



PLAY WITH YOUR HOOD

**Creating mobile game challenges
to foster social interactions in
ethnically diverse neighbourhoods**

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BOOTING UP

ACKNOWLEDGMENTS

I want to start off by thanking all the people I met on the street throughout my field research who I will probably never ever see again. Thank you for your time. I hope you're having a great day wherever you are!

Up next, my awesome supervisory team. I would first like to thank the man who made it all possible, Francisco Xavier Fonseca. Who knows what I would be doing if he did not give me the opportunity to hop on board of his PhD research on Social Cohesion, which is one tough concept to grasp. I hope to have helped you out if at least a bit with my insights and middle-of-the-night epiphanies. Niko Vegt, who pointed me towards countless research and ideation methods to help me make sense of the chaos, and his in-depth knowledge of games and gamification. Lastly, Ir. Marc Tassoul, who always asked the right questions and kept me inspired throughout the project. Thank you for the pleasant talks about music and the firm kicks in the butt I so desperately needed at times.

To all my friends who kept me company throughout my struggles. Omar and Sergej, thanks for making the long days at IO fun. Nino, Omy and Chrizzle, thanks for the friendship and gaming nights throughout our design study years (#FFF tho). Elsemieke, thank you for the karamel koffies and your friendship. Andrew, for our countless lunches and dinners. Ale, for being the friend I am both the least and most focused with. Lastly, my Hermanos Criminalos: Maarten, Luke and especially Ray. Thank you for helping me out with that tutoring brain of yours and your kind heart.

To my loving family. Mom and dad. You really are the freaking best. Thank you for making me believe in myself. To my brother, who has the ability to make me laugh and think and reflect like no other can. Lastly, for the one who has been there for me since I started growing teeth. My sister. Thank you for always lifting me back up from my deepest pits and being there for me no matter what. Los quiero mucho!

EXECUTIVE SUMMARY

Ethnically diverse neighbourhoods often lack in social cohesion. This means that people of different ethnic backgrounds often do not mingle with people outside their cultural circle, which leads into a poor public social experience. PhD student Francisco Xavier Fonseca has been developing a localized mobile game aimed at teenagers called Secrets of the South to fix this. The aim of this game is to improve social cohesion in ethnically diverse neighbourhoods by having players spend more time in public spaces while completing game challenges. This graduation project aims to create content for Secrets of the South to foster social interaction in ethnically diverse neighbourhoods.

Research

The first activity that was done is explorative research on Hillesluis, an ethnically diverse neighbourhood in Rotterdam South with perceived low social cohesion. Insights into the perception of this neighbourhood were gathered through informal interviews with residents in public spaces. A Rotterdam police officer was interviewed to get a top-down view of the situation of Hillesluis. The results of these interviews were compared with literature on similar neighbourhoods.

Design goal

With the insights gathered through the research, a design goal was formulated: "To create a social and exciting public spaces experience for teenagers of Hillesluis through Secrets of the South gameplay that encourages social interaction by engaging with the neighbourhood and creating and exposing common ground between players". To complement this design goal and make it easier to translate into a game experience, two transfer effects were created: 1. "Having joint experiences with fellow players and non-players" and 2. "Exchanging information face to face with fellow players and non-players"

Ideation

A creative session was carried out to kick off the ideation phase. Throughout this phase, numerous gameplay ideas were created and iterated on, culminating in a set of challenges and other game mechanics for Secrets of the South presented as smartphone screenshots.

Secrets of the South

Secrets of the South is a localized mobile game where players will try to conquer spots in their neighbourhood by completing various objectives.

Gameplay

Players will form squads of up to 4 people. They will then choose a spot to navigate to. Once at the spot, they will have to work together to find a handful of QR codes hidden in the environment. Once these have been found, a handful of challenges will be available to them. Players will have to interact with infrastructure and strangers to complete these challenges. Once all challenges have been completed, the players will get a chance to prove how well they know the spot by answering a series of timed questions. The squad that outperforms all other squads in the test will have conquered that spot.

Evaluation

To evaluate the game, the collection of screenshots was made into paper prototypes. 8 participants between the ages of 20 and 29 were recruited to playtest the game at a park in Schilderswijk, which is an ethnically diverse neighbourhood in the Hague. Twice the game was playtested, with 4 participants each time. All participants were interviewed afterwards. The interviews were transcribed, turned into statement cards and clustered and film footage of the tests was reviewed. The statement cards film footage yielded rich insights on how to improve the game. The concept was revised and updated with the feedback.

A list of recommendations was made to further develop Secrets of the South.

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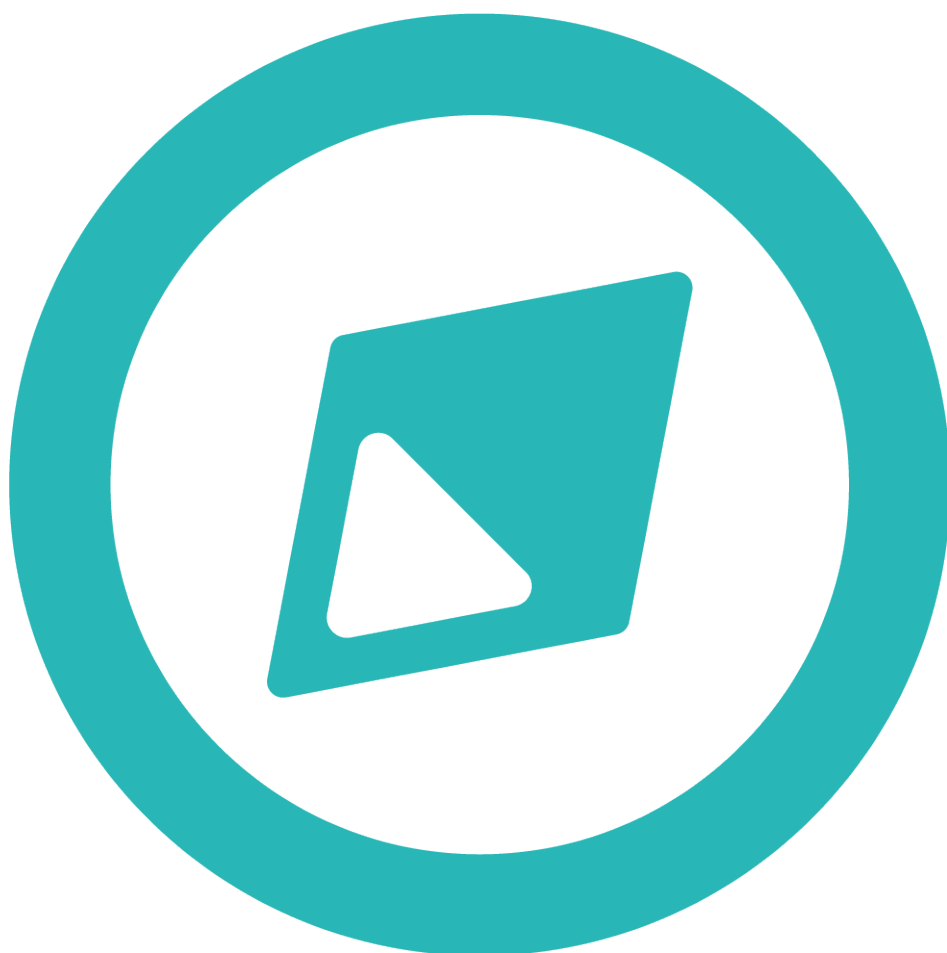
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LOADING REPORT

I. INTRODUCTION

In this report you will find the research, process and results of my graduation project titled

“Play With Your Hood: Creating mobile game challenges to foster social interactions in ethnically diverse neighbourhoods”.

The goal of this project is to understand the perception and problems of ethnically diverse neighbourhoods according to their residents. The insights gathered through explorative research will be turned in gameplay content for a localized mobile game currently under development called Secrets of the South. This game should foster social interaction between residents of ethnically diverse neighbourhoods to improve social cohesion in the long run.

2. BACKGROUND

THE STARTING POINT OF THE PROJECT

CONTENT

- 2.1 Rotterdam's diversity problem
- 2.2 Improving social life
- 2.3 Research background
- 2.4 Project goal
- 2.5 Research Questions

In this chapter, the starting point of this project is presented. The problem that I had to solve is introduced, followed by the angle that was taken to solve it. The project goal is then presented, followed by the research questions that ultimately lead to the fulfillment of this goal.



2.1 Rotterdam's diversity problem

Rotterdam is one of the most important cities for the Netherlands for many reasons. It is an economic center for the country, it houses the largest port of Europe, and has a sprawling art and culture scene. Since its rapid urban modernization in the 1980's, it has seen a massive influx of people from all over the world. Currently, Rotterdam is made up by over 50% of immigrants (CBS, 2017). This has made Rotterdam a very culturally diverse city. In certain parts of the city, there are more people with origins from outside the Netherlands than there are Dutch people, with their own unique social and cultural backgrounds. Feijenoord, a district in Rotterdam, is one such zone, with 69% of its population being non-Dutch (Wijkprofiel, 2018). It is noteworthy that 4 of the 8 neighbourhoods in Feijenoord have been consistently ranked as some of the most problematic in the Netherlands because of their high crime rate (GGD Rotterdam, 2010). It is in the best interest of both the government and the residents to change this situation in order to make the place safer and more enjoyable for everyone.

2.2 Improving social life

A way to lower crime rates in urban areas is by making public spaces more lively and connecting people to one another (Social City, 2006). A way to improve this, is by improving social cohesion between residents (Amin, 2002). However, social cohesion is a construct too big and abstract to tackle, let alone within the scope of this project. Instead, we will aim to foster social interactions between people, which is a key element for social cohesion (see Chapter 3). To foster social interactions between strangers, we will first have to create and expose common ground between them. This creates understanding, empathy, and connection between people (Barnett et al., 1989; Kecskes & Zhang, 2009)

2.3 Research background

Research has shown that a way to connect people is to have collective goals and activities (Stokes, 1983). A well known example of reaching a common goal is by playing games together, be it with or against each other. In order for people to play a game, they need to know and understand its rules and goals, which, if stripped down, are the core components of a game (Vegt, 2018). This mutual understanding of rules to operate by greatly helps at grounding people to one another (Shami, N. S., Erickson, T., & Kellogg, W. A., 2011). With the rise of smartphones and accurate location-tracking technologies, we are seeing a wave of games that blend digital assets with real-world locations. Activities like geocaching and games like Pokemon Go have become available for people around the world. These types of games come with even greater potential of grounding people, because, as research has shown, sharing a physical space is often enough to create common ground between individuals (Kecskes & Zhang, 2009).

For the last two years, PhD researcher Xavier Fonseca has been researching how serious location-based digital games with a physical world aspect could spark real life social interactions between strangers in ethnically diverse neighbourhoods. Through literature and participatory design research, he has come up with a list of requirements for a game targeted at teenagers (12-16 years) that aims to foster social interactions between strangers (Fonseca, 2017). With this knowledge, he has been developing a serious location-based mobile game, called *Secrets of the South* (fig. 1). He chose to use smartphones as the platform for this game in order to give as many people as possible the opportunity to play and make it playable in an outdoors setting.

**Throughout the project, Secrets of the South will often be referred to as SotS.*

2.4 Project goal

This Master thesis project will serve as additional user-centered research on the work of Fonseca. The goal of the project is to create a set of challenges (e.g., quizzes, physical activities, scavenger hunts) for SotS to foster social interactions in ethnically diverse neighbourhoods. These should actively engage its users with other players, fellow residents, and their neighbourhood in meaningful ways to create common ground between and ultimately improve social cohesion. The game mechanics, possible physical assets, real world implications, and presentation graphics will be presented by the end of the project. These will be playtested, evaluated, and improved upon with end-user feedback.

2.5 Research Questions

There is a perception that public spaces with a high ethnic diversity often lack in social cohesion (e.g. Van der Meer & Tolsma, 2014). This perception, whether true or false, will be looked into. To improve social cohesion, the threshold to interact with people from different cultural and ethnic backgrounds should be lowered. In the process, we should engage them with their neighbourhood to make them feel connected to it. The questions that will guide the project are the following:

1. What is the general perception of the social situation in ethnically diverse neighbourhoods according to its residents and authority figures involved with them?

2. Who are the people that will have the biggest impact on social cohesion in ethnically diverse neighbourhoods?

3. Do joint mobile game experiences foster social interaction? If so, how?

4. Does information exchange in the designed mobile game foster social interaction in ethnically diverse neighbourhoods? If so, how?

5. To what extent can Secrets of the South gameplay foster social interaction in ethnically diverse neighbourhoods?

By answering these questions, we will understand the problems surrounding the social situation in ethnically diverse neighbourhoods. This will help us create design guidelines to for the creation of Secrets of the South challenges. These challenges will be presented as gameplay content in Fonseca's game Secrets of the South, which should ultimately foster social interactions between its end-users.

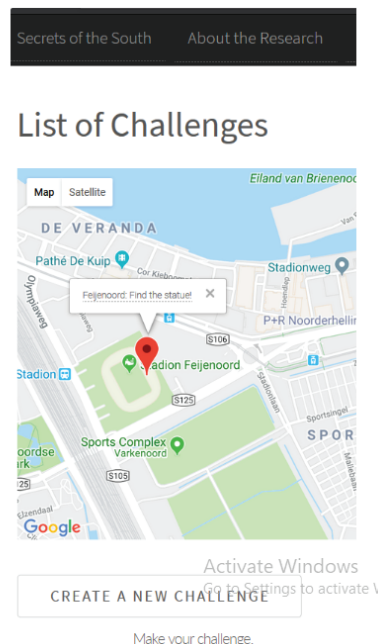
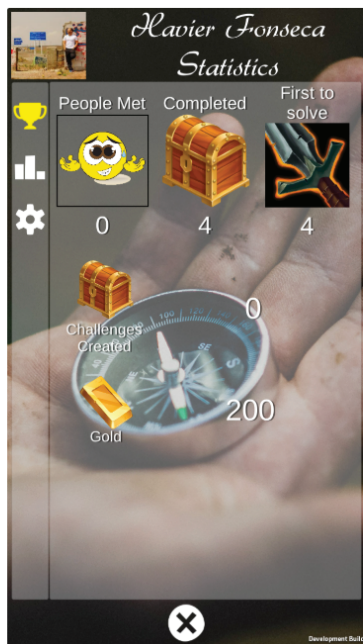
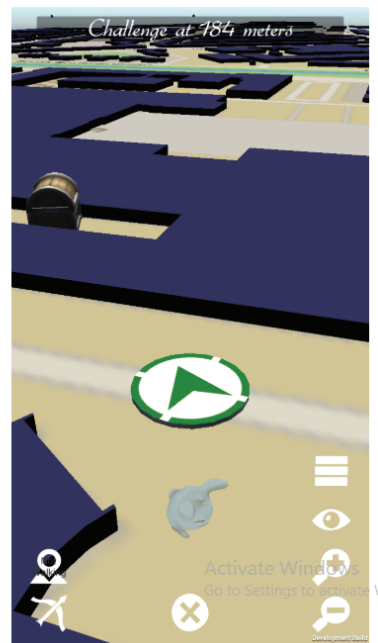
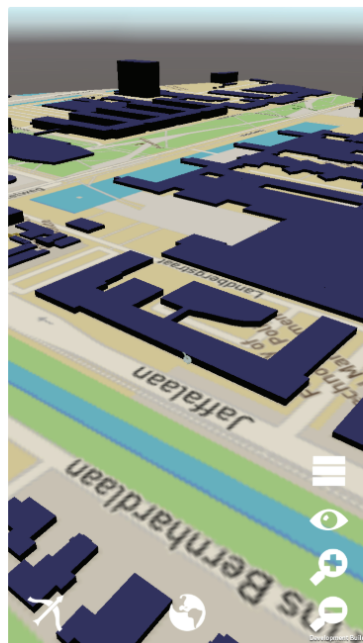
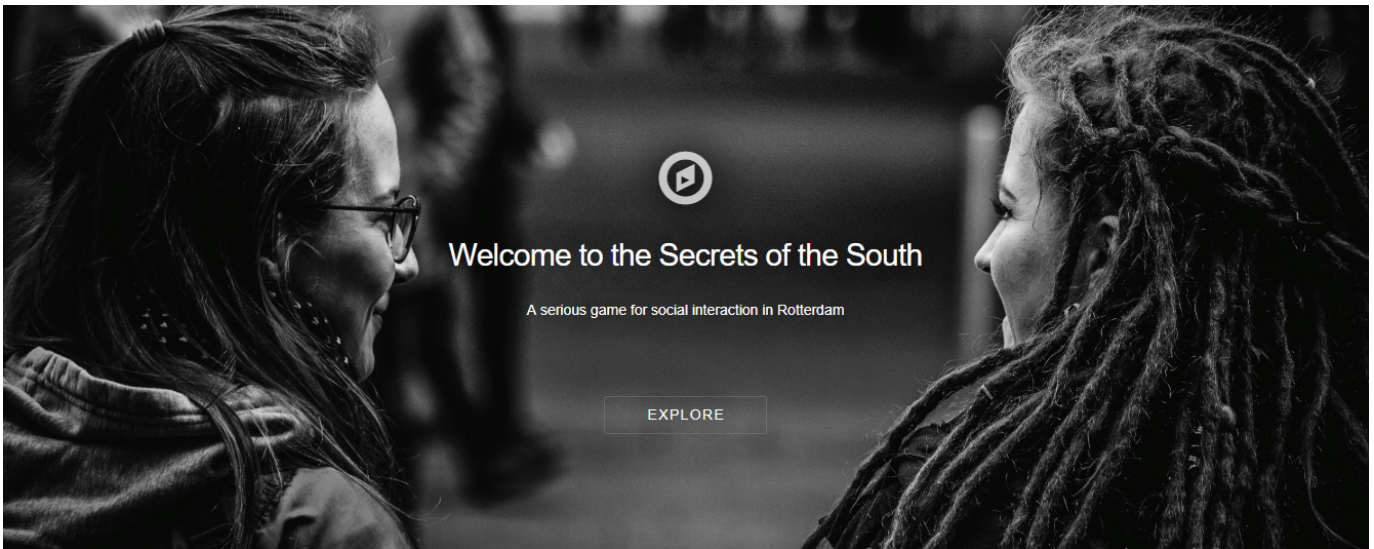


Fig. 1. A few selected screenshots of *Secrets of the South* at the time of starting the project. The first image is the welcome screen, followed by a navigation screen, a map showing locations containing challenges, and player statistics. The workflow of *Sots* as of version 1.7 can be found in Appendix A.

3. TERMINOLOGY

ALL THE BUZZWORDS YOU NEED TO KNOW

Social Cohesion

For this research, we will use the definition of John Bruhn (2009), which states that social cohesion is “an ongoing process of developing a community of shared values, challenges, and opportunities based on shared trust”. The higher social cohesion a group has, the more likely its members are to cooperate and work toward a common goal (Dyaram, L. & Kamalanabhan, T. J., 2005). Numerous studies have validated this claim up, finding that the more people can relate to one another, the more productive they will be and the more desire they will have to stay with their group (Evans & Dion, 1991). According to research (e.g. Barnett et al., 1989), the main influences of social cohesion are the similarity of a group’s members, the size of the group, the difficulty of entry to the group/community, and external threats (Carron & Spink, 1995; Gerard & Mathewson, 1966; Thompson & Rapkin, 1981). Even with this amount research, social cohesion is a phenomenon that is hard to measure objectively and consistently, especially within a limited scope and time frame (Friedkin, 2004). Because of these limitations, we will focus on a minor part of social cohesion, namely the social interaction between people and how this can be fostered.

Social interaction

Social interaction, for the context of this research, is defined as “a social exchange between two or more individuals” (Lumen Learning, 2018). Here, social exchange refers to both the literal exchange of goods (e.g. physical objects), and more intangible elements (e.g. smiling, or emotional support). It is because of this virtually unlimited range of possibilities of observable interactions, which can range from simple to complex, that we will focus on this rather than social cohesion (Bruhn, 2009). For this project, we will strive to create positive social interactions, which research has shown to contribute to subjective well-being and belonging (Sandstrom & Dunn, 2014).

Common Ground

In this research, common ground will be defined the mutual understanding among communicators about what is being discussed (Clark & Brennan, 1991). Before reaching common ground, the people involved go through a process called grounding, which is “the interactive process through which communicators exchange evidence in order to reach mutual understanding” (Clark & Wilkes-Gibbs, 1986). This process can be achieved through communication alone, but sharing a common space also helps greatly (Clark & Marshall, 1981). Research has shown that common ground is a key aspect for people to collaborate and interact in a positive manner (Kraut et al., 2002). On the flip side, if people who have to collaborate share a similar understanding of rules, procedures, timing, and the interaction at hand, grounding becomes easier (Convertino et al., 2009).

Serious Games

Games are activities that are primarily designed to entertain us. By establishing their governing goals and rules, they take us away from our everyday lives and transport us into their world (Vegt, 2018). Interesting enough, games often produce side effects that are transferred from the game world into the real world. For example, video games might improve one’s cognitive and reaction skills, and playing sports often provide us with health benefits (Strong et al., 2018). Serious games, on the other hand, aim primarily for these transfer effects. Abt (1970) says that serious games “have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement”. Their workings lie in merging none-entertaining purposes (e.g. educating, informing) with a game structure (Djaouti, Alvarez, & Jessel, 2011) to amuse players while actually educating them. It is because of this that we will use a serious game (SotS) to reach our goal of fostering social interaction in a playful manner.

TERMS OVERVIEW

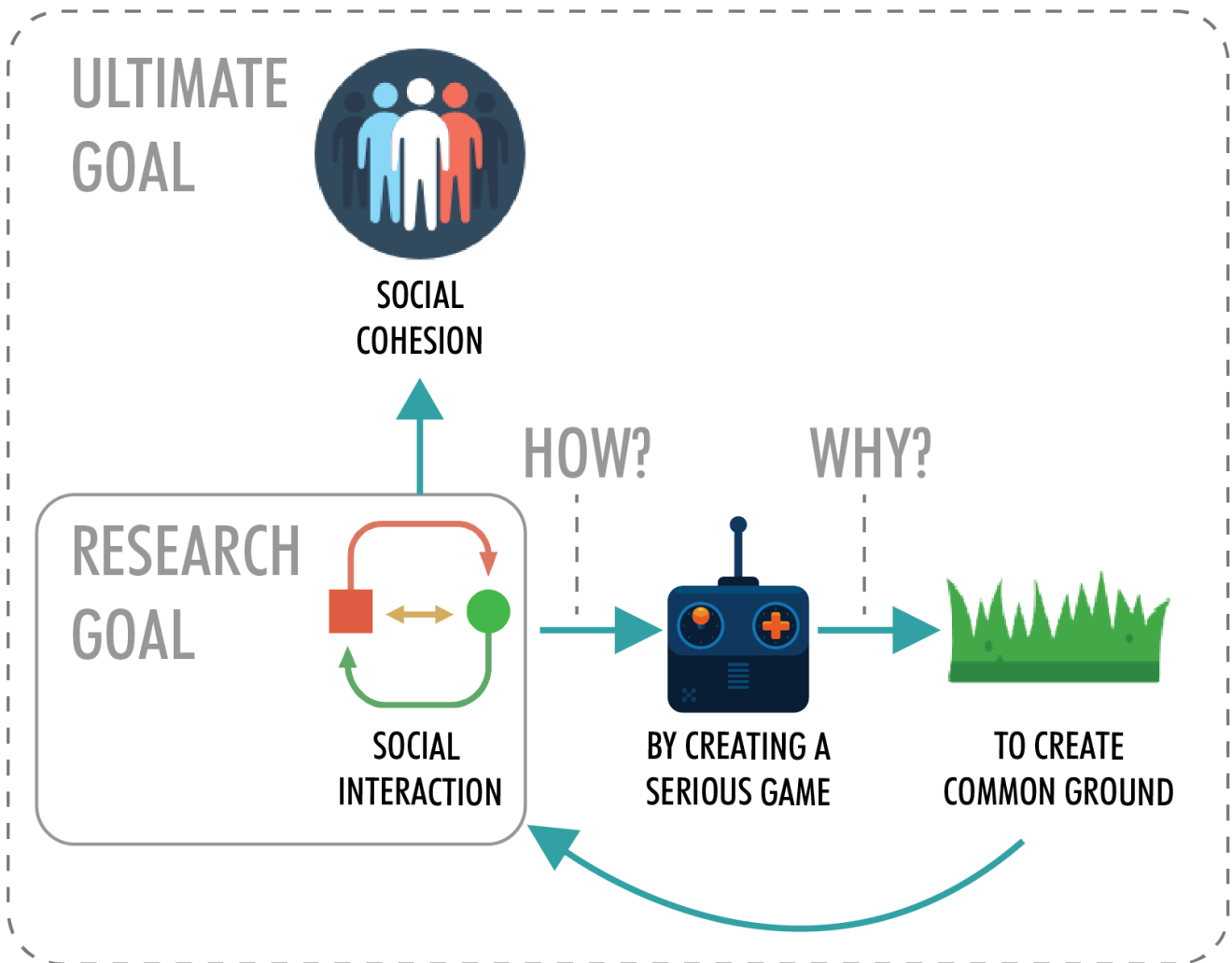


Fig. 2. The ultimate goal of this project is to improve social cohesion in culturally diverse neighbourhoods. To do so, we want to encourage social interaction between people in these neighbourhoods. How we will achieve this in our project is by creating content for a serious game (SotS) to create and expose common ground between them.

4. APPROACH

THE METHODS FOR A SUCCESSFUL DESIGN PROJECT

Qualitative Research

Qualitative and exploratory research will be done to get a real street-level understanding on how the end-users feel about their neighbourhood. Time will be spent on our focus area, observing the area and learning about it. From young teens to elderly people, the idea is to know all the good and bad feelings towards their neighbourhood, and how and where residents interact with it. These people will be talked to, because in the end, users are the experts of their own experience. Beside residents of our focus area, important actors like Police agents and the Stadsmarinier (see Chapter 5.5) will also be approached.

Tools: Interviews, observations, personas, customer journeys, statement cards

Literature Research and case studies

The results from the qualitative research will be compared to existing literature on the target group, similar neighbourhoods, and similar (mobile) games. Also, case studies of similar projects will be presented and discussed, and the lessons from them will be listed to inform our design goal.

Persuasive Game Design

Persuasive game design (PGD) is an approach to game design which bears much resemblance to the philosophy of serious game design (fig. 3).

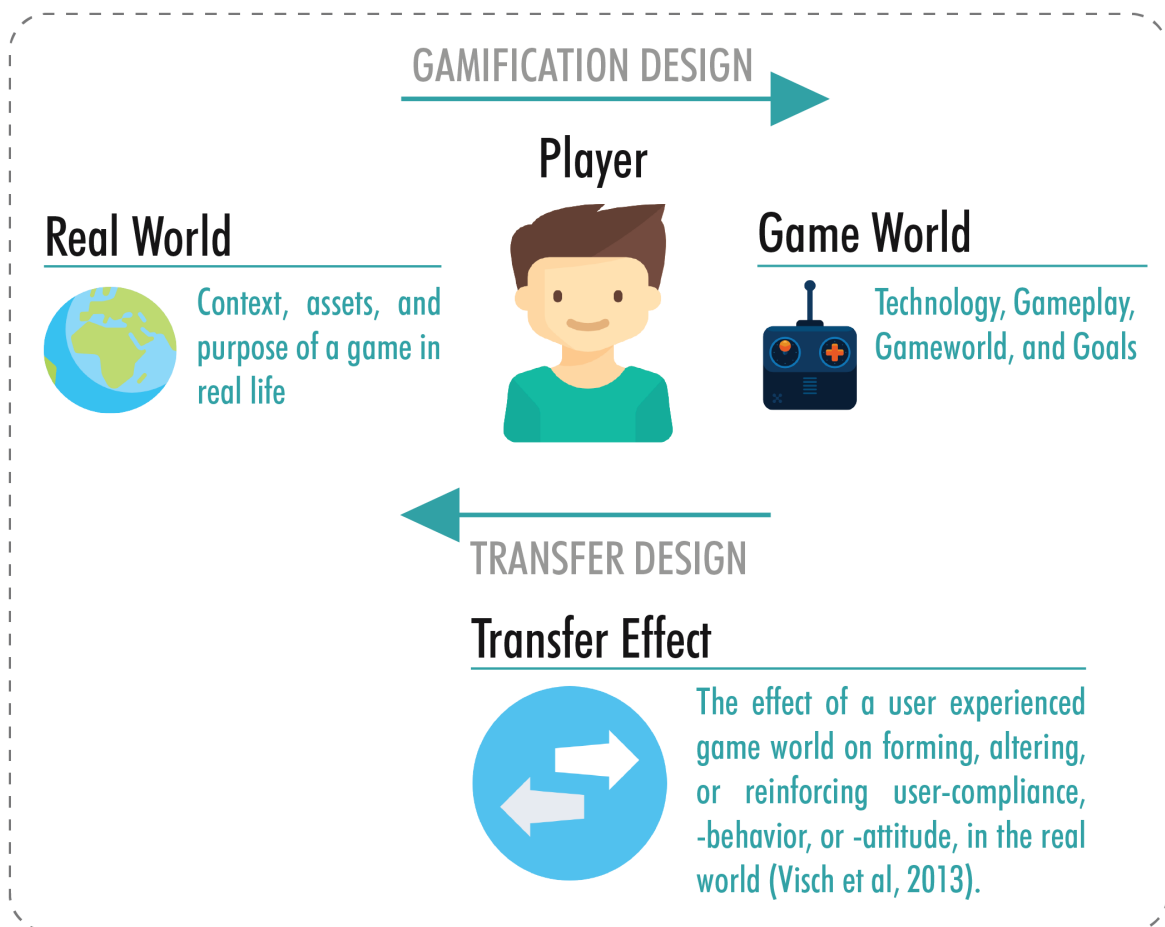


Fig. 3. An overview of the most important elements of Persuasive Game Design in relation to the players. The key element is to strike a good balance between keeping players in the real world, and transporting them into the game world

Prototyping

The difference is that, where most serious games aim to educate or teach players about certain topics, PGD aims to “form, alter, or reinforce user-compliance, -behavior, or -attitude, in the real world” (Visch et al, 2013). Also, serious games often teach their intended effect within their game world. PGD aims to blur the line between the game world and the real world to make the intended effect more direct. It is important to strike a balance between real and game. If the game stays too much in the real world, it might not be fun enough. Too game world oriented, then it may end up disconnected from reality. In both cases, the desired transfer effect would not be achieved (Vegt, 2018). This template of real world, game world, and the transfer effects between these will be the primary model to guide the design concept further down the line. This and other tools will be used to ideate on the design goal.

Tools: MDA model, morphology charts, sketching, creative sessions

The design ideas will be prototyped through different methods, depending on what needs to be validated. For in-game feedback and flow, paper prototypes will be created. If any physical assets get designed, these will be modeled and tested for ergonomics and use cues.

Tools: Flowcharts, Paper prototyping, Wizard of Oz, interactive prototyping

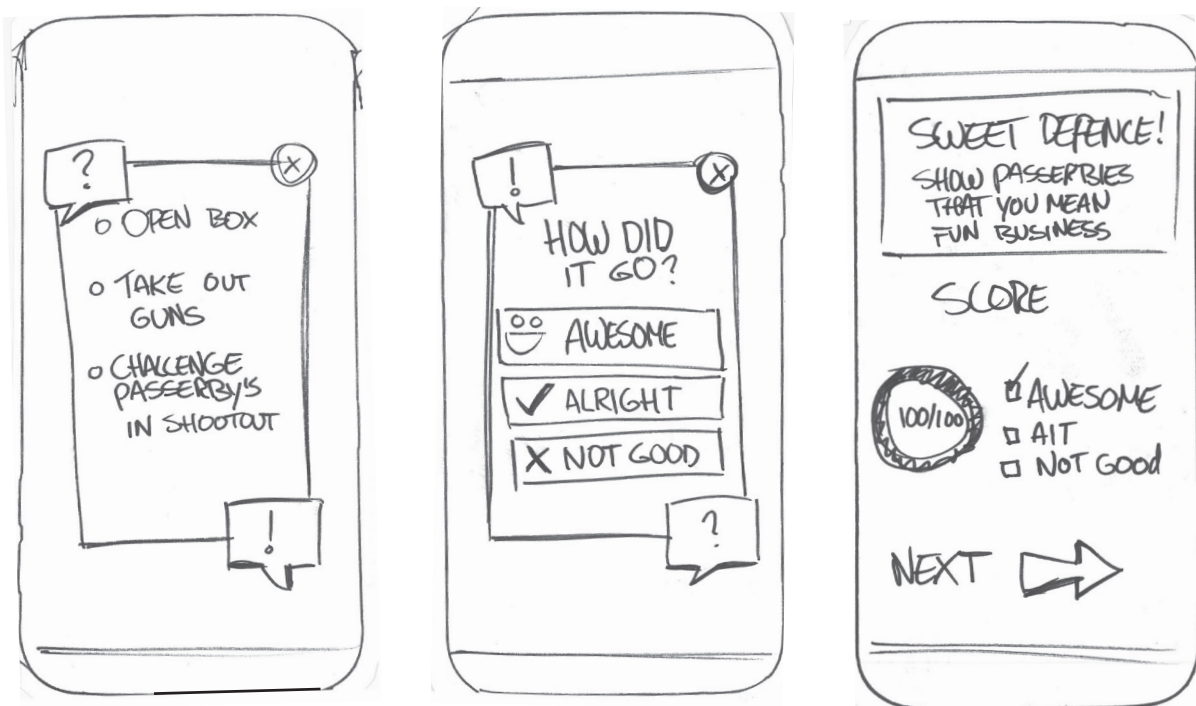


Fig. 4. Early paper prototype screenshots for a concept challenge for SotS

5. CONTEXT

THE STAGE ON WHICH RESEARCH WILL BE SET

CONTENT

5.1 Migration and crime

5.2 Hillesluis

5.3 Stakeholders

This chapter presents a theoretical framework that gives an explanation of why ethnically diverse neighbourhoods are often not socially cohesive. Next, Hillesluis will be presented. This is the neighbourhood where the field research was conducted. Its historical background and other relevant data will be presented. To finish this chapter, all relevant actors for this project will be listed.



Fig. 5. A painted mural in Hillesluis that reads “Live together. Play together”

5.1 Migration and crime

Let us take a look at the definition that we are using for social cohesion. The involvement of the term “values” could explain why social cohesion might be low in neighbourhoods with a high ethnic diversity. People who immigrate take not only their families with them, but also their culture and values. When differing values clash with one another, cultural identity is challenged (Ennaji, 2005), and conflict between people may arise (Turner, 2006). This conflict could lead to people either not having an interest in talking to people with a different ethnic background, or trying to avoid each other completely. While this outcome might seem trivial at first, conflict can go a long way in affecting social cohesion. Research suggests that ethnic diversity might cause a rise in crime in the long run via two paths.

The first influence is straightforward. When people start avoiding one another, a lack of socializing outdoors in public spaces starts to occur. This lack of people being outdoors has been linked to a rise in crime because of the lack of watchful eyes to report crimes (Social City, 2006). The silver lining regarding our project is that this feedback loop is also true if the situation is reversed. If more people socialize outside in public, crime rates drop (Social City, 2006). If crime rates drop, people feel safer outside. If they feel safer, there will be more incentive to come in contact with new people and cultures (Social City, 2006). This implies that improving social cohesion can be achieved by SotS through game challenges that are social in nature.

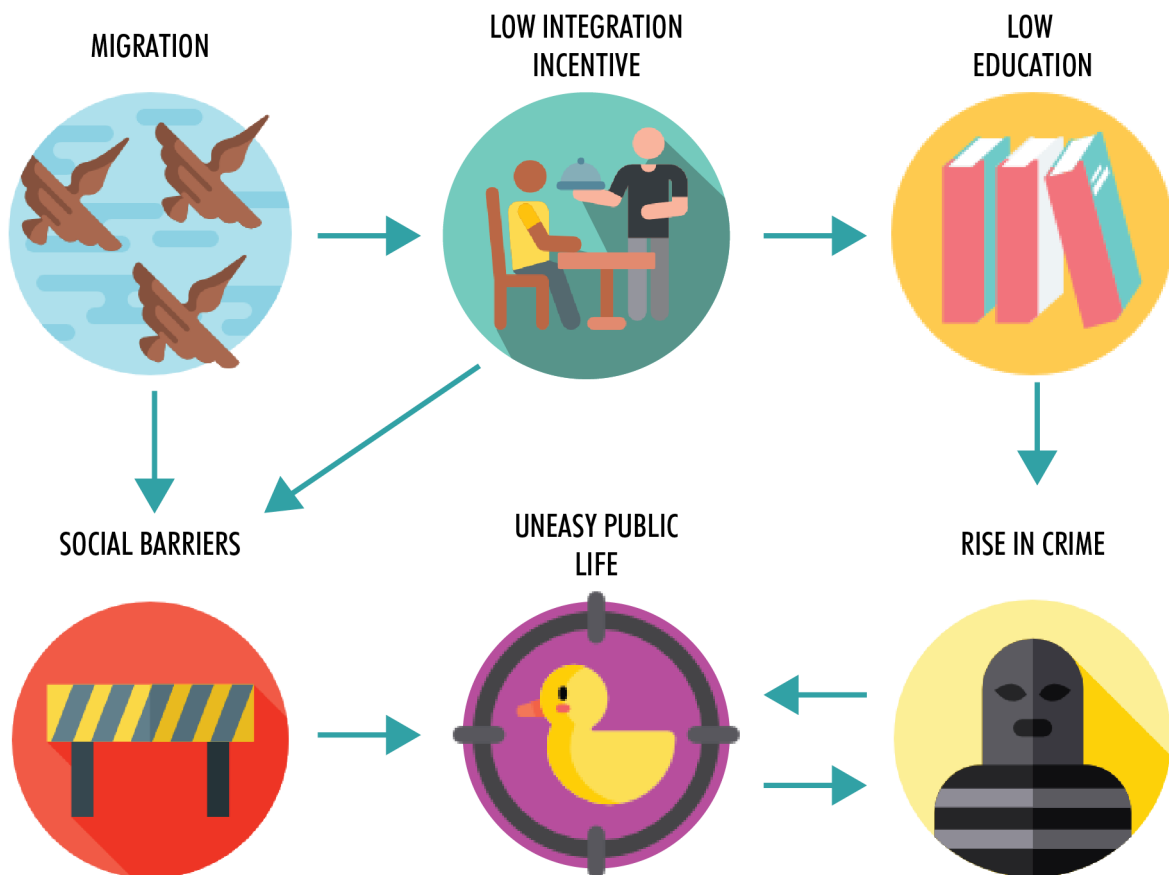


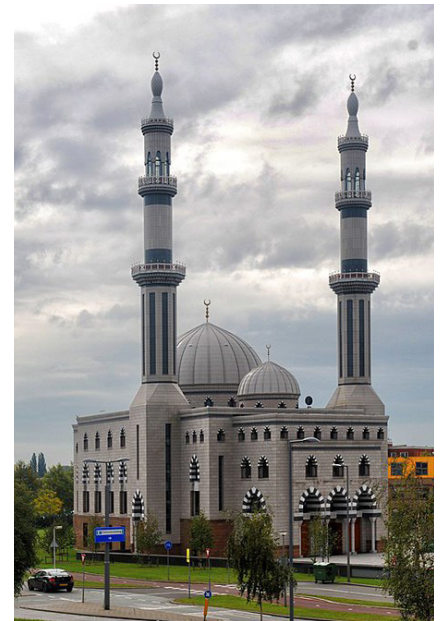
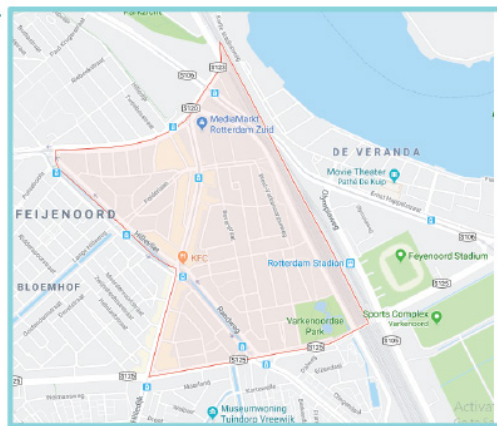
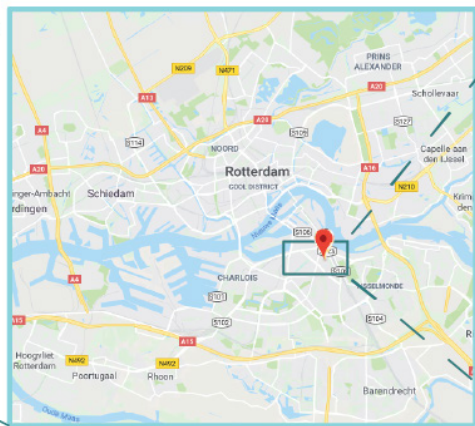
Fig. 6. The possible negative consequences migration might bring to individuals and their new surroundings when integration is difficult.

5.2 Hillesluis

The information presented up to this point presents a solid base on the mechanics at play in neighbourhoods with low social cohesion. However, what Fonseca wants to achieve with his game has to feel more intimate and personally tailored to the people who live in problematic neighbourhoods. This means that Fonseca's research will be greatly enriched if further research took a more human-centered approach rather than a technical one to continue working on SotS. To orient ourselves, we contacted Marcel Dela Haije, a Stadsmarinier in Feyenoord (see Rotterdam.nl for more information). What we wanted to know from him, being an authority figure working on street-level for the government, were pointers to where to look for information next. Mr. Dela Haije told us that he would like to see an improvement in the social life of all residents in Feyenoord, especially for those in Hillesluis.

Hillesluis is a neighbourhood in the Feyenoord District in Rotterdam. It is just South of the Nieuwe Maas, and very close to the Feyenoord Stadium. The main street of the neighbourhood is the Beijerlandselaan: A street that runs from one side of the neighbourhood to the other filled with all kinds of small local businesses. This street is constantly filled with people. However, half of this street is covered by overgrown trees that cover the sunlight. This makes it feel less lively than it could be.

The rest of the neighbourhood is not memorable. Houses and flats are indistinguishable from one another. The infrastructure is uninspired, except for the Essalam mosque, which greets visitors and residents when they arrive at the neighbourhood.



Hillesluis started off as a neighbourhood for people working at the port of Rotterdam in the early 1900's. Ever since, it has been primarily a neighbourhood for the working class. This led to a massive influx of immigrants looking for jobs to support their families. Unfortunately, the ethnic diversification has made Hillesluis one of, if not, the most problematic neighbourhoods in Feyenoord, and by extension, the Netherlands. According to research done on the area, people do not trust each other or the government. They do not report crimes out of fear of the consequences this might have on their safety (Olmez, 2018). This has had a negative effect on social cohesion and public social liveliness, as previously discussed.

Ethnographic data further backs the claims of crime and migration being linked to one another (fig. 7). In Hillesluis, the amount of immigrants is 83%, which is high, even compared to Feyenoord standing at 69% (Wijkprofiel, 2018). The implications behind these numbers on social cohesion, and by extension, safety, seem scary at first. However, numbers do not give insight into how the residents of Hillesluis feel toward these problems. Maybe they are as worried as we are. Maybe they do not even notice these problems but still have other problems linked to Hillesluis that we have not even considered.

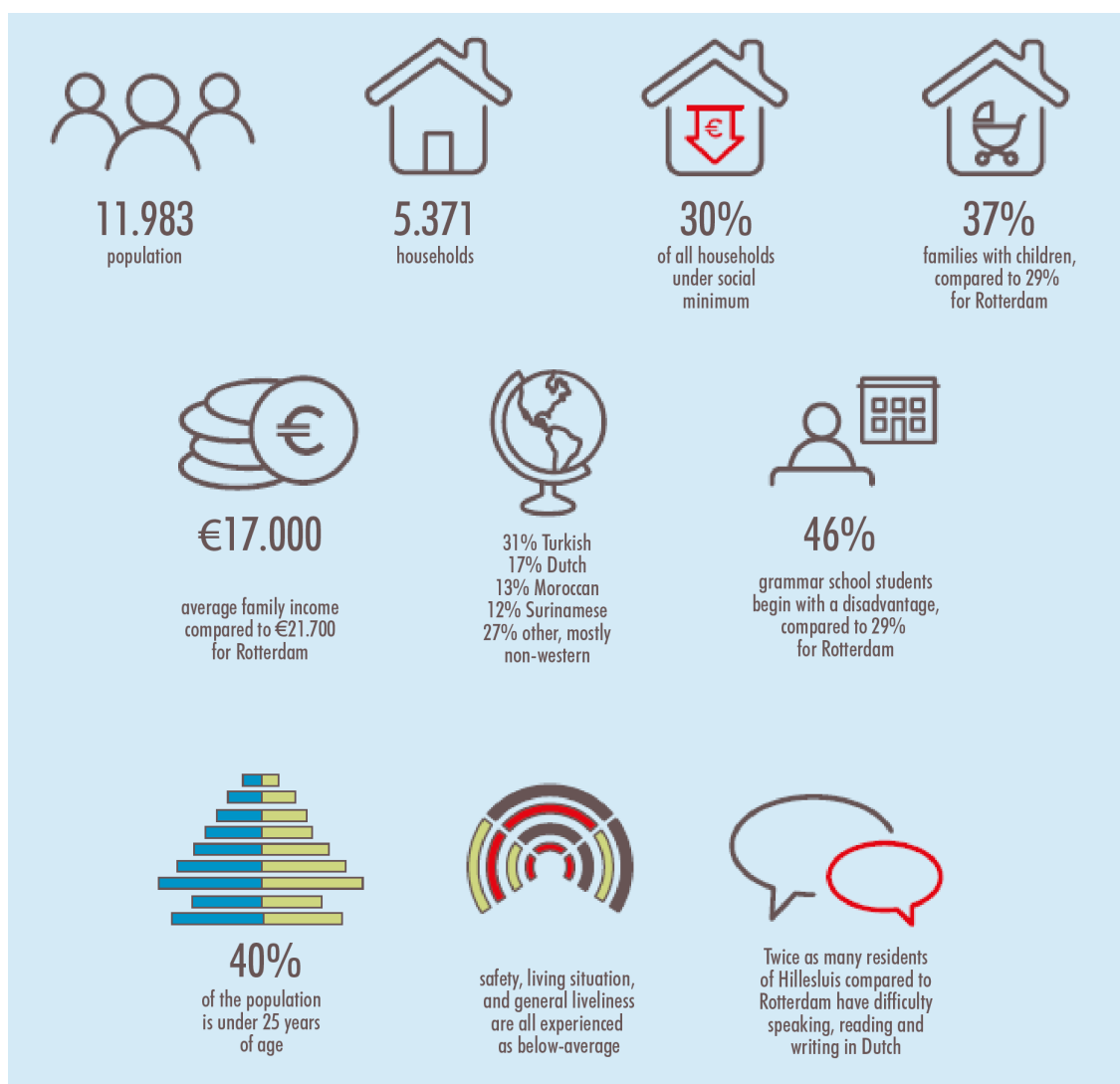


Fig. 7. A few statistics of Hillesluis. Taken from Wijkprofiel.rotterdam.nl (2018)

A clear opportunity found in these numbers, is that Hillesluis has a relatively young population, with 40% of its residents being younger than 25 years of age. This provides us with a large potential user group (teenagers) to study and co-create with for SotS in the long run. Also, seeing that teenagers are in the process of developing their personalities and identities (Strasburger et. al., 2014), the positive influence that we aim to create with SotS could be carried over more easily with this malleable audience than if it were with adults who are set in their ways.

This potential of youth is also addressed in a SWOT analysis of Hillesluis made by the Rotterdam Municipality (Wijkprofiel, 2018). Other strenghts and opportunities will not be adressed throughout this project because they are planological and infrastructural in nature, putting them far outside the scope of this project.

STRENGTHS

1. Good informal social networks within ethnic groups and cultures
2. A young demographic, meaning lots of potential for future work forces and long-term residents
3. A high amount of recreational spaces for children up to 12 years of age
4. Many (8!) elementary schools, providing potential links between different networks

1. Boulevard Zuid brings much potential to expanding the influence of Hillesluis
2. The West-varkenoordse Park and sport/recreational facilities could be promoted and used more
3. The high amount of small-scale businessess can improve the neighbourhoods' economy
4. There are many long-term infrastructural plans to improve in and around Hillesluis

WEAKNESSES

1. Socially weak: High unemployment rates, and low education, language, income and work experience levels
2. Little participation of individuals outside of their "own group"
3. Unsafe
4. Bad educational climate. Parents who can move to another neighbourhood often do so.
5. Limited and low-quality housing possibilities
6. Further decreasing quality of (particular) supply
7. Disturbance of peace by noise excess and drug trade
8. A lack of recreational facilities/oportunities, especially for youth over 12 years of age
9. A decreasing quality of elementary schools
10. A low amount of work oportunities within 30 minutes and mediocre reachability by public transportation
11. Dull outdoor infrastructure and a lack of green spaces

1. A (further) decrease of facilities
2. Underground criminal networks
3. Businesses at risk with crime lingering closeby
4. Abandoned shops and a lack of market development
5. A bad economy and job market further affects the jobless
6. A bad reputation for outsiders, and a mediocre reputation for residents

OPPORTUNITIES

THREATS

Fig 8. A SWOT analysis of Hillesluis by Wijkprofiel (2018). There is high potential for making the neighbourhood more pleasant, but residents should first be willing to participate.

5.3 Stakeholders

TU Delft

This project will serve as the Master Thesis for Daniel Aguirre Broca, who will carry out this project as research for the faculty of Industrial Design Engineering at the Delft University of Technology. The entry point to this project is Fonseca's PhD research on Social Cohesion through the design of a localized mobile game, which is being conducted at the faculty of Technology, Policy and Management. Fonseca will be addressed as the client for this project, and the outcomes will serve as academic knowledge for this University and other institutions interested in Social Cohesion and localized mobile game design. Other important TU Delft stakeholders are Marc Tassoul and Niko Vegt, two professors at the faculty of Industrial Design Engineering who will be supervising and evaluating this project.

Gemeente Rotterdam

The Rotterdam municipality wants to improve the quality of life for the residents of Hillesluis. It is currently running many cultural and infrastructural programs to improve the city, one of which is Resilient Rotterdam (Resilientrotterdam.nl), which Fonseca's initiative is a part of. Our main contact person with this organization is Stadsmarinier Marcel Dela Haije. The Stadsmarinier are street-level authorities and mediators between neighbourhoods in Rotterdam and the municipality (Gemeente Rotterdam, 2018).

The Police

This organization is mainly concerned with the safety of Hillesluis. What they would like to see is more welcoming and safer outdoors spaces where people can mingle without being annoyed. They are convinced that the way of achieving this is having more people on the street to make it difficult for crime to go unnoticed.

Local business owners

It is desired to have all residents of Hillesluis and similar neighbourhoods socially benefit from SotS in one way or another. An interesting group to take into consideration is (small) business owners. Partnering up with these entrepreneurs could result in interesting game rewards systems. For example, teenagers could complete tasks that involve helping older store owners with lifting heavy loads in exchange for discounts, or having store owners moderate some challenges in exchange for tax benefits.

Youth institutions

Fonseca was in contact with two high schools in Rotterdam South at the start of his project, RvC de Hef and STC. Here, he conducted two co-creation sessions with teenagers at the start of this project. If possible, these high schools and other youth work institutions like neighbourhood centers will be contacted to get access to groups of teenagers.

Teenagers

Teenagers in ethnically diverse neighbourhoods will be the target group for Fonseca's game. The reasoning behind this is that we want to influence a teenagers' social behavior towards strangers, which should to some extent rub off on their parents. What teenagers should get out of SotS is a fun gaming experience that positively alters their outlook towards strangers and their neighbourhood.

INSTITUTIONS



PEOPLE



Fig 9. A rundown of all the important stakeholders in the project



LOADING ANALYSIS

6. ANALYSIS

FINDINGS THROUGHOUT THE RESEARCH

CONTENT

- 6.1 Field research Setup
- 6.2 Field Research Findings
- 6.3 Interview with police officer
- 6.4 Literature comparison of results
- 6.5 Conclusion

In this chapter, the setup and execution of the field research conducted in Hillesluis is discussed. This is followed by an in-depth presentation of all the relevant data that was gathered through observations and interviews with individuals in Hillesluis and a discussion with a police officer. These findings are then compared to case studies of similar ethnically diverse neighbourhoods and other relevant research literature.

The chapter ends with a brief summary of the most important research findings that were used to formulate and inform the Design Goal of the project.



Fig. 10. A perfect representation of the current problem concerning the public perception of teenagers in Hillesluis (Humans of New York, 2018)

6.1 Field research Setup

We aimed to get rich insights and a real understanding on how the end users feel about their neighbourhood by doing an exploratory field research to find out how the situation in Hillesluis is experienced by its residents. From young teens to elderly people, data was collected on all the good and bad feelings people have towards the place they live in, and how and where people interact with it. With this field research, we aimed for two goals:

A. To get rich personal insights on how the residents of Hillesluis feel and behave toward the neighbourhood and other residents.

B. To find problems related to social cohesion that could be addressed by challenges directly linked to Hillesluis presented through SotS.

This project aims to understand how we could improve social cohesion and make public life more fun for the residents of Hillesluis via a localized mobile game. With our field research, we aimed to approach and talk to 30 people in and around Hillesluis in different situations and of different ethnicities to get insights, stories, and opinions on the neighbourhood and its residents from a wide perspective. The questions/discussion points that were posed were open for interpretation to allow for people to get lost in their own stories if they felt like it. Anyone found in the streets of Hillesluis was a potential and interesting participant, but 12-16 year olds were the priority. Shop owners were also an interesting group of people to keep in mind, seeing that they deal with all kinds of residents every day, and are sure to have seen or heard unusual stories that could inspire unique challenges.

For details on the field research guide, see Appendix B.

To find participants, I walked around Hillesluis from 14:00 to 17:00 on three consecutive weekdays. This time slot was chosen to best represent all the people walking in public in Hillesluis in the middle of the day. I looked around for individuals and groups of people that looked open for a conversation. That is to say that they did not look in a hurry, or were doing something important. Depending on the situation and their age, they were approached and greeted the way it seems most fit. After breaking the ice, I asked them if they were interested in helping me out with my research.

After having gone through all discussion points, the participants were thanked for their time. The exact location of the encounters was noted down (Appendix C)

The first people I talked to were three 17-18 year old teens in front of the Essalam Mosque. I went through all the questions of the field research, and left with high hopes for the rest of the days to come. However, I quickly discovered that teenagers were few and far between on the street in Hillesluis. With not much choice left, I started approaching other people who looked interesting to talk to. At the end of this first day, I felt confused about not seeing any teenagers I could talk to. There was one group of teens I came across later, however this ended up being an unpleasant experience. More on that in chapter 6.3.

Because of the perceived lack of teenagers on the street, I decided to add an extra methodology to my field research. The following two days I kept track of (groups of) passersby from 14:30 to 15:00. I sat down on a busy intersection in Beijerlandse laan, the main street of Hillesluis to get as much traffic as possible, and turfed groups of people according to their age (roughly).

The most striking result of this was the confirmation that teenagers are not too often found on the street. Only about 7% of the passersby were teenagers, which was strange, considering that 40% of Hillesluis' population is under the age of 25. They were all passing through, not stopping to hang around unlike other people. The most prevalent type of people found on the street were adults over the age of roughly 40 (about 39%). Followed by that were (young) adults from roughly 20 to 35 years of age (about 35%). Another big group of people were mothers with babies or infants. This accounted for 10% of the people.

In total, 22 people were talked to during the three days out. Most were in groups, and as previously mentioned. Furthermore, most people seemed to be with others from a similar ethnic group. I approached any person who looked interesting, with the only consistent question being if they were residents of Hillesluis. All other questions were either improvised, paraphrased or skipped completely to fit the people who were talked to because the guide was made with teenagers in mind. This may have resulted in slightly different interpretations of this project. However, I am confident that the questions I used gave useful insights for our research.

WHO		AGE (estimated)	TUE 15 - 05 - 2018	WED 16 - 05 - 2018	TOTAL	%
TEENAGERS	FEMALE	12 - 20	4	8	12	7
	MALE	12 - 20	5	3	8	
YOUNG ADULTS	FEMALE	20 - 40	36	11	47	35
	MALE	20 - 40	30	20	50	
ADULTS	FEMALE	40+	32	17	49	39
	MALE	40+	30	28	58	
COUPLES	YOUNG	12 - 40	6	5	11	9
	MIDDLE-AGED	40 - 60	4	2	6	
	ELDERLY	60+	1	3	4	
MOMS & KIDS		-	16	14	30	10
GRAND TOTAL					275	

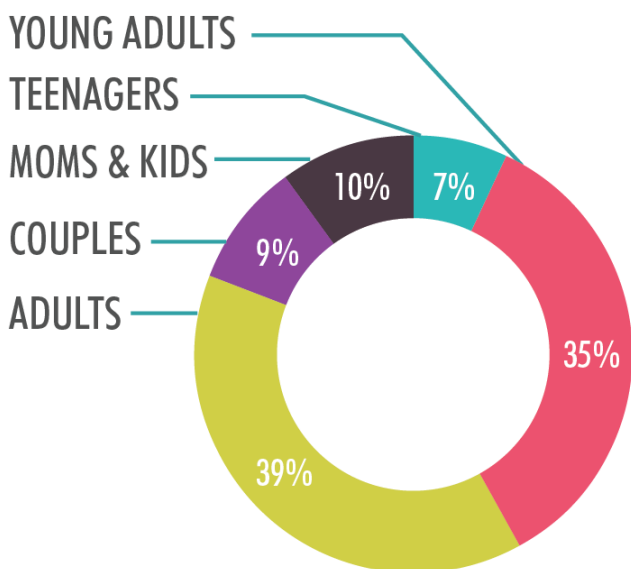


Fig. 11. An overview of all the people that were seen walking on the street during the day for two days,

6.2 Field Research Findings

In total, 22 people were talked to during the three days out. Most were in groups, and as previously mentioned. Furthermore, most people seemed to be with others from a similar ethnic group. I approached any person who looked interesting, with the only consistent question being if they were residents of Hillesluis. All other questions were either improvised, paraphrased or skipped completely to fit the people who were talked to because the guide was made with teenagers in mind. This may have resulted in slightly different interpretations of this project. However, I am confident that the questions I used gave useful insights for our research.

1. Friendly people with preconceptions

The question commonly used with the people I talked to was something along the lines of “what do you think about the social life in Hillesluis?”. To my surprise, everyone said that people can be friendly in Hillesluis. It is not uncommon for some people to greet each other. 3 out of the 22 people even explicitly said that they are on friendly terms with their neighbors.

However social people might be, there were often racist undertones and annoyances toward other cultures in peoples claims of social liveliness. A lot of people who were not Dutch mentioned how the neighbourhood is friendly because people from outside are much friendlier than the Dutch. Also, a lot of people referred to people from other cultures as “those [Moroccan, Antilleans, Dutch]”

“I know my neighbors very well. We do not hang much, but when we see each other we always have very pleasant conversations”

- Moroccan girl, 18

“I know a lot of people. I see a lot of people. People do their best to greet each other. Hey man.”

- St Maarten busker, about 45

“The social situation here is good man. There’s a lot of people from outside here. We’re more social than the Dutch, you know how it is. It’s nice here.”

- Moroccan man, about 25

“If I do see young people hanging outside, it is always corner boys. Especially those Moroccans”

- Curacao man, about 55

2. Not much to do

It is noteworthy that there are many playgrounds all around the neighbourhood. This gives children a lot of places to play. However safe a playground might be, attentive parents would still want to have more security for their children. When asked about loitering youth, parents seemed to have the biggest opinion on them. They do not like the fact that these youth tend to be annoying, and that younger kids often come in contact with them. Children tend to pick up bad habits from these older kids, which is undesired by parents. These encounters happen because there is not much space where these youth can go, or meaningful activities they can do.

Everyone mentioned that they wished there were more things to do. This is one aspect of Hillesluis that the residents unanimously agreed should be improved upon. From group activities to cultural events and simply places to hang around safely; anything would be an improvement over the current situation.

“These guys (loitering youth) sit in the middle of the neighbourhood and annoy people because there is no place where they can hang outside the residential area”

- Curacao father of 2 year old girl, 44

“Street kids? I won't claim that they are dumb, because they are not. They know a lot. However, they are lost. They need guidance. Activities to take part in”

- Curacao elderly lady, about 70

“What do I do when I'm outside? I just hang. That's about it”

- Moroccan girl, 18

“It's a calm neighbourhood, there's not much to look for here”

- Eritrean boy, 16

“They should open up an activities center for kids. Playstations, Xbox, football. A place where I know I can leave my daughter supervised so I can run some errands here and there.”

- Father of 6 year old girl, about 40

“Hillesluis? It's cool. Only I would want more activities, you know? Like DJs on the street and bands. Especially when the sun is up. It's nice here. It just needs some liveliness on the street, or some talent. We could have every couple of meters something going on. Talent. Some things that people show. It's too quiet here. It's just business business. If we had a bit more enjoyment between would be nice.”

- St Maarten busker, about 45

“I want to have a safe space for me and my girl. A community center”

Curacao mother of 2 year old girl, about 35

“There is no place I can go where I can just sit and hang with my daughter. They don't give us anything to do.”

Curacao father of 2 year old girl, 44

3. Authorities and safety

Another common complaint between people is that authorities are more of an annoyance than anything else. Apparently these people do not help the neighbourhood in any meaningful way. People either want them to be helpful, or to not be around at all because they feel harassed.

It is noteworthy to say that no one, with the exception of one elderly man, mentioned crime as a problem they have come across. This finding is interesting because we as outsiders and researchers have this dodgy look upon neighbourhoods like Hillesluis, but the residents might not even notice them and live their lives like anyone else would do.

4. Regarding SotS

Very few teenagers were seen on the street during the field research. Most people who were talked to were people over their 40's. The gaming angle of the project and SotS were mentioned, but were not heavily emphasized. This decision was made because of the believe that adults have little interest in (mobile) games. However, the idea of a game that aims to bring people together physically was well received. This is especially backed by people claiming that there is not much to do in Hillesluis, which means that any activity to engage people would be welcomed.

"Those guys in light blue (Stadswacht) don't do their jobs. They just annoy you until the edge of the neighbourhood."

- Curacao father of 2 year old girl, 44

"Those guys (Stadswacht)? They just annoy you. They only do things like telling people not to cycle on the sidewalk or not to park here or there. And if you tell the police that you want to report a crime, they will tell you to do it online. Tja, thanks for the help."

- Dutch elderly disabled man, about 70

"I see the Stadswacht walking around a lot, but why can't they just stay watching the playground for example? That way I can leave my child for 5 minutes, run some errands and come back"

- Mother of 6 year old girl, about 40

Sidestep: An unpleasant anecdote

While most people were open to having a chat with me (with the exception of a lady who quickly gestured me to leave her alone when I was approaching her), I encountered a group of 6 boys in their late teens who were hanging in a playground at Stichtseplein. This was a secluded vacant playground in Hillesluis. I approached them and introduced myself. The moment I mentioned that I wanted to talk to them about a project, one of them was quick to tell me he was not interested in any sort of research. However, another one told me to ignore his friend and asked me to finish my story. I did so, and the moment I did this new boy told me that indeed he (and his friends) was not interested. As I was turning away, he called me back, took out his phone, started to video record me, and asked me to dance for him. That way, he might consider answering my questions. I laughed and shrugged his demand off by politely but firmly saying no. He kept insisting, and his friends joined in with the filming. I asked why they wanted to film me so bad, to which they replied that it would be funny to see me dance. I replied with a provocative statement of my own. This backfired.

One of the boys stood up aggressively and told me to leave immediately. I thanked them for their time, turned around, and walked away. The boys stood up and kept following me, yelling at me and calling me names. It wasn't until a good 10 meters further that they stopped following me. No real harm came from this experience. However, I ran into one of the boys four more times after this encounter. Each time he would yell at me and threaten me. This experience felt quite nasty. I had never experienced something like this before. Even because of a small humorous exchange, they can be nasty. I definitely don't want to generalize teenagers, but it made me understand why some people look down on loitering youth.

Fig. 12. Stichtseplein is a popular playground for children. A non-profit organization often hosts educational events for children in this park and similar ones (BSW Rotterdam, 2018). According to the Stadsmarinier, this is also a popular hang-out spot for teenagers because it is relatively secluded in between houses, away from businesses and main streets.



6.3 Interview with police officer

The field research yielded interesting insights into how residents of Hillesluis perceive their neighbourhood. To complete the picture, we wanted to get a top-down view of the situation by talking to authority figures who are active in Hillesluis. We came in contact with a police officer in Rotterdam. An interview was conducted with the officer, which lasted about 45 minutes (see appendix D for the interview guide). Afterward, I was invited to drive through Hillesluis, where more information about the neighbourhood was shared. Naturally, the interest of the police laid more toward keeping Hillesluis safe and crime under control. Unfortunately, fixing these problems lay far outside the scope of this project. Regardless, he had a few points to share on social life and the problems we encountered:

Youth Concerns

The police often hears of people being annoyed by “loud” youth in public. They believe that this happens because of teens being impressionable by bad role models, which there are a lot of in Hillesluis. Luckily, the police have good ties with youth workers in the neighbourhood, who they believe are key people who could potentially have a big impact on social cohesion through influencing youth. Throughout the years, the police has seen that teens act like they do not listen to what older people have to say, but after a while, they do come to reason. This takes time, but the police are willing to do what they can to influence this process.

Trust Issues

The police is aware that the residents of Hillesluis do not trust them, the government, or other authorities because societal issues have not (yet) been fixed. In recent years they have been trying to improve the bond with residents by placing a select few officers for longer periods of time so the residents recognize them and start forming bonds to achieve mutual trust between the two parties.

Potential

The police is up to date with the latest crimes happening in Hillesluis, but find it a pity that other people outside of Hillesluis mostly hear about negative events. Hillesluis does have plenty of positives, the police officer says. For example, a lot of non-western cultures tend to be very socially cohesive within their own in-groups, which there are a lot of in Hillesluis. Also, with so many young people living in Hillesluis, there is a lot of potential for newer generations to become more social and help fix the image of their neighbourhood.

6.4 Literature comparison of results.

Culture and identity

Throughout the field research, it was observed that people with the same ethnic background tend to group up together, and do not show much effort in mingling with other cultures. This phenomenon has been observed in different studies conducted on public spaces in ethnically diverse neighbourhoods (e.g. Holland et al (2007), & Amin (2002)). This, scholars believe, can be attributed to a phenomenon called kin selection, which according to Hamilton (1964) is “the evolutionary strategy that favors reproductive success of organisms relatives”. This primitive instinct means that people tend to naturally favor being with others of a similar genetic background for the survival of their species. Coupled often with a lack of a common language, and having a difficult life adapting to their new work and live environment, the barrier to try and socialize with people outside their own cultural circle is often very high (OECD, 2016).

Another factor that adds to people sticking together is the “fear of loss of identity”. Everyone has been brought up in a certain environment, with certain cultural habits, preferences and morals, which become part of one’s identity. When one is exposed to a new environment with customs so different to what he/she is used to, it is often difficult to relate. This adjustment to a new culture mixed with worries like starting or even finding a new job is often a lot to bear, leading to mental distress and a negative impact on mental wellbeing. To alleviate some of this stress, immigrants tend to look for a “confirmation of identity” by forming bonds with people of similar background to keep or regain a sense of social and self identity (Bhugra & Becker, 2005).

Teenagers

As reported previously, not many teenagers were seen on the street. And if they were, they were described as “annoying” by older people. These two findings are echoed in a case study on social interactions in public spaces by Holland et. al. (2007), where it was found that teenagers often prefer being alone with their peers in public spaces, or stay home otherwise. Parents look down on teenagers who come in contact with their younger children at playgrounds, and policemen and shopkeepers see them as a disturbance of peace. The reason why teenagers hang around spots like this in the first place, is because Hillesluis does not have places to hang outdoors that fit their idea of a “chill spot”. Research has shown that the needs of young people are often overlooked during the design of public spaces (Holland et al., 2007). We can not fix infrastructural problems with this project, but it is possible to create social interactions between teenagers and those affected by their “loud” behavior to create empathy and understanding between these parties. Because of this, teenagers often hang around playgrounds, which in Hillesluis are often relatively secluded from public life. Adolescence is a stage in life where individuals are experimenting with and creating their identities (Erikson, 1950). This is why teenagers value spots where they can hang and “be themselves”, away from the gaze of authorities. This gives them privacy and a degree of ownership of their territory, which is something they often do not experience around older people (Altman, 1975).

Furthermore, teenagers are often seen as hard listeners. However, the police says that teens do come to reason eventually if they are told something by social (youth) workers or teachers. This gives us an opportunity to influence new generations towards a more accepting and cohesive community if done right. Especially considering that groups of young have a very strong social bond with their peers. If we were to influence just a few of them, there is a big chance that their peers will get influenced too. This comes with the principle of group mentality, where individuals are strongly influenced by other people in a subconscious effort to belong to the group (Tomé et. al., 2012).

6.5 Conclusion

Because of a lack of incentives for meaningful social interactions, the quality of the public social life in Hillesluis has declined. If people do run into fellow residents they do not know, they more often than not ignore each other. People continue on their way to business and do not hang around outdoors. This has made the few exchanges that people have with fellow residents distant and impersonal. Furthermore, people tend to find people from other cultures more annoying than their own, further creating social barriers. This has resulted in people having little trust in one another, resulting in strangers not opening up to each other. There is still a lot that can be improved in Hillesluis with the creation of game challenges that stimulate social interaction. The most pressing problems that the neighbourhood is facing, which are within the project scope are:

1. The Neighbourhood is not perceived as engaging

The most recurring complaint of Hillesluis from people is that there is not much to do. There aren't many places where people, especially teenagers, can hang around and spend time doing meaningful activities. Many people mentioned how they would want there to be activities and gatherings more often, especially to educate and entertain the youth.

2. There is not much reason to socialize outside of (cultural) circle

From a lack of places to meet up, to activities to partake in, and cultural barriers, there is simply not enough reason or incentive for people to engage with people outside their already established social circle. This leads to an uninteresting street life, where people are only outside to run errands or are on their way to a job or something similar.

3. Teenagers are seen as a nuisance in an otherwise quiet neighbourhood

Teenagers especially do not have much to do because there are simply not enough places or activities that are engaging for them. Because of this, they tend to hang around places they are not meant to be loitering around, like playgrounds and shopping streets. These teens are not welcomed by parents around playgrounds, nor by shop owners in shopping streets, nor by the police when they are simply hanging around because they "are loud and annoying". This antagonizes teenagers, and in turn, teenagers antagonize authority figures.

For this project, our solutions need to fit the framework of a serious game (Sots), and these have to be aimed at teenagers. For a more hands-on grasp on this target group, refer to Appendix E: Persona's.

In short, the solution to these various problems will be a combination of the following strategies:

Having teenagers interact with the infrastructure in their neighbourhood in fun ways through gameplay to improve its perception

Making interaction between teenagers and fellow (unacquainted) residents an integral game mechanic

Having these interactions be short, positive and playful to eliminate negative preconceptions between people of different backgrounds

7. DESIGN BRIEF

DEFINING A CLEAR TARGET

In this chapter, the learnings from the previous chapter are taken and turned into a concise Design Goal. In addition, an interaction vision was formulated to make the Design Goal more tangible. The Design Goal was translated into two Transfer Effects to make the jump towards designing a Persuasive Game. These will also be presented in this chapter.

CONTENT

- 7.1 Design Goal
- 7.2 Interaction Vision
- 7.3 Transfer Effects



7.1 Design Goal

Throughout our research on Hillesluis we learned that people from different cultures tend not to socialize with fellow residents outside their own cultural circle. This leads to little participation in public social life. The challenges should thus give players reasons to come in contact and have a social exchanges with fellow residents, however brief that may be.

Furthermore, people said that their neighbourhood is boring. We can not bring infrastructural changes to this neighbourhood within the scope of this project. This is why we should create challenges that actively engage players with the existing infrastructure and fellow residents in new and exciting ways.

The project goal is to create a set of challenges and challenge types (e.g., quizzes, physical activities, scavenger hunts) for Secrets of the South that actively engage its users with their neighbourhood and fellow residents to foster meaningful social interactions. With all the insights that were gathered until now, a design goal for the challenges was formulated.

DESIGN GOAL

"To create a social and exciting public spaces experience for teenagers of Hillesluis through Secrets of the South gameplay that encourages social interaction by engaging with the neighbourhood and creating and exposing common ground between players"

What we want to achieve

We believe that if we manage to create a more engaging public spaces experience for the teenagers of Hillesluis, they will value their neighbourhood more. If they get to meet other people through gameplay, they might just start feeling more comfortable around strangers and open up for simple "hello's" more often.

Our hope is that this opening up will lead to people spending more time outdoors, where they can feel safe and welcome. The more people are outside, the more social interactions there will be, the more people will share values and common goals, leading to a more socially cohesive neighbourhood where people are more willing to coexist and participate in a more social environment.

The design goal, visualized

Currently, people ignore each other when they come across one another and do not put much attention on studying their surroundings either (fig. 13). SotS should change the way these interactions play out.

People should feel comfortable with running into one another and having a moment together (1, see fig. 14). This will be facilitated by SotS challenges pulling attention to physical features in people's surroundings. These can be objects, buildings, people, etc. These feature should serve as common ground for people to interact with one another (2). With common ground already covered, people will feel a lower threshold to talk and connect to one another (3). Finally, people will continue with their lives, looking back at their new acquaintances and the experience that brought them together with a smile (4).

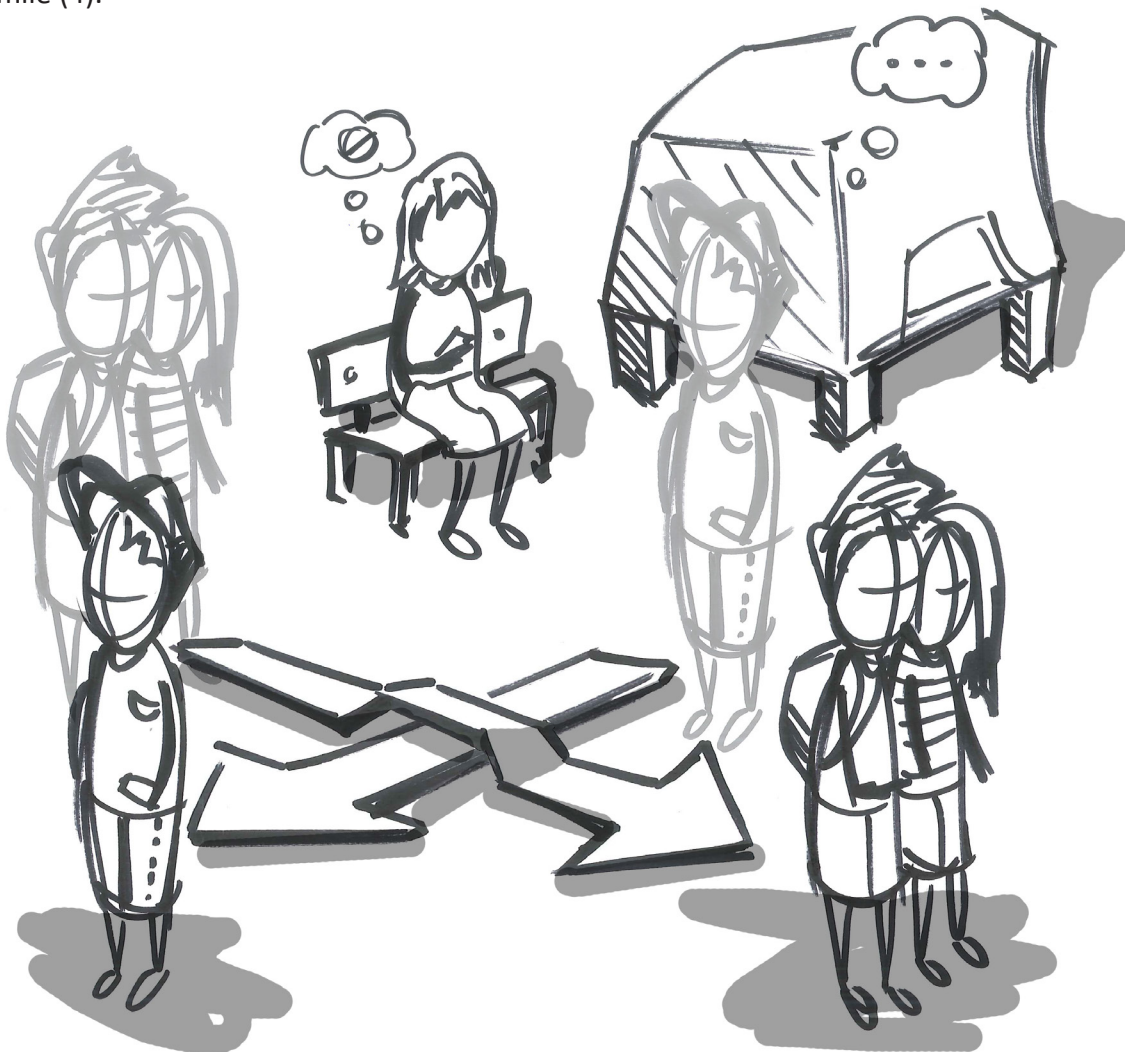


Fig 13. Now, people tend to just cross each other without having any sorts of interaction.

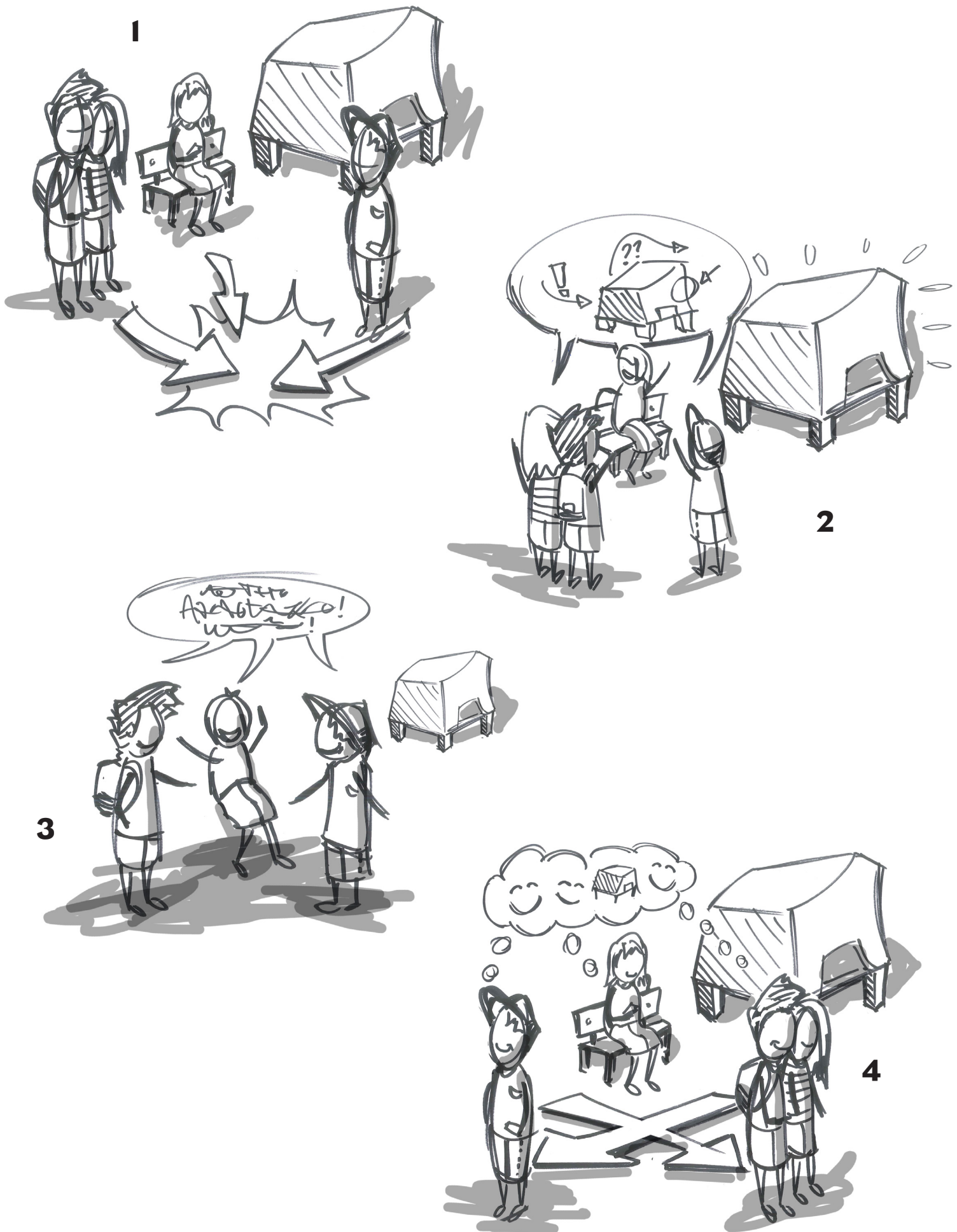


Fig 14. This is how interactions in public spaces should play out!

7.2 Interaction Vision

To solve the social issues plaguing Hillesluis, the content that will be created for SotS should change the current perception and feelings its residents have towards their neighbourhood. **Boredom, apathy and annoyance.**

These 3 key words were extracted as the most recurring feelings when it came to residents of Hillesluis and how they experienced the neighbourhood and unacquainted residents. We instead want to make people feel safe and welcomed in their own neighbourhood.

To help the design achieve this goal, an interactive vision was created (fig. 15). This is a metaphor that helps sum up how the interaction between Hillesluis and its residents (especially teenagers) should change.

Re-listening to a song to find more subtle details only requires a fresh mind willing to get surprised by details that were there all along. Exploring this new angle is fun because of the discoveries you will encounter, while staying comfortable throughout because you are already familiar with the structure of the song.

SotS should give the residents of Hillesluis a warm and refreshing angle on elements that are already in place in their neighbourhood. Whether it's learning about a (cool new hanging) spot, or interacting with new people, playing SotS should feel fun because of the potential to experience something new in a neighbourhood you are already familiar with.



PLAYING SOTS SHOULD FEEL LIKE
CONSCIOUSLY RELISTENING TO A SONG AND DISCOVERING THE MORE
SUBTLE ELEMENTS IN THE SOUNDSCAPE

Fig 15. A blissful interaction vision

7.3 Transfer Effects

The Design Goal is normally enough to start ideating for a project. However, in this project we are talking about a serious game. To successfully create and validate our design as a game, the Persuasive Game Design methodology presented by Siriaraya et. al. (2018) was used to create our desired Transfer Effects (See chapter 4 and Appendix F). Four elements had to be defined first: The Effect type, Change type, Point of Impact, and Domain.

Effect Type



The effect we want to have is a social perception change, where people transform their attitude toward potential social situations in public spaces. We want to change the way teenagers view their surroundings and fellow residents.

Change Type



We want to encourage teenagers to act more socially towards fellow residents and vice-versa. Creating social interactions is tricky business, however, so this change should not feel forced in any way.

Point of Impact



The change in perception towards other people and their neighbourhood should happen gradually to players as they play SotS. Talking to strangers is not an easy task for everyone, so the game should present challenges that require social interaction in a digestible way.

Domain



We want this change to happen at a neighbourhood level. The priority within the scope of this project is to improve social cohesion in Hillesluis. If we succeed here, we would like to test out the challenges in similar neighbourhoods

With the help of these four statements, and the design goal, two transfer effects were formulated.

Transfer Effect 1. Having joint experiences with fellow players and non-players



Common ground is an integral part of a healthy interaction between individuals (See chapter 3). Because of this, the SotS challenges should create and allow for players to experience events simultaneously with others within the game world and in the real physical space they share. This will let people realize they share the same living space with fellow residents, and can make it more exciting if they use it together in novel ways.

Transfer Effect 2. Exchanging information face to face with fellow players and non-players



We do not want to stop at only creating common ground between Residents of Hillesluis. We want these people to exchange information with one another. With exchanging information, we refer to all (positive) verbal and non-verbal information people could share. From saying hello, to talking about the SotS, or even becoming friends, the challenges should not only make players experience events together, but should actively require some face-to-face social interaction with non-players as game mechanics as well.

Conclusion

Our goal is to make Hillesluis more socially cohesive through game challenges presented in Secrets of the South. We hope to achieve this by encouraging active participation and exchanges of information between its residents to make people feel more comfortable while being outside in public spaces. Secrets of the South should also actively engage its players with their surroundings to alter the perception of their neighbourhood into a more fun and positive outlook

If the Transfer Effects are caused by the designed challenges, and we observe that players actively and willingly interact with a neighbourhood, its residents and themselves, then we can safely say that the design goal has been met.

For a list of requirements for the design goal, see Appendix G.

DESIGN GOAL

"To create a social and exciting public spaces experience for teenagers of Hillesluis through Secrets of the South gameplay that encourages social interaction by engaging with the neighbourhood and creating and exposing common ground between players"

TRANSFER EFFECT GOALS

Transfer Effect 1.
Having joint experiences with fellow players and non-players



Transfer Effect 2.
Exchanging information face to face with fellow players and non-players





LOADING IDEAS

8.1 Creative Session

To kick off the ideation phase of this project, a creative session was planned out and conducted with the help of 5 peers. We had three objectives to tackle with this session.

A. To produce insights into what activities we could give teenagers to do in public.

B. To understand what triggers people to interact with strangers.

C. To create an overview of elements in a neighbourhood that SotS players could interact with.

See appendix H for the Creative Session plan and materials.

A. Activities for teens?

To kick off the creative session, participants were asked to think of mischievous activities they would do for laughs if they were in a youngsters gang. They listed activities like tying someone's shoe laces, tagging property with graffiti, and throwing water balloons on people. They were then asked to come up with more positive activities. They came up with activities like helping out the elderly and cleaning up streets. For the latter one, participants proposed designing a trash can that would be connected to your smartphone. This way, players could keep track of how much trash they pick up and get points accordingly. Another cool idea was placing two or more booths with Google Cardboard in public where players can access short augmented reality mini-games that teaches them about the spot they are at.

Takeaway: There are many activities to be thought of for teenagers to do. The tricky part was finding a common thread between these activities to present them coherently in a game setting, and without having them overly rely on physical assets.

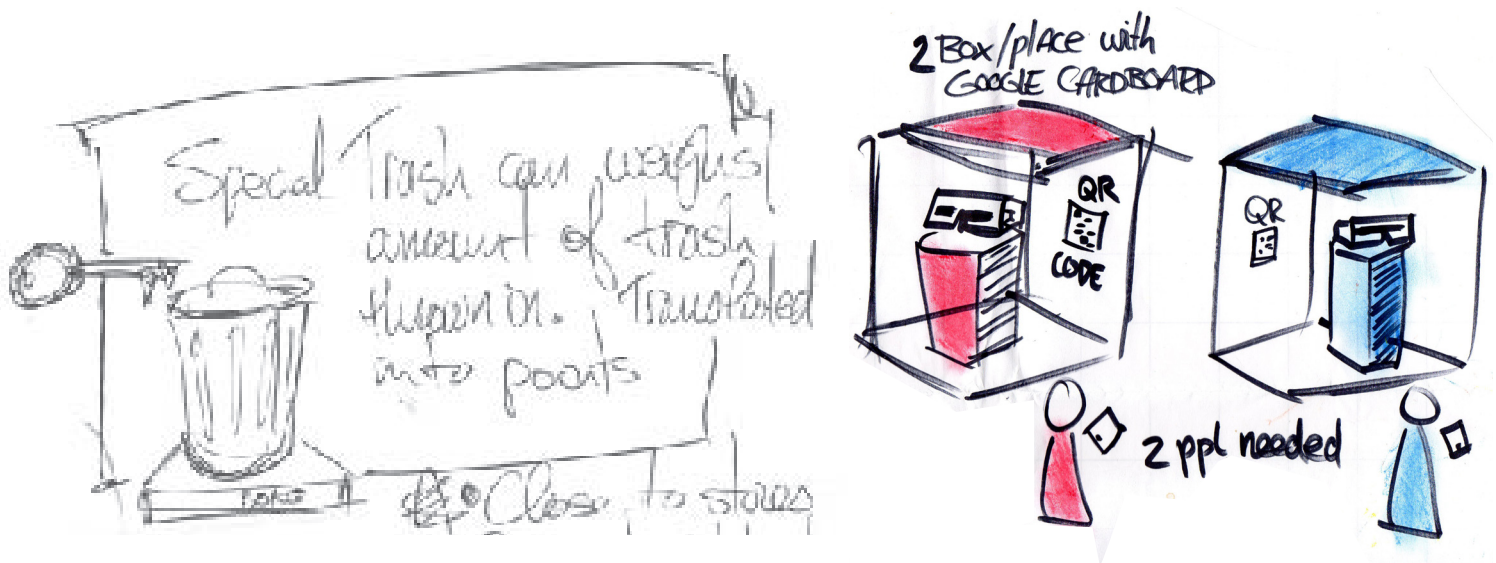


Fig 16. Both these ideas seem promising for making an outdoors spot fun, but they rely too much on physical interventions, and not enough on smartphone capabilities for gameplay.

B. Triggers for interaction

A collection of reasons why (not) to interact with strangers in public was made. These reasons were then clustered in groups. The most significant takeaway was that people find it easy to engage with strangers when they are in need of something. Be it a lighter, a pen, or directions, this need lowers social barriers. This learning can be used in combination with our in-game reward system.

Takeaway: We should create a NEED to talk to strangers through our game challenges.

C. Elements to interact with.

Participants were asked to list elements that are found in all modern Dutch neighbourhoods' public spaces. They were then trimmed down into elements that could either be interacted with and/or learned from. These were then arranged into four categories (right).

Takeaway: SoTS can let players interact with/learn from People, Places Infrastructure, and Trivia. These four elements should come back as parts of the game challenges in one way or another.

People



SoTS should present challenges that involve talking to other people face to face in the neighbourhood like authority figures (police officers), elderly people, shop owners, and of course, fellow teenagers.

Places



We want to encourage players to visit spots in their neighbourhood they would otherwise not go to. They might be surprised with what they find there, which is in line with our desire to alter the perception of residents for a more engaging experience of their own home.

Infra-structure



Creating new infrastructure to improve cohesion is outside the scope of this project. Therefore, the game challenges should make players engage with physical spaces through existing infrastructure like benches, trees, street lamps, etc.

Trivia



These three elements have interesting facts that players could learn through gameplay to make them feel closer to their neighbourhood. Think about facts like the history of a fountain, or events that happen every Saturday at a park.



8.2 Morphological chart

To better streamline the process of creating content for SotS gameplay, a morphological chart was created based on the Mechanics, Dynamics and Aesthetics (MDA) model (LeBlanc et. al., 2004). This model is a tool to help create a manageable overview for game designers to predict, understand and design for emotions they would like players to feel when interacting with their games. With this model, designers can play around with mechanics, and predict the emotional outcomes experienced by players. Predicting feelings of players is important for us, seeing that we are designing a persuasive game with which we want to alter the target groups' behavior.

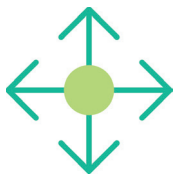
What follows next are two morphological charts based on the two desired Transfer Effects to explore game mechanic possibilities according to the MDA approach. We start by listing the Aesthetics (feelings and emotions) that feed to the Transfer Effects. After that, the Dynamic processes that could foster these feelings are listed. Finally, gameplay Mechanics that allow for these dynamics to happen will be listed. These will serve as guidelines for creating content for the game.

Mechanics



The components and assets that a game is made of, like scoring systems, levels, (digital) locations, and algorithms

Dynamics



The real-time dynamic processes of a game reacting to player actions and choices, and player reactions to game outputs

Aesthetics



The emotional responses (experiences) that game designers wish to trigger in players when engaging with their game

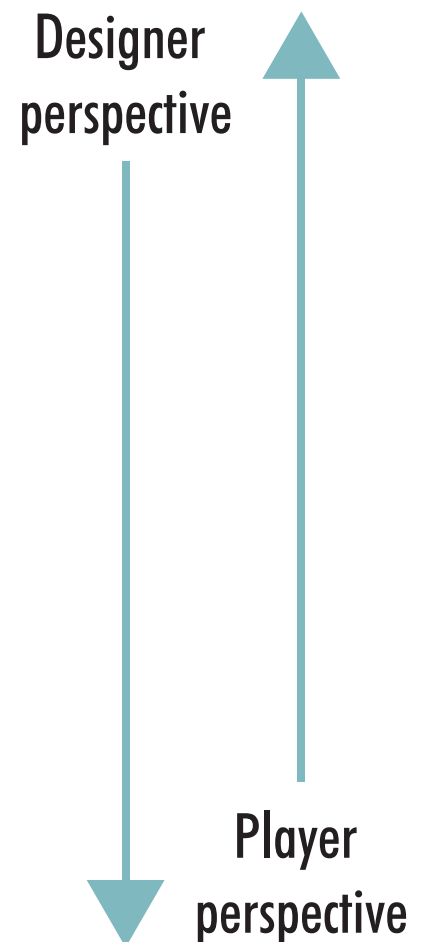


Fig 17. The MDA approach visualizes the interplay between the game designer's (mechanic) choices, and the outcome these might have on how players experience their game. This can also be used the other way around, for players to understand what underlying mechanics are behind what they feel while playing a game.



Transfer Effect 1

Having joint experiences with fellow players and non-players



Aesthetics



Dynamics



Mechanics

1. Empathy (towards fellow players)
2. Comradery (between players)
3. Sense of belonging (to a collective of residents)
4. Joy (of playing a game with others)

- Reciprocity between individuals
- Interdependence between players
- Players and non-players recognizing each other outside of gameplay
- Creating desire to cooperate with other players

- Physical Skill
- Information that has to be collected and pieced together
- Challenges that can only be completed with the help of non-players
- Simultaneous input from multiple player smartphones
- Logic-driven puzzles
- Physical assets that communicate with SotS online (NFC, Bluetooth, QRs)
- Leaderboards
- Rewards and progression
- Game world assets only accessible through augmented reality
- Location tracking
- Remote communication
- Picture taking and uploading
- QR codes in public spaces
- QR code scanning
- Scattered information on challenges
- Text input
- Time limits
- Avatars and Usernames (for online anonymity)
- Pedometer data
- Video data
- Audio data
- Database of completed challenges (videos, audio, routes, etc)
- Local connectivity (Bluetooth)
- Digital input into Sots from non-players



Transfer Effect 2

Exchanging information face to face with fellow players and non-players

1. Safety (feeling comfortable and welcomed)
2. Pride (of overcoming challenges)
3. Feeling Valuable (for being able to help yourself and others)
4. Curiosity (to learn and share about a neighbourhood)

- Making an effort to complete challenges creatively
- Players becoming curious and informing others about new spots they found
- Lowering social barrier between people in their neighbourhood
- Competition between players

Fig. 18. A morphological chart with a bunch of game mechanic ideas

8.3 Narrative breakthrough

To make coherent challenges, a narrative of sorts had to be created for SotS. In her 2007 research paper, Marika Holland talked about teenagers wanting privacy from authorities when hanging around with their peers in public. They often choose spots that are relatively secluded and often go to or around the same spots (for example, Stichtseplein in Hillesluis). Hanging spots like these are pivotal for the social and identity development of teenagers with the help of their peers and other people they might come across. It was observed through daily life that teenagers often hang around parks in groups of 4 to 6 individuals of similar age and ethnicity. This observation led to idea of creating a narrative for SotS that revolves around groups of teenagers working together to “conquer” spots around their neighbourhood.

This would gamify two behaviors that teenagers already exhibit: Being in a group of peers, and feeling like “owning” the spots where they hang. The idea of conquering spots would also allow for clustering of multiple challenges in one single area.

Three focus points for the development of SotS with this narrative were quickly explored.

1. The creation of “squads” (a term often used in multiplayer video games to refer to small player teams)
2. Gameplay: finding and completing challenges
3. Creating user-created challenges

It was decided to focus on the gameplay for the rest of the project. A first set of challenges was created and presented as both drawn screenshots and short scenarios. These challenges and the 3 focus points ideation can be found in their entirety in Appendix I.

Fig 19. Drawn-out scenarios for the first two created challenges

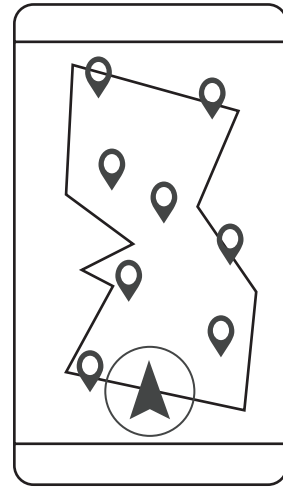


8.4 First challenges

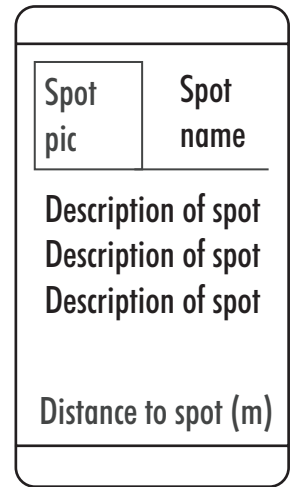
The narrative framing of the game was iterated upon. Narrative themes like pirates, gangsters, and “heroes and villains” were toyed around with to make it sound more engaging. I settled on a simple “Adventurers” premise to avoid coming across as too childish (fig. 20). A new set of challenges was created with a select few mechanics generated with the morphological chart.

The gameplay starts with you creating or joining a squad (black box). You then choose a spot to go to with the help of your smartphone (called EXPLR in the game). Each spot corresponds to a real-life location in your neighbourhood. You can claim a spot by completing challenges that can be found there. To truly conquer (claim ownership of) a spot, your squad has to complete the challenges, and then complete what is called a conqueror challenge with a higher score than all other squads (fig. 21).

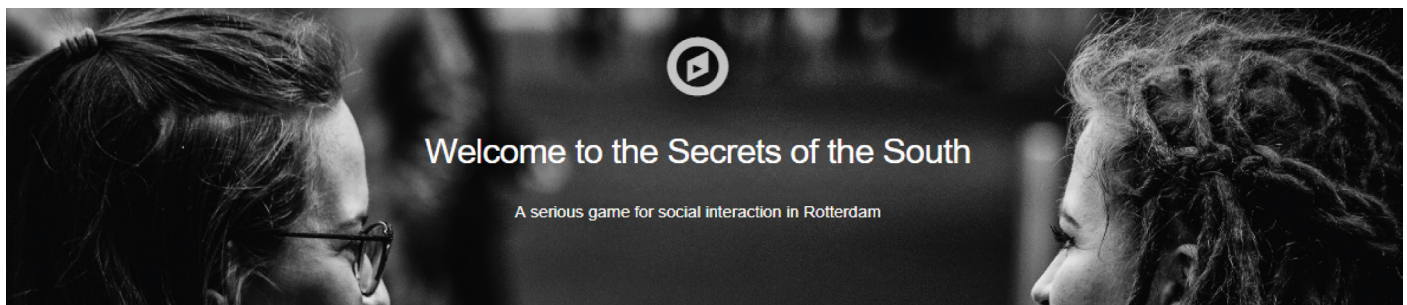
See Appendix J for these full challenges.



All conquerable spots can be seen on the map (main screen). You will also see yourself and your squad on the map.



If clicked on a spot, the distance to the spot will be shown, and the app will guide your squad to that spot

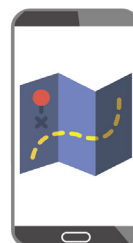


ADVENTURE AWAITS

Rotterdam South is a place with many hidden treasures. Every culture that settled here throughout the years has left its mark and knowledge. Over the years, however, this collective knowledge and its secrets slowly started to fade from memory...

To battle this loss of knowledge, a team of Researchers from the TU Delft has developed a special device for those willing to find the unseen secrets hiding in plain sight: The EXPLR.

Become an Adventurer. Form your Squad, gather knowledge around your neighbourhood and set out to discover the SECRETS OF THE SOUTH!



EXPLR

This device is your EXPLR. It will guide you through the process of uncovering the secrets around you. It will also let you interact with other explorers to share adventures, play with and against each other, and call for help if you so desire. Keep it with you at all times!

Fig 20. This is the premise and introductions players would get with the first set of fleshed out challenges.



Sign up

Create your online avatar and choose your Adventurer name, then proceed to create squad



Squad

GIVEN NAME

SQUAD STATISTICS

MEMBERS

ADD MEMBER(S)



by scanning QR or first



call for adventure



NEIGHBOURHOOD EXPERTISE (NE)
ADVENTURE POINTS (AP)



Complete challenges and their special requirements to get all 100 Ap and level up



CLAIMING a spot is worth max 100 AP



CONQUERING a spot gives +1 bonus level level



CONQUERING squad gets to name the spot



CONQUERING Squad creates (new) challenge for other squads to complete in order to be overthrown

SCAN THE PERIMETER

CHALLENGE A

Narrative

Your EXPLR has led your squad to this new mysterious spot. What knowledge could be hiding here? Use your EXPLR to scan the perimeter and gather data on this unexplored location to uncover its history.

Goal



Coordinate your squad to stand around the spot in such a way that you can collectively see as much as possible from the area

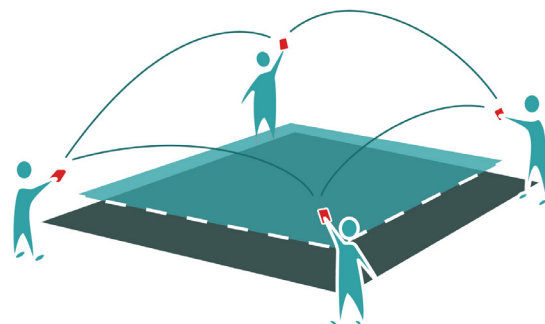


Fig. 21. At the top of the page there is an explanation of a few terms in the game. Below you see the first challenge that players would get when arriving at a spot to get familiar with it.

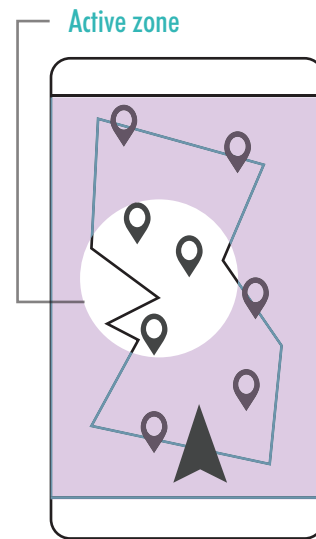
8.5 Detailing the game

Styling

To give the game a more defined identity, we took inspiration from the most played videogame of 2018: Fortnite Battle Royale (Epicgames, 2018). It counts 125 million subscriptions as of July 2018 (Gamesradar, July 2018). This game is a Battle Royale shooter game in which a hundred players must eliminate others to be the last one standing. One can play alone, in duo's, or in a squad of up to 4 people. 16% of its player count is female, compared to about 8% in other competitive shooter games (New World Notes, 2018). This wide appeal could be attributed to the game's cartoonish style and light, upbeat tone. This is desired by us to appeal to as wide a demographic as possible.

A styling study of Fornite was conducted (See Appendix K. The in-game SotS terminology and writing style was also altered to sound more light-hearted like Fortnite.

The way spots are presented was also altered inspired by Fortnite. Only a select few spots will be available for conquering at any given time. This is done to concentrate players around one area to improve the chance of players running into each other. We will refer to this as an Active Zone.



The Active Zone mechanic was inspired by the "Storm" mechanic in Fortnite. Anyone caught in the Storm (outside a safe zone) will quickly start losing health. This way the developers force players to run into each other more often and speed up the game with a time limit of sorts.



Fig 22. Fortnite is not your average online competitive shooter. The whole style of the game is silly and upbeat. This works very well to attract gamers of all ages and backgrounds.

8.6 Concept presentation

What follows is a rundown of Secrets of the South gameplay from launching the game all the way up to conquering a spot. The names of the locations and infrastructure referred to on the following screens all refer to the spot in which the game was eventually playtested (see chapter 9). Note that some screens have been left out of this chapter. The complete collection of screens can be found in Appendix L.

The core gameplay loop of SotS will have players making a group of up to 4 friends. They will then go to spots around their neighbourhood and will complete a series of challenges there together. Completing these challenges will give them points, which will level them up. If all challenges at a spot are completed, squads will have the option of doing one final set of challenges, which will give them a score. The squad that scores the highest in this final set of challenges will be crowned the Conquerors of that spot.

1. Welcome screen.

This will be the welcome screen for the game. Signing up should be as easy as linking your account to an existing account like Gmail or your Facebook.



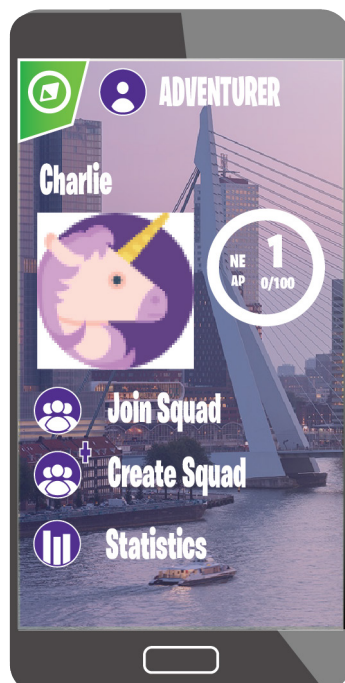
2. Introduction screens

These two screens (right and bottom right) introduce players to the premise of the game. Players are referred to as Adventurers and non-players are referred to as Locals.



3. Adventurer screen

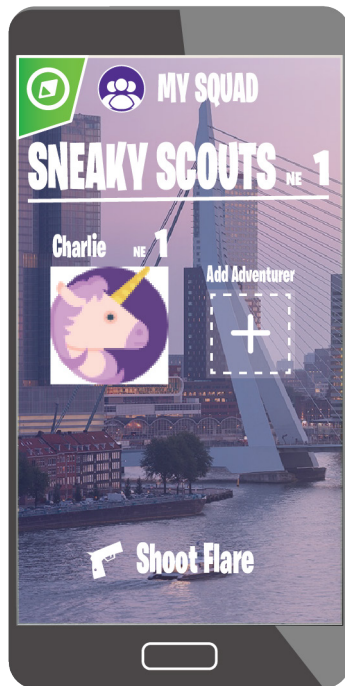
Players will get avatars and usernames assigned to them to avoid foul language use. Neighbourhood Expertise (NE) is the current level of a player. Players level up by completing challenges, which rewards them with Adventure Points (AP). A hundred AP makes them go up one level.



4A. Creating a squad

If players press Create Squad, they end up at this screen. To add players, press Add Adventurer, which leads to screen 4B.

If there are no players close to Adventurers to join their squad, squad leaders can choose to Shoot Flare. This will inform other Adventurers that a Squad could use their help.



4B. Adding adventurers

This QR pops up to let other players scan it with their EXPLR to join the Squad



4C. QR scanner

If players chose to instead join a Squad, they will enter a QR code scanner screen. With this, they can scan squad QRs (4B) and hidden QRs (7)



4D. Full Squad

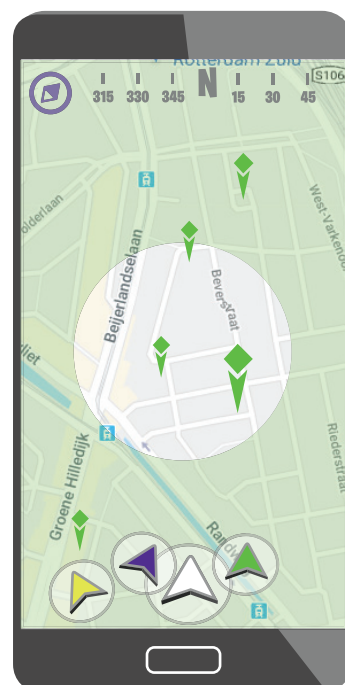
Eventually, players will be part of a full Squad, which will also get assigned a name. Their NE will be combined to form a Squad NE.



5. Main screen

The main screen of the game is a location map. Here, adventurers can see fellow squad members, where they are, and Spots that they can conquer.

On the top left is the game menu button, where adventurers can find a list of spots, statistics, other information.



6. Choosing a spot

Clicking on a spot icon will show information about it. The types of challenges now available in game are.

DO (!) Challenges that involve physical exertion like jumping or running.

ASK (?) Challenges that test players on their capacity to talk to other people to find out facts.

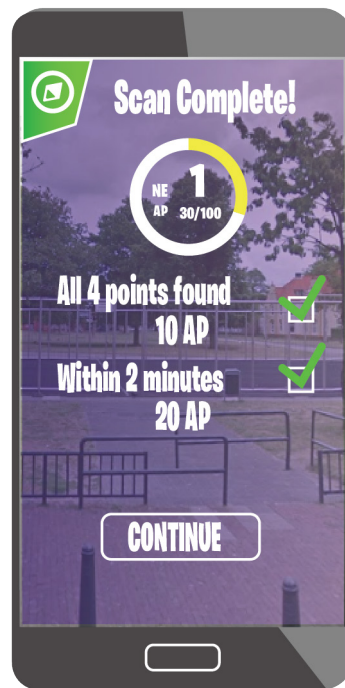
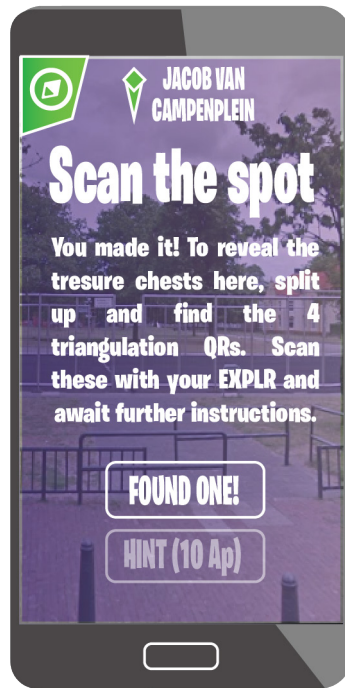
Clicking on Let's Go brings adventurers back to the map screen, which will help them navigate to the spot.



7. Scan the spot

When the Squad makes it to a location, this screen will pop up automatically. Adventurers look for QR codes around the spot and scan them with their EXPLR to encourage exploration. To encourage teamwork, each Adventurer can only scan 1 QR code.

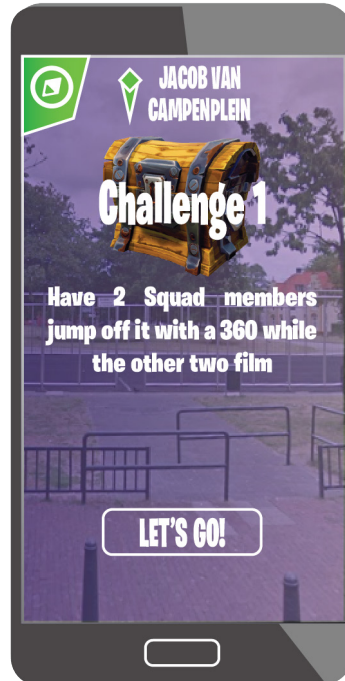
Once all QR codes have been found, players will be rewarded AP and the game map will update and show where exactly the challenges are around the spot, indicated by treasure chests.



8. Challenge 1

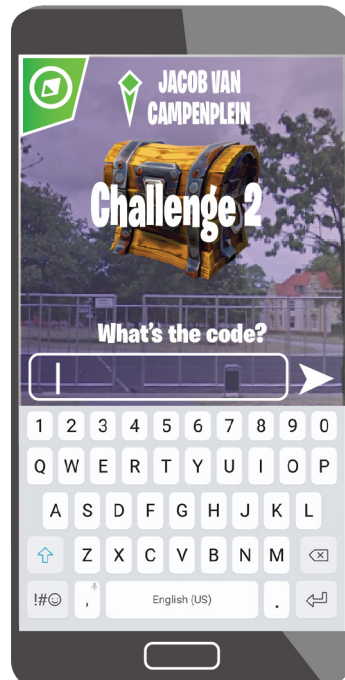
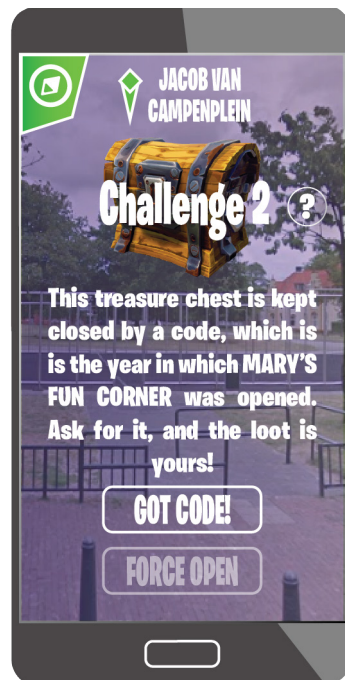
Once squad members get close enough to a treasure chest, it will reveal its challenge. This first challenge was created to challenge players to find something specific in a spot and interact with it through a simple physical interaction.

By pressing Let's Go, you EXPLRO will go into camera mode. Once two videos have been recorded by two separate EXPLRs and uploaded, the squad will be rewarded with AP.



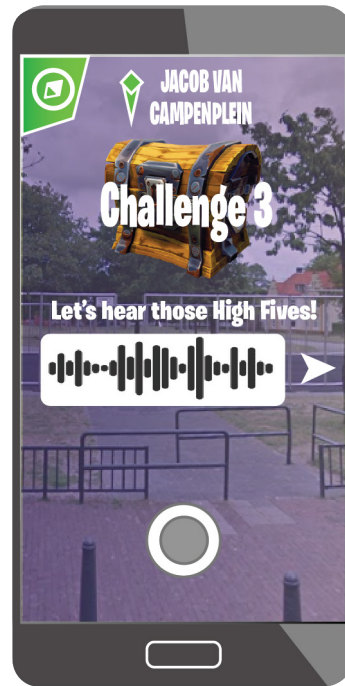
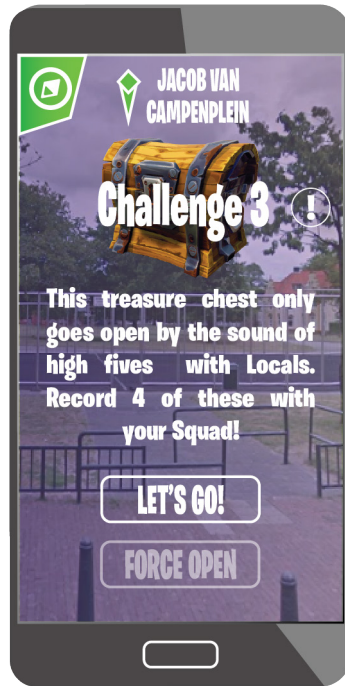
9. Challenge 2

The second challenge is meant to push adventurers into talking to the owner of a shop in the vicinity of the spot, since this is the only correct way of answering the question "what's the code?". Once one adventurer submits an answer, the whole squad will get rewards. If they do not answer correctly (indicating that they did not interact with a shop owner), they will get less points than if they answered correctly.



10. Challenge 3

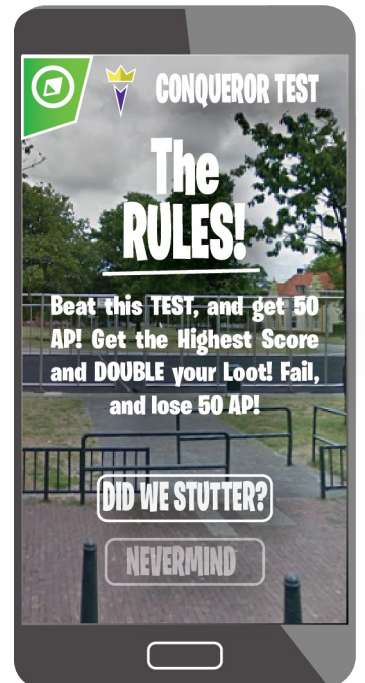
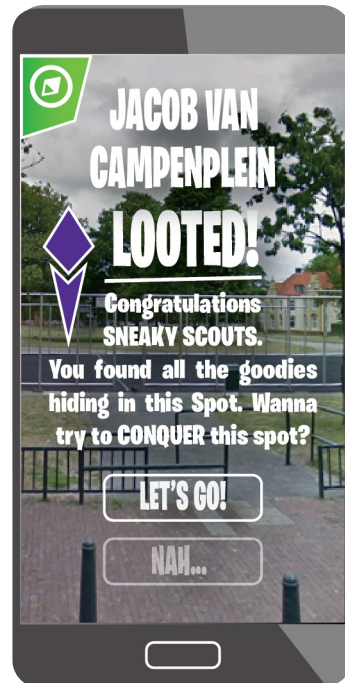
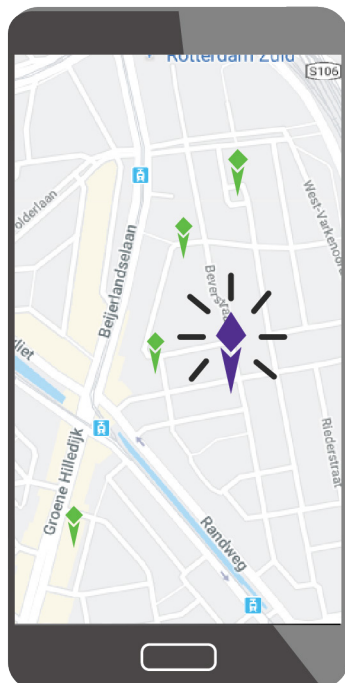
This third challenge is meant to push players into approaching Locals to have a short and sweet interaction comprising of a simple high five. Since some people might not like being filmed, players will be able to audio record these interactions as proof. Each EXPLR will only be able to record one High Five to again encourage all players to take part in the challenge.



11. Completing all challenges

If a squad completes all challenges in a spot, they will have LOOTED it (indicated by the green spot icon on the map turning purple).

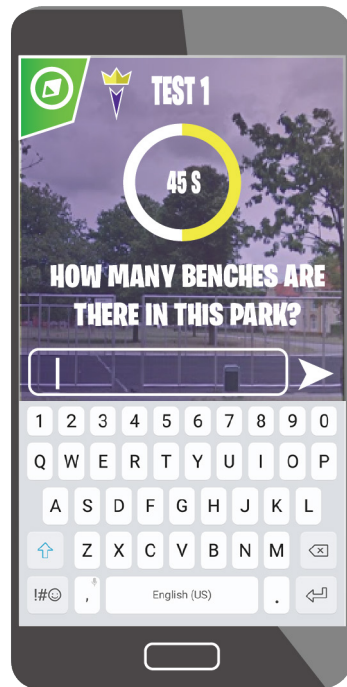
The squad will have the option of trying to CONQUER the spot by completing a test. The squad will have to consider the possibility of losing some AP if they perform poorly, so they better try their best!



12. Conqueror test questions

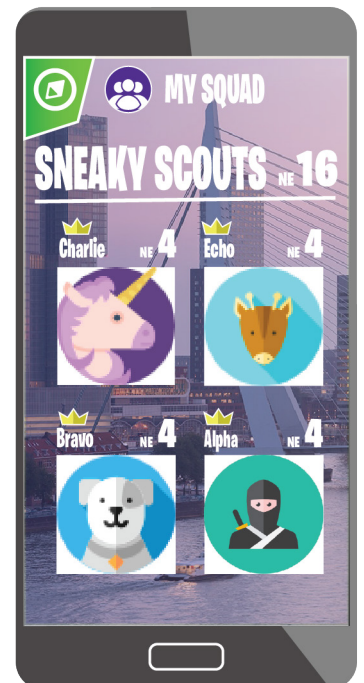
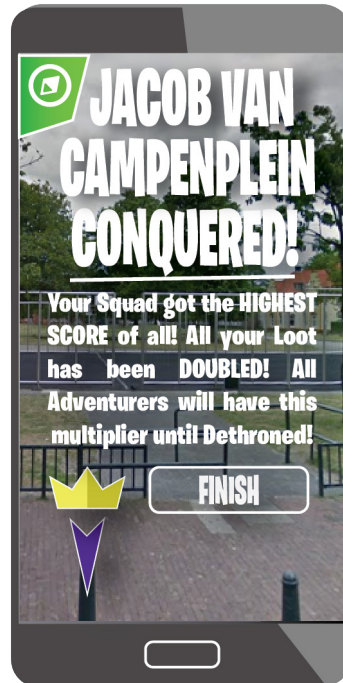
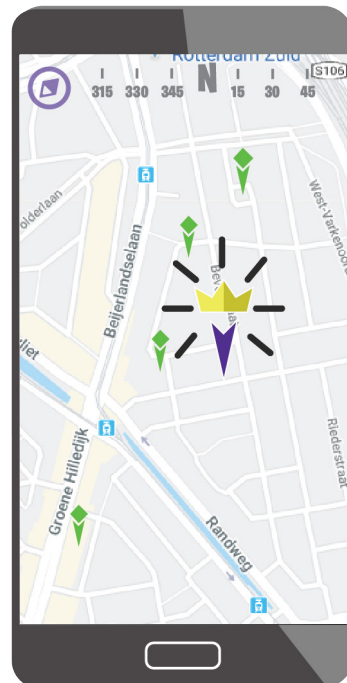
If the Squad accepts the Conqueror test, they will get a series of questions and tasks that will test them on how much attention they put on their surroundings while completing the challenges.

These questions will have a time limit add excitement and urgency to the test.



13. Spot Conquered

If a Squad manages to perform better than any other squad in the Conqueror test of a spot, they will have CONQUERED this spot. The purple looted icon will get a crown to indicate this. Other squads will be able to see that this Spot has been (re)conquered. The Conqueror squad members will have their AP doubled, and will continue to have this perk until another squad beats their score. At the end of the test, squad members will see their new NE. In this case, the Sneaky Scouts did so well that they all went up to NE 4! Such performance, much wow!



9. EVALUATION

TEST PLAN, MATERIALS, CONCLUSION,

CONTENT

9.1 Playtest setup

9.2 Playtest execution

9.3 Playtest analysis

9.4 Playtest conclusion

9.5 Revised concept

In this chapter, the process of validating the concept design through a playtest will be presented.

The screens presented in the previous chapter were turned into a physical paper prototype to playtest the concept with 8 participants.

The setup and execution of the playtest is presented first, followed by the insights that were gathered by analyzing the feedback from the participants. The chapter will finish with a revised concept.



Fig 23. Jacob van Campenplein is a park located at the edge of Schilderswijk, but away from any main road. It is a bright green open space with a small football field and playground equipment.

9.1 Playtest setup

To evaluate the challenges that were developed, a test plan was made to playtest Secrets of the South at a public outdoors location with a paper prototype. Due to time constraints and logistical problems, it was decided upon to test the game in Schilderswijk in the Hague instead of Hillesluis. The demographics of this neighbourhood are comparable to those of Hillesluis, with only 11.4% of its residents being native Dutch, and 28.4% of its population being youth under 20 years of age. (denhaag.nl, 2018). Jacob van Campenplein, a park in Schilderswijk-Oost was chosen as the exact location for the playtest (fig. 23). The SotS screenshots were customized to fit with environment:

- Four locations spread through the whole park were chosen for hiding the QR codes to get the participants to walk it all first.
- Two benches for jumping off of were chosen and their pictures were taken.

- A corner was chosen where we would place an observer to hold up a sign and act as the owner of “Mary’s fun corner” (a made-up shop name). This corner would also be next to a primary school, which its name will be asked during the conqueror test

- A picture of a tree trunk with a particular building in the background was taken for the final conqueror challenge.

The full set of screenshots (appendix L) was printed out five times (one for the mediator, and one for each participant) and bundled together into booklets.



Fig. 24. All booklets were the same, with the exception of the Adventurer and squad setup screens. Each booklet had a different predetermined adventurer name and avatar. The playtesters who got Charlie had create the squad (first 3) while the others had to instead join the squad

9.2 Playtest execution

With this test, we aimed for the following:

1. To explore to what extent the designed challenges can foster social interaction between strangers
2. To find out if SotS gameplay alters the perception of players towards an ethnically diverse neighbourhood
3. To get insights and recommendations on how the designed mobile game challenges can foster social interaction in ethnically diverse neighbourhoods better.

We wanted to have these 3 questions answered

1. Can playing SotS alter the perception of an ethnically diverse neighbourhood positively?

Do the players have a more positive outlook towards it?

Does the game make them pay more attention and thus more actively engage with their surroundings?

2. Do players interact with people they don't know through SotS gameplay?

Does it motivate players to interact with people they don't know?

How is it for players to interact with people they don't know?

Does playing a game together with friends make it easier to approach people they don't know?

How do strangers react to being approached by players?

3. What do participants think about SotS and gameplay?

Did they like it?

Does the game challenge players social and physical skills appropriately?

What would they like to see changed?

Would they play this game again? Why (not)?

For the full playtest plan and questions, see Appendix M1.

Participants

Attempts were made to gather participants within the age range of our target group (12- 16), by talking to social and youth workers, but this proved to be difficult. In the end, two groups of four participants between the ages of 20 and 29 were recruited. The playtest groups consisted of the following people:

On Friday November 16th, 14:10 - 15:15

P1. Female. 21 years old. Arubian. Lives in the Hague

P2. Male. 25 years old. Arubian. Lives in the Hague

P3. Male. 29 years old. Slovak/Dutch.

P4. Male. 26 years old. Arubian. Lives in the Hague

Prior to the playtest, nobody knew each other besides P2 and P4, who were well acquainted.

On Saturday November 17th, 11:10 - 12:15

P5. Female. 28 years old. Turkish.

P6. Male. 25 years old. Arubian. Lives in the Hague

P7. Female, 23 years old. Dutch. Lives in the Hague

P8. Male. 20 years old. Arubian. Lives in the Hague

Prior to the playtest, nobody knew each other besides P6 and P8, who were well acquainted.

Procedure

In both cases, the participants were asked for their consent to be filmed and voice recorded throughout the testing. Before being handed out the booklets, participants were made aware that the playtest was for testing the gameplay rather than the user interface and graphical presentation. They were also instructed to keep in mind that the intended target audience is younger than them, so as to try to experience the game with a younger mentality.

After the introduction to the paper prototyping method, we started off with individual pre-playtest interviews. The 4 participants were handed their own booklet with all the screens. They were encouraged to interpret the on-screen instructions however they seemed fit and were left to go through the game as a team.

Quick note on park visitors

When reading the high five challenge, the first group got worried that there were not enough strangers around to complete the challenge. Luckily, a group of around 7 male street cleaners of widely varying ages was sitting down (presumably taking a break) around the entrance of the park. The participant group gathered the courage to approach these men, lead by P3. The men reacted very positively to getting high fives from strangers!

The second group got similarly worried because of the lack of people. Eventually, they saw one young man who was walking through the park. P6 and P7 approached him. He reacted somewhat nervously to seeing people walking towards him, but after he was asked to give a high five he got a big smile on his face and kept on walking with a much more positive attitude.

The park was chosen in part because it was observed on two occasions prior to the playtest that many people of none-Dutch backgrounds (Especially middle-eastern ladies and children) go there to spend the afternoon. It is believed that the park was less busy during the playtests because they took place on particularly cold days. Also, one test took place roughly during lunch time, and the other took place early on a Saturday.

Back to business

It was observed throughout the game that both teams were having fun while playing. Players were encouraging each other, helping each other out, and joking around. After they completed the challenges, they were interviewed individually again, and then a debriefing session was held where more general questions were asked to the whole group.

9.3 Playtest analysis

The recordings of the interviews were transcribed and the gameplay videos were analyzed to extract information. Interesting quotes and exchanges were then turned in to statement cards and clustered into different recurring themes (Sanders & Stappers, 2012).

These yielded rich information on how much the players enjoyed the game, how it changed their perception on the neighbourhood, how they felt towards interacting with strangers and more. What follows is a list of insights that were gained from this evaluation with a few quotes to inform them.

The full interview transcriptions and statement cards can be found in appendices M2 and M3.



Improved neighbourhood view

Some participants expressed that they did not feel comfortable at first in Schilderswijk. They said they saw sketchy people around and have heard bad things about the place, which lead them to feel uncomfortable and unsafe. This preconception changed after the playtest. They said that they felt more comfortable after having spent some time there and having interacted with a few strangers.

3 out of the 6 participants who live in the Hague said they were pleasantly surprised to find such a nice spot at this part of their city, and would even consider hanging in the park in the summer time. Others also expressed how much they liked the park.

Conclusion

The players felt more comfortable at the test spot by spending time there and familiarizing with the area. Some of them were already pleasantly surprised just by finding a nice spot at a place they did not expect to. This implies that SotS gameplay can change the perception of neighbourhoods by simply introducing players to new locations and letting them spend time there while doing simple, fun activities. This, coupled with the challenges that made people engage with their surroundings, could make both residents of a neighbourhood and visitors feel more familiar and thus more comfortable.

"Not the best neighbourhood in the Hague. I don't see anything wrong per se. But this what people say and the history it has. I feel Ok comfortable, but not the greatest." - P1 before playtest

"I never knew this park existed, so that's nice. It's an extra place I could be in especially for summertime. I feel more comfortable now. It's calm" - P1 after playtest

"I saw it as just a park. Now I feel familiar with the area. Definitely. I can't describe it in words but it's a whole different experience that coming in first today" - P3

"I was kind of surprised how much I liked it (this park)" - P7

I think it's nice (the game). I imagine people chilling during the summer. there's things children can do and benches where you can talk with friends. - P8

"It's good because it forces people to pay attention to things that maybe they would not consider normally" - P4

"I thought the questions were really good actually. It helps you familiarize with the square and your surroundings. They made you reflect on where am I exactly? It happened to have stimulated me to think about things I normally never care about" - P3



Meeting strangers

Two challenges directly involved requesting something from strangers. The most prominent one was to high five strangers and voice record the interaction. Most participants reacted with hesitation. The reason why they were reluctant was that they did not want to bother people with a potentially silly request, or that they felt shy. In both groups one person took the lead, and this encouraged other players to follow suit. To their surprise, the strangers they high fived reacted very positively to the interaction and even struck a short conversation with the participants. After the playtest most participants said that they were proud of themselves and felt good for having approached strangers and getting such positive reactions.

Conclusion

These results show that even the smallest of interactions with strangers can result in positive feelings from both sides. With a few more challenges like the high fiving that push people to request something from strangers, SotS can come a long way to introduce people to others in a new neighbourhood. This could really improve the all around vibe between people who cross each other in public, where strangers are more open for a simple hello.

"How can we be cool and do the exercise? I felt a bit anxious. They (strangers) ended up being really cool about it and it ended up being nice. We had a short conversation, wished each other a nice day. So that was nice."

- P4 on high fiving strangers

"The guys (strangers) were skeptical at first but then loved it"

- P3 on high fiving strangers

"I feel like it's sort of a way to meet other people and you have a reason to talk to them. If you play something and you have to start together that is already the ice breaker." - P2

"I don't think I would remember him unless I lived here as well and saw him every day like hey! I would start saying hi if I recognized him." - P6

"yeah you know someone new so it's like you can tell a friend Hey I know that guy. So that's nice" - P1

The high 5ing thing was good but I don't think you actually start conversation. It starts an interaction, that's for sure. -P7

Yes I believe that. Especially the high 5s. I mean my squad were strangers and I interacted with them a lot so it's very fun. -P8

"I liked it because it made me interact with people I don't know. It made me feel friendly" - P5



Making friends by working together

Some participants did not know each other at first, and said that they felt alright around each other before the playtest started, but not the greatest. After the test, all of them said that they felt much more comfortable around each other because they had experience something together. This made them feel like they could talk to each other more openly, and that they would definitely remember each other.

The participants were also thankful that they could approach challenges a team. The more outgoing ones were able to shine with the more socially inclined challenges (e.g. high fiving strangers) while the more introverted players got more enthusiastic about other challenges like taking the right picture. They all felt like they were important members of the team at the end of the day.

Conclusion

Teamwork was necessary for players to complete most challenges. Having to work together led the players to start communicating naturally, which in turn led them to bond over their shared gaming experience. This made them feel acquainted enough to feel comfortable around each other and to start talking about none-game related topics.

"I feel more comfortable towards them. I feel like I would probably talk to them a little more about anything else." - P2

"Shared experiences connect people, so I feel like my team and I are connected now" - P3

We started to communicate while searching for the 2nd QR code. I felt more comfortable after that. When we were sitting just now on the bench waiting for the interview I felt more free to talk him because we already talked." - P5

"You had to approach with a random statement so yeah the fact that somebody was next to me that was also doing it was nice." - P6

"I think you have to do it together. Everybody plays their role." - P7

"It was easier knowing I could depend on others." - P2

"I'm glad someone else did it. I would've done it if I HAD to, but yeah. My team is cool. I can hang back" - P4

"It (teamwork) was necessary. We communicated well. I don't see you being able to play this game without communicating with your team." - P4

"I thought that sense of having more people to complete a task with was nice" - P6



Fun and exciting, but easy

After playtesting SotS, they were asked to talk about their experience with the game. They all said that they enjoyed playing the game, and would not mind playing it again. All the challenges were liked by at least some of the participants, with all of them having their personal favorites. The challenges that involved time limits were especially exciting, since they made people act fast.

However, they all agreed that the challenges could have been more challenging, especially after leveling up. Participants said that they would like to have their intellect tested, and not just their ability to try to find or remember something. This way, individuals would have more opportunities to shine within the team. Same goes with physical and social challenges. Some participants wanted to run and jump more, while others wanted to be tested on their social skills

Conclusion

The game was fun, but the challenges should ramp up in difficulty as you level up to make it worth coming back to. Especially considering that players start to get familiar with areas the more they play, the more challenged they can get to keep spots interesting. Adding time limits to tasks seem to do the job, but this should not be the only way of keeping things interesting.

"I didn't have many expectations, but I enjoyed it much more than I thought initially" - P2

"I was up for it! I was like guys let's do this" - P4

"Oh I thought it was very fun. It was interesting to look around, kind of a scavenger hunt. I like it. It was overall very fun to do. I enjoyed it." -P8

"I liked the time limits. When the team started counting it got exciting" - P6

"The time constrains triggered me back into the game! Putting time constrains on other tasks would be nice." - P3

"About the experience levels. Once you're a good team and can work together you can go harder. You can make it more challenging. Otherwise it will get boring" - P2

"When you level up I think the challenges should be a bit more difficult. You should be excited for the next level" - P5

"You're not really thinking. If you have to figure something out it's much more fun than just trial and error. If it were to have more puzzles then that would be more awesome. If it could incorporate more background knowledge it could incorporate knowledge that others might have that you don't" - P2

"Yeah you can implement more physical movement. That would also be healthier" - P8



Different playstyles

Some participants wanted more guidance while searching for the QR codes. They would have liked to get hints for challenges that have only one way of completing, which they were willing to exchange for AP. Another discussed solution was to implement a filter to only get desired challenge types, but with the cost of not being able to conquer a spot. Another gameplay change participants mentioned was the possibility to carry out challenges in any order. This was not possible with the paper prototype, but will be possible in the real game.

Beside choosing the challenge order, players also wanted to have multiple options for completing challenges to encourage different playstyles and reward going the extra mile for some.

Conclusion

SotS players will always have personal preferences for certain challenges and will dislike other challenges. It is important to give them multiple ways of either completing or bypassing challenges as to not get stuck and unable to continue with other challenges.

"More guidance. At a certain point I wanted to give up on finding the last QR code. Like something that tells you if you're warm or cold. I wouldn't mind paying AP for it" - P3

P1 "If someone is really shy, it can be challenging in general. But there are ways to go around it."

P3 "Yeah, you could skip those and accept that you won't get points. So it doesn't destroy the game"

P2 "Yeah you could bypass those with AP"

P3 "Maybe you could just filter out challenge types you don't want to do"

P2 "But then you wouldn't be able to conquer a park"

P3 "Yeah but then to conquer you just gotta do what you gotta do"

"Why this one first? I would like to do treasure chests in any order" - P3

"For now the challenges are very linear, they're one way of completing it. For example, if someone does more than a 360 (off a bench) I need bonus points. There should be room for the unexpected" - P2



Came longevity

Players found completing tasks and challenges exciting, but they were underwhelmed with what they got out of it. Gathering points was not enough to grant another playthrough for them. It would have been exciting if the experience points changed up the gameplay (e.g. by letting you buy hints or unlocking trickier challenges), but participants also suggested that having real-life rewards would be interesting to look at. Players could for example get coupons or discounts from stores they visited during gameplay (a matter of implementation and getting the right stakeholders), or could get little rewards like ice cream for helping people out. Players also said that they would like to do as many challenges as they'd want to, so they suggested removing the "only certain active spots per day" mechanic. If we want to let squads run into each other more often (which was the point of that mechanic), players would instead want to get notified if other squads entered their previously conquered spot to do something about it and always keep them on their toes. Also, the idea of squads could be scaled up by implementing a factions system where squads belong to a bigger group.

"This is fun, but I wouldn't do it tomorrow unless I get something out of it" - P3

Conclusions

Rewards should have more meaning than just collecting in-game points and levelling up. SotS developers could partner up with local shops and businesses to create a physical rewards system that benefits both players and entrepreneurs. Players could get treats or discounts, and entrepreneurs could get more exposure and clientele in return.

Conquering spots should not be a one-time mechanic for every squad at a spot. It should be a loop of players conquering a spot, and then being overthrown by another squad. For this, squads should belong to bigger groups, where they get notified if their conquered spots are at risk and have a chance of doing something about it.

"You could get ice cream or something. They're kids, it could be very simple" - P1

"I think most people (shop owners) would very happy to do that for you because it also means that they get more attention from people" - P7

"I would like to know if another group comes to our spot. What happens then? Turf war!" - P1

"Maybe you could have a brother team system. Like team blue dominates this area" - P1



Oh and also

1. The in-game narrative and other explanations should be visual and dynamic with for example videos.
2. Challenges should not be written ambiguously
3. Players should get notification pop-ups if squad members complete (part of) a task but are too far to talk to each other
4. Take into consideration player handicaps like colorblindness or the inability to walk (fast)

"The narrative should be a video. I don't want to read" - P3

"Wait, it has to be together?" - P1

"Nooo, right?" - P2

"Once I have a QR code I would like to see a notification. Like
"Ninja" found one" - P3



9.4 Playtest conclusion

1. Can playing SotS alter the perception of an ethnically diverse neighbourhood positively?

SotS is now set up as a spot-conquering game where players first have to physically be in predetermined outdoors public spaces in order to access challenges. This gameplay loop has a chance of introducing players to places they would otherwise never visit in a neighbourhood. Playtest data suggests that simply spending time in a newly discovered spot/square/park and getting incentivized to pay attention to its otherwise unremarkable physical details through gameplay (e.g. through walking around attentively to find hidden qr codes, counting the amount of benches) is enough to make players feel familiar, safe and welcomed there. They might just get pleasantly surprised to find a new favorite hanging spot.

In short

Yes, Secrets of the South has a high potential for positively influencing the perception of ethnically diverse neighbourhoods by introducing players to new spots and incentivizing them to actively engage and familiarize themselves with their surroundings.

2. Do players interact with people they don't know through SotS gameplay?

In the playtest version, SotS has two challenges that required interaction with strangers, "High Five" and "The Code". The more introverted participants were happy that they could count on their more outgoing squad members to approach strangers. In the end, all players high fived strangers and approached the shop owner. All players agreed that these challenges were the right amount of socially challenging, and they were easier to complete if accompanied by other players. Because of the team spirit and teamwork that naturally arose to complete tasks, players felt like they were connected to their squad members by the end of the playtest. All non-players who were approached also reacted positively to the short interactions they had with players. Players said that they would most likely say hello to people these people if they ever ran into them again.

In short

Yes, players willingly interacted with people they did not know in order to advance through the game. Knowing people, no matter how little, adds to feeling happy, welcomed, and familiar around a new spot for players and non-players.



3. What do participants think about SotS and gameplay?

Players liked the idea of having to find hidden objects in the environment, doing short physical activities, and being challenged to interact with strangers in ways they would otherwise not do on an every day basis. Working together was also very fun for them. However, they were underwhelmed at the level of difficulty and replay value of the game. They missed having challenges that challenged their intellect, and felt that just gathering points was not enough reason to keep playing the game.

Players would also have liked to see the consequences of other squads invading their conquered spot, and would have liked to know what they could do to stop them.

In (not so) short

Playing SotS was fun for the players. The challenges were exciting, especially those with time limits. The fun factor also contributed to making a spot positively memorable for players. However, the challenges, both physical and social, should get progressively more difficult as you level up to keep the game exciting. Challenges where one has to think are also very much desired. Also, the gameplay could be extended with mechanics that allow for squads to challenge each other more directly. Also, the rewards should have more meaning than only gathering points.

The game should be more rewarding. Mentally, physically, and literally.






9.5 Revised concept

The results from the playtest gave valuable and clear insight on what should be altered about the SotS concept to make it even more appealing to players. The concept as a whole will stay the same, with only a few minor presentation and gameplay tweaks. These changes are presented in the following pages.

General challenge changes

1. The challenges will not be numbered anymore so players can complete them in any order they want to.
2. Players will be able to skip challenges they do not like with the force open option. However, if they do so, they will not be able to Conquer the Spot they are at anymore
3. Challenges will now be split into three categories, which will be indicated in the challenge descriptions.

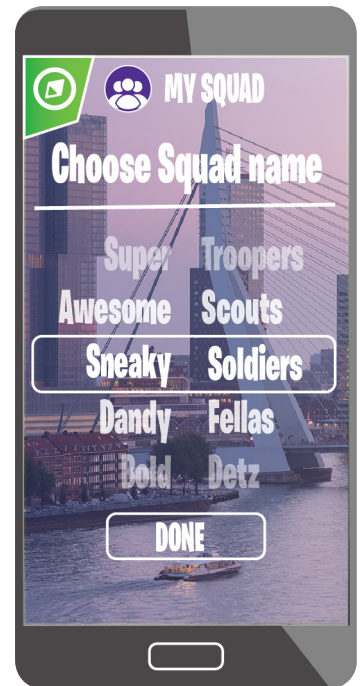
-  Action. These challenges require physical skill.
-  People. These challenges require interaction with locals
-  Puzzle. These challenges will test players on their logic and reasoning

4. The three original challenges will stay the same, but will now have multiple levels of complexity depending on Squad NE to challenge players accordingly. What will be presented is a higher difficulty variant of these.

1. Squad naming

During the first playtest group discussion, two participants said that they would have liked to choose their Squad name. This was not the case in the original concept to avoid the use of foul language.

Players will now be able to create their squad name by combining two words out of a predetermined list.



2. Notifications

Players were sometimes too far from each other to communicate verbally.

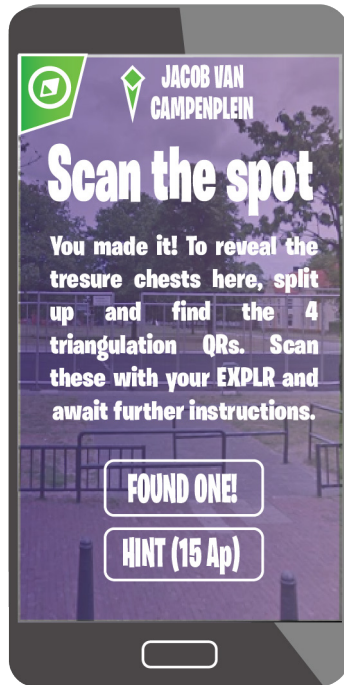
Now, pop-up messages will inform players of important actions that fellow squad members took, like finding a QR code or uploading a video for one of the challenges.



3. Hints

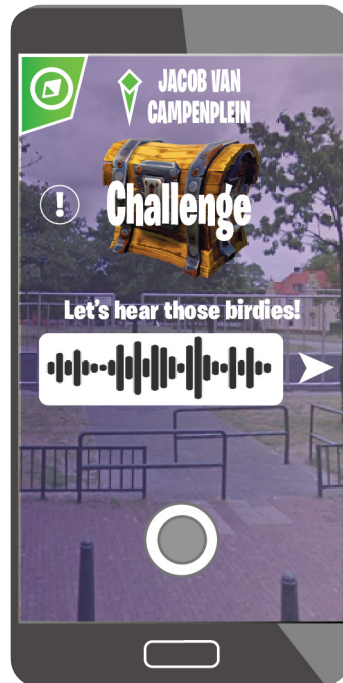
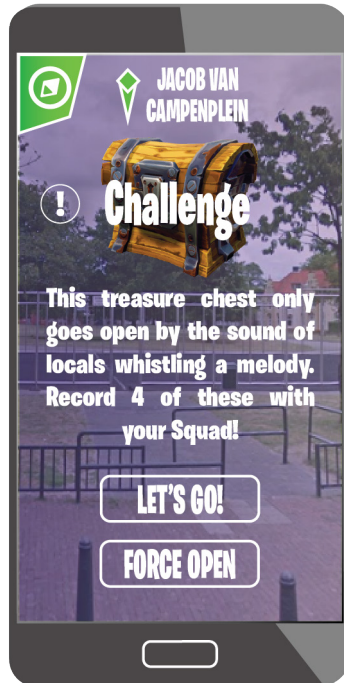
Participants felt like they were sometimes left too much in the dark when looking for things to advance the game.

To help them out, these challenges will allow for the purchasing of hints in exchange for AP. These hints will be pictures that will be shown for only a couple of seconds.



4. More complex interactions

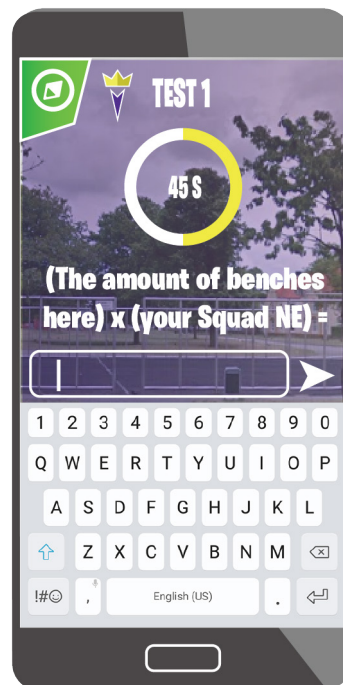
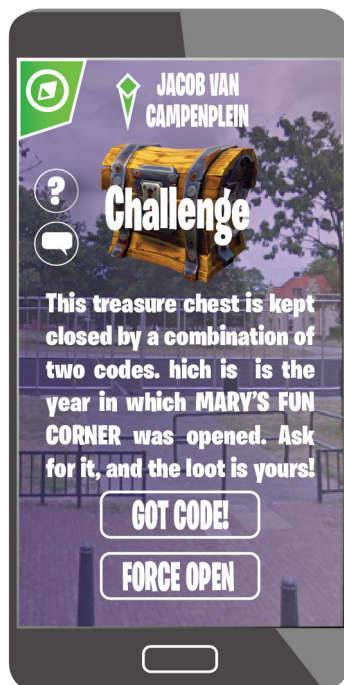
To test if the social skills of players progress as they play SotS and level up, they will have to ask more complex request from strangers. Are they now capable of asking more than just a high five?



5. Puzzles

Players wanted to see more puzzles in the game where they could use their smarts. The next level of the code-asking challenge is to ask two shop owners for information, and then combining these pieces of information to get the right answer.

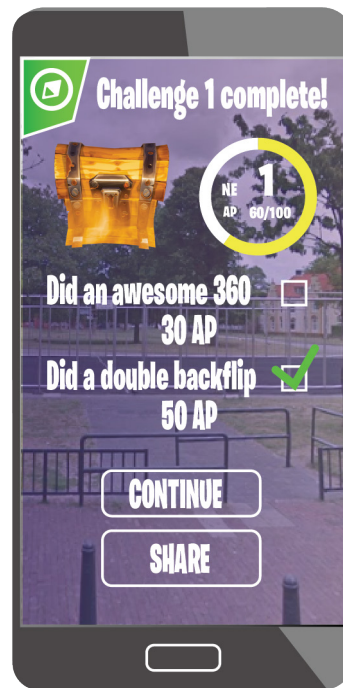
The conqueror test will now also have questions that get squads not only remembering, but thinking.



5. Unexpectedness

Instead of getting harder, challenges could also try to catch players off-guard. For example, once players find the bench it asks them to jump off of, it will tell them that they need to find another bench and do the same jump within a time limit.

Also, if players complete certain challenges by going the extra mile (e.g. doing a backflip instead of a 360 jump), they will get extra AP for their efforts.



5. Player input

Players wanted to challenge other squads more directly. Conqueror squads should therefore have a saying in what other squads should do to overthrow them.

A conqueror squad could choose to create a challenge. They could take the picture that will be used in the final conqueror test, or could have an agile squad member run a timed (and gps-tracked) lap around the spot to challenge someone else to beat that run!



10. CONCLUSION

EVALUATION AND STEPS FOR THE FUTURE

CONTENT

10.1 Conclusion

10.2 Design recommendations

10.3 Project recommendations

In this chapter, the overarching conclusion for the project is presented., going all the way back to the research questions. As a final note, recommendations will be listed for the further development of content for Secrets of the South.



10.1 Conclusion

The goal of this project was to create mobile game challenges to foster social interactions in ethnically diverse neighbourhoods. Through research, insights were gathered on how residents of Hillesluis perceive their neighbourhood, and what problems could be tackled within the scope of this project. With these insights, a design goal was formulated:

“To create a social and exciting public spaces experience for teenagers of Hillesluis through Secrets of the South gameplay that encourages social interaction by engaging with the neighbourhood and creating and exposing common ground between players”

Throughout the project, various challenges and gameplay ideas were created and iterated on. This process culminated in a gameplay experience where players have to conquer spots in a neighbourhood by completing challenges in these physical spaces. This was presented as a collection of various smartphone screenshots. These screenshots were made into a paper prototype to simulate a playthrough in a public park.

The playtest showed that the designed SotS gameplay fosters social interaction. This was achieved by creating challenges that require players to work together in a shared physical space. It was observed that players willingly interacted and communicated with one another. Furthermore, some challenges required interaction with non-players. The players approached strangers, and the interactions that followed were positive. Players were surprised to see how positive strangers reacted, and strangers were pleasantly surprised to be approached for a simple social interaction.

Other challenges had players searching for objects and information in the physical space. These challenges engaged them with their surroundings, which in retrospect made them feel more familiar and welcomed at the spot. After the playtest, they felt like the spot was more fun and exciting than when they first arrived.

The extent to which Secrets of the South can impact social cohesion in an ethnically diverse neighbourhood can not be extrated from two playthroughs that took about 45 minutes each to complete. This requires long term observations, which could simply not have be done within the scope of this project. However, we can conclude that Secrets of the South has the power to foster social interactions in ethnically diverse neighbourhoods. It will playfully guide players to interesting new locations and will introduce them to friendly residents that they can always count on for a high five, and that is not a bad place to start.

10.2 Design recommendations

Secrets of the South content was ideated upon, conceptualized, detailed, and evaluated throughout this project. However, many points were left unaddressed. Here are a few recommendations to further develop the game and the first few steps to successfully implement it.

Future playtests

The playtest outcomes could have been very different had it been carried out with the intended target audience. Future playtests should take place in Hillesluis with teenage residents of the neighbourhood to better validate the concept. For this, it is recommended to translate the whole game in Dutch.

User interface

The focus of this project laid on creating content for SotS rather than creating a user-friendly interface for it. Seeing that SotS is a mobile game, the UI and presentation are important elements for this design. It is recommended to plan and carry out a test to evaluate these elements to further smooth out the gameplay flow.

Challenge alternatives

Some challenges will involve talking to shop owners. However, it is expected for people to sometimes play the game when shops are closed. Players can always choose to skip a challenge, but other alternatives for situations such as this should be created to always have the game playable. Also, the challenges should adapt to the amount of squad members when a squad is not complete.

Addressing culture

Fonseca's overarching goal is to improve social cohesion in ethnically diverse neighbourhoods. A big issue these neighbourhoods are facing is the lack of interaction between cultures (see chapter 5.1). SotS could at some point have content that directly addresses and teaches players about different cultures (cuisine, language, customs, traditions, etc.) in their neighbourhoods to promote acceptance and understanding.

More competition

More mechanics should be developed to spark healthy competition between squads. Currently, the only way of competing against other squads is by trying to best each other in the conqueror challenges. For example, there should be consequences for squads entering a conquered spot. The Conqueror squad could get a notification that another squad is trying to dethrone them. These squads could directly compete to complete a set of challenges faster than the other.

The Rewards system

The rewards system was improved upon with the feedback from the playtest. Challenges will now get progressively harder as players collect more AP, and these points can be used in exchange for in-game hints. This rewards system could still be more meaningful, especially outside the boundaries of the digital game.

10.3 Project recommendations

Ideally, all the stakeholders discussed in chapter 5.5 would be more directly involved in the development, maintenance and execution of SotS to give the game more real-world value. These are a few recommendations to achieve this.

Shop owners

Currently, local business owners are only involved with the game through challenges that have players asking them questions (e.g. “The code” challenge). This relationship could be improved by having these entrepreneurs benefit from the game too. For example, shop owners could get online access to a system where they can request help for small logistical tasks. These request will then be turned into challenges that will be presented to players through Sots. Players would then be rewarded with discounts or small goods (e.g. ice creams, bubblegum), and shop owners will get help and exposure. This interplay would greatly improve the relationship between shop owners and teenagers.

Youth centers

To keep SotS content fresh and exciting, youth centers could organize monthly meetings where teenagers come together to talk about their SotS experience and brainstorm about challenges they would like to see in the game. Ideally, SotS should also allow for players to create simple challenges directly in it. For this, it is important to have moderators to filter out dangerous or inappropriate challenges. These moderators could be youth workers or trusted teenagers.

Police

Through the interview with the police officer we learned that it was not uncommon for authorities to directly address teenagers who are disturbing the public peace on the streets (see chapter 6.4). Instead of just telling these youth to leave a spot, police officer could promote the game instead and give them the power to make a difference in their neighbourhood.

During a casual follow-up talk I had with the police officer, he mentioned that he would love to see challenges that would have teenagers experience how it feels to be a cop. With this idea, he hopes to let youth empathize with other residents and the issues they might be facing. It would be interesting to do an ideation session for SotS with the police force to develop this idea further.

Gemeente Rotterdam.

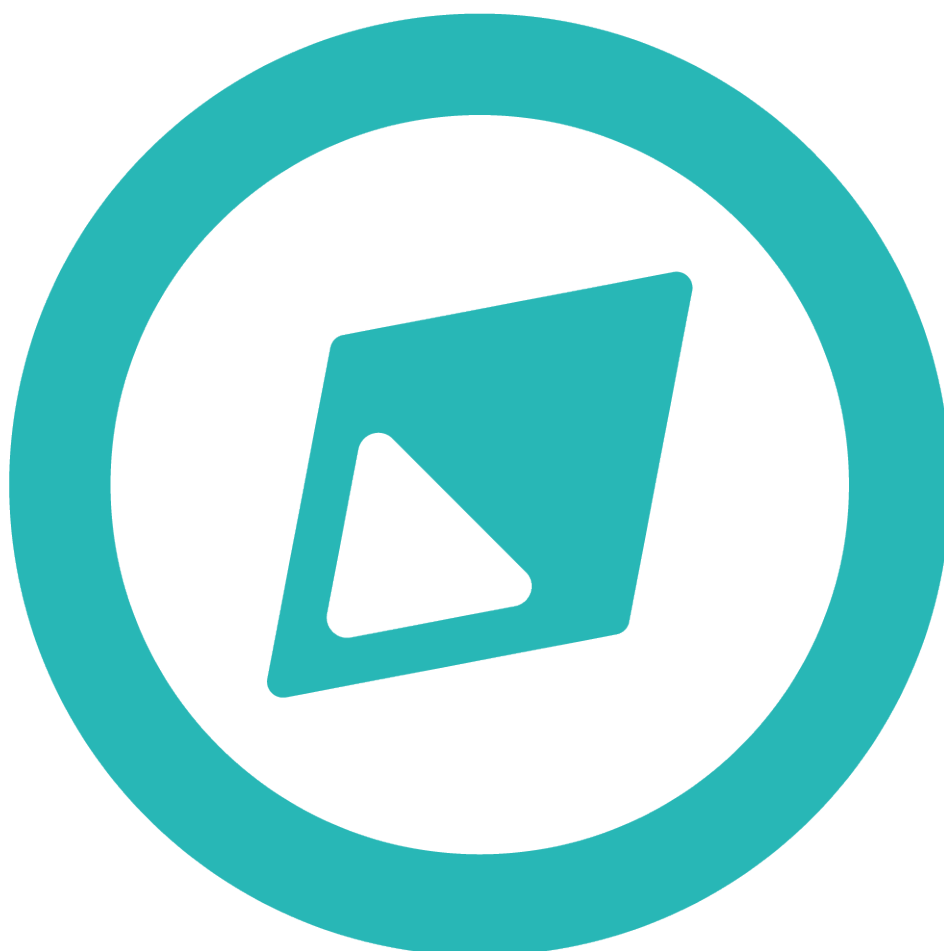
The Rotterdam municipality should be convinced about the positive effect Secrets of the South could have on social cohesion in its ethnically diverse neighbourhoods. If we manage to do so, all other stakeholders in Rotterdam should be more easily convinced to be a part of SotS. The municipality could promote and endorse the game. It could have a dedicated part of its Resilient Rotterdam budget to be spent on paying moderators and content creators to keep the game alive!

REFLECTION

As a Mexican-born, Aruba-raised gamer living in the Netherlands, I have always been interested in mingling with people from different cultural backgrounds. When I hear about this graduation project where I could mix my passion for gaming and cultures, I was excited to jump on board. However, my enthusiasms was quickly challenged. Only a few days into the project, it was clear to me that the problem that I had to tackle was going to be very challenging. Social cohesion is an abstract term with no single universally accepted definition. The amount of angles that I could have taken to research this topic felt very overwhelming at times. In the end, I concentrated my efforts on fostering social interaction, which helped a great deal. I learned that deconstructing a problem and defining a scope early on is very important for managing any project.

I often struggled with the design solutions I was think of during the design phase. The research findings pointed towards physical solutions in physical spaces, but the format of my final design was already set in stone: Content for a mobile game. It was not hard to think of activities that would be fun for teenagers to do in public spaces. The real challenge was to come up with reasons for these to be presented through a mobile game instead of just being activities that could otherwise be organized by youth groups. Eventually I came up with the narrative of conquering spots. This narrative tied together many gameplay ideas and gamified behavior teenagers already exhibit. This narrative also gave the game a higher goal than just fulfilling challenges. This shows that good storytelling is a mighty powerful tool, which is something that I will definitely keep in mind for the rest of my career as a professional designer.

If I could do this project again, I would have definitely planned it all better. I would have liked to have my concept playtested with the intended target group, but gathering willing individuals took longer than expected. I also could have spent more time studying (mobile) game design tools and methods to streamline my ideation process. In the end however, I managed to deal with all the challenges that I faced and delivered a concept which I am very proud of. This project really helped me feel more capable as a professional researcher and designer. I have never taken on such a big project by myself, and am happy to now that I am well equipped to do so.



LOADING CREDITS

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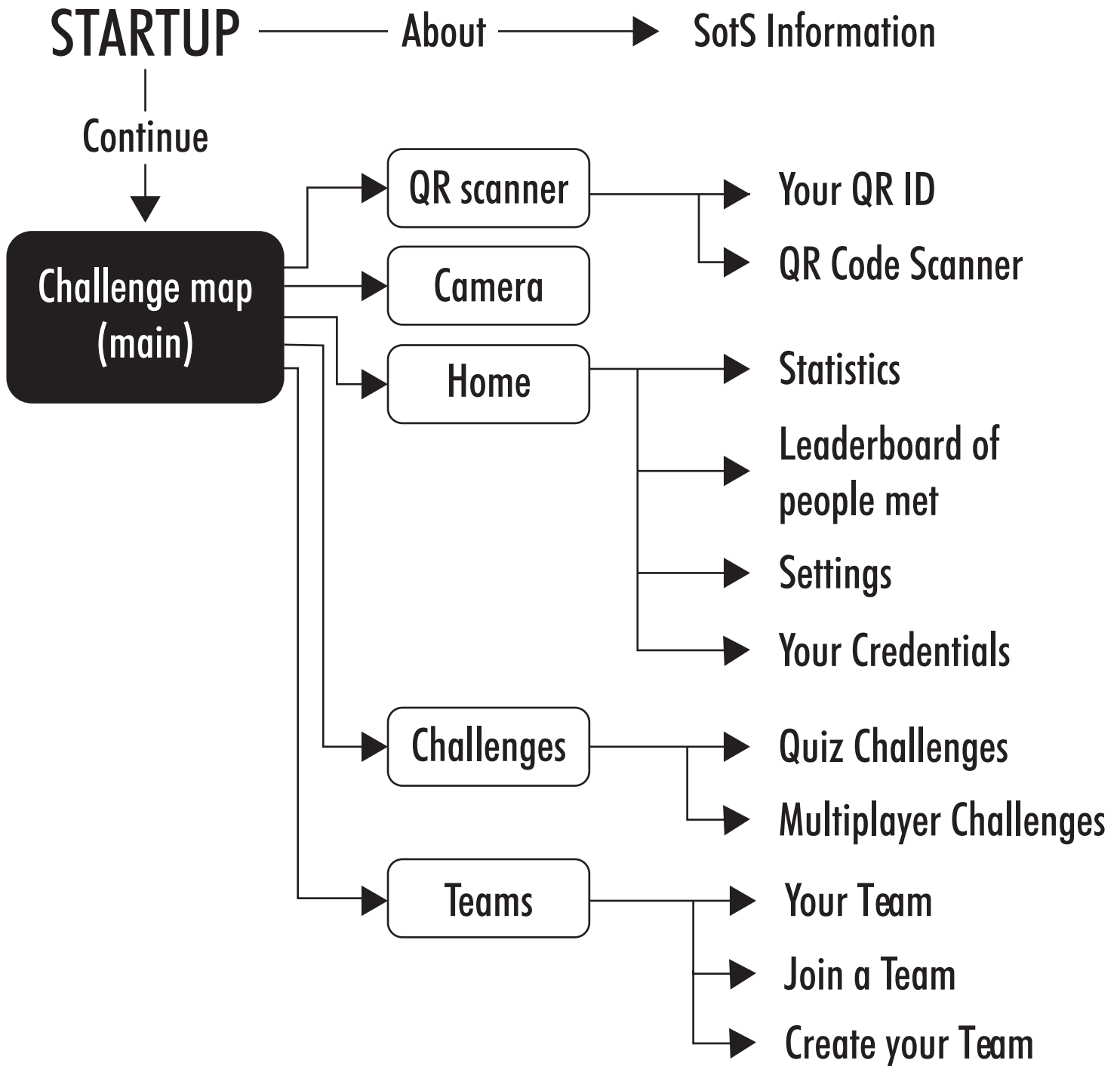
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APPENDIX A

SOTS V1.7 WORKFLOW



APPENDIX B

FIELD RESEARCH QUESTIONNAIRE

To engage with the youngsters, the language used during the interview will be laid back, and all manners of answers and humor will be encouraged. Also, if running low on time, some questions (marked in bold) will be given priority over others.

Introduction ± 10 sec

"Hello, my name is Dany.. I am working on improving living circumstances in the neighbourhood. Would you be interested in talking about your neighbourhood and to help me think about and imagine improvements for the neighbourhood to make it more fun."

If participants react positively, we will continue.

Explanation

I'm a student and researcher at the TU Delft. For my graduation project, I am researching the potential that mobile games have on improving social life on the street. Because of its ethnic diversity, and the preconception that people do not socialize much in public. I would like to talk to you, the residents to find out more about the social situation. With that, we can see what challenges you are facing, and how these could be addressed through a mobile game"

*Optional: ask if it's ok to voice record the conversation

Questions/discussion

Neighbourhood

1. Do you live here, or are you just visiting ?
2. What are your feelings toward Hillesluis? Do you feel connected to it? Are there things you love or hate about it?
3. How well do you feel like know your hood and its hanging spots? And what about landmarks?
4. Are there any specific places you love visiting or prefer to avoid?

Your role in it

5. How familiar are you with the other inhabitants of Hillesluis?
6. If you come in contact with someone you don't know, what is the occasion? How do you behave towards these people? Would you like this to be different?
7. What kinds of groups do you often see hanging outside? Do you appreciate youngsters having places where they can meet? What do you think your role is in your neighbourhood?

Activities

8. How often do you hang around outside and what do you do then?
9. What kind of games and sports do you like to play? These can be indoors and outdoors, digital, tabletop, sports
10. Do you sometimes do activities with people you don't know? Do you like coming in contact with new people?

After these discussion points, the premise of the game will be explained:

Secrets of the South

<http://secretsofthesouth.tbm.tudelft.nl/>

A game that aims to connect people to the city they live in, and to other residents. It's kind of like Pokemon GO. You will see yourself on a map of your location. You will see treasure chests scattered around, which you can open once you get close enough. Maybe there's a QR code there. Once opened/scanned, you will be given a challenge. This can be anything from a question about a statue nearby, to trying to make a jump between two benches, to anything you can think of, as long as it's on location. They can be cooperative or competitive challenges. Once a challenge has been completed, you will upload your results to compare them to others.

SotS specific

11. Does this sound like a game you would like to play? If not, what would have to be changed to motivate you to try it out?
12. What type of challenges would you like to see in a game like this? Anything you can think of goes! Mention questionable activities for stimulation if necessary!
13. If Hillesluis was the setting for a videogame, what kind of game would it be? What would be your roll in it?

APPENDIX C

FIELD RESEARCH MAP

APPENDIX D

POLICE OFFICER INTERVIEW

1. What do you think are the biggest problems or factors that neighbourhoods like Hillesluis face that affect social cohesion negatively? What should be tackled or paid extra attention to? Culture, crime, infrastructure?

2. How are you as a police officer treated in neighbourhoods like this? How is the relationship between the police force and these people? Would you like this to be different? Where do you see opportunities for improvement?

3. According to multiple sources (eg Wijkprofiel, 2018), Hillesluis a neighbourhood with a high crime rate. However, during the field research, only one participant mentioned crime as a problem. Another participant said that he has never seen shootouts or any other crimes that people often talk about in Hillesluis. How much do you think crime affects the general public liveliness of a neighbourhoods?

4. With the field research, we found that Hillesluis lacks social activities and public spaces where its residents can relax outdoors. What are the reasons for this?

A. What kind of activities could you see working to fix this problem? Activities that are both fun and proactive at improving social cohesion? Especially to involve teens.

B. Do you think presenting these through an app is a way to do so? To what extent do you think this could work?

5. During my field research, I saw very few teenagers on the street, who are our main target group. This could be explained by the lack of engaging activities.

A. What would be a good entry point to engage teenage participants beside approaching them through high schools?

B. What is the best way to approach 'hangjongeren' on the street? Do you see any possibilities in involving them with projects like this?

6. Beside teenagers, we would also like to involve shop keepers closely in our project because they surely have stories to share. Are there any other influential (groups of) people that dictate social cohesion in neighbourhoods like Hillesluis?

7. Food for thought. Yesterday I saw a video in which the author claimed that making policies for neighbourhoods to be both well-integrated (diverse) and socially cohesive are "lost cause". What are your thoughts on this?

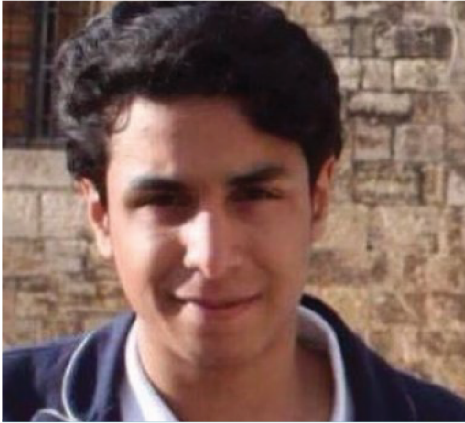
APPENDIX E

PERSONAS

It was observed that teenagers are not often found in public spaces. Especially considering that up to 40% of the residents are under 25 years of age, the amount of teens out in public was underwhelming. Other studies have found similar results (Holland et al., 2007). This lack of interest in public space life by teenagers might be detrimental for the development of these individuals, seeing that researchers argue that exposure to a social context with people of different ages is important for the development of these individuals (Lerner, 1981).

Teenagers, however, are an age group, not a subculture. We can not design for all of them. in mind. To get a better grasp on who exactly we are designing for, 3 personas were created: Deniz, Alma and Ahmad. These three characters best represent the teenagers that were talked to, and the concerns that older people and the police had when it came to teenagers in Hillesluis. The desires of these individuals will be kept in mind .

To complement each persona, user journey maps were created for each of them. Instead of creating these maps in relation to a service, these journeys were created to visualize the stages the personas undergo from the moment they decide to hang outside, to the moment they get home. These journeys were informed by the few teens that were talked to, observations, and consulting a high school teacher.



THE 'HANGJONGEN'

Deniz
17

Nationality: Turkish
Occupation: Pizza delivery boy

"I like chilling with my bro's at the playground in Stichterplein after school. It's pretty chill and private over there early in the day because all the kids are at school. However, it sucks that often older people or the stadstoezicht come to kill the vibe because they think we're being too loud or something. They're fucking annoying."

LIKES

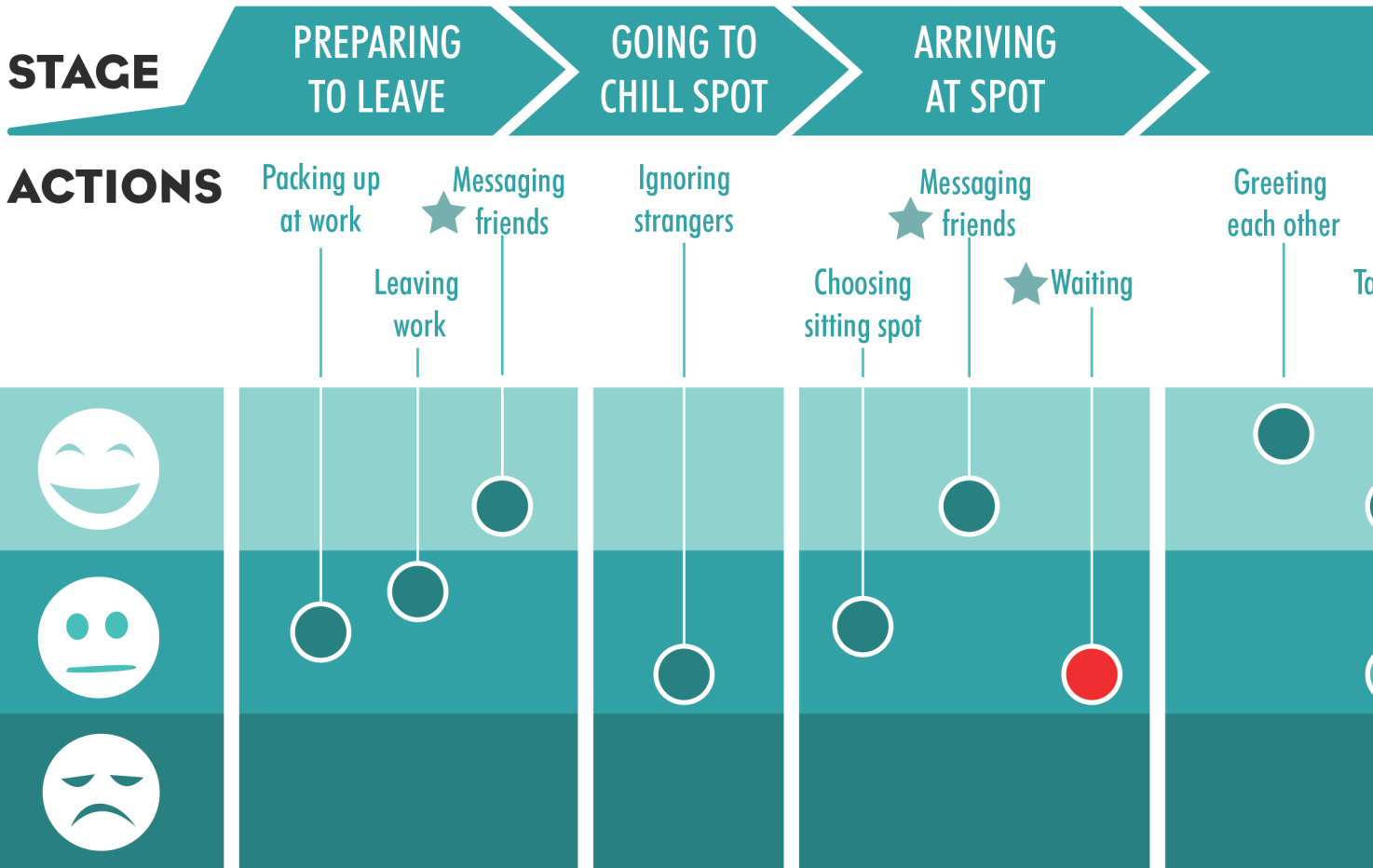
Playing football
Hanging with his friends
Rap music

DISLIKES

Authorities
Conformity
Kids playing around his hanging spot

WANTS

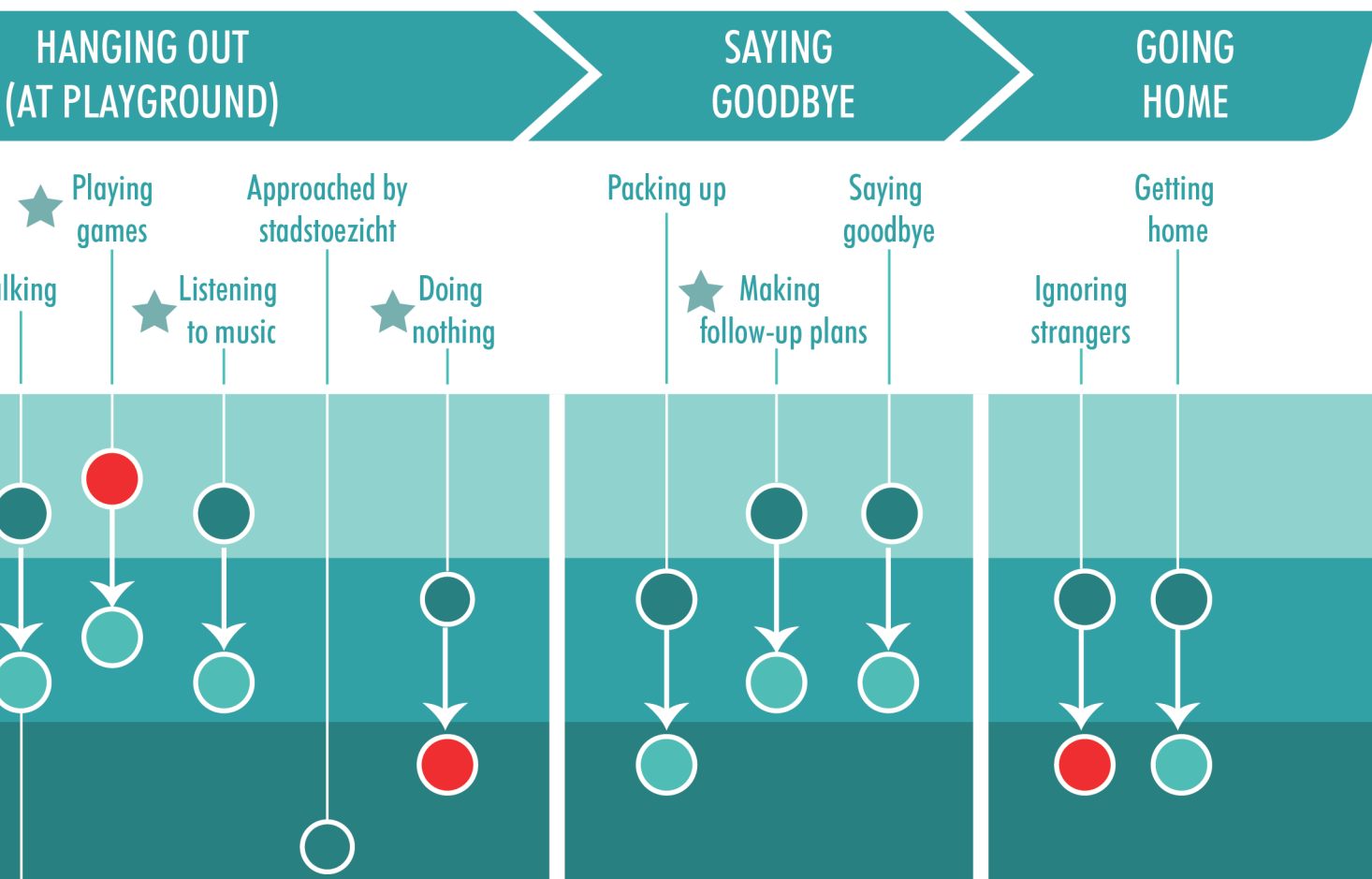
Privacy
Independence
Purpose



Deniz embodies the stereotypical “loud” young man who spends a lot of time outdoors with friends. He often comes across as rude because of his loud behavior when he is with friends. In reality, he is a nice individual who just likes to fool around. He often gets annoyed because of the judgmental looks he often gets from adults and he does not have many places to hang privately with his friends

How he could benefit the most from playing SotS is by changing how others perceive him. By coming in contact with people, he could show that he is not as mean spirited as adults often think he is.

- ★ Actions that (often) involve smartphones
- Emotional state during action
- Interesting states/actions to tackle
- 😊 Feeling happy/jolly
- 😐 Feeling indifferent
- 😞 Feeling sad/angry/annoyed



↳ worsened mood if approached by Stadstoezicht



THE STAY AT HOME DAUGHTER

Alma
15

Nationality: Moroccan
Occupation: MBO student

"I have 3 younger siblings, which is sometimes too much for mom to handle by herself, so I often stay home to help out. If I hang outside, it's mostly in the evenings. I usually go to the movies with my girlfriends. We avoid parks because there's always groups of boys being boys."

LIKES

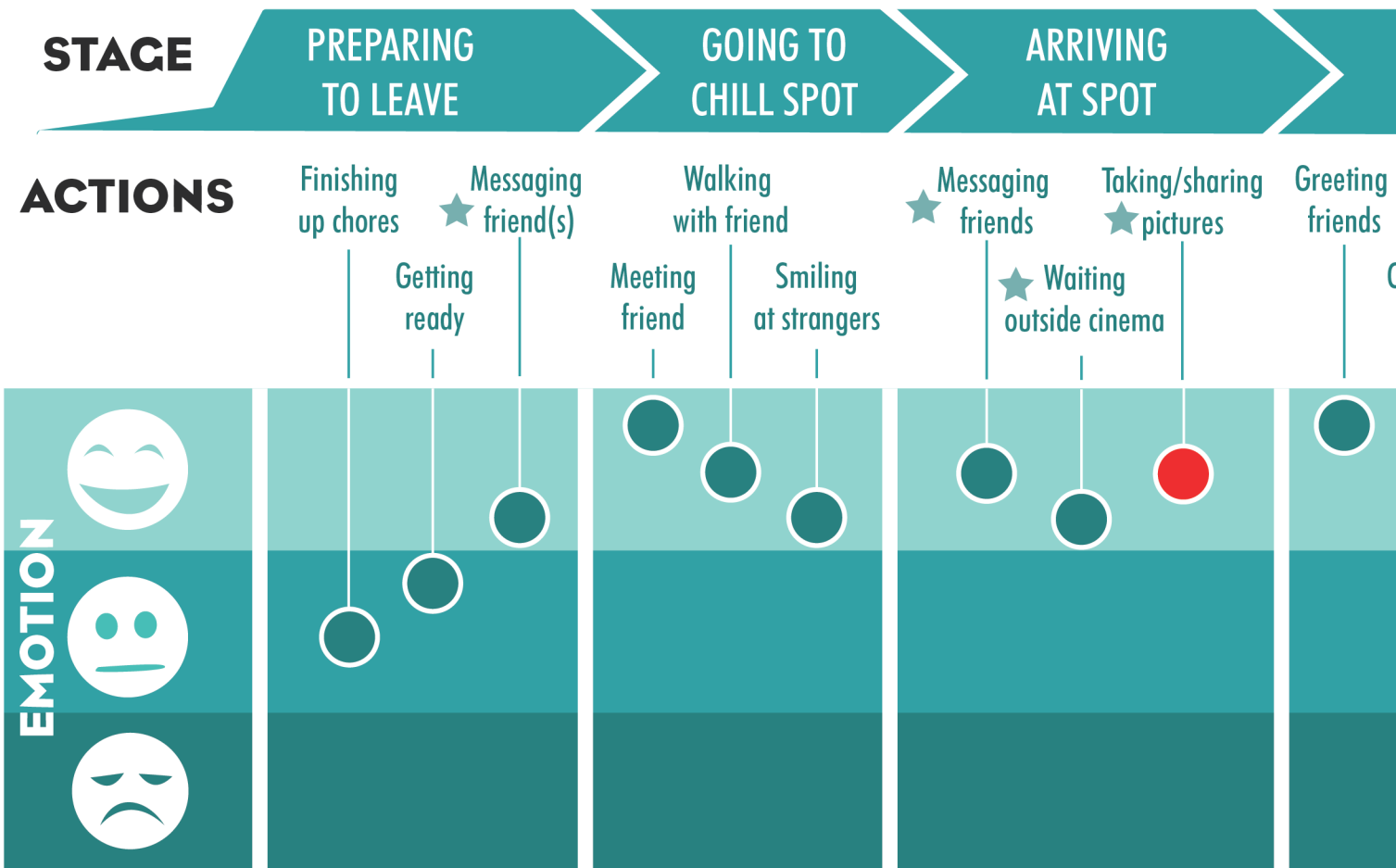
Her family
Snapchat stories
Catching up with girlfriends

DISLIKES

Staying home all day
Feeling unsafe at night
Not having much to do outdoors

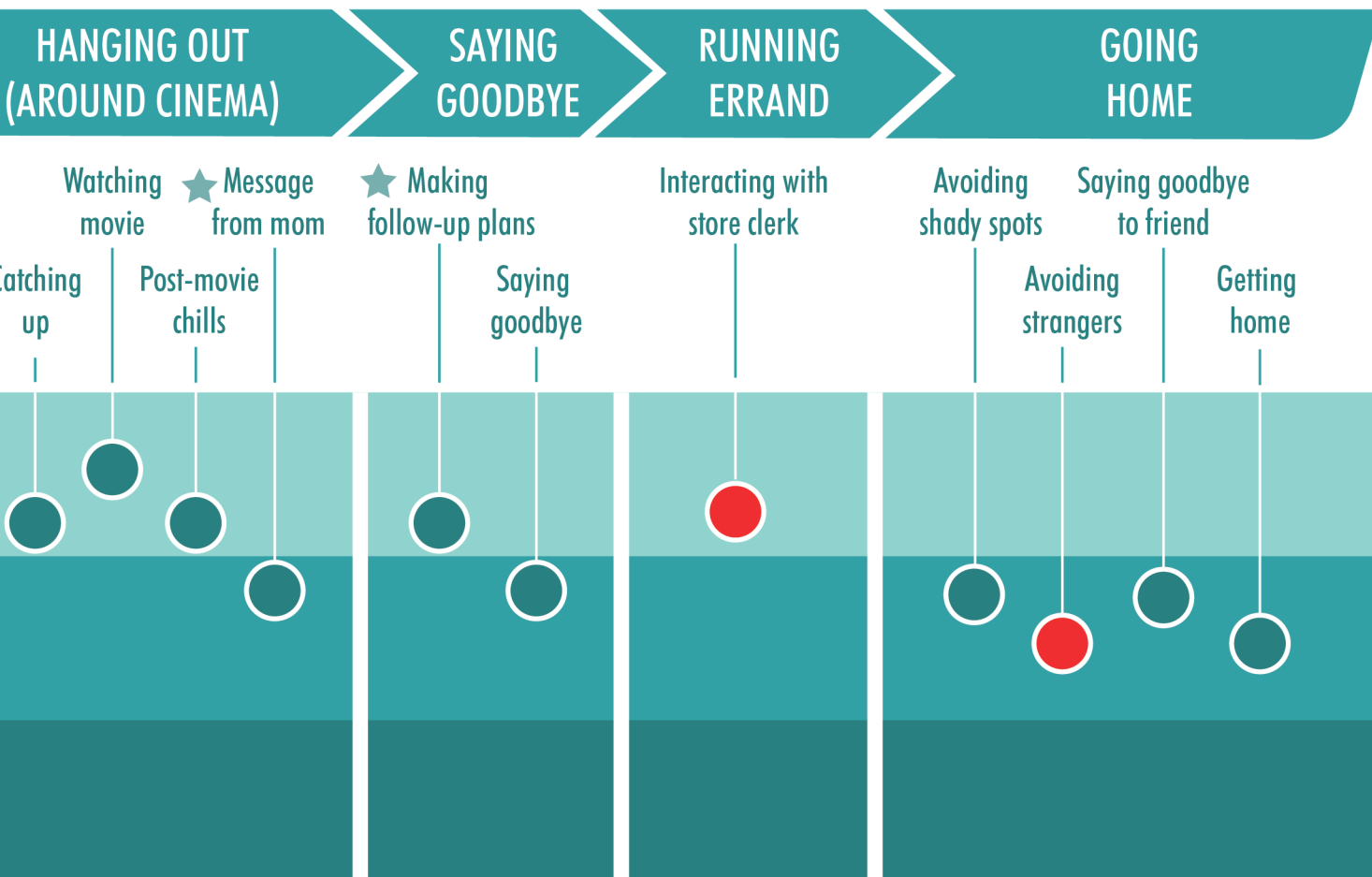
WANTS

Safety
Independence
To learn about cultures



Alma is a sweet girl who likes to talk to people. Sadly, she often has to stay home because her parents think it is dangerous for her to be outside.

How she could benefit from SotS is by the game creating a more socially cohesive neighbourhood where there are always people out on the street, making it feel safer and more welcoming.





THE OLDER BOY

Ahmad
12

Nationality: Moroccan
Occupation: MBO student

"I just started high school at RVC de hef. I want to start hanging outside more often with my new friends like my older brother does. However, my mom doesn't like it because she fears I might pick up on their bad habits like smoking and swearing too much."

LIKES

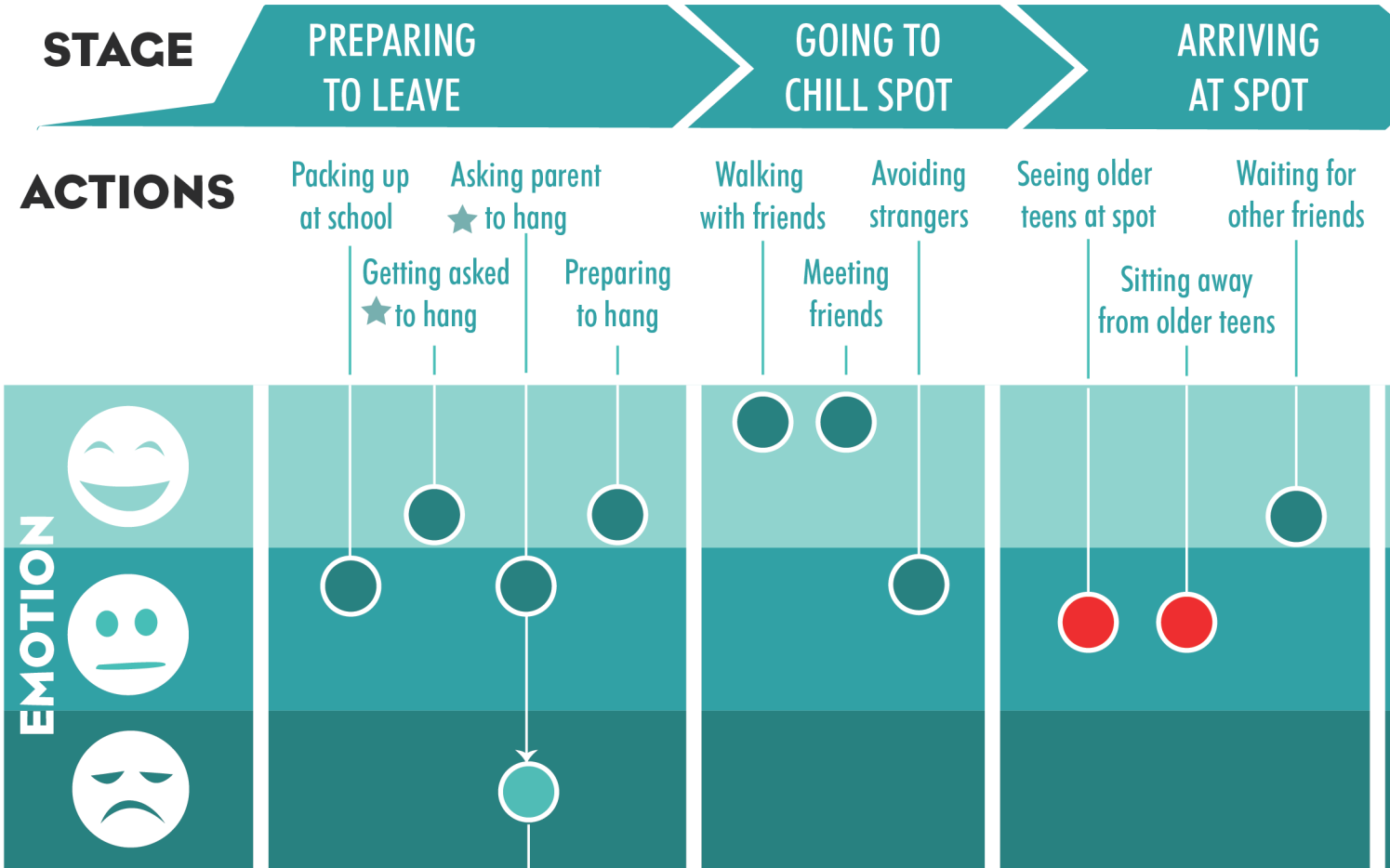
Playing Fortnite
Watching movies
Hanging around after school

DISLIKES

Being treated as a child
Homework
Not having much to do for his age

WANTS

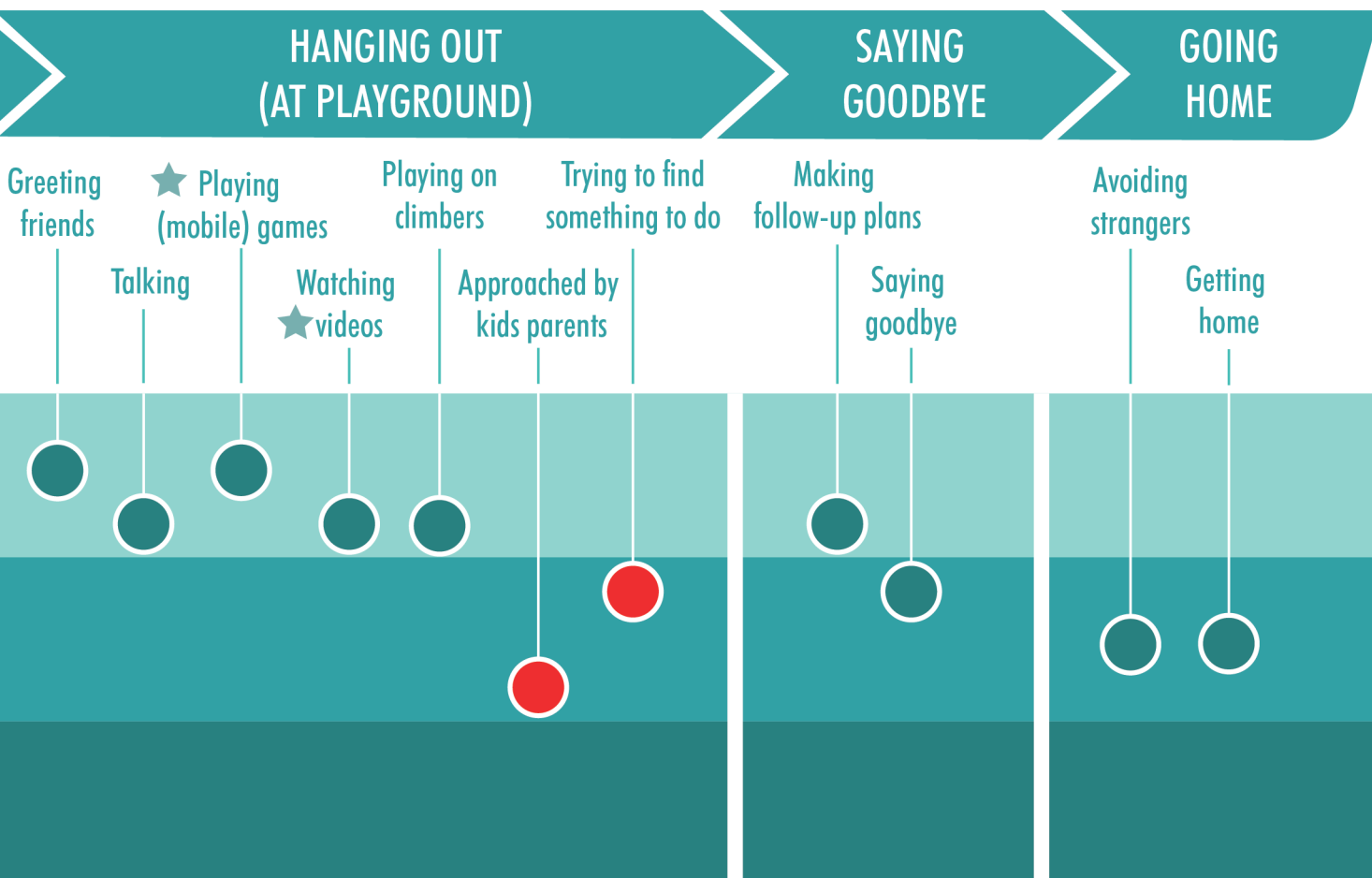
Independence
A saying in society
To do good



↳ If mom/dad doesn't let you

Ahmad is almost officially a teenager. Because of this, he finds it somewhat laughable that his parents still do not allow him outside as much as he would want to.

SotS could provide him with opportunities to do something meaningful for his neighbourhood like helping the elderly or shop owners. If his parents see that he is actually doing good, they might just allow him to go outside more often!



USER JOURNEY MAP METHODOLOGY

95 User Journey Maps

A user journey map is a visualization of the experiences people have when interacting with a product or service, so that each moment can be individually evaluated and improved.

A user journey map tells a story about an individual's actions, feelings, perceptions, and frame of mind—including the positive, negative, and neutral moments—as he or she interacts with a multi-channel product or service over a period of time. By documenting the series of events and interactions that a person experiences, the user journey map can shift an organization's focus from an operational, system-centered view to the larger context in which products and services are used in the real world. It also helps teams pinpoint distinct moments that elicit strong emotional reactions and are ripe for redesign and improvement. By creating discussions around which interactions are working optimally, which are insignificant, and which are failing altogether, the user journey map helps teams develop a shared vision about ways to more effectively augment existing user behavior within their actual contexts of use.

Solid user journey maps are usually created alongside, or immediately following, personas and scenarios documents. All three deliverables should be heavily informed by direct contact with the customers who use the product or service. Rich, qualitative data that is a result of primary research is the only way to be sure to craft deep, compelling narratives that reflect people's actual needs, feelings, and perceptions that occur before, during, and after product interactions. Each map should represent a journey specific to a persona, as well as include a description of the persona. For the benefit of the internal team, the map should also articulate the event it illustrates: this can be either an entire relationship life cycle, or can be limited to a specific scenario. The map should be an honest representation of an experience, and include moments of indecision, confusion, frustration, as well as delight and closure. Multiple maps will need to be created for multiple personas, as each persona will have different tasks and goals, and will experience different breakdowns and successes on their journey.

The early versions of the document can then serve as a springboard for discussion on the team. Print out an early version of the map on large-format paper, pin it up on a board, and hold a review session where everybody can get up close to the document and mark it up with questions, ideas, and suggestions for improvement. The hands-on, inclusive design activity that brings all decision makers together can go a long way in ensuring that the user journey map becomes a living document for the organization.

Further Reading

McInness, Andrew. "Assess The Effectiveness of Your Customer Journey Map." Forrester Research, 2010.

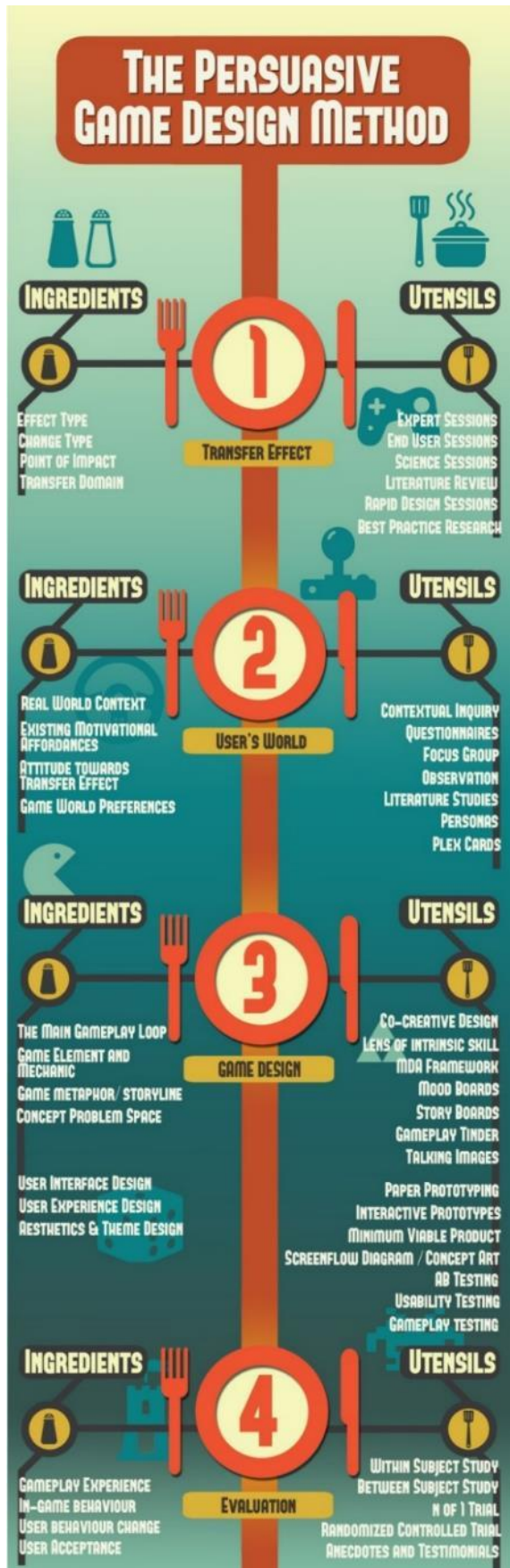
Brown, Jonathan. "Executive Q&A: Design Personas and Customer Journey Maps." Forrester Research, 2011.

Behavioral Attitudinal	Quantitative Qualitative	Innovative Adapted Traditional	Exploratory Generative Evaluative	Participatory Observational Self reporting Expert review Design process
196	Universal Methods of Design			

Fig X. An explanation of the User journey map method as presented by Martin and Hanington (Universal Methods of Design, 2012)

APPENDIX F

PCD COOKBOOK METHOD



Siriiraya (2018) presents a “cookbook” approach to designing Persuasive Games. BLABLAS are seen as dishes. The detailed elements that make up these dishes are called Ingredients, and the methodologies use to create these dishes are referred to as Utensils.



DISH 1: DEFINING THE TRANSFER EFFECT

INGREDIENT	NAME	DEFINITION	EXAMPLES
	Effect type	The type of effect the game aims to achieve.	<ul style="list-style-type: none">-Performance(e.g. Time on task)-Compliance (i.e. recurrence of task performance)-Social behavioral change (i.e. acting socially)-Physical behavioral change-Mental experience change (i.e. experiencing change in terms of social connectedness, self-esteem, emotions, etc.)-Attitudinal change (with respect to various behaviors)
	Change type	The type of change that is aimed for in relation to the existing pre-game (real world) behavior.	<ul style="list-style-type: none">-Reinforce-Alter-Forming/ creating
	Point of impact	The period in which it is expected to achieve the aimed-for change.	<ul style="list-style-type: none">-Effect is realized during gameplay-Effect is realized on a short term after gameplay (minutes/ hours/ days)-Effect is realized on a long term after gameplay (days/ weeks/ months/ years) after gameplay
	Domain	The application domain in which the change takes place	<ul style="list-style-type: none">-Healthcare context (e.g. hospital, therapy)-Business (e.g. office, factory)-Education (e.g. school, trainee programs)-Society (e.g. cities, neighbourhoods)-Personal life (e.g. family, individual users)

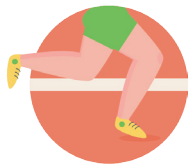
Fig X. A quick visual recap of how to define a transfer effect for persuasive game design (ISSG, 2018)

APPENDIX G

LIST OF REQUIREMENTS

Before this project started, Fonseca conducted a co-design session for SotS with high school students from RVC de Hef and STC, two High schools in Rotterdam South (Fonseca, 2018). One of his take-aways from these sessions was a list of mechanics that teenagers would like to see in his game. The most promising mechanics for this project were extracted and are presented here, and will serve as the list of requirements for the challenges that will be designed.

1. Physical Activity



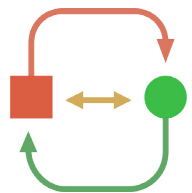
Teenagers would like to see activities that involve physical exertion beyond just manipulating a smartphone. Think of running, jumping, maybe even dancing or sports!

2. Team play



Teenagers would like the possibility to work together to complete challenges. This is also a very important point for us, seeing that, for cooperation to happen, people need to interact.

3. Communication



Cooperation within the game could happen both offline and online. For this, it is important to implement a way for players to communicate remotely to for example exchange information, or to find other players.

4. Rewards



Teenagers expressed the desire for rewards for their efforts. This will keep them motivated and will give them an extrinsic motivation to play the game. Also, collecting points would be a good way to track in-game progress.

5. Competition



Beside cooperating, competition would also encourage interaction between players. Some challenges should have a clear winner to motivate players intrinsically.

6. Neighbourhood Improvement



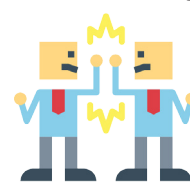
Surprisingly, many participants expressed their desire to help others out. They would like to see challenges that involve helping the elderly with errands, or volunteering to clean up.

7. Augmented Reality



Augmented reality was a popular mechanic. Teenagers expressed that they would like to see digital assets merged with the real world, not unlike games like Pokemon Go. This opens up possibilities for very creative gameplay.

8. Challenging Others



Players do not only want to cooperate and compete against each other. They would also like to challenge each other with self-made challenges through SotS. For this, templates of sorts would have to be created.

9. Avatars



Teenagers would like to present themselves somewhat anonymously online, especially at first. Because of this, avatars and usernames will be implemented in the game.

APPENDIX H

CREATIVE SESSION

Energizer

Zip zap game (5 minutes)

De kattenkwaad

1. Write down mischievous activities you can do in a gang on post-it's (5 minutes)
2. Make duo's, and gamify one of these activities on A3. Give em a name! (5 minutes)
3. Present em to me and to each other (3 mins)

Introduction

Doing research on neighbourhoods that lack social cohesion, "a process of developing a community of shared values, challenges, and opportunities based on shared trust". Believed to be so because of high ethnic diversity, low income, low education, low sense of security and reason to go outside. These two fuel each other (Migration thingie). This project is based upon research done by PhD Xavier. He wants to improve social cohesion by causing social interactions between people.

B. Interacting with (talk to, nod, etc) strangers in public?

1. Write down on post-it's reasons you WOULDN'T do it (5 min)
2. Write down reasons you WOULD do so
3. Cluster on big paper with axes Social barrier - Me/other (5 min)
4. Can we cluster these differently?

Research says that doing common tasks is a way to do so. What way to give common task? Games of course! Games are activities ruled by two things: Rules and goals, where everyone participating operates in. Xavier developed SotS (SotS screenshots). Game where people walk around, get challenges in environment they must complete. Examples. My job is to create the content and challenges for this game. So let's design a game! What's possible?

C. Possibilities

1. What objects/things/places/people are commonly found outdoors in Dutch neighbourhoods? What does police see? Moms? Kids? Teens? Write on post-it's.
2. Cluster these on sheet of paper.
3. What can you do with smartphones? Measure, AR, upload videos, google, call.
4. Can we cluster these as well?

I eventually narrowed down the scope to Hillesluis, a neighbourhood in Rotterdam Zuid. Talked to people, found 3 problems within scope:

1. Teenagers have very little to do in public. There are barely any public events, and there are limited dedicated spaces to socialize.
2. Teens are often seen as annoyance. They can be loud and disturb public peace and are a bad influence on children according to parents.
3. People get annoyed by Stadstoezicht and other authorities because they have not fixed problems yet.

Learning this, we came to our design goal

To create and expose common ground between teenage (12-18) residents of Hillesluis and other residents to create opportunities for social interactions

D. Activities

1. Now, one half pics a cluster of Objects each and the other a smartphone capability. Make duos, and combine both to create a multiplayer activity that sounds appealing to you. Has to include: F2F interactions, cooperation/collaboration, and physical movement.
2. Present to each other. Others, what would motivate you to play these games?

E. Rewards for completing challenges

1. Think of real world rewards
2. In-game rewards
3. Cluster these!

DE KATTENKWAAD

1. Write down mischievous activities you would do around your hood for fun
2. Make duo's, and gamify of one of these activities. Give it a name!
3. Present to each other

(SILENCE)

1. Why WOULDN'T you talk to strangers?
2. Why WOULD you?
3. Cluster on big paper with axes
Social barrier - Me/other (5 min)
4. Can we give these clusters names? Differently?

OBJECTS/PEOPLE IN PUBLIC SPACES

1. What objects/things/places/people are commonly seen outdoors in Dutch neighbourhoods?
2. What do these people often see?
3. Clustertime!

SMARTPHONE CAPABILITIES

1. What can smartphones do?
Measure, AR, videos, google, call, etc
2. Clustertopolis!!!

ACTIVITIES

One half pics a cluster of Objects each and the other a smartphone capability. Make duos, and combine both to create a multiplayer activity that sounds appealing to you

Requirements:
F2F interactions, cooperation/collaboration, and physical movement.

Wishes:
Could it tackle one of the reasons why not to socialize?

REWARDS??

1. Think of real world rewards
2. In-game rewards
3. Cluster these!
4. Make YES-BOX with rewards that should definitely be used



MOTHERS



SHOP OWNERS



AUTHORITIES



TEENAGERS



The reasons to (not) interact with strangers were then clustered into groups by arranging them on two axes. These were arranged on the horizontal axis in internal reasons (us, left) and reasons we put the blame on on the strangers (them, right). On the vertical axis they were arranged between a high social barrier (top) and a low social barrier (bottom).

APPENDIX I

FIRST DRAWN CHALLENGES

A. CREATING PROFILE **IN APP**

Creating Group **DATA**

IN THIS FLOW:

- SIGN UP FLOW
- What is important to add to one's profile:

INTERESTS: SPORTS, MOVIES, FOOD, CULTURES, CELEBRITIES, GAMES, MUSIC.

SHOULD I CREATE **ICONS** FOR THESE? ...?

HOW DO YOU CREATE GROUP?

- Send invite?
- One creates and scans QR?

WHY GROUPS?

IN APP

3 WORKFLOWS

B. Finding and Completing a Challenge

Especially interesting for teen girls because of their limited time outside of house.

Concentrate here on

SENSE of FINDING appropriate CHALLENGES

WATCHU GET OUT OF EM

1

C. Creating and Sharing a challenge

Which activities **PROMOTE**

-HEALTHY-

COM-PET-ITION?

Sport, "Can u do better than me?"?

PHRASAASING IS IMPORTANT.

WE SHOULD LIMIT VOCABULARY TO AVOID VERBAL AGGRESSION

How to place challenge?

Pin down / target at spot / Remindery

Adding time

FROM-TO / STARTS AT / ENDS AT

Scoring

AND PARTICIPATION & ENGAGEMENT

most important

*The numbers behind the headers correspond to the screenshot numbers on the following pages

INTRODUCTION

"Welcome to Secrets of the South. Complete challenges together to prove your worth in order to conquer spots."

Sign up: Black box

Create squad: Black box

YOUR FIRST SPOT (1 - 3)

Description: "Congratulations on forming your squad. Now is your time to prove your worth by conquering your first spot. Head to the area indicated on your map. Once there, click on the marker to get your first assignment."

Physical actions: With your squad, navigate to the indicated area.

Smartphone actions: Once in the area, click on the marker. It will give you challenge A.

A. WHAT'S THE NAME? (4 - 7b)

Description: "To conquer a spot with your squad, you first need to know its name. Did you pay attention to your surroundings when heading here? Do you know the name of the park / playground / street in which you are?"

Challenge: Write down the name of the park / playground / street you are currently at

Physical actions: Remember the name of the place. If not, walk around and find the name on a sign or ask someone.

Smartphone actions: Once known, input the name in the provided text box

Scoring: 100 pts when the name is uploaded correctly within 20 seconds.

50 points if it takes more time (indicative that you had to look for the answer).

The timer will start running from the moment you start reading the challenge.

B. FUN FACT (8 - 12)

Description: "Congratulations on getting to know the spot. To truly make a place yours however, you first need to know things about it that most people do not. For example, did you know that there is a bench with a smiley face in this area?"

Challenge: Find this bench (with your squad) and collect proof

Physical actions: Look for the object described in the assignment.
Smartphone actions: Once located, find the QR code close to it and scan it.

Scoring: 100 pts when QR code gets uploaded

C. TURF WAR! (13 - 17)

Description: "Now that you know something special about this spot, you can start claiming it. But beware, with turf comes conflict! It will be inevitable that others will try to take it from you. Find tooth and nail. Defend your spot at all costs!"

Challenge: Open the box with the QR code. With the Nerf guns inside, challenge a passerby to a shootout!

Physical actions: Take the toy guns from box. You and a squad mate take 2, the other 2 are given to 2 passerby's

Smartphone actions: Once the challenge has been completed, provide one of 3 possible answers: 1. It did not work, 2. The passerby's liked it, 3. The passerby's loved it.

Scoring: 1 and 2 give you 50 points. 3 gives you 100 points.

150 extra points are given when toy guns are returned in the box and it's closed properly.

SPOT CONQUERED (18a - 18b)

On your world map, status of the challenge area turns to completed or conquered.

D. WHAT'S NEXT? (19 - 24)

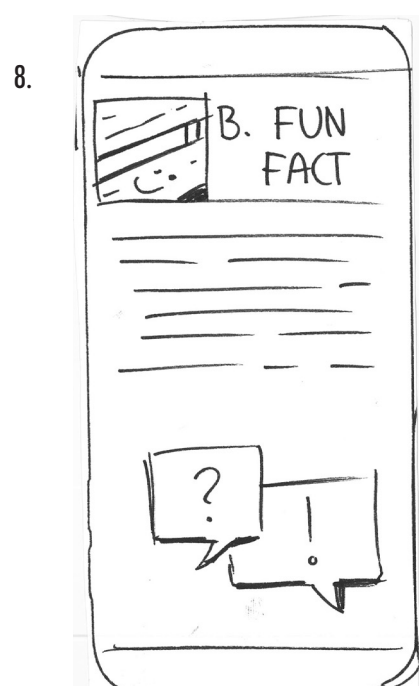
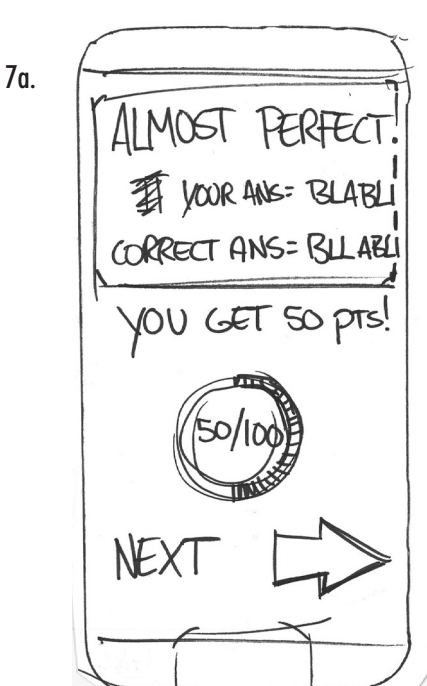
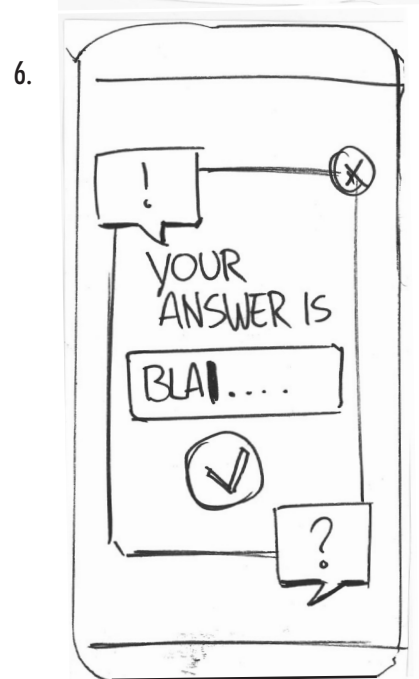
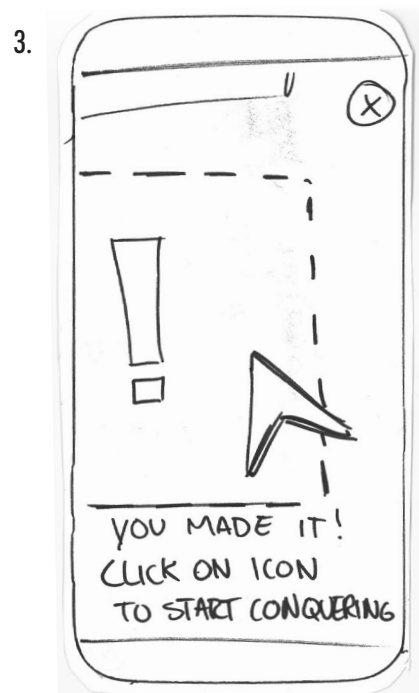
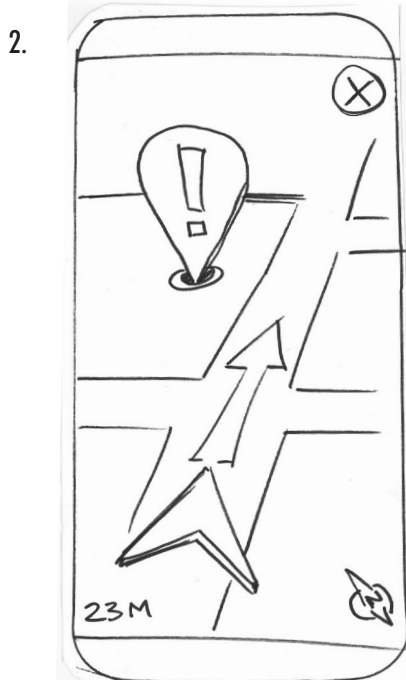
Description: Congratulations! You defended your turf, and can truly call it yours. But don't stop now! Extract information from people around your turf to plan out your next conquering excursion.

Challenge: Find a person in your vicinity and ask him/her for a recommendation for a nice place to hang in the neighbourhood.

Physical actions: Walk toward a stranger and ask him/her for a place to hang at. After he/she pinpoints a place, ask what is there if he/she has not said so.

Smartphone actions: Show map. Let stranger click on map to pin down a location. App then lets you make note of what is to be found there.

Scoring: 50 points if person pinned location. 50 extra points if note of what is to be found there is made.



9.



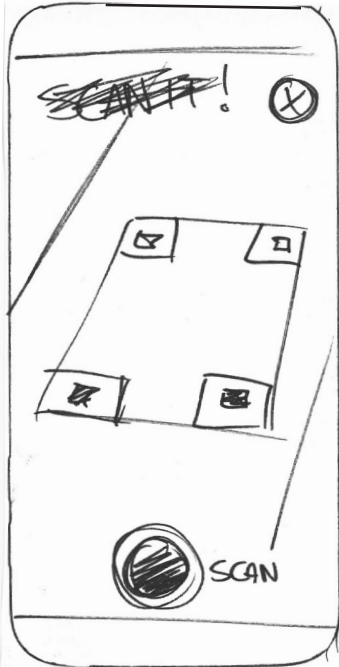
10.



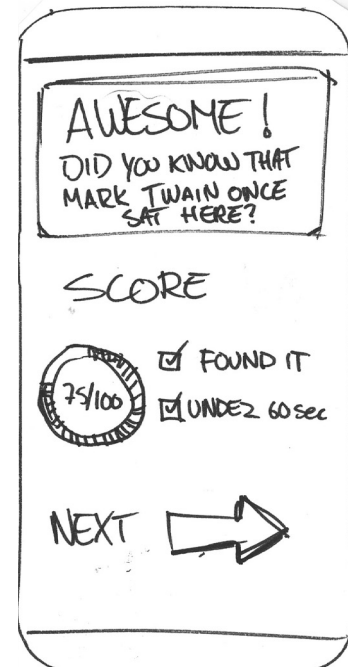
11a



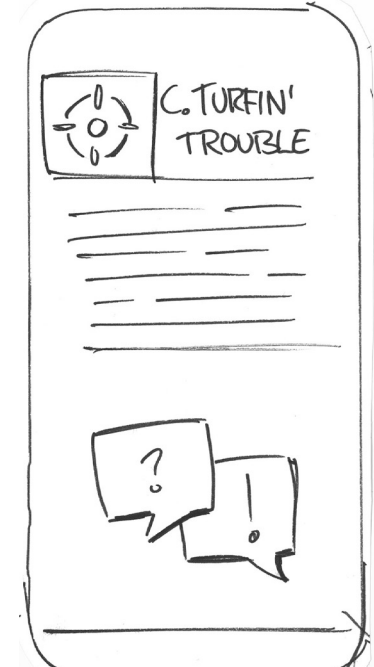
11b.



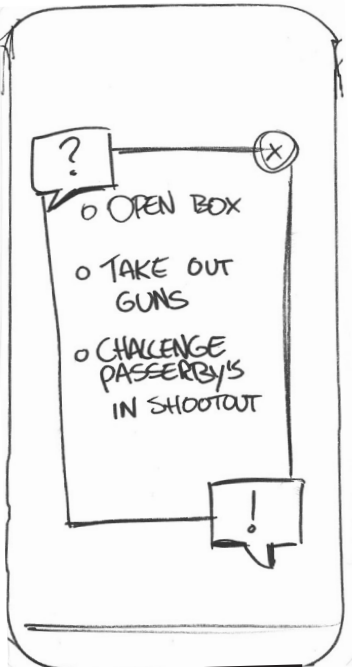
12.



13.



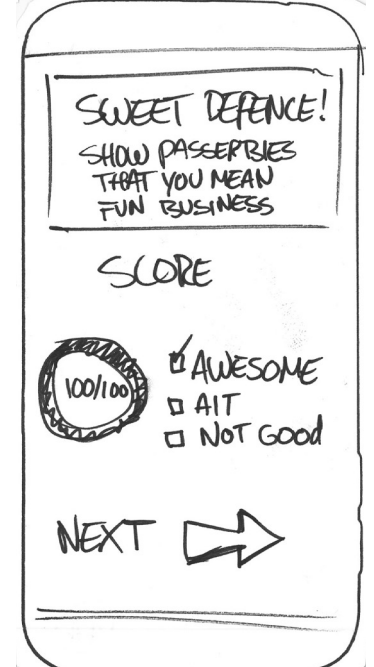
14.



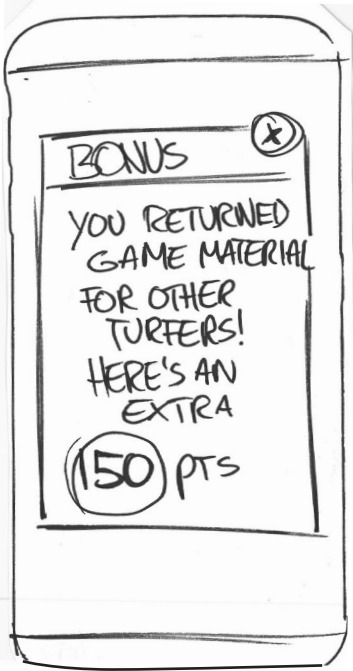
15.



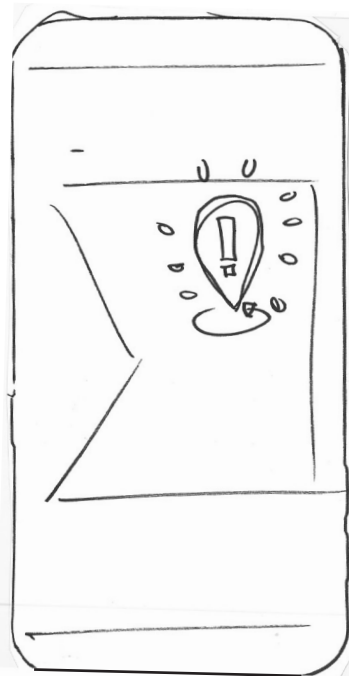
16.



17.



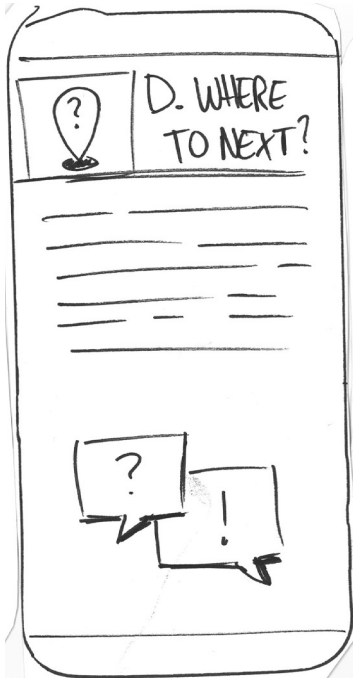
18a.



18b.



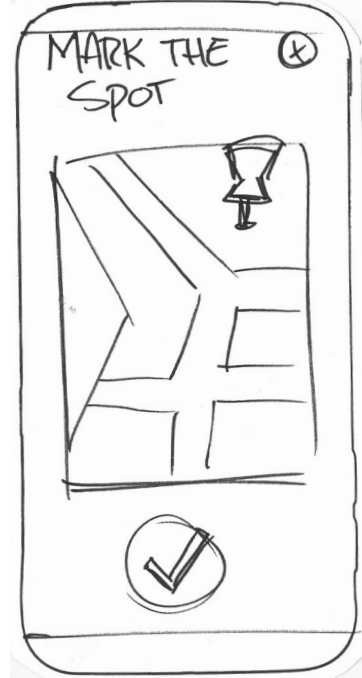
19.



20.



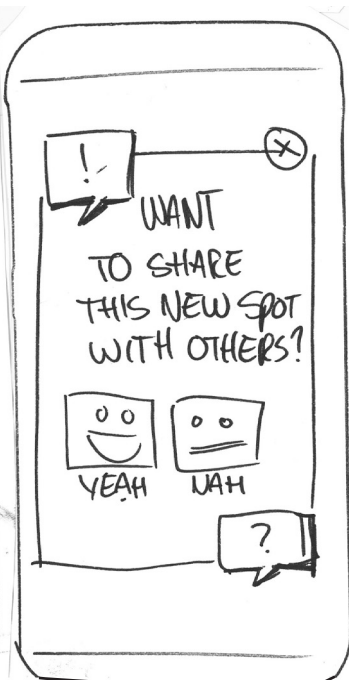
21.



22.



23.



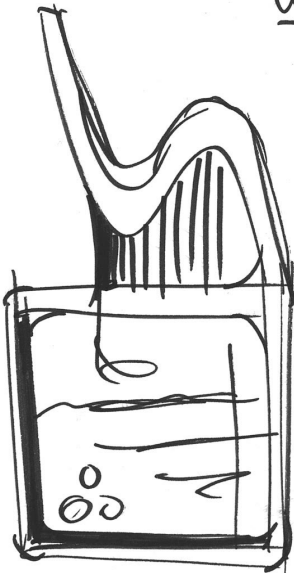
24.





1 With your squad, go to the spot marked on the map
Here, look for "the bench with the upside-down smiley face"

CHOOSE
~~MAKE~~ CURIOUS
OR VALUED
OBJECT



THIS CAN BE
ANY OBJECT
IN ENVIRON-
MENT

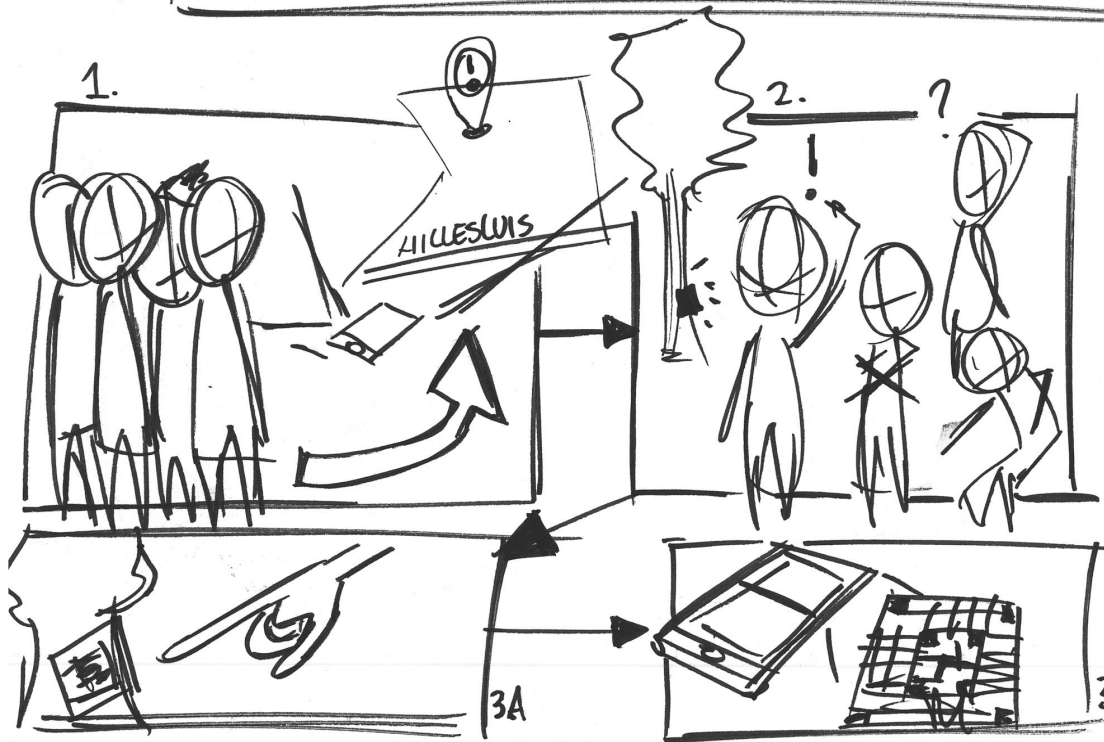
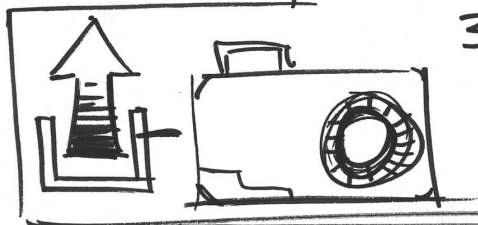
QR CODE

VIN GAME: Find spot where previous team sat, and take it back

Actions

1. Walk to place
2. Look for object
3. Once found, upload proof.

QR CODE SCANNED



NEXT
REWARD
CUP
NEXT
CHALLENGE
INFO ON
OBJECT
(IF PRO-
VIDED)

2

Now, could you name the park —
where you just found the object?
Bonus points if you can name
all the streets connected to it

DEPENDANT
ON PREV
LOCATION



IN-GAME
NARR

If you really want to own
this spot, you should
know it well. Be attentive!



Actions

1. Remember name of place you're at
2. Once remembered, upload name

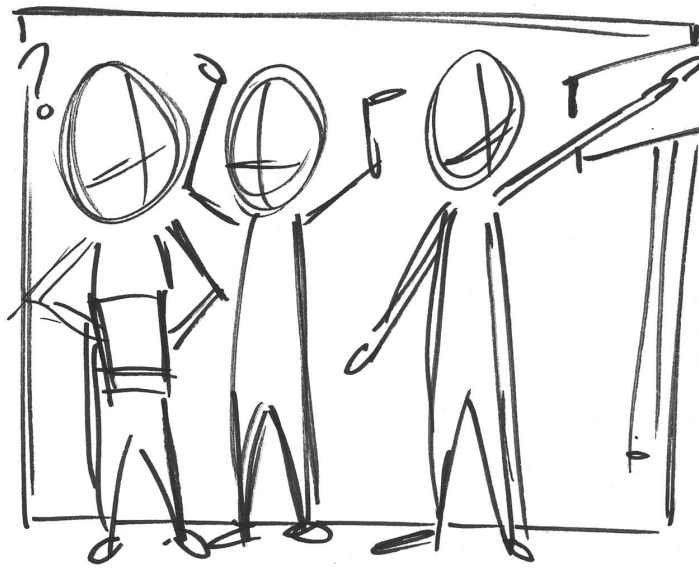


~~T.....T~~

* ~~Point loss~~ if Less points
the more time you take
(indicate you searched for it)



1.



2.



NEXT

REWARD

NEXT
CHALLENGE

STREET
NAME
TRIVIA

3

IN your group, walk and throw ball around. When passing by a stranger, throw ball at him/her and ask to throw it back

CAN ALSO KICK OR JUST SIMPLE CALL-RESPONSE

IN-GAME NARR

Now, make your presence known by letting others know you're here to play



Actions

1. Walk around passing ball
2. Give stranger heads up
3. Successfully throw and receive ball back

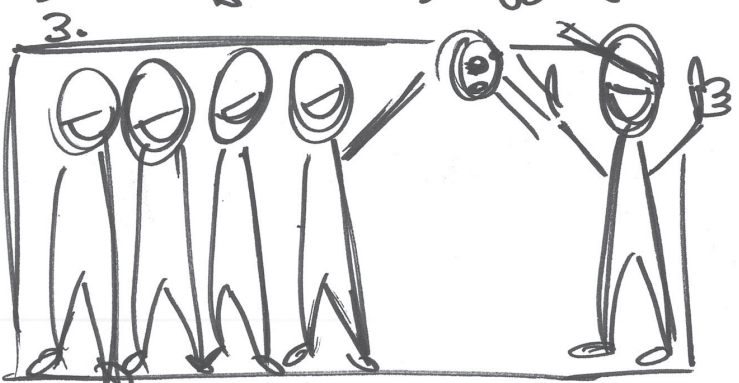
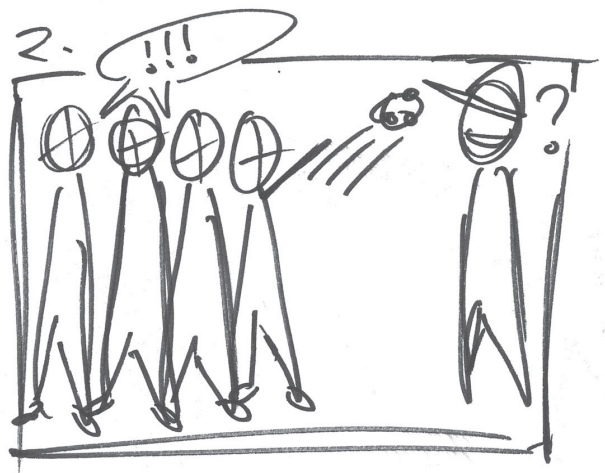
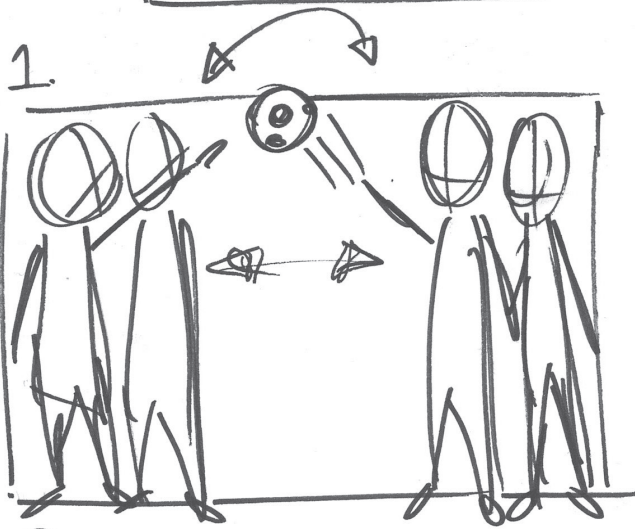


DIDN'T WORK

WAS OK

HE/SHE SMILED 😊

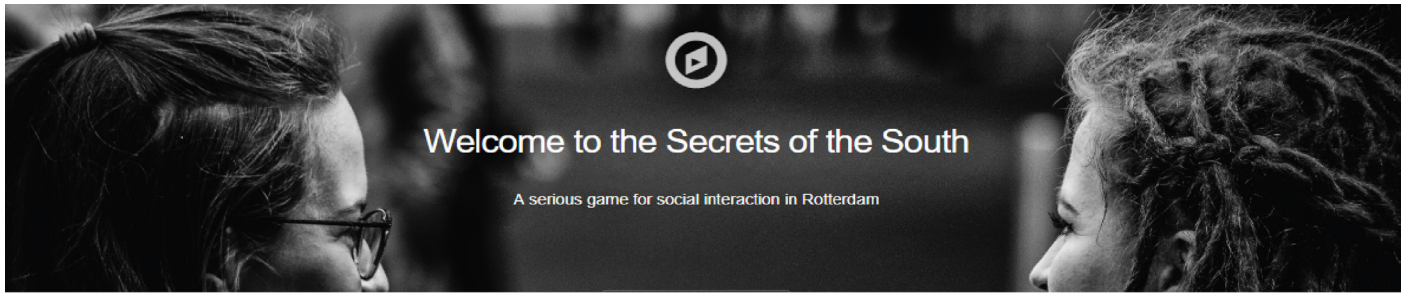
SUCCESS RATE



NEXT

APPENDIX J

PRE-GREEN LIGHT CHALLENGES



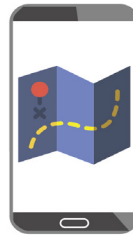
ADVENTURE AWAITS

Rotterdam South is a place with many hidden treasures. Every culture that settled here throughout the years has left its mark and knowledge. Over the years, however, this collective knowledge and its secrets slowly started to fade from memory...

To battle this loss of knowledge, a team of Researchers from the TU Delft has developed a special device for those willing to find the unseen secrets hiding in plain sight: The EXPLR.

Become an Adventurer. Form your Squad, gather knowledge around your neighbourhood and set out to discover the SECRETS OF THE SOUTH!

EXPLR



This device is your EXPLR. It will guide you through the process of uncovering the secrets around you. It will also let you interact with other explorers to share adventures, play with and against each other, and call for help if you so desire. Keep it with you at all times!

TERMINOLOGY

FOR PLAYERS AND NONE PLAYERS

ADVENTURER

How players are referred to within the SotS gameworld.

SQUAD

The groups of players that will complete challenges and get rewards together.

EXPLR

The smartphones that will be used by Adventurers to interact with the game world, which will track their progress.

ADVENTURE POINTS (AP)

The virtual points Adventurers accumulate by completing challenges

NEIGHBOURHOOD EXPERTISE (NE)

The "Levels" that show Adventurer progress

SPOT

A real-life location where challenges take place

CLAIMING

The achievement of completing all challenges within a Spot

CONQUERING

The achievement of completing all challenges within a Spot AND besting its Conqueror challenge

CHALLENGES

The games and quests that are available at a Spot

CONQUEROR CHALLENGE

Challenges that are created by Conquerors as final hurdles to Conquer a spot

LOCAL

People that are not playing SotS, but who might have information to help Adventurers proceed

CALL FOR ADVENTURE (CFA)

If your Squad is missing Adventurers, you can send out a CFA to let Squadless adventurers know of your vacant spot(s)

YOUR SQUAD

STARTING UP



Sign up

Create your online avatar and choose your Adventurer name, then proceed to create squad

Squad



GIVEN NAME

SQUAD STATISTICS

MEMBERS

ADD MEMBER(S)



by scanning QR or first



call for adventure

PROGRESSION

THROUGH EXPLR



NEIGHBOURHOOD EXPERTISE

ADVENTURE POINTS



Complete challenges and their special requirements to get all 100 Ap and level up



CLAIMING a spot is worth max 100 Ap



CONQUERING a spot gives +1 bonus level level



CONQUERING squad gets to name the spot



CONQUERING Squad creates (new) challenge for other squads to complete in order to be overthrown

SCAN THE PERIMETER

CHALLENGE A

Narrative

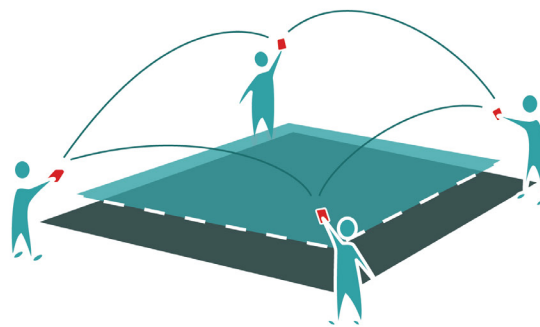
Your EXPLR has led your squad to this new mysterious spot. What knowledge could be hiding here? Use your EXPLR to scan the perimeter and gather data on this unexplored location to uncover its history.

Goal



Coordinate your squad to stand around the spot in such a way that you can collectively see as much as possible from the area

Mechanics



SCAN THE PERIMETER

CHALLENGE A

Gameplay



- 1 Adventurers choose vantage points around perimeter
- 2 EXPLR triangulates and scans the area
- 3 EXPLR updates map and gives next challenge



Desired Effects



Being curious to discover and explore a new spot
Learning to work together with others

Rewards



- | | |
|--|-------|
| <input checked="" type="checkbox"/> Completing challenge | 20 Ap |
| <input checked="" type="checkbox"/> All Adventurers are in sight | 20 Ap |

SOLVE THE RIDDLE

CHALLENGE B

Narrative

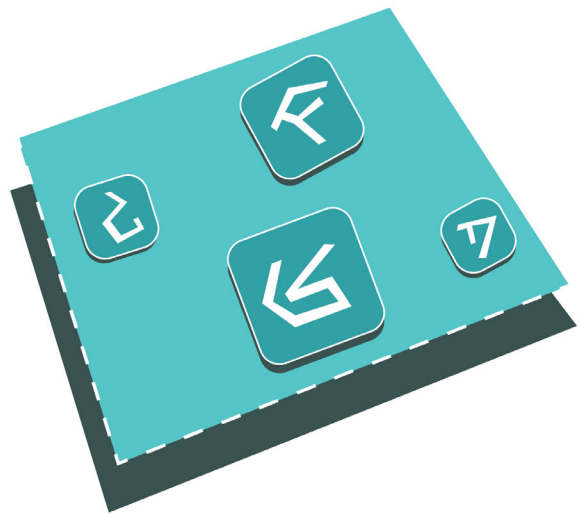
Your EXPLR has found 4 mysterious runes in the area. It is up to you and your team to find these, translate them, and solve the riddle they are hiding. But beware, exposure to these ancient runes might be dangerous. Split up and collect one piece per adventurer.

Goal



Each Adventurer has to find a different rune and scan it with his/her EXPLR to gather a piece of the riddle.

Mechanics



SOLVE THE RIDDLE

CHALLENGE B

Gameplay



- 1 Each Adventurer finds and scans one Rune
- 2 EXPLR will translate Runes into riddle pieces
- 3 Adventurers have to piece riddle together and answer it correctly
- 4 Squad broadcasts the ancient code (answer) through one EXPLR

Desired Effects



Feeling proud of your analytical skills
Daring to approach strangers for favors
Learning to trust others

Rewards



- | | |
|---|-------|
| <input checked="" type="checkbox"/> Find the 4 Runes | 15 Ap |
| <input checked="" type="checkbox"/> Within 60 seconds | 15 Ap |
| <input checked="" type="checkbox"/> Answer the riddle correctly | 30 Ap |



IN WHAT YEAR WAS ALBERT'S GOODIES SHOP OPENED?

FIND AND DISABLE!

CHALLENGE C

Narrative

Congratulations! Your squad has unravelled the secrets of this spot! You have shown great resolve, going as far as figuring out the ancient code and can now claim this spot. However, your broadcast signal has attracted the presence of a rival Adventurer squad: The Inquisition. Find them, disable their EXPLRs and conquer what is rightfully yours!!!



Goal



Disable all the other squad's EXPLRs before they disable yours!

Mechanics



FIND AND DISABLE!

CHALLENGE C

Gameplay



- 1 Identify rival Adventurers
- 2 Take aim at their EXPLR
- 3 Shoot EMP's at them
- 4 Be swift! Your EXPLR might get disabled too



Desired Effects



Feeling like you can play with potentially everyone
 Feeling proud of overcoming a challenge
 Gamifying daily activities (like hanging around other groups of friends)

Rewards

Winning Squad



- Be the last team standing 100 Ap
- Have at least 2 EXPLRs left 50 Ap

Losing Squad(s)

- Disable at least 1 EXPLR 10 Ap
- Disable 3 EXPLRs 25 Ap

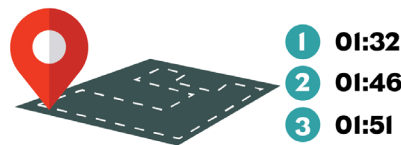
THE OUTCOME



CONQUEROR CHALLENGES

Conqueror Challenges will be the optional final tests of a Spot created by Conquerors to allow for possible "overthrowing". This mechanic will allow for a constant dynamic of Squads trying to best each other in a competitive yet fun way. For this to happen, templates for challenge types and methods of validation through SotS have to be thought out. To the right, a few examples of these possible Challenge templates can be seen.

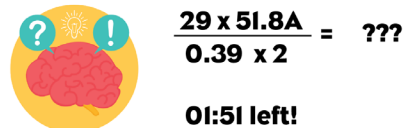
Time trials/Races



Completing good deeds



Solving (brain) puzzles

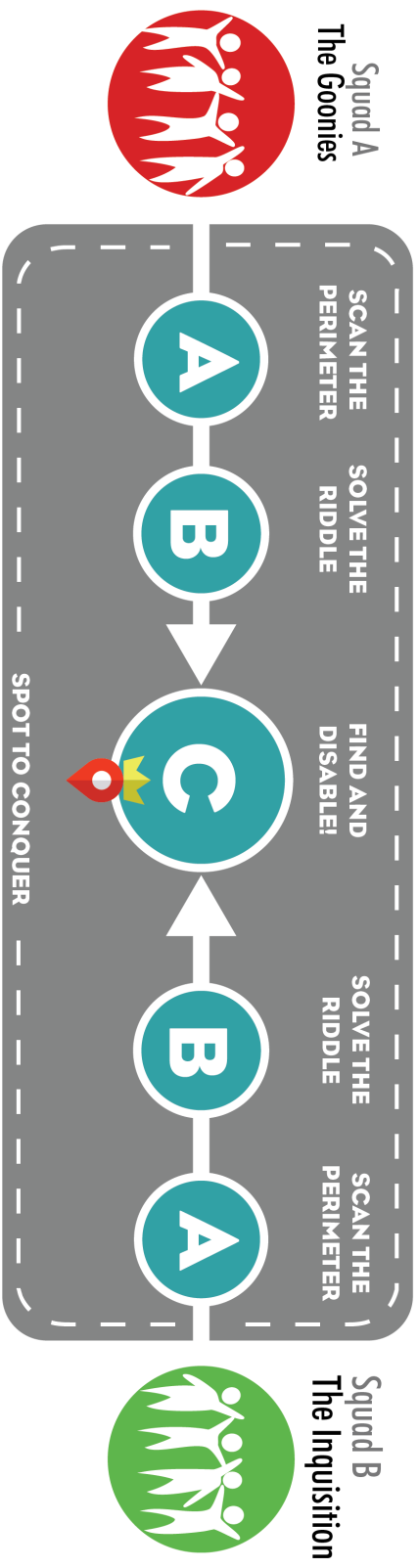


Games / Sports tournaments



CHALLENGE OVERVIEW

ALSO FOR TESTING



FORTNITE



STYLING STUDY

COLORS

MAIN COLORS

502e8f

1fad4b

GRADIENT AND TEXT

WHITE TEXT

WHITE TEXT

SECONDARY COLORS

956daf

76c044
f2e843 for aux numbers

253b60

a8deec for aux numbers

TEXT

**BURBANK BIG
CONDENSED**

ALL CAPITALS FOR MENUS

ICONS

SIMPLE, MONOCHROMATIC ICONS





APPENDIX K

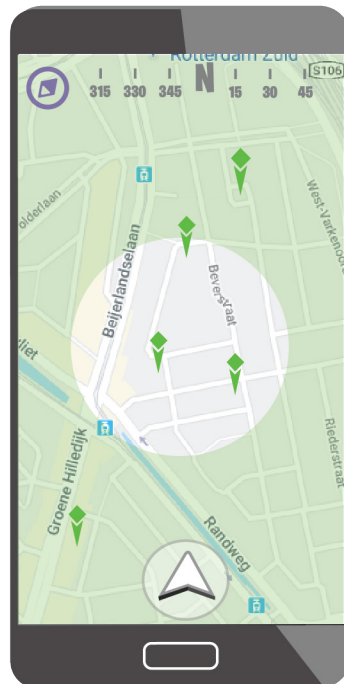
CONCEPT SCREENSHOTS

In this appendix, all the screenshots will be presented. These were all printed out and bundled in order (left to right, top to bottom) to be used during the playtests. Only the ones that have not been discussed in chapter 8 will be explained.



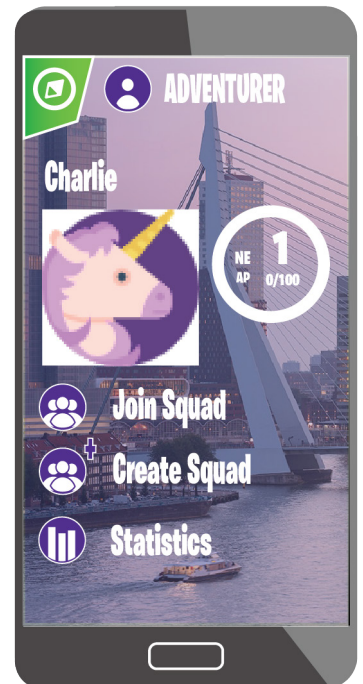
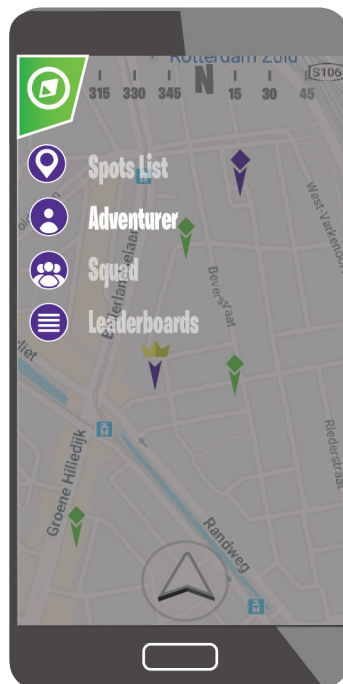
first screen to the right

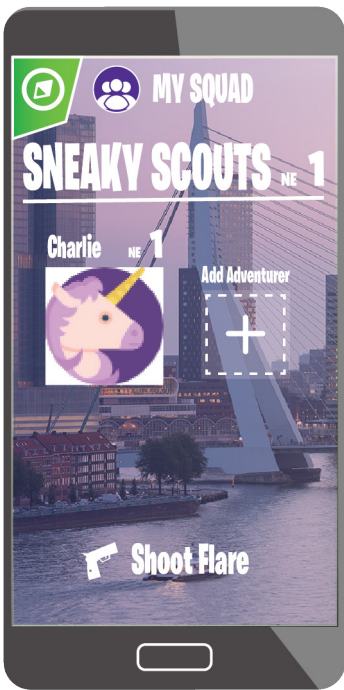
The first screen players should see when continuing a game (any time after launching for the first time they) is the map screen.



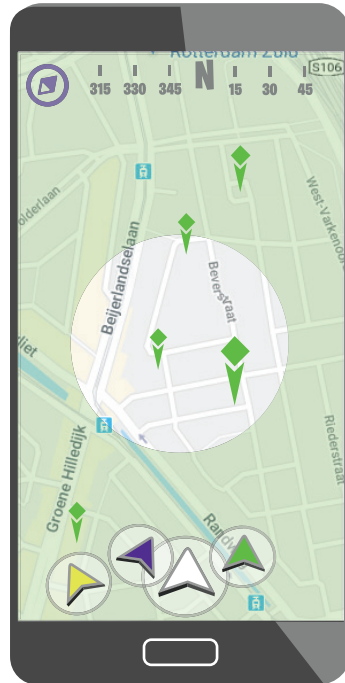
second screen to the right

There will always be a game menu button for the players to click on if they want to see leaderboards or a list version of all available spots

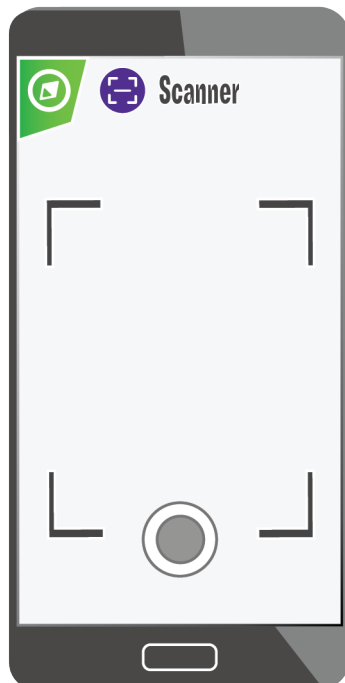
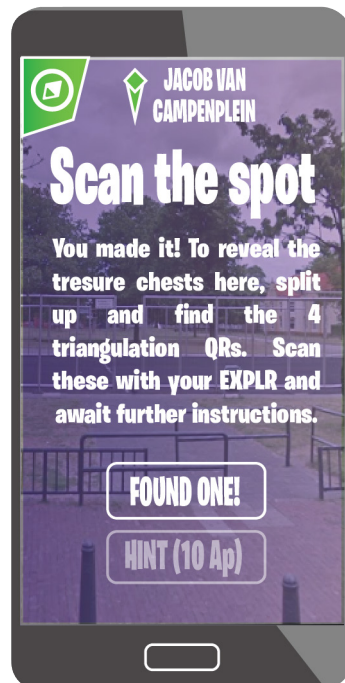




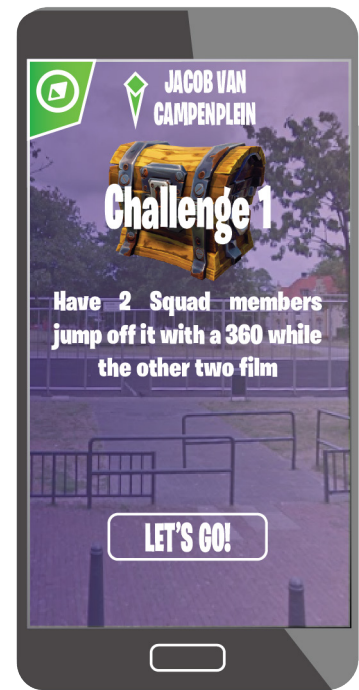
Third screen to the right
After clicking on Let's Go, players will get navigation help from the game.



Second screen to the right
After clicking on found one, the EXPLR will go into the QR scanner mode to scan the found QR.



Third screen to the right
After having scanned a QR code, the EXPLR in question go into waiting mode and become temporarily unusable (in-game) until every other squad member finds and scans a QR code.

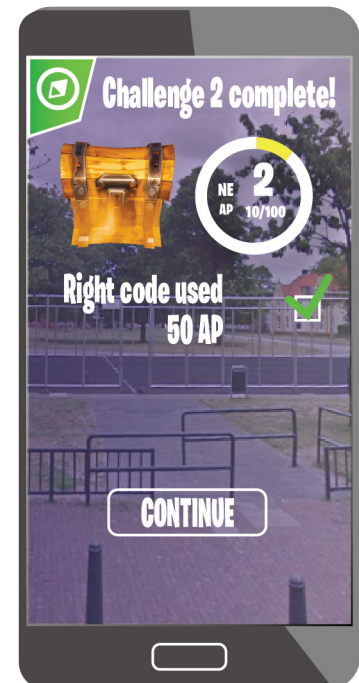
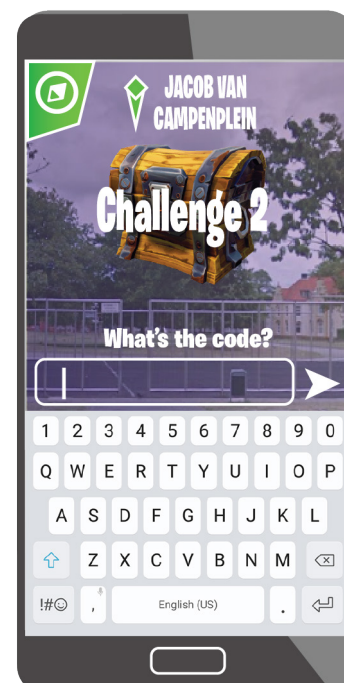
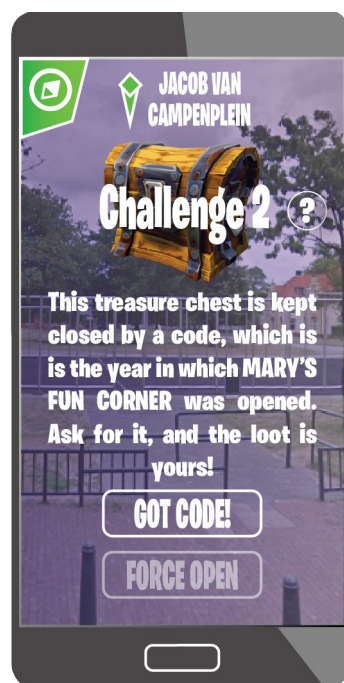
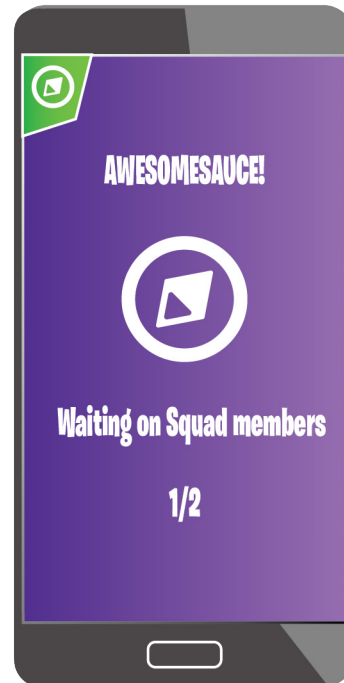
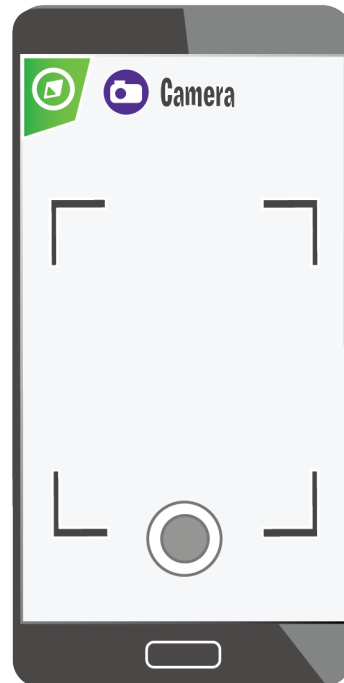


First screen to the right

Similar to with the previous challenge, the EXPLR will go into camera mode to have players film their squad members' jumps

Second screen to the right

After having filmed, the EXPLR in question go into waiting mode and become temporarily unusable (in-game) until another video gets recorded and uploaded

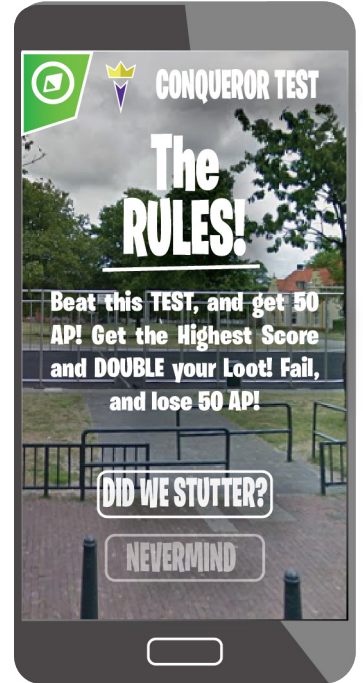
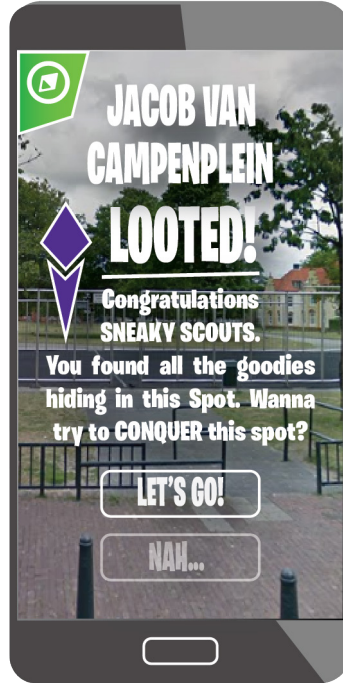
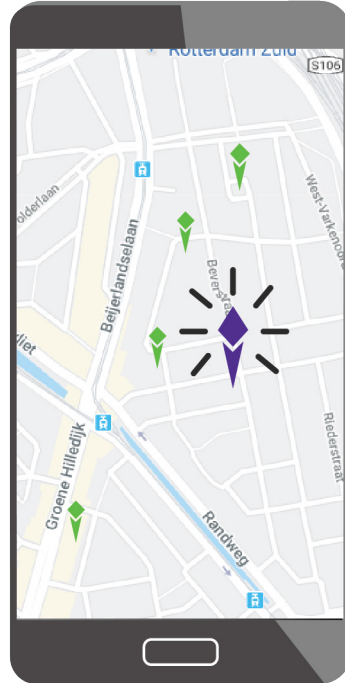
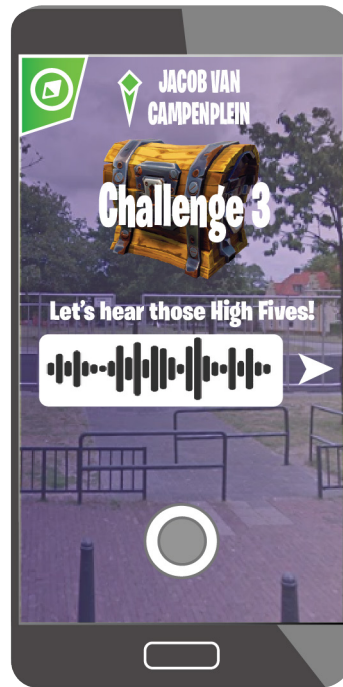
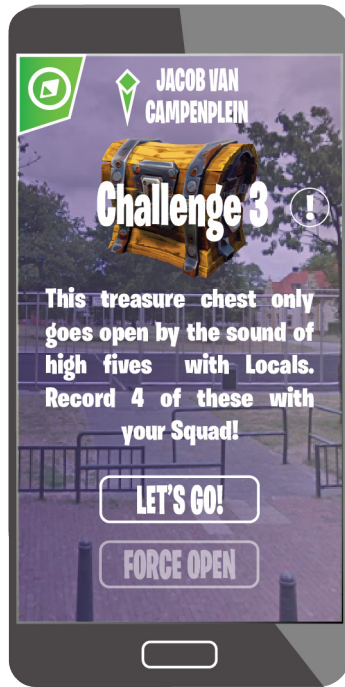


First screen to the right

Similar to with the previous challenge, the EXPLR will go into camera mode to have players film their squad members' jumps

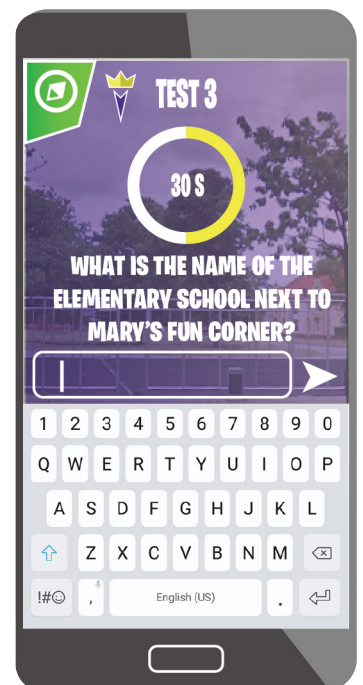
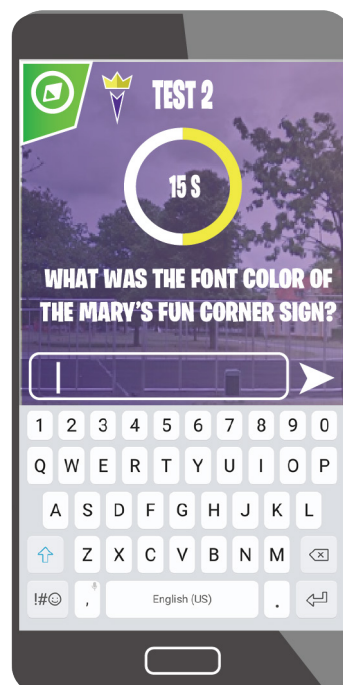
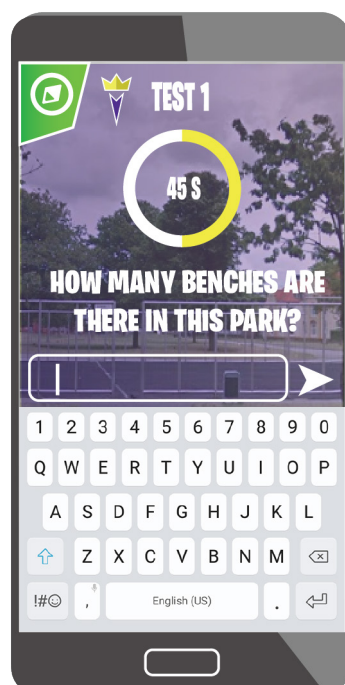
Second screen to the right

After having filmed, the EXPLR in question go into waiting mode and become temporarily unusable (in-game) until another video gets recorded and uploaded



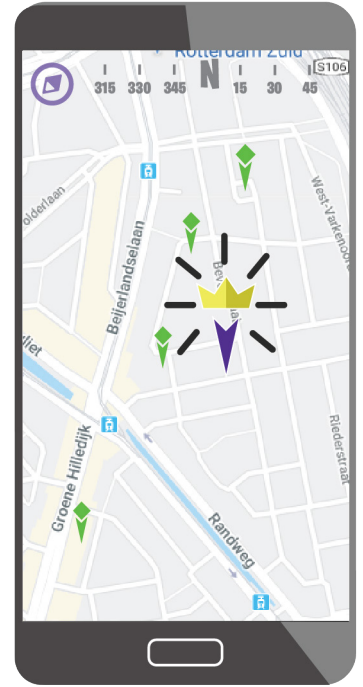
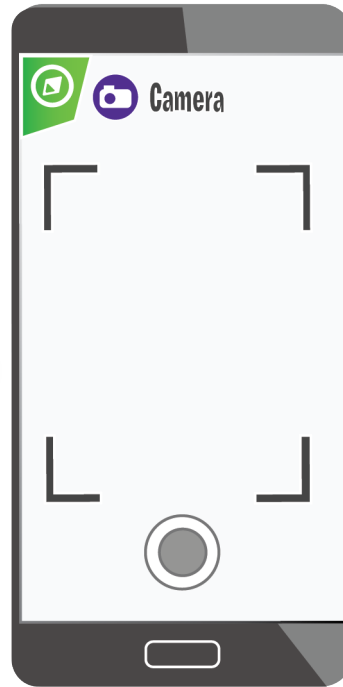
Third screen to the right

The third conqueror test question will be about a school that is located close to where mary's fun corner was. The elementary school was not mentioned at all in the previous screens. This is meant to test players on how attentive they are to things outside of the direct gameplay.

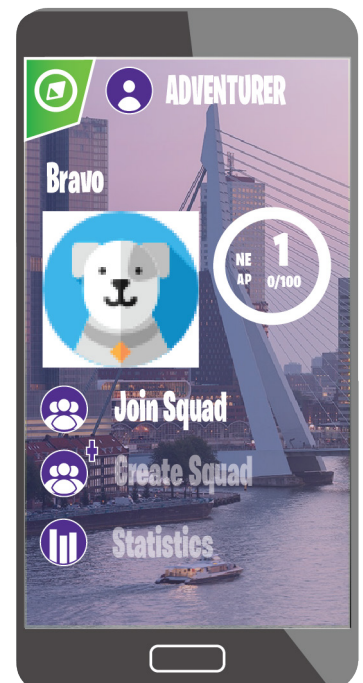
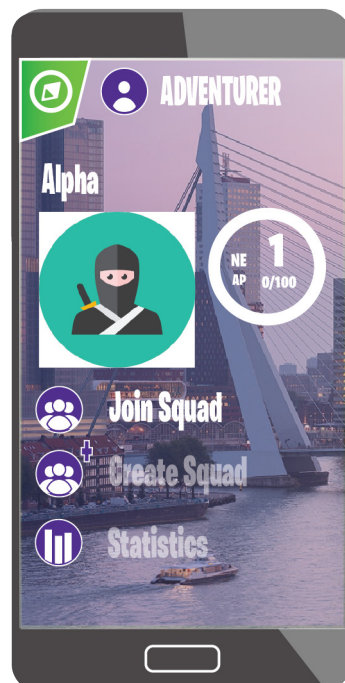
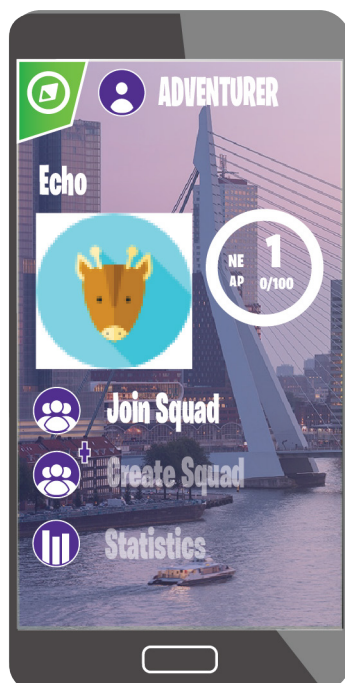


Second screen to the right

As with the other challenges that involve taking a picture or filming, the EXPLR will automatically go in camera mode when necessary.



Three screens to the right
Characters were created for the playtest. Charlie, Echo, Alpha and Bravo. Each squad member would get one of these as their character.



APPENDIX M1

PLAYTEST PLAN

Aim of the test

1. To explore to what extent these challenges can foster social interaction between strangers
2. To find out if SotS gameplay alters the perception of players towards an ethnically diverse neighbourhood
3. To get insights and recommendations on how the designed mobile game challenges can foster social interaction in ethnically diverse neighbourhoods better.

Questions for test

1. Does playing SotS alter the perception of an ethnically diverse neighbourhood positively?

Do the players have a more positive outlook towards it?

Does the game make players pay more attention and thus more actively engage with their surroundings?

2. Do players interact with people they don't know through SotS gameplay?

What motivates players to (not) interact with people they don't know?

How is it for players to interact with people they don't know?

Does playing a game together with friends make it easier to approach people they don't know?

Does the game challenge players social and physical skills appropriately?

How do strangers react to being approached by players?

3. What do participants think about SotS and gameplay?

What did they like?

What would they like to see changed?

Would they play this game again? Why (not)?

Setup

Two groups of 4 players. Tested on two different days.

Me plus 2 fellow observers:

I will be moderating the gameplay and guiding subjects through paper prototype method

1 will be video recording

1 will be observing

Will take pictures and do audio recordings. These will not be put online or shared. Only for research purposes. Will ask if this is OK with participants

Observations

Are the participants smiling when playing?

Are they energetic during the gameplay?

Are they helping each other out?

In challenge Bench jumping:

How did they decide upon who will do the jumping?

Were they all actively and willingly participating?

In challenge High five

Did they do high fives with strangers?

Did they high five themselves?

Is this something they enjoyed doing?

In Conqueror test

Were they doing their best to answer in time?

Were they all participating?

Were they having fun?

Procedure Explanation

1. Welcome and introduction (3 min).

Meeting up at spot.

Explain what project I'm working on.

2. Paper prototype

I will give each of you identical sets of screenshots. This is called a paper prototype, we use it to get an idea on how people use apps/digital interfaces without having to code it completely. You will go through the provided screenshots linearly and together.

Keep in mind, the game is primarily intended for teenagers aged 12 to 16. Try to get in that mindset.

3. Rules for testing

1. Go through each screen, and go to the next one together. Don't skip further than your fellow players.

2. Read the challenges. Between your group, figure out how you want to do the challenges. There is no wrong way to do things. It's completely up to you! LMK when you're done with each challenge

3. Pretend we are not here! Talk, figure out, do what you want. Have fun!

4. Any questions you can always ask, but try doing it independent of me.

4. Test

A. Pre-test questions

B. Gameplay: Paper prototype method

Scan the spot

Challenge 1: Bench jumping

Challenge 2: The Code

Challenge 3: High five

Conqueror challenge.

C. Post-game individual questions

D. Group discussion

A. Pre-test questions (individual, voice recorded)

Neighbourhood:

1. What is your impression about the neighbourhood we are at? Is it appealing to you? How comfortable do you feel here? Do you feel safe? Any thoughts about the people walking around?

Interaction

2. How do you feel around your fellow players?

Do you feel comfortable around them? Do you trust them? Do you feel like a unit?

3. What is your attitude towards Locals? Do you ever willingly interact with them in public?

Challenge design

4. Have you played games before? What attracts you to playing games?

Is it the challenge? Winning? To escape the real world? To learn something now? For the social aspect?

B. Gameplay

Booklet 1: Intro

Introduction to game, map screen, individual screen and squad screen. Navigation to spot.

Booklet 2: Scan the spot

Introduction to spot, scan the spot, scan screens, waiting, reward, updated map

Booklet 3: Challenge 1: Bench jumping

Read challenge, Do challenge, give/announce reward

Booklet 4: Challenge 2: High five

Read challenge, do challenge, give/announce reward

Booklet 5: Challenge 3: The code

Read challenge, do challenge, give/announce reward

Present squad results

Booklet 6: Conqueror test *add time limit

Read challenge, accept it together. Do the quiz all together
Talk results

C. Post-game questions (individual, voice recorded. (10 min)

Challenge design

1. What do you think about the challenge where you had to spread out and find qr codes? Was it fun? Do you feel like you had to work together? How'd you feel about it? Indicate one of these moods and explain why.

*Male and female pick-a-moods will be printed apart.

2. What did you think about challenge 1: Bench jumping?

Indicate mood and say why

3. What did you think about challenge 2: The code? Was it easy? Uncomfortable? Was it easier knowing that others depended on you to do so? Indicate mood and say why. Would you do it irl?

4. What do you think about challenge 3: High five? Was it easy? Uncomfortable? Was it easier knowing that others depended on you to do so?

Indicate mood and say why

5. What did you think about the conqueror test?

Indicate mood and say why

Interaction:

6. How do you feel now towards your fellow players?

7. Do you feel like working together is a necessary element to complete these challenges?

8. Do you feel like YOU were important to the group to complete challenges? Why?

9. Would you squad up with players you do not know to play this game? (What would incentive you to do so?)

10. Did the challenges give you enough reason to interact with strangers? (And how was it to approach a stranger during gameplay?)

11. How would you react to running into strangers you met through the game?

Neighbourhood

12. How do you feel about this neighbourhood now? Has the game altered the way you perceive it?

13. Is this a game you would like to play again? Why (not)?

D. Group Discussion (Open discussion, voice record)

1. What did you like about the game?

2. What would you change about the game?

(What do you think about the game narrative?)

4. Are there any challenges you can think would fit in this game?

5. Currently, the rewards system is a simple indication of how well you know a particular neighbourhood. We're planning to put in unlockables like cosmetics and higher-difficulty challenges. Both physically and socially. Got any ideas about these?

6. Any other reward systems you can think of?

7. Final thoughts/comments/questions?

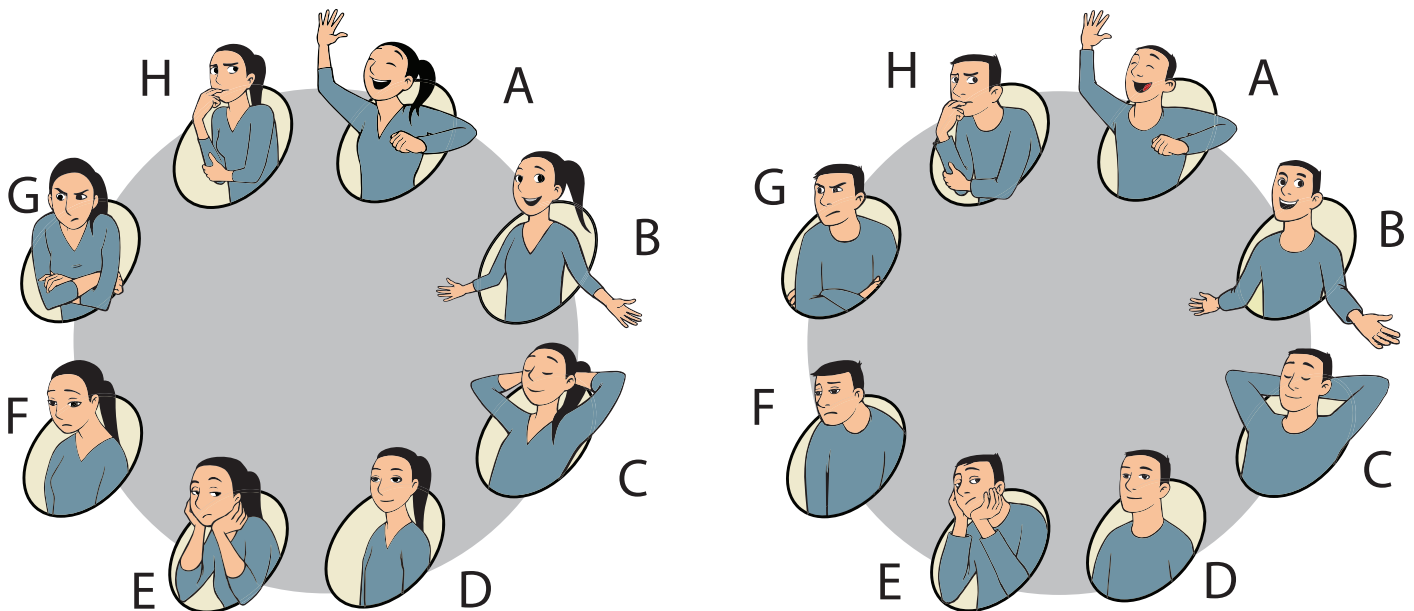


Fig x. Pic-a-mood is a tool developed by the institute of positive design at the TU Delft. It is a set of drawn expressions that helps test participants voice how they felt towards the experiences they underwent during the testing of designs. (Desmet et. al, 2016).

welcome to
MARY'S FUN CORNER
The place to be to get stuff for free

Fig x. This sign was made and printed out to be held by a moderator during the playtesting. This way, we could see if participants were willing to approach shop owners (fictional in this case) to get information to advance in the game.

APPENDIX M2

INDIVIDUAL INTERVIEWS TRANSCRIPTIONS

P1. 21 years old, female. Lives in the Hague

A. Pre game

1. Neighbourhood: "Not the best neighbourhood in the Hague. I don't see anything wrong per se. But this what people say and the history it has.

"I feel Ok comfortable, but not the greatest. If I'm with someone yes I feel better."

2. Fellow players: "Oh yeah I feel like I can trust them (fellow player). "

3. Strangers: "Normally no cause I'm really shy like a I'd only interact with them if I need something."

4. "it's just a fun time to not really focus on anything else and entertain yourself. (why play games)."

C. Post game

1. Qr: "The park is big. In the beginning I was like where the hell is it? I didn't expect them to be so small. But it was fun! We worked well together actually!" (B)

2. The bench: "Felt a bit dangerous. But it felt like expedition Robinson or something!" (B)

3. High five: "Good. it was a good challenge. I think it was the most difficult one for us because you become shy and you don't I know people in the area. You don't want to bother anyone with a high five. But I like the fact that you can voice record it and not film it. Helps a lot because some people don't like to be filmed." (H)

4. the code: "It was nice but in reality if it was a real shop how would we find out when it was established? Unless we can google it." (D)

5. Conqueror: "It was nice. It was fast-paced. It got you running a bit and thinking fast and working as a team." (B).

6. fellow players: "Good. I think it's interesting that someone took the role of leader and others followed so that was nice."

7. teamwork: "It's a big park so being alone and doing everything on yourself is not gonna work out to do it on time. So yeah you need to work together"

8. Feeling important: "I had more knowledge to where the building was for example. I would scream how many seconds we have left. So yes"

9. Playing with strangers: "If they're the same age as me then yeah."

10. Enough reason to interact with strangers: "I'd say not really to be honest"

11. Running into strangers again: "I just smile. I do every time I meet someone I've met before. yeah you know someone new so it's like you can tell a friend Hey I know that guy. So that's nice"

12. neighbourhood: "I never knew this park existed, so that's nice. It's an extra place I could be in especially for summertime." "

"I feel more comfortable now. It's calm."

13. Playing again: "Yeah. You want to find out what the other challenges are in other places. And what if a team takes over our place? Wage war!"

P2. 25 years old, male. Lives in the Hague

A. Pre game

1. "I don't really like the neighbourhood. It seems like it lacks life. It seems Left Behind in a sense. Dirty. I don't know. It's a neighbourhood by itself and not part of the Hague"
2. "I feel comfortable around them. All but one because I don't know him."
3. "I feel prejudiced if I might be honest. I wouldn't willingly interact with them (neighbourhood residents)."
4. "Competitiveness and winning. It's easy entertainment and an escape."

C. Post game

1. "Was fun" (D)
 2. "It was something different but it wasn't too challenging" (D and A)
 3. "I was more anxious than anything. It was easy but I think it was by myself I would not have done it. I would not speak to strangers"
 4. "I like the idea but I would I do it myself cause I'm too anxious".
- "It was easier knowing I could depend on others."
(B)
5. "I actually like that one a lot. Especially the picture thing. That was more visual. That was more fun to me"
 6. "I feel more comfortable towards them. I feel like I would probably talk to them a little more about anything else."
 7. "No".
 8. "I did find the picture, so yeah".

9. If my answer to "is teamwork necessary" was yes then yes. If the challenges were more challenging and really needed like someone else's assistance"

10. "Yeah"

11. "I will probably say hi to people I high fived"

12. "I mean I guess a little more familiar"

13. "yeah. Probably. I feel like it's sort of a way to meet other people and you have a reason to talk to them. If you play something and you have to start together that is already the ice breaker. I would like to see more challenging stuff."

"If it were to have more puzzles then that would be more awesome. If it could incorporate more background knowledge it could incorporate knowledge that others might have that you don't"

P3. 29 years old, male

A. Pre game

1. "Quiet. Empty. Maintained. I've seen worse."
2. "Neutral. Positive as well in the sense of nice people. Neutral, I don't have strong feelings"
3. "I talk to everyone. Social behavior I guess. Fun activity and curiosity as well."
4. "I think it's a better world than reality itself. You have much more control. It's immersive. It's just a habit. I grew up with it"

C. post game

1. "It started with excitement, with let's do this. Especially again when I found one!"

"At a point we felt like we've seen everything and didn't have a clue where to look next. You have nothing. you are left in the dark. I would like some more indication" (A)

2. "Bench jumping was fun. easy doable. Easy points. Yeah happy. Laid back, no stress"
3. "That was like yeeey we found it. But then we didn't know how to frame this question first so it got us thinking."
"My first thing to do is look outside for the right date. And if I couldn't find it then I would ask the owner."
4. "Yeah I love that stuff! I enjoy high fives. It's easy points. I do it without reason, so getting points is a bonus. The guys (Strangers) were skeptical at first but then loved it". (H, then A)
5. "What is a bench? That was shit, we didn't really know what to include in counting. Be more specific. It wasn't exciting"
"I liked the time limit. When the team started counting it got exciting"
"The other memory ones got you thinking! It was a nice challenge"
"After we got it, I was still doubting if it was the proper picture. And there was no emotion for me. I wasn't involved in this one"

6. "Shared experiences connect people, so I feel like we're connected now"
7. "Teamwork was necessary. Not for every challenge though. I wasn't involved in the tree challenge at all"
8. "Yes, I don't think we would've high fived people if it wasn't for me"
9. "If the phone connected us if we're in a certain area, perhaps. I wouldn't go to someone and ask if it's not specifically through the app"

I would definitely press the flare! (After explaining it)

10. "The high fives yes! The shop code would really do so if it would be really implemented.
12. "I saw it as a park. Now I feel familiar with the area. I know every corner now. I know how many benches there are! Definitely. I can't describe it in words but it's a whole different experience that coming in first today"
13. "Depending on the rewards. Gathering points is not enough for me. I need to use them for something. Depending on rewards yes. I mean it's fun, but I need gain to be gained. Then definitely.

P4. 26 years old, male. Lives in the Hague

A. Pre game

1. It seems like a nice spot in a good neighbourhood. It's green. There's playing facilities, so good impression. It seems nice.

2. I know most of them except two but I feel comfortable. I know they're nice people. They're my friends.

3. that depends a lot on face expression and I would say body language if I see someone from a distance and they smile then usually there is a good vibe. Sometimes I don't pay attention to it so it also depends on what mood I'm in personally.

4. If I have to pick out 2 or 3 of the most important ones. it's one is staying in contact with friends. So gaming as a as an excuse between brackets to meet up and hang out, Gaming as a way of going through a learning curve and mastering something. This sense of the sense of mastery is really cool. That's what I appreciate in in good games and a bit of healthy competition.

C. Post game

1. "I was up for it! I was like guys let's do this (A and B)"

2. "I'm glad someone else did it. I would've done it if I HAD to, but yeah. My team is cool. I can hang back"

3. "I was interested. Had to talk to an NPC. It's just the prson that I am, but I do sometimes enter new places and ask people when they opened. I end up having a good conversation and buying something as well. I'd be open for that"

4. "I was like cool let's do this and a bit anxious. Like let's not disrespect this group of people (who are working). How can we be cool and do the exercise? I felt a bit anxious. But they ended up being really cool about it and it ended up being nice. We had a short conversation, wished each other a nice day. So that was nice."

5. "It's good because it forces people to pay attention to things that maybe they would not consider normally. So how many benches are there is not something you don't ordinarily think of, but then you're like wait why are there so many benches? So I think that's nice.

"it's just a nice incentive to get to know your surroundings a bit more"

"I do think that there was very little time for the third one (elementary school) but yeah it was interesting"

6. "(P1) and (P3) I didn't know, but they are friends of friends, which made things easier, but yeah I liked them"

7. "It was necessary. We communicated well. I don't see you being able to play thi game without communicating with your team.

8. "Yes because I found the last QR code. I think I also participated nicely"

9. 'I don't know actually. it is a bit awkward. If I had to play with people I don't know, honeslty. I have no idea how that will go"

10. "I think it did. There were two moments. Yeah it was good"

12. "I feel like I know it a bit better. I feel like it's not alien to me anymore. I usually think places like this are only for people who live in this neighbourhood but now I think this is a cool spot and I know it a bit better than I did before so that's always nice"

13. "It depends with who. I'd play it again with friends. It depends wich square. I'd like to play it with squares that I don't know well"

A. Pre game

1. I really like it because it looks like a community a bit, It's this middle garden thing it looks like people living there can just yeah can communicate in this area while at the same time there are different kinds of a houses. These houses look more luxurious and this is a school I guess or social building so I can imagine maybe people are from different parts of the society so I'm not sure if they really hanging out.

2. You introduce them to me I feel already like most probably they are nice people off but I don't know them so yeah I don't have so many opinions about them. They look nice

3. Usually I feel shy to start interaction with them but if they start then Yeah I think it's easy to keep on the conversation but it also depends on how they look. If they look scary then I would pretend like I didn't hear if they say something to me.

4. I like drinking games so like physically telling things to each other. I like those games because it can learn more about the other people and also it's fun because sometimes it puts you in a funny situation so than you become familiar.

C. Post game

1. "I think it was good. The level of complexity was nice and you start exploring the area. that's nice but that point I don't have so much communication with these people, so I feel a bit weird. You don't know each other and you start searching right away. We started to communicate while searching for the 2nd QR code. I felt more comfortable after that. It feels better when you work together" (B)

2. I really like it because it's make me feel like a hero. I felt comforted and cheered on by the group, so that was good" (A)

3. because it was easy maybe didn't look for it so it's the London and feel too much something. I felt neutral. (D)

I don't know his name, but [P6] kind of became a group leader because I think he really he gives attention to the surrounding so after a while I realized that he really sees the surroundings. You feel more confident as a group because someone is taking care.

4. I felt shy. I feel like OK I can not do that so I felt happy that someone else was up for it. (H)

5. I think it was easy. It could be a bit more challenging so when you level up the challenge should also level higher. This 1 was easier than the previous ones I think so that's why I didn't feel so much triggered. It was nice to find the tree with [P7]. It was nice to share something and discuss something with her.

6. Yeah I feel more close. Like ah let's grab a coffee and talk.

7. I think so because when when you do it for example with him [P8]. We didn't the do much but were making jokes on the way. When we were sitting just now on the bench waiting for the interview I felt more free to talk him because we already talked.

8. I couldn't contribute too much. I was not a very strong member of this group. They didn't make me feel bad about it though.

9. I think the the challenge of this game is to decide to go into this kind of game. I think I still wouldn't do that. Maybe if if one of the person could be one that I know in game then I wouldn't feel bad.

10. No. I think it's because of my personality. If [P6] wouldn't do the high 5 I would do it in sake of continuing the game. It does give this incentive.

11. I think I would say hi, but only if he or she says hi.

12. yes I learned couple of more things about the neighbourhood. The school for example I never realized. While playing the game I see some people around so I got the idea that what kind of people are living here. It gave context to who lives here.

13. Yes I think I would like to play it again because it was a nice experience. It made me feel good.

P6. 25 years old, male

A. Pre game

1. I think it's nice. I imagine people chilling during the summer. there's things children can do and benches where you can talk with friends.

2. They seem really nice. I like em.

3. I think I'm a very social person so can approach them but with much difficulty. if I don't know something I will try to figure it out myself but if not I can always approach somebody.

4. I guess like as part of my leisure time. They're fun. It's a time where you don't have to really think or stress about something and just enjoy

C. Post game

1. I think that one was interesting. I liked it. Cause it made you feel like a detective. Like f*ck what did I miss in this area?

We worked well. We were immediately covering ground. We agreed on that approach. As soon as we found one we shared it." (B)

2. I mean it wasn't that hard and it felt a bit silly.

3. I think that was interesting because I mean you wouldn't know what place that would be.

You get to interact with someone. It didn't feel uncomfortable because we were with other people. It's easier to do if you feel like you have a backing.

4. Again it was a bit uncomfortable. You had to approach with a random statement so yeah the fact that somebody was next to me that was also doing it was nice.

5. I like that one aswell. It felt a bit like the first challenge. The time constrain made you active. It pulled you back into the game. It triggered you to be more active rather than the others where we took our time.

6. Since I arrived they had a nice energy and I still feel the same about that. I like them even more because we cooperated.

7. Yeah cause I mean you you are walking around the area with a group so there is like four people taking in information about the place which is impossible for 1 person to have photographic memory and remember all of this and cover the whole ground and still be fun.

8. yeah. I was helping cover ground aswell. If I wasn't there they would have a bit more more of a challenge to complete.

9. Yeah sure. I mean if for example if I had to somebody that had a level 4 as we are that knows this place that would help me achieve the mission faster maybe.

10. I think two of them did. There weren't a lot of people that had been here walking around since we arrived who you could approach to ask if they had seen a QR code.

11. I don't think I would remember him unless I lived here aswell and saw him every day like hey! I would start saying hi if I recognized him.

12. It changed cause it seems bigger. But I liked it since I came here.

13. yeah. I'd like to play something like this that requires outside activities with a group of people. The social aspect works.

A. Pre game

1. I was kind of surprised how much I liked. I'm not so much in schilderswijk. Coming in here I was like oh that's actually a very cute house! It is also a nice park. A little bit empty but with the weather it's kinda nice.

2. I'm actually not sure yet what we're going to do. My friends are your friends, but I'll see how it goes .

3. I think generally I'm very open but it depends at times because sometimes I'm just walking with my headphones in and a don't wanna be disturbed and then i'm like OK whatever and also sometimes being a female in a big city is a bit like that eh. As long as I approached them it is definitely OK. when they approach me it's a little bit sometimes more OK firsts checking if everything is OK and then OK whatever. If they don't look too sketchy, it's ok.

4. I play video games and board games a lot with my friends. It's more connecting. It's always ending up having fun and that's what connects.

C. Post game

1. I really like the treasure hunt part. I wanna run like a kid! I'm really a fan of puzzling, so I get in competition mode when I have to find something for a game!

2. I'm like ehh can someone else do it because I will probably fail.

3. If it's actually like a shop or whatever in the neighbourhood I think that would actually be really cool. I think most people (shop owners) would very happy to to do that for you because it also means that they get more attention from people. I think it really creates interaction. (A)

4. I think it was a good challenge. I think if there is more people in the park that would actually be a really fun interaction.

5. yeah that was good because you actually start to realize Oh I didn't pay attention I was only focussing on the QR codes instead of really paying attention to the to the area that you're in.

6. I didn't speak so much with them but you're working together to find the things this quick as possible. Yeah I think it's easier to start a conversation now.

7. Yeah for example would the QR codes if you if I already found 1 and you see another 1 you're not gonna be like I'm gonna wait until someone else finds it. You're just gonna scream hey guys I found one, come here!

8. Yeah I think you have to do it together. Everybody plays their role.

9. Hmm, yes. I think I would. It reminds me of pokemon go. I hear about people meeting up with strangers to walk and hunt Pokemon together. If you find people on your way its more fun to do it together.

10. Yes. The high 5ing thing was good but I don't think you actually start conversation. It starts an interaction, that's for sure.

12. I think it's still kinda nice. Ther's still not too many people but you get to know a little bit more around the surroundings. Like that there is a little school there. I didn't know that's. You like you noticed that the people at the houses are also watching like Hey what are these people doing. I think that's kind of fun.

P8. 20 years old, male. Lives in the Hague

A. Pre game

1. On our way here there was a lot of sketchy people and I think that says a lot about the neighbourhood we are in. The infrastructure is not the best and different paintings on the walls. That gives you an impression about how the neighbourhood actually is. I don't feel very comfortable. If I wasn't with a group of people I wouldn't come here at night.

2. I think this neighbourhood is based on elderly people.

3. I think they're pretty great people. I know one of them very well. The other two seem like nice people. With strangers here? I don't think so. I would avoid them actually.

4. Mostly because it's fun. Cause I enjoy it. And the people I play with are nice. It's nice to create a better bond with the people you play with.

C. Post game

1. Oh I thought it was very fun. It was interesting to look around, kind of a scavenger hunt. I like it. (B)

2. Yeah that was also fun. I hurt my leg a bit but overall it was fun.

3. Oh yeah that was funny. It was random. Yeah doing these kinds of events or challenges is not something you do like every day so I think it would be very fun to do.

4. Oh yeah that was a bit the bit awkward, but I mean overall was also a challenge I willing to take on. (D).

5. That was kind of fun. Like the cherry on the cake and it was very fun cause I had to run a little bit. Having a time frame really got your blood burning!

6. I think I got to know a couple of them better. They were all very fun people and very nice. We enjoyed this.

7. Yes. Of course. Definitely.

8. yes definitely. We all played an important role in the challenges.

9. That (the flare) would be very nice. It's a good way to meet people. Maybe start a couple of new friends if you're new in the city. I would have a lot of use. Meeting new people is always nice and especially fun activities.

10. Yes I believe that. Especially the high 5s. I mean my squad were strangers and I interacted with them a lot so it's very fun.

12. I mean will I remember it a lot. I mean it was very fun. We walked it all with nice weather so yeah I would definitely remember this place. It's very nice. You get a new perspective when you 1st arrive here and now that you're leaving.

13. yes I would definitely play again with random strangers. That would be very cool.

APPENDIX M3

STATEMENT CARDS AND CLUSTERS

*The pink statements are paraphrases of the quotes.

Liking the neighbourhood

P1 before playtest

"Not the best neighbourhood in the Hague. I don't see anything wrong per se. But this what people say and the history it has. I feel Ok comfortable, but not the greatest."

She doesn't like the neighbourhood because of what she's heard about it

P1 after playtest

"I never knew this park existed, so that's nice. It's an extra place I could be in especially for summertime. I feel more comfortable now. It's calm"

She feels more comfortable now

P8 before playtest

"On our way here there was a lot of sketchy people and I think that says a lot about the neighbourhood we are in. That gives you an impression about how the neighbourhood actually is. I don't feel very comfortable. If I wasn't with a group of people I wouldn't come here at night."

He doesn't have a good impression about the neighbourhood

P8 after playtest

"We walked it all with nice weather so yeah I would definitely remember this place. It's very nice. You get a new perspective when you 1st arrive here and now that you're leaving."

He likes the neighbourhood even more after the test

P3

"I saw it as just a park. Now I feel familiar with the area. Definitely. I can't describe it in words but it's a whole different experience that coming in first today"

He feels more familiar with the park after the test

P4

"I feel like it's not alien to me anymore. I usually think places like this are only for people who live in this neighbourhood but now I think this is a cool spot and I know it a bit better than I did before"

He feels like he can hang at this spot even if he doesn't live in the area

P7

"I was kind of surprised how much I liked it (this park)"

She was surprised about how much she liked the neighbourhood

P8

I think it's nice. I imagine people chilling during the summer. there's things children can do and benches where you can talk with friends.

He liked the neighbourhood

Engagement with surroundings

P4

"It's good because it forces people to pay attention to things that maybe they would not consider normally. So how many benches are there is not something you don't ordinarily think of, but then you're like wait why are there so many benches? So I think that's nice.

The challenges make people engage more with their surroundings

P4

"it's (the conqueror test) just a nice incentive to get to know your surroundings a bit more"

The makes you pay attention to your surroundings

P6

"Yeah. I'd like to play something like this that requires outside activities with a group of people. The social aspect works."

Doing activities together outside is enough incentive to play SotS

P3

"I thought the questions were really good actually. It helps you familiarize with the square and your surroundings. They made you reflect on where am I exactly? It happened to have stimulated me to think about things I normally never care about"

The challenges make people engage more with their surroundings

Meeting strangers through SotS

P1
"yeah you know someone new so it's like you can tell a friend Hey I know that guy. So that's nice"

SotS facilitates meeting strangers

P7
"The high fiving thing was good but I don't think you actually start conversation. It starts an interaction, that's for sure."

SotS facilitates interactions with strangers

P8
"Yes I believe that. Especially the high fives. I mean my squad were strangers and I interacted with them a lot so it's very fun."

SotS facilitates interactions with strangers

P5
"I liked it because it made me interact with people I don't know. It made me feel friendly"

Interacting with strangers makes you feel good about yourself

P7
"It always feels nicer to have interaction with people instead of walking in your own little zone in a street or park"

Interacting with strangers is mostly fun

P2
"I feel like it's sort of a way to meet other people and you have a reason to talk to them. If you play something and you have to start together that is already the ice breaker."

SotS facilitates getting to know strangers

P1
"If they're the same age as me then yeah."

She would play with strangers if they were around her age

P6
"I don't think I would remember him unless I lived here aswell and saw him every day like hey! I would start saying hi if I recognized him."

SotS facilitates getting to know strangers

P1
"I'd say not really to be honest"

The game should give more reasons to interact with strangers

Happy reactions from strangers

P1 on high fiving strangers
"Good. it was a good challenge. I think it was the most difficult one for us because you become shy and you don't know people in the area. You don't want to bother anyone with a high five."

She felt shy and did not want to bother strangers

P4 on high fiving strangers
"How can we be cool and do the exercise? I felt a bit anxious. They (strangers) ended up being really cool about it and it ended up being nice. We had a short conversation, wished each other a nice day. So that was nice."

He felt relieved that strangers reacted positively to being approached

P3 on high fiving strangers
"The guys (strangers) were skeptical at first but then loved it"
He was happy that the strangers reacted positively to being approached

SotS connects players

P3

"Shared experiences connect people, so I feel like my team and I are connected now"

SotS gameplay connects people

P5

"When we were sitting just now on the bench waiting for the interview I felt more free to talk him because we already talked."

SotS makes players feel comfortable around each other

P6

"I think I got to know a couple of them (fellow players) better. They were all very fun people and very nice. We enjoyed this."

SotS lets players get to know each other

P2

"I feel more comfortable towards them. I feel like I would probably talk to them a little more about anything else."

SotS gamelay makes players connect

P5

"We started to communicate while searching for the 2nd QR code. I felt more comfortable after that. It feels better when you work together"

SotS gameplay makes players communicate

Working together is important

P5

"You feel more confident as a group because someone is taking care"

Having others you can count on while playing is nice

P7

"I think you have to do it together. Everybody plays their role"

Working together is important for SotS gameplay

P2

"It was easier knowing I could depend on others (to get information from strangers)."

Working together makes approaching strangers easier

P4

"It (teamwork) was necessary. We communicated well. I don't see you being able to play this game without communicating with your team."

Communication between players is required to play SotS

P4

"I'm glad someone else did it. I would've done it if I HAD to, but yeah. My team is cool. I can hang back"

Having others you can count on while playing is nice

P6

"You had to approach with a random statement so yeah the fact that somebody was next to me that was also doing it was nice"

Working together makes approaching strangers easier

P3

"Teamwork was necessary. Not for every challenge though. I wasn't involved in the tree challenge at all"

Players should feel important in every challenge

P6

I thought that sense of having more people to complete a task with was nice"

Doing challenges together feels good

P8

"The group spirit was nice"

Working together felt good

Fun and excitement

P1

"Yeah. You want to find out what the other challenges are in other places. And what if a team takes over our place? Wage war!"

Enthusiastic about continuing the game

P2

"I didn't have many expectations, but I enjoyed it much more than I thought initially"

Playing SotS is enjoyable

P3

"Yeah that was fun! I hurt my leg a bit but overall it was fun."

Simple physical challenges are fun

P4

"I was up for it! I was like guys let's do this"

Having to find something for a game is exciting

P6

"I thought it was nice. Engaging"

SotS was fun to play

P7

"I wanna run like a kid! I'm really a fan of puzzling, so I get in competition mode when I have to find something for a game!"

Having to find something for a game is exciting

P8

"Oh I thought it was very fun. It was interesting to look around, kind of a scavenger hunt. I like it."

Having to find something for a game is fun

P1

"It was nice. It was fast-paced. It got you running a bit and thinking fast and working as a team."

Challenges that require team work and have a time limit are exciting

P1

"it was fun! We worked well together actually!"

Challenges that require team work are fun

P3

"Bench jumping was fun. Easy points. Yeah happy."

Simple physical challenges are fun

P8

"It was overall very fun to do. I enjoyed it."

Playing SotS is fun

P3

"It started with excitement, with let's do this. Especially again when I found one (A QR code)!"

Having to find something for a game is exciting

P2

"I like that the intent is for people to interact with each other and maybe with strangers. As a kid I would probably enjoy it a lot."

The game would be very enjoyable if he were younger

Challenge level

P2

"It was something different but it wasn't too challenging"

Challenges could be more challenging

P5

"It could be a bit more challenging so when you level up the challenge should also level higher"

Challenges should get more difficult as you level up

P2

"If it were to have more puzzles then that would be more awesome. If it could incorporate more background knowledge it could incorporate knowledge that others might have that you don't"

Would like to have personal skills and knowledge tested in game too

P3

"A combination would be amazing. If you have to run, and then immediately think, that would be really fun"

Challenges could be more dynamic

P5

"When you level up I think the challenges should be a bit more difficult. You should be excited for the next level"

The challenges should ramp up

P2

"One thing tho, I think the puzzles could be more challenging"

A higher degree of difficulty is desired

P2

"About the experience levels. Once you're a good team and can work together you can go harder. You can make it more challenging. Otherwise it will get boring"

The challenges should get progressively harder

P1

"The challenges could be more challenging"

A higher degree of difficulty is desired

P2

"You're not really thinking. If you have to figure something out it's much more fun than just trial and error"

Thinking challenges are desired

P3

"I would like to do a timelapse"

More optional physically demanding challenges would be a welcomed addition

P8

"Yeah you can implement more physical movement. That would also be healthier"

More physically demanding challenges would be a welcomed addition

Time limits

P3

"I liked the time limit. When the team started counting it got exciting"

Time limits make challenges exciting

P8

"Like the cherry on the cake and it was very fun cause I had to run a little bit (conqueror challenge). Having a time frame really got your blood burning!"

Time limits make challenges exciting

P6

"The time constrains triggered me back into the game! Putting time constrains on other tasks would be nice."

Time limits make the game more exciting

P6

"The time limit snapped me back into the game after I got a bit relaxed"

Time limits make challenges more exciting

Improving gamplay

P3 "Maybe you could just filter out challenge types you don't want to do"

P2 "But then you wouldn't be able to conquer a park"

P3 "Yeah but then to conquer you just gotta do what you gotta do"

Players want optional ways to play

P6

"Two high fives instead of four in case there's not too many people"

Challenges should let you complete them in different ways

P2

"For now the challenges are very linea, they're one way of completing it. For example, if someone does more than a 360 (off a bench) I need bonus points. There should be room for the unexpected"

The challenges should encourage going the extra mile

P3

"Why this one first? I would like to do treasure chests in any order"

Challenges should be accessible in any desired order

P3

"More guidance. At a certain point I wanted to give up on finding the last QR code. Like something that tells you if you're warm or cold. I wouldn't mind paying AP for it"

SotS could offer hints during certain challenges (could also be in exchange for AP)

P1 "If someone is really shy, it can be challenging in general. But there are ways to go around it."

P3 "Yeah, you could skip those and accept that you won't get points. So it doesn't destroy the game"

P2 "Yeah you could bypass those with AP"

There should be multiple ways to complete challenges

Rewards

P3

"This is fun, but I wouldn't do it tomorrow unless I get something out of it"

Rewards for completing challenges should mean something

P3

"If you can involve different stakeholders that would be amazing for rewards"

Rewards for completing challenges should mean something

P1

"You could get ice cream or something. They're kids, it could be very simple"

Rewards could be physical

P8

"Why only one spot per day? I want to conquer more"

There should be no constrains to how many challenges can be done in one day

P2

"Maybe you could have a brother team system. Like team blue dominates this area"

Team ups could be larger scale

P8

"I would like to know if another group comes to our spot. What happens then? Turf war!"

Squads want to stay updated about the spots they've conquered