Safe Together

Abstract

The purpose of this project is to make women more included in the society in Stockholm. Today a lot of women feel unsafe while being out at night. They do not always have someone to accompany them or someone to call. Women are more vulnerable when they are alone. This leads to that women can't participate in public areas on the same premises as men - which makes them socially excluded.

Our target audience is women of the age of 18-30 that are living in Stockholm with suburbs, circulating in the city at night. We have conducted field studies by doing several interviews with women in our target group to get a clearer view of the problem. The solution we decided on is an app that we call Safe Together, that connects women with each other when they are about to get home at night. We have created a prototype for this app, where you log in with your personal bank id to get the best possible safety features. Then a map comes up with locations of other girls that have chosen to be seen on the map. It is also connected to facebook so you can choose who can see you. There is the opportunity of ghost mode, where no one can see your location but you can still see others that are not in ghost mode. We want this app to create a safe feeling and for girls to see that they are not alone. It also gives them a chance to contact each other and therefore get home safe together.

Table of content

1   Introduction

We are examining whether girls in Stockholm feel unsafe walking home alone at night, and if that is the case, come up with a digital solution that can make a safer environment for young women in this situation. The aim of our design process is to provide a safe and user friendly solution that actually makes a difference for women. The solution should also prevent harm from being done in the first place

Picture 1. The results from the Aftonbladet study
(https://www.aftonbladet.se/nyheter/kolumnister/lenamellin/article21302571)

and furthermore make women feel more safe in their city. This way we hope being able to contribute to young women taking part in society on the same premises as men.

Statistics from both SCB and a study made by Aftonbladet show that 41% feel unsafe walking home alone or even avoid the situation, which makes this group socially excluded. One of the UN sustainable Development Goals is to have a gender equal society without violence or discrimination towards women. This is reached when men and women, girls and boys have the same rights, terms, possibilities and power to shape their own lives at the same time as having the chance to develop society, according to the UN sustainability goal number 5.

This goal is not yet achieved 100% in Sweden, but with our solution we hope to contribute to a development in the right direction. No one should feel unsafe in their own neighbourhoods.

2   Field Studies and State-of-the-Art

2.1   Field Studies

All of our field studies consist of semi-structured interviews of women in our target group. We decided to not present the area so much beforehand, in order to not make an impact of the answers.The interviews were both made by surveys and face-to-face interviews in order to get more nuanced answers and therefore they are hard to make statistical figures and tables out of. The qualitative data we have then used to analyze the problems and also what type of solutions that may prevent such problems.

Many women feel unsafe and afraid while walking home alone when it's dark outside. It is important that women can feel free to participate and have a social life in the public space on the same premises as men - no matter what time of day it is. Therefore

Picture 2. Group work

we have chosen the target audience young women, age 18-30. To make sure that these young women don't feel afraid to leave their homes at night we plan on improving the terms on which this group take part in society. This goal is also aligned with the 5th Sustainable Development Goal, which is about gender equality and where one of the targets is to eliminate all forms of violence against women and girls in the public spheres.

Picture 3. Face-to-face interview conducted by Louise

Most of the young women interviewed do walk home alone at night at least once a week. We can see correlation between feeling safe and having company while doing so, even being in touch with someone over the phone or social media contributes to a safer feeling while getting home. Of the interviewees we have been in contact with, none of them have ever used an assault alarm, however, they have all felt some kind of discomfort while walking home alone at night.

Depending on where the interviewees lived, some of them usually took detours to avoid walking through parks and shady neighbourhoods where they would normally walk during daytime.

2.2 State-of-the-Art (SotA)

Most women recognise the feeling of discomfort while getting home alone at night. Holding on to your keys in your pocket, constantly looking behind you and walking as fast as you can. How can this be changed and what available services are on the market today for young women to use to feel safe while getting home at night?

Not Alone

This application is used by connecting a person's phone number as your emergency call and if you pull out your headphones a text message is sent to that person. However, this does not prevent violence from happening since it takes action when an incident is already taking place.

Uber

By using for an example Uber (much like a taxi but with a more user-friendly app) you can share your ride with a contact, however, this contact must also be connected to Uber. The "share your ride"-alternative will send your arrival time to the one you desire to inform. This is an alternative that might make you feel safe during the ride although it will not prevent you from any types of exposure. Uber makes you also decide your driver (if you would like so) which might prevent such exposure.
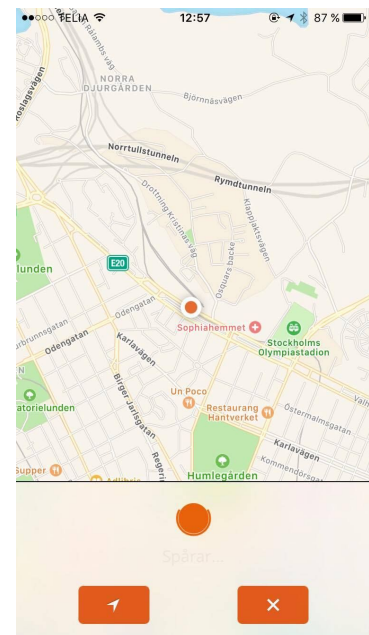

Picture 4. The Not Alone application

Kvinnoskjutsen

One service that is available today is the one called "Kvinnoskjutsen", a Facebook group where anyone can sign up to give other women a ride home. This service is available in multiple Swedish cities, and you call their private numbers to get picked up and driven home. By making a call to the one how is driving, you join the queue. This service is completely non-profit and therefore free to use, and it therefore satisfies the user's needs in getting both a cheap and safe way to go home, since many women today choose to walk or take public transport home to reduce the cost. Even being alone in a taxi can sometimes feel unsafe. This service being free and easy to use is therefore an very big pro. The backhand side of the service being a Facebook group though, is that it would potentially be very easy for deceivers to post in the group and take advantage of young women. There should be some way to identify yourself, which is hard on a website like Facebook. Also this system is rather primitive and it would definitely be more useable if you can see the queue in an app instead of just waiting for someone to call back.

bSafe

One other app is called *bSafe*. This app is a bit closer to what we want to achieve with our app. The app provides you with several features to make you feel safe while walking home late at night. One is "Follow me", it lets you invite friends to walk with you via live GPS tracking-now. A great thing is that when friends accept your invitation and join your journey, the app notifies you immediately. This way, you always know who is watching over you. This kind of safety problem solution is one thing we have thought about as very important and something we need to work with so that no one could use our app for the wrong purpose. There is definitely a lot of inspiration to get from this app, it has a lot of functions that matches our ideas. But what distinguishes it from what we want to do is that it still doesn't has it's right focus where we want it to be. For

Picture 5. The app bSafe

example, as you can see, the big red call SOS button is the one in focus. It almost make you feel afraid just by starting up the app, even though nothing yet has happened. But like I said, it's a great inspiration which we can use in our continued work on producing the prototype for our application idea.
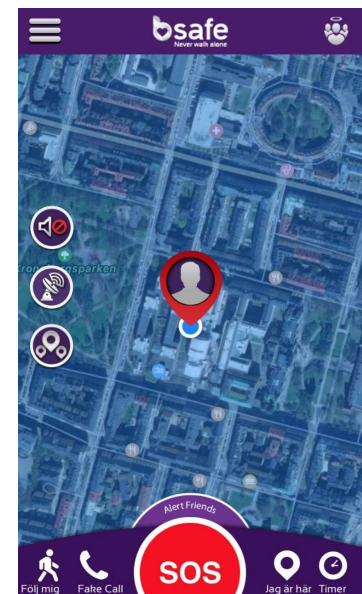
3   Personas and Scenarios

3.1   Personas

Persona 1.
Background
Party-Anna is a person that almost every weekend goes out clubbing. She always stays the latest and close down every club. Anna lives alone in her apartment outside of central Stockholm. Anna is 20 years old and since secondary school she has been working as a barista at Starbucks. She works very hard so she can go out party with her friends.

Picture 6. Party-Anna

Personality
- Anna is a very outgoing person who loves to meet new people. She has not yet figured out what she wants to do in the future but since she's doing just fine at the cafe and meets her friends every weekend life is good right now.
- Since going out to different clubs is one of Anna's main hobbies she's planning the next weekend during this moment. It's gonna be a fun weekend, but her friends are living in a different part of Stockholm so they will meet up at the club. She needs to know how she will come home though the subway doesn't go as often during the night as in the day and her friends does not live where she lives, Kista.

Persona 2.
Background
Workaholic Sarah, 25 y, is working very hard as a night nurse at Sabbatsberg. She often works late hours and are often combine with a lot of overtime. She really loves working with people and help where she can. Sarah lives at Kungsholmen and to save money she walks home after her shift. She lives in a small apartment with her boyfriend who is at home and waiting for her to come home after work.

Picture 7. Workaholic-Sarah

Personality

- Sarah loves her job. She feels like she becomes a better person by saving lives. She does not like to stay out at night if it's not at her work. In her spare time she likes to be at home and watch a movie with her boyfriend and eating pizza.
- The upcoming weekend is going to be a bit different than normally. She is working late friday to sunday and her boyfriend is away on a business trip and will not be home to wait for her. Since her boyfriend are out of the country she can't call him since that will cost a fortune. She will now have to walk home all by herself. Lately her boyfriend has been out of the country more often and she does not feel safe walking home alone without talking to anyone, she is now thinking about changing to day shift instead and thereby get lower salary which will affect her living standards.

3.2 Scenarios

Scenario 1 - persona 1.
Anna is at Hell's Kitchen and partying hard.

- Goals is to meet new people, dance as much as she can and come home safe.
- It is saturday late night. Anna, 20, has bought plenty of drinks and is dancing on the dancefloor with several unknown people and her friends.
- When Hell's Kitchen closes at 5 am she is going to take a cab straight home. There are a couple of things that can compromise this. The bad thing in Anna's night out is that her money will not cover a cab home. So she might have to take the subway home that leaves once in every hour at this hour. Since none of her friends live in Kista she will have to go alone.

Scenario 2 - persona 1.
Anna and her friends are at Hellströms at Södermalm and drinking and having fun.

- Anna and her friends are planning to go to a club after they have been drinking a few rinks at Hellströms.
- A guy at the bar starts to talk to Anna and they are having a very interesting conversation. When her friends wants to go into central Stockholm to a club Anna is not yet finished talking to the handsome guy. Her friends leave without her and they decide to meet up later.
- The guy Anna has been talking to have to go. So now Anna has to go into central Stockholm by herself to meet up with her friends. The hour is pretty late this Friday night and people are getting pretty drunk around her. She will take the subway alone but she feels that it would be nice to have someone to talk to in the meantime. She has to meet up with her friends.

Scenario 1 - persona 2.
Sarah is finishing her shift at Sabbatsberg 2.30 am.

- Goal is to take care of the patients and make the switch to the night nurse as comfortable as possible for the patience. Then go straight home and go to bed.
- It is saturday late night. Sarah's boyfriend is out of the country and nobody are waiting for her at home. She will walk through Vasaparken and there are a couple of gangs drinking this hour. She prepares for going home after work and wonder who she will talk to this evening.
- Her walk home from the hospital this night are going to be a bit nervous. Who will she talk to? What will she do if anything happens? Is it worth to go another way home to avoid dark and scary roads? These thought are spinning in Sarah's head while she is dressing herself for going home.

Scenario 2 - persona 2.
Sarah is walking home from work at 1.45.

- Sarah is walking home and she's on the phone with her boyfriend. Because she's soon home and is on the phone with her boyfriend she decides to walk through Vasaparken.
- Even though it is late Saturday night and she knows that there might be a few weird people in the park she goes through it anyway. She meets a gang that looks a bit suspicious but she's on the phone so she just walks by them cool. They start yelling as she has passed and she feels a bit afraid. Her boyfriend says that he will step out to meet her. But will he make it in time? The gang follows her and continues to yell at her. She takes her keys and press them between her fingers. She comes out of the park and sees her boyfriend.

3.3   Pain Points

Issues	Party Anna	Workaholic Sarah
Feeling safe - Overall	1	1
Contact possibilities	1	2
Taking detours	3	1
Knowledge of where other women are	4	1
Feeling safe - Depending on the environment on their way home	2	1
Company on their way home	2	1

3.4 Requirements

- You need to be able to identify yourself with your personal number in order to only include women in the solution. Therefore no imposters can use the solution.
- We need to be able to locate the position of the exposed woman through for example a smart phone.
- The application should be able to run on many different types of phones - e.g iPhone, Android.
- Simple and appealing use of the solution.
- It should be free of charge to use to include as many as possible.
- It requires effective algorithms so the application runs fast.
- The solutions will need to use a map of the area.
- The solution should prevent exclusion for women that feel unsafe outside at night.
- It should contribute to preventing harm from being done

4   Design and Low-fi prototyping. Brainstorming

4.1   Brainstorming

Parallel design:

We split up the group in two smaller sub groups. One was working on an application solution to the problem for our chosen target group, mainly for the "Party-Anna" persona. She needs a simple and easy to use application that she can manage to handle even after a few drinks. Therefore this group agreed upon having a map that covers the whole screen when entering the app. Then she easily can press the location she wants to go to, and by doing so the app also let her see which other users might be going in the same direction. The group used paper and pen to sketch down the idés, which resulted in a prototype also on paper.
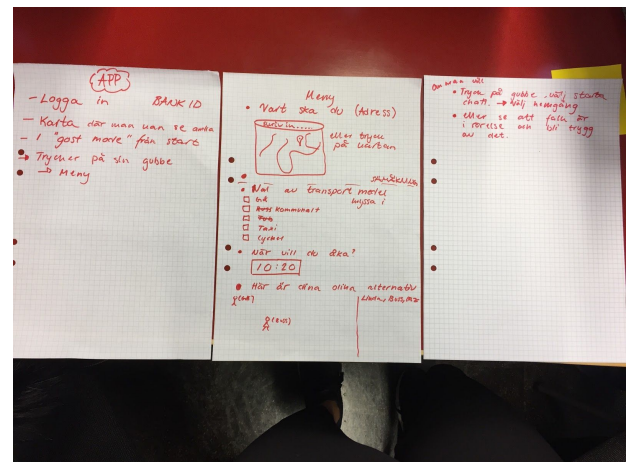
Picture 8. Parallel design

Picture 9. Group work

Meanwhile, the other group was working on another idea. They also thought of the importance of an easy to use application, but focused more on using clear symbols in the prototype. One other thing that the group focused on was that the users in this application had to identify themselves at log in, one important requirement that we had from the week before. The group also stressed the importance of the

application not sharing the design with an assault alarm - above all we want the user to feel safe, our goal is that the app works in a preventive way. These idéas were then outlined using a prototyping tool on a computer.

Word association:

When we did the word association prototyping, every person got to write three words on a post-it note and which we put up on the wall. We then worked on more post-it notes together, based on words that many of us thought were important in the design. The main words that came out of this exercise were app, map, make smart and communications.

Collaborative iteration:

The result of the collaborative iteration exercise was an agreement on having either a blue or green with clear symbols and easy to use and navigate maps. The post-it notes were sent around among the group members and everyone got to write down what they thought would be important in the design. What we then agreed on is the main content of the final post-it note. Together all of these exercises will contribute to a well functioning design.
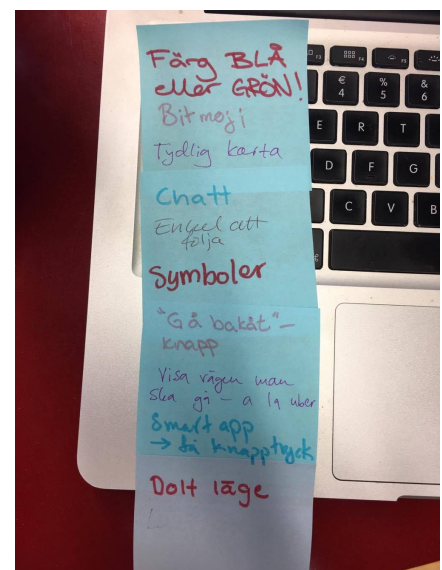

Picture 10. Collaborative iteration

4.2   Final Design (for evaluation)

To log into our app you use BankID so that only girls can use the app and all our users will feel secure using it.

Once you're logged in you can choose between different options. You can either see who's chose to reveal where they are and click on them to see which way they are taking home. Or you can choose to select where you are going and what time you are going there, if you want you can unselect "ghost mode" so that other users can click on you to see where and when you are going. This would help girls like Anna and Sarah when going home late at night. Before leaving the job or the club they can easily log in to the app and plan their way home hopefully with company. They can see if other people is nearby and going the same direction.

You can also chat with people whom you've talked to before and you can talk to new people that are not in ghost mode in your area to see if they want to have company on the way home.
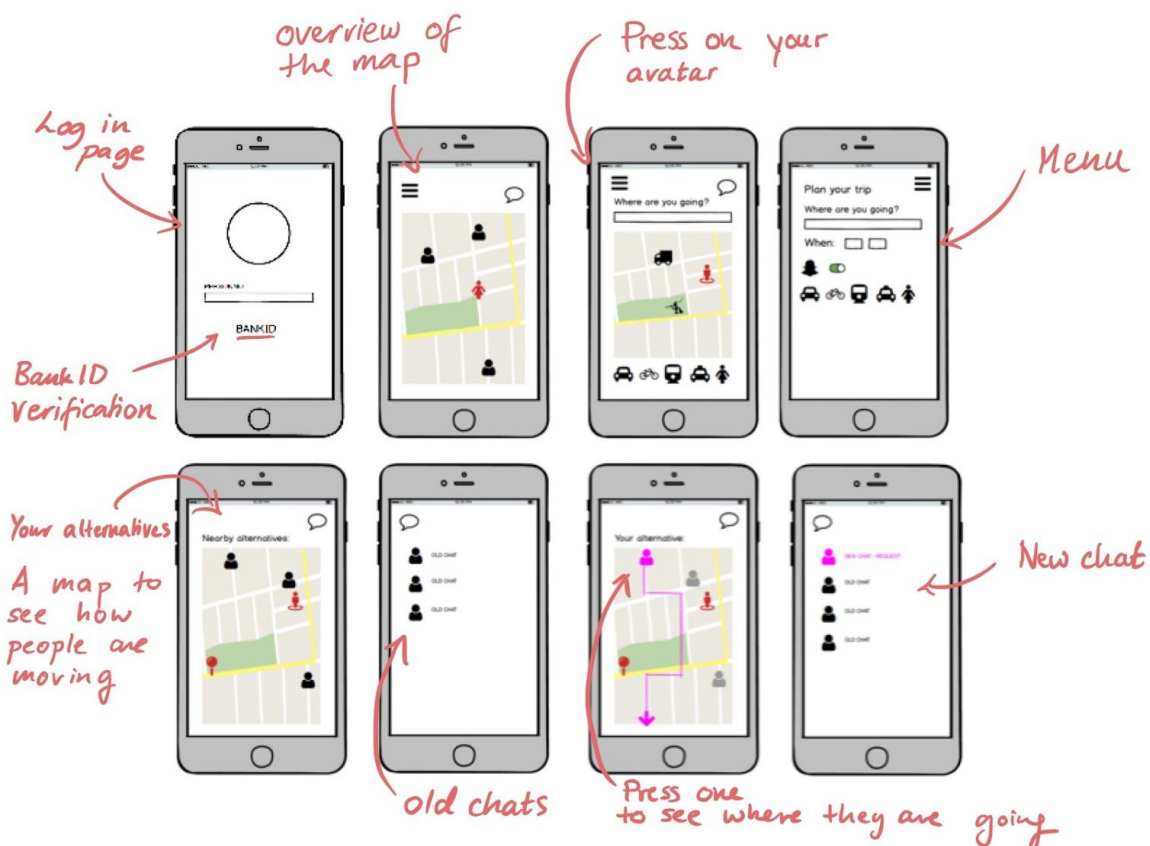
Picture 11. Final design for evaluation
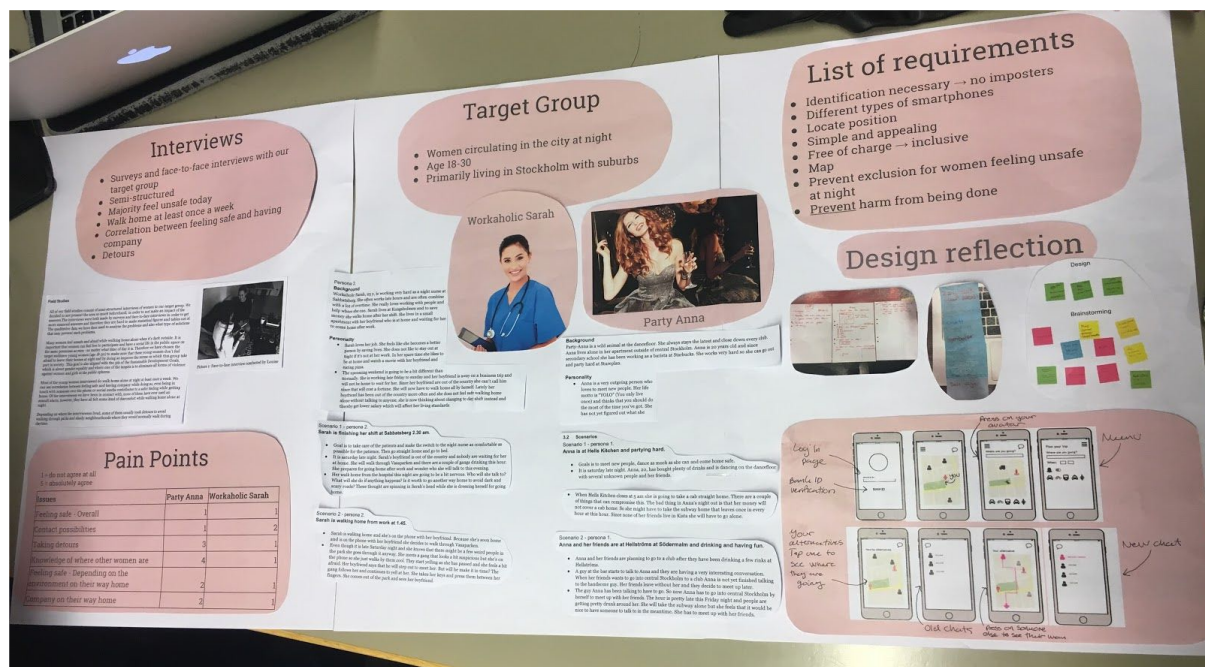
Picture 12. Peer evaluation

5 Evaluation

5.1 Peer evaluation

After the peer evaluation from the other group we got several suggestions to improve our design. In general they though the target group and solution was very clear. What they thought was most important was the safety with the app, so they really liked the idea of BANK id verification. To improve the security they suggested that we should have some sort of connection to Facebook. This would make you as a user to have the option to decided whether to only see and be seen by already trusted friends, friends' friends or choose to let everybody that uses the app to see you They thought that we have to work more on our design to make it more intuitive though. One suggestion was to have a easier way to "ghost mood". So we improved our design to meet this requirements by adding the ghost mood to the home screen of the app. We also decided to add a time limit to the ghost mood since it is a security risk if the user always can be seen by other users. We got more suggestions of improvements such as scoring system depending on how frequently you are using the app. The scoring system will then unlock different levels of rewards such as small gifts from ex. Pressbyrån, 7-eleven.

5.2 Think-aloud evaluation

The think-aloud method is an important step in usability testing and also to get the users to interact with the actual product. The think-aloud session were made individually however we got rather similar answers and feedback. We all agreed

upon that the best way of developing an idea is by getting feedback from others who are not involved in the project.

- Clarify the "get started"-button and the "Ghost"-symbol
- Add a choice of skip the tutorial
- Make some intuitive improvements of both symbols and design
- Add a picture of the actual MobiltBankID page
- Rename "Help" to "Tutorial"
- Delete "chat" in menu. Already have a chat symbol.
- Add profile to the menu.
- Change the menu. Maybe not have a whole page only for menu.
- Notification if someone has entered the same destination as you or is going the same way as you. Then you can decide to start talking to the person and going together.

6   A Concrete Design Proposal

Description of the final prototype along with usage scenario, its main features, with overview images. Include a link to website to access final prototype and other relevant material. You can think to record a presentation of your final prototype and insert the link to this video recording.

To explain our app we have made this movie where we explain how to use it:

https://drive.google.com/file/d/1V3rKT-50mUvgOgeN8qyqh51J7kefWFOh/view?usp=sharing

And here is the link to use our prototype:

https://xd.adobe.com/view/e91079d7-17e8-4fa0-b21a-0dc0a226402d/