

VISUAL PROCESS REPORT

DB520 // **PLANNING FOR A DESIGN START-UP**

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From the three presented start-up concepts, Smart Parenting was the most interesting topic for us. In order to not empathize too much on concept generation we consulted Eva Deckers to advise us on starting points within the Smart Parenting context. The products which were deemed interesting by Eva were filtered and afterward analyzed by our group.



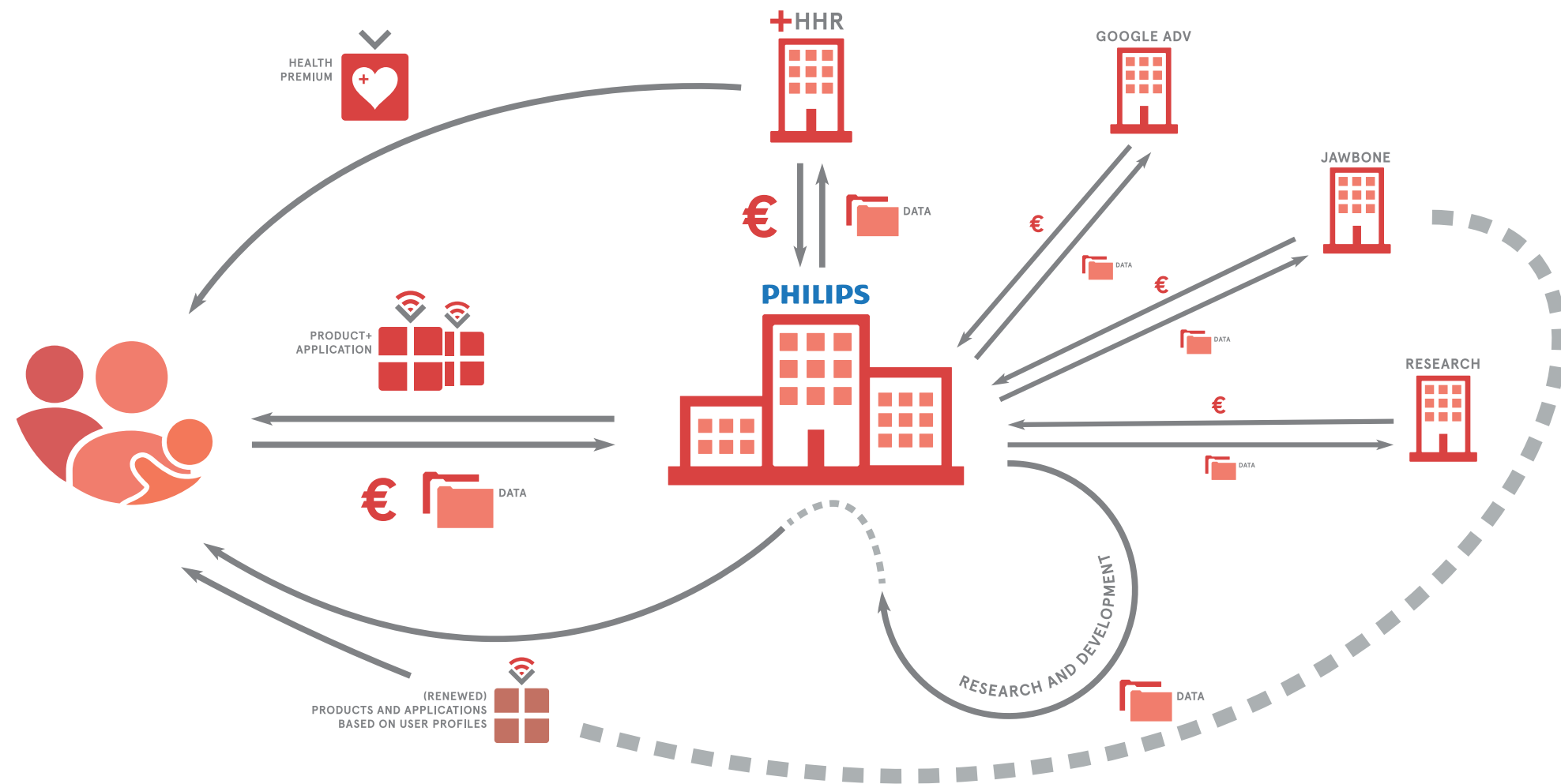
In order to understand the contexts and insights of the uGrow and My Baby and Me app, we visually mapped these products and their functionality. We combined several interesting aspects of both products which enabled it to expand in service opportunities within in a new concept. Our strongest asset within this concept was providing a premium service based on personal data.

FEEDBACK

Following from the feedback on our presentation of initial ideas, the proposal to combine data streams was shifted towards focusing on a single or double data streams. Moreover, we should continue with keeping focus on multiple family members.

Continuing our ideation phase while focussing on a single data stream, we introduced family dynamics to our concept.





As the focus within this module was to generate data and create (financial) value from this data we decided to create a money flow chart. This enabled us to create insights on all the possible data and money flow and how this could contribute to our concept.



To substantiate our concept, research was conducted and papers were read within the subject of sleep deprivation effects on both parents and their children. Furthermore, we checked which of the data streams would be involved in this.





Consultants
Family Health & Wellbeing

FEEDBACK

Our hypothesis was deemed too general that could assumed to be true. The feedback was to look into Creative Commons licences and construct new assumptions with hypotheses.

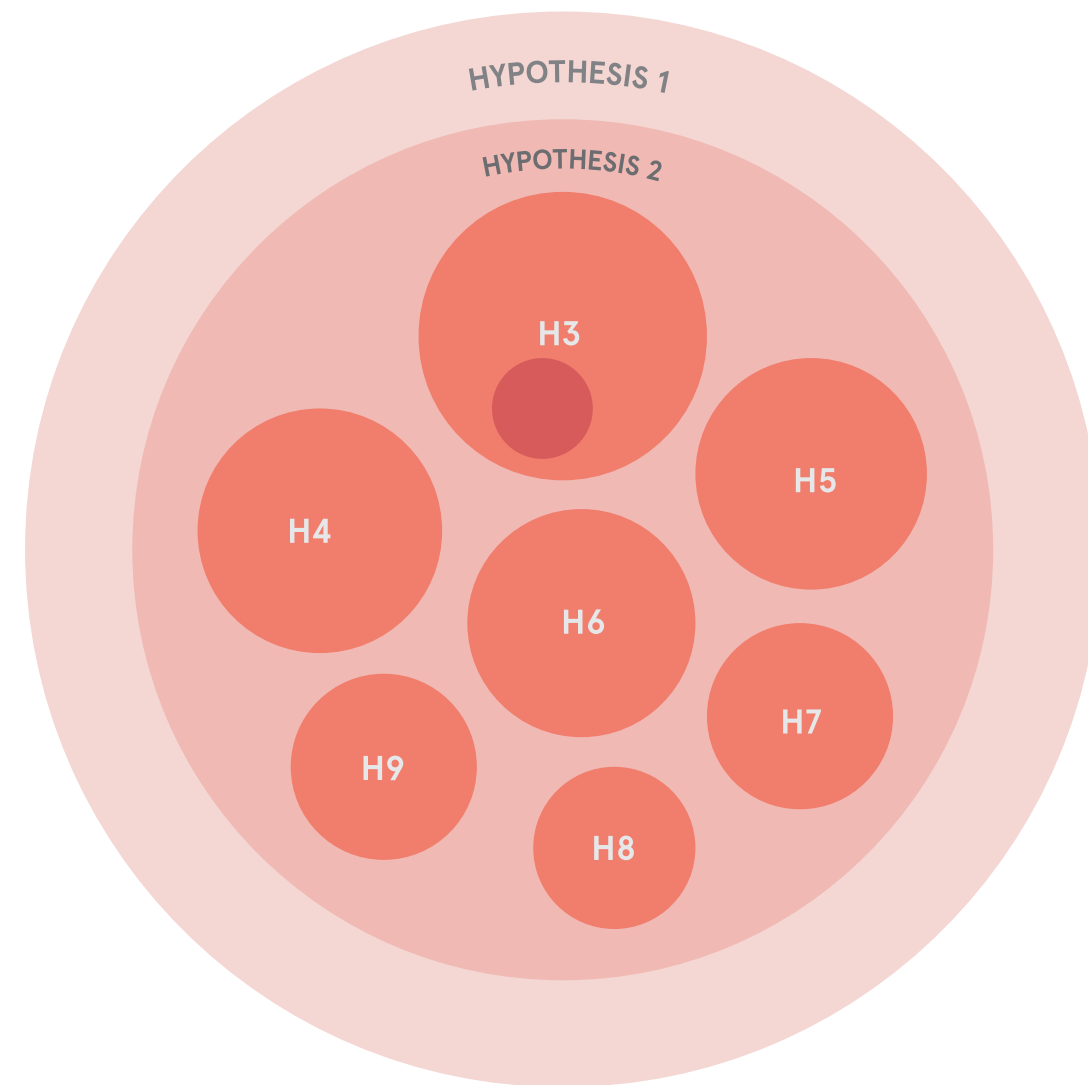
The last day of the first week started with a presentation of our interim concept, assumptions and related hypothesis. Our interim concept focused on sleep within a family centred context.

CUSTOMER Fresh parents with new born child	PROBLEM No possiblity to gain insight on sleep performance within family dynamics	SOLUTION Provide insights on sleep performance of familiy dynamics by guiding through application and a premium service that will cost money
RISKIEST ASSUMPTION Parents are interested in family dynamics data (not only individual)	RISKIEST ASSUMPTION People want to pay for personal guidance	RISKIEST ASSUMPTION People feel helped when guided through an application
HYPOTHESIS People want to improve their family sleep performance	HYPOTHESIS Personal guidance in family sleep dynamics based on personal data is worth paying for	HYPOTHESIS Apps are trustworthy enough to act as personal guidance

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After receiving feedback on our presentation, a new cycle of the Javelin Framework was conducted. From this cycle, 3 new hypotheses were drawn up and feedback on these by Lin Lin was requested. Furthermore, initial research into Creative Common Licenses was conducted and integrated in the extraction of hypotheses and assumptions.

The second week was kicked off by meeting Lin Lin and discussing the hypotheses. During this meeting, it was decided to pursue one of the three hypotheses. This hypothesis was specifically chosen because it was clearly framed which made it narrow enough to conduct a realistic and feasible test.



This visualization shows an abstract representation of our overarching hypotheses. This resembles that in order to test the most concrete hypothesis, some assumptions had to be made.

3 → Kunt u aangeven in hoeverre het voor u waardevol is om medisch advies van een specialist teruggekoppeld te krijgen via de volgende kanalen.

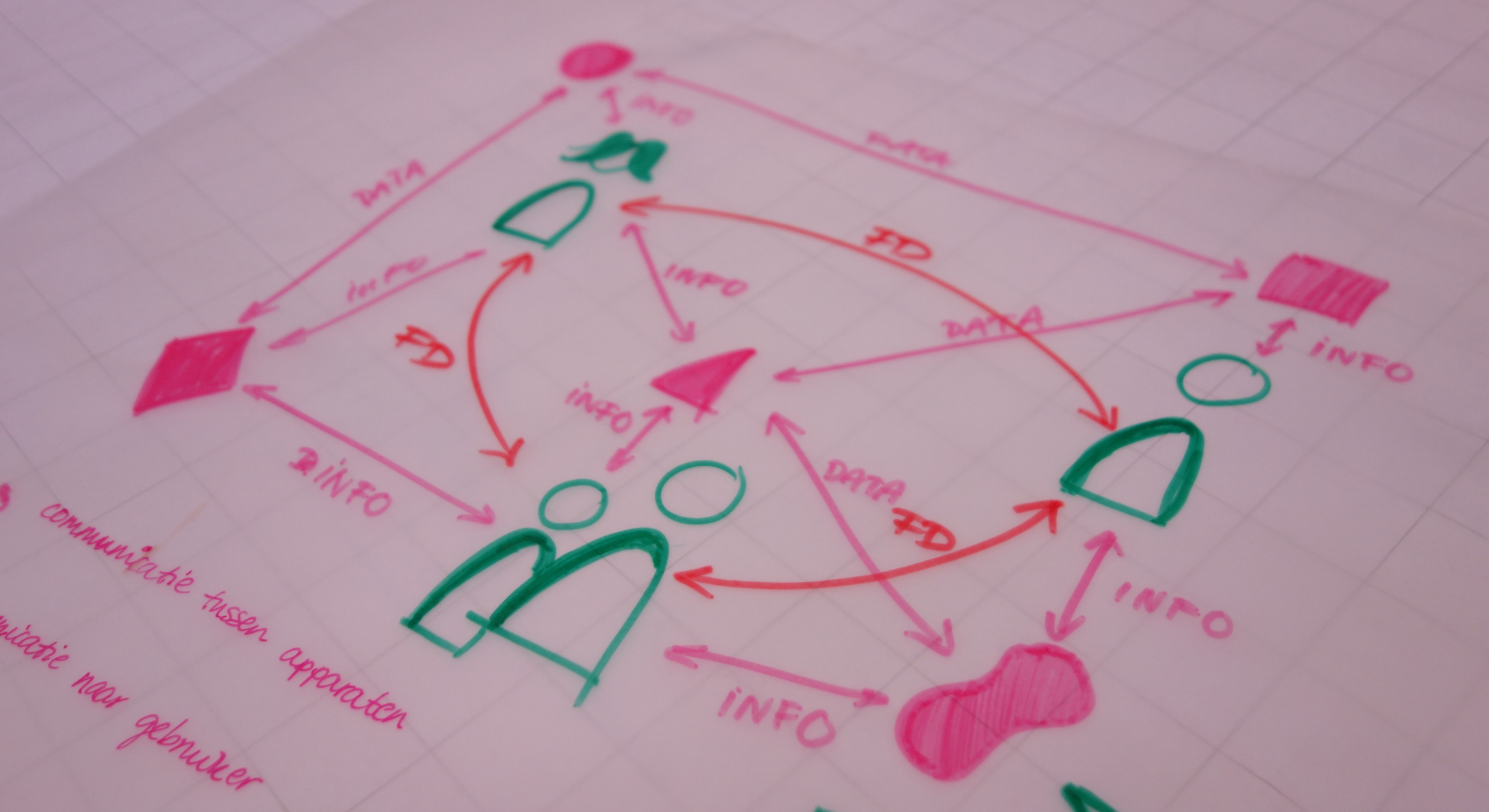
a. Een smartphone applicatie



b. Een telefoongesprek



During the construction of the first questionnaire, we discussed which insights about the participants were required in order to validate the hypothesis. We went through several iterations since we had more struggles with it than expected.



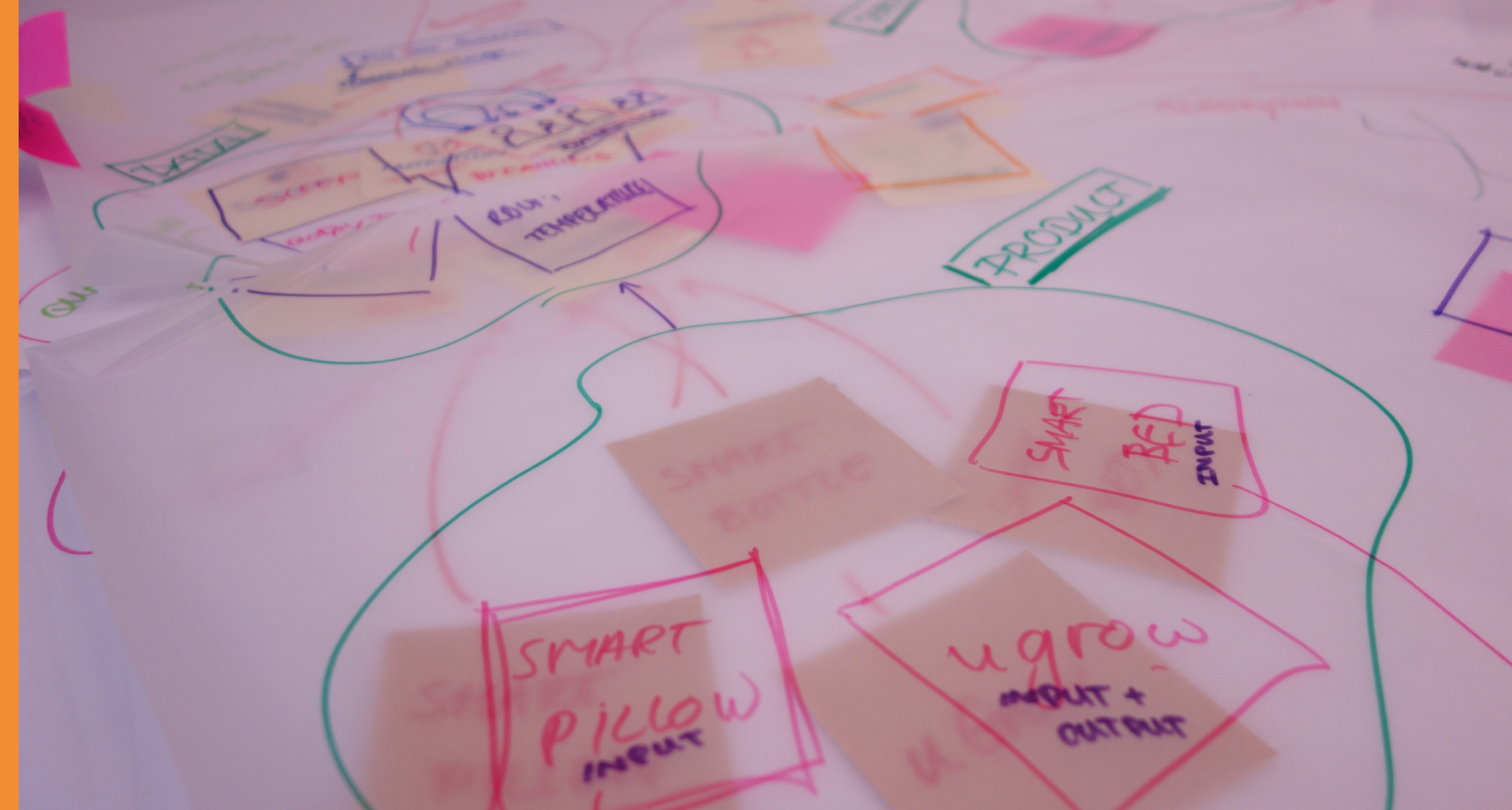
ONE FAMILY

While developing and conducting the test, our gut feeling told us that other aspects of our initial concept were of greater value to Philips and our own learning experience.

On Tuesday we presented our progress during the first part of the second week to Ad van Berlo, Lin Lin and Thomas. Next to that we indicated our wish to approach the concept in a different way and asked for feedback.

FEEDBACK

We were advised to do a new iteration of the complete process by starting with ideation, since our concept was still too broad and not concrete enough. Furthermore it was mentioned that the conducted questionnaire was too quantitative. Finally, we were advised to think about the kind of answers we wanted to receive, as this affected the shape of our experiment.



While reflecting upon our process, we established our focus and divided tasks.

The standards for the measurement of sleep differ according to age. The gold standards for scoring sleep stages in the newborn includes sleep behaviors, respiratory rates, eye movements, EEG, and muscle tone (Anders et al., 1995). In the older infant and children, polysomnography can be utilized and is similar to recordings in adults. Polysomnography is the concurrent and continuous recording of physiologic variables during the sleep period. Sleep stage scoring is based on three basic measurements: the EEG, electrooculogram (EOG), and electromyogram (EMG). During polysomnography, the heart rate, respiratory movements, air-flow, and oxygen saturation are monitored, and limb movements are recorded (Carskadon & Rechtschaffen, 2000). Most overnight studies are performed in a sleep laboratory.

SLEEP IN THE NEWBORN

The circadian and ultradian rhythms of the newborn are different than those of an older infant or child. At birth, the circadian rhythm is not fully established; therefore, sleep can occur as easily during the daytime hours as during the night. The normal, full-term newborn sleeps approximately 16 to 18 hours per day (Roffwarg, Muzio, & Dement, 1966). The longest continuous sleep period is 2.5 to 4 hours and the pattern of sleep and wakefulness is irregular. Often, the

Total sleep time	Children typically have a long sleep period at night (nighttime sleep) and short sleep periods during the day (daytime naps)
Ultradian rhythm	The total amount of sleep occurring in a 24-hour period, including nighttime sleep and daytime naps
Waking	The organization of sleep cycles into alternating periods of NREM and REM sleep
	A complete and persistent arousal, awareness of the surroundings, and the ability to think clearly and function normally

Data from Ferber & Kryger (1995) and Turek & Zee (1999).

There are three types of sleep recognized in the newborn: quiet sleep (analogous to NREM sleep), active sleep (REM equivalent), and indeterminate sleep.

Sleep is not merely a state of rest but also is a period of intense brain activity involving higher cortical functions.

Quiet sleep is characterized by minimal large or small muscle movements and

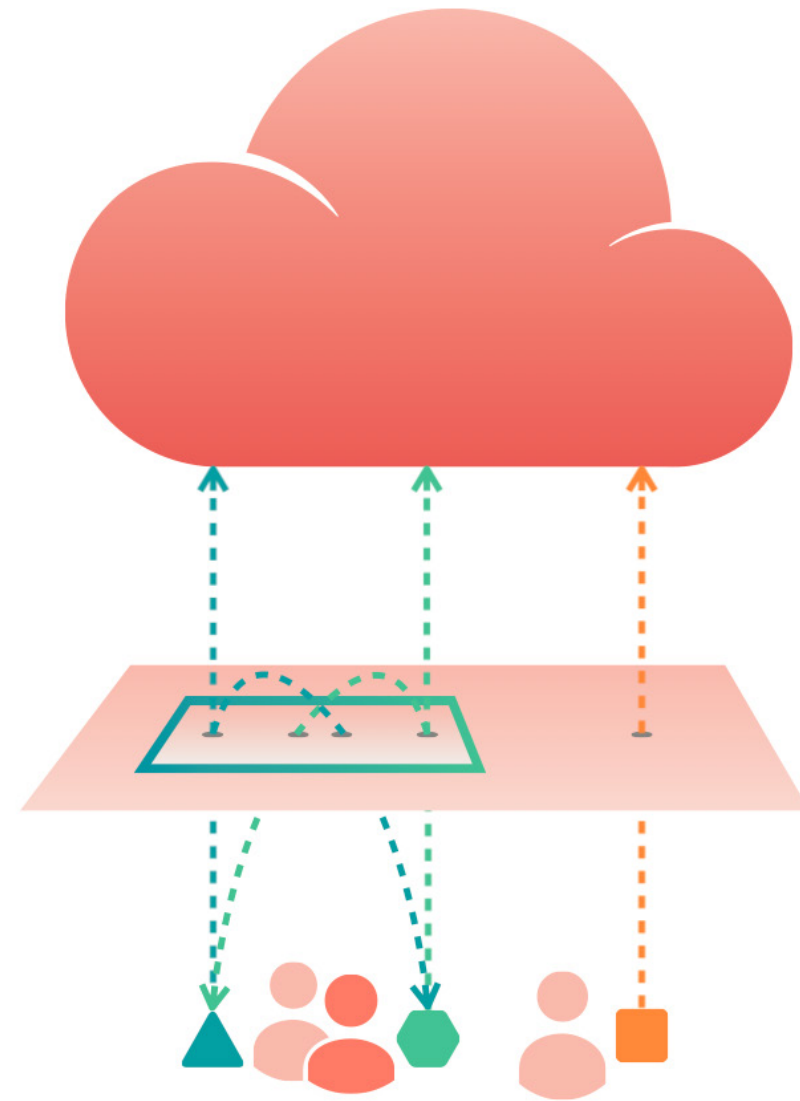
frowns, irregular breathing, and gross limb movements (converse to the typical REM sleep paralysis seen at later ages) are seen. Indeterminate sleep is the period of sleep that cannot be defined by polysomnogram as either active or quiet sleep by predetermined criteria (Sheldon, 2002). As the normal newborn matures, indeterminate sleep evolves into well-defined REM and NREM sleep (Anders et al., 1995).

Compared with older infants and children, newborn sleep architecture differs slightly. In the first few weeks of life, a sleep cycle consists of both active and quiet sleep periods in equal proportion. The sleep cycle lasts 50 to 60 minutes and sleep onset occurs through active (REM) sleep (Anders et al., 1995). Each sleep period lasts only one or two sleep cycles. Thus, sleep periods are shorter and more frequent than in an older child. The newborn has a less effi-

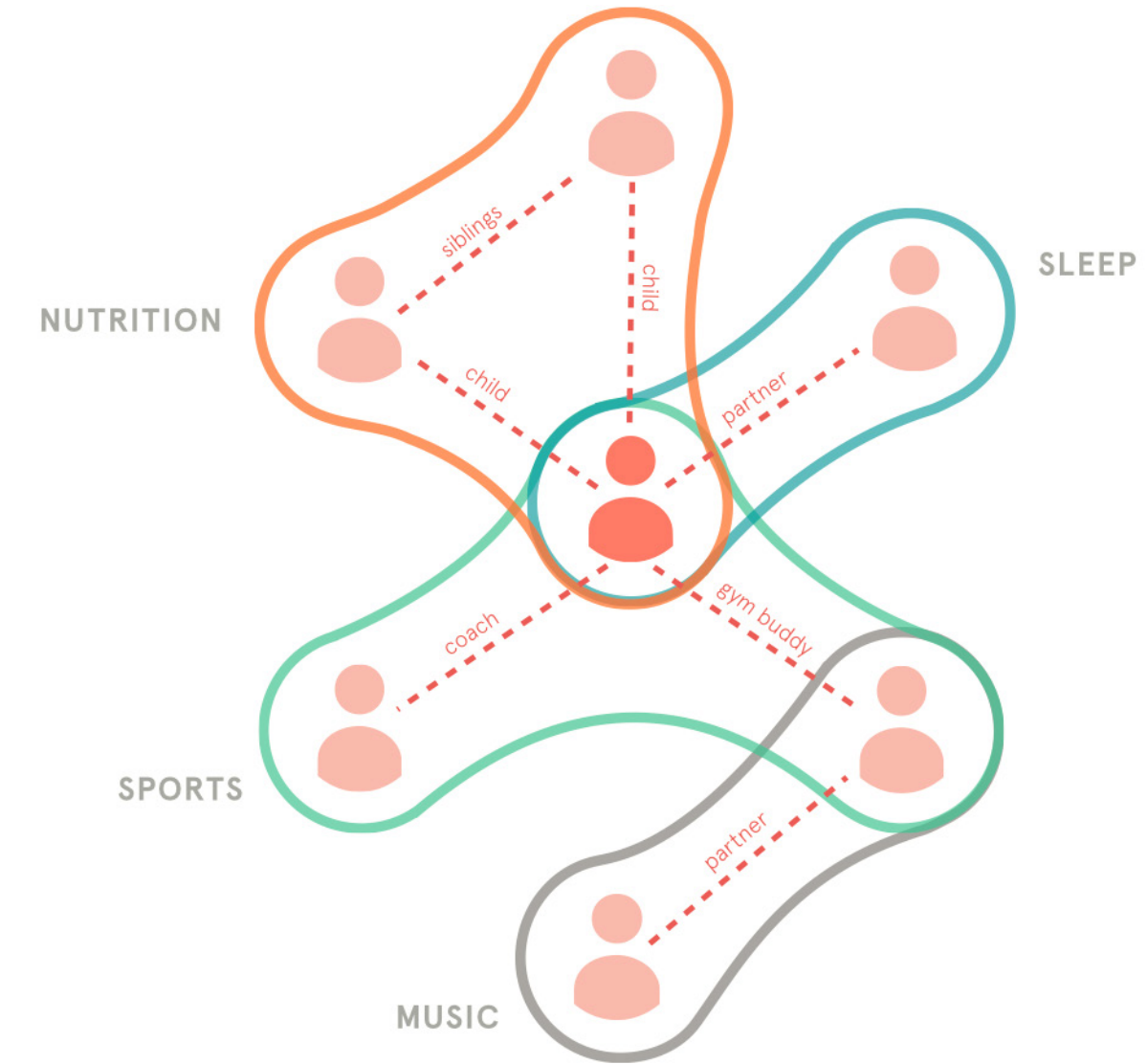


With the earlier conducted research we looked for market opportunities to decide where our concept could be of value.

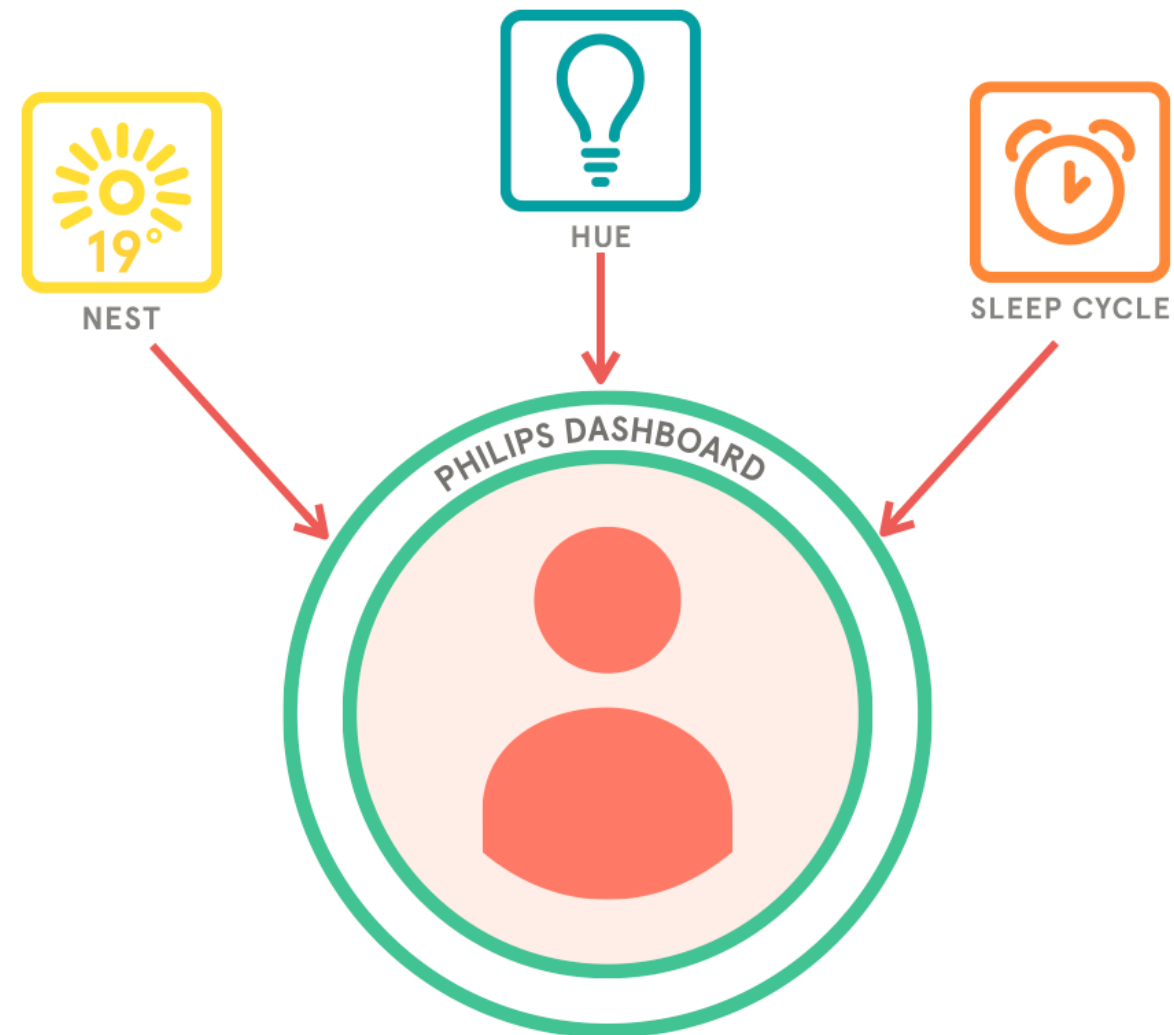
To make our concept more concrete, we needed to go back to the ideation phase. To create more empathy with the context and become inspired, we started thinking with scenarios and personas to define the aspects of our concept.



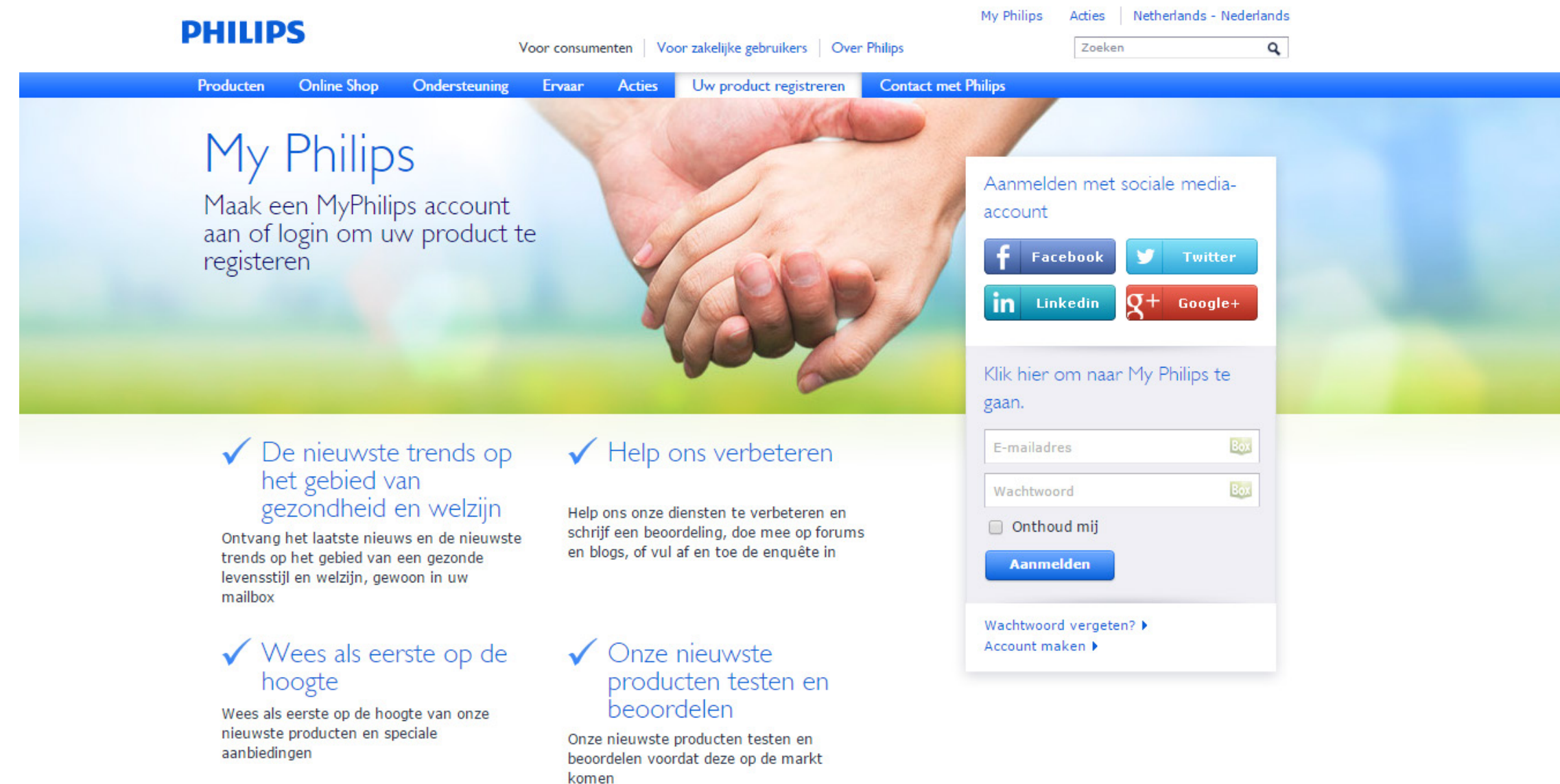
Parallel to our concrete ideation phase, the idea of a more holistic approach to our concept surfaced. Together with our existing ideation phase this co-evolved in a more concrete concept.



In our more holistic concept we use a variety of social relationships which can be linked within various segments. Over time these segments can be implemented in the overarching Philips system.



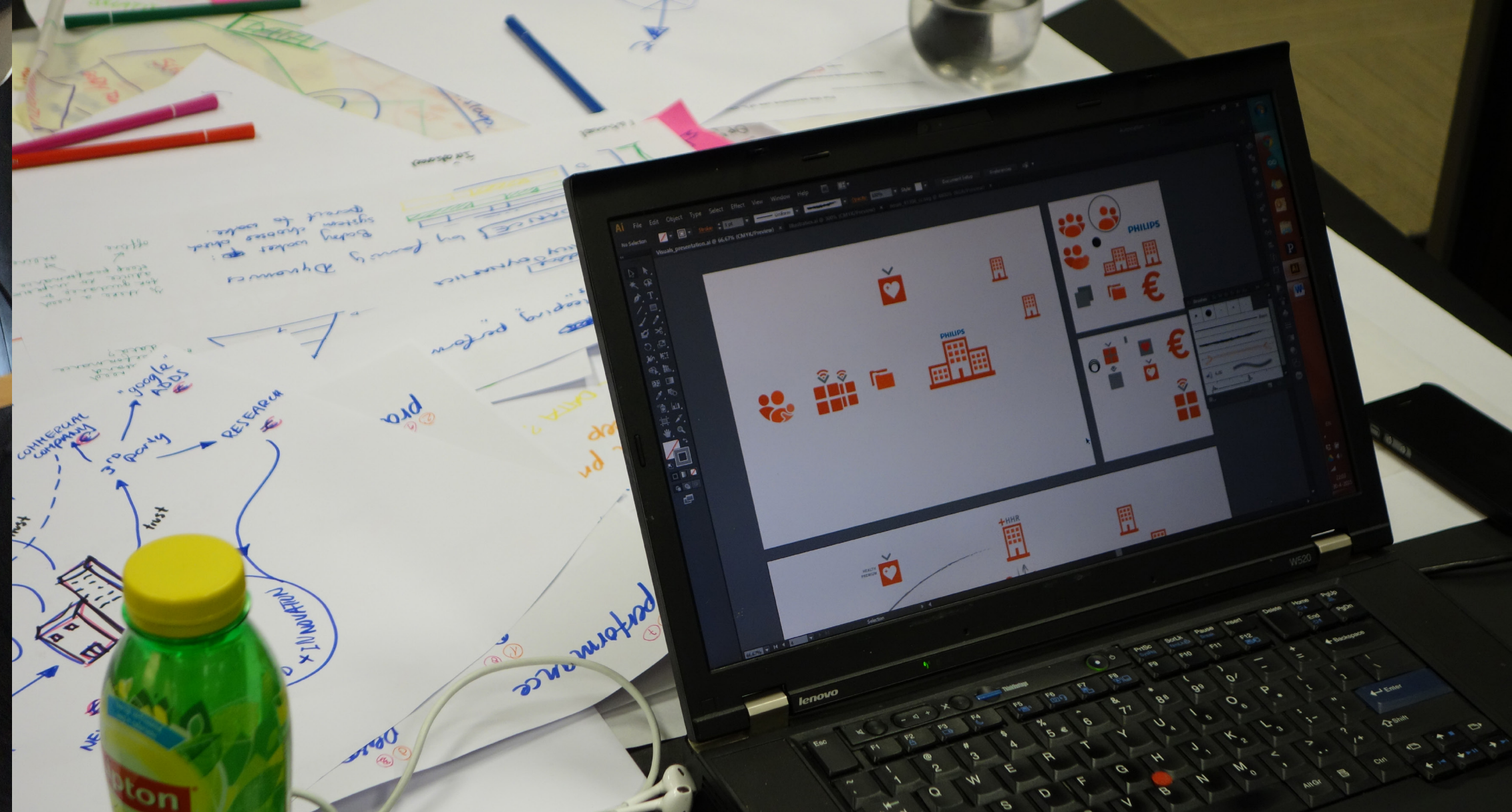
Philips Dashboard is the interface through which the user interacts with the multiple data streams. These streams can be accessed individually or can be combined to provide the user with meaningful feedback through apps called 'Philips Life Packages'.



While analysing our riskiest assumption for My Philips, we found that Philips needs to be able to identify the specific users, and users need to be able to connect to other users in order to make My Philips work. Trustworthiness and security is of great importance in order for the concept to succeed.



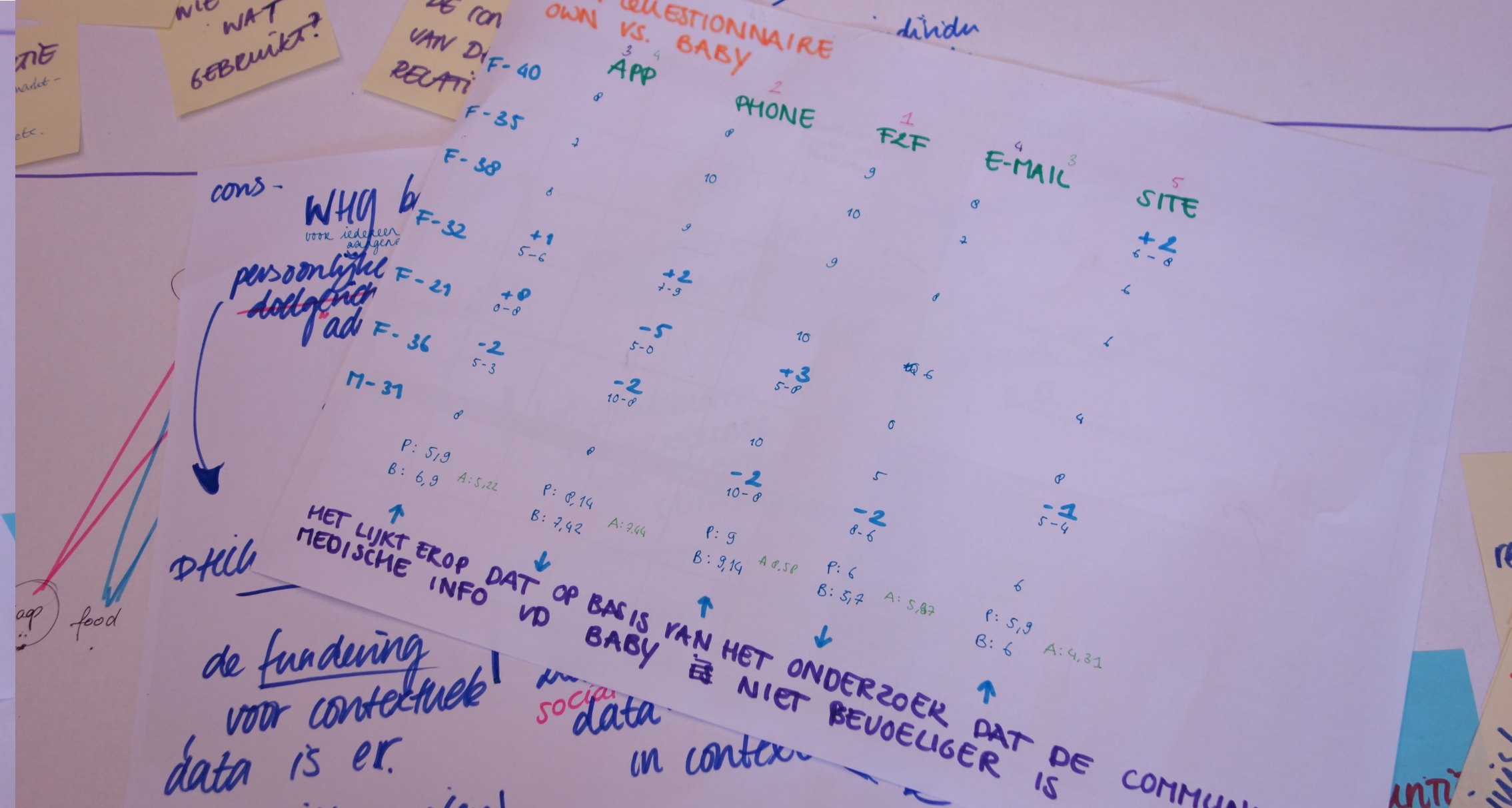
To make a convincing and clear presentation, we started to work on the design and focus on the storytelling while taking our audience into account.



While constructing our presentation, we paid extra attention to the visuals and the animations within the presentation to heighten the overall appeal and clarity.

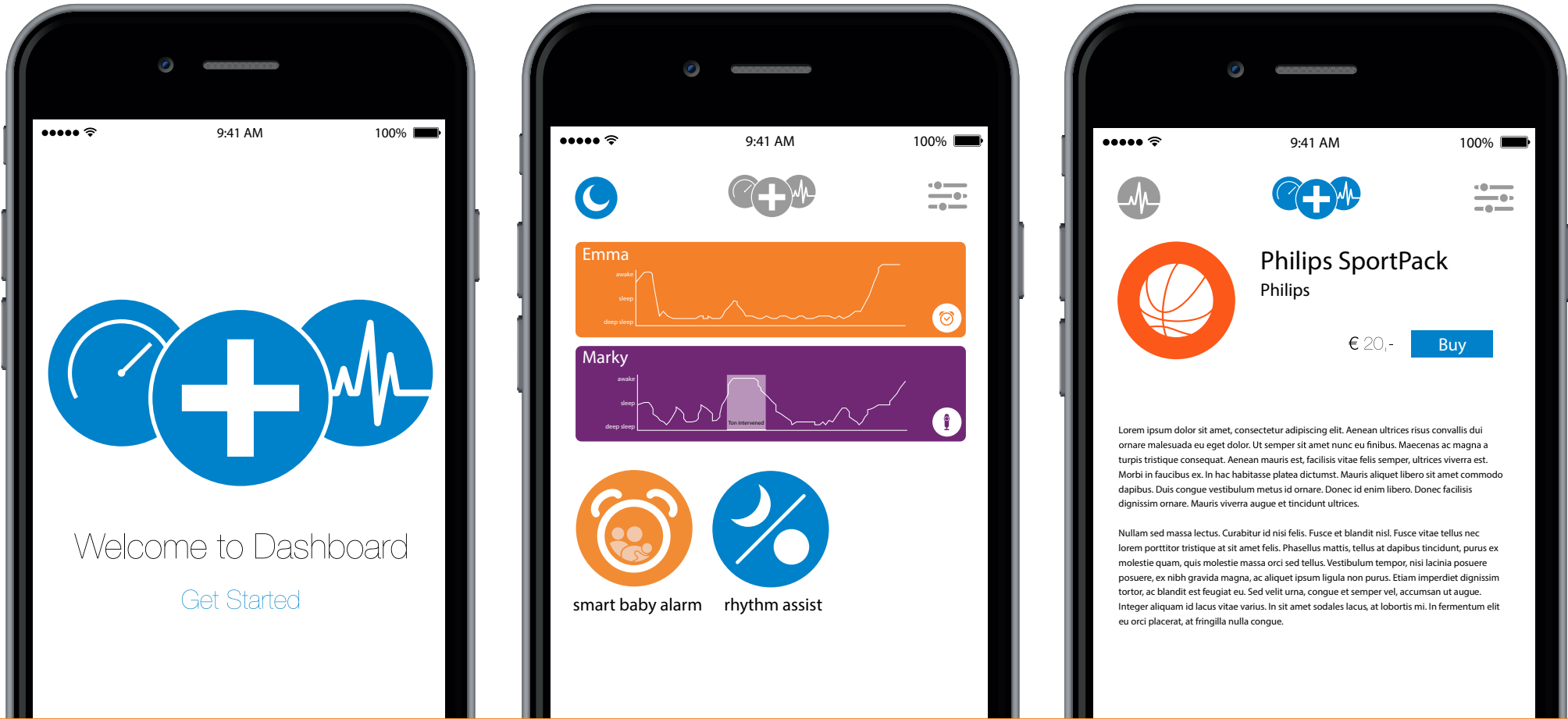
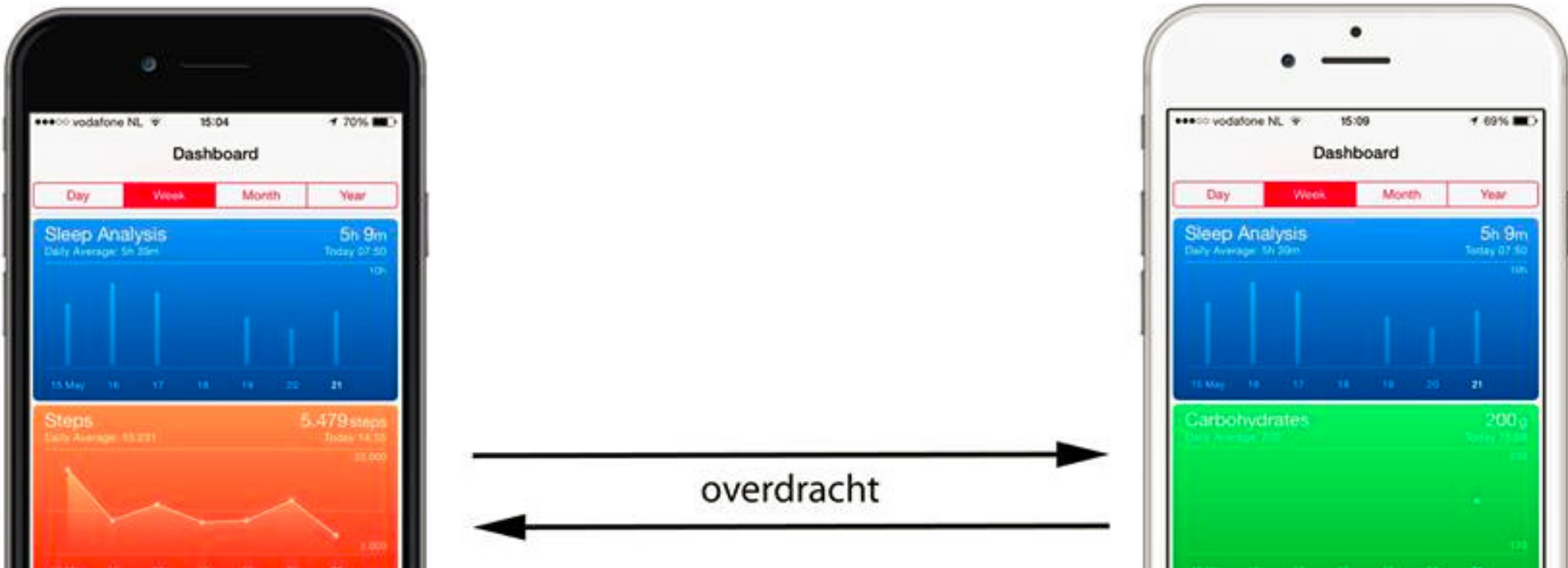


During the construction of our value proposition, we were specifically focussing on the relevance for Philips to make use of family dynamics.



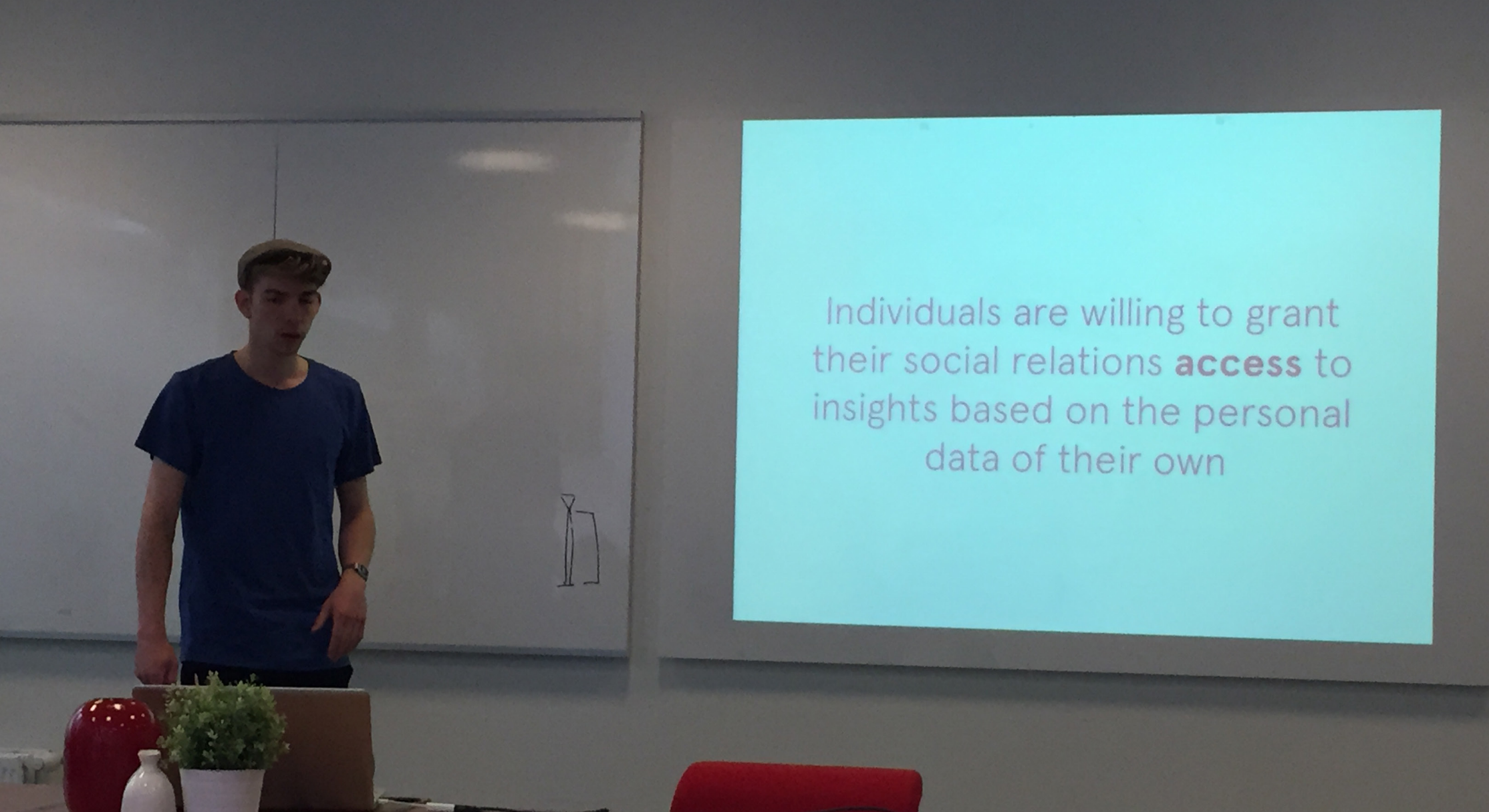
The results of the earlier conducted questionnaire were analyzed and it was observed that sharing information concerning your baby is not considered more sensitive than sharing own personal data.

Apple Health Kit wil in samenwerking met Sleep Cycle gerichtere informatie en service verlenen met betrekking tot de slaapgezondheid van individuen. Hiervoor willen ze de gegevens van bedpartners combineren om inzichten persoonlijker en betrouwbaarder te maken. Ze doen dit zonder de letterlijke data bloot te geven.



Through Facebook, we accessed users of the apps Sleep Cycle and Health Kit. By setting a scenario with images of phones presenting the applications, we asked our participants if they would be willing to share their personal data in a specific situation. During the conversations we observed that individuals are willing to grant their social relations access to insights based on the personal data of their own.

To make our concept more concrete, we designed in-app images of our Philips Dashboard application. The shown functionality was mostly focussed on sleep data and acted out specific situations.



Individuals are willing to grant
their social relations **access** to
insights based on the personal
data of their own

FEEDBACK

The feedback we received on our final presentation included the fact that our concept was still missing a concrete step, which caused our concept to be somewhat remote from the market. However, appraisal was given for the analysis of Philips' wants and needs, since the presented concept seemed to be in sync with Philips' vision. Furthermore it was mentioned that our Minimal Viable Product should have included personal data as this is of great influence to the participants ability to empathize.

In our final presentation, we focused mostly on the overall concept of Philips Dashboard and specifically dove into the sleep segment. Overall, we tried to deliver an emotionally appealing, clear presentation with a compelling story and nice visuals.