

Design document



Duo Hybrid app - Marco Ketelaars & Rick van Wijk

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Used methods:

- Competitive analysis
- Literature study
- Hardware validation
- Prototyping
- Requirements prioritization

Concept

Visitors to a pop festival can (if allowed by the organiser of the festival) stream live video (and music) to a server with this app. Users can then log on to that server and follow the concerts of the festival live on screen.

Our main focus/selling point is Dutch festivals. The reason for this is that there's many Dutch festivals that a lot of people enjoy watching. Another reason to focus on festivals is that in our market research we found out some of the [main competitors](#) focusses on international entities like artists or concerts/music events, but not Dutch festivals specifically.

About [82% of the Dutch](#) visit at least one event/concert every year. There's also an increasing amount of foreign visitors who are mainly from neighbouring countries. In [2018](#) about 18.2 million people visited the Dutch festivals. In 2019 19.5 million people were expected. This shows there's a growing demand. Unfortunately, due to Covid-19 only a certain amount people are allowed so even though a lot of people want to go the concerts/festivals they can't all go.

Analysis

Problem

A lot of people can't go to concerts and festivals due to Covid-19. There are also legal problems that occur when livestreaming without permission.

Solution

By creating a platform that festival organizers can use to host livestreaming events where visitors can livestream without getting into copyright problems. Meanwhile the organizers raise festival participation when the festival is sold at capacity.

Market research - competitive analysis

Goal

The goal is to find out what the competition is doing and how we can differentiate our concept from them.

Research Questions

What existing live stream platforms are there for music or festivals?

What are the strengths of the live stream platforms?

What weaknesses do the live stream platforms have?

What target audience do these live stream platforms have?

Competitors

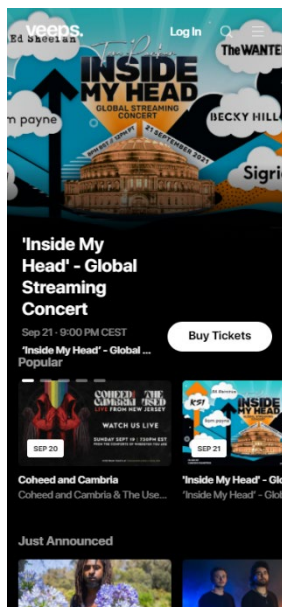
[Veeps](#)

veeps.

The biggest competitor of our livestreaming is a platform called Veeps, where people can buy access to livestreams. Veeps does not however have a mobile app. The concerts are only official livestreams. A different method to our method of letting audience members livestream their perspective.

Veeps sells tickets for most livestreams for €10.

The existence of this livestreaming service shows there is interest in watch concerts via livestream.



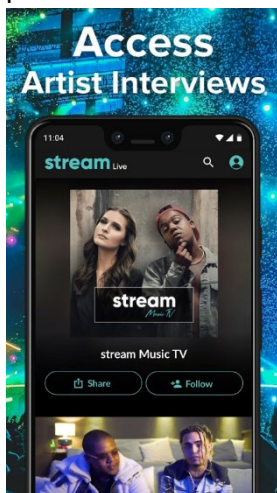
Stream Live



Stream LIVE is a livestreaming app where you can follow artists on their platform and watch them when they are livestreaming. It sells a premium subscription for its service.

Stream LIVE focuses on the artists rather than the concerts or festivals themselves. Some examples that confirm this:

- The description on the Play Store and Apple Store mentions artists very often
- UI components and features e.g., being able to follow artists show that the artists get pushed forwards more



Findings

Observations from the competitive analysis

Com petit or	Core concept	Target audience	Noticeable features	Strengths/weakne sses	Platform
Veep s	Selling tickets to livestreamed performances	Anyone that enjoys live music; from young to elderly people	Sign up as an artist Venues can be viewed to see the schedules	+ Minimalistic UI -search bar filter weak, no additional filters	Web
Strea m Live	Selling subscriptions for live streams of artists and offline streams/vids e.g., interviews of artists.	Youth who are big fans of certain artists but can't physically attend all concerts for different reasons.	Search for artists and follow artists Notifications for livestreams and new content from artists.	+ modern feeling UI, exciting color palette. Feels like Spotify. + Able to watch live streams back - Only focusses on selling content of	Android + iOS

	Content of artists is their main selling point.		Add future livestreams to your calendar	artists, not great for people that want to watch concerts with wide variety of artists.	
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Conclusion

Our concept has sufficient differences between the already existing livestreaming apps. Given the high amount of visitors to Dutch festivals we can be confident that we can occupy a niche in the market.

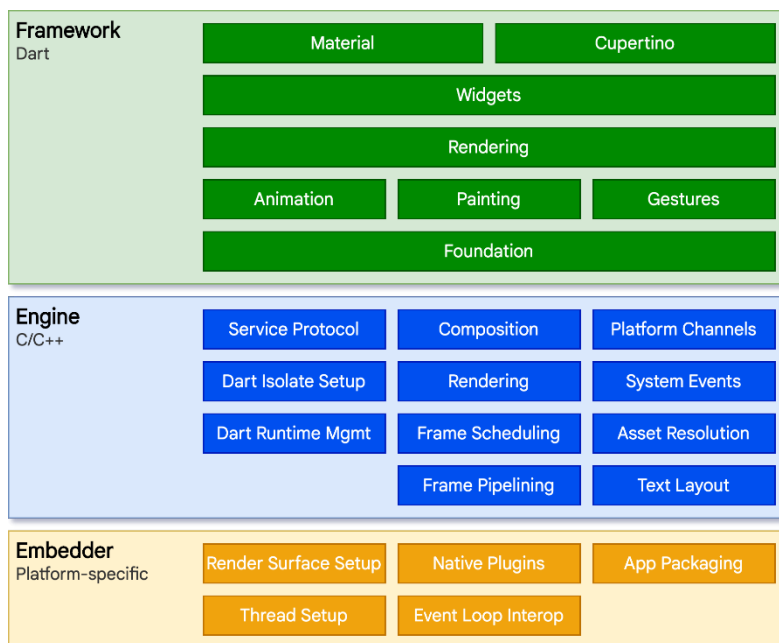
Technical Description

Technology overview

Technology	Description
Agora	Third-party livestreaming solution
Flutter	Framework in which the application is written
VScode + Flutter plugin	IDE used to program the app, the plugin gives VSCode support for Flutter and Dart
Gitlab	Version control platform
Firebase	Database – store data of users

Software architecture

The app will be a mobile application written with the Hybrid mobile platform Flutter. Flutter apps are created in a language called Dart. Below can be seen how the architecture of dart is built.



Hardware requirements

The devices need at least a camera and a microphone for the livestreaming to work.

If the device has GPS turned on, we can check if the streamer is at a festival and prompt them when they open the app if they want to stream for that festival.

Personas

Target audience

Before a persona can be created, a target audience must be defined first. This will help us design and develop a suitable app.

The stakeholders are:

- Organisers of festivals
- Visitors who want to live stream
- The viewers of the live stream

Demographics

- Young adults 20-35 years old; people of this age are often enjoying life and [party the most](#) out of all the other age groups
- Dutch; through [quick desktop research](#) we have confirmed our expectations that most visitors and organizers of Dutch festivals are indeed Dutch. However, the Dutch people within this age group understand English very well and there is an [increasing amount of foreign visitors](#), which is why English will be the primary language within the app.

Geographics

- The Netherlands; Dutch people who want to go to Dutch festivals or organize the festivals generally tend to live in The Netherlands.

Psychographics

- A need to have a feeling of being together, belonging to a group
- Partying is the key to a happy life, can't be happy without music and dancing
- Feeling of loneliness occurs immediately when there's no one around/to communicate with

Socio-economics

- Middle class

Persona 1: Streamer/Viewer



Name: Merlin Fischer

Age: 24

Nationality: German

Location: at Dutch festivals/at home

Bio: Merlin is known among his family and friends for partying all summer. Each summer his goal is to visit as many festivals as possible. When he's too old to go to festivals he would like to look back at his festival experiences. Sadly, there's a maximum amount of people allowed so sometimes Merlin can't go or he must go without friends.

Goals/Needs:

- Wants to experience as many festivals as possible
- Wants to share his festival experiences with others
- Wants to look back at his festival experiences in the future
- Needs money to fund his tickets

Frustrations/Fears:

- Can't always go to festivals due to circumstances like sold out tickets, illness, lack of money, etc.
- Wants to share his experiences, but filming or even live streaming entire performances requires permission from organisers otherwise Merlin feels like he can get into trouble.
- Merlin is annoyed when he must pass on a festival ticket because of a shortage of money

Devices: GoPro, smartphone

Persona 2: Viewer



Name: Sarah van Dijk

Age: 23

Nationality: Dutch

Location: at Dutch festivals/at home

Occupation: Geneeskunde (Medical School) Student

Bio: A hardworking student. Sarah usually works on her computer till late in the evening, even during weekends. Sarah often is too busy to go to festivals that typically continues for at least 3 days. To make up for missing all the fun, she puts on music while studying.

Goals/Needs:

- Wants to have fun
- Wants to feel united/wants company
- Want to be able to study

Frustrations/Fears:

- Can't go to most of the festivals she wants to go to due to having to study
- Feels left out on all the fun
- Fears that she will lose friends, because she often has to say "no I can't go, I have to study"

Persona 3: Organizer



Name: Dirk Meren

Age: 52

Nationality: Dutch

Location: at Dutch festivals/at their office

Occupation: Festival director

Bio: Dirk's job is to organize festivals. As a director he is also responsible for the finances. Dirk needs to keep a healthy balance between the popularity of the festivals and the finances. When Dirk has enough time, he loves to visit the festival and see the visitors have a good time.

Goals/Needs:

- Wants the festival to be filled at capacity
- Wants good promotion/media awareness of the festival

Frustrations/Fears:

- Not selling enough tickets
- Cancelled concerts/events
- Bad promotion of his festivals/his festivals getting a bad reputation

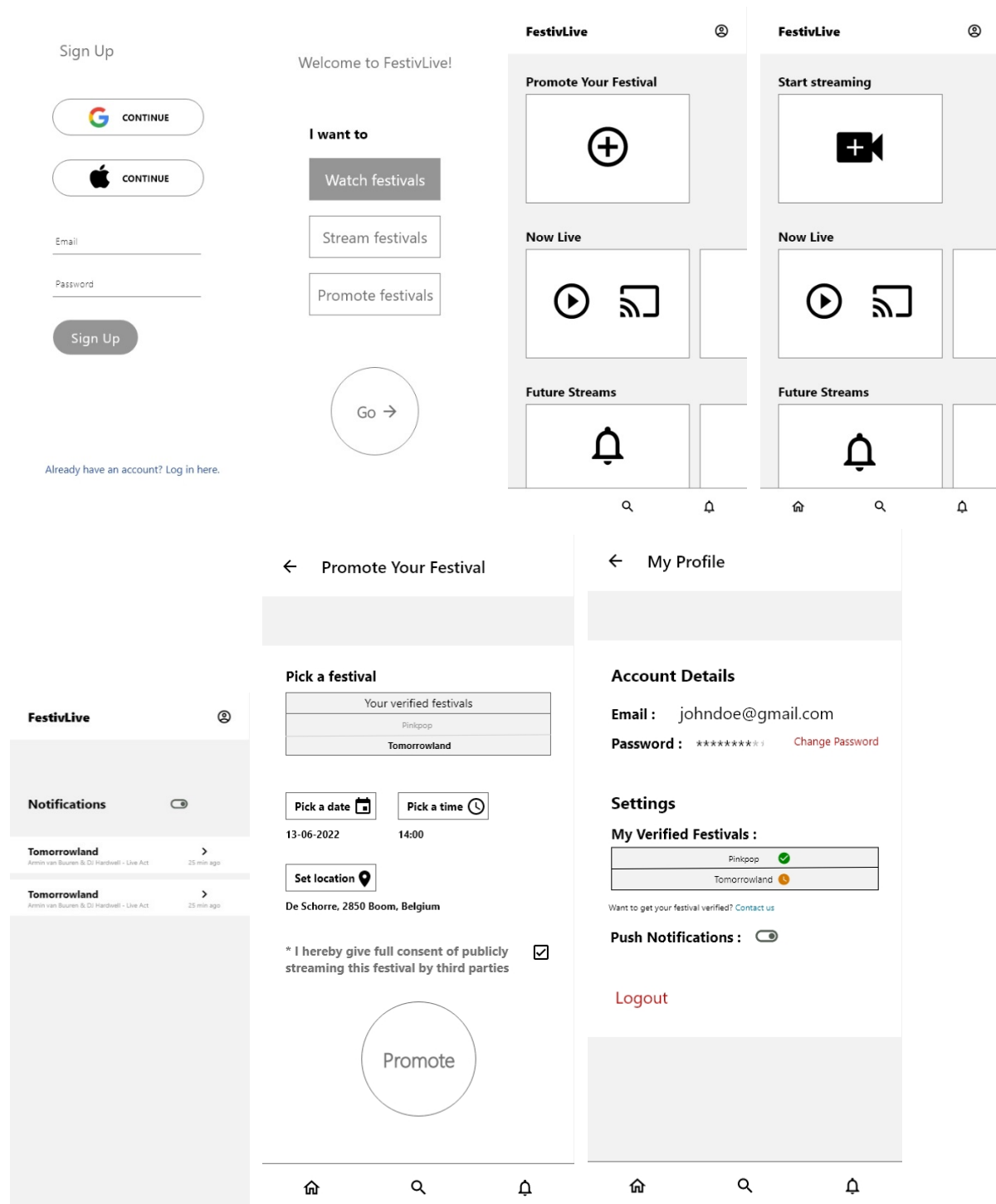
User stories

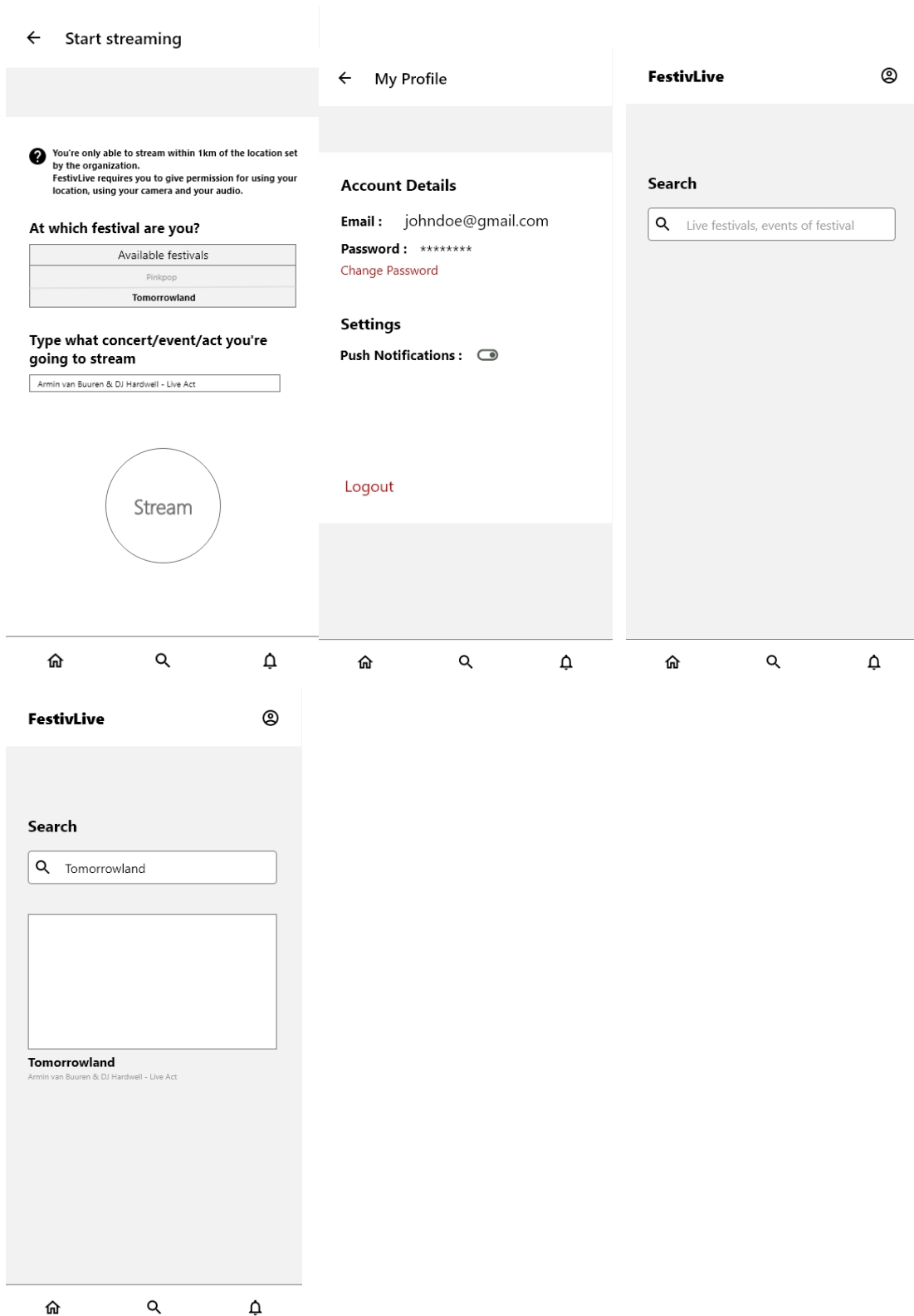
ID	User Story	MoSCoW
1	As a streamer I want to start a broadcast so I can share my experience	Must
2	As an organizer I want schedule an event so visitors can broadcast my event	Should
3	As an organizer I want to set the location of my event so only physical visitors can broadcast	Must
4	As an organizer I want to retract permission so I can be flexible in deciding what gets streamed	Should
5	As a streamer I want to stop the broadcast so I can control what I send to my viewers.	Should
5	As a streamer I want to schedule future broadcasts so that I can inform viewers when I start broadcasting	Could
6	As a viewer I want to watch a broadcast so that I can view concerts/festivals I like at home	Must
7	As a viewer I want to be able to get reminded when future broadcasts start so I don't miss the events I want to watch	Could
8	As a viewer I want to be able to search for festivals that are going to be broadcasted	Should
9	As a user I want to log in so I can use the application	Must
10	As a user I want to create an account so I can save my preferences	Must
11	As a user I want to screencast the broadcast so that I can watch it on a big screen	Should

First sketches

The first few designs of the app.

Since there are several different kinds of stakeholders in this project we have designed the app for each of these stakeholders. An organizer will, for example, see different layouts suited for their needs compared to a streamer.







Tomorrowland
Armin van Buuren & DJ Hardwell - Live Act



Tomorrowland
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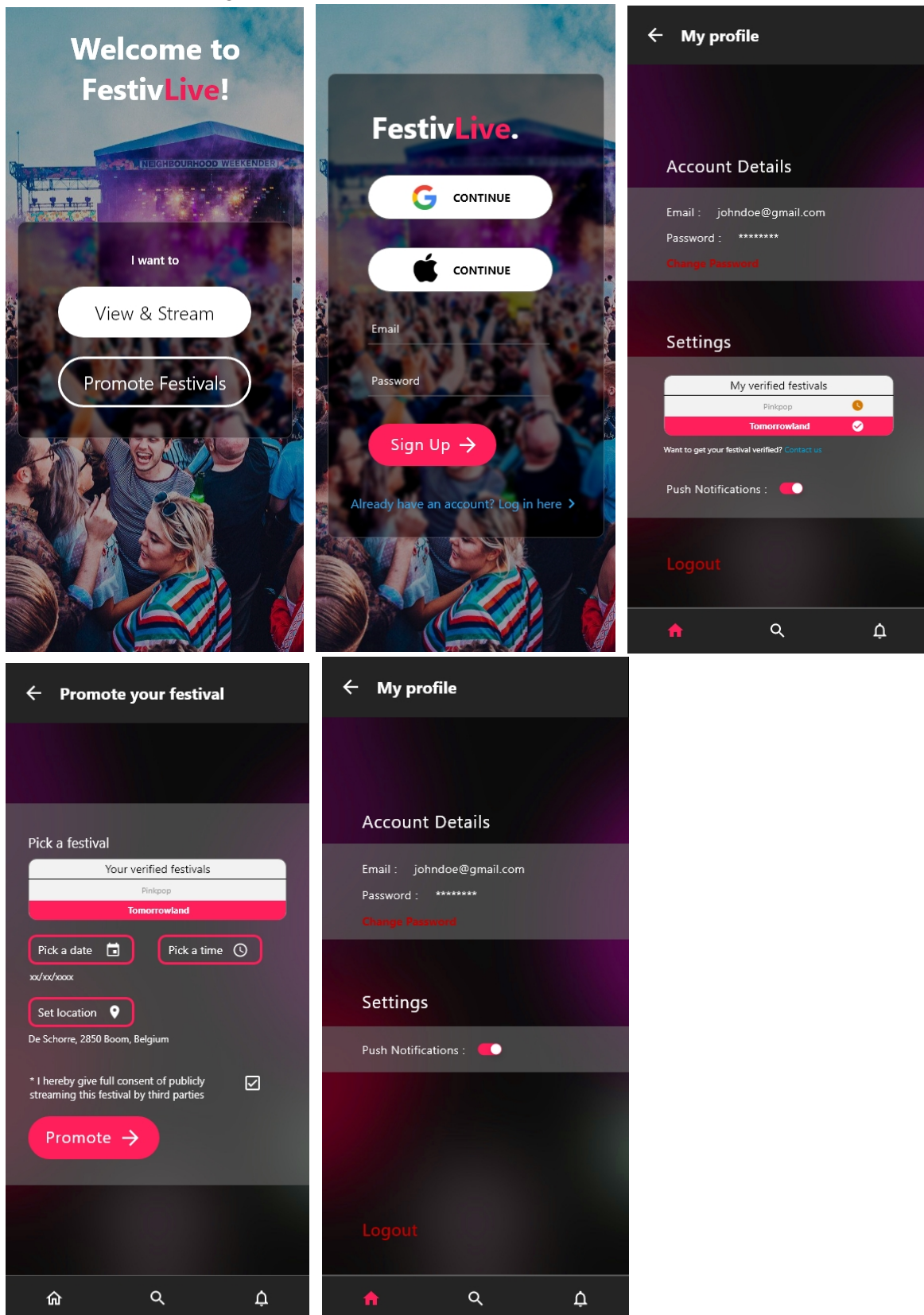


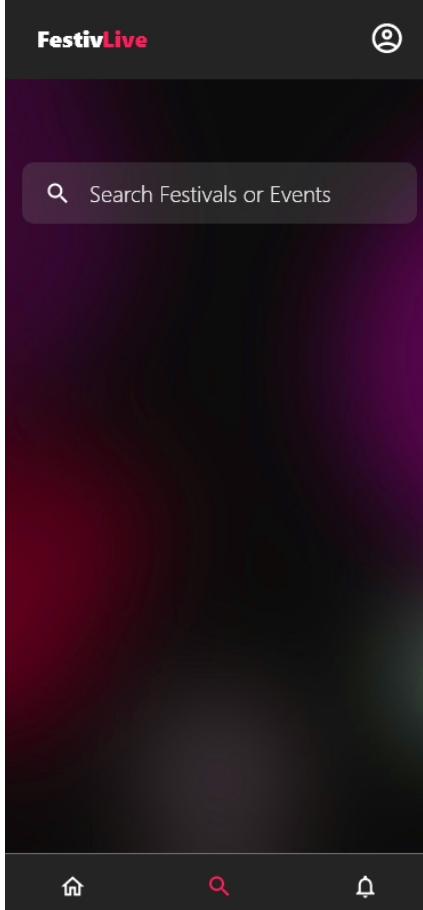
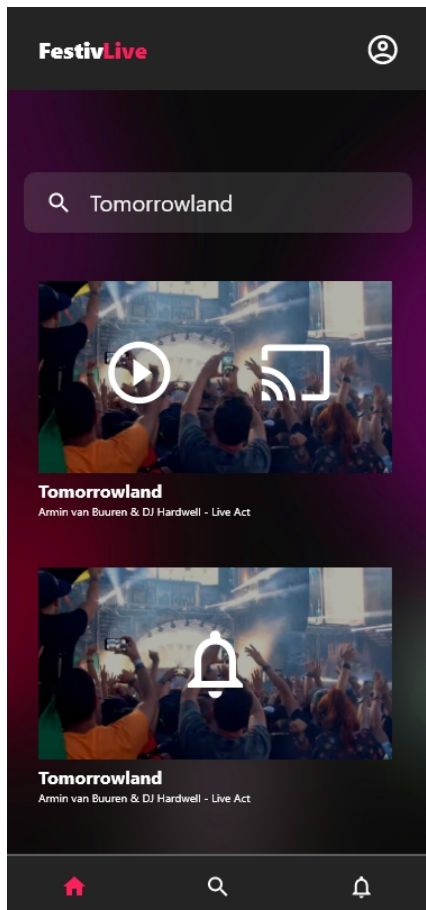
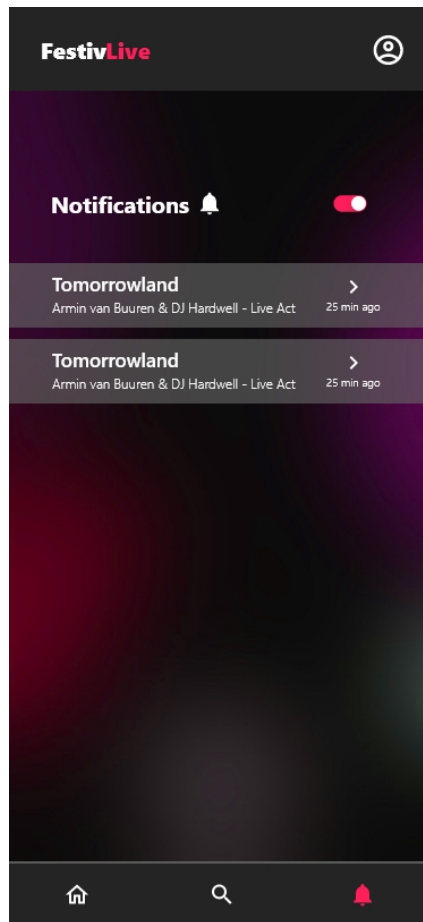
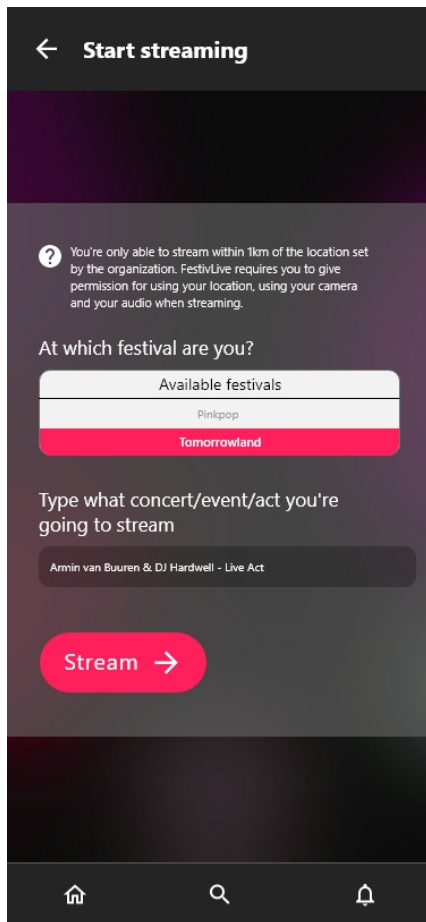
Tomorrowland
Armin van Buuren & DJ Hardwell - Live Act

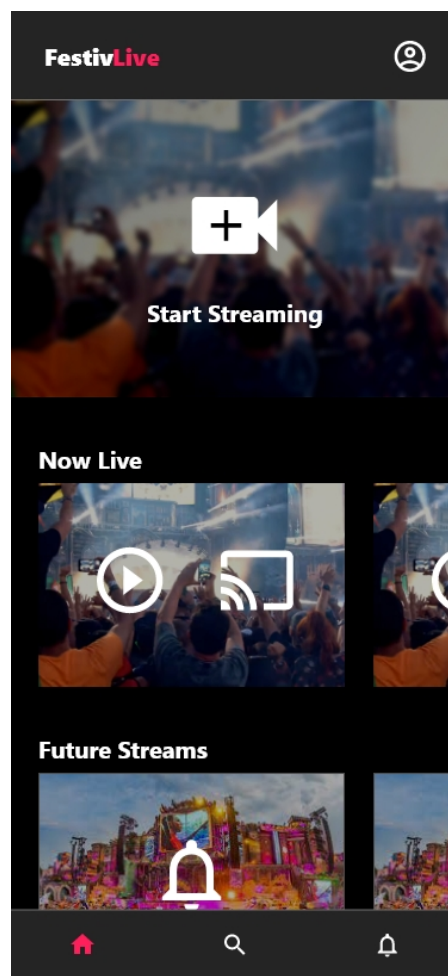
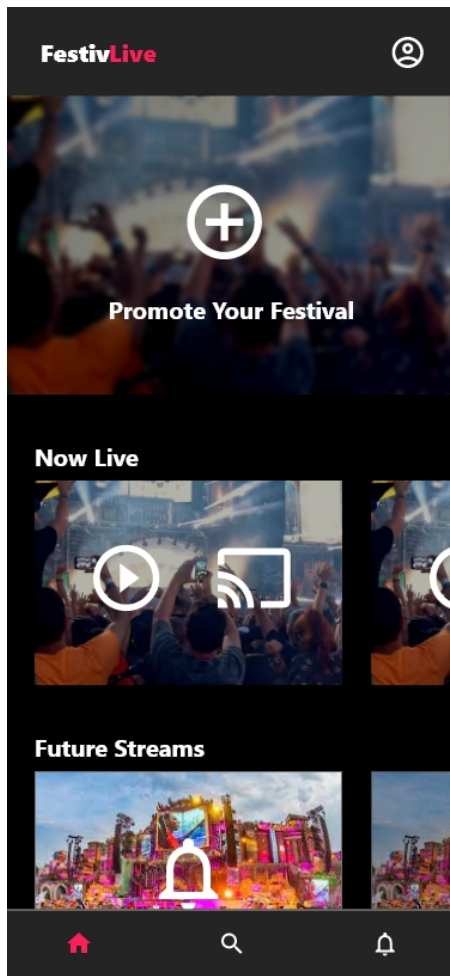


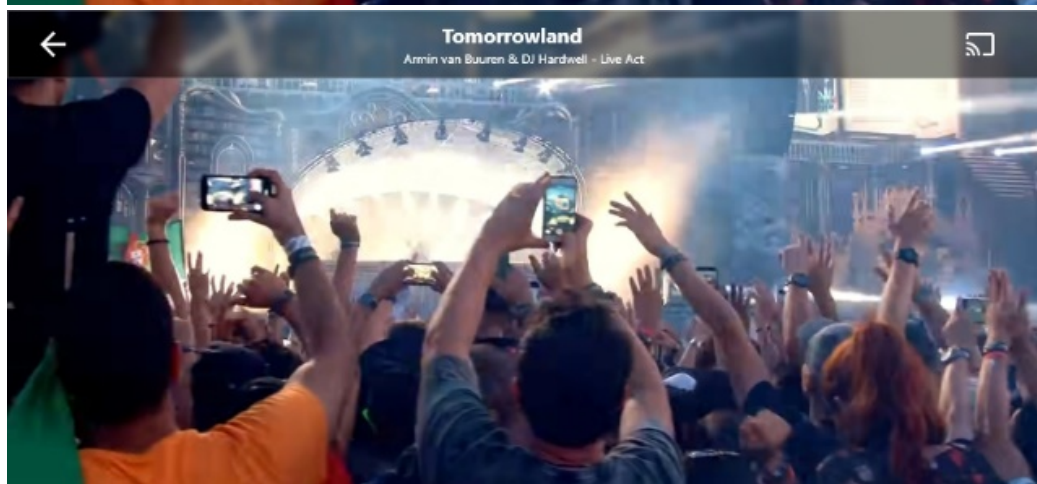
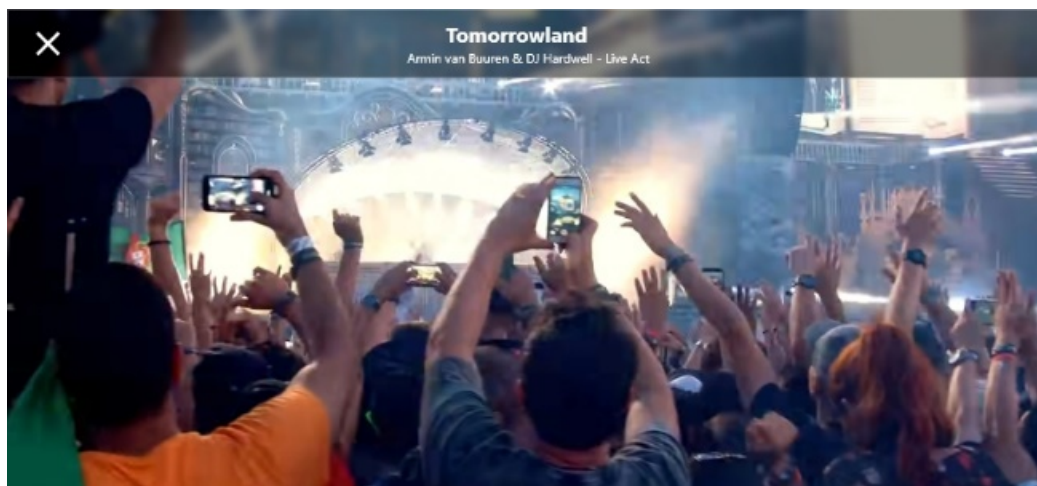
Final Design

The final design of the app. We decided to split up the different types of users into 'Viewers & Streamers' and 'Organizers'



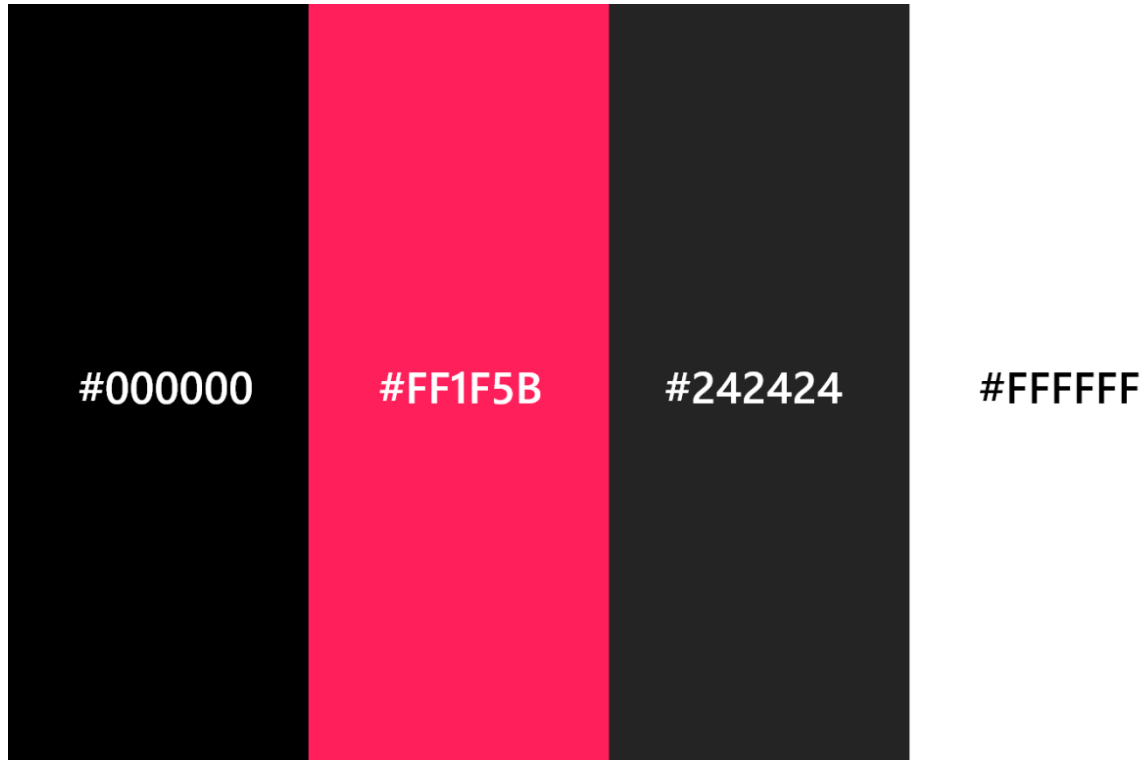






Color Palette

The image below contains all the colors that are used for the app.



#000000: used for background of the body of the app and text on light backgrounds.

#FF1F5B: primary color, used for elements in the app that need the user's attention.

#242424: accent background color, used for the 'appbar' and 'tabbar' to dissect them from the body background.

#FFFFFF: used for text on dark backgrounds and icons.

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