



## Courtyard Quest;

Playfully engaging families with the Pieter de Hooch exhibition

Irene van Houten



Museum Prinsenhof Delft

Delft University of Technology, Faculty of Industrial  
Design Engineering

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Author: Irene van Houten

Chair: Arnold Vermeeren

Mentor: Erik Jepma

Company Mentor: Diana Pereira

# Summary

Museums are often believed to be aimed at adults, yet museums specifically aimed at children are becoming more common, and most museums attempt to cater not only to adults, but to their younger visitors as well. Museum Prinsenhof Delft is one such museum.

This report presents the process of creating a new experience aimed at families, who come to visit the Pieter de Hooch exhibition at Museum Prinsenhof Delft.

The experience focusses on families with children aged 6 to 10 years old, and aims to provide a playful but educational experience to the families, to bring them into contact with the topic of the exhibition. Research showed that family days-out are a social event in which activity and fun for the children are the central theme.

From the research 3 key qualities were pulled which seemed relevant for the families to be included in a family day-out; Fun, Social and Engaging. These 3 qualities would help shape and define the final design.

The final Design, called Courtyard Quest, is an experience consisting of 2 elements;

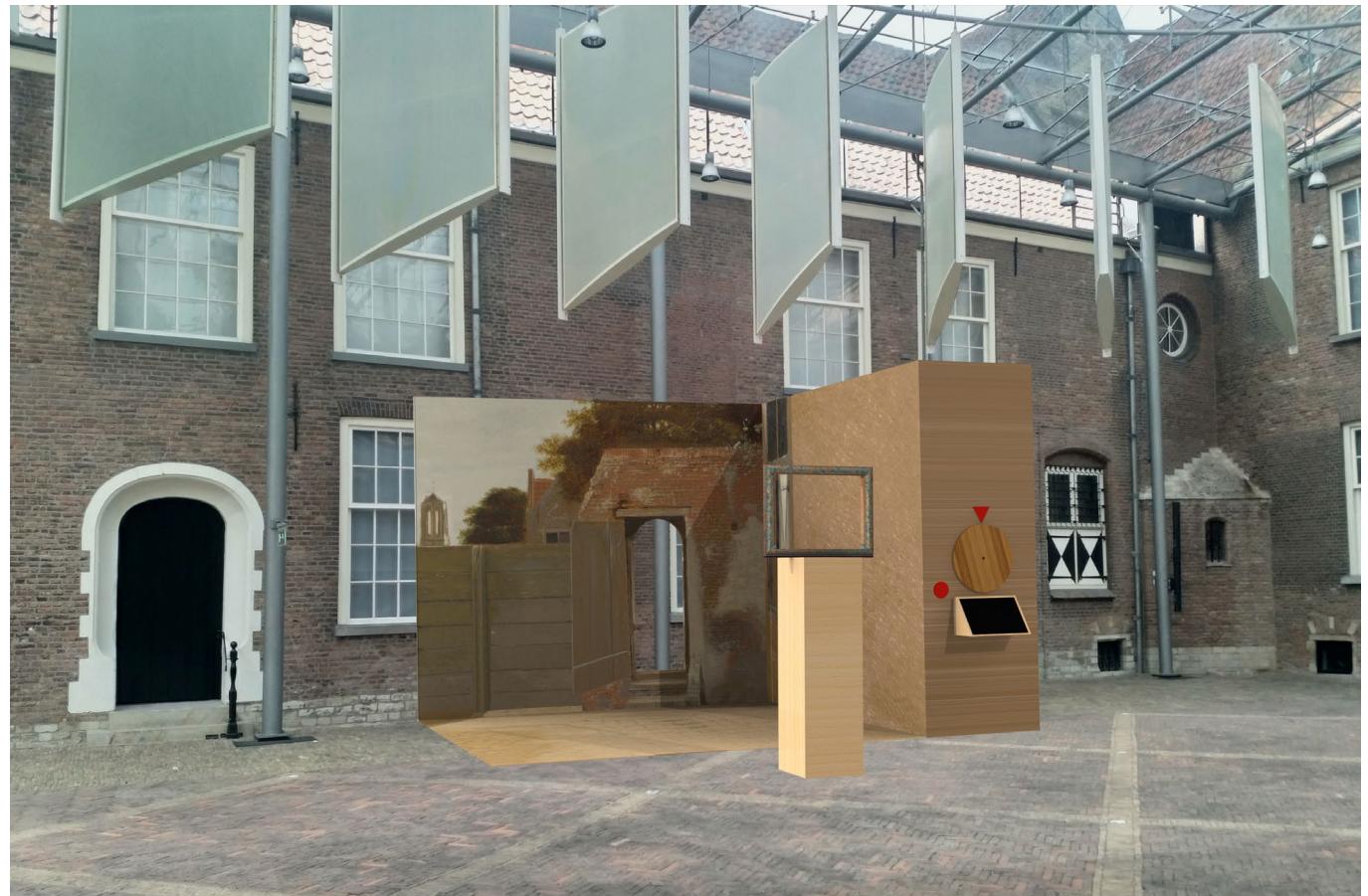
An audio tour specifically made for families with children

And an activity in which family members work together to build their own Courtyard in the style of Pieter de Hooch's paintings.

The information presented to the families in the

audio tour, is used in the activity at the end, when deciding what to put in the courtyard, and how to place it all. The audio tour presents this information in an entertaining commentary which contains not only explanations but jokes, questions and songs. While the activity motivates visitors to look back at this information by providing challenges when building their courtyard.

User research in the final phase showed that the Design did what it set out to do, achieving both its Design goal and Interaction vision. However there were still a few things which could be improved upon, or explored further, which were given to the museum as recommendations.



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# Introduction

There is a stereotypical belief in the world that museums are boring, and not meant for children, and yet a whole niche has been created with the start of children's museums. But what about those ordinary museums? Should they only cater to adults? Many museums would disagree, and aim to cater to children as well.

This report presents a design project done for Museum Prinsenhof Delft. The aim of the project was to create a new experience aimed at families, for a temporary exhibit which will open in the fall of 2019.

This first part of the report recalls the research phase of the project, starting out with the challenge and the context of the project. It then moves on to discuss the initial literature research which was executed, as well as the conversations with experts and a variety of user research methods which were used. The results of this research were used to draw conclusions, and create design guidelines for this project, as well as future projects aimed at designing a family museum experience. Furthermore, the results were used to formulate the more detailed design goal, target group and interaction vision, as well as a program of requirements.

In the second part of this report, the Ideation phase is presented. In this phase a multitude of different ideas were created and considered, until finally 3 concepts were left. There was a verification test, to check the potential of one of the concepts. Finally the 3 concepts were rated on the most important criteria, and a concept was chosen to continue with. The final part of the report presents the

development from concept to the final design. In between a preliminary design was created and tested with users from the target group to get insights into the user experience. The results of these test and further iterations eventually led to the final design of Courtyard Quest.

The final part of the report concludes the project; by discussing whether Courtyard Quest does indeed fulfil its design goal and interaction vision. And finally, recommendations are made for the future of the design.

Throughout the report a number of terms related to Industrial Design and research are used. These terms are explained in the report the first time they are mentioned, but can also be found in the glossary at the end of the report (page 76), where they are explained once more.

# 1. Context and Challenge

## 1.1 The Museum and the challenge

In October 2019 Museum Prinsenhof Delft will open a temporary exhibition on Pieter de Hooch; a Golden Age painter with over 70 known paintings to his name (The Athenaeum, n.d.). His paintings can be found in many highly regarded museums all over the world, and yet in the Netherlands he is fairly unknown. With a style and skillset similar to Vermeer, but many more paintings to his name, it is remarkable how unknown the Dutch painter truly is. In fact, the exhibition at Museum Prinsenhof Delft, will be the first ever in the Netherlands to be focused on him and his art.

Museum Prinsenhof Delft itself is a Cultural Historical museum, mostly known for its exhibition on William the Silent, who lived in the building between 1572 and his death in 1584. (Museum Prinsenhof Delft, n.d.) Furthermore the museum has exhibitions on Dutch art, culture and history including “Delfts Blauw” porcelain. The museum has about 2 to 3 temporary exhibitions per year, with in the fall of 2019, the start of the “Pieter de Hooch” Exhibition.

The Exhibition about Pieter de Hooch will present a number of his paintings, as well as provide new information on his life. This information will be the result of a period of research in collaboration with Delft university of Technology and the Rijksmuseum in Amsterdam. Overall, the exhibition will connect to the “year of the Golden Age”, which will be celebrated in multiple cities in the country.

The challenge for this project is to make an experience, connected to the exhibition, which is focused on families with children. The experience shall engage children and their parents with the theme of the exhibition in a playful<sup>1</sup> manner. Due to the high number of visitors expected for the exhibition, the additional experience should not disturb or hinder the visitor flow. Mainly, the experience should not take place in the room where the paintings are exhibited (additions such as an app are not yet excluded). The experience could, however, take place in other locations at the museum, the city of Delft or even at home. The full challenge can be found in appendix A.

<sup>1</sup> *Playful is defined as; Frolicsome, sportive, humorous and jocular (Fowler & Fowler, 1975) in the Oxford Dictionary. In other words it is often defined as fun and not serious.*





## 1.2 The exhibition

The exhibition will take place from 11th of October 2019, until the 16th of February 2020. Its goal is to claim Pieter de Hooch as a “Master from Delft” (Delftse Meester) and give the artist the attention he deserves. The Exhibition will provide an aesthetic experience to the visitors, by suggesting new ways to look at the paintings.

The exhibition shall be held in rooms 2, 8, 9 and 11, which are shown on the map in figure 1. Visitors with pre-ordered tickets enter through the Waalse kerk, visitors without a ticket will enter through the current entrance and have to buy a ticket at the entrance.

The Waalse kerk and the current entrance hall will house the cash register and information counter, a small coffee corner and the cloakroom. The exhibition will start in room 2, then goes through room 9, 8 and 11 out into the Van der Mandelezaal where the new Café will be set up. In room 2 an introduction to Pieter de Hooch and Delft in his time will be provided through a short film. Room 9 is mainly a small hallway, room 8 and 11 will be where the paintings are shown to the public.

In the exhibition the art will be presented in clusters, based on topic. These clusters will be placed in chronological order. Within the exhibition rooms there will be no interactive screen or elements. Additional information will be designed in such a way it allows visitors to pick up things as they pass by.

An audio tour will also be made for the exhibition.

The museum has the goal to attract around 100.000 visitors for the exhibition, and assumes the average visitor would take about an hour and a half to experience the entire exhibition, including the audio tour.

Visitors will receive a time-slot indicating when they are allowed to enter the exhibition. Time slots are given out per half an hour, if a visitor has a ticket for the time slot of 11:30, they can enter the exhibition anywhere between 11:30 and 11:59. The

time slots do not dictate an end time, allowing the visitors to stay for as long as they wish. About 80 tickets are sold for each half hour time slot, and most tickets will be sold online.

It is important to note that this chapter presents the information as we have it, at the time this report is presented. Throughout the project there were many weeks of knowing very little, and information changed throughout the process as well.

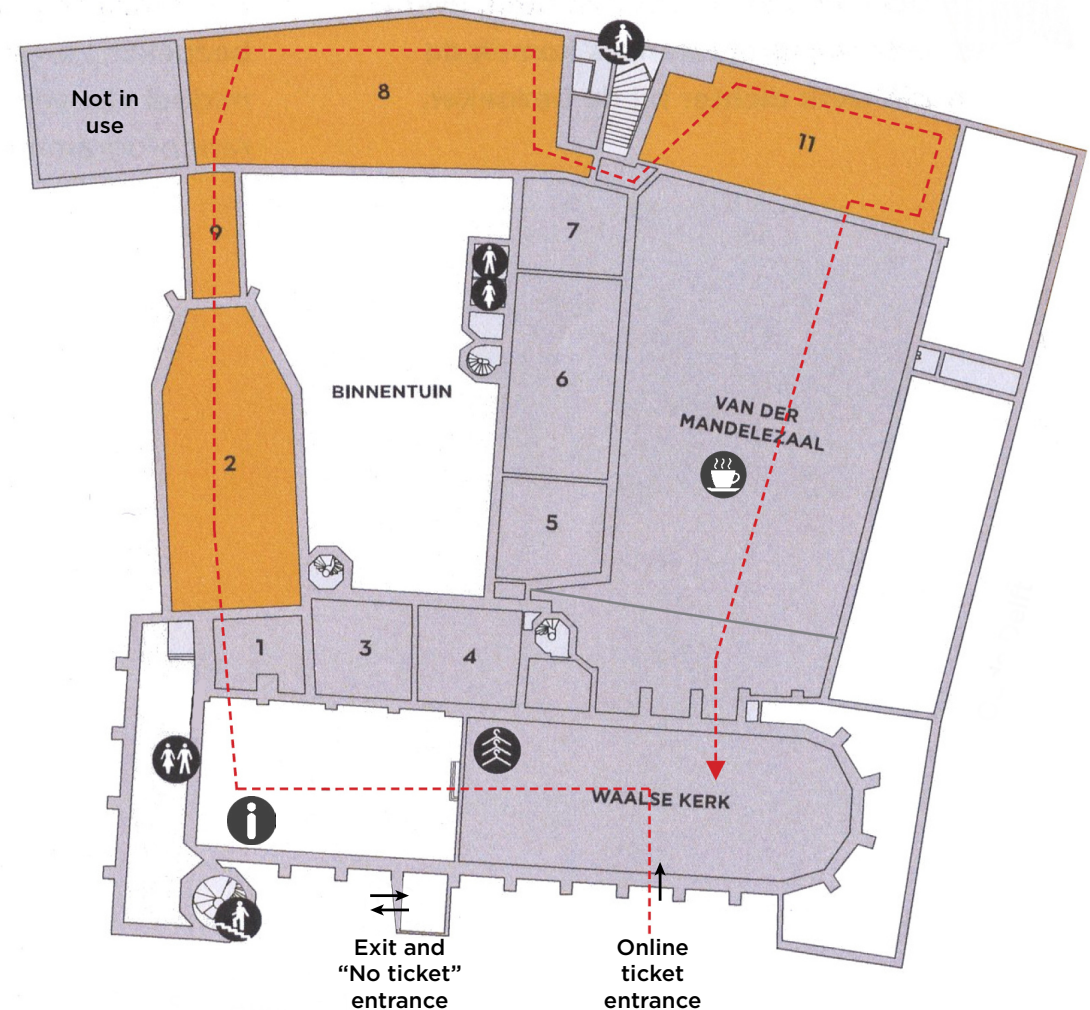


Figure 1: A map showing the rooms and route of the exhibition.

### 1.3 What we know of Pieter de Hooch

Although many museums around the world display paintings of Pieter de Hooch as part of their collection on the Dutch Golden age, and he is often considered a master in this area, we know fairly little about the painter. He was born in 1629, in Rotterdam, where he also started his career as a painter. He later moved to Delft, where he painted his most well-known pieces, often depicting domestic scenes. Since 1655 he was registered as an independent artist in the Saint Lucas Guild of Delft. (Rijksmuseum, n.d.)

Trademarks in De Hooch's paintings are his use of tile floors, his warm colour palette, the depiction of domestic themes and the use of Vistas (glimpses into other rooms or outside through windows, doorways or arches).

As of yet we do not know when De Hooch died, he was last heard of in 1684. Figure 2 shows what we assume to be a self-portrait by De Hooch.



Figure 2: The painting we assume to be a selfportrait by De Hooch. It is the only known portrait of the painter. (Wikimedia Commons & Pieter de Hooch, 1648)

## 2. Research

For this assignment, of designing a new experience for families visiting Museum Prinsenhof Delft, there are 3 main topics to cover in the research:

- The family experience (of a day out)
- The museum experience
- Engaging children

When combined, these 3 topics cover most of the elements within this challenge. Although a certain amount of overlap among the topics is to be expected, for this research the topics have been divided to organize and focus the approach.

Connected to each topic was a main research question which the research set out to answer.

These main questions were:

- What is the experience for a Family (family experience) when visiting an attraction together?
- Which elements of the museum experience make (or break) the experience/attraction for the visitors (mainly families)?
- How can we engage children at (educational) family attractions (such as museums)?

As these questions were rather broad to answer immediately, a multitude of sub questions was formulated. The answers to these sub questions would build up to answer the main research questions. Appendix B.1 provides an overview of the sub questions connected to each topic.

This chapter will provide an overview of the executed research and its results. It will present the

findings and insights, and conclude by formulating an answer to each research question.

### 2.1 Literature

The literature<sup>2</sup> research explored all topics of the project. It provided information and answers, but also gave indication as to what needed to be researched further and what other elements could be of interest for this project.

#### 2.1.1 The museum and the museum experience

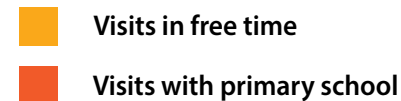
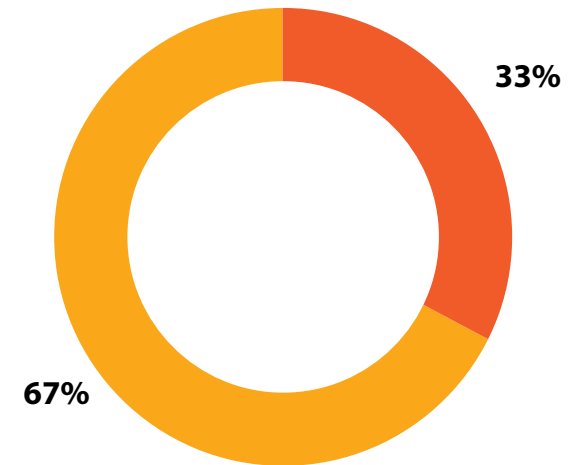
The following information is a summary of the yearly report of the Museumvereniging called “Museum cijfers 2017” (Museumvereniging, 2017). It shows the most valuable data and insights of the 2017 publication.

<sup>2</sup> Most of the literature concerning families in museums has been done in science museums, with fairly little, to no research on families in history museums done. Due to this, not all results presented in these papers can be transferred completely to the situation of Prinsenhof Museum Delft

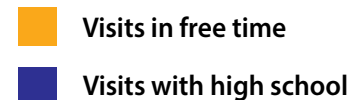
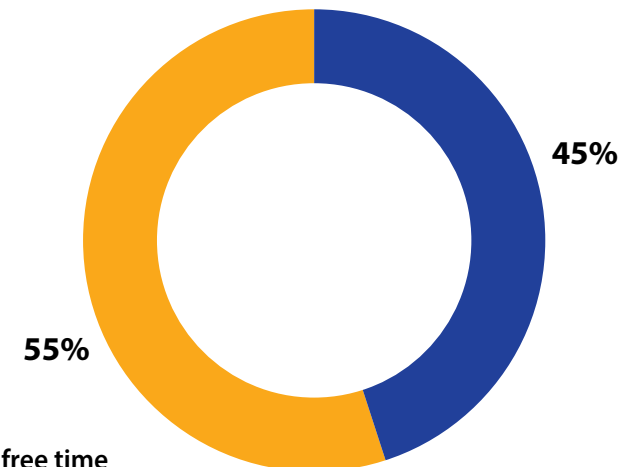
Figure 3: Museum visiting behaviour of Dutch Youth (under 18 years old) in The Netherlands in 2017

## Museum visits of youth in 2017

### Youth up to 12 years old



### Youth aged 13 to 18



By 2017, the majority of museums in the Netherlands have history as their main topic of interest (about 61 %), while art museums create the biggest profit. These 2 kinds of museums are also the kinds of museums which people are most willing, to travel long distances for.

Children up to the age of 12 visit more museums in their free time than children of 13 and up, although the overall number of children and teenagers visiting museums is less than 20% of total visitors. Lastly; over the past couple of years the government subsidies for museums have decreased significantly, which has resulted in museums needing to raise their own funds to compensate. In the period between 2013 and 2017, the price of a museum ticket has, on average, increased by 3,5% a year.

### 2.1.2 The family experience at the museum

For most families, visits to a museum are mainly seen as social visits. They go together in order to spend time with the family, have fun and enjoy each other's company (Fountain, Schänzel, Stewart, & Körner, 2015). This social element to the visit ensures they do not only interact with the exhibits of the museum, but also with one another.

Although the families come to the museum as a group, each family member will have their own personal interests, and therefore their own agenda and goals within the museum (Hilke, 1988). Individuals will decide for themselves which exhibited pieces to look at, and when to move onto a next element. Research shows that groups (mainly families) have a tendency to keep the group together at all costs (Tolmie, Benford, Greenhalgh,

Rodden, & Reeves, 2014). As a result, people can be rushed, forced to break off an engagement or need to skip elements altogether. Tolmie's research showed that (young) children have a strong influence on the family groups, and how they move through the museums. Often families put their wants and needs before their own to keep the children interested and engaged.

Borun and Dritsas (Borun & Dritsas, 1997) suggest there are 7 returning characteristics for exhibits who are successful in providing for family learning.

1. Multi-sided: Exhibitions which can be accessed from multiple sides so families can cluster around the exhibits, instead of only one person.
2. Multi-user: Exhibitions which allows for multiple people (in a group) to simultaneously interact with the exhibit.
3. Accessible: Exhibits which are built in such a way that both the adults as well as children can comfortably interact with the exhibit.
4. Multi-outcome: Exhibits which have multiple different and complex outcomes or interactions, and therefore motivate group discussions.
5. Multi-modal: Exhibits which appeal to and are approachable to people with different styles of learning and different levels of (background) knowledge.
6. Readable: The texts used to explain the exhibits are arranged to be easily seen by all visitors, and written to be understood by both children and adults.
7. Relevant: the exhibits make use of, and provide elements which visitors can link back to their previous knowledge, experiences or their daily lives.

Although these characteristics (and the research of Borun and Dritsas) have a focus on the learning element of the Family museum experience, they also cover accessibility and how to attract attention. Therefore, these characteristics should be kept in mind.

### 2.1.3 Engaging children and child development

Children often have an active imagination, and it should come as no surprise that they take this imagination with them to the museum. Different research projects have shown that children use their imagination to interpret the exhibited pieces (Dockett, Main, & Kelly, 2011). Often this results in elaborate back stories and contexts being made up for pieces which might not have one. Their personal background, upbringing and interests influences this interpretation, and therefore also has the possibility to influence their learning process.

Children between the ages of 4 and 12 are vastly different in development, perception of the world, and their interests. These differences are explored in the book "child development, an illustrated guide, by Carolyn Meggitt (Meggitt, 2006). The following is a summary of important moments of development for children aged 4 to 12:

- 4 year old children are still likely to mix up fact and fiction
- 5 year olds have developed a sense of time; differentiating between past, present and future. They like stories, and often re-enact them
- Children of 6 start to develop their own interests. They are able to distinguish between

fact and fiction and are able to hold multiple points of view.

- 7 year olds have reached a point where they are more detailed in drawing (including eye brows on people etc.) and use colours in a natural way (green for grass, blue for sky etc.) By this age, children are also capable of understanding cause and effect.
- 8 to 9 year old children have reached an age where they are easily embarrassed and discouraged. Additionally, they want to be part of organized clubs.
- Children around 10 and 11 years old show the ability to understand others, but are more self-conscious, sensitive to criticism and sometimes self-absorbed. They are likely to give into peer pressure and want to be independent from their parents, though still liking their help when needed.

Something children aged 6 to 10 seem to have in common is their interest in the world around them. They are curious about science, and enjoy experimenting with this, while on the other hand are learning about the social aspects of our world. These children are actively discovering and exploring the world they live in.

In addition to their interest in the real world, school-age children (6 to 12) are involved with stories. Although their role-play takes place mostly at home, the lines between this role-play and true story telling becomes more and more blurred. The children make up their stories as they go along, and use language to tell the story accompanying their play. (Frost, Wortham, & Reifel, 2011) Furthermore

kids this age are interested in social play with their peers.

The kinds of play these school-aged children engage in can be roughly divided into 4 groups. (Gielen, 2010). These 4 types are based on 2 scales; Active vs Reactive and Realistic vs Imaginative (figure 4). In practice, these scales are not absolute, and most children will have elements of most (if not all) types of play in them. It is however reasonable to assume that each child prefers one kind of play the most.

Despite the many things literature can teach us, there are still topics which have gone undiscussed so far. To gain further insights on the different topics experts in the field of museums were consulted. Additionally visitors were interviewed and observed at the museum, and families were asked about their experiences of days-out and museums visits. The insights gained from these methods are presented in the rest of this chapter.

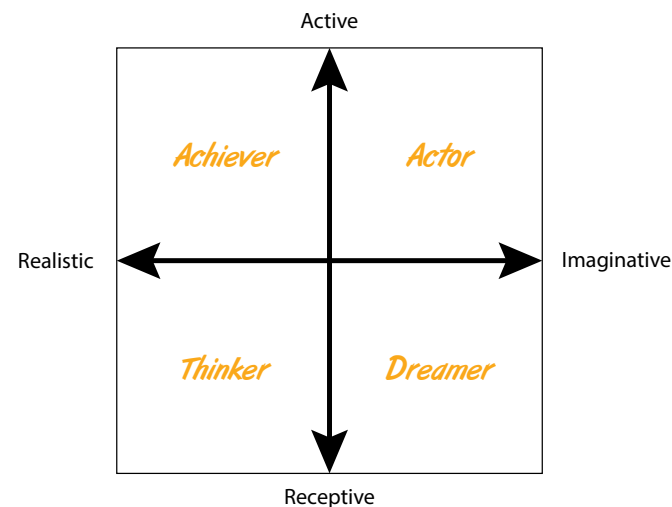


Figure 4: The 4 different kinds of play of children over 6 years old.

## 2.2 Expert opinion

In order to gain more insights in the behaviour of kids in a museum I talked to people who have experience working in museums and have observed the behaviour of children in the museum environment. The different experts worked for different kinds of museums, in different positions, but all have had experience with children in their work.

### 2.2.1 Aviodrome employee 1992 - 2000

The first expert worked at the Aviodrome<sup>3</sup> museum at Schiphol airport, for eight years. From this talk I hoped to gain an impression of the behaviour of children in museums. Mainly, I was interested in the children's ability to focus and pay attention, what elements interested them the most and how to best explain new knowledge and information to them. The following is a summary of the insights the expert provided. The full conversation can be found in appendix B.2.1

Children like to hold or touch objects, which is more prominent for the 4 to 5 year old children. When children are notified up front that the information presented, will later on be used in a fun way, they are more likely to pay attention. Children usually only read the provided

<sup>3</sup> Aviodrome is the largest Dutch museum dedicated to air and space travel. Since 2003 the museum is located in Lelystad, under the name "Luchtvaart- Themapark Aviodrome". Before, the museum was located at Schiphol National Airports, and simply known as Aviodrome.

information if they are certain it will be interesting for them.

Children need stories to connect to a topic and it helps them grasp new information.

The best approach towards letting children learn, is to explain the basics, and let them try it themselves, but be there to provide answers if they ask questions.

Many special simulations, videos etc. run on a loop in museums. This seems to take away some of the specialness of the experience. When an experience happens in intervals, more people seem to want to join the experience. The rarity seems to add a level of value.

For people in general, but especially children, it is difficult to process and remember new information if they have nothing to link it to. It is important to make sure there is a link to their background knowledge and their own life.

Overall, it is a good guideline to mainly focus on stories and visual aspects which are easily seen.

### 2.2.2 Children's Education employee Mauritshuis

The second expert was a Children's education employee at the Mauritshuis in The Hague. The full conversation is discussed in Appendix B.2.2

The Mauritshuis tries to make a Puzzlehunt for every special exhibition, but aims for the hunt not to need any answer sheets. The questions don't really have right or wrong answers, but instead incite conversations and interests.

14 During a special guided tour on "Restorations" children seemed enthralled by the "secrets" behind

the paintings and the extraordinary stories told around the paintings.

Children and adults sometimes still misbehave during puzzle hunts (such as parents tapping on the glass of a painting). To avoid the urge to run around looking for a painting, the puzzle hunts don't ask to find paintings, and often show all pieces in the exhibition on the puzzle sheets.

Children show an immediate interest in paintings which hold things they can identify with such as animals or other children. Furthermore they enjoy images where they can search for something and show interest in paintings like "Girl with the pearl earring" which they most likely have seen somewhere before.

Listening to, and making up stories surrounding a painting is enjoyable for kids, but they need some help and a trigger to make up their own stories. Children often ask about the building of the museum, and the "entourage" surrounding a painting; such as who painted it, where did they live, who were their family etc. Showing an interest in stories and context.

During guided tour, children sometimes have the urge to read the plaques in order to answer the upcoming questions, but don't always know how to interpret the provided information. For example, children will see the price of the painting instead of the year in which it was made.

### 2.2.3 Project Manager Exhibits and Virtual Museum, Science Centre Delft

As a final expert I consulted with Jules Dudok; Project manager at the Science Centre in Delft.

As the science centre is a very Hands on and active museum, I hoped to get some inspiration for designs and concepts as well as gain insights into what elements of the activities there attract the families the most.

Here the most valuable insights from conversation are presented, all insights from the interview can be found in appendix B.2.3.

Children get excited about (video)games, competitive elements and being able to make something themselves (expressing creativity) as well as breaking



Figure 5: an example of a question in the Fami puzzle hunt of the Mauritshuis museum

things (where this is allowed and part of the exhibit)

A lack of parental control is attractive to children, as there is no one to tell them what to do. Parents don't always partake in the activities. Games are things parents can get involved in, often because children ask. Parents don't get involved if they don't know how the activity works, as they don't want children to find out they don't know everything. Children are so used to technology today, that analogue things seem somewhat boring, especially when they stand close to a screen or other digital exhibit. All screens are immediately assumed to be touch screens.

## 2.3 User research

The literary research provided an impression of behaviour in the museum, and how families experience the visit, but did not show what they want from, or look for in a museum. To get a better impression of how visiting families experience the museum, how families interact in a cultural historical museum and what might keep them from visiting, different methods of user involved research were employed.

### 2.3.1 Context mapping

To gain information and insights on the experiences, emotions, opinions and concerns of visiting families, the method of "Context mapping" was used.

Context mapping is a qualitative research method, which aims to find out not only how people feel about something, but why they feel that way.

The results are used as inspiration for the design process.

The Contextmapping process is shown in figure 6.

#### 2.3.1.1 Method

Participating families were interviewed for about one hour. During this interview, participants shared their experiences, emotions etc. with the researcher. The interview was recorded, in order to save the raw data and avoid information going lost or changed due to personal interpretation. Before taking part in these interviews participants were "sensitized", through a few small exercises in the days leading up to the interview. This was done to get participants into the topic and mind-set of the interview, as well as being another source of insights. The full booklet can be found in appendix

B.3.

Along with the sensitizing booklet participants received some pens and markers, and a sticker sheet to help them fill in the booklet. Participants received an introduction letter explaining the procedure of the booklet, as well as receiving the consent form for the Interview. Figure 7 shows the full sensitizing package.

Participants for the interview were families with children aged between 4 and 12 years old. For a more representative set of data, the families were selected from a variety of sociocultural backgrounds, as much as was possible.

#### 2.3.1.2 Research goal

The aim of using Context Mapping, was to gather insights into the more personal and emotional side of the family days-out, as well as diving deeper into the goals and concerns surrounding the trips families take together. Furthermore, the research set out to find out what elements of such a day out makes the family days-out special. These insights would not only concern family visits to the museum, but any kind of day out with the

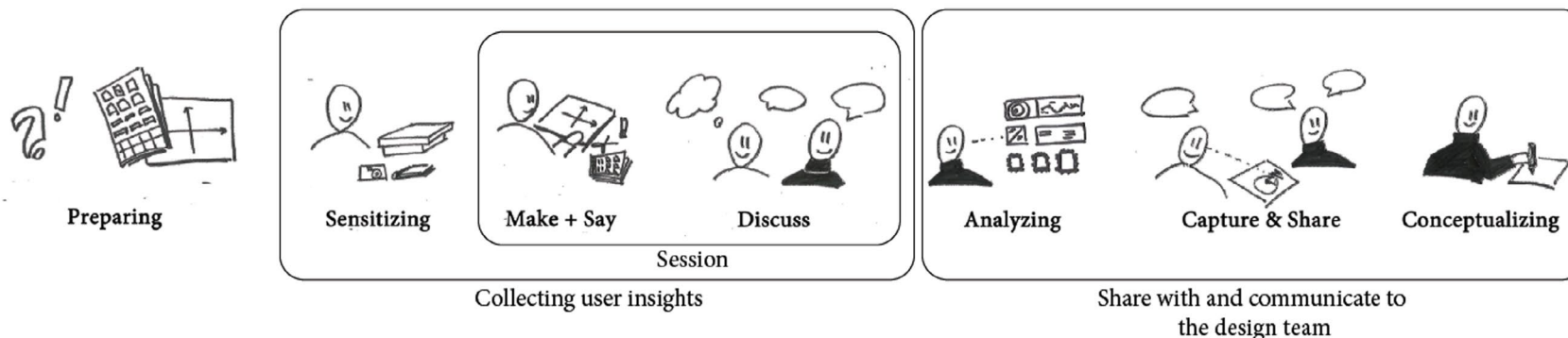


Figure 6: Overview of the Contextmapping Process (Sleeswijk Visser & Stappers, 2015)

# Een dagje uit met de familie



Verder zit er in de doos een "Consent form" deze heeft betrekking tot het interview. Voor het onderzoeksproces is het van belang dat het interview wordt opgenomen. Het is natuurlijk belangrijk dat u precies wilt weten wat er met die opnames en uw data gebeurd en welke rechten u als participant heeft. Hierover kunt u alles in de "Consent form" vinden. Ik zou het erg op prijs stellen als u dit formulier voor het interview een keer doorleest. Ook als u hier verdere vragen over heeft kunt u me daarvoor bereiken.

Email: I.C.F.vanHouten@student.tudelft.nl  
Mobiel: 06 34268623

Nogmaals hartelijk dank, ik hoop dat plezier heeft bij het invullen van het boekje.  
Tot binnenkort,  
Irene van Houten

Het om  
creativiteit, schrijf, teken of plak dingen op; het kan allemaal.  
Als u geen printer beschikbaar heeft, en voor 1 van de opdrachten een foto wilt gebruiken kunt u deze ook naar mij mailen of sturen via whatsapp, met het opdracht nummer erbij.  
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Figure 7: Example of a sensitizing box as it was sent to the participants.



family. To achieve this, it was not mentioned beforehand to the participants, that the project was done for Museum Prinsenhof Delft, in order not to steer participants into giving answers they expected I wanted to hear. Answers and insights were found through a 4-day sensitizing booklet, and an hour long interview. Participants were asked to fill in the booklets with the entire family. For the interview, it was accepted to have only one parent and (at least) one child present.<sup>4</sup>

The interview and sensitizing material was built around the theme of “a day out with the family”. During the interview the questions would slowly become more focussed, ending with a round of questions specifically about museum experiences and opinions.

### 2.3.1.3 Participants

As mentioned; the participating families had to have children between the ages of 4 and 12. In the end 5 families took part in the research. Figure 8 provides an overview of the participating families.<sup>5</sup>

### 2.3.1.3 The interview

The interview was conducted at participants’ homes, and lasted around one hour (one exception where it took almost double the time). The interview started out focussing on “Days-out with the family”, moving into the more emotional and experience side of this topic, and finally into the topic of Museums as a place to go with the family. The full Interview guide can be found in appendix B.4.

<sup>4</sup> For the interviews I allowed only one parent and one child to be present in order to make it manageable to plan the interviews, and not impose on participants by needing to come in the evening or the weekend.

<sup>5</sup> Some pictures do not show all interview participants due to them being unavailable for the interview, or low quality camera image.

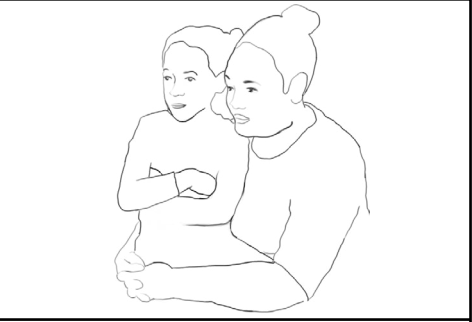




	CHILDREN	PARENTS	PICTURE
F1	Daughter; 7 years old	Mother	
F2	Daughters; 9 and 13 years old	Mother & Father	
F3	Son; 7 years old	Mother & Father	
F4	Son; 7 years old Daughter; 2 years old	Mother & Father	
F5	Son; 11 years old Daughter; 9 years old	Mother & Father	

Figure 8: An overview of the participants who took part in the contextmapping sessions

### 2.3.1.4 Analysis and Results

The interviews were analysed by finding the most important quotes and statements, interpreting these, and clustering them together in order to find patterns, such as general concerns, or overarching opinions. This analysis was an iterative process, in which the cards were clustered and analysed multiple times, until the result is satisfactory.

The results showed a multitude of patterns, most of which fell into one of 2 overarching themes “Concerns” and “Hurdles”.

Concerns indicate which factors are important for families when choosing an attraction for a day out. Hurdles indicate which factors might keep them from visiting a certain attraction.

Here the most important results are shown, a full representation of the results can be found in appendix B.5.

#### Concerns

- Most families (both parents and children) consider the social element of the days-out as most important. Being together and doing something together makes the day special.
- Parents put the needs of their children above their own when it comes to days-out; putting their own wishes on the back burner a bit. However, they try to find something everyone will enjoy.
- In the case children are old enough to formulate their opinions, these suggestions are taken into account as well.
- Some parents truly value the additional learning element of certain attractions, and how this has

*“Being complete as a family. The fact that you do something together as a family. That she, enjoys it as well; our teenager.”*

*Family 2*

an impact beyond just the day itself.

- Parents want to be able to relax on their days-out, and don’t want to have to worry about the kids or their behaviour. They see this opportunity to relax as somewhat of a requirement for the attractions they visit.
- Children want something more to do than just looking around on their days-out; for example actively doing something, interacting with objects, or even finding out stories.

#### Hurdles

- People often seem to have a somewhat stereotypical idea of what a museum is, and who it is intended for. Museums are for example seen as boring, and not meant for kids. In addition the idea seems to be that it shouldn’t add too many playful elements, less it become a playground.
- Parents feel their children are not ready to visit a museum, often based on their own experiences.
- Parents do not like taking risks when it comes to days-out. If they are uncertain their children will like something, they are not likely to go.
- Price is a definite hurdle for most families in every kind of day out. Families try to find a balance between the price of an attraction and its value (fun, learning etc.). Where possible they use discounts.

- Parents can be quite oblivious when it comes to museums; either not knowing museums for children exist, or that certain museums can be fun for kids.

It is also interesting to conclude on the association the participants had to the word “Museum”. Although it was somewhat personal as to whether participants enjoyed museums (with 2/5 calling them boring while the other 3 seemed to find them enjoyable or at least interesting), it seemed a more generally accepted association that museums are places with a clear room to room structure and the visit is a somewhat passive experience. Even participants who enjoyed museums felt that too much activity or playfulness would make one doubt whether it could still be considered a museum. This seems to suggest that people consider museums, not necessarily boring, but structured, sometimes formal, and in general; a passive experience.

*“A classic base-rule is; if the kids are enjoying themselves, then the parents enjoy themselves. You learn to appreciate that.”*

*Family 5*

### 2.3.2 Observations and interviews at Museum Prinsenhof Delft

To gain more insights into behaviour of families in cultural historical museums I observed and interviewed families at Museum Prinsenhof Delft. Most research into museum experiences so far has been conducted in Science museums. As these museums differ quite a bit in their experiences to Cultural historical museums, I found it valuable to gain insight into the experience of one such cultural history museum.

During this research step I aimed to gather insights on how families interact with the exhibitions but also one another. Furthermore I hoped to find out the opinions of families about the museum, in order align the future design with what people want or expect from the museum.

The observations and interviews were done in 2 different rooms; room 18 and room 15, shown in figure 9. These rooms were chosen for the observation as they contained both Static exhibits (Un-moving exhibits which one can only watch) as well as Dynamic exhibits (Exhibits which move, or where visitors can actively do something). Furthermore, these rooms were more towards the end of the museum, so visitors had already experienced enough to be able to give an opinion. The observations were done on 3 weekend afternoons, of which 2 during the Christmas break.

#### 2.3.2.1 Observations

The aim of the observations was to find out how visitors interacted with exhibitions as well as



Figure 9: Room 18 (top) and Room 15 (bottom) at Museum Prinsenhof Delft

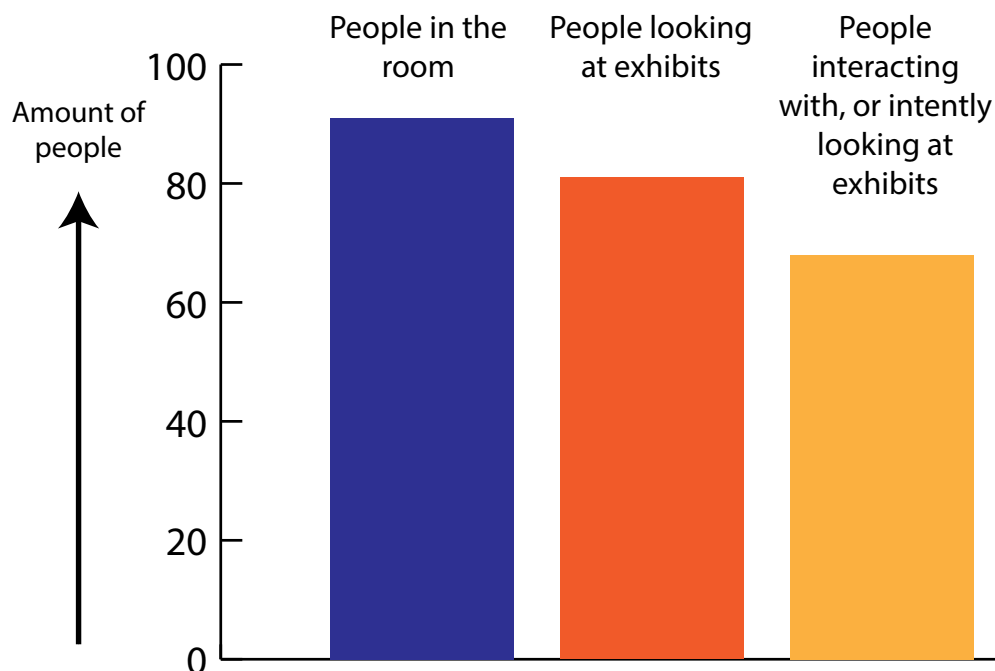


Figure 10: An overview of the amount of people in the room and what they do.

each other. This was to inspire the design of the experience and the interaction elements within and included exploring things such as whether people in fact read the information provided with pieces of art, and how much Families interact with one another when viewing the exhibits.

The observations showed that in the case of dynamic exhibits<sup>6</sup> as well as passive exhibits<sup>7</sup>, around 75% of family visitors do actively interact with them, even though, most of these interactions are with the dynamic exhibits. Especially children only interacted with the paintings when they were included in the puzzle hunt, other exercise or someone actively tells the stories connected to

<sup>6</sup> A dynamic exhibit is one which changes or moves, either of its own accord or due to the visitor's actions and can be different for each visitor

<sup>7</sup> Passive exhibits are those which require no input and do not change; They can only be observed.

the paintings (either the story teller or a family member).

Most people move through the rooms rather chaotically, often first moving in on large objects or dynamic exhibits. Although some families actively try to follow a route through the room, almost all families skip one or a few exhibits in the room.

Parents often let their children explore the exhibits for themselves. Where necessary parents translate or interpret written information for children (figure 11). Very few parents actively steer their children's behaviour, the few times this behaviour does occur it seems to be with very young children.

In some cases parents and children actively connect exhibits in the museum back to elements from their own life. Such figuring out what route they cycled to the museum, on the scale model, or a young

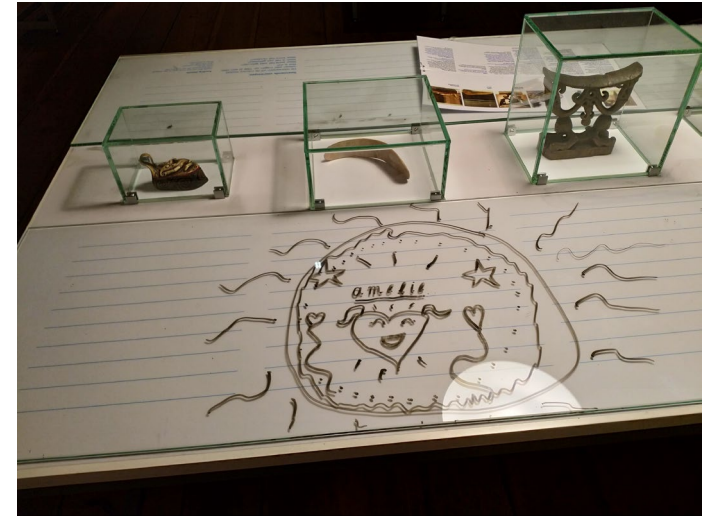


Figure 12: "Miss-use" of a dynamic exhibition room 15 of Museum Prinsenhof Delft

girl comparing herself to the portrait of the crown princess.

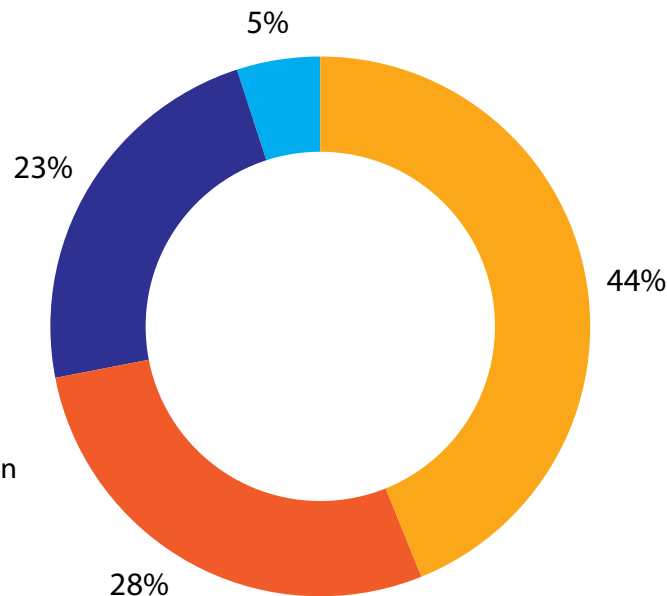
Although the dynamic exhibits received the most attention from children, it also seems these exhibits are sometimes "miss-used". Room 15 at the museum contains a table with a couple of objects; the surface of the table is meant to be written on with whiteboard markers, and visitors are motivated to guess what each object is and write the answer down. Observations showed that many visitors prefer drawing random doodles on the table, over actively answering the questions (figure 12). This behaviour did not only apply to children, but was also observed among (what seemed to be) adults.

Although most children accompanied by their parents mostly seemed to enjoy themselves , a

Figure 11: Overview of the observed parent-child interaction at Museum Prinsenhof

## Parent child interaction

- Parents who give their children freedom
- Parents who discuss the topic with their children
- Parents who translate or interpret for their children
- Parents who steer their children's interests



couple of children which seemed to be in their early teens were easily bored, and spent more times interacting with their phones, or the app like games in the museum than any of the exhibits.

Appendix B.6 shows an overview of all results from the observations.

### **2.3.2.2 Museum Lesson observations**

Museum Prinsenhof Delft offers a couple of programs for school groups who come to visit the museum. Among these programs are a puzzle hunt surrounding the “William the silent” exhibition and a couple different lessons provided to the school by employees of the museum.

In addition to the original observations in the museum, I observed 2 of these lessons for schools. The first lesson discussed the life of William the Silent and his death. This lesson was aimed towards children around 11 and 12, in the last class of primary school. The lesson told the story of William’s life, and his murder, and the children got to take part in a couple exercises to “Solve” the mystery of his death. In the end, the students were asked to re-enact the murder on William the silent. The group was divided into 2, with one group starting with the story, and the other with exercises. During this lesson, the following observations were made:

- While explaining the history of William the Silent, the guide is constantly asking questions to keep children focussed and interested, and making sure the questions aren’t always answered by the same children. This seems to keep children more engaged in the story

- After about half an hour the first children vocalize their boredom; “It’s taking quite long”
- Nearing the end of the story, the children noticed their classmates doing the exercises and re-enactment, this made them less engaged by the story, and more interested in the exercises.
- The exercises in groups to “Solve” the murder were enjoyed by the children; they fully engaged in the exercises.
- Some of the small groups finished their exercises sooner than others, and became impatient and restless. They started re-enacting the murder scene on their own, before the planned re-enactment.
- The official class re-enactment led to a lot of giggling.
- The group which did the exercises first was said to be less chaotic and restless when nearing the end of their tour, than the group which heard the story first.

The second lesson the museum offers is a lesson about Portraits, offered to children aged 6 and 7 in the first and second year after pre-school (groep 3 or 4).

In this lesson students are informed about portraits and certain elements of painting. The lesson started out with an introduction by the teacher, who introduces herself as a painter in need of inspiration for her portrait. The students are then guided through the museum, and shown different portraits. Some of the history is explained of the people in the portraits, but mostly the focus lies with the things which are easily seen on the painting. The lesson included a few activities;

posing like people in portraits, finding the objects in a painting and making your own portrait.

During the lesson the following things stood out:

- The museum teacher asked many questions throughout her story to keep the students interested.
- The children seemed very eager. Many times children just shouted out questions instead of waiting for their turn, they talked about other topics or objects in the room or asked somewhat unrelated questions.
- When it was time to re-enact the portraits, the boys didn’t want to take part in it, while most girls wanted to take part.
- When looking for objects in a painting, children easily find the animals and children.
- When asked to do the work by themselves, and not sharing it with the others, they didn’t listen and worked together anyway.

### 2.3.2.3 Interviews

Interviews were used to gain a better impression of the opinions and experiences of families visiting Prinsenhof Museum Delft. Based on these opinions and experiences the aim was to find elements to avoid and to emphasize in the experience design. Over the course of the 3 weekend afternoons, 10

families (consisting of 39 people) were interviewed.

The interviews showed that a main thread of interest for most people is the story of William the Silent, and many people referring to the bullet holes as interesting, and sometimes surprising. Children indicated their preference for the exhibition on William the silent, as there was more to tell about

him than the paintings, and there was a real story of what had happened. The adults in the families often referred to the added atmosphere of the building being part of the story. Another success, especially among the children, are the moving projections on the walls, showing for example how William the Silent was shot. People repeatedly commented on how these projections really brought the story to life. The puzzle hunt was praised by almost everyone using it, with one young girl stating she liked it because it “guided them through the Museum”. Some parents did comment they would like to see some more active or visual elements for the children.

The main 2 reasons for people to visit the museum seem to be an interest in William the Silent, or wanting to have a fun day out together with the family. 3 families indicated their possession of the Museum Jaarkaart<sup>8</sup>, being a deciding factor in visiting the museum.

Appendix B.7 shows the full list of questions, and all results of the interviews.



22 Figure 13: Projections by the staircase where William the Silent was killed, depicting the murder.

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<sup>8</sup> The museum Jaarkaart is a Dutch subscription card which provides free entrance to many museums in the country

## 2.4 Conclusions

Combining the results and data from all different methods of research, I drew the following conclusions, and linked them back to the original research questions.

### *The family experience*

For families on a day out, the social element and fun for the whole family is the most important aspect of the experience. Learning is an element appreciated by some, but will always come second to the enjoyment and the feeling of togetherness which characterize the days-out.

Any attraction hoping for family visitors needs a good balance between the price, and the risk that a child might not like the attraction. The price of any attraction will always be an important factor, and parents do not want to risk their child not enjoying the day out. Therefore if the risk is high, the price of the attraction needs to be on the lower side, while if an attraction is expensive, parents need to be sure their children will enjoy the experience. (Figure 14) Subscriptions such as the Museum Jaarkart, however, seem to motivate families to just try something, even if they are now sure how much they would like it.

### *The museum experience*

Many parents still have a somewhat stereotypical or classical impression of museums. Although there are museums aimed towards children, and many museums could be of interest to children, parents are doubtful whether their child would like the experience, or they do not know it is possible for museums to be interesting for children.

When families do go to museums together, they tend to move through the museum in a somewhat random manner, often missing some of the exhibited pieces. Usually, the whole family ends up together by the dynamic exhibits.

Parents view days-out as an opportunity for them to relax, and therefore have the requirement for attractions that they do not have to constantly watch or entertain their children. This is an element where certain museums fall short, as they require

parents to watch and police their children. This is stressful for the parents, gives a negative edge to the experience.

### *Engaging Children*

In any day out, children look for active elements which allow them something to do. In museums, this is even more evident, as children are rarely engaged in paintings or the information provided on the plaques; unless there is an additional activity

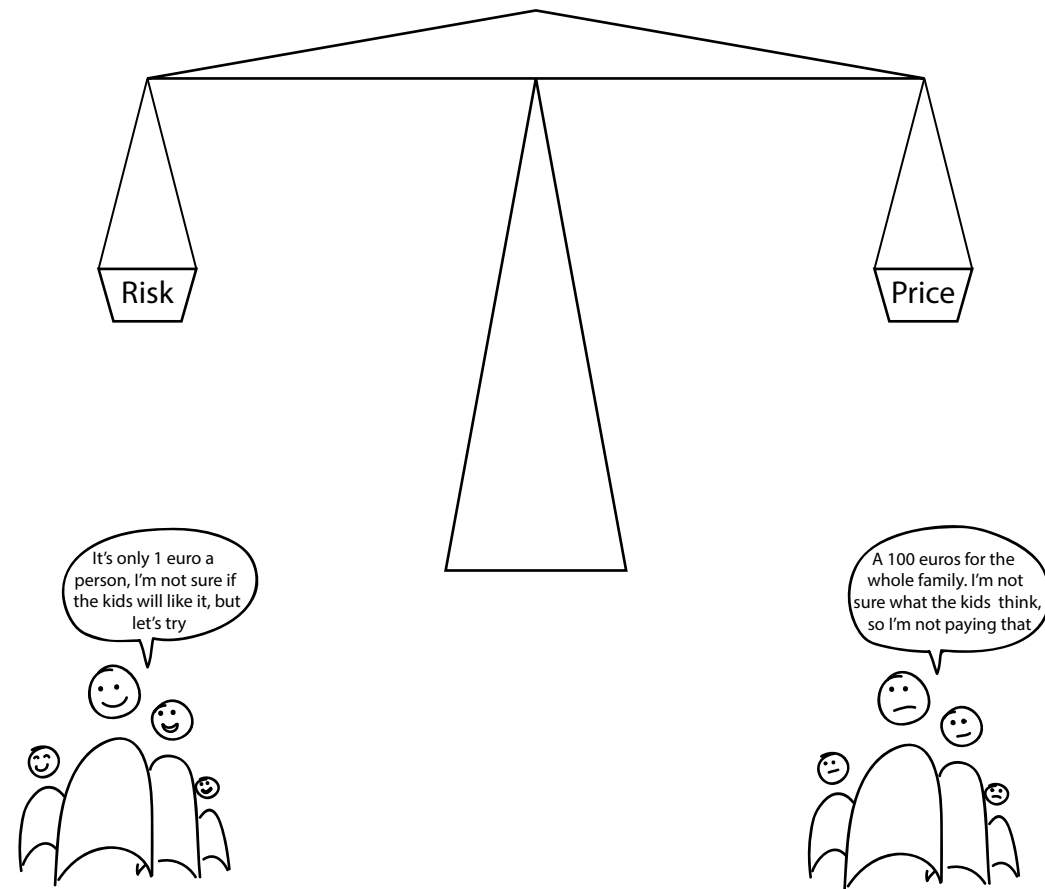


Figure 14: The balance between price and risk is vital for attractions. Price cannot go up, without the risk lowering, and the risk cannot be raised without lowering the price. If this balance isn't kept, families are unlikely to visit

connected to them. These dynamic exhibits do however not only attract the attention of children but also of the adults.

For any person, though especially children, it can be difficult to pick up new information. By presenting information in context and by using stories, new information will not only be made more interesting and engaging for children, it will be easier for them link it to their own life and experiences. This connection will help children remember the information more easily.

Additionally children engage more in exhibits which show elements they can identify with such as animals and children.

Lastly, children enjoy playing and working together in groups when they can, which can be emphasized when visiting an attraction together as a family.



### 3. Design Guidelines

To offer guidance during this design project, and perhaps future projects concerning families visiting museums, I formulated a couple of design guidelines. These guidelines are based on the results and conclusions of the research done for this project.

1. For families, the main point of the day out is the social aspect. Include elements which motivate or require social interaction, and create exhibits to be accessible to multiple people at the same time to play into the social goal of the visits, and children's desire to work and play together.
2. When designing an exhibition or experience for children and families at the museum, include active elements into the exhibits. Allowing visitors to interact with the exhibit and do

something will engage them further with the topic and information. (figure 15)

3. Try to use stories and the provided context to present information. This will help people (especially children) link the information back to their own life. By connecting information to their own life, they are more likely to remember the exhibit and the information it presents. The elements of story and context are especially important with static exhibits but can in any case be combined with other tactics.(Figure 16)
4. With static exhibits such as paintings; focus on elements and factors children can identify or connect with such as animals or other children. These quickly draw their attention, and pique their interest.
5. To attract families, exhibitions should not come

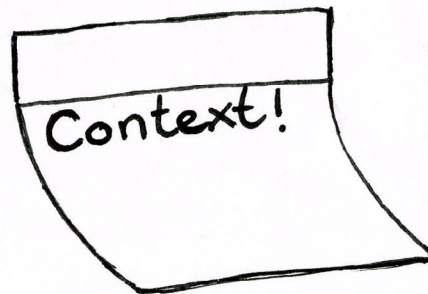
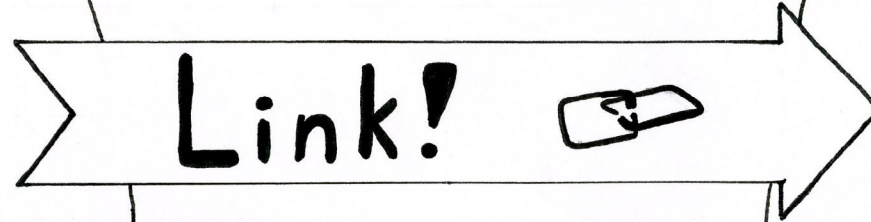
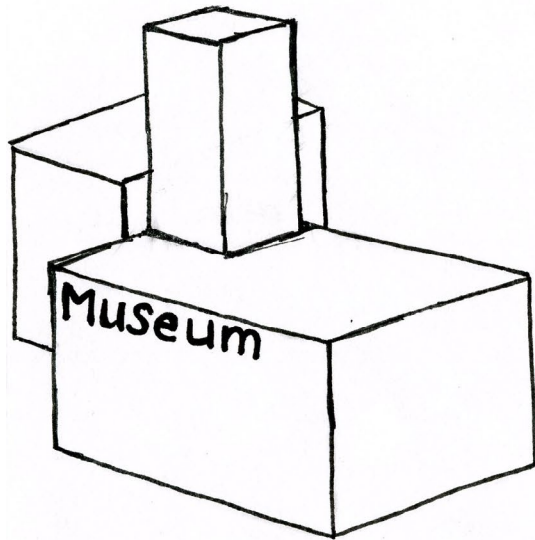
across as a stereotypical and classic museum exhibition, but as something children could enjoy and where they can be active. Parents believe children won't enjoy museums (partially based on the old fashioned impression) and don't want to risk that the trip won't be fun for them. As it is usually parents who decide whether or not to go, it is the parents you need to convince.

6. If there would be an activity for visitors which is connected to the topic of the exhibition and uses information from the exhibition, it is best to base the activity around exhibits which draw attention, and are least likely skipped. Examples of these are large scale exhibits, interactive or dynamic exhibits, or exhibits with bright colours.
7. If you want to attract more family visitors, create a somewhat informal atmosphere in the museum. Allow children to be somewhat chaotic and noisy, so parents don't have to constantly police their children. This allows parents to relax more and children to feel less restricted.
8. When presenting information and facts to children use methods such as audio, pictures, stories etc. in order to excite the children's imagination. Solely written text which sums up facts has a high chance of being ignored or miss-interpreted by children.

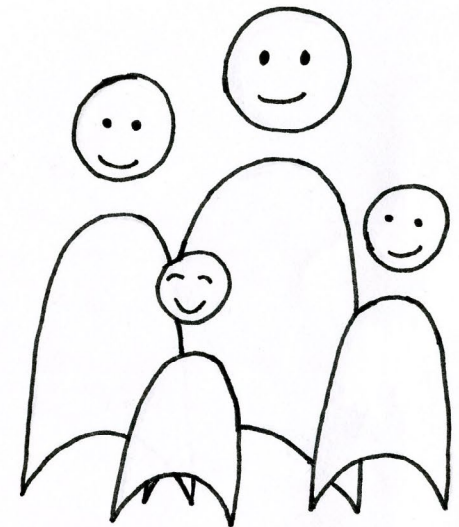


Figure 15: Two children and their mother interacting with one of the active exhibits in room 15 of Museum Prinsenhof Delft. 25

# Museums



# Family Life



26 Figure 16: A representation of how stories and context are necessary to link new information to daily life.

# 4. Target Group

## 4.1 The Target group

In order to make the design of the experience fit the needs of the users, it was important to define the target group for the new family experience.

The target group is the group of people the designer expects will use the product, and towards whom the design will be aimed.

For this project the target group was decided as followed:

Families with children aged 6 to 10 years old, who visit the Pieter de Hooch exhibit at Museum Prinsenhof Delft, together.

It was clear from the earliest moments of the project, that the design would be aimed at families. The choice was made to focus on children aged 6 to 10 because they are in an age where they enjoy social play with their peers, and are interested in discovering and exploring the physical and social world around them. It is interesting to play into the children's interest in social play, as research showed the social element being important to the parents, and it being an important aim for this project as well (see chapter 5).

Furthermore, this group of children is still very much involved with stories; an element which the research has shown can help children grasp new information.

Although the design is aimed towards this specific group of people, namely the target group, people

who do not fit this description can also enjoy the final product. The group of people who, in the end, use the product are defined as “the user group”, and can be different than the target group. Optimally, the user group covers the entirety of the target group, but is even larger, but it is never predictable how the two groups will overlap, or differ from one another

## 4.2 Familias


The defined target group still contained a wide

variety of people to whom it could apply; so to help steer the design process Familias (or family Personas<sup>9</sup>) were created.

In the case of families visiting the museum, 3 groups were defined:

- Families who live in the area and have heard of the museum quite often
- Families who have a museum jaarkaart.
- Families who are on a day-trip to Delft

<sup>9</sup> A persona is a representation of one or more persons who are part of the target group. It shows specific characteristics for that person which should be taken into account.



### Familia 1; live in the area

#### Family Smit, live in Delfgauw

Groups: Modern Mainstream, Cosmopolitan or convenience oriented (Motivaction, n.d.)

All levels of income, though mostly low to average educated people. Relatively focussed on materialism and consuming.

Socially oriented, with a focus on family. Focussed on status and how they present themselves to others.

Know the museum because they live close by. Kids have been on a school visit, and now the whole family goes together on a day out.

Not necessarily interested in art and culture. Not a lot of experience in going to museums and not used to the atmosphere. Little background knowledge in art and culture.

Family likes going out together to places like the Zoo, beach or theme parks. Might have a subscription to a place like Blijdorp or a park like Drievliet.

Figure 17: Persona for Families who live in Delft or the surrounding Area

Figures 17 through 19 show the three personas for these different families.

The personas provide an impression of the valuable characteristics for the family groups. These personal characteristics can greatly influence how they experience their trip to the museum.

For example, the mind-set with which they visit the museum, will steer what they want from their visit, and can therefore influence design decisions.

In this case, the families of Familia's 1 and 3 are not very used to the atmosphere of a museum. For them a day out is usually more active, and much less about absorbing information and knowledge. In contrast, the families who have a Museum Jaarkaart, are much more used to the idea of learning in a museum and the experience the museum offers.

Although most families would enjoy activities in the museum which provide more than just static information, it is the families who are not used to a museum atmosphere who require this activity much more.

In order to cater to their need it was important to keep the following elements in mind:

- Wanting a social aspect
- Wanting some activity
- Not used to obtaining dry information.



## Familia 2; museum jaarkaart

### Family Bakker, live in Breda

Groups: Part of the Postmodern-Hedonist, post Materialist or cosmopolitan (Motivaction, n.d.)

Mostly higher educated people.

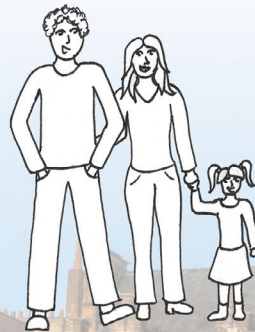
Focused on personal development and experiences.  
Involved in art and culture.

The family has a Museum Jaarkaart, and often visit museums (about once a month). Want to try Museum Prinsenhof Delft.

Have a rather good idea of what to expect of a museum and its atmosphere.

The children are used to the educational aspect of museums and quite enjoy the learning. The whole family has some background knowledge about different topics.

Figure 18: Persona for Families who own a Museum Jaarkaart



## Familia 3; day-trip Delft

### Family Nobel, live in Apeldoorn

Groups: Cosmopolitan, Post-materialist, Postmodern-hedonist or social climbers (Motivaction, n.d.)

Mostly average to highly educated.

Some are more fun/entertainment oriented, others are more focused on development and culture.

Have some interest in culture and science, visit museums a couple of times a year.

Not that used to a museum atmosphere and experience.

Have some background knowledge, which is very much steered by personal interests.

Family comes to visit Delft for the day as a family trip with some cultural aspects; Museum Prinsenhof Delft is part of the visit.

Figure 19: Persona for Families who come to Delft on a day trip

# 5. Design Goal & Qualities of Interaction

## 5.1 Design goal

The design goal defines the exact challenge to be tackled through the design process, based on the insights found in the research.

The design goal of this project is:

*To design an experience for families with children aged 6-10, who visit the Pieter de Hooch exhibition at Museum Prinsenhof Delft. The experience brings the families into contact with the art of the Dutch Golden age and Pieter de Hooch in a playful*

*manner. The experience allows families to learn, but does not set out to teach a specific topic or detail to the visitors.*

## 5.2 Qualities of Interaction

A tool often added to the design goal is to state the desired qualities of interaction for the design. Qualities of interaction are words which are used describe the interaction between the user and the final design without defining what the design is. They give an impression of how it should be or feel

for the user to use and interact with the product. This qualities of interaction for the future situation are often referred to as the desired qualities of interaction.

For this design project the desired qualities of interaction were:

- Social<sup>10</sup>
- Fun
- Engaging

Based on the qualities of interaction, an Interaction vision was formulated. The vision presents a situation which is different of that of the final design, but is one of which we all know the interactions and feelings it contains and evokes. This way, it is possible to communicate how the situation with the new design should feel, by comparing it to an existing situation. It also helps to inspire the design process, by looking at how the before mentioned qualities of interaction manifest themselves in that situation.

For this project, the chosen Interaction vision was that the family experience for the Pieter de Hooch exhibition should feel like “building a sandcastle together on the beach”.(figure 20).

<sup>10</sup> In this context “Social” is defined as being together as a group, but not doing everything together as a group. Visitors enjoy moments individually as well as in the group.

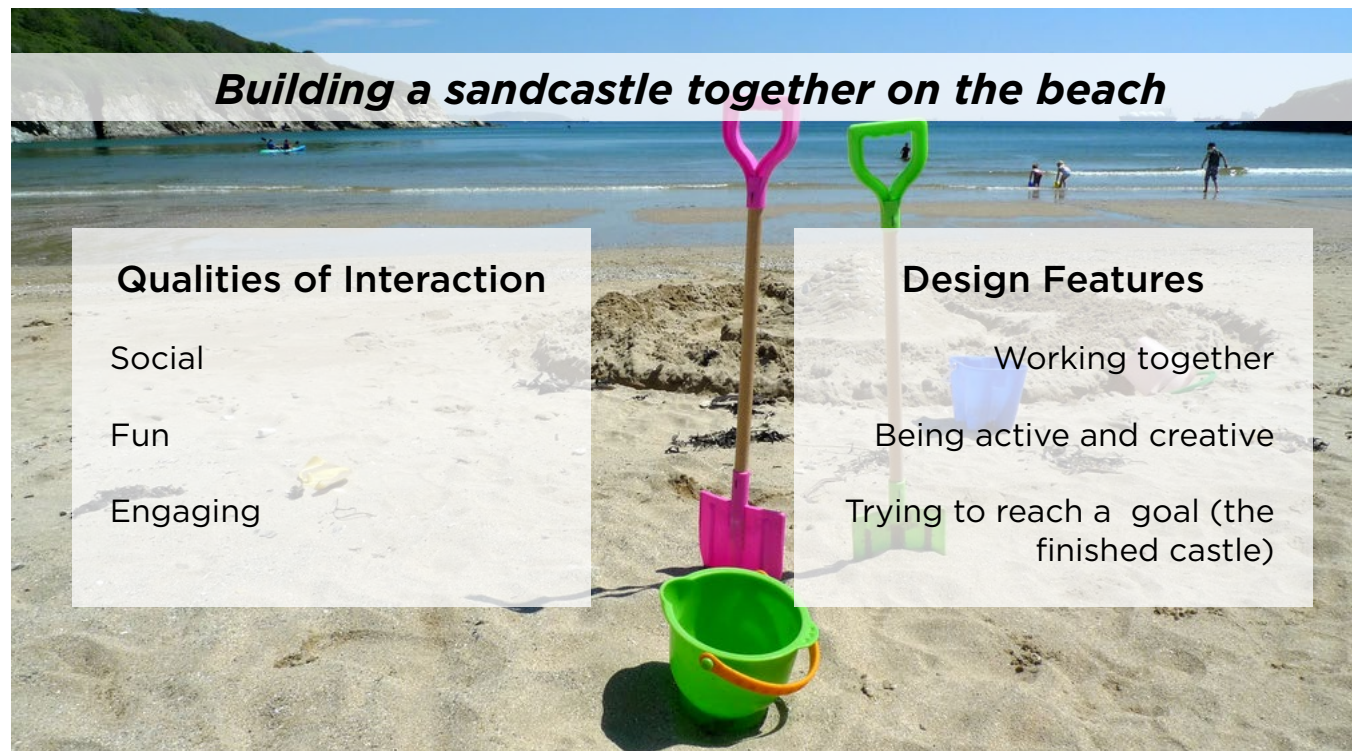


Figure 20: A visual representation of the Interaction vision (Burrows, 2013)

# 6. Program of Requirements

The program of requirements brought together the insights from the research phase and the expectations set by Museum Prinsenhof Delft. Together, these requirements set the limitations of the design. The program consists of 2 parts; Demands and wishes. Demands are the recruitments which have to be met and they have to be measurable<sup>11</sup>. The requirements which are less vital and more vague are referred to as wishes. These statements are seen as elements which would be nice to have in the design but not necessary, nor do the statements need to be measurable. This program of requirements has been updated throughout the project. Demands and wishes have been added or changed as new information about the exhibition became available. The requirements have not ordered based on importance, but are sorted into categories to make the list more organized.

## 6.1 List of demands

### Maintenance

- The product should be able to function for at least one month without additional maintenance to keep it from breaking or getting damaged
- The product should not require more action from the employees other than a start-up and

Turn-off at the beginning and end of the day.

### Health and Safety

- The design should confirm to the health and safety regulations, as applicable to toys for children aged 6 to 10 years old

### Use

- The experience should be accessible (both mentally and physically) to the adults in the family as well as to children aged 6 to 10.
- 2 or more people should be able to take part in the experience at the same time.
- The experience should be appropriate for the physical and mental skills of the target group
- Families within the target group should enjoy the experience

### Interaction

- The experience motivates social interaction within the family

### Theme

- The experience fits the theme of the Pieter de Hooch exhibition
- The experience connects to information and elements presented in the Pieter de Hooch exhibition.

### Design

- The experience should fit in with the style of Museum Prinsenhof Delft, and the Pieter de Hooch exhibition.

### Other

- The product should not compromise the autonomy of the painting (The visual of the painting cannot be changed through projections, Augmented Reality etc.)

## 6.2 List of wishes

### Use

- The design should be easy to use for both adults and children alike
- Families outside of the target group should be able to enjoy the experience

### Interaction

- The experience causes interaction among visitors who don't know one another.

### Other

- The design is easily adaptable to different languages, to cater to tourists
- The design breaks the stereotypical image people have of museums
- The experience allows visitors to explore the topic of the exhibition in a way the exhibition on its own does not
- Families learn something about the topic of the exhibition, they would not have learned without the experience

<sup>11</sup> The demands have to be formulated in such a way that through testing, the statement could be proven to be right or wrong.

# 7. Ideation

## 7.1 Brainstorm

In the early stages of brainstorming, very little information was available yet on Pieter de Hooch and the Exhibition plan. This lack of information on anything other than what art might be presented in the exhibition, steered my creative process to focus on ideas which would be directly connected to the paintings, and would be inside the exhibition rooms.

Further on in the design phase more information became available about the exhibition, however information on available rooms for my design was not available until the near end of my Ideation phase.

Therefore I noted which rooms in the museum could possibly become a spot for my experience, and went into a new round of ideation, which focussed on ideas outside of the exhibition rooms; such as ideas taking place in the city.

Figure 22 gives an example of the results of a brainstorm session (more examples can be found in appendix C.1). Returning themes of ideas within these sessions were:

- Activities outside the exhibition rooms
- Puzzle tour alike ideas
- Tour- like products (guide booklets etc.)
- Plays or other performance like ideas.

Performance like ideas would require a lot of effort

from the employees. As this would both cost a lot of money and did not fit the demands, these ideas were considered “not feasible” for a day to day experience at the museum. Although ideas in this category could be interesting for special events or holiday time, a design which could be used every day would be of more value to the museum. Therefore this category of ideas was not considered

further for this phase.

Considering the Museum’s requirement to keep the visitor flow smooth and consistent, there is a preference for ideas which take place outside the exhibition rooms. As there is no worry for visitor flow anymore when visitors are out of the exhibitions rooms, this would no longer be a key element the design would need to consider.

### Brain Storm

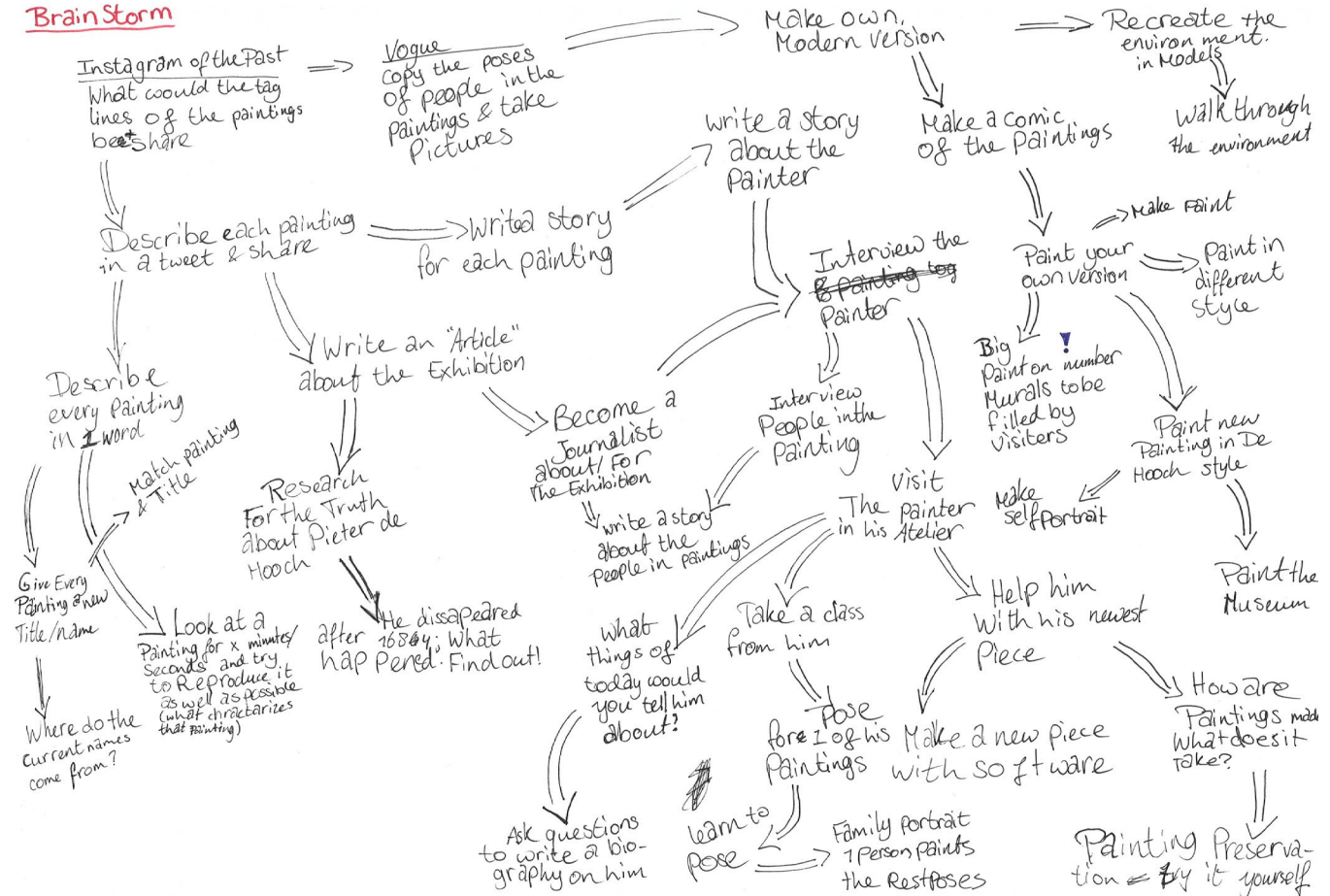


Figure 22: An example of the results of a brainstorm session

However, a well-designed tour (audio, multimedia etc.) could actually enhance the visitor flow, by placing a design intervention into the exhibition rooms. As the tour alike ideas had this advantage, they were not yet taken out of the running. However as puzzle tours do have an extra element of chaos, and are less easy to steer, they were taken out of consideration.

As a result, for the further development of concepts, ideas were chosen from those in the categories of; Tour-like products and Activities outside the exhibition rooms.

## 7.2 Concepts

Even after limiting the amount of ideas suitable for this project, there were still many to choose



Figure 23: Painting of Courtyard by Pieter de Hooch from 1658 (Wikimedia Commons & Pieter de Hooch, 1658)

from. Eventually, based on the list of requirements, advice and feedback from all stakeholders, and my own instinct, 3 ideas were chosen to work out and develop into concepts.

### 7.2.1 Courtyard Canvas

Pieter de Hooch was famous for his depiction of Courtyards in the Golden Age (figure 23); in fact it was almost a niche he invented. Where other painters painted large gardens which were truly outside the cities, and others painted the city life, de Hooch painted the more private, garden like settings inside the city.

In the different courtyards he painted, certain elements and details keep returning. For example,

De Hooch's courtyards always showed at least one person, he used stone or tile floors in many of them, and vistas in nearly all. Furthermore, they all used warm colours, sometimes show a landmark of Delft and in most cases a servant girl is shown as well. In this activity families will get the opportunity to create their own version of a Golden Age courtyard, just like in the paintings of Pieter de Hooch (figure 24). A room or area would be created where at least 2 walls were decorated with wallpaper, showing the background of one of de Hooch's courtyard paintings. Certain elements and details would be removed from these paintings, such as what could be seen through an open door (vistas) or the people standing in the painting. Using panels to decorate the wall, props and

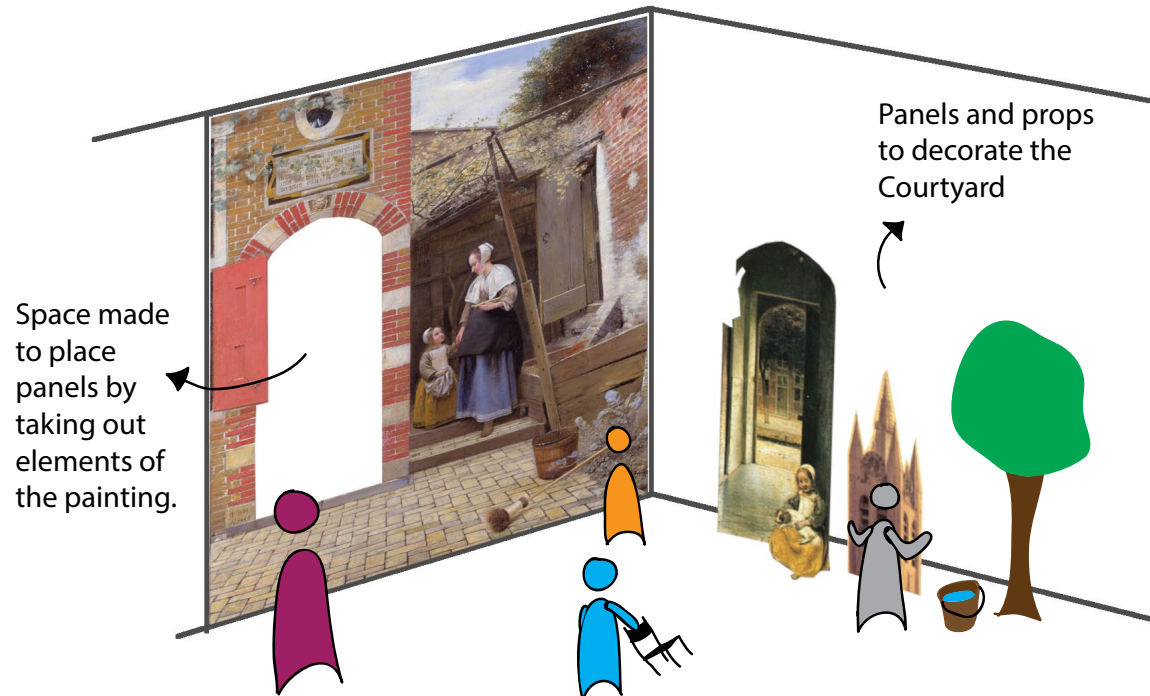


Figure 24: Sketch showing Courtyard Canvas and its possible props and other adjustable elements.



wooden cut outs to fill the room and fill in the left out details, each family creates their own unique version of a courtyard. They can then pose in the courtyard themselves for a picture to take home as a keep-sake.

### 7.2.2 Casper the Museum Cat

There is a lot to tell about Pieter de Hooch's art and skill, as well as art in the Golden Age in general. But to present these facts dryly on information plaques, will not be very attractive to children. To make the information, knowledge and stories surrounding this topic more interesting to families with children, a different method of presenting all this information to children is needed. This is where Casper the Museum cat comes into play.

Casper the Cat (figure 25) is a digital tour guide for children who translates the information of the art, into a format children can connect with. Because he is a cat, there are cases where he can provide a different perspective to the information which the



Figure 25: A possible visual representation of Casper the Museum cat.

Figure 26: An example of the kind of information Casper could share with the visitors



more general plaques do not present. Figure 26 shows an example of the kinds of comments Casper could make to present information. Casper would be able to ask questions, make jokes and nudge children to discuss topics with their parents. Due to the requirement of the museum that no changes should be made to the visuals of the paintings, the initial idea of showing Casper walking through the paintings on a screen is not possible. As a result Casper will only show up visually at the beginning and the end of the exhibition, while providing audio commentary during the exhibition.

Although the translator could be either human or animal, I found an animal to be a better choice. This is because animal characters have a higher chance to connect with both boys and girls (Acuff, 2010).

Animals have the advantage of seeming much more “genderless” than humans, therefore there is a lesser chance of kids not liking them because they are too girly or boyish.

But then there was still the question of what animal. Because the translator would be a character which would know a lot about the museum and its exhibits, I felt that an animal who is very observant, and even somewhat sneaky would best fit the part. This is why a Cat was chosen, as they are known to lurk in the background, and watch what is going on.

### 7.2.3 Visitor artwork

Visitor artwork is based around the idea of letting the visitors try their hand with the art of Pieter de

Hooch and his style as well as allowing visitors to add something to the museum. Visitor Artwork lets visitors work together to create an enlarged version of one of Pieter de Hooch's paintings, at the end of the exhibition.

The method of the artwork is based on “paint by number” paintings, where a painting is divided into small pieces based on colour, and each small part of the painting gets a number which matches the number of a colour of paint. However, letting the visitors use paint for this activity, would be a messy and chaotic situation. There is a risk of paint getting everywhere, and employees would need to clean brushes constantly, and keep a good supply of paint at hand, requiring a lot of work. So instead the artwork will use coloured stones, which are connected to the artwork with magnets effectively creating a Mosaic (figure 27). Each small part of the painting has a specifically shaped and coloured



Figure 27: a Mosaic version of “Card Players in a sunlit Room” by the Hooch (Wikimedia Commons & Pieter de Hooch, 1658)

stone which belongs there (figure 28). Both the stone and the part on the painting will receive a number which connects, and the artwork is filled up like a mosaic. Using the mosaic tiles also allows for the artwork to be undone when finished, and allowing the next group of visitors to take part in it, much more easily than a painted version would. How exactly visitors will receive the stones is still open. It could be that visitors need to earn their stones through some games or questions, or it could

be the stones are just available next to the Artwork display. The artwork is on display for all visitors of the exhibition, provides an interesting challenge to the visitors, and could even be used to inform visitors about the importance of colours, which is of great importance with the absence of details in a mosaic.

### 7.3 Verification

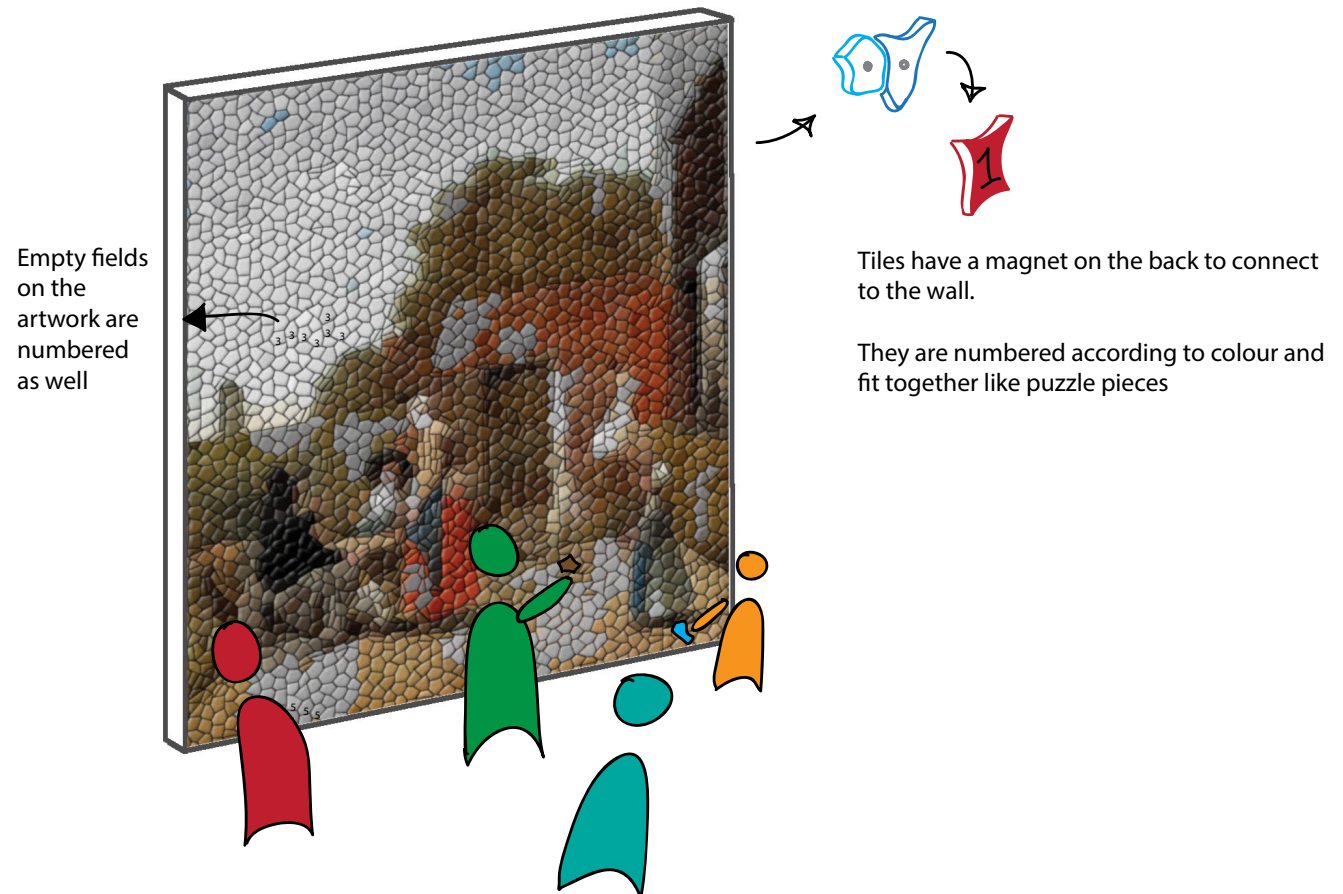


Figure 28: Sketch showing Visitor Artwork and how the use of stones would work, using the painting “A Dutch Courtyard” (wikimedia commons & Pieter de Hooch 1658)

My research so far made it clear that children want, and enjoy active elements in their days-out. As a result, it was fair to assume that both Courtyard Canvas and Visitor artwork would be enjoyed by children who visit the museum, as they allow the children to be active and creative. The element which was still somewhat uncertain, however, is whether children will enjoy listening to information about Pieter de Hooch's art when told by a character, who aims its delivery and wording to its target group and their interests.

In order to verify whether families with children would enjoy listening to Casper's explanation, and would enjoy the art more if they do, a user test was set up at the museum.

### 7.3.1 Test setup

The test was conducted on a Friday<sup>12</sup> and a Sunday afternoon at the Museum in room 15 on the second floor.

As the museum had already received 2 Pieter de Hooch paintings in advance, and they were already on display in the museum, it was possible to test the idea using one of de Hooch's real paintings as the topic for Casper to discuss, namely his family portrait in Delft.

Figure 29 shows the setup used for the test.

A small sign put up in the room asked visitors to take part in the test, in the hope people would come to me instead of me having to approach them. This

sign can be seen in figure 30.

When families did not approach of their own accord, I carefully asked families to take part, but quite often parents/guardians nudged children to take part.

Participants would receive a small introduction to the test; explaining that I was testing a new experience for the upcoming Pieter de Hooch exhibition.

Children were asked to rate what they thought of the painting on a "smiley scale" (figure 31) before knowing about Casper. Then they would watch a video where Casper would introduce himself as he would to people before going into the exhibition rooms. Immediately after visitors would listen to an audio clip where Casper talks about the painting. Afterwards Children were asked some questions, the sheet for this can be found in appendix C.2.

As an additional test, I decided to test whether or not my idea to let Casper sing at certain times would be appreciated; so children were asked to once more listen to audio clip. This one being of Casper singing a small

# Museum onderzoek voor Families

Kinderen tussen de 6  
en 10 jaar

Wie wil helpen?

Cadeautje voor het meedoen.

MUSEUM  
PRINSENHOF  
DELFT

Figure 30: The sign used to get visitor's attention for the user test.



Figure 29: A picture of the set up for the museum test.

<sup>12</sup> On this particular Friday Teachers were on strike resulting in children having the day off.

introduction to the painting. Afterwards they were asked about whether they liked the singing.

A last small addition was to take note of whether children would take Casper's advice to talk to their parents about the topic. This was mostly considered as a bonus within the context of this test, as the children's attention would be pulled in to other things (namely answering questions) before going back to interacting with their parents, and they might have forgotten the suggestion by that time already.

Children were given a small gift as a thank for their participation in the test; such a small animal figurine, yoyo etc.

### 7.3.2 Results

The first test was somewhat plagued by technical difficulties and ended up serving as a good pilot test. Afterwards, over the 2 days of testing 7 Families took part in the test, with 11 children between the ages of 6 and 11. Most of the families took part in the test as one of the last things they did in the room, and had already gone around to see all objects in the room they found interesting. Very few, (if not none) of the participating children took the effort to read the information on the Pieter de Hooch family portrait during their walk around the room.

As the first test had some technical difficulties, and was therefore unable to be executed fully, this test was considered the pilot test and the data was not taken into account, although it was recorded.

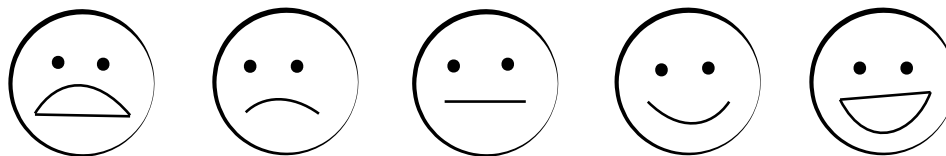


Figure 31: the smiley scale as used during the verification test, for children to rate the different elements of the concept.

On Sunday one boy only took part begrudgingly, not answering seriously and walking away before finishing. These answers were recorded but not taken into account due to his attitude and incomplete data.

Lastly, one test subject turned out to be 11 years old but this data was taken into account. Although he was technically not in the target group, he still was a child visiting a museum, and was only slightly out of the target group. This results in a test sample of 8 children.

In some cases the younger siblings just echoed the answers provided by the older siblings, this seemed to be more prominent in the case of girls. As stated before a smiley scale was used for

children to rate their answers, as can be seen in figure 31. In order to analyse the data, the smileys were converted to numbers with 1 being the saddest smiley, and 5 being the happiest<sup>13</sup>.

Figure 32 shows the opinion of the participants on Pieter de Hooch's family portrait in Delft, before having heard Casper's story, as well as the opinion after hearing Casper's story. The results show that every participating child had a more positive opinion towards the painting after having heard

<sup>13</sup> One participant originally rated the painting a 5, but realized he liked it more after having listened to Casper, therefore his final rating was raised to a 6, as it would be impractical and perhaps it would influence the data, to ask the young boy to change his earlier rating

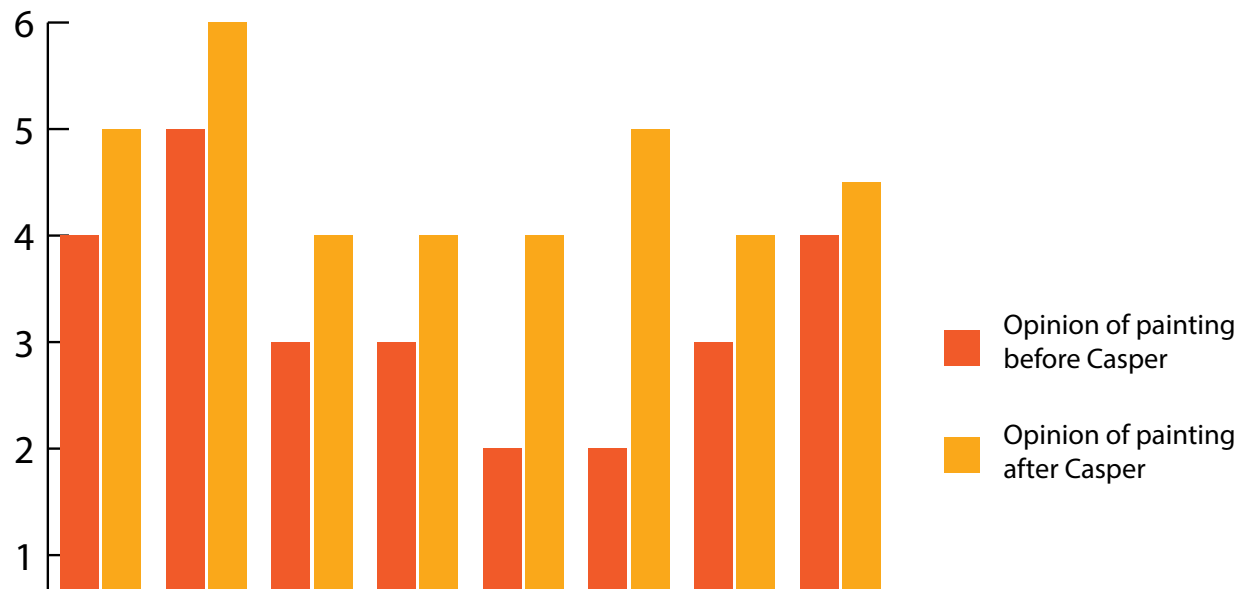


Figure 32: Overview of the opinions of participants on the Family portrait before and after Casper's explanation

Casper's story, often claiming they found it was more fun or more interesting than before. On average, the rating of the painting increased with 1,3.

Figure 33 shows the average ratings for Casper as a character, his explanation and his song, which all show to be rather positive.

Participants also commented they would like to know more on topics such as the people in the painting, the painter himself, surroundings and objects in the back ground such as the Church (which is mentioned in the story). As well as how it was painted, where in Delft the painting was made and one comment on why the clothes were so dark. When asked what else they would like Casper to do

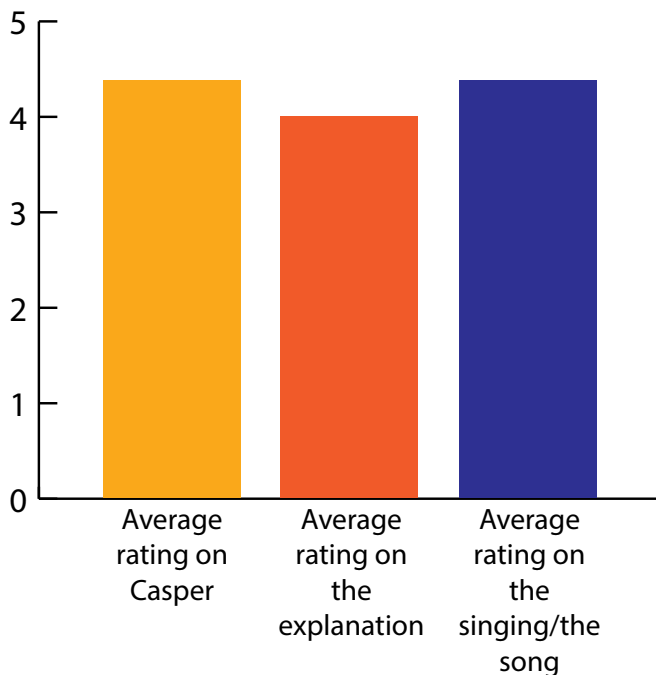


Figure 33: Average ratings for Casper, his explanations and his song.

most had no suggestions. The ones that did often suggested letting Casper walk through the painting and interacting with the people and objects in the painting. One child suggested Casper telling jokes about the topic.

The explanation Casper gave about the painting included a suggestion for the children to talk to their parents, however no children were seen actually starting a conversation with their parents about the painting.

A full overview of all results can be found in appendix C.3.

### 7.3.3 Conclusions

Based on the results of the test we can conclude that Casper does indeed make the art more interesting for children than the provided information on the plaques, even when Casper is only there in the form of audio commentary. Children were positive about the story Casper told about the painting, and showed interest in further topics to be explained. They liked Casper as a character, and were overall positive about the idea that Casper would sing every now and then.

Although children liked Casper as he was, they suggested it would be fun to see him move on the painting. Unfortunately this is something which the museum will not consider for this exhibition, and is therefore not possible in this situation.

The results of the test show that none of the children who took part in the test started a

conversation based on the nudge Casper gave to do so, at the end of his explanation. Although it would have been nice to see children take Casper's advice, the fact that they did not does not necessarily indicate this nudging wouldn't work at all. In this situation children were involved with the test, and the suggestion of Casper to talk with their parents was not the last thing they did or heard. After this suggestion they answered a few questions, and were provided with another audio file and some more questions. It can be concluded that this test set-up was probably not the most effective way to test this social element of this idea. This social aspect could still be explored further in the future whenever this idea will be developed.

Overall, I believe it can be concluded that Casper the Museum cat would succeed in making the topic more interesting for the children, even if he only shows up visually at the start and explanations are only presented in audio form. It seems it would be a good idea to have Casper sing every now and then as children thought it to be funny and it would make Casper more unique, especially if he only shows up in audio form.

This test was however conducted with a only a small group of children, and therefore the amount of improvement seen in this test is not significant.

With this idea verified and proven to be possible, the next step is to make a choice and decide which of the three concepts to continue with.

# 8. Concept Choice

In order to make a choice on which Concept to continue with in this project, the different concepts had to be compared to one another and measured against the most relevant criteria surrounding this project. These criteria were based upon the list of requirements, the museum's wishes, the design goal and the interaction vision.

## 8.1 Criteria

Taking into account all different sources of criteria, I created a list of 8 criteria which I found to be the most valuable. This list took into account the criteria which are of most importance to the museum as well as the elements I found most important in this project. The list is also ranked,

from most to least important. The criteria are:

1. Undisrupted visitor flow; The concept shall not stall or disrupt other visitors within the exhibition, and disrupt the continues flow throughout the exhibition.
2. Level of Social interaction; The experience should include an element of social interaction for the visiting families.
3. Playfulness; The concept should contain a level of playfulness, being fun and lighthearted.
4. Integration in the exhibition; The concept should have an integration with the exhibition
5. Fool proof: The product should be as fool proof as possible and have very little opportunity to get damaged.

6. Impact on visitor: The experience should leave an impression on the visitors.
7. Activity: The experience should have an active element.
8. Time: The experience should provide a longer period of fun to the visitors
9. Capacity: The experience should allow many visitors to make use of it at once.

## 8.2 Comparison

Figure 34 shows a comparison of the 3 concepts based on the before mentioned criteria. The concepts were rated on a scale of 1 to 3, based on how well they fulfilled the criteria<sup>14</sup>. I aimed to use each rating only once for each of the criteria, but in some cases the differences were too small, which resulted in 2 or even all three concepts sharing the same rating.

For example, for the criteria of undisrupted visitor flow, 2 concepts received a 3-star rating, and one a 2-star rating. Here both Visitor Artwork and Courtyard Canvas are at no risk of disturbing the visitor flow because they are not placed in the exhibition room, while Casper is in the exhibition room does have that risk. However since an audio tour can steer and influence the visitor flow quite well, the risk is small.

<sup>14</sup> Although rating systems like these often also use negative ratings, I deviated from this, as I feel all ideas fulfil the criteria at least to a certain extend. Secondly, this list of criteria also includes demands, which always need to be fulfilled, and therefore cannot receive a negative rating.

	Casper the cat	Courtyard Canvas	Visitor Artwork
<b>Undisrupted visitor flow</b>	★ ★	★ ★ ★	★ ★ ★
<b>Social level</b>	★	★ ★ ★	★ ★
<b>Playfulness</b>	★ ★	★ ★ ★	★ ★ ★
<b>Integration in exhibition</b>	★ ★ ★	★	★
<b>Fool proof level</b>	★ ★ ★	★ ★	★
<b>Impact on visitor</b>	★ ★ ★	★ ★	★
<b>Activity</b>	★	★ ★ ★	★ ★ ★
<b>Time of experience (how long)</b>	★ ★ ★	★ ★	★
<b>Capacity</b>	★ ★ ★	★	★ ★

Figure 34: A visual overview of the comparison of the 3 concets, based on the most important criteria.

The arguments and thought process for the ratings in the comparison can be found in appendix D.1.

When looking at the comparison it was clear that Visitor Artwork had the lowest score in general. With a few good scores, but the most of the 1-star ratings going to Visitor Artwork, the decision for a concept really boiled down to Courtyard Canvas and Casper the Museum Cat.

The ratings showed that Courtyard Canvas scored the best in the top 3 most important criteria. Its biggest weakness being that there was little connection to the exhibition itself, as it only provided an activity after the exhibition had happened. In comparison, Casper the cat scored less well on these top 3 criteria, but scored slightly better overall, with its biggest weakness being the low level of social interaction.

Although Casper the cat scored slightly better, it was designed as an experience which takes place inside the exhibition room, which the museum would like to avoid as much as possible. While Courtyard Canvas's biggest drawback was the fact that it did not much change the fact that the 1 hour exhibition would not be very engaging for children.

### 8.3 Conclusion

Based on the comparison of the three different concepts, I decided to focus on Courtyard canvas as the main social, family experience for the Pieter de Hooch exhibition, with the intention to improve its connection to the exhibition itself. To achieve this I combined Courtyard Canvas and Casper the cat.

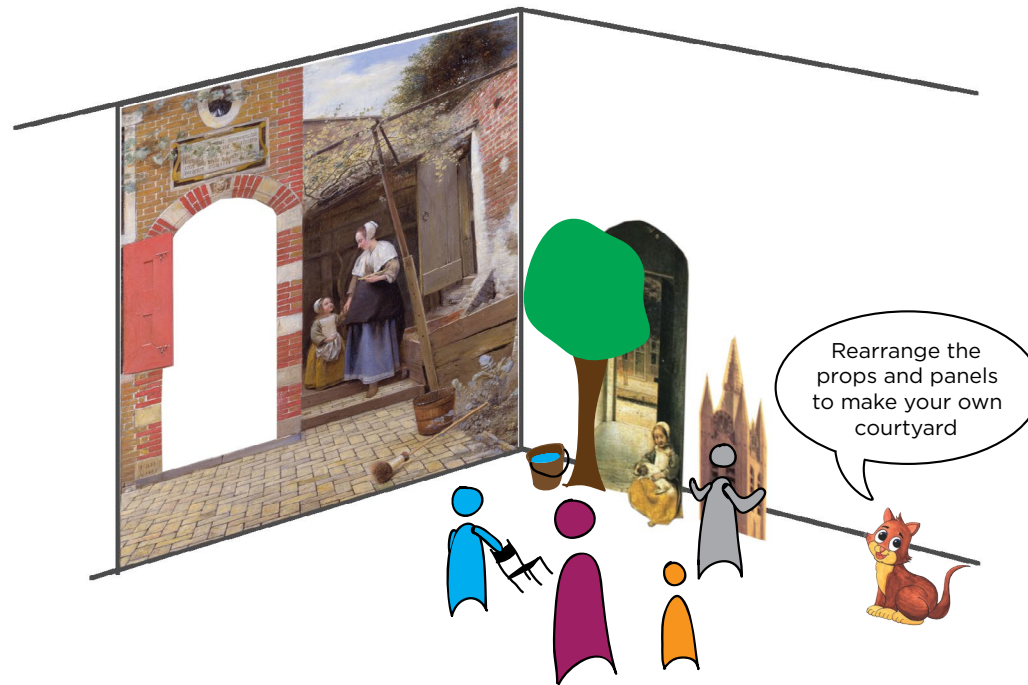


Figure 35: An example of how Casper and Courtyard Canvas would look when combined.

In this combination Casper would show up in the exhibition to explain some things which would be relevant for the activity at the end, while also making comments to make children truly look at the paintings. Casper's goal would be to get children to look at the paintings, and pick up information, which will be used for the activity of courtyard Canvas.

The activity of Courtyard Canvas would mainly be the same. Its purpose being for families to make their own courtyard, in the style of Pieter de Hooch, and based on the things they picked up during the exhibition.

The advantage of this combination would be that the two concepts complement each other well. Adding Casper to Courtyard Canvas, allows it to connect back to the exhibition, while on the other

hand, Casper would now be a part of a concept which is stronger socially.

The following chapters discuss how Casper the Cat and Courtyard Canvas were further developed into one concept, and became more detailed. For Casper the exact content of the Audio tour would not be developed; examples and setups would be explored, but with the exhibition in development it would not be possible to formulate exactly what information Casper would pass on to visitors.

On the level of Courtyard Canvas, both the content such as which painting to use for the background, and elements more on a production level were considered and explored in the next phase. With an overarching element of the connection between the two parts of the experience.

# 9. Preliminary Design

With the decision made to continue with a combination of Courtyard Canvas and Casper the Museum cat, it was time to further develop the two concepts into one final design. This chapter presents the preliminary design of the concept and briefly discusses the choices made in the process. Further explanations on these choices can be found in appendix E.

Before focussing on the design however, it was important to define the frame in which I was working. Therefore this chapter will also define the context in which the final design would be made.

## 9.1 Setting the context

As explained in chapter 1, the route of the exhibition will start in room 2 and end in the Van der Mandelezaal, going through rooms, 9, 8 and 11. In the Van der Mandelezaal a café is set up for the visitors.

As Courtyard Canvas is an activity which would be done after visiting the exhibition, it should be placed at the end of the route. The Van der Mandelezaal would be an ideal place for this, as it is visible to all visitors.

The activity can be done before or after a cup of coffee, and as it is at the end of the exhibition there

is no rush to finish quickly, and visitors can build as many courtyards as they want.

There is a catch to placing the activity in the Van der Mandelezaal, however.

All furniture in the Van der Mandelezaal should be easily (re)movable to accommodate the fact that the hall is often rented out, or used for events. This was taken into account in the development of the design.

For Casper, the context is a bit more varied. Casper would not just show up at the museum, but also before the exhibition, at home after tickets have been ordered. At the museum he will welcome visiting families before entering the exhibition.

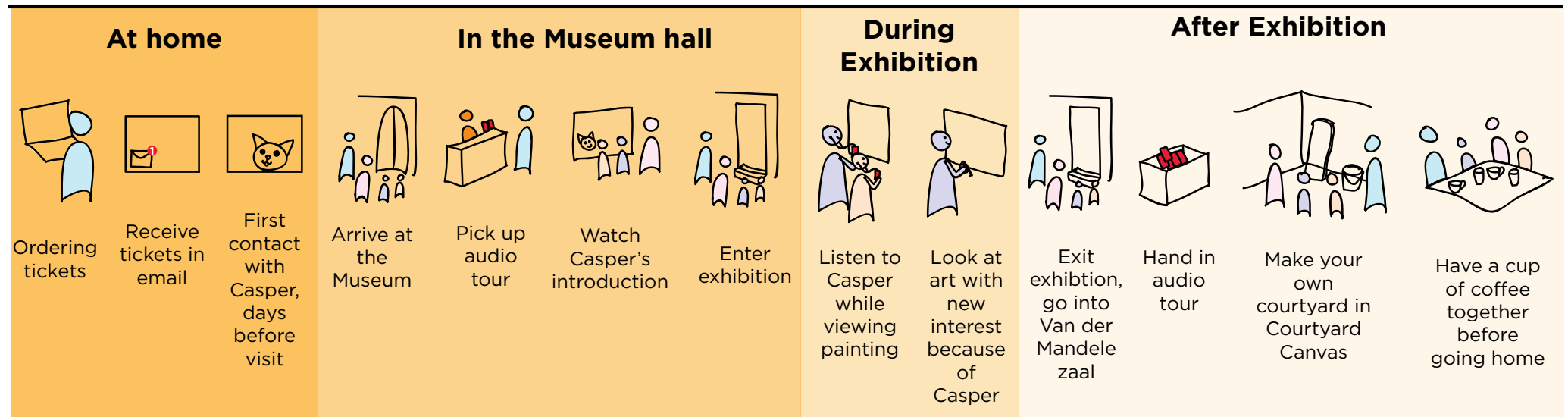


Figure 36: A scenario showing the basic steps of the visitor journey for the new experience



Then he will guide them through the exhibition, and remind them of the activity to come. In the Van der Mandelezaal, Casper will give a short introduction to Courtyard Canvas, as well as a closing message.

Taking these basic elements of context, and the concept up to this point, a basic visitor journey was defined. This journey is represented in figure 36. This journey did not yet take into account all details of the concept, but could be expanded when these developments were defined.

## 9.2 The design

The preliminary design will be presented in 2 parts; that of Casper's audio tour, and the activity of Courtyard Canvas. The different elements presented do not only influence one part of the experience, but often improve the integration of the 2 elements into one large experience. This integration of the 2 elements is discussed in detail later on, as well as the interaction design of the concept. The presentation of the choices in this chapter is not chronological, but ordered to their category, as the decisions were made during an iterative process. Therefore it can happen that a decision is mentioned before it is fully discussed.

### 9.2.1 Casper's design

#### 9.2.1.1 Casper's story

Casper the Museum Cat is the personal tour guide for families coming to visit the Pieter de Hooch exhibition. He is presented as an aspiring painter,

who is impressed by Pieter de Hooch's work, and wants to make a painting in his style. For this however, he needs a location which looks like those de Hooch painted, and he hasn't been able to find one yet in Delft. So he instead decides to ask visitors to help him build a courtyard from the Golden Age. To make sure they know what such a courtyard, and Delft in that time looked like, Casper takes them on a tour through the exhibition.

Although the tour takes place only at the museum, Casper's interaction with the visitors starts already at home. Visitor order tickets online, and receive a reminder of their visit a few days beforehand. With this reminder, the families will also receive a message from Casper, asking the visitors to help him out when they come to visit.

After arriving at the museum visitors will pick up their audio guide devices in the cloak room area, where Casper will show up to explain his story, and why he needs help. Furthermore he will explain that due to the large crowds in the exhibition rooms, he prefers to stay hidden while telling his stories, and how the visitors can find his explanations due to icons in the exhibition.

During the tour Casper will talk about Pieter de Hooch's life, his famous courtyard paintings, details of Delft visible in the paintings, the people in the paintings, his trademarks and many other re-occurring themes. Additionally Casper will point out interesting elements in specific paintings and explain overarching themes of the art. Casper's commentary will be a mix of explanations, questions, cracking jokes, and even some short

songs. Appendix E.1 provides examples of Casper's commentary.

At the end of the exhibition, Casper will take the visitors to the Van der Mandelezaal, where Courtyard Canvas is placed. Here he will explain to the visitors that they can make their own personal courtyard, based on the information they picked up during the tour. He will remind them they can pose in the courtyard to become a part of their creation, and encourage them to take a picture for themselves.

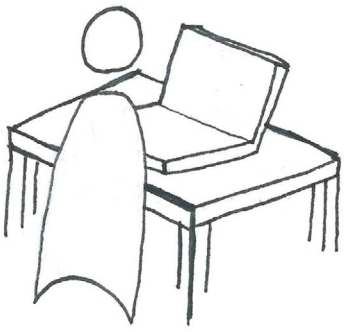
By pressing a button, visitors indicate they are finished, and Casper will come back to give some final comments, and assure visitors he has saved a photo of their courtyard so he can paint it later.

During the building process Casper will sometimes call out encouragements to the visitors, to keep them motivated, as well as to make Casper feel a little more alive.

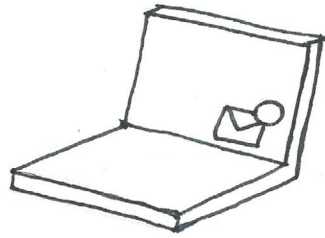
Figure 37 shows a scenario of the visitors' journey with Casper.

#### 9.2.1.2 Casper's Character

As a character, Casper has a couple defining characteristics, which are represented in figure 38. These characteristics work together to present Casper as a likable character. His physical characteristics make him seem cute and friendly, while his personality is attuned to fit the exhibition and his role as tour guide for the families.



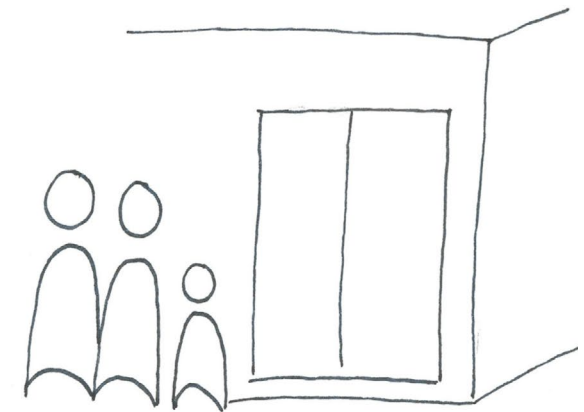
Visitors order their tickets online



A few days before the visit, visitors receive an email



Casper introduces himself and asks for help in a video



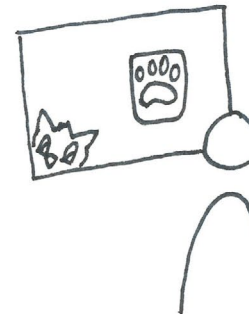
The visiting family arrives at the museum



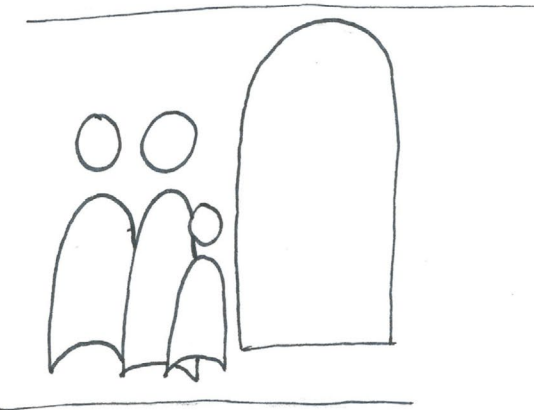
Go to pick up their audio tour from the information desk and get pointed to Casper's introduction



They listen to Casper's story



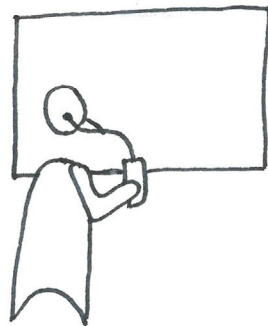
Casper explains how to find him



The family enters the exhibition



Find a paw print and start the audio file



Listen to the audio file while looking at the painting



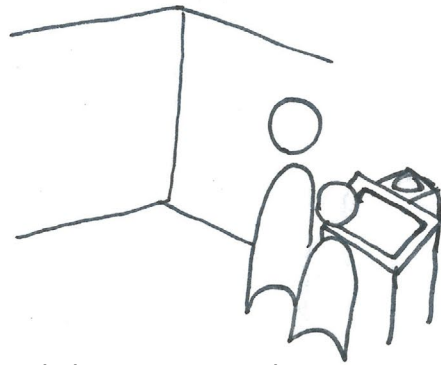
Discussing the topic together



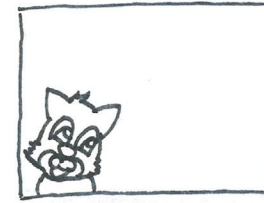
Leave the exhibition



Return audio tour devices



Find the Courtyard Canvas activity



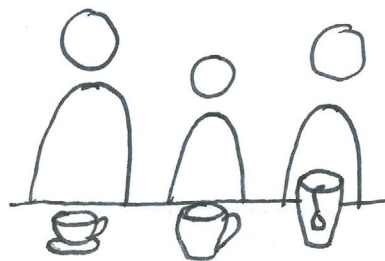
Listen to Casper's explanation



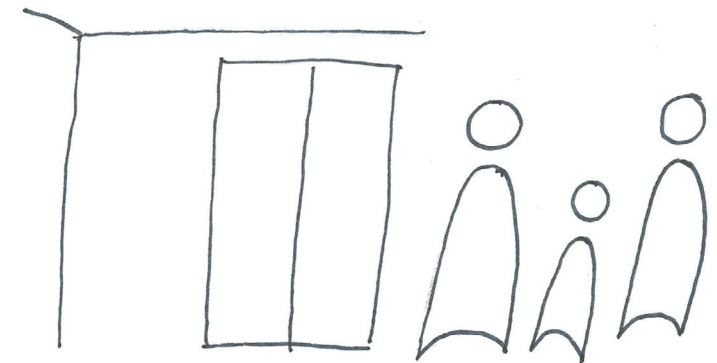
Make your own courtyard.



Pose in your courtyard and press the button to save it



Have a coffee together



Leave with a positive memory of a nice experience

Figure 37: A visual showing all steps of the experience.

## Physical Characteristics

## Personal Characteristics

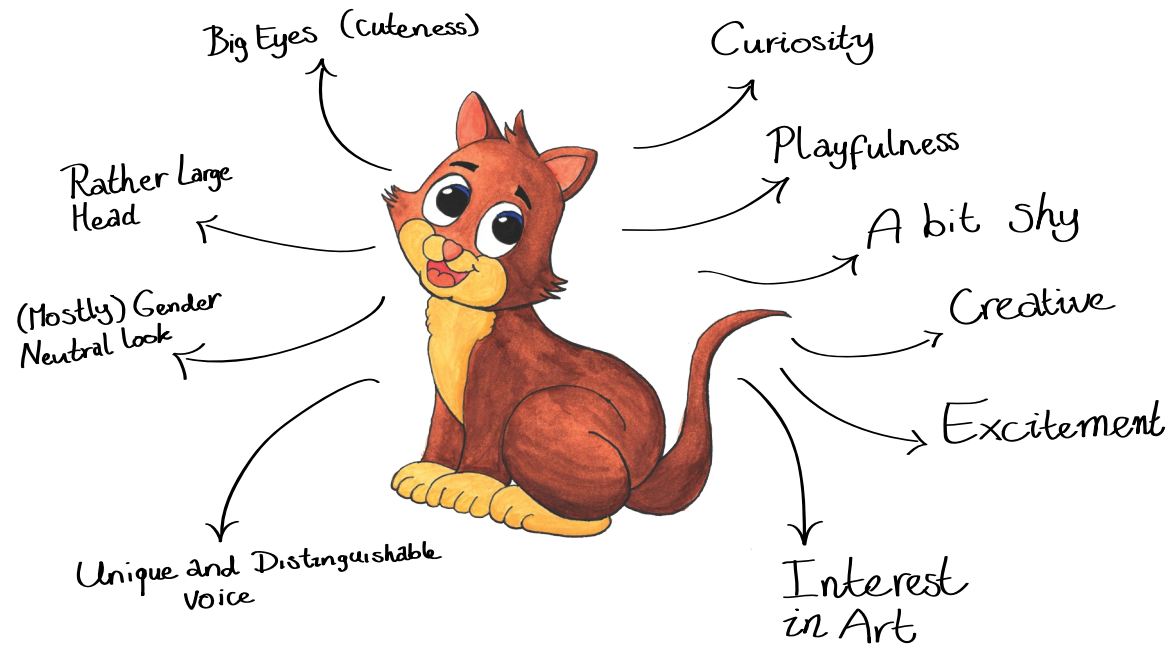


Figure 38: A visual showing Casper's most important characteristics

### 9.2.1.3 Audio tour details

Casper's audio tour spans 4 rooms, containing 28 paintings by Pieter de Hooch, clustered into categories based on the content of the painting<sup>15</sup>. When it comes to audio tours for children (or families) Petra Brinkhof from GuideID, advises the tours to be no longer than 45 minutes of total audio time, contain a maximum of 20 stops, and each stop should be no longer than 2 minutes. Furthermore, stops which do take around 2 minutes of audio are advised to be cut into two 1 minute audio files, where the visitor decides when the second part starts. To keep the children engaged with the audio

tour it is advisable to include small exercises or questions, and to include sound effects to create an atmosphere.

Taken all this into account I decided on Casper's tour containing 14 stops, of different lengths (up to 2 minutes maximum). This takes into account which themes and paintings are most interesting to children, and which categories require more attention due to their importance.

Overall, this would mean the tour contains 14 to 28 minutes of audio time.



Figure 39: The beacons as they are used for the regular audio tour in the museum

### 9.2.1.4 Casper's icon

Casper's audio tour will use the same device and system as the general audio tour. To start and audio tour, visitors point their device at a beacon on the wall and press play. The information is specific to the beacon, not the device, therefore the devices for both tours can be the same, but Casper will need his own audio tour icon.

The final design of the icon for the audio tour is decided on by the company who designs the entire exhibition, to ensure the icons fit the style of the overall design. Therefore the design included here will mainly be suggestions for the overall design company.

My requirements for the audio tour icon were for it to be clearly different from the usual audio tour icon (figure 39) to be easily found, but simple enough not to draw unwanted attention. Figure 40 shows some of the possible audio tour icons which were considered. In the end, the icon I found most befitting was the paw print. A nice extra is that the icon ties nicely into the story, by saying Casper

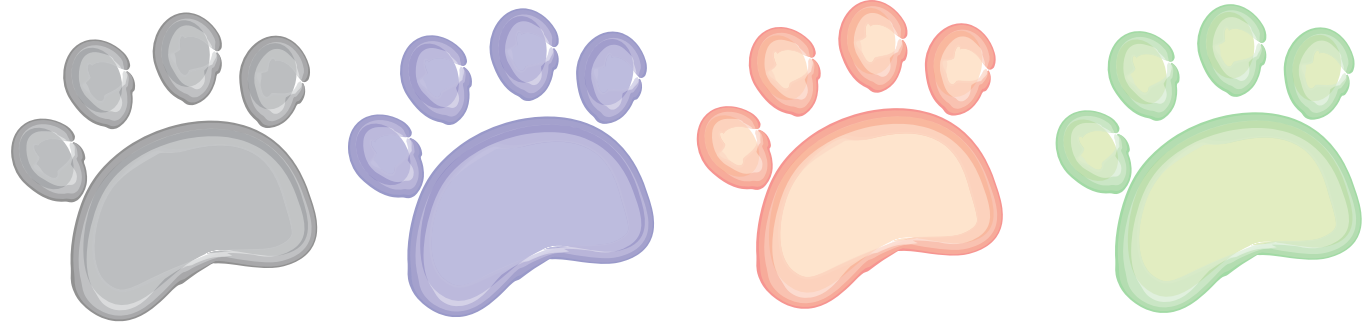


Figure 41: Different coloured examples of what Casper's paw print could look like as a paint stain.

actively left Paw prints around the museum for visitors to find.

To take it one step further with Casper's story the paw prints could look like they were left in paint, to tie in with Casper being a painter, as shown in figure 41. This however would require the colour of the icon to fit in with the colour scheme of the overall design.



Figure 40: The four different options considered for the new beacon icon design for the Casper audio tour

## 9.2.2 Courtyard Canvas' design

### 9.2.2.1 Sizing

In its basis, courtyard Canvas is an activity in which visitors make their own version of a Pieter de Hooch style courtyard. This can be done both on a small scale in the form of a *kijkdoos*<sup>16</sup>, which allows visitors to take home their creation, or a large scale version where the courtyard is life size and visitors can walk through the courtyard they created. As

<sup>16</sup> *A kijkdoos is a box in which items are placed to create a certain scene, which can be viewed through a hole in the box, which creates the desired perspective. The top is usually covered in a material which lets light in to illuminate the scene.*

the life size version adds a whole new level to the experience, with people walking through their creation, and the way of creating it feels more involved and interactive, it was decided to use the life-size version for the design.

It could however be considered to have workshops to make *kijkdoos* courtyards during the holidays or other special occasions.

For this life size version a floor surface of about 3 by 3 (maybe 3,5 by 3,5) meters would probably suffice. The walls should be at least 2 meters high, to ensure people don't easily look over the top which would ruin the immersion of the activity. These sizes would however require the walls to be made

of multiple pieces so that they fit through the door, when the Van der Mandelezaal (figure 42) is used for different purposes.

A detailed calculation of the sizes of the Courtyard can be found in Chapter 11.

### 9.2.2.2 Walls

Courtyard Canvas requires 2 walls to create (at least somewhat) the feeling of an enclosed courtyard. However, to accommodate the need that everything in the Van der Mandelezaal is easily (re)movable in a short amount of time, there needed to be a certain level of flexibility to the walls of Courtyard Canvas. The walls of the courtyard need to be smooth and flat, for the pictures to be placed upon them, however the architecture of the room does not include smooth surfaced walls. As a result it would not be possible to use the existing walls for the courtyard. Instead the courtyard walls would need to support its own weight and be able to stand on its own.

For this I decided on roll away walls, inspired by the roll away white boards which can be found at the faculty of Industrial Design Engineering (figure 43). These large whiteboards are basically large walls on 4 wheels to move them, and have breaks to place them on a spot without risk of moving.

For courtyard Canvas a slightly different version of these walls would be needed, with the same wall thickness everywhere, and a smooth surface area. Additionally it might be a good idea to add some extra weights at the bottom to help balance the wall, and keep it from falling over.

Another elements connected to the walls are



Figure 42: The Van der Mandelezaal when not in use.

the panels. In keeping with Pieter de Hooch's many painted vistas, the Courtyard provides the opportunity to change the vista in the painting. For this, the vista area is cut out of the painting, and the wall, and there are a couple of vistas placed on panels, which can in turn be placed in the hole in the wall. This does however require a certain suspension system, which is easy to use, durable and has very low to zero risk of the vista falling out and causing injuries.

For this I decided to simply use hooks or screws from which the panels are suspended. The panels would have specifically shaped dents which allow them to be safely put on the hook, as can be seen in figure 44. This system is simple, and although it might require an adult to place the panel, has a relative low risk of the panel falling out. In order to lift the panel, however, it would need a handle or a grip. Because it would be undesirable to have the handle be visible, a hidden grip was chosen instead. The grip was made by making small

cuts in the panel and the wall (figure 45), which allows visitors to reach back and grab the side of the panel to lift it out, in an nearly invisible way.

More detailed process of this decision is found in appendix E.2.



Figure 43: A moveable whiteboard wall at the faculty of Industrial Design at Delft university of technology

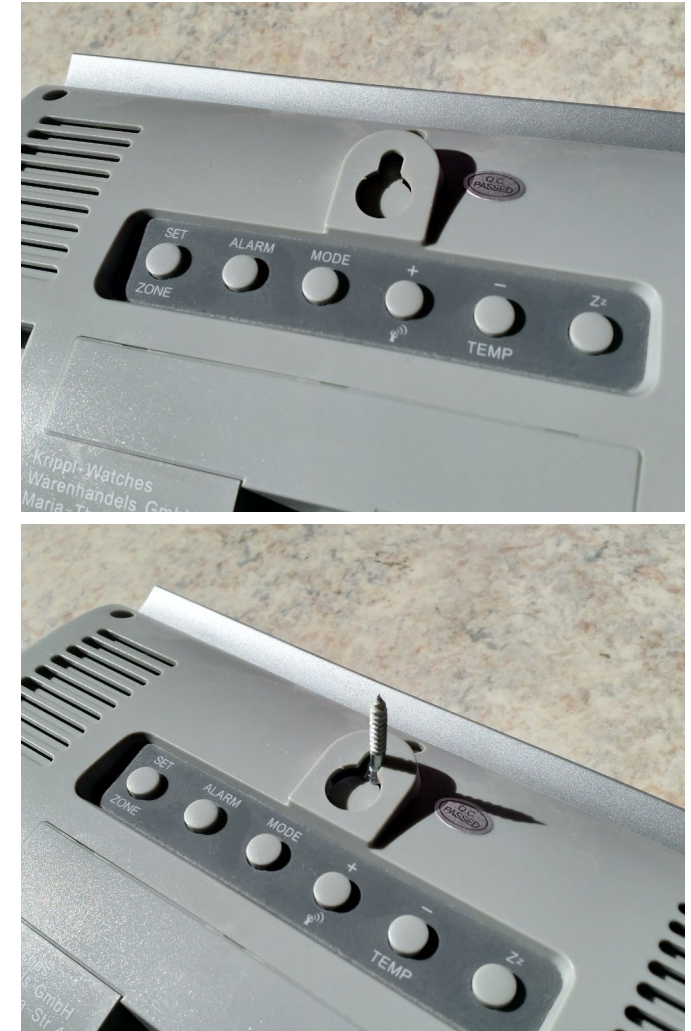


Figure 44: Example of the suspension mechanism for the wall panels

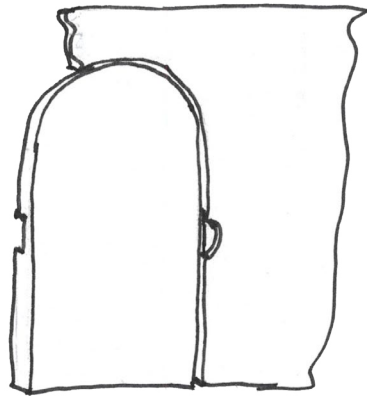
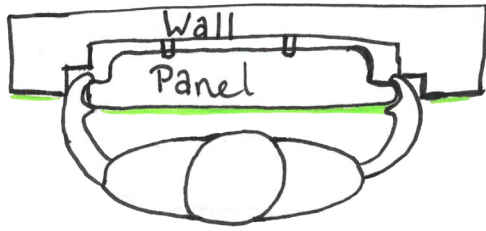


Figure 45: Sketch showing the grips on the wall panels

### 9.2.2.3 Floor plan

To create one version of courtyard canvas one would need 2 walls and a surface area of around 3 by 3 meters. The downside is that only one family at the time can use the court. Due to the self-supporting walls however, the activity could easily be extended to create multiple courtyards, if the room allows the use of the floor space. Figure 46, shows how the floor plan could be extended to create multiple courtyards, each of which could use a different painting as the background image. Although it would be interesting to increase the capacity, it is not necessary in order to build the activity, and would only be relevant if the amount

of visitors to the exhibition would require there to be multiple courtyards.

Other things which had to be taken into account when making the final floor plan however is the storing of the props and Casper's explanation. The props need a place where they can be neatly stored when the activity is not being used by families. This could be done in large, specifically made crates, or a designated area in which the props are placed by the visitors. In any case, it should be incredibly clear where what should be placed and it should be easy to clean up, so that the courtyard looks orderly when not in use. For Casper it is necessary that there is a place for the screen and speakers through which he will explain Courtyard Canvas to the visitors. By putting this final explanation on a screen instead of in the audio tour, visitors who did not join Casper's audio tour could still have a chance to take part in Courtyard Canvas if they would want to. Both Casper's screen and the prop area should be close to the courtyard, but placed in such a way that

if one takes a picture of the courtyard, they would not be in the frame. Their exact location will be presented in the final design.

### 9.2.2.4 Materials

The decision of what materials to use will largely be based on what props would be included in the activity, but there is one universal requirement for all materials; they need to be durable. The exhibition will run for 4 months, and during that time the props will be dragged, dropped, perhaps thrown or in other ways roughly handled by visitors. Throughout this process the props should not break beyond repair, and therefore should not be fragile.

Woods and plastics could be used for this purpose, and perhaps even plush toys for the animal props. However 3D plastic items, larger than those which could be 3D printed would be rather costly, due to high machinery costs. Wooden items on the other hand have less specific machinery, but higher costs

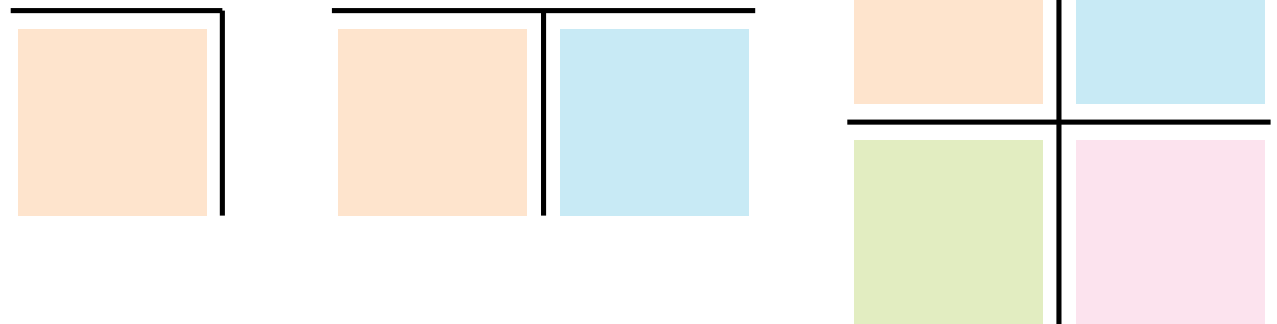


Figure 46: Example of how, by extending some walls, multiple different courtyards could be created.



for hand work.

In the end, I would conclude with letting it depend on the prop which material is used, as each specific shape has different requirements, to which different materials fit best. Some props could perhaps be bought in a theatre shop or a garden store, while others need to be specifically made.

To present the paintings on the wall I would advise vinyl stickers or printed fabric, and the wall panels could easily use fiberglass which is strong and rather lightweight.

### 9.2.2.5 The painting

For the backdrop of the courtyard I needed one of Pieter de Hooch's courtyard paintings. As Courtyards were somewhat of a niche for de



Figure 47: A Man Smoking and a Woman Drinking in a Courtyard (Wikimedia commons & Pieter de Hooch, 1658)

Hooch, there were quite a few to choose from. However, as the painting needed to be adjusted somewhat, there were certain requirements for the painting:

- The painting needed to contain a vista which was not covered or blocked by any object in the painting, so it could easily be cut out.
- The painting needed a perspective which showed 2 "Walls" so it would be easy to cup up and divide over the 2 walls of the installation.
- The fewer people on the painting the better, as

they should be removed from the painting.

Taking these criteria, as well as the image of the courtyard presented in the painting, into account, I eventually chose "A man smoking and a woman drinking in a courtyard" shown in figure 47. This painting shows a nice and cheery courtyard, with an unblocked vista and 2 clear walls. Figure 48 shows the changes which would be made to the painting for the background.

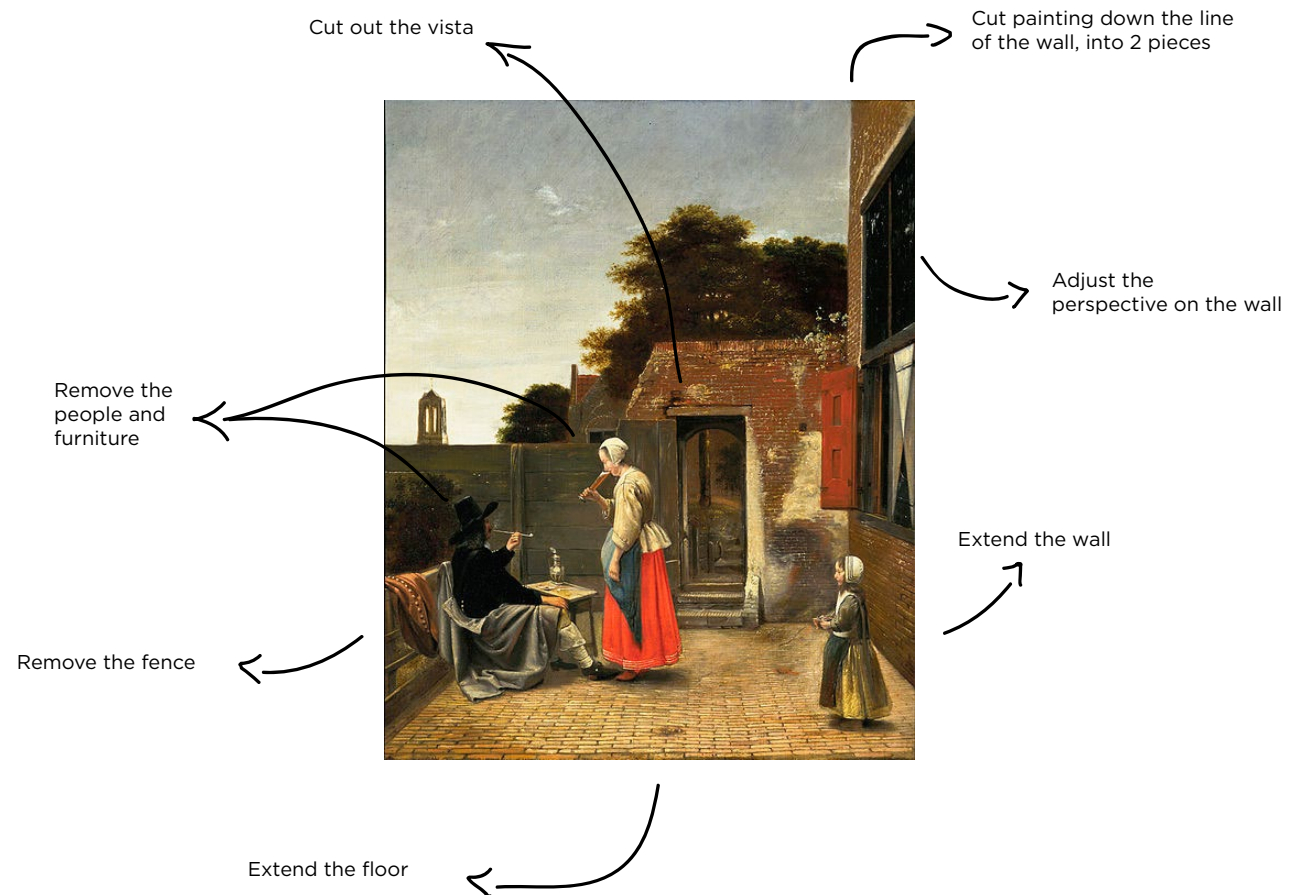


Figure 48: An overview showing the changes which will be made to the painting, so it can be used as a backdrop for the activity

### 9.2.2.6 The props

To allow each courtyard to be different, a good amount and variety of props needed to be provided to the visitors.

To help decide how many props would be necessary I used the formula:

Number of combinations =  $n!/r!(n-r)!$  (Sorrells, n.d.)

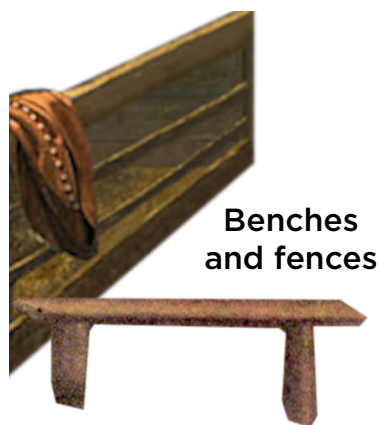
In which  $n$  is the number of items and  $r$  the number of items used in one combination.

Although this formula does not take into account interchangeable props<sup>17</sup>, it was used to provide a sense of how many different combinations would be possible, with a certain number of props. Figure 50 shows, based on the formula, how many different combinations can be made with 6 to 12 props.

Because the highest number of combinations is when not all props are used, it is preferable to have enough props that visitors don't use all available props.

Furthermore, there was the question of which props to use. This choice was inspired by the paintings of Pieter de Hooch, in which I searched for re-occurring items and themes. As a result, items such as dogs, buckets, barrels and benches were chosen from the paintings of Pieter de Hooch. The people often depicted in the paintings would

17 An interchangeable prop is a prop, for which there is only one location in the courtyard where it can be placed, but there are multiple available versions of said prop. An example of this will be the vista in the courtyard, where there will be different options to fill the vista, but only one can be used at the time.



Benches and fences



Vistas



Futuristic items which do not belong



Work items



Animals



Golden Age elements which do not belong

Figure 49: Examples of items which could be used as props and panels for Courtyard Canvas. Panels would be made in 2D to fit into the wall, all other props would be made in 3D.

not be provided as props, but would be represented by visitors posing in the painting themselves. For this a small variety of costumes should be available. To add to the challenge of the activity, the props should also include some items which do not belong in Pieter de Hooch's time, so people will have to make a conscious choice of what to use in their paintings. Some of these props would very

obviously not belong in the paintings, while others would require some more thinking.

Taking all this, and the size of the courtyard into account, I would recommend to use around 20 props for the courtyard. This would include around 2 or 3 interchangeable vistas and around 5 prop items which do not belong, leaving 12 items

	Combinations	Items	Chosen items		Combinations	Items	Chosen items		Combinations	Items	Chosen items
	6	6	1		9	9	1		11	11	1
	15	6	2		36	9	2		55	11	2
	20	6	3		84	9	3		165	11	3
	15	6	4		126	9	4		330	11	4
	6	6	5		126	9	5		462	11	5
	1	6	6		84	9	6		462	11	6
<b>Total</b>	<b>63</b>				36	9	7		330	11	7
					9	9	8		165	11	8
	7	7	1		1	9	9		55	11	9
	21	7	2	<b>Total</b>	<b>502</b>				11	11	10
	35	7	3						1	11	11
	35	7	4		10	10	1	<b>Total</b>	<b>2047</b>		
	21	7	5		45	10	2				
	7	7	6		120	10	3		12	12	1
	1	7	7		210	10	4		66	12	2
<b>Total</b>	<b>127</b>				252	10	5		220	12	3
					210	10	6		495	12	4
	8	8	1		120	10	7		792	12	5
	28	8	2		45	10	8		924	12	6
	56	8	3		10	10	9		792	12	7
	70	8	4		1	10	10		495	12	8
	56	8	5	<b>Total</b>	<b>1023</b>				220	12	9
	28	8	6						66	12	10
	8	8	7						12	12	11
	1	8	8						1	12	12
<b>Total</b>	<b>255</b>							<b>Total</b>	<b>4095</b>		

Figure 50: An overview of the amount of combinations which one can make when having 6 to 12 items to chose from.

from which to choose, which can create a couple hundred combinations already.

Figure 49 shows an example of the different items which could be used as props and panels for the activity.

This number of props does not yet include

costumes. For this I would advise to have 2 male and female adult costumes, as well as 2 for each gender for the kids, although with the children it would be advisable to have the pieces of clothing be easily adjustable to different sizes. For example by using a lot of elastic band in the costumes.

## 9.3 Interaction Design

In Chapter 5 the qualities of the Interaction for the new product were defined as needing to be; fun, engaging and social. In this chapter we look into the design, and how these qualities of interaction are included in the concept.

### 9.3.1 Fun

What is considered fun is in general very personal, but still there are elements which are generally connected to something being fun.

Children consider it fun when they get to do something. When the activity has few rules, children can decide what will happen, and they can express themselves, this will generally be considered as fun as well. All these elements are included in Courtyard Canvas, where families use their creativity to build something.

In passive entertainment such as movies, the fun is based in the characters and the story. Characters with quirky personalities and specific traits are fun for the audience. This is included in Casper the cat through his songs and jokes and his somewhat comicy voice. It is these elements which raise the level of fun for Casper, and keep children entertained while listening to the information.

### 9.3.2 Engaging

For a design or product to be engaging, it must align with the interests and skills of the users. In

general people seem more engaged when they are being active than being passive; which is emphasized in Courtyard Canvas. Visitors receive a challenge to succeed, a goal to work towards, which motivates them to fully focus on the activity and use their creativity.

If the skills of the user and the requirements of the product don't match, this can often lead to disengagement. These moments of disengagement are somewhat bypassed through the group work of Courtyard Canvas, where families work together and can fill in if one of them is unable to fulfil the task.

In the case of Casper, there is no chance for a very active involvement, and so other methods are employed to keep visitors engaged. Part of this is to keep a low level of activity in the audio tour, including questions which keep the children on their toes. The other part is through Casper's personality and story. By making him a character which children can connect to or identify with (as discussed in chapter 7.2.2), they are immediately drawn to him.

### 9.3.4 Social

For a family experience, the social aspect of the concept is of great importance, and so the experience should include moments where the family members are really brought together.

The concept includes small elements of social interaction during the exhibition, when Casper nudges children to talk to their parents, or ask for their opinions. Through sharing information

and nudging children to share their newly learned knowledge, conversations are sparked among the family members.

Still the bulk of the social interaction can be found in Courtyard Canvas, where families need to work together, communicate and use their combined creativity to create their own courtyard. It is in this activity that the more personal experiences of the exhibition rooms come together, and are combined to create a social group experience where information and opinions are shared. This final aspect of the experience, brings the family in contact with the topic, together as a group.

## 9.4 The integration of Casper and Courtyard Canvas

The connection and integration of the 2 different parts of the concept, are vital for the experience to be successful. The previous parts of this chapter have mentioned different elements which help connect these 2 parts of the experience. This final part presents a summary of all these elements and how they connect Courtyard Canvas with Casper as well as the exhibition.

### *The story*

The story of Casper wanting a courtyard to paint is the overarching story which connects the two elements. It rationalizes why Casper is explaining information to the visitors, and why visitors would build a courtyard in the end. It is only the first step of the whole integration, but makes it more logical for the experience being more than just one of the 2

elements.

### *Specific information and how to use it*

There is a lot to talk about when it comes to Pieter de Hooch's art, as each piece contains many small details worth paying attention to. However, visitors do not have all day and the information they receive from Casper should be useful for the final activity.

For example; Casper will explain about Pieter de Hooch's trademark vistas and how they allowed the painter to play with the light and show depth. In Courtyard Canvas visitors will be able to change the vistas and experience the impact it has on the painting.

Furthermore, there are many different, re-occurring items in de Hooch's paintings, such as heating elements in the rooms, buckets and baskets in the courtyards, and dogs in many of the pieces. Casper points the elements out to the visitors as they go through the exhibition. In Courtyard Canvas most of these are represented in the props. However there will also be elements which do not belong there; some more obvious than others. Most people could figure out a plastic bucket or a skateboard does not belong in a Golden Age painting, but will people realize that in Pieter's courtyard paintings bunnies do not belong as they were not yet held as pets?

By making sure the information told by Casper is specifically useful for the activity, and motivating people to think back to the paintings and the explanations, all three elements become connected.

### *Casper showing up*

To further emphasize the connection between Courtyard Canvas and Casper the Museum Cat, Casper will show up while visitors are building their courtyard. He will call out encouragements and small callbacks to the visitors about the information he shared with them. This addition will make Casper seem part of the courtyard activity, as well as making him seem somewhat more alive, as he now also interacts with visitors when they do not expect it.

Through the integration of Casper and Courtyard Canvas, there are many opportunities provided to the visitors to learn about Pieter de Hooch's life and career, his skill as a painter, and art in the Golden Age in general. By doing so, the new family experience creates a situation in which each visitor can learn what is most relevant to them; as was aimed for in the design goal (chapter 5). The visitors learn from the experience, but the experience does not set out to teach a specific thing. It aims for each visitor to go home with a new and positive experience, surrounding the topic of this exhibition.

# 10. Concept Verification

Before finalizing the concept and working out the final design, the concept first had to be verified. During the conceptualisation phase, the basic idea of Casper the cat was already tested. Because the audio-tour aspect has already been tested, this final verification test did not need to focus on that element. Instead the test focused on the activity and the overall journey.

Although it would have been the best case scenario if the combination of the full audio tour and the activity could be tested, this was not possible due to the fact the exhibition has not yet been built, as well as a time constraint issue. To still create an impression of the journey for the visitors, the test included an explanation by Casper on one painting, before the visitors would test Courtyard Canvas.

## 10.1 Goal of the test

Using broad terms, the goal of the test was to verify the idea, by showing it fulfils the design goal and is positively perceived by its target audience. These terms however are much too vague to measure the achievements of the concept, therefore the following goals were formulated.

This test set out to prove:

- That the concept achieves the design goal
- That the concept contains the qualities of interaction
- That the activity is fun for the whole family
- That Casper provides a good connection between the activity and the Art displayed in the exhibition

Furthermore the test also looked into other things, which could influence some tweaks and changes in the final concept design.

Topic	What happens or is discussed	Time
<b>Introduction to Test</b>	Project context What will happen in the test. Disclaimer: There are no wrong answers, everything is useful. Can we take Photos?	3 minutes
<b>Casper's Introduction</b>	Who Casper is The basic story of why the families will make a courtyard	2 minutes
<b>Casper's Painting explanation</b>	Short explanation of one of the paintings by Casper to provide some information, and create the flow of the real experience	2 minutes
<b>Disclaimer</b>	Scale model for the test Explain they can use all the items they want, and even make more than 1 courtyard	1 minute
<b>Courtyard Canvas Activity</b>	Families make one or more courtyards together. Behaviour and interactions are observed.	10 minutes (if it takes longer that's fine)
<b>Wrap up conversation/ interview</b>	Discussing experiences and opinions. Both open questions and rating scale questions	10-15 minutes
<b>Outro</b>	Thanking visitors for their participation Giving the kids a small gift as a thank you	1 minute

Figure 51: An overview of the test plan, including time and what will be done/discussed

## 10.2 Participants

Within the target group, there are 5 different ages of children. To get the best impression of whether the concept truly achieves its goals, it should be tested among all different ages within the target group.

The aim was to get at least 1 child of each of the different ages to take part in the test, although 2 or 3 of each age would be better. Overall, it was hoped to have around 10 children and 6 families<sup>18</sup> test the concept.

For the test I wanted family groups no larger than 6 people, to keep the testing process organized.

Additionally, a larger group would make observing and interviewing the participants difficult, and would risk data and information getting lost.

## 10.3 Set up

The test was held at Museum Prinsenhof Delft to put the participants in the atmosphere and context for the experience. However, to have more control over the test environment, and to avoid distractions, the test was not conducted in one of the main exhibition rooms, but in a separate room at the museum.

Figure 51 shows the planning for the test. Each session took about 40 minutes.

The wrap up interview was conducted with all family members present, both to save time, and

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<sup>18</sup> Considering families are of different sizes, reaching 10 children could be done with 3 large families. However this would not give a good impression of the family experience, only the children's experience. Therefore the aim defines both the amount of children and families.

with the hope that this might get a discussion going and coax the more shy family members (often the youngest of the children) to take part in the conversation as well. The interview contained both open and more closed questions and was used to find out the participants' experience with the concept and their opinions regarding the whole experience design.

The full interview and observation sheets can be found in appendix F.1

A scale model prototype of Courtyard Canvas was used for the test, as it was not possible to build a

full size model. The scale model included props and panels as would be used in the final version of the activity.

In the final, life size version, visitors would have to pose in the Courtyard if they want people to be in the picture. Of course due to the smaller size of this prototype, this was not possible. To still have the possibility of adding people to the courtyard, small cut outs of people (taken from other paintings by De Hooch) were provided to the participants. Figure 52 shows the prototype and the props available to the participants.



Figure 52: The prototype used for the final verification test, including the props available for the participants (not including the people cut outs, which would not be used in the lifesize version).

A picture of the test setup is shown in figure 53. When participants entered the room, the model was covered and the painting faced the wall, as to not distract the participants, or allow them time to observe the elements ahead of time, as they would not have this chance in the real situation either.

## 11.4 Results

In the end, the tests were conducted over 4 days (one Wednesday afternoon, and 3 weekend days), 7 families took part, leading up to a total of 15 children and 11 parents. Each of the ages between

6 and 10 was represented at least once in the group of participants (even one child outside the target group), with the biggest representation for the 6 year olds (figure 54).

Some of the tests did not include all of Casper's videos and audio encouragements due to human error. Therefore the results on these elements should be taken with a grain of salt. Furthermore, although no children seemed to take part in the study against their will, or only begrudgingly taking part, children did sometimes get bored during the interview and in some cases had somewhat

Children's Age	Number of Kids
6	6
7	2
8	3
9	1
10	2
11	1

Figure 54: An overview of the ages of the children of the participating families, and how many.

contradictory answers. The situations in which contradictory answers were given seemed to influence some of their ratings slightly negatively, so there should be no worry that the true outcome would have been even more negative.

Firstly going into the results of the rating questions; figure 55 presents the average score, from all participants, on 4 of the 5 main values<sup>19</sup> the design set out to fulfil. These overall scores indicate that the concept was received positively, and that according to the participants, the concept does indeed achieve what it sets out to do. The educational value of the concept is still somewhat in doubt. However, it is worth mentioning that many participants indicated wanting to learn more about Pieter de Hooch itself, his skills etc. and that this lack thereof was why they scored this value somewhat lower. Of course, it is due to the setup of the test (only having

<sup>19</sup> The 5th value; Engagement, was rated by the observer separately.

Figure 53: The test setup used for the user test, with the elements of the experience both unveiled.





### Average score over all participants

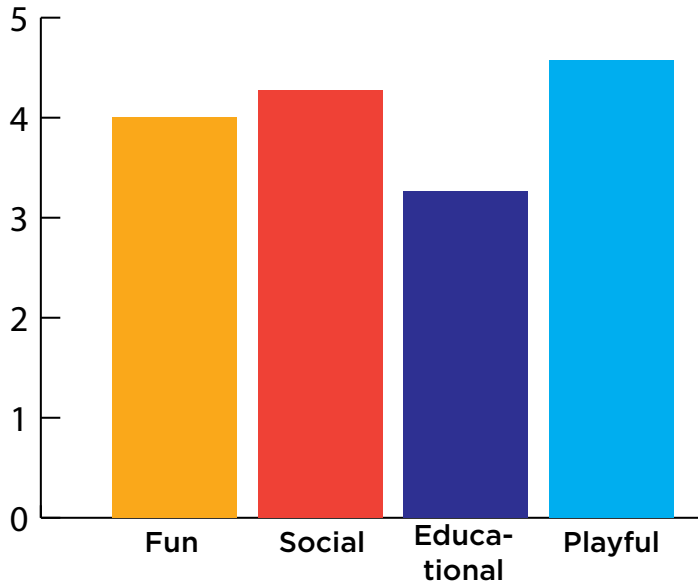


Figure 55: A graph showing the overall average scores of 4 of the main values.

the resources to explain one painting) that the information was scarce. As it is planned to include such points of information in the final audio tour, one can assume the value of education would go up.

The value of engagement was tested by keeping track of the amount of times one or more of the family members were distracted while interacting with the concept during the test<sup>20</sup>.

Figure 56 provides an overview of the amount of distractions. Considering the amount of participants who took part in the test, the number of times any given family member was distracted and shortly disengaged from the experience, seems to be an acceptable number.

With 9 distractions, spread out over a group of 26

<sup>20</sup> Participants getting distracted during the interview portion is not taken into account as this says nothing about the engagement level of the experience itself.

people and a time period of at least 20 minutes (interestingly, nearly half being parents distracted by the surroundings of the room); I would conclude the product can be described as rather engaging. Of course there is room for improvement, to make the activity even more engaging, but as humans do not have a perfect focus, it is unlikely there will be no cases of distractions at all.

The number of families who started out analysing every one of the props before building is almost the same as the number who just started building immediately; indicating this is just a personal preference. In many cases parents watched and provided advice at different moments, but did not get involved as much. They did however often indicate enjoying watching their children interact with the product.

It is possible that parents decided to take a step

### Number of Distractions during the test, per family

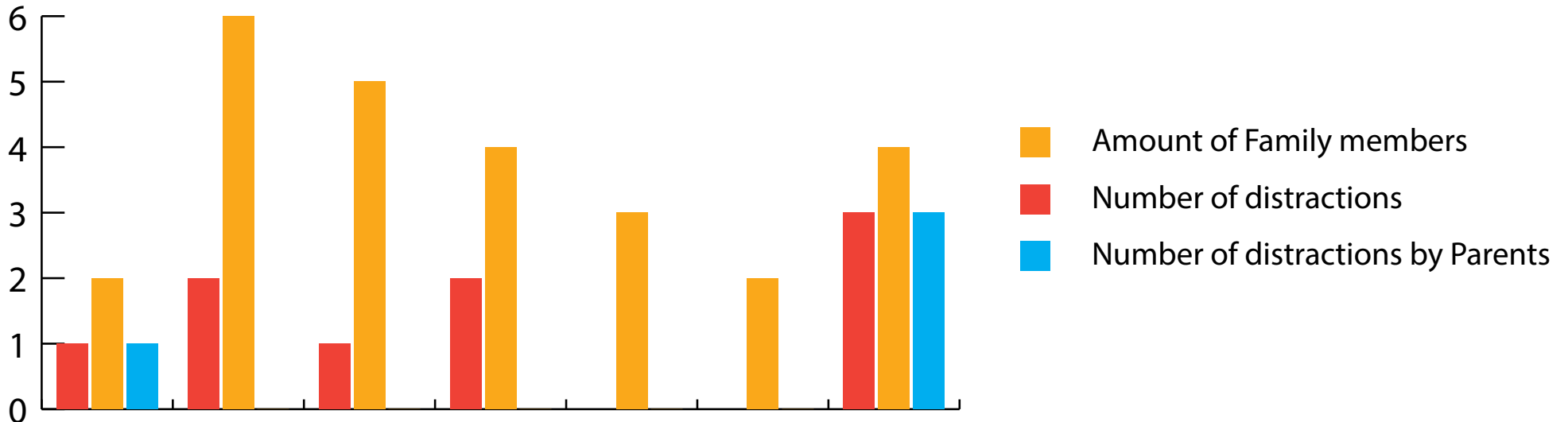


Figure 56: A graph showing the amount of distractions during the test, per family

back in the building activity, as they wanted to be sure their children got to enjoy it, and the smaller size made it less accessible to large groups.

All families, with the exception of one, made more than one courtyard, while the maximum amount was 3. In most cases the time to make a courtyard decreases after the first courtyard however, interestingly in some cases the third courtyard actually took longer to build than the first. On average, the time spent on building one courtyard is around 5 minutes, with a minimum of 20 seconds (a second courtyard where only one or two things changed compared to the first) and a maximum around 12 minutes. (Figure 57)

The test setup used more props than was originally advised upon, which provided interesting results. Although I advised to include only about 20 in total, from which had to be chosen, and some would likely be left out, the average number of used props per courtyard was around 22. Many of these courtyards could be considered crowded, however the participants indicated the amount of props being right. Stating that more would be too much, but less could make it boring.

Furthermore the test showed that participants were confused by the inclusion of a prop which reminded them somewhat of a computer, as this did not at all belong in the courtyard. For other items some people noticed they did not seem to belong, but were less obvious so and were often placed in anyway.

interview families commented on how much fun it would be if they could wear costumes when standing in the final life size version of the design. Even more so, if the museum took pictures of the courtyard, which could then be emailed to the visitors. Indicating it would add an extra layer to the experience.

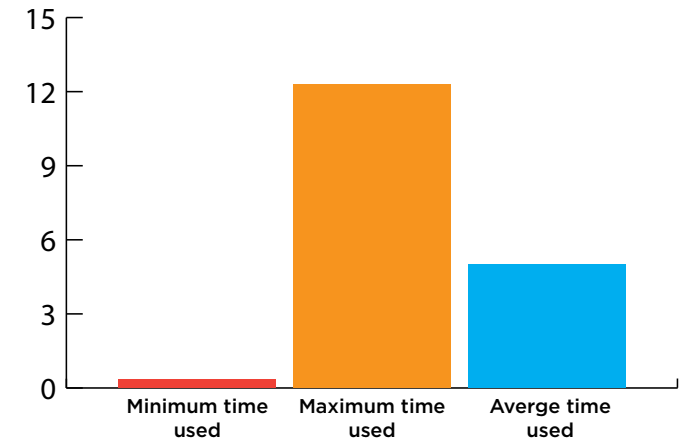
The variety in the results of the courtyard is not as wide as was hoped, figure 58 shows a few examples of different courtyards made by the participants.

Furthermore, in most cases Casper's encouragements did not have a great influence on the participants. In most cases it was not noticed by participants or just ignored. Only 2 times did the Participants truly react to Casper's words in any way but even they were firstly confused by the unexpected sounds<sup>21</sup>. Additionally, Casper's closing commentary after the activity, was sometimes skipped over by families who immediately cleared their courtyard, and other times found uninteresting giving the impression the closing comments are unnecessary.

In the end, most families left, asking when they could expect the design in the museum, indicating they were excited to try the life size version of the activity and to learn more about the topic.

A full overview of results can be found in Appendix F.2 to F.4.

**Time to build the courtyard in minutes**



**Props used during the test**

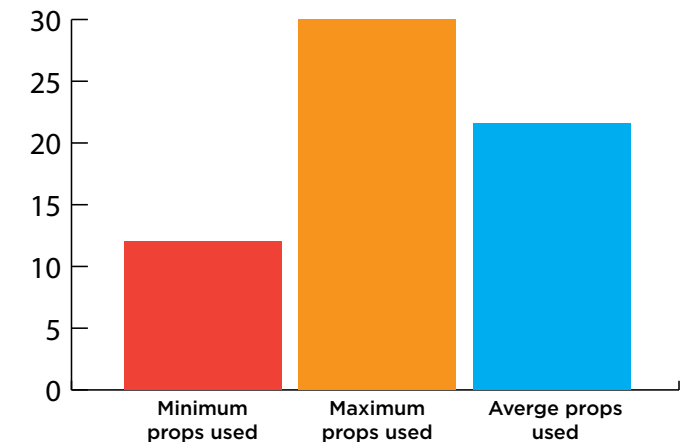


Figure 57: graphs showing the time needed to build a courtyard, and the amount of props used in the process.

58 Often times near the end of the test or during the

21 Out of the 7 tests, 2 did not contain any of Casper's encouragements, as they were forgotten.

## 11.5 Conclusions

Based on the results of the user test I could conclude that the concept does achieve the playfulness which was required in the design goal. The informative element of the concept was not yet as clearly achieved, however there are indications it could do so in the finalized version of the product. This is because the finalized version of the design will include more information, due to the full length audio tour, and will therefore have more moments to impart wisdom onto the visitors.

Overall, I was able to conclude that the concept fits the interaction vision, with high scores on all qualities, and only a few distractions and disengagements from the participants.

There were some elements, however, which could still be improved upon. First and foremost were the props of the activity. To create a wider variety in the outcomes of the activity, the props had to be reconsidered and improved, to allow for more changes in the background of the courtyard, instead of only filling the courtyard itself. The number of props also had to be reconsidered, based on the results showing a higher number of props used for each courtyard than initially expected.

Based on comments of some parents, it seemed to be a good idea to add a static camera to the installation, so that families could have a picture taken of their creation which they could take home in some way. This was also taken into account for the final design changes.

Lastly, based on the underwhelming reactions to Casper's encouragements and the fact they felt somewhat out of place during the activity, I decided to take these out of the design. This also applied to Casper's closing story, which received underwhelming reactions in the test, and was therefore taken out.



Figure 58: 3 examples of courtyards built by test participants

# 11. Final Concept; Courtyard Quest

In the last few weeks of the project, the Final Design of Courtyard Quest was improved upon based on the test results discussed in chapter 10, as well as moments of reflection and new realizations. This chapter presents Courtyard Quest's final design.

Courtyard Quest is a family experience, consisting of 2 elements, which was made specifically for the Pieter de Hooch exhibition at Museum Prinsenhof Delft. The 2 elements of the experience are; an audio tour made for families with young children and an activity in which families can make their own Courtyard like the ones Pieter de Hooch depicted in his art; also called Courtyard Canvas.

## 11.1 The challenge

In Courtyard Canvas (figure 59) families get to build their own life size courtyard, using props and panels they can place and arrange in the courtyard. To connect the activity back to the Audio Tour and the exhibition, and spark visitors creativity a bit more, the activity presents challenges to the visitors. These challenges present situations or themes, which are connected to Pieter de Hooch's art, around which the visitors can build their courtyard. An example of such a Challenge would be: Show a group of friends having a drinking game together. *Imagine the stories that could come to light during the game.* Or Create a scene where the family dog ran away, and



Figure 59: Courtyard Canvas placed in the Van der Mandelezaal.

the family has to catch it. *Imagine what could have made it run away*  
Further examples of challenges can be found in appendix G.1  
The challenges are optional, but can provide a

starting position for families, and requires the visitors to be creative in how to represent the situation. Visitors turn the wheel of fortune, connected to the side of the installation, to get a randomly selected challenge presented to them.

With their challenge presented to them, the visitors start selecting the props they need to build their courtyard.

## 11.2 The props

The props are made in 2D out of fiberglass or “sandwich”<sup>22</sup> plate material, so that they are lighter and therefore easier to move by the visitors. With the request from families to add Camera to the installation, which has only one viewpoint, the props can easily be placed in the courtyard so they do not look like 2D cut outs. This way the use of the props is easier, and the final picture will still come out looking great. The props have a small stand placed beneath them, to ensure they stay upright.

Among the 2D props are panels which can be placed in the Vista cut out of the back wall, and panels which can be added to the background to change the look of the courtyard. For example, a different building which can be seen over the wall (figure 60). These panels are hung from the wall using hooks. Although most hooks will be somewhat visible if not covered with one of those panels, they are the safest and surest options to suspend the panels.

To have visitors look like people from the golden age when they pose in the picture, cut outs of people with their faces and arms cut away allow people to quickly transform into Golden Century people, without the hassle of putting on costumes

<sup>22</sup> A plate material which has a stiff and hard material on both outsides, and the inside is filled with a lighter material. This keeps the strength and stiffness, while keeping the material light.



Figure 60: Panels which can be hung from the back wall to change the background.

(figure 61). These cut outs would provide a variety of standing and sitting positions, for both adults and children and have a variety of male and female characters.

With the different challenges, the variety in the costume cut outs, and the additional props to change the background, the list of props became quite long with an estimated minimum of 39 props. Figure 62 shows the list of these props and how many there are of each.

This list is a suggestion of props which could be used in the activity, but could be changed if different challenges require so, or if the museum would like to add others or leave some out.

When not in use, the props are stored in the cupboard hidden behind the sidewall, which is shown in figure 65.



Figure 61: Example of costume cut outs

Category	Amount	Why
Costumes	12	6 childrens cut outs, 2 for boys 2 for girls and 2 ambiguous, and 6 for adults, 3 male and 3 female. Within this, a variety of sitting and standing positions.
Vistas	3	With the idea in mind to be able to put more than one vista into the courtyard there should be more vista choices available.
Background changing elements	5	Some new elements are needed to change the background, such as what is seen over the wall, the look of the wall, and how many vistas there are. There could be many of these props but too avoid over choice, 5 seems to be a good minimum to create some variety.
Furniture	2	As the sitting costume positions will most likely have their chair or bench included in the cut out, it is not necessary to include many pieces of furniture; 1 table with food on it and a bench.
Working equipment (buckets etc.)	4	With nearly every one of Pieter's courtyards including some barrels, baskets, etc these cannot be left out of the props list, so a few different pieces are provided. (2 buckets, 1 basket 1 barrel).
Animals	3	Many paintings show dogs, and there could always be birds around, so there should be some animal props. It would nice if at least 1 (a bird or cat) would be made to be put on top of the wall.
Refreshments	3	1 bottle, 2 cups; drinking was done often, and should be available to be shown in the courtyards, though the table already holds some refreshments, and some cut outs already hold them as well.
Game elements	3	Hands of cards, made by gluing together existing card sets or so to show people playing.
Greenery	2	Some bushes to include some more nature in the courtyard.
Musical instruments	2	Instruments show up every now and again in de Hooch's art, and these instruments will be needed for 1 one of the challenges.
<b>Total</b>	<b>39</b>	

62 Figure 62: Overview of possible props for Courtyard Canvas

## 11.3 Sizes and material

Courtyard Canvas is built as a life size courtyard the visitors can walk through, stand in, and truly experience. This means that the size of the installation would be considerable. The basis of the courtyard is the painting "A man smoking and a woman drinking in a courtyard" (figure 47 in chapter 9.2.2.5), which also became the basis for the sizes. For example, the vista in the back should be large enough for people back in that time (somewhat shorter than we are today) to reasonably fit through. Because the painting is vertically oriented instead of horizontally, making the door large enough to fit through would result in a wall of around 5 meters high. This would not be



Figure 63: The adjusted painting, used in the backdrop of Courtyard Canvas

acceptable.

To better accommodate smaller sizes, the painting was cut down to the version shown in figure 63.

With this version of the painting the final sizes were defined as shown in figure 64.

These sizes are still considerable, but as a courtyard in real life would also be of considerable size, a much smaller courtyard would take away a certain level of the experience. Furthermore, it would also take away a lot from the painting if more was cut out, which is why this format and sizing was chosen.

The final installation could be built using large wooden plate material and supports to ensure the walls stay upright. This material also allows to easily build the prop cupboard, which help store the props neatly when the activity is in the Van der Mandelezaal, but not in use, as well as when the installation is temporarily stored away, shown in figure 65.

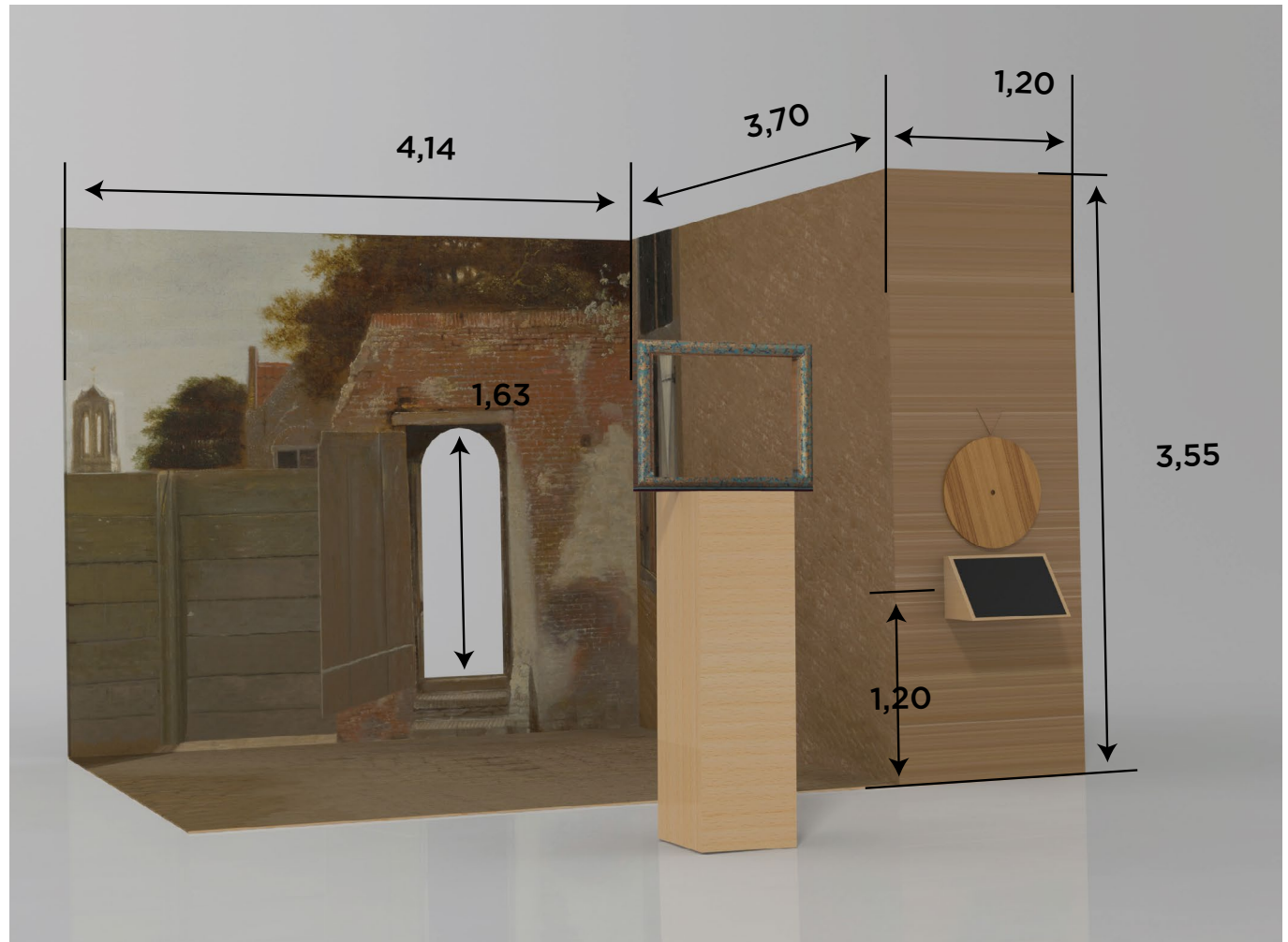


Figure 64: An overview of the most relevant sizes, in meters, in Courtyard Canvas.



Figure 65: An impression of how props would be stowed away in the prop cupboard.

## 11.4 The camera

A static camera was added to the installation upon the request of different families during the user test. The camera would be placed in front of the courtyard, so it would always have the same view. However where the camera should be placed is dependent on the kind of camera used. Using a Full frame camera, with a 46,8 degree view angle, and 50 mm focal length would provide a

view very similar to that of the human eye, and the most natural representation of the situation.

How far away the camera should be placed, is dependent on the size of the object being photographed.

If the whole back wall is put into view, the camera would be placed around 4,7 meters from the back wall (about 1 meter from the edge of the courtyard). To also get the sidewall (partially in frame), one can virtually extend the back wall, this would result in

the camera being shifted slightly towards the right, from the middle of the courtyard.

I would advise to take about half a meter more than the width of the back wall in the picture. This would result in about half of the sidewall being in view, and the camera being placed half a meter further away from the back wall. Figure 66 shows a top view of this situation.

In any case not the entirety of the courtyard will be visible on the picture. This could only be achieved with a camera lens with a much larger viewing angle, and a distance from the back wall of many more meters. As this is not possible, the placement shown in figure 66 is a good compromise.

On the side of the installation a Touchscreen will be placed on which a live view of the camera is shown, so that families working on the activity can easily see exactly what their courtyard will look like on the final picture. When they are finished, someone presses the red button next to the screen, and the camera will wait a couple of seconds before taking the picture, allowing the person to walk back to their place in the courtyard. A picture frame, reminiscent of the frames used for paintings is added digitally. The family can enter their email address to mail the picture to themselves. Right above the camera a real version of the picture frame is added so other visitors can watch the scene unfold as if it were a painting.



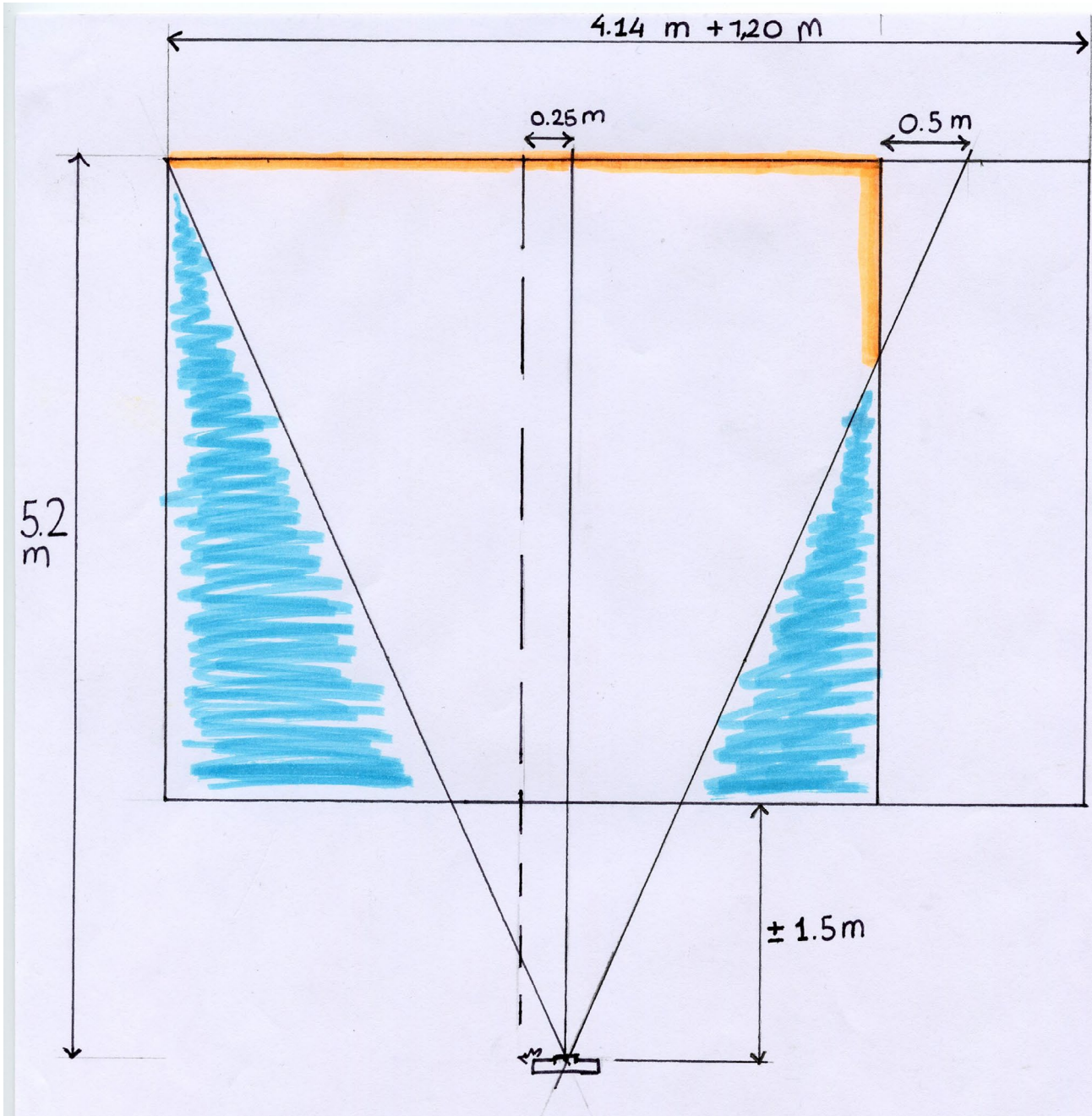


Figure 66: A top view showing the placement of the camera.

## 11.5 The model

A scale model of the courtyard canvas installation was built. The model is made on a 1:10 scale, with the exception of the thickness of the walls and props, as they needed a certain minimum thickness to be workable. Additionally, certain suspension and connection systems are not exactly the same as they are in the final design. This is because it would be nearly impossible to make those in such a small size. For example, the grips on the sides of the vistas would not be possible to make of such a size in the model, that we could use the grips as intended. Therefore a different system was used solely for the scale model.

The sizes used in this model such as the doorway are based on sizes found in DINED (Molenbroek, 2017).

The scale model is shown in figure 67.



Figure 67: Scale model of Courtyard Canvas installation

## 11.6 The audio tour

The activity is already connected to the exhibition through the topic, and the use of the paintings' themes in the activity. However there is another element which connects the activity to the exhibition, and that is the second facet of the exhibition; the audio tour.

Families who go through the exhibition with the audio tour, are shown around by Casper the Museum Cat (figure 68). He is a cat who lives in the museum and aspires to be a painter. He would like to make a painting in Pieter de Hooch's style, and for this he needs a courtyard, and he needs help from the visitors to build it. But before the visitors can build the courtyard, Casper will take them



Figure 68: Casper the Cat

through the exhibition to show the most relevant and interesting elements of Pieter de Hooch's art. The character of Casper is the overarching story which connects the exhibition, the courtyard, and the audio tour into one large experience for the families.

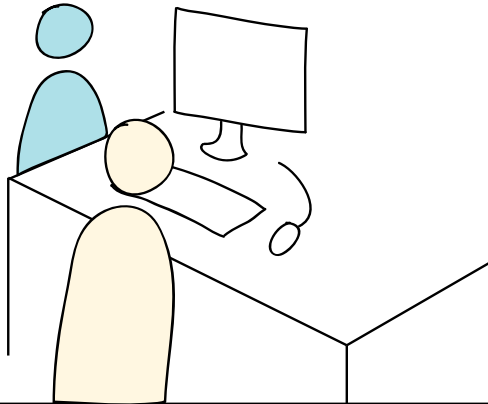
Casper's tour consists of 14 stops, with a maximum audio tour time of 28 minutes. It includes explanations, jokes, questions and songs, to really engage the visitors into the topic, and he already meets the visitors at home. Visitors order tickets online and receive a reminder shortly before the visit. This is when Casper shortly introduces himself to them, and asks for their help, to spark the family's curiosity. Later at the museum, families will pick up their tour guide in the Cloak room area, and will find Casper in his basket in the corner, and get his first audio commentary, where he explains the story, before going into the exhibition.

After the exhibition Casper leads visitors to the van der Mandelezaal, where he explains the activity of Courtyard canvas to the visitors.

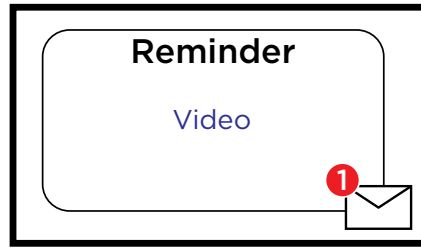
On the same screen as where the camera life view is visible, visitors will be able to press a button, and Casper's explanation will appear. The explanation is shown on the screen, rather than through audio, to avoid confusion in the noisy hall. The text is cut into short pieces, where visitors choose to go on to the next part using the touch screen. This way, the text seems less long, and visitors are less likely to give up reading before seeing the whole thing.

The whole journey of the visitors with the activity of courtyard quest is shown in the following scenario.

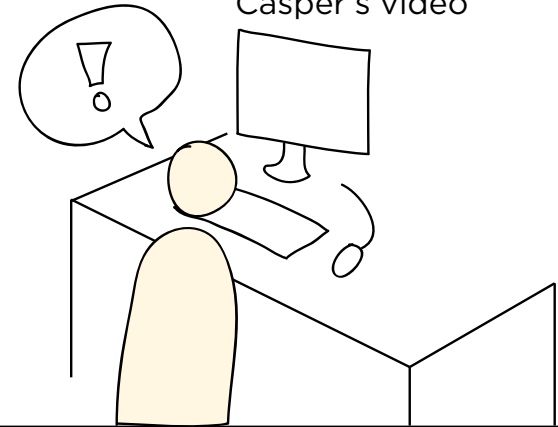
Family order their tickets online



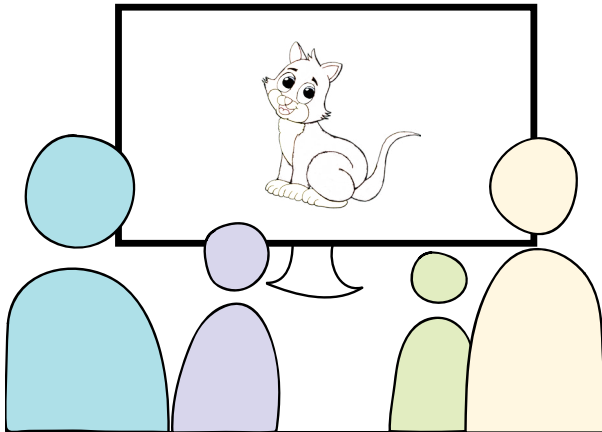
Receive a reminder, containing Casper a few days before the visit



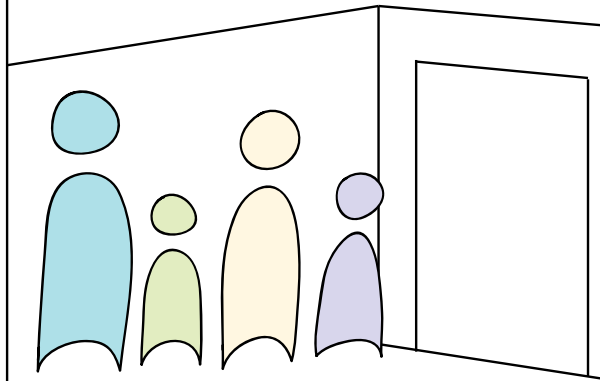
Parents calls everyone over to watch Casper's video



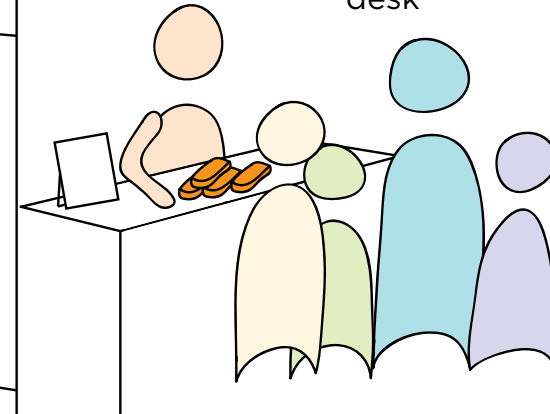
Family watches Casper's introduction



Then they go to the Museum

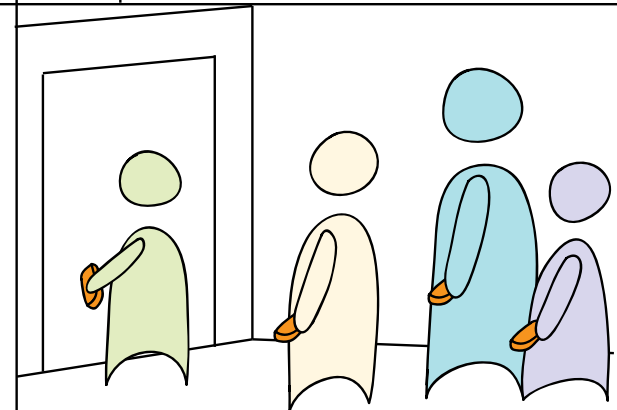


They pick up their audio tour devices at the desk



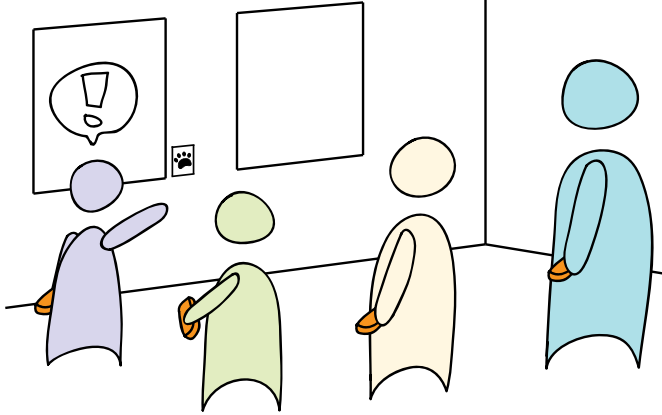
And the employee tells them to find Casper.

They find Casper and listen to his story

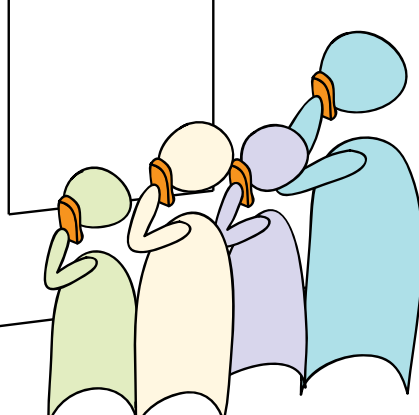


And then go into the exhibition

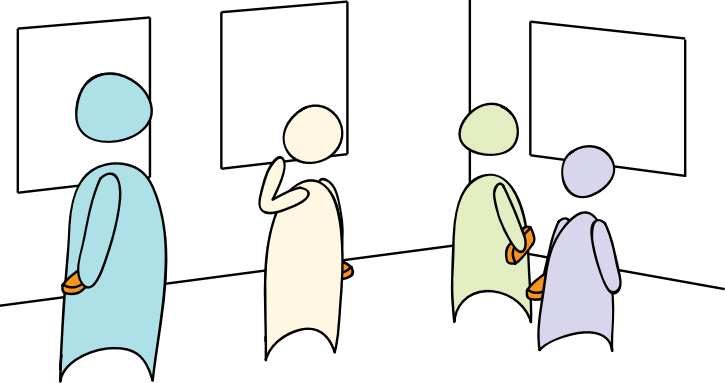
Someone spots Casper's first paw print



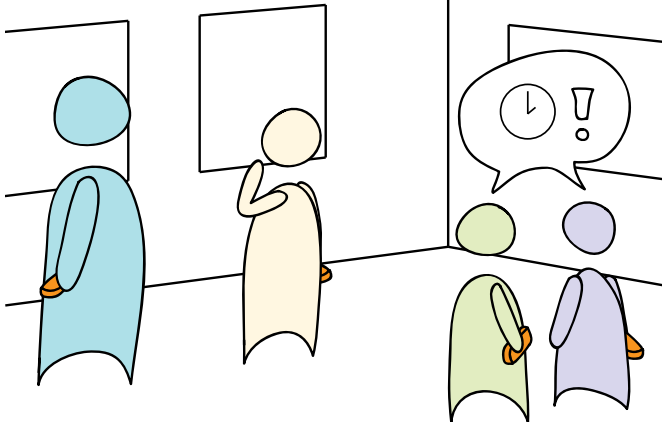
Listen to Casper together



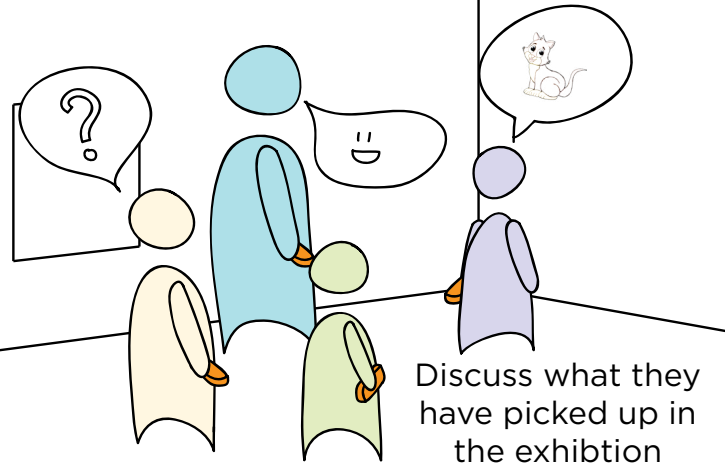
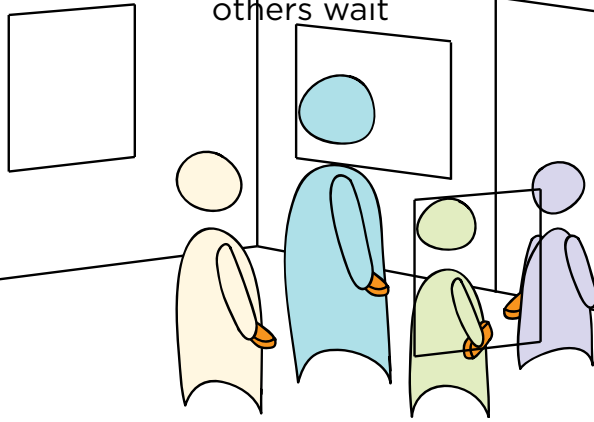
Go on to explore the art individually



Some family members want to move on

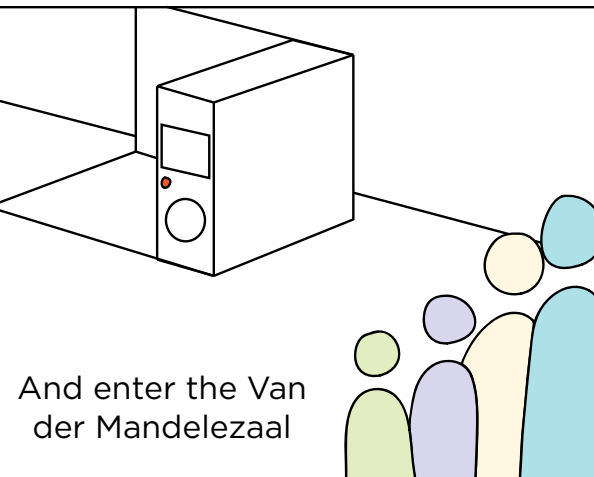
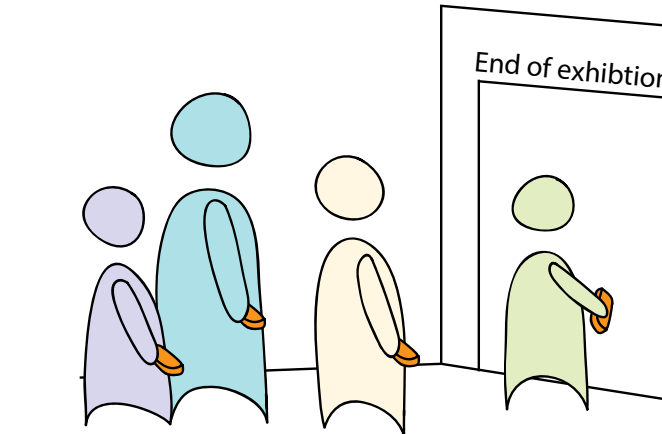


So the others wrap up to not let others wait



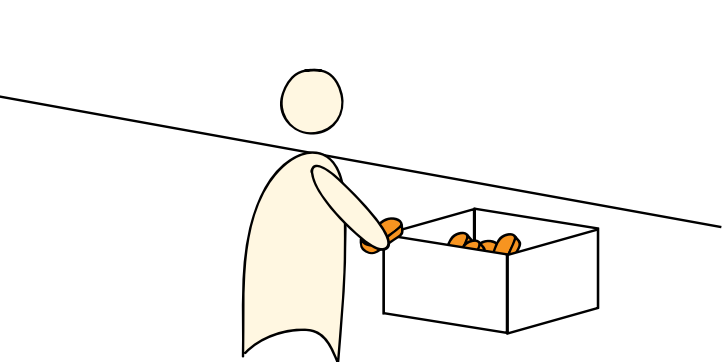
Discuss what they have picked up in the exhibition

Then the family leaves the exhibition

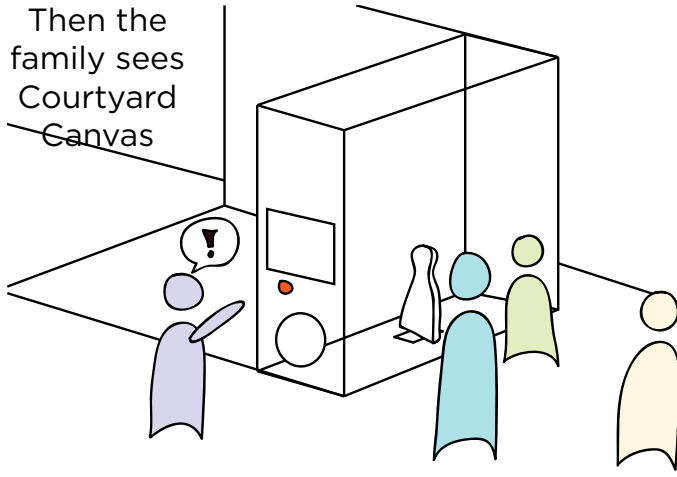


And enter the Van der Mandelezaal

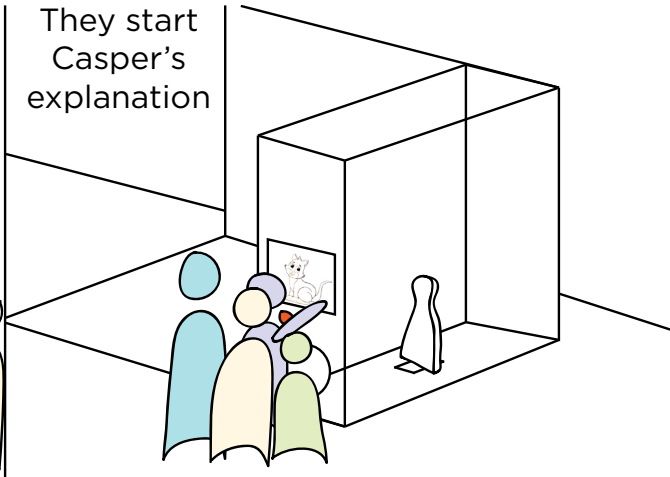
They hand in their audio tour devices



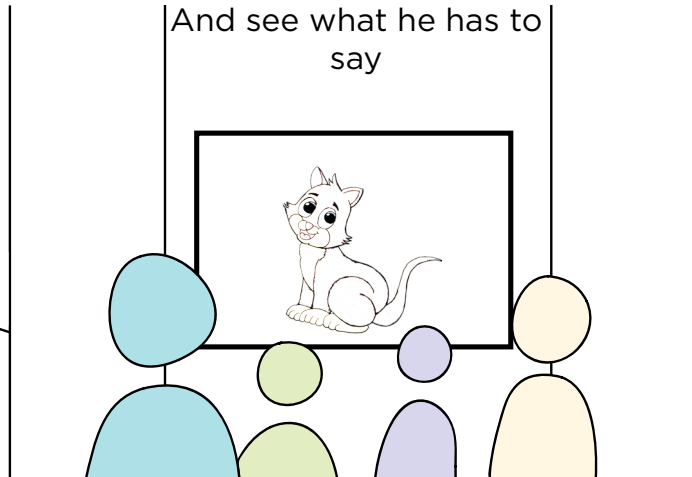
Then the family sees Courtyard Canvas



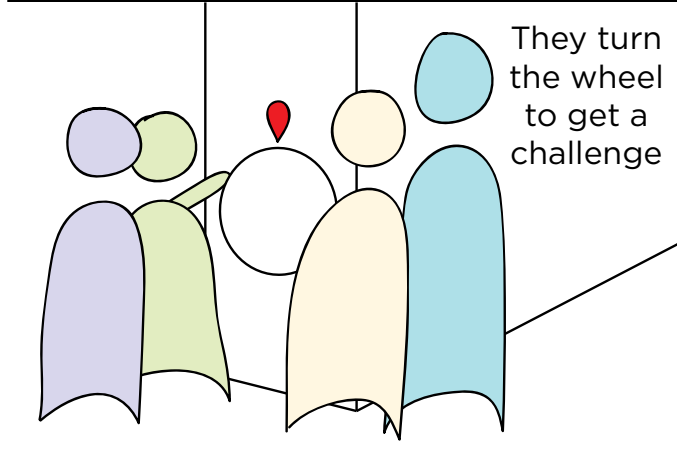
They start Casper's explanation



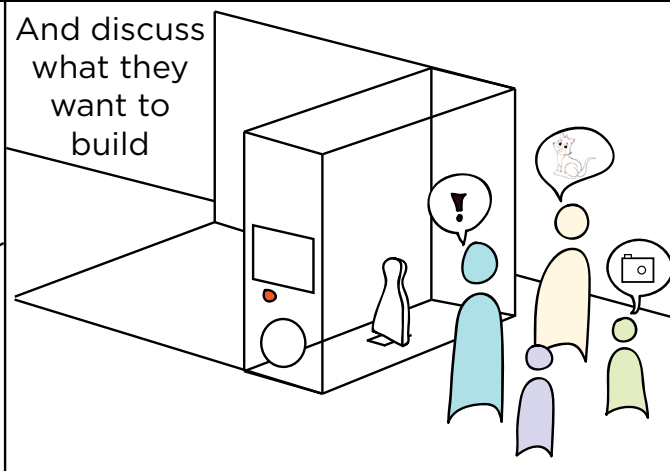
And see what he has to say



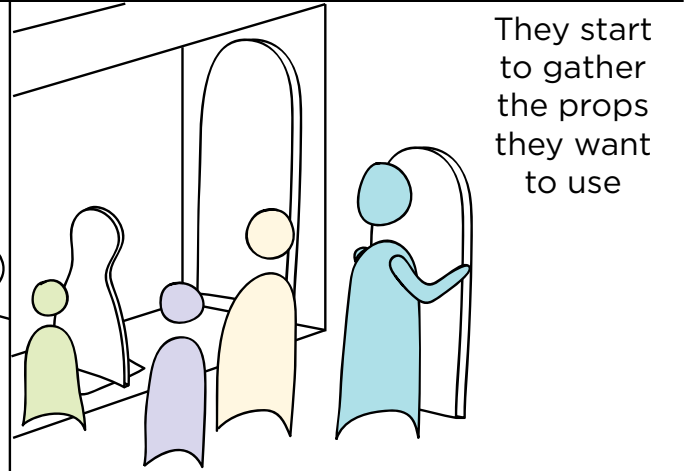
They turn the wheel to get a challenge



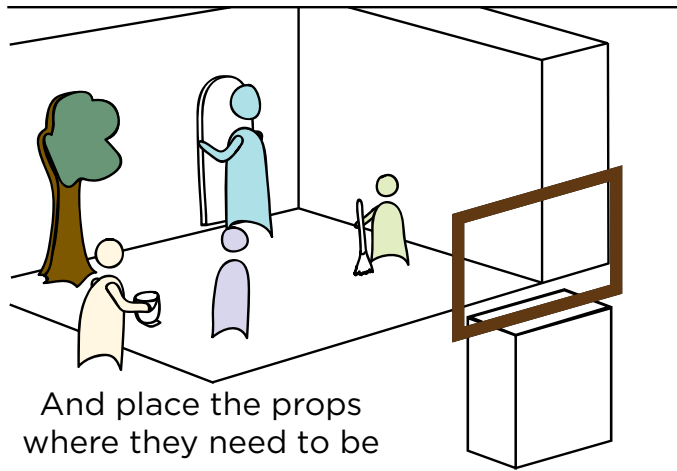
And discuss what they want to build



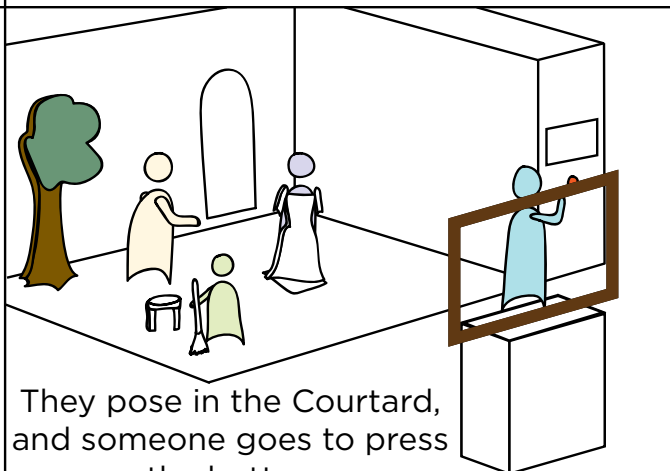
They start to gather the props they want to use



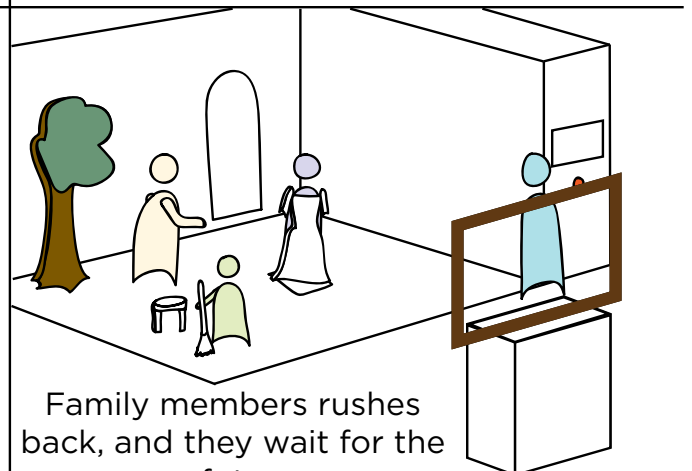
And place the props where they need to be

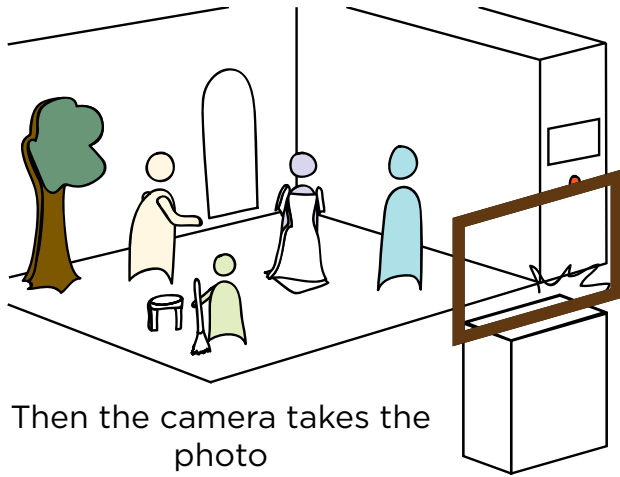


They pose in the Courtyard, and someone goes to press the button

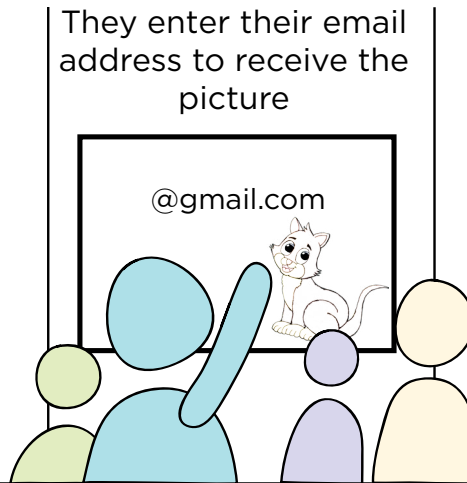


Family members rushes back, and they wait for the foto





Then the camera takes the photo

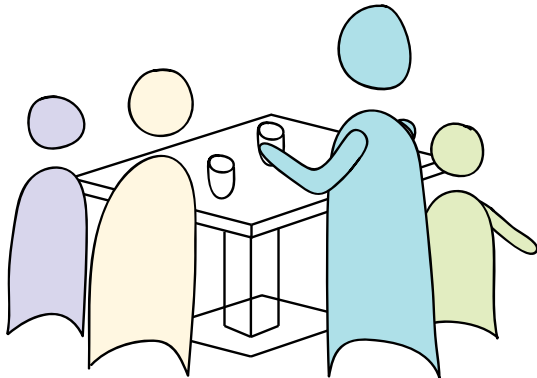


They enter their email address to receive the picture




And go on to clear the courtyard, by putting the props away

Finally, they end their visit with a nice moment in the cafe



## 11.7 The Family experience

Lastly, we look back on the 3 familias discussed back in chapter 4.2 and explore how they would experience the final design of Courtyard Quest. This will present the differences between the approach and experience of the 3 groups, based on their personal characteristics.



**Familia 1; live in the area**

**Family Smit, live in Delfgauw**

Groups: Modern Mainstream, Cosmopolitan or convenience oriented (Motivaction, n.d.)

All levels of income, though mostly low to average educated people. Relatively focussed on materialism and consuming.

Socially oriented, with a focus on family. Focussed on status and how they present themselves to others.

Know the museum because they live close by. Kids have been on a school visit, and now the whole family goes together on a day out.

Not necessarily interested in art and culture. Not a lot of experience in going to museums and not used to the atmosphere. Little background knowledge in art and culture.

Family likes going out together to places like the Zoo, beach or theme parks. Might have a subscription to a place like Blijdorp or a park like Drievliet.

**Familia 1; families who live in the area.**

These families are very focussed on the social aspect of the day out and somewhat less so on the museum itself. They will most likely all take the Casper audio tour so they all have the same route, and can stick together. More so, they do their best to do things together in the family as well; discussing the topics and questions Casper suggests with the group, and pointing out special and interesting aspects out to one another. When it comes to the activity, the parents will actively help out and work together with the children from the beginning of the activity and really get involved with the experience, instead of just watching or giving advice.



**Familia 2; museum jaarkaart**

**Family Bakker, live in Breda**

Groups: Part of the Postmodern-Hedonist, post Materialist or cosmopolitan (Motivaction, n.d.)

Mostly higher educated people.

Focused on personal development and experiences. Involved in art and culture.


The family has a Museum Jaarkaart, and often visit museums (about once a month). Want to try Museum Prinsenhof Delft. Have a rather good idea of what to expect of a museum and its atmosphere.

The children are used to the educational aspect of museums and quite enjoy the learning. The whole family has some background knowledge about different topics.

**Familia 2; Museum Jaarkaart**

This second group consists of Museum regulars, who have more attention towards the topic of the museum. There is more freedom to roam around on your own to observe, as the personal experience and development is important for them. Often the groups will wait on one another before moving along, sometimes they call each other concerning something special, but overall are less social in the exhibition. For this group there is a chance not all family members will join Casper's tour, some choosing to take the regular tour instead, or that parents switch to the regular tour throughout the visit. In the case only the children listen to Casper, they will have to remind their parents of Courtyard Canvas as this activity won't be emphasized in the regular tour. In these families the adults are more likely to stand back in the activity, preferring to advise the children and helping out when necessary rather than becoming a real part of the activity. They are happy to let the kids take their time to do the activity, and will take part mentally by advising, and could join physically as well, after a while.





**Familia 3; day-trip Delft**

**Family Nobel, live in Apeldoorn**

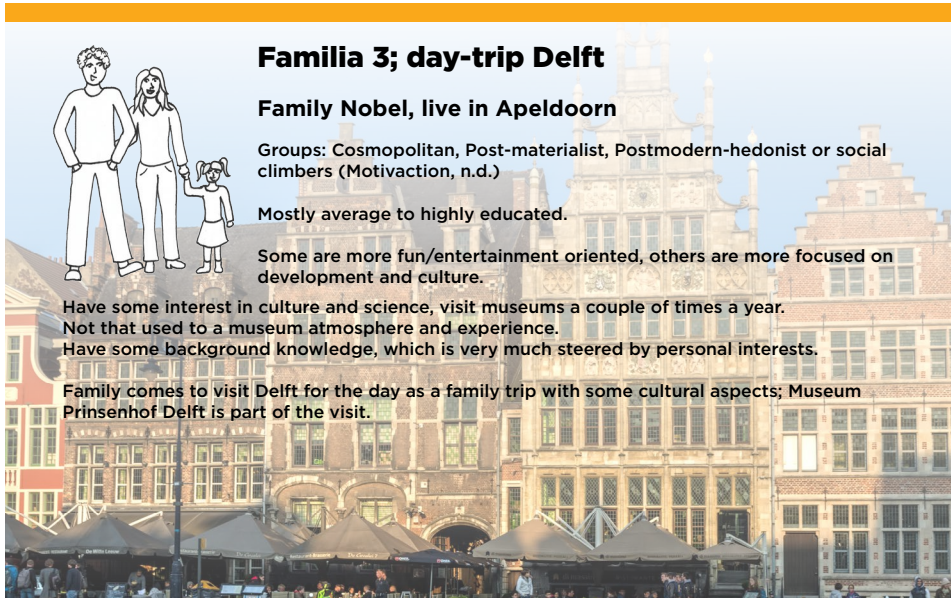
Groups: Cosmopolitan, Post-materialist, Postmodern-hedonist or social climbers (Motivaction, n.d.)

Mostly average to highly educated.

Some are more fun/entertainment oriented, others are more focused on development and culture.

Have some interest in culture and science, visit museums a couple of times a year.  
 Not that used to a museum atmosphere and experience.  
 Have some background knowledge, which is very much steered by personal interests.

Family comes to visit Delft for the day as a family trip with some cultural aspects; Museum Prinsenhof Delft is part of the visit.



### Familia 3; Day trip families

Although not museum regulars, there is some experience with museums in this group.

These families visiting the museum are more likely than the museum regulars to all take Casper's tour, although the chance still exists that adults will listen to some files from the regular audio tour additionally, or switch to the regular tour after a while.

They try to find a balance between their own personal experience and the group experience; often roaming around individually somewhat, but calling people together to share information or experiences with one another quite often.

When it comes to the activity, parents are happy to let the children take their time, starting out with low involvement, often observing or perhaps even going to drink a coffee. Later on these parents become more involved, but it takes them time to build up the courage to do so.

## 12. Conclusions and recommendations

This project set out with the original challenge, to create an experience for families visiting the Pieter de Hooch exhibition at Museum Prinsenhof Delft. Based on different methods of research the design goal became more detailed and included the experience being playful and educational, while bringing the families into contact with the art of Pieter de Hooch.

Overall, it seems that Courtyard Quest is a design which achieves its Design Goal and Interaction Vision, and would provide a new aspect to the museum experience for families.

Based on the results of the user test it can be concluded that Courtyard Quest presents a playful and active experience, based around Pieter de Hooch's art. Users felt the educational value of the experience was okay, but saw its potential when the experience included the full audio tour. Furthermore, most users were already curious to learn more about the topic.

On the Interaction qualities it can be concluded that the experience is very much so perceived as social and fun by the users, and that the design is rather engaging for children and their parents. Children were truly engaged in the activity of building their own courtyard, always having interactions with at least one family member, and though it sometimes took a while, parents always got involved in some way as well. Among the children Casper was a hit, and even parents <sup>74</sup> indicated him as a fun character.

Although it is likely the Educational Value of the experience will increase when the full audio tour will be included, exactly to what extent cannot yet be predicted. Therefore, I would recommend the Museum to look into this aspect of the experience some more, and test a slightly longer version of the audio tour, if they wish to emphasize the educational value of the experience.

Going back to the initial user research, it was concluded that families are often hesitant to take children to museums, due to a somewhat stereotypical impressions of museums. Therefore I would recommend using Courtyard Quest in the marketing if the museum would wish to appeal more to families for this exhibition. Parents need to be convinced the experience will be fun for the children as well, so it should be known to them that there is something made specifically for the children.

As Casper the cat was perceived very positively by children, and the character is not specific to this exhibition, I could recommend to the museum to consider Casper for future exhibitions to appeal to children.

In this final version of the design Casper the Cat only shows up in audio form to provide commentary to the families. In early iterations the Cat was also visually present in the exhibition, and walked around on the paintings using projections. Although this was not possible in this exhibition to

execute this idea, the first test of Casper showed it would be something children would enjoy, as they suggested the idea, without ever knowing it had been a possibility in earlier iterations. Therefore I would suggest that if Casper would be considered for future exhibitions, a more visual presence be used throughout the exhibitions.

Despite the recommendations, and their possible improvement to Courtyard Quest, and the overall Museum Experience, I believe the final design does indeed provide families coming to the Pieter de Hooch exhibition with an interesting experience which is enjoyable to everyone in the family.



# Glossary

## ***Attraction***

A place which provides a group of people with a specific experience, through multiple designed elements. An attraction could be a historical monument, a theme park, a zoo etc. It can be any place people go to specifically to visit. The visits are often in groups.

## ***Context mapping***

“Contextmapping is an approach to design in which designers use people’s everyday lives to inform and inspire themselves for ideation. [...] Explorative techniques are used to learn about the needs, wishes, motivations and experiences of everyday people and use this in designing. It makes mainly use of qualitative research, analysis and conceptualization methods and supports empathy with the end-users and inspiration for better solutions.” (Sleeswijk Visser & Stappers, 2015)

## ***Design goal***

A statement which formulates the kind of product you will be designing, and what effect it should have or which goals it should achieve.

## ***Dynamic Exhibit***

An exhibit in a museum which moves or changes, either on its own or due to the actions of a visitor. The exhibit can be different for each visitor, and nor does it have to be the same at any point in time. Examples of such Dynamic exhibits are videos or games.

## ***Experience***

According to the oxford dictionary an experience is “An event or occurrence which leaves an impression on someone” (Oxford Dictionary, n.d.) In this case an experience is a designed activity or event which you live through and or take part in. The experience spans from the moment the event or activity starts until the very last second. An example of such a designed experience can be roller-coaster ride in a theme park or a show at the Zoo.

## ***Family Experience***

The experience of visiting any place or attraction together as a family group, in which own jokes, experiences, social interactions, stories etc. could influence the perceived experience, and make it different from an experience with friends or school.

## ***Interaction***

An occasion when two or more people or things communicate with or react to each other. (Cambridge Dictionary, n.d.)

## ***Interaction vision***

A statement which, through metaphors or analogies, addresses how the interaction between the user and the product should be.

## ***Kijkdoos***

A kijkdoos is a box in which objects and items are placed to create a certain scene, which can be viewed through a hole in the box, which creates the desired point of view or perspective. The top is

usually covered in a material which lets light into the box to illuminate the scene, while closing it off, so it can only be viewed through the specific viewpoint.

## ***Museum***

“A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment.” (ICOM, 2008)

## ***Museum experience***

The emotional and physical experience of a museum for the visitor, from the moment they walk through the front door, to the moment they leave. It could even include the experience the visitors have when orienting their visit through leaflets or websites, and discussing the visit afterwards.

## ***Museum Jaarkaart***

A yearly subscription card which gives the owner free entrance to many museums in the Netherlands. The card is only available to people living in the Netherlands.

## ***Persona***

A visual representation showing an example of a person who fits within the defined target group. What information is presented in the Persona is influenced by what is important for the project.

### ***Playful***

Playful is defined as; Frolicsome, sportive, humorous and jocular (Fowler & Fowler, 1975) in the Oxford Dictionary. In other words it is often defined as fun and not serious.

be different (for example bigger or smaller) from the original target group.

### ***Program of Requirements***

A collection of criteria which apply to the, yet to be designed , product. (Roozenburg & Eekels, 1998)

### ***Qualities of interaction***

Qualities of interaction are words which describe the interaction between a product and its user; for example an interaction can be energetic or tender.

### ***Social***

Within the context of this project, social is defined as spending time together and enjoying each other's company, but not needing to do everything together. Family (or other group) members can enjoy moments in the museum individually, and spend other moments doing things together.

### ***Static Exhibit***

An exhibit in a museum which does not move, or require any input from the visitor. It can only be observed and does not change. Examples of static exhibits are Paintings or Scale models

### ***Target group***

A group of people, defined by the designer, as the people to whom they will aim the product.

### ***User group***

The group of people who, when the product is made, actually use the final product. This group can

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# Appendices

Due to the nature of the project; involving Dutch children between the ages of 6 and 10, most of whom are unable to speak English, a large part of these appendices presents information in dutch.

# Appendix B; Research

## B.1 Research Question Overview

This appendix presents the Main research question for each topic, and the different sub questions connected to it. These sub questions guided the research, but were not necessarily all directly or elaborately answered. During the process, new questions also presented themselves.

FAMILY	MUSEUM	CHILDREN
What is the experience for a Family (family experience) when visiting an attraction together?	Which elements of the museum experience make (or break) the experience for the visiting families?	How can we engage children at (educational) family attractions (such as museums)?
Which elements and behaviors characterize the experience of a family when visiting a museum or other attractions?	How do people describe their own (emotional) experience of visiting a museum?	What entertains and interests children at different ages?
What are elements families look for in attractions which would provide a family experience?	What are the memorable museum experiences families have had and why?	What different forms of play do children engage in? And how does the personality of a child influence this?
What do families want from their days-out together?	What elements are required for visitors to learn in a museum?	What makes learning more approachable to children (in museums)?
How do families interact with each other when at the museum?	What elements of Museum Prinsenhof Delft work well for families and which don't?	What do children want from their family days-out?

## B.2 Overview of Expert conversations

This appendix shows a full overview of the results gathered from the conversation with the Experts.

### B.2.1 Aviodrome Employee

- Kinderconcentratie afhankelijk van onderwerp en interesse maar toch wel tussen de 1 a 1,5 uur.
- Kinderen willen weten hoe iets zit/werkt
- Ze willen graag aan objecten zitten
- Als je kijkt naar 4 a 5 jarigen; die worden meestal gewoon meegenomen door hun ouders en raken dan dingen kwijt. Hebben weinig concentratie en moeten alles uitgelegd krijgen. Het “willen vasthouden” gehalte is nog hoger.
- Grote groepen (klassen enzo) gaan rondrennen, zijn luidruchtig en hebben veel begeleiding nodig.
- Kinderen hebben meeste interesse in “hoe zit iets in elkaar” “hoe werkt iets” “Welke materialen” hoe is iets gemaakt” etc.
- Gewaardeerd in andere musea: maak je eigen mini versie als souvenir
- Kinderen die van te voren weten dat ze achteraf iets leuk/interessants gaan doen met de info uit de tentoonstelling, letten beter op in de tentoonstelling, en vinden deze ook leuker
- Informatie bordjes worden eigenlijk alleen gelezen als ze weten dat het interessant is.
- Kinderen hebben erg veel belang bij verhalen en context, dus denk na over wat het verhaal is van het schilderij. Misschien kun je ze het zelf wel laten aanvullen.

- Meeste kinderen vinden het toch best leuk om door hun ouders meegenomen te worden naar een museum
- Als kinderen zich niet gedragen, ligt het probleem vaak bij de ouders. Dit zijn ouders die niet veel geven om musea en ook alleen maar gaan omdat het moet, en dus hun kinderen niet corrigeren omdat het hen weinig kan schelen.
- Suggestie: boekje met de verhalen van ieder schilderij specifiek voor de kinderen. Dan kunnen de kinderen het lezen op hun eigen tempo. Verder kunnen de boekjes leeftijd specifiek zijn aangepast in het soort informatie en taal gebruik. Kan gecombineerd met spelletjes/opdrachtjes (kleurplaten, verhaaltjes afmaken, of hoe zouden zij de moraal uit het schilderij presenteren?)
- Tot op een zeker niveau maakt het geen bal uit wat je doet, als je maar iets doet (voor de kinderen) er wat aandacht aan besteedt en zorgt dat er een te volgen verhaal in zit.
- Aanpak bij kinderen: leg de basis uit, zeg dat ze het in principe zelf moeten kunnen, maar geef aan dat ze altijd vragen mogen stellen (jongere kinderen vereisen iets meer uitleg)
- Families volgen meestal de aangegeven routes wel, en als er van afgeweken wordt (enthousiast kind) dan lopen ze stukje terug om weer op de route te vallen)
- Voorbeeld aviodrome; 1 keer in het half uur een vlieg simulatie, kinderen er bij betrekken, laat ze zelf antwoord geven etc. Dit soort acties trekken duidelijk aandacht.
- Dingen die maar 1 keer in de x tijd gebeuren voelen specialer dan op loop draaiende filmpjes etc. Daar komen meer mensen tegelijk op af.

(misschien te maken met een “angst” om het te missen)

- Binnen families hebben moeders de leiding (meestal). Jonge kinderen(vooral de jongste in de groep) trekken veel, maar de moeders beslissen nog steeds. In sommige gevallen als een klein kind echt niet verder wilt, wisselen de volwassenen af als kind oppas om de groep een kans te geven en het kind niet kwijt te raken.
- Sommige kinderen vinden kunst mega overweldigend en nemen met heel veel aandacht maar een paar schilderijen op
- Visuele/zichtbare informatie en verhalen bieden de beste aanknopingspunten voor kinderen
- Voor mensen in het algemeen, al helemaal kinderen, is het moeilijk om nieuwe info tot je te nemen zonder ophang/aanknopingspunt. Het moet ergens mee overlappen/aan grenzen. Wat is het raakvlak tussen de info en het leven en belevingswereld van de bezoeker
- Kijk uit met begrippen en achtergrondkennis verwachten
- Kinderen zijn uit zichzelf toch best wel beleefd (n ieder geval meer dan we vaak verwachten) dus verwacht ook niet meteen dat ze zich gaan misdragen.

### B.2.2 Children’s Education Mauritshuis (Janneke Gilsing)

Ook al lopen alle familie extra’s wel goed, is het familie-doe-pakket het populairste. In dit pakket worden ouders en kinderen gemotiveerd om samen te werken. Het pakket bestaat uit spelletjes,

kijkopdrachten en tekenopdrachten.

Het Mauritshuis maakt voor iedere speciale/ tijdelijke tentoonstelling een puzzeltocht, en probeert deze zo aan te pakken dat er geen antwoordbladen nodig te zijn (geen echt goede of foute antwoorden, maar motiveert gesprekken etc.) Bij alle familie extra's wordt er ook gekeken dat het leuk is voor de ouders en niet alleen de kinderen, dus ook de ouders worden er echt bij betrokken. Kinderen willen toch het liefste ook echt iets kunnen doen, in plaats van alleen luisteren. Een opvallende ontdekking was bij een rondleiding rond het Thema "Restauratie" waar kinderen erg geïnteresseerd in waren. Dit kwam waarschijnlijk door de opvallende verhalen en dat er "geheimen" achter de schilderijen zaten.

Bij de familierondleidingen en andere extra's is het nog nooit voorgekomen dat een kind naar huis wilde.

Kinderen misdragen zich toch ook soms nog, en ouders zijn zich daar niet altijd van bewust. In de kinder-museumnacht hadden ze last van rennende kinderen en ouders die op het glas van de schilderijen tikte.

Om bij de puzzeltochten de drang om een schilderij te zoeken en te rennen wat weg nemen, worden er geen "zoek dit schilderij" vragen in gestopt. Verder zijn de tentoongestelde schilderijen al te zien in de puzzeltocht (dan weten ze wat ze kunnen verwachten).

Dingen waarmee kinderen zich kunnen identificeren vallen het meest op voor kinderen, zoals dieren of andere kinderen. Verder zijn dingen als het "meisje met de parel" zo bekend dat het herkenbaar is. Ook zijn schilderijen die bijna een zoekplaatje zijn erg leuk.

Verhalen horen en bedenken bij schilderijen wordt altijd wel als leuk ervaren, al hebben kinderen een trigger en wat hulp nodig om de verhalen zelf te verzinnen.

Meeste mensen willen ook altijd wel weten hoeveel een schilderij kost.

De extra's voor families worden veel gedaan, maar waarschijnlijk toch wel minder dan de helft van familie bezoekers maken er gebruik van.

De kinderfeestjes die worden aangeboden door het museum worden vooral veel geboekt door expats.

Veel meer Chinese families komen naar het Nederlandse Musea maar willen dan vaak op zichzelf het museum ontdekken.

Kinderen vragen ook vaak naar het gebouw en alle entourage rond het schilderij; wie heeft het geschilderd, waar heeft hij gewoond, welke familie had hij etc. (context en verhalen)

Kinderen hebben bij rondleidingen ook wel eens de neigingen om bordjes te lezen van te voren om antwoord te kunnen geven op de vragen die ze verwachten, maar weten dan vaak niet helemaal hoe ze de informatie moeten verwerken. Zo zien ze bijvoorbeeld een prijs van het schilderij in plaats van een jaartal.

### B.2.3 Project Manager Exhibits and Virtual Museum, Science Centre Delft (Jules Dudok)

- In de voorjaarsvakantie zijn families er vooral voor entertainment. Ouders willen vooral kinderen bezig houden. Echte "Leer intentie" is er meer door de week en in standaard weekenden.
- Kinderen worden enthousiast over Games,

wedstrijdjes, dingen zelf kunnen maken (creativiteit) maar ook dingen mogen slopen. Ze worden ook erg blij van het feit dat er weinig ouderlijk toezicht en controle is.

- De speciale kracht van het Science Centre, is dat bezoekers unieke dingen kunnen doen, zelf de controle hebben, en in contact komen met one-of-a-kind prototypes die nergens anders te zien zijn.
- Kinderen worden aan getrokken door lichtjes, geluid, kleuren; eigenlijk alles waarbij volwassenen een sensory overload krijgen is interessant voor een kind. Het zelf maken, gereedschap en tools mogen gebruiken en dingen doen die thuis niet meer zo veel gebeuren en gedaan worden (bouwen etc).
- Of ouders ook echt meedoen in de activiteiten hangt heel erg af van de ouders. Games trekken ouders nog wel eens als de kinderen het vragen. Vooral de competitieve onderdelen.
- Vaak weten ouders (met de technische dingen) niet helemaal wat ze er mee moeten en willen niet laten merken aan de kinderen dat ze het niet snappen, en doen dus niet mee.
- Er wordt veel gerend in het science centre, wat met alle apparaten enzo wel een issue kan zijn voor de veiligheid
- Activiteiten waar mensen echt wat doen trekt ook een publiek wat alleen kijkt
- Schermen trekken de aandacht, zelfs nog meer dan grote objecten, maar ze gaan er ook eigenlijk altijd van uit dat het touchscreens zijn.
- Kinderen zijn heel erg gewent aan digitale dingen, dus dan lijken de dingen die analoog zijn, en tussen de digitale dingen staan snel saai

## B.3 Sensitizing booklet

This appendix shows the sensitizing booklet, with 4 days of exercises which was given to all participating families.

# Een dagje uit met de familie



# Introductie

Heel erg bedankt voor het meedoen aan dit onderzoek. Het doel is meer te weten te komen over de ervaringen van families en gezinnen die samen een dagje uit gaan. Er zijn geen foute antwoorden, alles wat je mening of ervaring uitlegt is waardevol voor het onderzoek. Ben dus vooral eerlijk over wat je vindt.

In dit boekje staan voor de komende paar dagen tot het interview een aantal kleine opdrachtjes. 1 opdracht per dag, tot de dag voor het onderzoek. We komen tijdens het interview terug op de antwoorden in het boekje.

Gebruik alle middelen die je wilt gebruiken voor het invullen van het boekje; alles mag! Fotos, stickers, tekenen... Gebruik je creativiteit!

Als jullie vragen hebben over een opdracht of het onderzoek in het algemeen kun je me deze altijd sturen.

Ik wens jullie veel plezier toe met dit boekje.



## Contact gegevens

Email:  
I.C.F.vanHouten@student.tudelft.nl  
Mobiël:  
06 34268623



# Dag 1: Ik ga uit en ik neem mee

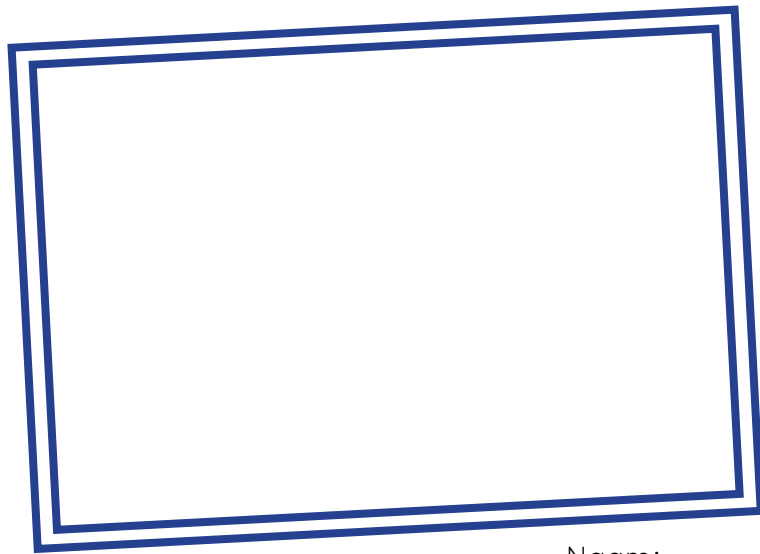
Vandaag zou ik graag willen weten wie er allemaal mee gaan naar het uitje en wat je mee neemt.

Teken de mensen van je familie met wie je meestal een dagje uit gaat, of plak een foto op in het lijstje op deze pagina.

Naam: .....  
Leeftijd: .....

Naam: .....  
Leeftijd: .....

Naam: .....  
Leeftijd: .....

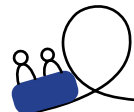
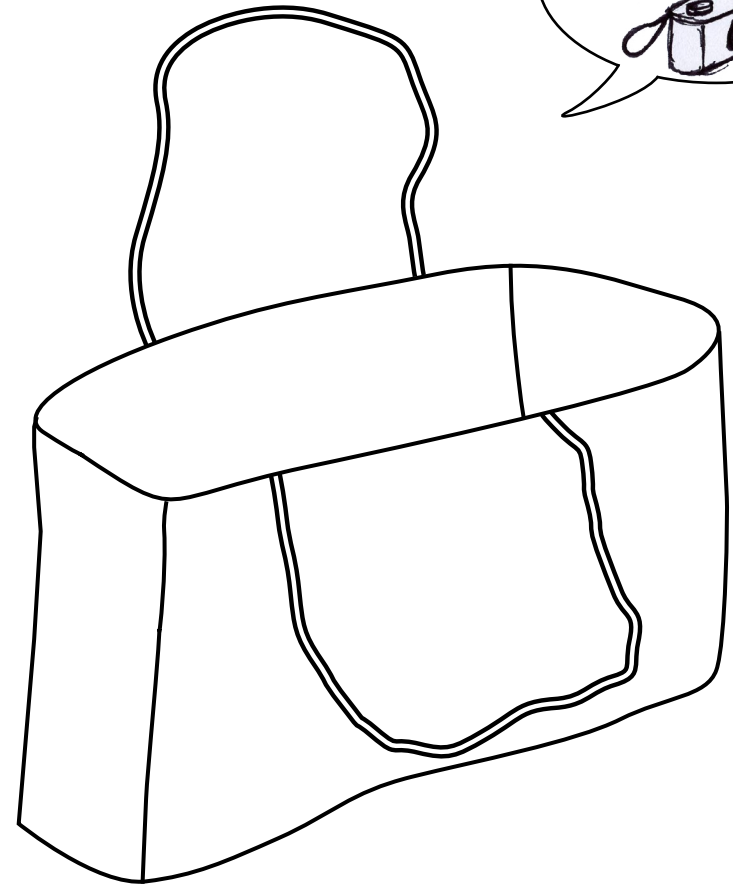


Naam: .....  
Leeftijd: .....

Naam: .....  
Leeftijd: .....

Naam: .....  
Leeftijd: .....

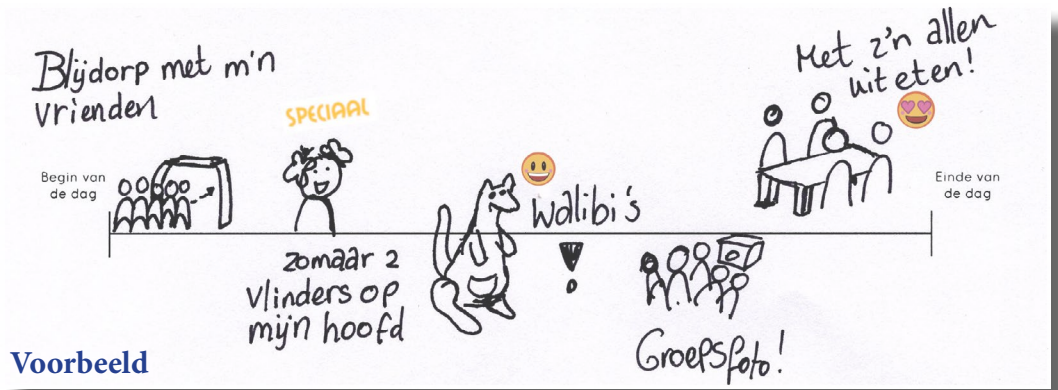
Voor een dagje uit gaan er altijd veel spullen mee. Teken de spullen die mee gaan voor een dagje uit in de tas. Als de objecten lastig te tekenen zijn, schrijf ze er dan gewoon bij.





## Dag 2: Het vorige dagje uit

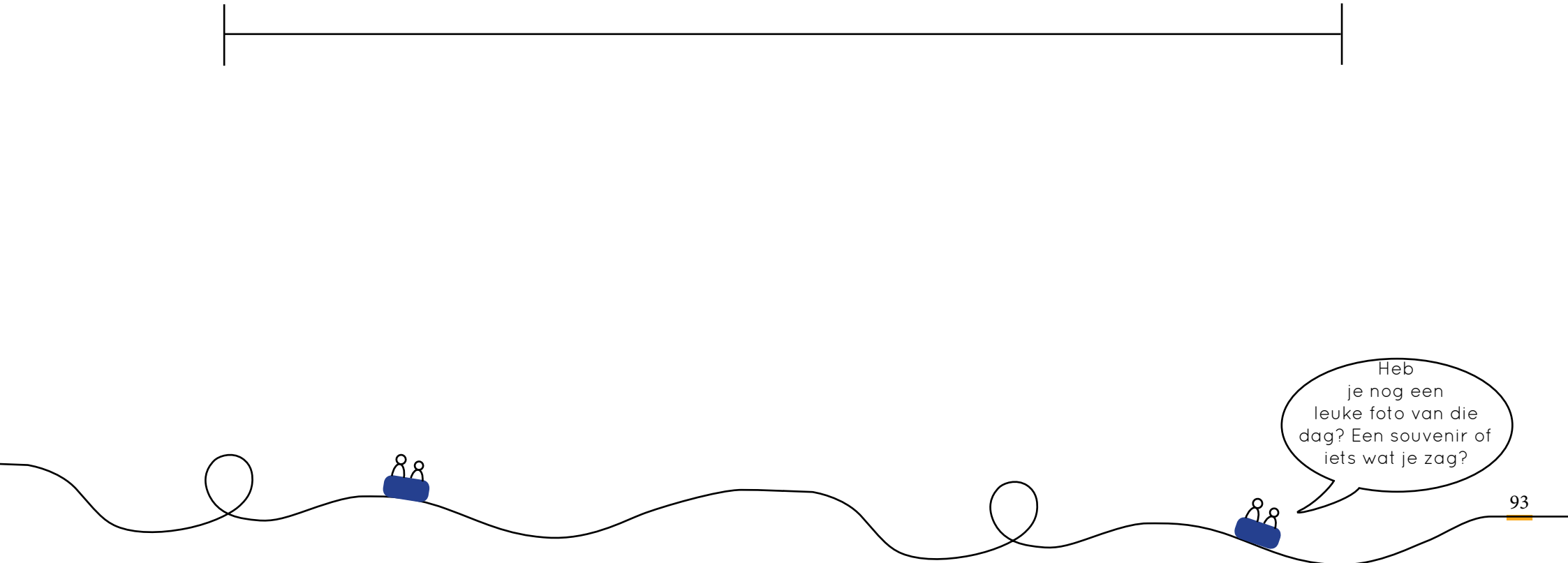
Vandaag wil ik wat weten over jullie meest recente dagje uit. Waar zijn jullie geweest? Wat hebben jullie gedaan? Wat was er bijzonder? Laat de dag zien op de tijdlijn. Je mag alles gebruiken wat je wilt; tekst, tekeningen, stickers. Het kan allemaal



Voorbeeld

Begin van de dag

Einde van de dag



## Dag 3: Plus en min punten

Dagjes uit zijn bijna altijd leuk, maar ze kunnen ook wat nadelen hebben. Vandaag wil ik horen wat de beste dingen zijn aan een dagje uit en wat er minder leuk is.



Voorbeeld:

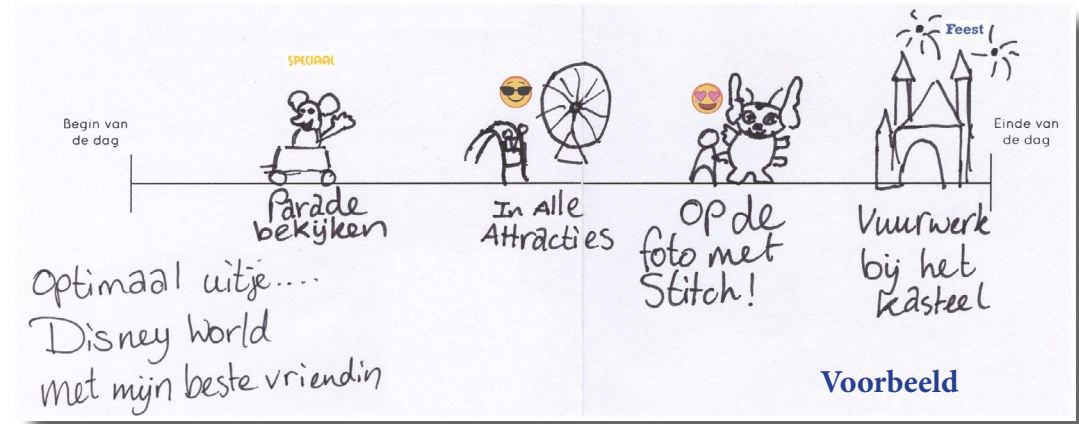
Een dagje uit is heel leuk, maar ik moet er wel vroeg voor opstaan.



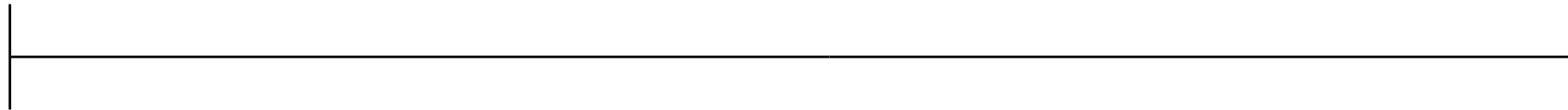
## Dag 4: Het beste dagje uit

Op deze laatste dag wil ik weten wat voor jullie het perfecte dagje uit zou zijn. Plan de dag! Wie gaan er mee? Waar gaan jullie naar toe?

Laat de planning zien op de tijdlijn, maar vul het blad gerust met verdere opmerkingen, stickers of tekeningen.



Begin van  
de dag



Einde van  
de dag

## B.4 Context mapping interview guide

This appendix presents the Interview guide used during the 5 Interview sessions, for the context mapping method. This guide was used for personal use in guiding the interview, and was not shown to the interviewees.

Interview .....

Datum .....

**Onderwerp:** Een dagje uit met het gezin/de familie.

**Hoofd vraag:** Wat is de ervaring van de familie bij een dagje uit?

**BENODIGDHEDEN:**

- |                     |                            |
|---------------------|----------------------------|
| - Schaar            | - Statief                  |
| - Lijm              | - Mobiel met geluidsopname |
| - A3 vel            | - Kleurplaten              |
| - Teken/schrijfbaar | - Voorbeeld bewerkte foto  |
| - Collage materiaal | - Stiften?                 |
| - Camera            |                            |

**WARNING!**

**Let op dat je de vragen niet alleen aan de ouders stelt, en dat de ouders geen antwoord geven voor de kinderen! Je hebt hun mening ook nodig.**

Betrek kind ook actief als hij/zij verlegen is, of de ouder vooral praat

**Vraag zoveel mogelijk naar de waarom!!**

**INTRODUCTIE**

Ten eerste; dankjewel voor het meedoen aan dit onderzoek. Dit interview zou ongeveer een uurtje moeten duren. Voordat we beginnen zou ik graag eerst de onderzoek overeenkomst tekenen.

(Zoals afgesproken via het formulier, wordt dit interview opgenomen voor verdere analyse, en kunnen quotes en antwoorden uit het boekje worden gebruikt in verslagen, maar alle persoonlijke gegevens worden veilig bewaard. Alles word anoniem gedaan.)

Aangezien niet alle vragen erg interessant zijn voor jou (kind) heb ik ook wat kleurplaten mee genomen, als je de vragen niet leuk vind om te beantwoorden kan je wat anders doen.

Hebben jullie voor we echt beginnen vragen?

Hoe is het invullen van het boekje gegaan?/ Is het invullen van het boekje allemaal gelukt? (ja, dan beginnen we bij de eerste 2 dagen van het boekje...

**ONDERDEEL 1: DAGJE UIT IN HET ALGEMEEN ± 15**

**HELE GEZIN**

- (Ingaan op de eerste 2 paginas van het boekje) Wil ik het graag hebben over jullie laatste dagje uit met het gezin. Wat is er die dag allemaal gebeurd?
- Hoe vaak gaan jullie ongeveer met z'n allen een dagje ( of middagje) uit? Is er een reden voor/*waarom dat interval?*
- Zou je er vaker tijd voor willen maken?
- Wie gaan er meestal allemaal mee op zo'n dagje uit? (als niet al op in gegaan bij bespreken boekje)
- Wat is jullie favoriete uitje voor met z'n allen? Waarom daar? Hoe vaak gaan jullie naar dat uitje? *Waarom dat uitje?*
- Hoe lang duren jullie uitjes meestal?
- (specifiek voor kinderen) Wat vinden jullie het aller leukste aan een dagje uit gaan met de familie?

**ONDERDEEL 2: DE ERVARING EN BETEKENIS VAN EEN DAGJE UIT ± 30****VOORAL OUDER GERICHT**

Nu wil ik graag wat dieper ingaan op hoe zo'n dagje uit met het gezin nou eigenlijk ervaren wordt en wat het voor jullie betekend. **Dus ik zou graag willen vragen of jullie een kleine collage zouden kunnen maken over wat een dagje uit met de familie betekent.** (Hints als ze het lastig vinden: Hoe voel je je op een dagje uit, wat is belangrijk en speciaal er aan. Etc.) Je mag helemaal zelf bepalen hoe je de collage maakt, maar moet het wel daarna kunnen uitleggen.

- Collage maken (ongeveer 5 tot 10 minuutjes), en uitleggen (ook 5 a tien minuutjes)
- Wat betekend dagje uit voor jullie? (collage)
- Hoe voel je je op die dagen uit? (collage) Is de hele ervaring positief of zijn er ook negatieve elementen (dag 3 sensitizing)
- Wat maakt het zo speciaal om met het hele gezin te gaan? (collage) Hebben jullie gewoontes/tradities rond dagjes uit?
- Hoe komen jullie op de beslissing om een dagje uit te gaan, en waar naartoe? (wie besluit wat)
- Wat is er belangrijk bij het maken van die beslissing? Welke eisen worden er gesteld? (beetje terug grijpen op laatste vraag van sensitizing)

**ONDERDEEL 3: EEN MUSEUM ALS FAMILIE UITJE ± 15****KINDEREN WEER WAT MEER  
BETREKKEN BIJ DIT STUK**

Nou wil ik als laatste graag wat dieper ingaan op 1 categorie uitjes; namelijk musea.

- Is een museum iets wat jullie overwegen voor familie uitjes? Waarom wel/niet?
- Follow up bij ja: welke soort musea?/Welke musea ga je het liefste naar toe?
- Follow up bij nee: Zijn jullie wel eens als gezin naar een museum geweest?
- Wat voor gevoel heb je bij een museum?/Hoe zou je een museum omschrijven? (musea in het algemeen)
- Wat houd je tegen om (vaker) naar een museum te gaan?
- Wat zou volgens jullie de ervaring in een museum verbeteren?
- (kinder vraag) Wat zou jij het liefste doen in een museum?/ Hoe zou jij het liefste leren?
- (kinder vraag) en wat zou jij veranderen aan musea? (als ze nog nooit naar een museum zijn geweest: Welk onderwerp zou jij wel aan iemand willen leren? Hoe zou je dat aanpakken?)
- Zouden jullie bij zo'n verandering musea vaker overwegen voor uitjes?

**AFSLUITING**

Nou, volgens hebben we dat ongeveer alles gehad. Hebben jullie nog vragen of opmerkingen? Iets wat jullie graag nog willen delen?

Ik wil jullie graag nog een keer heel erg bedanken, en ik wil jullie ook graag wat geven.

## B.5 Results Contextmapping

This appendix shows all the results from the different contextmapping sessions. The main chapter in the report presents the most valuable of these results.

- Most families (both parents and children) consider the social element of the days out as most important. Being together and doing something together make the day special.
- Parents put the needs of their children above their own when it comes to days out, putting their own wishes a bit on the back burner. However, they try to find something everyone will enjoy. In the case children are old enough to formulate their opinions, these suggestions are taken into account as well.
- Some parents truly value the additional learning element of certain attractions, and how this has an impact beyond just the day itself.
- People often seem to have a somewhat stereotypical idea of what a museum is, and who it is intended for. Museums are for example seen as boring, and not aimed at kids. In addition the idea seems to be that it shouldn't add to many playful elements, less it become a playground.
- Parents feel their children are not ready to visit a museum, often based on their own experiences.
- Parents do not like taking risks when it comes to days out. If they are uncertain their children will like something, they are not likely to go.
- Price is a definite threshold/hurdle for most

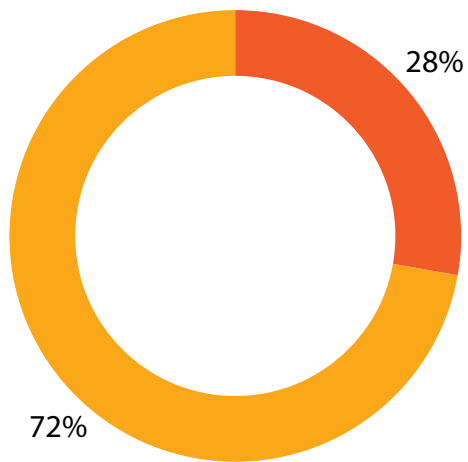
families in every kind of day out. Families try to find a balance between the price of an attraction and its value (fun, learning etc.). Where possible they use discounts.

- Parents want to be able to relax on their days out, and don't want to have to worry about the kids or their behaviour.
- Children want to actively do something on their days out with the family
- Parents and children see their days out somewhat differently.
- For parents, days out are an opportunity to relax, and see this as somewhat of a requirement for the attractions they visit.
- Time can be an issue for families when visiting attractions. For example when the family has a toddler which still takes afternoon naps.
- Parents can be quite oblivious when it comes to museums; either not knowing museums for children exist, or that certain museums can be fun for kids.
- Some families have social lives which are too busy leading them to have no time or energy for many days out.
- Not all outings are really considered trips by parents. They even seem to make a distinction between things such as a zoo and a museum.

## B.6 All observation graphs

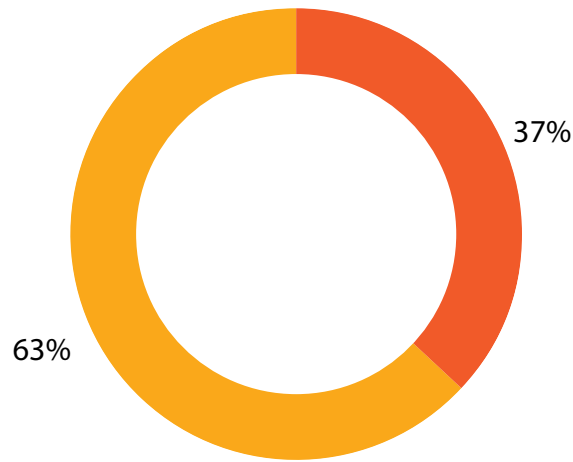
This appendix shows all graphs, presenting data from the museum observations.

### How do people move across the room?



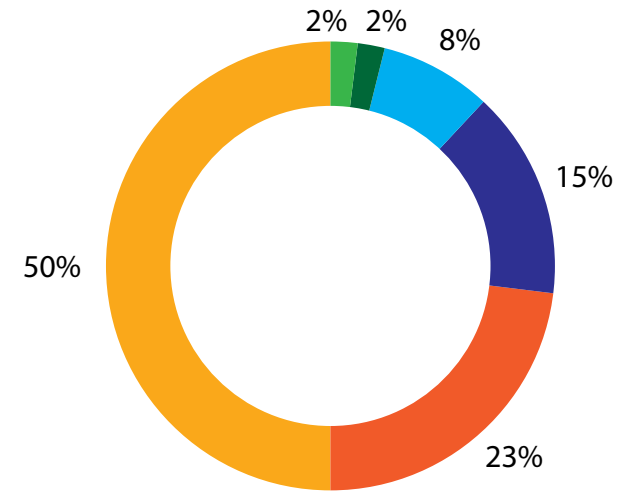
- People who move Criss-Cross
- People who move follow the route

### Interruptions



- Children who call for their parents
- Parents who call for their children

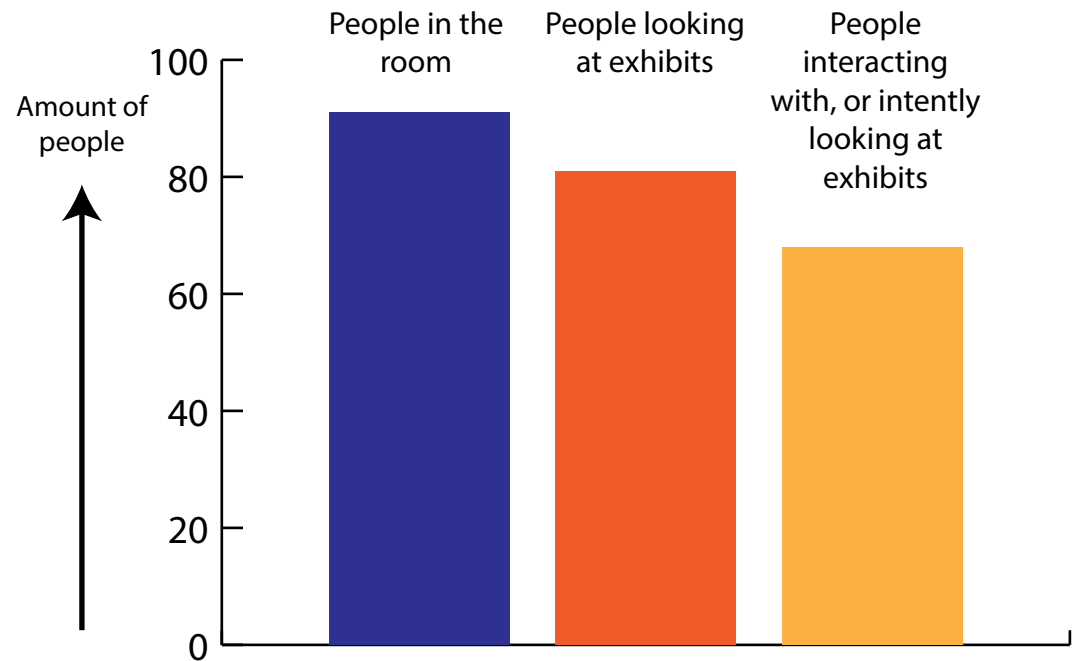
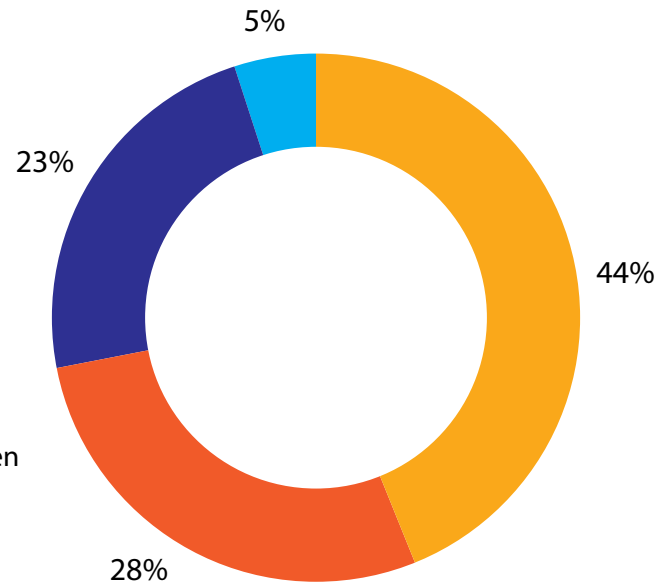
### The mood of children



- Children who seem interested
- Children who seem okay
- Children who seem happy
- Children who seem bored
- Children who seem sad
- Children who seem annoyed

# Parent child interaction

- Parents who give their children freedom
- Parents who discuss the topic with their children
- Parents who translate or interpret for their children
- Parents who steer their children's interests





## B.7 Full Interview overview

This appendix shows the questions visitors of Museum Prinsenhof Delft were asked to answer during the observation sessions, as well as an overview of the answers of all 10 families who took part in the interviews.

### PRINSENHOF INTERVIEWS

(groot) ouder: M/V

Kind 1 m/v leeftijd.....

Kind 2 m/v leeftijd.....

Kind 3 m/v leeftijd.....

Kind 4 m/v leeftijd.....

Kind 5 m/v leeftijd.....

### NUMMER....

#### VRAGEN

Waarom zijn jullie met zijn allen naar het Prinsenhof gekomen?

Zijn jullie hier al eerder geweest?

En wat vinden jullie van het museum? Waarom

Wat vonden jullie het leukste onderdeel in het museum? Waarom?

Wat heeft je het meeste verrast? Waarom?

Is er iets wat je graag zou veranderen aan het museum en waarom?

Hoe zou je het museum samen in 1 woord? Waarom dat woord?

---

#### OVERIGE OPMERKINGEN EN ANDERE ANTWOORDEN

Questions	Interview 1	Interview 2	Interview 3	Interview 4	Interview 5
Child 1	11	12	11	9	7
Child 2	8		8	7	9
Child 3				9	
Child 4				7	
Child 5				4	
Gender	F x 2	M	M x 2	F x3 + M x 2	M x 2
Parents	M + F	F	M + F	M + F	M + F

<b>Why come to the museum?</b>	<b>initiative of eldest daughter,</b> she had heard of William the silent	Just wanted to have a fun day out together (live nearby)	Live nearby and have a museum card	Christmas break and wanted to go out	Museum jaarkaart
<b>Been here before?</b>	Tried, but the exhibition was being rebuilt (went to new church instead)	no	about 3 or 4 times with the family ( dad seems to have been more often)	First time with th family	First time with the family, mother has been there quite often before
<b>What do you think of the museum? Why</b>	Nice atmosphere, lot of information, attention span of children not too long though. Rather diverse	It's nice "History coming to life"	It's okay ("Wel Leuk") <b>some things have too much text, and then he (11 year old) can't understand it that well</b>	Nice/fun puzzlehunt, nice/beautiful old building, <b>The projections are nice</b>	Nice/fun. Lot of exercises
<b>What did you like the most? Why?</b>	The bulletholes were considered special. Liked the portrait gallery of all "Oranges"	The parts about William the Silent <b>because there is more to tell about him than the paintings</b>	Singing the Wilhelmus (room 2) It was funny, could sing very loudly	<b>The puzzlehunt (waaier), because it leads you through the museum.</b> (hellebaarden, gewoon gaaf)	the puzzlehunt, you get to do more than just look around

Interview 6	Interview 7	Interview 8	Interview 9	Interview 10
9 6	8 6	8 5	10	9
F + M M + F	F + M M + F + Grandma	F + M Aunt + grandparents	M Grandparents	M F
To do something fun, curiosity about Balthasar Gerards	<b>Daughter read about William the Silent</b> and they wanted a day out	To see the exhibition on William the Silent	<b>Saw an add on Facebook about the William the Silent exhibition.</b> Recently bought a museum jaarkart, otherwise probably wouldn't have come	Spreekbeurt about William the Silent
First time with the family	First time with the family	First time for everything	First time for everyone	first time
Nice/fun, especially the storyteller	Nice/fun good explanations and impression. <b>Nice old building which is connected to the topic "Plaats delict"</b>	"Erg leuk" Fun/nice. Exciting (death of William the Silent)	Nice/beautiful (mooi)	"Wel mooi" (son) <b>Really speaks to the imagination, in the real location.</b> Breathing the atmosphere.
<b>The bulletholes, the story that went along with it and seeing the gun</b>	The stairs are most interesting. Recognizing the paintings seen in history books	<b>The puzzlehunt.</b> The overview of the Family of "De Oranjes" with all the paintings.	William the Silent and the paintings. Everything. <b>History of ancestors (Surname also "the Silent")</b>	Bulletholes, is Tangible. The story teller was nice

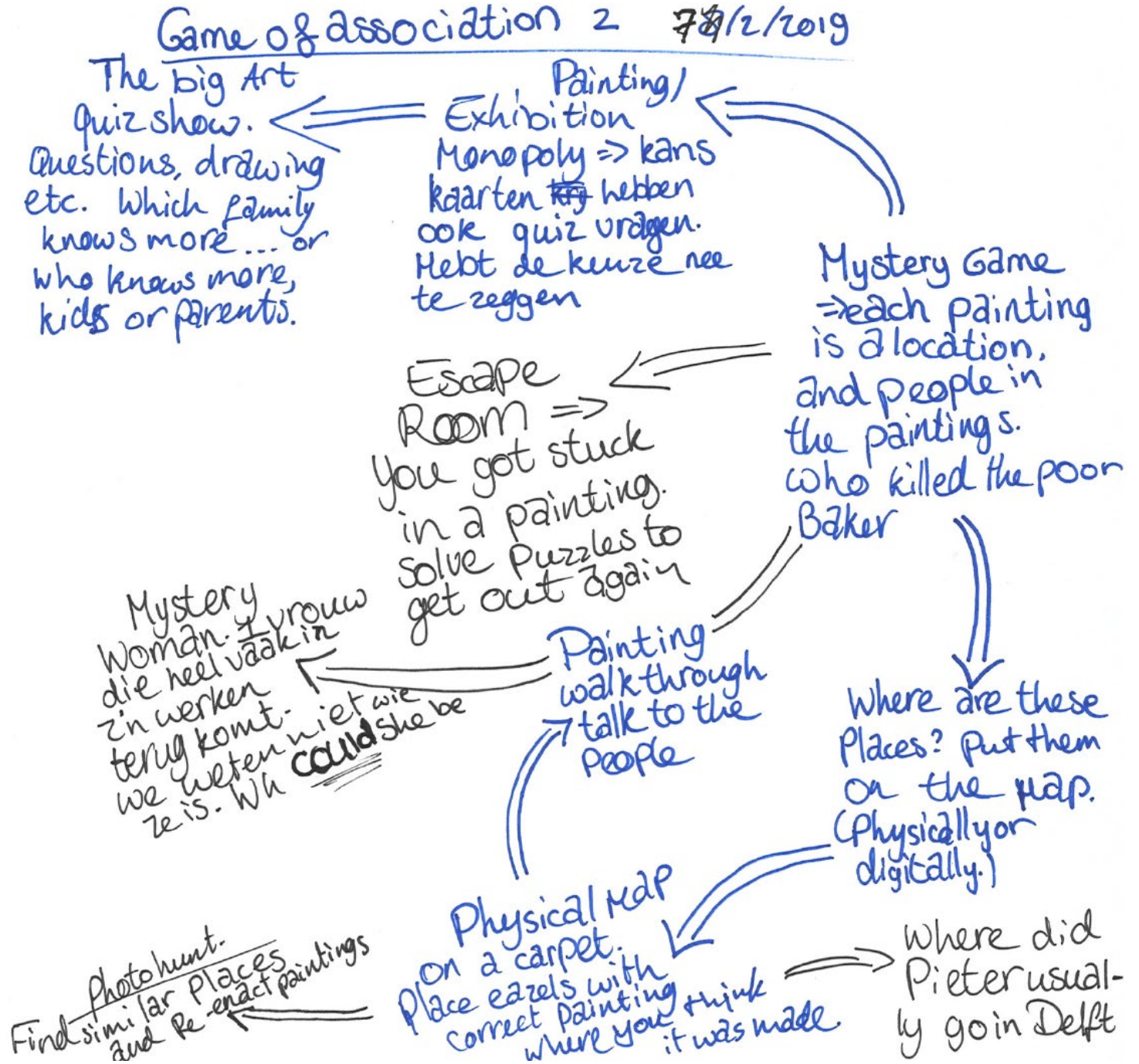
<b>What surprised you the most? Why?</b>	Everything not about William the Silent (that's mostly what they expected, and they didn't research in advance)	The combination with the old building	How loud the microphone was in that room	Room 15; lots to do ( <i>fault in notes so the why could be incorrect</i> )	The weapons, <b>the projections on the wall</b> ( hadn't been there last time the mother visited) "The big boat" (youngest son)
<b>Is there something you would like to change? Why?</b>	Nope	There could be some more things for children; for example de audio tour is quite dry and long	The room about "Plakkaat van verlatigen" (see photo), too much text	Shorter interval for the projections (shooter especially) as you now have to wait quite a bit. Make sure the interactive elements are all working (some whiteboard markers were empty) "Make everything come to life"	No
<b>Describe the museum in 1 word?</b>	Cosy (knus)		William the Silent (dad)	The past, Perfect, fantastic	William the Silent
<b>Who answered questions</b>	Parents ( kids didn't want to)	Both mother and son	dad and eldest son (mum had been pulled away by youngest son)	Mother and about 2 or 3 kids	mother and the 2 sond, but she had to nudge them
<b>Other comments</b>	<b>They find it interesting that the building is part of the story which is being told.</b> The shadows/silhouettes on the wall are interesting	Audio tour could be improved (see what they did in the Rijksmuseum). <b>There's a nice added value with the building being part of the museum</b>	Son seemed bored by the questions		It's nice to get something different everytime you visit a new museum

A lot of paintings of the "Oranjes". The physical size of the museum as well as the variety in the museum	The way of experiencing, listening (phone things etc.), not just looking	<b>Location; The old building itself tells a story.</b> The bulletholes. The projections on the wall really bring it to life	Projections showing the past of the country (room 22)	How the bulletholes had gotten bigger of time because everyone touched them
More about William the Silent, really a focus (personal interest)	<b>add some more "Do-things" such like dressing up in theme</b> etc.	Maybe make it more wheelchair friendly Worth the visit (the second and third time as well) History brought to life, "Vaderlandse geschiedenis"	Having the whole museum to yourself so you can go every day	<b>Some more visual elements for the children</b>
Fun (2x) Interesting, Authentic/realistic	"Heel vet" Interesting		Prachtig, beautiful	William the Silent. <b>The place where it happened.</b> Mostly the mother, son seemed somewhat bored by the questions, though she kept coaxing him into answering
the parents, the daughter, the son with some motivation	Father, mother and eldest daughter mostly.	Aunt and grandma, some input from the kids	all of them, though the grandson had to be asked a little more	
	A must for schoolkids	Suggestion; show what it was like in the past (overlegger)	Did not know about the museum's existence	

# Appendix C; Ideation

## C.1 Brainstorming

This appendix shows part of the brainstorm process so far.



Sketch it =>  
All paintings were made  
in his atelier based on  
Sketches => What would  
have been on his sketch

Sketch  
your own  
self portrait.  
What is in the  
Picture

Self portrait  
=> What clothes  
would de Hooch wear  
today?

If you see the views and  
backgrounds on the  
Paintings, where could  
the courtyards have  
been.

PdH was de Master  
of courtyards, try to  
Re-enact a scene he would  
Paint in a city Courtyard.

change it up.  
~~where~~ What could  
you see through all  
the vistas

Big Replica of  
a painting +  
stickers. Indi-  
cate where your  
attention is drawn  
by putting a sticker on it

First impressions  
what do you  
think PdH was  
like

write/create  
a FB profile  
for PdH

What places in Delft  
do you think PdH  
should paint were he  
here ~~now~~

Soundtrack:  
What song should  
Play in the back-  
ground of this painting.

What things would  
have been in  
PdH's atelier to  
Paint all that  
from memory

Can we make  
a Room smell like  
Paint?!

write  
your best  
joke based  
on the paintings

## C.2 Verification test, question sheet

This appendix shows the question sheet used and shown to children throughout the verification test of the “Casper the Museum cat” concept.

Kind: M/F ..... years old

Familie.....

### Voor geluidsfragmenten!

Wat vind je van het schilderij?



### Laat filmpje zien en geluidsfragment horen.

Wat vond je van Casper?



Wat vond je van het verhaal?



Wat vind je nu van het schilderij



### Laat liedje horen.

Wat vond je van Casper's liedje?



Zou je het leuk vinden als Casper af en toe zingt, of liever niet?

Waarover zou Casper nog meer kunnen vertellen?

Wat zou jij willen dat Casper nog meer doet?

Maakt Casper het schilderij leuker? Waarom?

Gaan ze het ook met hun ouders bespreken?



### C.3 Verification test, all results

This appendix shows the results of the verification test. The first image shows the Statistical results, the second shows the answers to the open questions.

	Age	Accompanying adults	M/F	Opinion on Painting	Opinion on Casper	Opinion on explanation	Opinion on painting after Casper	Opinion on song
Pilot (F1)	7	Granparents	F	x	5	5	Leuker dan eerst	
Pilot (F1)	10	Granparents	F	x	5	5	5	
F2	9	Granparents	F	4	5	5	5	4
F2	6	Granparents	M	5	5	4	6	4
F3	9	Mother	F	3	4	4	4	4
F3	7	Mother	F	3	4	4	4	4
F4	6	Mother	M	2	5	3	4	5
F4	7	Mother	M	2	4	4	5	5
(F5)*	9	Parents	M	5	5	5	4	
F6	8	Parents and sister	M	3	4	4	4	4
F7	11	Aunt, grandpa etc. (big mix)	M	4	4	4	4,5	5
<b>Average</b>					<b>4,375</b>	<b>4</b>		<b>4,375</b>

\* participant who did not answer seriously and walked away before finishing the questions and is therefore not taken

	Age	Maakt Casper het schilderij leuker	Zou je willen dat Casper zingt	Waarover vertellen	Casper nog meer doen?	Bespreken met ouders	
F1	10		kleine stukjes	Hoe geschilderd, technieken, de mensen	Om de mensen heen dansen	X	
F1	7	Ja leuker	Kleine stukjes	Hoe geschilderd, technieken, de mensen	Op het schilderij lopen	X	
F2	6	Ja, weet nu waar en hoe gemaakt	Ja	x	x	X	
F2	9	Ja, weet nu waar en hoe gemaakt	Ja als ie kan zingen	Waar in Delft het geschilderd is	x	X	
F3	7		ja	x	x	X	
F3	9		Ja	x	x	X	
F4	7		Ja	Huis op achtergrond, mensen, wat er buiten het schilderij zit	Op de muur klimmen, spelen met de hond	Moeder vroeg ergens naar en toen werd er naar gezocht en het besproken	Moeder was ook erg enthustiasit over het idee
F4	6	Vond het verhaal nog wel een beetje voor oude mensen	Ja	De kerk, Het huis op de achtergrond de schilder zelf	Op de punt van de kerk zitten, klimmen in de boom, aan de schoenen krabben	Moeder vroeg ergens naar en toen werd er naar gezocht en het besproken	
F5*	9	<i>Zei wel dat het mooier was, maar had duidelijk geen zin om mee te doen, antwoorde niet serieus en snapte de vraag niet. Is uiteindelijk weg gelopen voor alle vragen beantwoord waren</i>	<i>Weet niet ( fragment niet geluisterd want was in een slechte bui)</i>	x	x	x	* participant who did not answer seriously and walked away and is therefore not taken into account.
F6	8	Trucje over de diepte leren is leuk	Ja	x	x	x	
F7	11	lets interessanter. Kende het Trucje al wel, maar z'n moeder geloofde hem niet.	Stem is grappig	Waarom de kleding vroeger zo zwart was, en meer over de kerk vertellen (Zondag is hij dicht dus kan je er niet naar binnen)	Grappen maken		

# Appendix D; Concept Choice

## D.1 Arguments for concept ratings

This appendix shows the arguments and thought process for the scores provided to each concept, for the criteria as discussed in Chapter 8.

In regards to the requirements, Design goal and interaction vision each of the three concepts has its pros and cons, and although all of them should fulfil the demands and align to the design goal, some will do this better than others.

The first step in comparing the three concepts, is to analyse the pros and cons for each concept on its own, and see what are its strengths and shortcomings.

### *Courtyard canvas:*

In short; courtyard canvas is a creative group activity where visitors get to use ideas and knowledge they picked up during the exhibition to create their own Pieter de Hooch style courtyard.

For this activity the strengths are as followed:

- Active experience where visitors get to do something themselves
- A clear opportunity to work together and do something social
- A dynamic experience; the activity is different and unique for everyone because visitors influence and change what happens. They shape the activity themselves.
- Multiple outcomes; There are multiple different

ways to decorate the courtyard and due to the many different elements, the outcome is different (almost) every time.

- Possibility to do it multiple times, with a different goal and experience each time
- Opportunity to learn about the elements and trademarks of Pieter de Hooch's art.

Its short coming are:

- Momentary fun; due to the organisation of the exhibition, the activity can only be placed at the beginning or end of exhibition, and is only a moment of fun in the scale of the 1 -1,5 hour exhibition round.
- Only slightly tied in to the exhibition; the activity is connected to the exhibition through the topic, but the exhibition does, at the moment, not build up to the activity, for example through emphasizing information relevant to the activity.
- Rather low capacity; Although families are not the biggest group to come visit, only one family can take part the experience at the same time, unless multiple "courtyards" are made.
- Elements and panels could get damaged through use.

### *Visitor Artwork*

Visitor artwork is an activity where visitors focus on one of the paintings from the exhibition and work on completing the mosaic version of it.

The strengths of this activity are:

- An opportunity to learn about/ experience the

importance of colour due to the absence of all the details

- A fun puzzle for everyone to take part in, and which could also be entertaining for non-family visitors
- An activity where one can work together, help each other and interact in a social manner.
- Activity can be re-set; When the mosaic is filled up the museum can take down all the pieces and visitors can once again make the artwork
- Active experience where visitors get to do something themselves

Its short comings are:

- Momentary fun; due to the organisation of the exhibition, the activity can only be placed at the beginning or end of exhibition, and is only a moment of fun in the scale of the 1 -1,5 hour exhibition round.
- Only lightly tied in to the exhibition; the activity is connected to the exhibition through the topic, but the exhibition does, at the moment, not build up to the activity, for example through emphasizing information relevant to the activity.
- Rather low capacity; Although families are not the biggest group to come visit, only one family can take part the experience at the same time, unless multiple "courtyards" are made.
- Fool proof level not the highest; Stones could get lost or break

### *Casper the Museum Cat*

Casper is an audio (or multimedia) tour guide designed specifically for children, which guides them through the museum and translates the information and facts into stories and explanations understandable and enjoyable for them.

Its strengths are:

- Fun throughout the exhibition; Casper provides and interesting experience for the entirety of the exhibition
- Direct interaction with the exhibition art; Throughout the exhibition children are brought into contact with the art through Casper
- High capacity
- A fun and playful character for visitors to connect to
- Opportunity to pick up a lot of different knowledge
- Rather fool proof; De audiotour device is sturdy and difficult to break

Its shortcomings are:

- Not a very social experience; Some social interaction is motivated/nudged for in the idea, but mostly a more personal experience
- Not very active; Visitors mostly just listen to the tour.
- Other than the playful character, the experience is a little low on playfulness

# Appendix E; Further Development

## E.1 Casper's introductions, goodbyes and example explanations

### *First introduction at home (video form)*

Oh Hi! It's nice to see you. I'm Casper the Cat, and I live in Museum Prinsenhof Delft. I hear you guys are coming over to visit soon. That is really great, because I could use your help with something. Would you guys be willing to help me out when you come by? It would really mean a lot. Well, if you do, just tell the nice people at the information desk you have come to help me. She will know just how to find me. See you soon.

### *First introduction at the museum (video form)*

Hello! Welcome to the museum. I'm Casper, and I'm very happy to see you guys want to help out. You see, I want to be a painter! The first Painting Cat in the world. And as I was walking through the new exhibition of Pieter de Hooch, I fell in love with his paintings. Not I would really love to make a painting just like his. The problem is, I can't find a place which looks like the locations he painted in his art. Do you think you guys could help me build one? Yes? Great! Before we start building one though, I should probably show you around the exhibition first. There's a lot of information there which could be

useful. I'll show you all the nicest places, the most important details, and some funny things other people might not see. You won't be able to see me, though. There's so many people in those rooms, I better hide. But from my safe hiding spot, I'll tell you all you know. Just find the paw prints I left behind and you'll know the paintings I want to talk about. I'll see you guys inside!

### *Portrait "A Dutch Family" (audio file)*

This one is interesting! It's the only portrait Pieter de Hooch ever made in Delft. We know it's made in Delft because in the back you can see Delft's New Church. It still stands on the market square today. This painting also shows one of Pieter's trademarks; open windows and doors. Here we have one in the back. Through it you can see the garden behind the courtyard. It's a neat trick which gives the painting depth, by making it seem like it keeps going further back. But what I find really funny about this painting is the guy at the bottom of the stairs. It looks like he forgot to button his shirt up all the way! I wonder why? Maybe it has become too small? Or maybe he overslept? What do you think the reason is?



A Dutch Family (Wikimedia commons & Pieter de Hooch, 1662)



A Mother's Duty (Wikimedia Commons & Pieter de Hooch, 1658)

### *"A Mother's Duty" song example (audio file)*

I wrote a song about this painting! You want to hear it?

Once it's over and you want to hear the story behind the painting, you just click button X.

Oh, look here, isn't that nice,  
A mother getting rid of her daughter's lice  
Carefully weaving through her daughter's hair  
The perfect picture of a mother's care  
Carefully and gently she does her part  
All from the love, in a mother's heart  
And in the back, nice and bright  
An open window letting in the light  
In their house, cozy and warm  
A picture of a time long gone



Man Reading a letter to a woman (Wikimedia commons & Pieter de Hooch, 1674)

### *Painting example "Man reading a letter to a woman"*

Well will you look at that. It looks almost like a photo! Doesn't it just look like you could feel the fabric on the dress? It looks so cozy and soft. And to think he did make it look so much like fabric, just by using different colours of paint. It's amazing. But why does Pieter always have paint to tile floors? Didn't he realize how cold those are to the touch? It wouldn't be comfortable to walk in that room at all! But those people seem to be enjoying themselves. I wonder what was in that letter he is reading...? What do you think the letter contains?

### *Courtyard Canvas explanation (video format)*

Alright, here we are! This is where we can go and build a courtyard, just like the ones Pieter Painted. We have a lot of different props and pieces which could be used to make this new courtyard, in his style. And you can choose which things you think would look good in the courtyard, and my painting. And don't forget; All of Pieter's paintings have people on them, doing work, or having fun. You can be a part of the painting as well! When you guys are done, I'll save your example by taking a picture of it, of course you can take one as well.

### *Round off After Courtyard Canvas*

Wow! That's amazing. I'm sure this will become a great painting. Thank you guys so much for helping out I couldn't have done it without you. I've already taken a picture to save your courtyard, and don't forget to do so yourself. If you could maybe return all the pieces back to their designated place, that would be really great.

I'm going to go back to roaming through the museum, and I hope you'll come visit us again some time.

Bye.

## E.2 Decisions on hooks and grips

One of the elements for Courtyard canvas, would be to be able to interchange the vista of the painting (playing into one of Pieter de Hooch's main trademarks), by taking the original view through the vista out of the back drop, and providing a few panels with vista options to the visitors (one of the options being the original). The question however is, how would this panel stay where it is supposed to. It would, in theory, be possible to fit the panel in like a puzzle piece; but this would have a risk of the panel just falling out.

The panels could easily be made from plastic and painted or covered with a sticker, which would make it a light and easy to lift panel. This would open up possibilities about what form of connections to use.

Easy to use options are:

Magnets

Velcro

Hooks

Hooks are simple and would work quite well, but could have a slightly higher risk of kids hurting themselves, than the others. The hook would be placed on the removable wall, while the panel would get a small ring or loop connected to it, so the panel can be hung from the wall. It could also use the system as many wall clocks, where a space is cut out of the material of the object to be suspended. This allows for the hook to hold the item.

Velcro has the disadvantage of very noticeable wear

and tear. Each time the courtyard would be used, the Velcro would lose a bit of its quality and it could be that by the end of the 4 months the Velcro would not be strong enough to hold up the panel anymore. Which would have a high risk of the panel falling out and hurting someone. Furthermore, connecting the Velcro to the walls could be problematic.

Magnets would be a good option which would have low risk of kids hurting themselves, and wears out significantly less than Velcro does. It would however require quite a strong magnet to hold up the panel. Furthermore, if the panel would fit perfectly in the cut out in the wall, and is pulled back by magnets, it would require an additional handle or such needing to be added in order to get the panel out.

Although the additional handle, or perhaps cut out, to get a better grip on the panel to take it out again is one which plagues all methods of connection, it is the strongest for the method of magnets.

Considering these 3 options, simple but well-rounded hooks would probably be the best option, as it would be the easiest to implement, and the easiest to use for visitors. It would also require only a small change to accompany for a grip so that visitors can lift the panel of the wall once more.

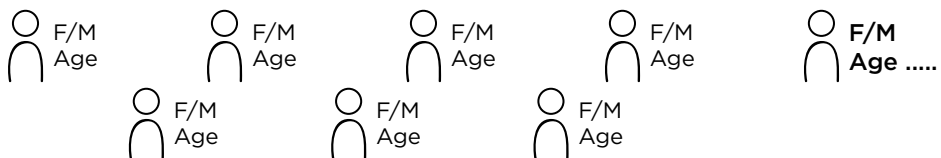
# Appendix F; Verification

## F.1 Observation and interview sheets.

This appendix shows the observation and interview sheets as used in during the final verification tests of the concept.

### Observation sheet

Family #



Activity time

Approach

# Times someone was distracted

Social interaction

1 2 3 4 5

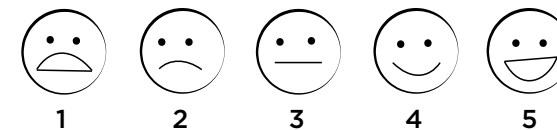
Items chosen (which and how many)

Take photo of the finished Courtyard!

Picture number(s)

### Interview sheet sheet

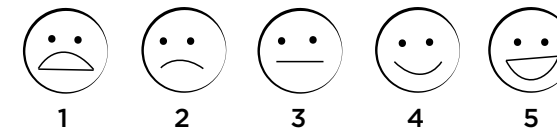
Hoe leuk vonden jullie de activiteit?



1 2 3 4 5

Waarom?

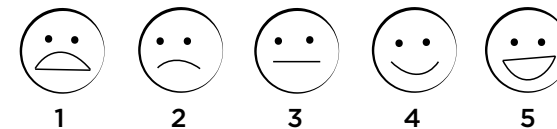
Hoe sociaal vond je de activiteit? (heb je veel met de rest gepraat of gelachen etc.)



1 2 3 4 5

Waarom?

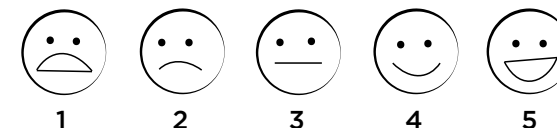
Hoe leerzaam vond je de activiteit?



1 2 3 4 5

Waarom?

Hoe speels vond je de activiteit?



1 2 3 4 5

Waarom?



Wat vond je van de ervaring?

Vind je dat de Activiteit bij het schilderij Past?

.....

Vind je dat je genoeg keuze had met de objecten? Was er genoeg varietie?

.....

Wat vond je het leukste?

.....

Is je iets bijzonders opgevallen aan de activiteit? (en zo ja wat?)

.....

Wat vond je van Casper en zijn verhaal (verhaal waarom hij bezig is)?

.....

Heb je suggesties om het nog te verbeteren?

## F.2 Observations

This appendix presents all observations from the final verification test.

Family	Age of kids	Activity time				Approach	Amount of distractions during video watching, painting explanation and activity	
1	8	05:39:00	02:37:00	04:00:00		Look at every piece first and try to see what everything is. Father gives the first chance to the daughter, but she wants him to start with the first piece	Parent distracted once, when a third courtyard is built	1
3	6,7,10,10	04:05:00	02:15:00	02:29:00		First look at everything, parents give advice, but it is an all in activity, parents really take apart, and really try to make pieces belong together.	During the last courtyard, when kids let Parents take the lead in building, 2 youngest seem a bit distracted	2
4	8,6,6	04:42:00	00:20:00		Only small changes	Daughters start building, parents watch by, calm approach, daughters ask for advice from parents	Youngest daughter slowly gets a bit distracted in the building process	1
5	6,7	05:45:00	06:19:00			Analyze every piece first, parents mostly watch at the start, but slowly get involved and try to create a system, to help the kids and try to avoid arguments	Daughter distracted by shopper during building, and the young boy was slightly uninterested in the painting, need some encouragement from parents	2
6	6,8	09:44:00	04:25:00	07:25:00		Start immediately with building, Mom mostly gives advice and watches. Disagreements exist between the brothers building the first one, so mom decides to let each brother make their own courtyard later	No distractions, though the mom was more a spectator/advice giver	0
7	6	08:50:00				Just starts building and placing things, mom tries to give advice, or ask questions to trigger the daughter.	No distractions, but the mom was mostly advice giver, and helped only ever so slightly	0
8	9,11	12:17:00	02:00:00	02:00:00	Lot of discussion the first time. Mom gave each kid 2 minutes to make their own courtyard	First take a look at all the objects. Daughters work while parents mostly just observe	Dad was distracted 3 times by the decorations and information in the room, he did not actively take part in the activity.	3
		<b>Average time:</b>		<b>04:59</b>				<b>1,2</b>

Social interaction (observation)	Items chosen Min	Items chosen (Max)	Reactions to Casper's encouragements	comments	
4	12	22	Forgot....	Different vista in the different versions	Forgot the Casper videos around activity and encouragements
5	18	30	confused surprised though only one kids, seemed to have heard	Different vista in the different versions	
3	19	22	too busy to notice		
4	22	24	Seemed surprised, tried to look at the laptop screen to see Casper, but did react to the comment	Don't use the vista first time, but place a puppet behind it to make their own vista view	
4	25	28	Slightly surprised at first, but do try to go into it	First they tried to make their own vista by placing a puppet behind the opening, but eventually used the provided vistas	
4	26	26			Forgot Casper closing and encouragements
3.5	13	16	Laugh at Casper's encouragement but don't use it	They really try to use the different sized puppets to work with the depth and perspective	Family was so fast with cleaning up the courtyard, I didn't have time for casper's closing comments
<b>3,75</b>	<b>21</b>	<b>23,2</b>			

## F.3 Rating questions

This appendix presents all rating question results from the final verification test.

Family	Family Member	Activity Fun level	Why	Activity social level	Why
1	1	4	Goal of activity not really clear; could use some more context of why you are doing it/ what you want to achieve	4	Family activity, but wanted daughter to think for herself as well, so tried not to say too much
	2	3		4	
3	1	4	Making it yourself, making it up yourself, doing it together, group activity, little fntatsy, creating a story, "Story cubes"	5	Just the working together. In the big version, it would really feel like being in that time
	2	4		5	
	3	4		5	
	4	4		5	
	5	4		5	
	6	4		5	
4	1	4	The dragging and making in the finl version, would be great. It makes it physical and tangible	4	It's fun as a parents to just watch as kids play, and see what happens when you give advice.
	2	4		4	
	3	4		4	
	4	4		4	
	5	5		4	
5	1	3	Looking for details in the painting makes you look and search more. Kind of like a puzzle. The mascot like character is very nice	4	( kids no longer had attention to answer every question) As a parent the watching is fun, but for the kids it really is something to work together on.
	2	3		4	
	3	4			
	4	4			
6	1	3	It was too short, should have been longer	3	There was teamwork but also disagreements between the siblings
	2	4		3	
	3	4		5	
7	1	4	Video and the cat are fun, building is fun	4	Mom had a lot of ideas, there was a nice "wisselwerking"
	2	5		4	
8	1	5	Making thing, setting it up, working together and communicating/negotiating	4	Some disagreements, but a lot of communications. Sometimes parents had their input as well
	2	5		5	
	3				
	4				
Averages		4		4,272723	

Activity "Leerzaam" level	Why	Activity Playfulness level	Why
2 2	Not that much yet connected to the information from Casper, except the vista (might be because of a lack of information with only 1 painting)	4 3	Could use more variety, puppets very similar, just different sizes
3 3 3 3 3 3	Would probably be a 4 if there were more paintings and thus more explanations and information	5 5 5 5 5	
3 3 3 4 4	Did already learn stuff about it at school. Discovering the things about different sizes and perspective	4 5 5 5 5	
2 3 4	Kids figured out not every painting is as nice, but now knows where it is made. Parents think the tour can go a little more into the why's and the answers of things, not just an open question at the end, but also the answer.	4 4	Really looking at the art with the kids, building is really fun and the videos with the mascots really makes a connection/link between the activity and the information
3 5 5	Their own opinion was that they learned a lot, mother thinks it could be better. Mostly they learned that there can be funny elements in paintings	5 5	The element of building and getting to do something. Would be nice to see some more tiny exercises with the paintings
2 3	Learned how to build (usually not very good at that, but doesn't remember a lot from the painting)	3 4	It was fun to build, the painting was less playful
4 5	It's something that almost everyone knows or can understand. Though it would be nice to know more of what time period it's from	5 5	You can mess around

Family scores are not connected to one specific person, and are only separated to show the spread in ratings. No conclusions can be drawn on which family member (parent or kid) has a certain opinion

## F.4 Open questions

This appendix presents all rating question results from the final verification test.

Family	What did you think?	What did you like the most?	What did you think of Casper and his story?	Do you think the activity fits the painting and its style?
1	Would like to hear some more about the painting technique	Making the courtyard, most fun to do	Father is of opinion that Casper is somewhat childish, daughter agrees only after Father suggests it	Quite well
3	fun, Leeraam, working together, gezellig, challenging, creative	Building it yourself, and making it up yourself. In final version; The immersion (sympathizing) in that time, when you have the clothes. Would love to get the picture of the painting"	Leerzaam, very nice, lot of fun	Yes, you got to decide on the vistas
4	Doing things is fun, nice to work together. Fun that it was placed under a cloth, raises curiosity.	Video, usually not allowed in a museum. Bit odd the cat talks, cats can't talk. He should just meow and have the text be in subtitles	Fun. Looking when Casper mentions something is good to follow for parents, but would be easier for kids if they were somehow emphasized, with a light or something.	Yes, definitely looks similar
5	Fun, building is the best part Nice to go into detail, maybe give kids a list of things to find in the paintings	Kid said building was the most fun, but earlier said the building was a 1 on the smiley scale, and Casper a 5.	Casper is very nice	Yes, definitely similar scenes
6	Fun. Should have been longer (explanation) so that you know more	A lot was fun, the combination of learning and doing	Quite fun, would like to know more about Casper himself. Painting exercise maybe?	Yes, but it could use some more matching items (stairs or something)
7	The building part is what mostly sticks with you	The doing part	Quite nicely told, could be more animated	Somewhat. The puppets match the painting
8	Fun	The making and setting the scene (indelen)	Fun story, bit young for them, but the cat was quite fun "Wel leuk"	Yeah. The background was kind of similar/ Maybe use the context of a painting being orchestrated and organized by the painter, and use that as the goal of the assignment.

Did you have enough choice of objects?	Did something special catch your attention?	Any more suggestions for improvement?	
It was good (daughter), Father thinks there could be some more things to be placed on the table, like fruit or such.	Play mobil helmet with computer was confusing	Put up a camera so you can get a picture of your version of the painting (with PDH's autograph?) either printed or sent to you	
Nice variety, use the smaller and bigger versions to create depth. Good amount, more would be too much and less would make it a smaller choice.	The talking cat. The diamonds, don't really belong there, but by including them you can make your own story.	Nope, it's great	
Was enough, some more overview over the pieces would be nice though (now in the box was a bit chaotic)	not a lot of info on the painter, would like to hear some more about him	The painting (coincidentally) looks like the education room ( stairs, and floor). Maybe you can link the things back to the museum and its rooms; for example the vista's of present day. Maybe have colouring books of the paintings	
A painting to put up in the courtyards, more tiles (tile floors), no helmet with computer things, and maybe some food for on the table	Play Mobil props and the helmet with computer thing	Really give an assignment or challenge would be nice	
Something for in the air (birds or so) grass or other greenery. Cape to put on yourself	The big ribbons on the guy's shoes	extra small exercises in between such as how long can you stand still for the painting	
yeah, it was good	The cats	More animation in Casper, would prefer to put puppets in the final version, over being in it herself (daughter)	
Could use some more variety in bigger objects other than the table, such as a gate or so	the Sci-Fi thing	Have some more variety in the puppets, even if you are part of the painting as well. Making the people in the painting really do something (interactions and such), maybe some more nature elements	

# Appendix G; Final Design

## G.1 Further examples of challenges

Create a family having a BBQ outside in the summer. *Imagine what would happen if the food got burnt*

Show a group of friends having a drink together on the terrace. *Imagine what could be the reason for their meeting*

Re-enact your last family reunion. *Imagine a relative doing something silly or embarrassing.*

Can you show what happens when a musician plays while drunk at a party? *Imagine what song he would play.*

Show people cleaning up, the morning after a big summer party. *Imagine what happened the night before.*

Show a game night with your friends. *Imagine what would happen if someone would cheat.*

Show a group of friends having a drinking game together. *Imagine the stories that could come to light during the game.*

Recreate a scene of parents playing with their children. *Imagine who would be the best at their*

Create a scene where the family dog ran away, and the family has to catch it. *Imagine what could have made it run away.*

Make whatever you would like. *Imagine your own story to tell.*



Museum Prinsenhof Delft

Delft University of Technology, Faculty of Industrial  
Design Engineering

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Author: Irene van Houten  
Chair: Arnold Vermeeren  
Mentor: Erik Jepma  
Company Mentor: Diana Pereira