



TRAIN SAFETY FOR WOMEN

find safer routes and spots, communicate with each other
and always be prepared for an emergency

VISION

Feminist theory suggests that all forms of violence are interrelated. Their approach argues that global security is related to local issues, so the success of comprehensive security depends on the action of women and men at all levels of society.

Our vision is a life, where women do not have to be afraid of going outside and living their life. They should be able to do whatever they want without being scared and worried for themselves and their female loved ones. DB for women is the first small step in Germany to approach that goal of us. Everyone deserves to be safe and we believe and fight for this statement.

We provide an App, which mainly **young and vulnerable women** can use, who **depend on the service of public transport** especially at night.

Women can use the app to plan safe routes by incorporating the information of other women's ratings of trainstations as well as the nearest safe spots.

We want to reduce anxiety and stress for the individuals and their community (e.g. family, friends) and also give them the freedom to travel at night with less fear and danger.

Therefore our app has an emergency board directly on the home screen, which women can use to quickly contact someone, immediatly report, or even start an audio recording for further proof in order to take legal actions against assaulters.

The app also provides the feature for women to contact one another while traveling in order to eventually travel together instead of alone, which we call "trainsharing".



RESEARCH

We started our project by brainstorming about a topic we wanted to research in the first place. We came to the conclusion that as an all woman team, we all share the common fear of taking public transportation alone at night. In our research, we found out that we are not alone with this problem. Many women fear using public transportation because of sexual harassment from strangers. It causes them to quit their jobs with late hours, seek employment close to home, preferring taxis and cars over public transportation or refusing to go out alone at night. We continued our research by interviewing other young women, most of whom experienced the same problem when traveling by public transportation. This problem mostly affects women who don't have a driver's license or a car or both, because these women rely on public transportation to get to their jobs and families. With our empathy map we wanted to visualize the woman's feelings and thoughts while using these services.

Person Number 1: Student, female, 22
Do you use public transport regularly?
Yes, almost everyday.

Did you ever choose a route that might be longer but safer for you?

Almost every weekend when I was at a club in Munich. I like to take the train before the last train at the day, just for safety. There are drunk people (especially men), that consider me.

Why is that?

Because I want to avoid every situation, where something could happen to me or to my girlfriends.

Still why do you take the train?

It's much easier than car. And nowadays much cheaper, too.

Person Number 3: Mother of 2, female, 37
Do you use public transport regularly?

Not much.

Did you ever choose a route with public transport that might be longer but safer for you?

Yes, so I don't have to wait on the stations alone.

Why is that?

So it's nothing happen to me. Like robbery or harassment.

Still why do you take the train?

Like I said, I don't take it too often, only when I drink and don't want to drive.

Person Number 2: Teacher, female, 34
Do you use public transport regularly?
Yes, since the gas prices are much higher than before.

Did you ever choose a route with public transport that might be longer but safer for you?

Yes. I always take routes at night, that I know. I never take a bus or train at night that I never took before.

Why is that?

For safety reasons. I like to know where to run or go when something might happen to me.

Still why do you take the train?

Like I said, it's cheaper. And it's more manageable, because of the parking in the city, etc.

summary:

reasons for public transportation:

- easier than car
- gas prices
- drinking

reasons for other route:

- awareness
- consideration
- knowing the route
- safety reasons
- fear of robbery and harassment

Chiara - 20, female student
Do you use public transport?
No, I feel very uncomfortable on trains

Why is that?

Maybe I'm more paranoid than others, but I always feel like I'm in danger especially when I'm around men. I will always prefer to drive my car, where I am in control and away from drunk men who might harass me.

When do you feel most uncomfortable?

Obviously at night, especially when there is no one around (or I'm alone with another man)

What do you do in these situations?

Walk away as far as possible. I usually pretend to be on my phone with my earphones in and try to ignore my surroundings (even though that's not very safe)

Student, female, 19

How do you feel when you travel alone on public transport at night?

I'm a little nervous and tense

Why is that?

Probably because I know that there are people who have fun bothering or disturbing others and won't stop so quickly or walk away at all

Why?

Because I have experience with such things, even when I am not alone but in larger groups with other women

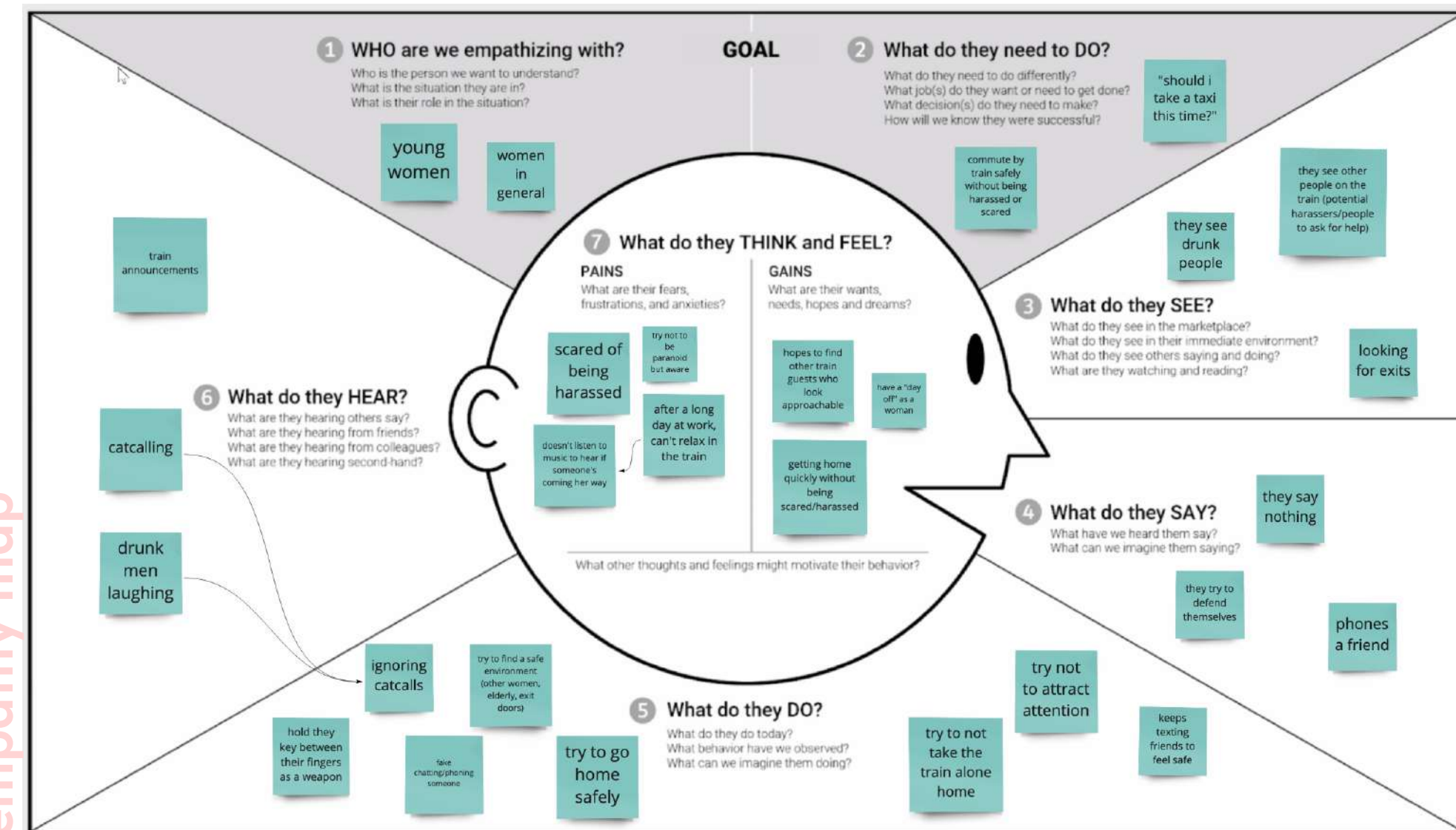
What do you do in these situations?

I try not to look directly at anyone or smile at them, so that they won't think of talking to me

Why do you take the train?

I have to, I don't have a car and I don't have a driver's license yet. If I have to go to work or come home or if I meet a little later with friends there is only this option

















empathy map



RESEARCH

Our next research step was the user journey. This tells the story from women preparing for using a public transportation service to arriving at home again. It shows the feelings, thoughts and reasons women have while using public transport.

user journey

Phases Which phases of the experience are you describing? Think phases (pre-service, service, post-service)	Preparing Phase			Waiting Phase			Getting into Train			Staying in Train			Leaving Train Phase				Walking Home Phase			Arriving at Home Phase		
Actions (Moments that matter) What does the user do? What information do they look for? What is their context?	preparing to go home	packing up their stuff (wallet, lunch, makeup etc)	checking everything last time	waiting for the train	looking for an area with lots of "safe" ppl (mothers with children, elderly)	holding bag close to the body	stepping onto the train	Sitting down near the exits	Again: looking for an area with lots of "safe" ppl (mothers with children, elderly)	notices that they are alone with a drunk man	sits down on the window side, trying to hide	walks to the back of the train	walks to the back of the train	leaves the train as quickly as possible	leaves the womensection or the button	phone in the hands	doesn't listen to music when walking home	questions if they are being followed	stays in bright areas	releaved to finally be at home	makes tea to calm down	
User goals (desired outcomes) What does the customer want to achieve or avoid? What needs do they have (both functional and emotional) <i>Tip: Reduce ambiguity, e.g. by using the first person narrator.</i>	"I want to feel prepared in case something happens to me on the train"	"I don't want to feel scared anytime I step outside as a woman"	"I want to have the same rights as men, including nightlife, but also work"	"I just stay there next to this older couple, it's safer"	"I hate to be at the trainstation at nighttime"	"just wanna go home and be safe"	"I just want to be around other people in case of harassment"	"I want to have full charged phone, in case something happens"	"I want to be near the exits so in case of harassment I can leave train quicker"	"I want to be invisible"	"I want to protect myself or just have the same chances as men"	"I want to be a man"		"Maybe I can follow that group of people leaving the train"	"I wanna go home, I am exhausted"		"I hope no one is following me"	"I need to get home quick"	"keys between the fingers"	"I wanna go to the bed"	"I never want to feel like this again"	"I want to relax"
Pain Points For each moment, what are the typical pain points (based on what you have learned so far)?	"Should I take the Taxi instead? Is it safer?"	"Should I go earlier to catch the train while it is still daylight outside?"	"Next time I should bring my pepper spray"	"I look nervously around in case of dangerous ppl"	"I am always on the phone, so others think I am in a conversation with someone and they know where am I"	"holding bag close to me and my keys between my fingers as a weapon"	"I am trying to stay silent in order not to attract attention"	"I am trying not to make eye contact with anyone"		"I just want to be safe "	"Don't make eyecontact"	"I hope nothing will happen"	"Oh no, is that man also leaving the train?"	"Should I leave after him?"	"Should I take taxi from the station to home?... but it's only 5 minutes walking"		"I wish I could be in a safe place"	"I wish I could cal somebody who I can trust"		"Thank God I'm finally home!"	"I am so happy that nothing happened!"	
Touchpoint What part of the service do they interact with? List everything or everyone the customers interacts with. 10 min together	work place	colleagues	taxi	train station	other passengers	bag and stuff	train doors	other passengers	phone	possible interaction with drunkard	phone	possible interaction with other passengers	friends oh phone	interaction with the exits: open doors	phone	keyes in the hand	walking down empty streets	no interaction with people		arrives home: opens door	puts everything down, no need to worry anymore	
Customer Feeling What is the customer feeling? <i>Tip: Use the emoji app to express more emotions</i> Use emojis to illustrate how the customer feels. 5 min together	 			 			 						  				 			   		

IDEATION

We started our ideation by doing the crazy eight method. From this we were able to gain these ideas for our possible prototypes...

... an app, that helps women plan routes and contact each other

... a button in the train, that can be pressed in emergency situation to contact someone to help

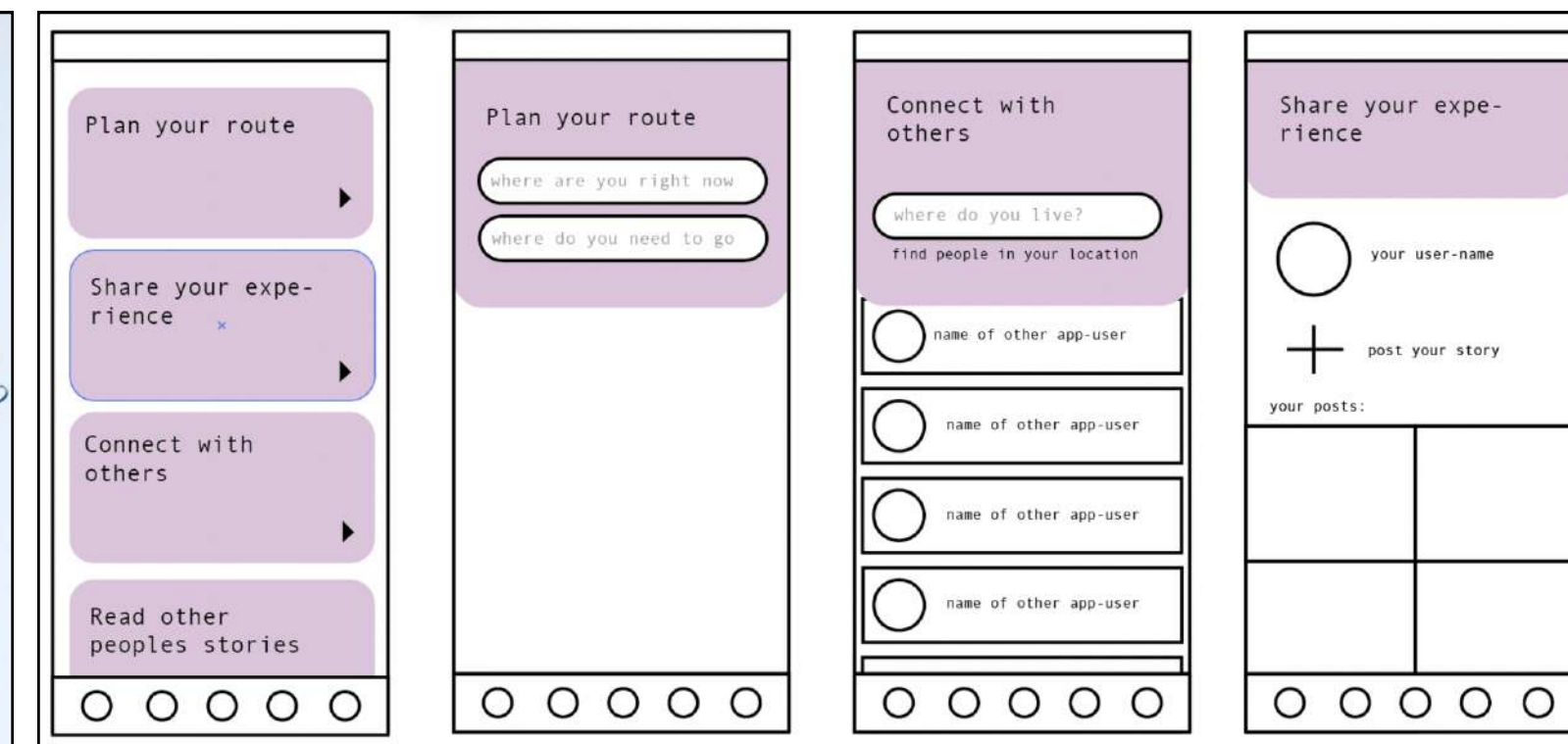
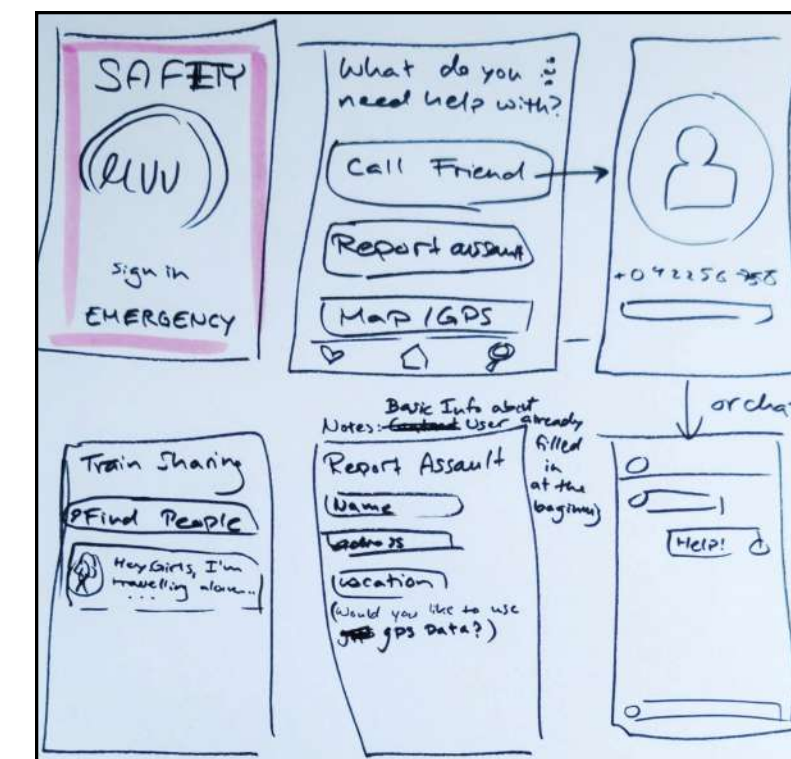
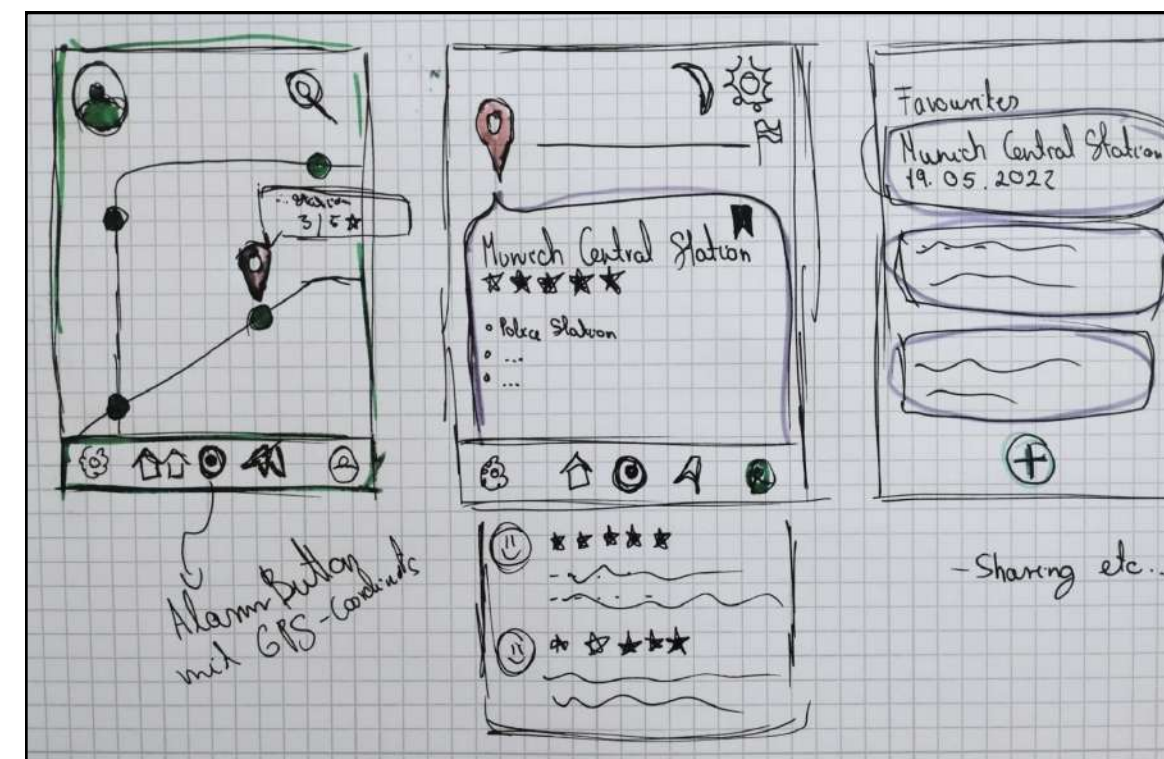
... train barriers in front of the doors of the train, so that no one can be pushed on the tracks

... identifying people to make sure who is on the train at what time

These ideas were ranked according to feasibility and desirability. The result was that the app idea was rated the highest in feasibility and desirability which is due to the fact that unlike our other ideas, no extra hardware would be needed to be installed. Another argument for the app is that almost every young person owns a smartphone in this day and age which would make an app more accessible to a wider range of people.

After we agreed on a solution for our problem we started sketching basic wireframes with the main functions we want to be included in the app.

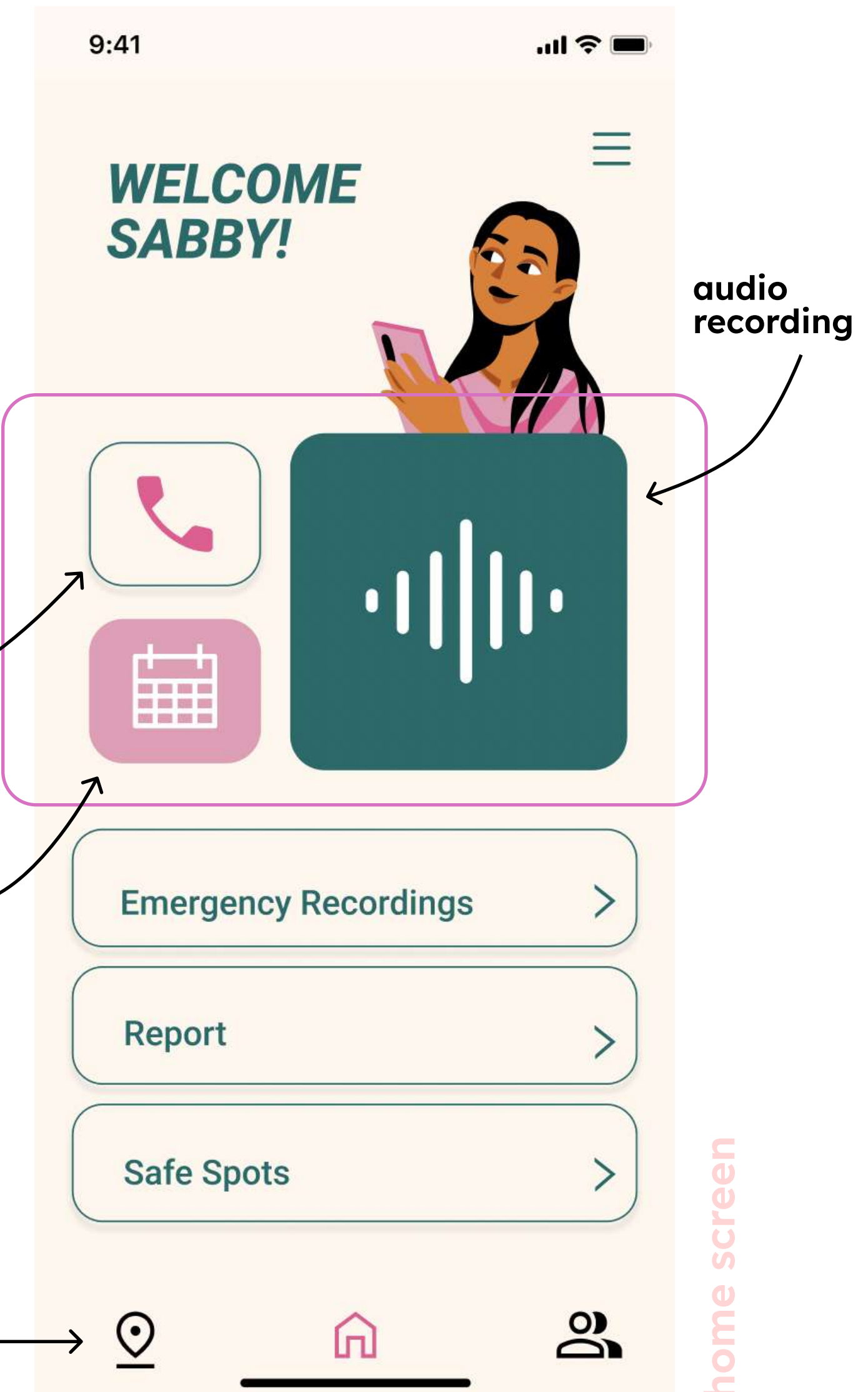
wireframes



PROTOTYPE: FEATURES

During our prototyping process, we focused on the following features:

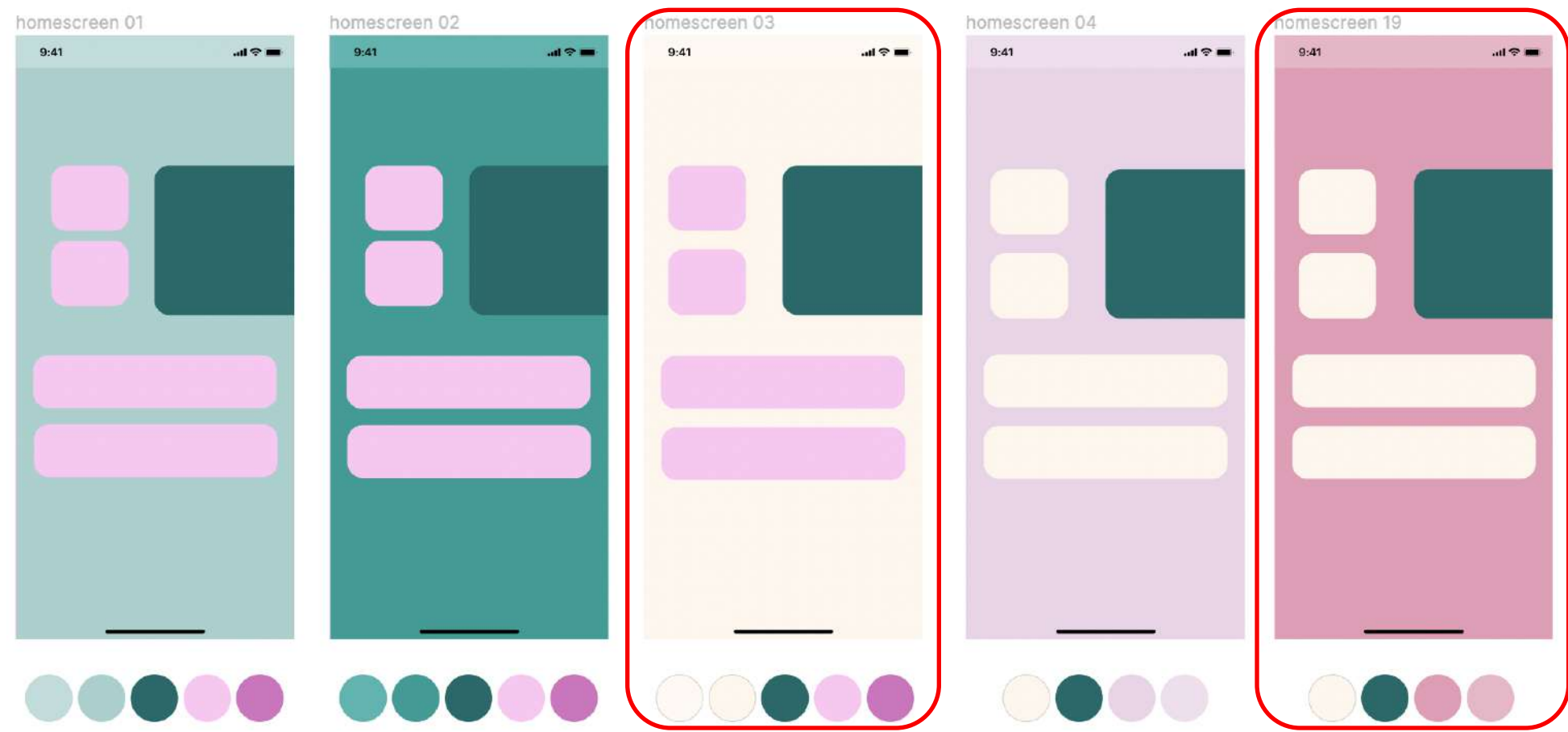
- plan safer routes in advance by including safe spots and safe rated trainstations in the route
- **emergency board** on home screen:
 - a. emergency audio recording triggered by user defined signs (like shaking phone very heavily, pushing buttons multiple times) in order to take actions against potential harassers
 - b. emergency call: user fills in contact numbers for quick and easy contacting in emergency situations
 - c. report assaults immediatly: user fills in data in advance to report quickly in shock situations without extra effort
- contact others who also use the app to be able to travel in groups (trainsharing): users who have agreed are displayed on the map to allow finding each other much easier
- share planned route or real-time gps coordinates with friends, family or police



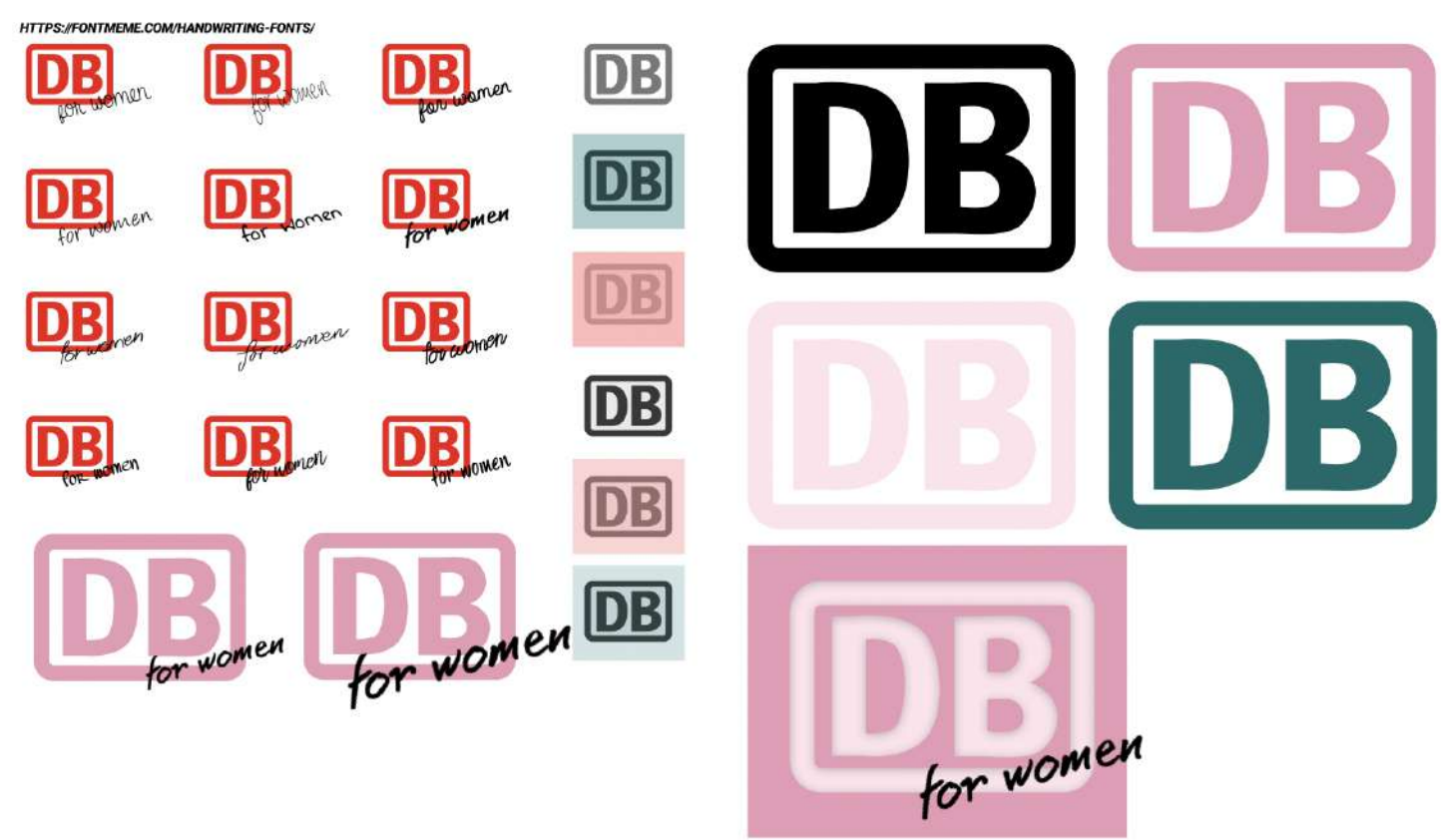
PROTOTYPE: DESIGN

We started by creating a moodboard for the desired app, so we could see which colours we wanted to use and what kind of design elements we wanted to add. Five colour palettes were created from this. We continued by trying out colour combinations on sample screens, and then decided on one to use. At the same time we worked on the logo for the app.

colour palettes



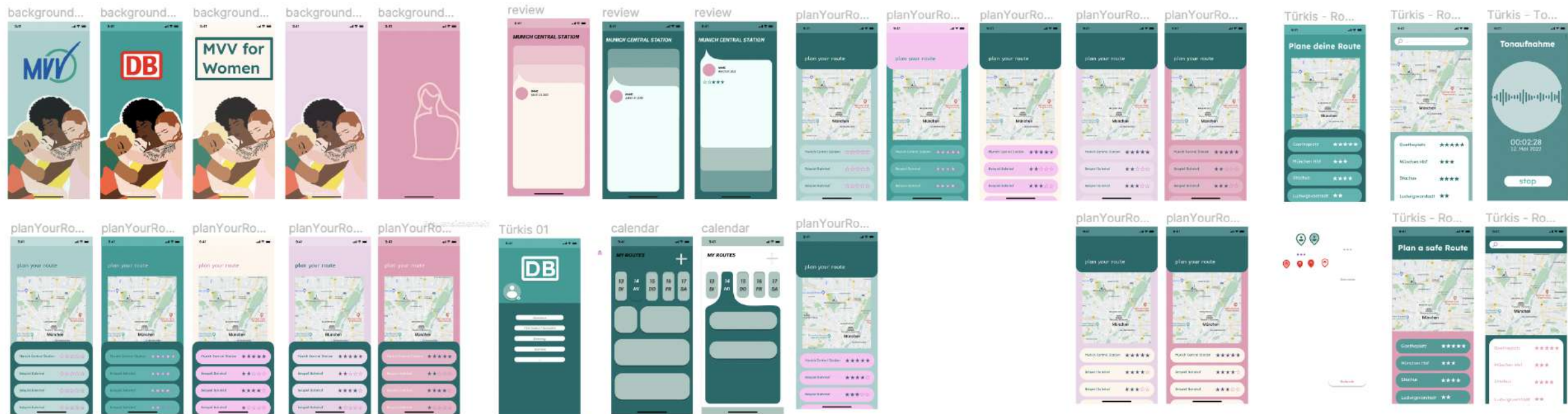
icons



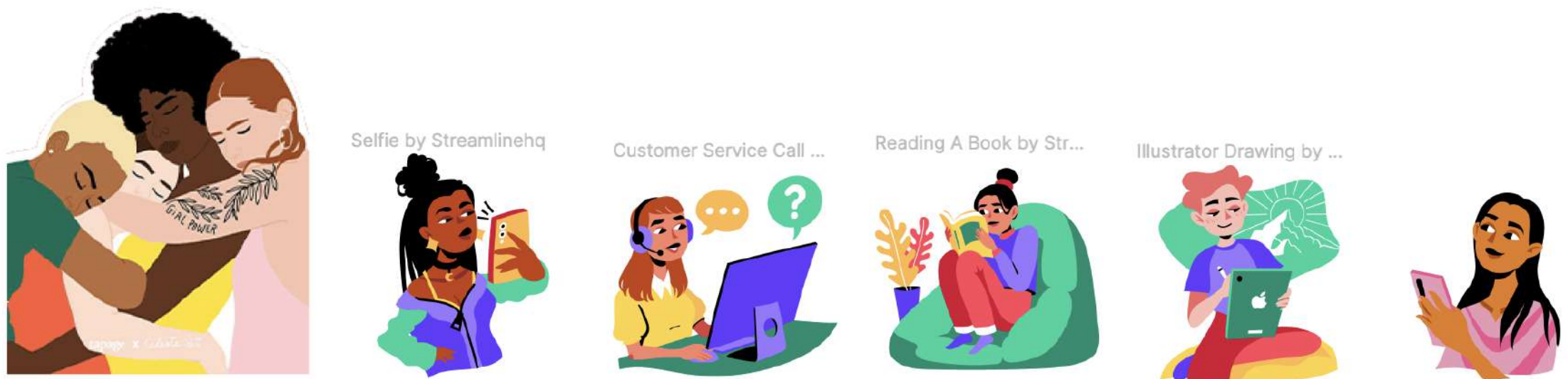
moodboard



trying different colour combinations



illustrations



ROADMAP

EPIC 1: Plan safe routes

Userstory 1: As an alone traveling woman I want to be able to plan my routes in advance as well as during the ride to know where I have to go

Userstory 2: As an alone traveling woman I want to be able to see ratings of stations to pick the safest ones for my route

EPIC 2: User wants to communicate with others on the app

Userstory 3: As an alone traveling woman I want to be able to share my planned route with my friends to be sure that someone knows where I am if something would happen

Userstory 4: As an alone traveling woman I want to be able to find other safe commuters through the app to be less alone

Userstory 5: As an alone traveling woman I want to be able to call others through the app (other people who also travel at the same time) in order to look busy during the ride

EPIC 3: Functions for actual emergencies

Userstory 6: As an alone traveling woman I want to be able to trigger my phone to record in emergency situations to have proof for the police

Userstory 7: As an alone traveling woman I want to be able to send my location to friends/family quickly so that in the worst case they know where to find me if I don't answer the phone anymore

Userstory 8: As an alone traveling woman I want to be able to quickly call the police if something happens



ROADMAP

MINIMUM VIABLE PRODUCT (MVP):

our minimum viable product includes...

... the map for planning safe routes in order to be able to plan everything in advance or also during the ride

... the possibility to see other app users on the map and contact them by phone or chat in order to arrange trainsharing for example.

MINIMUM LOVABLE SOLUTION (MLS):

our minimum lovable solution includes...

... the possibility to read about other peoples experiences while traveling with public transport

... a calendar in which you can see which route you have used and when, to make planning routes faster and easier, because you can simply use the route again with one click

... sharing the route with friends or family



STRATEGY

Feature Set

Plan safe routes in advance

- emergency audio recording triggered by user defined signs (like shaking phone very heavily, pushing buttons multiple times, etc.) audio-proof to take actions against potential harassers
- emergency functions on homescreen: emergency contact numbers given, emergency call/text, and the emergency button (also on screen) for recording
- contact others who also use app to be able to travel in groups (trainsharing)
- share planned route or real-time gps coordinates with friends or police

User Experience

...registration is necessary to make sure no harassers use it

...information from emergency setup page can be used for assault reports

User Benefits

...safety on app -> only other women are allowed to use the app

...find others to not be alone during the ride home

...less anxiety and stress for the users

...much easier to make assault reports

Revenue Sources and Cost Factors

- costs of developing and constant updating the app through DB (--> collaboration or subsidiary)
- the use of this app is free as well as the registration
- there are no ads, no sponsorships, no collaborations (except with DeutscheBahn or other transport firms in Germany like MVV etc.)
- calls are via wlan or mobile data free
- emergency calls are overall free
- car or other transportsharing between users of the app are also free

FINISHED PROTOTYPE



Here you can find our finished prototype
for our app “DB for women” on figma:

click [here](#)