TEQ TIME

Design an innovative child care tool for children of 10-14 years old

Graduation report

Joris Menting

November 2018 - May 2019

INNOVATIVE CHILDCARE TOOL

FOR CHILDREN FROM 10-12 YEARS OLD

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GLOSSARY

After school day care: A form of childcare that is offered outside school hours between 7:30 and 18:30. In Dutch: *Buitenschoolse opvang (BSO).*

Community work: A division of SWKGroep for social work in neighbourhoods, subsidized by municipalities. In Dutch: *Buurtwerk*

Childcare law: the law that regulates the allowances in costs for parents and guarantees the quality and safety of childcare facility's in the Netherlands. In Dutch: *Wet kinderopvang (Wko).*

Kids Club: After school day care for the eldest children at locations of SWKGroep, starting at 9 years old. Started as an initiative to keep children in after school day care for a longer period of time.

Municipal healthcare service: Authority for healthcare at a municipal level. In Dutch: *Gemeentelijke Gezondheidsdienst (GGD).*

Pedagogical employee (PE): A qualified employee of after school day care. In Dutch: *Pedagogisch medewerker* or *PM'er* for short.

Primary school: education form that in the Netherlands of 8 years that start at 4 years old. In Dutch: *Basisschool* or *Basisonderwijs*

Secondary school: education form that in the Netherlands usually starts at 12 years old. In Dutch: *Middelbare school* or *Voortgezet onderwijs.*

SWKGroep: Umbrella organisation with multiple businesses related to childcare and community work.

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EXECUTIVE SUMMARY

This report is the result of the graduation project of Joris Menting for SWKGroep. The project concludes the master program Design for Interaction at the Delft University of Technology.

SWKGroep asked for an innovative child care tool for children of 10-14 years old. The project description offered the designer much freedom. The initial design goal was formulated as follows:

"Design a location and time independent form of after school day care for children (10-14 years old) that relieves parents, where children experience both affection and freedom and that adds value for SWKGroep."

The project is divided in three chapters: Orientation/Research, Ideation/Iteration and Evaluation/Demonstration. See Figure 1 for the overview of this project.

The first chapter of the project, Orientation/Research, describes the internal and external analysis that gave more insight in the context of after school day care and the rules and regulations by the Dutch government.

Interviews with parents and generative research sessions with children gave insights in the latent needs and desires of the users of the product.

With the insights of the first chapter the design goal was further specified as follows:

"Design a location and time independent form of after school day care for children (10-14 years old) where:
children experience affection, freedom and guidance, while it relieves parents during work without losing control,
that fits the business operations of SWKGroep and adds value."

In the second chapter, Ideation/Iteration, ideas to reach the design goals where generated. To guide this process two interaction visions are developed. They formed the inspiration for new ideas and used to test whether ideas where still on track of solving the design goal.

Two initial design concepts where developed and assessed during a co-creation session with employees of different layers within the organisation of SWKGroep. Together with the analysis of an weighted objectives method the decision is made to

develop a chosen concept that uses the strengths of both initial concepts: TEQ TIME Coach.

In the last chapter: Evaluation/Demonstration the chosen concept is tested and evaluated with parents and potential coaches. These user tests gave the insights which made it possible to develop the chosen concept into a final design. This design is presented in paragraph 3.2 at page 90.

This project can be seen as the first part, research and ideation, of developing an innovative child care tool for children of 10-14 years old. The second part, implementation, will be a project for the future. This project ends with a implementation plan for this second phase.

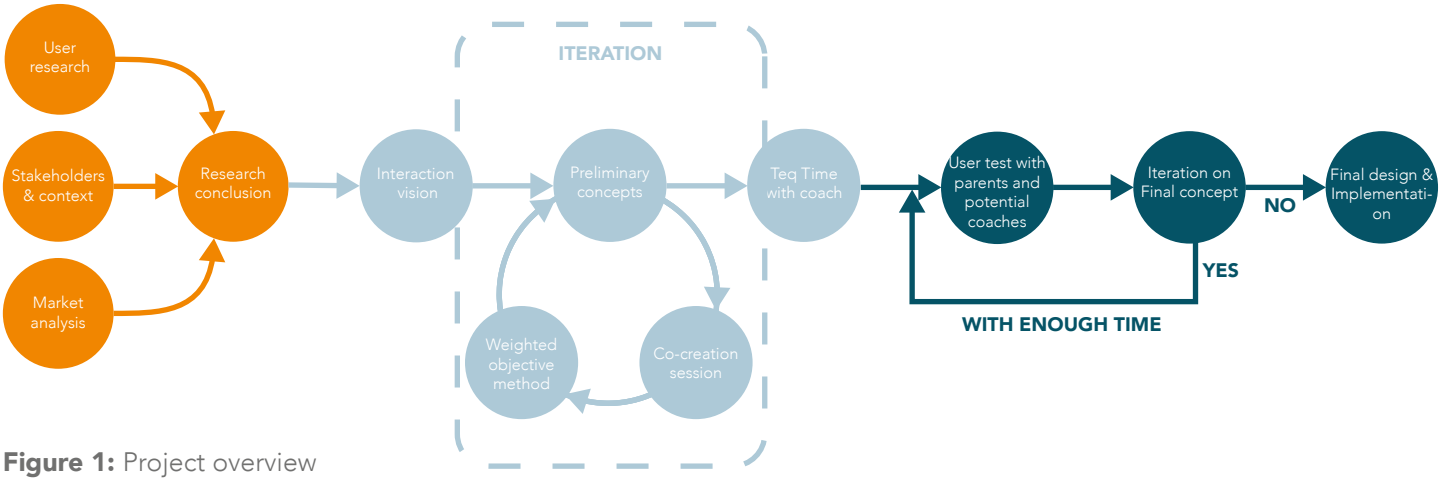


Figure 1: Project overview

0. INTRODUCTION

POSSIBLE SITUATION

Suppose you are a parent of two children, 10 and 13 years old. You and your partner works full time, to be there for your children you arranged with your employer that you can work 32 hours a week to get the Tuesday and Friday afternoon off. This still leaves you with three afternoons that some form of care has to be arranged. When the children where younger you lived closer to your parents. They loved to watch their grandchildren so you often brought them over. Since your family moved, it is almost an hour drive to your parents, besides the children don't like it anymore to go to their grandparents house. With some effort you arranged that every other week on Wednesday afternoon your parents come over alternating with your parents in law. For the Monday and Thursday afternoon you used to arrange after school day care for your children.

The eldest stayed at after school day care until he went to secondary school last year. This was a very big step for him, new school, new friends. On the Monday and Friday you made the agreement that he lets you know when he arrives home, most of the time via Whatsapp. He does keep his promise but as you could expect from a teenager in his puberty, he tells you as less as possible: "home".

He used to love to play outside all day long but now he rather spends his time on a screen, playing whatever game is popular at the moment. Sure, it is online and they talk with their friends via this headphone but there is no real social contact. Your partner made the agreement with him that he could only game for 1 hour a day. It is hard for him to live up to that agreement when you are there to watch him let alone when there is nobody to check!

The youngest of the two says she is lately bored at after school day care. She is the only one in her class that still has to go to after school day care and she rather spends her afternoons at home like her older brother. You don't like that idea, of course they can play nicely together, but when they get bored... Besides you think that 10 years old is a little young for all the responsibilities that come with being alone. You don't see her prepare a cup of thee for herself after school.

The situation gives you and your partner sleepless nights. Do you have to meet the wishes of your children? Work even less hours? Ask your partner to work less hours? Arrange a babysitter? Bring the eldest to homework class? None of the options feel right to you at the moment.

PROJECT APPROACH

This is a graduation project by a Design for Interaction master student from the faculty of Industrial Design Engineering at the Delft University of Technology. This section describes how the project is approached according to the methods learned during this master program.

The structure of Creative Problem Solving (CPS) is used. The purpose of this approach is to help unleash creativity by freeing the mind of limitations. It stimulates 'out-of-the-box' solutions through free association and free idea generation (van Boeijen, Daalhuizen, Zijlstra, van der Schoor, 2013).

CPS divides the project in three phases, the three phases are the chapters of this project:

1. ORIENTATION/RESEARCH

In the first chapter of the project the context of children with working parents is analysed. This phase will form the basis of the design by resulting in a clear design scope and design goal.

2. IDEATION/ITERATION

The second chapter is focusing on generating new design ideas within scope and based on a interaction vision. The design ideas are quickly tested with the target group and with short iterative cycles they will result in product concepts.

3. EVALUATION/ DEMONSTRATION

In consolation with the company and the design team a decision is made for the most promising design concept. This concept is developed to be able to test and evaluate it with the target group.

PROBLEM DEFINITION

After school day care is the most popular form of day care in the Netherlands for children from 4-12 years old (CBS, 2018). Because the nature of the childcare law, there is no regulated form of childcare for children older than 12 years old.

This project is focused on after school day care for children at the age of 10-14 years old. At this final stage of children's after school day care career two problems occur: Children that outgrow the day care at a relatively young age (1), and the pretty abrupt end of the day care when children go to high school (2).

CHILDREN THAT OUTGROW AFTER SCHOOL DAY CARE

Around 10 years old children start outgrowing the after school day care. Surrounded with all the younger children they see themselves as very mature and full-grown children. The environment does not suit them anymore. The desire for more freedom drives them to leave the day care and go to their own home after school, even though their parents are at work and they are too young to make decisions by themselves. This results in parents that have to take care of their children while they are actually busy working.

THE ABRUPT END OF AFTER SCHOOL DAY CARE

In the last year of primary school children are bored with their school. As 12 year olds they feel very secure, too old for the other kids in school. This secure feeling completely changes when they start to go to high school. Suddenly they have to leave their safe, well-known district, to go to school where they are by far the youngest. Together with all the changes that come with puberty this can lead to insecure children. This is the moment where children need a safe haven and a place that they feel secure. However this is also exactly the moment where after-school day care stops.

This project focuses on the two described problems combined by designing a modern form of day care for children in the age of 10-14 years old.

INITIAL DESIGN GOAL

"Design a location and time independent form of after school day care for children (10-14 years old) that relieves parents, where children experience both affection and freedom and that adds value for SWKGroep."

1. ORIENTATION/ RESEARCH

This chapter is divided in four sections: The first three sections are focused on gathering information: market analysis, stakeholder and context and user research. The last section is describes the conclusions of the first three sections, see Figure 2.

Figure 2: Orientation/Research approach

1.1. MARKET ANALYSIS

This section gives an overview of the market of after school day care in the Netherlands, divided in three paragraphs. The first paragraph explains how the Dutch government regulated childcare in the Netherlands. In paragraph 1.1.2. the SWKGroep is analysed in order to understand the company and how it is structured. Paragraph 1.1.3. describes the available alternatives in Dutch childcare, how they relate to each other and where market opportunity lay for SWKGroep.

1.1.1. CHILDCARE LAW

After school day care in the Netherlands is derived from the pre-school childcare for children between 0-4 years old. During the 90's there was an enormous growth in the demand for after school day care, this led to the professionalization of after school day care (Boogaard, van Daalen-Kapteijns, 2011).

Since august 2007 the Dutch government obligated elementary schools to arrange the connection between schools and after school day care between 7:30 and 18:30. Reason behind this law is to reduce the friction between school hours and the working hours of employed parents (Boogaard, Fukkink & Felix, 2007). The introduction of this law resulted in a growth in after school day care (Oploo, M. Et al. 2008).

To arrange childcare on a societal level, the Dutch government wrote the childcare. This law arranges the allowances in costs for parents and guarantees the quality and safety of the childcare. The law covers the childcare for pre-schoolers and children at primary school (0-12 years old). For this project the law for children at primary school is relevant and further explained. There are roughly two forms of day-care for children in primary school that are covered by the childcare law: After school day care and guest parents. Together they take care of 55% of the children with working parents (After school day care 47% and guest parents 8%) (CBS, 2018). SWKGroep only The different forms of childcare are further explained at page 22.

ALLOWANCE

Parents can qualify for an allowance from the Dutch tax authority. This allowance is income dependent and a percentage of the costs they make for childcare. The childcare law set a maximum hour rate that parents for childcare, 6,85 per hour for after school day care and 6,15 per hour for guest parents (Belastingdienst, 2019). When parents choose to make use of childcare with a higher hour rate, they do not receive allowance over the extra costs. Figure 3 shows the amount of allowance that parents receive per annual combined income (Rijksoverheid, 2019). Parents with an annual income until €24.611 receive the maximum allowance of 96% of the childcare costs.

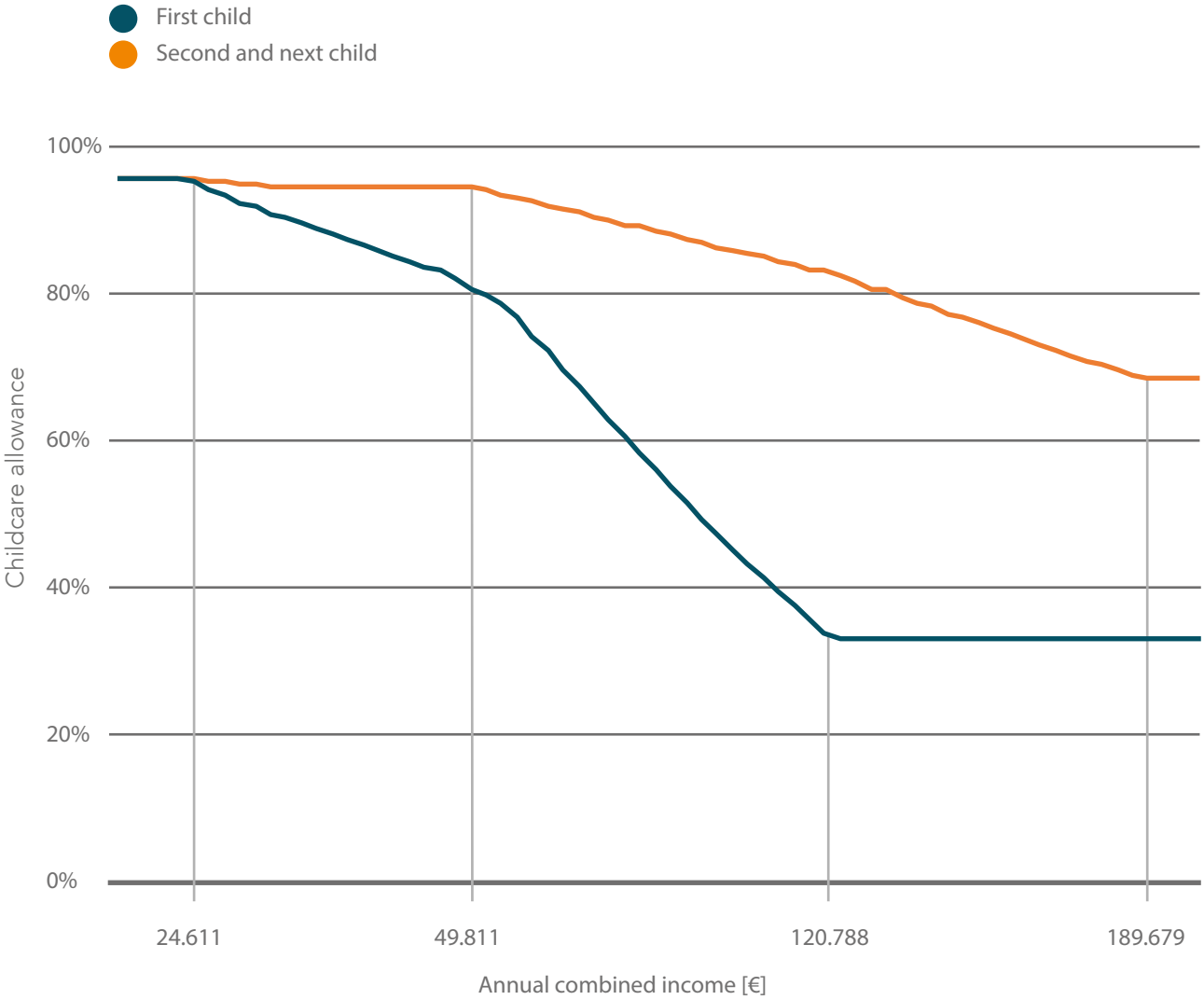


Figure 3: Childcare allowance in 2019

Parents receive allowance for maximum 70% of the amount of hours worked by the parent that works the least amount of hours, with a maximum of 230 hours per child per month (Wet Wko). The month that children start with secondary school the entitlement to allowance expires. Besides the arrangement of allowance, the law also sets requirements on the quality of the location and the education of employees at the childcare centre.

QUALITY AND SAFETY

To ensure quality and safety of the regulated childcare, the childcare facility's have to meet the regulations set by the childcare law as described in the law innovation and quality in childcare (Wet IKK):

The development of the child is important therefore the childcare facility has to ask parents for permission to share information about the development of the child with the school of the child. To encourage development every child gets a mentor. This must be a certified pedagogical employee (see Figure 4).

For children at primary school there must be one pedagogical employee for every 10 children. Children older than 7 can be in groups of 12 children per pedagogical employee. Pedagogical employees receive training at least once a year and are coached by pedagogcial policy makers.

Children are vulnerable for physical, sexual and mental abuse, therefore regulations on the safety of children in day-care are set. Childcare facility's are obligated to always have a first aid person. Employees are registered and are screened continuously on illegal actions.

The municipal healthcare service is responsible for checking the quality requirements, based on their reports the municipality can enforce with warnings or fines.

The Dutch childcare law ensures the quality and safety of childcare for children from 0-12. To meet the regulations set by the childcare law, a childcare facility has to invest in their housing and their employees. This raises the price of regulated childcare. In order to make childcare affordable for every social class, the Law regulates the allowance for parents for these forms of childcare.

Innovative ways of childcare can be hard to get covered by the childcare law because the regulations of the law is written for physical day-care. Childcare for children at secondary school (older then 12), is not covered by the law in any case.

It can be a strategic choice to design a new form of childcare outside the childcare law because this eliminates a lot of regulations that have to be met.

Figure 4: Certified pedagogical employee as a mentor of two children at after school day care

1.1.2. SWKGROEP

This paragraph describes the company context of SWKGroep. It gives insight in the structure of the company and describes the strengths of the company and how they use these in taking care of children in the age of 10-14 years old.

The SWKGroep is an umbrella organisation that mainly facilitates childcare and community centres. There are 17 businesses and foundations that operate under SWKGroep divided over four divisions: day-care, community work, childcare and services (See Appendix A). This project focusses on the division *kinderopvang* or day-care. There are nine businesses and foundations operating in the division day-care. Together they take care of 25.000 children every day. The SWKGroep facilitates most administrative work for these companies so they can economize and focus on what is most important: the care for the children.

Besides the administrative tasks the SWKGroep also has a policy making task. A pedagogic expertise team is constantly focusing on improving the way that childcare is implemented. In order to do so they wrote policy documents on childcare for different age groups. For this research the policy documents of children from 9-12 & 12-15 are most important.

SWKGroep sees that children start dropping out from their childcare program by the age of 10 years old. This mainly has to do that they feel too old for the children at the after school day care. In order to maintain children for longer periods various companies within SWKGroep started with offering a Kids Club for children in the last three groups of primary school. Children starting from 9 years old will join the Kids Club. The Kids Club offers more freedom, independence and participation. The children at the Kids Club can play outside if they want to and after every vacation a children's council comes together to discus about their own childcare. Combined with the fact that children of in this age group start focusing more on their peers (SWKGroep, 2018), the Kids Club program used to retain children for a longer period of time.

When parents sign a contract with SWKGroep for after school day care, the contract normally runs to the end of the last school year at primary school (the year that they turn 12). Contracts can get cancelled earlier for any reason. Figure 5 shows the percentages of cancellations per age group at SWKGroup and two of their after school day care businesses: IJselkids and Kern Kinderopvang. They are chosen because IJselkids, opposite to Kern Kinderopvang, does not yet implemented a Kids

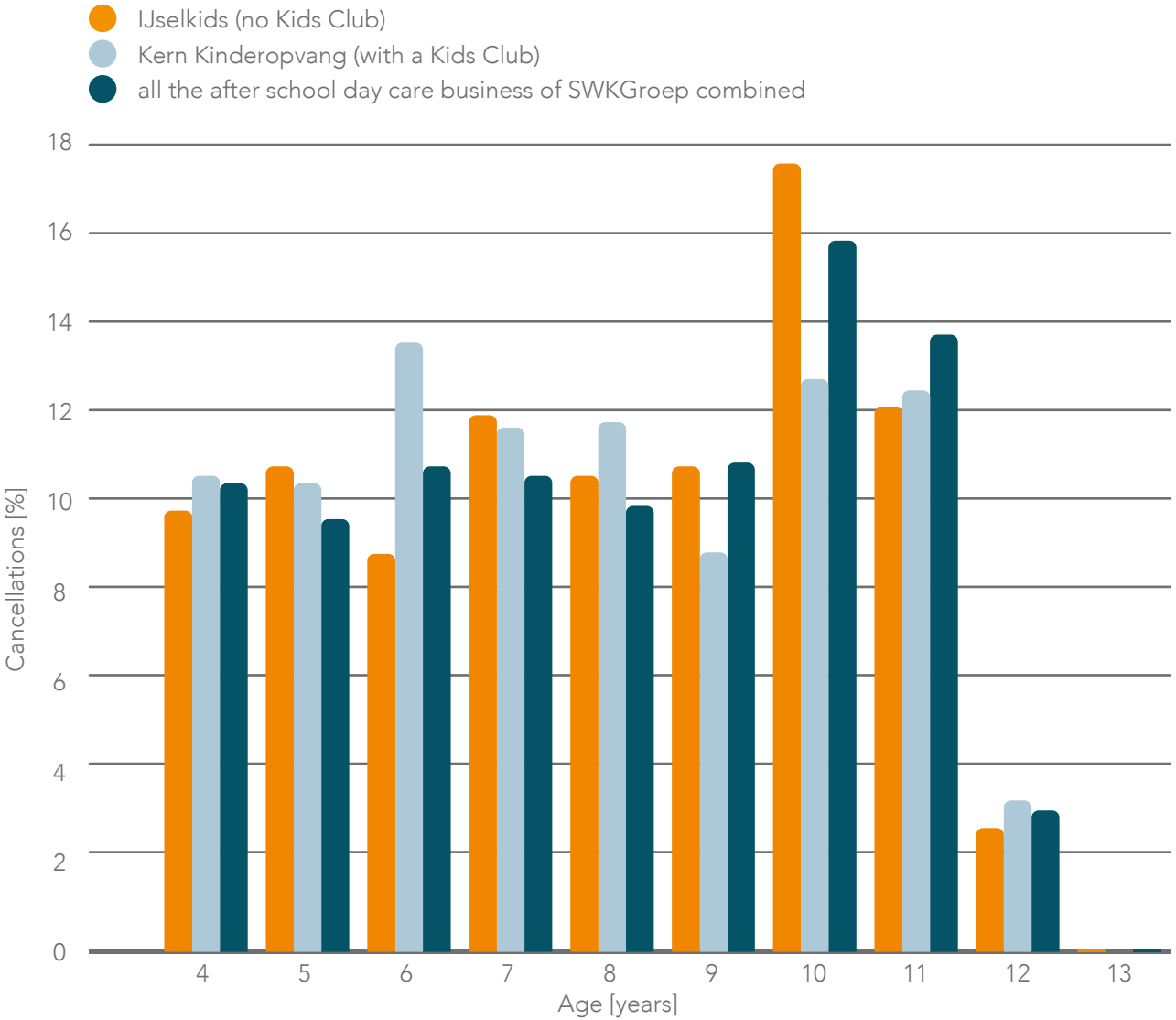


Figure 5: Cancellations in after school day care at SWKGroep in 2017-2018

Club. The diagram shows a peak in cancellations of children at 10 years old. At Kern Kinderopvang this peak is less outstanding than at IJselkids. Further research is needed to conclude if the presence of a Kids Club caused these differences. The contracts are automatically cancelled at the end of the duration (when children go to secondary school), The figure also shows that only 2-3% of the children stay at after school day care for the total duration of the contract.

In the policy of children from 12-15 (SWKGroep, 2018) is stated that some children benefit from guidance after they start with secondary school. SWKGroep has the policy to arrange guidance for those children but in practice this rarely happens. In fact, connection with children is lost starting at 10 years old. When children start going to secondary school, the only way to reach them now is via the division community work. This division is way smaller than the division day-care and most connections with the target group are lost.

SWKGroep is a large organisation with their own education and pedagogical expertise department that is responsible for the policy making task of the businesses that fall under SWKGroep. This provides them with a lot of knowledge and expertise in taking care for children from 9-15 years old. At the moment they lack the possibilities to make use of this knowledge and expertise because they lose the connection with children when they grow older, starting at around 10 years old. The pedagogic expertise of SWKGroep on the adolescent brain can be used to add value to the to be designed product, by informing and guiding parents with their adolescent child.

OTHER ORGANISATIONS

The Kids Club is not something that is typical for SWKGroep. Other childcare organisations also work with separate groups for the elder children. The reason however is not always to keep children longer at the after school day care. There is also a financial reason to have the elder children in a separate group. The childcare law states that children of 7 years and older are allowed to stay in groups of maximum 12 in stead of 10. Due to this rule most organisations offer an 7+ group. The philosophy of SWKGroep is that if they want to use the Kids Club to keep after school day care interesting for the elder children, they have to keep it a 9+ group.

There are also organisations that offer even more horizontal groups: 4-7, 7-10 and 10-12. There must be enough children within the organisation to fill the groups and keep the model profitable.

Another philosophy is after school day care in vertical groups. This means that children of different ages from 4-12 are in the same group. The idea behind vertical groups is that the elder children will take care of the younger children like in a large family.

1.1.3. CHILDCARE IN THE NETHERLANDS

This paragraph gives an overview of the available alternatives in Dutch childcare and how they are positioned. At the end of the paragraph each form of childcare is described in detail. The paragraph gives answers to the following questions:

- What kind of alternatives are there in the market of childcare?
- How do these alternatives differentiate from each other?
- What are the market opportunities for SWKGroep?

To determine how the different forms of childcare differentiate from each other a positioning grid is used. On a positioning grid competitors are plotted on two attributes that are important for the costumer. This way they provide information about the segmentation, differentiation and positioning of products in a market (van Boeijen et al., 2013).

Figure 6 shows a positioning grid of the possibilities that parents have when they want day-care for their children. The different forms of childcare are plotted on the attributes affordability, based on parents with an average income and two children and reliability, it is certain that children can go there.

The diagram shows that there is a potential field to design other forms of childcare on the high reliability side, especially for children in secondary school that can not attend the forms of childcare that fall under the childcare law.

AFTER SCHOOL DAY CARE

This is the most used form of childcare. It is part of the Dutch childcare law, which means that parents can qualify for an allowance from the tax authority. Payment is per child per session, for example an afternoon. It is possible that parents pay for hours that they do not use. With after school day care parents always have the assurance that their children are taken care of. During school holidays special programs are arranged for the children. Children are taken care of in groups of maximum 10 children per pedagogical employee. Figure 7 shows a typical setting of after school day care.

GUEST PARENTS

Guest parents fall under the Dutch childcare law. Guest parents are qualified persons that work from their own home. This results in a form of childcare with more personal attention for the child. They are paid per child per hour.

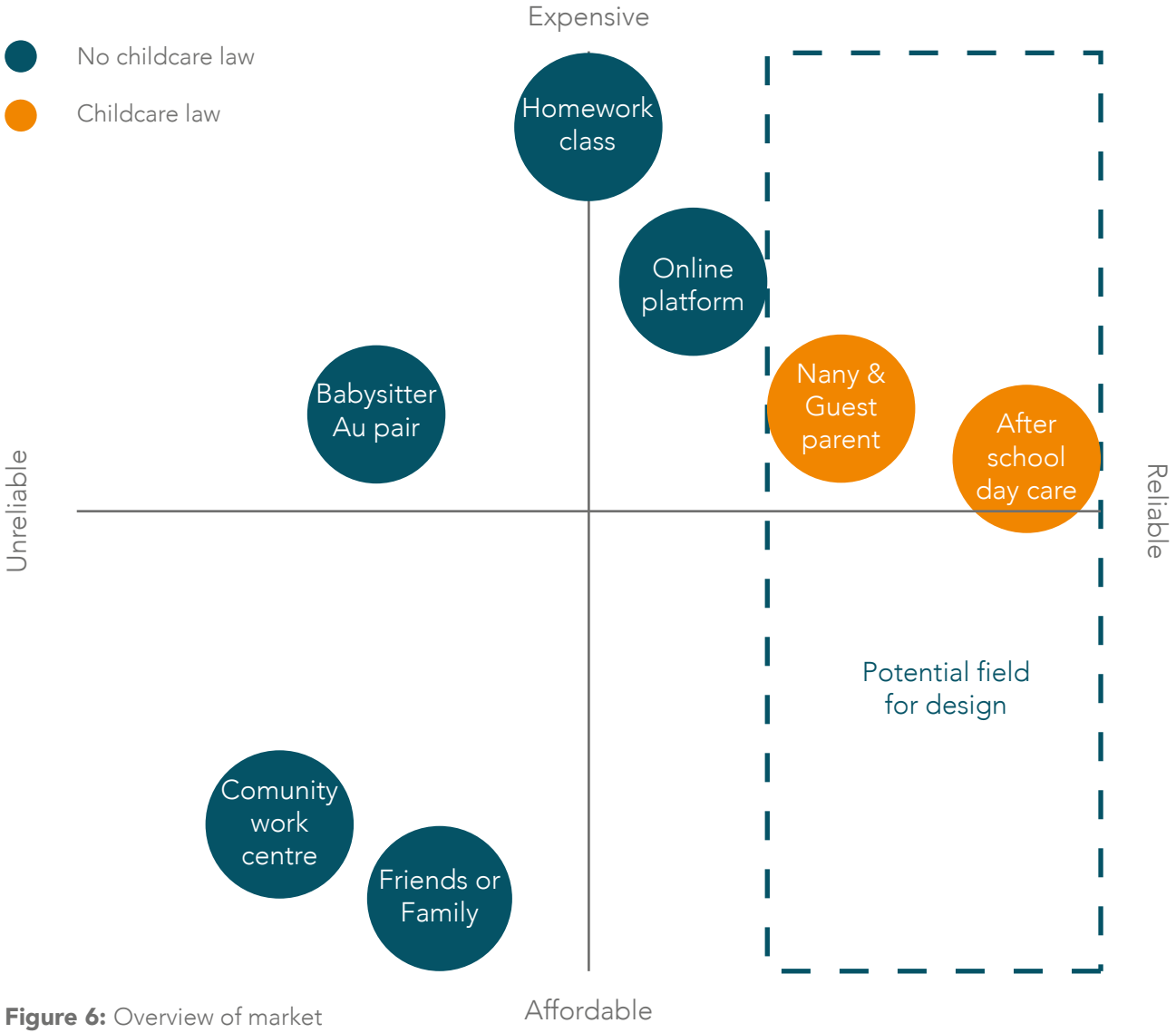


Figure 6: Overview of market

Figure 7: A typical setting of after school day care with an pedagogical employee and multiple children.

NANNY

A nanny is basically a guest parent that works in the home of the children. They work with a price per hour. This makes a nanny more affordable when the family consist of more children.

ONLINE PLATFORMS FOR BABYSITTERS

Babysitters are uncertified caregivers for children. Online platforms bring together the supply (babysitters) and demand (parents) in day-care. This form of day-care does not fall under the child care law. Therefore babysitters do not have to be certified, they are often young students. Because babysitters are not certified, wages are lower than that of nanny's but on the other hand parents can not qualify for allowance for this form of day care. The babysitter is paid per hour via the platform. With certain subscriptions parents have the assurance of child-care, also last minute. There are businesses that offer both guest parents / nanny's and babysitters.

HOMEWORK CLASS

At homework class children are guided in doing their homework. Classes take place after school hours. Homework class is focussed on children at secondary school, often offered at school by an external party or the school itself. Payment is done in the form of a monthly subscription based on the amount of hours and intensity of the guidance.

BABYSITTER / AU PAIR

This is a solution that parents arrange by themselves. Both are paid directly by the family. The babysitter only works when needed while an au pair lives with the family. A babysitter is often paid per hour while an au pair receives a salary per month.

FAMILY / NEIGHBOURS / OTHER PARENTS

Parents can also ask people in their environments if they can take care of their children. This is seen as a free service. It can however mean that parents have the feeling that they have to do something in return.

COMMUNITY WORK CENTRE

A centre subsidized by the municipality that organizes different activities for citizens of the neighbourhood. Some activities are for free and some for a small fee. The community centre is run by volunteers and paid community workers. They organize and guide the activities. They can also play an educational role for children, however going to the community work centre is without any obligation and day-care is not their core business. SWKGroep has a division community work, Figure 8 shows an impression of one of their community work locations in Zoetermeer.

Figure 6 at page 23 gives an overview of the different forms of childcare, mainly due to the limitations of the child-care law there is no reliable and professional form of day-care for children from 12 years old. SWKGroep can use their expertise and status as a reliable organisation in after school day care to offer a product for those children, that is not covered by the childcare law, but is still reliable and trustworthy.

Figure 8: Children gaming at a community work centre in Zoetermeer

1.2. STAKEHOLDERS & CONTEXT

This chapter describes the relevant stakeholders and how they interact within the context of after school day care. First a stakeholder map gives an overview of all the relevant stakeholders. A time line of a day at the after school day care explains how the most important stakeholders interact with each other.

1.2.1. STAKEHOLDERS

There are different stakeholders in the context of after school day care. A stakeholder map is designed to create an overview in the important stakeholders. Figure 9 shows this stakeholder map. The inner circle represents the context of after school day care. Three main stakeholders interact with each other within the environment of after school day care. These are the child, its parents and the pedagogical employee.

There are also other stakeholders from other contexts that influence the context of after school day care via the three main stakeholders. There are four contexts that influence the context of after school day care: Home, school, SWKGroep and the parents work.

Stakeholders in the home environment interact with both parents and child when it comes to childcare. Friends family are most important, they also take care of the child sometimes and their opinion on the form of childcare for the child is important for the parent. When there is a babysitter involved in the childcare, the child may have a preference for either the after school day care or the babysitter. Most far away are the neighbours, their opinion can influence the choice for a certain form of childcare.

In the school environment classmates and the teacher interact with the child and influence the perception of the child. Children often compare their situation with the situation of their classmates.

The pedagogical employee interacts with the different stakeholders in the organisation structure of SWKGroep. These stakeholders determine the strategy of the company and how the pedagogical employee has to carry this out.

In the work environment the parents are interacting with their colleagues. They depend on their cooperation when it comes to taking care of their child when they are at work. Their supervisors have to approve when parents wish to work other schedules in order to take care of their child.

There are three main stakeholders, the child, parent and pedagogical employee. Around them are a lot of stakeholders that influence the way that the main stakeholders interact with each other. The stakeholders around the main stakeholders can play a potential role in the to be designed product.

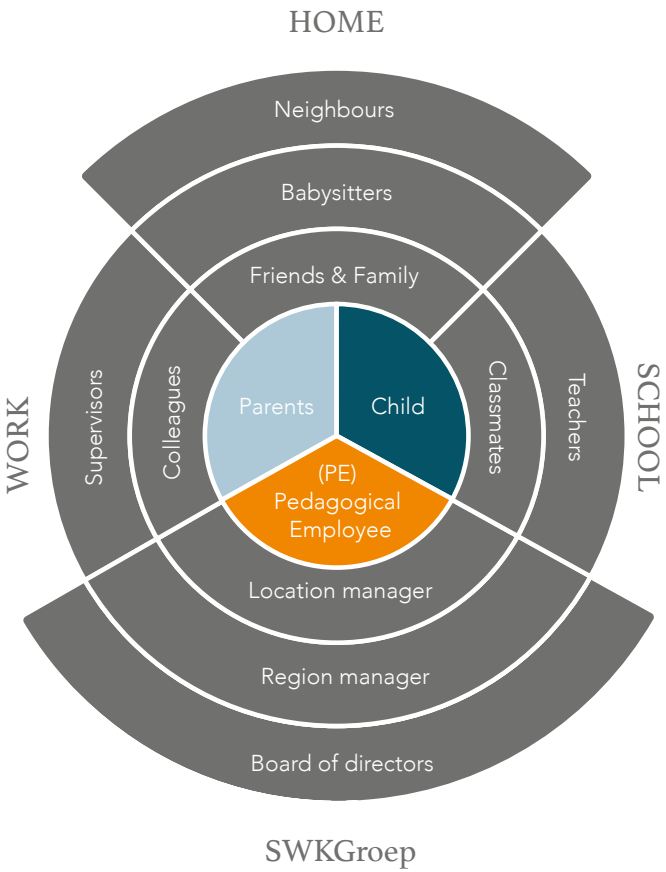


Figure 9: Stakeholdermap

1.2.2. CONTEXT OF AFTER SCHOOL DAY CARE

In order to understand the interactions within the context of after school day care, observations and interviews are conducted at Kern Kinderopvang in Zoetermeer, location Prinses Amalia school. The location is chosen because it works with a Kids Club for the eldest children, making it easier to separate the target group from the rest of the children. Based on this research a time line of a typical day at the Kids Club of after school day care is made, see Figure 10.

In the visual it can be seen that especially a lot is happening within the first hour. This is an hectic period: a pedagogical employee has to collect all the children (maximal 10 children per pedagogical employee), makes sure the table is ready for food, all children eat something and clean up before they can start playing.

Time at the Kids Club is spare time for children. They can decide what they want to do, they are never obliged to do something. Children at the Kids Club experience more freedom than the younger children at regular after school day care. If they want to, they can play outside. Outside they are obliged to wear a coloured jacket, this way the pedagogical employee is able to separate them from other children.

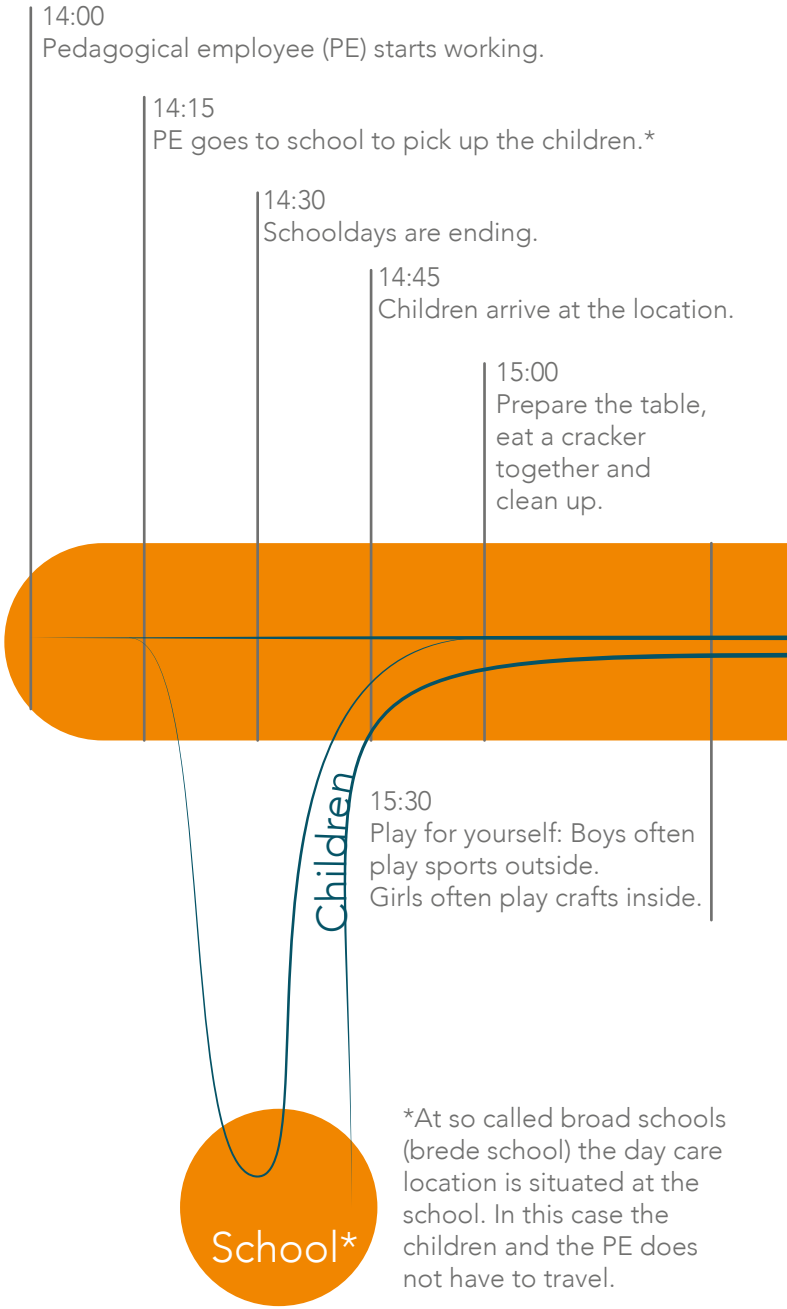
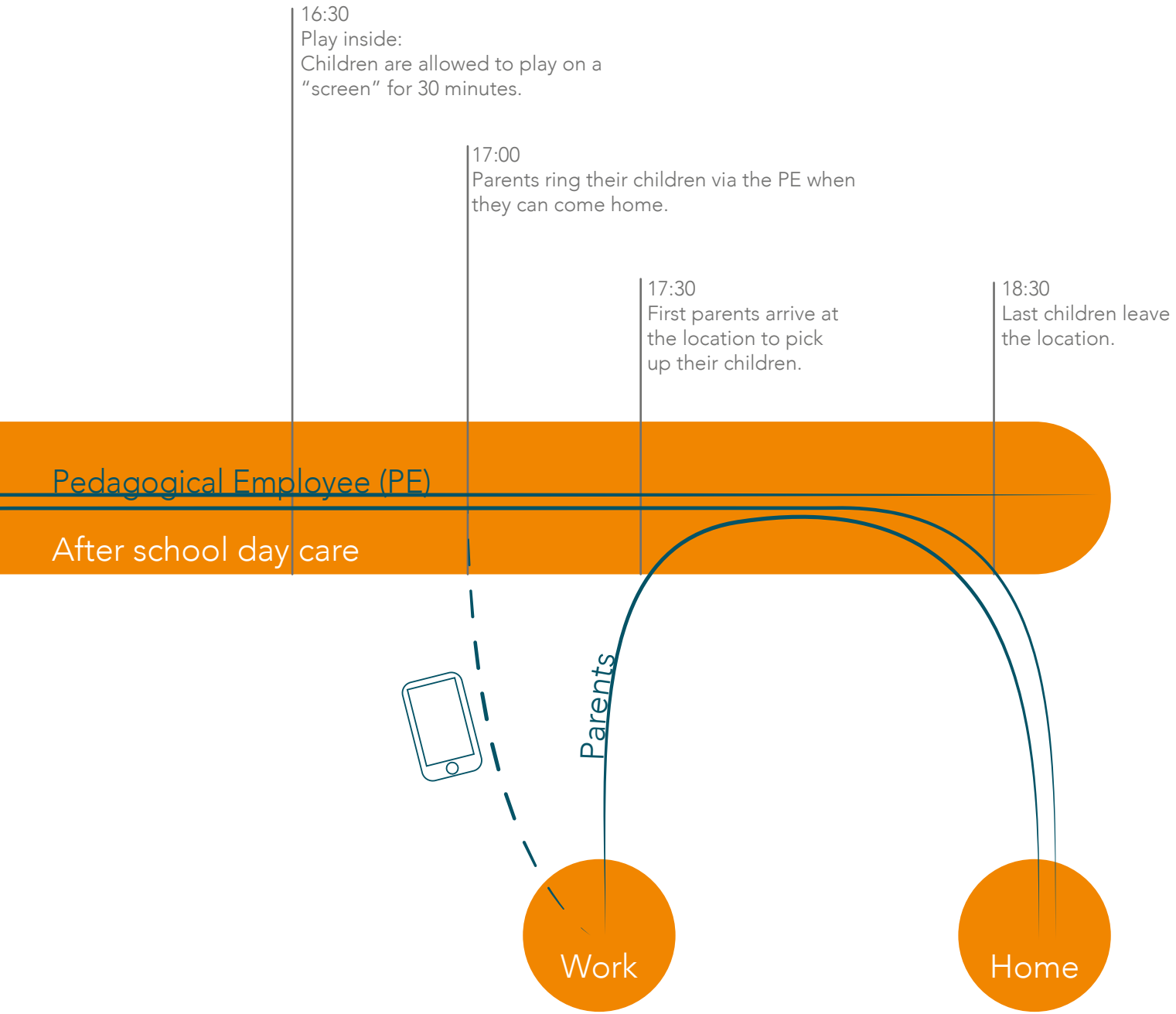


Figure 10: A day at after school day care


16:30
Play inside:
Children are allowed to play on a
“screen” for 30 minutes.
17:00
Parents ring their children via the PE when
they can come home.
17:30
First parents arrive at
the location to pick
up their children.
18:30
Last children leave
the location.
Pedagogical Employee (PE)
After school day care
Parents
Work
Home

Watching all children becomes hard for the pedagogical employee when there is a group of 10 children and some decide to play outside and others decide to play inside. A single pedagogical employee has to supervise both areas.

Children have 30 minutes of screen time that they often use to play games or watch video's on their tablets.

At the end of the afternoon children start going home. How this is arranged varies from child to child. Some children are picked up, some children can come home from a certain time and other children are called by their parents when they can come home. Calling always happens through the phone of the pedagogical employee. Often children call their parents back to ask if they can stay a little longer to finish the game that they are playing. The last children leave at 18:30.

Even though pedagogical employees are trained for, and used to the context, it is a hectic and chaotic context. They have to arrange and supervise a lot at the same time.

Children appreciate the attention of the pedagogical employee and like to tell them about their school day. Children experience their time at the Kids Club positive. They experience more freedom then they where used to and more possibilities to play.

1.3. USER RESEARCH

In this section research is done with the most important users in the context of after school day care: child and parents. See Figure 11 for this part of the stakeholder map. The entire stakeholder map with all stakeholders can be found at page 29. In the to be designed product child and parents will be the most important users. It is plausible that the PE will play another role than in after school day care in the to be designed product. It is chosen to focus the user research on the child (paragraph 1.3.1 at page 36) and parents (paragraph 1.3.2 at page 44).

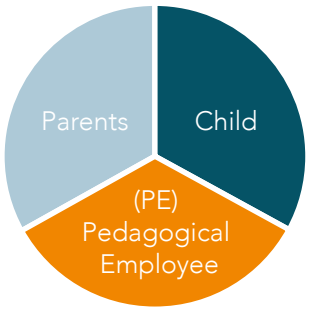


Figure 11: Stakeholders in after school day care

In order to decide which methods or techniques where suitable in research with the different users the model shown in Figure 12, (after Sleeswijk Visser Et al., 2005) Is used. The model shows the different techniques a design researcher can use in order to gain knowledge on different levels.

Interviews and observations give the researcher mainly insights in explicit and observable knowledge, based on the users experience of the present and past. To gain knowledge on future experiences, generative sessions are introduced by Sanders (1992) these techniques can reveal tacit knowledge and expose latent needs (Sanders, 2001). Tacit knowledge is knowledge that people can act upon, but cannot readily express in words (Polanyi,1964). Latent needs are those that people are not yet aware of. They are needs that become realized in the future (Sleeswijk Visser, Et al., 2005).

In generative sessions the researcher guides the participants in small steps to create and express the deeper types of knowledge. This way the researcher gets access to this hidden world and can use the insights for design purposes (Sleeswijk visser, Et al., 2005).

To gain explicit information of the present, interviews with parents were executed. More in-depth information was gained by conducting generative sessions with children who are in their final years of after school day care.

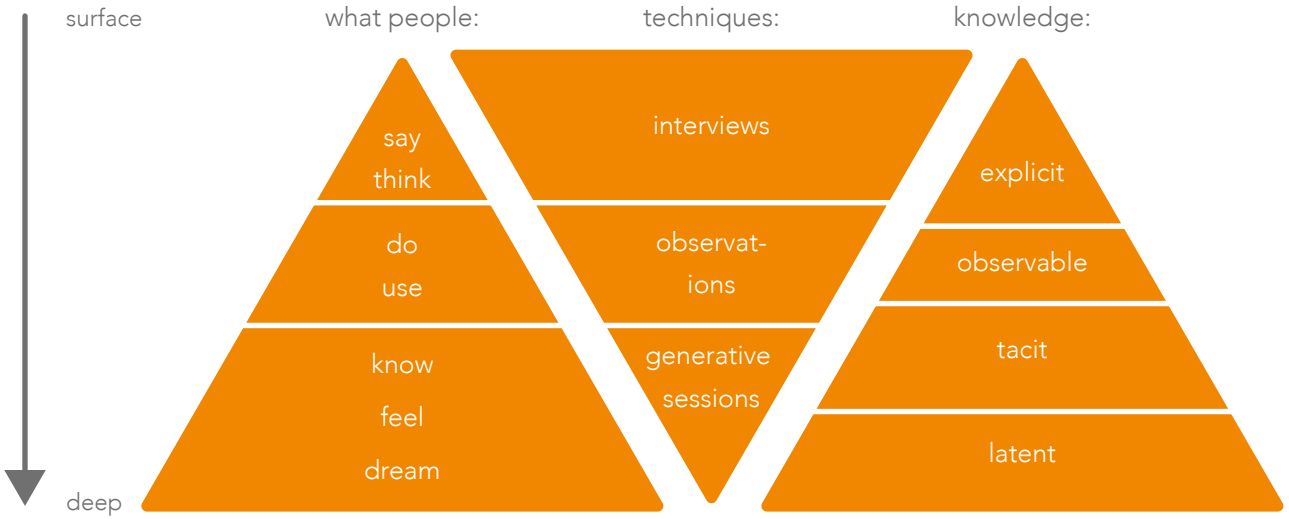


Figure 12: Overview of techniques and gained knowledge by Sleeswijk Visser, Et al. (2005)

1.3.1. CHILDREN

In order for the new product to be succesfull, the design should meet the needs of children when they are home alone. The user research with children is focused on gaining this knowledge. This paragraph describes the research in four sections: Research questions, Methods, Participants and Insights.

RESEARCH QUESTIONS

The user research described in this paragraph answers the following research question and sub questions:

- What are the needs of children (10-14 years old) when they are home alone.
    - What do these children do when they are at after school day care?
    - What do these children like to do when they are at home alone?
    - What are the concerns of these children when they are home alone?

METHODS

Generative sessions can be used to gain knowledge that is more deep, in literature referred to as latent needs and tacit knowledge (Sleeswijk Visser Et al., 2005) (see chapter 1.3 at page 34 for more information). In order to answer the research question it is important to reach the latent needs of the children. Therefore generative sessions are used in the research with children, they are based on the context mapping process as described by Sanders & Stappers (2015).

Two generative sessions where designed, the first generative session was designed with multiple exercises. Focusing on both the current situation (being in after school day care) and the future situation (being home alone). It turned out that this were too many questions for the children and the focus was too early in the generative session. Besides, exercises where asking the children directly what they would want for themselves. This led to superficial answers without true meaning based on their past and present experiences (explicit knowledge). After an iteration the amount of exercises was reduced. Figure 13 gives an overview of this iterative process and how this lead to insights. The second session resulted in more meaningful answers and reasoning behind these answers (latent

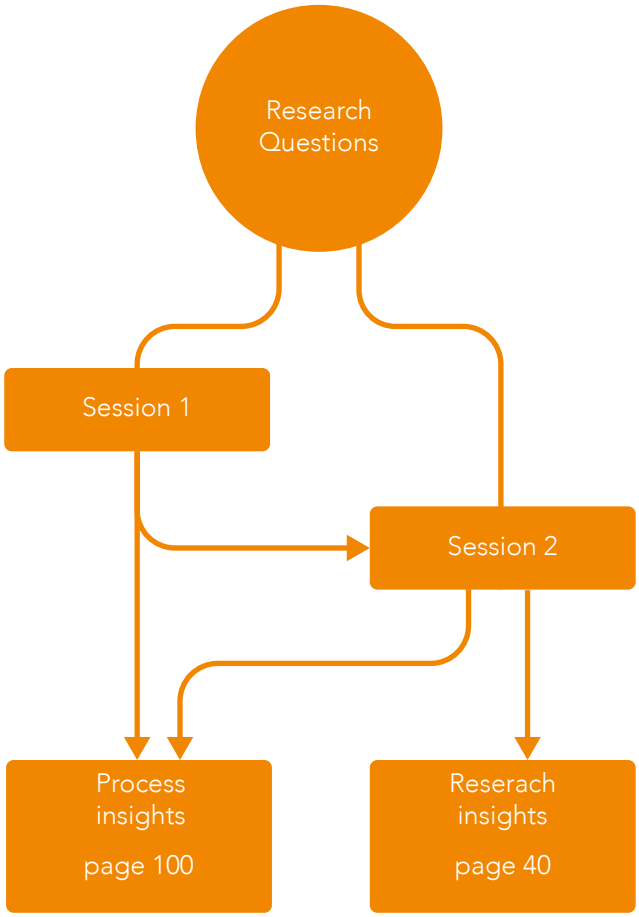


Figure 13: Iteration on generative sessions

needs and tacit knowledge). Practical insights of this process are described in the reflection at page 100. They are useful for students and researchers but also for the SWKGroep as inspiration for participation with children.

In the improved generative session children were asked to build their own buddy/superhero from Legos. In the exercise they were asked to think of what kind of superpowers their buddy/superhero needed to help them by being home alone. A3 sheets of paper with context related pictures where provided to them and they could use them as inspiration for superpowers, see Figure 15 and Figure 14.

During the session, the researcher encouraged the children to think of reasons behind a superpower. At the end of the session children presented their work to each other and explained why they had chosen their superpowers. See appendix B for a step by step procedures of the generative sessions.

PARTICIPANTS

The network of SWKGroep gave the researcher easy access to after school day care facilities. Due to time limitations and creating a bond of trust with the participating children a collaboration with a particular after school day care location on a fixed day of the week was chosen. Children often go to after school day care on the same day every week. This gave the researcher the opportunity to introduce himself to the children and ask permission of the parents in week 1 and execute the generative sessions in week 2 and 3 with the same group of children.

The pedagogical employee helped the researcher in selecting children that would like to participate and she helped to make the children enthusiastic to participate.

Generative sessions with 11 children from 9-12 years old were executed at the Kids Club of the Prinses Amalia school, Kern Kinderopvang, Zoetermeer. Divided over two sessions.

.

Figure 14: Children in a creative session. Using the pictures on the sheets as inspiration for superpowers.

Figure 15: Superhero's from Lego made by a child. The pictures on the A3 sheet provide inspiration for superpowers that help the children in being home alone

INSIGHTS

The results where interpreted by grouping superpowers with similar background reasons together in six groups. Each group represents a latent need. They are ranked from most important to least important, were importance was based on how often they occur and on how many different sheets. The six identified needs of children from 10-14 when they are at home alone. Figure 16 shows the outcome of one child's generative session:

1: SECURITY

A very common element is the fear of intruders. When children think of being home alone they fear people that might harm them. Thieves, intruders, scary man at the door, etc. Even though home should be a save environment, children do not experience this when their parents are not at home.

"Mijn superheld kan vliegen, dan ziet hij inbrekers aankomen en mij waarschuwen."
"My superhero can fly so he can spot intruders and warn me."

Hij moet sterk zijn om mij te beschermen tegen enge mannen aan de deur."
"He must be strong so he can protect me from scary men at the door."

2: HELP WITH CHORES

Children like to please or help their parents with chores they did. The hard thing however is actually doing these chores and knowing how or when they should be done best. Children would like it if they receive help with these chores. Sometimes chores are demanded by parents like helping in the household, sometimes they are for their own good like preparing food.

"Ik wil altijd mijn moeder helpen met bijvoorbeeld schoonmaken. Als ik niet goed weet hoe ik iets moet doen, dan kan mijn superheld mij daarbij helpen."
"I always like to help my mom by cleaning up for instance. When I don't know how to clean something, my superhero can help me."

3: EXPERIENCE TOGETHER

Children do not like to things on their own. Sharing it with peers is way more fun and helps fighting boredom. Watching TV or Youtube for example is more fun with a friend. It is important that the friend has the same interest and perceptions.

"Ik wil dat mijn superheld goed is in gamen, dan kunnen we samen spelen."
"I want my superhero to be good in playing games so we can play together!"

"Hij moet fan zijn van Christiano Ronaldo, anders kunnen we geen vrienden zijn."
"He must be a fan of Christiano Ronaldo, otherwise we could not be friends."

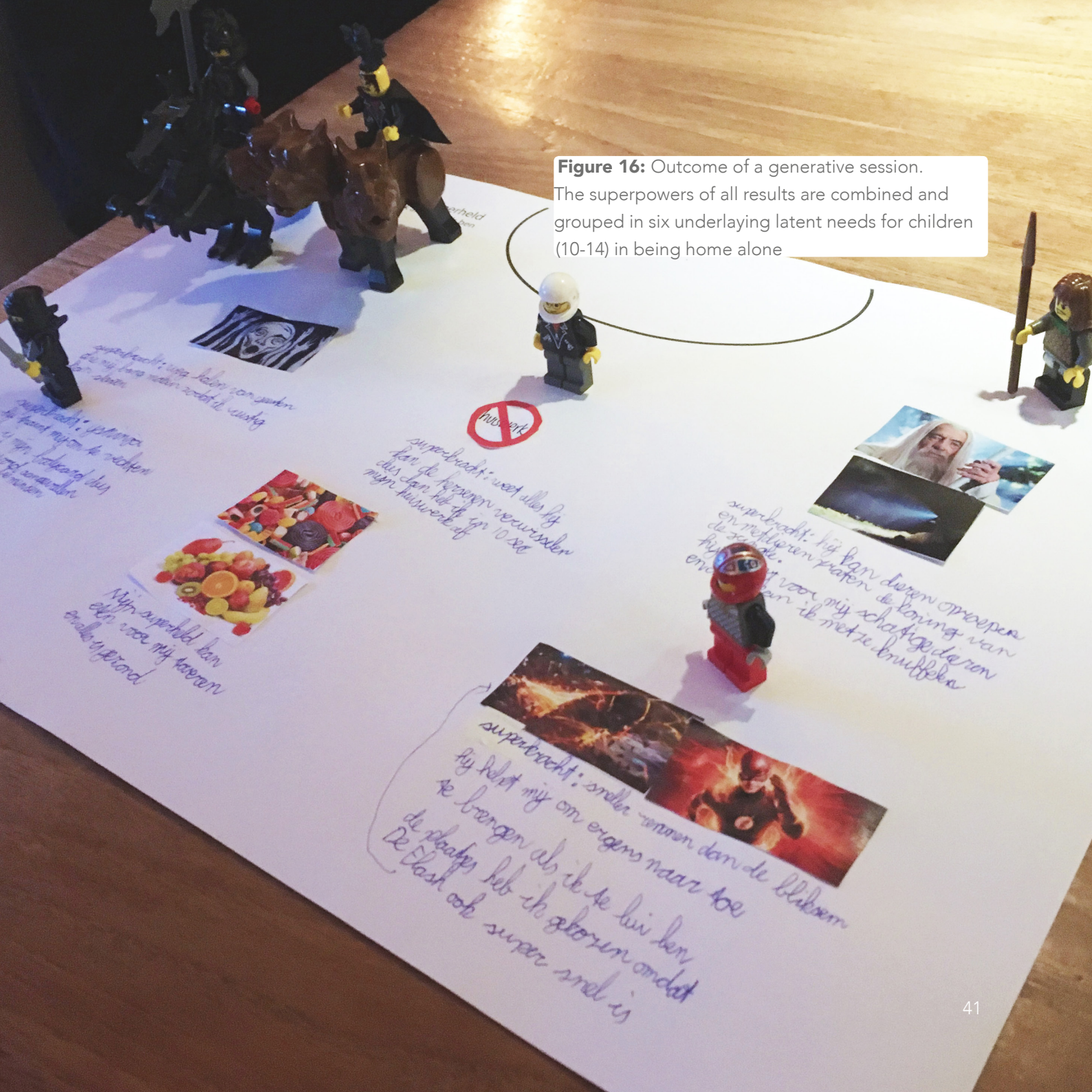


Figure 16: Outcome of a generative session. The superpowers of all results are combined and grouped in six underlaying latent needs for children (10-14) in being home alone

4: COMPANY

This need is related to the previous need. The reasoning however is driven by the fear of loneliness. This was often fought in seeking comfort by animals. Company does not necessarily have to be with another child.

"Ik heb deze superheld gemaakt zodat hij allemaal dieren kan oproepen, als ik dan alleen ben kan hij schattige dieren oproepen waar ik mee kan knuffelen."
"I created this superhero that can call all sorts of animals, when I feel alone he can call a cute animal that I can cuddle with"

5: FREEDOM

Children love the idea that they have the complete freedom to do what they want. The limitations to this freedom, for example traveling long distances on their own is something they desire to overcome.

"Mijn superheld kan vliegen zodat hij mij overal naartoe kan brengen."
"My superhero is able to fly so he can bring me everywhere I want."

"Deze superheld is snel als het licht, dan kan hij mij optillen en naar mijn vrienden brengen."
"This superhero is fast as lightning so when I want to visit my friend, he can bring me."

6: HELP WITH HOMEWORK

Children understand the importance of learning but they do not like the concept of homework. Especially beginning with homework is a hard task. They like the idea of something that helps them overcome the boundaries of doing homework. Something that makes homework more fun!

"Deze superheld is superslim en hij kan zijn hersens aan die van mij koppelen. Dan kan ik heel veel huiswerk goed maken."
"This superhero is very smart and he is able to transfer knowledge to my brain. I'll be able to make lot of homework!"

"Beginnen met huiswerk maken is het stomst. Ik maak liever alles in één keer zodat ik niet elke keer hoef te beginnen."
"Starting with homework is the worst. I rather do everything at once than divide it over the week. If my superhero can begin for me and I can finish, I don't have to do everything at once."

The generative session gave insight in the latent needs and tacit knowledge of children in the context of being alone. This knowledge is interpret in 6 needs for children (10-14) when they are at home alone:

- Security
- Help with chores
- Shared experiences
- Company
- Freedom
- Help with homework

These needs will form the guidelines for design.

1.3.2. PARENTS

Parents will be the ones that purchase the product, this makes them an important stakeholder. In order for the new product to be successful, the design should meet the needs of parents with children at home alone. The user research is focused on gaining this knowledge. This paragraph describes the research in four sections: Research questions, Methods, Participants and Insights.

RESEARCH QUESTIONS

The following research questions are answered in this paragraph:

- What are the current practices of after school day care?
    - What is influencing these practices?
- How do parents deal with the moments that their children are home alone?
- How do parents expect to deal with the future, when their children are in secondary school?

METHODS

The research questions are mainly focused on past and present experiences: explicit knowledge. Interviewing is a user research technique that can reveal explicit knowledge based on the present and past experiences of the user (Preece Et al., 2002) Therefore interviews with parents were conducted. For more information on the decision making of research methods see the introduction on user research at page 34.

In order to answer the be able to answer the research questions the interviews were structured in past (after school day care) present (home alone at primary school) and future (home alone and at secondary school). The complete list of guidance questions can be found in appendix C.

PARTICIPANTS

Two parents with children that used to go to after school day care were selected for the interview because they have experience with after school day care and experience with children that stay home alone. The interview took place at the parents home in order to make it as convenient as possible for the parents to cooperate.

INSIGHTS

The interview is recorded and transcribed for analysis and quotes, the transcript can be found in appendix D at page 115. The interview is structured in past, present and future. The insights of the interview are described in this order and substantiated with quotes.

PAST: AT AFTER SCHOOL DAY CARE

Over all their children enjoyed their time at the after school day care. Especially when there was some form of Kids Club for the children.

"Hij vond dat natuurlijk superstoer"
"Of course he thought it was supercool"

Parents like that their children can be themselves, play and blow off steam. The context however is chaotic and hectic. This is due to the fact that the children receive a lot of freedom. Parents like it when the children are offered a little more structure even though they do not see a real parenting task reserved for the pedagogical employees.

"Ik denk dat het ook wel goed is om ook een beetje structuur te bieden ook aan die kids, ja, aan de andere kant is het ook wel heel lekker dat ze dat daar kunnen doen."
"In my opinion it is good to offer those kids some structure, yes, on the other hand it is nice that they can do this over there."

Especially at the long days of vacations parents think the amount of things to do for the children is not sufficient.

PRESENT: AT PRIMARY SCHOOL AND HOME ALONE

Children are the ones that indicate that they do not want to go to after school day care anymore. This always has to do with the fact that they are the eldest at the elementary school and they miss connection with the other children. Parents are worried what children are going to do with their time alone at home.

"Ik vond het wel lastig, want wat ga je dan doen?"
"I found that difficult, because what are you going to do?"

They discuss with their children what they are going to do with the time alone at home. Parents worry that their children spent the entire time gaming. Often there is an agreement that children call their parents when they reach home.

FUTURE: GOING TO SECONDARY SCHOOL

Going to secondary school means a different school schedule. Parents are aware that their children have to show more responsibility. Parents find it hard to let go of their child, they rather give them everything on a silver plate. They understand however that if they want to educate their children in responsibility that they have to learn to let things go.

"Ik moet ook leren om niet alles voor hem uit te kauwen en het hem allemaal op een presenteerblaadje te geven."
"I have to learn not to give him everything on a silver plate"

The interviews gave insight in the needs of parents related to their children being alone at home. The needs are translated to guidelines for design:

The to be designed service should:

- Provide structure to the routines of children while parents are at work.
- Offer the children a wide range of diverse activities.
- Give parents the feeling that they are still in control of raising their child.
- Guide parents in letting go of their child so they can get independent adults.

1.4. RESEARCH CONCLUSION

In this chapter the orientation and research in the context of after school day care is described. In this last section the conclusions of these researches come together in an overall research conclusion. This conclusion describe the boundaries for design in the next chapter: ideation/iteration with a design scope and a design goal.

1.4.1. DESIGN SCOPE

There are two end-users of the product: the child and the parent. A pedagogical employee can be part of the product. Depending on the abstraction level of the context one can be more important than the other. On a high level of abstraction, the market and company level, the parent is more important because they are the ones that choose to purchase a certain form of childcare. This makes them the costumer of the product, but on the same time they will also be an end-user because they will also interact with the product. On a lower level, the product context level, the child is more important. The product should meet the needs of the child in order to be successful. In the current context of after school day care the pedagogical employee also plays an important role. For the to be designed product it is likely that this role will be different. Nevertheless the capabilities of the pedagogical employees should be taken into account wile designing a product.

The design scope is defined by the three factors: the desires of the child (1), the desires of the parents (2) and the capabilities of the pedagogical employee and SWKGroep (3). The three end-users form a challenge for design because their are conflicting desires among the different end-users. The design scope is defined by the matching desires and capabilities. See Figure 17 for a visual representation of the design scope.

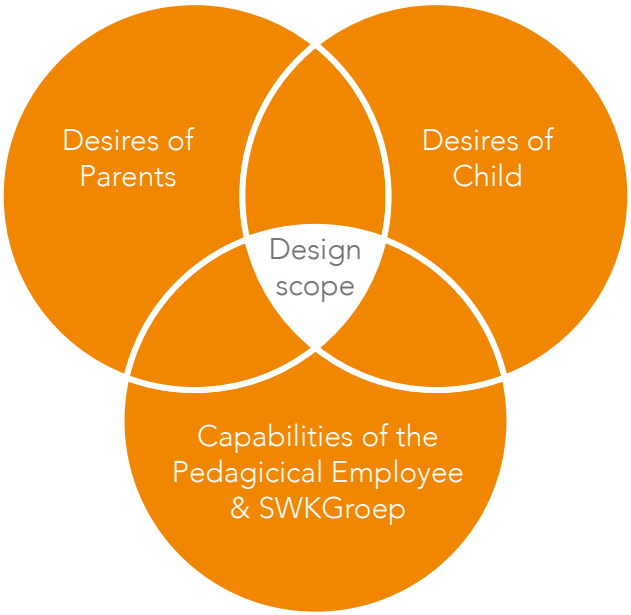


Figure 17: Design scope is defined in the area of the matching desires and capabilities of all three end-users.

1.4.2. DESIGN GOAL

The design goal is based on the three end-users: Child, parents and pedagogical employee. Described in paragraph 1.4.1 at page 47. This paragraph describes how the desires and capabilities of these end-users result in the formulation of the design goal. The highlighted words in the design goal correspond with the descriptions of the end-users desires and capabilities.

DESIRES OF THE CHILD

The needs of the child, discovered in paragraph 1.3.1 at page 36, can be grouped in three desires: Affection, freedom and guidance:

Affection: The need for security and the need for company both follow from the desire for affection when the child is home alone.

Freedom: As the child is getting older, the child wants to broaden its horizon, the desire for freedom grows, the need of experiencing together and freedom follow from this desire.

Guidance: Even though the child is getting more and more independent there is still a desire for guidance, the needs of help with chores and help with homework follow from this desire.

DESIRES OF THE PARENTS

The desires of parents, discovered in paragraph 1.3.2 at page 44, can be divided in relieve and control:

Relieve: Parents tend to arrange everything for their child, they have a hard time letting go of their care when they are at work and their child is home alone. They want structure for their child and a sufficient amount of things to do. They feel like their child is not able to come up with these things itself.

Control: On the other hand they like to stay in control of raising their child and need guidance in the phase where the child becomes more independent.

CAPABILITIES OF THE PE AND SWKGROEP

The product is offered by SWKGroep, most likely there will be pedagogical employees working with the product. Their role can be different as in after school day care but it should fit **business operations** of SWKGroep in order to suit to the capabilities of the Pedagogical employee.

When it is possible to get the product covered by the childcare law, described in paragraph 1.1.1 at page 14, this will be an enormous potential in the revenue of the product because parents can receive

allowance from the tax authority to pay for the product (Due to the nature of this law, this will only be possible for children that go to primary school).

Besides the division after school day care, SWKGroep also operates a division community work as discribed in paragraph 1.1.2 at page 18. Community work focusses on every age group without limitations. A collaboration with this division forms a design opportunity that fits the **business operations** of SWKGroep. This paragraph also describes the pedagogical expertise of SWKGroep. Making use of this expertise in the product **adds value** to the product.

Paragraph 1.1.3 at page 22 shows how the market of childcare is distributed. With their after school day care division SWKGroep provides a high reliable childcare service. At the moment there is no affordable and competitive childcare product at the market for children in secondary school. Translating the current **business operations** to a product for children in secondary school will be big opportunity to strengthen the competitive position of SWKGroep and to earn revenue.

The product should benefit the SWKGroep, it has to **ad value**, this is not only value in money, improve their service and strengthen their competitive position with the product also adds value.

Together with the design scope in Figure 17 the design goal will form the boundaries and direction in the next chapter: ideation/iteration.

DESIGN GOAL

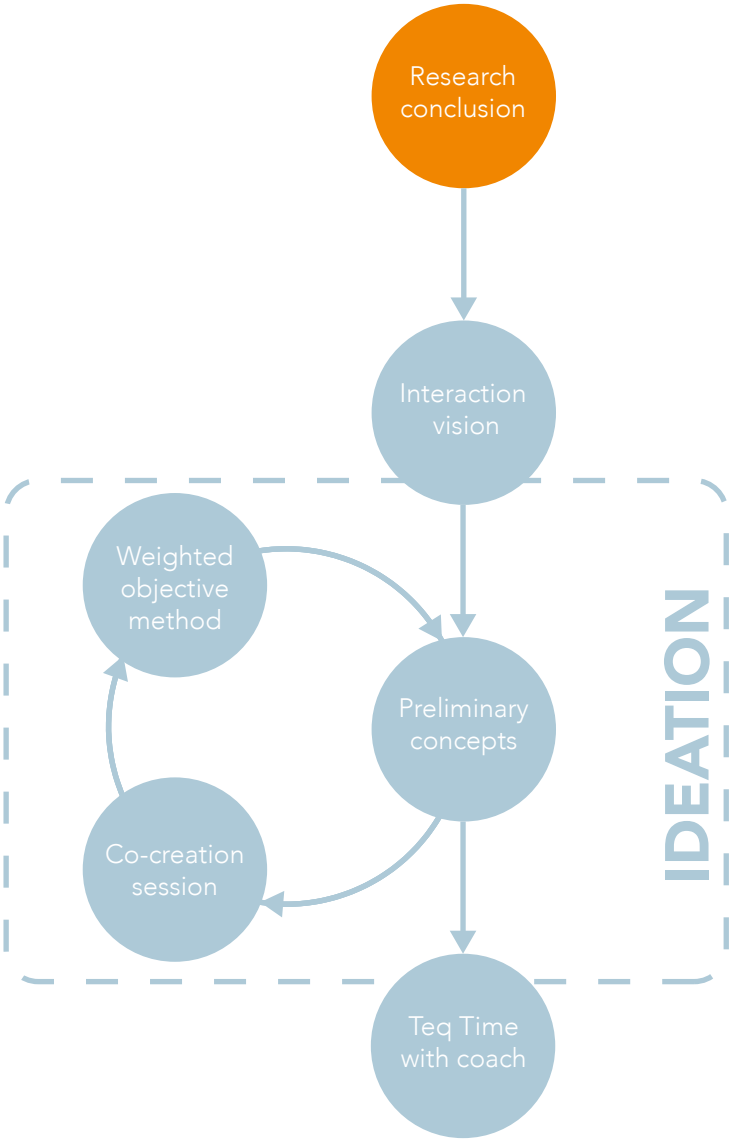
"Design a location and time independent form of after school day care for children (10-14 years old) where:

children experience **affection, freedom and guidance**, while it **relieves** parents during work without losing **control,**

that fits the **business operations** of SWKGroep and **adds value**."

2. IDEATION/ ITERATION

In this chapter ideas are generated based on the results of the previous phase. Interaction visions form guidance during the ideation. The generated ideas developed further during a co-creation session with stakeholders from the SWKGroep, the insights of this session combined with the insights of the weighted objective method result in the final concept: Teq Time with a coach.


Research conclusion
Interaction vision
Weighted objective method
Preliminary concepts
Co-creation session
IDEATION
Teq Time with coach

2.1. INTERACTION VISION

A method that is used in order to generate, guide and communicate ideas is the interaction vision. An interaction vision is a metaphor that communicates the intended impact of the design solution to the interactions in the context. Metaphors are commonly used to map users' understanding, activities and reactions to a product (Hey Et al. 2008).

In an interaction vision a metaphor is used that frames the qualities of the experience that should be provided to the users through the design solution.

Because the context in this project has two end-users: the child and the parent, two interaction visions are developed. Both focussing on their own end-user.

The first interaction vision is focusing on the child. The feeling of learning how to ride a bicycle see Figure 18. The dad first guides his son by holding the saddle, making sure he does not fall over. The child however has to paddle himself in order to go forward. Slowly the dad lets go of the saddle but still walking behind his son with is hand close to the saddle. The child does not know he is riding the bike by himself and can only manage this because his dad is right behind him.

Qualities in this interaction vision are: security, guidance, freedom & trust.

Figure 18: Interaction Vision 1: A parent that teaches his child to ride a bicycle.

The second interaction vision is focusing on the parents. A master of ceremonies, see Figure 19, during a wedding is often a good friend of the wedding couple. Someone that they can really trust in taking care of the wedding. The master of ceremonies is the contact person for everyone that has questions about the wedding. A good master of ceremonies makes sure that the wedding couple does not get bothered by minor things during the wedding or worried about major things during the wedding. They make sure that they can fully enjoy the wedding. In this Interaction vision the wedding is the child, the wedding couple are the parents and the master of ceremonies is the product.

Qualities in this interaction are: relieve, control, trust & ease.

Figure 19: Interaction Vision 2: A master of ceremonies at a wedding.

2.2. IDEATION

In this section the ideation is described. The interaction visions (page 52) formed inspiration and guidance by developing preliminary concepts. Two preliminary concepts are developed, one based on each interaction vision. During the ideation these concepts are further developed with the help of employees of different layers of the organization of SWKGroep in a co-creation session. The preliminary concepts are evaluated with the weighted objective model which gave insights in the contrary strengths of the two concepts. Based on the co-creation session and the insights of the weighted objective method a combined concept is presented: TEQ TIME activity platform with an embedded coach.

2.2.1. PRELIMINARY CONCEPTS

Two interaction visions are developed in paragraph 2.1 at page 52 to be able to cover the entire design goal. Based on these two interaction visions two preliminary concepts are developed, TEQ TIME, an activity platform and Bas Bel Oppas, a form of after school day care at a distance.

TEQ TIME

TEQ TIME is named after the mascot of SWKGroep, TEq. The mascot is used in the communication with children and is derived from the logo of SWKGroep. Naming the concept after the mascot and make use of the form language is used to make the product recognizable for children and give them the feeling that they can trust the concept.

TEQ TIME is mostly derived from the interaction vision of the child, the father that learns his child ride a bicycle. The concept tries to guide the child through the time alone by offering a wide range of activities to do. It is a private online activity platform, provided by SWKGroep. TEQ TIME offers children activities sorted in three categories: Individual, together and organized Figure 20 at page 59 shows the interaction diagram of the product. It shows how the different users interact with the product and how they are provided by information.

The individual activities are activities that children can do at their own house and at the time that they want. Activities can be related to cooking, arts, crafts or music making. The activity starts with an instruction video that explains the activity step by step. The child has the opportunity to invite a friend from the platform to join him/her with the activity via life video

connection. To finish the activity the child is asked to upload his/her results in photo or video.

Activities together are mostly focused on outside play like playing football. Children can organize an activity in their own neighbourhood and invite children from the platform.

Organized activities are activities in community centres or organized by after school day care. They can also be organized by partners of SWKGroep, such as sports clinics. They are supervised by employees of SWKGroep. The current vacation program of after school day care can be part of these activities.

Parents can also get access tot the platform. They get a notification when their child uploads a picture of a video about the activity that they completed. They can also see what collective activities they are joining. Giving them insight in what their child is doing with his/her free time.

Parents can also influence the activities that are offered to the child. If they don't want their child to use the stove, they can decide to turn of the activities which involve cooking.

Payment is done monthly in the form of a subscription. To make children familiar with the product, they get a free subscription as long as they are part of the Kids Club. When they stop going to after school day care parents can choose to continue with TEQ TIME with a paid subscription.

The concept has a lot of possibilities for further growth. For example a point reward system for finishing activities or a collaboration with schools so homework can be integrated.

- Update activiteiten regelmatig.
- Gebruik actualiteit om relevant te blijven.
- Werk samen met sponsoren (Waterpolo).

TEQ TIME

O
ac
pl

KIND

INDIVIDUEEL

Bekijk instructiefilmpje van de gekozen activiteit.

Upload vlog van de activiteit naar TEQ TIME.

SAMEN

Organiseer een activiteit op een locatie bij jou in de buurt

Nodig andere kinderen uit om mee te doen met de activiteit.

GEORGANISEERD

Zie welke activiteiten er worden georganiseerd.

Nodig andere kinderen uit om mee te doen met de activiteit

Figure 20: Interaction diagram of Teq Time.

BAS BEL OPPAS

Bas Bel Oppas is inspired on the interaction vision of the parent: The wedding planner. The concept relieves the parents and ensures a safe environment for the child, Figure 21 shows the interaction diagram of this preliminary product. It shows how the different users at different locations interact with the product and with each other.

Basically the concept is an after school day care at a distance. "Bas" stands for the pedagogical employee that takes care of the child. When parents choose for this form of childcare, the parents, child and Bas come together for an intake. During this intake they set goals for the next term of two months (for example about homework or planning). They also make an agenda with the timeslots that the child is home alone and how they keep in contact (phone, Whatsapp or mail).

Bas gets in contact with the child by phone at the moments that the child is home alone. He asks the children about how their day was, what they plan to do for the afternoon and how they can work on their goals today.

In the case of an emergency the child can get in contact with Bas. Bas can take care of the emergency and in the most extreme case come to help take care of the problem. If necessary Bas informs the parents about the emergency situation.

Every two months the child, parents and Bas come together for an evaluation of the goals in the previous term. If needed they agree on adjusted goals and the evaluate on the form and frequency of contact between the child and Bas.

The product is paid per month and depends on the amount of hours that Bas is used. A combination of after school day care and Bas Bel Oppas is possible for children under 12.

The concept should be seen as an expansion of the after school day care service of SWKGroep, not as a competitor. It should be offered to the parents when they decide to take their child out of the Kids Club. A try out period can also be offered when parents are in doubt if their child is independent enough to stay at home alone.

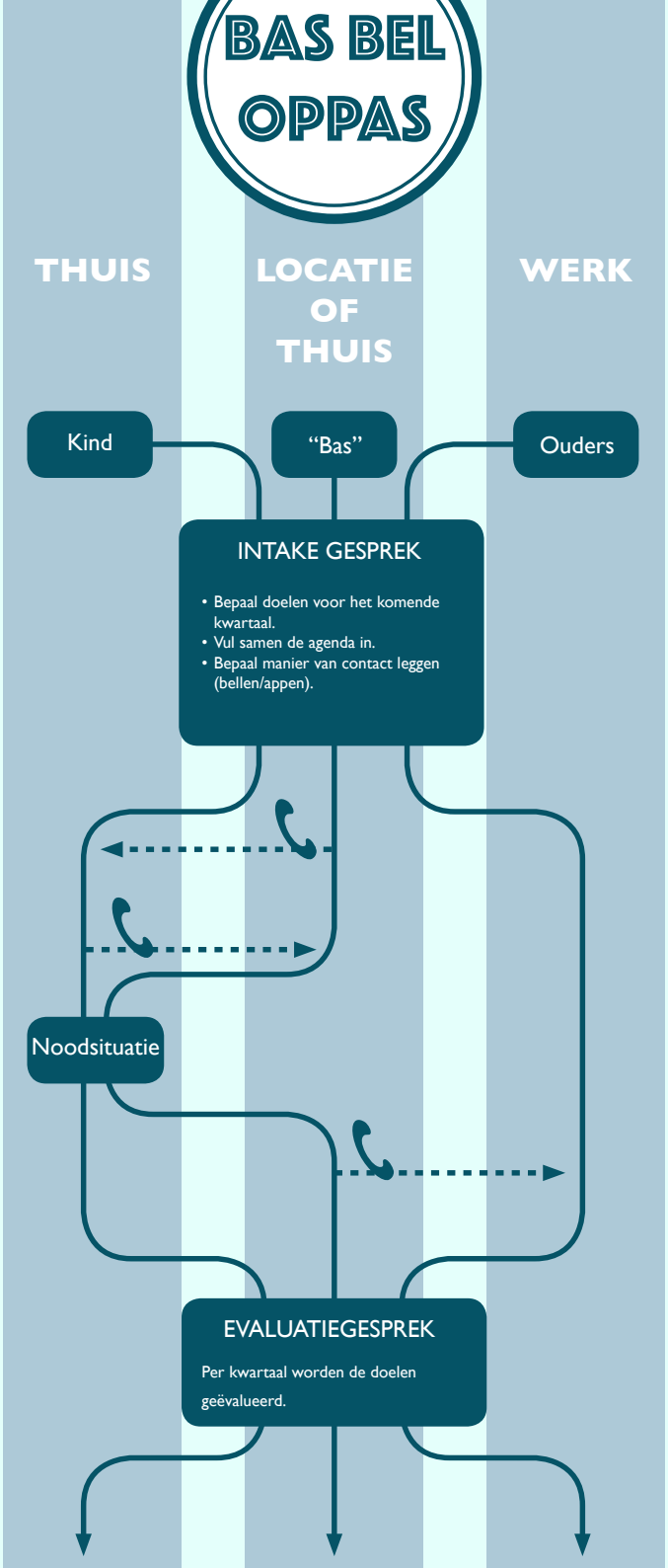


Figure 21: Interaction diagram of Bas Bel Oppas.

2.2.2. CO-CREATION SESSION

To be able to further iterate on the preliminary concepts a co-creation session was organised. In literature co-creation is used to refer to any act of collective creativity that is shared by two or more people (Sanders & Stappers, 2008). In this paragraph the co-creation session is described in four sections, research question, method, participants and insights.

RESEARCH QUESTION

The following questions where leading during this co-creation session:

- What are the strengths and weaknesses of both preliminary concepts?
- What can be solutions to overcome these weaknesses?

METHOD

To get everyone at the same page about the project, the research chapter of the project was presented. The presentation ended with the explanation of the two preliminary concepts.

For both concepts an A1 size poster of the interaction diagram was printed. The participants where asked to use coloured post-its to place comments on the posters. Green: positive feedback, Pink: bottlenecks, Yellow: General ideas and development. Participants where asked to work in groups and discuss with each other to encourage new ideas (see Figure 22).

PARTICIPANTS

A wide range of experts within SWKGroep where selected to take place in the co-creation session. Two members of the board of directors, the innovation manager, a process manager, a location manager after school day care, a pedagogical employee and an employee community work.

Figure 22: The innovation manager, process manager and community work employee in discussion about Teq Time.

INSIGHTS

To process the result, the post-its where sorted in matching groups per concept.

TEQ TIME

Digital

TEQ TIME is a present-day concept that meets the experience world of children in the age of 10-14 years old. The interactive offer of activities is an advantage and an expansion of the offline program offered by community work. The combination of a digital world and the outside world is seen as a strong point.

Collaboration

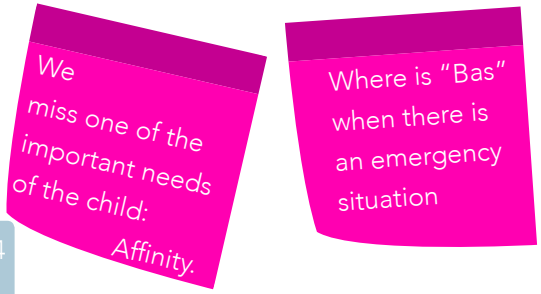
Organised activities can be organised with business partners like sports clubs. There is a lot of potential in using existing, but also building new relationships.

Sharing

it is questioned if children have the need to share their activities, will the log in and upload their videos.

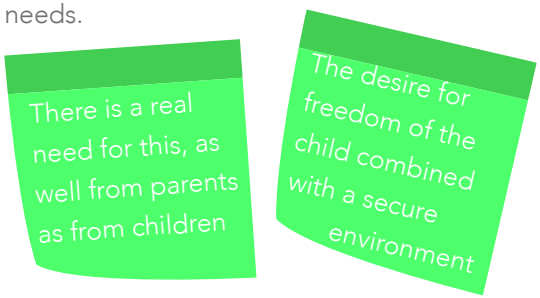
Affinity

The need for security is not found in this concept, there is nothing arranged for emergency situations so the child still has to rely on its parents.



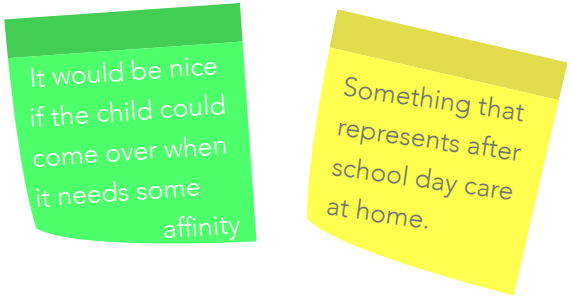
Individual care

There is a need for individual customizable care. It combines the desire for independence with the experience of a save environment. The intake makes sure that the childcare is adjusted to individual needs.



Link with existing after school day care

When their is a link with the after school day care that the child has been part of, it can be a strong product for children that leave after school day care early. It smooths the transition from receiving full care to taking care of yourself. The link can also be in the form of a physical product at home that reminds the child of the time at the after school day care.

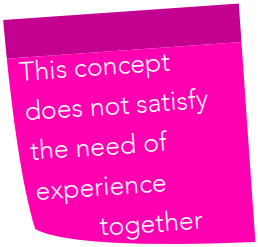


Competitive price

It is hard to come up with a competitive price, especially coming over to the child will get very expensive. This can result in a small target group.

Freedom

The desire to freedom of the child is less found in this concept, especially the need of experiencing together.



The participants showed great interest and enthusiasm in the preliminary concepts, in a wrap up, where participants where asked for their favourite concept, both concepts scored equal. The board of directors gave the designer the freedom to make a decision.

Bas Bel Oppas is seen as a valuable supplement of the after school day care service and is close to the existing business operations of SWKGroep. The service will extend customer relationships. The target group however is small because the focus is only on children that went to after school day care, it will be hard to offer a competitive price.

TEQ TIME is a scalable concept that covers multiple divisions of SWKGroep. It also incorporates community work and business relations of SWKGroep. The target group for this concept large, the scalability of the concept will make it easier to realize a competitive price. With the general approach on the other hand, the expertise of SWKGroep in individual childcare is lost.

A combination concepts was suggested because most strengths and weaknesses where contrary in both concepts.

2.2.3. WEIGHTED OBJECTIVE METHOD

The two preliminary products that were further developed during the co-creation session. During the session the board of directors gave the designer the freedom to make a decision of concepts. For the designers point of view it is most important that the product satisfies the needs of the users best.

The weighted objective method is used in order to quantify to what extend both concepts satisfy the needs of the users. In this paragraph the method is described in three sections: Research questions, procedure and insights. According to van Boeijen et Al. (2013), the highest score in the weighted objective method does not have mean that it is automatically the winning concept. The method can be used to create new concepts based on the strengths and weaknesses of the concepts.

RESEARCH QUESTIONS

The weighted objective method answers the following questions:

- To what extend do the different concepts satisfy the needs of the end-user.
- How do the different concepts differ from each other?
- Can the method result in new design insights?

PROCEDURE

In a weighted objective method several concepts are evaluated on design requirements, by attributing weight factors to these design requirements, the choice of a certain concept can be precisely motivated.

The needs of the children and parents, found in phase 1 of the project (see page 44 and page 44), are used as design requirements. Each requirement is attributed with a score from 1 to 5. The concepts get a score from 1 to 10 for each requirement. The sum product of the weight and scores is the final score of the concept. The final score is also indicated in percentage of the maximum score. See appendix E at page 123 for the table and a justification of the weights and scores.

The final scores can be used to make a decision between the two proposals. It is however also interesting to see where the two concepts differ from each other in particular the requirements: Fear of intruders, experience together and offer things to do. In these requirements the strengths of the one are the weaknesses of the other.

INSIGHTS

TEQ TIME scores best in the weighted objective method and fulfils the needs of the users best. The scores however are very close to each other. After analysing the scores further it can stands out that the strengths of the one proposal are weaknesses of the other proposal, especially with the design requirements Security, Experience together, Desire to freedom and Offer things to do.

Based on this analysis and the outcomes of the co-creation session it is decided to combine the strong features of both concepts and develop it into a stronger concept.

2.3. TEQ TIME WITH COACH

In order to use the strengths of both concepts the combined concept: TEQ TIME with an optional coach is designed. The basis of this concept is the online activity platform TEQ TIME. The strengths of the preliminary concept Bas Bel oppas are added by introducing a TEQ TIME coach. Figure 23 shows the interaction diagram for this concept.

The TEQ TIME coach is a certified employee of SWKGroep that coaches the child by setting goals together with the child and parent. Goals can be related to anything that the child encounters while growing up. The coach uses the activities provided in TEQ TIME guide the child in reaching its goals. The coach and the child communicate with each other via the TEQ TIME application for mobile devices, see Figure 24, Figure 25 and Figure 26.

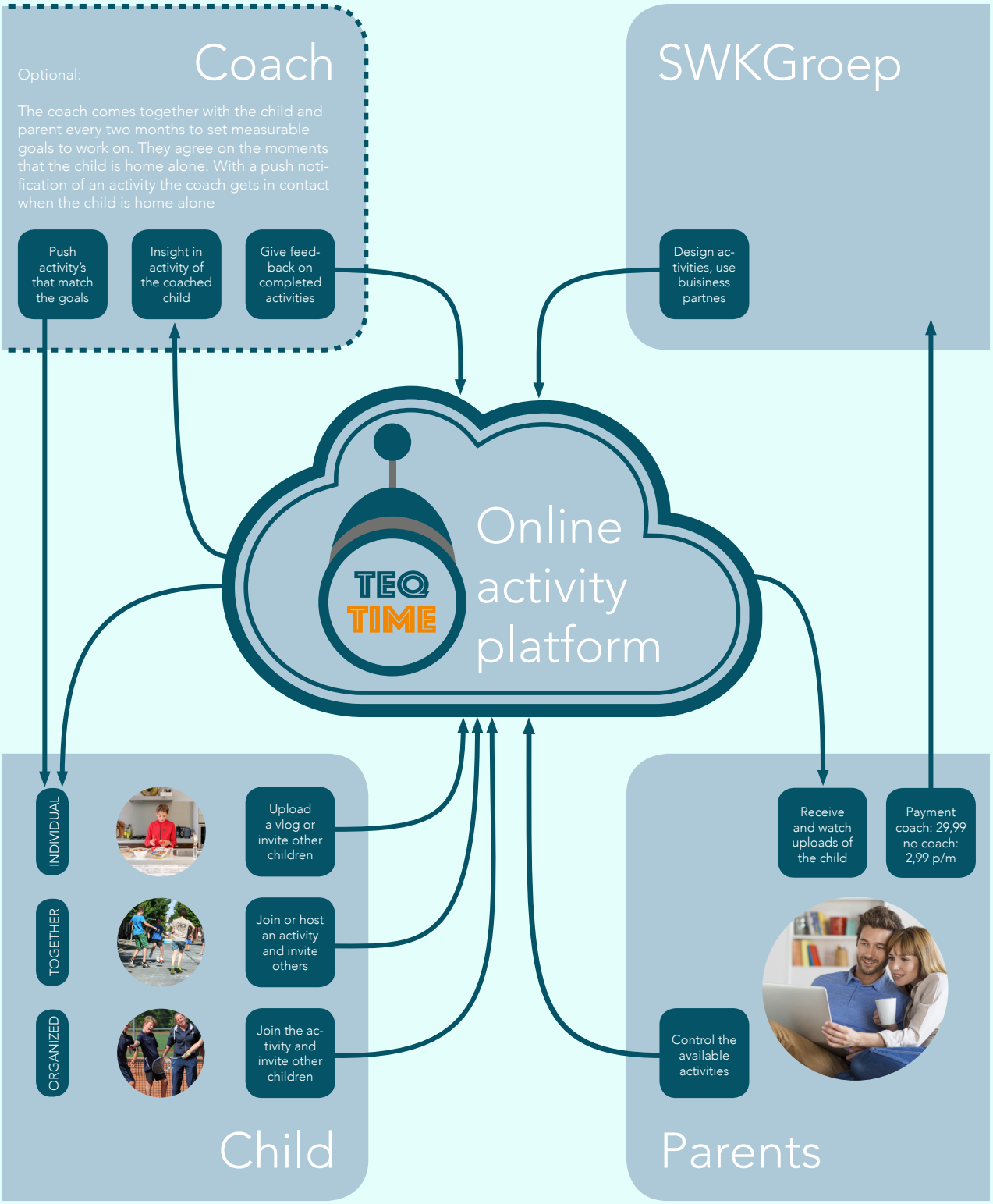


Figure 23: Interaction diagram of the combined concept: Teq Time with a optional coach.

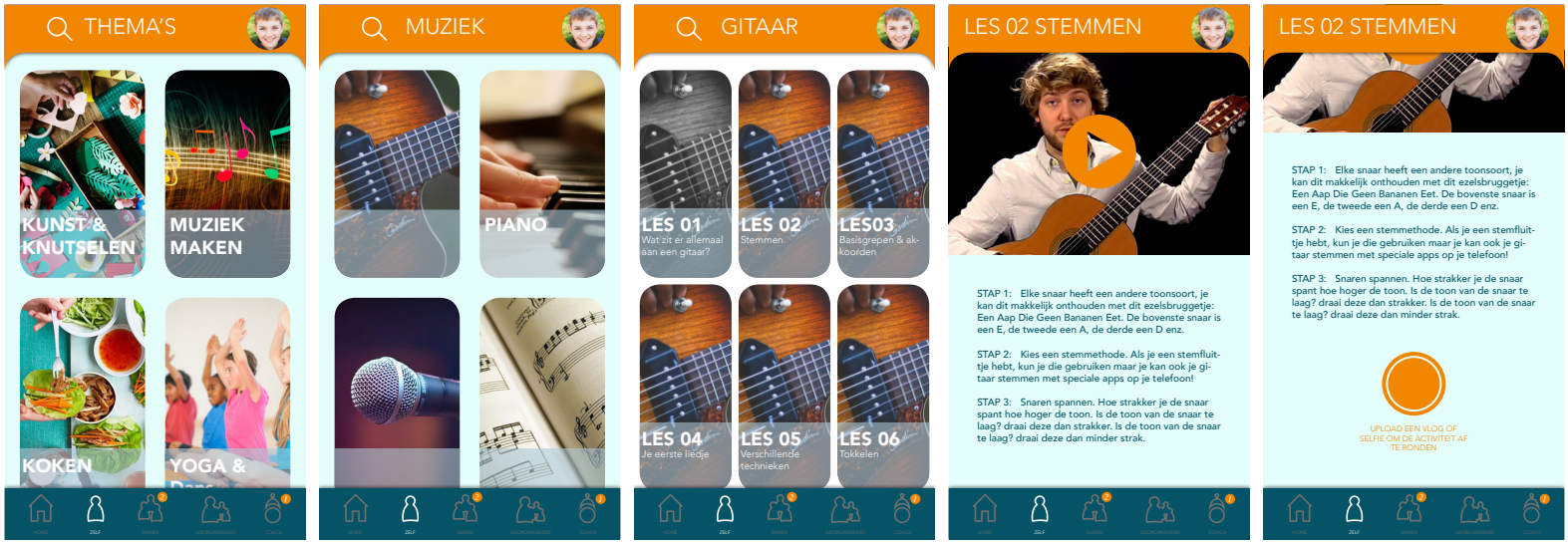


Figure 24: Impression of the interface used in individual activities

2.3.1. THE TEQ TIME APPLICATION

The TEQ TIME application is explained by three scenarios and the corresponding interfaces in the application.

INDIVIDUAL ACTIVITIES

The individual activities are sorted in themes, for example: arts and crafts, Music, Cooking and Yoga & Dance. When a theme is selected, multiple activities can be chosen, for example playing the guitar. Multiple lessons are offered to the child, helping the child to master the activity. An activity is introduced with a short instruction video and a step by step plan.

To finish the activity, the child has to upload a selfie or a vlog of the activity to the Teq Time cloud. The uploaded material is used to send to the parents. It is only visible for the parents and the Teq Time coach. This way the parents are involved in the experience world of the child

Figure 25: Impression of the interface used in joint activities

JOINT ACTIVITIES

There is also a possibility to organise joint activities together with other children. To organize an activity the child has to set a location, a time slot, a description of the activity and invite other children. An organized activity is shown in the activity calendar together with the supervised activity's organized by SWKGroep or one of its business partners.

Figure 26: Impression of the chat screen with the coach

CHAT WITH COACH

At the intake the child, parent and coach determine the afternoons that the child is home alone. On these moments the coach reaches out to the child via the TEQ TIME application. The coach asks the child about its day, encourage the child to get something to drink and supported by the activity's in TEQ TIME the coach guides the child in accomplishing the goals. For instance the child wants to get more confident. The coach helps the child in organizing a joint activity in TEQ TIME.

2.3.2. THE COACH

The coach is a certified employee of SWKGroep but does not necessarily has to be a pedagogical employee. Youth workers of community centres could also qualify as coaches. It is important to recruit the right persons as coaches. They have to be able to coach the child without too many physical contact moments. A persona for a coach is created to get a better understanding of what type of person a coach should be (Figure 27).

Figure 27: Persona of a Teq Time coach

2.3.3. TARGET GROUP

To maximize the target group two forms of TEQ TIME will be offered to children, see Figure 28. At the Kids Club in after school day care children start to work with TEQ TIME. They can use the activity platform to get inspired with activity's. This way the children of after school day care are already familiar with the platform.

When children don't want to go to after school day care anymore, the pedagogical employee can offer the TEQ TIME with coach to the child and its parents as a transition between after school day care and complete independence.

On the other side the TEQ TIME light, without coach, is available for every child in the region. When they start using TEQ TIME light they can swap to the version with a coach.

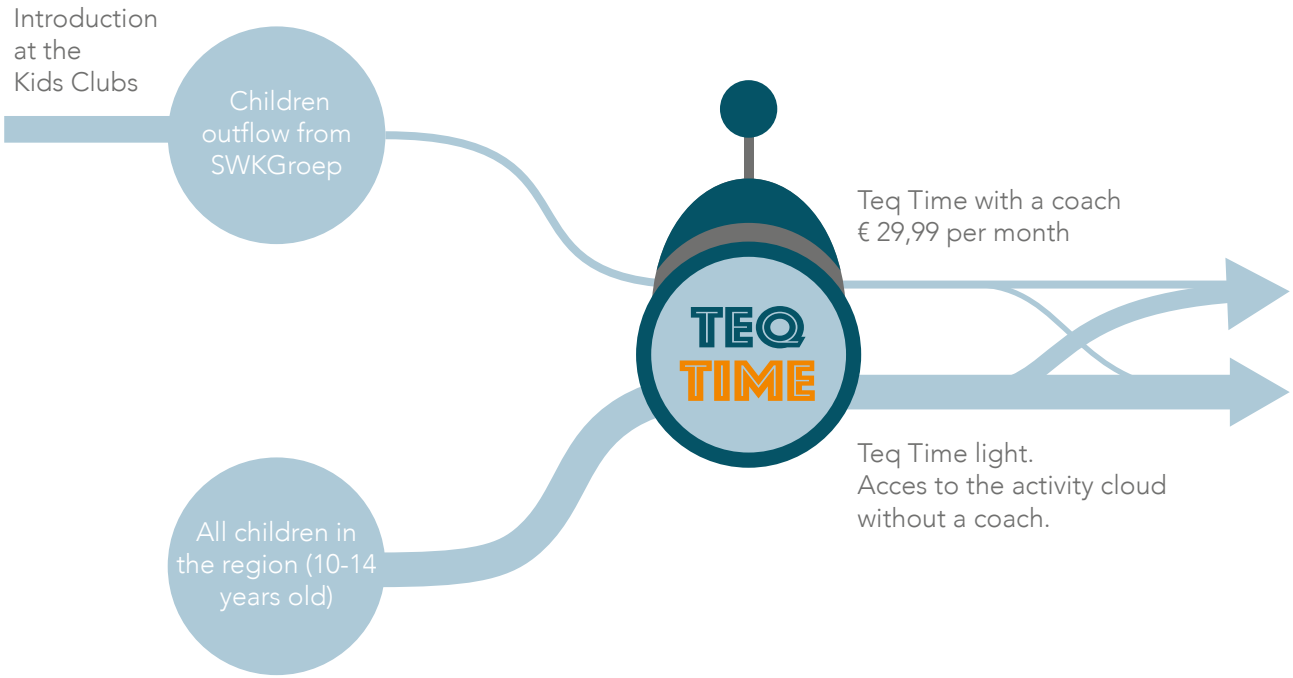


Figure 28: The target group of Teq Time

3. EVALUATION/ DEMONSTRATION

During this final chapter the concept is evaluated, developed in a final design and demonstrated. The human centred design model (IDEO, 2015), see Figure 29, is used to develop the concept into a meaningful final design. The model visualizes three lenses of innovation:
Desirability (1): is it desired, is there a market, does anyone want this or need this? Viability (2): is it viable, does it have a reasonable chance of succeeding? Is it capable of producing a profit or achieving a goal? And Feasibility (3): Is it feasible, does the technology exist or can this be created at a reasonable cost in an acceptable amount of time?

When the concept is elaborated at all three lenses this will result in a valuable design. The first lens, Desirability is mainly treated in the first chapter: 1. Orientation/research at page 12 and chapter 2. Ideation/iteration at page 50. Viability is mainly treated in paragraph 3.1. User Testing at page 76. Feasibility is treated in paragraph 3.3. Implementation plan at page 96. Figure 30 visualizes the structure of this chapter. However this is not a strict linear process because all three lenses have to be in harmony in order to result in a valuable and meaningful design (3.2. Final design at page 90) .

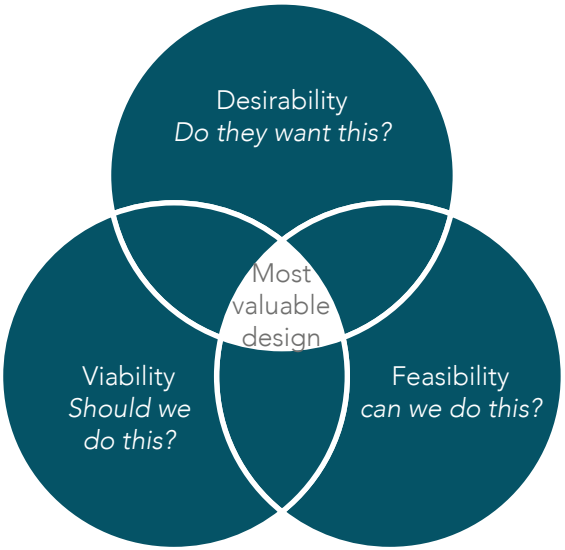


Figure 29: Three lenses of human centred design model (after IDEO, 2015)

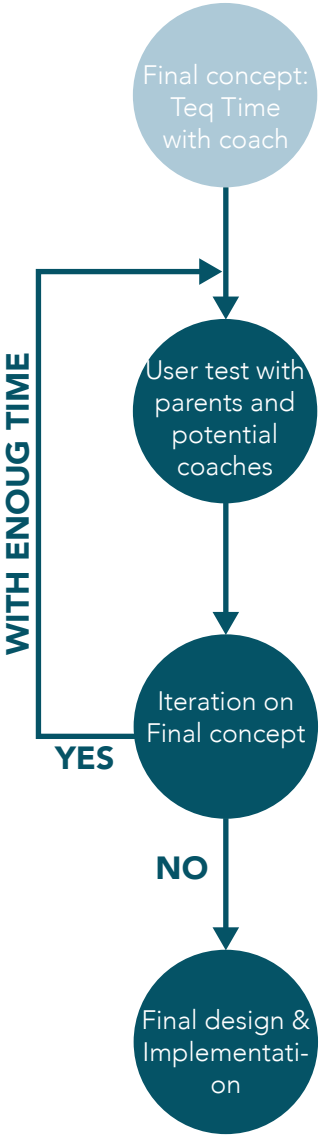


Figure 30: Process of chapter 3

3.1. USER TESTING

This section describes how the concept is tested with the stakeholders. Figure 31 shows the lenses of innovation that user testing is collaborating on. The Ultimately user testing with all three stakeholders is done. However due to time and prototyping limitations (it was not possible to simulate an online community and a wide offer of activities) it was chosen to focus user testing on parents and potential TEQ TIME coaches.

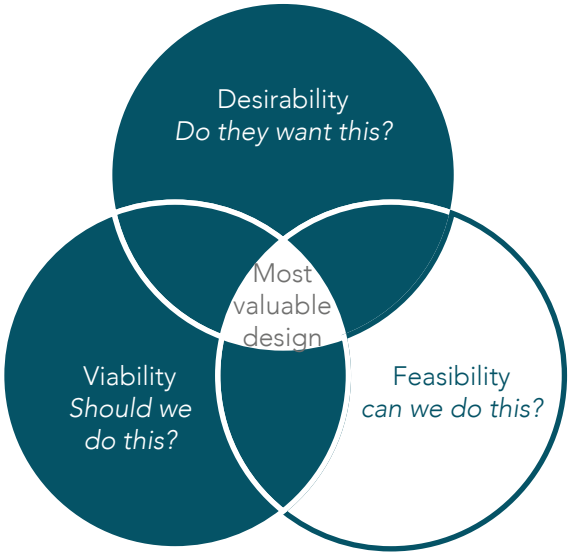


Figure 31: User testing is mainly evaluating the desirability and the viability lens of the human centred design model (after IDEO, 2015)

3.1.1. PARENTS

Parents will be the stakeholders that purchase the product. It is important that parents are willing to pay for the design. This paragraph describes the user testing with parents in four sections: Research questions, Methods, Participants and Insights.

RESEARCH QUESTIONS

The following questions are answered during user testing with parents. The first question and three sub questions are derived from the interaction vision of the master of ceremonies described at page 55.

- What is the opinion of parents to the concept?

- Do parents see the added value of TEQ TIME?
  - Does TEQ TIME relieves parents?
  - Do parents feel in control with TEQ TIME?
  - Do parents trust TEQ TIME?

- Are parents prepared to pay for this added value?
  - How much are parents prepared to pay?

METHODS

User testing with parents was carried out based on scenarios. The researcher briefly explained the problem of children 10-14 that stay at home alone. The TEQ TIME concept was introduced to the parents with an overview poster, interaction poster and a time-line. Paper prototypes of the application interface (see Appendix F) where used to help describe different scenarios of a child that is home alone with TEQ TIME.

The scenario's:

- The child is home alone and uses TEQ TIME an individual activity (playing the guitar).
- The child is using TEQ TIME to gain confidence by organising an activity for his friends.
- The child got in a fight with a friend during the organised activity. He is upset and tells the coach. The coach suggest to the child to go to the community centre.
- The child fell during the activity and possibly broke his leg. The coach calls the emergency number and informs the parents.

During the scenario walk through the participants where encouraged to ask questions when something

remain unclear or uncertain. After walking through each scenario the participant was asked for feedback. The test session ended with a short interview, participants were questioned on how they feel about the added value of TEQ TIME and if they would be prepared to pay for the concept.

PARTICIPANTS

Four parents with children between 10 and 14 years old who used to go to after school day care were selected for user testing. It was important that their children were not younger than the target group because those parents could be frightened by the thought of their children being home alone which would influence the results on how they trust TEQ TIME. For the participants convenience the sessions took place at their home.

INSIGHTS

The recorded audio is used to analyse the user test sessions. Quotes from the participants are used to substantiate the insights that give answers to the research questions. The insights described in three sections, corresponding to the three main research questions: General opinion, Added value and Prepared to pay.

GENERAL OPINION

Over all parents are enthusiastic about the concept, they like the wide offer of activities and the fact that it is non obligatory. The way that the activities are offered and the coach communicates suits the way their children experience the world around them. This creates a lower threshold for children to work with TEQ TIME.

"Het is heel vrijblijvend en dat vind ik leuk, niks hoeft alles kan ... als ik zeg je moet dit dan gaat ie dat niet doen."
"It is non obligatory and I like that, nothing is mandatory and everything is possible ... when I say you have to, than he will not do it."

"Ik vind het heel leuk concept, ook dat het digitaal is, dat is wat kinderen willen, met de tijd mee gaan."
"I think the concept is very nice, it is digital, children want that, they want to keep up."

"Het is voor hem veel makkelijker om een appje te downloaden en met een coach te chatten, als hij zou moeten bellen.. dat gaat ie dan niet doen."
"It is easier for him to download an app and chat with a coach, if he would have to make a call.. he would never do that."

On the other hand, the concept is new to them. They are familiar with after school day care so they tend to put TEQ TIME in perspective of after school day care.

This point of view raises trust issues in the concept.

"Ik wil wel gewoon kunnen werken, ik wil niet dat ik dan gebeld wordt: oma nam niet op, de buurvrouw was niet thuis en m'n kind heeft zich in de vinger gesneden."
"I just want to work, I don't want to get called: grandma is not responding, the neighbour is not home and my child has cut his own finger."

ADDED VALUE

Parents recognize the problem of getting disturbed during work. Some of them have the agreement with their children that they can only call them in an emergency, however they also get called when their children get in a fight with each other. Parents agree that when their children have activities to do that the afternoon will pass without problems.

"Hoe fijn is het als je weet dat ze lekker bezig zijn en je daar op je werk niet mee wordt lastig gevallen."
"How nice would it be when you know that they have things to do and that you are not bothered by that during work."

"Ik vind het wel leuk dat als ze zeggen ik verveel me, dan heb je een aanbod, ik kan ook wel wat zeggen maar dat is toch niet goed."
"I like it that when they say: I'm bored, that there is an offer, I can also suggest something but that is not good any way"

The TEQ TIME coach guides the children and stays in contact with them in a chat conversation that is not visible for parents. Parents get an update of what happened at the end of the afternoon. This way of communicating is relieves parents and gives them confidence.

"Dat zie ik wel echt als een stukje ontzorgen: geen nieuws is goed nieuws."
"I really see that as relive: no news is good news."

"Het is fijn dat als je aan het werk bent dat je kind met iemand contact kan hebben."
"It is nice that your child can have contact with someone while you are at work."

The intake is an important element of the concept, This meeting gives parents the opportunity to provide input in the way that the coach communicates with the child. Parents have a hard time to let go of their child but they know that it is important for the development of the child.

"Het is toch een stukje loslaten en hopen dat het goed gaat."
"I have to let go and hope for the best."

"Ik vind het wel fijn als je met de coach kan overleggen of het kind thuis is of dat het naar een vriendje mag."
"I like the idea that I'm able to communicate with the coach if my child should stay at home or that he can go to a friend."

The concept is new to parents and this gives them doubt whether they should trust the concept or not. Shorter cycles of intake and evaluation meetings in the first months could help parents build this trust. Parents also appreciate the update from the coach at the end of the afternoon, they get familiar with the working methods of the coach which would lead to trust.

"Ik zou de evaluatie gesprekken in het begin korter doen, vooral ook voor het vertrouwen."
"In the beginning I would make the evaluation cycle shorter, especially for building trust."

"Dit vind ik wel prettig (update van coach) als het goed gaat wil ik dat weten en als het minder gaat ook."
"I think that is nice (update of the coach) If things are going fine I would like to know that as well when it is going less fine."

Emergency situations concern parents, especially when they relate TEQ TIME to after school day care. If something will happen they want to know how the coach will handle the situation and who is responsible when things gone wrong.

"Waar ligt de verantwoordelijkheid als bijvoorbeeld je kind het huis in de steekt?"
"Who is responsible for example when your child sets fire to the house."

PREPARED TO PAY

Parents are prepared to pay for the value that TEQ TIME offers to the context of their children that stay at home alone. However, they are used to income dependant prices from after school day care. They are afraid that TEQ TIME might be too expensive.

"Ik zou daar wel voor willen betalen ja, maar je moet het wel kunnen, kijk ik ben alleen en een ander heeft misschien een partner met bakken met geld."
"I will be prepared to pay for that, but you have to be able to, I'm by myself and someone else might have a partner that is loaded."

The freedom for the child in TEQ TIME lowers the amount parents want to pay for TEQ TIME. It is important that the coach is able to work on the goals with the child and that the progress of the child is noticed by parents.

"Als het kind besluit om de hele dag in de ijssalon te hangen ... dan betaal je voor niks."
'If the child decides to hang out in the ice cream shop ... you're paying for nothing."

User testing with parents resulted in some interesting insights and answers to the research questions. The insights of this research are used to develop the concept into a meaningful final design. Rules for design improvements and design adjustments are made to guide this process.

- The offered activities should be updated regularly in order to maintain the interest of the children and sustain an interesting offer of activities.
- Communication with child, coach and parents should be separated, as long as the parent receives an update at the end of the afternoon.
- The intake is a very important meeting that helps building trust and give parents control. The following points need to be added to the intake:
  - What is an emergency situation?
  - How will the coach react on these situations?
  - Consult with the parents about how much freedom the child receives: does it stay at home, friends, neighbourhood or city?
  - Consult with parents about the time for the next evaluation meeting. Focus on periods of three months but trust can be gained when cycles are shorter in the beginning phase.
- Put the product in perspective of being home alone without any form of care in stead of an alternative for after school day care.
- Prices for TEQ TIME should be below the netto price for after school day care (€1,50 - €2,00 per hour for a modal income).
- For parents it must be clear where they pay for. The progress of the child should be communicated clearly to the parents.
- Offering help with planning and doing homework will make parents more willing to pay.

3.1.2. POTENTIAL TEQ TIME COACHES

The TEQ TIME coaches are important stakeholders in the concept. Via TEQ TIME they communicate with the child and the parents. This paragraph describes the user testing with potential TEQ TIME coaches.

RESEARCH QUESTIONS

The following research questions are answered during user research with possible TEQ TIME coaches:

- What is the opinion of the potential coaches to the concept?

- Who are suitable coaches?
  - Are coaching activities combinable with the activities of pedagogical employees or youth workers.
  - Is there a demand for longer workdays and therefore full time contracts?

- Provides TEQ TIME sufficient ways/tools to coach children?
  - Is working with goals practical?
  - How long should the period between evaluation meeting be?
  - Is communicating by chat sufficient enough for coaching?

METHOD

User testing with possible TEQ TIME coaches started with a short introduction of the problem with children of 10-14 years old that stay at home alone. The concept was explained by presenting an overview poster, interaction poster, time-line and paper prototypes of the interfaces of the child-app, parents app and employees software (See appendix F).

Further explanation of the concept was done by scenario walk through. Four scenario's where presented and walked through with the participants:

- The child is home alone and uses TEQ TIME an individual activity (playing the guitar).
- The child is using TEQ TIME to gain confidence by organising an activity for his friends.
- The child got in a fight with a friend during the organised activity. He is upset and tells the coach. The coach suggest to the child to go to the community centre.
- The child fell during the activity and possibly broke his leg. The coach calls the emergency number and informs the parents.

During the scenario walk through the participants were encouraged to ask questions when something

remained unclear or uncertain. The session ends with a short interview with the participants, focusing on if they would see themselves act as a coach in TEQ TIME and how they would do that.

PARTICIPANTS

Employees of the division childcare and community work of SWKGroep are selected for user research. The division childcare is partly responsible for after school day care, covered by the child care law, see paragraph 1.1.1 at page 14. Therefore they are focused on the care of children until they go to secondary school (around 12 years old). The division community work is there for every age. Community work centres employ youth workers for their younger target group, mostly in the adolescent phase (10-18). User testing with a pedagogical employee of after school day care in Zoetermeer and a youth worker of a community work centre in Rotterdam were conducted. For the convenience of the participants, the user tests took place at their workplaces in Zoetermeer and Rotterdam.

INSIGHTS

GENERAL OPINION

"Kinderen die van de basisschool naar de middelbare school gaan dat je ze kan voorbereiden ... ik vind dat daar nu te weinig in wordt geïnvesteerd, ze worden echt in het diepe gegooid."

"When children from elementary school will go to secondary school you can prepare them .. I think that we are not investing enough in this, they are simply thrown into the deep." - Youth worker

Participants recognize the problem and understand how the concept can contribute in solving this problem.

"Ik denk dat dit gaat werken, ik denk echt dat hier vraag naar is. Het zit goed in elkaar."
"I think that this is going to work, I really thing that there is a demand for this. It is very well organized." - Pedagogical employee

They see the concept work in practice and see it as a possible addition to their existing activities.

"Ik denk dat dit echt wel een toevoeging zou kunnen zijn, zeker omdat je die jongeren niet elke dag binnen hebt."
'I think this can be an addition, especially because these youngsters are not here everyday." - Youth worker

Especially in community work centres there are a lot of possibilities to make use of the existing activities and combine them with the possibilities of TEQ TIME, for example the offering youth assistance digitally.

"Het stukje verdieping met digitale hulpverlening zou ik heel interessant vinden."
"To give it more depth with digital assistance I personally find very interesting." - Youth worker

SUITABLE COACHES

The activities of TEQ TIME coaches is closer to the activities of youth workers in community centres than that of pedagogical employees in after school day care.

"Ik denk dat dit voor jongerenwerkers makkelijker te behappen is dan mensen op de bso of kinderopvang."
"I belive that this will be easier to do for youth workers than for people at after school day care." - Youth worker

Generally male employees evoke activities with children, they are energising and especially boys have the urge for a male role model that organises fun things to do. On the other hand the target group starts getting into puberty. Boys and girls will be more comfortable with talking about these subjects with coaches of the same sex. Preferably there are coaches of both sexes.

"Ik denk dat jongens het heel gaaf vinden als het een man is maar jonge meisjes hebben natuurlijk vragen die ze misschien liever aan een vrouw stellen."
"I think that boys will find it very cool when it is a male, but young girls will have questions that they rather ask to a female." - Pedagogical employee

A coach should be confident with working with the computer and communicate via chat with children. For potential coaches it is important to understand that the interaction with the children is different.

"Ik zou niet de aangewezen persoon zijn, ik hou meer van persoonlijk contact maar er zijn genoeg mensen die snel met computers zijn en dat wel kunnen"
"I would not be the person for the job,I like the personal interaction but there will be enough people who work easier on a computer that will be qualified." - Pedagogical employee

Besides their knowledge of grammar and spelling should be sufficient.

"Het staat allemaal zwart op wit wat je schrijft, dus dat moet wel zonder spelfouten zijn ... je bent voorbeeld naar ouders en kinderen."
"Everything is written down, so it has to be without grammar mistakes ... you are an example for parents and children." - Pedagogical employee

COMBINATION OF EXISTING WORK WITH WORK AS COACH IN TEQ TIME

Combining the activities as a coach with the existing work activities is more suitable to youth workers than to pedagogical employees at after school day care. The work peak of after school day care would be around the same time as that of TEQ TIME; in the afternoon between 15:00 and 17:00. In community work centres the activities for children typically take place after dinnertime, 19:00 to 21:00. For pedagogical employees this means that working

as a coach in TEQ TIME is only possible when it is alternated; one day coach the other day pedagogical employee. Youth workers will be able to combine the work as a coach with their regular activities in a single shift.

"Op de midelbare school is dat natuurlijk anders maar hier (basisschool) krijg je ze dan allemaal tegelijk."
"At secondary school this would be different but here (primary school) you get them all at the same time." - Pedagogical employee

Pedagogical employees and youth workers only work part time, this makes working with children unattractive for men who want to provide for their families.

"Voor mannen is het nu vaak niet interessant en we hebben meer mannen nodig."
"For males it is not interesting at the moment, and we need more males." - Pedagogical employee

When a part time contract can be scaled up to a full time contract by expanding the work load by adding work as a TEQ TIME coach there will be a demand for that within the workforce of SWKGroep.

"Er zijn veel jonge mensen bij ons die dat zouden willen, langere dagen werken."
"There are a lot of young people in our organisation that would want that, more working hours." - Pedagogical employee

"Met de mensen hier dat je kan opschalen en meer kan rekenen ... als dit zo in de praktijk zou komen zou ik daar zeker wel gebruik van maken."
"With the people here in the organisation that can scale up and earn more ... if this would be here right now I would certainly make use of it." - Youth worker

After school day care can possibly play another role in TEQ TIME. When children have minor problems while staying at home, the coach can tell the children that it is possible to visit the after school day care location that they went to. The coach can inform the pedagogical employees that a child is coming over and what the issues are.

"Ik kan wel iemand zijn die als er een probleempje is, dat ik naar de kinderen toe ga of dat zij naar mij op de kidsclub komen"
"I could be the person that, if ther is a minor issue, comes over to the children or that they can come to me at the KidsClub." - Pedagogical employee

TOOLS IN TEQ TIME

One of the tools of the coach in TEQ TIME is the goals that are set together to work on. Youth workers and pedagogical employees are familiar with this tool that they use in order to help children grow up.

"Dat doen we altijd, met de jongeren hier hebben we ook een bepaald doel voor ogen."

"We always do that, with the youngsters here we also have a certain goal in mind." - Youth worker

Reaching the goals with the children also helps the coaches with gaining trust from the parents and helping them in letting go of their child.

"Ouders moeten ook het vertrouwen krijgen dat de kinderen het uiteindelijk zelf kunnen doen en niet afhankelijk blijven van bijvoorbeeld de coach."
"Parents should get the confidence that their children will be able to stand on their own feet and will not be depending on a coach for example." - Pedagogical employee

The time between evaluation meetings of three months is considered a workable timespan to reach the sort of goals that would be worked with in TEQ TIME.

"In deze setting denk ik dat drie maanden een goede termijn is."
"In this setting I think that three months is a good time span." - Youth worker

In between the evaluation meetings the coach communicates with the child and the parents via chat. The participants are certain that this form of communicating is suitable for the target group and they feel confident that they can coach the target group via chat.

"Met deze doelgroep valt in chat wel duidelijk te communiceren"
"This target group communicates clearly via chat." - Youth worker

There is no need to provide the coaches with additional tools to check whether the children completed certain tasks. By asking the right questions in the chat a coach can be able to verify if a child has completed a task.

"Ik denk dat je als jongerenwerker tactisch moet zijn met je comunnicatie je gaat vragen wat heb je gedaan? Hoe dan? Of laat eens zien? Dan weet je wel of ze iets gedaan hebben of er nog niet aan toe zijn. Dat kan je wel uit je communicatie kan halen."
"I think that a youth worker should be tactical in communication, you ask what did you do? How? Or can you show me? Then you will know if they did something or if they did not do it. You can tell from your communication." - Youth worker

There is however a concern, when a coach is working with multiple children at the same time. It will be hard to write multiple personal messages in a very short amount of time.

"Is elke chat handmatig? Hier heb je ze allemaal tegelijkertijd ... Die persoonlijke touch is heel erg belangrijk."
"Is every message manual? Here you all have them at the same time ... That personal touch is very important." - Pedagogical employee

The interaction between coach, child and parent is via two separate chat screens. Participants find it desirable that parents do not oversee the communication with the coach and child because children will act differently when they know that their parents are watching.

"Als het kind alleen is dan zie je het kind, als de ouders erbij zijn zie je het kind zoals de ouders willen dat het kind is"
"When the child is alone you see the child, when its parents are there you see the child as the parents want the child to be." - Youth worker

It is also a part of getting independent. It is part of their age that they don't want to share everything with their parents anymore.

"Die gaan langzaam voor zichzelf kiezen en daar moet je ze ook in respecteren ... Je kan ze blijven checken maar het hoort echt bij de leeftijd ... het gaat er meer om dat ze zelfstandigheid leren."
"Slowly they are going to choose for themselves and you have to respect that ... You can keep checking on them but it is part of their age ... what matters is that they learn how to be independent." - Pedagogical employee

These personal messages also have to help children in their communication. They have to be honest in what they are going to do. It is important for the development of the child that he learns to communicate.

"Je wilt dat het kind leert om te communiceren. Als het eerder vrij is of naar een vriendje gaat moet ie dat melden. Van GPS gegevens leert het niks."
"You want the child to learn how to communicate. When schools out early or when he is going to a friend, he has to mention that. They don't learn from tracking GPS data."

User testing with potantial TEQ TIME coaches resulted in a lot of insights in how the concept can be developed into a meaninfull and valuable final design. The insights are translated into rules for design improvements and design adjustments.

- The competences of a coach should be elaborated.
  - Able to moderate between parent and child about getting independent.
  - Able to recognize if a child needs assistance.
  - Confident of working with a computer.
  - Confident of chatting with multiple children at the same time.
  - Have excellent knowledge of Dutch grammar and spelling.
- TEQ TIME is a concept that can last for a longer period of time because it can be adjusted and expanded. A team should regularly evaluate and adjust where needed.
- If possible children should get the possibility to choose for a coach of a male or a female coach.
- Intern recruitment for coaches should be mainly focused on youth workers at community work by offering them the possibility of a full time contract.
- Communicate what emergency situations are and how the coach will act on them.
- Let children come over to community work centres of after school day care centres in stead of sending someone to the children.
- After using TEQ TIME a child should be independent. A coach should give parents the confidence that they are working on reaching this.
- Chat messages should always be personal, also when there are a lot of children at the same time.
- A coach should encourage a child to communicate where he is. This way children will learn to take responsibility. On a parents request GPS data can be tracked.

3.2. FINAL DESIGN

This paragraph shows how the last iteration steps developed the chosen concept into the final design. The final design is presented according to the Human centred design model (IDEO, 2015). The three lenses of innovation: desirability, viability and feasibility are used to structure this paragraph.

DESIRABILITY

Research shows in paragraph 1.3 at page 34 that parents and children have certain desires when it comes to children of 10-14 that stay at home alone. Their main desire is overlapping: having/being an independent child that can stay at home by himself. Their opinion on how to get there and when this desire is fulfilled is conflicting.

In the current situation children are thrown into the deep when after school day care ends. They stay at home without any form of guidance and have to bother their parents during work when they have any questions. TEQ TIME is designed to smooth this big step, see Figure 32.

TEQ TIME with a coach is there to guide children and parents towards an independent child and coach them in the responsibilities and skills that they need to get there.

When parents decide to go for TEQ TIME with a coach, a process is started in order to coach the child towards independency an overview of the interactions during this process is shown in Figure 33.

Figure 32: Role and position of TEQ TIME in the journey towards an independent child.

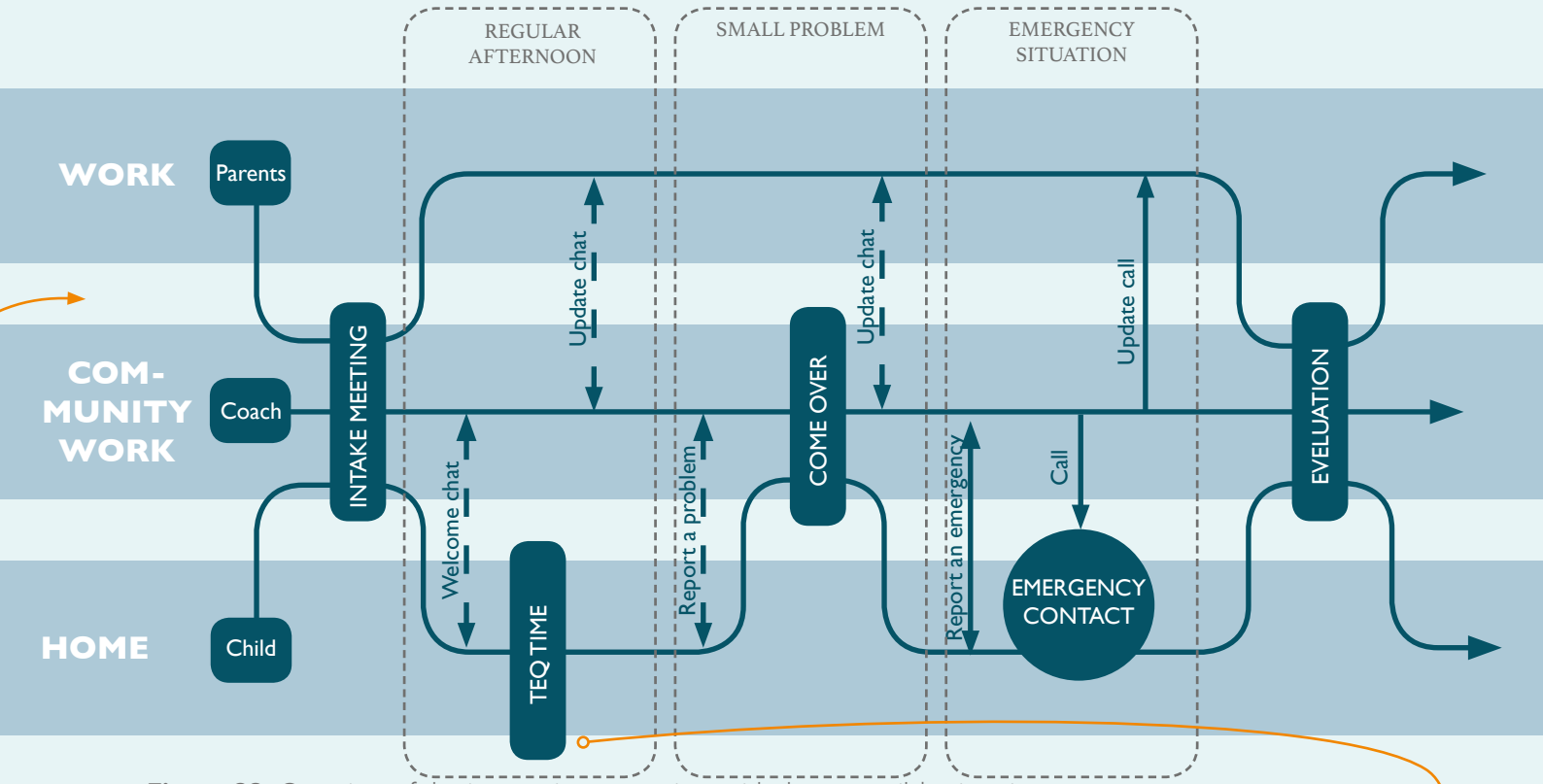


Figure 33: Overview of the interactions over time with three possible situations

The process stars with an intake meeting. This is an important meeting that explains TEQ TIME to the parents and children and is meant to get everyone at the same page and earn trust of the parents and child. A procedure of the intake meeting can be found ad appendix G. After a period of approximately 3 months an evaluation meeting is planned to evaluate on the goals and adjust the process if needed.

REGULAR AFTERNOON

At the start afternoon that the child is home alone the coach sends a chat message via TEQ TIME to the child. This message is meant to give the child some comfort and a friendly person to talk to about their day. The coach uses the activities in TEQ TIME to help the child to reach its goals. Organising and inviting children to an activity for instance can help to work on self assurance. At the end of the afternoon the coach sends an update to the parents via a chat

message in TEQ TIME. The update is a summary of what the child has done that afternoon and how that contributes to their goals. The update is meant to give parents insight in how their child is developing and is used to earn trust from the parent.

SMALL PROBLEM

When a small problem occurs, for instance the child got in a fight with a friend during soccer and is upset about that, the coach asks the child to come over to the community work centre or their former after school day care centre. The coach informs the relevant employees that the child is coming over for comfort. A small problem is communicated to the parents in the update at the end of the afternoon.

EMERGENCY SITUATION

In the case of an emergency situation, for instance the child felt and injured its leg, the child can call the coach via TEQ TIME. The coach calls an emergency contact and makes sure that they come over to help the child. Based on the extent of the emergency the coach will call the parents to inform them.

FEASIBILITY

In order for TEQ TIME to work, an overview of how the different data streams flow between the different stakeholders, see Figure 34. On top the two stakeholders that work for the project are shown, at the bottom the two users: child and parent.

COACH

The coach receives insight in what activities the children do or plan to join. They also receive chat messages from both parents and child. An impression of the interface of the coach screen can be found in appendix I. A competence profile of a coach can be found in appendix H.

SWKGROEP

The SWKGroep is responsible to keep the activities in TEQ TIME up to date. This is done by compiling focus groups of coaches, parents and children that come together monthly to brainstorm about new activities and evaluate the current activities. A developing team will be responsible for the new content (text, photos and videos). SWKGroep receives money from the parents.

CHILDREN

Children have the opportunity to do three different types of activities: Individual, together and organised. The individual activities can be anything from making music to cooking lessons (see Figure 35). At the end of an individual activity the child is asked to make a vlog or photo of the activity. This completes the activity and is used to send to the parents to get them involved in what their child is doing.

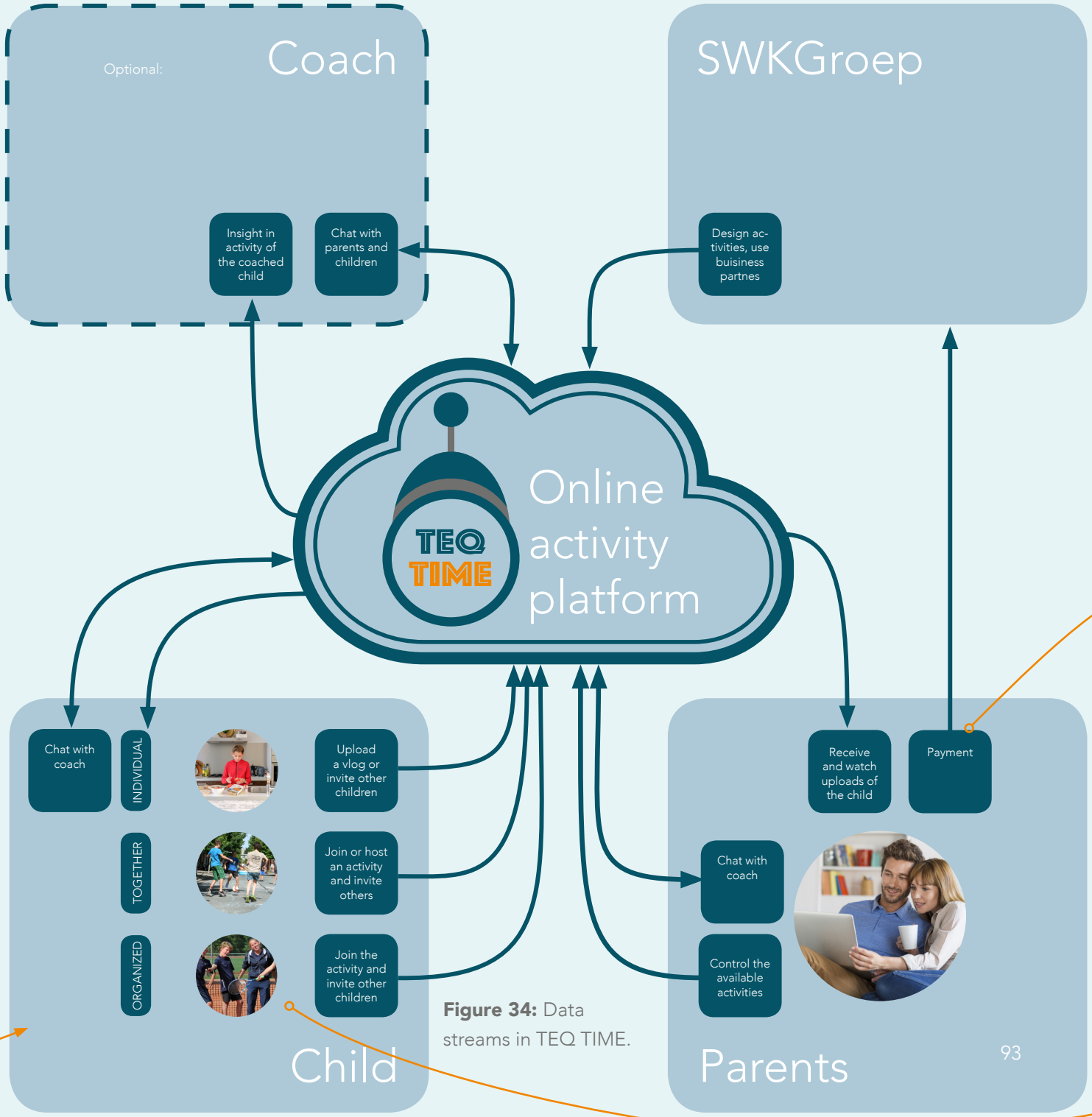


Figure 34: Data streams in TEQ TIME.

By default the GPS data of the child is not tracked in order to learn them the responsibility to tell where they are. When parents think that the child is not yet ready for this responsibility this data can be tracked on their request so the coach can validate whether the child is communicating correctly.

PARENTS

Parents recieve an update via chat message from the coach at the end of an afternoon. They can also see the vlogs, foto's and activities that the child is organising or joining. Parents are given control over the amount of freedom of the child, they can choose to make certain activities invisible for the child when they think that they are to dangerous or inappropriate for the child. Parents can also set limitations to the radius of the organised and together activities.

VIABILITY

TEQ TIME has to gain revenue for SWKGroep. To reach a maximal amount of children, two versions of TEQ TIME are introduced: TEQ TIME Coach and TEQ TIME Light (see Figure 36). To get children familiar with TEQ TIME and to quickly build a community of children that use TEQ TIME, TEQ TIME light is offered to every child at a Kids Club. TEQ TIME can be used at the Kids Club for inspiration when children are bored.

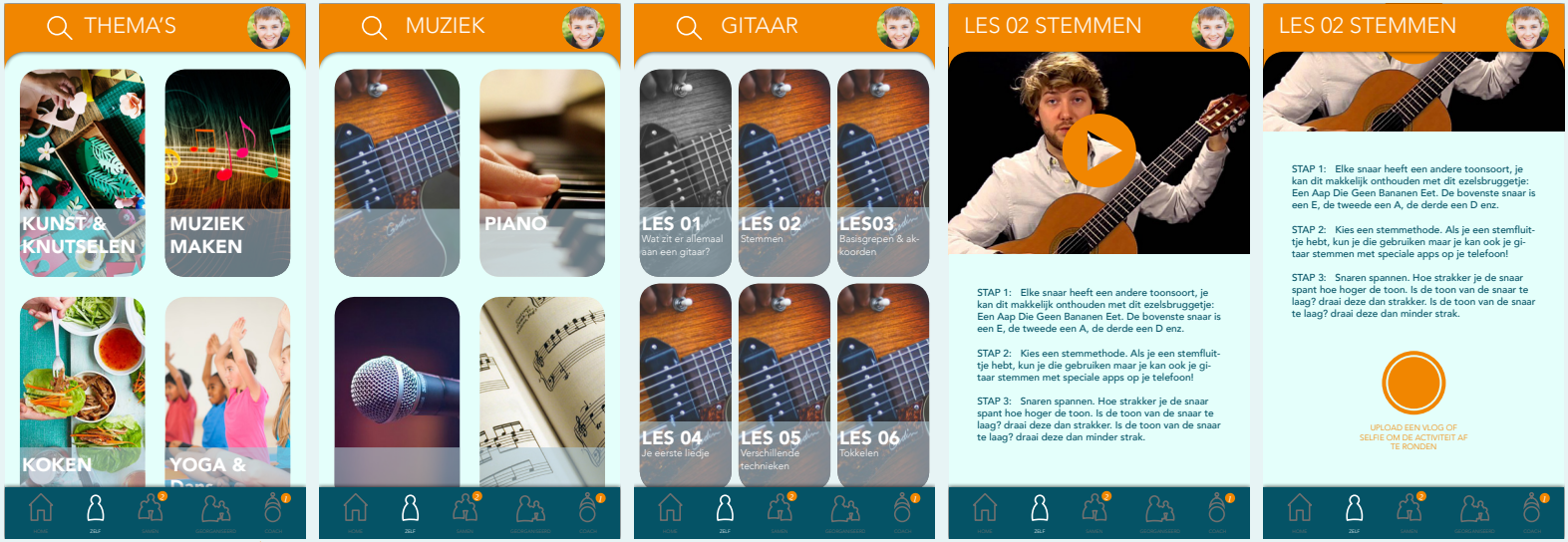


Figure 35: Impression of the interface with individual activities

When children leave the after school day care they can choose to keep TEQ TIME Light for € 3,99 per month. Children can still take place in the activities in TEQ TIME. They can also choose to use TEQ TIME extent their subscription with TEQ TIME Coach for the hours that the child is alone for an additional € 1,49 per hour. These prices are based on what parents are prepared to pay, the expected amount of users and 15 children per coach. Further investigation in these prices is needed and adjustments may be done when there is more knowledge about the expected amount of users.

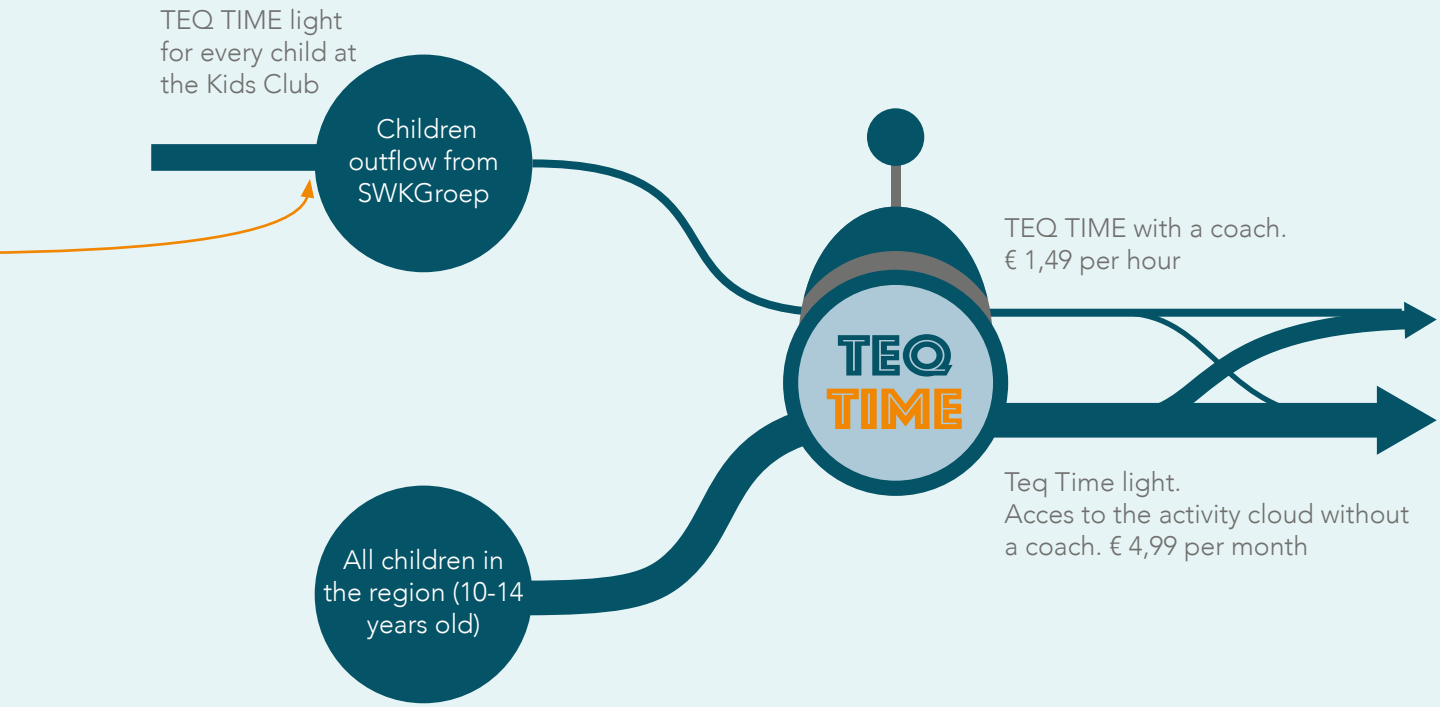


Figure 36: Two versions of TEQ TIME are used to reach as much children as possible.

3.3. IMPLEMENTATION PLAN

This project ended with the presentation of the final design in paragraph 3.2 at page 90. During this project the lenses of innovation (IDEO, 2015) Desirability and Viability extensively worked out. Working out the third lens of innovation, Feasibility lays behind the scope of this project. This paragraph can be used as a planning to work out the third lens of innovation.

The implementation plan, see Figure 37, is a rough planning for approximately one to one and a half year that ultimately implements TEQ TIME at the two locations where SWKGroep is active in community work and after school day care. Further implementation in other locations will fallow when TEQ TIME is working smoothly in those two locations. It can be partly worked out by different teams within SWKGroep in collaboration with a developing team or a creative technologist. In total there will be five teams working on the implementation of TEQ TIME each with their own responsibility.

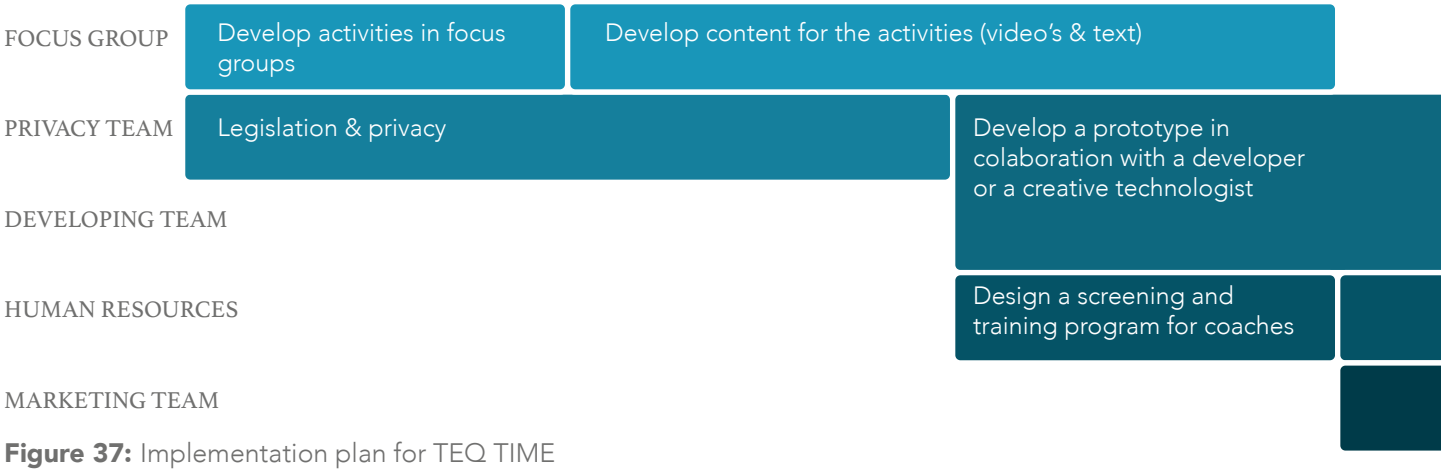


Figure 37: Implementation plan for TEQ TIME

FOCUS GROUP

The top row of the implementation plan will be worked out by a focus group of potential TEQ TIME coaches (pedagogical employees and youth workers), parents and children. They are responsible for the content of the individual activities and keep this up to date.

PRIVACY TEAM

Legislation and privacy will be worked out by the privacy team. They are responsible for setting the boundaries for TEQ TIME and the activities. They are also responsible for the terms of use.

DEVELOPING TEAM

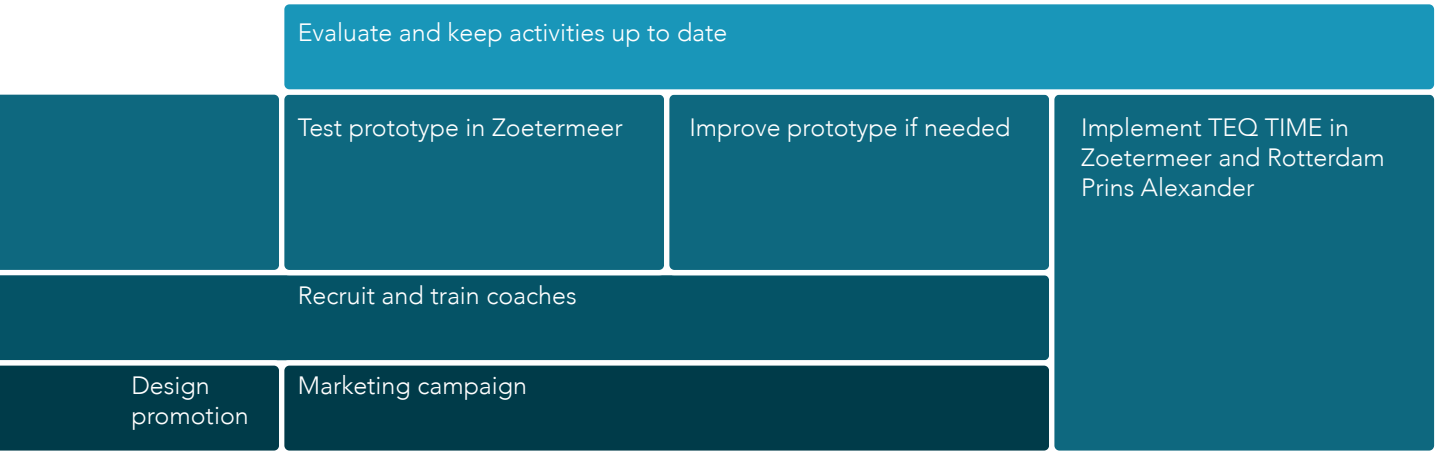
Prototype development will be done by a third party that has experience with building software. This will be the most expensive part of the implementation plan.

HUMAN RESOURCES (HR)

The HR department of SWKGroep is responsible for setting up a screening and training program for coaches in TEQ TIME.

MARKETING TEAM

TEQ TIME should be promoted. This is partly done by offering TEQ TIME Light to all the children at the KidsClubs of SWKGroep. However marketing will be broader, the marketing team is responsible for setting up a campaign to reach as much children as possible.



3.4. CONCLUSION

At the end of the research phase the design goal for this project was reformulated to:

"Design a location and time independent form of after school day care for children (10-14 years old) where:

children experience **affection, freedom and guidance**, while it **relieves** parents during work without losing **control,**

also fits the **business operations** of SWKGroep and **adds value**."

After an ideation and iteration phase the concept TEQ TIME was developed. Together with users the concept was developed into a final design that is meant to reach the design goal.

It is a service that children and parents can use no matter where the child is, at home, outside or with friends.

The coach offers the children affection by sending personal chat messages to the child when they are home alone. This way of communicating suits the target group and gives them the freedom to respond from any location at any given time. The coach guides children according to corresponding set goals. He can suggest children to do certain activities to reach their goals but children have the freedom to make their own decisions.

Parents can go to work without worries. The coach handles minor problems and there are emergency contacts that can act upon an emergency. No news for the parents means good news. The coach gives the parents an update at the end of the afternoon so parents know what is going and adjust the guidance of the coach when needed. Together with the evaluation meetings every three months they stay in control of the care of their own child. Besides the possibility of consulting with the coach, parents stay in control of the activities that are visible for the child and how far from home he can organise and join activities. By default children are not GPS tracked so they can learn to take responsibility and communicate where they are but parents can request to track the GPS data when they think their child is not ready for this responsibility.

The intake and evaluation meetings give the coach the opportunity to deliver custom care to the child. SWKGroep is used to offer custom care to children in after school day care. There is also a lot of

pedagogical expertise within the SWKGroep that can be used to coach children. SWKGroep can use TEQ TIME to add value in money but a better integration of the divisions childcare and after school day care can also add value to the services and attract more children. In the future TEQ TIME can also be used to infiltrate in cities where SWKGroep has the desire to start with community work. Besides TEQ TIME provides SWKGroep with a lot of data that has potential value.

TEQ TIME Light (only access to the activities) is used to reach children that, due to any reason, don't want to use TEQ TIME Coach. This way all children have the possibility to join activities in TEQ TIME for the price of only € 4,99 per month. A large community of TEQ TIME Light users can partly sustain the product and keep the hour rate of TEQ TIME Coach at an acceptable level.

This project can be seen as the first part (research and ideation) of developing an innovative child care tool for children of 10-14 years old. Paragraph 3.3 at page 96 describes how the second part (Iteration and implementation) could look like.

3.5. REFLECTION

This project was my first individual project of this scale. And also one of the rare opportunities during the master program to work for a real client. During this project I have learned a lot of things that are possibly interesting for other students, researchers or employees of SWKGroep. In this paragraph I share these insights.

3.5.1. PLANNING

A project like this requires a solid planning. I had made one at the beginning for the entire project but failed to make a planning on a weekly scale. Half way the project I lost the overview. I got behind schedule and had to add a view extra weeks to the project. From that moment I also made a planning for every week. This helped with the overview and to complete my project.

3.5.2. IDEATION

I found out that ideation on my own was hard. I was able to generate ideas but they did not develop as quick as I was used to when ideation takes place in a team. After realizing this I used the meeting that was initially meant as a concept presentation as a co-creation session where the employees of different layers of the SWKGroep where asked to collaborate in the development of the initial concept ideas. If I had the chance to redo this part of the project I would organise these sessions earlier in the ideation phase. Also brainstorm sessions with other designers could have been very helpful in this stage of the project.

3.5.3. TOOLS GENERATIVE SESSION

The classic way of doing user research is a researcher observing and/or interviewing the user. As explained earlier, these methods only reveal the knowledge that lays more on the surface. Generative sessions can be used to gain knowledge that is more deep, in literature referred to as latent and tacit knowledge (Sleeswijk Visser, 2005). In a generative session the user and the researcher cooperate in revealing the knowledge.

Because it was the first time that I designed a generative session with children it was hard to design a proper generative session in one go. An iterative process was needed to design a useful generative session. The insights of this iterative process and experiences from practice can be very useful for others that plan to conduct generative sessions in general, but especially with the target group children. This paragraph explains these insights. In the orange box the insights are listed in rules for generative sessions with children.

FOCUS OF A SESSION

Version 1 of the generative session, see Appendix B, gave only superficial answers. Two main reasons caused these superficial answers: The sessions was to long (1), with four individual tasks it took the kids to much concentration to complete the session. Especially the last task was important and the peak of their input was way earlier in the session with task one and two. Beside the final question was to general (2). What does the Lego figure need when he is alone? It is better to ask more explicit questions like what toys/game/information/tools/food/superpowers/etc.. does he need when he is alone.

COPY BEHAVIOUR

Children tend to copy. Try to avoid examples with pictures from the toolkit. It is very likely that children are going to use this example. Besides copying from the researcher, they copy from each other. The answers can still be valuable when the researcher is able to ask the reasoning behind the answer individually.

REASONING

Children do not tell you reasons behind their answers. As a researcher you have to ask them specifically why they gave their answer.

BREAK THE ICE

Make sure that the ice is broken when you start with a session. In this case it really helped that the researcher was already at the location a week before the sessions to make observations and introduce himself to the children. This way the children are more eager and less afraid to join a session.

INVOLVE CHILDREN

Children give more serious input when they feel involved. In this case the researcher introduced the session by telling the children that he was also in school and had one last opportunity to make something beautiful and that the children could really help him out by cooperating in the session.

MAKE STAKEHOLDERS ENTHUSIASTIC

When the sessions are done at a location that children come together often, it is very helpful when the researcher is able to get employees at that location enthusiastic. The pedagogical employee helped making the children enthusiastic during the days before the session.

LOCATION

A location that children are familiar with works best. A school for example also offers suitable rooms and the children are there anyway.

ACKNOWLEDGEMENT

Children appreciate acknowledgment for their input. This can be shown by giving them a present after the session. In this case this was been done by giving them a certificate as junior designers (See Appendix B.)

RULES FOR GENERATIVE SESSIONS WITH CHILDREN

- Be specific in questions: the more general the question, the more superficial the answer.
- Keep sessions short, under an hour is advised.
- Avoid copying by avoiding examples.
- When children copy from each other, ask them individually about the reasoning behind the answer.
- Ask children to the reasons behind their answers by asking why questions.
- If possible, make yourself familiar with the children before preforming a session.
- Make children involved. They like to help when they understand the significance of their input.
- Make stakeholders in the context of the children enthusiastic about the sessions.
- Preform sessions locations that children come together anyway.
- Thank the children for their input by offering them something after they participated.

REFERENCES

Belastingdienst, *Maximaal uurtarief voor de kinderopvang.* Retrieved April 15, 2019 from https://www.belastingdienst.nl/wps/wcm/connect/bldcontentnl/belastingdienst/prive/toeslagen/kinderopvangtoeslag/hoeveel-kinderopvangtoeslag-kan-ik-krijgen/maximaal-uurtarief-voor-de-kinderopvang

van Boeijen, A. G. C., Daalhuizen, J. J., Zijlstra, J. J. M., van der Schoor, R. S. A., (2013). *Delft Design Guide*. Amsterdam, Netherlands: BIS Publishers

Boogaard, M., Fukkink, R., Charles, F. (2007). *Chillen, skaten, gamen: Opvattingen over kwalitatief goede buitenschoolse opvang in Nederland.* Amsterdam, Netherlands: SCO-Kohnstamm Instituut. Retrieved from University of Amsterdam digital acadamic repository.

Boogaard, M., van Daalen-Kapteijns, M. (2011). *Pedagogische kwaliteit van buitenschoolse opvang in Nederland.* Amsterdam, Netherlands: Kohnstamm Instituut. Retrieved from https://www.kohnstamminstituut.nl/assets/ki879.pdf

CBS. *Formele kinderopvang; kinderen, uren, soort opvang, vorm opvang, regio*. (2018). Retrieved December 19, 2018 from http://jeugdstatline.cbs.nl/Jeugdmonitor/publication/?DM=SLNL&PA=20214NED&D1=a&D2=a&D3=a&D4=0-16&D5=a&VW=T%3C%3C

Hey, J., Linsey, J., Agogino, A. M., Wood, K. L. (2008) *Analogies and Metaphors in Creative Design.* Great Britain: TEMPUS Publications.

IDEO. *Human Centered Design Toolkit 2nd edition*. (2015) Retrieved May 13, 2019 from http://www.designkit.org/resources/1.

http://www.designkit.org/resources/1. (visited on 20/104/2016)

Oploo, M., van Velzen, A., van der Werf, C., Engelen, M. (2008). *Groei van kinderopvang.* Zoetermeer, Netherlands: Research voor beleid. Retrieved from https://www.kenniscentrumsport.nl/publicatie/?groei-van-kinderopvang&kb_id=5161

Menold, J., Simpson, T. W., Jablokow, K. W. (2016). *The Prototype for X (PFX) framework: assessing the impact of PFX on desirability, feasibility,*

and viability of end Designs. In ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. American Society of Mechanical Engineers.

Polanyi, M. (1964). *Personal Knowledge: Towards a Post Critical Philosophy.* NewYork, United States: Harper & Row.

Preece, J., Rogers, Y., Sharp, H. (2002). *Interaction Design: Beyond Human-computer Interaction.* New York, United States: Wiley.

Rijksoverheid. *Bedragen kinderopvangtoeslag 2019*. Retrieved April 15, 2019 from https://www.rijksoverheid.nl/onderwerpen/kinderopvangtoeslag/bedragen-kinderopvangtoeslag-2019

Sanders, E. B. -N. (1992). *Converging perspectives: product development research for the1990s.* Design Management Journal, 3(4), 48-54

Sanders ,E. B. -N. (2001). *Virtuosos of the experience domain.*

Sanders, E. B. -N., & Stappers, P. J. (2012). *Convivial design toolbox: Generative research for the front end of design.* Amsterdam, Netherlands: BIS Publishers.

Sanders, E. B. -N., & Stappers, P.J. (2008). *Co-creation and the new landscapes of design*, Codesign, 4:1, 5-18, DOI: 10.1080/15710880701875068

Sleeswijk Visser, F., Stappers, P. J., van der Lugt, R. (2005). *Contextmapping: experiences from practice.* International Journal of CoCreation in Design and the Arts, volume 1, issue 2, 119–149. Retrieved from https://www.tandfonline.com/toc/ncdn20/1/2.

SWKGroep. (2018). *Samen de Wereld Kleuren: Pedagogisch deelbeleid Schoolkinderen (9–12 jaar).* Retrieved from SWKGroep Company database.

SWKGroep. (2018). *Samen de Wereld Kleuren: Pedagogisch deelbeleid Pubers (12–15 jaar).* Retrieved from SWKGroep Company database.

SWKGroep. (2017). *Super 8 BAAN*, version 2.0. Retrieved from SWKGroep Company database.

Wet IKK. (2019 January 1). Retrieved april 15,

2019, from https://wetten.overheid.nl/BWBR0039785/2019-01-01

Wet Wko. (2019 January 1). Retrieved january 23, 2019, from https://wetten.overheid.nl/BWBR0017017/2019-01-01.

APPENDIX

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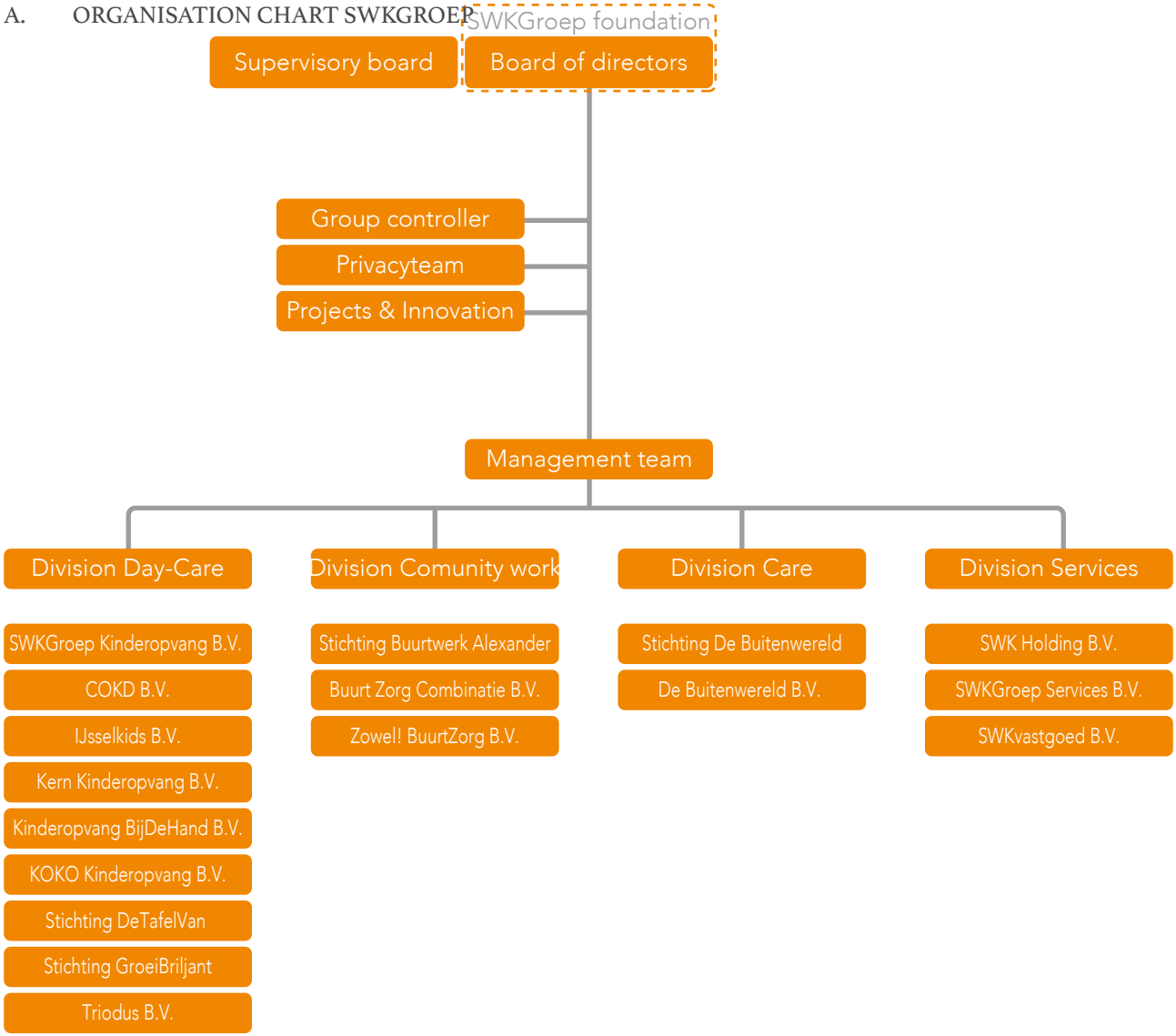
A. ORGANISATION CHART SWKGROEP



B. PROCEDURE OF GENERATIVE SESSIONS

Two versions of a generative session where designed. An iteration was needed because the original generative session was to long and resulted in superficial answers. See page 100 for the researcher insights from this iteration.

In this appendix the procedures of both generative sessions are described.

SESSION 1

Participants: groups of max. 5 children.

Location setup: Classroom with a table, large enough for 5 children and the researcher.

Tools: A box with sorted pieces of Lego figures and the Toolkit.

Toolkit: Pencils, markers, scissors, glue, post its, stickers, set of pictures for inspiration (printed on A3 sheets) & sheets for the different exercises.

Step 1: First the researcher welcomes the children and thanks them for their participation. The researcher mentions that he is also in school, has the opportunity to create something beautiful for the last time in his school career and that they can really help them by completing this session.

Step 2: Children are asked to build a figure of Lego that they would want to be.

Step 3: The task this is me: The second task is designed to get to know each other and for the children to practice with the toolkit. A sheet with a circle in the middle is used to put the Lego in the middle and the children are asked to map out their lives with the help of the toolkit.

The children share their work with each other and with the researcher.

Step 4: The timeline task: In order to gain insight in a day at after school day care the children are asked to make a timeline of their day at after school day care.

The children share their work with each other and with the researcher.

Step 5: Home alone task: A sheet with a house in the middle is again used to place the lego figure. The children are asked to come up with stuff that the figure would need in order to be home alone in a nice manner.

The children share their work with each other and with the researcher.

Step 6: The researcher thanks the children and rewards them with a junior designer certificate.

SESSION 2

Participants: groups of max. 5 children.

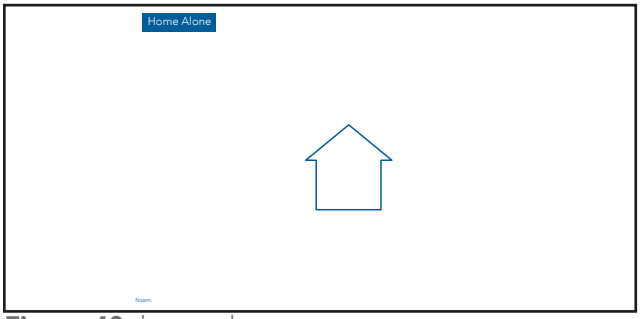


Figure 40: home alone

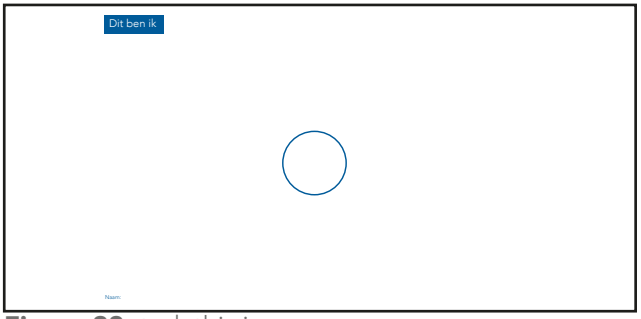


Figure 38: task this is me

Figure 41: junior designer certificate

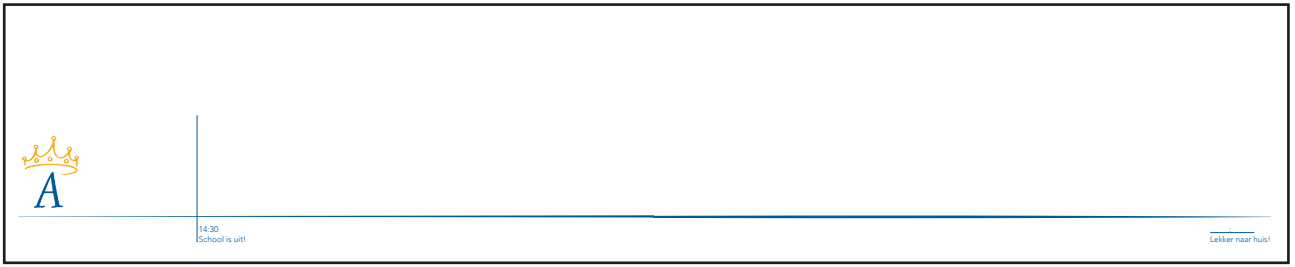


Figure 39: timeline

Location setup: Classroom with a table, large enough for 5 children and the researcher and a large whiteboard with markers.

Tools: A box with sorted pieces of Lego figures and the Toolkit.

Toolkit: Pencils, markers, scissors, glue, post its, stickers, set of pictures for inspiration (printed on A3 sheets) & sheet for the exercise.

Step 1: First the researcher welcomes the children and thanks them for their participation. The researcher mentions that he is also in school, has the opportunity to create something beautiful for the last time in his school career and that they can really help them by completing this session.

Step 2: A timeline of after school day care is made together on the whiteboard. One child is asked to write things down while the children come up with the answers together under supervision of the researcher see Figure 42.

Step 3: The children are asked to build a Lego figure or figures that will be their personal superhero.

Step 4: The lego figure is placed on top of an A3 sheet of paper. The children are asked to think of superpowers that their figure might need in order to help them in being home alone.
The researcher constantly asks why questions in order to get to know the reasons behind the superpowers, see Figure 43.

The children share their work with each other and with the researcher.

Step 5: The researcher thanks the children and rewards them with a junior designer certificate.

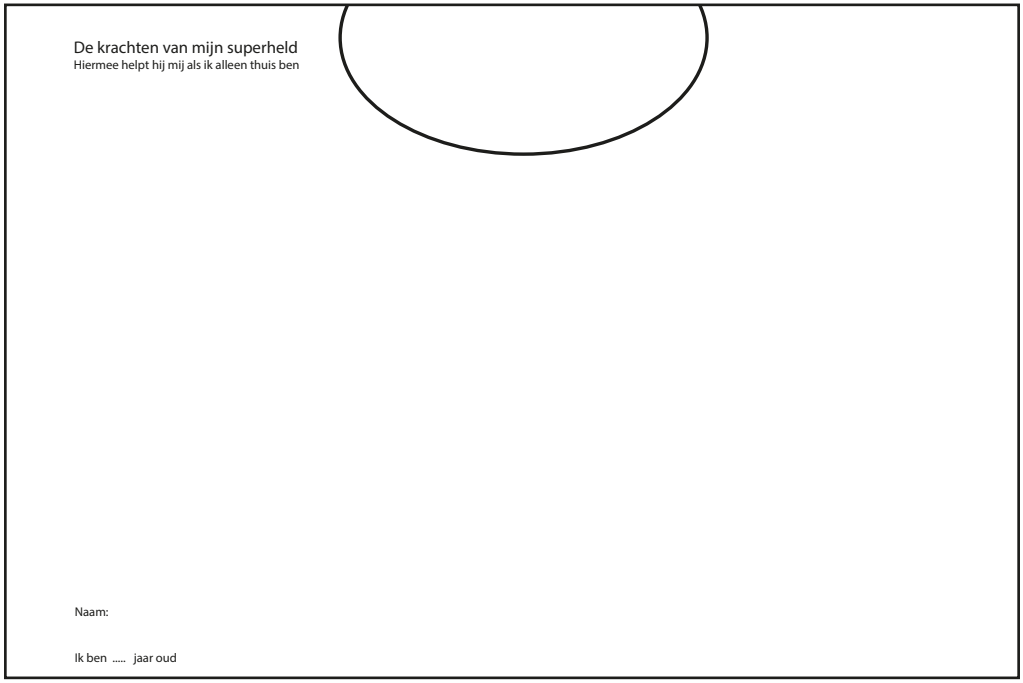


Figure 43: super powers

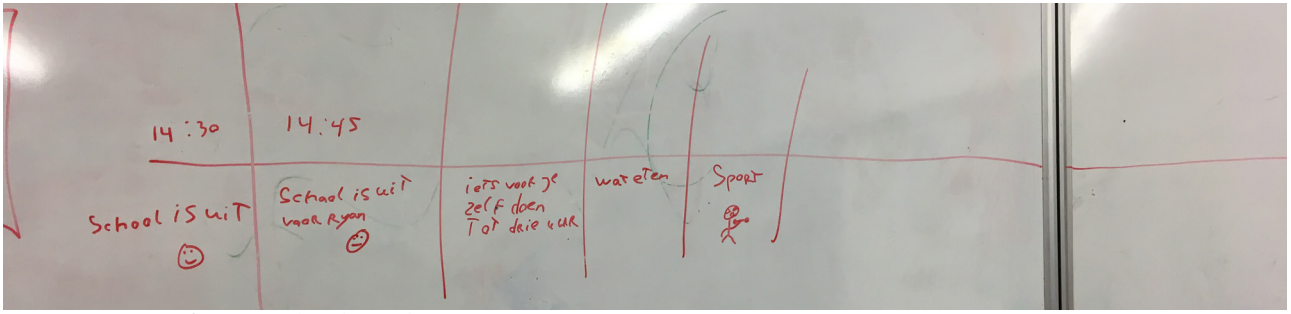


Figure 42: timeline on whiteboard

C. GUIDANCE QUESTIONS OF INTERVIEW WITH PARENTS

Target group: Parents with children in the age of 10-12 that used to go to after school day care.

The interviews are structured as fallows: Past, present and future. Past is about the time that the child was in after school day care, the present is when the child is still in primary school but does not go to after school day care anymore. The future is about the situation when the children are going to secondary school.

Past:

- What did after school day care look like?
  - Was there a "KidsClub"?
  - How many days did he/she go?
  - What did he/she thought about after school day care?
- Positive experiences.
  - Why?
- Negative experiences.
  - Why and what did they do about it?

Present:

- When did they stop with after school day care?
  - Why?
  - How doe they experience the child being at home?
  - How many times in the week?
  - What did you do in preparation for being alone?

Future:

- How do they foresee going to secondary school?
- Do they cope with the uncertainties, the child and/or parents?
- Do they thought already of strategies for the moments of being alone?

D. INTERVIEW TRANSCRIPTS

Interview 1: with a mother of two children ([child 1] 11 years old, [child 2] 9 years old). Interview took place at 19 January 2019 and is transcribed in Dutch.

Hoe lang geleden is het dat [child 1] op de bso zat?

Hij is dit jaar, vanaf begin dit schooljaar is ie 1 dag gegaan, hij ging altijd twee. En sinds volgens mij november ofzo.. Nee na de herfstvakantie dus oktober is dat geweest. En toen hebben we het helemaal afge… Daarvoor had ie twee middagen en sinds dit schooljaar 1.

Voor mijn beeldvorming hoe dat dan was. Waar ik ben geweest hadden ze twee delen, de KidsClub vanaf groep 5 dus 8, 9 jaar zo'n beetje. De school is op basis van leerpleinen met lokalen eromheen en een gezamenlijk plein in het midden en dan zit de kidsclub in het leerplein en mag zelfstandig naar buiten met een hesje aan, moeten ze wel vragen. De echte BSO, wat zij bso noemen dat is dan van groep 3 tot en met groep 5. Heeft [Child 1] dat ook gehad?

Waar [Child 1] zat, was op een BSO waar kinderen zitten tot hun 8e. Omdat dat een vrij kleine BSO is. Daarna zijn ze naar de Sportlaan gegaan boven de hockey bij de sportvelden allemaal. En dat is vanaf 8. Daar worden dus andere dingen aangeboden dan zo'n andere BSO waar de jongere kinderen zitten.

Hoe ervoer hij dat?

Hij vond dat natuurlijk superstoer. En ook het feit dat ze daar hadden veel meer ruimte. En er werden daar sporten aangeboden. Voetballen, hockey, basketballen, skaten, skateboarden he op van die wiebeldingen. Dus ja hij ging daar echt graag heen.

Dat is wel leuk om te horen. Dat is dus eigenlijk die opsplitsing, wat ik vaak tegen kom is dat ze de BSO niet leuk vinden omdat ze de jonge kinderen niet leuk vinden. Het verschil in leeftijd is een dingetje. Maar hij had dus ook niet de mogelijkheid om langer te blijven op die andere BSO?

Nee, nee daar zeggen ze gewoon vanaf 8 jaar moet je gewoon doorstromen. Daar moeten ze wel weg.

En de overgang, hoe hebben jullie dat ervaren?

Hij hockeyde daar al dus voor hem was het wel makkelijk,. Ik weet wel dat sommige ouders er moeite mee hebben, omdat ze vanaf school een

stukje moeten fietsen. Dat wordt natuurlijk wel onder begeleiding gedaan. Maar het is natuurlijk een stukje meer loslaten.

De eerste was in school?

Nee dat niet maar daar werden ze gehaald met een taxi en toen daar gebracht.

En dat laatste stuk is dan meer zelfstandig?

Ja dan krijgen ze ook meer zelfstandigheid ook met eten maken, tosties. Ze moesten echt wel meer voor zichzelf zorgen. Natuurlijk werd dat wel onder begeleiding gedaan maar toch wel meer zelfstandigheid maar dat vinden ze natuurlijk dan heel erg leuk ja.

Dan gaan we ons vooral focussen op dat laatste stuk, van 8 tot net 11 denk ik dan.

Ja

We hebben nu wat positieve dingen gehoord daarover maar heb je daar ook negatieve ervaringen gehad, kan je iets bedenken als ouder?

Ik vond het vaak heel rommelig, heel rommelig, ook chaotisch, je hoeft niet meer alles overgedragen te krijgen hoe het is gegaan, maaaar ik vindt het wel belangrijk dat je een beetje weet wat er is gebeurt. En ik vond het aanbod op een gegeven moment heel minimaal. Zoals in de vakantie gingen ze dan bijvoorbeeld alleen naar het zwembad.

De hele dag?

Ja of voor een paar uurtjes. Maar er was niks anders. Of ze gingen naar het bos. Dat was het. Terwijl ik denk dat je op zo'n BSO met de mogelijkheden veel meer kan organiseren en daar echt kinderen gewoon dingen aanbieden. En dat gebeurt vind ik weinig.

En hoorde je dat dan ook van [Child 1], dat ie dat dan tijdens de vakantie saai vond?

Jaa, ja, ja.

En die chaos, hoe ervoer hij dat, weet je dat?

Hij had daar niet zo'n last van. Het was wel relaxed natuurlijk want alles mocht. Weet je, ze gingen skatend door dat pand heen en dat is hartstikke leuk dat dat kan. Maar het geeft ook heel veel onrust. En ik denk dat het voor jongens leuker en aantrekkelijker was daar dan dat dat voor meisjes was. Want zij

hadden daar niet zo veel te doen vind ik.

Jij geeft aan dat je het rommelig vond of druk chaotisch, waarom zie je dat als iets negatiefs terwijl het voor de kinderen positief kan zijn?

Ik kan er zelf niet zo goed tegen haha, nou ik denk dat het ook wel goed is om ook een beetje structuur te bieden ook aan die kids, ja, aan de andere kant is het ook wel heel lekker dat ze dat daar kunnen doen. Dat ze daar kunnen raggen en druk kunnen doen en schreeuwen en druk kunnen doen. Keihard muziek aanzetten en doen.

Zodat ze dat niet thuis doen?

Nee het is ook wel een uitlaatklep natuurlijk!

Structuur aanbrengen, is dat dan iets wat je hoopt dat ze daar leren?

Nee ik vind niet dat dat de taak is van een PMer daar. Ik vind dat doe je thuis, wij voeden ze op en zij begeleiden ze. Natuurlijk moeten ze af en toe corrigeren maar ik vind niet dat het hun taak is nee.

Het is wel interessant hoe jij kijkt naar de rol van de BSO?

Ik werk natuurlijk voor een kinderopvangorganisatie dus ik kijk er ook wel met een andere bril naar. Maar ik ben vooral ook moeder. Dus ik kijk, als ik daar kwam om [Child 1] en [Child 2] op te halen kwam ik als moeder. Ik kan dit wel als moeder vertellen.

Heb jij het idee dat over het algemeen ouders er zo naar kijken als je die sprak?

Nee ik denk dat ouders hele andere eisen hebben. Ik weet wel dat andere ouders het eigenlijk net zo ervaarde als ik, die drukte en die chaos. Wat doet mijn kind hier. Dat weet ik. Dat hoorde ik natuurlijk ook terug. Maar dat is natuurlijk een keuze van de soort BSO waar je ze naartoe laat gaan.

Ik bedoel de zegmaar de hoe kijken ouders over het algemeen naar de, zien ze het ook als een uitlaatklep voor de kinderen of zien ze ook een opvoedende taak?

Zij willen wel dat ze dingen leren: Hij kan nog steeds niet knippen. Ja dan moet je daar wat mee doen thuis. De taak ligt dan wel echt bij de ouders. Of je moet dan bij de kleintjes zo'n dagdeel daar is extra

aandacht aan. Maar BSO is vooral het ontspannen en vooral het kind laten zijn en het kind keuzes laten maken wat ie zelf wil gaan doen vind ik. Maar je moet het ze wel aanbieden. En als je niet mee wilt doen is dat ook goed maar ze moeten wel de keuze stellen vind ik.

Maar je ziet geen opvoedende taak om dingen te leren of bij te brengen?

Ik vind wel dat je ze dingen kan leren. Dat je ze kan mee laten denken. Er zijn ook opstootjes. Ik vind wel dat de PMer moet gaan praten met de kinderen hoe ze het anders moeten doen. Maar de basis ligt echt thuis vind ik.

Ik denk dat we het genoeg hebben gehad over het verleden. Hij gaat nou niet meer, hoe is die keuze ontstaan?

Hij heeft het zelf gezegd: Ik wil niet meer, niemand gaat meer van mijn leeftijd.

Hij was ook de oudste?

Nou er zit nog 1 meisje uit zn klas weet ik nu. Dat had hij niet gezegd maar dat geeft niet haha. Maar al zijn vriendjes zijn gestopt. Gewoon omdat hij nu in groep acht zit. En ik vind het wel belangrijk dat ie gaat leren en dat ie zelf verantwoordelijkheid krijgt. Dat ie naar huis gaat vanuit school met de sleutel enzo. Dat zijn hele simpele dingen maar toch nog best lastig. Even wat eten enzo, doe wat lampjes aan weetje, ga wat doen, maak een afspraak, ga met je huiswerk.

Maar hij had het dus zelf aangegeven?

Ja, ik vond het wel lastig, want wat ga je dan doen. Ik vond dat wel lastig, kijk ik weet wel dat het moet en dat het goed is. Wat ga je dan doen? Ja met vrienden afspreken. Ik ben de laatste tijd wat vaker thuis geweest maar dan had ie niet echt afgesproken met vrienden. Dan ging achter de computer zitten wilde die gamen. Of er kwam een vriendje mee en dan gingen ze samen op de telefoon. En dat vind ik niet leuk.

Hoe ervaren jullie het dan nu dat ie thuis is, wat zou je anders willen zien dan?

Ik zou het leuk vinden als ze nog afspreken, dat ze nog naar buiten gaan. Hij is nu elf en ze spelen nog wel buiten hoor. Maar ga wat doen. In plaats van achter die computer of playstation ofzo wat nu echt heel veel gebeurt.

Dat is de invulling van het thuis zijn. Schets het is

als ie van school komt?

Na school fiets ie naar huis en dan neemt ie hopelijk wat te drinken en neemt ie even wat te eten. Vaak een krentenbol. En ehm dan gaat ie zitten.

Hoe hebben jullie dat in de voorbereiding daar naartoe aangepakt?

We hebben wel gezegd van wat ga je dan doen? Want hij wilde wel graag gaan spelen met zn vriendjes maar in de praktijk blijkt dat het echt veel minder gebeurt en dat ik dat echt moet zeggen bel dan iemand op.

Jullie hebben dat in gespreksvorm zo van te voren voorbereid of heb je het de eerste week nog een bepaalde vorm van controle daarop proberen te hebben?

We bellen wel en dan vragen we wat ga je doen?

Bellen jullie op?

Hij belt eigenlijk altijd zelf: mam mag ik?

Dus op de dagen dat hij thuis is heb je sowieso telefonisch contact met elkaar?

Ja

Is dat dan 1 x bellen of bij meerdere keuzes die die moet maken?

Meestal is het 1 x ja. En soms een keertje extra: mag ik iets? Mag ik iets? En dan denk ik, ik vind het wel bijzonder dat je dat vraagt. Want ik deed het gewoon, ik pakte gewoon. Maar het schijnt wel met heel veel kinderen zo te zijn.
Ik probeer wel te stimuleren dat ie wat gaat doen. Kijk ze hebben nu huiswerk en laatst kwam ik thuis en toen zat ie gewoon huiswerk te maken en dan denk ik van nou.. Best goed!

Huiswerk, hebben jullie daar afspraken over gemaakt dat ie dat doet op de momenten dat ie alleen is of helemaal niet?

Niet echt, nou ik zeg wel: heb je nog huiswerk? En soms zecht ie dan OE ik heb morgen engels een toets. Een paar keer gebeurt in het begin maar dat is nu niet meer. Hij is er wel echt mee bezig en dat vind ik wel goed. Natuurlijk helpen we hem wel. Martijn is daar wel veel mee bezig.

Kan je voor het heden nog negatieve ervaringen bedenken?

Ik moet het wel voor mezelf, dat ik het wat meer los moet laten. Ik kan wel elke keer zeggen ga naar buiten ga naar buiten. Maar hij moet ook kunnen zijn en doen waar hij zich prettig bij voelt. Dat vind ik wel. Ik was altijd buiten aan het spelen tot weet ik veel welke leeftijd eigenlijk maar dat gamen dat is gewoon zo onwijs hot onder die gasten en dan spelen ze eigenlijk nog samen want ze hebben ook nog contact via de koptelefoon maar wat ik het vervelende vind is dat ie daarna gewoon niet aanspreekbaar is, dat ie niet zo gezellig is na het gamen. Maar voor de rest. Ja hij gaat straks naar de 1e dus hij moet, hij moet gewoon zelfstandig worden.

Jij zegt loslaten, zie je dat echt als iets voor jou zelf als moeder om te ontwikkelen?

Ja, ja, ja hij moet toch. Ik moet ook leren om niet alles voor hem uit te kauwen en het hem allemaal op een presenteerblaadje want dan gaat ie niks leren. Ik ben daar wel heel erg van, kom hier en doe wel. Ik weet dat mijn moeder dat ook deed en dat haatte ik, vond ik vreselijk, dat ik niks zelf kon doen. Daar moet ik wel over waken.

Hoeveel dagen gaat het eigenlijk om dat hij nu alleen thuis is?

Maandag en donderdag. Hij is dan om half 4 is ie thuis uit school en ik ben om tien over vijf thuis dus het is echt maar een hele korte periode. En op dinsdag zijn opa en oma hier altijd, al jaren.

Waarom hebben jullie daar eigenlijk voor gekozen, dat je ook een gedeelte door opa en oma laat doen?

Drie dagen voelde niet goed, vond ik gewoon te veel voor een kind. Terwijl ik daar nu de planning doe voor kinderdagverblijven, zoveel kinderen gaan zoveel dagen daarheen. Soms wel vijf dagen, dat vind ik wel pittig.

Kan je uitleggen waarom je dat dan pittig vind?

Nou dan heb ik het idee dat de opvoeding wel daar licht, want wanneer ziet een ouder dan dat kind. Een kindje wordt smorgens vanaf half 8 kan het gebracht worden en tot half 7 zijn we open. Dan ligt daar wel een opvoedende taak. Ze gaan dan nog niet naar school.

Ze gaan nu natuurlijk wel naar school, is het dan misschien een gewoonte dat opa en oma nog komen die dag?

Nou anders zouden ze met zn tweeën op dinsdag

thuis zijn en dat zie ik nog niet zo zitten. Dan gaan ze gewoon ruzie maken. Ik hoop dat het op een gegeven moment mindere wordt want op een gegeven moment is het kaar en moeten ze ook samen dingen kunnen doen. Als ik Nu boodschappen ga doen wordt ik heel vaak gebeld door 1 van de 2. Het gaat wel heel vaak goed, als ze ergens mee bezig zijn dan gaat het goed. Maar als je alles afneemt qua gamen of televisie dan hebben ze een probleem, dan weten ze het even niet. Als ze een puzzel hebben gaan ze daar wel mee aan de slag. Ik denk dat dat het is, als je dingen aanbiedt, op de BSO of thuis, dat ze daar wel gevoelig voor zijn.

Dat was het heden, straks aan het eind van groep acht gaat ie natuurlijk naar de middelbare school, andere uren.

Andere uren ja, waarschijnlijk moet hij straks al later naar school als wij al naar kantoor moeten, dat kan ja.

Hebben jullie daar al met elkaar over nagedacht?

Helemaal niet eigenlijk. Ook omdat je nu dit aan het trainen bent. We hebben ook trouwens nu sinds januari dat hij vrijdag niet meer overblijft maar dat ie met een vriendje naar huis gaat om te eten maar met een vriendje mee of hierheen als ik thuis ben. Ook zodat ze tussen school door naar huis gaan en dat ze dan zelf de tijd in de gaten moeten houden. Dat is wel een soort training denk ik, hoop ik, ik hoop dat het wat toevoegt.

Denk je dat het iets is wat jullie actief met hem gaan trainen of in ieder geval bespreken?

Wel bespreken ja, Ik denk, we zitten nu in de fase dat we scholen aan het kijken zijn. Hij heeft net zn advies gekregen.
Het gaat wel heel snel. Ik weet wel van de buurjongens die zitten nu nog denk ik in de tweede, vorig jaar stonden ze wel aan de deur om te voetballen maar die behoeftes veranderen ineens. Als het heel mooi weer is zie ik ze nog wel is. Maar dat gaat zo snel. Ik hoop dat ze nog wel eens buiten gaan spelen, ik weet van mezelf ook wel dat het op een gegeven moment over was.
Hij hockeyt natuurlijk ook he, twee keer in de week trainen en wedstrijd op zaterdag. Nee maar dat, hij gaat nu ook strakjes als het weer buiten gaat starten, dan moet hij ook de dagen dat hij dus thuis komt alleen, dan moet hij er ook voor zorgen dat hij om 5 uur op het hockeyveld is. Daar moet hij ook zelfstandig naartoe. Kijk op die manier heb je al invulling van die twee dagen, in ieder geval dat ie om kwart voor 5 dan weg moet.

Hoe verwacht je dat dat gaat als hij straks alleen thuis komt?

[Mother]: Ik weet het niet, ik hoop thee zetten en huiswerk maken hahaha. Nee zoals ik hem nu zie en als ik hem zo bezig zie. Dat hij daar wel bewust van is en dat hij daar wel mee bezig is.

[Child 1]: Ik doe meestal op 1 dag in de week huiswerk, ik krijg op maandag huiswerk en dat moet ik de maandag daarop inleveren. Meestal maak ik dan alles in het weekend in 1 x.

Waarom doe je het dan niet gespreid, steeds een klein beetje?

[Child 1]: Kijk het huiswerk is heel vervelend om mee te beginnen dus dan moet ik 7,6,5 x in de week moet ik dan beginnen en dat kan ik niet.

[Mother]: Hij heeft nu ook op zn telefoon spotify op boven met een boxje, dan zit ie toch wel aardig zn huiswerk te doen. Donderdag toen ik thuis kwam zat ie boven, zat ie huiswerk te maken.
Maandag moet hij zn huiswerk bij opa en oma maken. Want dan hebben ze studiedag. Dat doe ik dus nog niet he, een hele dag. [Child 2] zou naar de BSO kunnen gaan maar dan breng ik ze gewoon naar mn ouders.

Je hebt aangegeven dat als ze samen zijn, dat je dat nog niet wilde maar een hele dag alleen?

Dat vind ik gewoon niet prettig, wat ga je doen dan de hele dag. Ik vind het van mezelf al, een hele dag, ik vermaak me wel maar het is best wel lang.

E. WEIGHT AND SCORE JUSTIFICATION

WEIGHT JUSTIFICATION

The design requirements consist of the final users needs. Six needs for the child and three needs for the parents, found in phase 1 of the project, see page 36 and page 44.

The first six requirements are needs of the child. They where found after analysis of the creative sessions with children. The needs where ranked to commonalty. The most common need is weight highest towards the least common need that is weight lowest.

The last three requirements are needs of the parents. They where found in interviews that where structured as fallows: past (child at after school day care), present (child being at home alone), and future (child in secondary school). The design solution is focusing on the present and future. Those needs are therefore scored as most important.

SCORE JUSTIFICATION

Two concepts are scored: Bas Bel Oppas and Teq Time.

BAS BEL OPPAS

Fear of intruders: 9

In this concept there is a trusted person that contacts the child every time it arrives at home alone. The child can always contact this person during an emergency situation. The feeling that there is always someone, not judgemental, to help you takes away a lot of the fear that children have for intruders.

Help with chores: 7

During the intake the coach, child and parent can decide on goals that they want to work on. One of these goals can be doing chores. The coach can stimulate the child in doing this and answer questions. They can however not check how or if they did them. It is also hard to show how a certain chore should be done.

Experience together: 1

The coach can encourage the child to go play and experience things with other kids, the product however does not facilitates this in any way.

Fear of being alone: 9
Because there is a trusted person available for the child there is no feeling of being alone. The person is not physically present but gives the child a warm welcome and acknowledgement.

Desire to freedom: 3
The child is contacted at times that it is home alone. This can limit the experience of freedom. There is a form of control that is obvious for the child. On the other hand the coach can encourage the child to make his own decisions and go outside.

Help with homework: 7
Planning and doing homework can be goals set in the intake. The coach can encourage the child in working on these goals. He can not directly check the results but progress can be discussed during follow up meetings.

Offer structure: 7
The goals discussed in the intake with coach, parents and child offer structure to the free time of the child. The coach guarantees this structure by encouraging the child to work on his goals frequently. The parents are only disturbed during their work when it is really necessary, providing structure to them as well.

Offer things to do: 2
The coach can help the child when it is bored but there are no suggestions of things to do for the child.

Help letting go: 8
Handing the responsibility to the coach during the time of the child at home alone, is a form of practise for the parent in letting go of the child. The parents have regularly contact with the coach witch is an expert in child care for children in this age group. If parents are uncertain or have any questions they can get in contact with the coach.

TEQ TIME

Fear of intruders: 3
The concept can offer distraction for the child so they experience less fear. There is nothing designed for possible emergency situations.

Help with chores: 8
The concept is based on intrinsic motivation of the child. When there are activities offered that incorporate chores in a fun way, children are likely to do them. The can make their parents proud by posting the results of their chores.

Experience together: 10
Every activity in the platform is touching on this need. Even the individual activities offer the possibility to live-stream them with friends and experience together. Besides children can also take place in shared activities.

Fear of being alone: 6
The child has to actively make use of the product to experience the benefits. When, for whatever reason the child decides to not use the product the child can experience loneliness the same as being alone without the product.

Desire to freedom: 8
In particular the shared activities make the children go outside and experience the freedom that they have. Parents can enlarge the world of their children when they gain confidence by making activities further away also available.

Help with homework: 5
There can be homework related activities but they are not the same as doing homework. The activities should be enjoyable for the children, most children experience doing homework not as enjoyable.

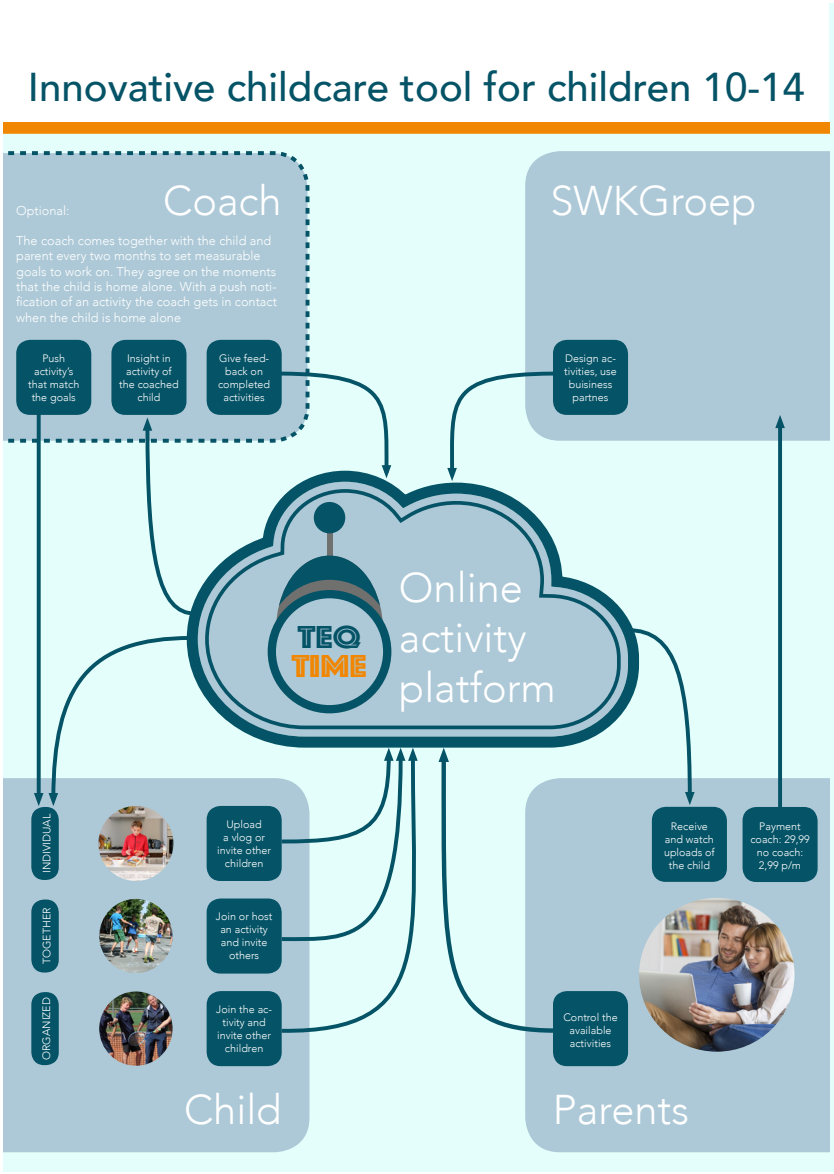
Offer structure: 5
The concept offers a lot of activities to do, structured in: alone, together and organized. The activities are also categorized. The concept does not facilitate any structure in how the children plan these activities during their free time.

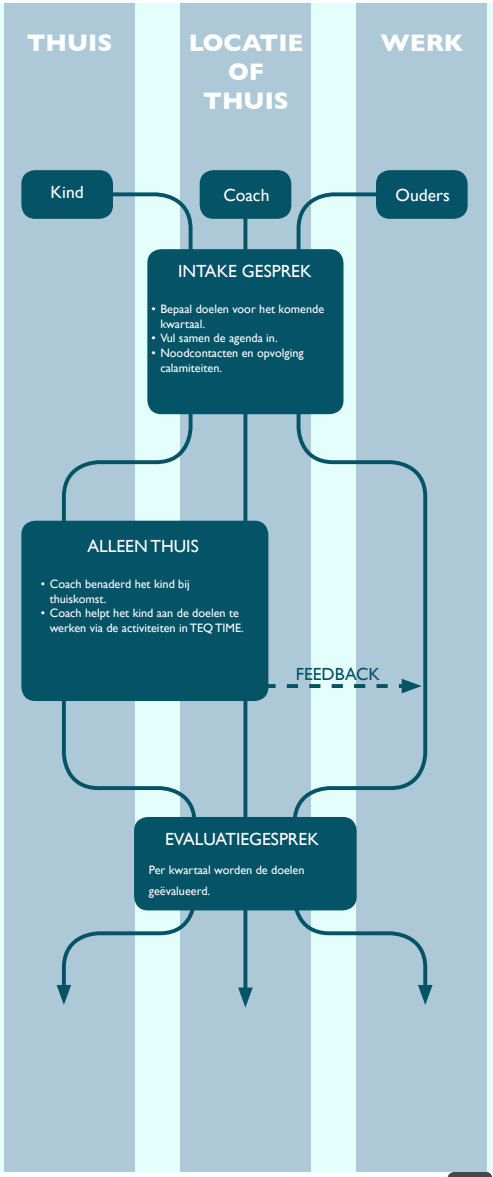
Offer things to do: 10
The strong point of this concept is that there is a wide range of activities to do, the activities are also updated over time so they stay relevant and interesting.

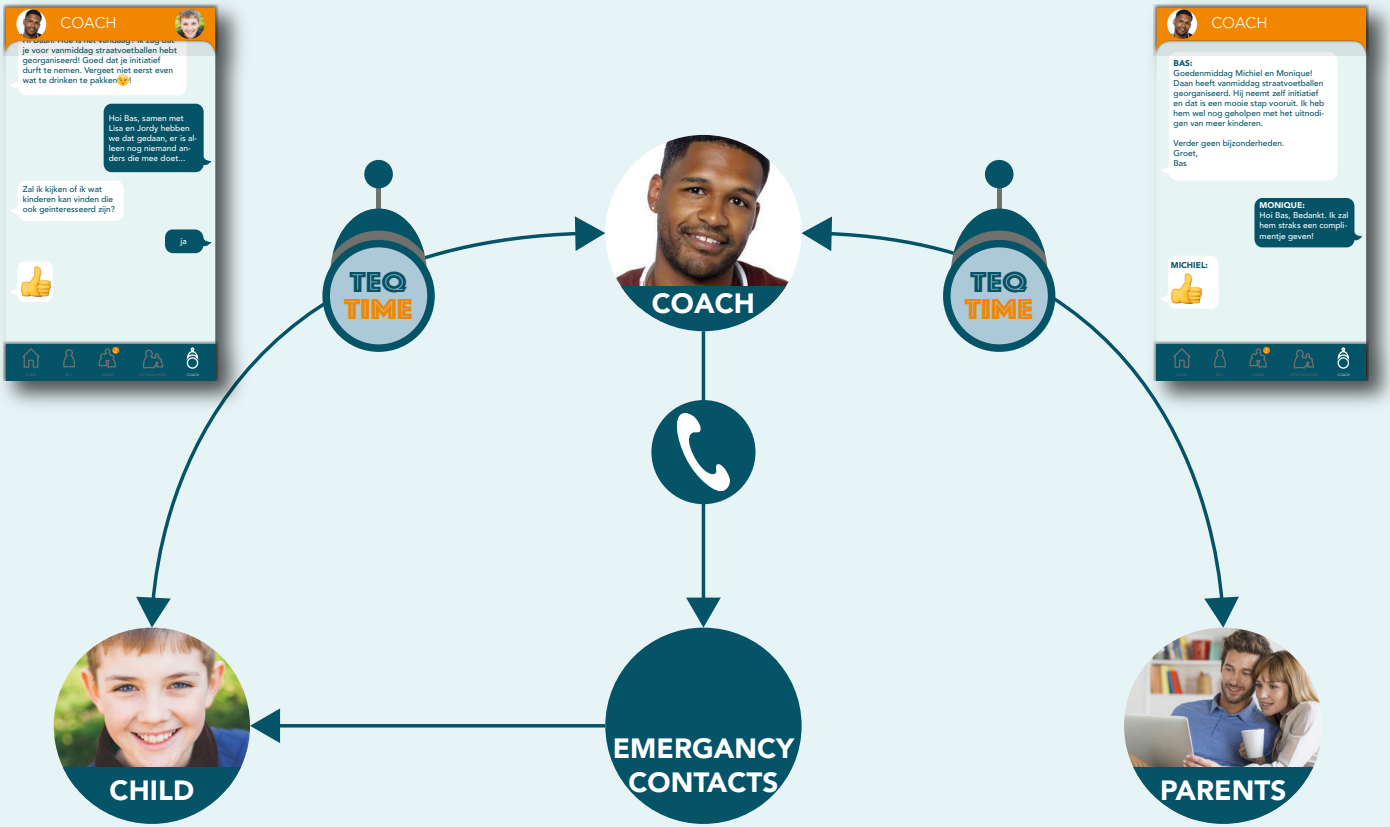
Help letting go: 5
The concept can nudge children towards independency but other than that it does not guide the parent in letting go of their child.

DESIGN REQUIREMENTS	WEIGHT	BAS BEL OPPAS	TEQ TIME
Security	5	9	3
Help with chores	4	7	8
Experience together	4	1	10
Company	3	9	6
Desire to freedom	2	3	8
Help with homework	1	7	5
Provide structure	2	7	5
Parents in control	4	9	6
Offer things to do	5	2	10
Help letting go	5	8	5
Final score		213	235
		61 %	67 %

F. PRINTED FILES DURING USER TESTING






COACH
je voor vanmiddag straatvoetballen hebt georganiseerd! Goed dat je initiatief durft te nemen. Vergeet niet eerst even wat te drinken te pakken!
Hoi Bas, samen met Lisa en Jordy hebben we dat gedaan, er is alleen nog niemand anders die mee doet...
Zal ik kijken of ik wat kinderen kan vinden die ook geinteresseerd zijn?
ja
TEQ TIME
COACH
TEQ TIME
COACH
BAS:
Goedenmiddag Michiel en Monique! Daan heeft vanmiddag straatvoetballen georganiseerd. Hij neemt zelf initiatief en dat is een mooie stap vooruit. Ik heb hem wel nog geholpen met het uitnodigen van meer kinderen.
Verder geen bijzonderheden.
Groet,
Bas
MONIQUE:
Hoi Bas, Bedankt. Ik zal hem straks een complimentje geven!
MICHIEL:
CHILD
EMERGANCY CONTACTS
PARENTS

G. PROCEDURE DURING INTAKE MEETING

In an intake meeting the following should be discussed:

- Explain how TEQ TIME Coach works and what options parents and children have to adjust.
- Explain that TEQ TIME is an alternative of being alone without any guidance. Not an alternative for after school day care.
- Consult with the parents how much freedom the child has, does it have to stay at home or can it also go outside or play with friends.
- Decide goals together to work on for the next term.
- Decide when an evaluation meeting takes place, typically three months but on a parents request this cycle can be shorter, especially at the beginning.
- Explain the differences between problems and emergencies and how the coach will react on them.
- Exchange emergency contacts.
- Explain that it is preferred to not track the GPS data to teach children responsibility. However give parents the opportunity to track the GPS data.
- Explain when the coach is contacting the child and parent.
- Explain that the coach is open for any question of the child and parents, they can ask them now or later via chat.

H. COMPETENCE PROFILE OF A COACH

Coaches are one of the most important factors for the product to succeed. A list of competences can be used to hire the right people for the job.

- Background of working with teenagers.
- Able to coach children via chat messages.
- Confident of working with a computer.
- Confident of chatting with multiple children at the same time.
- Have excellent knowledge of Dutch grammar and spelling.
- Able to moderate between parent and child about getting independent.
- Able to recognize if a child needs assistance.
- Preferably a team consists of male and female coaches. A coach should be able to recognize when a child rather wants to ask something to a coach of the opposite sex.

I. IMPRESSION OF COACH INTERFACE

TEQ
TIME