

Service conductor

An approach to increasing safety in Nairobi's matatus.



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Part 1

Researching the problem

Background of the project

Nairobi, Kenya's capital city, is one of the most dynamic and fastest-growing of Africa's emerging cities (CMI, 2019). By the end of the century, Nairobi is projected to have a population of over 46 million, and providing accessible and efficient access to transportation services is already arguably the city's most pressing challenge (GCIF, 2014). Almost 50% of people in Nairobi walk because they cannot access affordable transport options, yet most roads in Nairobi do not account for the needs of pedestrians (Maherali & Adegboye, 2019). According to the Nairobi Metropolitan Area Transport Authority, Nairobi is the fourth most congested city in the world, with traffic congestion estimated to cost the city over \$1 billion a year. Minibuses called matatus are the most popular means of transportation, which is why this project mostly focuses on the matatu industry.

The project team for this project consists of three students from the University of Nairobi in Kenya and three students from Aalto University in Finland. As a multidisciplinary team, we combine expertise in Engineering, Business, and Design to tackle the challenges of this project. This collaboration of two schools has been organized by PBL Africa.

For this project, we collaborate with Uber and Utopia. Uber is a global platform for car-sharing and mobility services, and Utopia is an urban innovation group that supports urban startups on their mission to improve cities.

The project focuses on identifying impediments in the use of public transport in Nairobi, as increasing the use of public transport might lead to more sustainable traffic and a less congested city. The literature review in this report shows that one major issue around public transport in Nairobi is women facing harassment. The purpose of this research is to further investigate the issue of harassment in public transport.

Based on the identified problems, this project then aims at harnessing existing solutions and technology tools to develop solutions.

In collaboration with Uber and Utopia, we ultimately strive to support a better, smarter, more sustainable and less congested city of Nairobi. Since the teams consist of students of different disciplines and study levels, the collaboration is expected to show versatile thinking and expertise. The outcome is supposed to be, and hopefully will be, practical, research-based and achievable within the timeframe. The project is funded by the Ministry of Foreign Affairs.

Research process

We used a diverse set of methods in the research process, including interviews, desk research, and observation, to gain a clear holistic picture of the problem. The goal was to evaluate the problems in-depth and gain further insights into the mechanisms that produce issues of harassment associated with public transport journeys by women.

Literature review

The first phase of the research process included a review of existing research in the field of safety in Nairobi's public transport. The literature review helped to identify overall patterns and to identify open issues to be addressed in user and expert interviews.

Next, qualitative methods were used in obtaining data through in-depth interviews conducted with the relevant stakeholders, each with a slight modification to fit with the nature of their work. User interviews focused on understanding how the commuters feel and think, as well as identifying the biggest problems they face. On the other hand, expert interviews were all about understanding the issue from the above and gaining an idea of what things are behind the problem and how they are or could be tackled.

User Interviews

This study developed interview questions with a maximum number of questions focused on female users of public transport as the respondents. The main part of questionnaires focused on a user journey, which had four main parts that involved any public transport commute, where the respondents felt most at least safe.

1. walking to, from or between transport facilities or stops.
2. waiting at boarding points
3. the trip itself (while traveling onboard)
4. getting from the stop to the final destination

11 respondents were interviewed at 3 different interchange stations and the total number recorded.

Expert (in-depth) Interviews

Relevant stakeholder interviews were conducted to gain information regarding their experiences and views on personal safety and harassment. The stakeholders considered were from both public and private sectors, i.e. transport operators, government and non-governmental organizations.

Data obtained from commuters' interviews and stakeholders mainly relied on notes, recordings and transcripts from these activities. Experiences and interviewees' insights were also observed and considered. Then, the results from various conversations and responses in terms of specific terms and moments of interest were synthesized.



Problem framing

Initially, the topic we were given was 'Decongesting Nairobi', but during the research, we decided to focus on the personal safety of women

Finding the topic took relatively long due to the complexity of the transport systems and problems associated with it, we had to do a lot of research to find a problem that we could tackle. We wanted to have a problem that is small enough for us to handle and something we could actually affect.

During desk research, we found out that safety is a major issue in Nairobi and decided to look into the topic. We excluded road safety already in the early phase, as it is a systematic problem that would require big government intervention, being out of our scope. After this, we were considering things such as availability, safety, accessibility and price of public transportation as our topic. After thorough desk research, we chose to focus on our current topic, the personal safety of women, as we felt it is an important issue where we could come up with something new. It is also not as recognized as a problem as road safety is a good area to study.

Thus, our research was lead by the following question:

How might we increase the personal safety for women using buses and matatus in Nairobi?

Definitions of key terms used in this research

We define **personal safety** as not having to encounter or worry about encountering physical or psychological threats excluding accidents or road safety-related threats.

For **discrimination**, **harassment** and **sexual harassment**, we decided to use the definitions by the United Nations as we felt that they are in line with our perceptions and to ensure comparability with other projects using it:

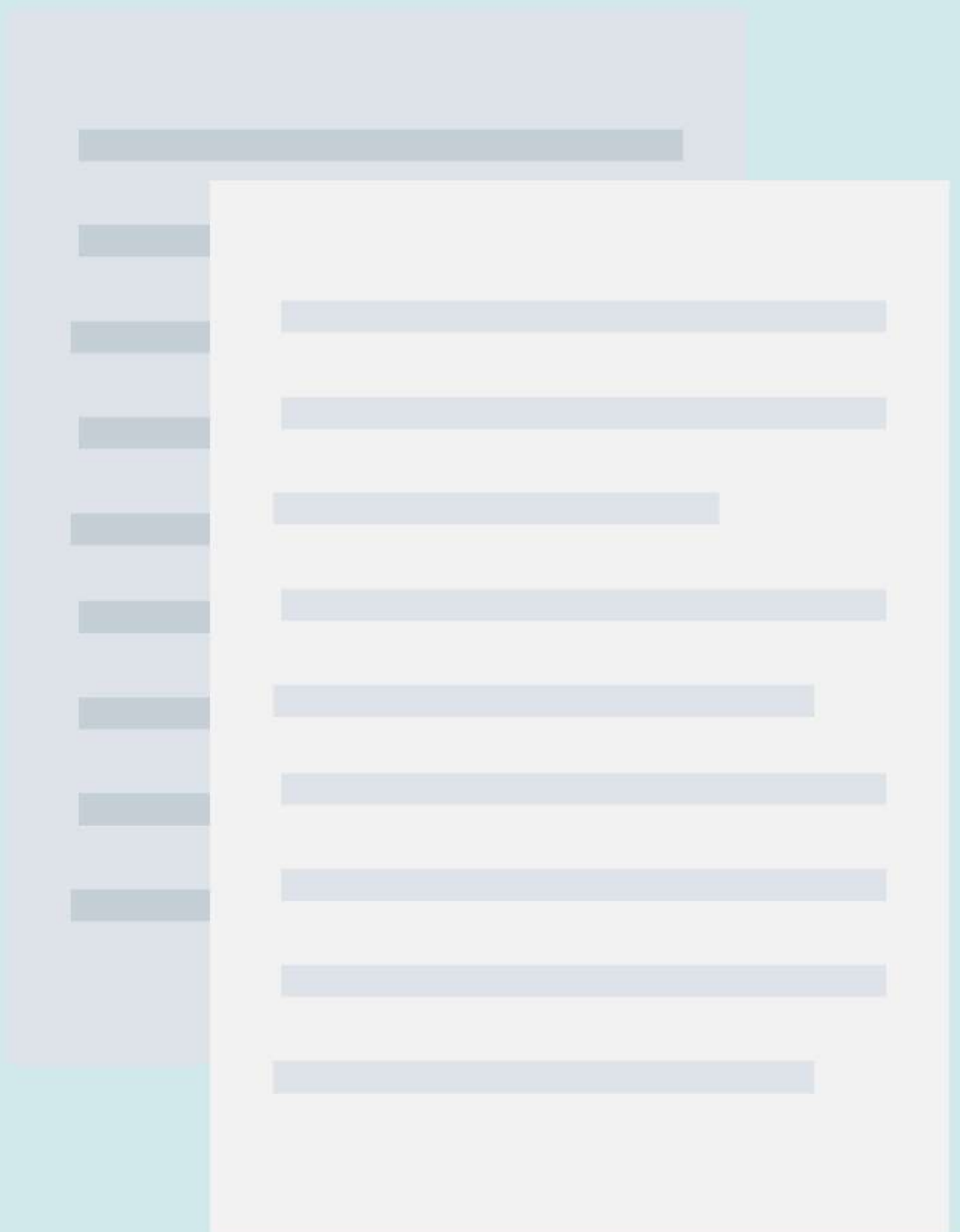
Definitions by the United Nations (2018)

Discrimination is any unfair treatment or arbitrary distinction based on a person's race, sex, religion, nationality, ethnic origin, sexual orientation, disability, age, language, social origin or another status. Discrimination may be an isolated event affecting one person or a group of persons similarly situated or may manifest itself through harassment or abuse of authority.

Harassment is any improper and unwelcome conduct that might reasonably be expected or be perceived to cause offense or humiliation to another person. Harassment may take the form of words, gestures or actions which tend to annoy, alarm, abuse, demean, intimidate, belittle, humiliate or embarrass another or which creates an intimidating, hostile or offensive work environment. Harassment normally implies a series of incidents. Disagreement on work performance or on other work-related issues is normally not considered harassment and is not dealt with under the provisions of this policy but in the context of performance management.

Sexual harassment is any unwelcome sexual advance, request for sexual favor, verbal or physical conduct or gesture of a sexual nature, or any other behavior of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation to another, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment. While typically involving a pattern of behavior, it can take the form of a single incident. Sexual harassment may occur between persons of the opposite or same-sex. Both males and females can be either victims or offenders. (United Nations, 2008)

Literature Review



Reviewing prior research in the field

The discussion about public transport in Nairobi and other cities usually addresses major issues such as affordability, safety, convenience, and comfort. In the context of our research question, personal safety and security need to be considered as the basis that needs to be given in order to enable equal access to public transport for everyone. Safety and security are especially relevant for vulnerable groups, such as women and children, elderly people, disabled people or the poor (ASTF Inaugural Forum, 2014).

Women and girls not only have to worry about reaching their destination, but need to take into consideration harassment, such as being verbally abused, inappropriately touched, groped, and even stripped of their clothing during their commute (Mwangi, 2019). The issue has major effects beyond mobility, as barriers to mobility affect educational possibilities, as well as access to employment, health care, social networks, as well as involvement in politics and religion (ASTF Inaugural Forum, 2014) (Mwangi, 2019).

Flone Initiative recently published a report, that systematically evaluated the state of violence against women and girls (VAWG) in public road transport and connected spaces in Nairobi (Wafula, 2018). The report outlined that the majority of SACCO managers, as well as commuters, have heard or witnessed cases of VAWG on their respective routes, highlighting the relevance of the issue.

The majority of managers and commuters additionally identify transport operators as the major perpetrators of VAWG. However, only 40% of operators agree to this. According to the study, the majority of incidents happen at bus stations, as mentioned by over 60% of interviewees. Other less often mentioned spaces are the vehicle entrance and inside the vehicle (Wafula, 2018).

Sexual harassment in public transport occurs in multiple forms, ranging from blocking the vehicle upon entering, to abusive language and comments with sexual connotations, inappropriate physical contact, winking and undressing (Wafula, 2018). Cases of public stripping of women in or close to public transport have gained public attention in the past and lead to major protests against victim-blaming (Cummings, 2014). While these cases are particularly prominent in the media, they might not be the most common form of harassment in and around public transport. Among the interview participants in the study by Flone Initiative, most managers (35%) and operators (30%) name abusive language as the most common form of harassment, while 33% of commuters state inappropriate physical contact is most common. However, among both managers and commuters the most frequently mentioned factor contributing to VAWG was “female commuters dressing inappropriately”. Other prominent factors contributing to VAWG were attributed to victims not reporting cases and police not taking cases seriously (Wafula, 2018).

Taking action in cases of VAWG is a vital aspect of improving safety and security for women and girls. Against this backdrop, it is alarming that 36% of commuters would not take action if they observe harassment.

In order to make public transport more hospitable for female commuters, managers interviewed in the study suggest to train operators, toughening laws against VAWG and employing more women drivers/conductors (Wafula, 2018). The underrepresentation of women in public transport is an important factor contributing to missing inclusivity, gender-based discrimination. Yet, working conditions – including harassment, the absence of formal contracts, health insurance or social protection – in the public transportation sector make such jobs less attractive to women (Wilkman and Muhoza, 2019).

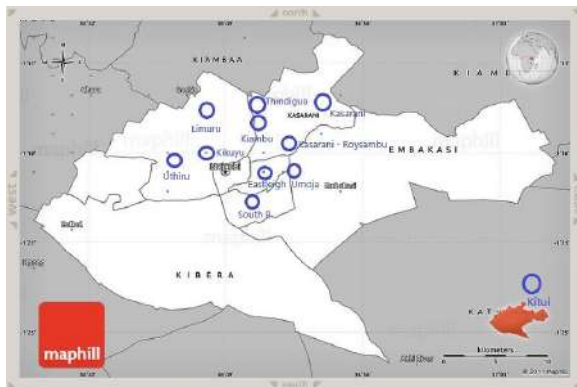
User Interviews



User Interviews

For a better understanding of safety for women in matatus and buses, this study used various methods of getting insights from the users. These were obtained in various forms, mainly through observations and one-on-one interviews with the participants.

A total of 11 participants were interviewed from Nairobi, who were chosen through random sampling. All interviewees were female and ranging from ages 19 years to slightly above 40 years. Interviews were conducted on the University of Nairobi's campus and in different districts of Nairobi. Additionally, participants were residents of different districts of the city, as the map below shows.



(Figure 1: Location of interviewees' residence, Maphill, 2011)

Structure of Interviews

The interviews were conducted in a semi-structured format and lasted around 30 minutes each. The questions used for interviews were structured in three parts: First, an introduction asking about personal information, which was followed by a user journey and exploring safety issues on daily commutes. The third and final part focused on harassment and future improvements.

The main part of the interview was the user journey from each interviewee, with respect to where she lives, the duration it takes to her destination, challenges from home to destination and back as well as ratings on safety for all levels of the trip. Safety ratings were collected from six of the eleven interviewees and are visualized in the upcoming analysis of the user insights.

Subsequently, the interview questions addressed experiences of harassment in public transport and interviewees were encouraged to share more of their personal experiences or those they had seen and heard through other people. Finally, women were asked for suggestions on how she wished the issue would be handled to cater to her needs.

Potentials and limitations of the user research

The potential of user interviews is to gain personal insights into the problem. The interviews build on more quantitative research as conducted by Flone Initiative and other organizations. Through the interviews we aimed to add to this prior research and collect personal testimonies, that reveal concrete issues for individual users, as opposed to systematic challenges revealed by prior studies. The testimonies helped identify, as well as communication problems for female commuters in public transport. In addition, they serve as a starting point for the next phase of this project, which aims at developing possible solutions for some of these problems.

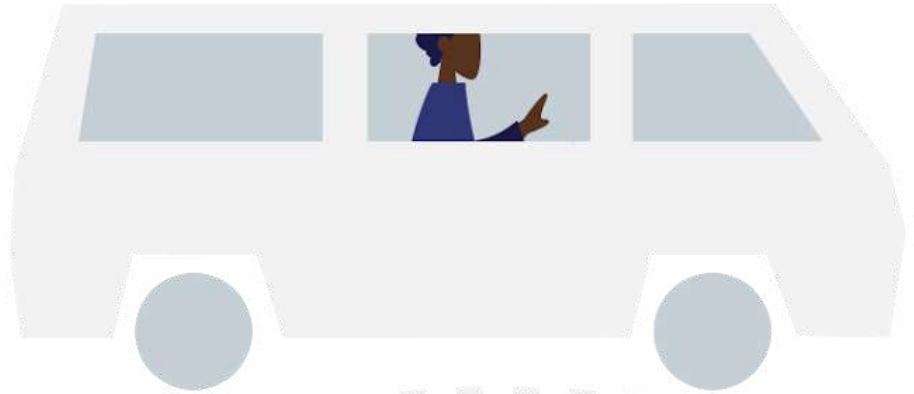
Against this backdrop, one also has to consider the limitations of the user interviews.

For this small-scale study eleven interviews were conducted, that aimed at qualitative insights. Even though some patterns can be observed, the issue of personal safety of women in matatus would benefit from more research on a bigger scale. Organizations such as Flone Initiative have already made a significant contribution to this field. In some of the expert interviews we did as part of this research (see next chapter) the need for more studies and more reliable numbers to influence policy-making was raised. Our student project is much smaller in scope and aims at developing solutions, rather than influencing policy making. That's why we had to limit the number of interview participants.

Next, the delicate nature of harassment in public transport needs to be considered, when analyzing interview results. Even though we tried to create a pleasant and open interview atmosphere, it is important to keep in mind that experiences with harassment are highly private.

Consequently, we need to assume that our female interview participants did not open up completely. Plus, analyzing our interview results one can observe that women that were interviewed by only male team members, raised fewer concerns about personal safety and harassment. During some interviews, we also observed that it was easier for women to talk about safety and harassment in Swahili. Half of the team consists of foreigners from Finland and Germany. It is also possible that interview participants might be hesitant to speak freely about harassment towards interviewers from a different cultural background.

User insights
along the
user journey





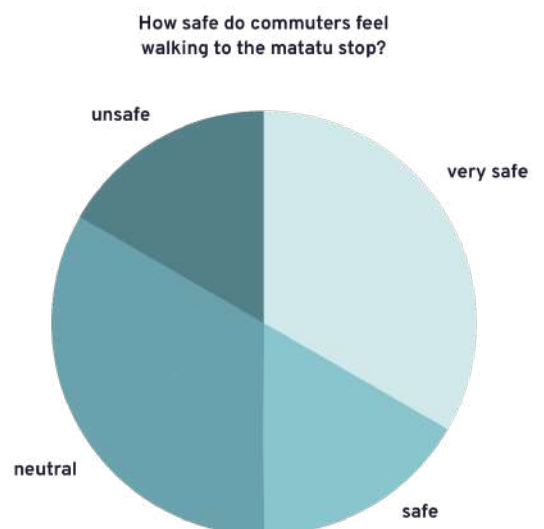
1. Walking to the matatu stop

The first phase of the user journey describes how users get from their home to the matatu stop. Most of our interview participants started their commutes early in the morning when it is still dark (between 5 and 7 am).

Some of the interview participants described that they did not face any issues related to security on their way to the matatu stop. They considered that using the matatu regularly or knowing the people in their community made them feel safe.

The majority of interviewees, however, described security concerns during their journey from home to the matatu stop. Some of these concerns relate to darkness and several interview participants stated that bad lighting makes them feel unsafe. Having only a few people on the streets, an issue that is often referred to as 'eyes on the street' theory in the literature (Jacobs, 1961), makes them feel unsafe. On top of that, interviewees reported that they have heard stories of violence from other people in their community, which adds to the perception of having to be extra cautious.

As a result, some of the interview participants have limited their movement. One woman described that she only uses the closest matatu stop in the dark mornings, even though that matatu line is less convenient. Another woman describes that family members accompany her on her way to and from the matatu stop when it's dark.





2. Waiting at the matatu stop

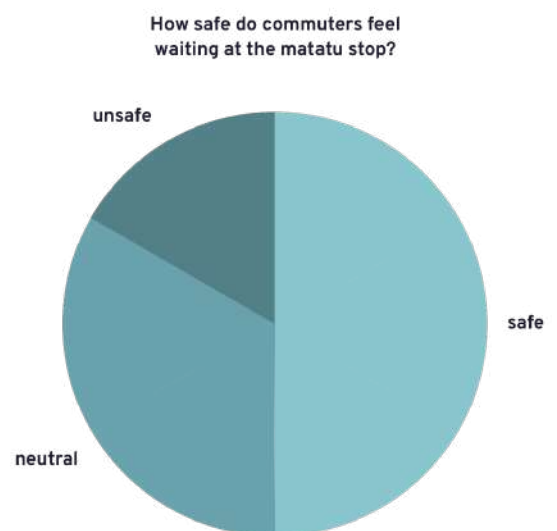
In the next phase of the user journey, the women wait for the matatu. The time commuters have to wait at the matatu stop varies a lot, from only a few minutes up to twenty minutes.

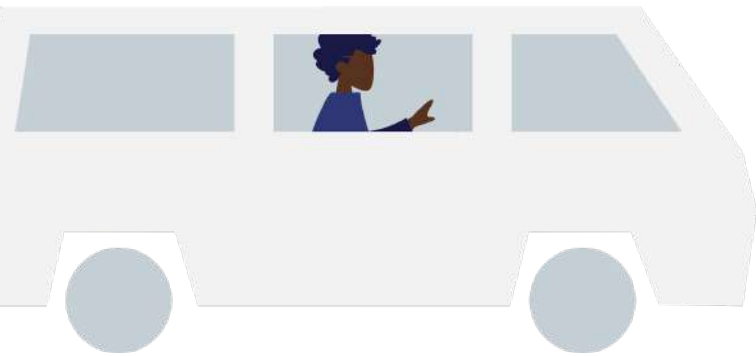
At the terminal, women usually wait together with other commuters. Some of our interview participants reported that the presence of other people increases their feeling of safety, especially if they know each other. However, some women reported that they feel unsafe if people look suspicious, especially if they have to wait for a long time. Some women prefer standing next to other women, to feel safer.

Besides issues around harassment, some women reported concerns about theft. That's why they keep their luggage on sight or refrain from carrying valuables, such as a laptop, altogether.

When choosing a matatu, most women take into consideration aspects of personal safety and not only price and convenience. Some women reported that they only choose matatus with other passengers, women in particular. Plus, they try to get into the matatu fast to not be left alone at the dark matatu stop. The design of the matatu plays an important role, too. Women reported that they prefer matatus without tinted windows or loud music. Tinted windows increase the feeling of insecurity, as matatus are darker on the inside and women cannot look out to check conditions at the stops where they might want to get off. Besides, the appearance of operators plays a big role. Women reported that they look for matatus with few operators, that are wearing uniforms.

This might relate to experiences with harassment at the matatu stops. Our interview participants reported incidents of harassment by touts. Women were pulled into matatu with physical force. Also, some women reported being verbally insulted if they did not respond to touts.





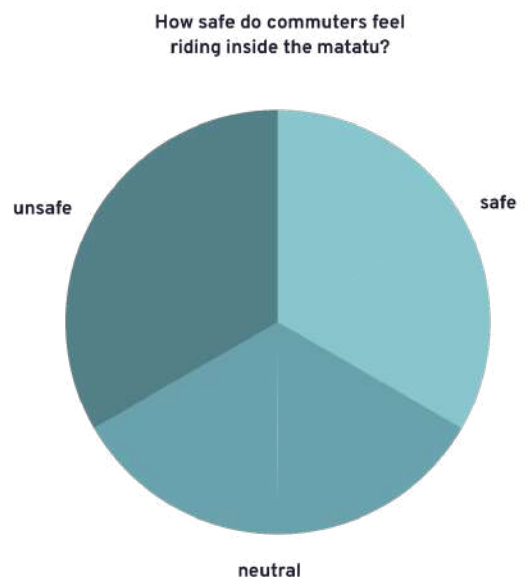
3. Riding inside the matatu

Next women described their journey inside the matatu to their final stop.

Upon entering the matatu, women chose a safe and convenient place to sit. Most women reported that they aim for a seat with little disturbance. Many women prefer to sit in the middle of the matatu to be able to observe what is going on and to alight easily. Some women prefer sitting next to the window in order to have more privacy and be able to look out the windows. Others fear theft through open windows and prefer a middle seat. Most women also reported that they consider who sits next to them and look for a decent appearance of other commuters, especially when traveling in the dark hours. Plus, they prefer sitting alone or next to another woman.

Several women have reported incidents of harassment inside the matatu by other passengers. Some of them described how other male passengers take advantage of congested situations upon entering the matatu and touch women inappropriately. Other women described male commuters sitting next to them touching their thighs without consent.

In addition, many described mistrust in operators and SACCOs. They describe a bad reputation of some SACCOs, as well as unprofessional, rude behavior of touts towards women and children. Some interviewees also believe that some conductors collaborate with thieves. Many women also reported negative experiences with paying their fares, as touts did not return the right amount of change. In the most extreme case, an interview participant described how people were thrown out of the matatu for not having the fare.



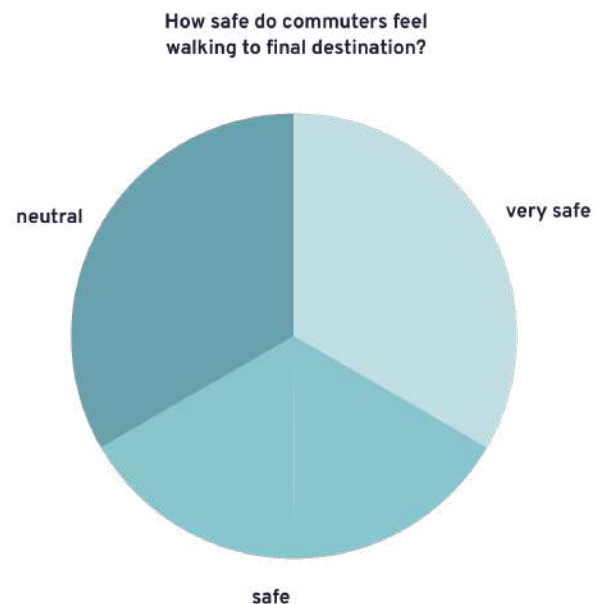


4. Walking to the final destination

The last phase of the user journey describes how and where women alight, as well as how they get from the matatu stop to their final destination. Most women walk from the stop to the final destination. Many experiences described in this phase are comparable to the first part of their user journey when women walk to the matatu stop.

During the day, most women feel safe, especially if they only have to walk short distances in an environment they know.

Some women described that safety considerations play a role when deciding where to get off the matatu. Some observe the environment first to make sure they are not alone in the streets or surrounded by suspicious-looking people. Several women also described that they take additional safety measures when commuting in the dark. Most women prefer streets where they are surrounded by other people. To make sure they are not alone, women often take longer routes. Several women also take motorbikes (*safe-bodas*) to get from the matatu stop to their final destination during the dark hours.



Additional User Insights

Most women depend on public transport, i.e. matatus, for moving from one point to another each day on different activities.

Safety matters from the start of their journey to their final destination and back, depending on the time of the day.

For early morning and late evening hours when it's still dark, safety is less guaranteed while moving to and from a bus stop, as the roads are less lit and fewer people are walking. This leads to an increased usage of Uber and Bolt bikes, which are considered safer. Queuing for a matatu in the evening is also unsafe for most women due to cases of theft, especially in areas in town that lack lighting.

Dressing of the matatu crew also matters most before boarding and inside the vehicle. Those in uniform tend to appear safer as they belong to a known SACCO, while those without may at times be thieves. Apart from matatu crew appearance, fellow passengers also determine where the women sit. Neat and well-groomed passengers make women more comfortable compared to badly dressed or shabby looking ones, who raise suspicion.

Since most harassment cases happen when matatus are congested, some women consider using physical force (such as slaps) to show they are uncomfortable, while others prefer to keep quiet and let it go. None of the interview

participants had reported a case of harassment to the police, even if they had experienced or observed harassment. Interviewees reported this was due to the time it takes to report such cases. Plus, they felt reports are not followed up by authorities and perpetrators are not facing consequences of their behavior. Besides, women have commitments from work and family duties, which are more important to them than following up on the cases.

Payment is also a major concern, as conductors at most times are untrustworthy (refusing to return change, alighting with all money before final destination), which makes them wish for an alternative safer and efficient payment system such as using cards or MPESA.

Finally, women made a number of suggestions for future improvements. Some of them included having separate buses for men and women and educating matatu crews on handling passengers especially women. Most women also wish that mothers with small children should be prioritized on-boarding matatus before other passengers get in.

Expert Interviews



Who we talked to and why

In order to gain a comprehensive understanding of the subject, we conducted interviews with experts in various fields. Through the experts, we aimed to understand the systemic issues surrounding the personal safety of women in Nairobi's public transport. Plus, these interviews were meant to provide background information that needs to be considered when ideating solutions for the users' problems. That's why we interviewed the following stakeholders:

The matatu industry is overseen by the **National Transport and Safety Authority (NTSA)** and the **Nairobi City County**. These government bodies majorly determine the routes matatus can operate in, where they can set up their bus terminuses and approval or termination of operating licenses.

Matatu drivers, touts and those who operate at the bus terminuses operate under their respective SACCOs. SACCOs are cooperatives that are authorized through operating licenses given by the NTSA to operate along various routes. The City-County By-Laws and the National Police Act give the city-county officers and the police respectively, the mandate to enforce laws that touch on the matatu industry and can handle safety and security issues reported to SACCOs.

There are a number of NGOs and interested third parties that are working on improving the quality and safety of public transportation. Specifically regarding the safety of women and girls, **Fione Initiative** has conducted a number of surveys highlighting the mobility of women and their safety while using various modes of public transport. They also conduct workshops with Sacco employees to train them on issues such as harassment of women. **Institute for Transport and Development Policy, ITDP** has worked on a draft design guide for the Bus Rapid Transport, BRT, which is meant to radically transform public transportation in the city. They also advise the government on transport-related issues.

The **UN-Habitat** also works directly with the government providing among other services, technical assistance in urban design. They have a city design guide that they use to advocate for safer streets for all.

Other organizations such as the **Kenya Transport Research Network, Naipolitans, Kilimani Project** are all interested parties that advocate for the security and safety of passengers and pedestrians as they move about in Nairobi.

Stakeholders



Government

NTSA, City County

NGOs

ITDP, Flone Initiative,
Kilimani Project, KTRN

Transportation Companies

Uber

Interested Parties

UN Habitat
Constant Cap

Affinity mapping and analysis

After conducting each interview, we shared the most important outcomes with the team, wrote them down to post-it notes and collectively created an affinity map. This helped us to get our ideas clear and visible in one place. Having collected insights from multiple stakeholders, with multiple approaches, we started to see patterns in the data. While discovering similarities between the results, we clustered them together and determined the headline for each set of insights.



Main insights from expert interviews by topic

Issues women face

First of all, the usage of public transport is different for women than it is for men, and this has not been taken into account in the design of matatu operations.

Women don't just go to work and back, but they do groceries, see friends and relatives and take their children to school and back. All this is done while keeping the safety concerns in mind. And yet, matatus are the only mode they can access so they don't have a choice. The whole user experience of matatu also consists of walking and transferring which are important factors in safety considerations. (Holzwarth, 2020.)

Sexual harassment seems to be a big concern according to our interviewees. It doesn't only happen inside of the matatus, but also while waiting at the bus stops and during the transfers. In fact, most of the reported cases occur at bus stops and in slum areas (Thuo, 2020). Children as well are most afraid when walking from a matatu stop to school. In the research by Kilimani Project, children experienced inappropriate touching and backpack thefts on their way to school (Houghton, 2020). Most of the challenges happen due to the darkness and poor visibility at night time (Maherali, 2020). There are dark and narrow roads which are the places for catcallers and idlers. This leads women to avoid some areas, especially when it's

dark outside. Many women do not board a matatu if there are no other women (Cap, 2020). In general, areas without women indicate less safety (Mburu, 2020).

Women can be attacked on the streets, which is also a concern for women carrying babies. Sometimes this happens by accident, when there are hundreds of people waiting for a matatu, and they are pushing each other. This isn't good because many men are stronger so they tend to push stronger. While women board a matatu, they find it hard to sit down with the luggage and the children. Sometimes they are expected to pay for several seats, which they can't afford (Mburu, 2020.) Or sometimes they can be discriminated against when trying to board a matatu, with all of their luggage. Even women of bigger size are told not to enter because they could take space, which is away from matatus' profits (Kamau, 2020).

Root causes

Like many countries, Kenya is a men's society. The ecosystem functions so that the women don't have that much power and laws regarding women's rights are not enforced. There are hardly any female leaders to take care of female problems (Houghton, 2020.) Plus, there is lots of physical and verbal harassment, but little awareness. These experiences are being normalized, so a woman might not see herself as a victim. In order to raise awareness, citizens should be educated about what harassment means (Mwaura, 2020.)

The mood of the public affects individuals: if people, in general, are negative, the individual tends to be negative as well

and vice versa (Kamau, 2020). The people who are isolated or not comfortable with their surroundings will cause problems (Houghton, 2020). Besides, victims of violence are likely to carry on violent behavior. This pattern might be rooted in experiences with violence in their childhood or be part of an ongoing dynamic in family and work environments. As a result, these people are more likely to show verbally and physically violent behavior. And some crimes just simply happen when people don't have anything else to do (Kuiyaky, 2020). Thus, these people should be empowered economically.

Matatu industry problems

The behavior of matatu operators is lacking professionalism because anyone can work in the industry without training. There are many unauthorized people, due to informal employment. Undocumented people are an important part of the value chain. Considering all this, some matatus are very unorganized. Also, the matatu industry is dominated by men, only a few women are employed in the business. Having more women working in matatus could lower the harassment rate significantly. (Mwaura, 2020.)

Conductors are often perpetrators of violence (Mwaura, 2020). They are paid based on the number of trips taken and that's why they aim to collect as much money as possible by any means necessary (Otieno, 2020). Everything in the operations of matatus is based on the operators' need to collect money. Matatus have the 'first come, first serve' idea, which means that the operators are

competing on customers. Therefore they might forcefully grab a person to their vehicle, and keep collecting passengers until the matatu is full. It's very common to wait in a matatu for long before it starts moving. In some cases, there are people 'acting' to be a passenger so that the matatu would look fuller, but unfortunately, these same people tend to cause harassment while waiting (Kuiyaky, 2020.) If you don't happen to have the right money to pay for the ride, conductors might start a fight or throw you out from the moving vehicle. Instead of abusing passengers, conductors should take care of them! (Otieno, 2020). In fact, touting is illegal and it's controlled by by-laws (Kibogong and Ngovo, 2020).

SACCOs, which are a matatu alliance, are supposed to solve these problems, but they are not in charge of the matatus which makes them unaware of these situations. Actually, matatus are owned privately (Kuiyaky, 2020). SACCOs are also meant to help by ensuring that the operators wear uniforms and the matatus are hygienic, but often that's not the case (Otieno, 2020). Violence is still a systemic issue in matatus (Ragan, 2020). Men could fight onboard and sometimes there are robberies. Sometimes the conductors aren't actually real conductors. Whatever happens in the back of matatus is not visible for the drivers. (Mburu, 2020).

Matatu design

The design of matatus is not meeting the standards: they should have seats for 25 people, seats for pregnant women, seats for women with babies and seats for disabled people. Right now there is not

enough space for all this and the design of the matatus is not answering the needs of the users. Matatus operators often don't close the side door while driving, which enables anyone to jump in and jump off. This makes the seats next to the door very dangerous. Matatus would also need proper lighting and clear windows. Right now, you can't see inside many matatus as the windows are dark and tinted. There are also some legislations when it comes to using matatus. Quite often though, matatus don't have seatbelts or if they do, they are broken. Police discourage women and children from sitting in the front of the matatu, because they might block the way of the door, and children might distract the driver. Also sitting next to the door is not safe for anyone. (Otieno, 2020.)

Authority and their actions

Corruption is an existing concern with Kenyan police. Even if the legislation were stricter, the police would still take bribes and look away when crimes happen. Due to this, the government needs to make investments, not only rules (Kuiyaky, 2020). Also, the police who manage traffic violations, don't focus on harassment cases in public transport. They mainly look at insurances or the condition of tires and so forth (Houghton, 2020). But ideally, misbehavior of drivers and conductors leads to suspension of the matatus on road, and disciplinary action towards SACCOs. NTSA is partnering with the police when handling cases above their jurisdiction. For example, harassment cases are forwarded to the police (Kibogong and Ngovo, 2020). Police need to make sure that the cases are followed and justice is done. Based on the filed

reports, they need to minimize cases where harassment can happen (Mwaura, 2020). But the problem is that the gender office is not taking all of the matters seriously, as people within the department transfer often and new employees may or may not have an interest in the issue (Thuo, 2020).

Reporting

Only 5% of the harassment cases are reported. One reason for this is that the process is slow, the police can't provide instant justice and therefore some women give up (Houghton, 2020). Secondly, women might feel embarrassed to report, and many of them don't trust the system (Mwaura, 2020). There's a conflict of interest on the police side. Sometimes police don't follow up, which again decreases the system's reliability (Ragan, 2020). The process only gets more difficult in many cases where there is a lack of witnesses. Especially in slum areas, people aren't easily reachable, because many of them don't have phones (Thuo, 2020) This turn leads to witnesses –if there are any– being contacted only slowly or not at all.

According to Thuo (2020), another aspect that affects reporting is that the definition of harassment varies depending on the stakeholder. For example, sexual harassment is only applicable in indecent acts law which is only valid when private body parts are involved. If female officers would be handling cases related to women, the aspect could be different (Thuo, 2020).

Leadership and decision-making

The ones who design public transport infrastructure and matatus don't necessarily use them (Mwaura, 2020). If leaders would understand people's needs better, there wouldn't be as many problems. Politics has too much power, which is not good in cases if politicians make bad decisions. This might tell about a lack of capacity on the governmental side. Leaders shouldn't plan for things that won't be in use that's why they should ride matatus in order to understand the whole journey (Mburu, 2020). It is critical to have more diversity in leadership roles, such as young women (Ragan, 2020). They need to understand that eventually, the matatu is just a part of the journey and commuters are also pedestrians (Mburu, 2020).

Authorities like NTSA need to regulate who gets into matatu business, they would also need to regulate SACCOs and ensure they don't break the laws. Meanwhile, the NGC (National gender committee) could collect data and monitor reporting mechanisms. A lot of collaboration is needed between these actors, silent work doesn't help (Mwaura, 2020). However, even if there were stricter rules and regulations, it's not a guarantee that they work (Kamau, 2020).

Public participation

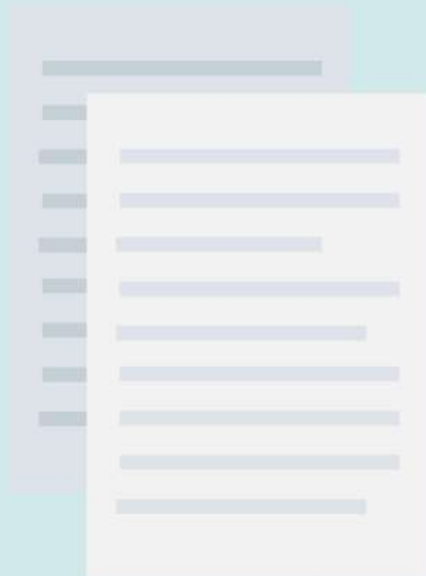
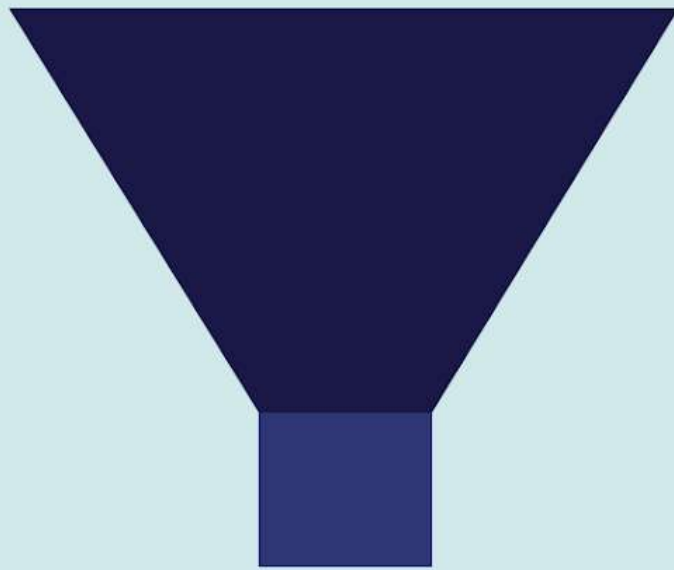
In order to change the situation of safety in matatus effectively everyone, including the public needs to be involved. However, the challenge in communal involvement is that people tend to be engaged only when

the matter drives their own benefit.

Another problem is that people saw the Kilimani project, for example, more as a service than community effort, assuming that it does everything for them. Most times people can be pessimistic about the impact they can have, making them less willing to try. When they see the impact the community can have, they become more proactive (Cap, 2020). That's why initiatives that involve public participation need to follow up and inform participants on the progress of the work. Plus, at the moment urban planning events that invite public involvement are often organized spontaneously and at times when most people work (Mwaura, 2020.) In order to really enable public participation, this needs to change. Right now there isn't any consumer advocacy on public transport, even peer support would be helpful (Mwaura, 2020).

The digital system helps a lot in adding safety, which would offer transparency for matatus as well. For example, knowing your driver better, sharing thoughts online, giving feedback and making sure that the feedback is heard. If drivers and routes can be verified, matatus would be more reliable (Maherali, 2020). Also, the awareness would be raised by talking to men in the matatu industry and by doing actions in public (Ragan, 2020). Working hand in hand with SACCOs, having open discussions that lead to customer service charter and adding hotlines in all matatus (Holzwarth, 2020). The conductors should be taught about what to do, and what not to do in case of harassment (Otieno, 2020). And finally, schools would need to do a better job in educating urban planners (Mwaura, 2020).

Summary





Research Summary

Women's safety in Nairobi's public transport is a complex problem, which has many causes ranging from systematic issues in the matatu industry to discrimination and lack of respect for other people. As the matatu system has emerged instead of being planned and established, the competition is fierce and crews use all means to earn more. Even though the conductor is behind the wheel, money is often driving the matatu. This leads to a high amount of informal employment, which in turn often results in bad customer service.

The user interviews showed that the biggest causes for women feeling unsafe are suspicious-looking matatus and their crews, badly lit routes to bus stops and unpredictability of matatus, time and service-wise.

Common reasons for harassment mentioned by experts were uncontrolled matatu industry, ineffective law enforcement and lack of professionalism among crews. Many saw systematic changes such as the introduction of BRT as the best way to solve the problem, other areas of improvement being training of the matatu crews and making policymakers aware of the magnitude of the problem.

Part 2

Developing a solution

Ideation Process

After the field trip we started the ideation phase, where we turned the insights gathered into ideas and further solutions. We used design sprints as the main method when coming up with solutions.

The ideation phase consisted of two design sprints that built on each other. In the first one we started with a focus, which was coming up with ways to reward good behavior by making behaving well beneficial for people. During the research we saw that at the moment conductors do not in many cases have an incentive to serve customers better as there is no direct benefit of it for them. As there are issues with enforcement of legislation, we also wanted to come up with a solution that people would start using voluntarily as it benefits them rather than trying to force them to do something.

The research question we had for the first sprint was:

'How might we reward good behavior for matatu drivers and commuters'

The sprint consisted of five three-hour sessions. We found out that design sprint works also in the shorter form, and good planning as well as how one uses the time is more important than the duration of the sprint.

After the sprint we had the first version of Service Conductor-concept, where conductors complete tasks and best ones

are awarded a badge, so that commuters can identify the most reliable ones.

We tested the concept by creating surveys for both conductors as well as commuters in order to find out what they think of it and if they would use it. The results were mostly positive and people wished there was a way to identify buses that have better service.

We used the feedback in the second sprint to improve the concept. This time we had two questions:

'How do we encourage conductors to participate in the service?'

And

'How to design a training that would change the behavior of conductors?'

After the sprint, we had the concept in its current form, and after getting positive feedback, decided to stick to it.

Due to the busy schedule of team members, the second sprint had two three-hour sessions as well as individual tasks done afterwards. This worked for us as the idea was to further develop the idea rather than to come up with a completely new one.

The sprint were done using Skype and Miro, a working room where one can work much in the same way as in a face-to-face workshop. We were happy with this setup and can recommend it for similar projects.

Focus of the ideation

As a starting point for ideation, we had three possible focus areas: 1. Rewarding good behavior 2. Creating awareness and 3. Supporting the victims of harassment. We decided to focus on coming up with ways to reward good behavior and creating positive feedback loops as we saw it as the most effective way of improving the situation. There are plenty of examples of how one can nudge people to change their behavior by introducing rewarding systems. One example of this is Uber's rating system, where behaving well results in better rating, which in turn makes finding cars and passengers easier. Such reward loops can be very simple, yet have a huge effect on people.



Target group

As a result of our design sprints, we decided to target conductors, because their behavioral change could have an impact on the matatu industry. Currently, the conductors main role is to fill the matatu with passengers and collect money from them. Conductors are employed under different matatu unions of which are known by the name Saccos. Even though the matatu drivers are trained for their profession, conductors' job doesn't require training **(Ngovo, 2020)**. Conductors' performance is not supervised strictly, which often enables them to forget about the rules like wearing their uniforms while working **(Otieno, 2020)**.

Due to a multi-sided problem, we have a multi-sided target. Our secondary target is passengers, who we aim to affect eventually, through the behavioral change of conductors. In the ideal situation, passengers would be able to use public transport without a fear of facing unpleasant problems onboard. If conductors are encouraged to behave well and prevent problems in matatus, the customers could trust matatus better.



Jo

Jo is a conductor. He is a 30-year-old man from Kibera, Nairobi. He got employed by Embassava Sacco through his friend. During the long working days, Jo tries to get as many customers as possible. His aim is to collect at least 10 000 KSh in a day for the matatu owner, and the excess money is his to keep. Jo could have use for extra cash, so sometimes customers' payments cause disagreements onboard. He thinks good music and cool paintings bring more customers.

Sonya

Sonya is a 26-year-old lady from Pangani, Nairobi. She spends a lot of time traveling because she has a young daughter with whom she goes to see relatives and do groceries. Sonya is working in a hotel in the central business district and the most affordable way to commute is to take a matatu near CBD and walk the rest. Because a big part of her commuting happens by foot, she avoids traveling when it's dark. She has some experiences of harassment at the bus stop as well as in a matatu. That's why she doesn't mind a little extra wait to find a safer looking matatu. She prefers matatus with other female passengers and less noise.



Our solution



The solution

Service conductor is a digital training program for conductors and operators in the matatu industry on topics such as customer service and harassment.

Why is this valuable?

In our research, we found out that a major challenge in the matatu industry is the high amount of informal work, limited education of personnel and missing training for the job. As a result, harassment occurs more easily, as the awareness of good customer service and harassment tends to be low. Many of these issues are systemic and should be addressed by diverse solutions and in a collaboration of stakeholders in the industry. Since the resources of our student project are limited, we decided to focus on a small sub-challenge: training conductors.

Service conductor:

A digital training for conductors

“Service conductor” is a training program for conductors, that aims to increase awareness and knowledge on topics such as customer service, safety and harassment. It’s main intention is to support a better service experience in and around matatus for commuters, as well as conductors.



Hey, it's time for a new training.



... on topics like harassment

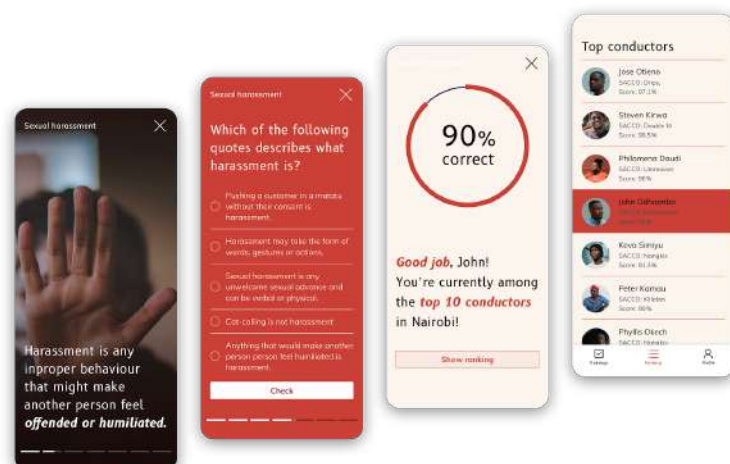
To do the training, a conductor like Jo, opens the app. This week's training informs about the topic of harassment and consists of short video sequences on the topic and quizzes that check if Jo has understood the information.

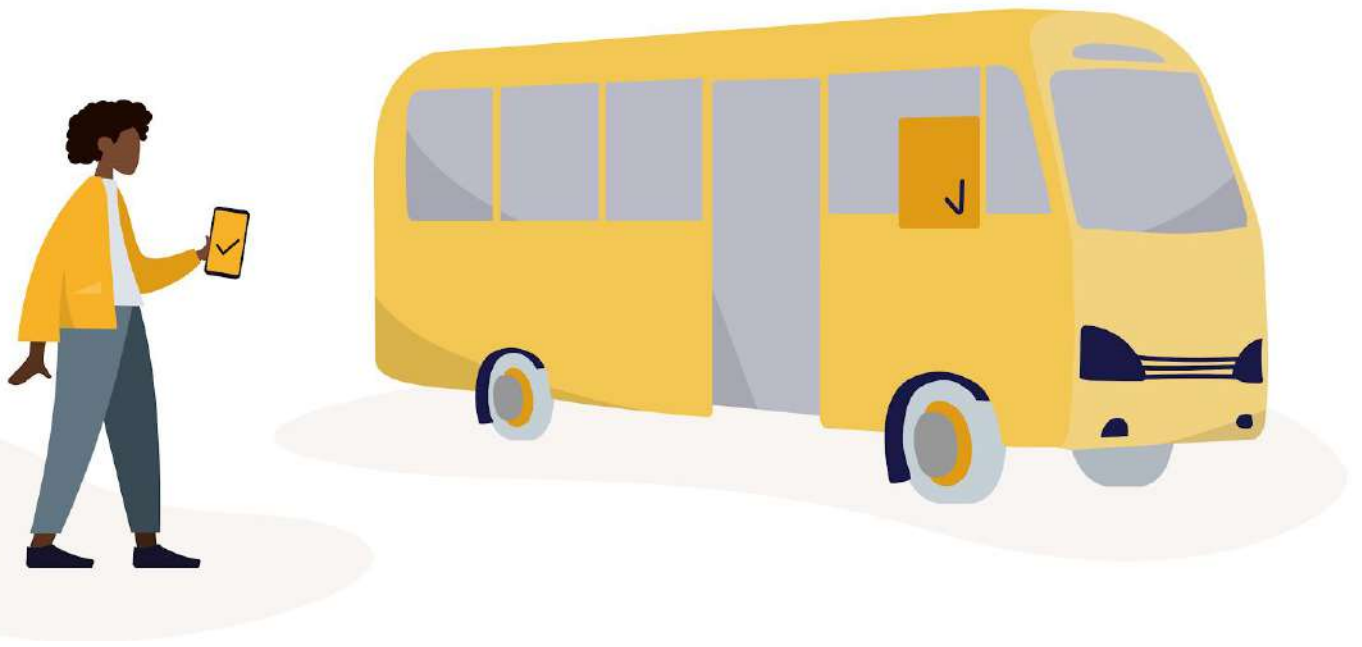
At the end of each training, Jo receives an overview of his results, as well as a score reflecting how well he did in the training.

With this score, Jo can take part in a ranking and compete with his colleagues on the best results. Plus, he receives a certification, that he can use to show to customers, as well as employers, that he is trained in customer service.

Weekly digital trainings ...

Every week, conductors receive an invitation to do a short training in the app. Training sessions are kept short and informative and can easily be done between working shifts or at home.





Customers can check if conductors are trained

As a result, commuters can check which Matatus have trained personnel, before boarding it, both through the ranking of trained conductors, as well as certificates on the outside of matatus with trained personnel on board.

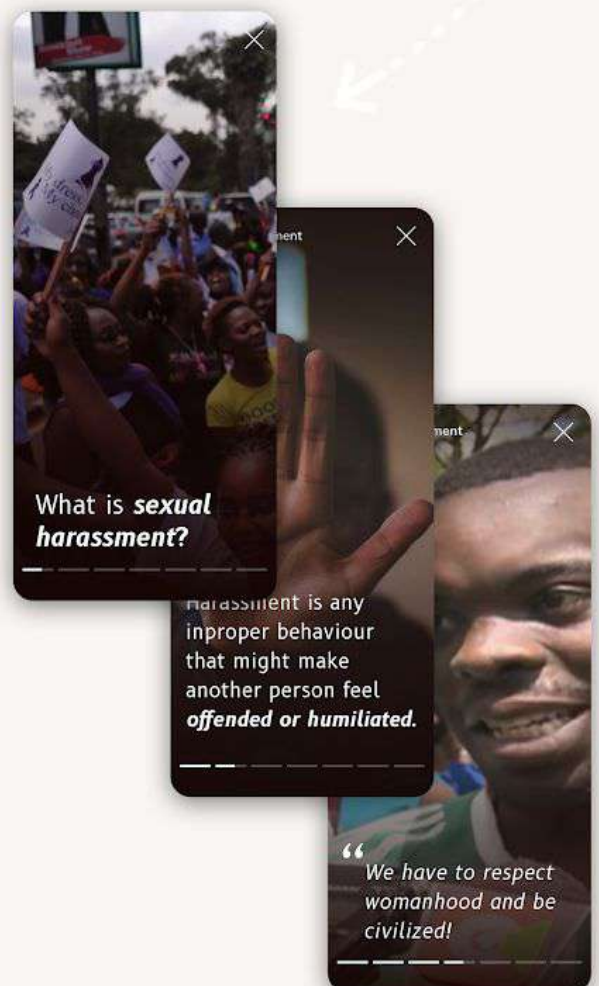
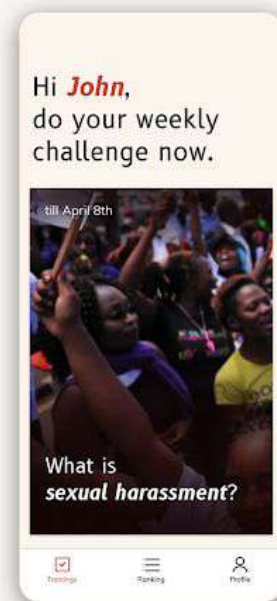


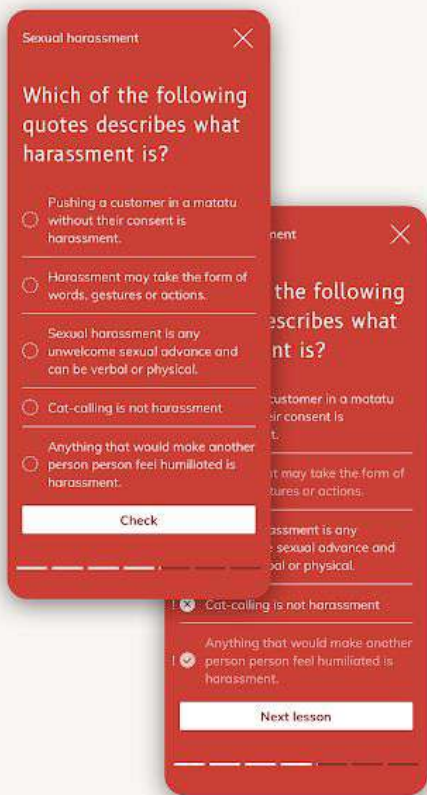
The training app

Upon opening the app, the conductor sees the latest training and is invited to inform it. Through different taps, the ranking and personal settings can be accessed.

The main part of the Service conductor training app, are short video trainings. The video sequences explain the topic (e.g. harassment) and contain interviews with diverse stakeholders.

The content is created in an accessible way that takes into account different degrees of prior education and knowledge. The mix of audio, video and text supports accessibility for people with diverse abilities. Plus, the presentation of the content is oriented towards short formats that are well known by the target groups, for example Instagram Stories.

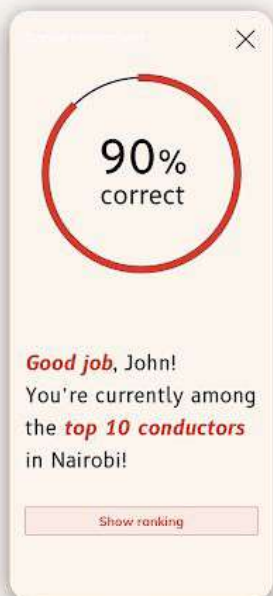




The short video sequences are mixed with quizzes that activate users and help check if they have understood the information. Plus, instant feedback enables users to revise information that might have been unclear.

At the end of each training session, users receive feedback on how they did during the training. The feedback shows an overall score, as well as information about which topics might need some further improvement.

Finally, conductors can choose to take part in a ranking and compete against their peers. In our research, we found out that one of the main motivators of conductors is based on competition with their peers, which this feature addresses directly.



Benchmarking

Short information snippets

Tagesschau
(German news)



Instagram



Blinkist

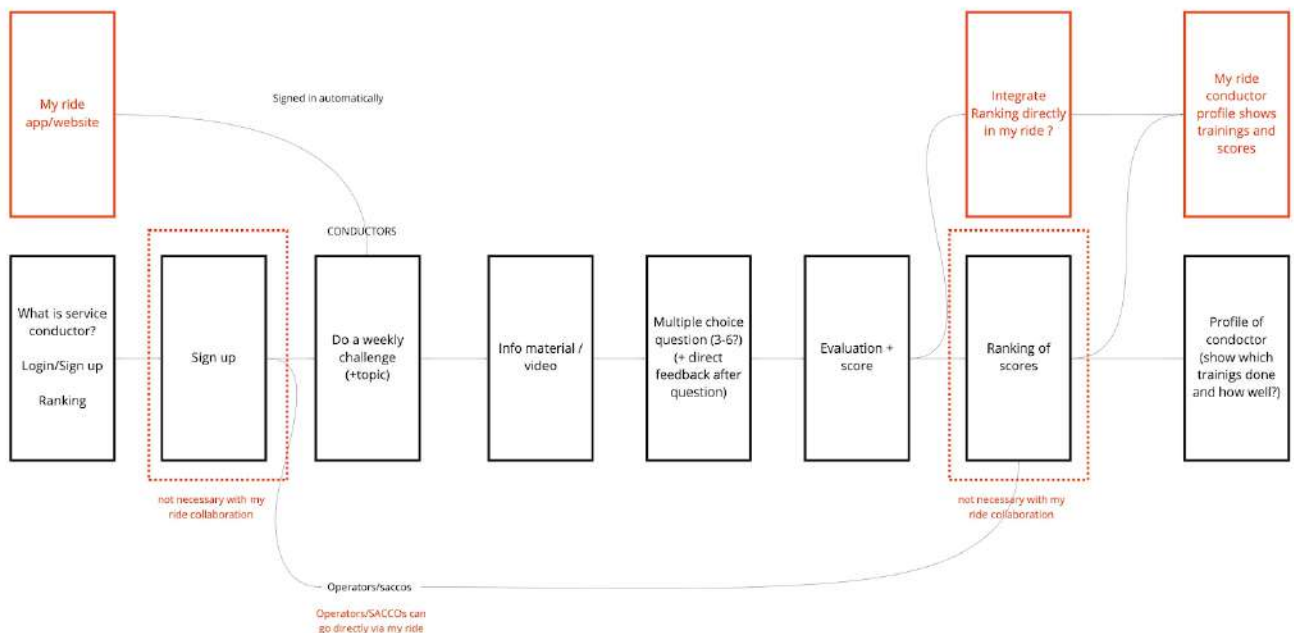


Collaboration with existing services

As shown before, “Service Conductor” would work as a separate app. However, a collaboration with existing services might increase the lever of the solution. My Ride Africa (source) is a Kenyan platform for matatus, that contains ratings of matatus, information about routes as well as their locations. The service is already well established among SACCOs in Nairobi and has a wide user base. Integrating “Service Conductor” into MyRide Africa, would help commuters to choose safe matatus more easily, as all relevant information can be found in one place. In addition, a collaboration might increase the reach of our solution, as many conductors already know and use it. Plus, conductors could easily incorporate the training into their usage of the MyRide platform.

Simplified user flow of the service

Black: Service Conductor App
Red: Potential integration with My ride platform



Content creation

Among the success factors of the service will certainly be creating the right content. Multiple stakeholders of the matatu industry such as Flone Initiative, UN Habitat or the National Road Safety Authority (?) are already engaged in creating different kinds of training for operators and conductors of matatus. These stakeholders have valuable knowledge about the industry, as well as how to create the right content for the trainings. “Service Conductor” by no means aims to compete with these services. Quite the reverse! It would be valuable to collaborate and think of “Service Conductor” as a contribution to existing in-person and online trainings. Plus, collaborating on the content creation would certainly increase the quality of trainings, as the above mentioned stakeholders have a profound knowledge of the industry and needs of conductors and operators.

In this context, the “Service Conductor” training could cover topics such as:

Service etiquette

- Use of appropriate language and mother tongue
- Personal hygiene/dress code
- Avoiding drug-usage (khat, etc)
- Working well together

Professional mobility service

- integrity (sticking with the price & the route)
- time management (e.g. stewards of time-not waiting until the matatu is completely full)
- appropriate music and entertainment in the matatu
- introduction to cashless payment systems
- Monetary impact of improved service

Avoiding and reacting to violence

- harassment
- how to intervene in situations of violence
- reporting incidents
- information about people with different abilities and their perspectives (including elderly, pregnant)

Increasing safety and health on board

- first aid and road health
- extortion and bribery (corruption menace)
- road safety (e.g. stop the matatu first before the passenger enters/exit)

Feedback

The commuters and the conductors were heard when we started ideating and when taking the idea further. After the first design sprint, we wanted to validate the initial concept by reaching to people who use matatus actively. These 20 commuters reviewed the concept through a questionnaire and said following:

- 95% agreed or strongly agreed that they would feel safer if touts would be certified
- 95% agreed or strongly agreed that increasing training would make matatus safer
- 75% agreed or strongly agreed that stickers or badges would show that well
- 65% agreed or strongly agreed that conductors lack customer service skills
- 70% agreed or strongly agreed that they would trust Service Conductor
- Commuters would spend 13 extra minutes (on average), to find a certified matatu

Commuters would feel safer, if they knew touts are trained and certified, which shows that the idea of visibility has potential. Still, the open answers show that they wouldn't fully trust the system. The respondents were concerned that the conductors would not adapt the trainings, they could fake their certificates or simply the training wouldn't bring any change in their behavior. Roughly a half of the respondents wouldn't use more than 10 minutes for finding a safe matatu

but the rest could use up until 30 minutes of time. That shows that the differentiation between a safe and an unsafe matatu isn't pointless.

Since the concept targets conductors directly, their feedback and needs are vital to develop a good solution. Due to the corona crisis, we weren't able to interview conductors face to face, so the prototypes were shown in a questionnaire form, where conductors could review the concept. The 5 conductors who participated the questionnaire, thought following:

- 60% would like to use Service Conductor
- 40% believed that Service Conductor would improve their customer service skills
- 60% felt that badges or stickers are a good way of showing their superior customer service skills
- 60% said that badges/ stickers would motivate them to do the trainings
- 80% are interested in learning more about customers' safety onboard and 60% wanted to learn about first aid
- Touts felt motivated by competition amongst other touts and the possibility to get more customers

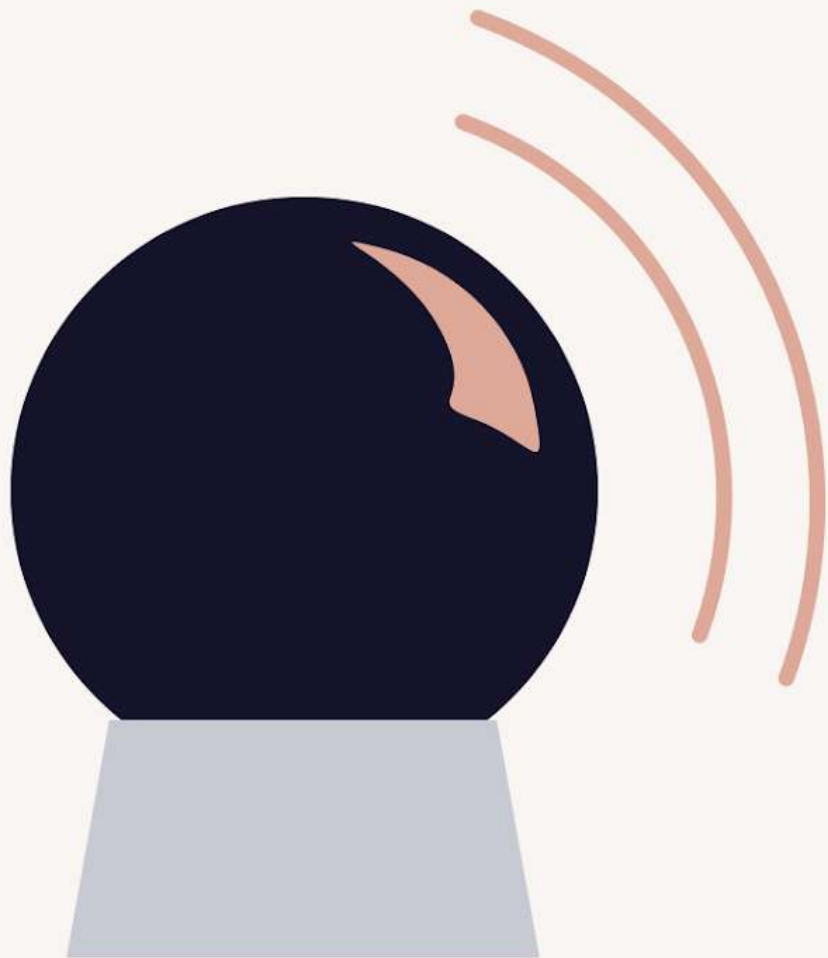
The conductors showed some interest in the service and were especially interested in competition among peers that could possibly bring them more customers. However, rather than focusing on the safety issues of customers, they saw that a general good

service could benefit them. Despite the small sample of 5 people, we can conclude that by motivating them with the right incentives, the concept could have value in use. There is a need for raising awareness about harassment and our solution has to attract conductors.

We gathered feedback during the ideation. It showed that both conductors, as well as commuters, would be interested in a solution like Service Conductor. However, it would be necessary to evaluate the idea more thoroughly, if we were to further develop the idea.

During the last steps of the ideation, we wanted more external validation from professionals, so we contacted NTSA and MyRide once again. As a conclusion, NTSA seemed interested in the idea. They helped us by providing some more insights from the matatu industry. MyRide is already well established in the industry and would be interested in collaborating. That makes sense as relationships and networking are very important in the matatu industry and they are well established as a mobile service. We believe that Service Conductor would be a good extension to their platform.

Outlook



Future plans

Due to the project only lasting for six months, implementing the idea is out of our scope and our goal was to create a concept that could serve as an example or inspiration to someone interested in developing it

KEY PARTNERS <ul style="list-style-type: none"> - matatu owners - SACCOs - Police - <u>NTSA</u> - Flone - Ethics and Anti-Corruption Commission (EACC) 	VALUE PROPOSITION <ul style="list-style-type: none"> - Make touts offer professional customer service while preventing cases of harassment - Give touts a possibility to earn more and develop on their career - Passengers would know which matatu is safe to board - SACCO's know who to hire 	CHANNELS <ul style="list-style-type: none"> - Website - Mobile app - Social media - Prints / physical material
KEY ACTIVITIES <ul style="list-style-type: none"> - Offer training and evaluation for touts - Offer a platform for SACCOS & passengers to see which touts/ matatus are reliable 	CUSTOMER RELATIONSHIPS <ul style="list-style-type: none"> - Cooperating with key partners when improving the service - For passengers mainly informatic 	COST STRUCTURE <ul style="list-style-type: none"> - Development - Maintenance/updates - Marketing? - Printed stuff - Customer service
KEY RESOURCES <ul style="list-style-type: none"> - Platform (software, hosting etc.) - Developers? - Managers? - customer service 	CUSTOMER SEGMENTS <ul style="list-style-type: none"> - Touts - Multi-sided platform: SACCOs & passengers 	REVENUE STREAMS <ul style="list-style-type: none"> - Ads? - <u>SACCO's</u> pay? - Government subsidies? - funding from charities - organizations like NTSA?

The Business Case

The diagram above shows the various business components that a business or entrepreneur would need to consider when taking on this project. Our research uncovered the need for public transport users to feel safe as they travel in and around Nairobi. An entrepreneur could offer a subscription-based service where saccos sign up to have their matatu crew trained and sensitized on harassment and other service related topics. In return we predict those Saccos would experience increased customer numbers,

as public transport users are keen on their safety.

Another area with potential that was uncovered in our research was the lack of data or follow up of reported harassment cases. A few organizations have seen this gap, MyRide Africa using their app, allows users to report cases related to public transport. The number of reports they have received on their platform is an indication of the need for solutions that allow users to report cases, read and

share stories with others. MyRideAfrica is able to leverage these reports and data as a valuable resource for parties interested in accessing data on public transport in Nairobi.

We have highlighted the potential of an application to meet the reporting and training needs in public transport; allowing users to report cases, training matatu crews and allowing interested parties to have access to this data. The costs of developing the application, whether as a stand-alone app or an integration with existing services, have to be considered by the entrepreneur. There would also be costs in sensitizing the public, training all sacco staff and maintaining the proposed system.

In ideal case, we would see the service implemented in the future either as a functionality in some other application, or as its own. Service Conductor requires having quite a lot of users to make it effective and in order to change people's behavior. In this sense it's very important to have contacts to the big stakeholders such as transport agencies and SACCOs and get them involved, or the risk is that the service is left unnoticed. Especially bus owners may need to be proven that the service benefits them.

Service Conductor could be financed either publicly or privately. As the service is more about common good than profits, the possibility of getting governmental support should be examined. Increasing safety is in high interest for local authorities and this kind of new technological approach could be a way to bring them closer to the commuters,

also giving them data about public transport, which they currently do not have. In the long run the majority of conductors would be trained, and this in art could also make the bus system less informal, as there would be some tracking of conductors.

Another option would be getting investments from the private sector. Service Conductor could also be turned into a service that the SACCOs would pay for as it is a way for them to do marketing and stand out from competitors. Service Conductor is also a simple way for them to train their personnel without having to create material or have people in one place for a class. Bus owners could also use the service to find new employees, as it would serve as their CV.

In the long run only the trained conductors will be employed. This is something that SACCOs could take into account more. Ideally the profession of a conductor would be seen as more valuable, they could be counted on as pioneers who take care of the safety of Nairobi.

During the project we were in contact with many stakeholders, who would also be likely playing some role in the implementation of the service. Perhaps the most likely one was MyRide Africa. MyRide Africa is a web platform for finding matatu routes and rating rides. Service Conductor could be combined together with MyRide and we had an initial talk about possible cooperation.

Reflection



Reflection

We were offered a great opportunity to work with Uber and Utopia during these six months. The project taught us a lot about cross-cultural working, especially about communications across two countries. We all adapted new approaches through the diverse knowledge and differing working habits. Having a team consisting of students from Nairobi and Helsinki combined the local insights and engineering power with an outside perspective of design and business.

In this final chapter we are going to look into the process and the teamwork.

Reflection on the project

We had a freedom to choose the topic by ourselves, which was a great motivating factor. Safety is an important topic for us and working with women's safety made us feel like we could have an impact on an actual problem. Acknowledging the importance of the matter and the scope of the project, we aimed high with the quality. The process followed the design thinking process which wasn't the most familiar tool for all of us, but some got to learn whereas some got to teach. But for many things the learning and teaching roles switched sides since we all share a different background and professional experience.

During the field trip in February we conducted a range of interviews with users and experts, which enabled us to

gain a solid understanding of safety-related issues in the matatu industry. In our research we mainly focused on the situation of commuters, as well as a general understanding of the matatu industry and its challenges. During the ideation, it then turned out that a profound understanding of conductors' situation is important, too. While validating the idea by collecting feedback, the most important group, conductors, were difficult to reach via online questionnaires. The feedback on the prototype would have been extremely valuable but given the circumstances, and the rarity of online questionnaires among our target, we didn't succeed to get enough respondents. The challenge was already predicted, since according to the expert interviews, the conductors aren't likely to implement change in their working behavior. The matatu industry is indeed quite complex and changing someone's mindset requires a fundamental shift from other groups as well.

Reflection on the teamwork

The project proved us the importance of working communication especially when working in a diverse team across continents. Communication serves as a base layer for everything else, and if it does not work, it is very hard to get any results. Considering the circumstances and extra challenges COVID-19 brought, we are quite happy with the project, as we were able to find a problem and create a solution for it.

We learned the importance of keeping everyone up to date and sharing all

documents in a place accessible for all, as some team members being 'left behind' is a real risk if they miss even some meetings. When working face-to-face, it is easier to stay on the same page, as when working remotely at least part of the communication is lost. For example bringing up one's opinions can be harder for some people online, especially if the team has never met in real life. For us meeting the team in real life was very important, and after it one realized how skewed and partial the impression one gets via online is.

Working remotely is very flexible, which brings both benefits as well as challenges. When everyone is in the same room, decisions can often be made faster as everyone is present, whereas messaging is easier to ignore and forget about causing delays and inefficiency in communication.

One of the biggest learnings came from cross-cultural teamwork. Our team

consists of three nationalities which means there are three differing backgrounds when it comes to culture and education. It was profounding to learn from each other's working habits and diverse knowledge. We got to learn from different ways of doing while sharing our visions as well. If we could go back to the beginning of the project now, we would most likely have the reflections of our cultural habits and project expectations way earlier.

However, it was important to learn that we can never assume that things work the same way in other cultural contexts. The ability to be understanding and to make compromises are something that we all learned better. We saw how important it is to encourage open conversation and take each other's needs and opinions into account. As a result of this course, we will be more prepared to work in cross-cultural teams in the future.

Acknowledgements

Finally, we would like to acknowledge some important people who have been of significant help in our project. The following people deserve the sincerest thanks for making the project possible and offering an opportunity for growth to all of us.

First of all, a sincere thank you to all the women who bravely took part in our field research by sharing their invaluable insights.

Also, we would like to thank all our expert interview partners for sharing their insights into Nairobi's Matatu Industry and giving feedback when we most needed it.

Our clients **Cezanne Maherali** from Uber and **Emmanuel Adegboye** from Utopia are inspiring people with wide knowledge. Thank you for your feedback and dozens of insights that offered a strong base for our work.

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Appendix

1. Mapping user insights (Part 1 - 5)

Clustering insights from user interviews into common topics along with different steps in the user journey, as well as into clusters that refer to the whole user journey

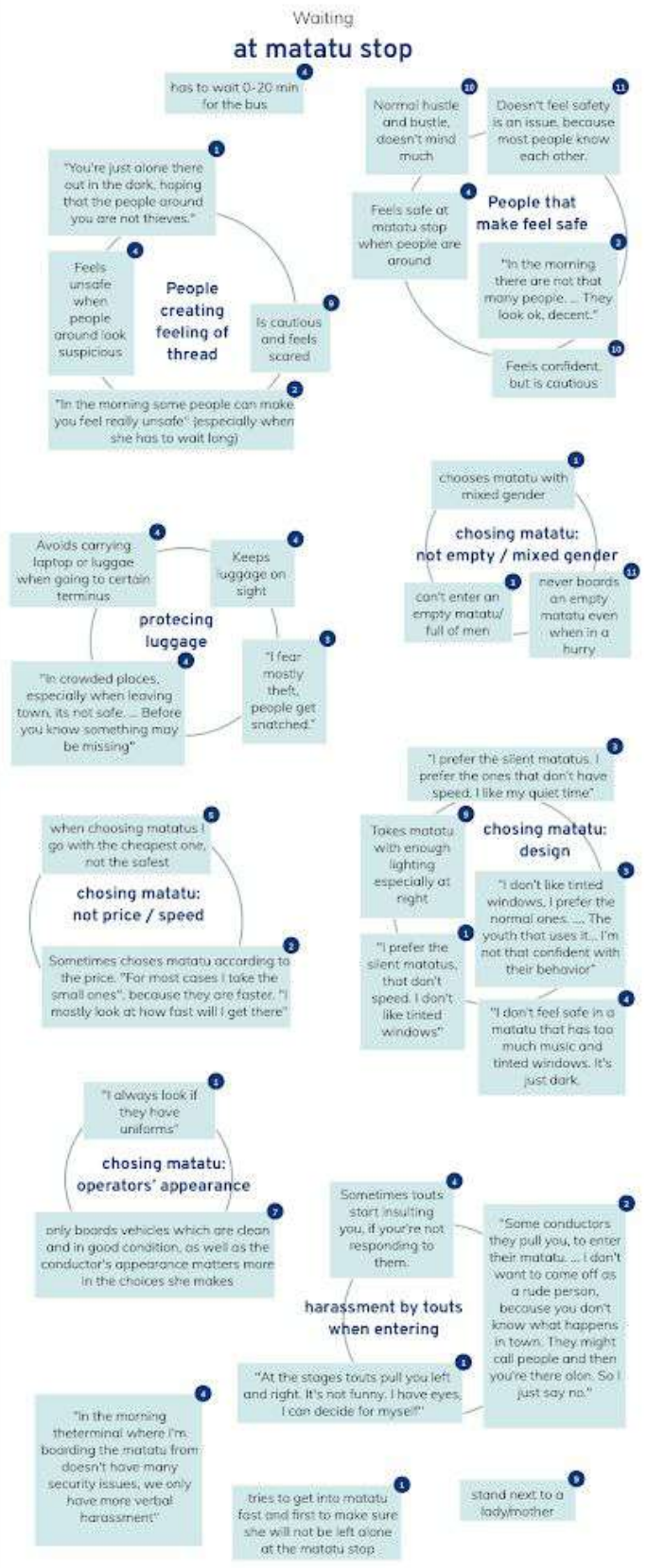
2. Interview questionnaire - commuters

Interview guideline that was used for the 11 user interviews

3. Interview questionnaire - experts

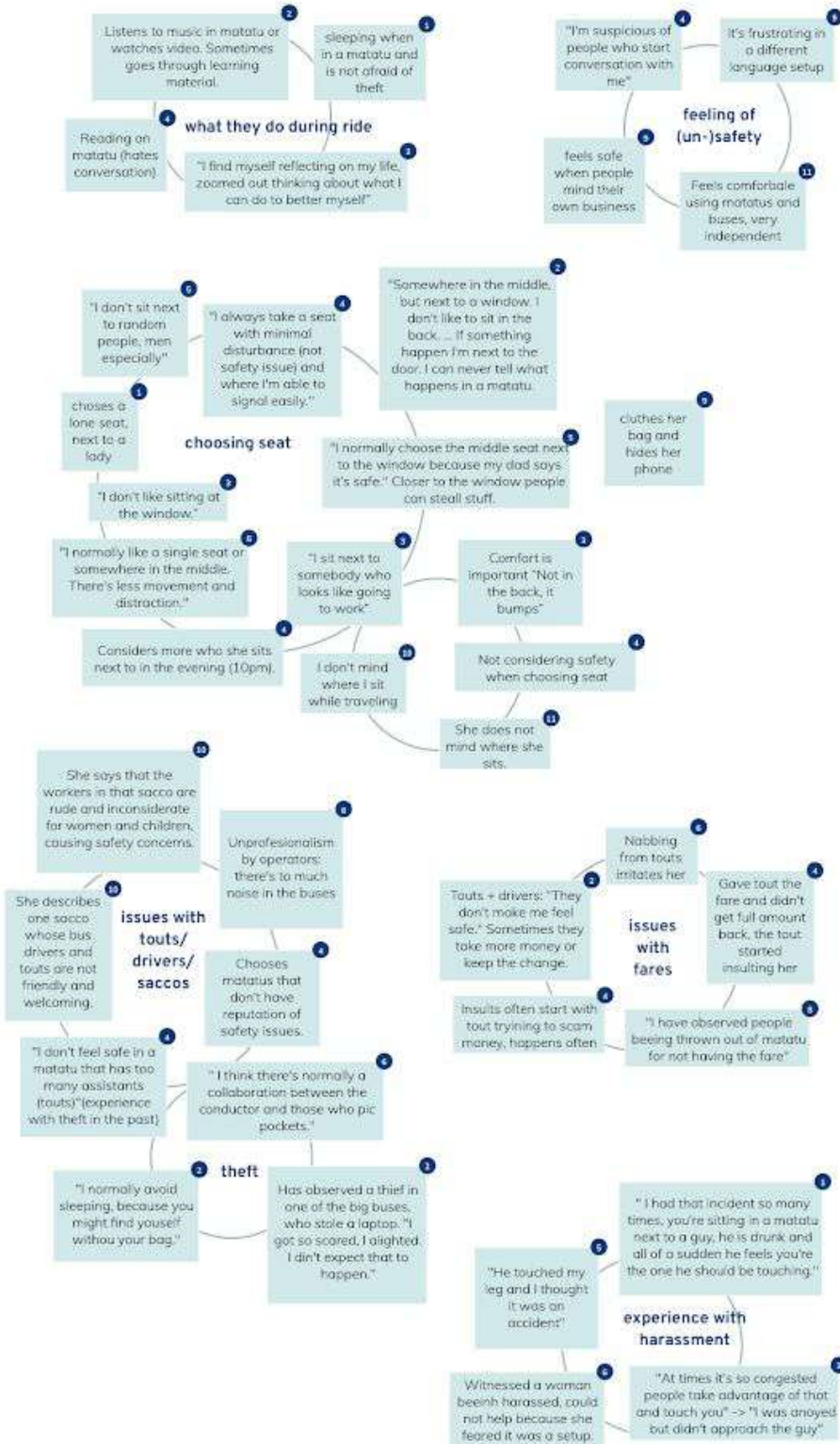
Interview example used for the Flone initiative. Most of the interviews followed a similar structure but were modified according to the interviewee.

Mapping user insights – Part 1

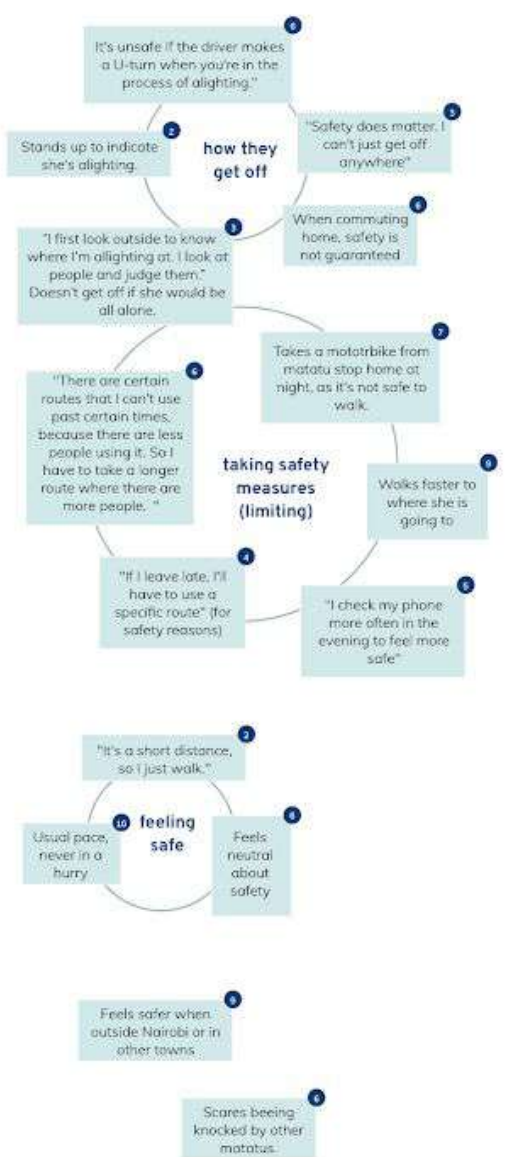


Mapping user insights – Part 2

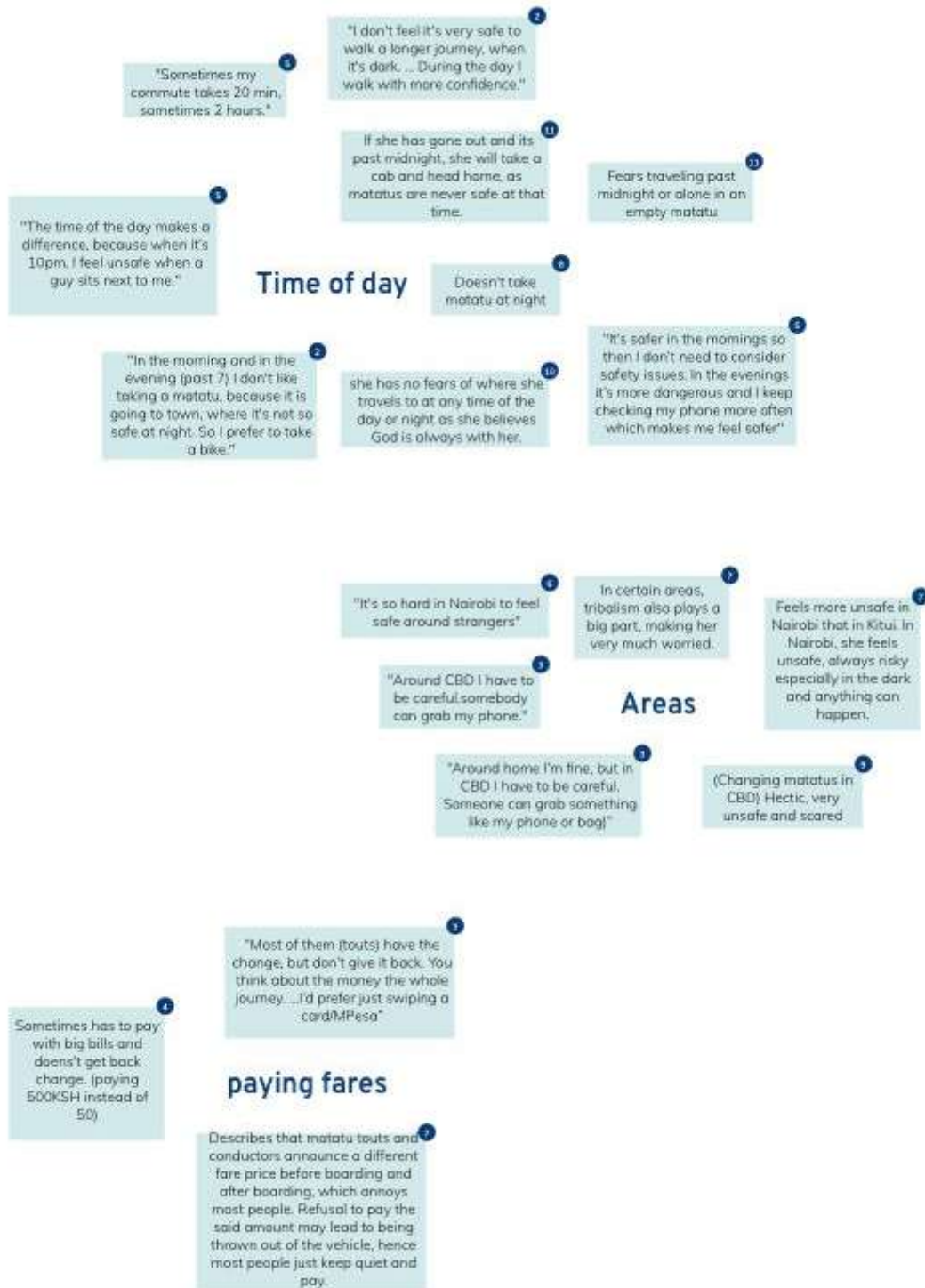
Riding inside matatu



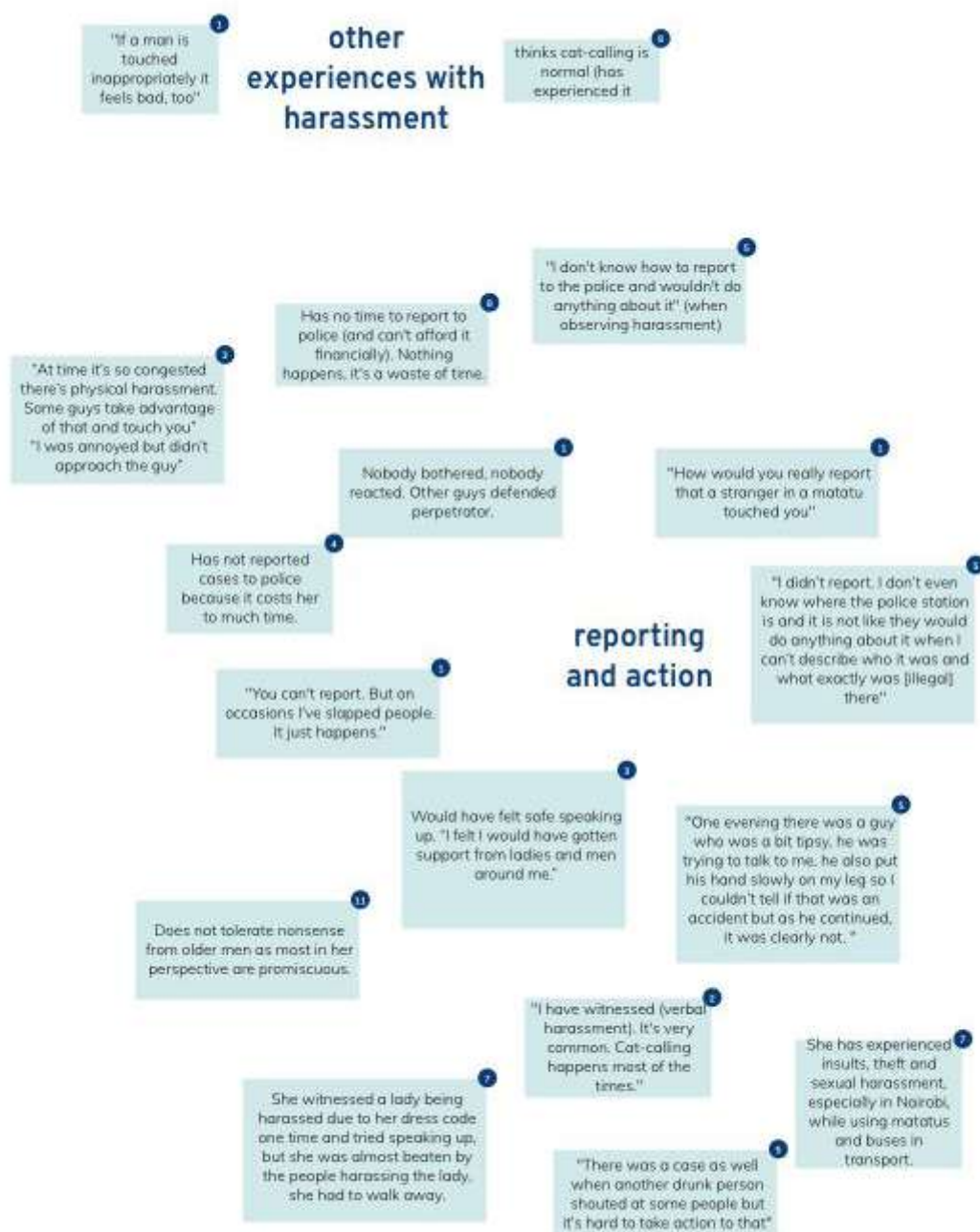
Walking to final destination



Mapping user insights – Part 3



Mapping user insights – Part 4



Mapping user insights – Part 5



2. Interview Questionnaire – Commuter

Introduction

We are a project team consisting of students from the University of Nairobi and students from Aalto University in Finland.

Currently, we're working on a project on public transport in Nairobi. Our goal is to make public transport in Nairobi safer for women and children using it.

With this Interview, we would love to learn from you how you use public transport and what thoughts and experiences you have about personal safety in public transport.

One important thing: There are no right or wrong answers. You are invited to talk freely.

Audio recording

We would love to make an audio recording, that will help us later to capture the most important aspects of the interview.

May we record the interview? YES / NO

1. Personal information

- Age:
- Gender:
- Employment:
- Residence
- How long have you resided in Nairobi?

2. General questions on public transport

- How often do you use public transport?
- Which means of transport do you use?
- Do you own a car? If yes/no, why?

3. User journey public transport

We would now love to go through a typical commute of you – from when you leave the door at home till you reach your destination. Along the way, we ask you safety-related questions.

– From where to where do you travel?

Let's start at your home.

- At what time would you typically leave?
- How do you start your journey? Do you walk, take the bike or an uber?
- How do you choose how to get to the bus stop?
 - Do safety considerations play a role here? If so, why?
- How long does it take you to get to the matatu/bus stop?

On a scale from 1 to 5, how safe do you feel while walking to the matatu/bus stop?

1. very safe 2. safe 3. neutral 4. unsafe 5. very unsafe
-

At the bus/matatu stop.

- How long do you typically have to wait at the bus/matatu stop?
- What does a typical waiting situation for you look like?
 - What does the place look like?
 - Where do you wait?
 - Who is around?

On a scale from 1 to 5, how safe do you feel while waiting at the bus stop?

1. very safe 2. safe 3. neutral 4. unsafe 5. very unsafe
-

- Can you describe how you feel? What makes you feel safe/unsafe?
- Is there anything you do to feel/be safe?

- How do you choose which matatu/bus to take?
 - Does safety play a role here?

Inside the matatu

Upon entering the matatu:

- How do you choose which seat to take?
- What does a typical matatu/bus ride look like?
 - Where do you sit?
 - Who is around?
 - What do you do while commuting in the bus/matatu?
 - How long does a typical commute take?
- When do you pay for your ride?
 - How do you do it?

On a scale from 1 to 5, how safe do you feel while commuting in the bus/matatu?

1. very safe 2. safe 3. neutral 4. unsafe 5. very unsafe

- Can you describe how you feel? What makes you feel safe/unsafe?
- Is there anyone around who makes you feel more or less safe?
 - How do you feel about operators on your commute?
 - How do you feel about other passengers?
- Is there anything you do to feel/be safe?

Changing modes of transport

- Do you have to change matatus/buses?

If so:

- What does change look like?
- Where is it?
- How long do you have to wait?
- Who is around?

On a scale from 1 to 5, how safe do you feel while switching busses/matatus?

1. very safe 2. safe 3. neutral 4. unsafe 5. very unsafe

- Can you describe how you feel? What makes you feel safe/unsafe?
- Is there anything you do to feel/be safe?

Arriving at the final matatus stop, getting to the final destination

- How do you decide where to get off the matatu?
- Do safety considerations play a role in deciding where to get off?

- What does a typical situation of getting off the matatu look like?

- How do you get from the bus/matatu stop to your final destination? (walk, uber, ...)
- What route do you take?
 - Do safety considerations play a role in which route you take?

On a scale from 1 to 5, how safe do you feel while getting off the bus/matatu?

1. very safe 2. safe 3. neutral 4. unsafe 5. very unsafe
-

- Can you describe how you feel? What makes you feel safe/unsafe?
- Is there anything you do to feel/be safe?

Overall experience

- How long did this ride take in total? (on average)

On a scale from 1 to 5, how safe do you feel overall during your commute?

1. very safe 2. safe 3. neutral 4. unsafe 5. very unsafe
-

- Are there any aspects related to safety in public transport that we did not touch upon?
- Does the time of the day play a role in your decisions about public transport?
 - If so how?
 - Do you feel safer at certain times of the day? (e.g. day vs. night)
- Is there anything you do to feel safer during your commute that we have not touched upon yet?

4. Experience with harassment and threat

- Have you ever witnessed someone being harassed or attacked in or around public transport?
 - What did you observe and where?
 - Did you take action? If so, what? If not, why?

- Have you ever experienced harassment personally? And if yes, tell us the experience.
 - Where, when and how did this situation occur?
 - What made you feel unsafe?
 - Who was around in the situation?
 - What did you do?
 - Did you report the incident?

5. Future improvement

- If you could change public transport in Nairobi: What would you want to be done differently to improve personal safety on public transport?
 - Is there any person/authority that should act differently?
 - Are there any particular places you would address?

6. Final comments

Is there anything we did not talk about yet, that you would still love to add? Did we miss anything?

3. Interview Questionnaire – Expert

With Naomi Mwaura – Founder

Introduction

We are a project team consisting of students from the University of Nairobi and students from Aalto University in Finland.

Currently, we're working on a project on public transport in Nairobi. Our goal is to make public transport in Nairobi safer for women and children using it.

The objective of this Interview:

- Develop a better understanding of the background and ecosystem surrounding VAWG in public transport in Nairobi
- Find out what small problems we might be able to address in the project

Audio recording

We would love to make an audio recording, that will help us later to capture the most important aspects of the interview.

May we record the interview? YES / NO

May we use direct quotes from you in the final report? YES / NO

Notes to self: some of Flone's activities:

- Report it Stop it crowd mapping platform developed in partnership with Ushahidi
- #MyDressMyChoice campaign
- Usalama Wa Uma training manual and program (prevention of sexual violence, customer service and professional development)
- Women in Transportation (WIT) Program
- Eastern Africa Women in Transport Conference

How much time do we have for the interview?

About Naomi

Could you tell us a little bit about your background? Who are you?

Why Flone? What motivates you to work in this field?

About Flone?

What are your main objectives with the Flone Initiative?

Who do you target with your actions?

You founded Flone in 2011.

Has the issue of harassment/VAWG in public transport changed since then? How?

What actions of FLONE have been most successful?

How do you define VAWG?

What does safety mean to you?

Systemic challenges around VAWG

What are the systematic challenges that lead to VAWG? What are the underlying patterns?

Where do you think is the biggest lever for positive change?

Roles of different actors in the ecosystem

With your research and activities, you target multiple actors in the transportation ecosystem (e.g. Public Safety Certificate Program for vehicles and bus terminals, a reporting platform for harassment incidents)

How would you describe the role and responsibility of the different actors, when it comes to reducing harassment in public transport?

What should be done through policies by the government?

What should SACCOs do? Operators, Passengers, Women and girls themselves?

How do different actors collaborate?

Where would you wish to see more collaboration? Is there anyone you would wish to collaborate more with?

Recommendations for “problems”

Over the past few years, you have done multiple studies in VAWG and Gender Equity Assessment (GEA), etc. As a result of your research you have developed actions such as “Report it to stop it (Ushahidi)”, the Gender Toolkit and other training programs.

Based on your research:

Is there any specific issue/problem that you would recommend us looking into?

Is there anything you would have loved to tackle but didn't manage to do yet?

Collaboration/Contribution?

Engaging stakeholders in a difficult topic

Yesterday we had a few conversations with matatu operators. My impression was that the operators either really don't have experience with harassment and other forms of violence, or they do not open up. (-> one of the recommendations in the gender toolkit: zero-tolerance to sexual harassment)

How do you foster honest conversations about these topics?

How do you engage the different stakeholders? Recruiting? Motivate to open up?

How do you describe VAWG to different stakeholders?

How do they approach operators? Individually? Where? What kind of setting?

(How do you communicate? Channels? Community outreach to increase awareness?)

Do you have any kind of meeting that we might join? Recommendation for people to talk to/community?

Role of new mobility services and entrepreneurs

There are a number of new mobility services in Nairobi (uber, swvl, etc.)

How do you see the role of these services compared to traditional matatus?

Safer? Potentials and limitations?

Do you have any data on the impact of these services on decrease (?) VAWG after the introduction?

If we were new mobility entrepreneurs, what advice would you give us to start the business in Nairobi in a way that eliminates VAWG?

What kinds of tools and methods have proven to be effective and which not?

Future development of FLONE / VAWG

How do you see VAWG in Nairobi's public transport in the next few years?


What needs to be addressed next?


Where do you see your biggest potential to improve VAWG?

Final remarks

Is there anything that we did not talk about yet, that you think is important for us to know?


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