

Social safety:

Rethinking women's travel experiences at Blaak station and beyond

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Preface

The first words of this report are actually the last ones I've written. The last words as a student. It has been a wonderful experience to walk around the IDE faculty for the past six years. And, as with everything, it must come to an end. It feels a bit sentimental to realize this, after having been in school since I was four years old.

When this project came my way, I was excited by the opportunity to work on a societal topic: inequality. It was in a domain I hadn't designed for before — mobility and public transport. It turned out to be a challenging yet deeply meaningful exploration of how design can contribute to a safer and more inclusive world.

I want to thank Annemiek and Sine for your guidance throughout this project and for your patience with me. So many meetings ran longer than scheduled, and even when I got stuck, I could always share my struggles with you. I'm also grateful to have been introduced to systemic theories. They have enriched my perspective on designing within social domains.

From Advier, I want to thank Fieke for your supportive role. You were a great listener and incredibly patient. I truly enjoyed organizing the workshop on social safety with you. Your drive for this theme helped me move forward at moments when I questioned the urgency. For that, I am very thankful.

I couldn't have done this project without the support of my housemates, especially Angela and Hannah. Thank you for the brainstorming sessions and your optimism whenever I felt lost. And to my amazing brother Jilles: my partner in crime during all those late nights at Blaak. You helped me test setups and take photos, and you were always there.

To bring my final concept to life, I owe thanks to the faces of Vedankur, Jules, Max, Caspian, and Lucy. True actors!

All that is left to say is: enjoy the read, and don't forget to look after eachother ;)

Sijmen

Summary

This graduation project explores how women's perception of safety in public transport, specifically at Blaak station in Rotterdam, can be improved through a systemic and human-centered design approach.

The project was initiated in collaboration with Advier, a consultancy focused on sustainable mobility. Their involvement reflects the ethical need to ensure that public transport is accessible and safe for all users, particularly for women, who often experience safety concerns during travel.

The research began by unpacking what safety means in public transport spaces. It included insights about current concerns from an operational view (NS and RET), the role of power dynamics, and existing design interventions that aim to increase women's safety in public space. Both short- and long-term solutions were explored, alongside lessons learned from own observed interventions in Rotterdam.

The focus then narrowed to Blaak Station. Through street interviews and semi-structured interviews with regular travellers, context-specific safety factors were identified. These together with the earlier retrieved insights were clustered into driving forces using the ViP method. Based on these, underlying tensions were uncovered—such as the dominance of individual behaviour over collective responsibility, the counterproductive effects of visible surveillance, and spatial limitations of underground station design.

From these tensions, a design opportunity was defined around one specific moment in the travel experience: the waiting moment on the train platform. This short pause—when travellers slow down while waiting for their transport—offers a natural opportunity for subtle social interaction and reflection.

Building on this insight, the central design goal was formulated: to foster empathy and alertness in male fellow travellers. This goal guided the ideation process and framed the search for interventions that could activate social awareness within a short time span.

Through an iterative serial design process focused on screen-based concepts, this insight led to the final intervention: KijkOmJeHeen. This interactive campaign transforms mirror surfaces on the platform into screens that display subtle, relatable social gestures. The mirror functions as both a physical and symbolic trigger for reflection, inviting travellers to consider their role in contributing to a socially safe environment.

Early design iterations focused on visualizing differences in safety perception and engaging male travellers. However, over time the concept shifted towards modelling prosocial behaviour as a positive norm—moving from confrontation to subtle encouragement. This aligns with the need to engage travellers quickly and inclusively during short waiting moments.

The final intervention was informed by behavioural theory and evaluated through an online survey and two test sessions. These evaluations confirm the potential of KijkOmJeHeen to support small but meaningful shifts in perception—particularly in raising awareness and prompting self-reflection.

While the broader goal of increasing empathy and sustained alertness among all users requires long-term testing in real-world settings, initial responses show that the mirror installation has potential in prompting reflection about traveller's contribution to a pleasant and safe space.

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1

Chapter 1

Introduction

This chapter provides an overview of the project's relevance, initial goals, defined scope, and the overall structure of the report. It serves as a foundation for understanding the approach and direction taken throughout the thesis.

1| Introduction

Research by Pointer, shows that 9 in 10 women feel unsafe at stations (KRO-NCRV, 2024b). Causes include the presence of strolling figures under the influence of alcohol or drugs, little lighting, lack of social control and this is experienced especially after dark. As a result of this unsafe feeling, 40% women avoid public transport in the evening (KRO-NCRV, 2024b), but not every woman has the choice to avoid this travel option.

Safety measures that responds to this problem such as improved lighting, sight lines and camera surveillance are not solving the problem as a whole. This puts the responsibility for their own safety on women themselves. However, research (KRO-NCRV, 2024b) shows that women benefit from informal supervision, e.g. the presence of 24/7 shops and fellow travellers on a platform.

Beyond the physical safety measures, a sociological perspective suggests that the rise in public sexual harassment is deeply connected to shifting social norms, values, and attitudes. The increase in such incidents can be attributed to the deterioration of values, norms, attitudes, and beliefs of the 'misdirected' globalization forces. Bringing attitudinal change by revolutionizing the value system of megacity life is key to countering these anomic situations (Abeysundara, 2017). This highlights the need to address not only infrastructure but also the underlying social dynamics that contribute to feelings of insecurity in public spaces.

1.1 Project scope

The focus in this project is on Blaak station, where trains, metros and trams converge. Because of this transit facilitation (e.g. from train to tram outside), travellers could feel unsafe during transfer time. This location has been pinned on the Pointer map as unsafe several times (KRO-NCRV, 2024). Choosing a node with both trains trams and metro challenge me to look from a systemic view and enables a wide starting point for this project to dive in to.

1.2 Initial project goals

The aim of this project is to explore how women's individual perception of safety can be improved by looking at a collective responsibility for a safe travel experience. Herein, the focus is on a preventive approach, in which the role of bystanders is key in preventing unsafe situations for women at stations and creating awareness among potential perpetrators.

1) Understanding what social safety and safety perception means in the specific context of station Blaak
2) Creating an intervention that contributes to preventing than rather reacting on unsafe situations based on the factors present in the context

1.3 Collaboration with Advier

For this project Advier is involved as a third party. Advier is a consulting firm that works to (re)design mobility, space and organizations.

Their mission is to put people in motion towards a sustainable society (Advier, z.d.). To do so, Advier envisions a world in which bicycling and public transport are the main transport providers and only shared cars are an alternative to private cars. Figure 1 illustrates the prominence of cars in our society perfectly by leaving them out.



Figure 1: Illustration of a car-free street (Karl Jilg, z.d.)

Ethical perspective
With Advier's vision also comes responsibilities. A future with only shared cars, bikes, and public transport, creating more space for greenery in the streets, paints a beautiful picture. However, these services must be safe for everyone. Take, for instance, people who work in healthcare and have night shifts; this group often opts for cars, partly due to safety concerns. Public transport is a sustainable mobility option, but only if it can be used safely for eacth individual. This has been the driving force for Advier to initiate this project

1.4 Project approach

This project combines a human-centred approach with systemic design practices to explore how women's perception of safety in and around public transit can be improved and designed for to shift the public transport system into a desired direction.

This desired direction stems from systems-shifting design in which a vision is generated which represents a 'directionality' in which we want a complex system to move (Van der Bijl-Brouwer, 2023).

It is part of the systemic design approach: a way to look at a problem more holistically. It embraces the complexity of a context by recognising the multiple stakeholders at play and the dynamic and emergent structures and behaviour within a system (Jones & van Ael, 2022).

The Double Diamond model (Design Council, 2005) is used as a guiding structure—helping to zoom in on individual experiences and zoom out to understand their place within the broader system. However, since the research and design phase are overlapping and not equally balanced, an adjusted approach has been visualized.

A visual representation of the project structure with corresponding chapter per phase is shown in Figure 2 as navigation through this project.

Figure 2: Visualized project structure

2| Understanding (un)safety

3| Exploring Blaak and surroundings

4| Mapping tensions

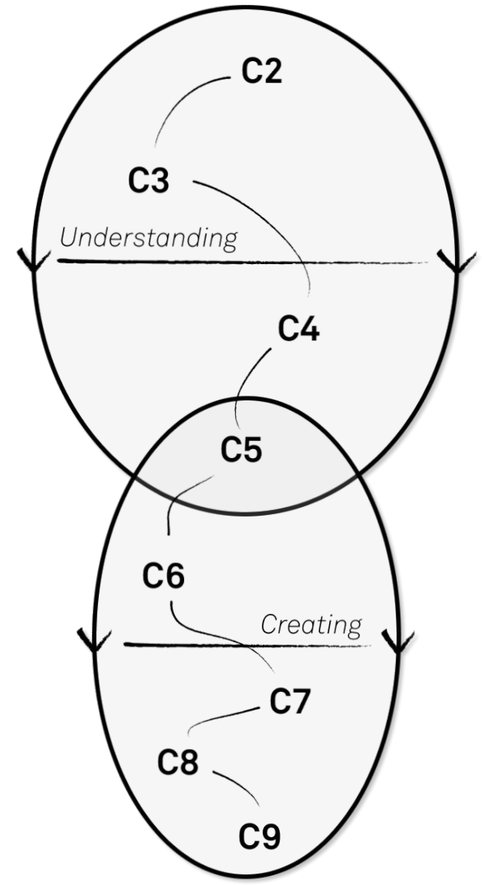
5| Defining the opportunity to intervene

6| Creating the intervention

7| Final intervention

8| Evaluating the intervention

9| Conclusion, discussion and reflection





2

Chapter 2

Understanding (un)safety

This chapter aims to explore the meaning of safety and its related terms in the context of public transport. To do so, three research questions have been formulated:

- What are current concerns and views regarding safety on stations and vehicles?
- How do social structures impact women's perceptions of safety?
- What can be learned from existing design interventions that contribute to women’s safety in the public space?

Through desktop research, expert interviews, and explorative activities, the chapter moves towards formulating a long-term shared vision that serves as a point of reference throughout the project.

2 | Understanding (un)safety

2.1 Current concerns and views regarding safety on stations and vehicles

RQ1: "What are current concerns and views regarding safety on stations and vehicles?"

To answer this research question 3 semi-structured interviews were conducted with experts from the NS (Ward van Gils), RET (Marc Wesselius & Angelique Heijnen) and political party Leefbaar Rotterdam (Simon Ceulemans). The interviews took 60 minutes and were held via Microsoft Teams. Reference is made to appendix B for the set-up of the interviews. The main concerns and views retrieved from the interviews are stated below.

Homelessness challenge
Both NS and RET signal issues related to homelessness in and around stations. This group is not homogeneous and requires tailored approaches: sometimes enforcement is needed, but in other cases, NS works with specialized staff to de-escalate or support individuals experiencing disturbed behaviour (Van Gils, 2024). The presence of people with mental health issues is also increasingly visible due to cuts in the healthcare sector and long waiting lists at GGZ (Van Gils, 2024; Wesselius, 2025). Therefore NS has developed an action plan to address these challenges with key stakeholders, including the Ministries of Infrastructure and Water Management, Justice and Security, and Migration and Asylum. This societal concern is beyond the responsibilities of NS alone.

Shortage of BOA's
A structural shortage of enforcement officers, in Dutch called BOA's, and police staff limits the visibility and availability of safety personnel in public transport. Wesselius (2025) states:

"*this is especially problematic at the ends of metro lines or at quiet stations, which are more difficult to control*".

The RET acknowledges this shortage as a growing concern, noting that visible presence is key to perceived safety but cannot always be guaranteed. Ceulemans (2024) also confirms that recruitment struggles affect the ability to respond adequately to incidents.

Rising aggression
While the number of aggression incidents has not significantly increased, their intensity has. Since the COVID-19 pandemic, public transport staff report more violent behaviour and less respect between passengers and towards personnel (Wesselius, 2025). He aims for downsizing enforcement teams during ticket controls from 5 to 2 persons, because "the appearance of many enforcers works like a red rag to a bull, provoking aggression from fare dodgers."

Complexity of analysing sexual unwanted behaviour
Ceulemans (2024) pointed out that it is difficult to identify and prevent unwanted intimacies using surveillance cameras alone. While clear instances of undesirable behaviour, such as someone kicking OV gates, are easy to spot and address, other situations are more unclear. For example, two people sitting closely together may just be a couple or two strangers. This shows the challenge of telling apart harmless from harmful interactions. As a result, bystanders play a key role in spotting potential issues.

2.2 Power dynamics in the public space

RQ2: "How do social structures impact women's perceptions of safety?"

While safety concerns are often addressed through infrastructural changes, many of the root causes lie within social structures—those unseen, often taken-for-granted norms and systems that shape behaviour in society (Vink et al., 2021). These structures, such as societal expectations around gender roles, masculinity, and peer behaviour, can influence how people interact in public spaces.

To answer this research question, a semi-structured interview was conducted with Lilly van der Hoek, employed at Emancipator.

Emancipator is a Dutch organization focused on men's emancipation and gender equality. Street harassment is often driven by peer pressure, with men feeling the need to prove their masculinity. According to Van der Hoek (2024), shouting or intimidating on the street is often a way for men to prove "they are not gay" which reinforces harmful behaviours that are normalized within certain groups. These dynamics highlight the significant role social pressures and gender norms play in shaping public behaviour, contributing to unsafe environments for women.

Van der Hoek (2024) emphasized the importance of involving men in creating safer public spaces—not only to prevent harassment but also as active allies. Encouraging men to reflect on their actions and understand their role as bystanders is crucial for shifting societal norms. This perspective shifts the burden of safety away from women and encourages a collective responsibility for maintaining a safe environment.

2.3 Existing design interventions

RQ3: "What can be learned from existing design interventions that contribute to women's safety in the public space?

Beyond the concerns, views and root causes, existing designs and interventions responding to women's safety in public spaces were explored. The subchapters illustrate solutions in the short and long term and vary in cultural context. The examples are derived from desktop research, literature, and observations.

2.3.1 Short term solutions

Women-only carriages
"Women-only' carriages have been the norm in Japan since 2001 (see Figure 3). Due to sexual harassment such as groping during peak hour, women feel unsafe. Women feel comfortable in the coupés knowing there are no men allowed, but this is like a band-aid solution, not facing the actual problem of patriarchal ideology: the disrespect and objectification of women (Joan Ito, 2023).

Women-only cars function mainly on social expectations, relying on an honour system where men don't enter to avoid social disapproval. While there are laws against this inappropriate behaviour, the smooth operation of these carriages reflects the collective respect for rules and societal norms in Japan (Joan Ito, 2023).



Figure 3 Impression of women-only carriages in Japan (youinJapan.net, z.d.)

Female friendly parking
The women's parking space is a telling example, retrieved from Caroline Criado Perez's book Invisible Women , of how design affect women's safety. The women's parking space is specifically designed to make women feel safer. These parking spaces are located closer to the entrance so that women do not have to walk as far, for example if they are pregnant or are in an unpleasant situation, such as at a remote petrol station. Figure 4 illustrates the women-friendly intervention.

While this provides a practical solution, it is also seen as a band-aid solution: it acknowledges women's vulnerability, but also emphasises that these designs are necessary because of existing inequalities.


Figure 4: 'For Her" Parking Spaces (Persio, 2017)

2.3.2 Long term solutions

Snow-clearing policy
Long term example comes from the Swedish town Karlskoga and is about policy on snow-clearing. For years, snow-clearing began with the major traffic arteries, and ended with pedestrian walkways and bicycle paths. This order proved to disadvantage pedestrians, who often had to walk through snow-covered paths and were therefore more likely to slip and be injured (Perez, 2020). Because women are more likely to be on foot, less likely to own a car, and have more caring responsibilities (such as bringing and picking up children), they were disproportionately affected. Eventually, the order was changed: pedestrian and bicycle paths were cleared first, followed by local roads and only then highways. This led to a decrease in accidents and lower healthcare costs. This example shows that infrastructure and policies are often designed by men, who assume from their own perspective (e.g. highways having the priority to clear. Changing the order not only prevented accidents, but even saved money in the long run through prevention.

Audio experience "Psst, hee schatje"
Creating awareness is a preventive way to contribute to feelings of safety. During Orange Week in October 2024, the audio tour "Psss... hee schatje" by Lous van Noordwijk was visited (Figure 5 (2024)).



Figure 5: Still from "Psss... hee schatje" by Lous van Noordwijk (2024).

This immersive experience aimed to help participants empathize with women's experiences of harassment, such as being groped or stared at. After the tour, visitors reflected on their experiences together. Male actors involved in the event discussed their perspectives, with one noting:

"I can never fully feel the anxiety, panic, or stress, but I understand it better now. I am more mindful of not walking too closely behind someone on the street or choosing a different path."

2.3.1 Observed design interventions

The seating area at metro Dijkzigt
An urban design example of contribution close to Blaak is the seating area at metro station Dijkzigt. This spot is located next to the hospital and underground an empty square with one snackbar. During observations of the metro stations on the ABC lines, the design of the seats was noted. Figure 6 shows and explains 3 elements that contribute to women's sense of safety. The hostile design is a paradoxical element. While it can increase women's sense of safety by discouraging certain behaviours, it also excludes homeless individuals from public spaces, which should remain accessible to everyone. As Stevens (2023) mentions, this paradox reflects the failure to address the root causes of homelessness, and instead relies on exclusionary tactics that create further social division.

Mirrors at Eendrachtsplein
The next station on metro lines ABC is Eendrachtsplein. Here, mirrored walls in the corridors of the station were observed. Figure 7 shows and explains how this element contributes to the experience. It has an indirect impact because the mirrors expand the traveller's view which could prevent people from behaving inappropriately, as if big brother is watching you.

2.4 Conclusion and desired directionality

Having gained a deeper understanding of the concerns, underlying causes, and current responses to safety issues in public space and transport, the next step is to shape a long-term shared vision that will guide the project. The envisioned shift is toward a public transport system that is:

"accessible to all where preventing rather than reacting on unsafe situations is the norm by a collective alertness among fellow travellers."

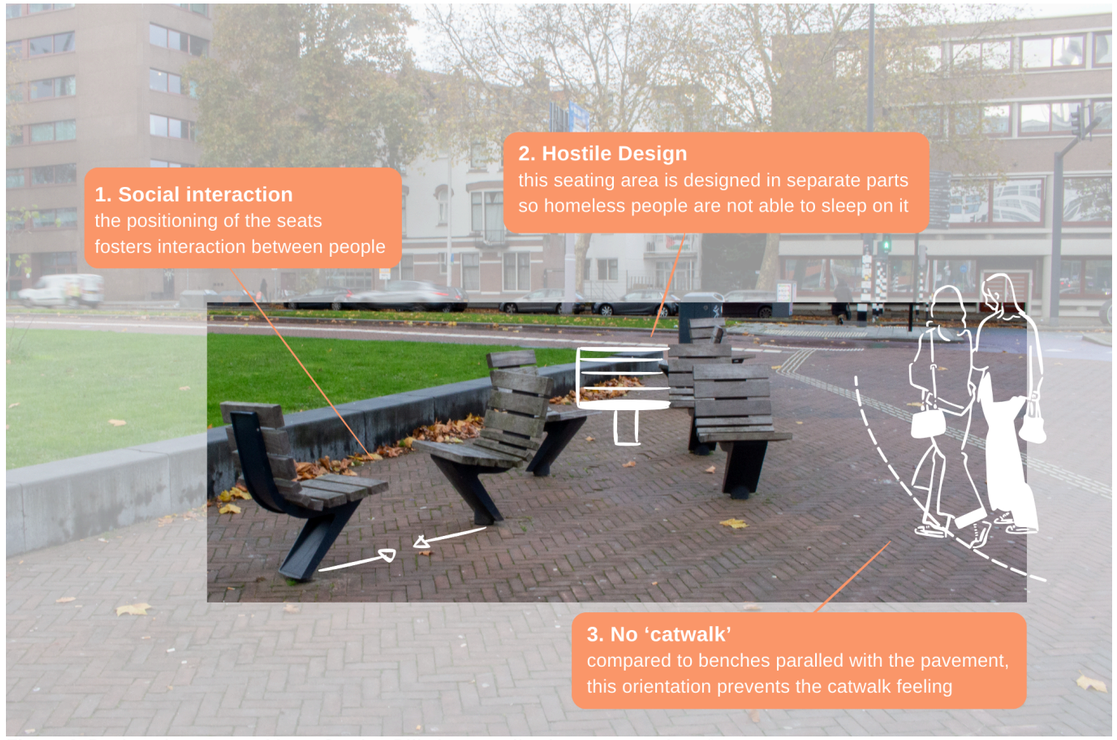


Figure 6: Design elements at Metro Station Dijkzigt contributing to women's safety

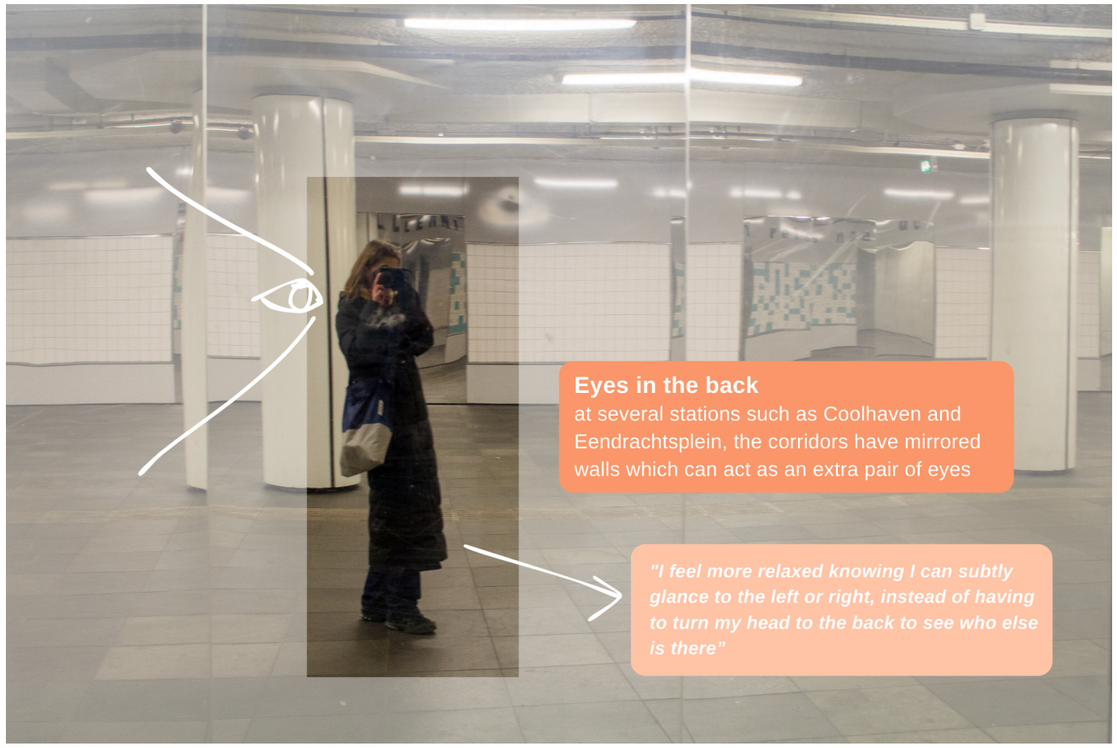


Figure 7: Mirrored walls in metrostation Eendrachtsplein



Chapter 3

Exploring Blaak and surroundings

This chapter investigates the specific context of Blaak station in Rotterdam. The goal is to gain situated insights that can inform the design direction.
To guide this exploration, two research questions have been formulated:

- Who are the (in)direct actors involved in the system?
- What factors influence the perception of safety of travellers at station Blaak and its surroundings?

Through actor mapping, field research (street interviews), and journey mapping this chapter aims to uncover specific context factors. These findings, together with the insights from the previous chapter, lay the groundwork for shaping the domain of social safety at Blaak station.

3 | Exploring Blaak and surroundings

3.1 Actors

RQ1: Who are (in)direct involved in the system?

An actor map was created to offer a visual depiction of the key organizations and individuals that make up the system 'social safety at Blaak station' as well as their relationships to one another (Gopal & Clarke, 2015).

The map distinguishes the actors in 5 roles that shape the social safety at Blaak station (figure 8). Central to the map is the individual traveller who feels unsafe. The fellow traveller has an ambiguous role because they can be both a bystander as a threat. The map is developed based on context observations, desktop research and the interviews with experts (C2.1).

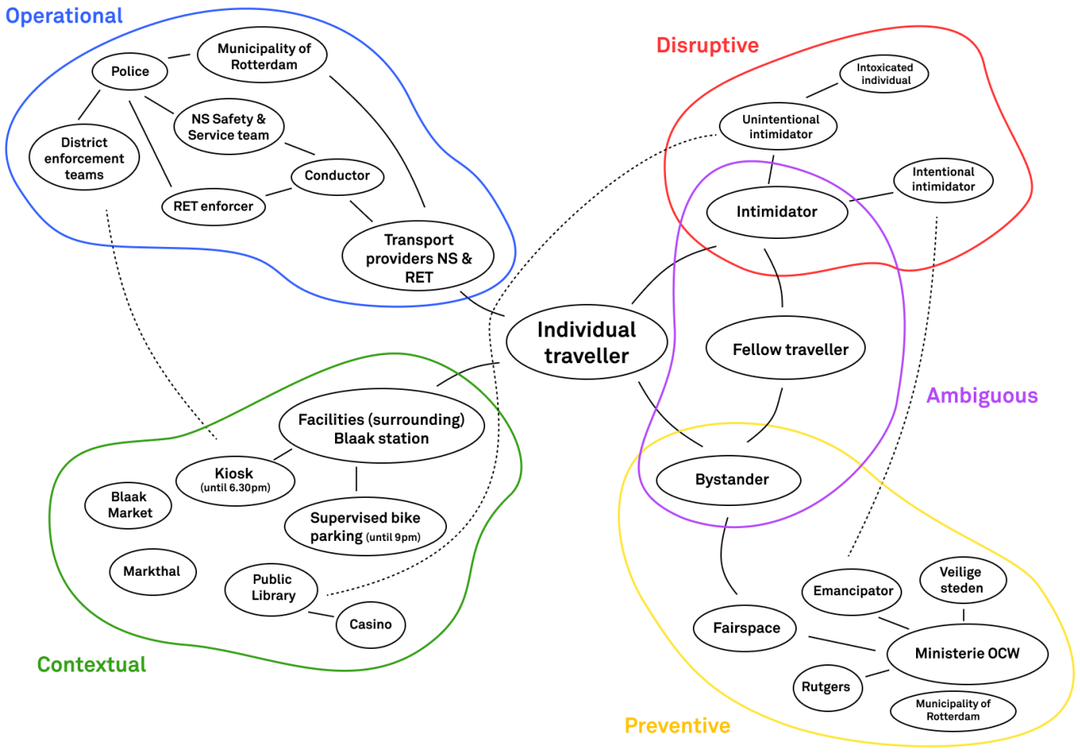


Figure 8: Actor map divided in five roles

3.2 Uncovering factors of Blaak

RQ2: What factors influence the perception of safety of travellers at station Blaak and surroundings?

Transit safety demands a situational and dynamic perspective that is framed to the different stages of the trip at micro level and at particular times (Ceccato et al., 2022). Therefore, it is important to find out how specific the travellers of Blaak feel regarding safety. To answer the research question, field research was conducted through street interviews and semi-structured interviews with regular travellers.

3.2.1 Street interviews

Goal
To gain representative and context-specific insights, interviews were conducted at different times and locations with people varying in age, gender and cultural background.

Set-up
The interviews were conducted on train and metro platforms as well as around the station, divided over three visits. A total of 73 people participated in the conversations. Figure 9 & 10 show the set-up in practice.

Set 1 - Blaak during the day:

"What makes Blaak Station (un)safe for you?"
Participants: 12 females and 6 males

This question focused on retrieving personal stories and pointing out spots on site.

Set 2 - Blaak & Slinge during the day:

"I feel safe in and around this station"
Participants: 14 females and 18 males

This proposition allowed for a comparative measurement between two stations.

Set 3 - Blaak at night (10-11pm):

"I feel safe in and around this station"
Participants: 14 females and 9 males

By using the same proposition, insights from the evening setting could be directly compared to the earlier measurements.

Insights
The following overarching insights emerged:

- Crowds and social presence have a dual effect: they can create a sense of safety ("there are always people around") but also discomfort, especially when involving intoxicated groups or noise.
- Physical environmental elements such as tunnels, the smell of urine or weed, and poor visibility were frequently mentioned as negative factors.
- Familiarity with the location played a key role: locals felt safe because "they know the area".
- Gender influences perception: women more often reported discomfort, while some men acknowledged the difference in experience.

For a comprehensive overview of the collected data and the used artboards see to Appendix C.

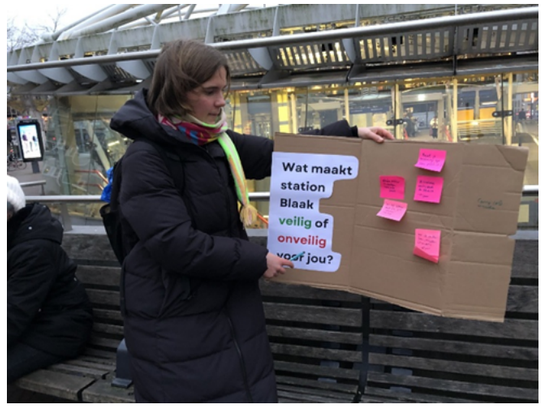


Figure 9: Street interview set-up 1



Figure 10: Street interview set-up 2

3.2.2 Semi-structured interviews with regular travellers

Goal
To gain more in-depth insights on the travel journey, 3 semi-structured interviews were conducted with participants that regularly travel or travelled via Blaak station.

Method
The 3 sessions took 45 minutes with 2 female and 1 male participant. One session was hosted online via Teams.

A visual worksheet (see Figure 11 on the next page) was given to the participants to draw and reflect on their typical travel experience.

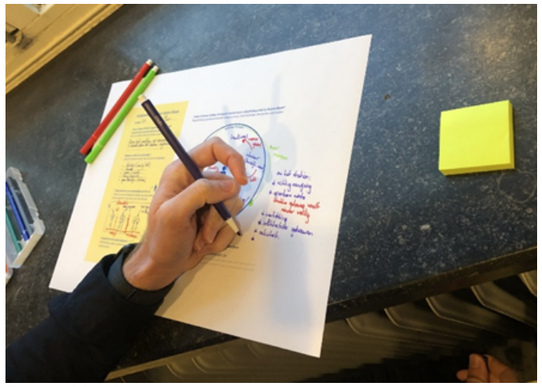


Figure 11: Worksheet filled in during interview

Insights
Additional insights retrieved were:

- Participant 2 only experience the underground areas of the station, as she transfers directly between metro and train platforms. This means travellers perception of the station depends on their route.
- Commuters experience their journey differently: time pressure and routine make them less focused on their surroundings, but also more sensitive to unclear signage and crowd flows.
- Wayfinding issues and a lack of supervision in underground areas were mentioned by Participant 2 & 3 as stress-inducing, especially during transfers.
- The built environment around Blaak, including nearby offices and restaurants, contributes positively to the perception of Participant 1 by making the area feel lively and active.

3.2.3 Journey map

Blaak station functions as a transitional space with both underground and above-ground layers, making it a spatially complex context. Inspired by the tool gigamapping, which is extensive mapping across layers and scales to visualize complex systems (Sevaldson, 2011), a two-layered journey map was created. This journey is based on the insights gathered in section 3.2.1 and 3.2.2 and communicates participants positive and negative perceptions of particular places within this context by a mix of images and text. The map is visualized on the following page (Figure 12).

Figure 12: Journeymap of Blaak and its surroundings with gathered insights

Library entrance
Every morning, a group of homeless people gathers near the library. *“They scream, kick cans of beer, play loud music at 8AM; it’s frustrating.”*





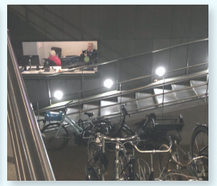
Markthal surroundings
Thanks to restaurants and evening visitors, the area around Markthal feels active and lively even after dark. The flow of tourists contributes to a sense of social presence.

Metro entrance
In the evening, (homeless) people (some visiting casino) hang around the metro entrance asking for cigarettes or money and shelter. Their unpredictable behaviour can make cause unsafe feelings



Bike parking
The bike parking is supervised (see right picture) until 9PM. After that, its open layout allows passers-by to act as informal ‘eyes on the street’ from above parking.





cross section of Blaak station and surroundings

positive factor

negative factor



Train platform
The platform feels unsupervised, especially in the evening. *“At Rotterdam Central I always see staff, but at Blaak I’ve never seen anyone — if something happened, I wouldn’t know where to go.”*



Transfer signage confusion
Wayfinding between train and metro is unclear. *“When I just moved here, I walked the wrong way for two weeks — super annoying.”*



Underground passage to platform
One of the entrances to the platform feels cold and empty, with a bulky object placed in the middle. *“It feels unheimisch — and it smells like urine.”*



4

Chapter 4

Mapping tensions

This chapter aims to structure and visualise the findings from chapter 2 and 3. Using the ViP method, collected context factors are clustered into driving forces that shape the experience of social safety at Blaak station.

The goal of this chapter is to uncover underlying tensions based on these forces. These tensions reveal contradictions in the system and serve as a starting point for defining meaningful and context-specific design opportunities.

4 | Mapping tensions

4.1 Driving forces

Throughout Chapter 2 and 3 pieces of information were collected by a variety of sources. From talking to stakeholders to observations and from literature to street interviews. This led to a collection of factors that play a role in the domain of social safety at station Blaak. Some factors are specific for Blaak and some are broad experiences on other stations. To make sense out of this pieces of information, the ViP method (Hekkert & Van Dijk, 2011) has been used to cluster the factors into 12 driving forces that shape the context of social safety at Blaak. A schematic overview of this process is shown in Figure 13.

The 12 driving forces are:

1. Safety perception is subjective.
2. Clean and complete: The importance of the indirect sensible elements on Blaak Station.
3. The fear of the unknown.
4. Traveling time is me-time.
5. Act of anarchism.
6. Blaak's weak spot.
7. Not all men, but always men.
8. Women are used to be on their guard.
9. NS as a sanctuary.
10. The need to be seen
11. The struggle of BOA recruitment and retention.
12. Shedding light on safety concerns.

See Appendix D for the collected context factors, organized by trends, developments, states, and principles present in this domain, along with the clusters and their corresponding factors.

4.2 Underlying tensions

To make a coherent structure of the driving forces a system map inspired on the causal loop diagram has been created as sketched in Figure 14. Here, several causal relations were identified between the driving forces. The green marked arrows indicate a positive relationship, meaning the two driving forces change in the same direction. To illustrate this, when the 'travel time is me-time' increases, 'the fear of the unknown' increases too. Whereas the red marked arrows indicate the opposite; an increase in clean and complete stations decreases women to be on their guard.

Three tensions were found that can be used as an interesting starting point for meaningful innovation, because tensions trigger the development of creative resolution though what is called integrative thinking (Ryan, 2014). Figure 15 shows the related driving forces. The tensions are discussed on the following page.

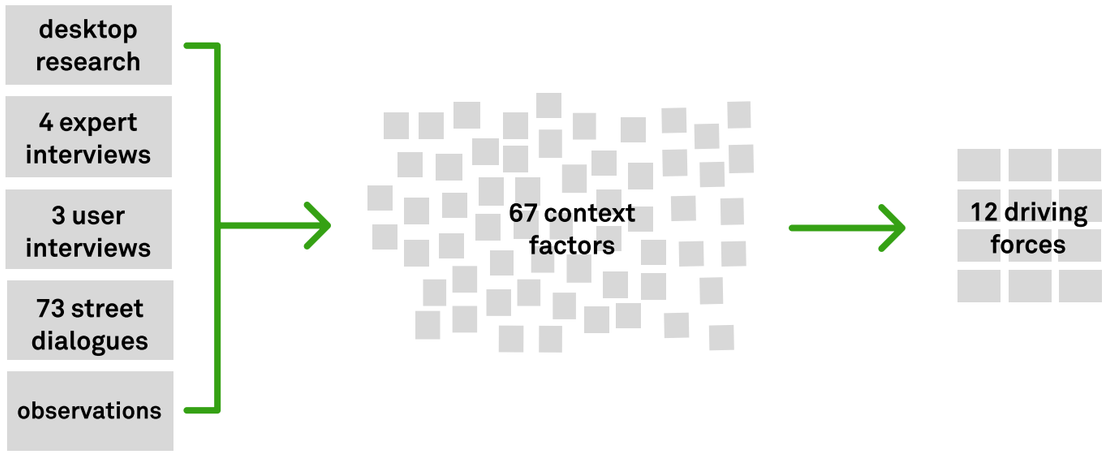


Figure 13: Schematic overview of clustering process

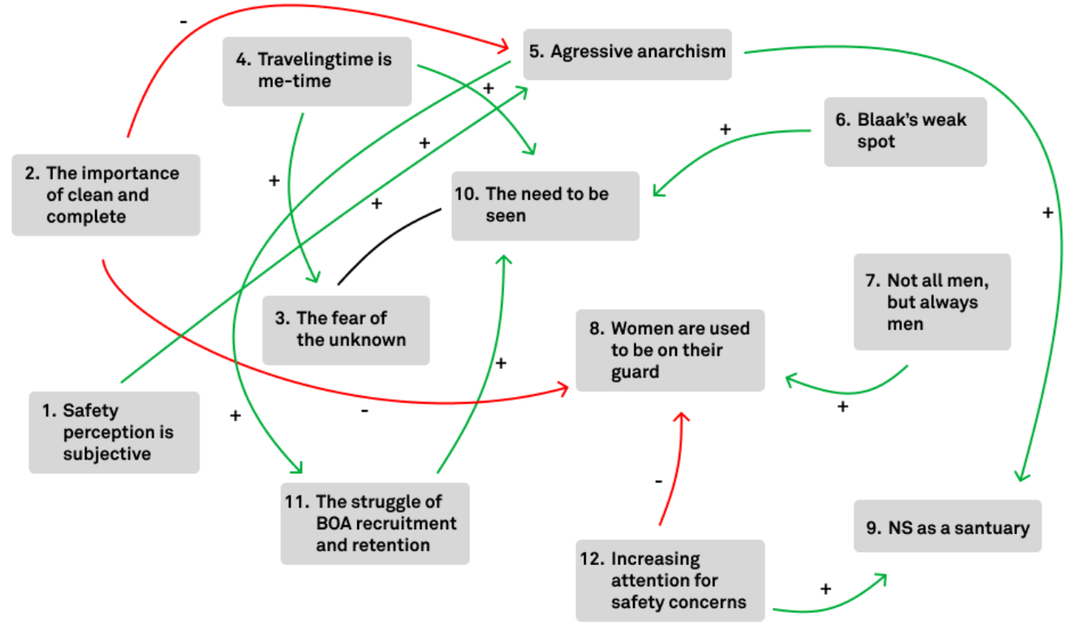


Figure 14: System map with causal relations

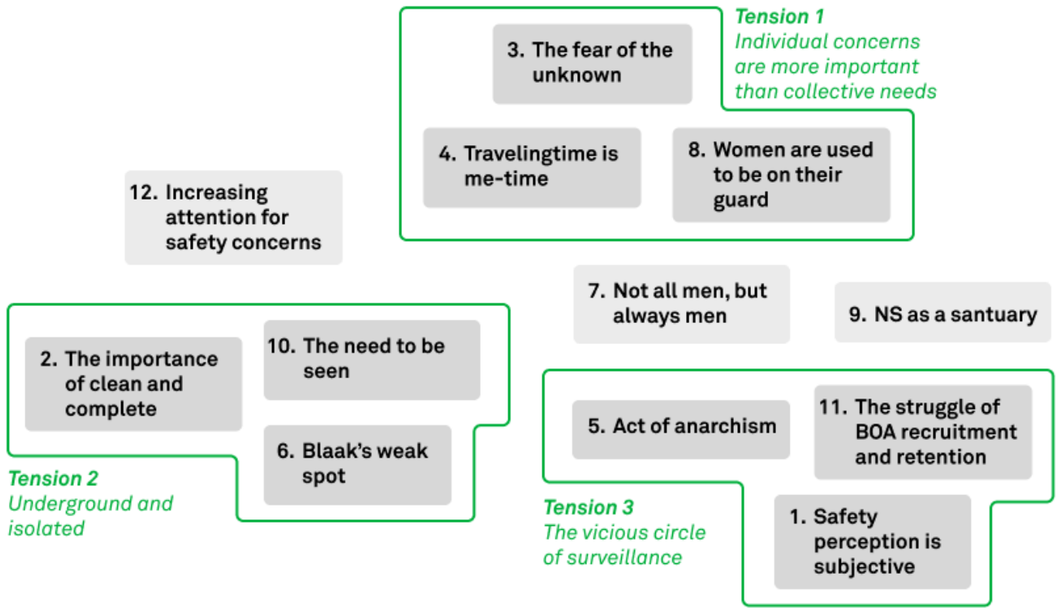


Figure 15: Identified tensions







Tension 1 | **Individual concerns are more important than collective needs**

Related driving forces:
- Traveling time is me-time
- Women are used to be on their guard
- The fear of the unknown

Travel time is increasingly experienced as personal time. Smartphones offer distraction and comfort, but also amplify social isolation and reduce awareness of the surroundings. This creates a situation where many travellers are primarily busy with themselves rather than their environment or other people.

At the same time, female travellers are structurally more alert due to fear of the unknown and previous negative experiences. This fear of the unknown is deeply rooted and often socially ingrained, especially in women, stemming from childhood warnings about ‘stranger danger’ (Whitzman, 2007). Furthermore, as Valentine (1990) notes, in the absence of prior experience or familiarity with a particular place, judgments tend to be based on preconceived ideas or stereotypes, which can increase feelings of fear and uncertainty. While increased use of public transport could theoretically reduce fear through familiarity, unfamiliar or unpredictable situations still provoke anxiety. The tension lies in balancing the individual’s desire for privacy with the need for collective social safety. How can social contact be stimulated without violating personal space?

Starting point:
subtly making female presence more visible, discouraging phone use during waiting time, and encouraging playful, voluntary interactions between travellers.

Pictures are made by Sijmen de Vries during observations at Blaak station

Tension 2 | **The vicious circle of surveillance**

Related driving forces:
- Act of anarchism
- The struggle of BOA recruitment and retention
- Safety perception is subjective

BOAs (public safety officers) experience increasing levels of aggression, leading to reduced job satisfaction and difficulties in recruitment and retention. Also because of shortage at the Police, less enforcers are available for public transport enforcement. In order to feel safe, BOA teams operate in groups of five during ticket control interventions, which can unintentionally signal to travellers that the station is unsafe. Because safety perception is subjective, this may deepen mistrust or even evokes aggression. This creates a downward spiral. A key design question is: how can bystanders be encouraged to play an active role in social safety?

Starting point:
strengthening a collective sense of responsibility and alertness could help balance the need for safety without relying solely on formal surveillance.













Tension 3 | **Underground and isolated**

Related driving forces:

- Blaak's weak spot
- Clean and complete: the importance of the indirect sensorable elements on Blaak Station
- The need to be seen

Blaak Station is underground and lacks clear orientation points, natural light, and a welcoming atmosphere. The station layout is complicated: the train platforms are on level -2, and the metro platforms are on level -1, but overall the underground setting combined with many entrances and exits makes it harder to orientate and can make people feel isolated. These factors often make people feel unsafe, especially women who want to feel seen and recognized in public spaces.

Also, dirty surroundings like the smell of urine or weed, which came up during street interviews, show neglect and make people feel less safe. Clean and well-kept areas are very important because signs of decay can increase feelings of danger and discomfort. However, examples like Delft station show that with careful design, even underground stations can feel safe and welcoming. The challenge is to turn these negative features into opportunities to improve safety and comfort.

Starting point:
using sensory design—light, acoustics, smell, and materiality—the underground space can become part of the solution rather than the problem.

4.3 Conclusion

Tensions reveal where change is needed. By embracing rather than avoiding contradictions, between privacy and connection, surveillance and trust, form and feeling, starting points for meaningful and context-specific design interventions can be created.



5

Chapter 5

Defining the opportunity to intervene

Building on the tensions identified in the previous chapter, this chapter aims to formulate a desired design direction.

Furthermore, an interaction vision is set up to guide how the intervention should be experienced, followed by a design statement and defined design principles to guide the development of the concept in the next phase.

5 | Defining the opportunity to intervene

5.1 Desired design direction

Based on the three identified tensions in Chapter 4, a clear design direction began to emerge. Each tension highlights a key challenge within the perception of safety at Blaak station. From the dominance of individual isolation to the absence of visible surveillance at night and the impersonal qualities of underground architecture.

These tensions converge around one specific moment in the travel experience:
the waiting moment on the train platform.

From both interviews and observations, this moment appeared to be the most natural point for potential interaction; a brief pause where people tend to slow down, look around, and become (even slightly) more open to their surroundings. The check-in gates are generally not suitable for interaction, as travellers are often focused and in a rush to catch their train. This reflects the importance of timing; people are more receptive when they are not hurried. The platform is also where the physical aspects of the station (lighting, layout, atmosphere) are most strongly experienced.

The desired design direction is twofold:

- Make women feel seen in a subtle and respectful way
- Help fellow travellers, particularly men, feel relevant in contributing to a safe environment

This dual aim responds to the imbalance in safety perception and aims to foster a sense of empathy among bystanders. As shown in interviews, people who do not experience unsafe situations themselves often underestimate the discomfort others feel in the same location. Such a gap in perception creates a blind spot in the collective alertness for safety.

5.2 Interaction vision

To foster empathy and alertness the interaction with the intervention should feel as:

“letting someone go ahead of you in the supermarket line because they clearly have fewer groceries than you.”

Figure 16 illustrates this analogy in which 3 significant moments of interaction are highlighted based on two roles. Direct role is from the middle customer who’s noticing the difference and acts attentive to the last customer (moment 1 & 2). The indirect role is from the fellow costumer and cashier who are observing the attentive behaviour (moment 3).

The corresponding interaction qualities are:

Subtle – It does not shout or force behaviour, it blends into the environment.

Sensible – It is easily noticeable to see differences

Reflective – It creates a moment of pause or recognition

Attentive – It acknowledges the presence of others in a respectful way

Temporary – It fits into the short, passing nature of a waiting moment

Norm-setting – It hints at what is socially desirable and evokes social contagion

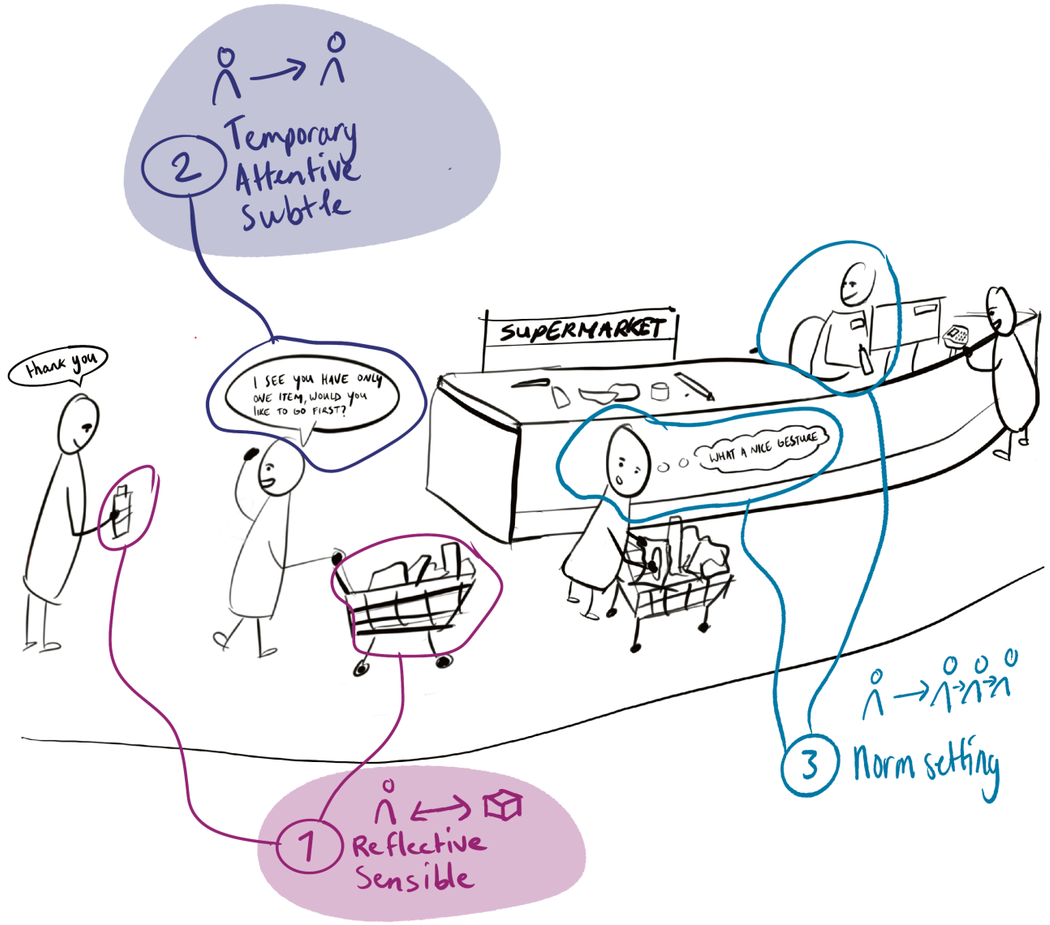


Figure 16: Illustrated interaction vision of a supermarket check-out

5.3 Design rationale

To shift into the desired direction I formulated a design rationale. This 'rationale' helps figuring out how to create the design (what) and the working principle (how) that lead to the aspired value (Dorst, 2011). The working principle is based on the interaction vision (5.2). Inspired by the systemic design reasoning of Van Der Bijl-Brouwer et al. (2024), I defined two human values leading to one systemic value. A systemic value goes beyond value for individual stakeholders to society more broadly (Van Der Bijl-Brouwer et al.,2024). Figure 17 provides a schematic overview of my own rationale leading to the following design statement:

"The **design intervention** aims to **stimulate empathy and alertness in male fellow travellers** by **highlighting differences** in safety perception on the platforms at night at Blaak station."

WHAT = to-be designed intervention

HOW = highlighting personal differences on the platform, such as the interaction vision

HUMAN VALUE 1 = stimulating empathy and alertness in male fellow travellers

So that women feel seen at night (human value 2) so that public transport is accessible to everybody (systemic value).

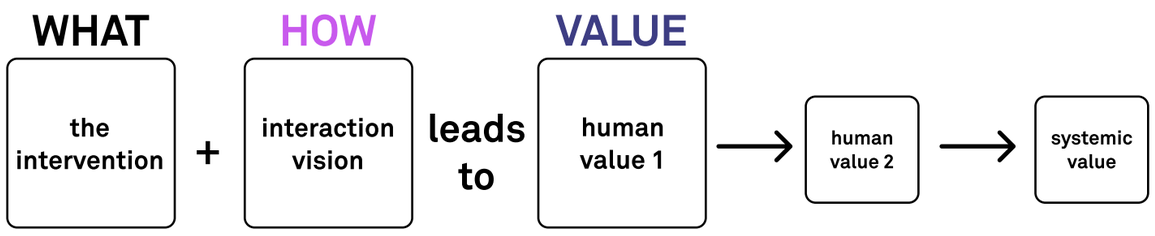


Figure 17: Design rationale based on the (systemic) design reasoning of Dorst (2011) and Van Der Bijl-Brouwer et al. (2024)

5.4 Design principles

To steer the ideation process and evaluate ideas meaningfully, I formulated seven design principles. These were derived from the context, identified tensions, and the interaction vision:

- The design should fit within the existing space and work with the current infrastructure of Blaak station, without requiring major architectural changes.
- The design should match a short time span because people do not dwell long, so the intervention must create impact within just a few moments of waiting.
- The design should engage male travellers without being accusatory or moralizing, speaking to and involving men as part of the solution.
- The design should highlight differences in safety perception by contrasting what is visible with what is felt, addressing the gap between lived experience and observation.
- The design should include a clear trigger to evoke interaction between travellers and the intervention.
- The design should take into account the noise of trains passing by to avoid distraction or interference with the experience.
- The design should consider cultural differences in terms of language to ensure understanding.



6

Chapter 6

Creating the intervention

This chapter reports the key steps taken towards the development of the final concept. To guide this ideation process the following design questions have been formulated:

- How to design within the existing space?
- How to design to engage male travellers?
- How to design for a short time span?
- How to highlight differences (in safety perception)?

Throughout the process, a shift in perspective emerged that influenced the role and tone of the desired intervention. This is discussed in the subsections 6.4 en 6.5 with a sharpened interaction vision and updated design principles.

6 | Creating the intervention

6.1 Initial ideas

The ideation phase in this project overlapped with the development of the design statement (Chapter 5), which already started to narrow down the scope. Early ideas explored a wider solution space with playful interventions to foster connection between travellers. However, after specifying the final design statement, I formulated the following design questions: *How to design within the existing space? How to design to engage male travellers? How to design for a short time span? How to highlight differences (in safety perception)?*

With these questions in mind, new ideas were explored, more aligned with the identified waiting moment on the platform (5.1) and focusing on personal differences. Inspiring ideas were mapped onto the journey as can be seen in Figure 18. Appendix E provides a full overview of ideation sessions and idea sketches.

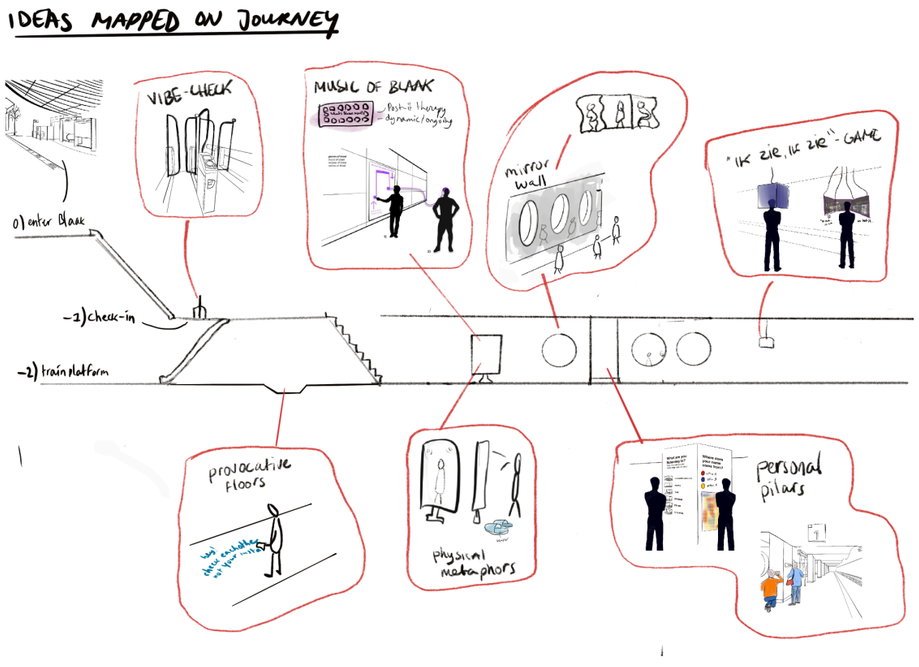


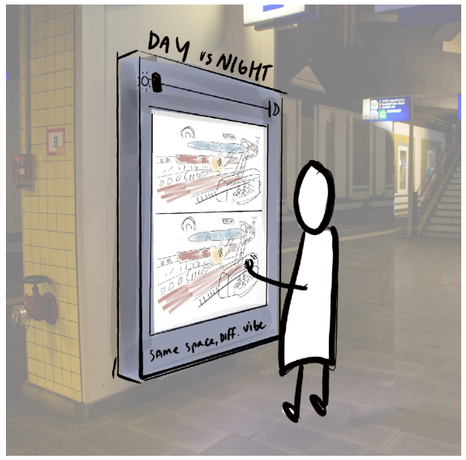
Figure 18: Set of ideas mapped during waiting time

6.2 Towards a screen based concept

Rather than a parallel comparison of three equal concepts, the development towards the final concept (see 6.3) followed more a serial, iterative process. Brainstorm sessions with fellow design students, informal feedback from male colleagues and my own design intuition led to a screen based concept (based on design elements of the ideas set out on the journey).

This concept challenges travellers to spot five differences between a day and night map of Blaak station (see Figure 19). It addresses the first design question of using existing space, since the concept can be integrated in billboards present on the platform. The engagement of male travellers is also addressed by challenging them to see the differences. Figure 20 provides an overview of the five potential examples of differences between the day and night setting that can be used.

Throughout a feedback session with two female design students, a coach meeting with supervisor A. van Boeijen and the design principles (5.4) as a reference, the concept revealed both strengths and limitations.



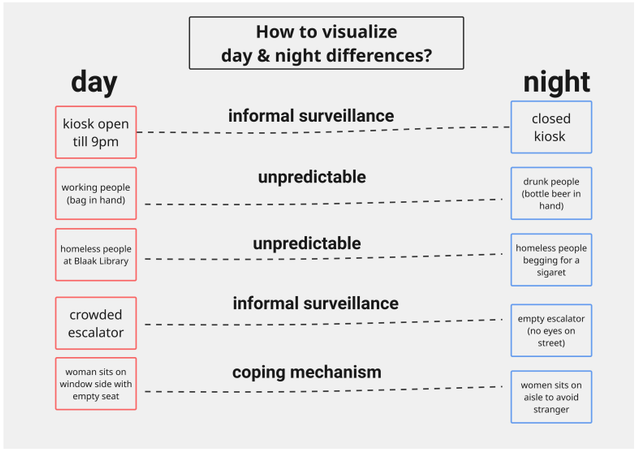


Figure 19: Concept sketch of user interacting with the screen (left)
Figure 20: Overview of the five examples of differences between the day and night (right)

In terms of strengths; the concept is engaging by making it a challenge, it addresses the differences of safety perception. It fits the existing space and is easily implemented therefore and lastly it increases awareness in an educational way.

However the limitations are the complexity for short interaction, how do you ensure travellers will interact? Also there is a potential for reinforcing negative perceptions by emphasizing how different Blaak station looks at night and lastly by limiting to five differences a risk of generalisation of examples can occur as a fellow design student mentioned she did not recognize herself in the 'coping mechanism' example of sitting at the aisle to avoid contact with strangers. She rather sit close to the window and puts her bag next to her on the seat (personal communication, March 2025).

These insights raised further questions that navigate to the final concept:

DQ1: How can screen-based concept evoke interaction without a game element?
DQ2: How can safety perception differences be shown without prescribing what is safe or unsafe?
DQ3: How can the design trigger awareness in a short and still engaging way?

6.3 Iteration to final concept

The final concept answers the above questions by shifting from a gamified to a reflective interaction making use of mirrors. The concept builds up on the earlier observed design intervention at metro station Eendrachtsplein (see chapter 2.3.3), where mirrors cover the walls for overview. Reintroducing this element here as a trigger point for interaction.

The mirror installation transforms into screen when a traveller approaches. The screen then displays a person that reacts to the movement of the traveller as can be seen in Figure 21. The design leverages the natural human behaviour of checking oneself in mirrors to introduce a moment of reflection supported by a campaign message.

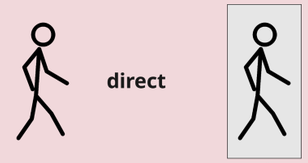


Figure 21: Concept sketch of user approaching the mirror

6.3.1 Exploration of screen content

An exploration of desired interactions between the traveller (in the scenarios called as the user) and the fictive person on the screen, led to three possible scenarios.

Scenario 1:



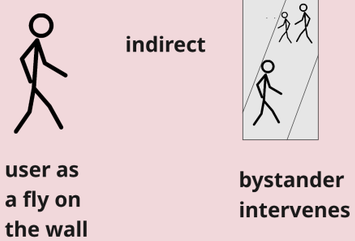
The mirror shows an anxious female traveller reacting to the user's presence. Here the emphasize is on highlighting differences in safety perception in a direct way.

Scenario 2:



The mirror shows a neutral, friendly fellow traveller who removes earbuds as the user approaches. Here the emphasize is on showing an example of what alertness looks like.

Scenario 3:



The mirror shows a bystander responding to a suspicious situation in the background, with the user positioned as an uninvolved witness. Here the emphasize is on highlighting an unsafe situation in an indirect way.

6.3.2 Scenario selection and concept validation

In collaboration with F. Jongsma, consultant in behaviour change at Advier, the scenarios were discussed. Based on her expertise, scenario 2 was identified as having the most potential to foster behaviour change. This scenario aligns with Bandura's Social Cognitive Theory (1991), which argues that people learn social behaviour by observing relatable, rewarding actions in others.

Smiling, for example, has been shown to increase approachability and reduce tension in social settings (Knutson, 1996). Similarly, Dijksterhuis (2020) points out that we unconsciously imitate facial expressions: seeing a smiling face often triggers an automatic smile in return, while a frowning face can evoke a frowning reaction. These automatic forms of mimicry help shape social interactions and support the design choice for scenario 2.

Scenario 1, although strong and effective in raising awareness of different safety perceptions, can creates a sense of negativity and fear especially for female travellers who also encounter this mirror. As F. Jongsma states the immersive framing may discourage users rather than invite reflection (personal communication, March 31, 2025).

Scenario 3 risks reinforcing stereotypes about unsafe situations and generalising certain types of interactions. Additionally, it lacks the strong one-to-one mirroring effect that scenarios 1 and 2 offer — a key quality in creating an impactful moment of self-reflection.

Survey

To validate this chosen scenario and the overall concept, an online survey was conducted with 53 participants. The goal of this evaluation was to understand how people respond to 4 short videos of the same person and slogans. It helped to determine the impact of showing only faces versus full-body images and how the body language is perceived. Figure 22 visualizes the created content for this survey, images were combined to create a short video. The slogans were presented separately from the visual content aiming to validate whether the visual message is clear on its own.



Figure 22: Short videos used in the survey

The videos were difficult to interpret on their own, primarily due to their short duration. The third video received the least positive ratings in terms of the emotions it evoked, suggesting that focusing more on full-body videos could better convey the message. One female participant (age between 18-24) remarked:

"Just through this survey, I've had something of an eye-opener that there should be more interaction on public transport, which I believe is more common in other countries than here, so it seems like an interesting project. I also think it's very important that the person in the video has a friendly appearance because otherwise it feels a bit creepy."

This feedback underscores the importance of conveying friendliness in the videos, aligning with the social cognitive theory (Bandura, 1991) as explained earlier.

Participants had mixed reactions regarding the presence of the phone: for younger people, it was a relatable and representative detail, while mainly the age group 45+ viewed it as a sign of inattentiveness. This highlights the need for clearer contextual framing to ensure the intended message is effectively communicated.

Regarding the slogans, their separate presentation led to varied interpretations,indicating a need for stronger integration with the visual content. Ensuring that slogans complement the videos and enhance the campaign message. Full survey details are provided in Appendix F.

6.4 Shift in perspective

The iterative development and testing process helped to sharpen the strengths of the final concept and revealed important insights related to the original design questions (see section 6.1). Initially, the focus was on highlighting differences in safety perception and engaging male travellers within a short interaction time. However, since ideation is an ongoing process, the perspective shifted towards fostering a social norm by showing desired behaviour as a positive example.

Instead of directly emphasizing contrasts in perception, the concept now aims to subtly encourage alertness and empathy by modelling approachable, prosocial actions. This aligns with the need to engage travellers quickly during short waiting moments and to resonate across diverse users, as identified in the design questions. Figure 23 illustrates the reframed interaction vision: shifting from the direct to the indirect role.

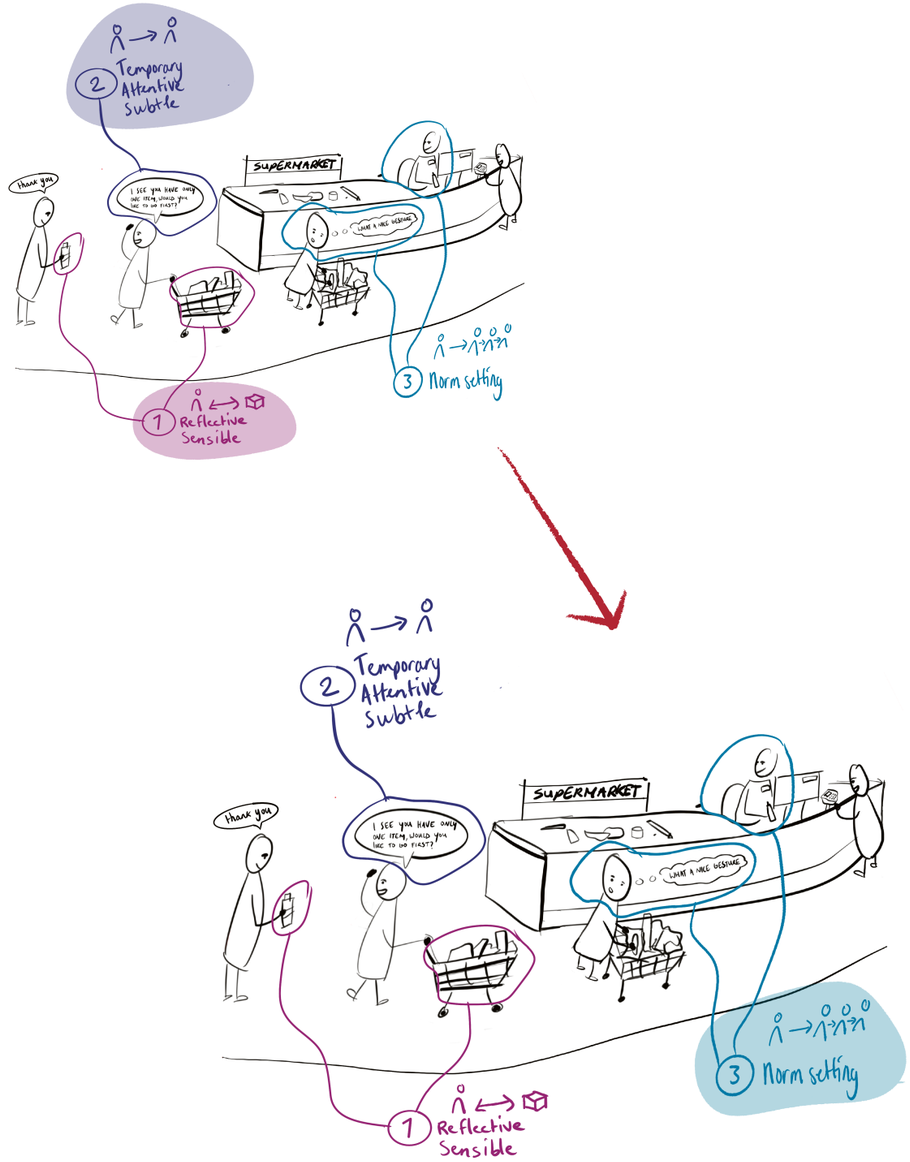


Figure 23: Reframed interaction vision

6.5 Adjusted design principles

Based on the iteration process and survey findings, the design principles have been refined as follows:

Adjusted principles:

- The design should focus on showing example behaviour that reflects attentiveness and alertness.
- The design should adopt an indirect role, modelling subtle, relatable behaviour
- The design should align with the natural behaviour of looking at oneself in a mirror, creating an intuitive interaction moment.
- The design should ensure an unmissable presence by strategically placing the intervention so travellers encounter it naturally without actively seeking it out.
- The design should include a diverse range of people in terms of ethnicity to ensure representation and recognizability.

Maintained principles from section 5.4:

- The design should fit within the existing space, using current infrastructure without requiring architectural modifications.
- The design should match the short duration of typical waiting moments.
- The design should take into account the noise of trains passing by to avoid distraction or interference with the interaction.



7

Chapter 7

Final Intervention: KijkOmJeHeen

This chapter presents the final intervention, supported by a user scenario, visuals and explanations of the key design elements.

7 | Final intervention: KijkOmJeHeen

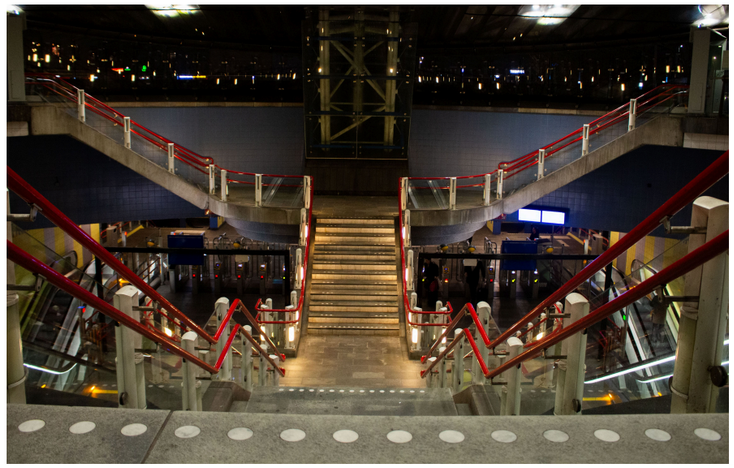
KijkOmJeHeen (“LookAroundYou”) is an interactive campaign that makes travellers reflect on their role and responsibility as a fellow traveller. The intervention capitalizes on the human tendency to look at yourself in mirrors to literally and figuratively introduce a moment of reflection. KijkOmJeHeen consists of two main elements: the mirror installation and the campaign video.



7.1 User scenario

Before discussing the details of the design; how would the intervention be used in the context? The following pictures illustrate the journey of a traveller at Blaak station interacting with KijkOmJeHeen.

Figure 24: User scenario KijkOmJeHeen



1. The entrance of Blaak station at 11pm



2. Traveller checks in at the gates



3. He takes the stairs to the platform



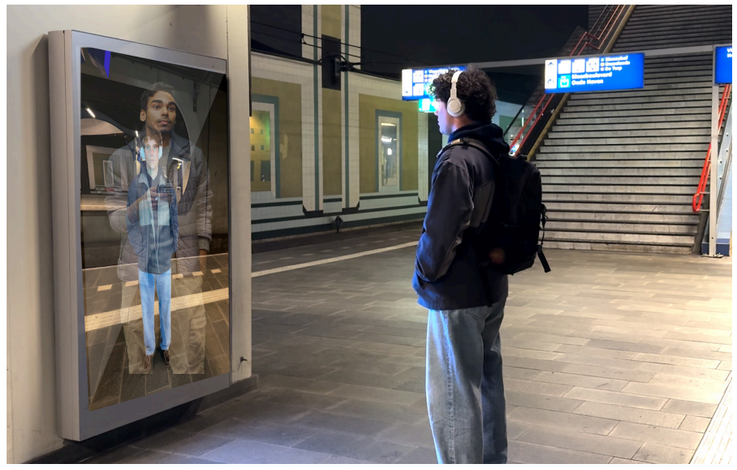
4. The train just left in front of him



5. He walks a bit towards the mirror



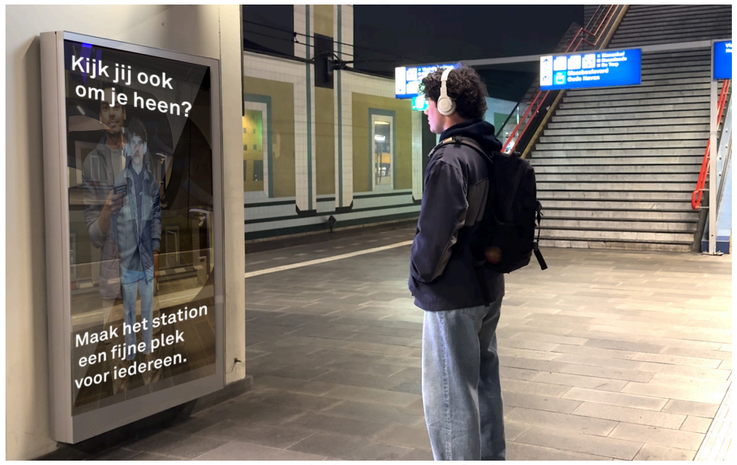
6. As he passes, he looks side ways in to the mirror. A sensor captures movement.



7. The screen behind the mirror partly lits up and catches his attention.



8. A person appears in the reflection, looking alert and friendly beyond the traveller's shoulder.



9. A message apears and the person fades away.



10. “Do you also look around? Make the station a pleasant space for everyone.”



11. The message fades away too and the traveller is left with his own reflection



12. “How do I come across when I’m waiting on the train actually?”, he wonders.



13. He puts off his headphones



14. And observes his surrounding. A subtle smile to a fellow traveller appears.



15. The gesture is received well as she smiles back



16. His train arrives and his journey continues.

7.2 ‘KijkOmJeHeen’ explained

This subsection discusses the mechanism of the mirror installation and different elements of the campaign video.

7.2.1 The mirror installation

How does KijkOmJeHeen work? In Figure 25, a visual overview of the mechanism of mirror film is provided. As can be seen, when the screen displays the person in front of a black background, this lit-up area makes the mirror film transparent partly while the rest of the surface remains a mirror, allowing users to see the real platform they are standing on. This creates a merged reality, where one's own reflection and another traveller's behaviour coexist. When in ‘stand-by’ mode, the installation functions as an extra pair of eyes on the platform, as the reflective surface literally provides more spatial overview.

Motion sensor
A motion sensor was chosen to detect passing travellers, as people typically glance sideways at advertisement boards from about 1.5 to 2 meters away. A sensor with this range helps avoid false triggers from irrelevant movements, such as passing trains. Detecting the exact moment someone looks into the mirror, for example via facial recognition, is not feasible due to privacy (GDPR) concerns and possible negative user reactions. The sensor activates the screen with a slight delay so that the glance itself does not immediately trigger activation, but still attracts enough attention to make the campaign visible.

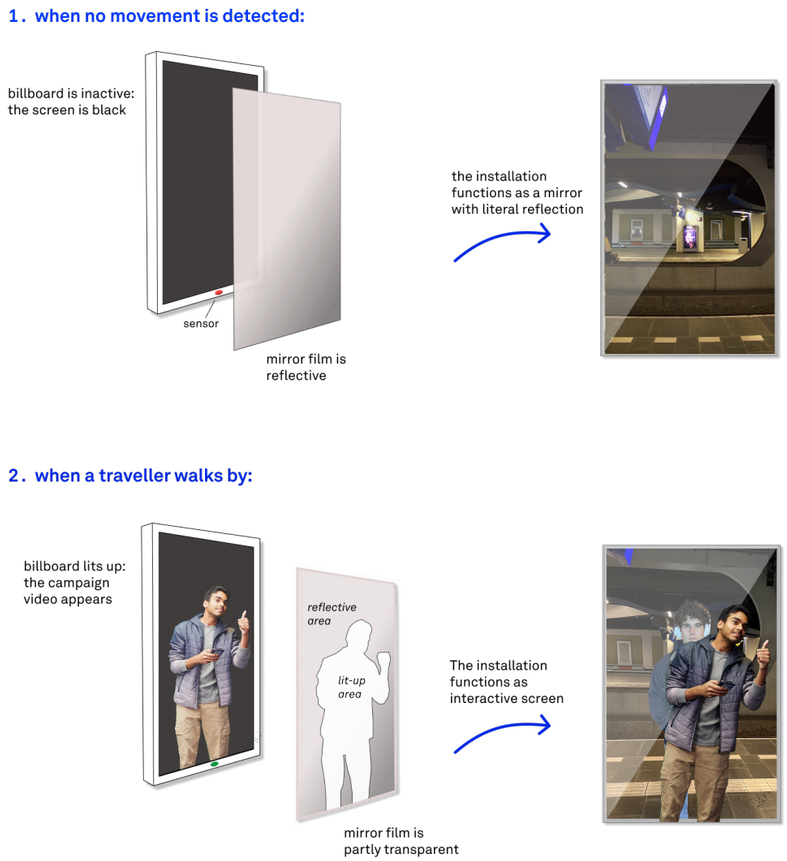


Figure 25: schematic overview of mirror mechanism

7.2.2 The campaign

Whereas the user journey in subsection 7.1 gave an overall scenario in context, Figure 26 provides a visual overview of the relevant moments of the campaign video. The attitude ofthe character of the video is based on Bandura’s Social Cognitive Theory (1991), which argues that people learn social behaviour by observing relatable, rewarding actions in others. Showing recognisable, positive actions such as raising a thumb and smiling (figure y) aims to encourage travellers to reflect on their own role as traveller and on the long term foster alertness. Besides, the fact that real humans are the main element of the concept and people’s appearance can differ from person to person, the importance to create a simple video with clear gestures is key in understanding the take away which is the text appearing in the end.

The merged reality, where one's own reflection and another traveller's behaviour coexist aims to fosters empathy not only because of the realistic size. Also by making use of the fourth wall. As can be seen in figure y, the character first looks beyond the travellers shoulder and then he looks into the ‘camera’ facing the traveller, this emphasizes the question ‘Do you also look around?’ that appears in the same moment making it a confronting and immersive experience.



Figure 26: Visual summary of content for campaign video

Representation in campaign video
As Van Boeijen (2015) underscores the importance of a culture sensitive approach to avoid mismatches in design, short videos were developed featuring six individuals varying in gender and ethnicity. This aims to ensures the campaign message feels recognisable and relatable for varying travellers using public transport, especially in the municipality of Rotterdam where 56% has a migration background (CBS Statline, 2024).

Figure 27 contains stills from the videos, with background image of platform included for context. Each video ends with a shot of the character looking directly into the camera—breaking the fourth wall—to reinforce the call to action: to also look around.

The characters are shown holding their smartphones, as this realistically reflects how travellers typically appear while waiting on the platform. The aim is for viewers to resonate with the characters through this familiar behaviour. The videos are included in the showcase video as part of the concept demonstration. For the evaluation (see section 8), one character was selected as the focus.

The rationale behind the text
The campaign text is written in Dutch. This decision was based on observations at train stations, where most billboard messages were in Dutch. Additionally, this aligns with the communication style of the RET, which also runs Dutch-language campaigns.
Another important design choice is the use of rhyme. Studies show that how something is said strongly influences how credible and memorable it is perceived. This effect—known as the Keats heuristic—suggests that aesthetically pleasing language increases perceived truthfulness. Even simple rhymes can have this effect. For instance, people rate rhyming slogans as more believable, even when the actual content is unchanged (McGlone & Tofighbakhsh, 2000).



Figure 27: Stills from campaign videos showing diverse characters



Figure 29: Exploration of branding KijkOmJeHeen campaign



Figure 28: Campaign text supported by design choices

By using rhyme in the campaign text—"Kijk jij ook om je heen? Maak het station een fijne plek voor iedereen"—the goal is to make the message more engaging, memorable, and trustworthy. The verb 'look' ('kijk') resonates with the act of looking in a mirror.
The slogan is displayed in Figure 28 with explanation for the design choices.

Further exploration
To explore how the campaign message could be extended beyond the platform installation, a first branding iteration was developed (see Figure 29). These designs could be used on digital station screens or as physical posters around stations.

Currently, the colours are based on those of Blaak Station, but further exploration is needed to develop a consistent visual identity. These posters are not part of the core campaign, but an initial exploration of potential broader applications.



Chapter 8

Evaluating the intervention

This chapter explores how users respond to KijkOmJeHeen. The goal is to assess whether the concept functions as intended and how it can be improved.
Through two test sessions, the campaign is evaluated on its ability to foster understanding of the campaign message, the perceived friendliness of the character, and to prompt reflection on travellers' own role as fellow travellers.
Section 8.3 presents the outcomes of the evaluation and discusses the limitations and key insights.

8 | Evaluating the intervention

8.1 How do users respond to the intervention and what can be improved?

To validate the KijkOmJeHeen-campaign and collect recommendations for further improvements I conducted two test sessions. The main goal of this evaluation is to investigate how the intervention performs regarding the design statement and if it properly addressed the interaction qualities and design principles as mentioned in section 6.5. *Does the campaign fosters empathy and alertness among the users? Does the campaign prompt reflection? Is the role character perceived as alert and friendly? Does the textual message align with the attitude of the role model?*

8.2 Method of evaluation

Evaluating the intervention consists of two main parts: the digital content of the campaign and the embodiment of the prototype. For both sessions, an evaluation form (Appendix G: Form 1 and 2) with qualitative and quantitative questions was used and filled in after the test by the interviewer. Participants agreed to voice recording, enabling the analysis of the interviews afterward. For this evaluation, I used Bluetooth clickers to activate the screen from a distance, recreating the function of the movement sensor.

8.2.1 Set-up at Blaak station

The first session was held in the real-world context at the platform of Blaak station. Taking into account the transitional space (not obstructing travellers in their journey) and the lack of power supply, a tablet was used to demonstrate the intervention (see Figure 30). As a preparatory instruction, the participant was shown an image of the actual concept in context and given a brief explanation that this test is part of a project about safety at stations. They then received the instruction:

"You can approach the mirror in such a way that you are able to see yourself in the mirror."

The main goal of this session was to evaluate the understanding of the message and the perceived impression of the role model. Although less testable on a small screen, a subgoal was to also evaluate the effectiveness of the mirror, whether it prompted reflection. Testing in the evening ensured a representative user group and enabled to approach travellers with diverse ethnicities.



Figure 30: Test set-up evaluation 1

8.2.2 Set-up in simulation setting

For the second test session, a simulation setting was created at Advier. Here, for the embodiment and demonstration of the prototype, a 1:1 scale monitor was used, as shown in Figure 31. Using a large screen ensured that the concept could be evaluated not only on understanding the campaign message but also on the experience of seeing your own reflection intertwined with the message. Given the simulation context, the participant was sensitized with a textual description envisioning walking at Blaak station, accompanied by an image of the mirror in context (see Appendix G).

After the first test session, iterations were made on the campaign content. Since this simulation reflects the background of the office environment, a background image of the station environment was incorporated into the campaign video.

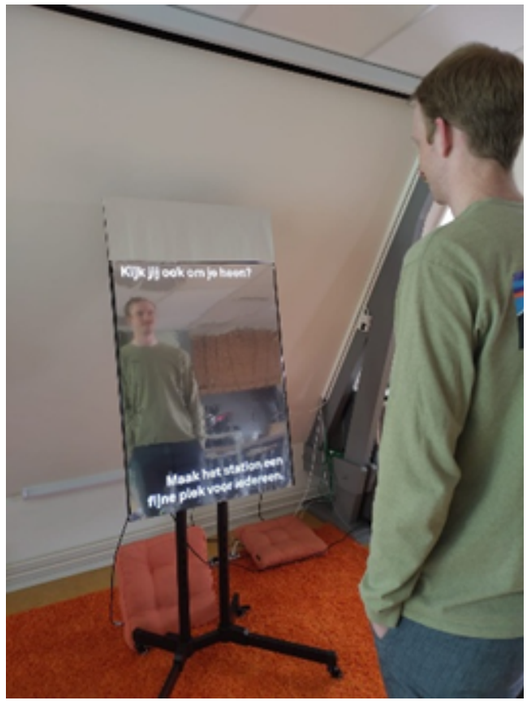


Figure 31: Test set-up evaluation 2

The main goal of this session was to evaluate the iterated campaign in terms of understanding, specifically for male users, and explore the effectiveness of the mirror interaction: To what extent does it prompt reflection on a traveller's role when at stations?

A comprehensive overview of the information per evaluation session can be seen in Table 1.

Session	Goal of evaluation	Context	Participants	Display set-up	Method
1	Evaluating the understanding of the message Evaluating the perceived impression of the character by men and women	At Blaak station between 9.30-11.30pm during waiting time on one of the train platforms	11 travellers 6 women 5 men	iPad on tripod covered with mirror film displaying video version 1: 	Reflective questions after test (see Appendix G for evaluation form)
2	Evaluating men's understanding of the iterated message Explore the effectiveness of the mirror interaction: whether it clearly prompts reflection	A simulation set up was created in a work space at Advier	10 general users 8 men 2 women	70cmx100cm LED monitor with mirror film displaying video final version: 	Observation during and reflective questions after test (see Appendix G for evaluation form)

Table 1: Evaluation characteristics per session

8.3 Outcomes of the evaluation

This subsection describes the results and insights per evaluation and focuses on three aspects: the understanding of the message, the perceived impression of the person (role model) and the level of self-reflection.

8.3.1 Evaluating at Blaak station

A combination of quantitative and qualitative questions was used. Figure 32 provides the quantitative results derived from the interviews after the test. These results are not significant but rather indicative.

Understanding of the message
Since the intervention cannot explain itself, the message needs to be clear. This includes both the video and the text and how well they fit together. The female participants seemed to understand the overall message in depth by asking them the goal of the video they just saw. A few responses: *“More attention for each other on the station” “showing that human contact” “showing you are not alone”.* Whereas men responded more in general on what the goal was: *“less on your phone” “be more alert”.*

As can be seen in Figure 32, the question about how well the text fits the video content has been rated differently by men and women. Overall the quote was perceived ambiguous. Two participants mentioned they associate ‘stand-by’ with the mode of a television and others mentioned it as simple but missing a concrete action. This indicates the text should be improved in order to align it with the visual message.

Another cause of the lack of connection is that the person in the video was not recognized as a fellow traveller by everyone. The lack of reflection of the small screen might have caused participants to see the person only on the black background missing context of the platform. Therefore the quote did not fit the content for some participants.

Perceived impression of role model
The smile was highly rated, as shown in Figure 32, with an average score of 6.2/7 from both men and women. This indicates that the smile was perceived positively. I specifically chose a male role model to check if women also perceived the person as friendly, which was

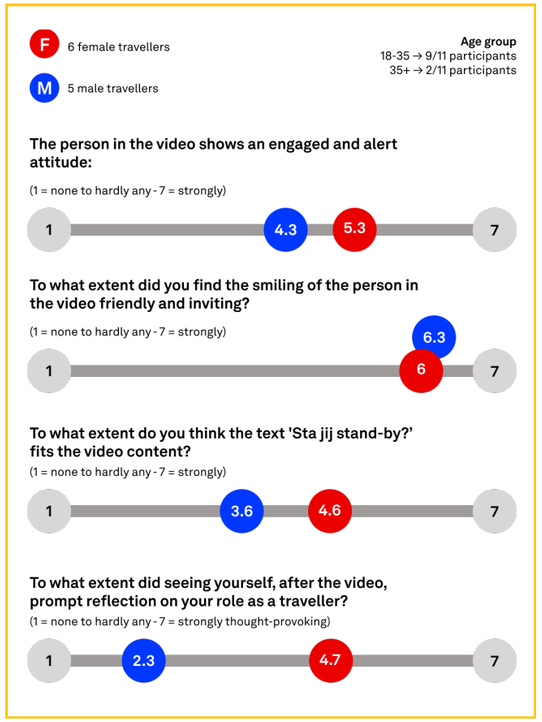


Figure 32: Quantitative results of test session 1

indeed the case. Regarding how alert they found the role model, the score was high (4.8/7), but slightly lower than the friendliness score. For some participants, the use of a phone seemed to suggest that the person was not fully alert, but this perception improved toward the end of the video. The thumbs-up gesture was a few times mentioned as a clear visual cue to show the person was paying attention.

Level of self-reflection
The following question was asked:
“To what extent did seeing yourself after the video of the person disappear make you think about your own role as a traveller?”

As one of the assumptions, and therefore less of a focus of this test, the participants did not score highly on the level of self-reflection (see the last question in Figure 32). The level of self-reflection was not significant but between men and women it differed notably. Men scored an average of 2.3, while women scored 4.7 out of 7. This difference could resonate with the fact that women are generally more conscious of their safety in public spaces, which makes them more alert as travellers and thus more aware of their role on the station towards others.

"I do start thinking now of ‘how do people actually see me when I stand at the station?’ because sometimes I really stand so grumpy. Maybe I look a little too angry.” – Female participant, 19 years old

Take aways for second session
Due to the limitations of the iPad's positioning, which was in a little angle to ensure it was fixed on the standard, participants couldn’t see themselves directly in the eyes, which affected the reflection experience.

Another limitation of this test is the busy nature of Blaak Station led to some participants rushing through the process, which resulted in brief or incomplete answers.

The small size of the iPad made it difficult for participants to relate to the character as someone standing at the station. The background was also black, which didn't help place the character in a station setting.

The differences in how men and women perceived the message highlight the importance of simplifying the message for male users. The mirror effect has potential, but further testing with a more realistic context is needed to strengthen its impact.
The character in the video could be made more relatable by showing the character in a real station context.

8.3.2 Evaluating in simulation setting

A combination of quantitative and qualitative questions was used. Figure 33 provides the quantitative results of the 8 male participants derived from the interviews after the test. These results are not significant but rather indicative.

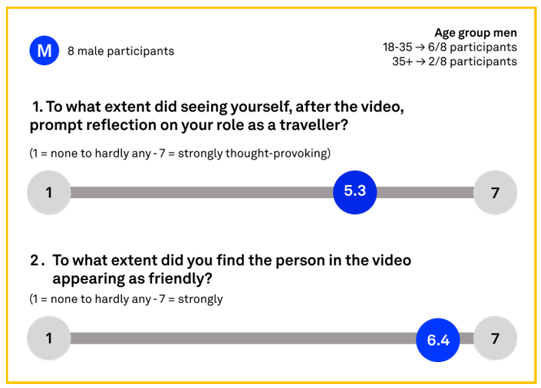


Figure 33: Quantitative results of test session 2

Understanding of the message
This evaluation consist of the final message: “Kijk jij ook om je heen? Maak het station een fijne plek voor iedereen”

This message was very well understood. The interpretation of the text was very clear, which can be attributed to the addition of the take away, making it clear what the campaign is about and therefore also more easy to understand. Two participants also mentioned that the rhyme aspect was clever and catchy. And one participant mentioned straight after the test that he did have very much a tendency to look around behind him. Implicating the message came across.

Level of self-reflection
“To what extent did seeing yourself after the video of the person disappear make you think about your own role as a traveller?” This question was highly rated as can be seen in figure 33.

"It was quite confronting in a way. I'm also often, when I go to the train station, so in a routine of ‘oh yeah, I'm just going home,’ and then you're really not concerned with safety." – Participant 2, 26 years old

“Well, of course you're focused first on what's going on, and then that you see yourself in the same position, then you kind of think, ‘Yeah, should I be that kind of person too?’ and do I also have to make sure that I'm looking in my environment at what's going on.” – Participant 4, 26 years old

Perceived friendliness
This element was evaluated both with an open question and a closed quantitative question. In the open question, participants described the attitude as very positive, ranging from relaxed to very friendly and open. Out of observations I could see how one participant smiled back when seeing the role model smiling.

"Because he smiled, I felt the urge to smile too." – Participant 6, 46 years old

“Relaxed. Relatable. Just like that was a buddy of yours. He also had one hand in his pocket and the other on his phone. That's probably how I would have stood at the station also." – Participant 8, 23 years old

The quantitative question about level of friendliness with a score of 6.4 complemented these positive reactions (Figure 33).

8.3.3 Limitations and key insights

The evaluation provides insight into how users experience the intervention, but it cannot fully determine whether the campaign actually fosters empathy and alertness among users. The second test shows that the campaign does encourage self-reflection, the character is perceived as friendly and alert, and the text aligns better with the message. These partial questions have been answered.

However, the main question of whether the campaign truly fosters empathy and alertness among travelers cannot be definitively answered within the context and scale of these evaluations. Both test environments have limitations: in the real station context (first test), the experience with the mirror was limited by the small size and angle of the screen, meaning the interactive effect could not be fully explored. The simulation (second test) provided an improved experience with the mirror effect, but lacked realistic context, and the damage to the mirror film affected the use, as users had to stand too close. This could cause a bias, as in a real station situation, travelers would typically be farther away or pass by the intervention.

It is also important to note that not all aspects of the intervention were evaluated, such as the experience of passing by the mirror and the actual interaction that would occur when walking by without knowing what to expect. These elements are crucial to understand how the intervention would be experienced in a real station setting.

Overall, the results confirm that the campaign approach was well-received. However, the technical execution still needs further refinement, for example, by improving the mirror film, as users had to stand too close to interact effectively. Additionally, the evaluation did not test the full interactive experience of walking past the mirror without prior knowledge of what would happen. To determine if the intervention's mechanism works effectively, the entire intervention must be tested and observed in a realistic setting to obtain accurate results.

Chapter 9

Conclusion, discussion and personal reflection

9

9 | Conclusion, discussion and personal reflection

9.1 Conclusion

Within the complex dynamics of public transport safety, this project has focused on Blaak station—a busy transit hub where trains, metros, and trams converge. In this context I explored safety challenges from different perspectives. The project started with its initial goals by investigating how women's individual perception of safety is influenced and how it can be improved. Central to this approach is a preventive focus, emphasizing the role of bystanders in preventing unsafe situations. This foundation has guided the design of an intervention aimed at distributing responsibility for safety beyond the individual traveller, contributing to a safer and more alert travel environment.

Based on identified tensions, it became clear that the platform waiting time at Blaak station was the key moment to intervene. Based on this insight, the campaign KijkOmJeHeen was developed. It is designed to stimulate self-reflection among travellers, with the larger goal of fostering empathy and alertness, especially among male fellow travelers. This aims to make women feel seen, a key factor that influences women's safety perception and their travel behaviour.

Reflecting on the evaluation results, the design goal was not fully met. Improving empathy and alertness among users is a broad and complex objective, difficult to measure in this project's scope. Still, KijkOmJeHeen did succeed in conveying the positive behaviour and triggering self-reflection, primarily through the mirror effect. To generate the intended empathy and sustained alertness in travellers, future testing in real-world setting is needed.

9.2 Discussion

Feasibility of the intervention
KijkOmJeHeen can be implemented on existing screens at stations by using mirror film and software that activates the campaign with a motion sensor, integrated into the existing advertising palette. The transparency of the film ensures that advertisements behind it remain visible.

The appropriate timing of showing the campaign depends on how busy the station is; for example, a subway station Slinge, a terminus, is quiet as early as 8 a.m., while Blaak only becomes quiet from 10 a.m. This thus requires customization depending on the station where the campaign will be.

Screen activation requires further refinement. Facial recognition would be more precise, but conflicts with privacy laws (GDPR) and may negatively affect the user experience. Further development should seek a balance between effectiveness and ethics, and explore alternatives that increase engagement without compromising trust.

Project owner of the intervention
KijkOmJeHeen aligns well with Advier's ethical vision of shared responsibility for safety, rather than placing it entirely on individual travelers. The campaign fits within Advier's Mad Movement program, focused on behavior change and marketing projects.

However, Advier is not a direct client, but more of a partner in exploration. This opens space to further develop the concept within Mad Movement and address potential stakeholders, such as municipalities and transportation companies like NS and RET. Rotterdam City Council and these transport companies have an interest in campaigns that promote shared responsibility for safety so that their own staff feel safer as well.

Because of my project, Advier came in contact with Fairspace, which led to discussions about further cooperation between Advier and this organization where my project was also discussed and there was an enthusiastic response so this may have a sequel.

Systemic perspective on KijkOmJeHeen
The systemic value of this project was to shift towards a public transport system that is accessible to everybody. How does KijkOmJeHeen contribute to this long term vision?

Changing complex systems cannot be achieved through a single intervention. As Van der BijlBrouwer (2024) explains, system change is a long-term process that requires multiple, mutually reinforcing interventions—known as leverage points—working together to create broader shifts. This perspective is essential when evaluating the KijkOmJeHeen campaign: while this campaign serves as a valuable starting point during waiting times on the platform, it is only one small part of a much larger change process.

To truly advance toward the larger goal of safer and more accessible public transport, interventions beyond station campaigns are needed. For instance, integrating education on gender roles and social expectations into school curricula and parenting is crucial to fostering future generations' awareness of norms around safety and respect. Additionally, it is important that government provides sufficient care and support for people with mental health challenges, which can reduce situations where confused individuals inadvertently create feelings of insecurity at stations.

The complexity and slow pace of system change require patience and persistence, with small interventions like KijkOmJeHeen serving as important steps forward within a broader portfolio of actions.

Furthermore, expanding the scope of the intervention by exploring how KijkOmJeHeen could work in other public contexts with similar social dynamics—such as nightclubs and sports clubs—is valuable. These settings also involve complex social interactions where safety and group dynamics are central concerns. Conducting such a case study could provide insights that further strengthen and enrich the concept, potentially producing positive effects across multiple domains of social safety.

In short, realizing a true system shift requires viewing interventions like KijkOmJeHeen as part of a larger whole, where multiple interventions, not only design, are needed.

Need for cultural sensitive approach
Cultural sensitivity is indirectly woven into this project by conducting street interviews with a variety of people and by considering a varying representation of the traveller featuring in the campaign video. This is an initial exploration, but to ensure that the intervention resonates well with travellers, a wider range of characters must be employed. This includes not only ethnicity, but also age and variation in costume. For this project, I stand by my choice of a Dutch-language campaign, given its fit with existing advertising and campaigns in the Netherlands.

9.3 Personal reflection

During this project, reflection was already at the center and an essential part of the final concept. Now it is time to look in the mirror myself and I share the key learning moments below.

Engaging with people on the streets
One of the most rewarding parts of this project was engaging with over 70 people during street conversations. I truly enjoyed gathering diverse perspectives and feedback, which enriched my understanding of the topic. Looking back, I recognize that the project could have benefited from more in-depth interviews with male travellers and experts in psychology and sociology to deepen the insights further.

Safety as a subjective experience
Designing for safety perception proved to be a complex challenge. Safety is experienced very differently by each individual, making it difficult to create an intervention that resonates emotionally across such a diverse audience. While KijkOmJeHeen aims to have impact, I learned that designing for emotional safety in public spaces is inherently subjective and cannot be generalized.

I also became aware of my own biases as a woman who generally feels safe at night. This sometimes made me question the urgency of the problem for others and led me to be overly critical of ideas before testing them with users. This experience reaffirmed an important lesson: it is impossible to design for everyone.

Methods are not fixed
Initially, I viewed systemic design as a fixed methodology. However, throughout the project, I realized that systemic design is rather a philosophy comprising overlapping methods and tools that can be adapted depending on the project's needs. While I worked the ViP method to reframe the domain and explore future directions I assumed that I would use the framework of two axes. But during the clustering of the driving forces I concluded that the collected factors were less future-oriented

than ViP typically assumes. So after clustering, instead of creating the two dimensional framework, I identified 3 tensions as starting point for design opportunities. Although I incorporated only elements of systemic design, this approach offered a fresh perspective on tackling complex social issues.

Aesthetic hygiene
In design processes, it is often the norm to present reports and documentation as result-oriented and logical, as if the process was linear and without obstacles. According to Nilsson and Vink (2024), this 'aesthetic hygiene' causes the complex, iterative, and sometimes messy nature of design to be lost. They criticize how popular methods and documentation tend to erase the 'mess' of the design process, while uncertainty and reflection are essential for critical design.

My own process around the ideation phase and the design goal illustrated this: I iterated and experimented with various ideas, with the design goal continuously evolving and overlapping with this ideation phase. Given this messy process, I found it important to mention how the mechanism to reach the value has been changed, as can be seen in Chapter 6.

Therefore, I consider this report a process report, in which not only final results but also also the iterations, reflections, and uncertainties are embraced.

Critical and creative
A common challenge for designers is balancing critical and creative thinking at the right moments in the design process. I experienced this struggle during the ideation of the textual message for the campaign. The possibility to iterate on the text felt endless because text, as part of the design, can easily be adjusted. Besides, having no concrete target group or client gave me freedom, but I sometimes felt a bit uncertain without clear boundaries and wondered if the project would be as meaningful without a direct client to design for. Making decisions and then revisiting them to see if they could be improved confirmed my (sometimes overly) critical nature and my interest in thinking before executing.

Now that this solo project has come to an end, I look forward to working on important societal topics, but then in a team context, wherever that may be.



Chapter 10

References

10

10 | References

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Appendix A: Initial project brief
Appendix B: Interview set-up experts
Appendix C: Street interview materials & collected data
Appendix D: Context factors and driving forces
Appendix E: Ideation sessions & sketches
Appendix F: Survey set-up and results
Appendix G: Pre test instructions and evaluation forms

Chapter 11

Appendices

11

Appendix A: Initial project brief

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TU Delft

DESIGN FOR our future

IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

In this document the agreements made between student and supervisory team about the student's IDE Master Graduation Project are set out. This document may also include involvement of an external client, however does not cover any legal matters student and client (might) agree upon. Next to that, this document facilitates the required procedural checks:

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project's setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student's registration and study progress
- IDE's Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME
Complete all fields and indicate which master(s) you are in

Famil… Dfl ✔ SPD

Giver…

Student n…

SUPERVISORY TEAM
Fill in he required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Cha…
mentc…
2nd mentc…
client…
city…
option…
comment…

! Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why.

! Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter.

! 2nd mentor only applies when a client is involved.

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in **by the Chair** of the supervisory team

Sign for approval (Chair)

Name Annemiek van Boeijen Date 20 Nov 2024 Signature

CHECK ON STUDY PROGRESS
To be filled in **by SSC E&SA** (Shared Service Centre, Education & Student Affairs), after approval of the project brief by the chair.
The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total ____ EC

Of which, taking conditional requirements into account, can be part of the exam programme ____ EC

X	**YES**	all 1st year master courses passed
	NO	missing 1st year courses

Comments:

Sign for approval (SSC E&SA)

Name Robin den Braber Date 25-11-2024 Signature

APPROVAL OF BOARD OF EXAMINERS IDE on SUPERVISORY TEAM -> to be checked and filled in by IDE's Board of Examiners

Does the composition of the Supervisory Team comply with regulations?

YES	V	Supervisory Team approved
NO		Supervisory Team not approved

Comments:

Based on study progress, students is …

V	**ALLOWED** to start the graduation project
	NOT allowed to start the graduation project

Comments:

Sign for approval (BoEx)

Name Monique von Morgen Date 26/11/2024 Signature

…ges / figures on next page

DESIGN FOR our future

TU Delft

Personal Project Brief – IDE Master Graduation Project

Name student Sijmen de Vries Student number 4,854,268

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT
Complete all fields, keep information clear, specific and concise

Project title Social Safety: Rethinking women's experiences at stations in Rotterdam

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

Research by Pointer, shows that 9 in 10 women feel unsafe at stations (KRO-NCRV, 2024b). Causes include the presence of strolling figures under the influence of alcohol/drugs, little lighting, lack of social control and this is experienced especially after dark. As a result of this unsafe feeling, women avoid public transport in the evening or take the car, but not every woman has this option.

The focus in this project is on Blaak station, where trains, metros and trams converge. Because of this transit facilitation (e.g. from train to tram outside), travelers might feel unsafe during transfer time. This location has been pinned on the Pointer map as unsafe several times (KRO-NCRV, 2024).

The choice for a specific age group is not defined yet, since the focus is on qualitative insights in the first phase and does not include women only, but also men who are part of the social dynamics in the context of using public transport.

Directly involved stakeholders are people, mostly men (age group not defined yet) who consciously and unconsciously make women feel unsafe. Indirectly involved are fellow travelers, and employees from public transport organizations RET and NS, such as conductors, and from the local government, such as policemen and boas. The government benefits from positive safety perceptions for everyone, including women, so that more citizens use public transport and thus indirectly less private transport is used.

Introduction (continued): space for images

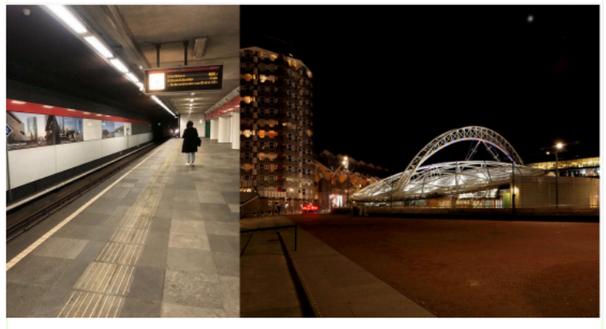


image / figure 1 An impression of the context: Coolhaven & Station Blaak during night time (van der Linden - Focoss, 2023)

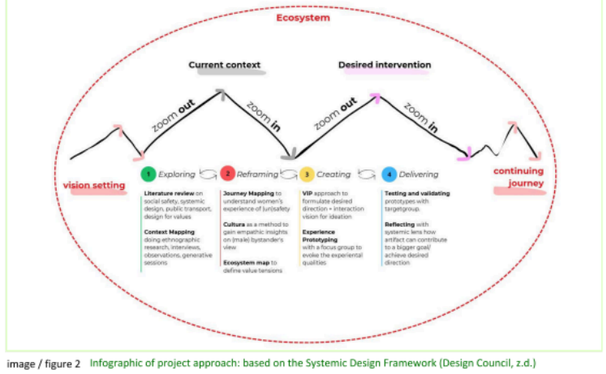


image / figure 2 Infographic of project approach: based on the Systemic Design Framework (Design Council, z.d.)

DESIGN FOR our future

TU Delft

Personal Project Brief – IDE Master Graduation Project

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)

Despite practical measures such as improved lighting, sight lines, and camera surveillance, women's sense of safety at stations remains vulnerable, this is mainly due to a lack of social control. Current solutions are mostly reactive, aimed at reducing risks after situations have already become unsafe. This puts the responsibility for their own safety on women themselves. However, research (KRO-NCRV, 2024b) shows that women benefit from informal supervision, e.g. the presence of 24/7 shops and fellow travelers on a platform.

As a DfI student, I see opportunities to explore how to increase women's individual perception of safety by looking at a collective perception of safety with fellow travelers. Herein, the focus is on a preventive approach, in which the role of bystanders is key in preventing unsafe situations for women at stations and creating awareness among potential perpetrators. I will explore safety from a broad view to prevent tunnel vision on women only.

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

I will design an artifact or intervention that supports the feeling of a collective responsibility for safety to preventively improve the individual safety perception for women around Rotterdam Blaak station during nighttime. KQ's: What factors in public space influence the safe feeling? What can be learned from existing designs (in similar/other contexts) that contribute (or not) to women's safety in the public space? DQ's: How can design influence the safe feeling? How do I design for different socio-cultural values?

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

Exploring exactly what perception of safety means for women, men, cultures; which factors play a role in the current context? I will do a literature review, context exploration in which I do street interviews, observations (ethnographic research) at Rotterdam Blaak and generative sessions with a focus group from different cultural backgrounds.
Framing the problem, I will use Journey Mapping to define women's experience and Cultura to gain empathic insights on (male) bystander's view on safety. Next, to design for long-term transitions, I will create an Ecosystem Map to identify leverage points, working with a systemic design principle to focus on both stakeholder as systemic value (Van der Bijl-Brouwer et al., 2024)
For developing ideas the ViP approach to formulate a desired direction and interaction vision. With this, Experience prototyping will be a next step to evoke experiential qualities.
For delivering a desired intervention, testing, iterating, validating prototypes will be key. And reflecting (systemic lens) how a small artifact contributes to a bigger whole: improving safety perception of everyone, including women, in order to motivate more people to use public transport.

Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines.
*Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting**, **mid-term evaluation meeting**, **green light meeting** and **graduation ceremony**. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).*

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting	18 nov 2024
Mid-term evaluation	24 jan 2025
Green light meeting	28 mrt 2025
Graduation ceremony	28 apr 2025

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	✔
For how many project weeks	1
Number of project days per week	1,0

Comments:
studying for a resit 31th of January due to family matters (funeral) on the first exam moment

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

My motivation for this project comes from a strong desire to address societal inequalities through design. I want to use this project as a way to create awareness, specifically by focusing on improving safety for women in public spaces. This topic excites me because it's meaningful and sensitive, which aligns with previous work I've done during my MSc, like designing for STD experience. I also want to take this opportunity to improve my skills in context mapping. I've explored this during the C&C course a little, but this project gives me more time to dive deeper and get better at it.

My personal ambitions:
1. I want to broaden my skills by applying a systemic design perspective. While human-centered design has been a key focus of my master DfI, I want to learn how a systemic lens can add depth and relevance to this approach applying systemic design reasoning (Van der Bijl-Brouwer et al., 2024)
2. I want to strengthen my ability to lead my own project. I aim to treat feedback from supervisors and stakeholders as guidance, not as the main determinant of my project (as I struggled with in a previous project). It's a chance for me to grow as an independent designer and project manager.
3. I want to sharpen my skills in storytelling and visualization to make the results of this project both impactful and accessible.

Appendix B: Interview setup for experts

for NS and RET

Introductie
- "Goedemiddag, . Bedankt dat u de tijd heeft genomen voor dit interview."
- "Mijn naam is Sijmen de Vries. Ik studeer momenteel af bij Advier, een adviesbureau gespecialiseerd in mobiliteit, voor mijn master Design for Interaction aan de TU Delft."

1. **Projectcontext**
   - "Mijn afstudeeronderzoek richt zich op het verbeteren van sociale veiligheid rondom stations, met een specifieke focus op station Rotterdam Blaak. De keuze voor dit station komt door de complexe combinatie van vervoersmiddelen als knooppunt en de unieke uitdagingen die daarbij horen."
2. **Doel van het gesprek**

3. **Opzet van het interview**
   - "Ik heb een aantal open vragen voorbereid en wil graag een semi-gestructureerd gesprek voeren. U mag uiteraard uw eigen ervaringen en gedachten toevoegen waar u dat relevant vindt."

Interviewvragen

Definities en uitgangspunten
4. Hoe definieert u een sociaal veilige omgeving op stations?
5. Welke factoren zijn volgens u het meest bepalend voor de veiligheidsbeleving van reizigers en medewerkers?

Specifieke uitdagingen en aanpak
6. Station Blaak staat bekend om specifieke uitdagingen, zoals de aanwezigheid van verslaafden. Hoe gaat NS / RET hiermee om?
7. Wat zijn de grootste verschillen qua veiligheid tussen station Blaak en een groter station zoals Rotterdam Centraal?

Gender en veiligheidsbeleving
8. In de klantenbarometer scoort veiligheid gemiddeld een 7,5, maar uit onderzoek van Pointer blijkt dat 9 op de 10 vrouwen zich onveilig voelt op stations. Wat is volgens u de reden dat gender niet expliciet wordt meegenomen in de klantenbarometer?
9. Hoe werkt NS / RET aan het verbeteren van de veiligheidsbeleving voor vrouwelijke reizigers?

Invloed en samenwerking
10. Welke invloed merkt u dat de fysieke aanwezigheid van Veiligheid & Service (V&S)-medewerkers heeft op het gedrag van reizigers?
11. Krijgt u ook positieve feedback van reizigers over de aanwezigheid van V&S? Kunt u voorbeelden noemen?
12. Hoe verloopt de samenwerking met NS / RET op knooppunten zoals station Blaak, met betrekking tot veiligheid en verantwoordelijkheden?

Omstanders en gezamenlijke verantwoordelijkheid
13. Bent u wel eens getuige geweest van situaties waarin omstanders niet ingrijpen bij incidenten? Wat leert u daarvan?
14. Hoe denkt u dat NS-medewerkers en omstanders beter kunnen samenwerken om sociale veiligheid te bevorderen?

Toekomst en innovatie
15. Welke innovatieve ideeën of tools ziet u als kansrijk om sociale veiligheid op stations verder te verbeteren?

Interview set up Leefbaar Rotterdam

Introductie
Mijn naam is Sijmen de Vries, en ik werk aan mijn afstudeerproject bij adviesbureau Advier als onderdeel van de master Design for Interaction aan de TU Delft. Ik ben benieuwd naar uw visie als raadslid van Leefbaar Rotterdam op hoe onveilige situaties in publieke ruimtes ontstaan en aangepakt kunnen worden. Daarnaast hoop ik inzichten te krijgen in hoe de gemeente en het Actieplan bijdragen aan het verbeteren van sociale veiligheid voor alle reizigers. Ik kijk ernaar uit om meer te horen over uw perspectief en ervaringen.

A. Analyse van het probleem
1. Wat ziet u als de belangrijkste oorzaken van de toename van sociale onveiligheid, met name in en rond station Blaak?
2. Welke maatregelen worden momenteel genomen om sociale onveiligheid in het OV aan te pakken?
3. In hoeverre speelt wapengebruik een rol bij de veiligheidsproblematiek rondom het station?
4. Zijn er naast de incidenten andere aanleidingen waarom jullie je hierop inzetten?
5. Zijn er specifieke demografische groepen (bijvoorbeeld vrouwen, jongeren, ouderen) die zich in dit gebied vaker onveilig voelen?

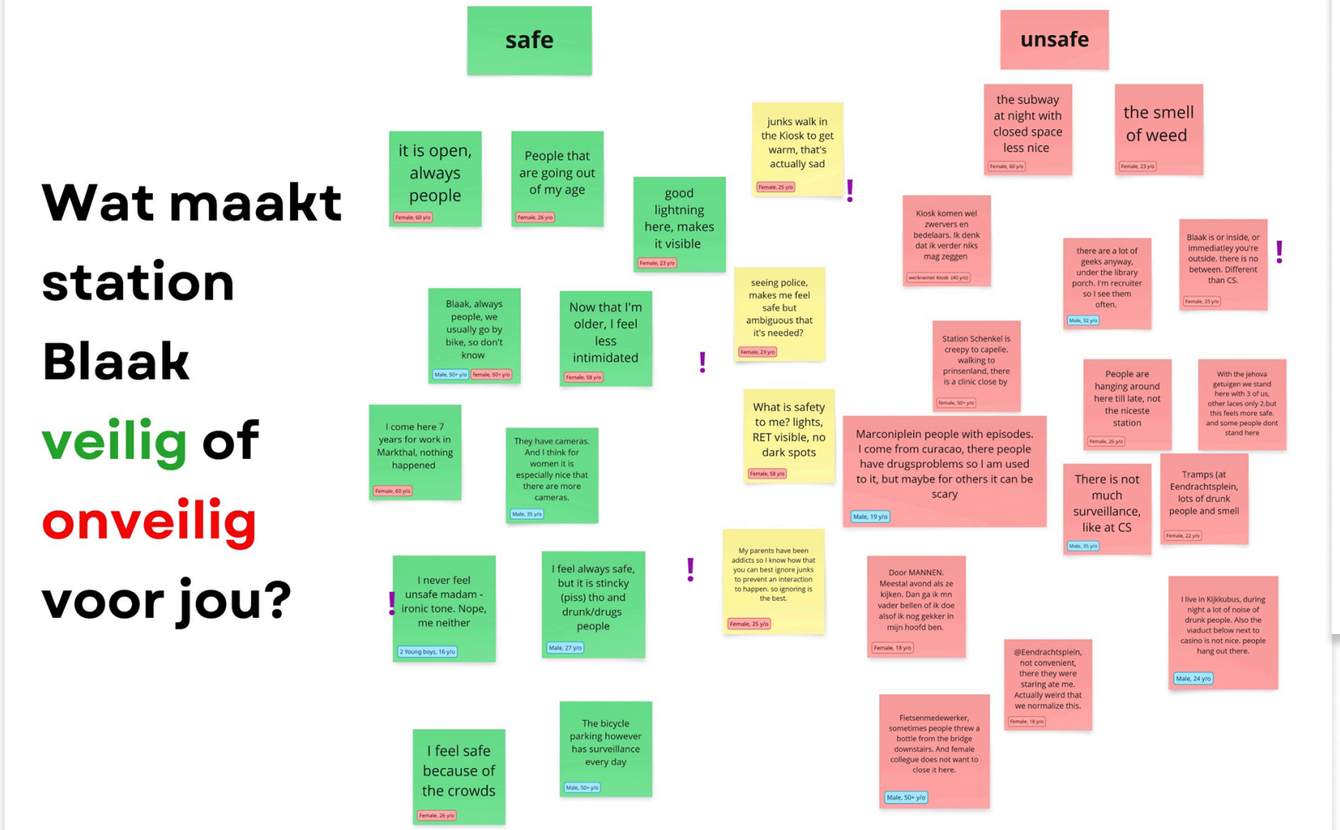
B. Oplossingen en acties
6. Welke maatregelen uit het gemeentelijke Actieplan zijn relevant voor het vergroten van de sociale veiligheid rondom station Blaak?
7. Hoe pakt de gemeente straatintimidatie en seksuele intimidatie specifiek aan op plekken zoals station Blaak?
8. Hoe belangrijk vindt u de rol van omstanders in het verbeteren van sociale veiligheid, en hoe kunnen zij worden geactiveerd?

C. Positieve initiatieven
9. Welke initiatieven ziet u op of rond station Blaak die al bijdragen aan een veiliger gevoel bij reizigers?
10. Zijn er samenwerkingen met vervoerders, buurtbewoners, of andere partijen die u effectief vindt?

D. Toekomst en kansen
11. Welke kansen ziet u om de sociale veiligheid rond station Blaak verder te verbeteren?
12. Wat zou volgens u een succesvolle interventie zijn om reizigers meer veiligheid te laten ervaren?

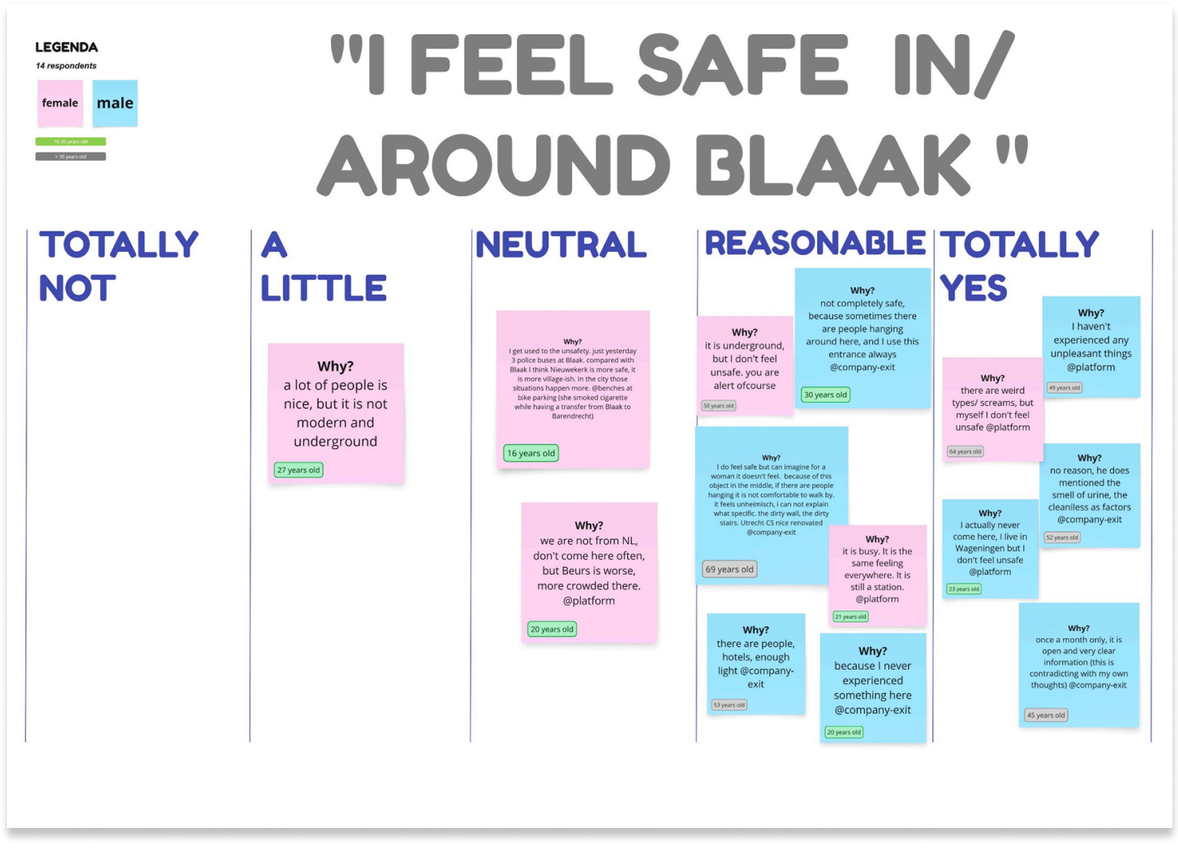
Afsluiting
• Bedank de geïnterviewde voor zijn tijd.
• Vraag of hij aanvullende informatie of bronnen heeft die nuttig kunnen zijn voor jouw project.

Appendix C: Street interview materials & collected data









Appendix D: context factors categorized per type

TREND

agression
Travelers behave more agressively in incidents since the covid pandemic; spitting on eachother

phone as defense
women call someone to feel more safe. It is a way to share where you are and as a distraction

phone as power
people more often use their phone to document crime or assault

(usecue of headphone) women wear headphones in public transport to discourage contact with strangers

Since the covid pandemic more people work from home, so more peakhours at Tuesday and Thursday at NS trains

DEVELOPMENT

less grateful
intervening during an unsafe situation as a BOA is less appreciated; people don't say thank you anymore, but ask why I did that

Cabinet
abolishes 'bed-bath-bread' regulation, leaving failed asylum seekers on the streets

people live more individualisitic

isolation the effects of covid pandemic are present with Gen Z becoming less social

there is more than newspapers
More and more young people are using social media to keep abreast of what is going on in the world. 94% of young people trust the news

AI misinfo
With developments in Artificial Intelligence (AI), news stories are increasingly being automated which can lead to disinformation.

PRINCIPLE

bystander effect

bother
people shy away from asking for help because we don't want to bother other people, assuming that our request will feel like an inconvenience to them

social control
people feel safe when surrounded by people, knowing they could ask for help

homeless people
look for shelter and warmth in public space so they are present in stations and libraries

not all men
but always men: the disrespect and objectification of women

feeling unsafe is caused by a combination of factors

people want to be part of a group

STATE

unpredictable:
people around station Blaak that are under influence of drugs or alchohol cause unsafe feelings because of their unpredictability

the provision of information
is unclear for travelers walking from train to metro underground

light
the platforms of station Blaak are lacking lighting

Of the RET transport vehicles, bus is perceived as safest because there is direct contact with the driver.

cleanliness and smell
on stations is strongly related to the safety perception

a group of men
hanging out in public space is associated as odd in the dutch culture whereas in Arabic cultures this is a way of socializing

52 context factors

hardening of society:
people are having less respect towards boa's

de Terp less surveillance of staff at the end stations of metrolines such as Slinge

+316 13181318 The NS is increasingly actively highlighting the emergency number that passengers can app when they feel unsafe on the train.

headphones The wireless headphones market is expected to grow with 8.94% from 2024 to 2029, reaching a market size of $14.38 billion by 2029.

presence of enforcement at stations causes mixed feelings

there is no fixed NS service staff present on station Blaak

Men and women value very different things when it comes to safety perception.

collaboration the RET, the Police and Gemeente Rotterdam are increasingly working together on safety issues

Conscious and meaningful consumption is becoming more popular, with travellers seeking an optimal balance between convenience and value.

social safety on the train and station is deteriorating, partly due to norm blurring.

Increase in illegal copies of electronic (youth) day tickets. In 2023, we did a new working method. By blocking e-tickets earlier, we increase social safety for employees and travellers, among other things

RET faces staff shortages at enforcement department

people make assumptions based on appearance

authority people in the Netherlands are authority unsensitive

overcrowding is associated with aggression and social disorganization

inclusive architecture: rounded corners and stairs without angles of 90 degrees improve the visibility of people

Orientation points help people identify their surroundings and thus feel in control.

feeling safe differs person to person:

the older you are as a woman, the less intimidated you feel

speaking the same language helps to emphatize with others

underground transfer: Blaak station is used as a transfer particularly between train and metro.

markthal Blaak station is a vibrant location in the evening due to tourism, horeca and nightlife facilities.

modern interior of stations contribute to travelers safety perception

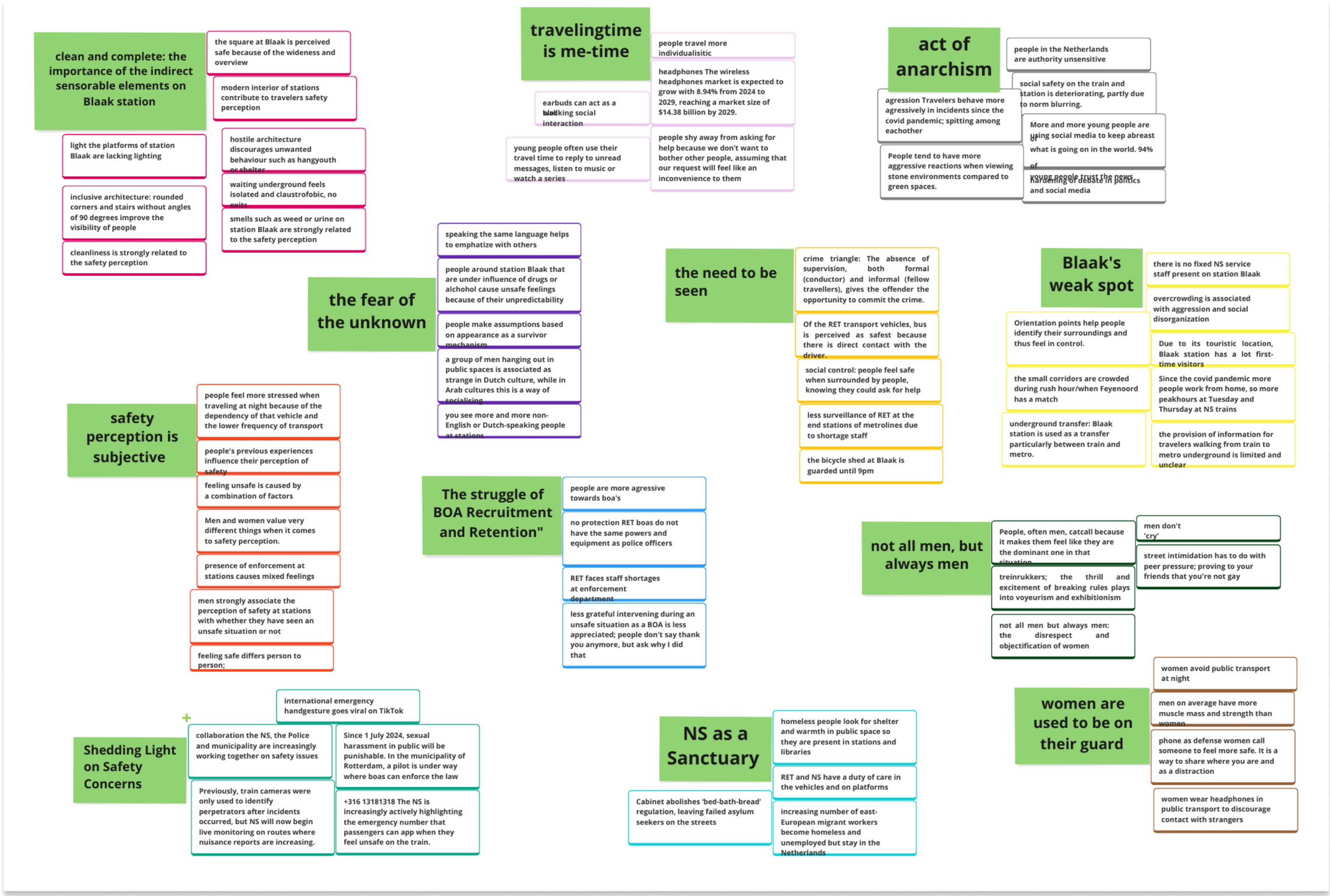
people feel more stressed when traveling at night because of the dependency of that vehicle and the lower frequency of transport

no protection RET boas do not have the same powers as police officers

the small corridors are crowded during rush hour/when Feyenoord has a match

hostile architecture contributes to women's sense of safety by discouraging certain behaviors

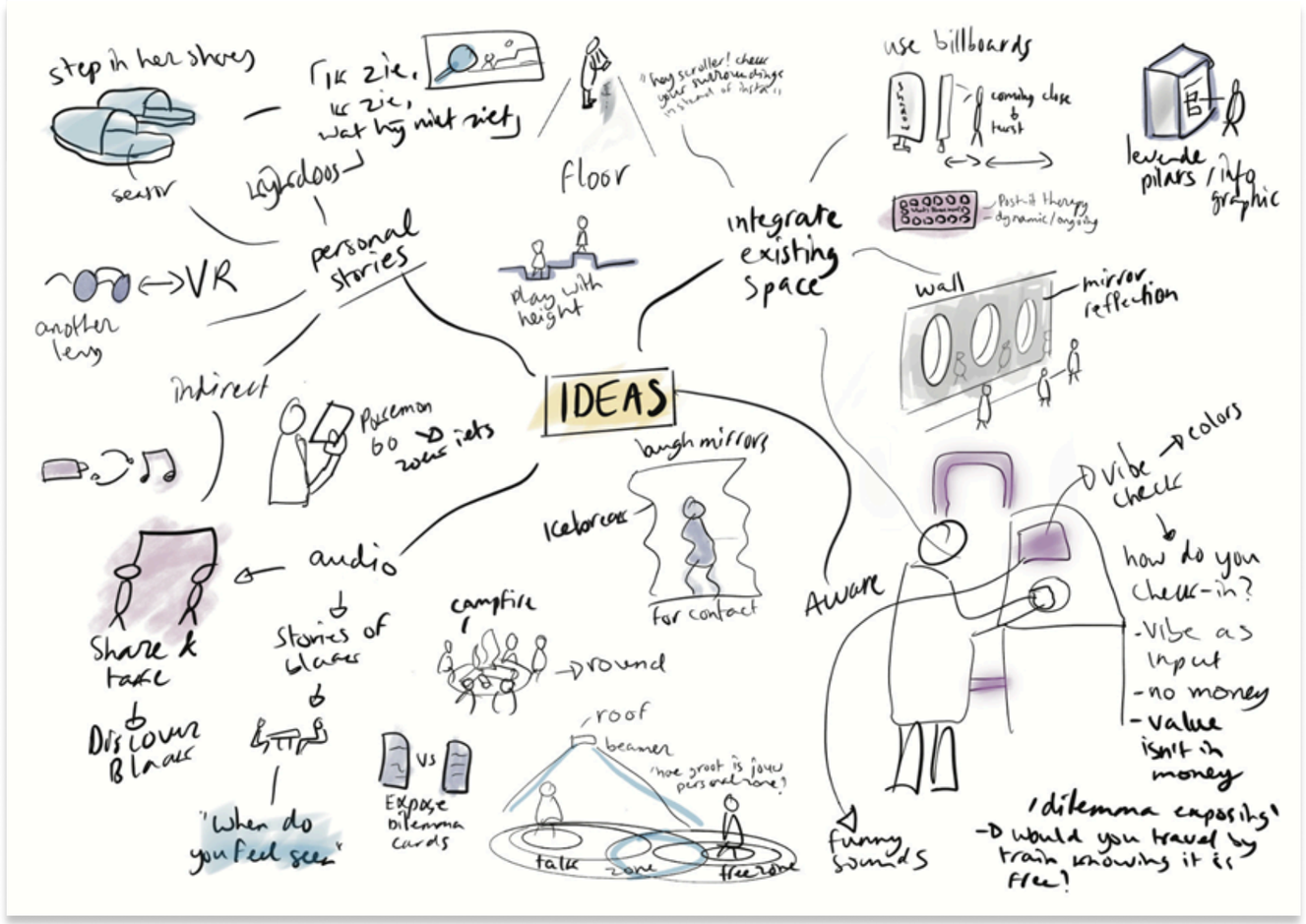
Appendix D: clusters

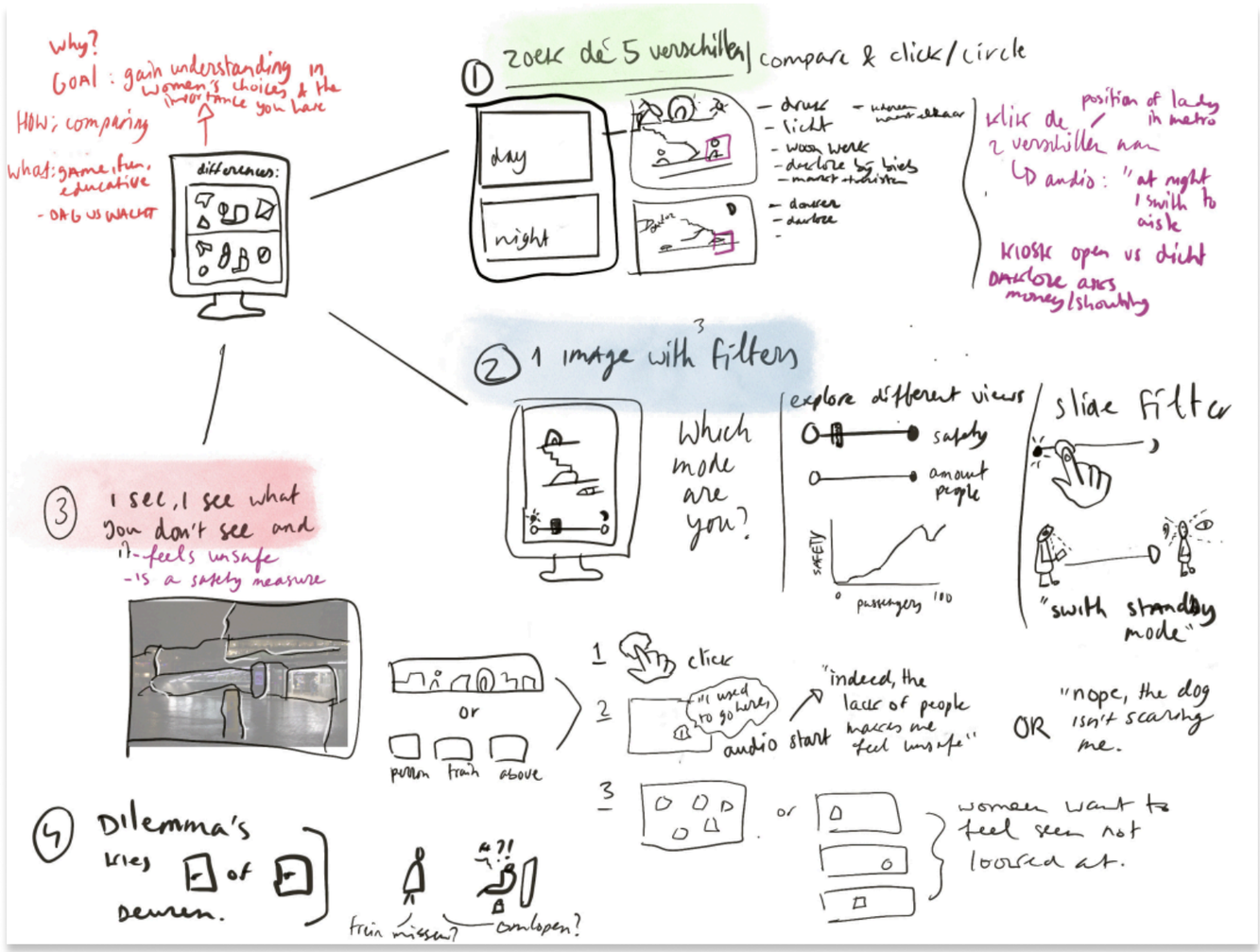


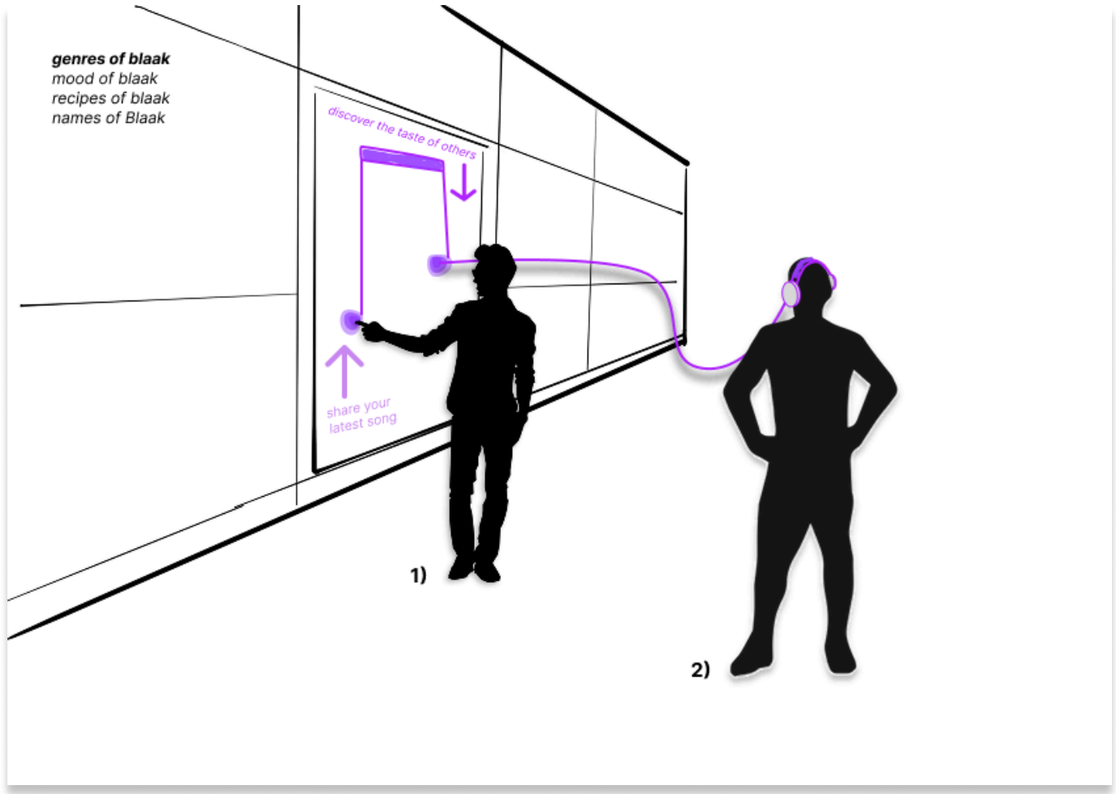
Appendix E: Ideation sessions and sketches

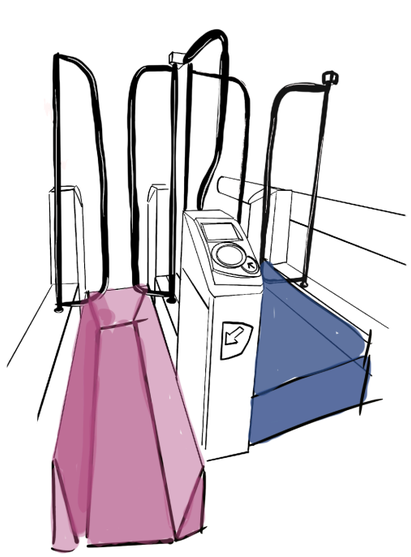






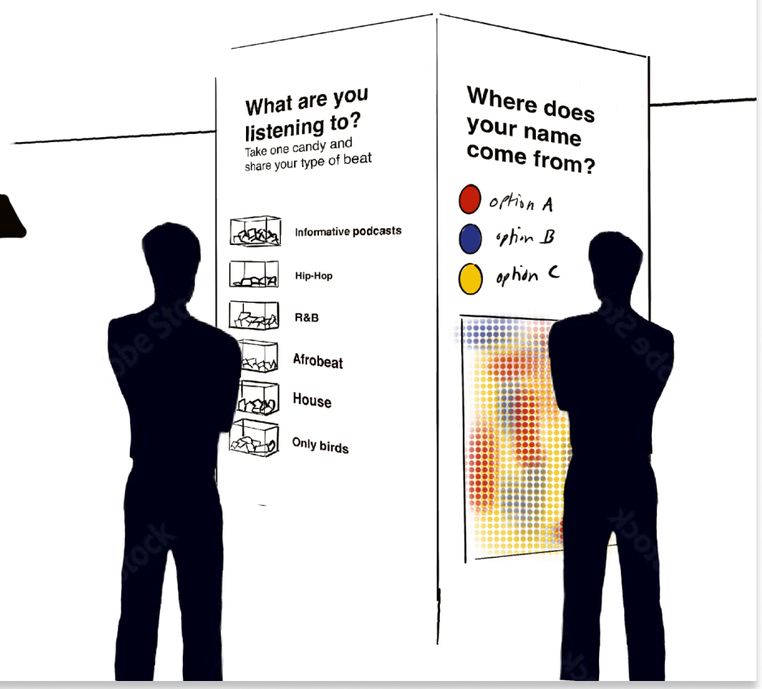












Personal Pilars

Appendix F: Survey set-up and results

Sociale veiligheid op het perron

Toelichting context en concept

Hieronder is een storyboard te zien van het concept op een treinperron. Het concept is een spiegel die verandert in een scherm wanneer je dichterbij komt. Op dit scherm verschijnen korte video's die een bepaalde boodschap uitdragen. Vul de vragen in vanuit jouw perspectief alsof je zelf op het perron staat.

Ik wil testen hoe deze video's geïnterpreteerd worden aan de hand van 5 voorbeelden.

Storyboard of user



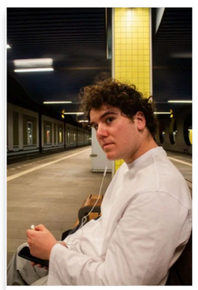
1) you notice yourself while waiting on the train platform at night



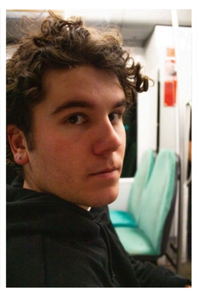
2) you get closer to the mirror to check yourself



3) the mirror turns into a screen with short videos









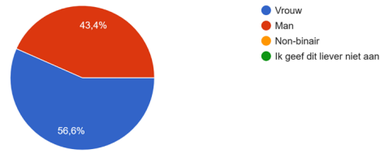


1 2 3 4 5

video were based on five situations in total.

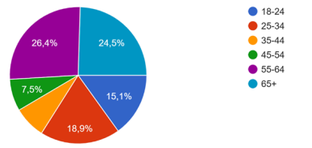
Ik identificeer mij als

53 antwoorden



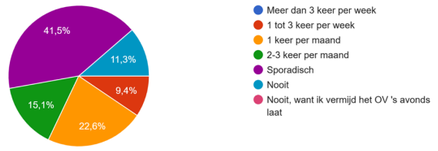
Ik behoor tot de leeftijdsgroep:

53 antwoorden



Hoe vaak reis je 's avonds laat (na 21.00u) met de trein, tram of metro?

53 antwoorden



Wat is volgens jou de boodschap van de quote: "Zien en gezien worden"

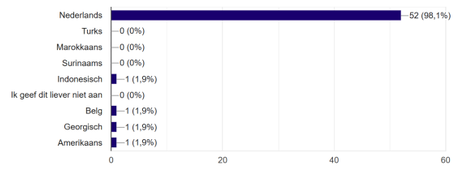
53 antwoorden

- Neg associatie. De uutsoraak heeft en neg connotatie
- alert zijn
- Elkaar zien op het perron, zonder echt interactie te hebben.
- Sociale controle
- Dat je niet alleen reist en dag jij uitkijkt naar anderen en andere ook naar jou
- Zonder telefoon, in staande positie blijf je alert.
- Er zijn veel verschillende mensen, geen zorgen
- Sociale controle, zorg medemens, samen veilig zijn
- aanwezig zijn

Wat is je etnische of culturele achtergrond? (Meerdere antwoorden mogelijk)

Diagram kopiëren

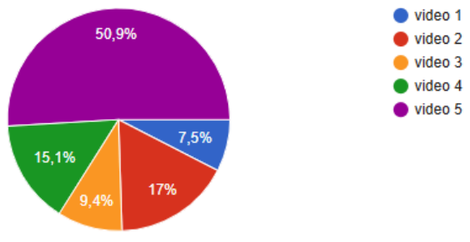
53 antwoorden



Welke video riep de meest positieve gevoelens op?

Diagram kopiëren

53 antwoorden



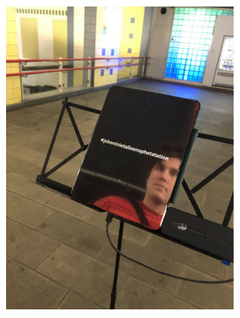
Appendix G: Pre test instructions and evaluation forms

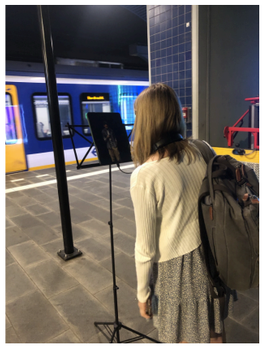
Blaak station test session

used PrEmo, for male travellers male expressions

image shown in advance of test







Concept Evaluatie Formulier (TU Delft afstudeerproject)

Ik identificeer mij als: O Man O Vrouw O Non-binair
Leeftijd: _____

1. Wat is volgens jou het doel van dit concept?

_____
_____

2. Omcirkel één of meer cartoons die het beste uitdrukken wat je voelt na het ervaren van het concept:



3. Leg in je eigen woorden uit wat de gekozen cartoon(s) uitdrukken:

_____
_____
_____

4. In hoeverre zette het zien van jezelf na afloop van de video aan tot nadenken over jouw rol als reiziger?
(1 = niet tot nauwelijks — 7 = sterk aanzettend tot nadenken)

O O O O O O O
1 2 3 4 5 6 7

5. Op schaal van 1 tot 7, geef jouw indruk van de persoon en tekst in de video:
(1 = helemaal niet — 7 = heel erg)

5a. de persoon toont een betrokken en alerte houding:

O O O O O O O
1 2 3 4 5 6 7

5b In hoeverre vond je het lachen van de persoon in de video vriendelijk of uitnodigend?

O O O O O O O
1 2 3 4 5 6 7

5c. In hoeverre voel je je aangemoedigd om alerter om je heen te kijken 's avonds op het station?

O O O O O O O
1 2 3 4 5 6 7

5d. In hoeverre vind je de tekst 'Sta jij stand-by?' aansluiten bij de beelden?

O O O O O O O
1 2 3 4 5 6 7

Wil je nog iets kwijt en/of heb je nog feedback voor mij?

_____
_____
_____

Dankjewel voor je hulp!

Sijmen de Vries
sadevries@tudelft.nl
+31637451273

Simulation test session

Sensitize text and image for simulation session

It is 11 p.m. at night, you are going home after an evening with friends in Rotterdam and take the train from Blaak towards Delft. With your headphones on you walk onto the platform and see that your train won't arrive for another 8 minutes. Besides you, there are 2 travelers on the platform. While scrolling on your phone you walk towards a bench on the platform until you walk past a mirror. You take a quick look at yourself, whether your coat is on properly, and stand still for a moment.



Evaluatieformulier concept test

Participant:

Sensitize Check

Hoe vaak reis je 's avonds laat (na 21.00u) met de trein, tram of metro?

- 1 tot 3 keer per week
- 1 keer per maand
- 2-3 keer per maand
- Sporadisch
- Nooit
- *Anders:* _____

note *toself: Observatie imitatie gedrag: "lacht de participant wanneer Vedankur lacht?"*

_____
_____

Begrip van de boodschap

1. Kun je omschrijven wat je zojuist zag?
Doel: Dit geeft je inzicht in hun begrip van de boodschap.

_____
_____

2. Wat is het doel van dit concept volgens jou?
Doel: Valideer of de boodschap duidelijk overkomt. Dit is een belangrijke vraag omdat je wilt weten of de deelnemers de boodschap van veiligheid, empathie en alertheid begrijpen.

_____
_____

Ervaring met de spiegel en reflectie

3. Als het goed is zag je jezelf in de spiegel. Hoe was het om jezelf te zien in de spiegel nadat het videobeeld verdween?
Doel: Meet hoe ze de reflectie ervaren. Je kunt hier ook dieper doorvragen, wat deed dat met je in relatie tot de vraag die er stond:

_____
_____

4. In hoeverre zet het je aan tot nadenken over jouw eigen rol als reiziger?

helemaal niet aanzettend tot nadenken — O O O O O O O — sterk aanzettend tot nadenken
1 2 3 4 5 6 7

Omschrijving van de persoon in de video

5. Hoe zou je de persoon die je zag omschrijven?
Doel: Het geeft je inzicht in hoe de persoon in de video wordt ontvangen. Vooral de glimlach en de vriendelijkheid zijn belangrijk. Waardoor? doorvragen.

_____
_____

6. In cijfers; In hoeverre vond je de persoon in de video vriendelijk overkomen?

helemaal niet vriendelijk — O O O O O O O — zeer vriendelijk
1 2 3 4 5 6 7

Betekenis van de boodschap

"Kijk jij ook om je heen?
Maak het station een fijne plek voor iedereen."

7. Wat is jouw interpretatie van deze boodschap tekst?
Doel: Valideer of ze de boodschap van alertheid begrijpen en of ze dat associeren met veilige en empathische gedragingen. Hoe komt deze tekst over?

_____
_____

Overige opmerkingen / feedback

_____
_____
_____