euro
each. About 16 participants per visit.

Who:
Tineke Janssen
Bas Berga
Willemijn Westendorp

Where:
MI Amsterdam (IJtoren)

When:
28 January 2010

What:
Introduction meeting MI

Change: Currently there are a lot off changes going on in MI. There are less employees for
MI. There also is a shift of responsibilities towards CMM. Within MI there will be a difference
in task devisie.

Innovation intelligence will execute different researches for specifically for several projects.

Consumer intelligence will do more general research on segment (Happy Homers) for example
about materials and finishing (Leatitia).

Ria Dierks meer over design toetsing voor design concept.
Who:
Dennis van Deursen
Willemijn Westendorp

Where:
CMM Amsterdam (IJtoren)

When:
28 January 2010

What:
Introduction meeting CMM

Insight workshop; brainstorm till moodboard come out, containing visuals. These moodboards are then translated to words describing the theme. These words are then elaborated to a sentence.

Design for knowhow (century at floorcar.

Rith and Blues; More from corporate (=MI) to bussiness (=CMM)
MI will have less influence and internaly being hired to execute research to find out certain information.

"Als ik dit zo hoor dan zie ik zo voor me dat het Arc samen met MI de kartrekkers worden. En dan zouden de andere belanghebben prima erbij betrokken kunnen worden op de nuttige momenten."

Who:
Stella van de Berg
Willemijn Westendorp

Where:
Drachten

When:
10 February 2010

What:
Brainjuicer, ARC Drachten

She had executed her graduation project at Brainjuicer. This is an online marketing research company. Executing quantitative research which is quantitatively verified. Their main tool is called the mindreader: which continuously asks for an explanation why? Most important is that it is insightfull for the client. But equally as important is that its fun for the participants to participate.

ARC at Insight generation Workshop

Own experience as a attendee of an insight generation workshop. 10 people participating from different departments within Philips. CMM and MI had already provided several platform by means of moodboards (Health, Tatste etc). The group was devided into subs of 4. these groups had to brainstorm on the different platforms. These 10 people where:

a) not inspired
b) not involved
c) not enjoying themselves

"It felt like we were doing the job for the CMMer because they had already determined what it was going to be and we were just there to fill it in. As if they thought it was too much work for
them so we where asks to do the dirty work.”

“Contextmapping would be a good starting point for such an insight generation workshop. This will enable that everybody will have a profound and especially equal knowledge level. I truly believe that it will enable that all stakeholders will feel more engaged. If I where you I would indeed ask all participants of the insight generation workshop attend the contextmapping session. But apart from that provide small bits of raw video material and all diaries etc at the beginning of an insight generation workshop so those who could not attend can catch up knowledge....”

Who:
Dirk Bulsink
Willemijn Westendorp

Where:
Drachten

When:
16 February 2010

What:
Relevance and Involvement by projectteam (leader)

“I have a project team here in Drachten that I have to steer into the right direction. And currently within Philips that direction is towards the end-user. So the ARC plays an important role in our team. We work together to get the constructor s and system architect more user minded. Currently more empathy is created by the ARC through short movies of user interaction. However these movies always come to late as they are feedback movies.”

“Currently I am working on a project that is based on a very strong consumer insight. The fact that people only feel they have cleaned their floor after it is wet is really strong. And also the RtB’s really fit. This enables us to proceed with the process fast, because we are not forced to look back all the time. This is a luxury. And I believe that methods such as the contextmapping can help us to develop such strong concepts more often.”

“I think that for the members of the Drachten team, empathy is most important. Apart from me no one is involved in the early creation part. For that part inspiration is probably most relevant.”

“We use PowerPoint to communicate and share knowledge. Either as support during face-to-face meetings or to communicate over distance for example with design or something.”

Who:
Elise Michel-Paulsen
Willemijn Westendorp

Where:
Amsterdam

When:
16 February 2010

What:
Relevance and Involvement by CMM

“Tests are always more specific initiated for a project. Where else should the money come from?”
"I think it will be really interesting in the beginning of a process, when the insights are generated."

"In the past we have done HomeVisits for general purpose. Every Friday 2 people would go on a visit. This was maintained during 4 months but it was blown off because it did not provide any useful results. I think that the main problem was that people forgot to consolidate their results immediately after the Visit.

"Well if the ARC will pay for general goals, it would be great. To create several new insights that can serve as input for the roadmap. But for us the roadmap already is developed so we only get budget for a specific project. And there several characteristics are already defined for the project, so I do not think that such an open-ended method would suit this type of aim..."

"Also for the involvement; the CMI’s responsibility and capacity is decreasing. So they do not have time at all. And as a consequence we have also gotten more work to do. So I do not think that we can take responsibility for this research. But I think it will suit the ARC very well. Off course we want to be involved. I think this is really on the edge where ARC and Marketing come together so we can both benefit from the knowledge. But ARC should really be responsible for the execution of the research."

"For Lion, for example: we have already defined that it should be a high-end bagless green vacuum cleaner. That was already determined three years ago. But we have now determined that it should have an extra characteristic to serve as discriminator. Therefore we have now asked the CMI to determine what the needs are in the market. Then we visualise the benefits in moodboards which we use to discuss our ideas during HomeVisits."

"The Insight Generation Workshop are attended by about 8 people from the core project team (Design, ARC, TFC, CMI and CMM). The day goes as follows: in the morning we discuss what the needs are (based on market research and the HomeVisits). Then we define clusters/area’s. We look for tensions between different clusters. That is where the insights are (so for example (Powerful but Small)). There where we see relevant tensions we try to write insights. This is done in couples. The insights are then discussed in the team. I rewrote the insights several times with CMI. Then we send them to Synovate Research Company. And now a ConceptLab will be held to evaluate the insights. This is a focus group during which the end-user will be confronted with the insights. They can react on the insights. Based on their reactions we will rewrite the insights several times. Then the maintaining insights will be tested quantitatively by Brainjuicer."

"For the communication or sharing of knowledge we mainly use PowerPoint. Everything is done in PowerPoint here! Haha! If it is important knowledge (with consequential decisions) we plan in a face to face meeting. We come to Drachten or they come to use. And we sit down and talk. But this is almost always also supported by a PowerPoint presentation. We connect the laptop to the big television screens so it is visible for the whole team."

"For the processing of information obtained during the HomeVisits I also use PowerPoint. It is handy because it combines visuals and text easily. We put it on SharePoint to store the knowledge when needed later at night."

"For the analysis of data we use excel. I guess and some specific tools but those are to determine value from cost and risqué. The analysis of data about market and users used to be done by CMI. They use SPSS I believe. But now we have to analyse the data ourselves. I do not know how that is going to work... I have no clue!"

Who: 
Erik Smith 
Willemijn Westendorp
"I am a really special project leader. I believe the ARC. They are the experts so if they say that
the consumers want this why should I doubt that. That is also why I do not see the relevance
in attending such research. If they show me the outcome and can say this was said by this
many people and confirmed by this many people I do not see why I should doubt that...? But
attending during such researches? I hate it. It makes me feel uncomfortable. I do not know
what to do with such information because it is too vague for me! But as I said, I am special...
most project leaders seem to love to be involved in these early value creating stages.”

"I think it is dangerous to include the constructors and such types in this kind of research,
because these people do not know how to value the words of one consumer. They tend to
keep coming up with the same stories that just one consumer has said. They will see it as the
absolute through because it echoes their own opinion. I believe it is dangerous.”

“But equal to these constructers we as project leaders should just be the executers. We should
not be thinking. That is the task of the CMM. Or ARC in this case.”

“We use PowerPoint to process our work and send it to others if necessary. We also use
sharepoint for larger files or to store.”

Who:
Don Thackray
Mirjam Wouters
Willemijn Westendorp

Where:
Drachten
When:
16 February 2010

What:
Relevance and Involvement by projectteam (leader)

Don “There cannot be enough input for the Insight Generation Workshop. So I think this is
another good initiative to support the consumer intimacy within the organisation.”

Don; “The input should focus on the inspirational aspects. That is most important for this stage
of the process.”

Don; “We as design would love to be involved at this stage of the process. We are currently
also working on initiating inspirational method to serve as input for the insight generation
workshop. It is very valuable for design to be more involved in these early stages because then
we can still have a major influence on the positioning and design were as now we can only
ask for small changes which will never provide the freedom we need to deliver nice aesthetics.
Therefore we should combine forces. Together with CM and EF.”

Mirjam; “Yes, I have been working on these experience flows. These flows show real people.
They are VERY INSPIRING!! We do a lot to look into the experience of consumer. And use this
knowledge as inspiration. But it can be applied at all levels of abstraction. They are printed in
A3 so they can be hung in the office. It is now hanging at the CMM office so they can look at it all day.”

Mirjam: “We have also used the booklets to obtain information. And have made them for the HomeVisits. But to be honest no one has looked into them. We use the booklets more to obtain more knowledge about rituals rather than as a creative tool.”

Don: “We also initiate other things to get insights on the experience of consumers. Designs robes they are called. We do small provocations on you tube. Where people can react on.”

Don: “If ARC would initiate such a research we are more than happy to help and be involved. Our involvement can be indispensible for the creation of the booklets. We have experience with making them.”

Don and Mirjam: “We normally have face to face meetings to share information. Because we are all in one room we just ask our “neighbour”. But in the project team it is often done on SharePoint. Yes SharePoint. Or we email the drawings in pdf. But if it is something important and we need to make decisions we stick to the face-to-face meetings.”

Don and Mirjam: “For analysis we do not have that many tools. We just make for example experience flows based on knowledge or inspired by consumers. It is more qualitative so no specific tools.”

Who:
Janine
Stella van der Berg
Willemijn Westendorp

Where:
Drachten

When:
02 April 2010

What:
To be developed tool and current tools applied

“Currently we use SPSS, Eye question online tool and excel to analyse data. For data of HomeVisits we do not have a standard to analyse of such qualitative knowledge. We process it in PowerPoint if required by the CMM but even that is not frequent. For sharing of knowledge we use online, yes, for short messages and notifications. SharePoint is used for bigger files but they go without any deliberation or message. It is more for storage. If we want to discuss something and make sure that everybody will actually read the info we use PowerPoint presentations which we email. We rarely make telephone calls, that only for short alignment before meeting or urgent notifications. Domino docs are another network hard disc where we can store information. When we generate a large amount of data this is often copied to word which we compact into a report.”

13.5.2// Participants of the session

Pilot of pilot:

Bert Westendorp: “i only saw the images till later. I wish I saw them earlier because they kind of come in handy to answer the questions.”

Lous Bijl: “I really do not like the fact that I see all the assignment at ones. They all look the same and they confuse me. The lines separate them. I get that but it seems like a big mess
to me.”

Arie Bijl: “I feel like I am being forced to do something which I have never done before. I am not good at this stuff and it feels unnatural. I have not used the images either. They do not fit.” [about the map]

Mvr. Bom: “I like the looks of the booklet. They look like a little diary. It really triggered me to make it look nice. I tried to do the best I could to make them look equally nice. And the images in the back were nice. The map does not look that way. I do not know where to start reading. It might also be my fold because I started unfolding it upside down but I could not undo my mistake... sorry!”

Marielle Weidema: “If I see the booklet I get enthusiastic and think. Let’s fill this in. It looks nice. I am curious what it is about. The sheet does not do that for me. I Do not feel appealed to start working with it. It is all stuffed together on this little sheet. And I do not feel like I have sufficient space to answer the questions asked. The booklet looks like fun to fill it in.”

Pilot:

Trijnie Kol: “The booklet has a creative appearance and looks is easy-viewable. And it is surprising. Each time you flip the pages some nice new assignment comes up. And the examples really make it easier.”

“I would not want to change anything.”

Erich Bouwman: “I sometimes still had the feeling of; what would they like to see? What do they mean? I experienced difficulties to answer the questions but they also made me think about the things I do. I liked filling in the booklets, I loved the images in the back and drawings that served as an example. I experienced difficulties to answer the questions but they also made me think about the things I do. I liked filling in the booklets, I loved the images in the back and drawings that served as an example.”

Session one:  
To be added (not in yet)

Session two:  
To be added (not in yet)
13.5.3// Attendees Workshop

The questionnaires (CONTEXTQUESTionnaires) were send out to the attendees of the workshop by email.

Myrna Grol (Consumer Marketing Manager)

How did you feel while doing the analysis (during the morning session)?

Was nice to do! especially seeing the little movies of the focus groups was interesting and making your personal page, also the variety of consumer input (collage, focus groups, diary etc.)

Did you like being involved in the analysis? Why (not)?

Yes, always nice to be in contact with consumers! But also ‘working’ with the materials, selecting the most interesting parts etc. ensures that you are more involved and think a level deeper than if you just read a report for example

To what extend did the tools used during the workshop help you to get inspired? Please compare with normal process (home visits + insight workshop).

Of course doing yourself home visits and being present at focus groups is always the nicest! but this is more efficient. If you can not attend the focus groups or do the home visits, this is a nice alternative. Also the diaries and collage of the people are inspiring.

It is nice that we could make our own personal collage and in the end you can create your own personal page, which makes it very clear which are your main take-outs

Where you inspired by the poster or analysis of other the other attendees of the workshop? Why (not)? How?

Yes, interesting to see what others select as the most important take-outs, to see if it is different than yours, it is a good starting point for discussion

Write down two learnings about the experience of end-user that you have obtained during the workshop:

Some new things came up like weather behavior and the ‘threshold’ to start cleaning

What do you think about the usefulness of the website? Please add example.

Main advantage is that you are more involved/stronger interaction with the consumer, normally you just listen to someone presenting the consumer feedback, now you really have to do something with the consumer input.

Do you think ‘insights’ have potential for the future? Which one(s)? Why (not)?

As we already did so much market research for floor care, it is really difficult to come up with really new things, maybe the more emotional ones, which are more focused on the end result on a higher level, as this fits with our positioning and competition is not using this approach

Do think this method is useful for the future? Why (not)? How do you think it should be applied?

Yes, useful for the future, participants are more involved with the consumer by doing it this way, more inspired and creative which hopefully leads to better output. And it is more efficient to do it this way. It saves time and money. Disadvantage is that people are less in ‘real contact’ with the consumer as with home visits and focus groups. Being present at focus groups/home visits is still very valuable as you see the body
language and just seeing a small movie is more superficial/ fast. But of course not everyone can attend focusgroups or home visits.

It is a good way to get people prepared for the workshop, they can do this whenever they like, when they have the time/ feel like it.

Other feedback? (Can be about anything, website, methodology, facilitation, data, etc)
Good explanation of the workshop (what will be the output, why we are doing this etc.) and the website (what you can expect, what kind of tasks do you have to do), is very important. That was a bit vague in the beginning.

But good luck with everything, it was very nice and interesting to do !

**Richard Jousma (PreDeveloper)**

How did you feel while doing the analysis (during the morning session)?
At the beginning I had no idea what the end goal was of the whole session. So I felt a bit uncertain do I do the right things?

Did you like being involved in the analysis? Why (not)?
Yes definitely. I help the come in the mood. Normally we read it and that’s it.

To what extend did the tools used during the workshop help you to get inspired? Please compare with normal process (home visits + insight workshop).

It helps you to accumulate the data in more detail than an ordinary workshop.

Where you inspired by the poster or analysis of other the other attendees of the workshop? Why (not)? How?

Not at the workshop, we were more focused on the technical challenges of the software.

Write down two learnings about the experience of end-user that you have obtained during the workshop:

Household cleaning is more a mindset and has everything to do with mood. Household cleaning gives a good feeling if you have started (similar to sports).

What do you think about the usefulness of the website? Please add example.
At this moment I’m hesitated because it not working without a hassle. I would also propose to do this as homework and not during the workshop.

Do you think ‘insights’ have potential for the future? Which one(s)? Why (not)?
Question not clear to me...

Do think this method is useful for the future? Why (not)? How do you think it should be applied?

Yes I think it has some potential but only if the system is working (almost) without any technical problems. As said before it helps you to get into the mood and listen very carefully to the consumer.
Other feedback? (Can be about anything, website, methodology, facilitation, data, etc)

**Bas Berga (Application Researcher, ARC)**

How did you feel while doing the analysis (during the morning session)?

De begin van de sessie was enigzins onwennig; nieuw programma; veel analyse opdrachten en licht chaotisch door software bugs; toch gaf de tool duidelijk houvast (rode draad) om de data te analyseren. Na het zien van de eerste filmpjes groeide het enthoasisme en zag je de groeps discussies al starten; wat dat betreft heeft het individueel analyseren in een groep‘ook zijn voordelen!

Did you like being involved in the analysis? Why (not)?

In het begin voelde ik mij persoonlijk verantwoordelijk voor de activiteiten aangezien ik officieel je begeleider ben. Na de eerste 10 minuten nam je volledig de leiding waardoor ik met veel plezier mijn data heb kunnen analyseren.

To what extend did the tools used during the workshop help you to get inspired? Please compare with normal process (home visits + insight workshop).

De C&C tool geeft mij meer inzicht in de “echte needs en irritations”die niet zichtbaar zijn tijdens een home visit. De kans dat de “drempel”concept gevonden zou worden tijdens het normale process lijkt me niet groot.

Where you inspired by the poster or analysis of other attendees during the workshop? Why (not)? How?

Tuurlijk! Super interessant om de inzichten van de andere participanten aan te horen. Met name de presentatie opdrachten waren zeer nuttig aangezien hier de verbanden tussen de verhalen van de verschillende consumenten gevormd konden worden!

Write down two learnings about the experience of end-user that you have obtained during the workshop:

Dat de drempel een van de grootste irritaties is van consumenten en dat de activiteit zelf niet zeer vervelend is en dat dit vergelijkbaar is met sporten!
Dat consumenten zicht zelf proberen te motiveren voor stofzuigen door te denken aan het resultaat; ter voorbereiding aan visite.

What do you think about the usefulness of the website? Please add example.

Super, maar kan hier en daar zeker verbeterd worden; hiërarchie is niet zeer duidelijk en wanneer een scherm wordt afgesloten wordt vaak een niveau te hoog terug gelinkt. Maar toch vind ik het super knal dat je in zon korte zijn een website hebt kunnen opzetten met zoveel functionaliteit zoals filmpjes kijken, knippen, plakken ed!

Do you think ‘insights’ have potential for the future? Which one(s)? Why (not)?

Zeker!! Motivatie, drempel, weer en belonging/voldoening

Do think this method is useful for the future? Why (not)? How do you think it should be applied?

Ik hoop het zeker; denk dat je de juiste mensen enthousiast hebt gemaakt; nu is het aan ons.
om de snelheid er in te houden en ditz o snel mogelijk voor het eerste de beste (FloorCare) project toe te passen.

Other feedback? (Can be about anything, website, methodology, facilitation, data, etc)

Ik hoop dat je zo snel mogelijk zelf binnen Philips met deze tool aan de slag kan! Wat presentaties en workshops mag je wat mij betreft nog wel duidelijker de leiding nemen; jij bepaald wat er gebeurd! Super geslaagde pilot!

Rienk Kentie (Consumer Marketing Manager)

How did you feel while doing the analysis (during the morning session)?

Overall a good session, small improvements possible in the structure of the system and the explanation (e.g. one ten comments possible for ALL movies)

Did you like being involved in the analysis? Why (not)?

Yes, I think it is good to get the direct feedback from consumers and being involved in that. I think it is good to only see movies of a selected number of consumers (as it was now), but it would be worth to go through all books/diaries that they made (takes little time, maybe 1-2 min per book – but gives a broader view)

To what extend did the tools used during the workshop help you to get inspired? Please compare with normal process (home visits + insight workshop).

Because information is ‘prepared’ it is more efficient, however, you don’t have the possibility of asking additional questions. I think therefore this approach is more suitable for a ‘general’ floor care U&A, and less for specific concept/insight development.

Where you inspired by the poster or analysis of other attendees during the workshop? Why (not)? How?

Not specifically, I found the poster/collage the least useful/inspiring. The diaries and movie were more useful for me.

Write down two learnings about the experience of end-user that you have obtained during the workshop:
I can’t recall any specific learnings. I think it nothing really new came out for me. As mentioned, I believe it is more useful to get a general view on cleaning.

What do you think about the usefulness of the website? Please add example.
It is very useful to have all information in one place. The structure could be improved and also the functionality of the ‘poster paster’.

Do you think ‘insights’ have potential for the future? Which one(s)? Why (not)?
I think nothing really new/exiting came out of the workshop

Do think this method is useful for the future? Why (not)? How do you think it should be applied?
I think it is particularly useful for people new to the category and people that generally do not talk a lot to consumers. Once participated in several home visit/concept labs, it does not add a lot of new information.

Other feedback? (Can be about anything, website, methodology, facilitation, data, etc)

• Overall a positive feeling, but I think (as mentioned) the concept is more useful for general U&A, not for specific insight/concept development, due to the lack of interaction with the consumer (only one-way).
• Website can be improved on functionality and structure.
• This questionnaire could be set-up a little more professional (lay-out – e.g. text boxes / online)
• Give a deadline for the questionnaire (sorry for being late...)
13.6// DECISIONS

This Appendix describes these decisions, followed by their most relevant considerations (in grey). These consideration refer to the information described in the chapters Philips and User Experience research. References are made to the requirements and preceding decisions (referred to as "Req.x" and "Dec. x"). After the general decisions are listed, the decisions will be stated in the sequence of the six steps defined for the conventional contextmapping method.

GENERAL

1\ The ARC will be superintendent of this research method.
There should be one department superintendent of this research method (Req. 4b). In the current process within Philips, the Consumer Marketing Manager ("CMM") is responsible for the total Early Value Creation phase. They are supported by Consumer and Market Intelligence ("CMI") in the execution of researches. However from multiple interviews it became clear that both CMM and CMI do not have the time or capacity to be responsible of this research method. The focus of the Application Research Centre ("ARC") is to represent the end-user during several stages of the innovation process. The recently launched Accelerate program stimulates the ARC to be more actively involved in the Early Value Creation stage. The responsibility of the contextmapping method provides a good opportunity for the ARC to become more actively involved in this phase.

2\ Besides ARC, also CMI or an external company should be able to support the execution of the research.
It is desirable that in case the ARC does not have enough time or when an external view/approached is needed, the ARC can request extensive support from other parties. In the current Early Value Creation process, researches are mainly executed by CMI. In case of a radical innovation project or when the research is executed outside of the Netherlands an external company is approached (often this is Synovate). Members of CMI indicated in several interviews to be willing to support the execution of the research if needed. Especially when an external research company will be involved, CMI prefers that they are the main contact person.

PREPARATION

3\ The project brief will serve as input for the preparation stage.
Within contextmapping a good preparation consists of a clearly defined goal, targetgroup and planning of the research. This is time consuming but relevant as it influences the richness of the obtained knowledge (Req. 1a). In the current process of Philips, the project brief already describes the goal of the project and the targetgroup. Furthermore it provides a detailed planning and the purpose of the tests. One of the requirements is to merge steps of the adjusted method with the existing stages of the current process of Philips as much as possible, to stimulate acceptance and save time (Req. 3a). For this reason, the project brief will be used as input for the preparation stage.

4\ This stage should stimulate the approach of all stakeholders of the contextmapping research.
In an ideal situation, the different stakeholders (participants, team member’s project, external support) would be actively involved from the beginning of the preparation stage to ensure that they are fully engaged to the research. However for the project team members this is not feasible, due to the limited amount of time (Req. 2b) and the importance of the project members’ involvement in later stages (Req. 2a). Therefore, the project team members should only be informed of the research at this preparation stage. On the other hand, the participants and external company can be actively involved at this stage. The CookBook guide (Req. 4a) should support the different approaches of these stakeholders by incorporating this action already in this stage of the process and providing supporting tools (Req. 4c).

5\ The CookBook will extensively support the development of a detailed and feasible planning for the research.
Contextmapping is a time-consuming method (Req. 2c). However at Philips time is a valuable asset (Req. 3) and therefore it is a necessity that for this assignment the method should be made as time-efficient as possible (Req. 3). Supporting the development of a detailed planning
should ensure that the research is completed within the defined deadlines (Req. 4c).

SENSITISING
6\ A guideline will be included in the CookBook to enable that apart from the responsible ARC, other parties such as CMI, the design departments or an external company can develop the sensitising packages.
Recent research has indicated that all members of a project team should be involved in the development of the sensitising packages to enhance their engagement. However, when looking at the limited amount of time (Req.2b) and the importance of the project members’ involvement during the other stages (Req.2a), the involvement of all members of the project team will not be realizable. During an interview with two designers it became clear that they are willing to help in case creative design skills are required. Next to that, it is also desirable that in case the ARC does not have enough time or when an external view/approached is desired at this stage, it can also be executed by for example the CMI or an external company (Dec. 2).
7\ The sensitising of the participants for the contextmapping session will be accomplished by means of a paper workbooklet version of the packages.
Sensitising packages have several appearances. Usually it is a paper printed A5sized booklet that contains several tasks which are expressive of nature aiming to trigger creativity (in the subsequent session stage). The ARC has already worked with the printed booklets as well as A6 sized maps. The fact that they are already familiar with this type of physical sensitising will increase their acceptance towards this type (Req. 3a) (Sleeswijk Visser, 2009).
Recent researches have investigated the opportunities of sensitising on internet or digital inspiration tools (respectively M.C. Kaptein, 2008; and I.Keller, 2005). An important advantage for this digital application would be the benefit of ease in storage and distribution of results amongst the different members of the project team (Req. 2d). The biggest disadvantage remains the possible lack in expressive freedom and inability of bodily interaction. The development of such a digital tool to accomplish the expressive tasks for sensitizing will require extensive research and money to be developed successfully, and is out of scope for this study.
8\ A standard layout of the sensitising packages will be provided in PowerPoint. This layout will be developed in InDesign, after which it will be converted into a PowerPoint file (the original InDesign file will also be supplied).
The appearance of the packages should stimulate the interest of the participants, activating them to think extensively about the topic and become inspired (Sanders, 2002). However ARC or other departments within Philips (except for the design department) are not used to advert to the attractive appearances, next to the fact that it also consumes a lot of time (Req. 3). Therefore a standard layout should be provided to support the creation of an attractive package (Req. 4c). Furthermore the layout should enable that it can be easily filled with content by the ARC, supporting departments or external companies (Req. 3).
InDesign is a software application is specifically developed to create and layout publications, posters, and print media. The program enables an unrestrained freedom in developing the layout. However, within Philips this program is not used very often. Amongst the members of the ARC only few know how to handle this program. PowerPoint however is commonly used within Philips to develop files that combine visual and verbal information. In comparison to InDesign, PowerPoint does not provide the extensive freedom to develop such a visually attractive layout. It is most often used to develop digital slideshows to support (oral) presentations but also printable posters are created using PowerPoint. During several interviews, members of the project teams coming from different departments confirmed to be comfortable working with PowerPoint. For this reason the layout will be developed in InDesign and then converted to PowerPoint. This way it can be easily filled with content by the members of different project teams.
The original layout in InDesign should also be supplied in case the project requires an adjusted layout. The person that will create the package should be accommodated with the required knowledge to do so properly (Req. 4c). Therefore the CookBook will contain tips, tricks and an example of a completed package.
9\ The layout will be provided for the development of both A5sized booklets as well as for A6sized foldable maps. The CookBook will stress the added value to use the booklet above the maps.
The most commonly applied form of paper version sensitising packages are A5 sized booklets.
Within Philips they have already made these types of booklets, as well as A6 sized maps. To stimulate acceptance within the organisation (Req. 3a) (Sleeswijk Visser 2009) one of these types should be applied.

The advantage of the booklets is that they have a more neat and complete appearance than the maps, which will enhance the engagement of the participants. A short questionnaire amongst ten participants (executed during this graduation research) confirmed that they were more dedicated to fill in the booklets than the maps. They indicated that the booklets look nicer and more creative, and give a more personal and private feeling, "as if it is my own diary." Another advantage of the booklets is that the tasks are divided over the pages in such a way that one page is supposed to be filled in per day. This is beneficial because it is more accessible for the participants then when they are exposed to all tasks at once (which is the case for the maps). These two advantages of the booklets will result in an enhanced contribution of the participants. A major disadvantage of the booklets is that it takes more time to develop a booklet than a map. The booklets require time-consuming cutting, folding and stapling of the leaflets in oppose to the map which only needs to be folded. This disadvantage should be taken into consideration as time-efficiency is an important requirement for the adjusted method (Req. 3).

Taken all of this into consideration, it has been decided that both the layout for the booklet and the map will be provided. The person developing the sensitizing packages should however be aware of the value-added by the booklets and only apply the map when time is exceptionally rare. This will be communicated in the guidelines of the sensitizing chapter in the CookBook guide.

SESSION

10 One person will facilitate the session with the participants. This facilitator will either be an ARCer or another member of the team (more experienced in facilitation).

A good facilitator can contribute to the richness of the obtained data by asking the right questions and creating the right atmosphere. The CookBook will support the facilitator with tips, tricks, general setup for the session and an example of a completed session. The CookBook will also emphasise the added value of a professional facilitator and encourage the approach of one for the facilitation of these sessions.

Preferably, a contextmapping session is led by a professional facilitator. This will enable that the right questions are asked and an informal environment is created during the session. The support of a professional facilitator brings additional costs, which do not always fit in budget of €2000 (Req. 3c). Therefore a person from the ARC or another member of the project team (more experienced in facilitation) should facilitate the session. This person should be supported in facilitating this session. Therefore the CookBook guideline should incorporate tips, tricks, a general setup for the session and an example of a completed session.

11 All members of the project team will be invited to attend the session on a voluntary base. The members present (and not involved in the act of facilitating) will follow the session from the observation room.

For the HomeVisits in the current process of Philips, all team members are invited to attend; little to no preparation is required from their side. If they have time to attend (they are not always able to attend, due to lack in time), they are expected to actively participate in the research, by asking questions and taking pictures of the participants.

The attendance of the project team, during the session of the contextmapping research will greatly enhance the empathy towards the end-users and engagement towards the project itself. However, when looking at the limited amount of time and the importance of the project members’ involvement during the other stages of the contextmapping method (Req. 2a), the involvement of all members of the project team will not be realizable. Next to that, not too many people should be prominently present during the session because this will cause that the participants are distracted or intimidated. Therefore the members of the project team should be invited to follow the session from the observation room (on a voluntary basis).

ANALYSIS

12 An interactive analysis tool will be developed to stimulate and guide the project team to be actively involved in the sense making of the obtained data.

Ownership of the results is promoted (engagement) and a deep understanding of the users
attained (empathy) (Req. 2a), by ensuring that the receivers of information take an active role in the process of sense-making. In the current process of Philips, project teams are already actively involved in the gathering and analysis of this type of contextual information themselves, during the so-called HomeVisits. The fact that the project teams are already actively involved in this stage implies that they would be capable of the sense making sense of the obtained data. However literature warns that not all members of a project team are skilful researchers, nor do they have enough time (Req. 3b) to analyze the data from scratch. Therefore they should be supported and guided in the sense-making of the information by a tool (Req. 4c).

Next to engagement and empathy, inspiration amongst the team members is another requirement that is important for leveraging the user experience knowledge in the product development process (Req. 2). Interactivity facilitates browsing, organising, and selecting the information in such a way that they can use it how they prefer themselves. The feeling of freedom and responsibility that this brings is an important condition for inspiring the project team members. Therefore this tool should be interactive.

The analysis tool will digitally support the interaction with the obtained data. To support the sense making of the obtained knowledge, both digital and analogue tools are currently applied.

Traditional analogue tools have three advantages in oppose to digital tools:
1. Interaction (fluent and direct)
2. Usability (allows improvisation and readily available materials)
3. Aesthetics (more real and personal)

Digital tools have three advantages in oppose to analogue tools:
1. Flexibility in (re-)use (independent of location)
2. Efficiency in sharing of knowledge (especially when supplied online)
3. Stimulates the storage of knowledge

Interviews with several members of project teams indicated that they see it as a major advantage if the tool would enable them to capture and store the analysed qualitative data. As a result one of the requirements is that the tool should enable storage of data/knowledge from this research (Req. 2, 2d).

Currently analysis and sharing of research data within Philips is mainly done digitally with support programs (SPSS, Excell, Word, PowerPoint, email, SharePoint, face-to-face meetings). To enhance acceptance of the tool amongst the different members of the project team, it should fit the current approach of sense making of knowledge within the company (Req. 3a). This would imply that the newly developed tool should be in a digital format.

Concluding, data/knowledge should be obtained and analysed digitally because it corresponds with the currently applied tools within Philips (Req. 4d) and complies best with the requirement to store the obtained and analysed knowledge.

The analysis tool will be accessible online. Making the digital tool online accessible will bring two important advantages; first, it will enable the project team members to react on one another. Secondly, it will store intermediate results of analysis and activities during the creativity workshop. This will support the creation of a shared image of the end-user (Req. 2e).

The tool will offer structured assignments, where members of the project team are confronted with raw data. Raw data provides freedom of interpretation which stimulates engagement. On the other hand, guiding interpretations provides direction and therefore stimulates ideation and alignment in argumentation in the project teams (see Chapter contextmapping).

Currently, members of the project teams are already involved in the sense making of raw data (Req. 4d). The tool should only provide raw data, to stimulate ownership of the obtained insights by the team members. The team members should be supported when interpreting the raw data, to ensure that they will analyse the data in an efficient way and stimulate that the richness of the data is maintained. This support will be provided through several (easy to follow) assignments.

The tool will provide video records from the session as well as the artefacts made before and during the session.

Raw data of a contextmapping method consists of records of the session and the artefacts made by the participants before and during the sessions. According to Graver et al., the returned
booklets are not designed to be extensively analysed or summarized. Other practitioners (e.g., Mattelmaki) advocate the value of the returned materials and interpretations of the team in order to support team communication. The adjusted method should stimulate communication and sharing of knowledge (Req. 2e). Therefore the artefacts should also be incorporated in the data analysis.

The members of the team will be presented with the real individual people that participated in the session and a task will be proposed where they will have to analyse one of those participants. Information about real individual people support stakeholders to make references to the individual users. This will enable them to connect with the users more easily become inspired because it stimulates the imagination. (See chapter contextmapping, Req. 2).

The tool will stimulate that the team members address their own experience. When team members are stimulated to become more aware of their own experiences, they are better able to connect and relate to the users’ experiences (Sleeswijk Visser 2009). This leads to a deeper understanding of the users’ experiences (Req. 2). Therefore one of the tasks in the analysis tool should stimulate the project members to address their own experience.

The layout of the tool will be similar to the corporate layout of other knowledge tools applied within Philips and stimulate creativity. Interviews with the different members of the team indicated that the tool in the corporate style was taken much more serious. A small test was executed that asked 10 people within Philips to evaluate two different layout versions of the tool. One layout was more playful, were the other corresponded with the corporate style. They all indicated to be more likely to accomplish all tasks of the "official version" which layout was in the corporate style. They are familiar with the layout of the "halfmoon-shaped" figures and acknowledge the importance of accomplishing all tasks. Therefore the tools’ layout will be equal to the corporate style of Philips. The layout always comes with several points of recognition in appearance applied in on- as well as offline tools as displayed below, in image 13.6.2 below.
Image 13.6.1; The characteristics of layouts for tools applied within Philips. In this case it is a screenshot of the online “Cookbook” for the development of a Value Proposition House.

However for this tool it is important to evoke creativity amongst the members of the project team and encourage them to engage with their users. Therefore studies of possible application of these two qualities have been executed resulting in the layout displayed in image 13.6.2.
20\ A week time will be provided for the project members to immerse into the knowledge and allowing the knowledge to incubate.
Understanding rich experience knowledge needs immersion time, because deeper insights are only concealed and perceived after a certain time of incubation. Next to that, time should be planned in for incubation in between immersion and ideation, because deep and intense immersion detracts from inspiration (See Chapter contextmapping). However one of the most important requirements for the adjusted method is the reduction in time spend by the members of the team (Req.3). Therefore the members should be enabled to spread their work over several days to enable immersion and provided with some days in between the delivery of the analysis and the ideation in a group.

SHARING
21\ This stage will support the project team in sharing their individual findings.
In the original contextmapping method this stage is meant to create awareness amongst the different members of the project teams for their own experiences, the users’ experiences and the topic of investigation. Now that this is already covered by the tool during the analysis have been executed by the members of the project team, it is not necessary anymore to communicate this knowledge extensively to the project team. Meanwhile it will be important for the different project team members to share their individual findings amongst the team in order to align (Req. 2e). Therefore alignment amongst the members should be included in this adjusted method.
22\ The alignment of knowledge will be included during the face-to-face meeting of the next phase.
In the current process of Philips aligning knowledge and opinions is usually done by means of face to face meetings. Because it is important to fit the adjusted method to the current approach of Philips (Req. 4d) this should be done equally for the adjusted contextmapping method. Because the next stage of the adjusted method will be covered extensively by a face-to-face meeting this will incorporated in the next phase (Req. 3a).

CONCEPTUALISATION
23\ Ideation will be done both individually by the members of the project team as well as in the project team.
The solution to promoting creativity in teams requires approaches that combine the benefits of individual and group creativity (see chapter contextmapping).
Group creativity have the following benefits (in oppose to individual creativity):
- Social interaction can feel rewarding (Req. 2)
- The exposure to other ideas enables association
- Multidisciplinary perspective for complex solutions
- Stimulates alignment (Req. 2e)
Individual creativity has the following benefits (in oppose to group ideation):
- Enhancement of time efficiency (Req. 3)
- Opportunity to state what first pops up their minds
Because the alignment amongst the different members of the team is required, it is necessary to generate ideas in a group. This will also provide the opportunity to share knowledge obtained during the analysis (Dec. 21). However individual creativity is more efficient which also is an important requirement. Therefore a combination of individual and group creativity is desired.
24\ The tool will support the individual ideation during the immersion into the data. Ideas arise while immersing into data. Therefore the individual ideation should be stimulated during the immersion by the members of the project team into the data. This can be offered by the tool during the analysis stage (Req. 4c).
25\ The divergence, convergence and alignment within the team for the adjusted method will be combined with the Insight Generation Workshop.
Currently, alignment and generation of new ideas is done during a face-to-face group sessions, called Insight Generation Workshops within Philips. It is attended by all members of the project team. The workshop lasts all day. The morning usually is filled with diverging assignments after which the afternoon is detained for convergence. The group alignment for the adjusted method should also be combined with the Insight Generation Workshop to enhance acceptance
The tool will support the Workshop with an organisational structure. Organisational techniques have a positive effect on the creativity in groups and reduce the number of alternatives to be evaluated after the idea-generation stage. The tool can impose an organisational structure to support alignment and ideation during the workshop (Req. 4c). The CookBook guide will describe the role of the facilitator during the Workshop. Also the leading by a group facilitator contributes to the effectiveness of creativity in a group (see chapter contextmapping). In the current process of Philips the Insight Generation Workshop is often structured and facilitated by one of the team members (Req. 4d). Therefore the adjusted method should also enable that it can be facilitated by one of the project team members in a proper way.
13.7\\ WEBSITE STUDIES

This is Dirk:

Welcome Rita,
The following 10 steps will guide you through the analysis of .................
More guidance in the beginning of the analysis, while immersing in the data...

And then more freedom in the end, when evaluating and ideation should be supported...

Image 6.6: Studies for the layout for this website. Mainly experimenting on the stimulation of inspiration and empathy within the proposed canvas of the standard Philips layout.
Evaluate item:

Visiemaat: TROTS

Je weet toch dat je GOED BEZIG bent...

"Die warme lucht die uit zo'n sto- zuiger komt die lijkt me ook ONGEZOND." "Ja en het stinkt?" "Ik gebruik daar altijd warmwater voor; strooie je van te voren even op de vloer..." "Ja maar toch het kan toch niet goed zijn voor een mens..."

Loodzwaar werk!

Personal Worksheet of Silvia: Noodzakelijk toewijden

Select top 10 item:

Select 10 items which (according to you) are most relevant for the common worksheet. The items in this worksheet can be viewed by the rest of the team and will serve as support during the Insight Generation Workshop.

You can do this by click and drag of the items to the Common Worksheet icon (displayed here on the right).

The number in red indicates the amount selected.

Muziek

"Ja ik kan echt niet rustig koffie gaan drinken voordat die vloer schoon is. Voor mij is het echt een heerlijkheid."
13.8// RESULTS SENSITISING

This Appendix displays the results of the sensitising stage.
13.9 // RESULTS SESSION

This Appendix displays the artefacts made during the session stage.
13.9// RESULTS ANALYSIS

This Appendix displays the artefacts made during the digital analysis stage.

Poster Bas Berga (ARC)

Poster Myrna Grol (CMI)
Poster Richard Jousma (Pre-Developer)
13.10 // RESULTS WORKSHOP
This Appendix displays the artefacts made during the digital analysis stage.

Dirk Bakker zegt...
als het regent heb je gigantisch veel meer werk van het schoonmaken van je huis - en je hebt minder zin omdat de zon niet schijnt.
Je loopt meer naar binnen toe dus je moet meer dweilen.
Als de zon schijnt, ben je meer buiten en heb je minder inloop waardoor je vloer minder vies wordt.

Bij ons zijn nogal wat mensen allergisch, wordt tijd om schoon te maken is iemand er last van krijgt.

Ik moet mezelf motiveren voor het schoonmaken... ik vertel mijzelf dat ik het doe voor een goed doel en tijd valt achteraf vaak mee!

Ik zet altijd eerst een sopie klaar anders kan ik me nog bedenken....

Visitekaartje

Mijn moeder had het vroeger altijd strict gepland, vroeger had ze een systeem; dan moest ze wel.
Weer

Dirk Bakker zegt...

"...als het regent en dat soort dingen heb je gigantisch veel meer werk van het schoonmaken van je huis - en je hebt minder zin omdat de zon niet schijnt.

Je loopt meer naar binnen toe dus je moet meer dweilen.

Als de zon schijnt ben je meer buiten en heb je minder inloop waardoor je vroeger minder vies wordt."

7/23/10

Drempel

"Ik moet mezelf motiveren voor het schoonmaken...ik vertel mijzelf dat ik het doe voor een goed doel en tijd valt achteraf vaak mee!"

"Maar als je eenmaal over die drempel bent dan wil je het ook wel goed doen. En dan gaat het ook wel lekker!!"

Je wordt je dan ook bewuster van het feit dat schoonmaken toch ook wel weer zin heeft...
Stofzuigen is net als Sporten...

Uiteindelijk geeft het een voldaan gevoel maar je moet even over die drempel...

Sport motivatie tip 1: Plan vooruit

Sport motivatie tip 2: **Maak van sport een gewoonte**

Sport motivatie tip 3: Houd een dagboek bij

Sport motivatie tip 4: Stel duidelijke **doelen**

Sport motivatie tip 5: Wees creatief

Sport motivatie tip 6: Wees flexibel

Sport motivatie tip 7: **Samen met anderen**

Sport motivatie tip 8: Beloon **jezelf**

MarieClaire: “Als je dan toch het huis gestofzuigd hebt, is het helemaal als je ook nog even mocht. En jauwel: ook dan draait de verbrandingsmotor op volle toeren. Zet de muziek aan en het kuisje is helemaal zo erg nog niet. En wat zal je je daarna nog wel willen.”

**Gezond**

“Inspanning geeft altijd een voldaan gevoel. Dat is met sporten ook zo! Als je lekker gelopen hebt dan ben je ook voldaan!”

“Ik bedoel, laat ik het zo zeggen... Ik zweet wel eens als ik ga schoonmaken!”
Beloning

"De sfeer in huis als het lekker schoon is. Een beloning voor dat moment dat ik denk, nu is gewoon echt de sfeer warm, leuk en gezellig en alles lijkt mooier en nieuwer."

Herhaling

"Maar ik vind wel, je hebt er eigenlijk nooit eer aan... Want zeker met stofzuigen; dat moet de volgende dag eenvoudig gewoon weer..."

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Huisdieren

“Huisdier, haren, zand, vlooien”

Ja maar als je huisdieren hebt. Een natte hond op het tapijt. Wij hebben al bijna nergens tapijt liggen want we hebben huisdieren...

Kinderen

Kruimels, kinderen, Kinderen, kruimels!!

“Kinderen die spelen op de grond...”
**Muziek**

"Met een lekker muziekje erbij dan gaat het nog beter!!"

Waar je tijdens het stofzuigen hoor je dat natuurlijk niet echt maar dat maakt niet uit.

"Tijdens het schoonmaken gaat de muziek bij mij keihard aan... Dan weten de buren ook meteen dat wanneer ik aan het schoonmaken ben..

**Tijd**

"Ik moet wel plannen want ik moet werken en met een hond, kat en 2 mensen moet je toch wel minstens een keer per dag stofzuigen dus dat moet 's ochtends. Door de weeks is er dan een behoorlijke tijdsdruk om. Dus de klok houd ik altijd met een oog in de gaten..."
13.9// STAKEHOLDER INVOLVEMENT
The overview below displays the involvement by the different stakeholders throughout the different steps of context mapping. Note that the session part of the Philips stakeholders is partially colored for the session stage. This is because their attendance is preferred, however not “obliged”.

[Diagram showing the involvement of different stakeholders across different steps of context mapping, with color coding for each step.]