

# CAMPING IN NATURE

DESIGN FOR ENHANCED EXPERIENCE AND INTERACTION  
BETWEEN CAMPER AND NATURE DURING SHELTER USE.

MASTER THESIS DESIGN FOR  
INTERACTION

Delft University of Technology

Loriana Dagers

4065069

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CHAIR

Marieke Sonneveld

FACULTY MENTOR

Silje Dehli

EXTERNAL MENTOR

Danny Hazewindus

# PREFACE

This graduation project has been a great journey, with mostly highs and some lows. Many people helped, supported and or supported me on part or during the whole journey, for which I want to thank them.

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# ABSTRACT

## WHAT WILL THIS REPORT TELL YOU?

Lots of people go camping to submerge in nature to break with their busy daily routine. Current camping shelters do not seem to support the desired nature experience of these campers. While protecting these campers from external conditions the shelters closes the campers off from the outdoors they came for. This led to the following hypothesis:

Current camping shelters do not fit the desired nature camping experience.

By researching campers and their context this hypothesis is confirmed. Besides confirming the hypothesis the research gave two other noteworthy insights about the desired camping experience. Firstly, the research showed that these campers like to have the possibility to make a camping spot their own. Secondly, it was indicated that they want to have the possibility to retreat in this own created place, secluding themselves from the outdoors. Combining these findings with a future shelter and interaction vision led to the following design goal:

To design a shelter where the feeling of being outside and inside merge smoothly into one another, giving the user the opportunity to seclude from and submerge in their surrounding. Meanwhile enabling the user to break with their daily routine and make a shelter and by that, making their camping spot their own, in a mindful and exploratory manner.

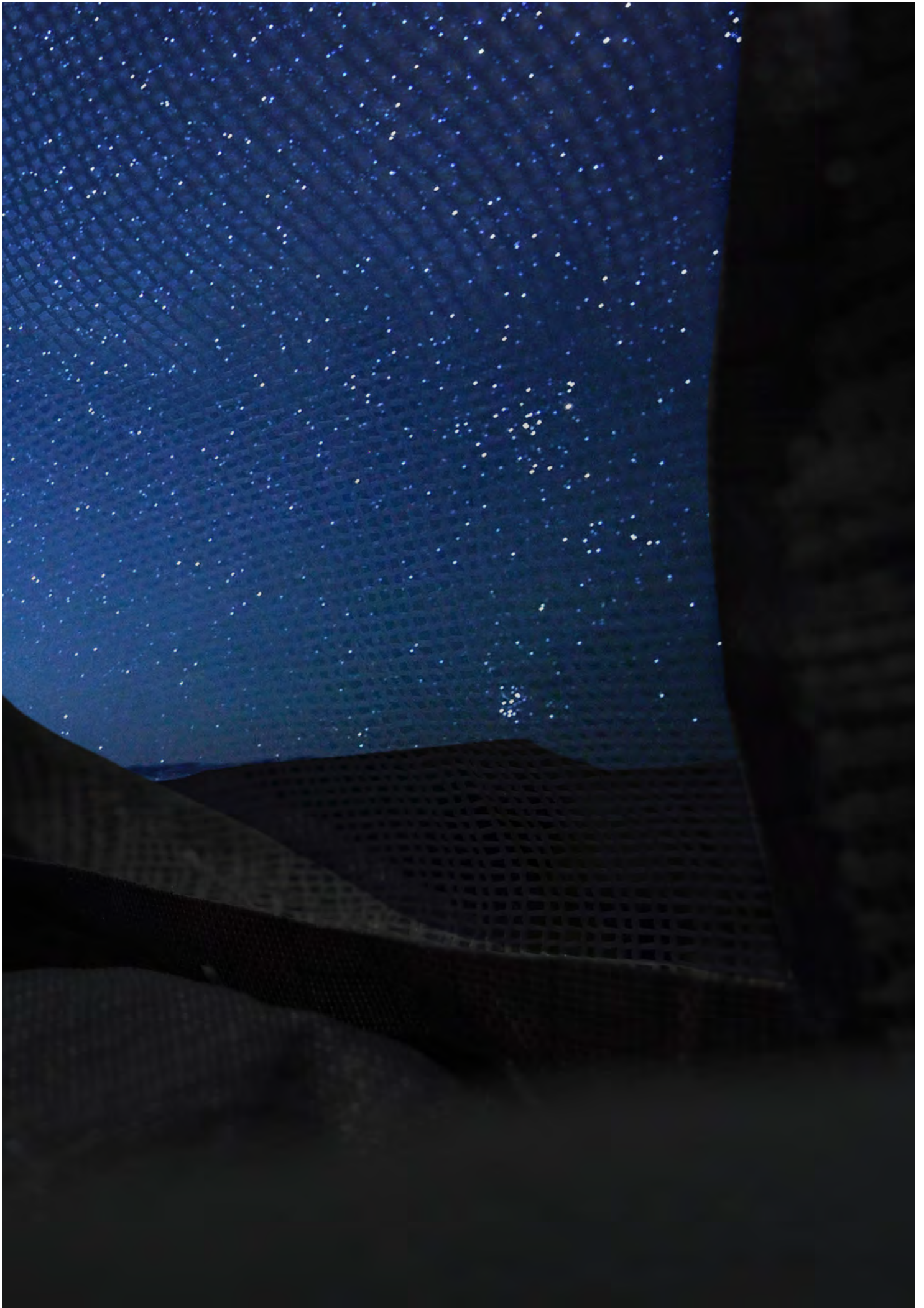
The concept designed based on this design goal is a modular shelter named the LUCID. The LUCID consists of seven components, which can be configured in multiple ways. Four configurations are designed during this project; other possible configurations are left to the user. Giving them the option to make the shelter and camping spot their own. Each of the four designed configurations can be opened and closed from the inside to ensure the user that they can both submerge in and seclude from the surroundings.

To answer the question whether or not it is a good idea to continue developing the LUCID (after completing this graduation project) a concept evaluation research is carried out. Based on this evaluation and the opinion of a consulted camping and outdoor specialist the advise on continuing the development of the LUCID is positive.



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# 1. PROJECT INTRODUCTION

WILDERNESS PLANNING  
EASY  
FAMILY WEATHER CAMPING  
PEACE FUN PARTY RV HAPPY  
PRIMITIVE TENT ECONOMIC  
SMORES CABIN

## 1.1 INTRODUCTION

In this chapter the project will be introduced by first explaining the overall subject of camping and what is involved (chapter 1.2). Subsequently the developments over the years within the subject are illustrated (chapter 1.3). Thereafter, the chosen target group (chapter 1.4) and the overall project approach is introduced (chapter 1.5). To conclude with a project aim based on the given information in this chapter (chapter 1.6). This project aim will function as the foundation of this project.





Figure 1. The image represents words Americans associate with camping in 2012. The words are proportional to the percent of associations (Coleman Company, et al., (2012)



Figure 2. Schematic reproduction of what will be explained in this chapter and what comes next.

## 1.2 TEMPORALLY LIVING OUTDOORS

Camping is often defined as temporarily living outdoors, whereby a tent, RV, cabin, bivouac sack and yurts are the most used shelters. This definition of camping will also be used during this project.

According to a research done by Coleman Company, et al., (2011) a shelter and camping means something else for different kind of campers. They divide campers into five groups based on their attitude towards camping: parents, partier, soft rugged, extreme and average campers (see figure 4). How and why these five groups use a shelter during camping differs. Parents use their shelter to create a safe space for their children and belongings. Partiers use their shelter to get some sleep and hide from the madness around them. Soft rugged find luxury and comfort

in their shelter. Whereas the extreme and the average camper, who seek the outdoors to be in nature, find mainly protection from rain, animals and other external factors. De Vries (2013) took an other approach. He divided camping with a tent into four segments, camping, travel, trekking and expedition based on the number of people and transportation. Figure 3 shows how the five groups defined by the Coleman Company presumably fit with the four camping segments of de Vries based on data available on both set of groups.

Although camping can be defined as temporarily living outdoors, different attitudes towards camping can be distinguished.

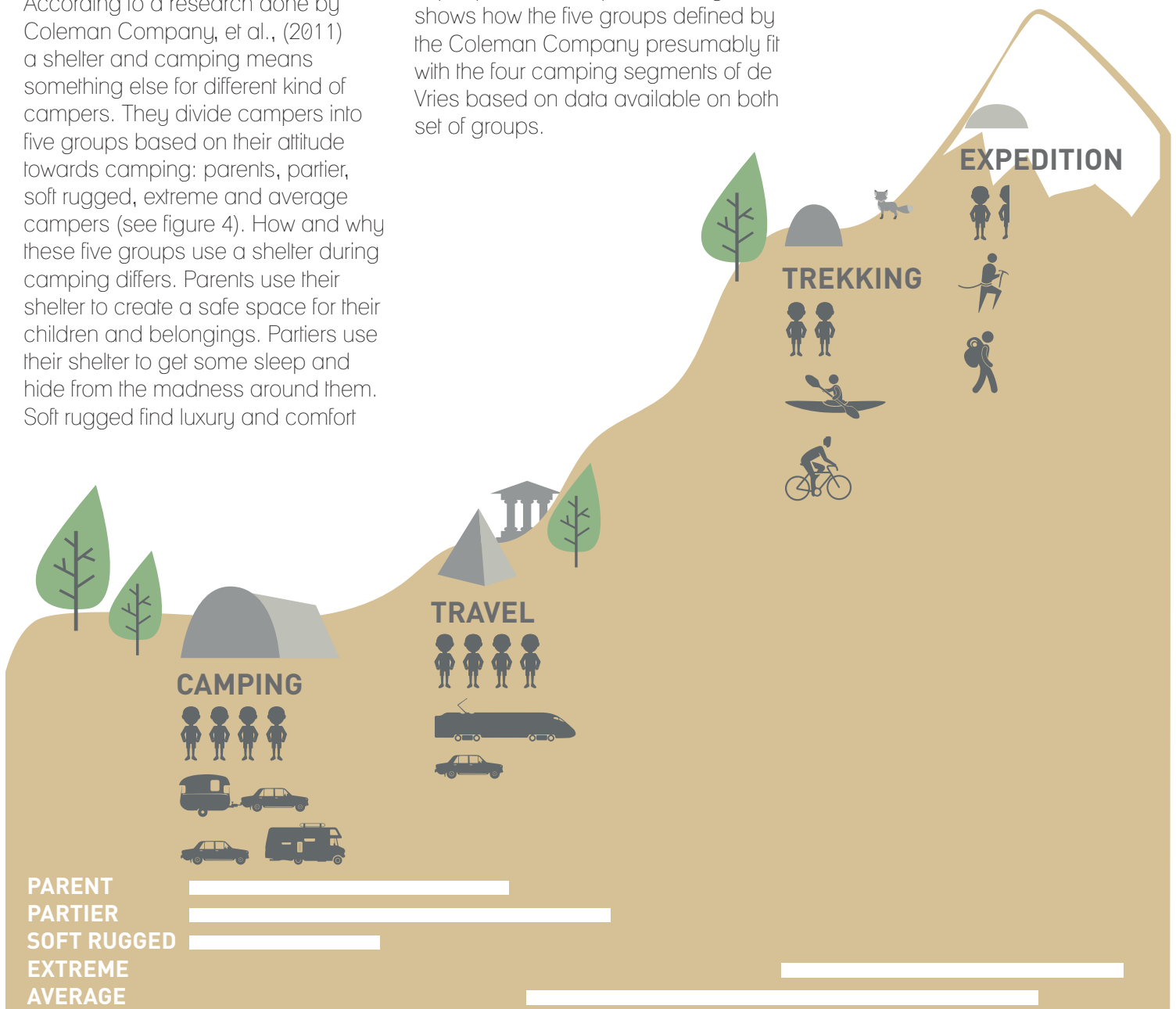


Figure 3. The four segments camping, travel, trekking and expedition defined by de Vries (2013) based on average group size and transportation used. The white beams at the bottom present the five groups defined by the Coleman company, et al., (2014) and how they presumably fit with the four segments of the Vries based on the data available on both set of groups.



**PARENT**

Words that this category associates with camping

**KIDS  
FAMILY  
S'MORES  
TEENAGERS  
PLAYGROUND**



**PARTIER**

Words that this category associates with camping

**PARTY  
CAMP FIRE  
FUN  
FRIENDS  
STORIES**



**SOFT RUGGED**

Words that this category associates with camping

**ECONOMICAL  
EASY  
CABIN  
RV  
ELECTRICITY**



**EXTREME**

Words that this category associates with camping

**WILDERNESS  
TENT  
ADVENTURE  
PRIMITIVE  
INTENSE**



**AVERAGE CAMPERS**

Words that this category associates with camping

**OUTDOORS  
CAMP FIRE  
TENT  
ADVENTURE**

### 1.3 SHELTER INNOVATIONS

Analysing camping shelter history made clear that durability, living and sleeping comfort drive innovation for soft rugged and parent shelters, whereas price and ease of set up push innovation for shelters meant for partiers. For designers of average and extreme shelters, weight and pack size is the focus for innovation up until today. The different attitudes, needs and wants of the different kind of campers resulted in different shelter innovations over the years. Figure 6 summarizes these innovations and trends in a timeline. In conclusion, shelter designs focus mainly on

functionality, usability and comfort. Herby is the interaction between the camper and the shelter not overlooked. What is underexposed however is how the shelter fits in the overall camping experience. Here experience is understood as “A STORY, EMERGING FROM THE DIALOGUE OF A PERSON WITH HER OR HIS WORLD THROUGH ACTION” HASSENZAHL, (2010). It seems a shelter is not really part of the camping story, merely a theatrical prop that is left out when a camper tells about their camping trip. Only few brands have one or more tent designs that show affinity with

making their shelter part of the camping story. Figure 5 shows in the outer layer the brands designing shelters with a focus on functionality, usability and comfort and who do not explicitly design for making their shelter part of the camping story, while the inner layer presents brands that do design to make the tent a part of the camping story, or at least seem to have taken it into account. Designing a shelter that is part of, or even enhances the camping story and thus the overall camping experience, is apparently as good as unexplored territory. This possible opportunity will be further looked into during this project.



Figure 5. Shelter market overview visualised using a bullseye. All brands displayed design tents like shelters. The inner layer are brands who do design for making their shelters part of the camping story or have some designs which show they take this into account. The outer layer are brands that design shelters with a focus on functionality, usability and comfort



Figure 6. Timeline summarising shelter innovations and trends over the years with corresponding focus, functionality, usability, comfort and experience

## 1.4 TARGET GROUP

Now that the project focus is explained, a target group remains to be chosen. There are two target groups where the discrepancy between the tent design and their overall camping experience seems the biggest, these are average and extreme campers. It seems a shelter plays a marginal role in their overall camping story. As mentioned before a shelter is merely a piece of equipment providing shelter while they enjoy their daily activities and being outdoors. Therefore these two groups are chosen as the target group for this project.

In order to design for the average and extreme camper, more information is needed on who they are. The report of the Coleman Company, et al., (2011) gives the following information. Most of the time people start camping because of their love of the outdoors. Average and extreme campers are most likely to choose a tent above all other types of camping shelter, and camp up to eleven times per year and do this mostly during the summer, spring and fall seasons. However, more than thirty percent of the extreme and average campers indicate that they also camp during wintertime. During these camping trips they like to hike, make camp fires and experience adventurous things. Average campers are evenly split between genders where extreme campers consist of 59% man and are mostly highly educated.

A more in depth notion of who extreme and average campers are needs to be created. However, what this brief description does make clear is that average and extreme campers most likely use a tent when they go camping. Therefore, from here on a focus on tents is selected. Although a

focus on tents is chosen, in this report it is continued to call it a shelter. This is done to prevent limitations of the solution area.

## 1.5 APPROACH

There are multiple ways to design a shelter that enhances the camping story. The human-centred design approach chosen for this project is based on theories of Jordan (1997) and Pohlmeier (2017). In 1997 Jordan poses that people at that time assumed a product does what it needs to do (functionality) and does that with taking usability into account; most currently available shelters are presumably designed in this way. He predicted that in the future people would also take for granted that a product offers pleasure, see figure 7. Pohlmeier, (2017) adds to this notion that we are certainly not there yet, because many products are designed with a bottom up design approach. Meaning that design teams first focus on functionality and usability and often never get to designing for pleasure because of time pressure, design considerations and concessions. Therefore she poses that in order to design for pleasure (which according to her will soon be the new standard) a top down approach is needed. Because this project aims to design a shelter that is part of the camping story a top down approach is applied. This is done by first focusing on the context and exposing the latent needs and wants of the target group. Based on these findings a design direction and a vision is drafted, focused on a pleasurable camping experience and interaction rather than a focus on usability and functionality. By doing so, ideas are generated with a focus on pleasure. When elaborating these

ideas into concepts, usability and functionality begin to play a more substantial role. Ultimately ending with a concept that takes all the three layers of pleasure, usability and functionality into account.

## 1.6 CONCLUSION

Taking all the gathered information into account, the project aim is:

DESIGNING A SHELTER THAT ENHANCES THE CAMPING EXPERIENCE OF THE AVERAGE AND EXTREME CAMPER, BY GIVING THE SHELTER A MORE PROMINENT ROLE IN THEIR CAMPING STORY.

The project aim immediately raises two main questions for further investigation in order to design a well integrated shelter.

1. What are the characteristics of extreme and average campers?
2. What defines their camping experience and story?

See chapter 2.2 for all the research questions.

Figure 8 summarises what is known about the context so far. From this figure together with the two questions mentioned above, three general research themes in relation to the target group are selected as guidance for further context analyses: nature, camping and shelter.

The focus during this project is on people because a human-centred design approach is used. The other three themes are all studied in relation to the central theme of people.

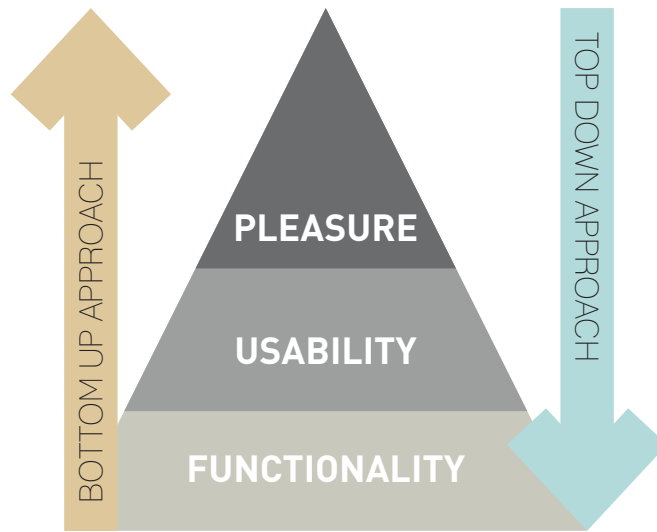


Figure 7. Jordan, (1997) pleasure based approach model combined with positive design strategy of pohlmeyer, (2017).

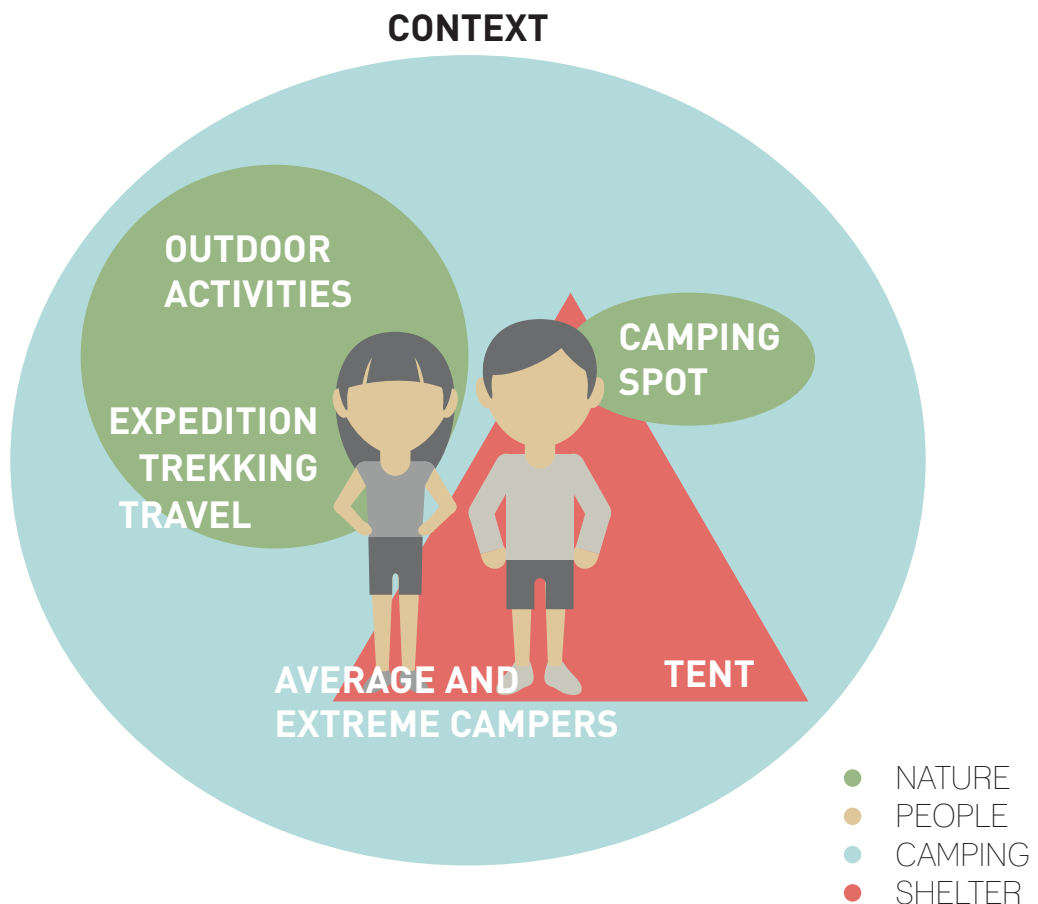


Figure 8. Context of extreme and average campers as is known so far. Three themes are highlighted: Nature, camping and shelter, and average and extreme campers are placed in the middle.



# 2. CONTEXT & USER RESEARCH

## 2.1 INTRODUCTION

In the previous chapter a first attempt to sketch the context is made. This shows that there is still much unclear about the average and extreme camper and their context. Therefore a research is set up to deepen this understanding.

From the earlier defined project aim of designing a shelter for average and extreme campers two main research question arise:

1. What are the characteristics of extreme and average campers?
2. What defines their camping experience and story?

The two main research questions will be first divided in sub questions making the research more detailed and

accessible (chapter 2.2.1). These research questions are answered by means of four studies using different methods: literature studies, study of blogs and vlogs, interviews and context mapping (chapter 2.2.2). By means of using different sources of information and using different types of research, the aim is to expose the context from different angles.

These studies result in two layers. The first layer describes the extreme and average campers on an empathic level by means of personas (chapter 2.3.2), making it possible to identify with the target group. The other level is more theoretical and abstract describing the context in the form of clusters (chapter 2.3.4). Thereafter these two results are unified in a context map (chapter 2.4) that forms the basis for a design vision and subsequently a design.





Figure 9. Schematic reproduction of what is already explained, what will be explained in this chapter and what comes next.

# 2.2 RESEARCH SETUP

## HOW IS THE TARGET GROUP AND CONTEXT RESEARCHED?

As described in chapter 1.6 the focus of this research is on people (average and extreme campers) interacting with the three themes of nature, shelter and camping, see figure 10. Therefore people is placed in the middle of the framework and the other three themes around it. This way, creating a framework where each element in relation to people is studied and in relation to each other, resulting in a framework with three levels:

1. The whole context (See dark grey plane in figure 10)
2. The relation between people and two other themes (See beige planes in figure 10)
3. The relation between people and one other theme (See light grey planes in figure 10)

By ordering the sub-question according to this framework, it is attempted to cover the whole context. Four different research methods are used to answer all of these research questions; the used methods are explained in chapter 2.2.2. Thereafter the data is analysed herewith creating clusters, each describing a part of the context, detailed personas, and subsequently a rich map of the context.

### 2.2.1 RESEARCH SUB-QUESTIONS

The numbers of the research questions below correspond with the numbers in figure 11. Figure 11 explains which research question is answered with which research method.

#### LEVEL 1

People-nature-camping-shelter research questions

1. What does the context entail?
2. What are the interrelations between the different context elements?
3. What are the latent needs of the target group in the context?

#### LEVEL 2

People-nature-camping research questions

4. Which experiences is the target group looking for in a nature camping trip?
5. What are the motivations to camp in nature?
6. What is the effect of nature on camping?

Human-nature-shelter research questions

7. What is the relation between human nature and shelter?
8. Which effect has nature on shelter use?
9. What kind of nature experience is the target group looking for during shelter use?

People-shelter-camping research questions

10. Which interactions do people have with their shelter during a camping trip?
11. What role does a shelter fulfil during a camping trip?
12. What meaning has camping (with a tent) for the target group?

#### LEVEL 3

People-camping research questions

13. What is the effect of camping on campers?
14. Who is camping?
15. What kind of camping gear do campers use?
16. What are the motivations to go camping?

People-nature research questions

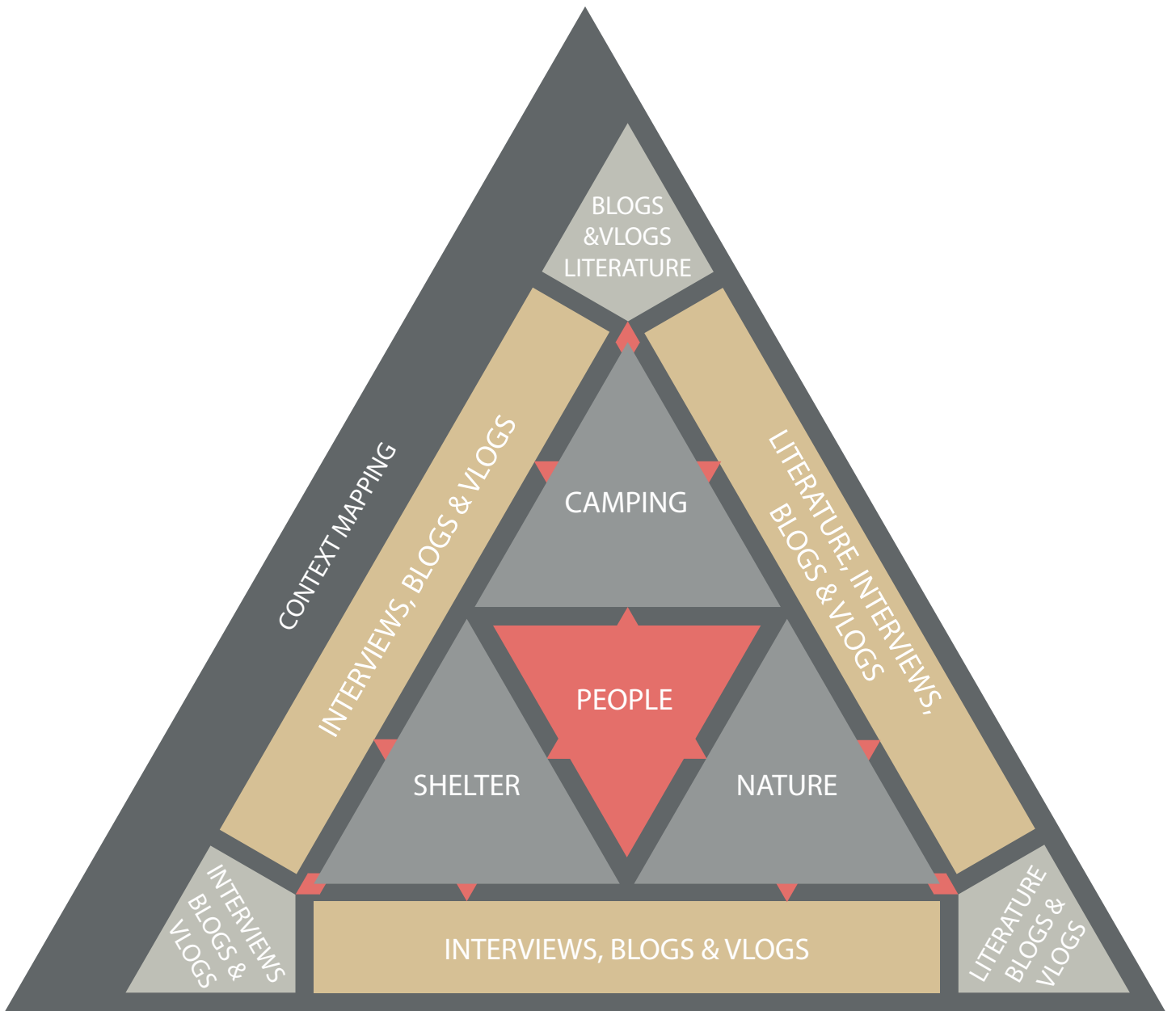
17. Which effect does being in nature have on people?
18. What kind of experiences do people search for when venturing into nature?

People-shelter research questions

19. What does sleeping in a shelter entail?
20. What are important shelter features?

### 2.2.2 METHODS

The next page explains which methods are chosen for this research, how they are applied and why. For a more detailed explanation of the research approach see appendix A.





## LITERATURE

Before conducting any research, a literature research is done in order to see what has already been discovered in the field of camping, nature and nature based camping. Subsequently, these findings are complimented with data from the other studies.

Figure 11 shows the questions answered by this method and appendix A1 describes the research approach in more detail.



## BLOGS & VLOGS

Blogs and vlogs are read and viewed in order to enlarge the geographical area of the context and to get information directly from the context. Observation is an effective way to get first hand insight into the context, but since it is winter time during this phase of the project, little camping is done. That is why blogs and vlogs are studied instead. This way multiple situations can be analysed instead of only winter camping in the Netherlands.

The blogs and vlogs are chosen based on the kind of camping trip, ranging from camping on a camp ground to wild camping, as well as, an estimation if the blogger or vlogger fitted the target group based on their activities and expressed appreciation for nature and/or being outdoors. Furthermore, the blogs and vlogs were selected based on their in depth story telling, describing their actions as well as their emotions.

Figure 11 shows the questions answered by this method and appendix A2 describes the research approach in more detail.



## INTERVIEWS

Interviews with the target group give extensive insights into the context. The method allows for elaborate answers, a deeper understanding by discussing subjects and questions that are raised during the interview, making sure the whole spectrum is covered. Furthermore, the method allows to amplify and complement the insights gained by the methods 'literature' and 'blogs & vlogs'.

Two interviews are conducted with two seasoned campers. Verhoeckx (24, Dutch) camped with her family from an early age on and just finished an 800 mile walk in the back country of west America, where she had to be self-sufficient and camp every night on a new spot in the wilderness. Ramirez (54, Colombian) has camped a lot in her life, both extreme, camping in the wilderness of Colombia as well as on camp grounds in Europe. Her love for the outdoors is limitless.

Figure 11 shows the questions answered by this method and appendix A3 describes the research approach in more detail.



## CONTEXT MAPPING

To understand the complete 'People-nature-camping-shelter' context and its interrelations the method context mapping is chosen. Sleeswijk Visser (2005) describes this method as followed: 'context mapping is a method for conducting contextual research with users, where latent needs are discovered about the context of use of products. Typically involving a sequence of steps: preparation, sensitizing participants, creative group session, analysis and communication'.

One extreme and four average campers with an age ranging from 24 to 62 were invited to join the context mapping session. A week before the session the participants were asked to fill in a booklet to sensitize them. The session took three hours and consisted of two collage making tasks, alternated with discussing the collages of each participant, resulting in a wide variety of in depth insight of the context.

Figure 11 shows the questions answered by this method and appendix A4 describes the research approach in more detail.

**HUMAN-NATURE-CAMPING-SHELTER**

**LEVEL 1**

1. What does the context entail? ●
2. What are the interrelations between the different context elements? ●
3. What are the latent needs of the target group in the context? ●

**HUMAN-NATURE-CAMPING**

**LEVEL 2**

4. Which experiences is the target group looking for in a nature camping trip? ●●●●
5. What are the motivations to camp in nature? ●●●
6. What is the effect of nature on camping? ●●●

**LEVEL 3**

**HUMAN-CAMPING**

13. What is the effect of camping on campers? ●●●●
14. Who is camping? ●●●●
15. What kind of camping gear do campers use? ●●●●
16. What are the motivations to go camping? ●●●●

**HUMAN-NATURE-SHELTER**

7. What is the relation between human nature and shelter? ●●
8. Which effect has nature on shelter use? ●●
9. What kind of nature experience is the target group looking for during shelter use? ●●●●

**HUMAN-NATURE**

17. Which effect does being in nature have on people? ●●
18. What kind of experiences do people search for when venturing into nature? ●●

**HUMAN-SHELTER-CAMPING**

10. Which interactions do people have with their shelter during a camping trip? ●●
11. What role does a shelter fulfil during a camping trip? ●●●●
12. What meaning has camping (with a tent) for the target group? ●●●●

**HUMAN-SHELTER**

19. What does sleeping in a shelter entail? ●●●●
20. What are important shelter features? ●●●●

- CONTEXT MAPPING
- BLOGS & VLOGS
- LITERATURE
- INTERVIEWS

# 2.3 GETTING FAMILIAR WITH THE CONTEXT

## WHAT PATTERNS, THEMES AND CONNECTIONS CAN BE FOUND?

### 2.3.1 INTRODUCTION

The data is analysed by means of statement cards. This is an analysing method developed by Sanders, et al., (2012) intended to move from data, to information, to knowledge. An additional benefit of this method is that all the different kinds of data from the four studies can be compared and analysed together.

Figure 12 shows an example of a statement card used during this project, see appendix C for all the results. First, all the interesting quotes/results of the four studies are noted. Secondly these quotes/results are transcribed into statements. Third, the statement cards are printed and classified based on the sub-question they answer in order to answer the main research questions:

1. What are the characteristics of extreme and average campers?
2. What defines their camping experience and story?

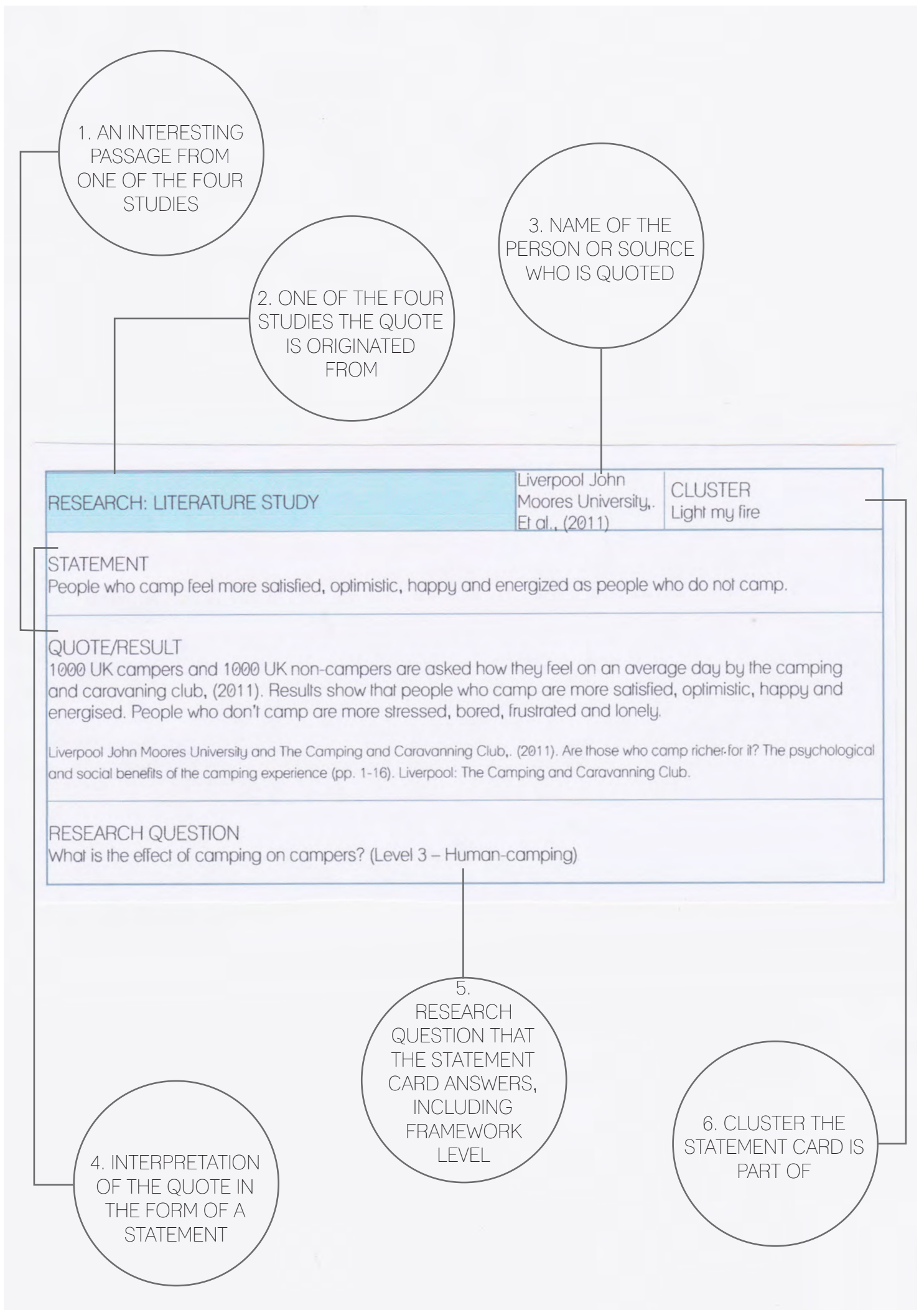
These main research questions are answered on an explicit and an empathic level by means of personas (chapter 2.3.2), and a more abstract level by means of clusters (chapter 2.3.4). Together, the personas and the clusters will form the context map. The context map is an overview of the uncovered future user and their camping experience and forms the conclusion of this chapter.

### 2.3.2 PERSONAS

As an answer to the research questions introduced in chapter 2.2, personas are defined. Personas are a tool to empathise with and becoming immersed in the lives, environments, attitudes and experiences of the future user. Or as Grudin, et al., (2002) said so nicely: "Personas utilize our mind's powerful ability to extrapolate from partial knowledge of people to create coherent wholes and project them into new settings and situations." Once created they function as design guides since they create a deep understanding of the users and their context, enabling designers to relate to the user.

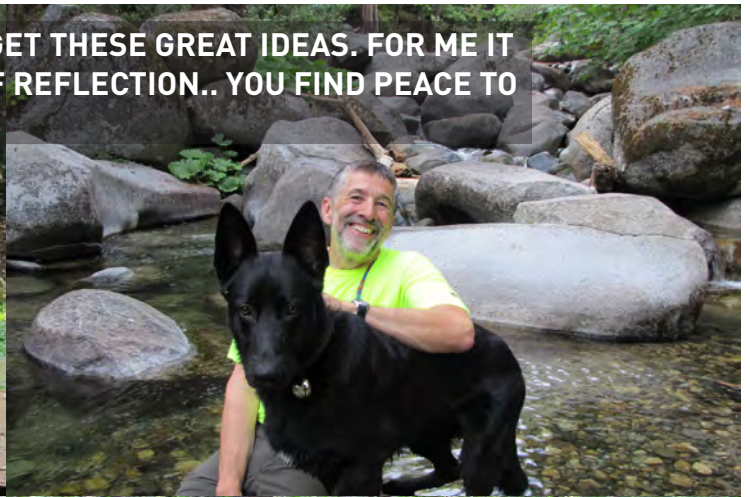
Based on the results of the four studies four personas are defined, Basic Mary, Easy going Anna, Extreme Nicholas and Active Bob, see figures 13 to 16.

These personas consist of a story, photos and quotes describing the person, their environment and attitudes within the context camping. The quotes used are literal transcriptions from the interviews and the context mapping session conducted. The story and the photos are based on all four studies.





**"WHEN CAMPING YOU GET THESE GREAT IDEAS. FOR ME IT IS OFTEN A MOMENT OF REFLECTION.. YOU FIND PEACE TO THINK ABOUT THINGS."**



**"CAMPING MAKES YOU MORE OPEN, OPEN FOR IDEAS AND YOUR SURROUNDING."**



**"CAMPING IS IMPROVISING BECAUSE YOU DON'T HAVE A LOT OF STUFF WITH YOU. FOR EXAMPLE WHEN COOKING DINNER YOU MAKE SOMETHING WITH THE THINGS YOU HAVE. I ENJOY THAT VERY MUCH."**

**BASIC MARY, 59, ARCHITECT**

Mary is an investigative woman who loves her family, the outdoors and to philosophise. She knows what she wants and is very determined to get results.

When she goes camping she does not leave without her husband Richard, their dog Mono and her bird book. For her, camping is back to basic, cooking simple meals and clearing your head. The perfect place to philosophise about life.

They mostly go to nature orientated camp grounds where the camping spots are parted from each other by lots of green creating natural private spots where they find themselves immersed in nature. These camp grounds often offer little facilities, but Mary does not really care about that as long as she can sip her wine next to a camp fire at night and discover the beautiful surroundings on foot during the day.

For Mary and Richard the camp ground functions as their base camp from where they do day hikes with their dog Mono.



**"IN DRENTHE YOU CAMP IN THE FOREST WITH ONLY A WATER TAP AND NOTHING ELSE. I THOUGHT THAT WAS AMAZING!"**

Figure 13. Persona, Basic Mary .Photos by Durant, (2012)

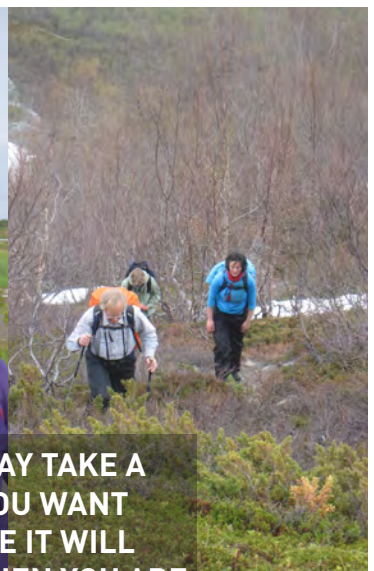




**"I LIKE SIMPLE CAMPING WITH AS LITTLE STUFF AS POSSIBLE AND NO BIG CAMP GROUNDS AND SUCH."**



**"EVERYTHING MAY TAKE A LONG TIME. IF YOU WANT A CUP OF COFFEE IT WILL TAKE LONGER THEN YOU ARE USED TO. BUT THAT DOES NOT MATTER IT IS PART OF THE EXPERIENCE."**S



EASY GOING ANNA, 32, PRIMARY SCHOOL TEACHER

Anna is full of energy and she likes reading books and gardening. From a young age she spent a lot of time in the outdoors. First with her parents sailing and hiking, now she spends a lot of time on a bicycle together with her partner Ned.

Before leaving on one of their beloved cycling tours they try to find nice spots along their route to camp. They seek for small camp grounds, which have spacious spots surrounded by nature and, not unimportant, located in an area worth exploring. When picking a spot facilities are seldom a requirement.

Normally they stay 2 to 3 days at one place to relax, visit authentic villages and hike. When arriving at their camping spot she likes to make the place her own.



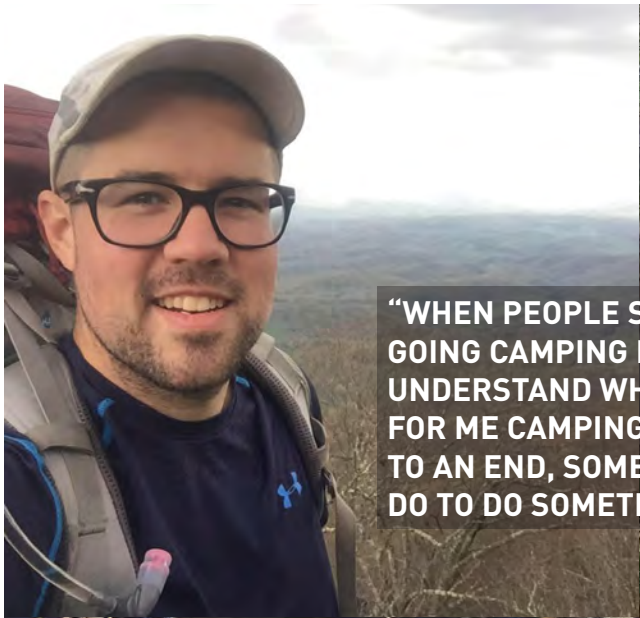
**"I LIKE CAMPING AT THE WATERSIDE MAKING IT POSSIBLE TO LOOK VERY FAR. HAVING UNLIMITED VIEW!"**

**"WHEN CHOOSING A SPOT I REALLY LOOK AROUND, WHERE DO I WANT TO SET UP CAMP? WHAT IS A NICE SPOT? WHEN I FOUND THAT SPOT I AM GOING TO MAKE IT MY OWN. I DO THAT EVEN WHEN I STAY FOR 1 NIGHT."**



**"THAT IS SOMETHING A CARE VERY DEEPLY ABOUT WHILE CAMPING, BEING CONSTANTLY OUTSIDE."**





**"WHEN PEOPLE SAY I AM GOING CAMPING I DON'T UNDERSTAND WHAT THAT IS. FOR ME CAMPING IS A MEANS TO AN END, SOMETHING YOU DO TO DO SOMETHING ELSE."**



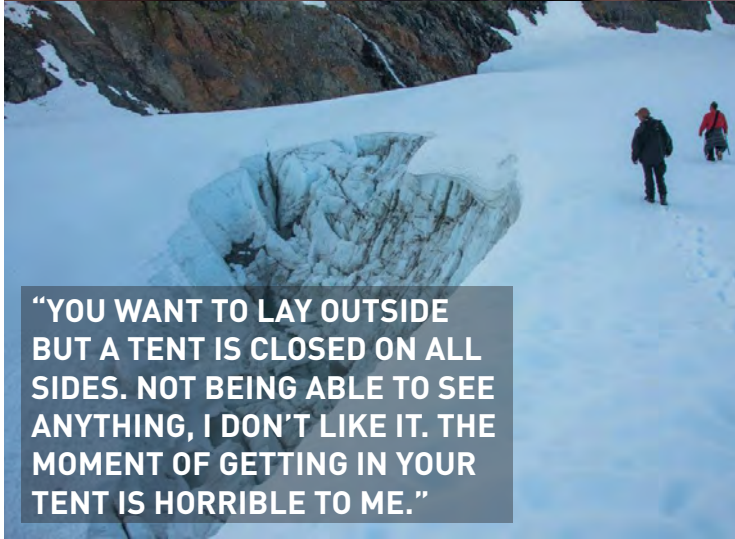
**"SOMETIMES I HAVE BEEN SITTING ALL DAY INSIDE. I FEEL MISERABLE WHEN THAT HAPPENS."**



**"THE ONLY THING YOU HAVE TO WORRY ABOUT IS FOOD, WATER, SLEEPING AND WALKING. AND WHEN YOU WANT TO BATH YOU JUMP IN AN ICE-COLD RIVER OR LAKE. FANTASTIC!"**

**EXTREME NICHOLAS, 27, TENNIS COACH**

Nicholas is optimistic, eager to learn and loves a challenge. Being outside is very important for his state of mind, hence is job as tennis coach. At least three times a year he goes on a multi-day hike, carrying everything he needs to be self-sufficient on his back. Normally he goes alone meeting people on the trek but sometimes a friend tags along. What he loves about trekking on foot is the physical challenge, being far from civilisation and being surrounded by beautiful nature. The journey is the primary goal of the trip. At the end of a long hiking day he sets up camp in the wild or at a free camp ground. These camp grounds offer no facilities whatsoever, only a water tap if he is lucky.



**"YOU WANT TO LAY OUTSIDE BUT A TENT IS CLOSED ON ALL SIDES. NOT BEING ABLE TO SEE ANYTHING, I DON'T LIKE IT. THE MOMENT OF GETTING IN YOUR TENT IS HORRIBLE TO ME."**



**"AT SUCH MOMENTS YOU ARE IN THE WILD, NO PEOPLE AROUND, IT IS ALMOST A SORT OF MAGICAL. IN THE MIDDLE OF NOWHERE YOU FEEL ONE WITH EVERYTHING."**

Figure 15. Persona, Extreme Nicholas. Photo by Lee Reichard, (2016).

ACTIVE BOB, 24, PHYSIOTHERAPY STUDENT

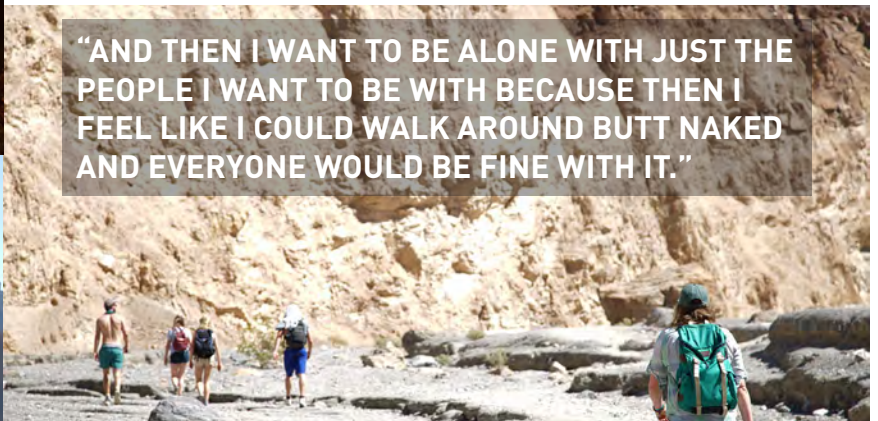
Bob is cheerful, adventurous and a dreadnought. During long weekends and holidays you can find him in all sorts of places as long as there is something adventurous to do like mountain biking, Kayaking, rafting and hiking. He is keen to discover new places together with his friends. Normally they make some sort of plan but their go with the flow mentality is paramount. They go from place to place by car or using public transportation. Sometimes they camp on an official camp ground other times they try to find a wild camping spot. Budget, excitement and nature's beauty are considered when choosing a pitch. Never staying longer than one or two days because new territory has to be explored. Depending on their means of transportation and duration, Bob decides what to bring on an outing, but he never needs much, improvising is part of the fun.



**"IF IT IS NICE YOU STAY A COUPLE OF DAYS WHEN NOT YOU GO ON."**



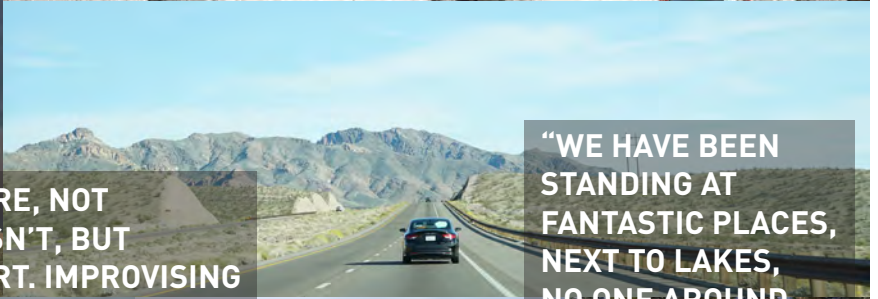
**"I WANT TO DO A LOT OF STUFF. NOT WITH A QUESTION MARK BUT WITH A EXCLAMATION POINT!"**



**"AND THEN I WANT TO BE ALONE WITH JUST THE PEOPLE I WANT TO BE WITH BECAUSE THEN I FEEL LIKE I COULD WALK AROUND BUTT NAKED AND EVERYONE WOULD BE FINE WITH IT."**



**"WHEN CAMPING I ENJOY MY FOOD MORE, NOT BECAUSE IT IS BETTER, IT PROBABLY ISN'T, BUT BECAUSE YOU HAVE TO MAKE AN EFFORT. IMPROVISING AND SUCH, IT IS A NICE CHALLENGE. AND WHEN IT TURNS OUT TO BE GOOD.. MAN THAT GIVES SATISFACTION."**



**"WE HAVE BEEN STANDING AT FANTASTIC PLACES, NEXT TO LAKES, NO ONE AROUND, SURROUNDED BY NATURE."**



**"I DON'T LIKE THE TRANSITION FROM CHILLING OUTSIDE AND THEN GOING INTO YOUR TENT. ALSO, OFTEN IT IS A BIG SURPRISE WHAT YOU ENCOUNTER WHEN ZIPPING OPEN YOUR TENT. ZIP, TADA!"**



### **2.3.3 SIMILARITIES AND DIFFERENCES BETWEEN THE PERSONAS**

When comparing the four personas, similarities and differences can be found.

#### **NATURE**

As expected, based on the information given by the Coleman Company, et al., (2011) all four personas find nature very important during a camping trip. Not only during their daily activities but also at their camping spot they like to be surrounded by nature's beauty.

#### **CAMPING SPOT**

Although the four personas share this need to camp in nature, they satisfy this need in different ways. Basic Mary and Easy going Anna find their camping spots on nature orientated camp grounds whereas Extreme Nicholas and Active Bob are fans of wild camping or free camp grounds. See figure 17 for an explanation of nature orientated camp grounds, free camping and wild camping.

#### **ACTIVE ATTITUDE**

Another resemblance between the four personas is their active attitude. Again, this manifests itself in different ways. Basic Mary satisfies this need by doing day hikes from her base camp, Easy going Anna alternates day hikes with bicycle touring going from place to place, For Extreme Nicholas, the journey is the primary goal of the trip and for Active Bob this manifests itself in different activities each day of the trip, exploring all different angles to experience nature.

#### **EQUIPMENT**

And last but not least they all want camping to be basic. Taking only the essentials and having little to no facilities on the camping spot.



## NATURE ORIENTED CAMP GROUND

A nature oriented camp ground is a small campsite with a focus on enjoying peace, space and the outdoors. Generally there are basic facilities like running water, toilets and a shower. It is always situated in natural surroundings.



## FREE CAMPING

Free camp ground are designated camping areas with little to no facilities. Meant to camp for no longer than approximately 48 hours. They are usually located on quiet spots in the middle or on the edge of a national park.



## WILD CAMPING

Wild camping is done, as the name indicates, in the wild. Wherever people set up camp and stay the night can be a wild camping spot. However it is not allowed everywhere. The rules for wild camping are different in every country. In some countries it not allowed at all, in some countries there are restricted areas and in others it permitted almost everywhere.



### 2.3.4 CLUSTERS

The statement cards explained in chapter 2.3.1 are clustered in order to discover themes, patterns and connections, which describe the characteristics of the extreme and average camper and defines their camping experience and context.

Each of these clusters describe a part of the context on an abstract level, making it possible to reveal and explain insights that otherwise might have been underexposed.

Hereafter the clusters are separately explained by means of a description and an image. Lastly, to substantiate the clusters some of the statement card quotes, belonging to the concerning cluster are mentioned.



## CREATING MEMORIES TOGETHER

During camping, people take and have the time to get closer to one another. Not only with the people they came with, but also with people they meet during their camping trip. Creating happy memories in the process. See also figure 18.

For all statements and quotes in this cluster, see appendix C.

“One of the things that makes camping and hiking such a rewarding experience is the opportunity to meet so many wonderful people and hear their stories.” - Wilmer and Janie, (2013)

“97% of campers agree that camping generates happy memories.” - Liverpool John Moores University, et al., (2011)

“Camping makes families feel closer and richer.” - Liverpool John Moores University, et al., (2011)

Figure 18. Picture by Allan, (2015) visualising the cluster 'creating memories together'.



## DON'T FOLLOW PLEASE

When alone or with people close to them, average and extreme campers feel less restricted, giving them the opportunity to feel totally free.

On top of that, one can only feel the full awe of nature with not too many people around. See also figure 19.

For all statements and quotes in this cluster, see appendix C.

"I want to be alone with the people I want to be with, so I can run around naked. That would be nice." - Meijs (2017)

"The potatoes are roasting in the fire, this green oasis is totally ours today." - Geerts & Spil

"The confrontation with hoards of tourists just released from their touring cars, makes us leave as soon as possible." - Vansteenbrugge

Figure 19. Picture by Santos, (2014) visualising the cluster 'don't follow please'.





## CRAVING THE FULL AWE

There is a need not only to be in nature but to be physically submerged in nature, experiencing its overwhelming awe. Being outside all the time while camping helps to fulfil this need and make people appreciate nature more in times that people become increasingly detached from natural environments. See also figure 20.

For all statements and quotes in this cluster, see appendix C.

“The landscape is beautiful, the lake legendary, but when the northern lights entertained us one evening it was mesmerising.” - Janice, (2012)

“The expressions of 21st century campers appeared to indicate a greater urgency and a deeper need for nature in a world in which some of the experiences afforded by camping have become fewer.” - Garst, et al., (2009)

“A way of reconnecting with the natural environment is to become physically immersed in it, with camping in national parks a popular way of achieving this. The camping experience can allow interaction with nature on a direct level by temporarily living in a dynamic natural ecosystem.” - Hassell, et al., (2015)

Figure 20. Picture by Norfolk & Beyond, (2013) visualising the cluster 'craving the full awe'.



## HOME SWEET CAVE

People like to make a place their own, giving them a homey feeling. When camping, this means familiarity in an unfamiliar surrounding providing a feeling of safety, seclusion, snugness and privacy. Familiarity comes often with memories, see cluster 'creating memories together'. See also figure 21.

For all statements and quotes in this cluster, see appendix C.

"But once I'm lying in my tent I enjoy it very much. It has something cosy." - Meijs, (2017)

"I really look for that, where I want to stay, what I find a nice place. Thereafter I'm going to make it my own. I will do this when I stay for one night as well as when I stay for a longer period. I always do it." - Lagewaardt, (2017)

"A tent gives this feeling of.. I think it's a feeling of, it's my space." - Ramirez, (2017)

"A very relaxed feeling, always having your home with you. Going on an adventure, but having your homey feeling in your backpack." - Verhoeckx, (2016)

Figure 21. Picture by MSR, (2015) visualising the cluster 'home sweet cave'.



## TWILIGHT ZONE

This cluster is the twilight zone between the need of having your own secluded area and the need to be totally submerged in nature. See also figure 22.

For all statements and quotes in this cluster, see appendix C.

"The perfect tent is absolutely see through." Ramirez, (2017).

"So, your own space, but meanwhile a nice view." - Lagewaardt, (2017)

"That's it! It's nature and privacy." - Ramirez, (2017).

Figure 22. Picture by Mpora, (2015) visualising the cluster 'twilight zone'.



Camping is suffering in a pleasant way, like being tired and feeling your muscles aching after a nice workout. Making an effort makes your meal, shelter, surroundings, activity, etc. more meaningful and satisfactory. See also figure 23.

For all statements and quotes in this cluster, see appendix C.

“Nice camping experiences often are when you get the most out of it. When things go wrong. When you are on your own, you have to solve it yourself.” - Ramirez, (2017).

“Everything may take a long time. You want a cup of coffee? This will take a while longer than you are used to.” - Boom, (2017)

“I enjoy food more when I am camping. I don't think it is actually better, but because you have to work for it, more fumbling and improvising. It is more of a challenge. And when it is finally ready as well as tasty it is more satisfying than normal cooking and eating.” - Meijs, (2017)

“Making your own sleeping quarters gives you that feeling of being one with nature.” - SasquatchBobby, (2016).

Figure 23. Picture by Daily Mail, (2013) visualising the cluster 'blood, sweat and tears give satisfaction'.





## FEELING FLEXIBLE AND FREE

Camping gives one the opportunity to go wherever whenever. There is no need to plan ahead, stay longer in one place as well as the ability to stay at places where no infrastructure is in place. Camping offers total freedom and flexibility. In order to be this flexible it is ought to bring as little stuff as possible see cluster 'Drop your weapons'. See also figure 25.

For all statements and quotes in this cluster, see appendix C.

"Feeling free and being in nature. Being in nature by having nature all around you." - Lagewaardt, (2017)

"If I go cycling and I want to follow this little road [points left] but the bungalow is 15 km that way [points right]. In the morning I want to be able to see where we might go. That's why we carry a tent with us." - De Jong, (2017)

Figure 25. Picture by Grossman, (2014) visualising the cluster 'feeling flexible and free'.



## FIRE MY IMAGINATION

From cooking on a gas stove to building a shelter from rocks, campers like to discover and be challenged by using their creativity and imagination to solve the problem at hand. Breaking their daily routine to be more open for new ideas and their surroundings. See also figure 26.

For all statements and quotes in this cluster, see appendix C.

"Yes that's fun! Coming across a problem and finding a solution." - Ramirez, (2017).

"Retreat from daily life. In any case, something totally different than you are used to. That is very important to me." - Meijs, (2017)

"You see the most extraordinary things. People who are very ingenious with their space." - Beukelman, (2017)

"A tent that lets you discover would be nice." - Logewaardt, (2017)

Figure 26. Picture by Food.com, (2016) visualising the cluster 'fire my imagination'.



## DON'T WORRY BE HAPPY

While living in a primitive way, one is only occupied with the basics of life, enabling people to find peace of mind, feel free and be happy, while forgetting about the worries of their busy daily lives. See also figure 27.

For all statements and quotes in this cluster, see appendix C.

“Here, I had no worries, and had forgotten entirely about home.” - Berry (2013)

A study done by Mac Kerron, et al., (2013) indicates that happiness is greater when in natural environments.

“When staying in a bungalow you become busy again. Vacuum and such. That’s the difference between camping and staying in a bungalow. When camping you don’t have to do as much. For that matter it is more like going to a hotel.” - De jong (2017)

Figure 27. Picture by mintberycrunk, (2015) visualising the cluster ‘don’t worry be happy’.





## BITTER SWEAT NATURE COMFORT

This cluster stands for the conflict between the urge to submerge oneself in nature (craving the full awe) and the discomforts nature brings. This is a constant struggle campers have to cope with. See also figure 28.

For all statements and quotes in this cluster, see appendix C.

“Camping: the art of getting closer to nature while getting further away from the nearest cold beverage, hot shower and a flush toilet.” - Unknown (n.d.)

“A nice aspect of camping is the fact that you appreciate your bed more when you get home.” - Meijs, (2017)

“This is always the case when you are outside, it think.. When you are outside you think ‘o, it rains, bad weather’, but if you are outside it is not as bad as it seems.” - Lagewaardt, (2017)

Figure 28. Picture by Dabene, (2017) visualising the cluster ‘bitter sweat nature comfort’.



## FEELING FREE TO TRUST ON SELF

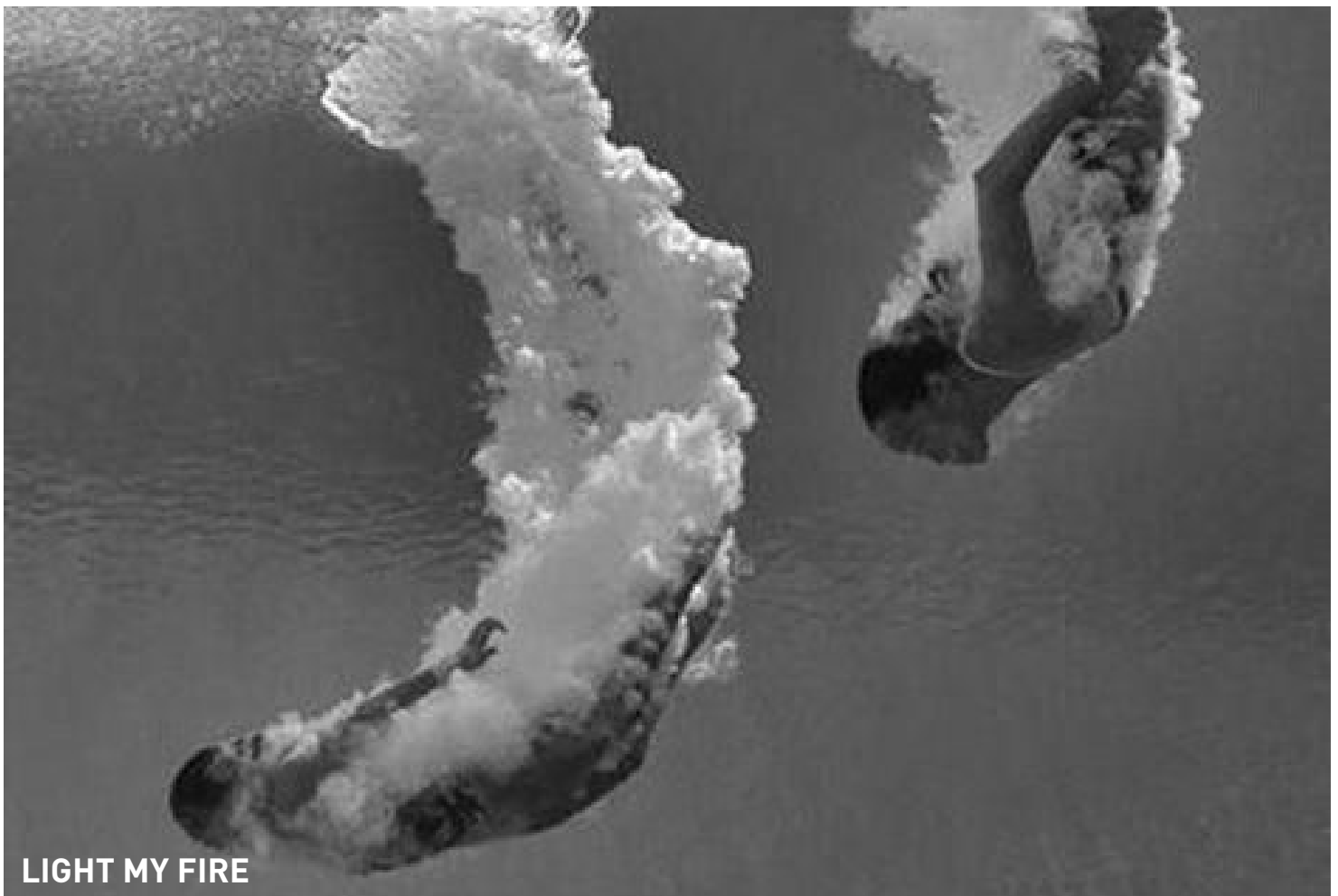
Current society makes people dependent. When living a primitive life one relies on oneself, one's experience, knowledge, and preparation. Enabling people to get closer to who they are and feeling free to trust themselves. See also figure 29.

For all statements and quotes in this cluster, see appendix C.

"You are totally self-sufficient, that is kind of liberating." - Verhoeckx, (2016)

"It is primitive, you need little, it is primordial.[...] This brings you close to yourself. It unites you with nature and yourself." - Ramirez, (2017).

Figure 29. Picture by Fox Searchlight Pictures, (2014) visualising the cluster 'feeling free to trust on self'.



## LIGHT MY FIRE

Being in nature and camping makes people feel energized, optimistic and full of wonder. A need for enjoying nature by doing is present, but encouragement in how to is needed. This encouragement is needed because people lost the sensory connection with nature. See also figure 30.

For all statements and quotes in this cluster, see appendix C.

“Having an experience that is a bit extreme.. Where you get surprised so to speak.” - Lagewaardt, (2017)

“It has a diving board. With a nice bow you can jump in the water. This gives lots of energy.” - Meijs, (2017)

“As campers lose the sensory connection with nature, experiencing nature becomes passive observation instead of active engagement.” - Garst, et al., (2009)

“It was my first solo camping trip and I would do it again in a heartbeat, me, my backpack and a head full of wonder and slight worry.” - Littlebpost, (2013)

Figure 30. Picture by Pretty, (2017) visualising the cluster 'light my fire'.



## ON EQUAL FOOTING

Being in nature sets not only people on the same playing field but in addition makes them aware that nature is not their commodity. Treating our surroundings, humans and nature, with respect. See also figure 31.

For all statements and quotes in this cluster, see appendix C.

“The beauty of backpacking is that it puts everyone on the same playing field. No matter rich or poor, old or young, the trail treats you the same. We are all humans, our class differences striped away by the cold rock surrounding us.” - Berry, (2013)

“We abuse land because we regard it as a commodity belonging to us. When we see land as a commodity to which we belong, we may begin to use it with love and respect.” - Leopold (1949)

Figure 31. Picture by Bourdin, (1972) visualising the cluster 'on equal footing'.

### **2.3.5 CONCLUSION CLUSTERS**

The clusters give rich insights in what is important for extreme and average campers. Each cluster sketches a part of the context, but when connections between the clusters are made the bigger picture gets clear. Some of the clusters already mention other clusters they are connected to. In chapter 2.4 all the connections between the different clusters are shown and explained.

# 2.4 CONTEXT MAP

## WHAT DOES THE TOTAL CONTEXT OF THE AVERAGE AND EXTREME CAMPERS LOOK LIKE?

To generate a deep understanding of the context of the average and extreme camper the context is divided in three levels as mentioned in chapter 2.2:

- Level 1. The whole context
- Level 2. The relation between people and two other themes
- Level 3. The relation between people and one other theme

By answering the corresponding sub-questions it is made sure all the needed information about the interrelations of the different context elements and the target group is gathered. After conducting the four studies, the statement cards are categorised by sub-question to make sure all the information needed is indeed covered. Since these sub-questions only functioned as guidance and to make sure all information is gathered the answers to the sub-questions are mentioned on the statement cards and will not be further discussed here, see appendix C for all the statement cards.

The personas and clusters give rich but fragmented insight into the context and the average and extreme campers. Like finding an old broken vase. The pieces individually tell a story and give information but together they reveal the whole picture. The same goes for the bits and pieces of information given in the personas and clusters. This information brought

together gives a conclusive overview of what the characteristics of the average and extreme camper are and what their camping experience and story entails. This conclusive overview is the context map on in figure 32.

Although the four personas differ from each other there is also a lot of common ground. This made it possible to create one context map instead of four. In the context map the context is summarised and connections are made between the different clusters, from here on called 'cluster fields'. At the top of the context map an image, illustration, a quote and some pointers describes the personas. Below all the different clusters and cluster fields are displayed. The grey coloured blocks indicate which clusters are connected and the corresponding text explains the connection.

A lot of information about the context is gained and concluded in this context map. This made it possible to submerge in the world and the camping story of the target group. Now, the question remains: how to use the gained knowledge in order to meet the project aim?

**PROJECT AIM**  
DESIGNING A SHELTER THAT ENHANCES THE CAMPING EXPERIENCE OF THE AVERAGE AND EXTREME CAMPER, BY GIVING THE SHELTER A MORE PROMINENT ROLE IN THEIR CAMPING STORY.

“A CONTEXT MAPPING STUDY CONSIST OF A MULTITUDE OF FRAGMENTARY CLUES AND DIRECTIONS ABOUT PEOPLES LIVES. THE DATA IS MULTI-FACETED AND MULTI-LAYERED, AND ADDRESSES ISSUES BOTH FUNCTIONAL AND AFFECTIVE, BOTH GENERAL AND PERSONAL, BOTH OBJECTIVE AND SUBJECTIVE. IT SHOULD BE PRESENTED APPROPRIATELY. [...] IN ORDER TO BE USEFUL FOR DESIGNERS, THIS INFORMATION SHOULD BE RICH AND BROAD, BUT ALSO LEAVE ROOM FOR THE DESIGNER’S CREATIVITY.”  
Sleeswijk Visser, et al., (2005)

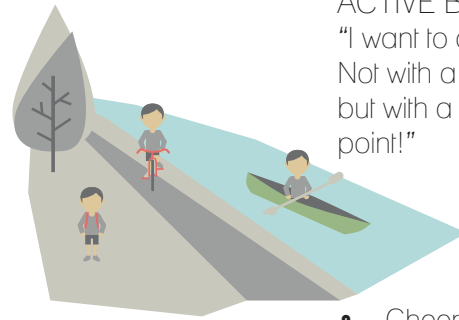




**BASIC MARY**  
 "Camping makes you open, open for ideas and your surrounding."



- Investigative
- Moment of reflection
- Partner
- Little facilities
- Nature orientated camp ground
- Travel (de Vries, 2013)



**ACTIVE BOB**  
 "I want to do a lot of stuff. Not with a question mark but with an exclamation point!"



- Cheerful
- Thrill seeker
- Activities
- Friends
- Little to no facilities
- Free camp ground
- Travel (de Vries, 2013)



HOME SWEET CAVE



TWILIGHT ZONE



CRAVING THE FULL AWE

1. A result of bringing as little stuff as possible is that the target group gets creative and has to work harder to get something done, or to find a solution for a given situation. This gives extreme and average campers joy and satisfaction.

2. On one hand the target group has this craving to be physically immersed in nature, experiencing full awe, and on the other hand they have this need to make a place their own by creating familiarity in an unfamiliar place, and seclude themselves from their surroundings.



DONT FOLLOW PLEASE



BITTER SWEET NATURE COMFORT



BLOOD SWEAT AND TEARS GIVE SATISFACTION



FIRE MY IMAGINATION



DROP YOUR WEAPONS





### EASY GOING ANNA

"I like simple camping, with as little stuff as possible, no big camp grounds and such."



- Full of energy
- Exploring surroundings
- Relaxed
- Partner
- Nature oriented camp grounds
- Trekking (de Vries, 2013)



### EXTREME NICHOLAS

"At such moments you are in the wild, no people around, it is almost a sort of magical."



- Optimistic
- Outside all the time
- Physical challenge
- Alone
- No facilities
- Wild camping
- Expedition (de Vries, 2013)

LIGHT MY FIRE



4. When immersed in nature people become energised, optimistic and full of wonder. This makes their cravings for nature only greater.

5. The notion that everyone and everything is equal is in every cluster of importance. For example, without this notion people would ruin the little jaw dropping nature that we have left on this earth. And without this notion a wafer-thin tent would not feel as safe as people currently experience it.

ONEQUAL FOOTING



3. In order to enjoy the full awe, little to no crowd is wished. This means in many cases that one has to go far from the civilised world and say goodbye to comforts like a toilet, a soft bed, and a supermarket.

6. When camping, little baggage means in many cases less comfort; something that the target group is willing to give up in exchange for flexibility, freedom, and less worries. But when the elements are not in their favour the discomfort can be too much, making the target group wish they had brought that little bit extra.

7. During camping, life is stripped of worry, rush and white noise. Enabling people to break with their daily routine and making them open up to their surrounding and each other. This makes people more conscious of what they are doing, resulting in memories that stay with them for a long time. Meanwhile, they do not only open up to others but also to themselves.

FEELING FLEXIBLE AND FREE



DON'T WORRY BE HAPPY



FEELING FREE TO TRUST ON SELF



CREATING MEMORIES TOGETHER



# 3. DESIGN VISION



## 3.1 INTRODUCTION

In chapter 2.3 and 2.4 the four personas are defined as basic, easy going, extreme and active and 15 clusters are grouped into 7 cluster fields. The gathered information is too divergent to lead to a focused design vision and design concept, which is necessary for developing a coherent design. Therefore, in this chapter a focus is chosen (chapter 3.2) and a corresponding future shelter vision (chapter 3.3) and interaction vision (chapter 3.4) are defined. Subsequently a design goal is formulated (chapter 3.5).

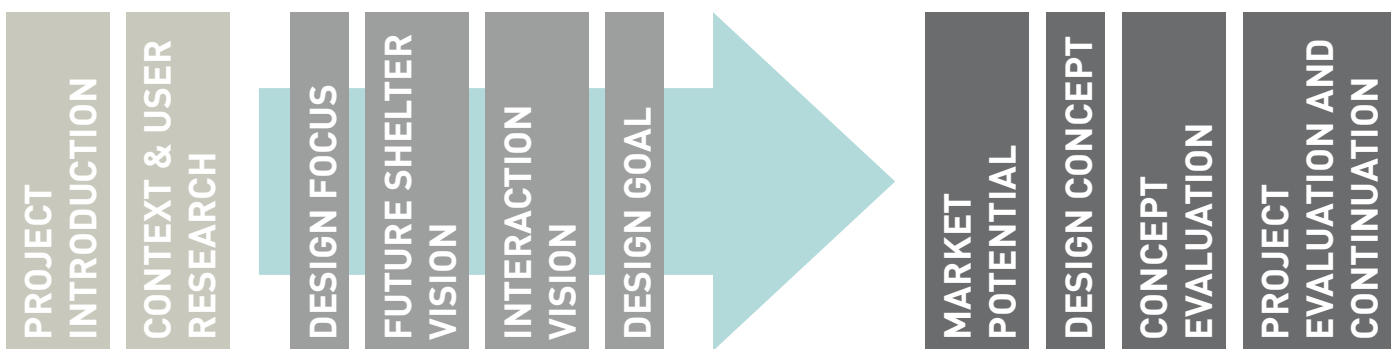


Figure 33. Schematic reproduction of what, is already explained what will be explained in this chapter and what comes next.

# 3.2 DESIGN FOCUS

## WHAT WILL BE THE FOCUS FROM HERE ON?

The seven cluster fields in the context map all offer opportunities to enhance the camping story. But there is one that offers a clear opportunity to enhance the camping story by means of a shelter design, which is cluster field two, 'home sweet cave-twilight zone-craving the full awe'. All the other cluster fields will probably also lead to a design enhancing the camping story of the average and extreme camper but not necessary by means of a shelter it may lead to the design of a totally other object. Because during this project a focus on shelters is chosen the cluster field, 'home sweet cave-twilight zone-craving the full awe' will from here on be the main focus for further design. First this cluster field will be further elaborated and opportunities within will be exposed. Based on these, a future shelter vision will be formulated.

Within this cluster field there seems to be tension between the needs and want of the target group and the current situation. These tensions will be explained in the following paragraphs and supported by the quotes from the four studies, see figure 34 and 35.

### 3.2.1 SUBMERGING AND SECLUDING

As repeatedly pointed out being in nature is very important for the target group during their camping trips. This is why they camp either on nature orientated camp grounds, free camping spots or go wild camping, and engage in all sorts of nature involved activities. Research shown in chapter 2 (see also figure 34) leads to believe that current tent designs do not fit in this image because when in use it closes the user off from the outdoors they came for instead of helping them submerge in their surrounding. Meanwhile the target group indicates the need to have an own secluded area, to create a private space.

"YOU WANT TO LAY OUTSIDE BUT A TENT IS CLOSED ON ALL SIDES. NOT BEING ABLE TO SEE ANYTHING, I DON'T LIKE IT. THE MOMENT OF GETTING IN YOUR TENT IS HORRIBLE TO ME."

"I DON'T LIKE THE TRANSITION FROM CHILLING OUTSIDE AND THEN GOING INTO YOUR TENT. BUT ONCE I LAY IN MY TENT, IT CAN BE VERY NICE AND SNUG."

"THE IDEAL TENT SHOULD WORK LIKE A SNOW GOGGLE, YOU ARE INSIDE BUT YOU CAN SEE EVERYTHING OUTSIDE."

"IT IS NATURE AND PRIVACY. AAH! YES! THAT'S IT, I WANT PRIVATE SPACE. AT THAT MOMENT IT IS MY HOME, MY OWN SPACE."

"YOU CAN LOOK OUTSIDE, BUT STILL HAVE THE FEELING OF A SECLUDEDNESS, YOUR OWN DEN."

"SOMETIMES IT IS NICE TO BE SECLUDED FROM YOUR SURROUNDINGS."

Figure 34. Quotes from the four studies supporting the discrepancy between the needs and want of the target group and the current camping story regarding the theme closing and submerging.

### 3.2.2 MAKING A SPOT YOUR OWN

Another opportunity to improve the camping story is to respond on the indicated want to make a camping spot your own. Now, average and extreme campers do this by choosing a certain spot and add some minimal decoration like a washing line. This way of making a camping spot your own seems a bit marginal. Whilst, making a spot your own is of great importance to the target group, because it offers them a feeling of safety and familiarity in an unfamiliar place. See also figure 35.

“WHEN CHOOSING A SPOT I REALLY LOOK AROUND, WHERE DO I WANT TO SET UP CAMP? WHAT IS A NICE SPOT? WHEN I FOUND THAT SPOT I AM GOING TO MAKE IT MY OWN. I DO THAT EVEN WHEN I STAY FOR 1 NIGHT.”

“YOU MAKE THE CAMPING SPOT AROUND YOUR TENT INTO A LIVING AREA OF SORTS.”

“MAKING YOUR OWN SLEEPING QUARTERS GIVES YOU THAT FEELING OF ONE WITH NATURE.”

“THE MOMENT YOU BUILT A SHELTER IS THE MOMENT OF HAVE ARRIVED.”

“ONCE THE TENTS ARE SET UP I BRISK ABOUT WITH MY TARP. TAKING ON THE CHALLENGE TO CRATE THE AREA I WANT. WHEN I SUCCEED IT IMMEDIATELY HAS BECOME MY OWN PLACE.”

Figure 35. Quotes from the four studies supporting the discrepancy between the needs and want of the target group and the current camping story regarding making a spot your own.

# 3.3 FUTURE SHELTER VISION

## IN WHAT MANNER SHOULD A FUTURE SHELTER ENHANCE THE CAMPING EXPERIENCE AND GAIN A MORE PROMINENT ROLE IN THE CAMPING STORY?

The two tension points ‘submerge and seclude’ on the one hand and ‘making a spot your own’ on the other hand are transcribed into a future shelter vision for average and extreme campers. This improves the overall camping experience and gives the shelter a more prominent role in the camping story.

**Outside and inside merge smoothly into one another**, therewith an abrupt end to enjoying nature and the users own created spot can be avoided. Control over when and how much to **seclude when privacy is needed** is given by the shelter. Meanwhile the user is given the opportunity to **submerge in their surroundings**

while enjoying the protection of their shelter. Besides secluding and submerging the shelter offers the user a opportunity to **make a camping spot their own**. This gives the user a feeling of safety and familiarity while they **explore unfamiliar surroundings**. See also figure 36.



# 3.4 INTERACTION VISION

## WHAT ARE THE INTENDED QUALITIES AND CHARACTERISTICS OF THE INTERACTION?

As a future shelter vision is formulated, an interaction vision representing the intended interaction qualities and characteristics between the shelter and user can be examined.

Described in the future shelter vision are two interactions with the shelter:

- Opening and closing the shelter as desired
- Making a camping spot your own by means of a shelter

Beside these physical interactions there can also be more psychological interaction. This brings us to the question: what are proper characteristics and qualities of these interactions and for the to be designed shelter as a whole?

### INTENDED INTERACTION

One of the important effects camping has on average and extreme campers is breaking with their busy daily routine. This is not only mentioned during the context mapping session and interviews, but also appeared from literature, blogs and vlogs. By starting the interaction with the shelter in a **mindful** way it is attempted to break with the daily routine in an early stage of the camping story. To further break with the daily routine, and enabling average and extreme campers to make a camping spot their own, also an **exploratory** interaction is chosen. This interaction quality

fits with the average and extreme camper because it is based on one of the 15 clusters. This cluster 'fire my imagination' challenges the target group to interact in a for them unusual way with their surroundings.

This is different from their daily routine and helps them to make a camping spot their own, see figure 37. Once the shelter is set up, the interaction quality **smooth** should have the upper hand. The needs for seclusion and 'craving the full awe' are fulfilled by a smooth

and an unencumbered transition from an open to a closed shelter. In conclusion the intended qualities of the interaction between the shelter concept and the user should be mindful, exploratory and smooth.



Figure 37. Cluster fire my imagination described as in chapter 2.3.4



THE INTENDED  
QUALITIES OF THE  
INTERACTION BETWEEN  
THE SHELTER CONCEPT  
AND THE USER  
SHOULD BE MINDFUL,  
EXPLORATORY AND  
SMOOTH.



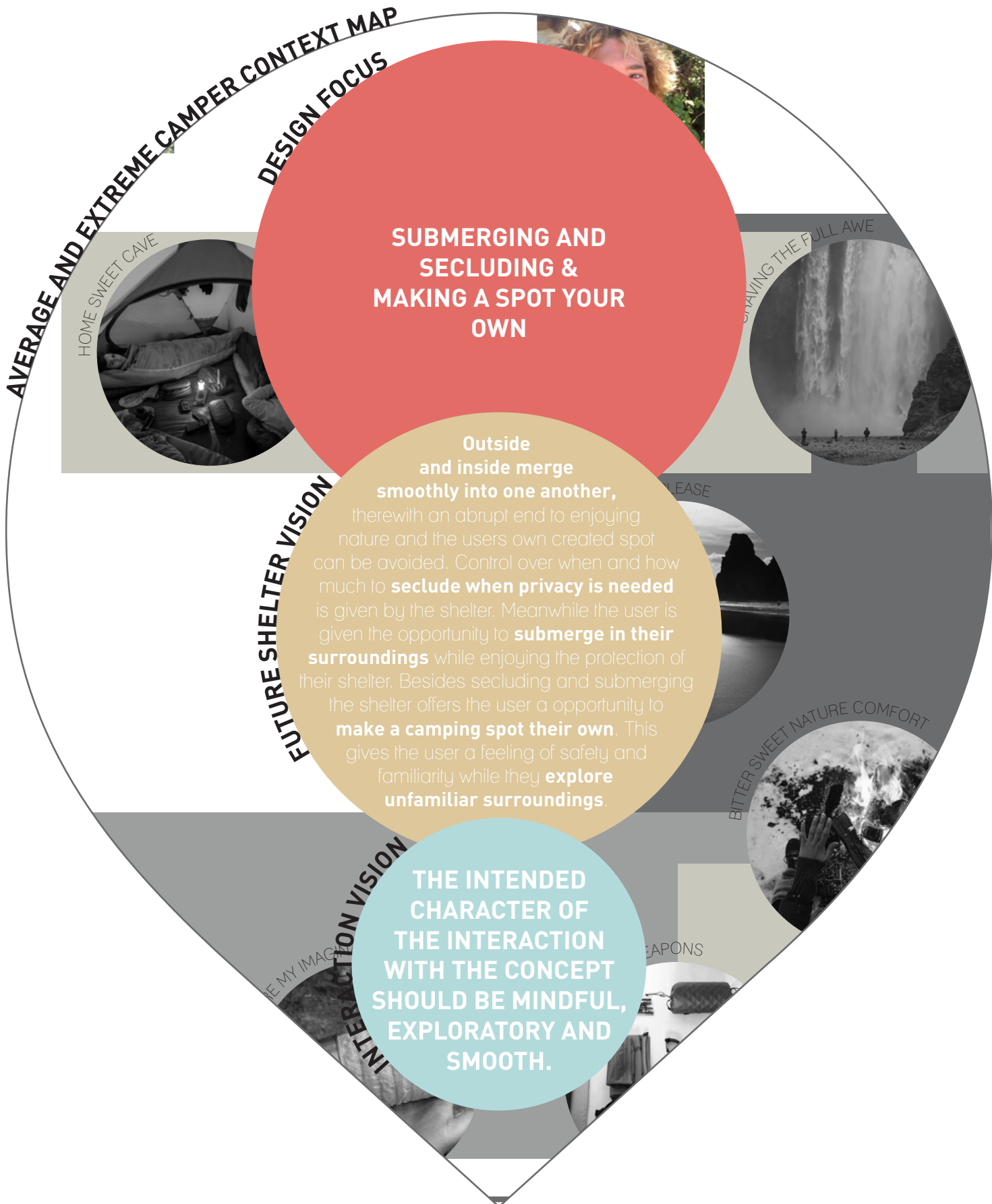
# 3.5 DESIGN GOAL

## HOW TO TRANSLATE THE AVERAGE AND EXTREME CAMPER CONTEXT INTO A DESIGN GOAL?

By translating the camper context map into a design goal we have to consider the just drafted design focus, future shelter and interaction vision. In figure 39 the design focus and the two visions are placed on top of the camper context map. This visualizes the influence of the context map on the future shelter and interaction vision as well as on the design focus. By focusing on a part of the context map a focus is chosen. Further zooming in results in a future shelter vision and finally an interaction vision. Zooming out and

taking together the design focus, future shelter and interaction vision with in the background the context map leads to the comprehensive design goal:

To design a shelter where the feeling of being outside and inside merge smoothly into one another, giving the user the opportunity to seclude from and submerge in their surrounding. Meanwhile enabling the user to break with their daily routine and by that, making a shelter and their camping spot their own, in a mindful and exploratory manner.



## DESIGN GOAL

To design a shelter where the feeling of being outside and inside merge smoothly into one another, giving the user the opportunity to seclude from and submerge in their surrounding. Meanwhile enabling the user to break with their daily routine and make a shelter and by that, making their camping spot their own, in a mindful and exploratory manner.

# 4. MARKET POTENTIAL



## 4.1 INTRODUCTION

To enter the already swamped market of shelters, product differentiation is chosen as market strategy. Product differentiation is explained by Dickson, et al., (1987) as “a product offering is perceived by the consumer to differ from its competition on any physical or non physical product characteristic”

A market analysis is done to see if current shelter designs are already or partly fulfilling the design goal drafted in chapter 3.5, and if so in which manner.

### DESIGN GOAL

To design a shelter where the feeling of being outside and inside merge smoothly into one another, giving the user the opportunity to seclude from and submerge in their surrounding. Meanwhile enabling the user to break with their daily routine and make a shelter and by that, making their camping spot their own, in a mindful and exploratory manner.

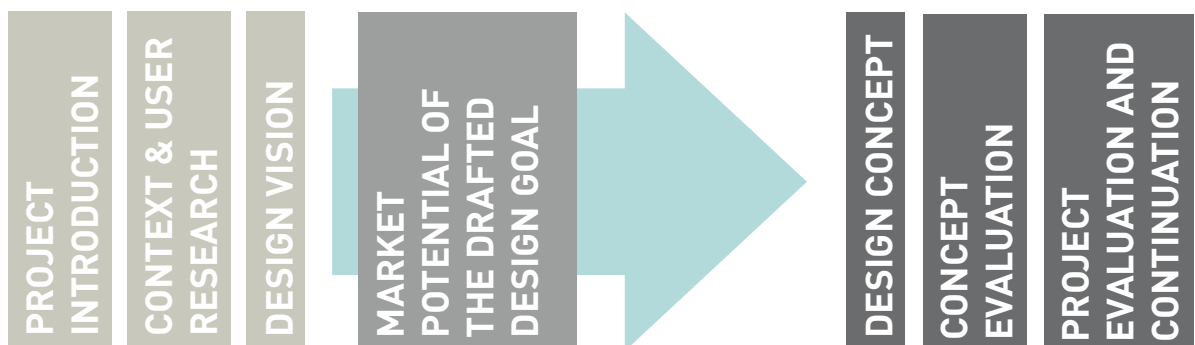


Figure 40. Schematic reproduction of what is already explained, what will be explained in this chapter and what comes next.

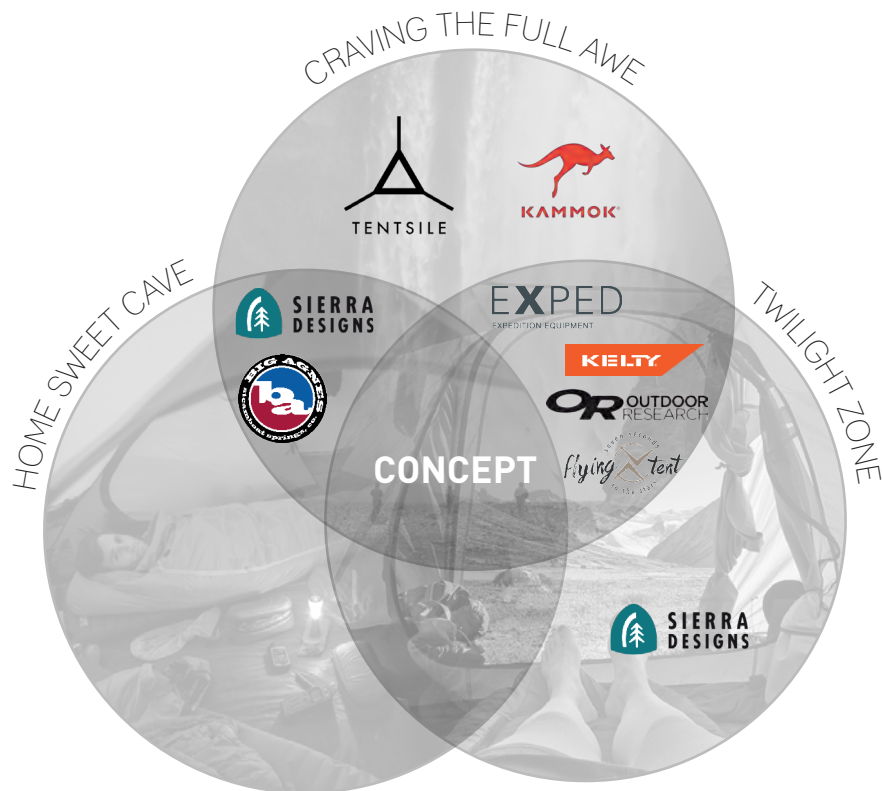


Figure 41. Overview of the nine brands in chapter 1.3 defined as, brands who do design for making the tent/shelter part of the camping story or have some designs which show they take this into account, divided into the three clusters 'home sweet cave', 'craving the full awe' and 'twilight' based on one or more of their products. See appendix for which products and the full analysis.

#### 4.1.2 SHELTER ANALYSIS

Because this project and also the design goal, is still focused on making the shelter part of the camping story, only the brands which are in chapter 1.3 identified as brands that at least try to make their shelters part of the camping story are analysed. These brands are:

- Sierra design
- Flying Tent
- Exped
- Kammok
- Big Agnes
- Tentsile
- Outdoor Research
- Kelty

To make this analysis manageable the design goal is divided into three sections. These sections are the clusters 'craving the full awe', 'twilight zone' and 'home sweet cave'. Each shelter of the earlier mentioned brands is examined and the shelters that fit one or more of the clusters are selected for further examination.

Examples of these selected shelters that fit one or more of the three clusters are given in figure 42 on the next page. In these examples one can see a tree tent as an example of craving the full awe. 'The Trail Ridge' shows how a rain fly can be used to submerge in and seclude from the environment (Twilight zone). 'Whetstone shelter' is one of the two shelters that show how 'home sweet cave' can be integrated in a design. The position of the rain fly can be changed, also changing the appearance and functionality of the shelter. For the rest of the analysis see appendix D.

#### 4.1.3 CONCLUSION

In figure 41 the brands, Sierra design, Flying Tent, Exped, Kammok, Big Agnes, Tesile, Outdoor Research and Kelty are divided over the clusters 'craving the full awe', 'twilight zone' and 'home sweet cave' based on the analysed shelters. As can be seen in this figure, a design based on the cluster 'craving the full awe'

and 'twilight zone' is not differentiating. A focus on a combination of the clusters 'twilight zone' and 'home sweet cave' or a design based on the combination of the three cluster 'craving the full awe', 'twilight zone' and 'home sweet cave' as is done in the design goal of this project is still as good as unexplored territory. Therefore it is believed that a design based on the design goal of this project will be differentiating from the products currently on the market. Unfortunately differentiation makes not necessarily for a well designed product that people want. Therefore after developing the concept another market analysis should be done to find out if there is market for this product. But for now it can be concluded that a design fitting the design goal of this project will differentiate from current products on the market. By creating a shelter that has at least the same functionality, comfort and usability as its competitors but excels in experience and enhances the camping story.

## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

The shelter is adaptable to surroundings. Hang it in a tree or place it on the ground.

## SUNDA



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

The inner tent is mostly made of see through netting making sure you can see 360 degrees. When setting up the shelter without a rain fly.

### TWILIGHT ZONE

The shelter is designed to easily submerge in or seclude from your surroundings by retracting the fly.

## TRAIL RIDGE

KELTY



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

This openness of this shelter enables the user to submerge in nature.

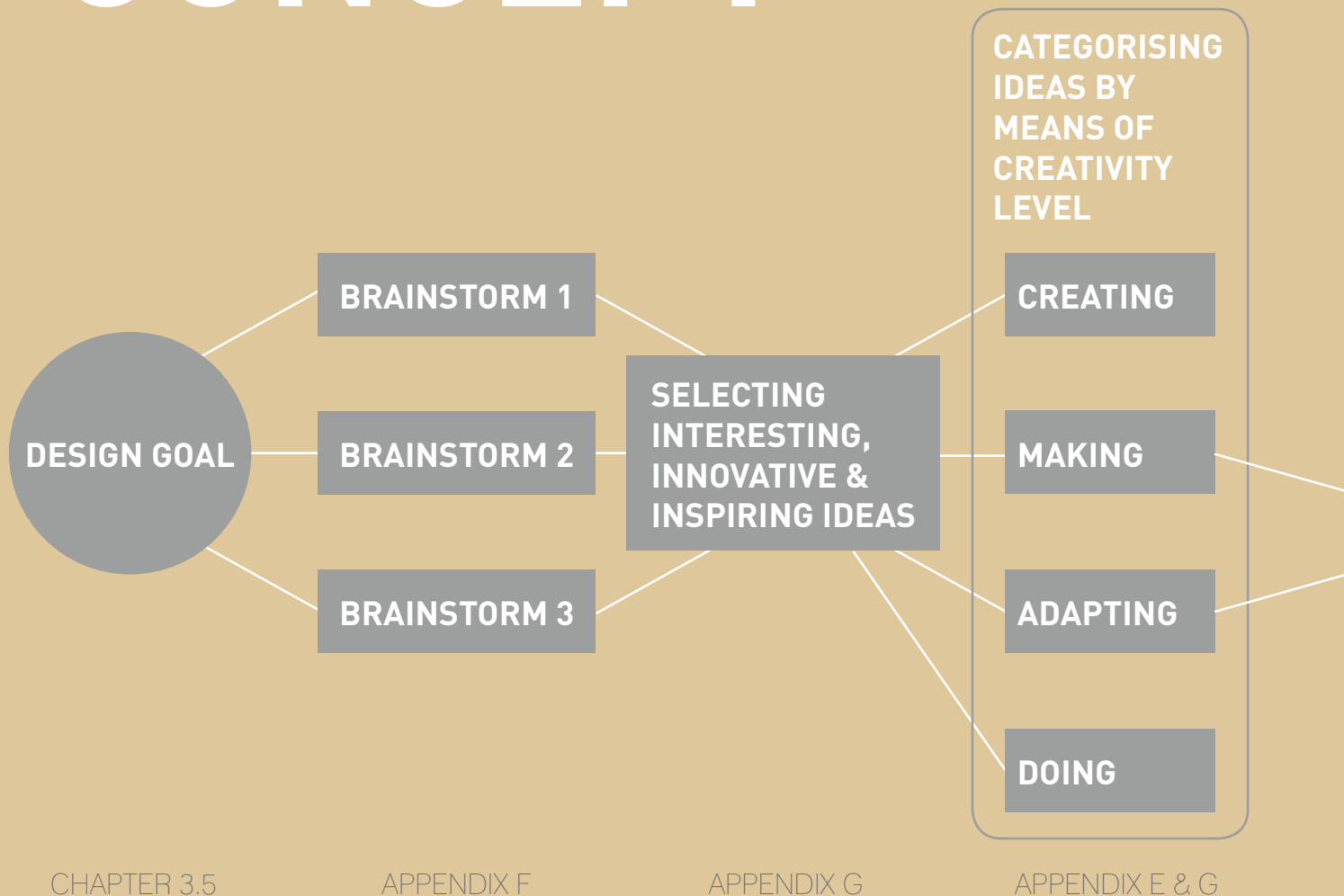
### HOME SWEET CAVE

This shelter lets the user make it their own by enabling them to gradually change the position of the rain fly to their needs and wants. Meanwhile also changing the appearance of the shelter

## WHETSTONE SHELTER



# 5. DESIGN CONCEPT



## 5.1 INTRODUCTION

Based on the design goal a concept is developed by going through an elaborate ideation process, see figure 43 and appendix E to I. The ideation process consists of three brainstorm sessions that lead to a great amount of ideas. Then, the most interesting, innovative and inspiring ideas are selected and categorised based on the creativity level framework of Sanders, et al., (2008), see appendix E. Based on these ideas two idea directions are created. Thereafter an idea direction is chosen, based on the design goal, desired creativity and skill level (Dahl, et al., 2007, see appendix E), and differentiation compared to current products on the market. Thereafter, the chosen idea

direction is further developed into the concept 'LUCID'. The design concept LUCID will be explained in this chapter.

The ideation process uses a top down approach as explained in chapter 1.5. In previous chapters the focus was mainly on the top layer of pleasure and middle layer of usability. In this chapter gradually the basic level of functionality is introduced. First an introduction about the LUCID is given to familiarise with the general idea behind the concept and how LUCID fits the design goal and interaction vision (chapter 5.2). Thereafter the interaction with the concept is explained with the aid user scenarios (chapter 5.3). Finally materials are assigned to the different components of the LUCID (chapter 5.4).



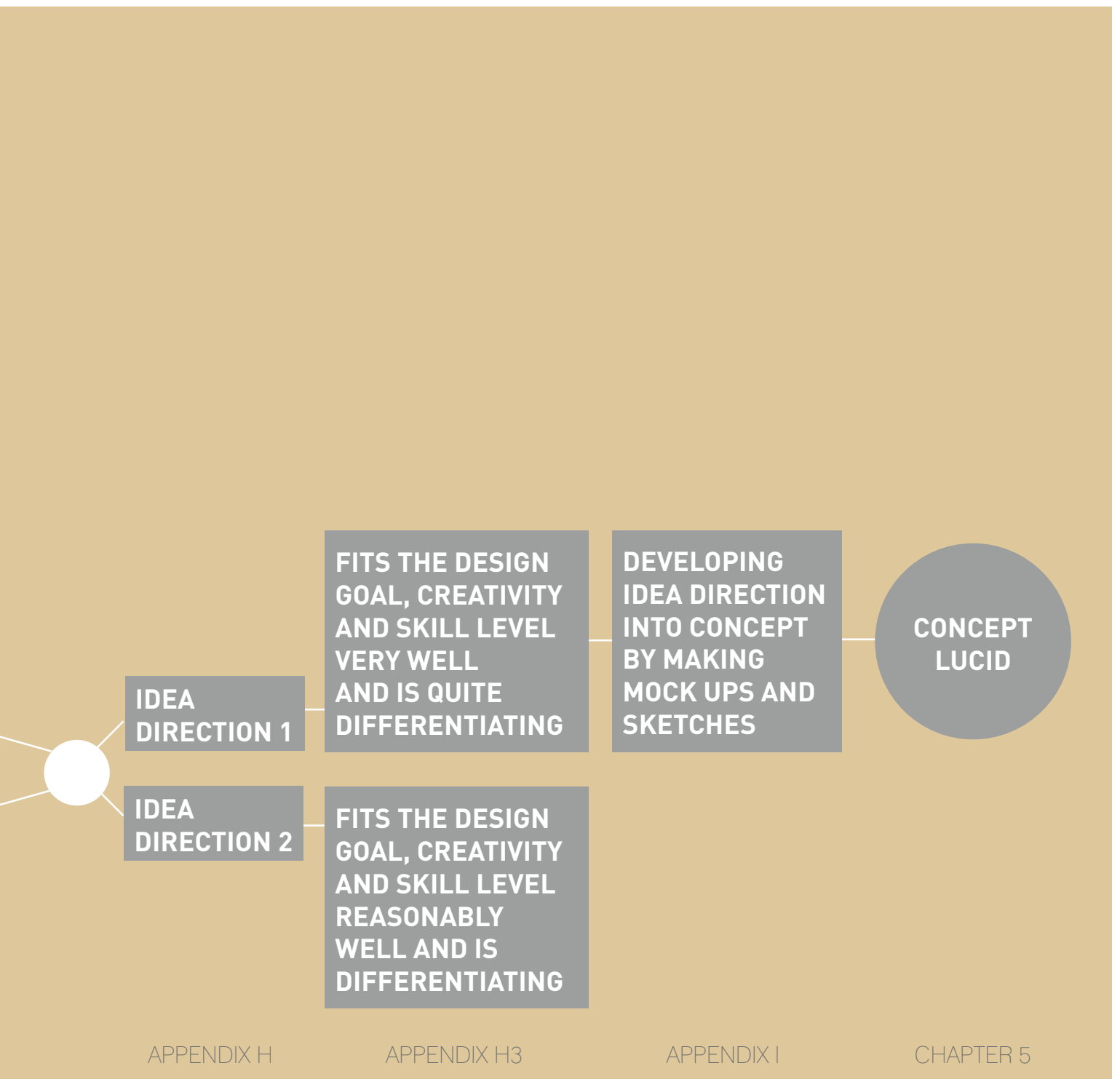


Figure 43. Schematic visualisation of the ideation process.

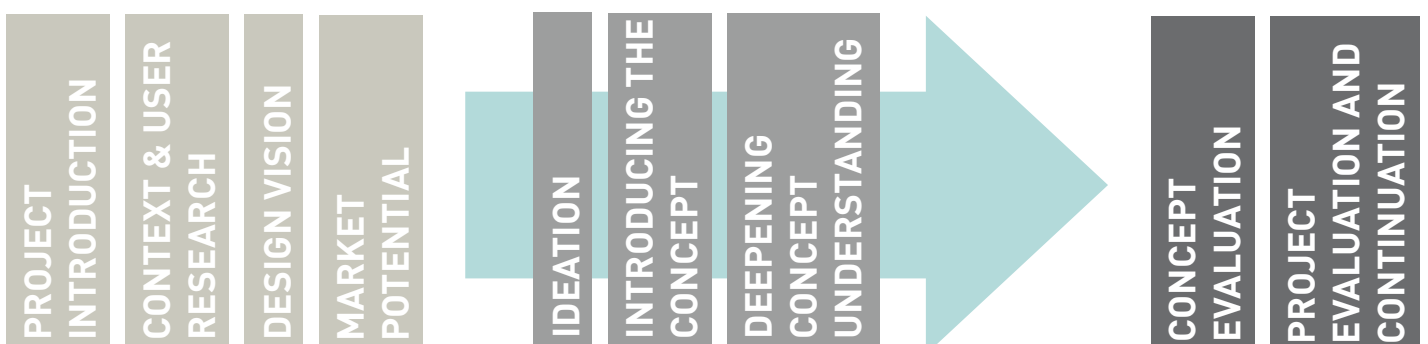


Figure 44. Schematic reproduction of what is already explained, what will be explained in this chapter and what comes next.

# 5.2 LUCID INTRODUCTION

## WHAT IS THE CONCEPT? AND HOW DOES IT FIT THE DESIGN GOAL AND INTERACTION VISION?

The LUCID is a versatile and modular shelter concept, which enables the user to adapt to their situation and surroundings. Whether someone is cycling alone, kayaking with a friend or wandering through the outback, LUCID makes sure the user is able to enjoy the beauty of their surroundings to the fullest.

The system consists of multiple components that can be configured in several ways. Four configurations are designed (these configurations will be explained in chapter 5.3). These four configurations can be adapted by the user or a whole new configuration can be created inspired by the different components in interaction with the environment. This enables the user to adapt to different situations and make every camping spot his or her own.

### 5.2.1 THE STORY

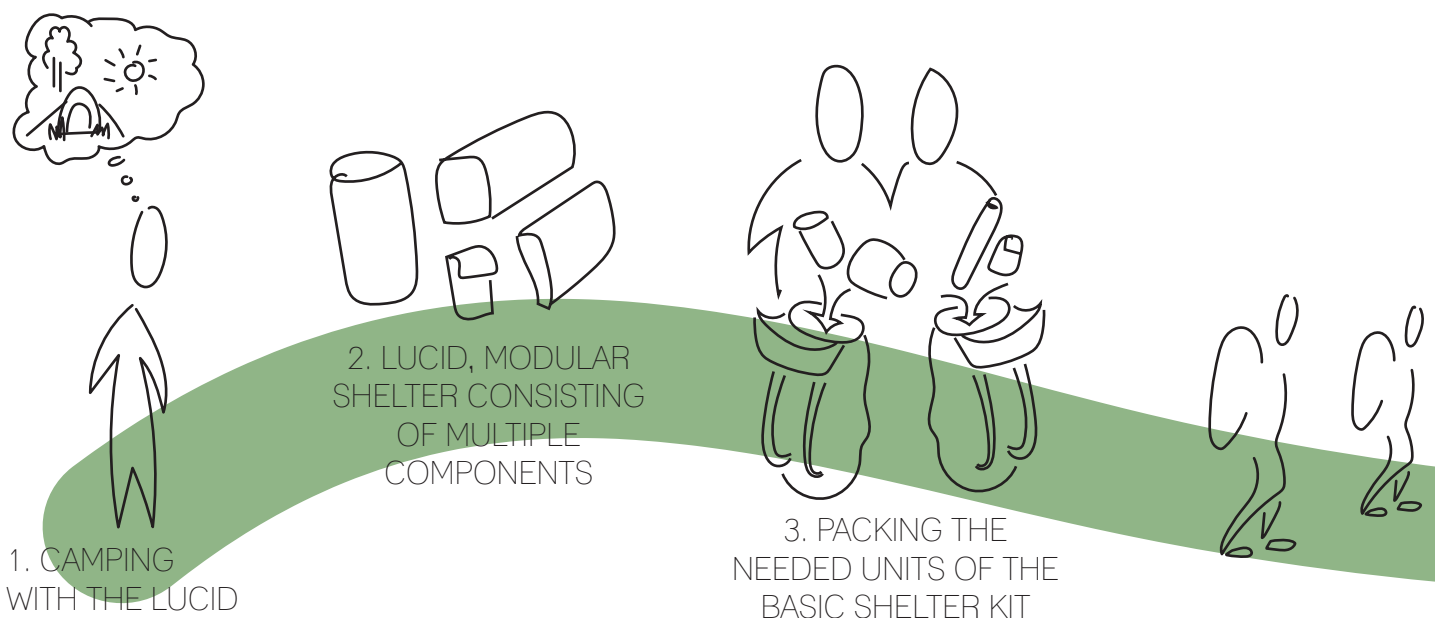
Where other shelters begin to play a part in the camping story when arriving on the camping spot, the LUCID begins to play a role when packing for a certain camping trip (see figure 45 (1)). The user can decide to leave some components at home to save weight or take all the components and have the full LUCID experience (2). When the LUCID components are packed, venturing into

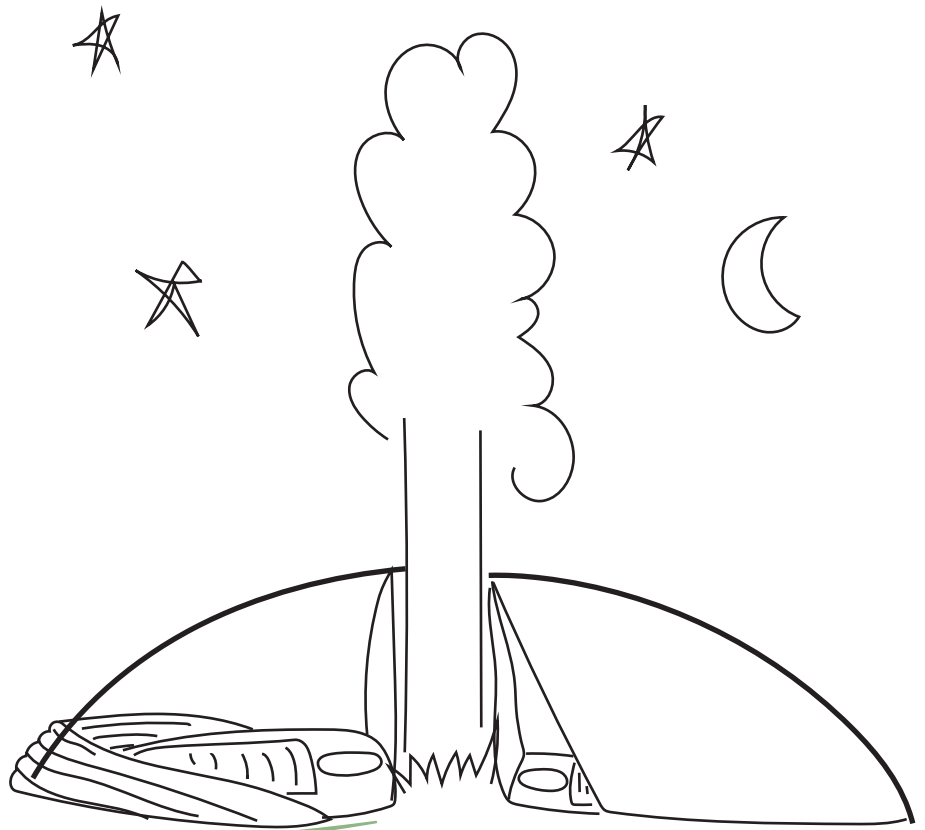
nature can begin (3).

When the right spot to set up camp is found, the user can begin to make the unfamiliar place his or her own (4). Unlike ordinary shelters, the LUCID supports this process by not having one fixed shape. The LUCID enables the user to adapt the shelter to the given situation and surrounding (5). This surrounding is probably at a by the target group preferred nature oriented camp ground, free camping spot or in the wild. This adapting can be done by choosing one of the four designed configurations or by getting creative and set-up his or her own shelter configuration (6).

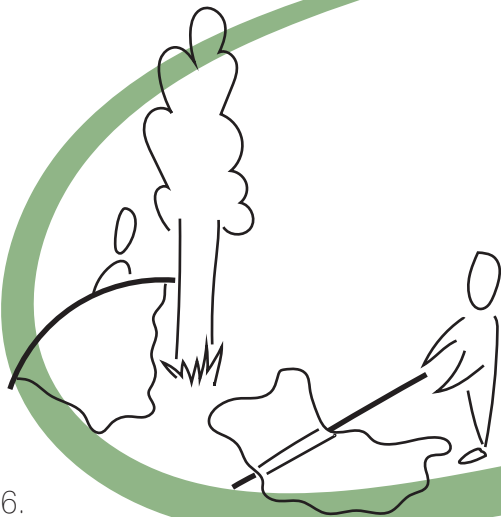
It is assumed that both while packing and setting up the LUCID, many considerations play a role. For example, transportation, weather, duration of stay, group size, mood, surrounding, time of day, energy level, etc. The LUCID is designed to offer the user the freedom to take as much of these factors into account as they like.

Even when the shelter is set up, the LUCID can still be adapted. This time not to make the camping spot your own but to submerge in, or seclude from, the surrounding (7).

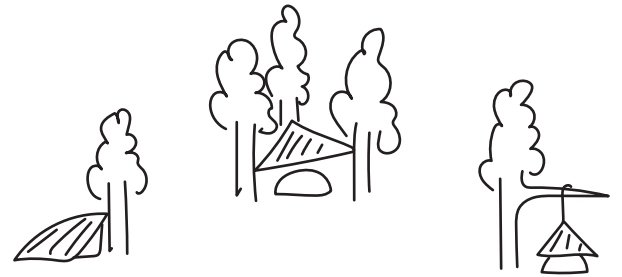




7. ONCE SET UP THE USER CAN SECLUDE OR SUBMERGE IN THEIR SURROUNDING.



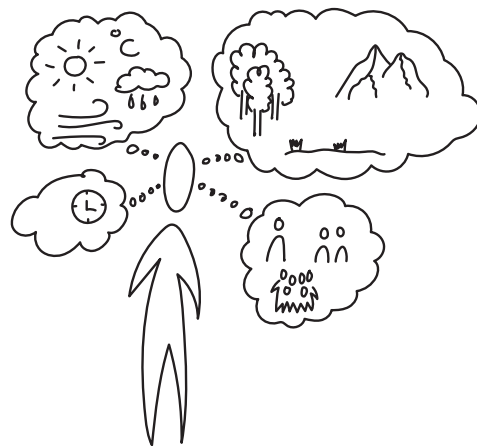
6.



5. GET INSPIRED OR PICK ONE OF THE PROVIDED DESIGNS THAT FIT YOUR NEEDS AND CONDITIONS. EXPERIENCED OR FEELING CREATIVE, THINK ONE UP YOURSELF!



4.



CONSIDERING SURROUNDING, WEATHER CONDITIONS, DURATION OF STAY, GROUP SIZE ETC. TO BUILD THE PERFECT SHELTER

## 5.2.2 THE INTENDED INTERACTION WITH THE LUCID

The three interaction qualities, mindful, exploratory and smooth are on different levels. Mindful is on a psychological level, it is considerate, attentive and aware. The interaction quality exploratory is both psychological and physical and the quality smooth is integrated in the concept on a physical level.

### MINDFUL INTERACTION

Most products are designed to be set-up as fast as possible, see figure 46. This interaction with the product fits well with rushed everyday life, but does not fit the wish to break with daily routine while camping. A first **mindful** interaction with the LUCID starts already at home while packing, (see figure 47) by making the user choose which components to bring, letting them imagine where they are going and in what situations they could find themselves. This makes the LUCID part of the pleasurable anticipation.

A second moment of **mindfulness** is while setting up the shelter. The design challenges the user to consider the surroundings, conditions

and components brought along, to configure the optimal shelter for that moment.

### EXPLORATORY INTERACTION

Exploratory interaction leads to creation of a place of your own and getting away from daily routine. The LUCID responds to this by offering loose components instead of one fixed shelter shape. These loose components challenge the camper to create a shelter by interacting with the surrounding and interpreting the situation, see figure 47. Therefore each shelter configuration will be different for every camper depending on his or her creativity and skill level (appendix E). The creativity and skill level challenged by the LUCID fits the average and extreme camper. In contrast to the conventional shelters analysed in chapter 4, who do not challenge the creativity and skills of the target group.

The existing shelters analysed show only two examples that enable the user to make the shelter their own. One shelter forces the user to use their trekking poles. The other allows the user to gradually change the position of the rain fly to their needs and wants. Meanwhile also changing the appearance of the shelter, see

appendix D. The two examples show a static and not challenging design which does not lead to an exploratory interaction. This makes the experience of making a camping spot your own and breaking with daily routine less intense.

### SMOOTH INTERACTION

As shown in chapter 4 there are already some shelters that attempt to enable the user to submerge in and seclude from their surrounding. Even though the way these shelters try to accomplish this is rather cumbersome, see figure 46. One has to go outside to roll up or roll down the rain fly in order to seclude or submerge. The LUCID offers a different interaction, one that is **smooth** and easy, see figure 47. The user can close and open the rain fly from within the shelter. Staying comfortably in their sleeping bag only to sit up, zip open the side, and pull the rain fly into the wanted position. By lowering the threshold of this interaction the user is enabled to really enjoy every moment of natural beauty. Watching the thunder before the rain sets in, seeing the sun rise and set from your warm nest, or simply taking in the camping spot so carefully made your own.

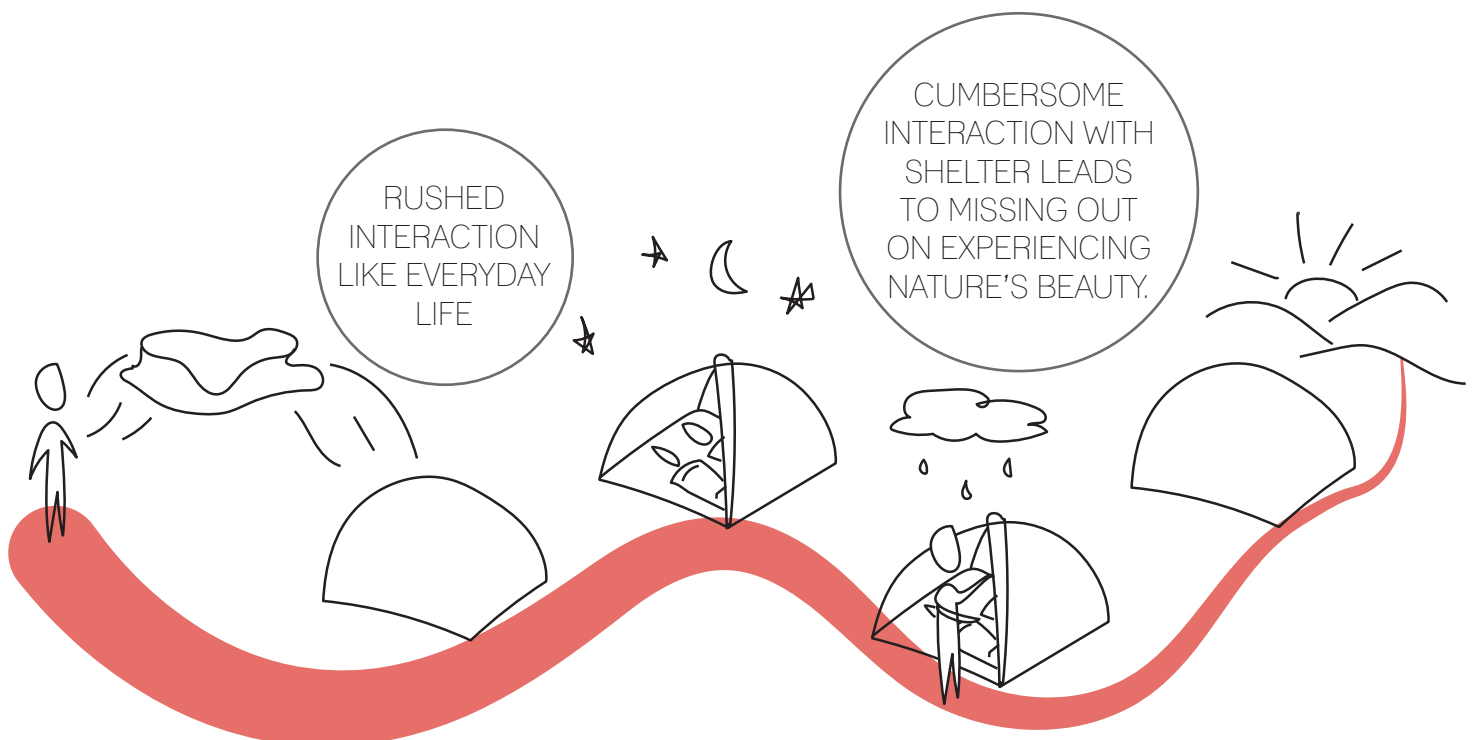
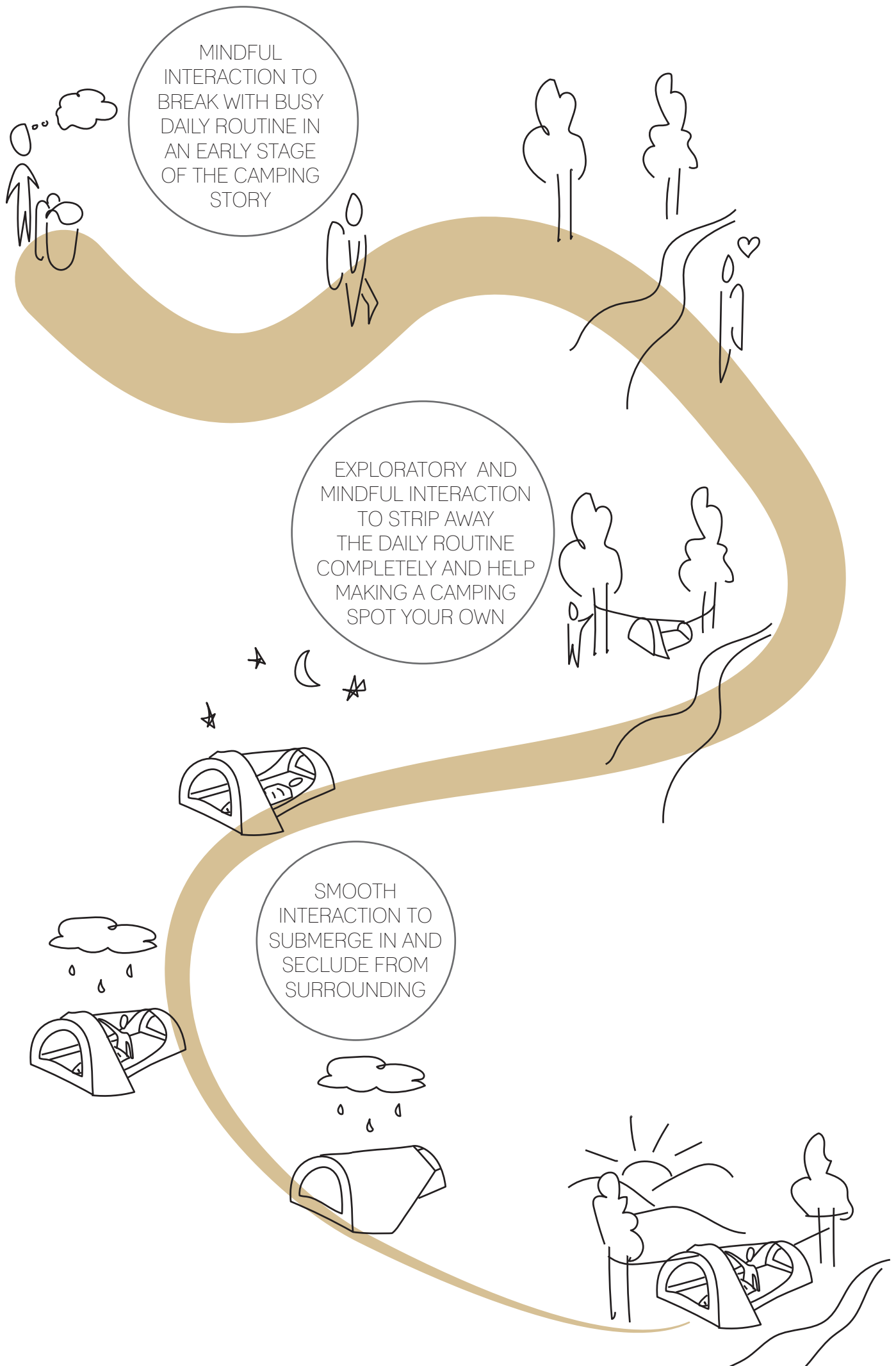


Figure 46. Illustration of current shelter interaction: rushed, unmindful and cumbersome.



# 5.3 THE CONFIGURATIONS

## WHAT DO THE FOUR DIFFERENT CONFIGURATIONS ENTAIL?

As mentioned before, the LUCID is a shelter that is adaptable to the user's surroundings and situation. The LUCID consists of a two person canopy, a rain fly, three tent poles, a vestibule and a footprint, see figure 48. Combining these components in different ways creates a free standing two person shelter (LUCID Lush, chapter 5.3.1), a light weight two person shelter (LUCID Light, chapter 5.3.2), a full cover two person shelter (LUCID Divis, chapter 5.3.3) and a one person tarp shelter (LUCID Fly, chapter 5.3.4).

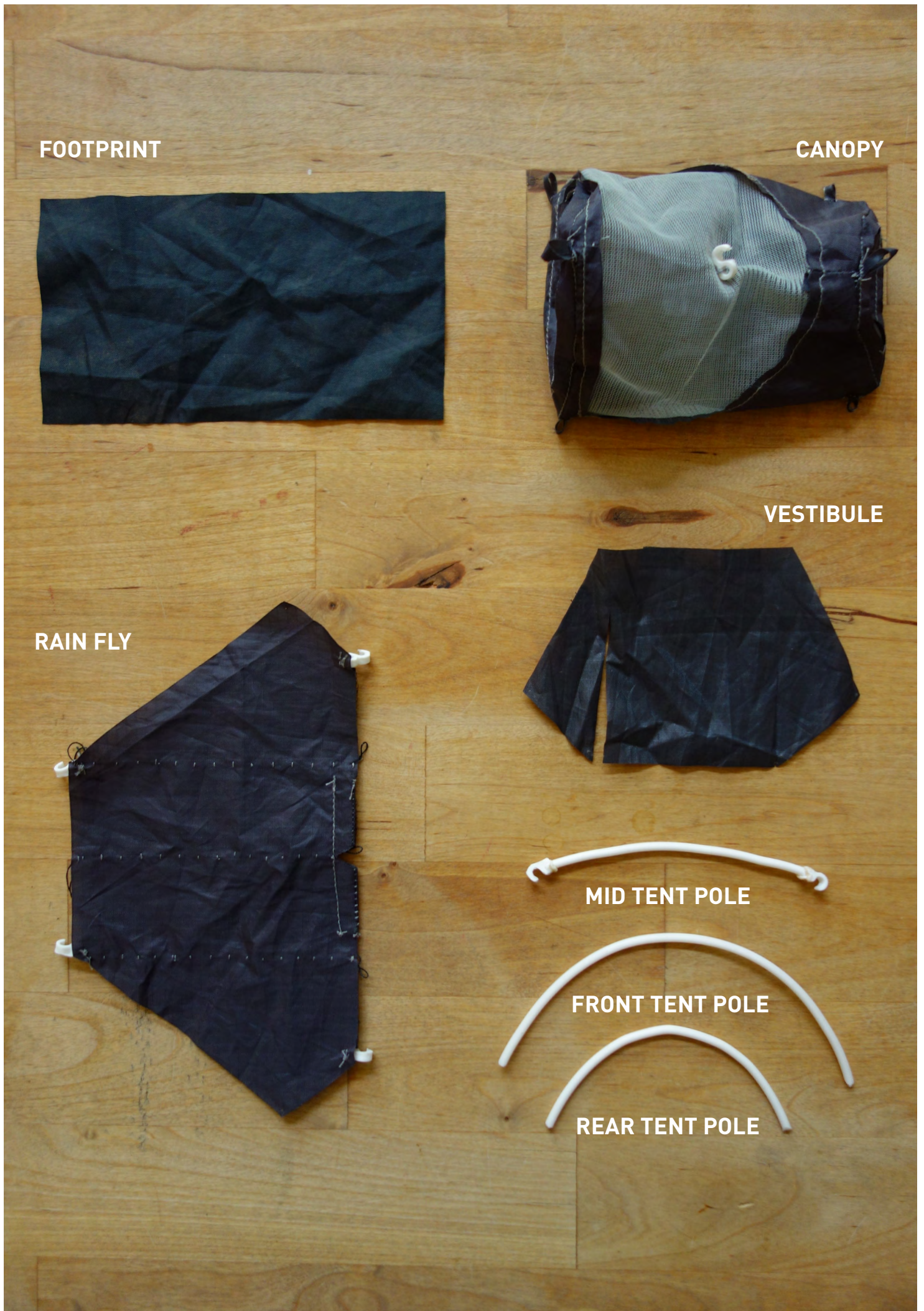
The LUCID Lush, Light, Divis and

Fly are just four set up options. From the design concept follows that users can also design their own configurations inspired by the LUCID, their surroundings and/or the situation they are in (chapter 5.3.6).

First the four designed configurations will be individually explained on the following pages by means of respectively:

- the needed components to set up the configuration
- the main features of the configuration
- the circumstances under which one might use the configuration

After that the interactions with the different shelters will be illustrated in more detail in chapter 5.3.5 to 5.3.7



**FOOTPRINT**

**CANOPY**

**VESTIBULE**

**RAIN FLY**

**MID TENT POLE**

**FRONT TENT POLE**

**REAR TENT POLE**

## COMPONENTS



Rain fly



Canopy



Foot print

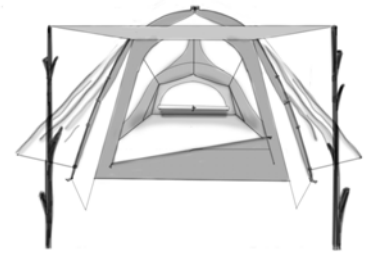
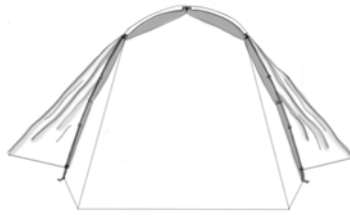


Vestibule



Three tent poles

## FRONT VIEW



## SIDE VIEW

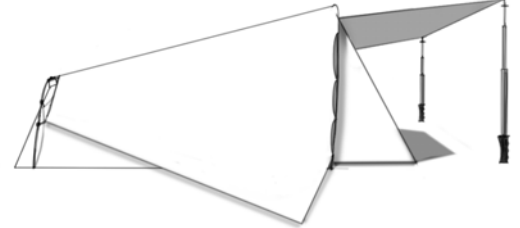
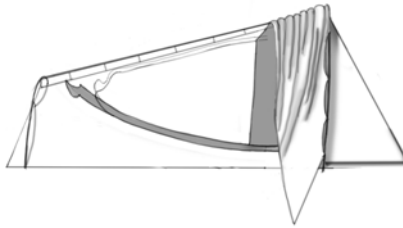
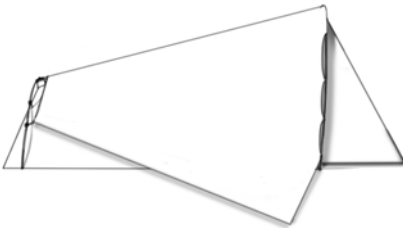


Figure 49. On the top the components needed to set up the LUCID Lush are shown. Below that a front and side view is shown of a LUCID Lush with a closed rain fly, an open rain fly and with an awning constructed with respectively branches and trekking poles.

### 5.3.1 LUCID Lush

The LUCID Lush is a comfortable two person, two layer, free standing shelter with plenty of storage space. For this configuration of the LUCID all the components, the rain fly, canopy, footprint, vestibule and three tent poles are needed (figure 49). The vestibule offers extra storage space and can also function as awning when sitting and cooking. (e.g. when the weather is bad.) Furthermore, the rain fly can be smoothly opened and closed from the inside. This is done by zipping open a big zipper in the canopy, unclipping four clips between the rain fly and the rear tent pole and pushing back the rain fly to the desired position. Hereby the rain fly is guided by the straight tent pole between the rear and the front pole, see for a visual

explanation chapter 5.3.7.

#### SCENARIO

When weight and size are no constraints, all components of the LUCID can be brought along for ultimate form freedom, comfort and storage space. When traveling with two people, weight and volume constraints can be limited by dividing the different components between the two.

No matter if the user is staying on a nature oriented camp ground for a couple of days or wild camping for just one night, the LUCID Lush offers both privacy and enables the user to submerge in their surroundings by easily moving the rain fly in the desired position (figure 50).





Figure 50. Three pictures showing a scenario of how the LUCID lush can be used.

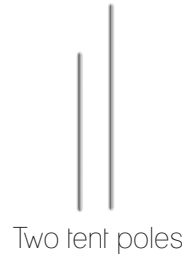
## COMPONENTS



Rain fly



Canopy



Two tent poles



Or replace two third of the front tent pole by two trekking poles

## FRONT VIEW



## SIDE VIEW

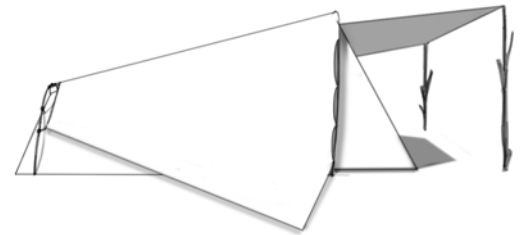
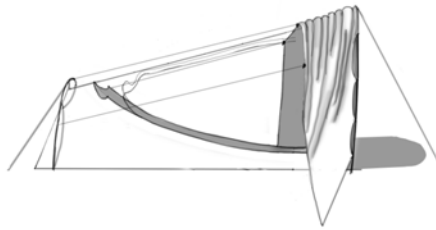
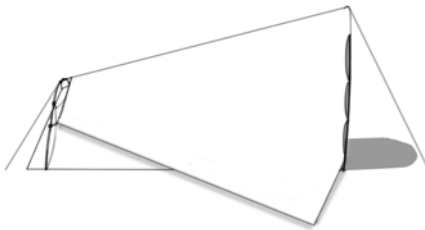


Figure 51. On the top the components needed to set up the LUCID Light are shown. Below that a front and side view is shown of a LUCID Light with a closed rain fly, an open rain fly and with an awning constructed with respectively trees and branches.

### 5.3.2 LUCID Light

The LUCID Light is a two person, two layer shelter. For this configuration of the LUCID, the rain fly, canopy and two tent poles are needed (figure 51). The front pole can be separated in three parts this way two of the three parts of this tent pole can be interchanged with trekking poles to give the user more versatility. Furthermore, the rain fly can be easily opened and closed from the inside. This is done in the same way as in the LUCID Lush configuration, only now the rain fly is guided by three strings integrated in the rain fly, see for a visual explanation chapter 5.3.7. Because the straight tent pole between the rear and the front pole is not used in this set up, the shelter needs to be guided out by guide out

lines at the front and the rear of the shelter. When more storage space or covered living space is needed, the vestibule can be attached by simply zipping it onto the rain fly.

#### SCENARIO

By leaving one tent pole at home, weight is saved, and volume reduced. With the components of the LUCID Light also the Divis and Fly and own configurations are still an option. On a bicycle one can basically go wherever he or she wants and enjoy the surroundings in a nice and easy pace. The LUCID Light makes sure that one can continue to savour the surroundings together or alone, while enjoying the safe feeling of the shelter. By opening the rain fly from the inside with minimal effort, the user does not

miss a moment of natural beauty (figure 52).



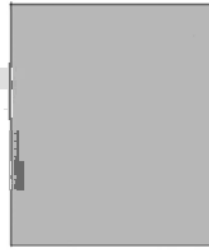
## COMPONENTS



Rain fly



Vestibule

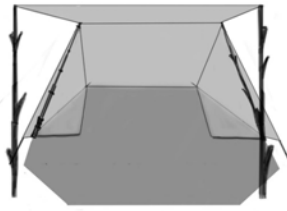


Foot print



Branches, trekking poles, trees or another component to give the needed structure

## FRONT VIEW



## SIDE VIEW

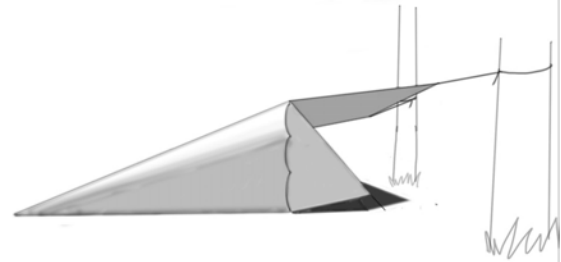
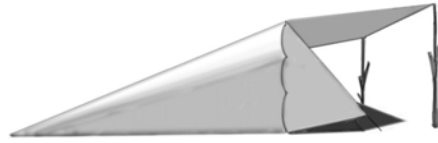


Figure 53. On the top the components needed to set up the LUCID Divis are shown. Below that a front and side view is shown of a LUCID Divis with a closed vestibule and with an awning constructed with respectively branches and trees.

### 5.3.3 LUCID Divis

The LUCID Divis is a lightweight, full cover, one layer shelter for two persons. For this configuration of the LUCID, the rain fly and vestibule are needed (figure 5.3). Additional to these components, two branches, trekking poles, a tree or other components are needed to build the shelter. Depending on the creativity of the user, the situation and in interaction with the surroundings the final shape of the Divis can vary (see figure 53). The same goes for using the vestibule as awning. Another option is to open the vestibule by rolling it up. The rain fly can be easily opened and closed from the inside using three cord stoppers attached to the three strings integrated in the rain fly, see for a visual explanation chapter 5.3.7.

### SCENARIO

When touring the rivers by kayak with a friend, lack of storage space can be a problem. Because all the components of the LUCID are packed independently, the full capacity of the kayak can be used. When lack of storage capacity is really an issue, only the components rain fly and vestibule can be brought along. In that situation only the LUCID Divis and the LUCID Fly can be set up. Another option is to use one of the softer packages as a cushion. Due to the durability of the materials chosen, this kind of use will not be a problem. When setting up camp the surroundings and situation influences how the LUCID Divis can be configured. In a forest, branches and trees can be used to give structure to

the Divis. In this scenario, oars also can be used to give the shelter the needed structure (figure 54).

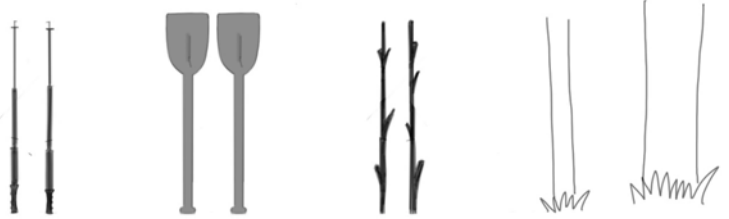


Figure 54. Three pictures showing a scenario of how the LUCID Divis can be used.

## COMPONENTS

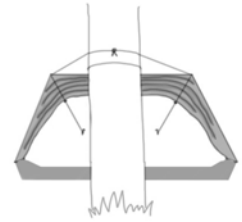
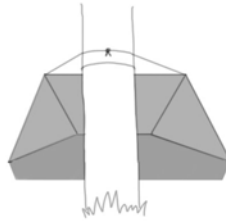
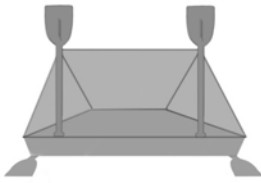


Rain fly



Trekking poles, oars, branches, trees or another component to give the needed structure

## FRONT VIEW



## SIDE VIEW

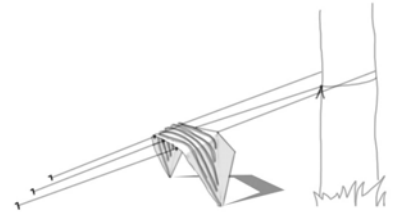
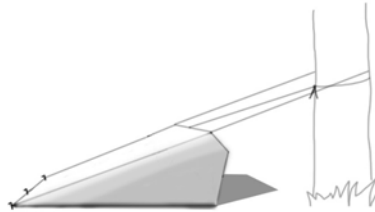
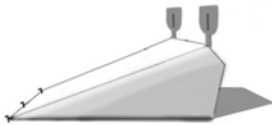


Figure 55. On the top the components needed to set up the LUCID Fly are shown. Below that a front and side view is shown of a LUCID Fly constructed with oars, constructed with a tree and with an open rain fly.

### 5.3.4 LUCID Fly

The LUCID Fly is a ultra lightweight tarp shelter for one person. For this configuration of the LUCID only the rain fly is needed. Additional to this component two branches, trekking poles, bike wheels, or other component are needed to build the shelter (figure 55). The rain fly can be easily opened and closed from the inside using three cord stoppers attached to the three strings integrated in the rain fly, see for a visual explanation chapter 5.3.7.

#### SCENARIO

When backpacking, size and weight of the equipment are of utmost importance. Especially when wandering in the dessert, one has to carry a lot of heavy water bottles. In

this case, taking the ultra light LUCID Fly is enough to protect the user from harsh wind and sun, while it still gives the user plenty of versatility to make a spot their own. The LUCID Fly can be set up with trekking poles or by attaching it to a big rock or tree. The strings intertwined in the fabric give you the option to fully open your shelter when you feel like watching the stars at night or want to see the sunrise from your warm sleeping bag. Additionally the LUCID fly can function as a water container when during night water is condensing on the surface (figure 56).



Figure 56. Three pictures showing a scenario of how the LUCID Fly can be used.

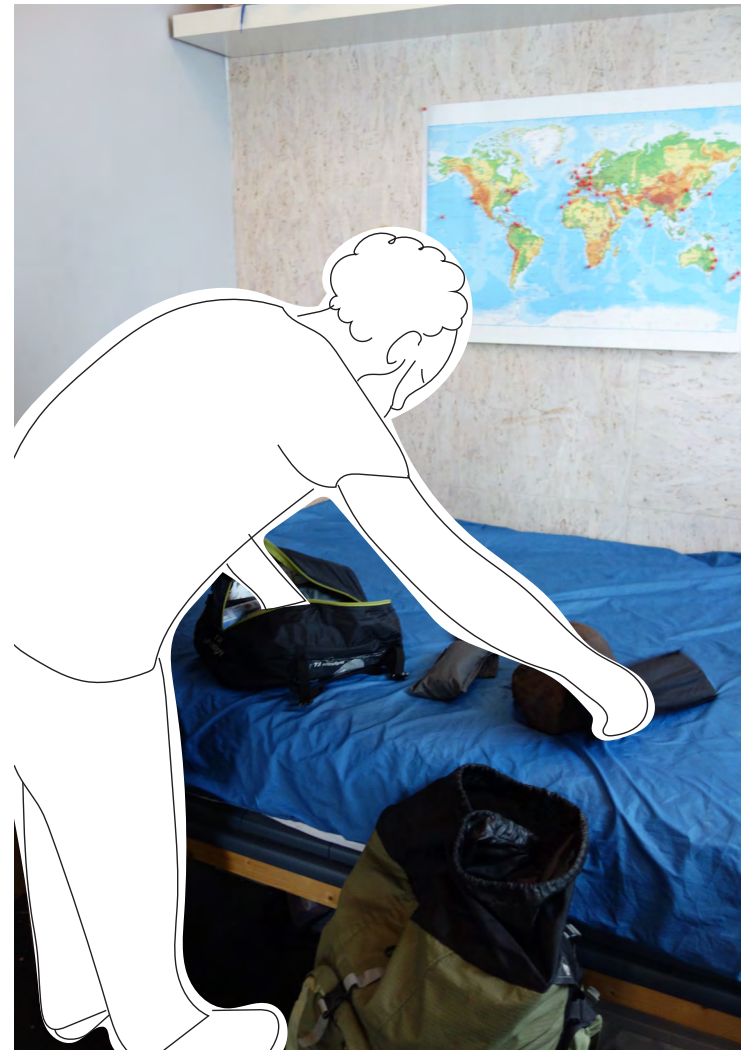


Figure 57. Estimation of the different components in their packed form.

### 5.3.5 PACKING FOR THE TRIP

Packing for a trip is a mindful activity, especially when using the LUCID. Figure 58 shows the interaction with the LUCID while packing. Figure 57 shows an estimation of the different components in their packed form.





### **5.3.6 CONFIGURING**

As explained multiple times before, the different components can be configured either by means of the user's own insight or by setting up or adjusting the one of the designed configurations. Here the mindful considerations to decide upon which configuration to choose is made concrete by illustrating them in the figures 59 and 60. Figure 60 illustrates an example of how a user can creatively build his or her own shelter with the components provided by the LUCID and using the surroundings.

# USER CONFIGURATION

## MINDFUL CONSIDERATIONS

- Forest
- No mosquitoes
- Cycling for multiple days
- Feeling creative
- Free camping
- Two persons



83 Figure 59. Example of a configuration conceived by an user with corresponding considerations. For this configuration the rain fly, front tent pole, vestibule and two branches are used to create an shelter with an awning on the side.

# LUCID Lush



## MINDFUL CONSIDERATIONS

- Rain
- No trees around
- Staying for more than 3 days
- Two persons

# LUCID Light



## MINDFUL CONSIDERATIONS

- Changeable weather
- More than 25 °C
- Staying 2 days
- Camping spot with a nice view
- Two persons

# LUCID Divis



## MINDFUL CONSIDERATIONS

- Windy but nice weather
- Duration of stay unknown
- Lots of trees and branches in the area
- One persons

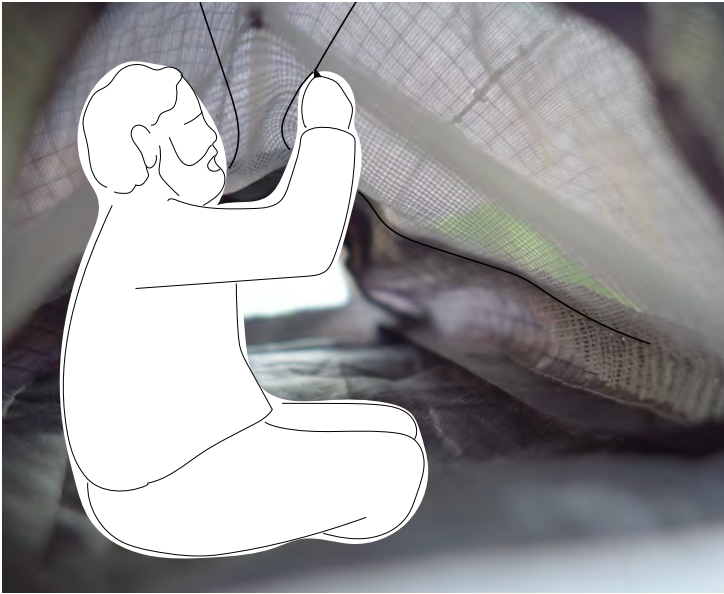
# LUCID Fly



## MINDFUL CONSIDERATIONS

- Bright sun
- Hiking for multiple days
- Staying one night
- Camping spot with a tree so no trekking poles are needed
- One person

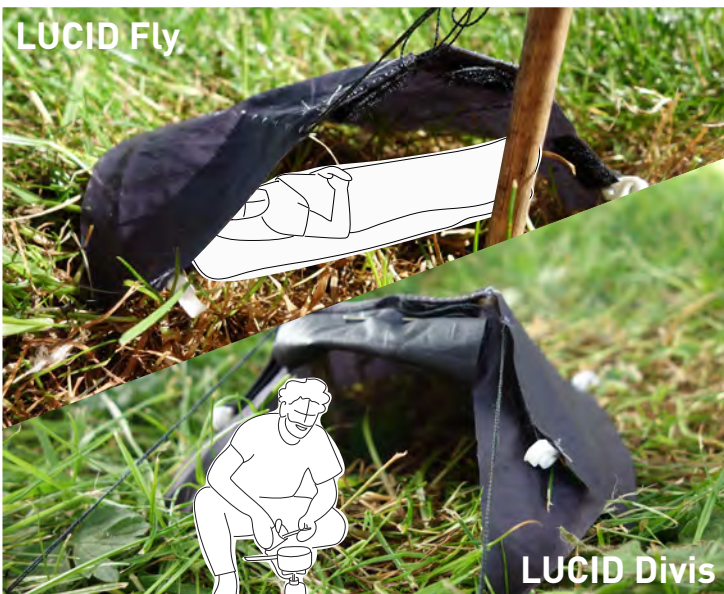
## LUCID Lush & Light



**CLOSED**



## LUCID Divis & Fly



### 5.3.7 SMOOTH OPEN AND CLOSING

To show how the different configurations are smoothly opened and closed this interaction is explained step by step in figure 61. As can be seen opening and closing works almost the same in all the configurations, making it comprehensible for the user. On top of that the LUCID Lush, Light, Divis and Fly can all be opened from the inside, making the interaction smooth and unencumbered.



→ OPEN

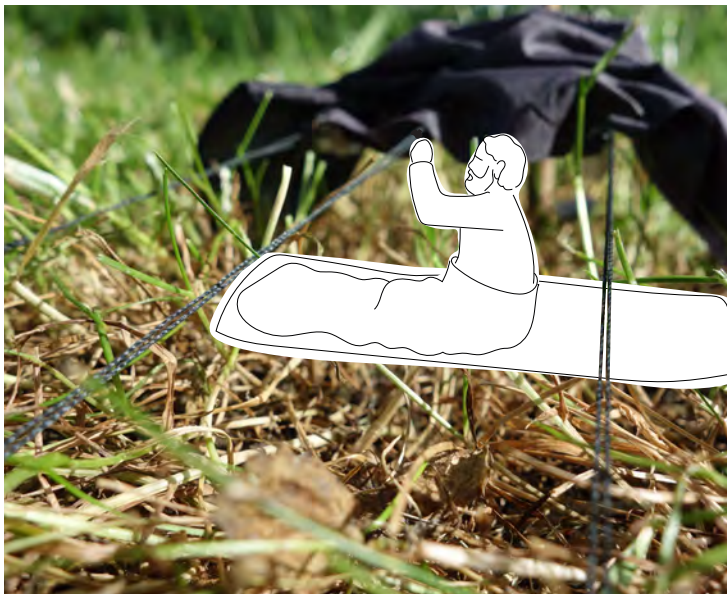


Figure 61. Visualisation of the interaction with the LUCID Lush, Light, Divis and Fly when opening and closing the rain fly

# 5.4 MATERIALISATION

## WHAT MATERIALS SHOULD THE PRODUCT BE MADE OF?

The interaction with the product depends not only on the product features but also on the look and feel, here material is very important. Material is also chosen based on consideration of sustainability, indicated by the participants of the context and user research as very important. In addition sustainability is considered during material selection to contribute to the continuation of being able to enjoy nature to the fullest.

The focus on interaction and sustainability results in the following criteria for material selection:

### Sustainability

- high quality/durable
- no use of polluting chemicals in the fabrication process.
- Pollution during use.

### Interaction

- Lightweight
- Low volume
- Durable looking
- Pliant
- Low property change under different circumstances
- Feeling of being protected
- Transparency

In a later development stage these materials have to be re-evaluated based on mechanical properties, price and processing ease, among other things. Next, the chosen materials are given and visualised in figure 62.

### 5.4.1 MATERIALS

#### TENT POLES

Because of sustainability considerations, DAC Featherlite NSL poles are chosen because they are anodized with DAC's Green Anodizing process, which eliminates nitric and phosphoric acid from the process. Also these poles are high quality and make it possible to mix different diameters in the same line of poles. This is needed to give the user the option to exchange parts of the front tent pole with two trekking poles. This not only enables the user to make the LUSH Light even lighter but also gives the user the feeling that the concept is even more versatile. Besides a material and a set-up mechanism a pole diameter must be selected. 9 mm is chosen based on tents with a similar shape. Further research is needed to optimize the diameter of the pole regarding, strength, stiffness and weight.

#### RAIN FLY

The rain fly is an important component because it is used in every set up option and will presumably be also used in a self-designed configuration. For using the fly in the different configurations it has to be made of a material that people will trust to use together with branches, trees and other non-provided objects. Therefore a durable fabric needs to be chosen. When considering durability a good option would be a thick and trustworthy cotton. Regrettably this does not fit the criteria: Light weight, low volume and pliant. Therefore a sturdy, lightweight, pliant and low volume ripstop fabric is chosen to

keep the fabric from ripping, and in case it does rip the ripstop will ensure the user the damage stays limited. Besides the different configurations the rain fly also plays a big role when it comes to opening and closing the LUCID. Because a smooth and easy interaction is preferred the rain fly has to be light and pliant. This makes it possible for people to retract the rain fly with just one hand quickly. Another consideration is how the tent looks when it is set up. Because the LUCID can be set up in many ways to support the desired interactions the rain fly is flat like a tarp. This results inevitable in a little slack in the rain fly. Therefore extra sagging due to expansion of material when it rains must be avoided, because this would lead to leakage when the rain fly touches the canopy. Therefore polyester is chosen instead of nylon (which is more commonly used in tents), because nylon expands considerably less in wet conditions. In conclusion a 20 denier polyester ripstop is selected for the rain fly.

#### CANOPY

Although the canopy has probably less to endure than the rain fly it still is preferred to give the user the feeling they can do anything with it and use it in every condition they desire. Therefore a ripstop is chosen. On top of that, user's also need to have the feeling they can go wherever they want, regardless of their transportation. Therefore lightweight and volume are criteria for the canopy fabric as well. Since sagging is less of an issue for this component, a cheaper nylon instead of polyester is selected. All

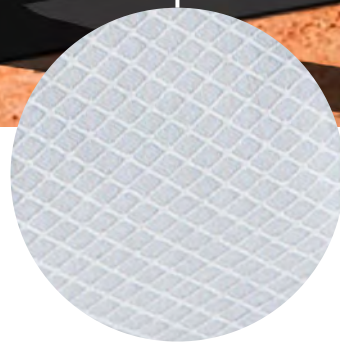
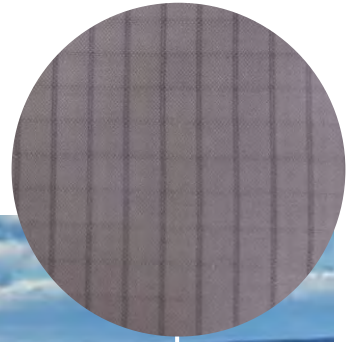
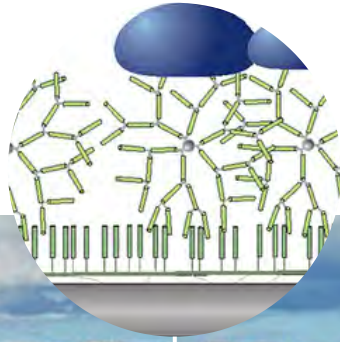


9 MM DAC  
FEATHERLITE NSL

BIONIC-FINISH ECO

SYMPATEX MEMBRANE

20 D POLYESTER  
RIPSTOP



15D NO-SEE-UM MESH

20 D POLYESTER  
RIPSTOP

20 D NYLON RIPSTOP

40 D NYLON RIPSTOP

these criteria lead to a 20 denier nylon ripstop for the canopy fabric.

#### VESTIBULE

For the vestibule the same requirements as for the canopy are applicable. But in addition the vestibule is flat unlike the canopy, meaning it is subjected to the same problem as the rain fly, namely that the vestibule may not sag when it starts to rain, because this will cause leakage and that will most likely have a negative effect on the camping experience instead of enhancing it. Therefore a 20 denier polyester ripstop is chosen.

#### CANOPY MESH

The canopy mesh must ensure the user, on the one hand, to feel safe from animals and other threats, and on the other hand, give the feeling that, despite the fact that there is something in between them and the environment, they can fully submerge in it. Therefore, a mesh must be selected that provides the perfect balance between transparent and fine-woven so that no pests can enter and the user can still look unhindered outside. This resulted in the choice for a 15 denier no-see-um white polyester mosquito netting. It is lightweight, soft, and keeps even the littlest insects out while being highly transparent.

#### FOOT PRINT

The foot print will be used to protect the user from heavy rain and also protect the tent from rough surfaces. Meanwhile it also has to encourage the user to find new possibilities and purposes for this piece of fabric.

Therefore a little sturdier and thicker fabric with a higher water column is chosen than for the rain fly, canopy and vestibule. These considerations lead to the selection of a 40 denier nylon ripstop.

#### WATERPROOFING

All the fabrics chosen for the different components, except for the mesh, need to be waterproof to protect the user from rain. Most waterproofing coatings use polyfluorinated chemicals (PFCs). According to research done by Geenpeace (2013) some of these PFCs are hazardous and cause harm to reproduction, promote the growth of tumors and affect the hormone system. They found these hazardous PFC's in most outdoor products and discovered that these chemicals can evaporate from these materials into the air, this way polluting even the most remote places of our earth. Luckily their conclusion is that there are a number of waterproofing options without PFC's. For the LUCID, a combination of a SympaTex membrane on the inside and a bionic-finish eco made by Rudolf company on the outside. SympaTex can withstand high water pressures, is very breathable, and allows for perspiration to evaporate to the outside. The bionic-finish eco repels water, dirt and oily substances. With more than 10000 abrasion cycles it performs even better than coatings using PFC's. This choice for a sustainable waterproofing fits well with the earlier mentioned desire to design a shelter that does not pollute the nature the target group is so very attached to.

#### REMAINDERS

Beside the just mentioned components, there are many more components in the LUCID that need to be materialized such as pegs, haberdashery, guide out lines, etc. All of these parts affect the interaction and sustainability of the design. However, these components are considered too detailed for this phase of the design process and therefore will be further elaborated on after this graduation project.

### 5.4.2 CONCLUSION

In this phase of the design process, materials are selected to shape the shelter. Different criteria are applied based on the design concept. However there is a tension between the requirements to be imposed on the materials selected. Due to the design phase this project is now in, the process of balancing criteria for material selection cannot be deepened. The criteria used to select materials are based on the intended interaction with product and the sustainability impact on the environment.

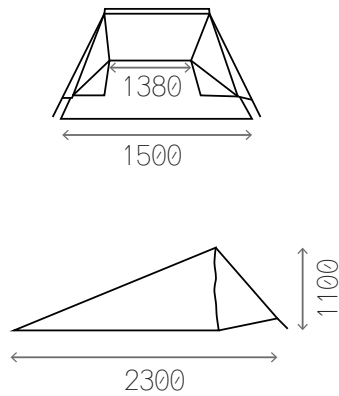
Weighting of criteria has led to choose DAC Featherlite NSL poles due to their sustainable and practical product features. For the fly, canopy and vestibule a nylon or polyester ripstop with sustainable waterproofing coating is selected based on their light weight, low volume, rip stop ability, sustainability and tough appearance among other characteristics.



## LUCID Divis



LIGHTWEIGHT  
SHELTER



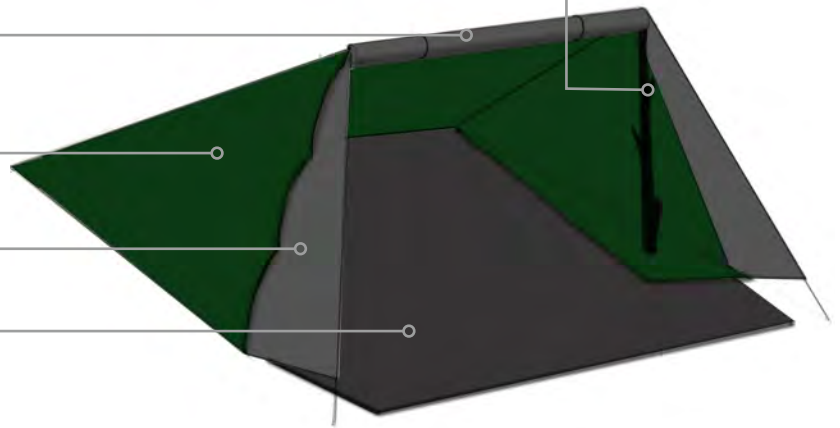
RAP, CLOSE OR  
CRATE A NICE  
AWNING

SUSTAINABLY  
WATERPROOFED  
RAIN FLY

DURABLE RIPSTOP  
VESTIBULE

DURABLE RIPSTOP  
FOOT PRINT

BRANCHES CAN BE  
SUBSTITUTED BY FOR  
EXAMPLE TREKKING  
POLES



## LUCID Fly



ULTRA LIGHTWEIGHT  
TARP SHELTER

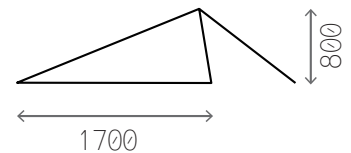
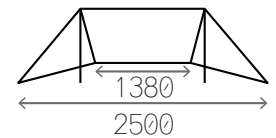


RETRACTABLE RAIN  
FLY FOR SMOOTH  
SUBMERGING IN OR  
SECLUSION FORM  
SURROUNDING.

DURABLE RIPSTOP  
RAIN FLY

TREKKING POLES CAN  
BE SUBSTITUTED BY FOR  
EXAMPLE BRANCHES,  
TREES OR OARS

6 TENT STAKES CAN BE  
SUBSTITUTED BY FOR  
EXAMPLE ROCKS OR  
SAND



# 5.5 CONCLUSION

## IS EACH PART OF THE DESIGN GOAL INCLUDED IN THE DESIGN?

To see if each part of the design goal is in the end included in the design, the design is summarised in figure 63. Subsequently the design goal is taken apart and colour coded:

The goal was to design a shelter where the feeling of being outside and inside merge smoothly into one another. Giving the user the opportunity to seclude from and submerge in their surrounding. Meanwhile enabling the user to break

with their daily routine and make a shelter and therewith their camping spot their own, in a mindful and exploratory manner.

The colour coded design goal together with figure 63 shows that all the aspects of the design goal are indeed included in the design. As for the mindful interaction it is believed that figure 63 falls short to show the full range of the mindful interaction with the

design. Since the mindful interaction is mostly psychological interaction instead of physical interaction.

Now that the concept is explained and it is established that the LUCID theoretically fits the design goal, a target group evaluation needs to be done to change this theoretical conclusion to a concrete one.

## LUCID Light

  LIGHTWEIGHT SHELTER






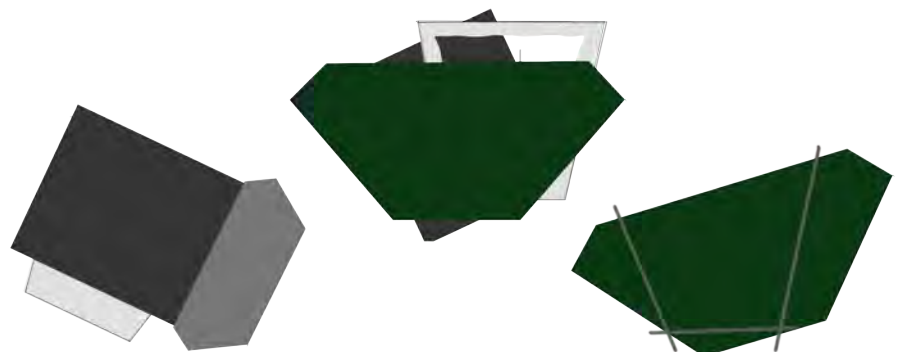
## LUCID Lush

  FREE STANDING SHELTER



## LUCID User configuration

   DEPENDED ON: NEEDS, SURROUNDING, SITUATION, CREATIVITY LEVEL, SKILL LEVEL, MOOD ETC.





# 6. CONCEPT EVALUATION

## 6.1 INTRODUCTION

A context and target group research is done which led to a design focus, vision and subsequently to a design goal. This design goal is the basis of the concept LUCID explained in the previous chapter. To check if the design goal is reached, an evaluation research is done. This research is explained in this chapter.

First a research setup is explained (chapter 6.2) subsequently the conclusions from this research are explained, which lead to the recommendations for development of the LUCID (chapter 6.3).

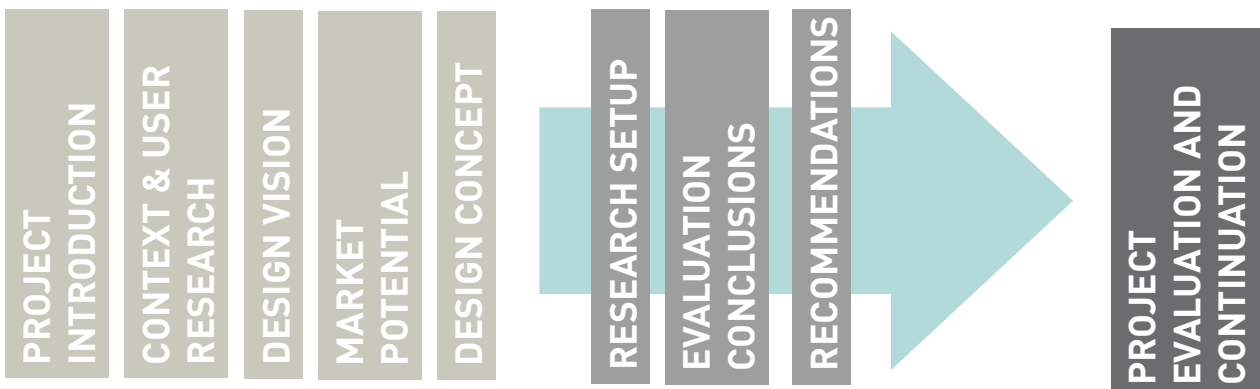


Figure 64. Schematic reproduction of what is already explained, what will be explained in this chapter and what comes next.

# 6.2 RESEARCH SETUP

## HOW TO EVALUATE IF THE DESIGN MEETS THE DESIGN GOAL?

A research is set up to evaluate the LUCID. Seven average and extreme campers are selected and asked to participate in an evaluation session of the LUCID (figure 65). The sessions is held with each participant individually and took between 45 and 60 minutes. Here the full list of research questions and a short explanation of the procedure is given the rest of the setup can be found in appendix L.

### RESEARCH QUESTIONS

Main question:

Does the design meet the design goal?

Sub-questions:

- To what extend does the design give the user the feeling they can smoothly transit from an open to a closed shelter?
- To what extend does the design give the user the feeling they can seclude from and submerge in their surrounding?
- To what extend does the design give the user the feeling it helps them break with daily routine?
- To what extend does the design give the user the feeling they can make a camping spot their own?
- To what extend does the design give the user the feeling they can make a camping spot their own in an exploratory manner?
- To what extend does the design give the user the feeling they can make a camping spot their own in a mindful manner?
- What concerns does the design raise?
- What opportunities do the users see for the design?

### PROCEDURE

First an introduction is given on what the research is for and the different steps the evaluation session will consist of. Then the participants are asked to describe what kind of camping trips they make. In this way, it can be determined what kind of camper the participant is. The different camping trips described will also be used to discuss the concept later on in the session. After this, the concept is explained by means of the two stimuli, illustrations and a 1:20 mock up.

While explaining the concept, no value judgment or explanation why certain things are designed the way they are is given.

When the concept is clear to the participant he or she is asked to explain if and how they would use the LUCID during the different camping trips distinguished before. No further input is given at this instance except from questions like: can you elaborate on that? Can you explain that to me? and why do you think so? This way it is possible to find out if the LUCID is used in the intended way and if the participants see the benefits of the LUCID without pointing them out. After the participant explained how he or she would use the LUCID, research questions that remain unanswered are dealt with. This is done by asking the participant what they think about these aspects. This feedback on the LUCID is viewed as less valuable than the input the participants give themselves.

When all the research questions are answered, the participants are asked to evaluate the concept by prompting the following questions:

- Would you like to add or change something to the concept?
- What do you see as the biggest advantage and what as the biggest disadvantage of the LUCID?

After these last questions the evaluation session is completed and the participant is thanked for his or her participation.

### ANALYSIS

A fill out form together with an audio recorder is used to capture the evaluation sessions. The form also functions as guidance and to keep track of the answered research questions during the session. To analyse the data the notes are supplemented with quotes from the audio recording. Subsequently the notes and quotes are classified by research question and concluded in chapter 6.3.



J. VERHOECKX  
 AGE: 24  
 GENDER: FEMALE  
 SHOWS  
 RESEMBLANCE  
 WITH PERSONA(S):  
 EXTREME NICHOLAS  
 AND EASY GOING  
 ANNA



O. MEIJS  
 AGE: 25  
 GENDER: MALE  
 RESEMBLANCE WITH  
 PERSONA(S): ACTIVE  
 BOB, BASIC MARY  
 AND EASY GOING  
 ANNA



S. VAN DER HORST  
 AGE: 30  
 GENDER: MALE  
 RESEMBLANCE WITH  
 PERSONA(S): ACTIVE  
 BOB



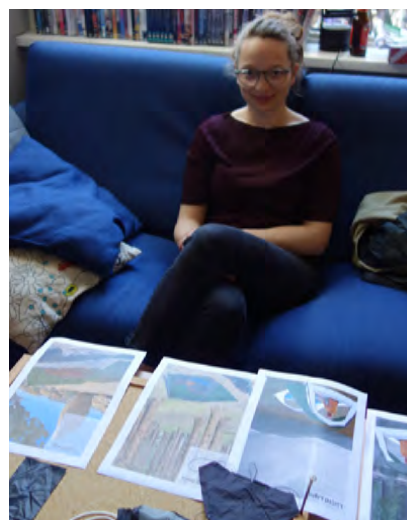
T. DE JONG  
 AGE: 58  
 GENDER: MALE  
 RESEMBLANCE  
 WITH PERSONA(S):  
 EXTREME NICHOLAS  
 AND EASY GOING  
 ANNA



A. KATTEMULLÖLLE  
 AGE: 27  
 GENDER: FEMALE  
 RESEMBLANCE  
 WITH PERSONA(S):  
 EXTREME NICHOLAS  
 AND ACTIVE BOB



E. LAGEWAARDT  
 AGE: 55  
 GENDER: FEMALE  
 RESEMBLANCE WITH  
 PERSONA(S): EASY  
 GOING ANNA AND  
 BASIC MARY



Y. BOOM  
 AGE: 24  
 GENDER: FEMALE  
 RESEMBLANCE WITH  
 PERSONA(S): EASY  
 GOING ANNA AND  
 BASIC MARY

# 6.3 CONCLUSIONS

## WHAT NEEDS TO BE IMPROVED AND FURTHER LOOKED INTO?

Quotes from the evaluation session are categorised per research question. Interpreting the data created insights based on presumed interactions with use of and opinions about the LUCID. Here the insights are explained per research question. First the research questions based on the design goal are explained. Thereafter concerns and opportunities are discussed.

### 6.3.2 HOW THE DESIGN FITS THE DESIGN GOAL

- Does the design give the user the feeling they can smoothly transit from an open to a closed shelter?
- Does the design give the user the feeling they can seclude from and submerge in their surrounding?

This part of the design goal is mainly focused on opening and closing the shelter, in what manner and for what reason. Some just see the practical aspect. They imagine the LUCID and especially the Lush and Light as a shelter one can ventilate well by retracting the rain fly. But most see the benefit of being able to submerge in or seclude from their surroundings as one of the biggest advantages of the LUCID.

“BEING PROTECTED AND STILL HAVING THE FEELING OF BEING IN NATURE INSTEAD OF IN YOUR TENT.”

“I COULD VERY WELL IMAGINE THAT I WOULD CLOSE THE COVER BECAUSE OF PRIVACY OR WHATEVER. FOR EXAMPLE ON A BUSY NORMAL CAMPING.”

Although almost everyone was very enthusiastic about this feature of the LUCID, some expressed a concern. Opening and closing the shelter should be very easy and smooth. Preferably pulling a string, like opening the curtains.

“IT REALLY DEPENDS ON THE EASINESS OF USE WHETHER I WOULD USE IT IN THE END. OPENING THE ROOF NEEDS TO BE NICE AND EASY. IT NEEDS TO RUN SMOOTHLY”.

This concern is already included in the design goal and interaction vision by stating that the interaction should be smooth. And integrated in the design by enabling the user to open and close the rain fly from the inside. However when developing the concept, further research needs to be done to evaluate the current interaction. Research might very well lead to the conclusion that the interaction should be even smoother.

- Does the design give the user the feeling it helps them break with daily routine?

During this research this part of the design goal is neither confirmed nor rejected. This can have several reasons. For starters, this part of the design goal tries to positively influence a subconscious need that is uncovered by the method of context mapping. This method is as explained in chapter 2.2.2 known for exposing latent needs. The method used for validating the concept is not known for that. This could very well be the reason for participants not addressing this part of the design goal during the evaluation session. Another reason could be that the design simply does not encourage the user to break with their daily routine. It is suggested to further analyse if the design meets this part of the design goal, a different more fitting research is carried out.

- Does the design give the user the feeling they can make a camping spot their own?

It differs how people experience the LUCID regarding this part of the design goal. All participants indicated that they would use different configurations depending on the situation or conditions they would be in. For example:

“I DON’T KNOW BEFOREHAND WHERE I WILL END UP. BUT NOW I CAN THINK: OH WHAT A NICE SPOT I’M GOING TO SET UP THIS CONFIGURATION. OR, TONIGHT WE EXPECT MOSQUITOS SO WE ARE GOING TO SET UP THE CANOPY. OR, WE ARE NOW AT A VERY BUSY CAMP SPOT, SO I AM GOING TO PUT THE RAIN FLY OVER TO CREATE MORE PRIVACY.”

But only some see experiential advantages in making the shelter your own by using the surrounding. Searching for branches or a tree to set up the Light or the Divis sparked the creativity of some and is viewed as cumbersome by others. Creating a new configuration or adapting an existing one on the other hand got more endorsement. Without asking the participants if they felt the need or want to create their own configuration, they started explaining alternations by themselves:

“I CAN ALSO IMAGINE LIFTING THE SIDE OF THE RAIN FLY SO YOU CAN STORE MORE STUFF THERE, OR A TARP AWNING. USING THE SIDE MORE AS THE MAIN ENTRANCE. AND YOU CAN ALSO LOOK OUTSIDE WHEN IT IS LIFTED LIKE THAT.”

It is therefore proposed that the included tent poles are redesigned in such a way that they can also be used to set up the Divis and the Fly, giving the user more flexibility and reassurance when they don’t feel like creating their own shelter or the surrounding does not support them. It is believed that the users, who get creatively sparked by their surroundings, will still create their own set up. Even when it is not necessary:

“A TENT POLE IS REASSURING BUT I LIKE TO THINK OF CREATIVE SOLUTIONS TO GIVE THE SHELTER STRUCTURE IN THE MOST EFFICIENT WAY. I LIKE TO THINK ABOUT THAT. AND IT IS ALSO PART OF THE EXPERIENCE, BEING ACTIVELY BUSY WITH MAKING THE SHELTER.”

- Does the design give the user the feeling they can make a camping spot their own in a mindful and exploratory manner?

The interaction quality ‘exploratory’ is clearly present in the way the participants explained how they would set up the LUCID in different situations and conditions. The interaction quality ‘mindful’ on the other hand is less apparent. Therefore here is zoomed in on the two moments the interaction quality mindful is intended. In chapter

5.2.2 it is explained that this interaction quality would first have effect when packing for the trip. Participants showed during the evaluation session that a well considered choice is made as to which components of the LUCID they would bring depending on the kind of trip. Indicating that here a mindful interaction is in play.

“WHEN I KNOW THE WEATHER IS GOING TO BE GOOD AT HE BEGINNING OF THE HIKE I WOULD SEND THE CANOPY TO A RANGER STATION FURTHER DOWN THE TRACK AND US E THE DIVIS IN THE BEGINNING. LATER ON WHEN TREKKING IN THE MOUNTAINS I WOULD PICK UP THE CANOPY AND USE THE LUCID LIGHT.”

After that the interaction quality mindful should play a role just before setting up camp. Intended is that the surrounding and conditions are considered and dependently the configuration is chosen or created. In reality this depends a lot on the kind of trip. When going by car, all the components are often brought along, making it possible to set up all the configurations. However, when staying for more than one night, most participants indicated they would use the Lush or the Light because of more comfort, storage and living space. When staying for just one night people seem to care less for these things and

are more likely to set up the Divis or the Fly. Weather conditions play a part in this consideration as well.

“SO, THE DIVIS FOR ON THE GO AND THE LIGHT WHEN I STAY AT ONE PLACE FOR A LONGER PERIOD OF TIME.”

When trekking by foot or by bicycle beforehand a lighter and smaller pack size is preferred. Making the Fly, Divis and Light more popular configurations because one tent pole and the vestibule can be left at home. When trekking and staying for just one night on each spot the Fly and Divis are top of the list but when a slower pace is applicable people soon see added value in setting up the Light. In conclusion, all the configurations are mentioned by different participants, but often the choice is between the Light and the Lush when travelling by car and between the Divis and the Light when traveling by foot or bicycle. Only participants showing similarities with the persona Extreme Nicholas found themselves using the LUCID Fly in a lot of situations.

“I STILL WANT A SIMPLE TENT, AS ELEMENTARY AS POSSIBLE. SO, SOMETHING LIKE THE LUCID FLY IS VERY NICE. ONLY A RAIN FLY, WONDERFUL! AS LONG AS THE WEATHER CONDITIONS ALLOW ME I WOULD LIKE TO USE THIS CONFIGURATION.”

Therefore, it should be considered to improve the mindful interaction with the LUCID when setting it up. Either by improving how the Fly and the Divis are perceived, light weight, low volume and easy to set up. Giving the user more to consider and enhancing the mindful interaction when setting up the shelter. Or by taking a totally different approach to accomplish a mindful interaction.

A mindful interaction before the trip begins seems to be already achieved in the intended way. When still at home or even when buying the LUCID people have the idea that they can make any kind of camping trip with this shelter. Encouraging them to think of adventures yet to come:

“I NEVER DID A CAMPING TRIP BY FOOT OR WITH A BICYCLE, BUT I REALLY WANT TO. THIS CONCEPT WOULD ENABLE AND ENCOURAGE ME TO DO SO.”

### 6.3.3 CONCERNS AND OPPORTUNITIES

Besides analysing if the concept fits the design goal, concerns and opportunities expressed by the participants of the evaluation sessions are gathered. These concerns and opportunities have to be further analysed and considered when developing the concept.

- What concerns does the design raise?

#### STORAGE SPACE

Some participants expressed the concern regarding storage space. Further research must indicate whether there is indeed not enough storage space.

#### PACKAGING

Because there are more components than with a normal tent, and the user can decide to leave some at home. Some participants expressed the concern of losing or forgetting components. This assumption seems plausible and a good solution needs to be found. Solutions suggested by one participant was colour coding and Tetris like bags so they would fit as a whole for each configuration, making sure no needed components are left behind.

#### USING BRANCHES

One of the participants expressed the concern that he might not feel comfortable using branches for the structure because he would be scared to pierce the fabric. If this would be clearly designed for that purpose, this concern would be taken away, he indicated. Further research must indicate whether more people have this concern and, if so, how the design can express that this kind of use is intended and does not result in a ripped shelter.

#### ANIMALS

Some participants mentioned that they dislike unwanted visitors in their shelter. They indicated that they were less likely to use the Light and Divis because of this reason. Therefore

a bug-net for these configurations should be considered.

### RAINPROOF, QUALITY AND WEIGHT

Because all the configurations are partly or completely single walled, some participants are concerned that the tent will leak when touching it. Other shelters have proven that this is nothing to worry about, nevertheless, it should be considered to take it into account when communicating the concept in the store, just like the weight and quality of the material. These should all be similar to comparable products.

- What opportunities do the users see for the design?

### LIVING SPACE

Some participants expressed the want for extra living space to cook, eat, play games, etc. This could be an opportunity for an extension of the LUCID. The LUCID can be the basic package, which one can extend with for example a package that provides extra living space.

### NEW AND EXTRA COMPONENTS

Sometimes parts of a tent are wearing out or get broken. Normally this would mean you have to buy a completely new tent. But because this shelter is made up of different components and also packaged that way, it is a nice opportunity to sell the different components as a package but also as loose components, not only enabling users to replace

components but also to expand their package with for example an extra rain fly, giving them for example the opportunity to set up a base camp and have the LUCID Fly as trekking option, or expand their creative solution space for a self-designed configuration.

### 6.3.4 RECOMMENDATIONS

All the improvements mentioned in this chapter should be taken into account when developing the concept. Here the recommendations resulting from the evaluation research are listed:

#### DESIGN GOAL

- Further research needs to be done to evaluate the current smoothness of opening and closing the rain fly. This is needed to evaluate if this interaction is already smooth enough or can and must be enhanced.
- Since this research failed to confirm or rejected the LUCID helps the user to break with daily routine, a second research needs to be done to see if improvement is needed.
- To give the user more flexibility to make a the shelter their own in any given situation, it should be considered to include tent poles for setting up the LUCID Fly and Divis. Preferably by changing the current tent poles so they can also be used for these two configurations.
- It should be considered to improve the mindful interaction between user and shelter when

setting up the tent.

### CONCERNS AND OPPORTUNITIES

It is advised to further investigate whether and how to optimize the following:

- Storage space
- Packaging
- Trust in materials
- Trust in quality
- Trust in rain-proofing
- Living space
- Replacing components
- Additional components

### FURTHER DEVELOPMENT

Besides taking into account the recommendations resulting from this research, the whole concept has to be further developed and evaluated. Recommended is to first further evaluate the desired interaction by means of a 1:1 model. When the outcome of this evaluation is positive, detailing and embodiment of the concept can begin. Meanwhile it is advised to analyse the market potential of the LUCID.

It is advised to develop the LUCID by means of an iterative process. Meaning: development and testing alternate each other until it is decided to launch the LUCID. Even then improvements can be made, probably resulting in multiple versions of the LUCID over the years.

# 7. PROJECT EVALUATION & CONTINUATION



## **7.1 INTRODUCTION**

As a concept is designed and evaluated, the project limitations can be discussed and evaluated to help assess if further development is advisable. This advice will conclude this graduation project.

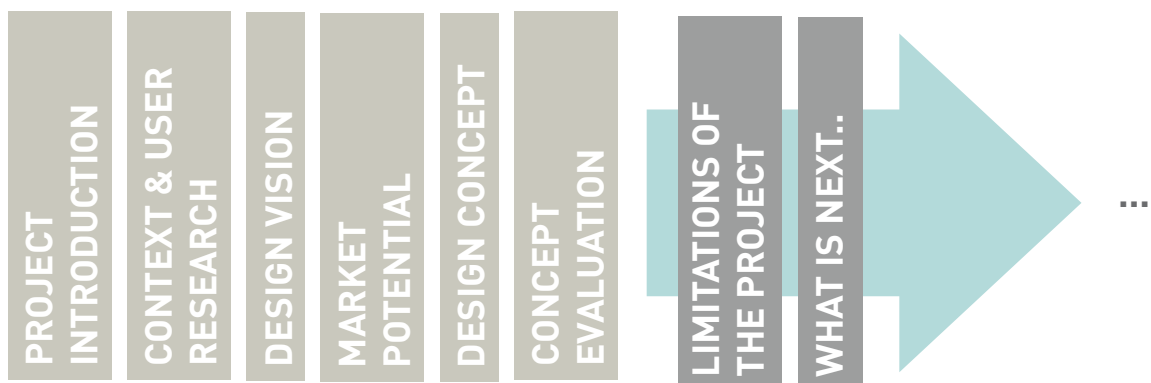


Figure 66. Schematic reproduction of what is already explained, what will be explained in this chapter and what comes next.

# 7.2 DISCUSSION

## WHAT ARE THE LIMITATIONS OF THE PROJECT?

Although the concept is well-received by the target group during the evaluation sessions, the project has its limitations. The project's limitations are discussed to give insight if these limitations have a major consequences for continuation of the project.

### 7.2.1 RESEARCH LIMITATIONS

#### CONTEXT AND USER RESEARCH

This research was very elaborate and gave rich insights because it looked at the context from different angles by using four different research methods. However, there are some limitations to this research. Firstly all the participants of the interviews and four of the six participants of the context mapping session were acquaintances. On one hand, this had the benefit of being able to categorise the participants with certainty as extreme or average camper, and on the other hand, it had the disadvantage of subjective participants. However, it remains the question whether or not this has played a role. Because both during the interviews and during the context mapping session there is no right or wrong, just own experience and the willingness to share these experience.

The assumption that current shelters do not play a role in the camping story is not explicitly but only implicitly confirmed by the context and user research. As a result, there is no hard evidence to convince people of this assumption other than a shelter concept of which people see the experiential benefits of.

#### CONCEPT EVALUATION RESEARCH

The concept evaluation research was helpful and gave great insights, unfortunately it gave not all the insights needed to answer all the research questions. Although this is the biggest limitation of this research it is not the only one. Another limitation was that most of the participants were acquaintances. This might have influenced the outcome of the research because of their subjectivity. They might have been more positive about the LUCID because they personally knew who designed the concept. Furthermore, five of the seven of the participants also participated in the context and user research. This might have influenced the outcome of the research as well, since they might have felt invested. However, no of the participants knew what the concept was before participating in the concept evaluation research. Finally, this research investigated presumed use instead of real use due to limited time and resources. It has to be taken into account that the outcome of this research does probably not reflect the exact reality of use and interaction. The fact that no real interaction could be observed is also one of the reasons some of the research questions could not be (satisfactorily) answered.

### 7.2.2 DESIGN LIMITATIONS

During this project the focus was mainly on interaction and experience rather than market, functionality, usability and product feasibility. This choice is clearly made in the beginning of the project when choosing for a top down design approach (chapter 1.5). However, this has led to a concept that is limited on these points. This does not mean the LUCID is a good or bad concept, it means that, when proceeding with this project market, functionality, usability and product feasibility should get more priority during development.

### 7.2.3 CONCLUSION

The limitations of the project are restricted to a manageable degree. When deciding to continue the project the evaluation research needs to be substituted with another research. This is to be able to validate the whole design goal. Further development of the LUCID will have to focus on market, functionality, usability and product feasibility in order to arrive at a well substantiated concept.





# 7.3 WHAT IS NEXT...

## IS FURTHER DEVELOPMENT ADVISABLE? AND IF SO, HOW?

When doing a graduation project for a company, one hopes the final conclusion is: It is advised to proceed the developments of the concept. Hence, 'throwing the idea over the fence' as the Dutch like to say, ending the graduation project there and then. In this case the graduation project is done with the incentive to see if the concept can be a beginning of an entrepreneurship. Below is evaluated if it is a good idea to proceed the development of the LUCID

### 7.3.1 EVALUATION

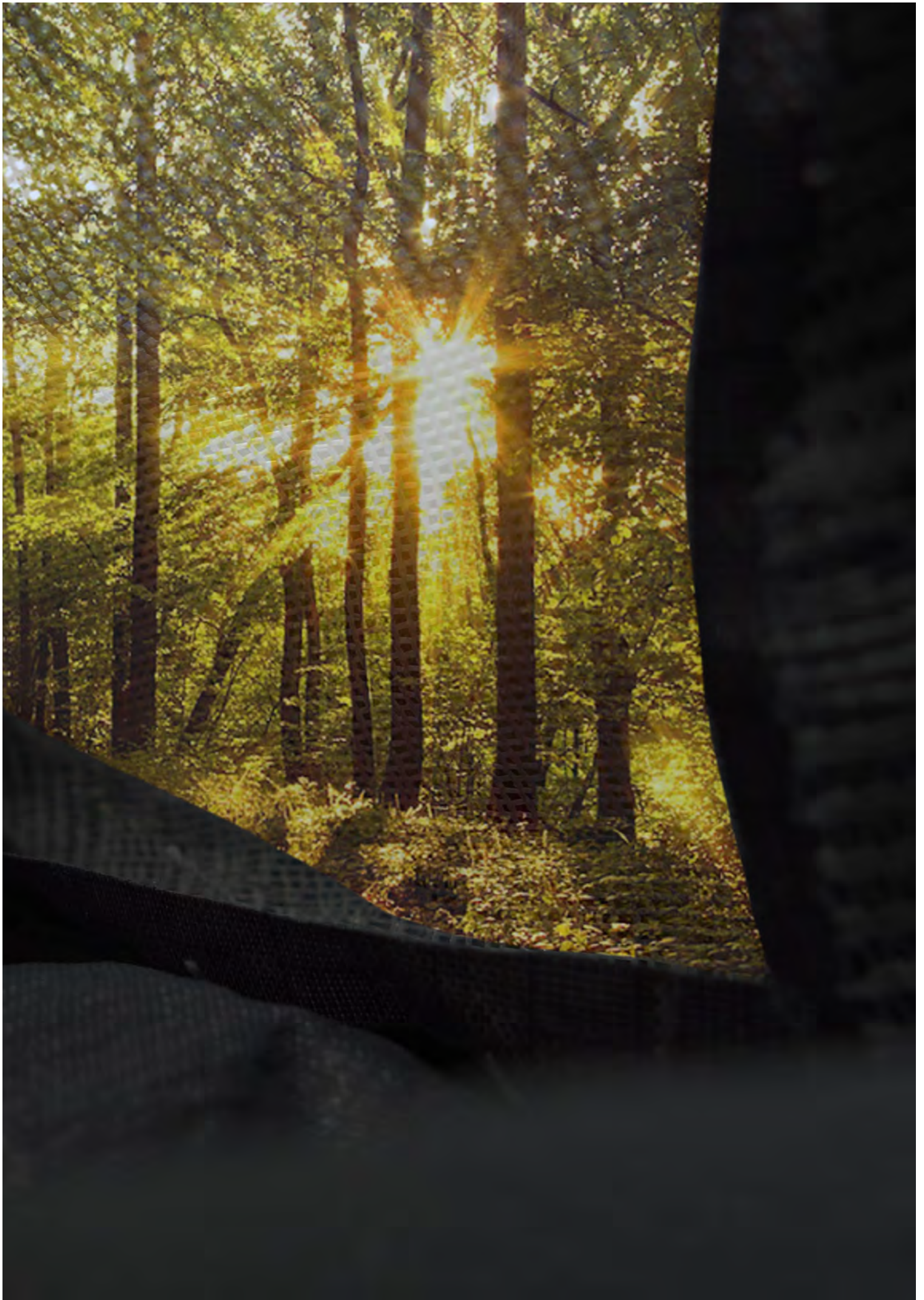
During the concept evaluation research all of the participants reacted very positive on the concept and even indicated they wanted to have the concept if it was on the market. Noted that this are only seven people it is still 100% and they cover the all the four personas defined within the target group.

When evaluating the LUCID with

camping and outdoor specialist D. Hazewindus (2017), he was very enthusiastic. He had some practical notes like: "the front and back pole are under too much stress, you might want to lower the height of the front and widen the back" (this is confirmed by an iteration study, see appendix J). However, his overall advise was, although a lot of development still has to be done, to continue with the project because he definitely sees potential in the LUCID.

### 7.3.2 DEVELOPMENT ADVICE

These two positive evaluations do not guarantee developing the LUCID will lead to success, but the evaluations do indicate it would be a shame not to try to. Therefore, the conclusion of this project is the advise to keep developing the LUCID and see where it might take us.



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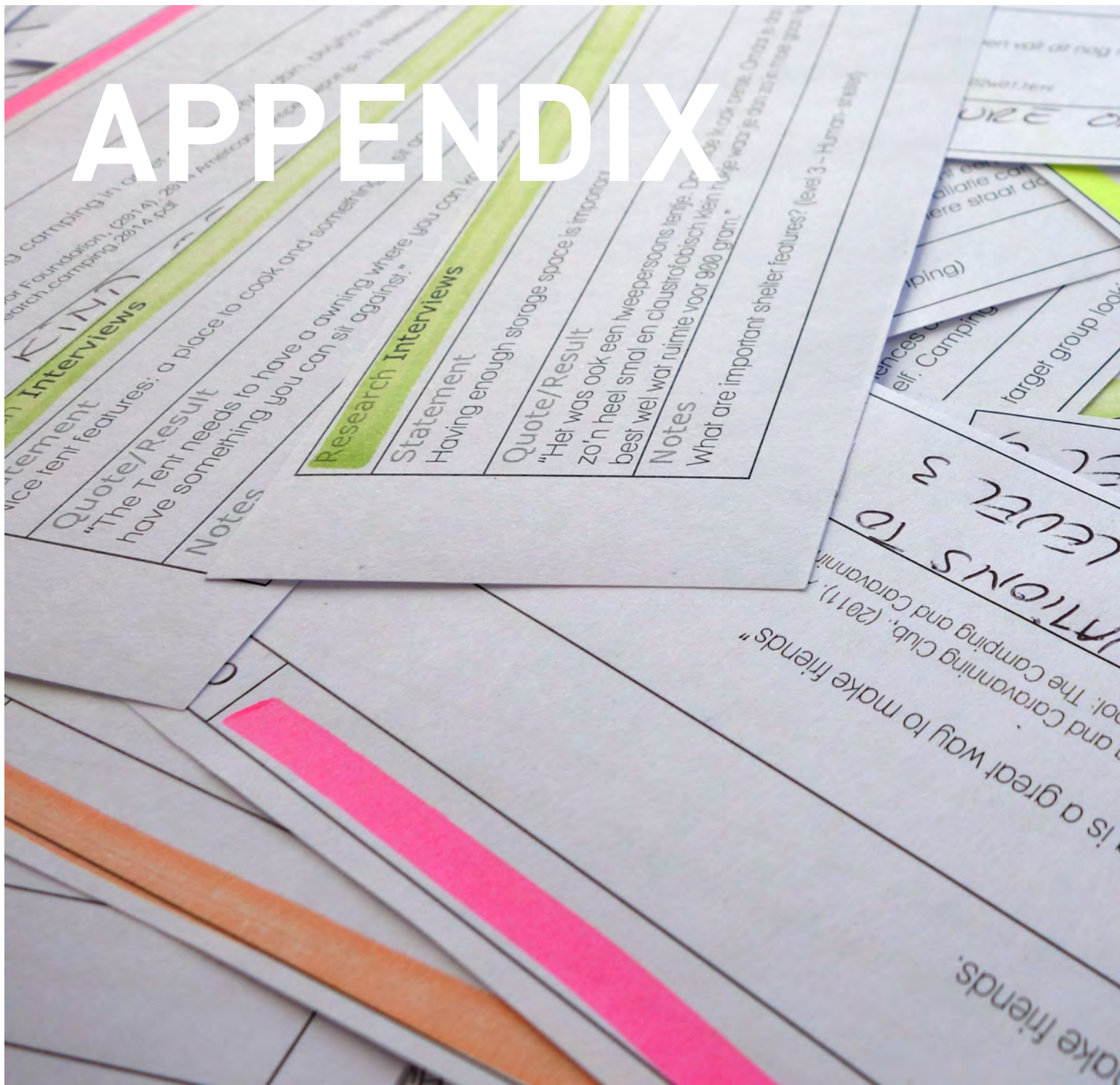
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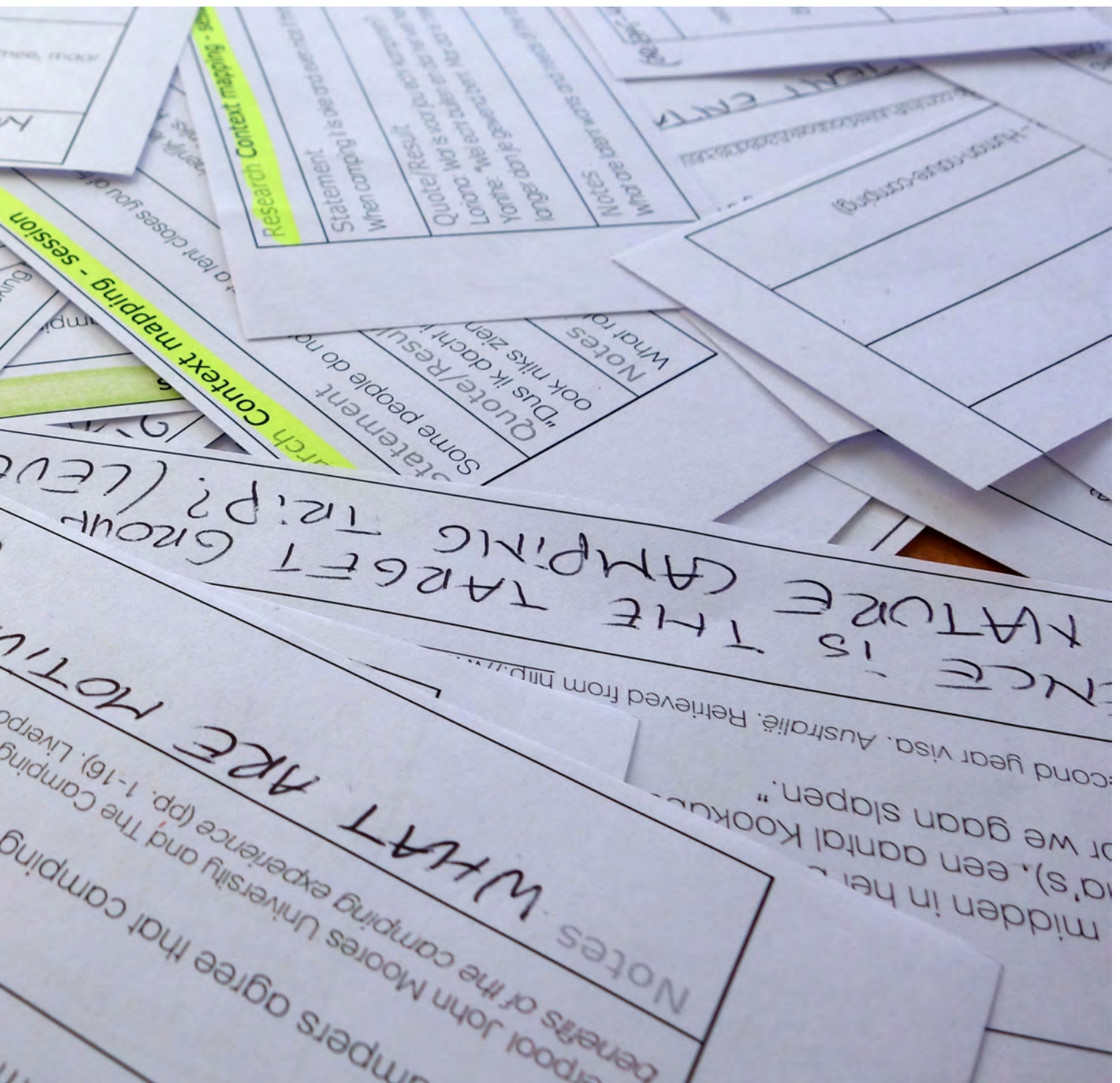


# APPENDIX

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# A RESEARCH APPROACH

## HOW IS THE CONTEXT AND USER RESEARCH SET UP?

This appendix complements the explanation of the research approach in chapter 2.2. Figure 67 shows a brief overview of the followed approach.

### A1 LITERATURE

Literature is chosen based on relevance regarding the subjects nature, camping and nature based camping and thereafter selected if they gave answer to one or more of the research questions below.

Research questions:

4. Which experiences is the target group looking for in a nature camping trip?
5. What are the motivations to camp in nature?
6. What is the effect of nature on camping?
7. What is the relation between human nature and shelter?
8. Which effect has nature on shelter use?
9. What kind of nature experience is the target group looking for during shelter use?
10. Which interactions do people have with their shelter during a camping trip?
11. What role does a shelter fulfil during a camping trip?
12. What meaning has camping (with a tent) for the target group?
13. What is the effect of camping on campers?
14. Who is camping?
15. What kind of camping gear do campers use?
16. What are the motivations to go camping?
17. What does sleeping in a shelter entail?
18. What are important shelter features?
19. What are important shelter features?
20. What are important shelter features?

### CONSULTED LITERATURE

#### Nature

Garst, B., Williams, D., & Roggenbuck, J. (2009). Exploring Early Twenty-First Century Developed Forest Camping Experiences and Meanings.

Howell, A., Dopko, R., Passmore, H., & Buro, K. (2011). Nature connectedness: Associations with well-being and mindfulness.

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#### Camping

The Coleman Company Inc. and the Outdoor Foundation, (2014). 2014 American Camper Report

Liverpool John Moores University and The Camping and Caravanning Club,. (2011). Are those who camp richer for it? The psychological and social benefits of the camping experience

Brooker, E. & Joppe, M. (2013). Trends in camping and outdoor hospitality—An international review.

Mock, S. & Hummel, E. (2012). Sexual Minority Adults at a Seasonal Home Campground: An Examination of Common, Unique, and Diverse Leisure Motivations.

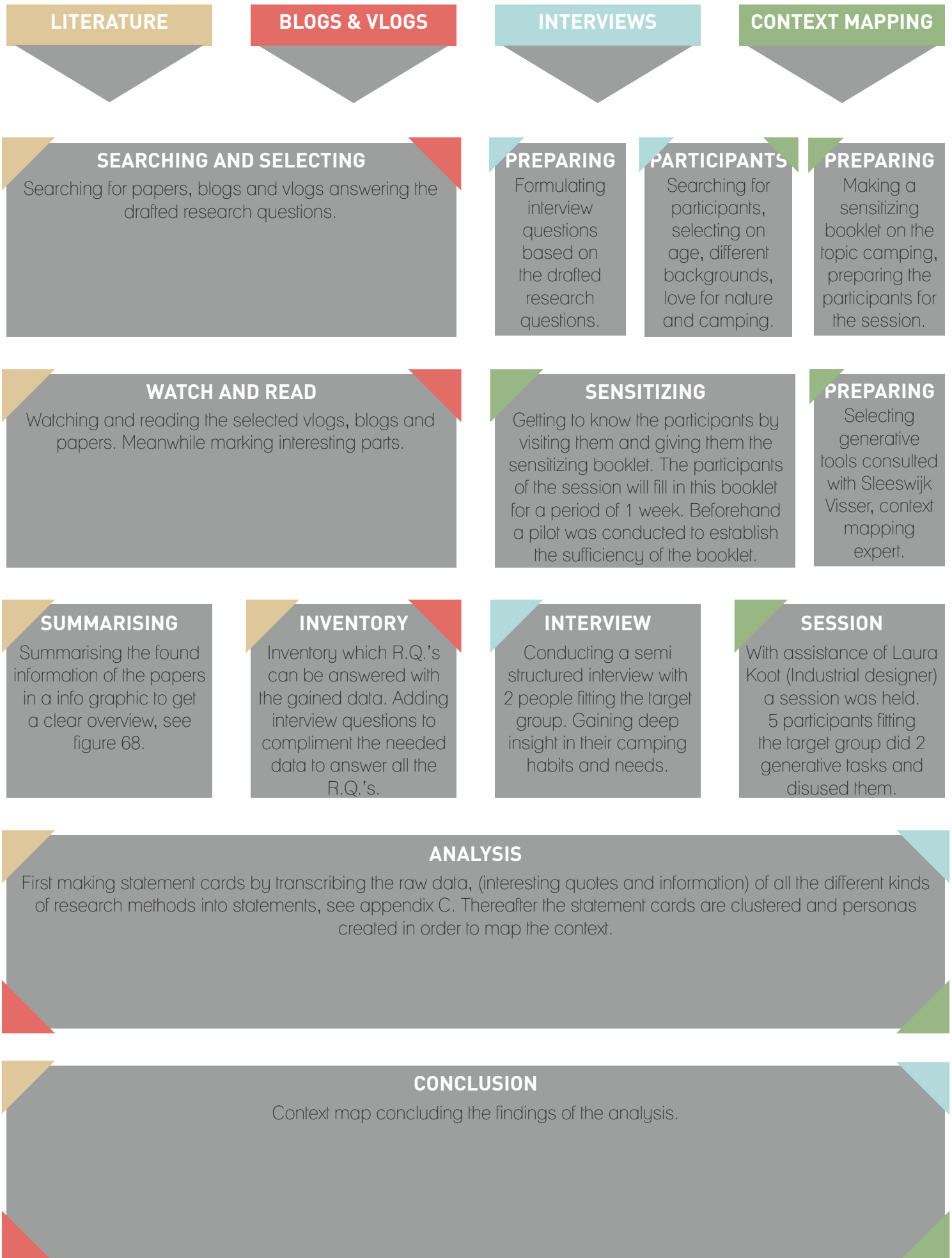
Cairn Consulting Group and Kampgrounds of America, (2016). North american camping report

Nature based camping  
Hassell, S., Moore, S., & Macbeth, J. (2015). Exploring the Motivations, Experiences and Meanings of Camping in National Parks.

Garst, B., Williams, D., & Roggenbuck, J. (2009). Exploring Early Twenty-First Century Developed Forest Camping Experiences and Meanings.

### DATA PROCESSING AND DRAWING CONCLUSIONS

The sections in the papers giving answer to the given research questions are summarized in a info graphic (see figure 68) and incorporated in the statement cards (see appendix C) and subsequently in the clusters and context map.

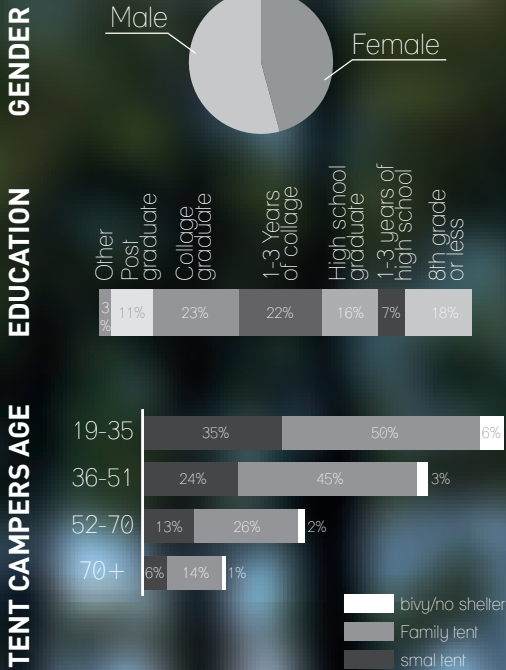


# CAMPING

"Camping is a form of outdoor recreation that is part activity and part accommodation"  
Edward Brooker and Marion Joppe, (2013)

## WHO IS CAMPING?

Result of a online surveys by the outdoorfoundation, (2014) and Cairn Consulting Group, (2016) among US households.

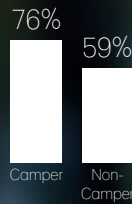


## HOW DO YOU FEEL ON A AVERAGE DAY?

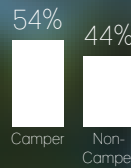
1000 UK campers and 1000 UK non-campers are asked how they feel on an average day by the camping and caravanning club, (2011).

### CAMPERS ARE MORE...

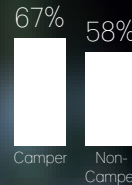
#### SATISFIED



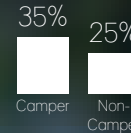
#### OPTIMISTIC



#### HAPPY

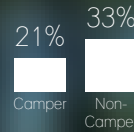


#### ENERGISED

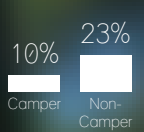


### NON-CAMPERS ARE MORE...

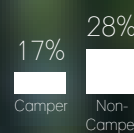
#### STRESSED



#### BORED



#### FRUSTRATED

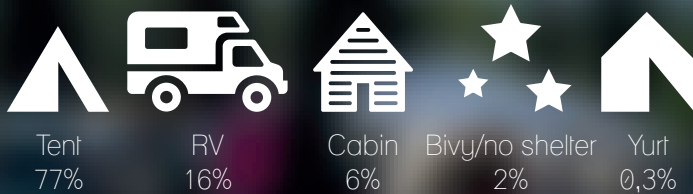


#### LONELY



## MOST USED CAMPING SHELTER TYPES

Result of a online survey by the outdoorfoundation, (2014) among 19240 US households.



## TOP 5 CAMPING ESSENTIALS

Result of a online survey by the outdoorfoundation, (2014) among 19240 US households.



### SOCIAL

"Camping makes families feel closer and richer"  
Camping and Caravanning Club (2011)

"73% of campers agree that camping is a great way to make friends"  
Camping and Caravanning Club (2011)

"Camping enables individuals to be themselves, to relax and to socialize as much or as little as they desire "  
Mock, et al., (2012)

### HEALTH

"95% of campers agree that camping recharges your batteries"  
Camping and Caravanning Club (2011)

"84% of campers agree that camping improves mental health"  
Camping and Caravanning Club (2011)

"Camping provides an opportunity for physical, mental and emotional recovery from experienced stresses."  
Brooker, et al., (2013)

### EXPERIENCES

"97% of campers agree that camping generates happy memories"  
Camping and Caravanning Club (2011)

"92% of campers agree that camping expands your horizon"  
Camping and Caravanning Club (2011)

### NATURE

"93% of campers agree that camping makes you appreciate nature more"  
Camping and Caravanning Club (2011)

"52% of first-time campers were motivated to camp by a love for the outdoors."  
American camper report (2014)

# NATURE

“Camping is a form of outdoor recreation that is part activity and part accommodation”  
Edward Brooker and Marion Joppe, (2013)

“We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.”  
Leopold (1949)

“Climb the mountains and get their good tidings. Nature’s peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy.”  
Muir (1901)

“Individuals who associate themselves with the natural environment tend to hold broader sets of concerns for environmental issues”  
Schultz, et al., (2004)

A study done by Mac Kerron, et al., (2013) indicates that happiness is greater when in natural environments

“Being outdoors is vitalizing in large part because of the presence of nature.”  
Ryan, et al., (2010)

“Nature connectedness positively correlated with both psycho- logical and social well-being.”  
Howell, et al., (2011)

van den Berg, et al., (2003) found that viewing pictures of natural versus built environments was associated with mood restoration, including lower feelings of stress and depression

Experiences perceived as most important to visitors of Australian nature parks according to Weber, et al., (2010) were...



1. Enjoying the natural scenery



2. enjoying the sounds and smells of nature



3. getting away from the usual demands of life



4. experiencing tranquility/ solitude

## CAMPING IN NATURE

Camping as a means to EXPERIENCE & INTERACTION with nature in a time where people become increasingly DETACHED FROM NATURE because of technology and city life.  
(Garst, et al., 2009, Hassell, et al., 2015)

## DETACHED FROM NATURE

“The expressions of 21st century campers appeared to indicate a greater urgency and a deeper need for nature in a world in which some of the experiences afforded by camping have become fewer.”  
(Garst, et al., 2009)

“We found that campers expressed a clear desire for contact with nature. Perceptions of nature contact were relative to the amount of nature that most people experienced on any given day while at home.”  
(Garst, et al., 2009)

According to Garst, et al., (2009) campers express a clear desire for contact with nature but nowadays technology is often in the way. As campers lose the sensory connection to nature, experiencing nature becomes passive observation instead of active engagement.

## EXPERIENCE & INTERACTION

“Camping is far more than an inexpensive holiday close to nature; it rekindles the human relationship with the natural environment and serves as a conduit for beneficial and meaningful experiences to occur that have positive impacts on camper’s lives.”  
Hassell, et al., (2015)

“A way of reconnecting with the natural environment is to become physically immersed in it, with camping in national parks a popular way of achieving this. The camping experience can allow interaction with nature on a direct level by temporarily living in a dynamic natural ecosystem.”  
Hassell, et al., (2015)

## A2 BLOGS AND VLOGS

Blogs and vlogs are chosen based on relevance regarding the subjects camping, shelter, nature and thereafter selected if they gave answer to one or more of the research questions below.

Research questions

4. Which experiences is the target group looking for in a nature camping trip?
5. What are the motivations to camp in nature?
6. What is the effect of nature on camping?
7. What is the relation between human nature and shelter?
8. Which effect has nature on shelter use?
9. What kind of nature experience is the target group looking for during shelter use?
11. What role does a shelter fulfil during a camping trip?
12. What meaning has camping (with a tent) for the target group?
13. What is the effect of camping on campers?
14. Who is camping?
15. What kind of camping gear do campers use?
16. What are the motivations to go camping?
17. Which effect does being in nature have on people?
18. What kind of experiences do people search for when venturing into nature?
19. What does sleeping in a shelter entail?
20. What are important shelter features?

## CONSULTED BLOGS AND VLOGS

SasquatchBobby,. (2016).  
WILDERNESS CAMPING

Cedarhaus films,. (2014).  
WILDERNESS CAMPING.

DayUntoDay,. (2013). Fall Camping.

Berry, T. (2013). A Grand Canyon Winter Adventure.

Michel and Marissa,. (2016). Roadtrip naar second year visa. Australië.

Geerts, A. and Spil, T.,. 'Overnatting i det fri'. Denemarken.

Vansteenbrugge, G. Trektocht over de Hardangervidda.

Janice, (2012). Camping Stories for National Camping Week.

Catchpole, K. and Mohl, E., (2012). Camping Stories for National Camping Week.

Woodward. L., (2012). Camping Stories for National Camping Week.

McNeaney, E. and Fairbairn, S., (2012). Camping Stories for National Camping Week.

Littlebpost, (2013) Camping Stories for National Camping Week.

Wilmer and Janie,. (2013). Cassiar Highway. Camping trip - 2013.

Binkley, D. and Binkley, M.,. (2007). Day 43: Hiking in the park. Alaska Adventure 2007.

Unknown,. (2014). Onze hernieuwde kampeerervaring. Verhalen uit Amerika.

Unknown,. (2016). L'Orage 19-20 July 2016. La France & UK.

## DATA PROCESSING AND DRAWING CONCLUSIONS

The sections in the blogs and vlogs giving answer to the given research questions are incorporated in the statement cards (see appendix C) and subsequently in the clusters and context map.

## A3 INTERVIEWS

Two in-depth semi-structured interviews are conducted to answer the following research questions.

Research questions:

4. Which experiences is the target group looking for in a nature camping trip?
5. What are the motivations to camp in nature?
6. What is the effect of nature on camping?
13. What is the effect of camping on campers?
14. Who is camping?
15. What kind of camping gear do campers use?
16. What are the motivations to go camping?
17. Which effect does being in nature have on people?
18. What kind of experiences do people search for when venturing into nature?

## INTERVIEW QUESTIONS

The interview questions are used as guidelines more then checking them one by one. Making it a semi-structured interview.

### Camping

- What do you think of camping?
- What does camping mean to you?
- What is your favourite/ideal camping spot? And why?
- What do you associate with camping? And why?
- What is your best camping experience? And why?
- With whom do you go camping? And what kind of camping trips do you make with these people?

### Shelter

- Do you sometimes camp without a tent or other kind of shelter? Why?/ Why not?
- When using a shelter, what is the reason?
- Which role(s) does a shelter play during a camping trip?
- If you would make your own shelter or you would let someone make you one how would it look like?

- What kind of things do you do in your shelter?

#### Nature

- What role does nature play when camping?

### DATA PROCESSING AND DRAWING CONCLUSIONS

The sections of the interview giving answer to the given research questions are incorporated in the statement cards, see appendix C, and subsequently in the clusters and context map. The raw interview data can be found in appendix B.

## A4 CONTEXT MAPPING

A context mapping session is held to get a better understanding of the context and the latent needs and wants of the target group.

#### Research questions

1. What does the context entail?
2. What are the interrelations between the different context elements?
3. What are the latent needs of the

- target group in the context?
4. Which experiences is the target group looking for in a nature camping trip?
5. What are the motivations to camp in nature?
6. What is the effect of nature on camping?
9. What kind of nature experience is the target group looking for during shelter use?
10. Which interactions do people have with their shelter during a camping trip?
11. What role does a shelter fulfil during a camping trip?
12. What meaning has camping (with a tent) for the target group?
13. What is the effect of camping on campers?
14. Who is camping?
16. What are the motivations to go camping?
19. What does sleeping in a shelter entail?
20. What are important shelter features?

#### SENSITIZING

To sensitize the participants beforehand a booklet is made. This

booklet contained 6 tasks which the participants filled in during the 6 days prior to the session. At the beginning of the session the booklets are handed in. Before the participants the context mapping session filled in the booklet a pilot is done. This to see if the tasks in the booklet had the intended effect of making people think about their prior camping experiences and getting them in the right mood for the session.

#### SESSION PLAN

A session plan is made and altered after discussing it with context mapping expert, F. Sleeswijk Fisser (2017). Next the set-up the used generative tools and the time schedule are discussed.

#### Set-up

The session is held in studio 13 on Friday the 13th of January 2017. One table is used for coffee, tea and snacks, and one table is used to sit on during the session, see figure 69. This session table equipped all the generative tools needed during the session. The participants are



positioned on the long edges of the table and the two facilitators on the short edges. With a camera capturing the session from begin to end to analyse the session afterwards. During the session both facilitators asked questions and one of them also made pictures.

#### Generative tools

One ice breaking task and two generative collage making tasks are done during the session. The tasks are chosen based on a theory provided by Sleeswijk et al. (2005) explaining that one should first focus on the present and the past before discussing the future during a context mapping session. Apart from this, the task also get more specific towards the end of the session. The first task is about camping in general, the second about a camping spot, and the third about a camping residence. With every task the context is further zoomed in.

The ice breaker is used to get everyone in a creative mood and to get to know each other a little. In turn everyone told each other three camping experiences of which two are true and one is false. The others have to guess which one is false. Beforehand everyone was given some time to think of three stories. This task was apart from an ice breaker also meant to let the participants think about their past camping experiences.

During the first generative task the participants had to make a collage of their ideal camping spot. Making them think both about their past experience and their current wants and needs.

During the last generative task the participants are asked to visualise their ideal future camping residence. Beforehand the facilitators in consultation with the participants made a list of the main themes and functions discussed during the first generative task to help the participants with giving form to their ideal future

camping residence.

#### Time scheme

See figure 70 for the used time scheme.

#### PARTICIPANTS

A group of six participants is asked to join the context mapping session. The participants are selected based on their love for the outdoors and fitting the category average or extreme camper. Furthermore a range of age is perused. Unfortunately the participant filling the gap between the 50+ and the younger participants had to cancel. Finally the session is held with the following participants.

##### Erna Lagewaardt (55)

Categorised as average camper who loves the outdoors. She camps two to three times a year on different locations and with different shelters. Ranging from a average tent to a old-timer caravan.

##### Tjeerd de Jong (58)

Categorised as extreme camper who loves the outdoors. He camps three to four times a year on different locations preferably without a shelter.

##### Jan Beukelman (65)

Categorised as average camper who loves the outdoors. He owns a nature camping and back in the days he made a lot of biking trips with his dog and his tent.

##### Olmo Meijjs (24)

Categorised as average to extreme camper who loves the outdoors. He camps multiple times a year ranging from festivals to wild camping adventures.

##### Yanthe Boom (24)

Categorised as average camper who loves the outdoors. She camps two to three times a year on different locations. Often staying in one place for a couple days to get to know the area.

#### DATA PROCESSING AND DRAWING CONCLUSIONS

The sections of the session giving answer to the given research questions are incorporated in the statement cards (see appendix C) and subsequently in the clusters and context map.



<b>TIME</b>	<b>DURATION</b>	<b>WHAT</b>	<b>NEEDED ITEMS</b>	<b>NOTES</b>
11.00	1,5 hour	Preparing and set up room		
12.30	15 min	Welcome, coffee and tea	<ul style="list-style-type: none"> <li>• Coffee</li> <li>• Tea</li> <li>• Biscuits</li> <li>• Fruit</li> </ul>	
12.45	10 min	Introduction	<ul style="list-style-type: none"> <li>• Notes of introduction</li> </ul>	<p>What are we going to do  Why are we going to do this  What do I want to get out of this  What do I mean by camping  Everything is good, everything is allowed,  Whatever you make it does not need to be pretty  Don't hold back. Ask each other and me questions if you want to know something.  Be curious.</p>
12.55	30 min	Icebreaker & Name plates		Tell 3 camping experiences. Two must be true and one false. The others have to guess which one is false.
13.25	15 min	Making visual of ideal camping spot	<ul style="list-style-type: none"> <li>• A3 paper</li> <li>• Words and images from magazines</li> <li>• Sheets with images</li> <li>• Sheets with words</li> <li>• Scissors</li> <li>• Glue</li> <li>• Markers</li> </ul>	<p>3 min explaining  5 min collage making  5 min wrap up/finishing touch</p>
13.40	40 min	Telling each other about their ideal camping spot		Everyone tells 5 minutes
14.20	15 min	Break		
14.35	15 min	Making list of functions/themes	<ul style="list-style-type: none"> <li>• White board</li> <li>• Whiteboard markers</li> </ul>	Summarising the main themes and functions discussed during the first visualisation task.
14.50	15 min	Visualize ideal future camping residence	<ul style="list-style-type: none"> <li>• A3 paper</li> <li>• Markers</li> <li>• Words and images from magazines</li> <li>• Sheets with images</li> <li>• Sheets with words</li> <li>• Scissors</li> <li>• Glue</li> <li>• Markers</li> </ul>	<p>2 min explaining  5 min collage making  5 min wrap up/finishing touch</p>
15.05	45 min	Telling each other about ideal future camping spot		
15.50		Wrap up		Thanking everyone for being here, saying goodbye

# B INTERVIEW DATA

## B1 INTERVIEW PAOLA RAMIREZ

1-01-2017

*Wat vind je in het algemeen van kamperen?*

Vrijheid, Weinig objecten

*Wat betekend kamperen voor jou?*

Dat het primitief is en dat je weinig nodig hebt. Het is oers.

Door hebben dat je maar weinig nodig hebt. Weinig kleding, weinig dingen.

*Wat voor gevoel geeft je dat? Waarom wil je weinig nodig hebben?*

Je bent dicht bij jezelf. Aan de kunst om echt diep te gaan.

En de natuur en de vereniging. De vereniging met de natuur en met jezelf. Dat is belangrijk.

*Waarom is dat belangrijk?*

Het is puur. Daar kan je in alle richtingen om je heen kijken. Wauw, kijk die bloemen, kijk die kleuren! hier zijn geen bloemen hier is niks hier is comfort.

*Wat is je mooiste kampeer ervaring?*

Dat is een moeilijke vraag er zijn zo veel verschillende ervaringen.

Mijn god oke. Ze lijken oneindig uhm oneindig. Wanneer je er het meeste uit krijgt. Wanneer dingen misgaan. Wanneer je op jezelf bent aangewezen.

Bijvoorbeeld die keer dat het heel heel koud was en ik moest plassen. Je moet dan over de kou heen stappen en je kont vriest er af. Op dat moment vergeet je wat kou is.

Ook ben ik een keer in een gletsjer

meer gesprongen er was gewoon ijs. We waren 3 dagen en ik had niet gedouche en ik wilde me graag wassen. En toen ik het water in sprong was het koude water een shock. En je weet niet hoe snel je er uit moet komen.

*Als ik je zo hoor dan heb je eigenlijk geen tent nodig..?*

Zonder tent overleef je het niet! De tent is alles, het is het belangrijkste. Het is pauze, beschutting, warme deken. Onze huid is niet zo gebouwd dat we grote kou verdragen.

Oke regen is ook een ding en wind ook. Dat is schuilen voor de elementen van de wind. Het moment dat je een tent bouwt. Dit moment, dan ben je aangekomen. Je bouwt de tent. Dat is het probleem met de vraag het concept kamperen hier in europa is heel anders dan wat ik voor ogen heb. Maar wanneer men ergens verblijft. En je dan aankomt waar je bent in de natuur.

*Hoe ziet jouw 'tent' er uit?*

De perfecte tent is absoluut doorzichtig. Maar toch beschermd van fel licht, bijvoorbeeld bij sneeuw. Een ideale tent zou moeten werken als een sneeuwbril, zodat je binnen bent maar toch alles buiten kunt zien. Is dat maakbaar?

Er moet een voortent zijn waar in je kan koken. En wanneer het koud is moet je een plasje kunnen doen maar dat is comfort wat niet past bij het weinige wat ik wil hahaha. Maar dan moet je er uit gaan enzo. Gera: Dus je moet in het onderzeil ook een rits hebben hahaha.

Wanneer je voor langere tijd in een tent zit. Dan zou ik ook wel iets willen

waar je tegenaan kan zitten.

*Heb je nog meer ideeën van wat er in moet of wat je zou willen?*

Wanneer het helemaal donker is en je bent in de tent dat alle zakjes op handbereik zijn. Je weet dat in dit zakje zit dat en enzo. In dit zakje een lamp en in dit zakje je bril.

O en wat ook altijd zo is. Wanneer je een basis kamp hebt met meer tenten. Dan zouden de scheerlijnen fluoriserend moeten zijn, zodat je niet over de touwen struikeld.

Whow! Wat ook heel belangrijk is.

(We zoeken naar het woord)

WATERPAS!! Dus het zou tof zijn als er een waterpas ingebouwd is in het grondzeil. Ik zie het helemaal voor me, hoe er een vloeistofreep in het grondzeil zit. (we tekenen) Het is belangrijk dat de tent recht staat.

*Wat doe je in de tent?*

Alles, alles, Plassen, koken, alles. Het is je huisje.

Alleen niet poepen.

*Ook niet als het heel koud is of gevaarlijk buiten?*

Ja natuurlijk.

Maar wanneer je in je tent zit lees je, schrijf je, denk je, kijk je. Ik!... het is alleen een membraan tussen jou en de natuur. Alleen maar een doek een kleine plastic doek.

*Welke rol speelt een tent voor jou?*

*Welke rol speelt natuur?*

Alle rollen! Ideaal gezien gebruik ik geen tent. Bijvoorbeeld: toen ik bij jullie thuis was voor twee weken. Toen had ik een tent in de tuin. Het is natuur en privacy. Aahh! Ja dan wil ik een prive ruimte hebben. Op dat moment is het mijn huis, mijn eigen plekje.

Maar het echte is hoe primitief kan ik het maken. Ik heb mijn tanden buiten gepoetst, geen shampoo gebruikt, niks van dat alles. Hoe dicht kan ik bij het niks komen? Ja natuur speelt daar in een grote grote rol in. Wanneer ik in mijn tent lig was het super super heet. Thermisch aha! Als het buiten warm is dan is het binnen koel. En wanneer het buiten koud is dan binnen warm.

(Paola heeft kippevel door het praten over kamperen in de bergen. Oei, geweldig, een kadoetje van het leven!)

*Met wie ga je kamperen en wat voor trips maak je met deze mensen?*

Als ik ga, ga ik met profi's. Het liefste ben ik met mijn compagnon Roberto boven in de bergen. En kamperen is dan niet perse mijn ding. Alleen met jou heb ik dat gedaan. Ik doe meer wildkamperen. Ja, met Roberto in de bergen omringt door de elementen. Of met Marq.

Maar weet je wat, als ik in een tent slaap voel ik me nooit claustrofobisch. Nooit! Terwijl ik er anders gauw last van heb.

*Wat is je ideale camping plaats?*

Niet georganiseerd, geen camping. Dat gaat niet, dat gaat niet. Dat is een catastrofe.

*Zulke trips doe je niet hier he? Heb je dat ooit in Duitsland gedaan?*

Dat is te georganiseerd. Het is zo uhm met vrienden heb ik wel eens vrij gekampeerd, maar het is niet zoals in Colombia. Ik had het wel gehoopt hier te kunnen doen.

*Heb je wel eens gekampeerd zonder tent of een andere vorm van een tent?*

O ja bivak! 3 maal op 3000 meter hoogte. Daar zijn vele stenen en sneeuw en het is koud. En toen moesten we wachten op goed weer maar op dat moment hadden we geen goed weer. We hadden geen materialen om een tent te bouwen maar toen hadden we bivak gemaakt van stenen een soort steen formatie halve grot. En toen waren we met 5

ofzo daar in. 1 koppel had hun plastic jassen gebruikte om voor ons beiden een bivak te maken. En dat was echt een zeer toffe ervaring. Dat is me wel echt bij gebleven.

Ja dat is het leuk! Je komt een probleem tegen en je verzint een oplossing.

Ook al zit je als sardijnen in een blik. En verplicht de natuur je om te wachten. Geen kans om verder te gaan, te slecht weer. Bivak is het vrije slapen. Er bestaat bijvoorbeeld een bivaktent: is een zeil wat je op deze manier kan ophangen [legt uit]. De naam daar voor is wild kamperen of kamperen zonder tent.

*Is een bivak dan je ideale schuilplaats?*

Nee! Want nu kruip ik lekker in m'n tent en lees ik een boek en dat is nu.. Dat is niet het zelfde. Een tent is juist fijn, een tent is... Een tent geeft meer ruimte. Maar ja een tent geeft je dit gevoel ja dit gevoel.

*Maar is dit ook het gevoel dat het een plekje op de wereld voor jou is?*

Ik denk dat het gevoel is dat het mijn plekje is. Dit is mijn huiselijkheid. Hier heb ik m'n kleren en hier kan ik koken, ja. Het voelt huiselijk.

## **B2 INTERVIEW JOSIEN VERHOECKX**

6-01-2017

Het was zo basic allemaal. Hier heb je allemaal van die kleine dingen die je moet doen. Allemaal dingen, het zit constant in je hoofd. Daar, het enige waar je zorgen over hoefde te maken was eten, slapen en lopen en water dan. Het is zo basic, het is een soort van verslavend om daar alleen maar bezig te zijn en de hele dag buiten. Het is gewoon heel chill, ja gewoon heel fijn.

Als je daar loopt wel hoor dan mis je een bed of een normale wc of gewoon inderdaad, maar de dingen

doen zelf zeg maar. Ik miste het niet om te studeren of ik miste het niet om een film te kijken ofzo. Dat soort dingen miste ik helemaal niet. Maar de comfort die je hier dan hebt zoals een stomend water en chill eten die wel maar niet de luxe dingen die je hier hebt. Ik miste m'n computer echt total niet.

Dit was wel echt back to basic. Ik heb ook wel 'gewoon' gekampeerd en dan heb je nog een toiletgebouwtje. Maar dit was wel echt een stapje verder.

Er zijn wel kampeer plekken maar dan is er een vuur plek en verder niks zeg maar. Geen toiletten, geen kranen helemaal niks. Al het water komt uit de rivier en dat moet je dan filteren.

Je bent gewoon helemaal zelfvoorzienend dat is gewoon best wel bevrijdend ofzo. Je hoeft ook niet op zo'n kamp plek te staan. Het is wel chill als je een vlak stuk grond hebt dus in de Bergen zijn dat wel de plekken waar je terecht komt. Maar in principe kan je gewoon op elk moment ergens neerploffen en dat is gewoon echt chill. Je hoeft helemaal niks.

Als je wil kan je helemaal alleen zijn en daar kiezen sommige mensen ook wel voor. Maar eigenlijk, het hoeft helemaal niet. En ik zelf had op de tweede dag al een chill iemand gevonden waar ik dan een tijdje mee heb gelopen en op een gegeven moment kom je dan weer iemand anders tegen. Er is altijd wel iemand leuks.

Maar je loopt wel echt alleen iedereen heeft een eigen tempo. Het lopen zelf en als je dan eten kookt dat doe je dan samen en samen tentje opzetten enzo. Een soort van kampje maken. Maar het lopen zelf was ik eigenlijk altijd wel alleen. Omdat ik het niet chill vindt om achter iemand aan te lopen. Dan heb ik het idee dat ik of te hard of te zacht. Dus dan was het zo van ok

we zien elkaar over twee uur en dan gaan we luchten.

Je hebt een bepaald aantal eten bij je dat draag je dan ook allemaal. Daar mik je het wel op. Ok over 5 dagen moet ik hier aankomen. Of je dan de eerste dag 10 en de volgende dag 30 doet kilometer loopt dat is dan. Dat maakt niet zo veel uit. Je moet wel echt door.

In het begin had m'n moeder me ook afgezet midden in de desert. Echt een uur over zo'n zandpad gereden en toen stond ik daar zo van. En toen was ze weg gereden. En toen dacht ik wel van oke ik moet nu wel. Ik kan ook niet zeggen oke ik stop er mee, want ik ben helemaal nergens.

Ik dacht wel, oke ik heb me echt goed voorbereid want ik ben wel een beetje panisch. Ik vond het ook wel super spannend enzo dus ik ging wel super goed voorbereiden en allemaal van die blogs lezen en boekjes gekocht. Dus toen ik daar stond eenmaal toen dacht ik wel van oke dit komt wel goed. Maar echt nog 10 minuten daar voor dacht ik nog o nee moet ik niet meer water of ben ik dit vergeten. Maar het komt allemaal wel goed ofzo. Ik heb ook zo veel dingen me druk over gemaakt waarvan ik achteraf denk van jeetje dat slaat echt helemaal nergens op. Zoals spinnen die dan in je slaapzak zouden kruipen terwijl ik heb geen spin gezien eigenlijk. Of ratelslangen waar je dan 's nachts op zou staan. Dat de sneeuw veel te veel was. Het viel allemaal wel mee en het komt allemaal wel goed. Er zijn zo veel mensen om je heen.

Ik heb wel eens dingen gehad die ik heel spannend vond. Moest ik bijvoorbeeld een rivier door tot m'n middel en dan denk je ok als ik nu omval allemaal dure spullen. Dan lig ik ergens, alles is nat. Maar het ging eigenlijk allemaal goed. Eigenlijk niks echt fout gegaan ofzo. 1 keer had ik hoogste ziekte en toen heb ik half

overgegeven. Toen voelde ik me wel echt heel kut. Maar toen waren er zo veel mensen om me heen die me allemaal hun eten gaven. Hier eet dit en drink dit en neem een snoepje. Dus dat was daarom ook wel weer oke ofzo. Ja het is echt een soort van, ja het is echt een community ja. Niet alleen de hikkers maar je hebt ook mensen van buiten af die komen helpen. Die staan dan op de trail met allemaal eten Of ze laten kistjes achter met drankjes er in ofzo of ze brengen je gratis naar een stadje. Het is echt een hele wereld ofzo. Je hebt ook een facebook er van en daar is iedereen allemaal vragen aan het stellen en elkaar aan het helpen. Het is echt heel open.

Ik heb ook met een kroaat gelopen en die gaf ook altijd zijn eten enzo. Want dat was heel erg in het begin want toen at ik heel weinig nog omdat als ik moe ben en het is warm dan gaat m'n eetlust heel erg weg. En dan zei hij ja je moet dit eten en hier eet dit. En dan gaf hij mij allemaal zijn eten. En dan dacht ik dat is zo aardig. Dit is alles wat je hebt zeg maar en je bent het alsnog aan het delen. Dat is gewoon heel lief.

Je bent een beetje van elkaar afhankelijk. Als je daar loopt, je loopt allemaal met het zelfde doel. Het is niet, je kan er niet echt makkelijk komen als dagjes mens dus iedereen die er loopt is er meerdere dagen. Je hoeft er niet echt met mensen over te hebben om een soort van vrienden met elkaar te worden. Ik heb ook mensen die kende ik twee dagen en dat voelt echt als je beste vrienden al. Het is heel bizar maar. Je hoeft niks uit te leggen. Terwijl als je hier dan bent dan is het hee he wat ga je doen? O slaap je dan in een hotel? Nee in een tentje. En dat hoeft daar niet iedereen weet waarom je er bent. Niet precies maar ongeveer. Dus het zit gewoon meteen goed ofzo.

Ja, hier heb je wel hutten tochten. Als je dan in Zwitserland meerdaagse

trektochten doet slaap je eigenlijk altijd in zo'n hutje. Dus ik snap wel dat mensen denken dat je niet mag kamperen in het wild zomaar. Terwijl dat dus wel mag daar. Ik heb vroeger ook zo veel gekampeerd dat ik me wel op m'n gemak voel.

Ik heb hier voor helemaal niet wild gekampeerd, eigenlijk altijd op campings. Ik heb wel 1 keer gebivakt maar slaap je in zo'n zakje. Dat is het natuurlijk ook helemaal niet. Ja nee dus dit was ook heel nieuw voor mij. Dat je water moest filteren enzo. En dat je gewoon overal kon gaan staan. Dat was zo tof eigenlijk.

Op een camping ben je dus nooit echt helemaal alleen. En dat kan hier dus wel. Soms zijn er wel mensen maar toch en je bent helemaal in het wild en er is heel weinig mensen om je heen het is een soort van magisch bijna kijk je naar de sterren hemel en dan zie je daar de Melkweg enzo. Je bent echt een soort van 1 met alles om je heen. Terwijl op een camping is toch aangelegd en ook families die dan woon installatie camper unit hebben is toch. Ik weet niet. Het is wat luxer en wat minder wild. Als je dan zo in de middel of no where staat dan voel je toch wel echt een met alles.

Ik vond het echt heel chill juist om het wel te doen. We zijn ook wel eens dan komen we aan bij een ranch waar je kan slapen en dan vond ik het toch ook wel heel fijn om in m'n tentje te slapen. Omdat het ook op een gegeven moment als thuis gaat voelen. Dat kleine stukje wat je hebt en een bed is ook wel heel chill maar je bent gewoon vrij om te doen wat je wil en niemand om je heen. Want een eigen kamer heb je toch meestal niet dus dan slaap je met meerdere mensen. En dan je eigen tentje is toch gewoon, het voelt een beetje als thuis op een gegeven moment. Ik ben er echt heel erg aan gehecht geraakt aan dat stomme tentje. Ook gewoon als je daar binnen zat dan voelde ik me gewoon helemaal veilig terwijl dat

echt helemaal een illusie was, want het is gewoon een doekje. Een beer kan er zo door heen. Maar toch.. Ik ben echt best wel een huis mus namelijk ook. En dat is dit natuurlijk helemaal niet. Maar dat tentje zorgd er wel voor dat ik me dan echt veilig voel ofzo.

Ja dat is heel chill dat je gewoon altijd je huisje bij je hebt. Je gaat op avontuur maar je hebt toch een soort van thuis gevoel in je rugzak zitten. En heel veel mensen hadden dat niet perse die slapen dan in de buitenlucht en dat vonden ze gewoon prima. Maar ik vond toch zelf altijd wel chill om gewoon echt in m'n tentje te zitten.

Ik heb wel een paar nachten buiten geslapen. Maar ik zou dat in m'n eentje niet hebben gedaan. Dat was altijd met andere mensen. Dat lijkt me.. Ik weet niet waarom dat is gewoon zo. Iedereen kan je zien en alles kan je pakken en ik weet het niet..

Ik had een tent die, waar je de binnentent ook los van de buiten tent op kan zetten. Dus je hoefde niet altijd dat zeil erover heen. Dat deed ik eigenlijk meestal. Het was gewoon bijna altijd echt goed weer. Behalve als het heel koud was dan zette ik wel dat buiten tent op. Die binnentent heeft dus ook zo'n gaas aan de boven kant dus je kan gewoon naar buiten kijken.

Maar toch heb je een soort van dat afgesloten. Je eigen hokkie. Ik weet niet zo goed waarom. Misschien omdat er dan een stukje aan de onderkant wel dan dicht was. Klinkt heel gek als ik het zo zeg. Misschien ook omdat er geen beestjes naar binnen konden. Dat dat toch ook wel heel erg fijn is. Dat je niet een soort va overspoeld kan worden door slangen. Die er helemaal niet zo heel veel zijn en die ook niet echt iets zullen doen maar.. Maar meestal ga je toch slapen als al die beesten al naar bed zijn. Vooral die koudbloedige.

Die zijn savonds gewoon niet meer actief. Dus die gaan nergens meer heen. Ik weet niet het voelt gewoon ook vreemd om gewoon. Iemand kan ook heel dicht bij je komen zonder dat je het hoort. Misschien vind ik dat ook irritant. Iemand moet nu eerst een rits openmaken en daar kan je dan wakker van worden.

Ik was met zo veel mensen en die zette ook allemaal niet hun tent op. En dan heb je gewoon een hele mooie lucht eigenlijk wel dan kan je gewoon naar al die sterren kijken. En als het gewoon warm genoeg is dan voel je ook wel door de groep gewoon veilig. En het heeft ook wel iets avontuurlijks wel om zonder tentje daar te liggen. En als iedereen dan niet in zijn tentje ligt dan verbind dat ook weer met de anderen mensen. Want je bent dan niet afgesloten van de rest maar je bent dan met zijn allen daar buiten. En dat vond ik dan wel heel tof. En 1 keer omdat ik veel te moe was. Ik heb gewoon m'n matje uitgerold m'n slaapzak. En toen ben ik gewoon neer gegaan. Ik dacht het zal allemaal wel. Dan heb je gewoon. Het duurt echt helemaal niet lang een tentje opzetten maar toch bij het idee dacht ik oke laat maar. Ik heb toen niet gegeten alleen m'n matje uitgerold. Ik dacht oke ik ga nu gewoon slapen. Ik ben klaar met vandaag.

Eigenlijk altijd als ik met m'n ouders op vakantie ging gingen we altijd kamperen. Ik heb echt bijna nooit in een hotel geslapen. Dus dat gaat in je zitten ofzo. Mensen die altijd in hotels hebben gezeten. Ik had het er toevallig gister met m'n huisgenootje over. Als iemand zegt ja nee ik hou niet van kamperen ik ga liever naar hotels dan weet je eigenlijk precies wat voor persoon dit is. Door maar 1 ding te zeggen. Als je op date gaat ofzo dan zei hij ook, daar begin ik altijd wel snel over want dan weet je precies of het een beetje zo'n miepje is of niet. Wat echt belachelijk is maar ik ben het er wel echt mee eens. Het is een soort van ja.. Het hoeft

allemaal niet zo lux te zijn en gewoon lekker buiten altijd. Dat is iets waar ik me dan best wel aan hecht, aan het kamperen. Dat je gewoon constant buiten bent. Wat niet zo goed. Want hier ben ik gewoon soms de hele dag binnen en dan ben ik nooit naar buiten geweest. Dat vind ik dan echt best wel erg op een dag. Terwijl dan ben je gewoon altijd buiten. Dat is zo fijn.

Ja dat je een beetje een bent met wat er om je heen zit en die frisse lucht ofzo. Maakt ook wel wat uit misschien. Het geeft een soort van vrijheid mee. Als ik dan denk aan een hotel kamer dan krijg ik een beetje een opgesloten gevoel. Het is heel onpersoonlijk. Bij kamperen heb je eigen tent ook. Het is jouw huisje. Ja wat ik zei het is je eigen huisje. Jij hebt die en die hotel kamer dat heeft iemand anders gekocht en ingericht ofzo. Het enige wat daar van jou is, is dat koffertje wat je mee hebt terwijl dat hele tentje is een soort van. Van mij, dit heb ik uitgekozen en je kan het precies kopen zoals je wil. Inrichten zoals je het wil.

Bij een hotel kamer weet ik niet of je echt op de vorm van de hotel kamer de hotelkamer uitzoekt. Je kijkt wel een beetje naar de foto's of het er niet shabby uit ziet, maar je kiest het vaak ook wel op de ligging van het hotel en of ze wel of niet all inclusive hebben. En dat is bij een tent, koop je eerst de tent en dan ga je kijken naar de plek en de ligging van de camping. En je pakt hem ook zo weer in. Ik en m'n moeder doen nooit reserveren bij campings dus het is een soort van oke we zien wel als we daar zijn en dan zelden we hem neer en als het dan leuk is dan blijven we een paar dagen en als het kut is dan gaan we weer door. Dat vind ik ook wel heerlijk eigenlijk. Dat is misschien ook weer dat vrijheid ofzo. Je kan gewoon gaan en staan weet je wel.

De tent heb ik echt hier voor gekocht. Hij moest echt licht zijn. Hij is 900

gram. In Nederland had je deze ook niet. Ik heb hem in Amerika gekocht. En ik wilde dus heel graag dat je de binnentent kon opzetten zonder de buitentent. Dat je naar buiten wel kon kijken zonder dat ding er overheen. En ik wilde dat de ingang in de lengte zat. Omdat je dan zo kan liggen en de tent open kan ritsen en dan zo een boek kan lezen half buiten en dan met je slaapzak half binnen. Met je hoofd er zo uit en je benen dan zo achter je. Dat vond ik chill. Want als het aan de zijkant zit dan gaat liggen lezen dan kijk je tegen het tent doek aan. Dan kan je gewoon in je tentje zitten maar wel naar buiten kijken. Dat vond ik heel chill dat deze dat kon. En verder heb ik niet naar prijs gekeken ik dacht oke. Het zijn sowieso dure tenten als ze zo licht worden zijn ze super duur. En goeie recensies.

Ik ben ook best wel vaak hier naar van die outdoor winkels geweest. Maar het was het allemaal net niet, hier in Nederland. Je mag bijna nergens wild kamperen hier dus van die trekking tentjes is ook denk ik minder een ding in europa. Omdat als je gaat trekken omdat je dan meestal toch in van die hutten of hostels ofzo slaapt. Ja ze hadden wel wat maar. Ja nee. Of het was zo. Het was ook een twee persoons tentje. Dat wilde ik ook persee. Omdat je dan je rugzak er in kon doen. En anders zit je in zo'n heel smal en claustrofobisch klein hokje waar je dan zo in moet gaan liggen. Dat leek me ook echt niet chill. Ik had best wel wat ruimte voor 900 gram.

Daarom had ik van die eisen. Ik wil perse de binnen tent los zodat ik naar buiten kan kijken terwijl ik daar lig. Maar denken ze gewoon. Ja dat is eigenlijk.. Ben ik de enige die dat wil? Kan me niet voorstellen want het is best wel chill.

Loriana: Je hebt een paar tenten waarvan je de rain fly gedeeltelijk op kan rollen. Josien: O, een soort van cabrio eigenlijk.

Loriana: Ja!

Voorals als je die fly er overheen hebt ben je helemaal afgesloten van de omgeving eigenlijk. En dat is soms wel fijn. Ik denk vooral als je slaapt. Maar savonds als je nog dingen aan het doen bent hoeft dat eigenlijk helemaal niet.

# C STATEMENT CARDS

See digital included document titled:  
Appendix C - Statement cards.

### CRAVING THE FULL AWE

This openness of this shelter enables the user to submerge in nature.

### HOME SWEET CAVE

This shelter lets the user make it their own by enabling them to gradually change the position of the rain fly to their needs and wants. Meanwhile also changing the appearance of the shelter



Figure 71. Shelter of the brand Big Agnes analysed by means of associated clusters.

# D MARKET POTENTIAL ANALYSIS

## DO CURRENT SHELTERS ALREADY FIT THE DESIGN GOAL?

A market analysis is done to see if current shelter designs are already or partly fulfilling the design goal drafted in chapter 3.5, and if so in which manner. Because this project and also the design goal, is still focused on making the shelter part of the camping story, only the brands which are in chapter 1.3 identified as brands that at least try to make their shelters part of the camping story are

analysed. These brands are:

- Sierra design
- Flying Tent
- Exped
- Kammok
- Big Agnes
- Tentsile
- Outdoor Research
- Kelty

To make this analysis manageable

the design goal is divided into three sections. These sections are the clusters 'craving the full awe', 'twilight zone' and 'home sweet cave'. Each shelter of the earlier mentioned brands is examined and the shelters that fit one or more of the clusters are selected for further examination. This examination is shown in figure 71 to 73.



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

The shelter is adaptable to surroundings. Hang it in a tree or place it on the ground.

### TWILIGHT ZONE

The shelter is designed to easily submerge in or seclude from your surroundings by retracting the fly.

## FLYING TENT

FLYING TENT  
BY THE STARS



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

By hanging your shelter in the trees nature becomes part of your shelter. It also enables you to hang above water or go very high to have a nice view.

## STINGRAY

TENTSILE



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

The inner tent is mostly made of see through netting making sure you can see 360 degrees. When setting up the shelter without a rain fly.

### TWILIGHT ZONE

The shelter is designed to easily submerge in or seclude from your surroundings by retracting the fly.

## TRAIL RIDGE

KELTY



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

The shelter is adaptable to surroundings. Hang it in a tree or place it on the ground.

## SUNDA



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

This light weight shelter enables going any where.

### TWILIGHT ZONE

This shelter lets the user make it their own by enabling them to gradually or rigorously change the rain fly to their needs and wants. Although the canopy is not very translucent which hinders looking outside without opening up the zippers.

## VELA

**EXPED**  
EXPEDITION EQUIPMENT



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

This light weight shelter enables going any where.

### TWILIGHT ZONE

The shelter is designed to easily submerge in or seclude from your surroundings by moving back the head pole.

## ADVANCED BIVY

**OR** OUTDOOR  
RESEARCH



## ASSOCIATED CLUSTERS

### TWILIGHT ZONE

The shelter is designed to easily submerge in or seclude from your surroundings by retracting the fly.

## NIGHT WATCH



## ASSOCIATED CLUSTERS

### TWILIGHT ZONE

The shelter is designed so the rain fly can be easily retracted. The fact this can only be done on two sides makes that retracting the rain fly leads to a middling feeling of being submerged in the surroundings.

## FLASH



## ASSOCIATED CLUSTERS

### CRAVING THE FULL AWE

This light weight shelter makes that you can go every where. Furthermore the see through netting makes sure you have a 360 degree view when setting up without a rain fly.

### HOME SWEET CAVE

By adding your own trekking poles you make the shelter a bit your own.

## HIGH ROUTE







# E IDEATION APPROACH

## WHICH FRAMEWORKS CAN BE USED TO GIVE FORM TO THE IDEATION PHASE?

### TOP DOWN APPROACH

In 1997 P.W. Jordan poses that people at that time assumed a product does what it needs to do (functionality) and does that with taking usability into account, see figure 74. He predicted that in the future people would also take for granted that a product offers the user pleasure. Pohlmeier, (2017). adds to this notion that we are certainly not there yet because many products are designed with a bottom up design approach. Meaning that design teams first focus on functionality and usability and often never get to designing for pleasure because of time pressure and design considerations and concessions. Therefore she poses that in order to design for pleasure (which will soon be the new standard) a top down approach is needed. This is why during the design process of this project functionality and usability are first set aside in order to focus on pleasure. In this case the pleasures of enjoying nature to the fullest and the pleasure that making something your own can bring. Pohlmeier, et al., (2013) also explains that designing for prolonged appreciation is part of designing for pleasure. This subsequently

makes for more sustainable product consumption since people will longer enjoy using their products and feel less need to replace the product with a new one. This fits well with the cluster 'on equal footing'. According to Pohlmeier, (2017) this can be reached by letting people devote time and effort into a product and by infinite variety.

Devoting time and effort and product variety fits well with the notion of making something your own, since brainstorming about 'how to make something your own?' Showed that giving something your own touch, twist or devotion makes a product feel more like your own. Which also leads to the idea that making something your own is a process, which in many cases involves creativity.

### CREATIVITY LEVEL

An article written by Sanders and Stappers, (2008) explains that in order to make a creative session successful the level of creativity of the participants should be taken into account when preparing the session and choosing the creative tools. Therefore they pose a framework with four creative levels, see figure 75. Participants can

be classified into one of the levels according to their involvement with the subject. This framework could very well be applied to the design of this project to make sure the level of creativity needed to make a shelter feel like your own fits the intended target group. Average and extreme campers are presumed to be intermediate to highly involved with camping. Leading to the assumption the design should fit the creativity levels two and three.

### SKILL LEVEL

A research by Dahl and Moreau (2007) introduce a matrix (see figure 76) based on the idea that a creative process is the most enjoyable when the feeling of competence and autonomy are well balanced. This balance point is dependent on the skill level of the people involved. When projecting this framework on this project the following notion occurred. The target group is presumed to have an intermediate to high skill level when it comes to camping. Therefore the design should be positioned within the blue area in figure 76 in order to make using the product enjoyable for the whole target group.

- TOP DOWN DESIGN APPROACH
- DESIGN THAT ENCOURAGES PEOPLE TO DEVOTE TIME AND EFFORT OR HAS ENDLESS VARIETY
- A DESIGN THAT FITS CREATIVE LEVELS 2 TO 4 TO MAKE SURE EVERYONE WITHIN THE TARGET GROUP IS TRIGGERED TO GET THE MOST OUT OF THE DESIGN.
- A DESIGN THAT FITS THE SKILL LEVEL OF THE TARGET GROUP TO MAKE SURE USING THE PRODUCT IS ENJOYABLE FOR EVERYONE.

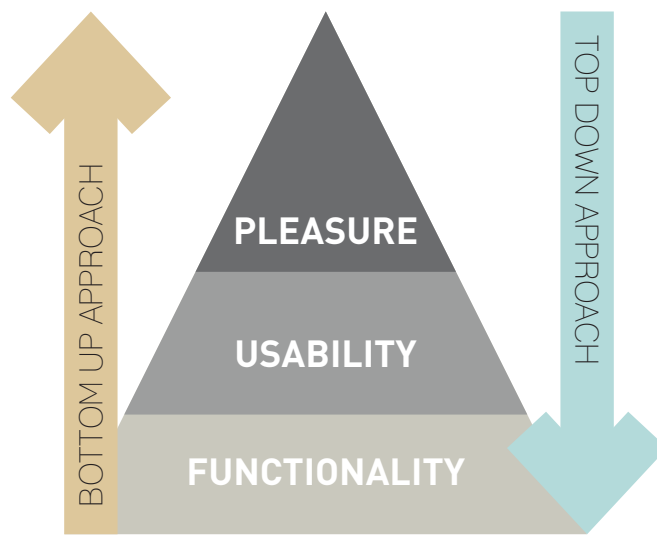


Figure 74. Jordan, (1997) pleasure based approach model combined with positive design strategy of pohlmeier, (2017).

CREATIVE LEVEL	TYPE	MOTIVATED BY	PURPOSE	EXAMPLE
4	Creating	Inspiration	Express my creativity	Design your own clothes from scratch
3	Making	Showing ability or skill	Make with my own hands	Making your own clothes based on a pattern
2	Adapting	Appropriation	Make things my own	Altering clothes to own taste
1	Doing	Productivity	Getting something done	Combining clothes

Figure 75. The four creative levels defined by Sanders and Stappers (2008)

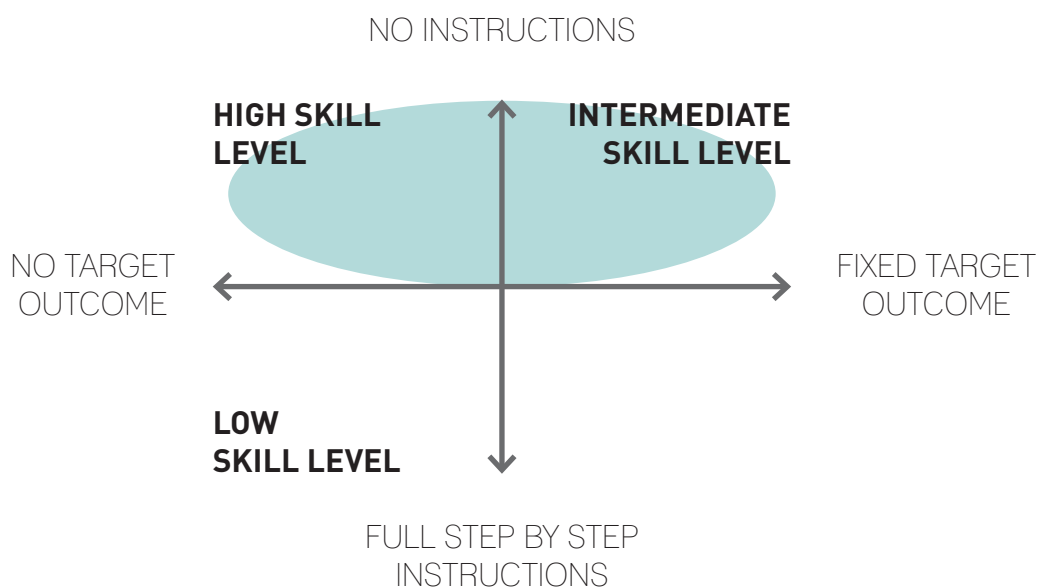


Figure 76. On the x axes the extent to which a target outcome of a creative task is dictated is given and on the y axes the amount of instruction or direction provided is given. Within this matrix the ideal positioning for enjoying a creative task depending on the skill level of whom is performing the task is shown. Dahl and Moreau, (2007)

# F IDEA GENERATION

## BRAINSTORM SESSIONS

To generate ideas three brainstorm sessions are done.

### F1 BRAINSTORM 1

The first brainstorm was done to get all the ideas which were already developing during the analysis phase on paper. After getting the first ideas on paper two mind maps are made, see figure 78. One with all the associations and aspects of camping now all the information of the analysis phase has sunken in. And one with all the aspects the to be designed product should take into account.

Thereafter how to's are generated to help the ideation process along. This is a brainstorm method where problem statements are written in the form of a question to support the idea generation. How to's can focus on different aspect of the design goal. During this session the following how to's were used to generate ideas.

- How can one discover their surroundings?
- How to change a shelter from open to closed and the other way around?
- How to experience your surroundings from inside a shelter?
- How to make a temporary accommodation your own?
- How to adjust a shelter to it's surroundings?

### F2 BRAINSTORM 2

A second brainstorm session is done with four Industrial Design master students and facilitated by me in

order to generate more ideas. To get the brainstorm team into the right mindset a story fitting the context and the clusters is read to them. Thereafter a brainstorm is held where different how to's on different A3 papers are passed around with a interval of three minutes, see figure 78. Making it possible for the team associate on each others ideas. After discussing all the ideas together each team member is asked to select one of the ideas on each paper which they liked the most. Discussing why they selected these particular ideas gave a lot of insights about which aspects of the ideas are important.

How to's used during brainstorm 2

- How to change a shelter from open to closed and the other way around?
- How to experience your surroundings from inside a shelter?
- How to make a temporary accommodation your own?
- How to adjust a shelter to it's surroundings?
- How to make sure a shelter is different every time you use it?

### F3 BRAINSTORM 3

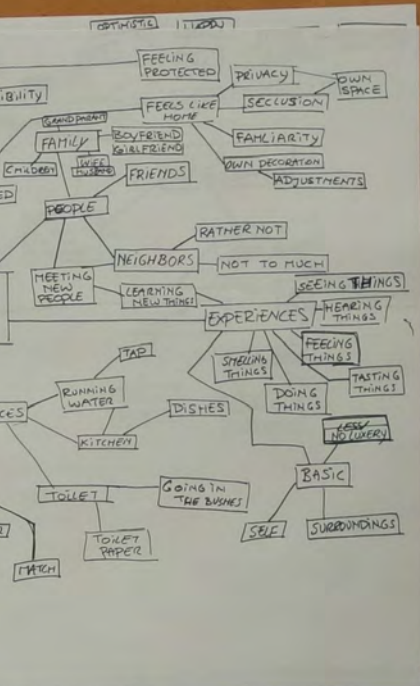
To broaden the scope of ideas a third brainstorm session is done with a totally different approach. The session is facilitated by Industrial Design master student A. Stöhr and the participants included me and three other TU Delft students. First a short description of the project and the design goal is given where after the participants are asked to build

a tent with their bodies as a way of warming up the body and mind. Next the participants are asked to write everything down a shelter could and or should have. What makes a shelter a shelter? What different shelters are there? Thereafter participants are taken on a journey by means of story telling. The participants are asked to close their eyes while the facilitator sketches a story in such a way that the participants can fill in the blanks with their own imagination. Then the participants are asked to draw the imagined shelter. Followed by the brainstorm method 'worst case scenario'. Where the participants write down the worst things imaginable about a shelter, see figure 77. To subsequently turn these horrible ideas into positive ideas. This way coming up with new ideas otherwise not thought of. The three most favourite ideas per participants are thereafter clustered, based on these clusters drawing of more elaborate ideas are made.









DESIGN GOAL

DESIGNING A SHELTER THAT IS MODIFIABLE FROM OPEN TO CLOSED BY THE USER(S), GIVING THEM THE OPPORTUNITY TO SECLUDE FROM OR SUBMERGE IN THEIR SURROUNDINGS, THEREWITH ENABELING THE USER(S) TO MAKE THE SHELTER THEIR OWN.

**HOE KUN JE OMGEVING BELEVEN?**

GETTING INFO ABOUT SURROUNDING

KAARS LICHT OMGEVING IS BEPERKTE ZIEN

GEEN LICHT OMGEVING IS BETER TE ZIEN

THICK CUCHENS SOFTNES TO CHILL ON

COZY

OPEN

SPGEL WOORD VERBODEN OMGEVING

MEGA PARS INSIDE

gordijnen

OMGEVING INZIELEN

open

SAVENDS LIJEN NAAD

STAR DOME

LISTENING DEVICE

COZY

OPEN

COZY OMHELST WORDEN DOOR...

OPEN

CLOSED COZY

OPEN

PROTECTED

PROTECTED

**ANPASSEN OP DE OMGEVING?**

YOUR OWN MAKE BUILDING TOOLS FROM STONES, BRANCKES ETC

INSPIRE THE SHAPE OF YOUR SHELTER ON YOUR SURROUNDINGS

Schaduwplek creëren

CHANGES SHELTER DEFORMS THROUGH SURROUNDINGS

WIND CHANGES FORM

BY CHANGES COOL

ETC.

DOOR WIND

ontzicht kan make.

VORMD 16 Bijv.

**HOE KUN JE EEN SHELTER VERANDEREN VAN COSY NAAR OPEN EN ANDERSOM?**

②

COZY

OPEN

KAARS LICHT OMGEVING IS BEPERKTE ZIEN

GEEN LICHT OMGEVING IS BETER TE ZIEN

THICK CUCHENS SOFTNES TO CHILL ON

COZY

OPEN

SPGEL WOORD VERBODEN OMGEVING

MEGA PARS INSIDE

gordijnen

OMGEVING INZIELEN

open

SAVENDS LIJEN NAAD

STAR DOME

LISTENING DEVICE

COZY

OPEN

COZY OMHELST WORDEN DOOR...

OPEN

CLOSED COZY

OPEN

PROTECTED

PROTECTED

Figure 78. Result brainstorm session 1 and 2, mind map session 1 and design goal.

# G SELECTING IDEAS

## WHICH IDEAS ARE THE MOST APPEALING AND FIT BEST WITH THE CREATIVITY AND SKILL LEVEL OF THE TARGET GROUP?

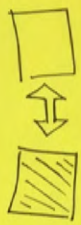
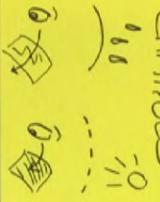
The three brainstorm session resulted in a great amount of ideas. In order to select ideas to further develop into idea directions the following procedure is followed.

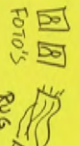
Based on personal preference the most appealing, interesting and innovative ideas are selected. The selected ideas are thereafter categorised into the four levels of creativity as explained in appendix E. The ideas categorised in level two and three (see figure 79 and 80) are further developed and reviewed on how well they fit the design goal and different skill levels of the target group. As a result two design directions are chosen.



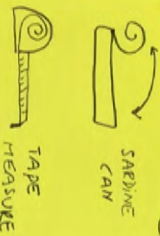
MAKE IT YOUR OWN  
ADAPTING LEVEL

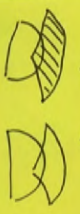
①  
USING RAIN FLY  



①  
CHANGING MATERIAL  
  
MATERIAL CHANGES  


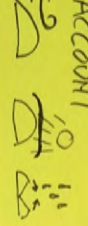
①  
FAMILIARIZE BY ADDING  
PHOTOS  
ROGS  
ETC.  


①  
GUIDED  

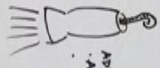

③  
SARDINE CAN  
TAPES  
MEASURE  


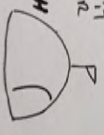
②  
INSIDE OUT  
DIFFERENT APPEARANCE OR/AND PROPERTIES  


②  
LIKE PAGES OF A BOOK  
EACH PAGE DIFFERENT PROPERTY?  


①  
ALTERING SHELTER TAKING SURROUNDINGS INTO ACCOUNT  



MAKE IT YOUR OWN  
ADAPTING LEVEL

ADDING FEATURES  
- A LIGHT  


ALTERING APPEARANCE  
GIVE IT YOUR OWN TOUCH  


SET IT UP DIFFERENT AS INTENDED  


HINER REMAINS  
- POLE  
- FLY  
- ETC.  


UPGRADING/ADDING  
ADDING A BETTER FOOTPRINT  


WATER PROOFING  


Figure 79. Ideas fitting creative level 2

MAKE IT YOUR OWN  
MAKING LEVEL

① PLAYFUL

② SELF DECIDE ON CONFIGURATION

② SURROUNDING IS SHELTER

③ LIKE A FIRE YOU CAN ST/LIE AROUND

② RUBIK CUBE WITH SEVERAL SOLUTIONS

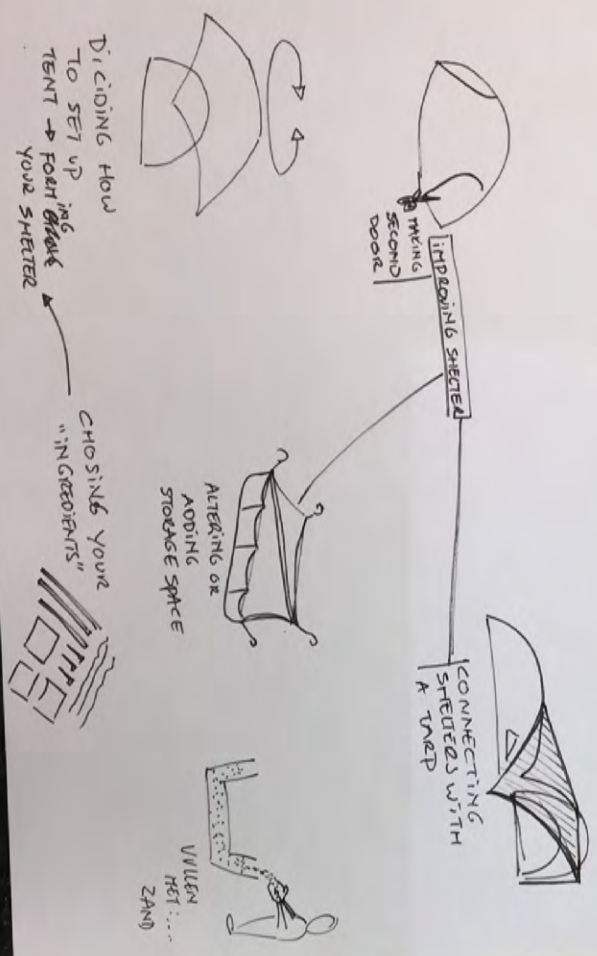
① SET UP DIFFERENTLY SAME 'INGREDIENTS'

③ SHELLER IS A PATCH WORK YOU CAN RE ARRANGE

② FLEXIBLE FORM DESIGN YOUR SELF

① INCLUDING NATURE TO MAKE DIFFERENT TENTS

TAKE IT YOUR OWN  
MAKING LEVEL



③ STRETCH CLOTH MULTI FORM SHELTER

# H IDEA DIRECTIONS

## WHAT ARE THE DIFFERENT IDEA DIRECTIONS? AND WHICH ONE FITS THE PROJECT THE BEST?

First the two design directions will be explained. Then, the choice for one of the directions will be elaborated.

### H1 IDEA DIRECTION 1: THOUSAND AND ONE NIGHTS

This design direction is based on the idea that every adventure and surrounding is different, see figure 81. By designing a shelter you can alter to the surroundings and the situation, the user can really submerge him/herself in nature and meanwhile make the place and the shelter their own. When setting up the idea is that the shelter can be easily opened up from the inside in order for the user to enjoy their surroundings to the fullest, even until the first raindrop.

### H2 IDEA DIRECTION 2: TRANSIT

The transit mainly focusses on submersion and closing of the surroundings when the shelter is already set up, see figure 81. By pulling the shelter down you are protected from the elements while you still have lots of opportunity to see your surroundings. When more privacy is wanted, the windows can be closed. Hooks are attached to the hoop pole which can be used for all kinds of things like drying clothes, hanging your torch, etc.

### H3 CHOOSING A DESIGN DIRECTION

The choice for one of the design directions is made based on which idea direction fits best with the design goal, the creativity and skill level of the target group and is the most differentiating compared to current products on the market.

#### DESIGN GOAL

The design goal consists more or less of two parts. One part focuses on submerging in the surrounding (see below highlighted in green) and the other part focusses on making the shelter your own in an exploratory way (see below highlighted in red). Thousand and one nights combines these two parts of the design goal neatly into one design direction whereas Transit focusses more on opening and closing and less on making the shelter ones own in a creative way. This part would have to be force fitted into the idea direction with ideas like the hooks attached to the hooped pole.

#### CREATIVITY AND SKILL LEVEL

Idea direction one, suites creativity level one, two and three depending on how the user chooses to use and set up the shelter. This also applies for the skill level. When the user chooses to set up a given version of the shelter a fixed target outcome is given. When the user decides to be creative a given design can be

altered or the user can come up with a totally new design using the basic shelter kit and their surroundings. This way 'Thousand and one nights' fits a intermediate to expert skill level.

Idea direction two suites creativity level one and two because just a few alternations can be made by the user. Moreover in order to modify the shelter to the users wants and needs a low to intermediate skill level is needed. which does not fit with the high to intermediate skill level of the target group.

#### DIFFERENTIATION

The two design directions are discussed with D. Hazewindus (2017). In his opinion both design directions have potential. According to him Thousand and one night is the most innovating whereas the Transit is easier to develop and has potentially a bigger market. He also noted that he thought that the Transit, because of its hooped pole would be associated with the 3 second tent which might not do justice to the idea and the intended interaction.

### H4 CONCLUSION

It may be clear that on all three aspects, design goal, creativity and skill level and differentiation design direction 1 has an edge over design direction 2. Therefore Thousand and one nights is chosen to further develop into a concept.


### DESIGN GOAL

TO DESIGN A SHELTER WHERE THE FEELING OF BEING OUTSIDE AND INSIDE MERGE SMOOTHLY INTO ONE ANOTHER, GIVING THE USER THE OPPORTUNITY TO SECLUDE FROM AND SUBMERGE IN THEIR SURROUNDING. MEANWHILE ENABLING THE USER TO BREAK WITH THEIR DAILY ROUTINE AND MAKE A SHELTER AND BY THAT, MAKING THEIR CAMPING SPOT THEIR OWN, IN A MINDFUL AND EXPLORATORY MANNER.




# THOUSANT AND ONE NIGHTS

**BASIC SHELTER KIT**

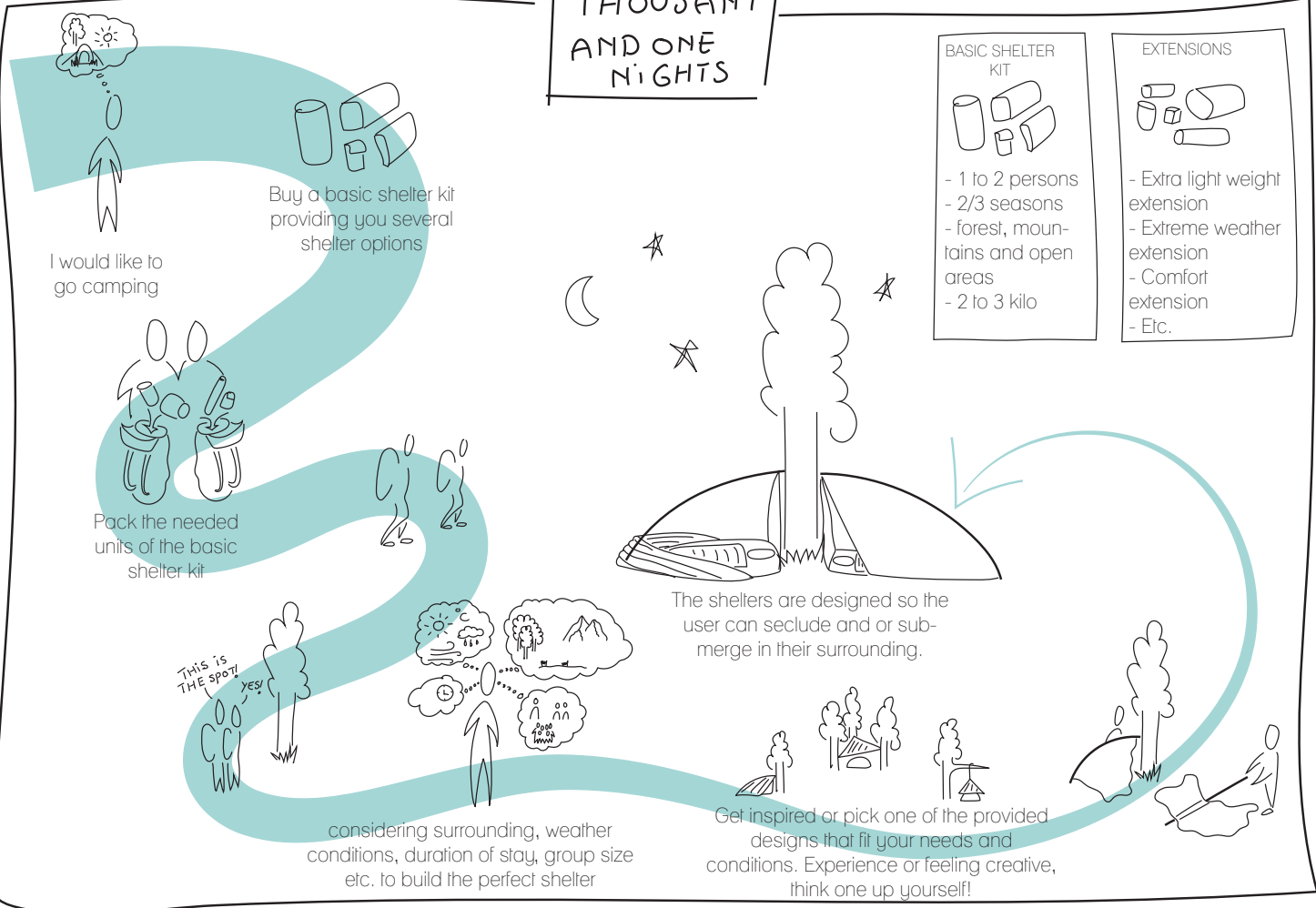


- 1 to 2 persons
- 2/3 seasons
- forest, mountains and open areas
- 2 to 3 kilo

**EXTENSIONS**



- Extra light weight extension
- Extreme weather extension
- Comfort extension
- Etc.



# TRANSIT

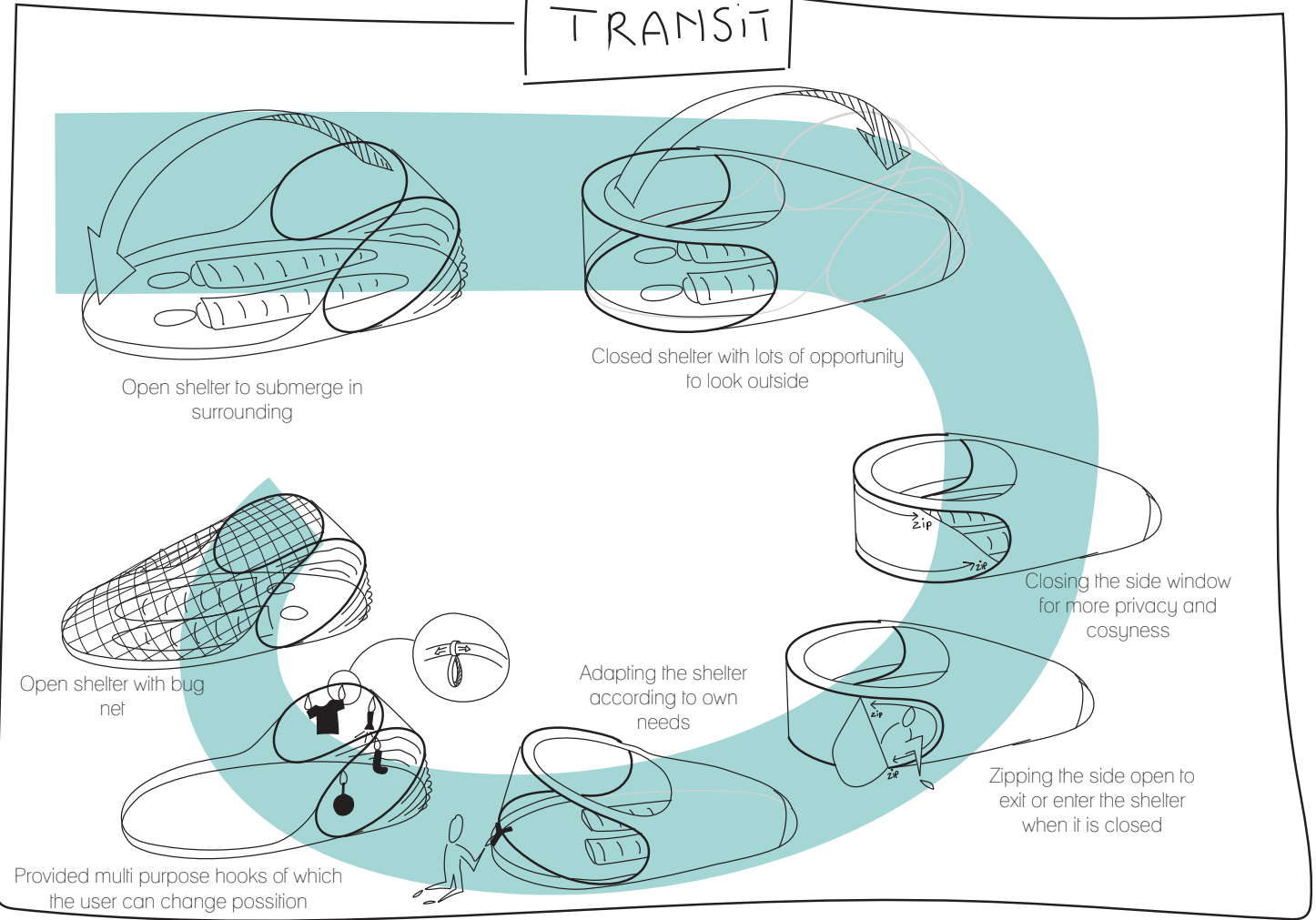


Figure 81. Visual explanation of idea direction 1: Thousand and one nights and idea direction 2: Transit.





# I IDEA DIRECTION DEVELOPMENT

## HOW TO GET FROM IDEA DIRECTION TO CONCEPT?

### I1 FORM AND FUNCTION STUDY

The tricky part of the chosen idea direction is integrating both versatility and meanwhile making sure the tent can be opened from the inside to submerge in the surroundings in such a way that the product is not very complicated, both to make and to use. First the two problems are viewed separately from each other by means of drawings and models. In this first concept development phase there is deliberately chosen for a chaos approach, meaning no structure is maintained and no conclusions are drawn. This is done to let the creative process flow and prevent the process from stagnation and choosing the obvious option instead of going that little bit further.

#### HOW CAN DIFFERENT FORMS BE MADE WITH THE SAME ELEMENTS?

Different solutions to this question are generated by means of paper models, pole models, pole with fabric models and drawings, see figure 82 until 95.

#### HOW CAN DIFFERENT SHELTERS BE OPENED AND CLOSED FROM THE INSIDE?

Different solutions to this question are generated by means of pole

models, pole with fabric models and a brainstorm session with a fellow student P. Klap, see figure 96 until 100.

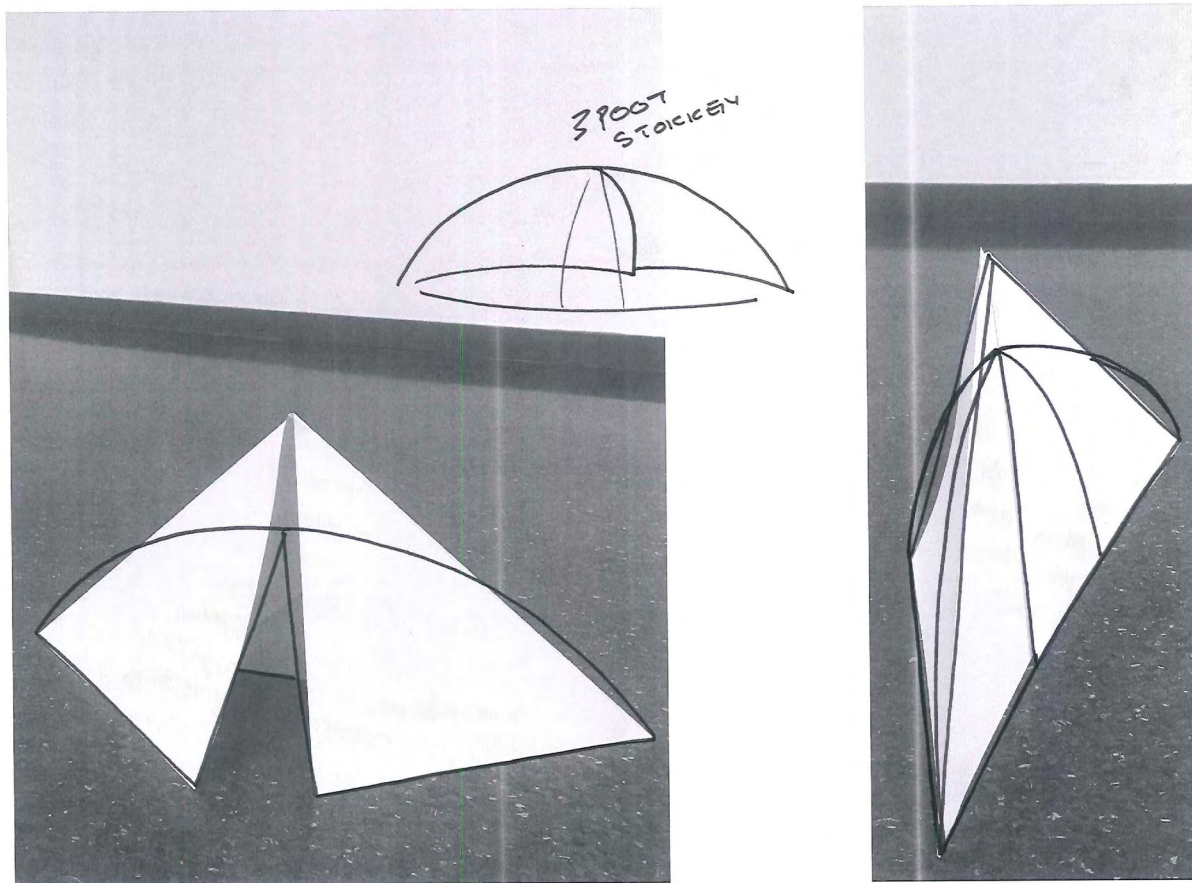
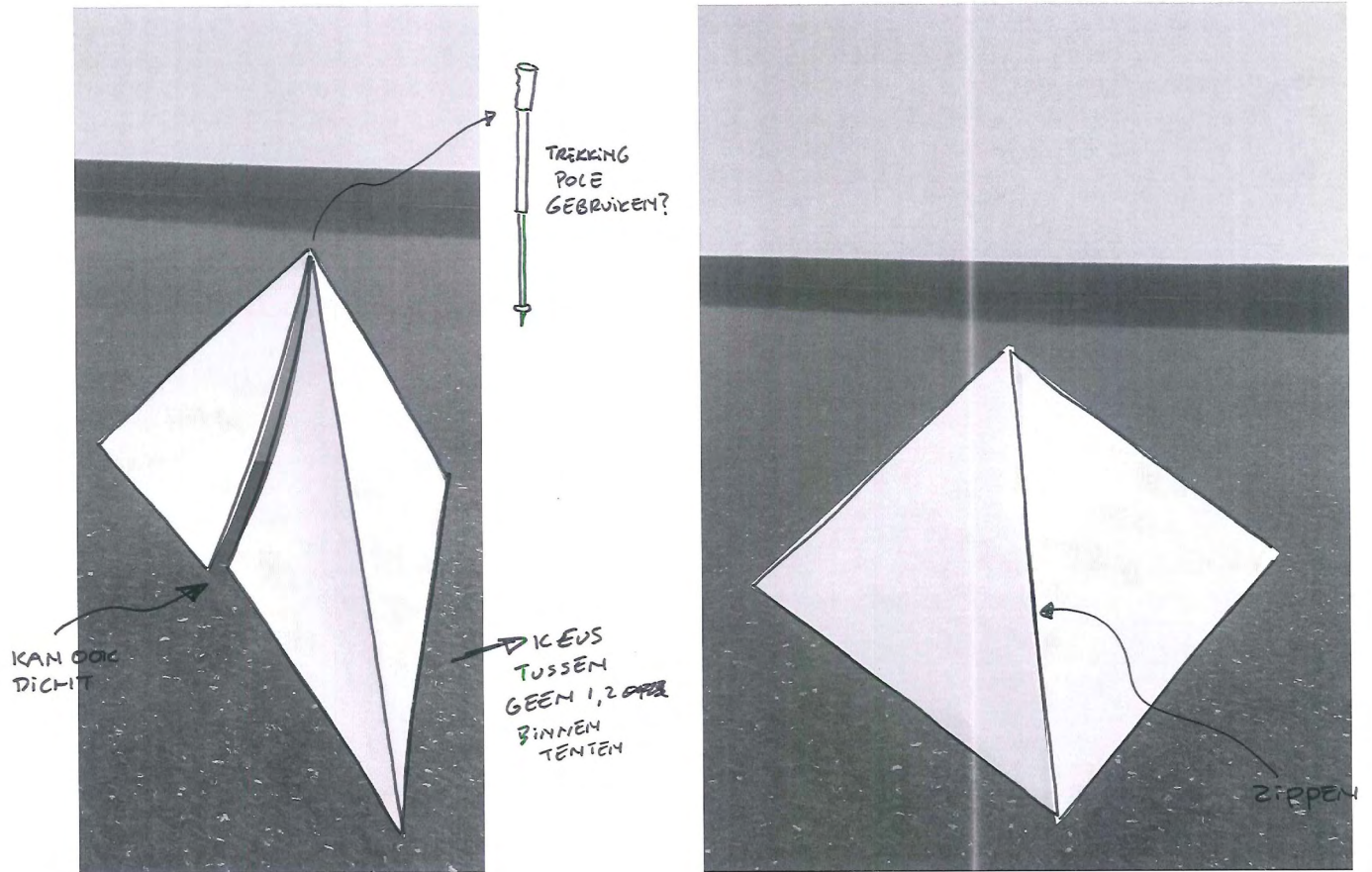
### I2 STRUCTURE STUDY

In order to bring order to the chaos and use the gained insights to design a final concept the results are structured in the following themes, see also figure 101 to 108.

- Open and closing
- Rope/string
- Stones
- Folding
- Sand
- Air
- Branches
- Trees
- Zippers
- Trekking Poles

After categorizing the solutions into different themes the method 'morphological chart' explained in the Delft design guide (2013) is used to generate four different solution areas by using different solutions for pegs, structure, form changing and open & closing, see figure 109.

There was one basic form which appeared in all the four solution areas, see figure 110 until 113. This form was chosen because it lends itself well for opening and closing and seemed to be the most versatile. When decided on the form the conceptualisation began.



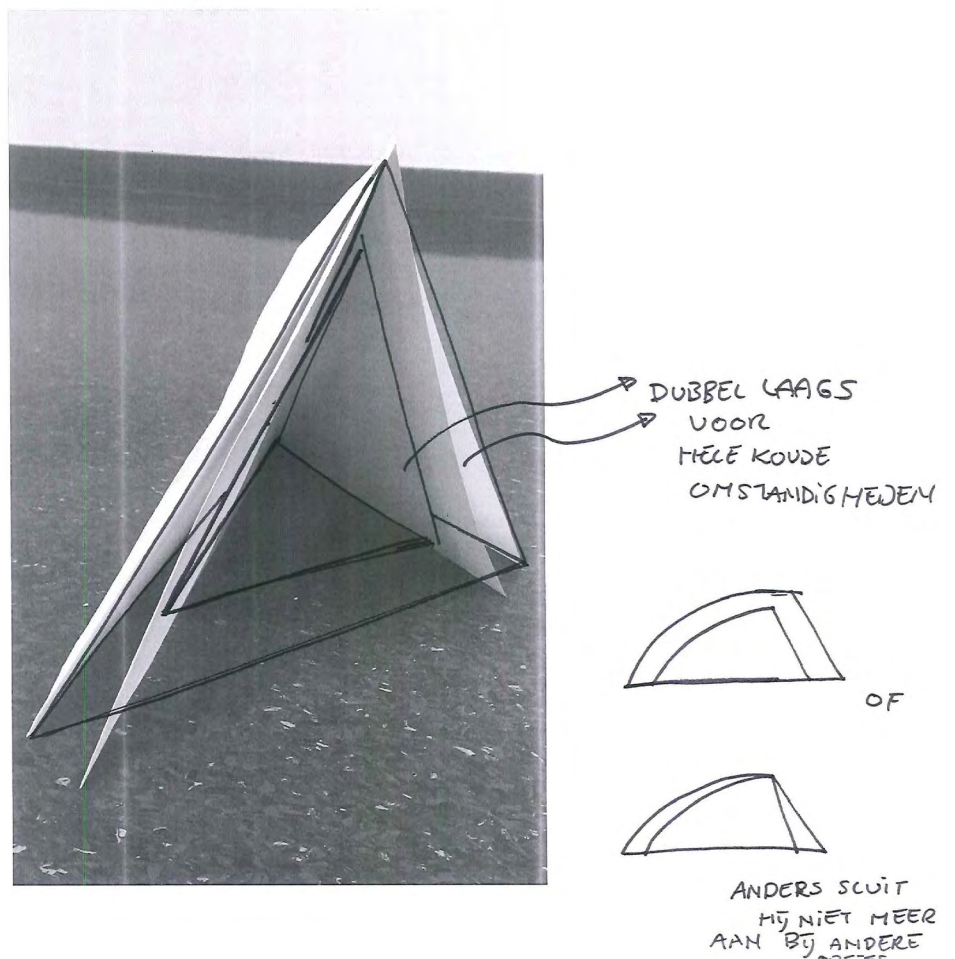
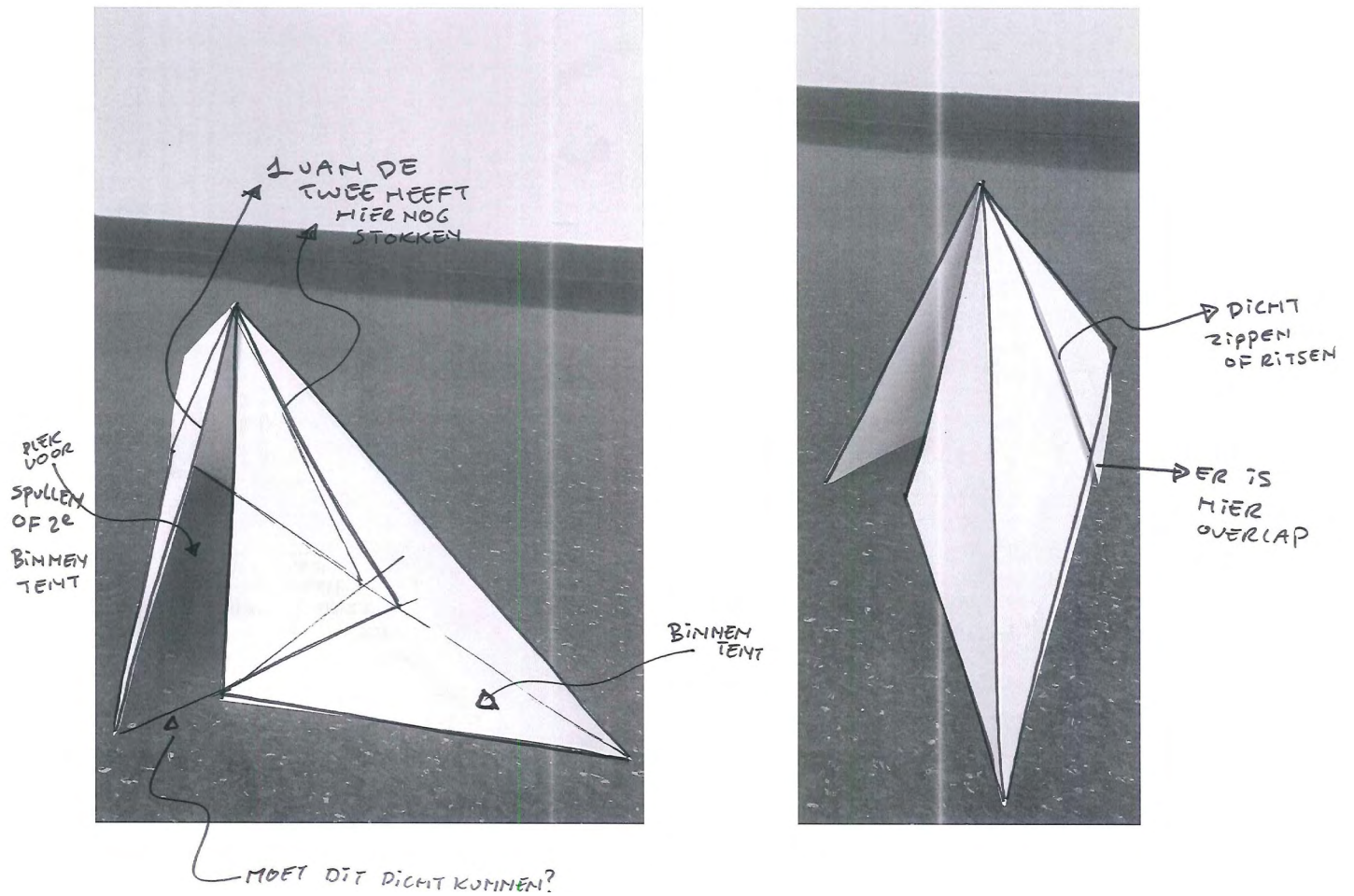


Figure 83. Paper model: two folded papers positioned differently relative to each other. This way creating different forms with the same materials.

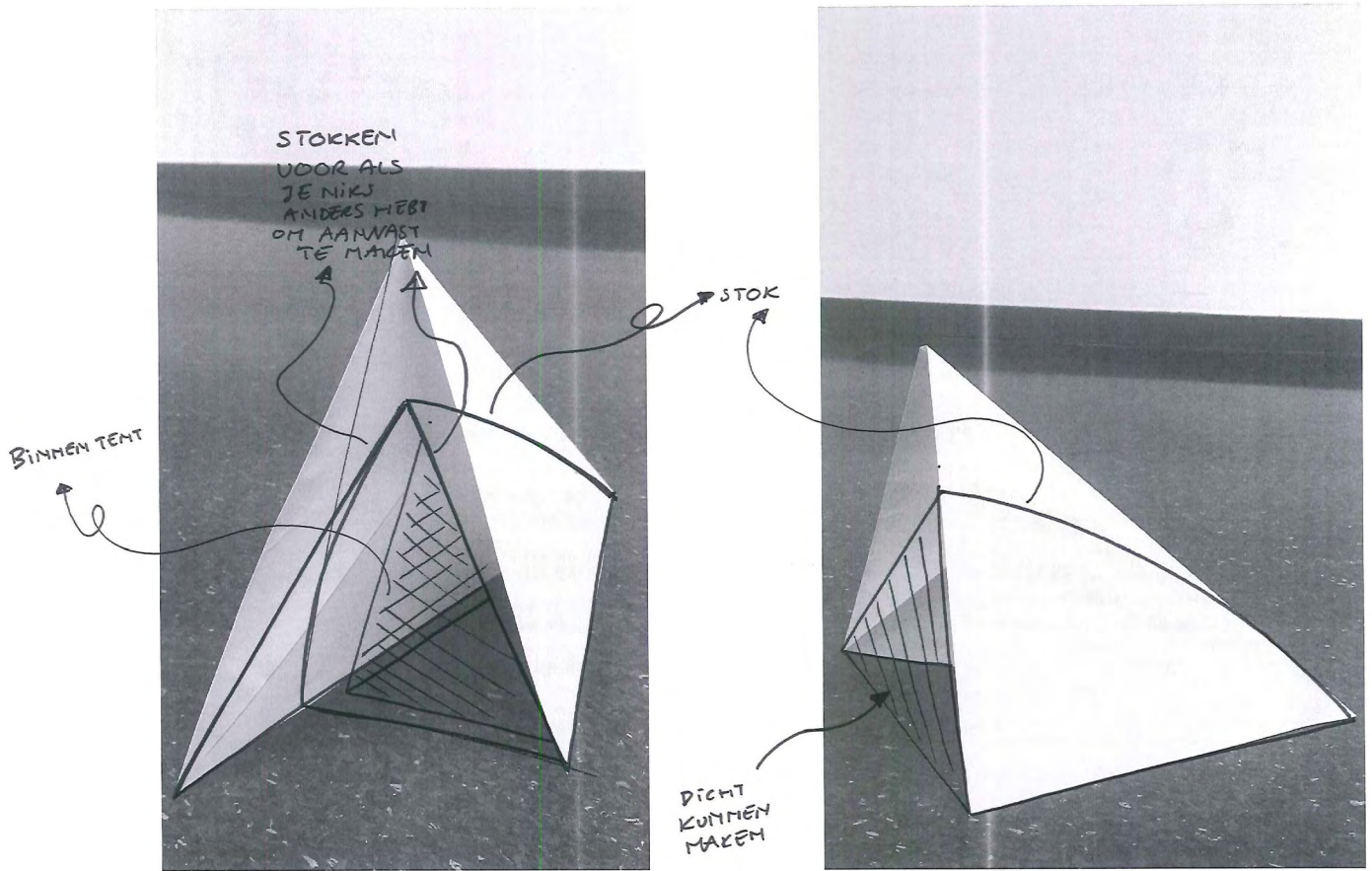
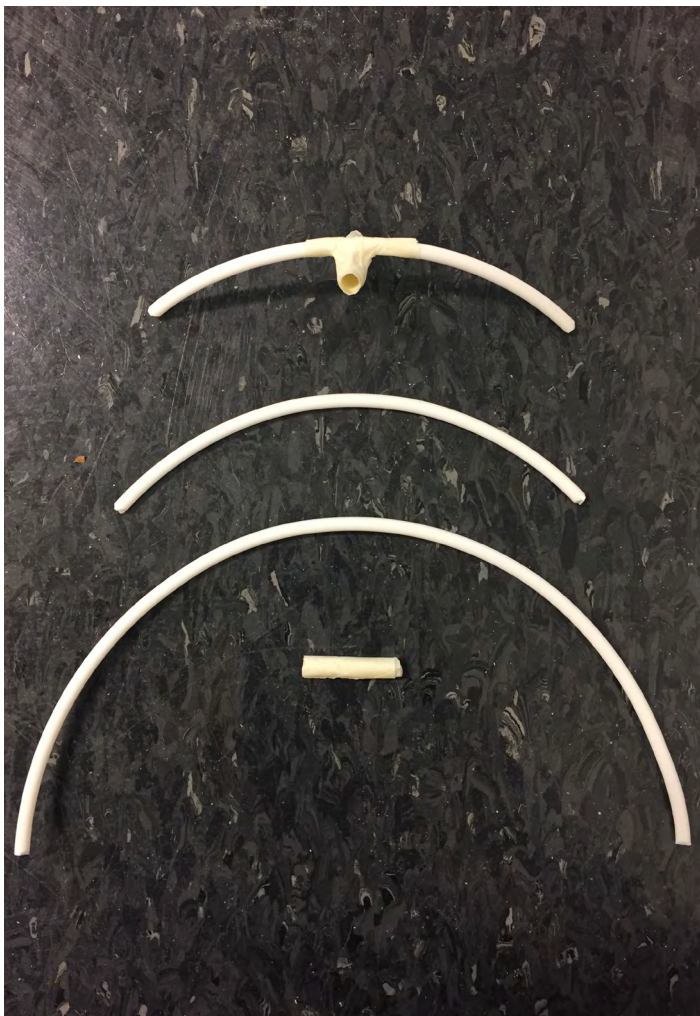


Figure 84. Paper model: two folded papers positioned differently relative to each other. This way creating different forms with the same materials.



151 Figure 85. Study how three poles and two attachment parts can form different pole structures- parts

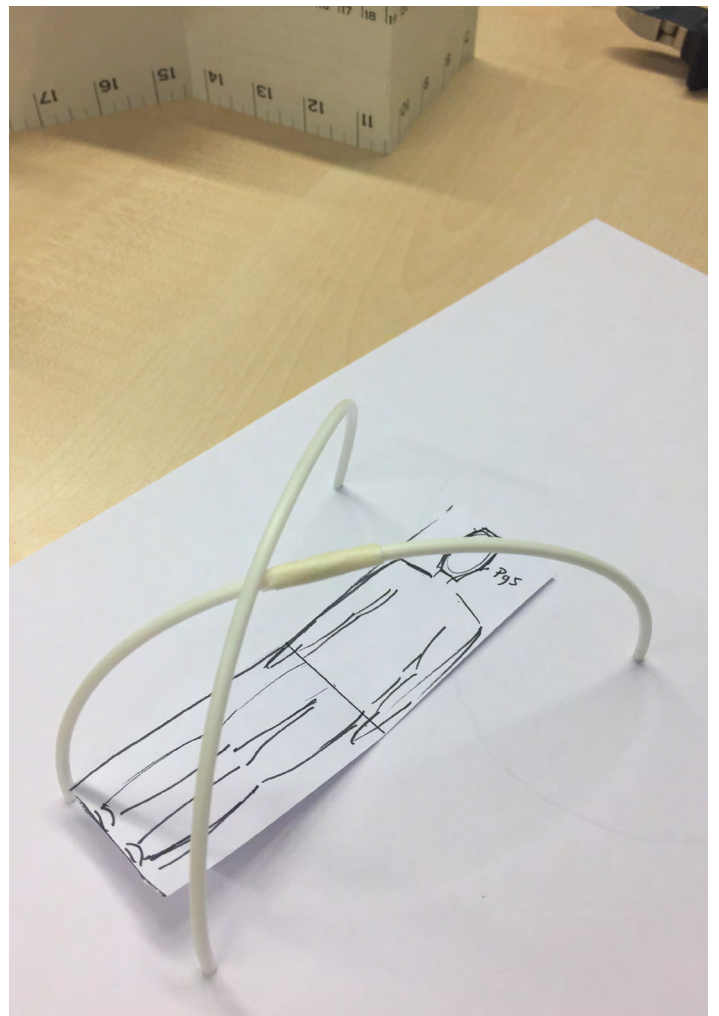
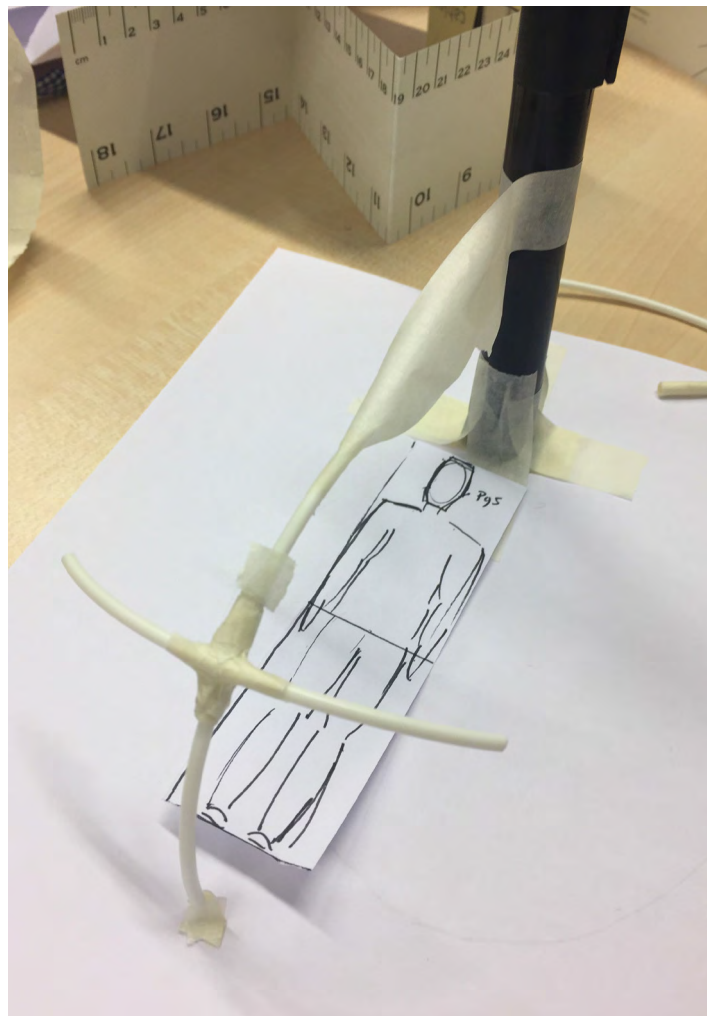
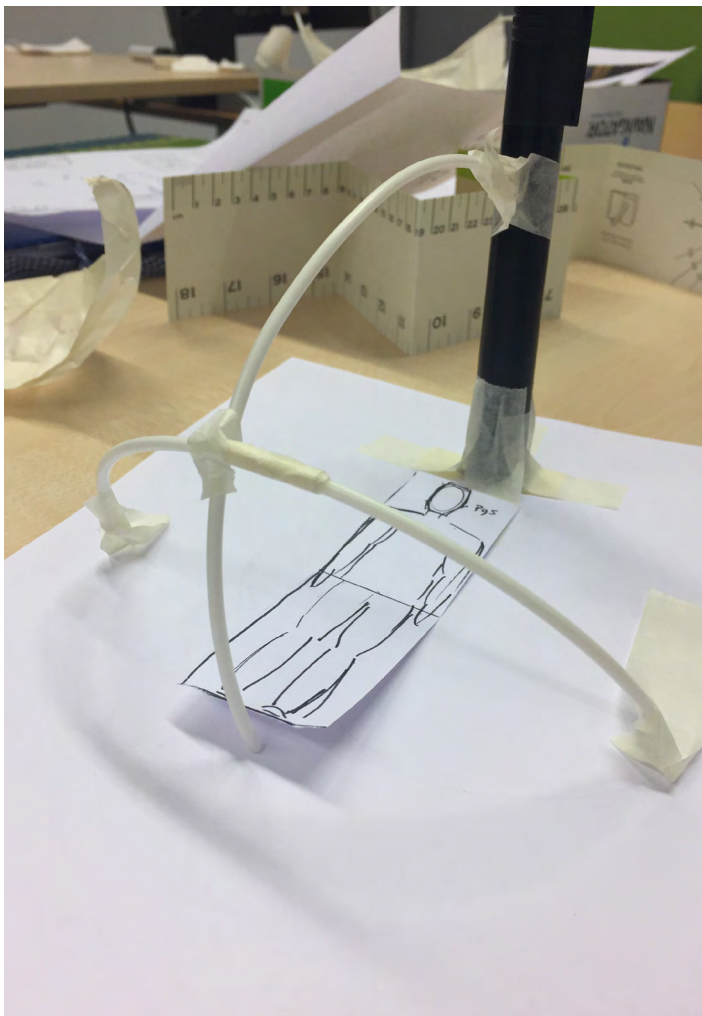
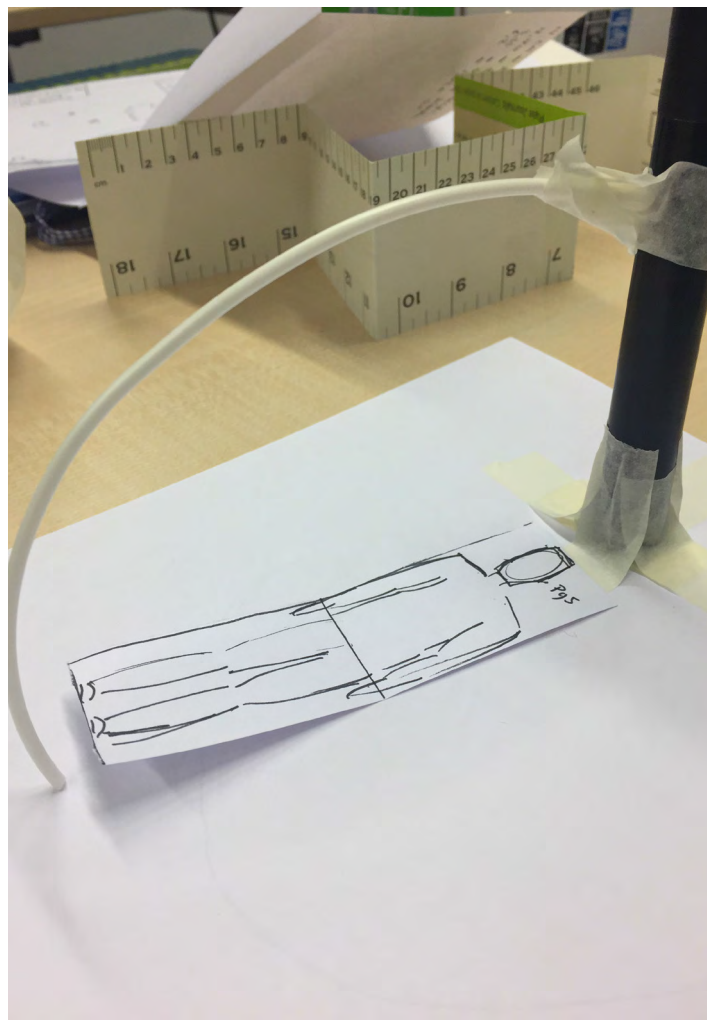
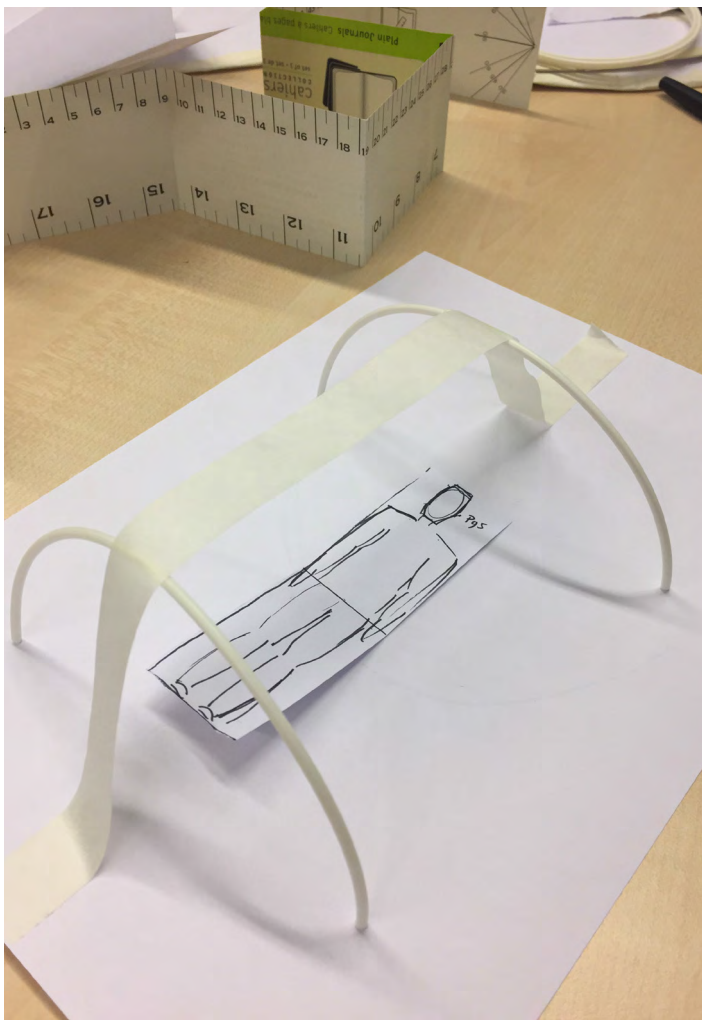
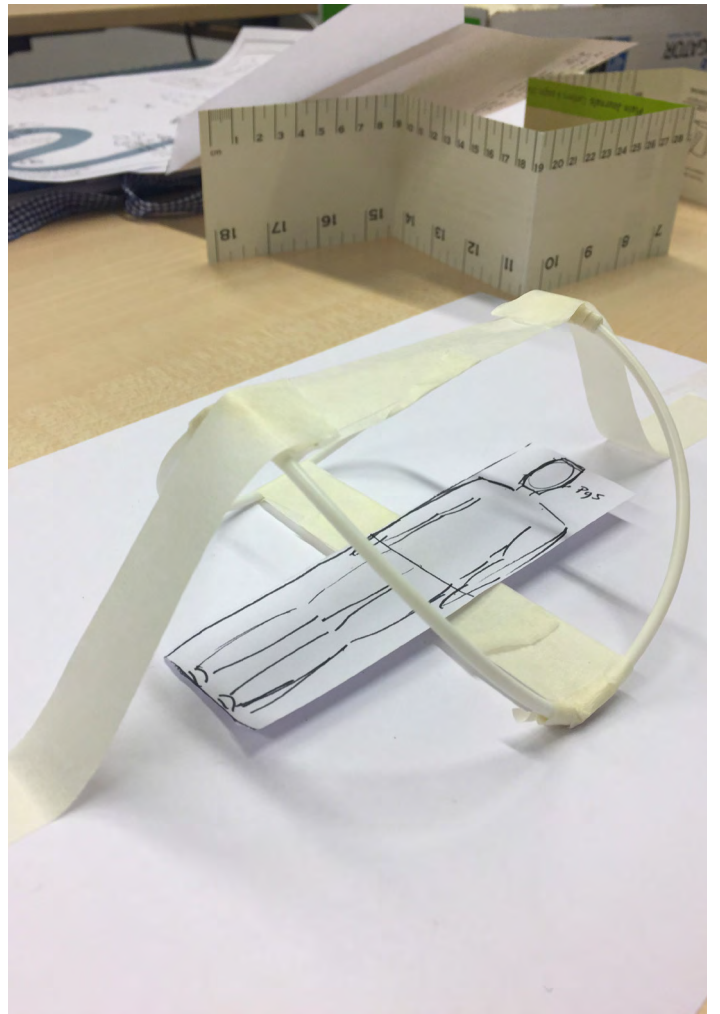
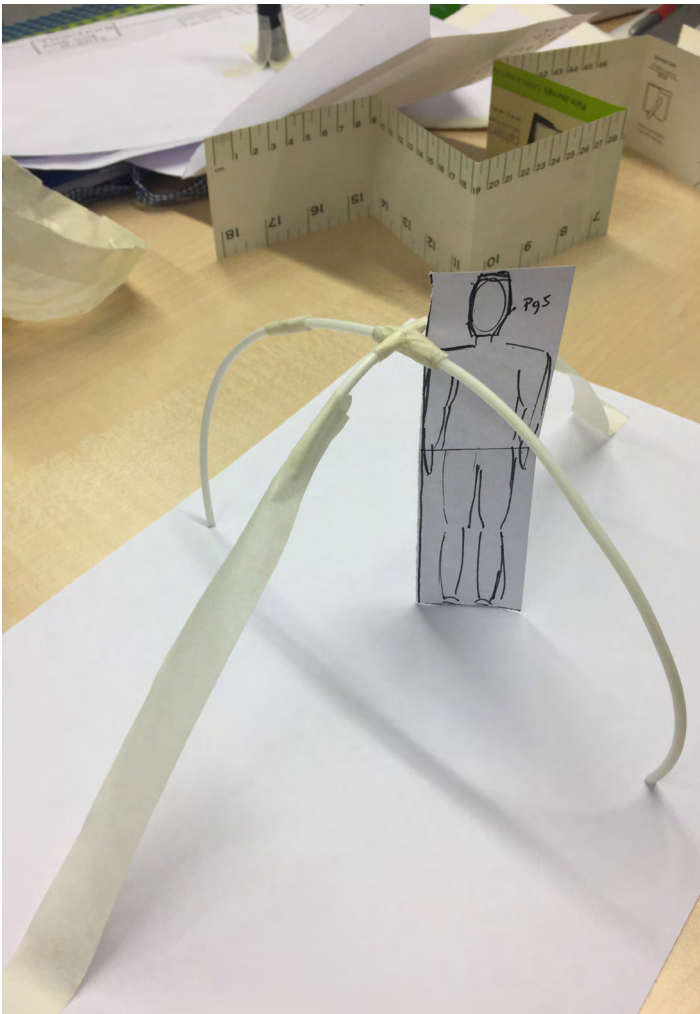
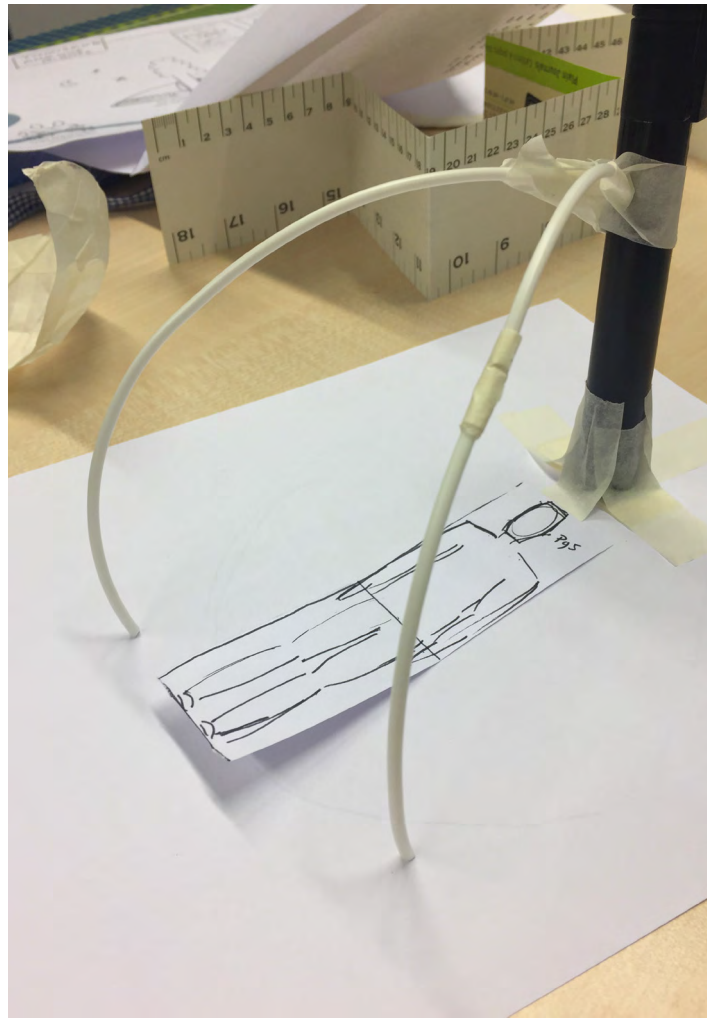
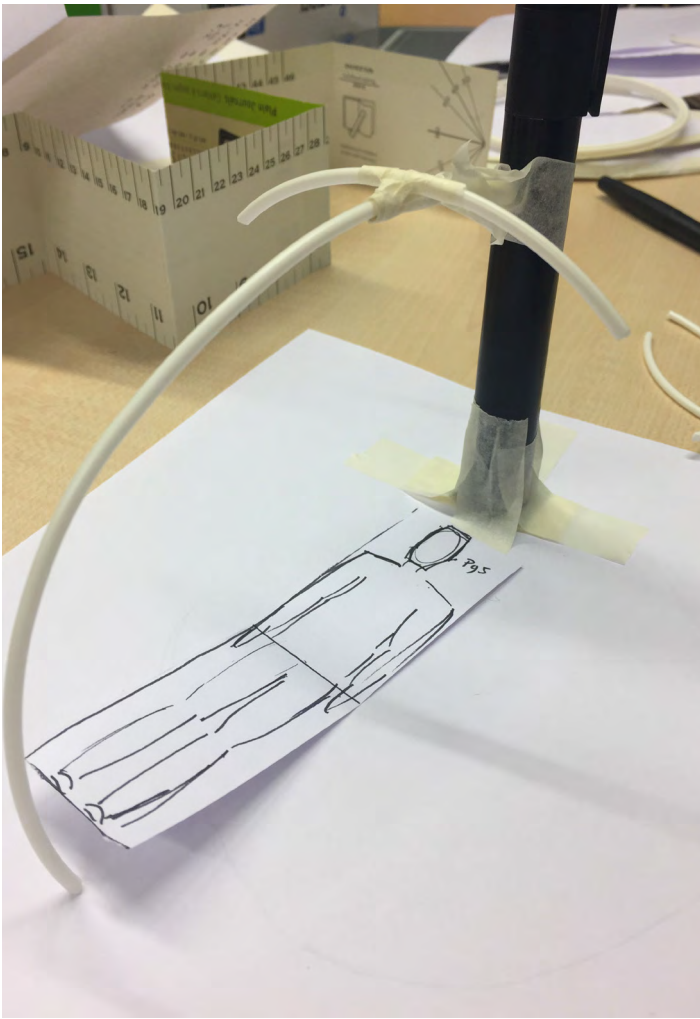


Figure 86. Study how three poles and two attachment parts can form different pole structures.







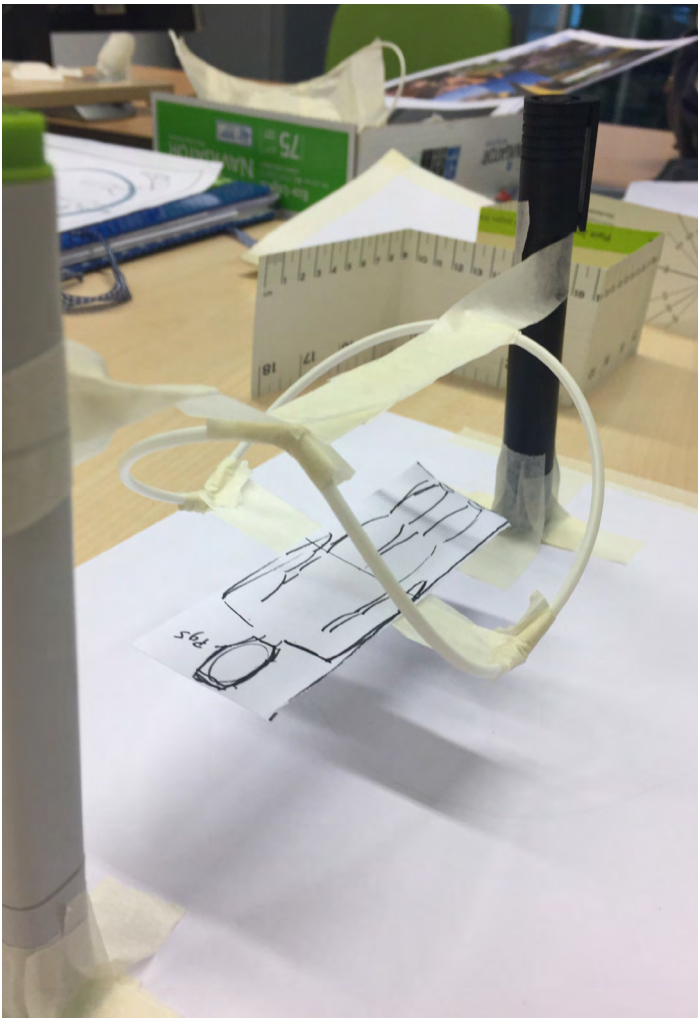


Figure 88. Study how three poles and two attachment parts can form different pole structures



Figure 89. Study how one piece of fabric fits different pole structures.



Figure 90. Study how one piece of fabric fits different pole structures



Figure 91. Study how one piece of fabric fits different pole structures.





Figure 93. Study how one piece of fabric fits different pole structures



Figure 94. Study how one piece of fabric fits different pole structures.

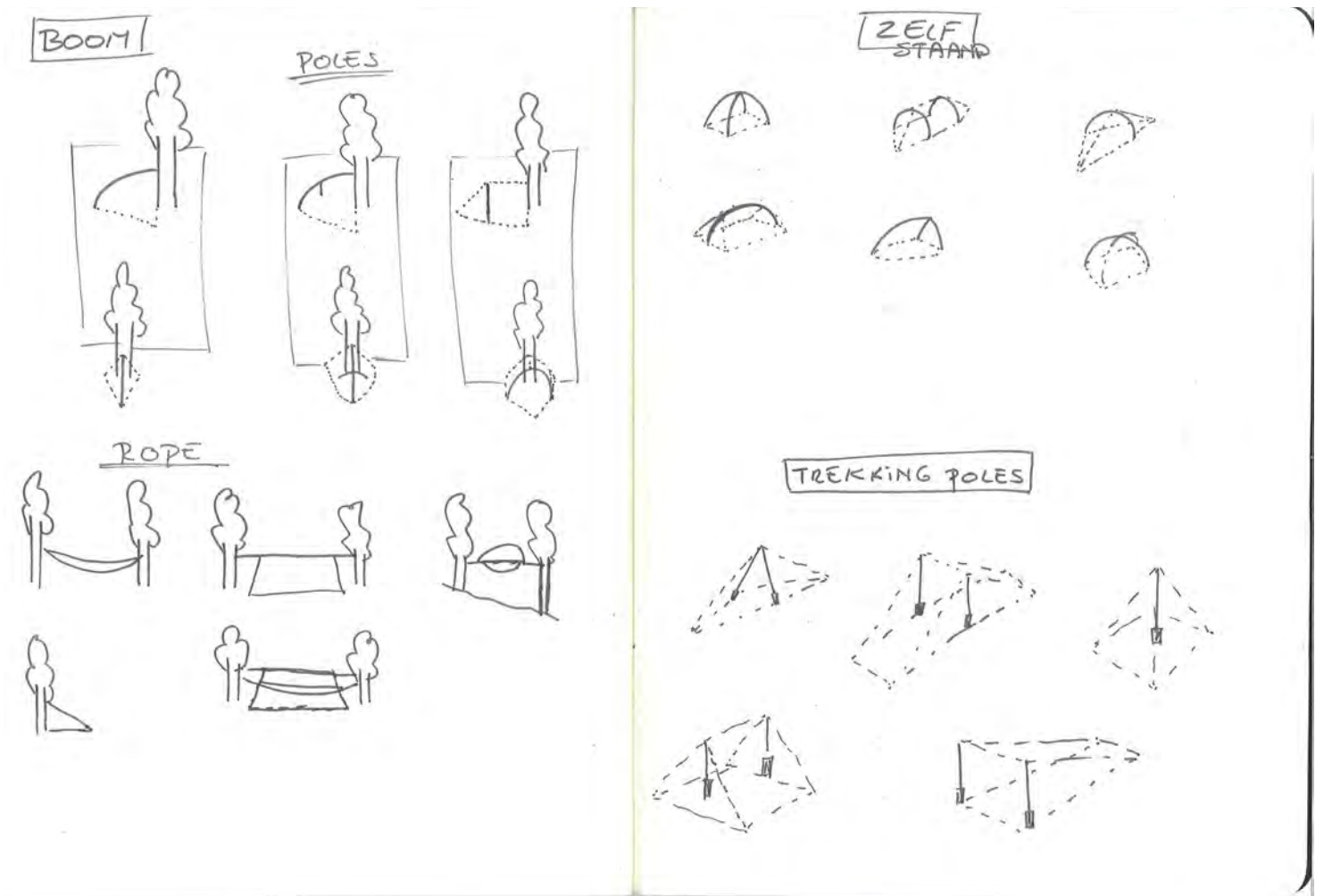
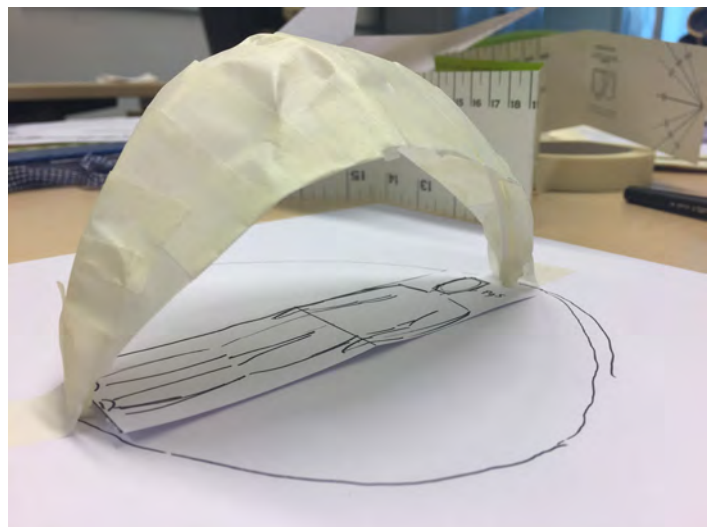
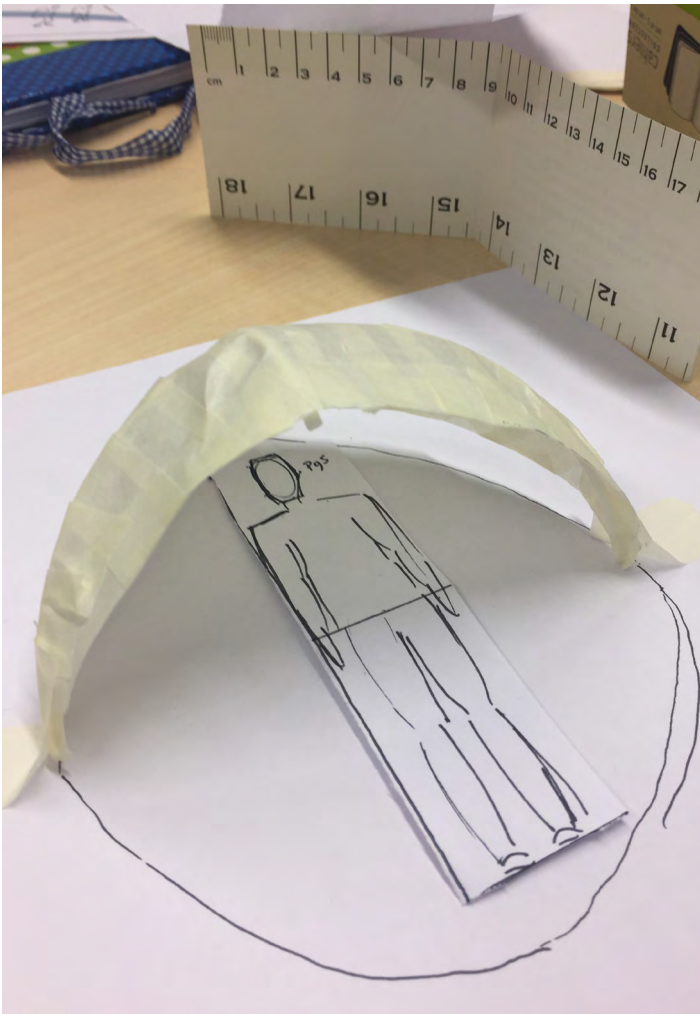
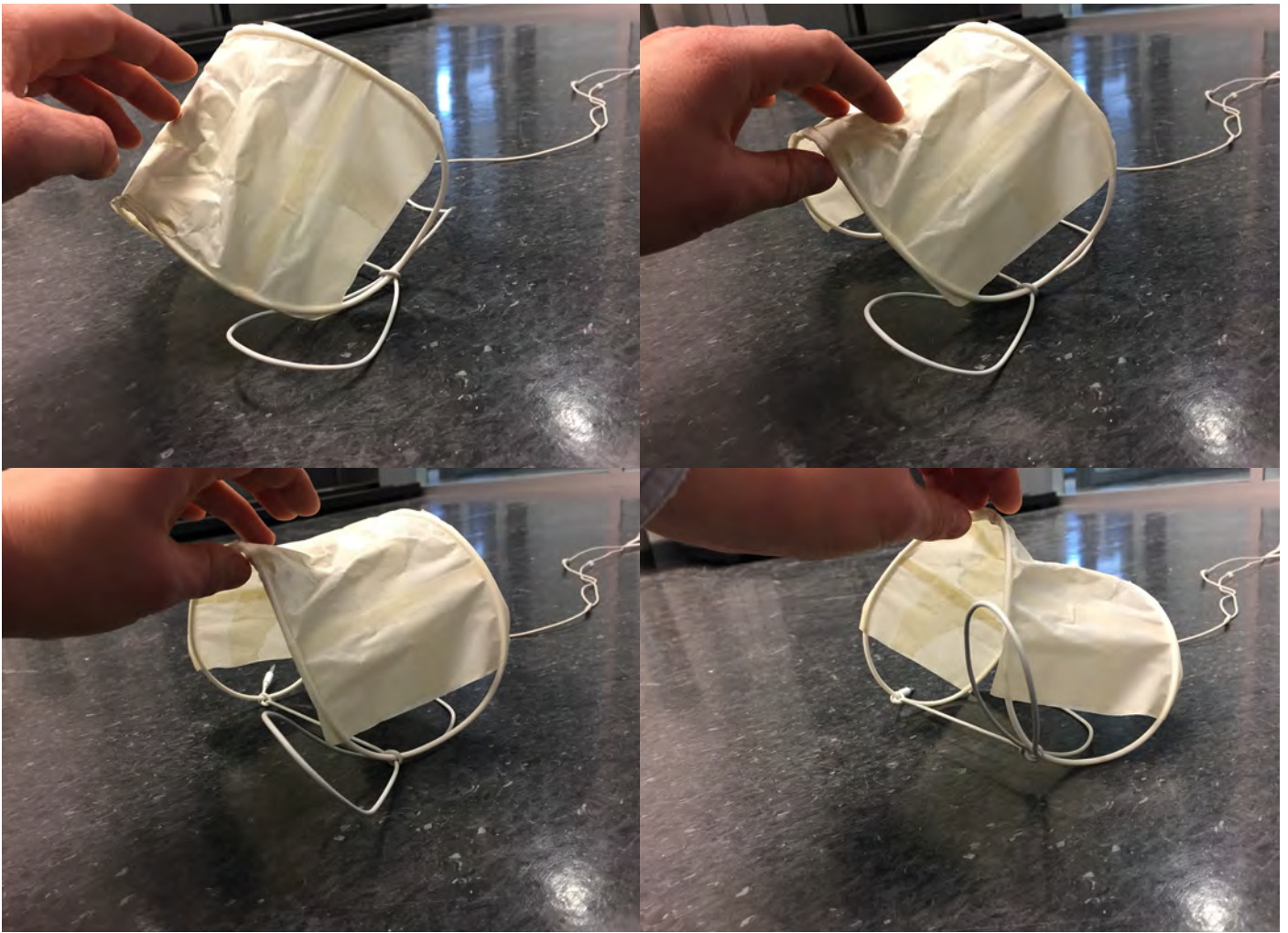


Figure 95. Drawings of different possible structures based on rope, poles, trees and trekking poles.



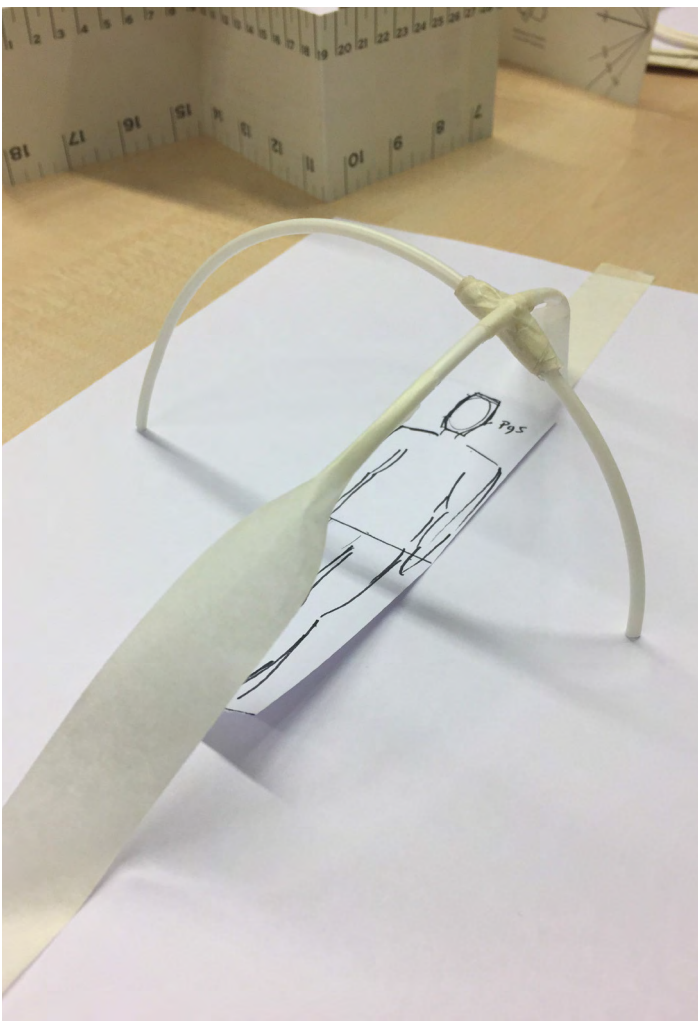


Figure 97. Study on how a pole structure can facilitate opening and closing a shelter.

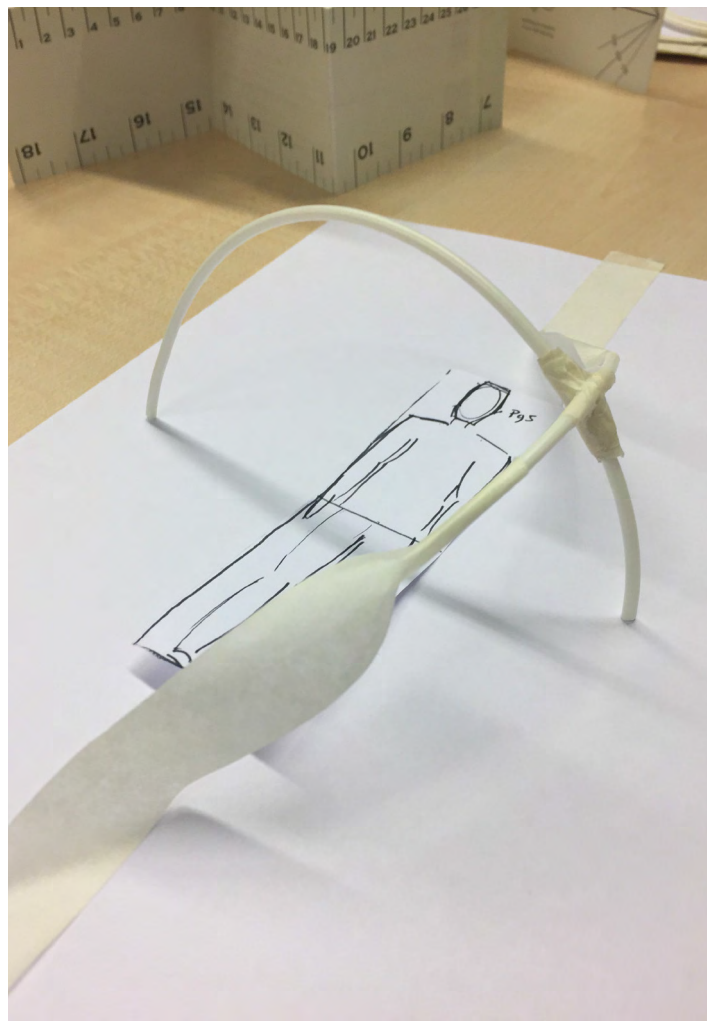
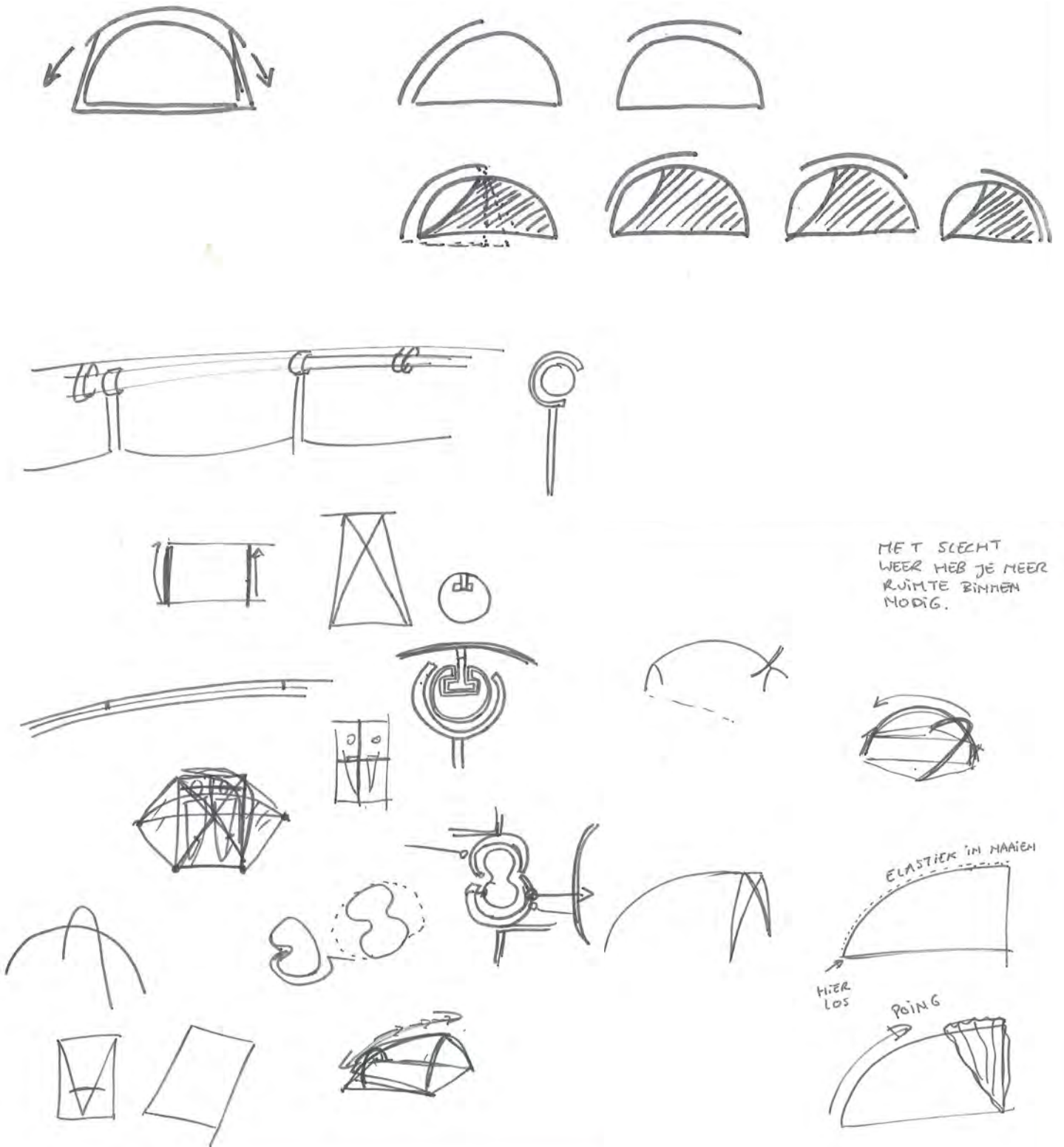


Figure 98. Study on how a pole structure can facilitate opening and closing a shelter



Figure 99. Study on how a pole and fabric can work together to open and close a shelter.



TREKKING  
POLES

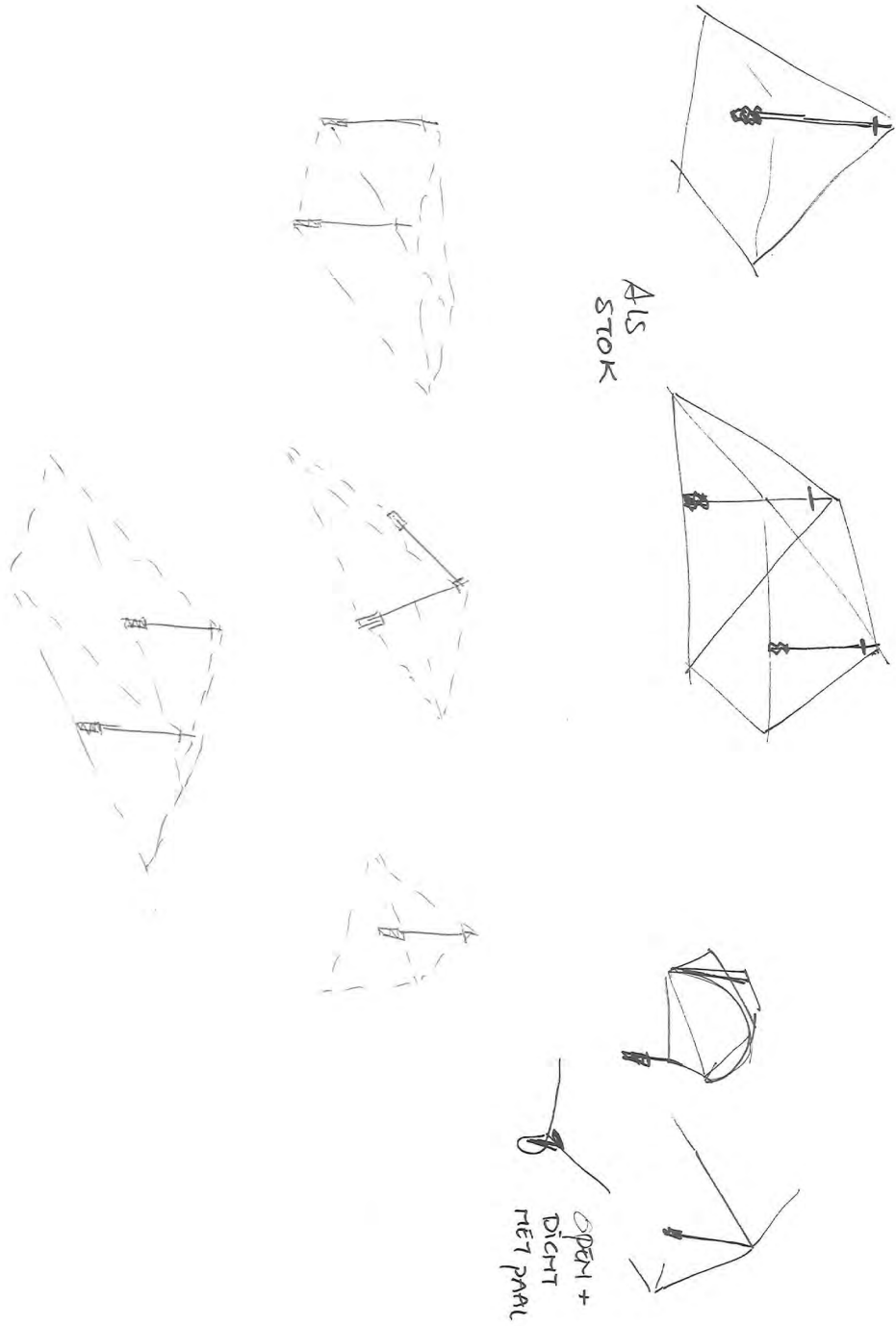
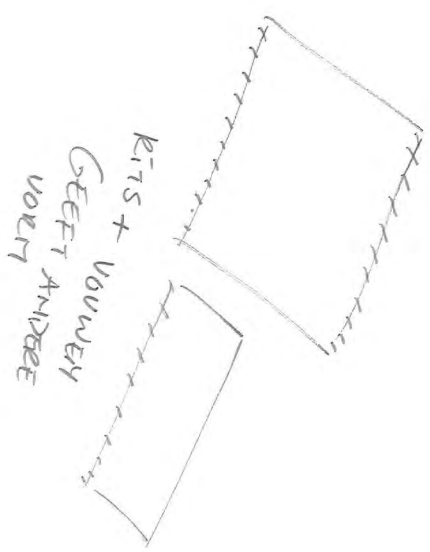
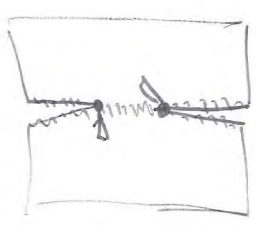
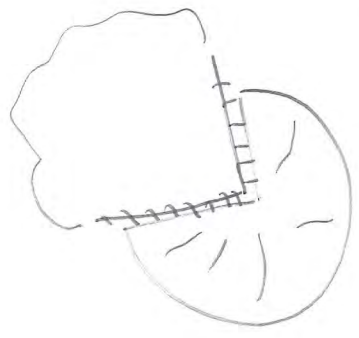
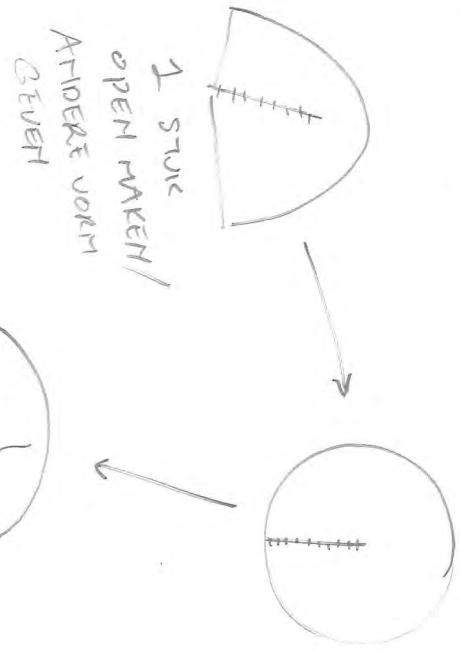
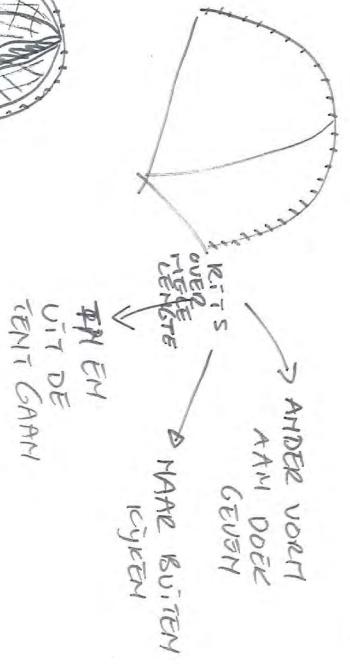
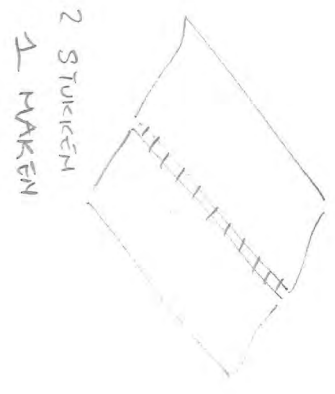
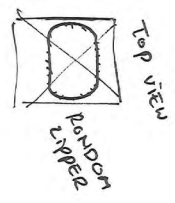
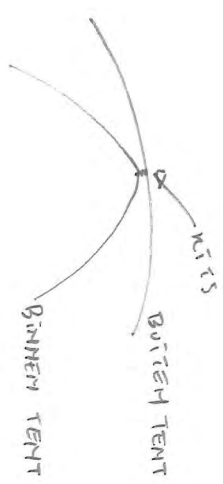
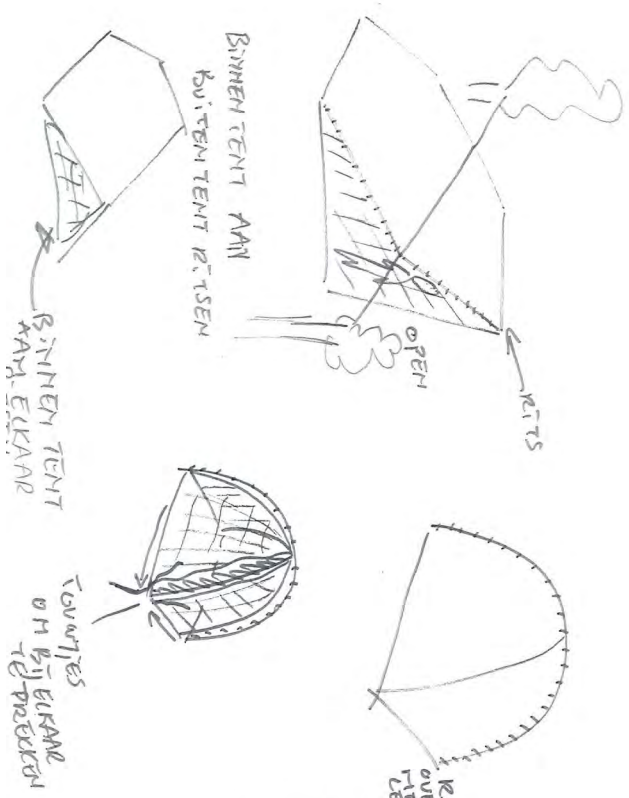


Figure 101. Results of the form and function study categorised by theme - Trekking poles





WETENS

PIJTSEN

*[Handwritten signature]*

USING  
BOHEM

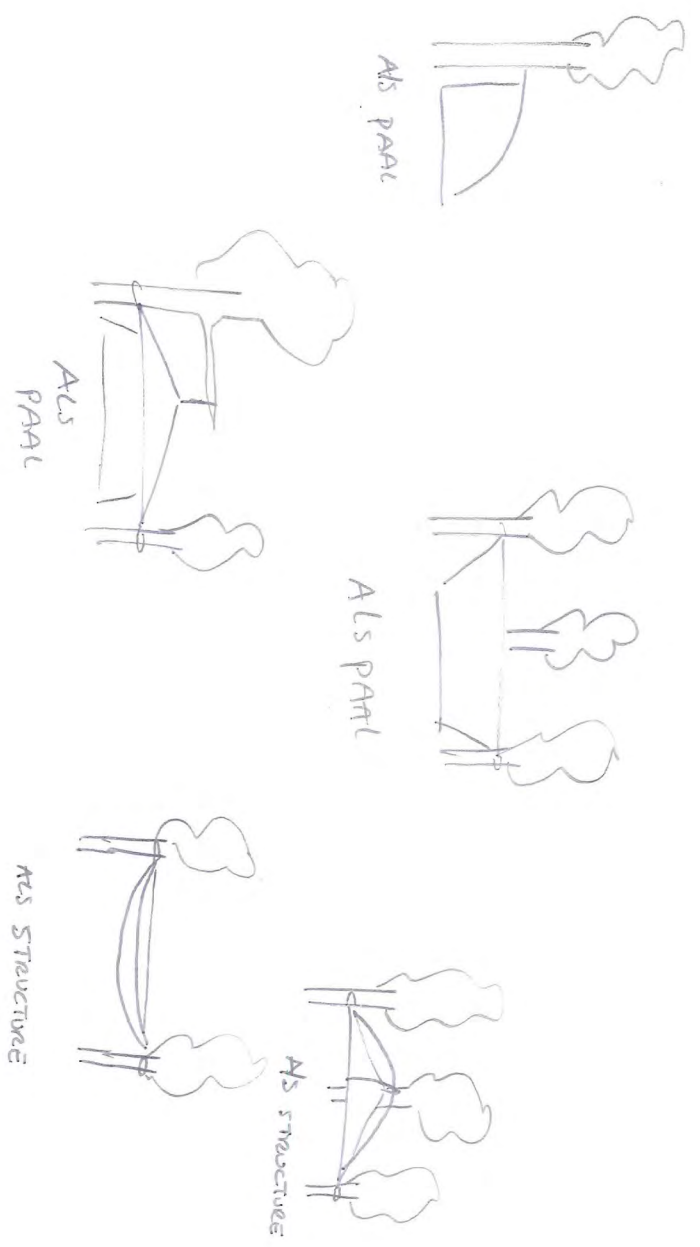
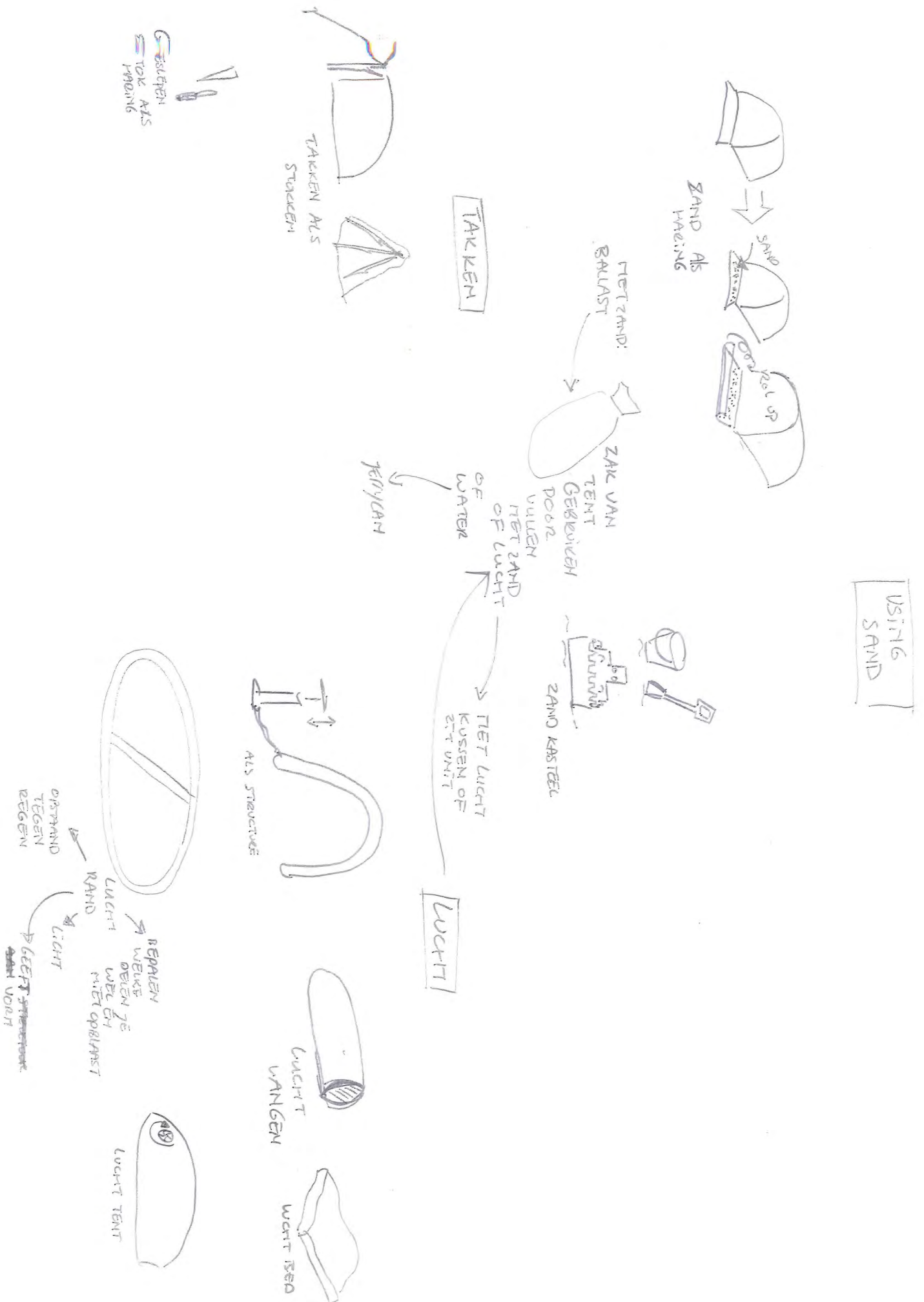
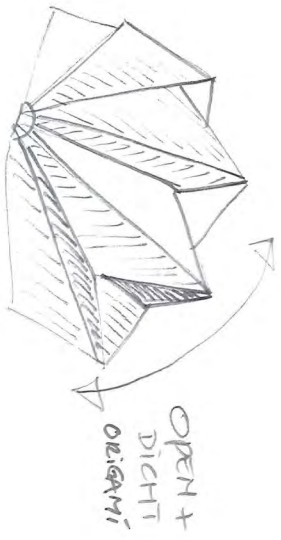
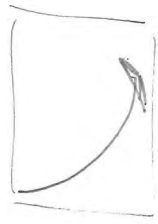


Figure 103. Results of the form and function study categorised by theme - Trees

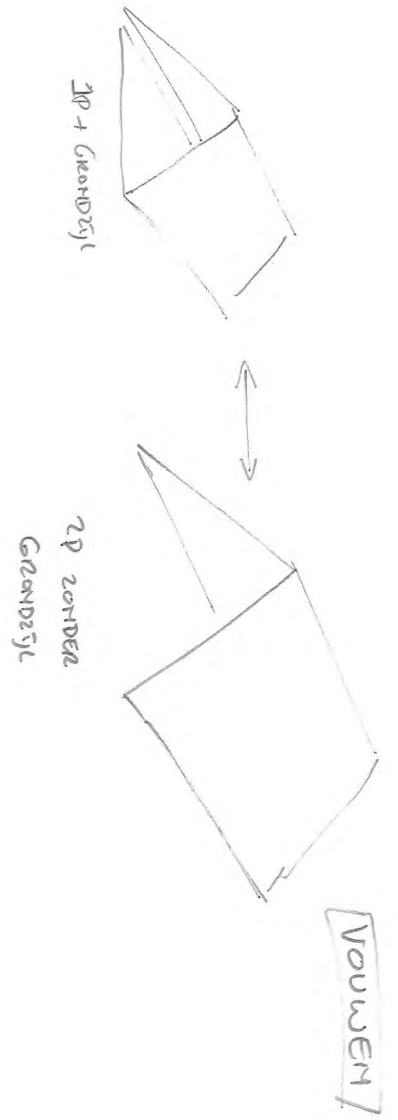
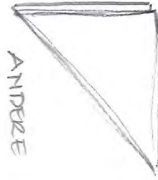




OPEN +  
DICHT  
OLIGAMI



ANDEZE  
VOR H  
DOOR VOUWEN



1P + GROUNDSTYL

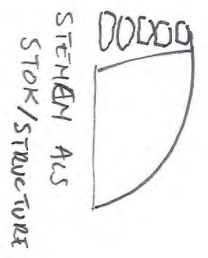
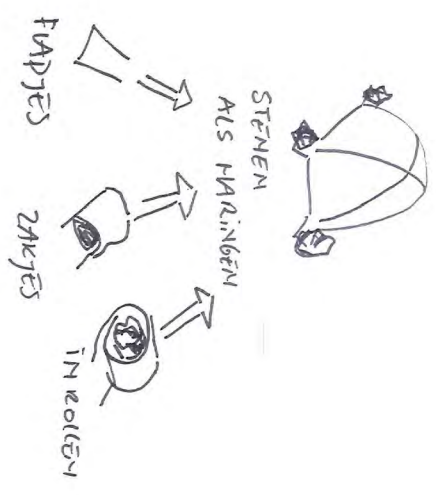
2P ZONDER  
GROUNDSTYL

VOUWEN

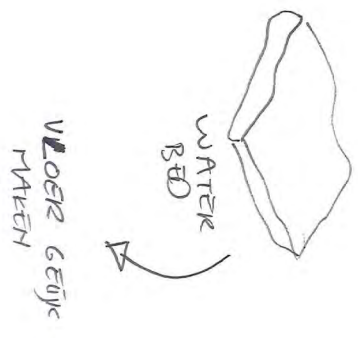
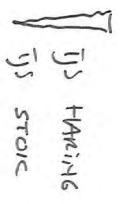


ONKLAFFEN  
VON VOR H  
GEEFT ANDEZE  
GEBRUIKSDIESTUKKEN

USING STONES



WATER



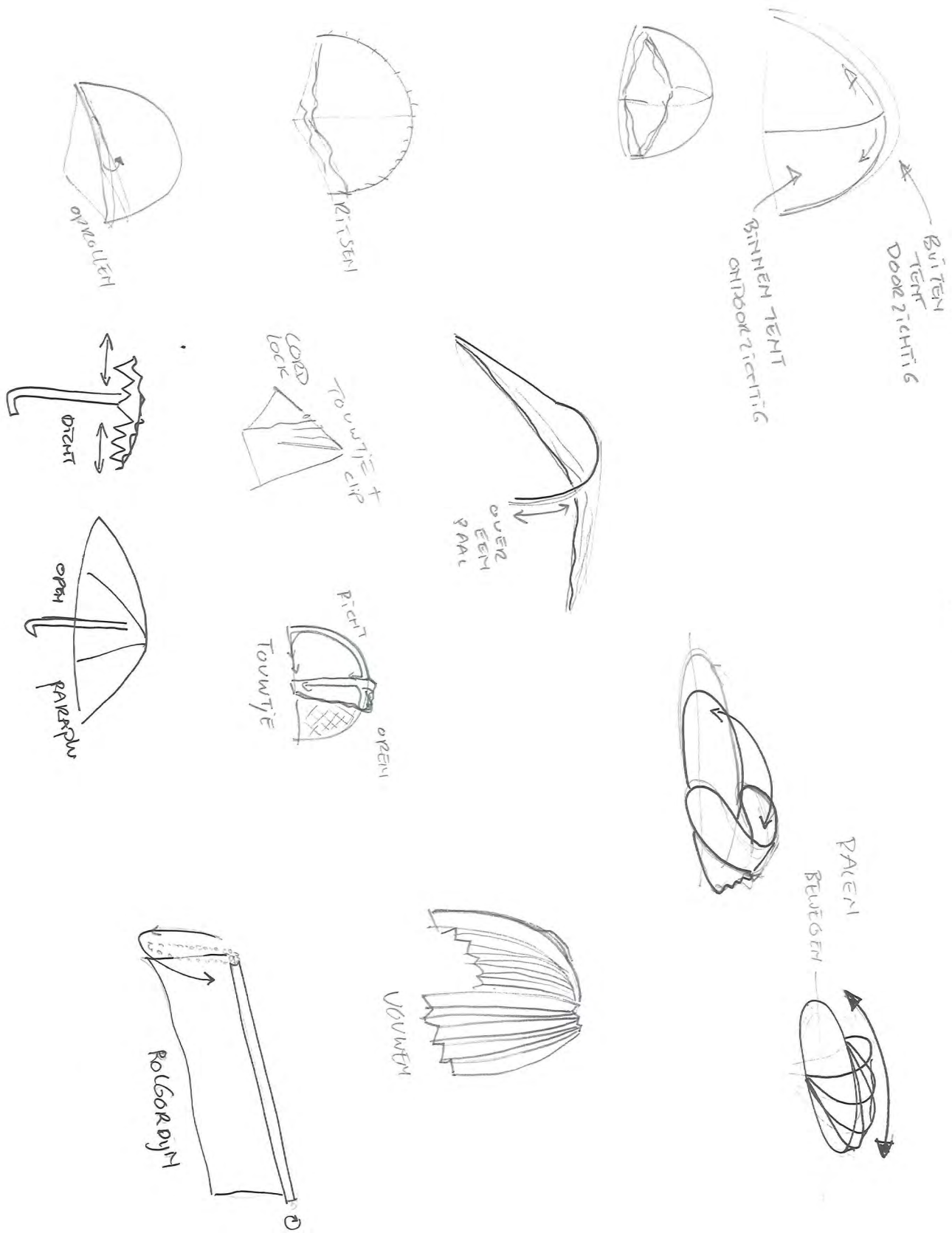
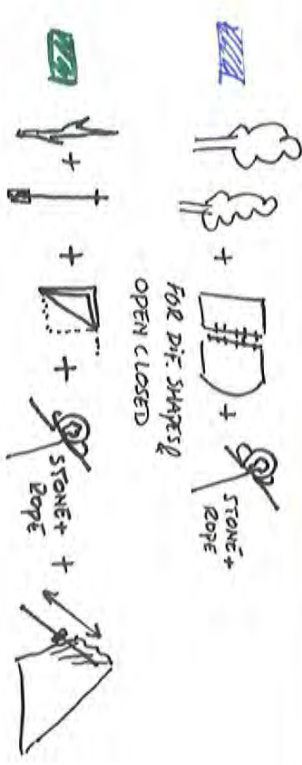
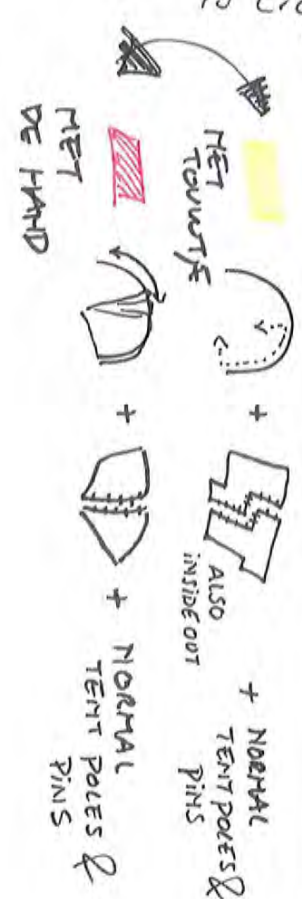


Figure 107. Results of the form and function study categorised by theme - Open and closing shelter



IS EIGENLIJK NIET ZELFDE



Pins	Structure	Form/different shapes fabric	Open and close shelter from the inside for easy emerging in nature	Additional options
Nature	Branches			
Sand	Trees			Using the tent bags as jerry can (filling it with water), pillow (filling it with air), counter weight (filling it with rocks or sand)
Rocks	Stones			
Branch	Air			
Water	Ice/snow			
	Rock formation			
Bring yourself/Do yourself				
Pins	Tent poles	Folding	Roller blind mechanism	
	Trekking poles	Merging different forms (zipping, lacing, ziplock)	Umbrella mechanism	
	Bike	Inside out	Cord lock with rope to easily lift and close outer tent	
	Fishing rod	Versatile attachment points (rock witch rope for guide out lines)	Folding/origami	
	Umbrella		Outer tent see trough, inner tent opaque and easy to open	
	Hunting rifle		Sliding fabric over pole	
	Car		Folding the outer structure away like idea direction 'Transit'	
	Rope		Zipping the outer tent totally open	
	Canoe		Pulling cord attached to outer tent	

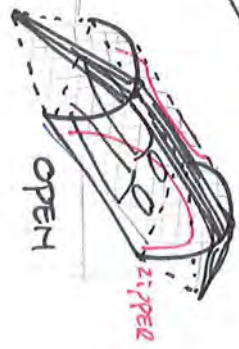
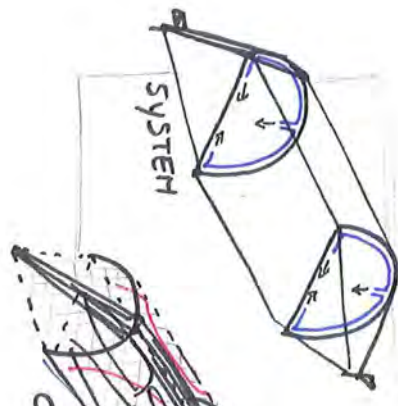
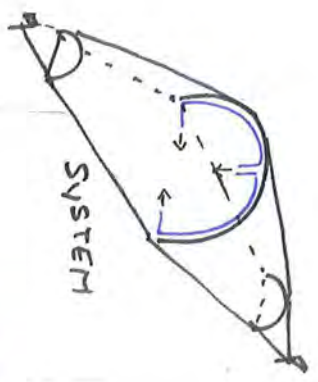
Figure 109. Morphological chart with 4 different solution areas indicated with green, blue, yellow and red.



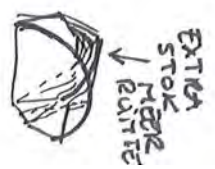
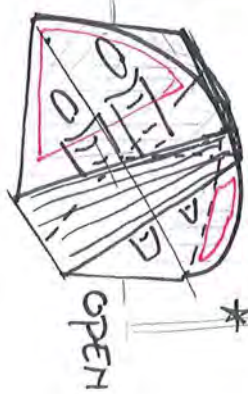
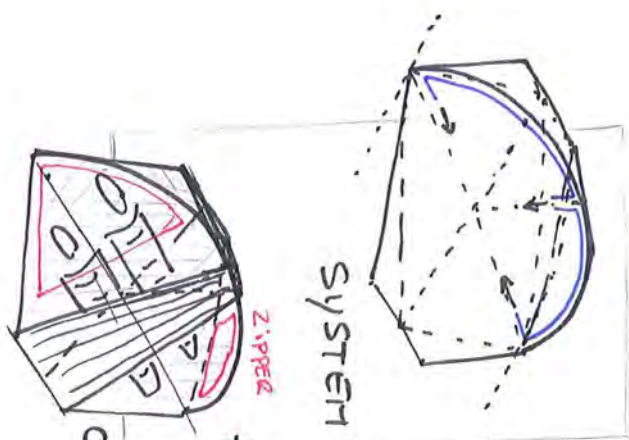
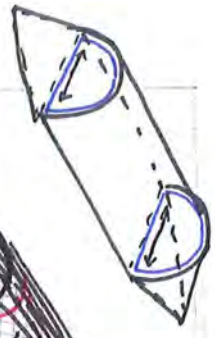
- 2P / 1P
- POLES
- PINS
- OPEN / CLOSE BY PULLING COORD
- ZIPPING FABRIC TOGETHER

STEPS  
 1. PULL COORD TO OPEN OR CLOSE THE OUTER TENT

KUNNEN DEZE ALEMAAL MET X AANTAL DEZELFDE LAPPEN?



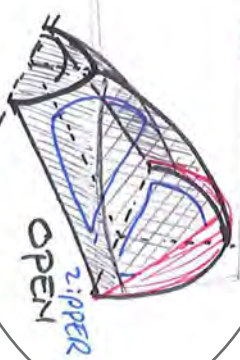
OR



\* ALS HIJ NAAR HET MIDDEN TOEKT KAN DAAR MET 20 GOED NOG EEN STUK VOOR EXTRA RUIMTE



BUITEN TENT



\* ALLEEN DEZE KAN MET BOON OF TAKEN

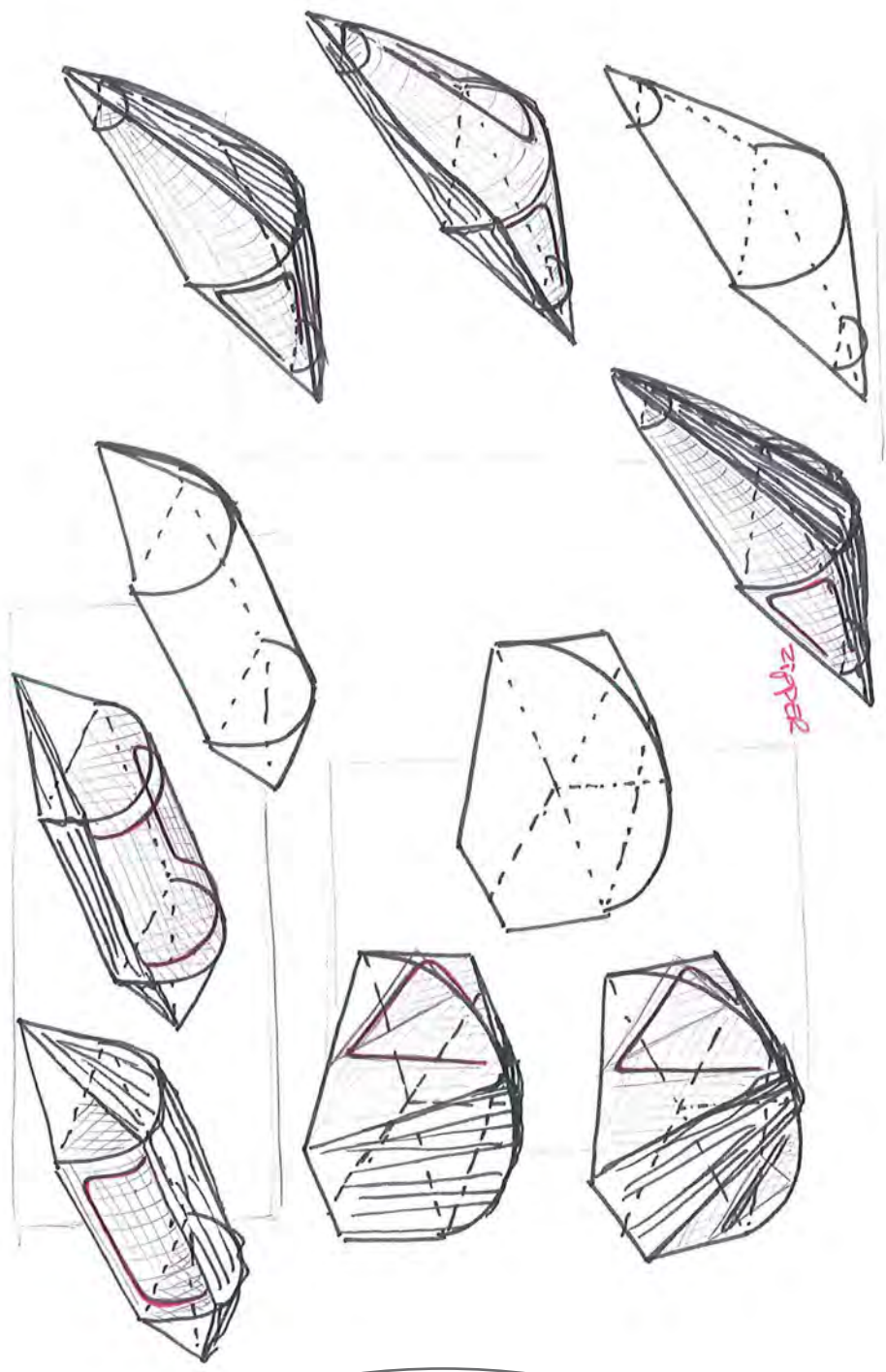
Figure 110. Ideas fitting solution area yellow. Circled is the form appearing in every solution area.



- 2P/1P
- POLES
- PINS
- OPEN/CLOSE BY SLIDING FABRIC OVER POLE
- ZIPPING FABRIC TOGETHER

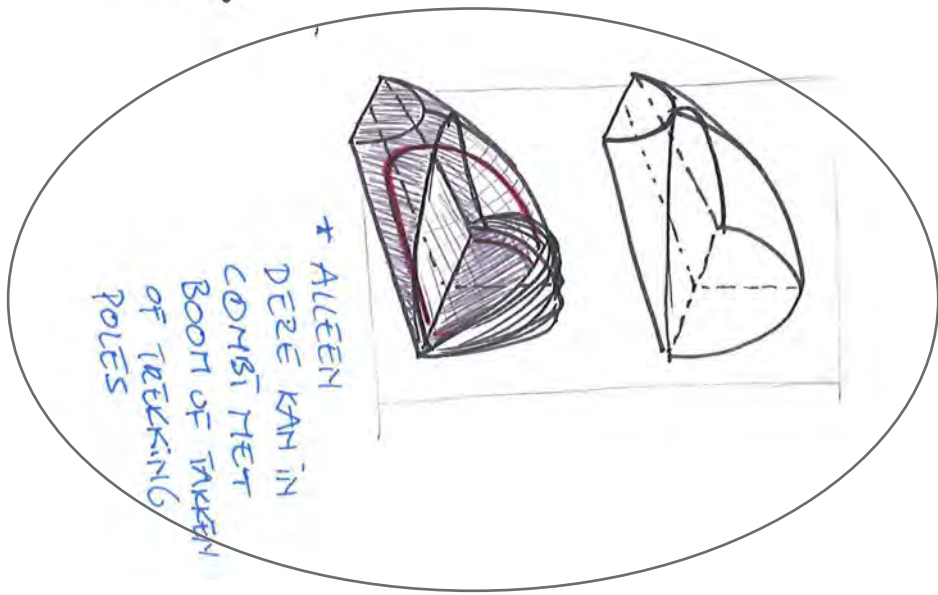
STEPS

1. OPEN THE ZIPPER OF THE INNER TENT
2. SLIDE OUTER TENT TO DESIRED POSITION!



ZIPPER

KUNNEN DEZE ALLEMAAL MET X AANTAL DEZELFDE APPEN?



\* ALLEEN DEZE KAN IN COMBI MET BOORT OF TWEEN OF TEEKING POLES

Figure 111. Ideas fitting solution area red. Circled is the form appearing in every solution area.



• 2P/1P

- TREKKING POLES AND BRANCHES AS STRUCTURE
- FOLDING FOR ~~OPENING~~ MULTIPLE STRAPS
- CORD LOCK WITH ROPE FOR CLOSING AND OPENING

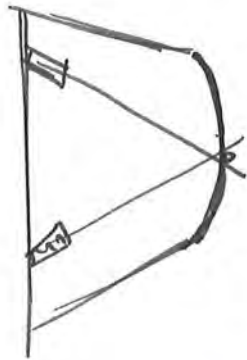
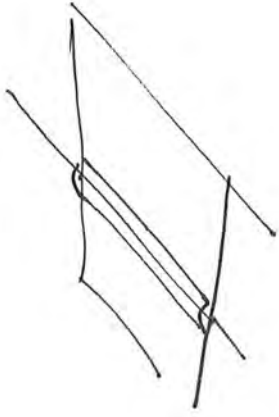
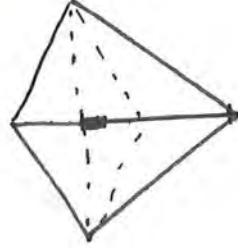
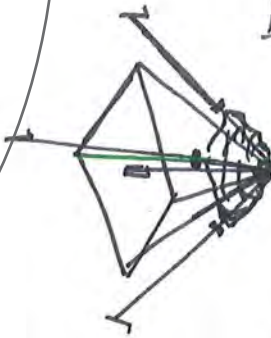
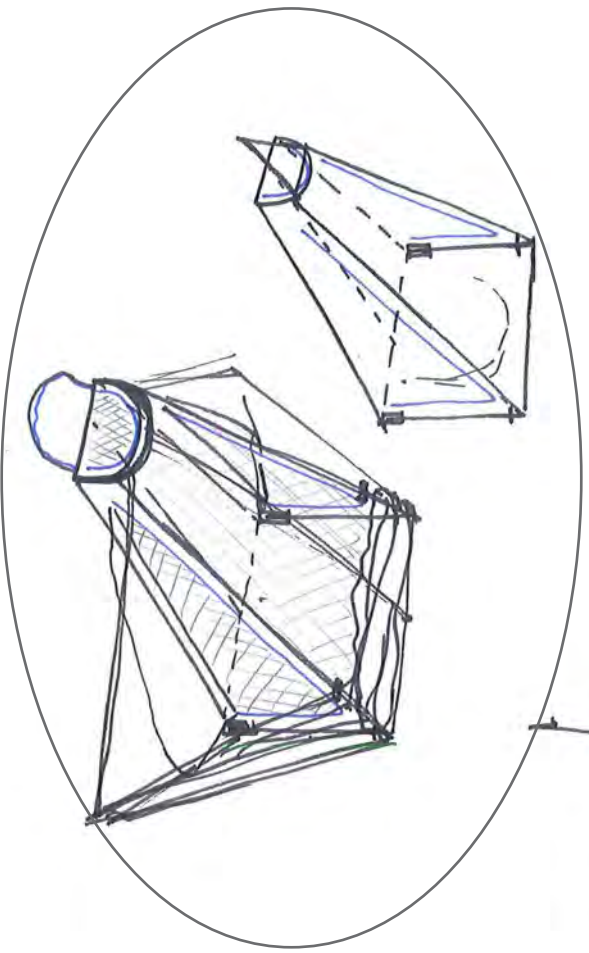



Figure 112. Ideas fitting solution area green. Circled is the form appearing in every solution area.


 • 2P/1P  
 • TREES AS STRUCTURE  
 • ZIPPER FOR OPEN/CLOSED  
 • AND MULTIPLE SHAPES  
 • VERSITILE ATTACHMENT  
 POINTS

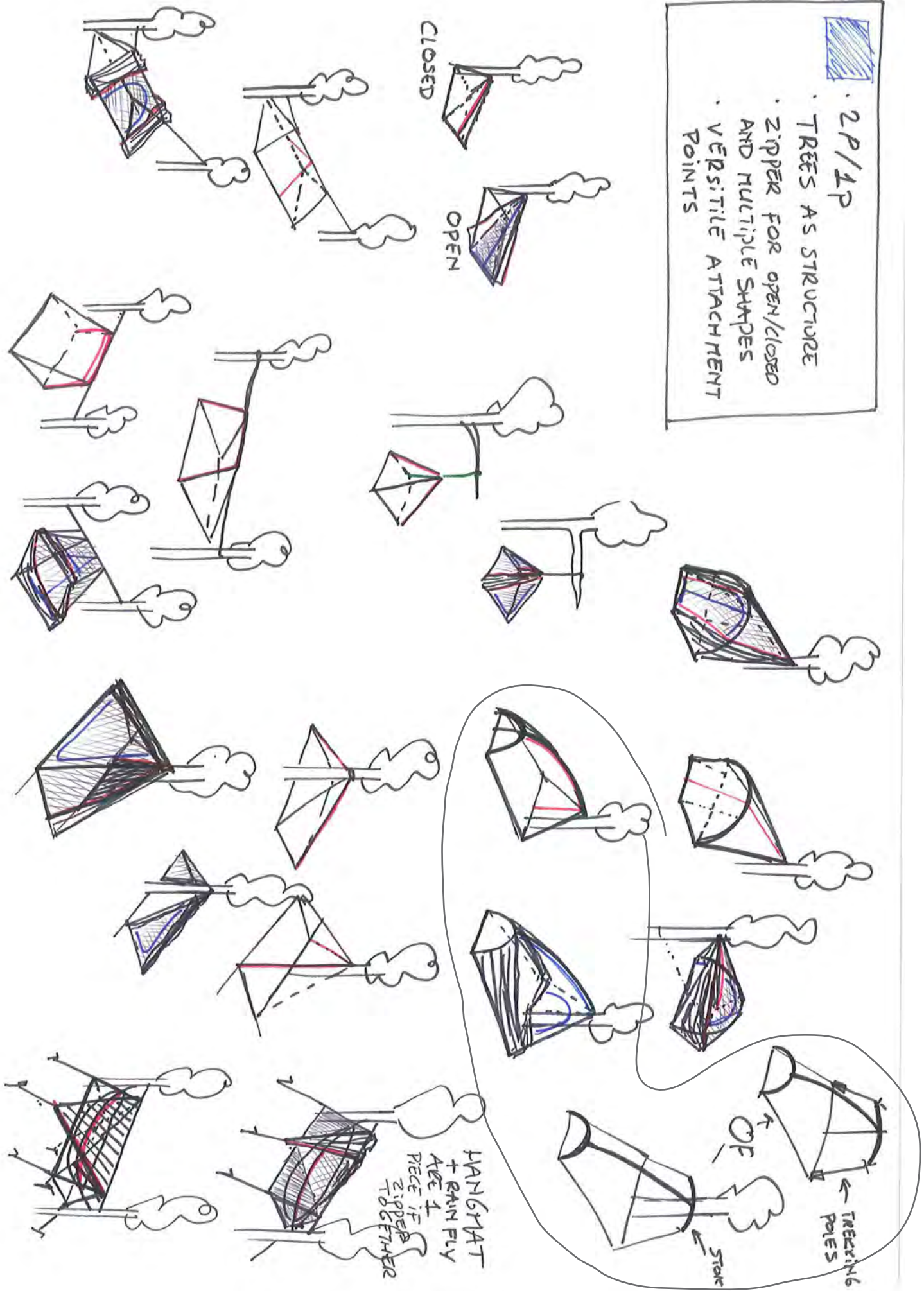


Figure 113. Ideas fitting solution area blue. Circled is the form appearing in every solution area.

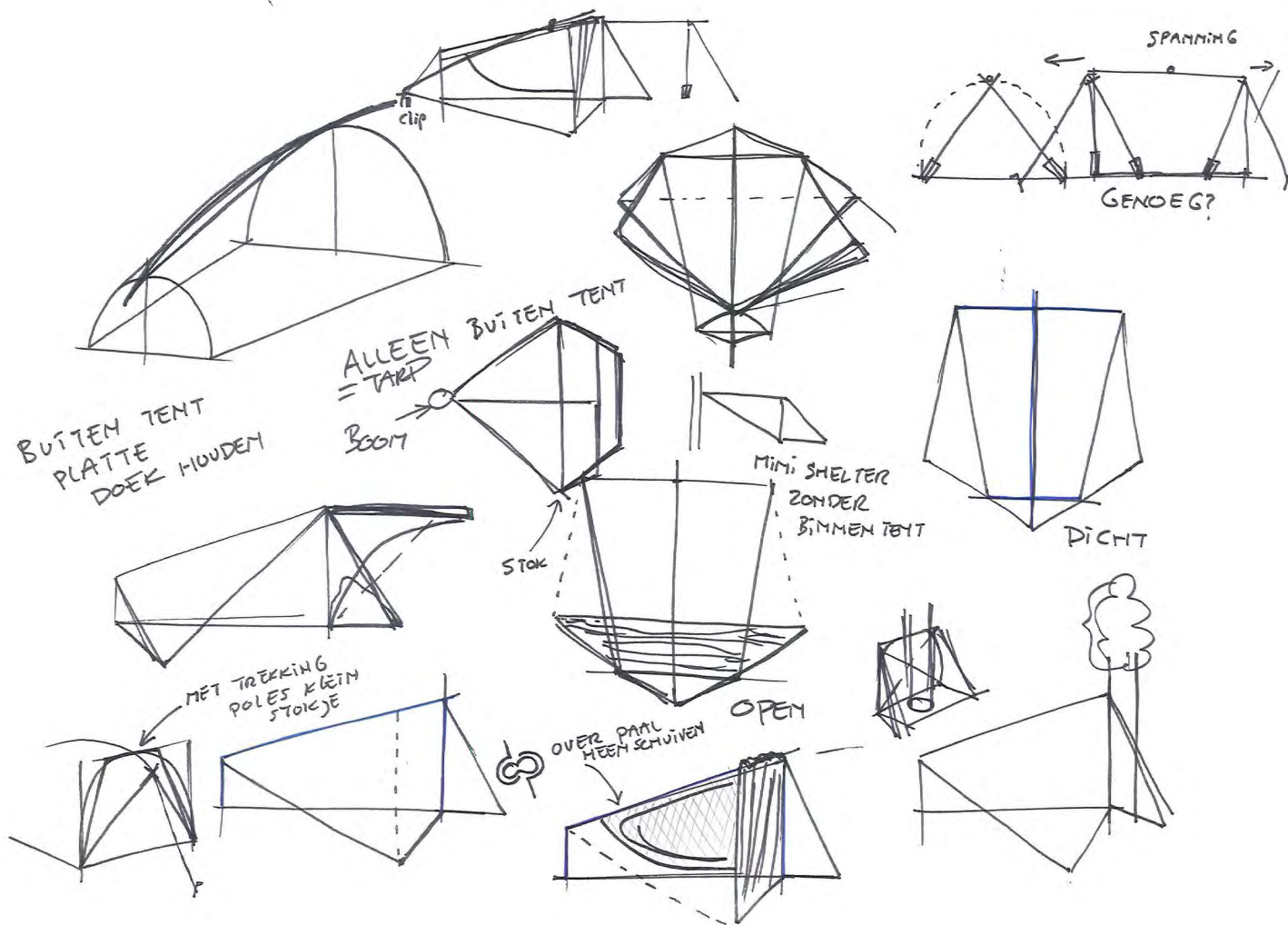


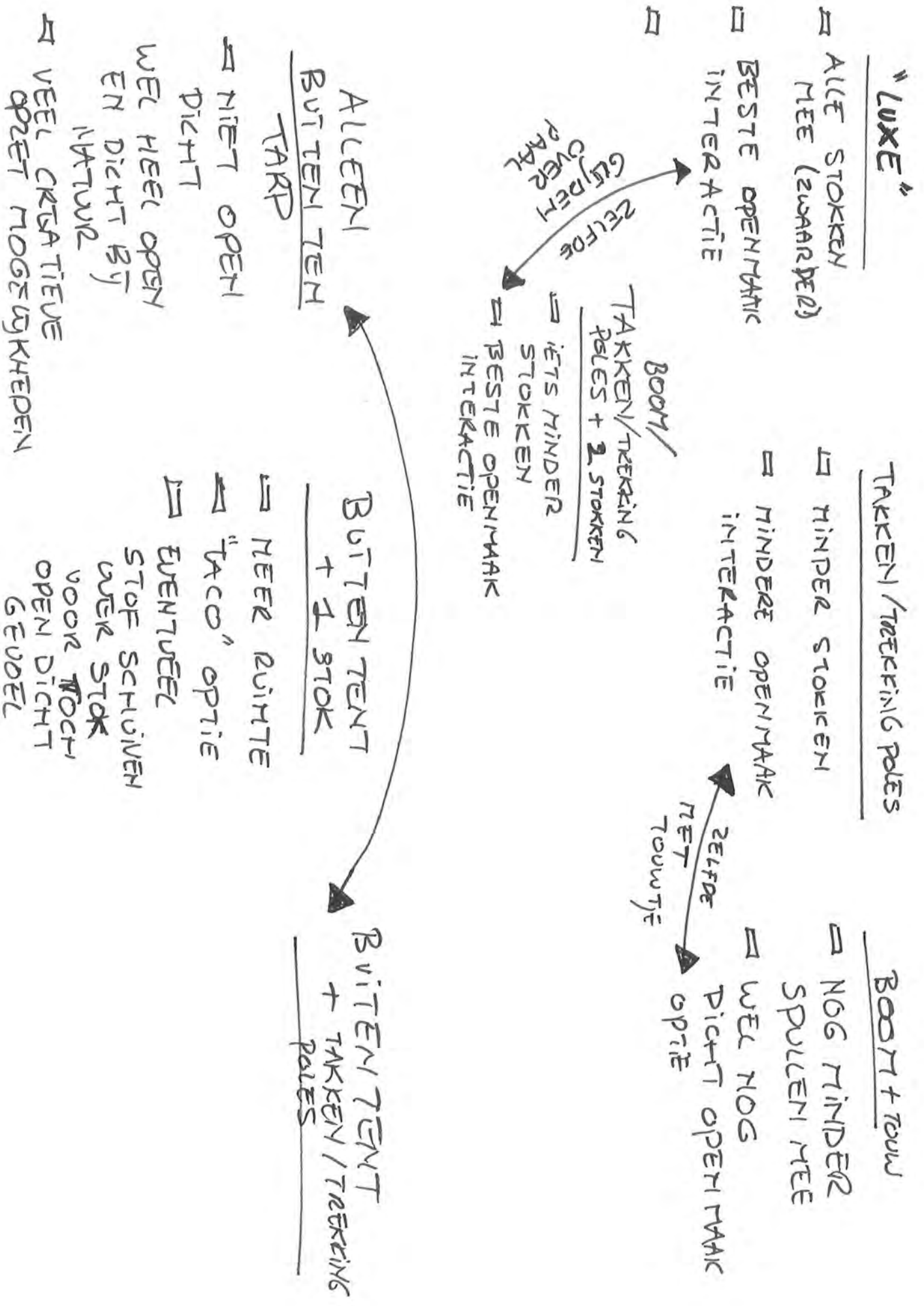
Figure 114. First sketches of the concept.

# J CONCEPT DEVELOPMENT

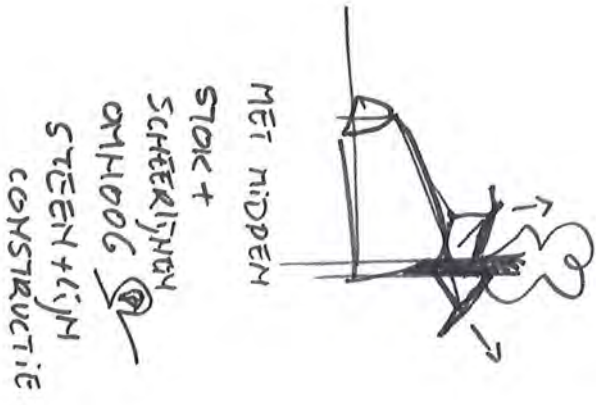
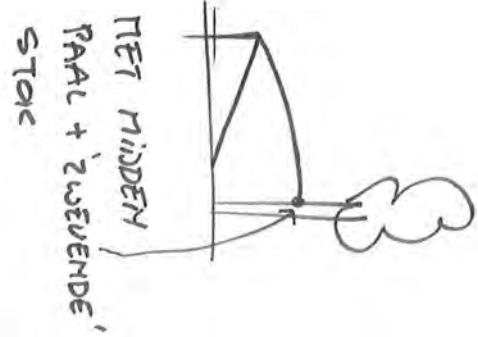
## HOW IS THE CONCEPT DEVELOPED?

Development of the concept is done by making sketches (figure 115 until 119), multiple scale models (figure 120) and determining the material (chapter 5.4). Thereafter a 1:1 mock-up is made to validate the chosen measurements and form. This led to several insights explained in appendix K.

After this first iteration, a concept evaluation research is done to evaluate the concept based on the design goal, see chapter 6.



HET BOOM



STEEN + LIJN  
CONSTRUCTIE

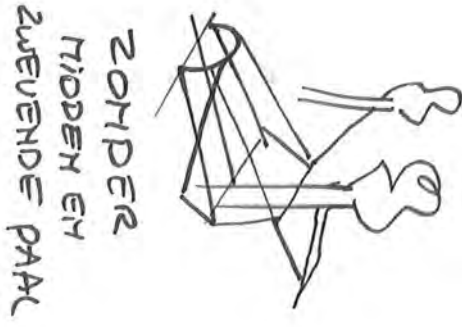
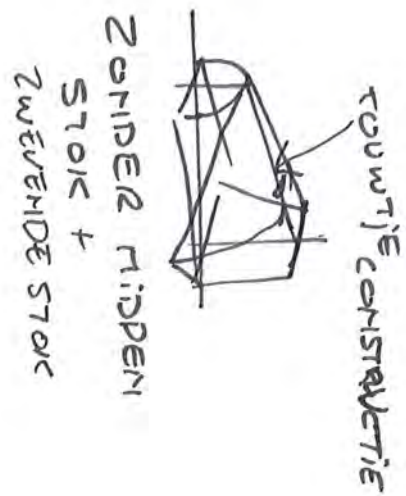
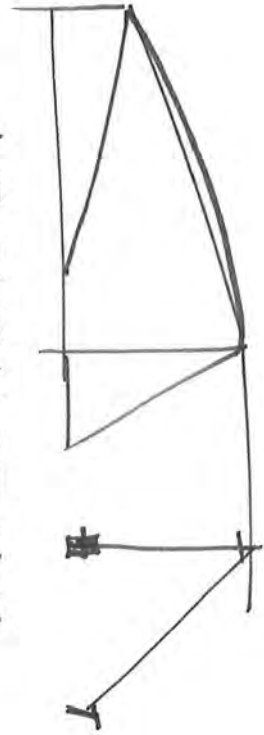


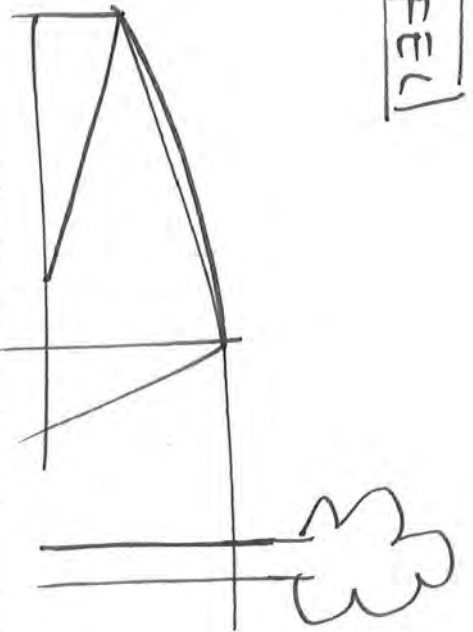
Figure 116. Drawings of the concept using a tree.



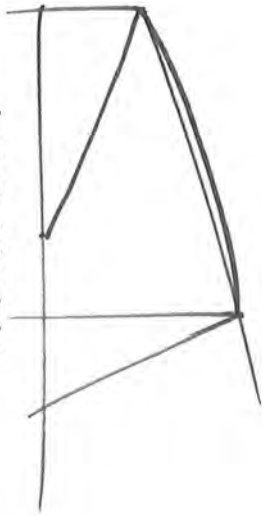
ALICE PALEH  
(MET LUIFEL)



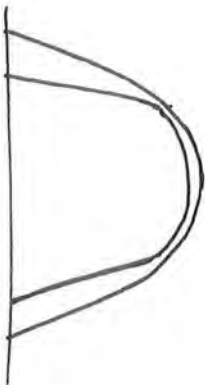
ALICE PALEH + TEEKING  
POLES OF STOKEN



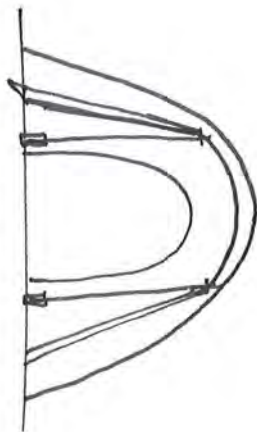
ALICE PALEH + BOOM(EN)



ALICE PALEH +  
DICHTE LUIFEL =  
EXTRA OPSLAG PLAAST



DICHT



OPEN  
MET TEEKING  
POLES

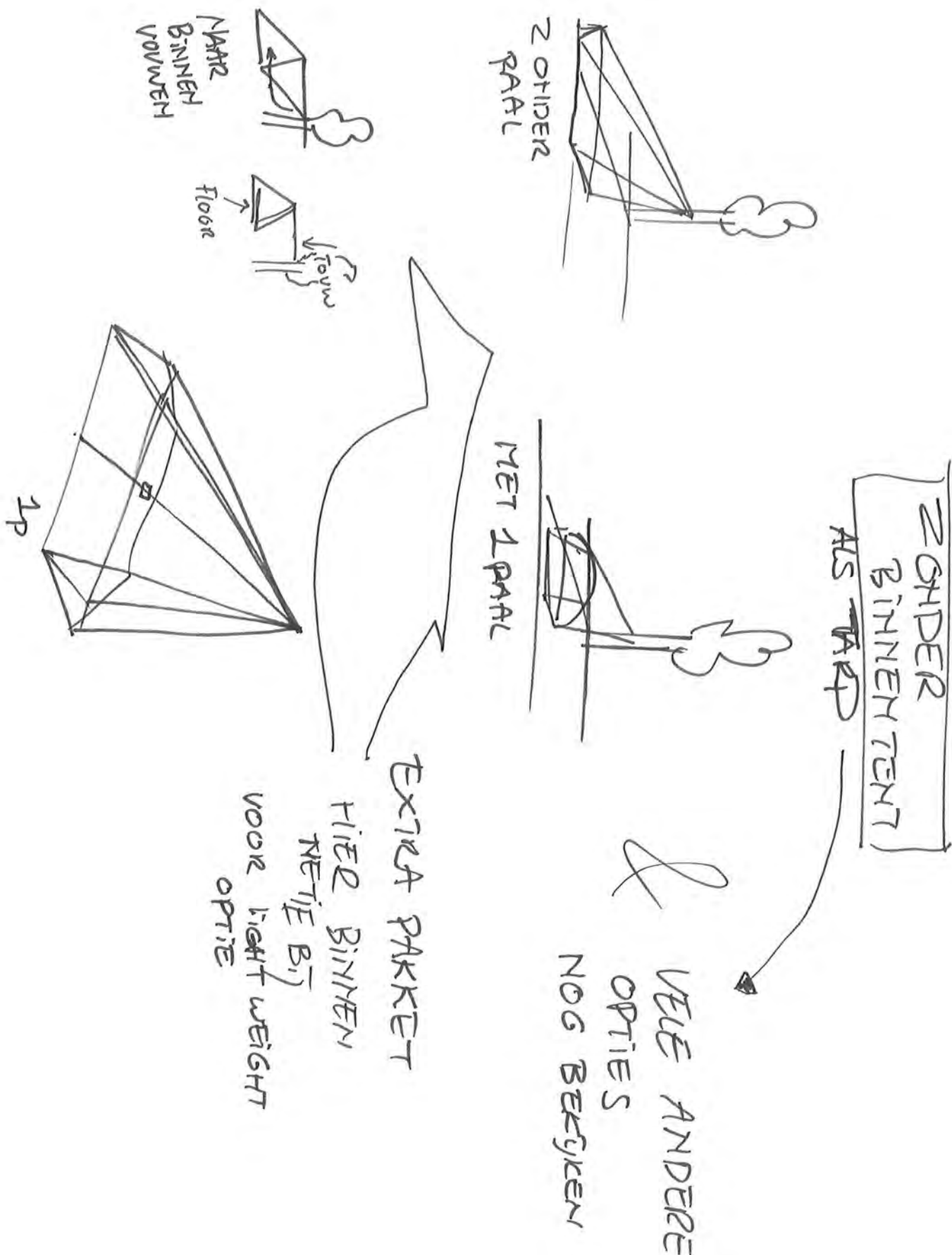
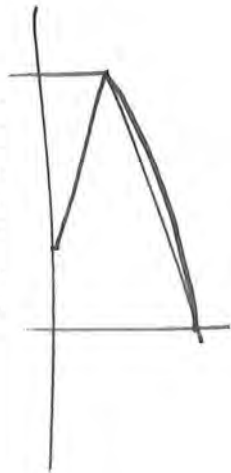


Figure 118. Drawings of the concept without a canopy.

ZONDER LUIFEL



ALLE PALEN  
DICHT



ALLE PALEN  
OPEN



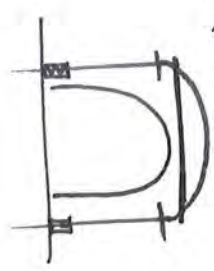
MET PRAKTIJIE ALS  
MIDDEN PAAL  
GEBRUIKT WORDT

MET OF ZONDER  
PRAKTIJIE

ZONDER MIDDEN  
PAAL, ZONDER LUIFEL

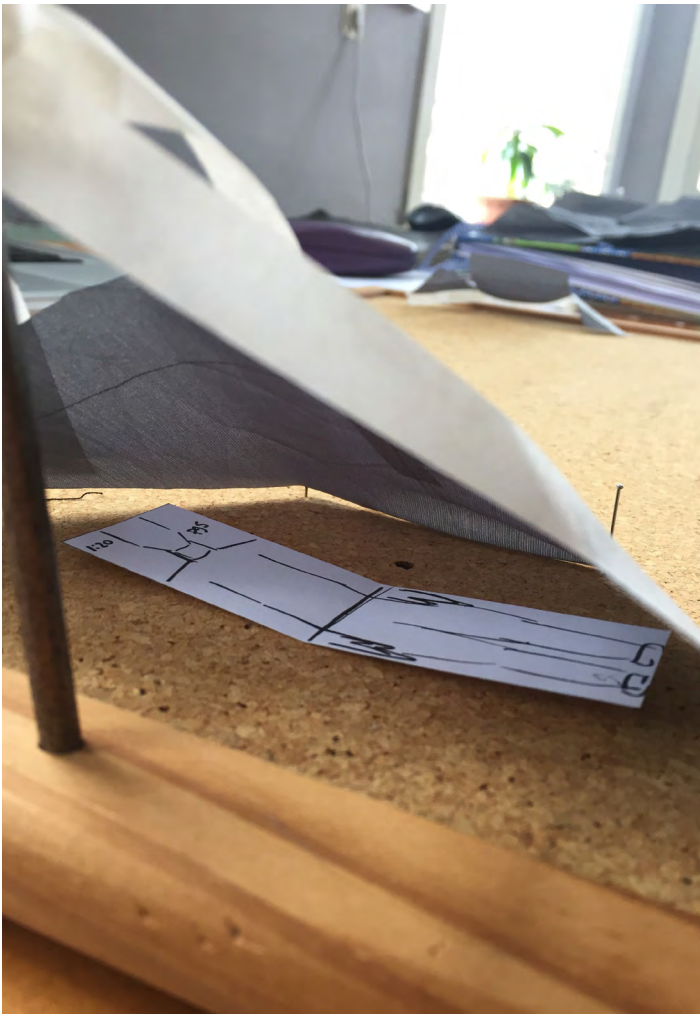
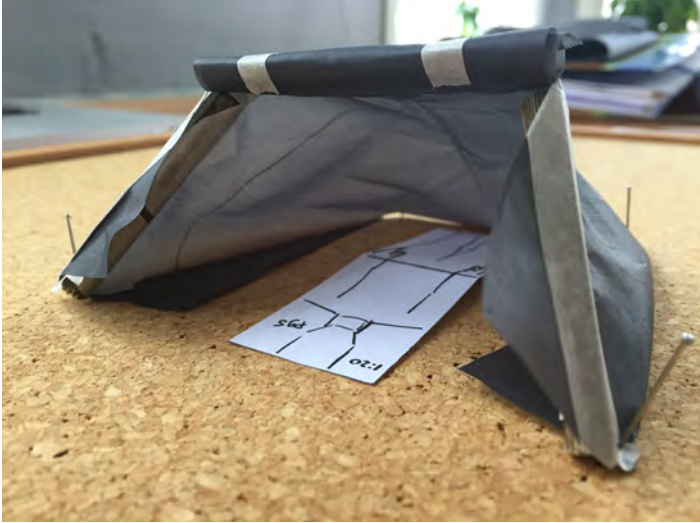


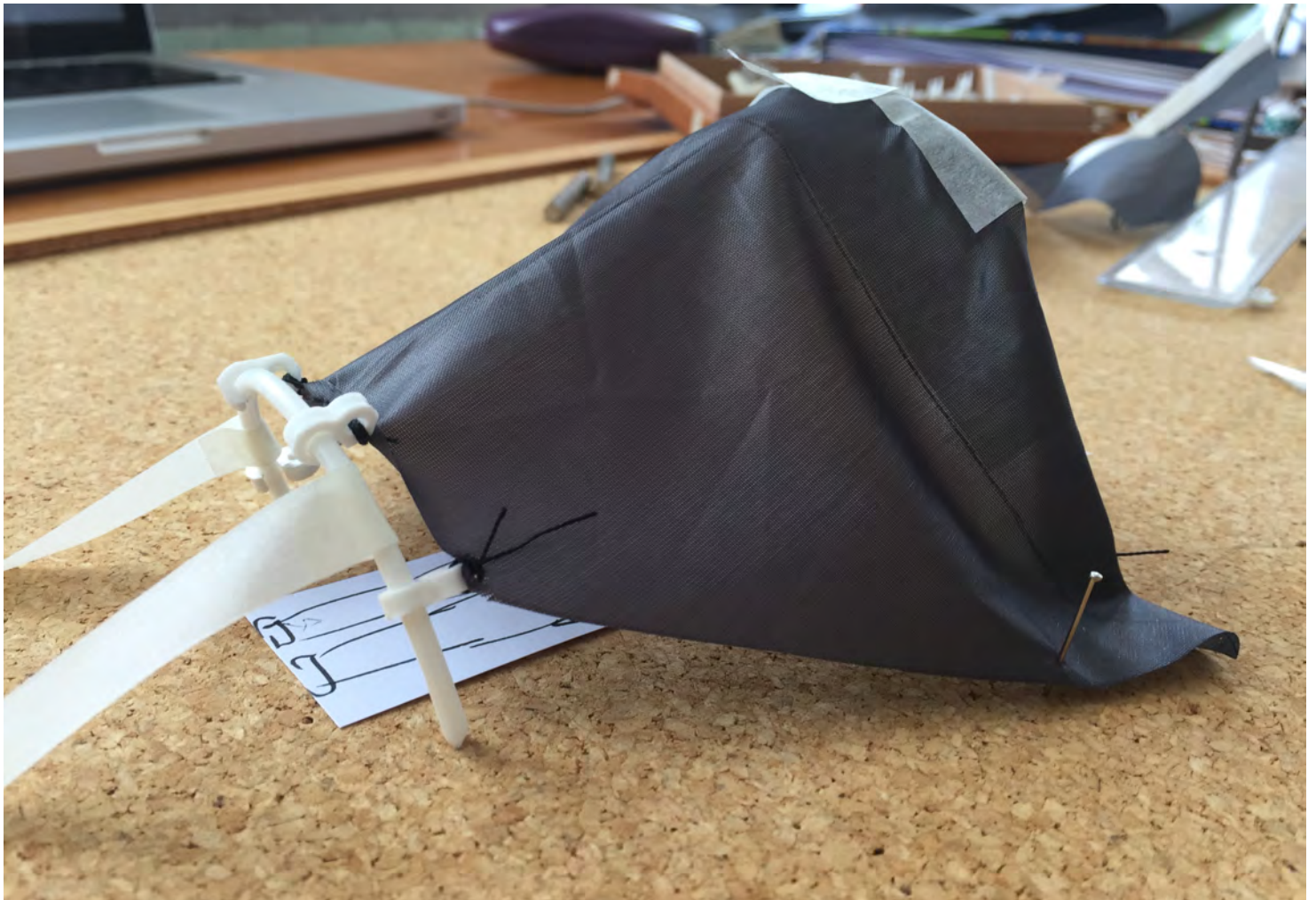
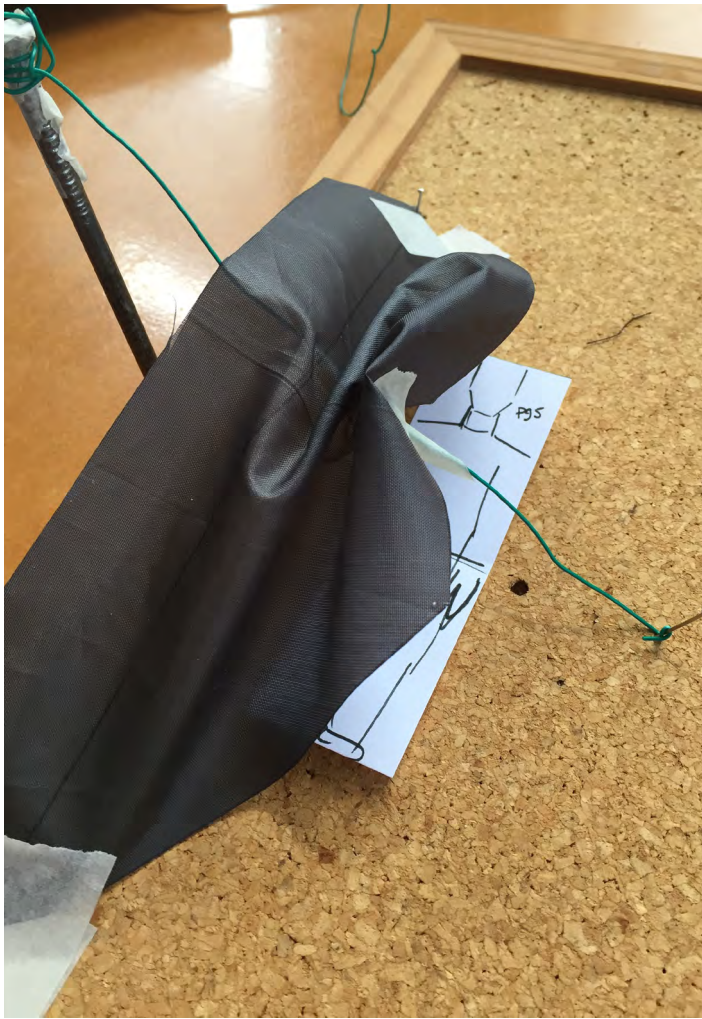
ZONDER MIDDEN  
PAAL + TREKKING  
PALES/~~PAAL~~



TOUWIJDE  
SYSTEMEN

Figure 119. Drawings of the concept without a vestibule.





# K DIMENSION AND FORM EVALUATION

## WHAT CAN BE IMPROVED?

A 1:1 mock up of the rain fly and the 3 poles is made and set-up to see if the dimensions and form of the different elements need to be reconsidered, see figure 1.2.1.

1. The form of the rain fly needs to be altered. Currently the fly is big and the angle is too small. By means of this mock-up a new form for the rain fly is determinant.
2. The space inside the tent is roomy enough to fit two persons. Furthermore a large person (P90) can sit up straight in the front up until the middle of the tent.
3. There is too much tension on the front pole. This can be remedied by making the entrance 1200 mm instead of 1300 mm, still offering enough height to easily enter the tent from the front. In addition the front pole is split in 3. This should also lower the tension in the construction. This way the two ends can be interchanged with trekking poles.
4. The entrance is big and makes it easy to get in and out of the tent. Even for a large person (P90).
5. With its 1100 mm the foot end barely fits two very small camping mattresses. Therefore it is decided to enlarge this dimension to 1200 mm. Making the tent a lot nicer to use.
6. The clips used to disconnect the rain fly from the rear pole work very well and can be adopted in the real design.
7. It was uncertain if the rain fly could be tensioned enough and in the right way without preforming the fabric with use of seams.
8. There is too much tension on the rear pole. By making the foot end 1200 mm instead of 1100 mm as discussed before the tension will become lower.

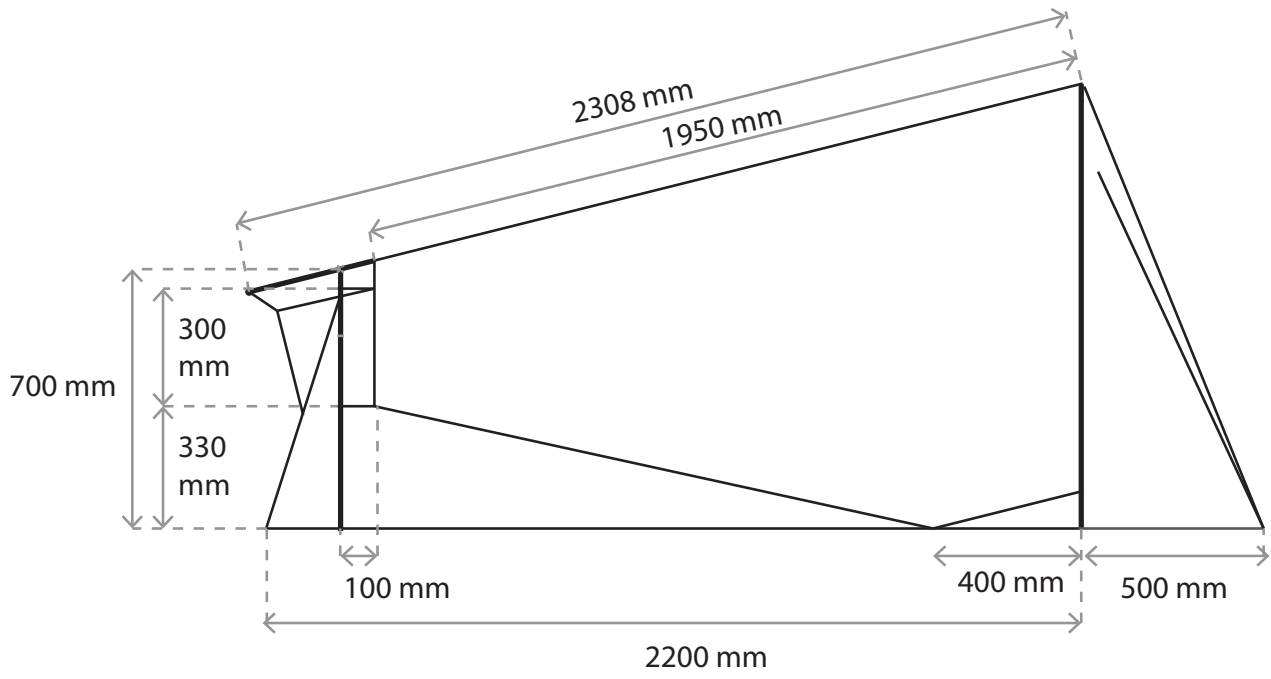
The changes discussed are implemented in the measurements in figure 122 until 124.



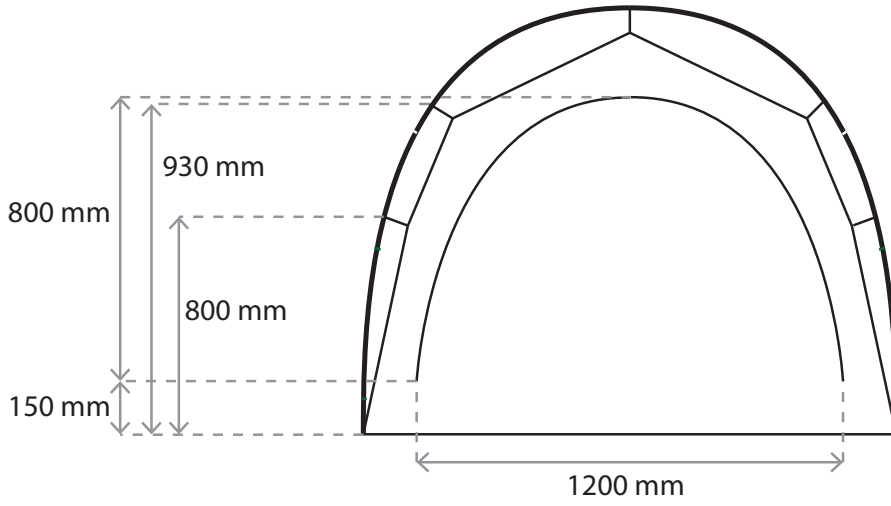




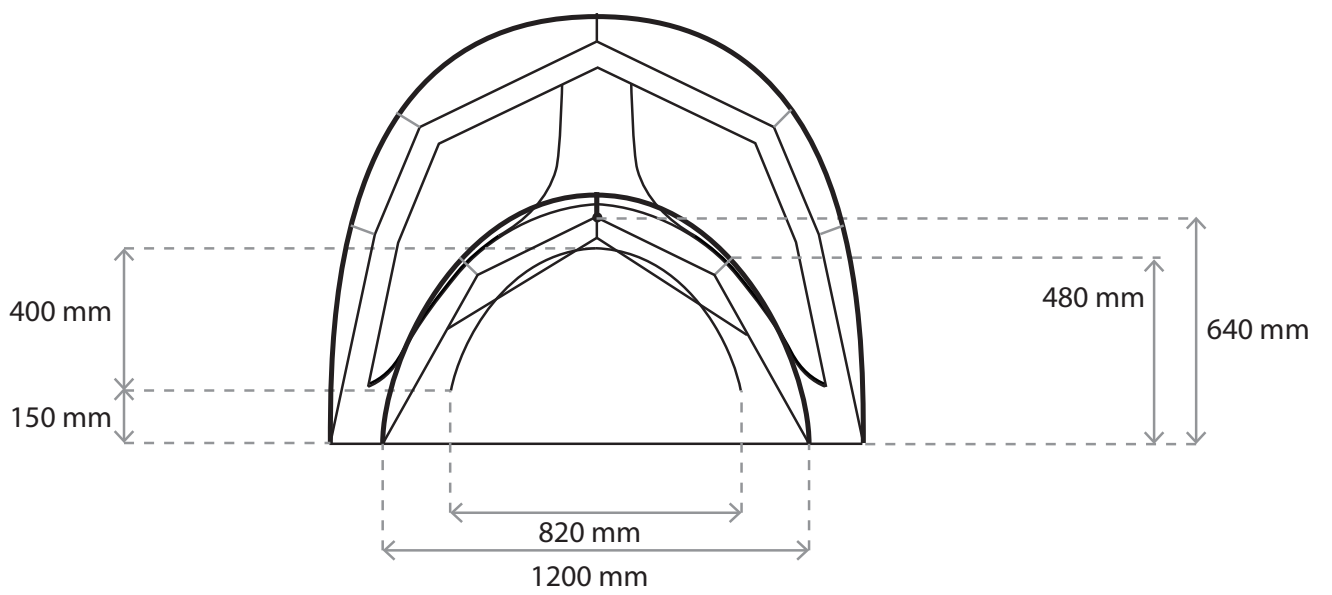
SIDE VIEW



FRONT VIEW

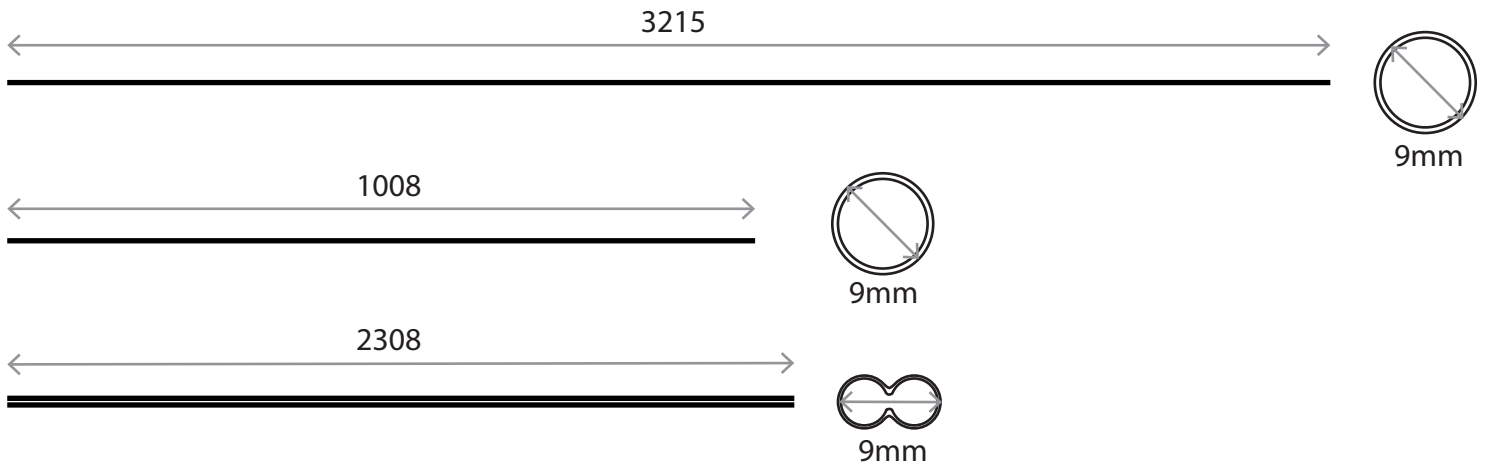


BACK VIEW

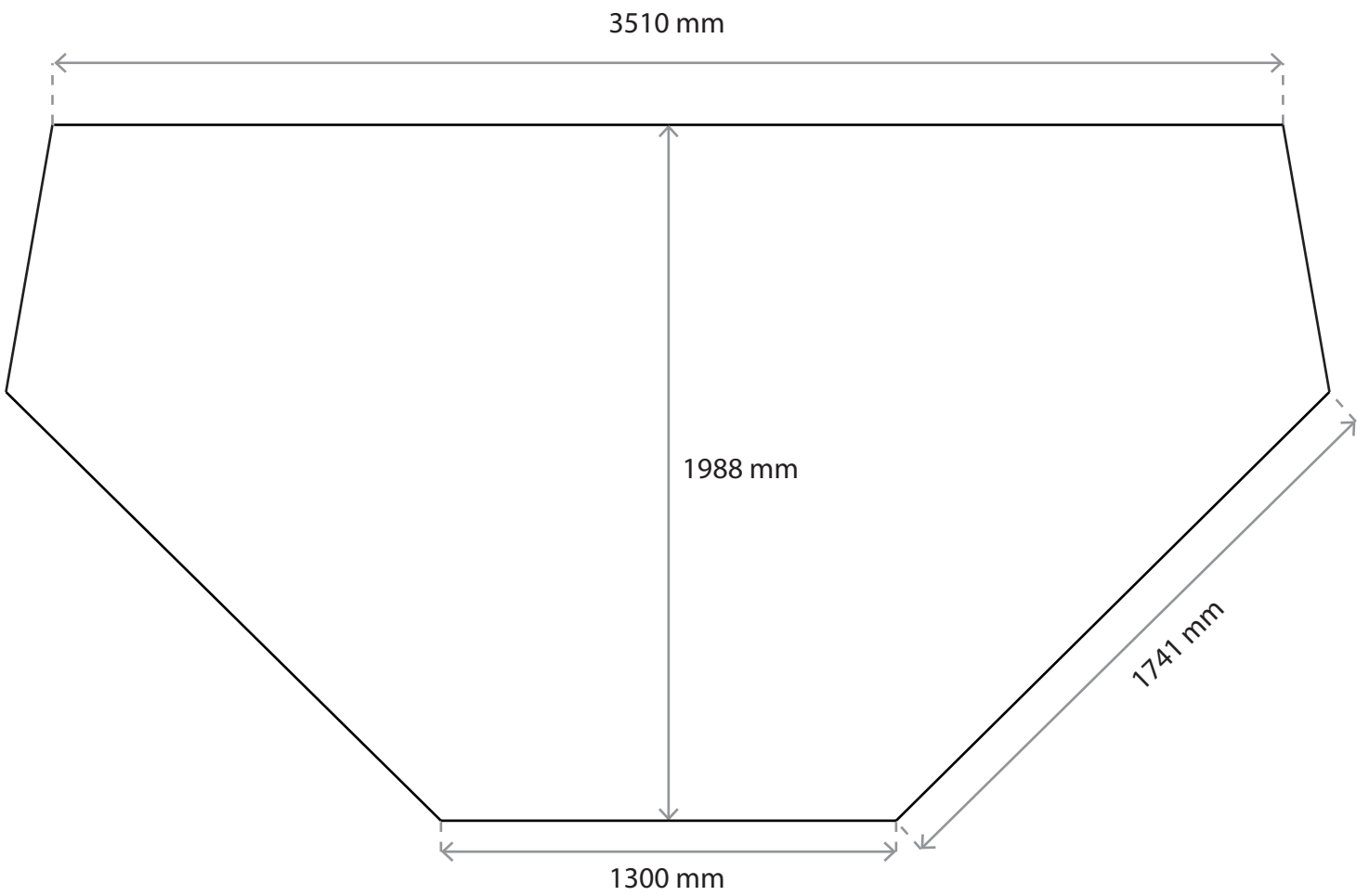


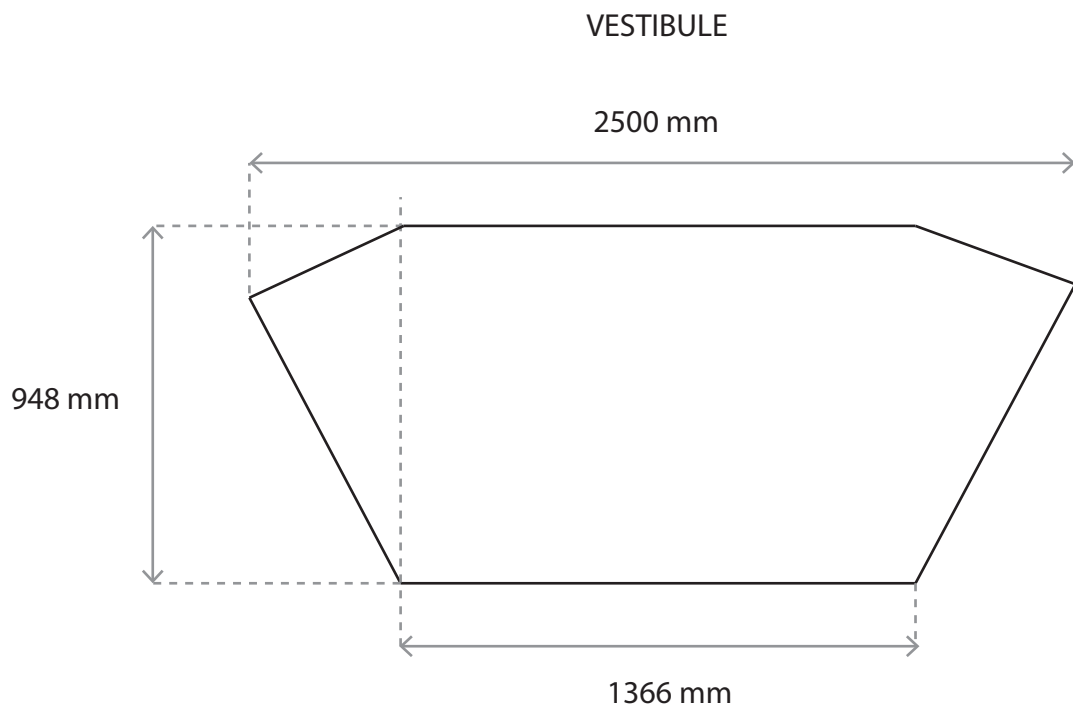


TENT POLES, FRONT POLE, REAR POLE, MID POLE



RAIN FLY





# L CONCEPT EVALUATION RESEARCH SETUP

Here a more detailed research set up of the evaluation research is given.

## RESEARCH QUESTIONS

Main question:

Does the design meet the design goal?

Sub-questions:

- To what extend does the design give the user the feeling they can smoothly transit from an open to a closed shelter?
- To what extend does the design give the user the feeling they can seclude from and submerge in their surrounding?
- To what extend does the design give the user the feeling it helps them break with daily routine?
- To what extend does the design give the user the feeling they can make a camping spot their own?
- To what extend does the design give the user the feeling they can

make a camping spot their own in an exploratory manner?

- To what extend does the design give the user the feeling they can make a camping spot their own in a mindful manner?
- What concerns does the design raise?
- What opportunities do the users see for the design?

## PARTICIPANTS

Seven participants, three men and four women participated in the validation research. Their age varies from 24 to 58. All the participants fitted one or more of the personas showed in chapter 2.3.2, see figure 126 and 127. Some of them already participated in earlier research conducted during this project but all of them heard about the concept for the first time during the session. It is therefore assumed this has little influence on the outcome. What can

have effect on the outcome of the evaluation research is the personal relation between the participants and me.

## STIMULI

To explain the concept to the participants two stimuli are used. First a visualisation of each configuration is given, see figure 125. Secondly a 1:20 prototype is used to explain the different components the LUCID consists. Thereafter is explained which components are used for each configuration and de features of the LUCID are elaborated.

## APPARATUS

A fill out form together with an audio recorder is used capture the evaluation sessions. The form also functions as guidance and to keep track of the answered research questions during the session. The audio record is used to supplement



Figure 125. 1:20 model and visualisations showed to the participants during the evaluation session to explain the concept.

the notes taken on the fill out form during the session.

## PROCEDURE

A evaluation session is held with each participant individually. This is done so the participants do not affect each other and are able to evaluate the concept extensively.

First an introduction is given on what the research is for and the different steps the evaluation session will consist of. Then the participants are asked to describe what kind of camping trips they make. In this way, it can be determined what kind of camper the participant is. The different camping trips described will also be used to discuss the concept later on in the session. Hereafter the concept is explained by means of the two stimuli. While explaining the concept no value judgment or explanation why certain things are designed the way they are is given.

When the concept is clear to the participant he or she is asked to explain if and how they would use the LUCID during the different camping trips distinguished before. No further input is given at this instance except from questions like: can you elaborate on that? Can you explain that to me? and why do you think so? This way it is tried to see if the LUCID is used in the intended way and if the participants see the benefits of the LUCID without pointing them out. After the participant explained how he or she would use the LUCID research questions that remain unanswered are dealt with. This is done by asking the participant what they think about these aspects. This feedback on the LUCID is viewed as less valuable as the input the participants give themselves. When all the research questions are answered the participants are asked to evaluate the concept by prompting the following questions:

- Would you like to add or change something to the concept?
- What do you see as the biggest advantage and what as the biggest disadvantage of the LUCID?

After these last questions the evaluation session is completed and the participant is thanked.

## ANALYSIS

First the notes on the fill in form are supplemented by listening to the audio recording and transcribing quotes answering the research questions. Subsequently all of the quotes are printed, colour coded per participant and classified by research question. This data can be found in figure 126 until 135 and is concluded in chapter 7.2.3.

- EXTREME NICHOLAS
- EASY GOING ANNA

### PERSONA - JOSIEN

	Transportation	Weather	Surrounding	Camping spot	Note
EXTREME NICHOLAS Reis 1	Walking and public transport	No rain	USA, mountains and dessert	Wild camping and free camping	1 night, set up and break down
EASY GOING ANNA Reis 2	Car, with family	Average is good weather, summer	Alps, mountains	Nature orientated camp spot	Staying multiple nights
BASIC Reis 3	Car, With family	Depends	Belgium, Ardennen, hills and forest	Nature orientated camp spot and sometimes wild camping	Tent next to cabin, no need for living space only sleeping in tent.

- ACTIVE BOB
- BASIC MARY
- EASY GOING ANNA

### PERSONA -OLMO

	Transportation	Weather	Surrounding	Camping spot	Note
BASIC EASY GOING ANNA Reis 1	Car		Alps, mountains	Nature orientated camp spot	Family with a big tent 4 to 5 days in one place
BASIC MARY BASIC EASY GOING ANNA Reis 2	Car	Average is good weather, summer	See, windsurfing	Free camping, wild camping, close to see	Group of friends, one to two persons per tent. Stay in one spot for the whole trip
ACTIVE BOB Reis 3	Trekking on foot		Norway	Wild camping	Me and my girlfriend 1 night, set up and break down. 1 night, set up and break down.
ACTIVE BOB Reis 4	Car		See, windsurfing	Free camping, wild camping, close to see	Group of friends, one to two persons per tent. Trekking from place to place.

- EXTREME NICHOLAS
- ~~BASIC MARY~~ ACTIVE BOB

### PERSONA- ANNELOES

"I don't really care for a inner tent. Maybe when there are mosquitos it would be nice to have the ventilation of the canopy and be protected from the mosquitos. But you could also just bring deet."

	Transportation	Weather	Surrounding	Camping spot	Note
Reis 1	Van or boat				Using tent as enlargement of living space
Reis 2	Walking or cycling		Depends	Wild camping	Base camp is van or boat. Walking or cycling from there for 1 or 2 nights
Reis 3	Festival				



**PERSONA-ERNA**

- BASIC MARY
- EASY GOING ANNA
- ACTIVE BOB

	Transportation	Weather	Surrounding	Camping spot	Note
Reis 1	Hitchhiking or public transportation		Europe	Small camp grounds	Backpack, taking little
Reis 2	bicycle		Netherlands and Belgium	Small camp grounds	Only necessary stuff in bicycle bags
Reis 3	car		Europe	Small camp grounds	
Reis 4					

**PERSONA - TJEERD**

- EXTREME NICHOLAS
- EASY GOING ANNA

	Transportation	Weather	Surrounding	Camping spot	Note
EXTREME NICHOLAS Reis 1	Bicycle	Nice, sometimes rain	Netherlands	Nature orientated camp spot and sometimes wild camping	1 night, set up and break down, no need for comfort as simple as possible. The shelter needs to protect from rain.
EASY GOING ANNA Reis 2	Car, with wife	Always good weather	Lots of mosquitoes. Island Skye in Scotland	Nature orientated camp spot and sometimes wild camping	1 night, trekking, little more comfort. Needs to protect mainly from bugs.
EASY GOING ANNA Reis 3	Car, with wife	Depends	Depends	Nature orientated camp spot and sometimes wild camping	1 night trekking, little more comfort. Needs to protect mainly from bugs and rain.

**PERSONA-YANTHE**

- EASY GOING ANNA  
- BASIC MARY

"I seek for a quiet and secluded spot with some trees. Furthermore the spot has to be levelled so you don't roll to one side. And shade I find important."

"When a camping is just a empty field a will look for an other camp ground."

"Or wild or free camping in nature, in Norway or in the Biesbos."

EASY GOING ANNA  
EASY GOING ANNA

	Transportation	Weather	Surrounding	Camping spot	Note
Reis 1	Airplane				festival
Reis 2	Auto			Secluded camp spot, not a field filled with tents	Touring from place to place. Staying 3 days in one place
Reis 3	Backpacken, cycling			Free camping spots, wild camping or little secluded camp grounds	
Reis 4					

- ACTIVE BOB

**PERSONA - SAM**

	Transportation	Weather	Surrounding	Camping spot	Note
Reis 1	Car		Festival, Belgium		
Reis 2	Hiking	4000 meter, very cold	Himalya		One night
Reis 3	Car	Koud, heel warm, wind	Rondreis australie	Free camping	6 weeks
Reis 4	Car		Mosquitos, river side	Small caming	2 night

Figure 127. Distinctive camping trips the different participants did in the past.

## TO WHAT EXTEND DOES THE DESIGN GIVE THE USER THE FEELING THEY CAN SMOOTHLY TRANSIT FORM AN OPEN TO A CLOSED SHELTER?

- “Sometimes I think it is not going to rain and decide to just set up the inner tent without the rain fly. But when it starts to rain you have to get out of your tent en set up the rainfly. Which is annoying. This is why when in doubt about if it is going to rain or not I always put the rain fly on. But this is very unfortunate because then you can no longer look outside. But now the threshold is a lot lower. I could have the rainfly in the upward position and know that I can lower it in a matter of seconds. That seems very nice.”
- “Once I have set up the rainfly I would not remove it even if the weather is nice. So this is a very nice option.”
- “I hope that opening the fly works with just pulling a string. [after explaining how it works]. Yes very relaxed, as if opening the curtains. That seems very nice.”
- “I can imagine that it would be nice in the morning. It is always a little strange to wake up in a tent, closed and airless. It would be nice if you could just pull a string and open your tent. All of the sudden you are outside. And you could do this gradually while waking up. That would be attractive.”
- “Biggest advantages are easily opening the fly without getting out of the tent.”
- “Opening the fly has to be really easy, like 30 seconds. I would like to just pull a string..”
- “It really depends on easy of use if I would use this in the end.”
- “I wouldnt trust my self to wake up in time when it starts to rain. So I would keep the rain fly closed when I would be in doubt if it is going to rain.”
- “It really depends on easy of use if I would use this in the end. Opening the roof needs to be nice

## TO WHAT EXTEND DOES THE DESIGN GIVE THE USER THE FEELING THEY CAN SECLUDE FROM THEIR SURROUNDING?

"I see the added value but the only situation that I now can think of that I would use the Lush or Light configuration is at a festival. And there I would not open it because of privacy reasons..."

I could very well be that if you are somewhere you want some more cover because of privacy or whatever. For example on a 'normal' camping."

"When going to a festival I would go for the Lush or Light to have more private space. To have not only the option to sleep like in the Divis but also an secluded area."

The Lush and Light give a more secluded feeling, more your own space. In nature are the fly and Divis cool but on a campground give the Lush and Light more privacy."

"I really like it when I can close something off. And the Divis is a sort of tarp you can close of. That seems very nice to me."

## TO WHAT EXTEND DOES THE DESIGN GIVE THE USER THE FEELING THEY CAN SUBMERGE IN THEIR SURROUNDING?

“Sometimes you are in a tent and you don’t see your surrounding. This tent offers a great solution.”

“It really adds something if you can see your surroundings while being protected from mosquitos. Especially when in nature. The goal when being in nature is being one with nature, that is what you want to feel. I’m not going there because I do not want to hear cars, I am going into nature because I think it is beautiful. So then you would experience it more, and that adds something.”

“The openness of the concept is awesome. You can look outside and also it can be very hot in a tent. Then you can open up the fly and the two windows to let the wind get trough.”

“The possibility of opening the fly gives me the feeling as if I am more camping, being more outside instead of being in a secluded tent.”

“It seems you can easily open this up. It is very nice to have more the feeling of laying in nature instead of in a tent.”

“You can really look outside. That would be a big plus. Being protected and still having the feeling of being in nature instead of in your tent.”

And certainly when

“Can I look nicely outside while it protects me from the mosquitos.”

“What I like about this tent is that it is very open. Sometimes tents are very sweaty.”

“It is really a tent for being in nature. Being outside, lovely.”













“What seems very relaxed to me is when you are somewhere at see at a beautiful spot you can wake up in the morning and fiiuuut open the fly and enjoy the view. Waking up nicely while looking outside.”

“Is the mesh see trough? Would be nice if you can look at the stars. But I doubt that works..”

## TO WHAT EXTEND DOES THE DESIGN GIVE THE USER THE FEELING THEY CAN MAKE A CAMPING SPOT THEIR OWN IN AN EXPLORATORY MANNER AND MINDFUL MANNER?

- And I like the fact that you can create something. I'm always buzzy with creating an own space with cloths and so on. So I very much like the fact you are free to do so with this concept."
- It is very nice! A tent pole is reassured but I like to think of creative solutions to give the shelter structure in the most efficient way. I Like to think about that. And that is also part of the experience. Being actively buzzy with making the shelter. And when there is a fixed design you are less buzzy with making a shelter for yourself. I like the fact that now you can figure out a construction yourself."
- "I have the idea that namely women want to make a tent their own, give it your own identity or something cosy. I can totally imagine that I am going to make my own shelter and then build something like a bench, also from those branches. The lush and Light do not really encourage to do so, because the form is more fixed."
- "I think the Lush and the light will remain the same but with those two [pointing at the Divis and the Fly] you can d what you want."
- "What I find very nice is that depending on the place you are you can set up your tent in a different way."
- "There are moments that you want to make it your own, but there are also moment that it is just about the getting trough the night in a safe way, with as little as possible."
- "The Fly and the Divis are about efficiency, what do I need to build a shelter and use your surroundings for that, and finding nice creative solutions. Whereas the Light and the Lush, you just set up and then read a book."
- "I believe there will be something to attach the tent to. So you wont need tent poles. A branch or a tree."
- "I see the fact that there are no tent poles provided to set up the Divis as a advantage. I don't think I can't make it work, because you can always find a solution. But I would have the feeling that I don't have a complete set with me. I would feel better if I have something with me that reassures me that I can set up the tent."
- "I wonder if I would really use the Divis and the fly because it seems a little troublesome especially the fly. And I think to really use it well you have do it a couple of times to get more experienced with it. So, when going on a longer trip you could use it but for just a couple of nights.. I wonder if people would do that. It is not a disadvantage but I don't see it as a advantage."
- "In the Divis you use branches..? Could you also use tent poles for that?"
- "Can you also use the tent poles for the Divis in case there are no trees and or branches? In that case I would use those."

## WHAT CONCERNS DOES THE DESIGN RAISE?

	"My son is now picking out a new tent. And I see that one of his criteria is a place for his backpack."
	"I like to put my bag not in the inner tent but still somewhere close by, protected and where I can easily reach it."
	"Some compartments to put your glasses, flashlight, etc. So I don't have to search for stuff in the dark."
	"I am concerned that I would loose things. Once I went camping and I forgot the pins. With all these loose elements I would be concerned that this would happen much more often."
	<p>"I wonder how you are going to package this. Is there a adaptable bag depending on what you are going to bring along or.. every component in a different bag or is the each part a bag in intself? I could imagine the fly being the bag because you need this component for every set up option."</p> <p>Other options:</p> <ul style="list-style-type: none"><li>o Tetris bags together one form</li><li>o Colour coding</li></ul>
	"I have the feeling if you use branches to set up the tent you can stick trough the fabric. That would be a concern. But if it is well designed I would trust that it is oke."
	"I would like to have a bug net for the Fly option"
	"I wonder if the single walled front and back is rain proof or that you need a little triangle to cover from slanting rain coming in. Because when touching the tent cloth from the inside it often starts to leek."
	"The Divis runs al the way to the ground so I would be concerned that my feet touch the rain fly and the tent begins to leak.. Therefore I would rather have a inner tent stopping me from touching the rain fly. I would be prepared to take that little bit extra fabric with me
	"Very nice! Yes I think I would buy it. Definitely when it is light and is qualitatively comparable with other tents."
	"Total weight of the tent is also important."
	"Because of the amount of mesh in it is more a summer tent then a winter tent. But for me that is not really a problem because I go mostly camping in summer."

## WHAT OPPORTUNITIES DO THE USERS SEE FOR THE DESIGN?

"I would like an option to add more living space. So, an extra component with a piece of extra fabric and an extra tent pole in order to create a living space and maybe a extra piece of foot print. A place you can cook and play games when the weather is bad but also when it is cold outside."

"Plus if something get broken I assume you can buy a new part instead of buying a new tent."

"I would like it if you could buy loose components. If something is broken then you can buy a new part instead of a new tent."

"Maybe you could give the user the option to choose a colour or pattern for the fly. Make it more their own like a telephone case. Or the colours of the places you go most often alps, forest, etc. personalizing it. This way camouflaging it, more one with your surroundings. "



## ADAPTING THE LUCID TO THE GIVEN SITUATION

"This shelter offers configurations that deals with the situation where you are in. I find that very nice. The surrounding has an influence on what kind of tent configuration you want. A tent we had once could be enlarged or reduced in size but that had to do with the group size. You decide on the configuration beforehand."

"The Divis and Fly make it possible that you can go with a small day pack instead of a big backpack. And that is relaxed. But a environment with lost of insects is not an option."

"So with harsh winds I would use the Light or Lush with guide out lines."

"When it is good and warm weather I can imagine using the Divis."

"Really nice, especially the modularity. Being able to decide last minute which of the components you bring along."

"The Light and the Lush you can set up at every location and look sort of the same in every situation. But the fly or the Divis are different at every location, because the construction and the way you set it up is different. It is nice to have verity, this time it is a branch, another time a tree or a bicycle pump."

"I don't now beforehand where I will end up. But now I can think: oh what a nice spot I'm going to set up this configuration. Or tonight we expect mosquitos so we are going to set up the canopy. Or we are now at a very buzzy camp spot, so I am going to put the rain fly over to create more privacy."

In case there is a little levelled area the Divis might just fit and the Lush/Light might then be to big. So that would be another reason to sometimes choose the Divis."

"Great idea, a tent that you can change depending on the situation."

"The modularity is nice because now you can adapt to the weather. Now I can decide last minute what I need in order to take as little as possible."

"So the Divis for on the go and the Light for a more permanent, long lasting solution."

"I would rather go for the Divis, although it has no inner tent it feels more secure. When with two weight matters less so maybe then I would go for the Light."

"When I know the beginning of the hike is good weather I would send the canopy to a ranger station further down the route and use the Divis in the beginning and later on in the mountains use the Light."

## USER CONFIGURATIONS

“I am starting to wonder if you have two of these rain flies what can you further do with it. And if a friend has a set like this as well can you then combine and create a common area. But I have to have it in my hands to see the possibilities.”

“When I would have the rain fly twice I would leave my tent at a base camp and take the extra fly with me. It would be nice to have a bivac option with me in case I want to stay over night during a day trip or something happens. It is practically no weight but you always have a shelter with you to sleep under.”

“I can also imagine lifting the side of rain fly so you can store more stuff there. Kind of tarp awning. Using the side more as the main entrance. And you can look outside when it is lifted like that.”

“Maybe you can use trees instead of branches to set up the Divis”

“Maybe I would use the fly as sun screen. But then you also need it for the Lush or Light. Hmm.. It would be nice to use it as a extra space for cook for example against the wind. Maybe you want two rain flies.”

“You could also just take the rain fly and use it as a tarp. So, you could also set it up higher with poles or whatever. That is very nice. Current tents are very much designed like this is the end product and you can't do anything with it.”

“If the design makes it easy to use the surrounding I would defiantly try it out. But I would choose an easy option. If there is a tree on the camping spot fine. Then I don't have to get the tent poles out.”

“Maybe when I would have a extra rain Fly I can double my living pace. Add an extra rain fly to the Lush or light for example.”



