



**FPT UNIVERSITY
CAPSTONE DOCUMENT**

Enhance SoundCloud Audience Personal Experience

Member name :	Tran Thanh Hoang - SE03649 Pham Thai Quynh Nhu - SE61511 La Hong Quan - SE03600
Student ID	
Supervisor	Tran Thi Le Quyen
Capstone Project code	

CONTENTS

1

PROJECT INTRODUCTION

2

PROJECT PROPOSAL

Problem Definition

Name of this Capstone Project

Problem Abstraction

Project overview

Define the Problem

Research

Specify Requirement

3

DESIGN PROPOSAL

Building first Sitemap

User Requirement Specification

Building first Prototype

4

PRE DESIGN

User Test

Building second Sitemap

Building second Prototype

User Interface Design

Style Guide

Design Layout

5

DESIGN FINALIZATION

Design Overview

Review User Interface Design

User test with Interface Design

Design Finalization

6

FUNCTIONS STIMULATION

PROJECT INTRODUCTION



ABOUT SOUNDCLOUD

“As the world’s largest music and audio platform, SoundCloud lets people discover and enjoy the greatest selection of music from the most diverse creator community on earth. Since launching in 2008, the platform has become renowned for its unique content and features, including the ability to share music and connect directly with artists, as well as unearth breakthrough tracks, raw demos, podcasts and more. This is made possible by an open platform that directly connects creators and their fans across the globe. Music and audio creators use SoundCloud to both share and monetise their content with a global audience, as well as receive detailed stats and feedback from the SoundCloud community.”



MIKE

“Studying, working, relaxing,...
Everything I do, I do it listening to music”

SOUNDCLOUD USER PERSONA

#COLLEGE STUDENT #AVID MUSIC LISTENERS

ABOUT

Mike is a young, sociable college student who love music and always in the mood of finding and sharing new music through social media. He listens to songs any-time he has chance and saves his favorite song in specific playlists, which he describes as "the best place to express his personality".

Age: 22

Gender: Male

Status: Single

Social:



Trends:



Tech:



FRUSTRATIONS

- Unsatisfied with Discover Newly Upload playlist
- Unable to satisfied moods
- Confused by similar functions

NEEDS

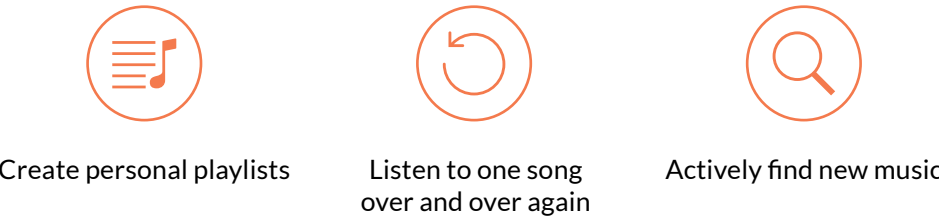
- Ways to discover new music
- Music flow that can go along with his particular moods
- A community where he can express nt streaming music

LISTENING HABIT

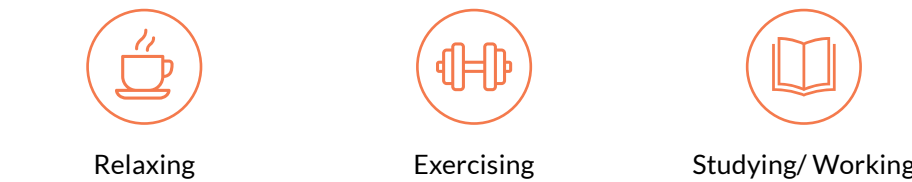
- He usually take time to create playlists for variable topic and purpose
- Music is an important part of his social life, he loves to share new music with his friends
- He plays music mostly on website and mobile app
- He has general knowledge about music genres

LISTENING HABIT RESEARCH

Main listening habits



People mostly listening to music when



Devices used to listen



Frequency of finding new music



On the scale of 1 to 5 which describe the frequency of finding new music: 86.1% user rate more than 3 (which can be understood as “more than often”).

Feeling when discover new music



Most appealing recommended sources



SOUNDCLOUD AWARENESS

Top Reason why user use SoundCloud

- 1 They can find great and new music
- 2 Their favorites artist use SoundCloud
- 3 This is a place to showcase their taste and personality by music

Most used Functions

- 1 Playing music
- 2 Playlist
- 3 Search

Top Hardest Functions

- 1 Stream
- 2 Chart
- 3 Station

User found these function hard to use because they did not know about them and they are not clear enough

PROJECT OVERVIEW



NAME OF THIS PROJECT

After in-depth researches about SoundCloud and its Target audiences, we came up with the idea of fulfilling their needs and trying to reduce pain points from the website. The main concept, which is to “*Enhance SoundCloud Audience Personal Experience*”, is taken as the name of the projects.

This concept is then divided into three main objectives in the next part.

PROBLEM ABSTRACTION (MAIN OBJECTIVES)



Create Listening Atmosphere

WHAT: This is our first option to enhance audiences experience by trying to add a **personal space** to the website, in which user can enjoy music not only by the track itself, but also by the **specific background effects**.

WHY: From the need of audiences to enjoy playing music within a **specific mood**; plus the insights about how **the surroundings** effect one feelings and listening experience.

HOW: A new feature contains background effects is added, dedicated to users who seek for a particular atmosphere to experience music.



Facilitate Personal Access to Music

WHAT: This objective is about helping user with their choices of music.

WHY: From the need of audiences to instantly play music. Besides, the collected data about listening habit also shows that people are likely to play their playlists, or repeatedly listen to their favorite songs.

HOW: By **ancitipated suggestions** and **playlist-oriented** management flow.



Personalize Discovery Flow

WHAT: An important goal of the project, along with to make a place for user to enjoy their favorite tracks with ease, is to **deliver new music** to **each individuals** in the way that match their taste and feelings.

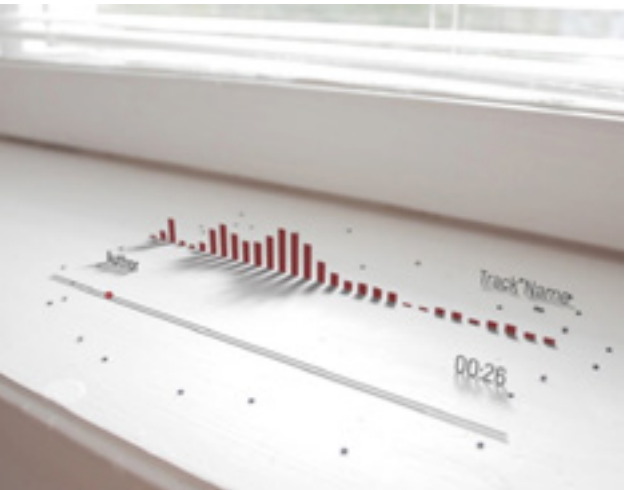
WHY: From the need of audiences to seek for new music and the frustration from unsatisfied discovery flow that cannot come along with their expectation and moods.

HOW: Provides various way to approach unheard tracks and adjust the discover function to fulfill user needs.

RESEARCH - ANOTHER WEB/APPS

				
	SoundCloud	Spotify	Apple Music	Googleplay Music
Distinct Function	Discover Provides a Newly Upload playlist, updated whenever there is a new track that fit one listening habit and suggest related tracks of recently played music.	Discover Weekly Playlist Provides personalized play-lists every new week, based on user's listening habit.	Connect section Serves as a social network for artists where they can share photos, videos, lyrics, demo tracks, mixtapes and more with their fans.	Cloud Storage Instant music from personal library, allows users to listen to their favorite song offline.
Strengths	<ul style="list-style-type: none">• Largest song library• Global• Huge userbase• Provides tracks that can't be found anywhere else.• Allows discovering new music straight from the source, the artist	<ul style="list-style-type: none">• Huge collection of music• Allows wireless streaming to other devices• Social network integration• Exclusive content• Alexa Intergration	<ul style="list-style-type: none">• Syncs across devices• Connect feature allows closer communication with musicians• Exclusive content• Siri integration in a music streaming service	<ul style="list-style-type: none">• Offers free cloud storage for personal music• Can organize streamed music and uploaded music• High sound quality
Weaknesses	<ul style="list-style-type: none">• Lots of variation in audio quality for user-uploaded music• Poor capabilities for discovering new music	<ul style="list-style-type: none">• Almost all of the songs on spotify can be found in another music streaming service• Not available in many countries around the world• Free plan has very annoying audio ads	<ul style="list-style-type: none">• Anyone not interested in mainstream names will be disappointed by the feed's lack of diversity• Lacks a social component that connects you with your friends and other music listeners.• No free plan	<ul style="list-style-type: none">• Limited options without a subscription

RESEARCH - TECHNOLOGY



Track suggestion engine

Function: Discover Newly Upload uses "Taste-of-the-art machine" learning algorithm to deliver fresh new music and audio suggestions based on your likes and plays on SoundCloud – refreshing frequently with tracks you won't find anywhere else. The more you use SoundCloud, the more the algorithm learns and perfects itself, day after day.

Pain point: The algorithm takes time to learn user listening habit and interacting pattern. Consequently, it may returns a blank page or poor suggestions to new users.

Station Function: Serves a longer queue of songs that are a mixture of similar, new, and popular tracks related to the track or artist you started the Station from, for an experience closer to listening to the radio.

Pain point: User can access Track Station and Artist Station. Stations access from Aritst Profile returns engaging suggestion; but Track Station results and Related Tracks results are almost the same.

Related tracks are selected by an algorithm that returns recommendations through a network of relations and interactions on SoundCloud (for example a user liked a track, a user followed another user, a track is reposted etc.). The recommendations for a track can be both directly or indirectly related to tracks in this network.

Tempo vs. Mood

Music tempo, measured by BPM (Beat per minute) has been proven to cause noticeable affects on heart rate. To be specific, the heart beats faster while one is listening to fast music and vice versa. Heart beat, on the other hand, also changes in different actions and emotions. As a consequence, a particular range of BPM will match with heart rate in a specific situation. This result explains the reason why some fast songs feel great when one is working out but become annoying when they want to relax.

All of the above shows that it is possible to have a algorithm which return suggestions based on music bpm that can come along with user particular moods.

TECHNOLOGY RESEARCH : INTERACTION

We have expanded our range of research from website algorithm to more interactive technology in order to achieve our goals to Enhance SoundCloud Audiences Personal Experience.



NEAR FIELD COMMUNICATION (NFC)

Near field communication technology: is a set of communication protocols that enable two electronic devices, one of which is usually a portable device such as a smartphone. Speakers -- NFC is typically used in these devices to pair a smartphone to a speaker. The music is not actually streamed to the system via NFC but is shared through Bluetooth. Samsung and Sony were two notable companies with NFC speakers. Headphones -- The function is much like wireless speakers. Users tap their phone to the headphones to allow pairing for the transfer of music.



PRIZM : THE MUSIC BRAIN

Prizm revolutionizes listening to music with friends. It recognizes who's there using their smartphone and adapts the music according to each person's tastes. Using its patented Contextual Music Engine technology, Prizm identifies users in the room and detects the mood, in order to play the best music without any help. Through WiFi, Prizm explores millions of tracks for you.



VIRTUAL REALITY

Virtual reality is the term used to describe a three-dimensional, computer-generated environment which can be explored and interacted with by a person. That person becomes part of this virtual world or is immersed within this environment and whilst there, is able to manipulate objects or perform a series of actions.

SPECIFY REQUIREMENT



OBJECTIVE 1: Create Listening Atmosphere

REQUIREMENTS FOR OBJECTIVE 1:

Current Situation: SoundCloud has its unique point as a website that allow user to browse the site freely while still be able to listen to a track. However, the user interface design sometimes appears as "confusing and plain" in its target audience opinions. The website is lack of elements that can contribute to their experience while listening to music.

Solutions:

- Separate browsing flow and now playing music flow
- Add new features to improve experience: **Listening Theme** with visual effect and background sound.



OBJECTIVE 1: Facilitate Personal Access to Music

REQUIREMENTS FOR OBJECTIVE 1:

Current Situation: SoundCloud homepage approach users with **Stream** function, which is a list of latest posts from people they are following. In fact, the survey shows that **Stream** is one of the hardest function to use. It is because **Stream** will appear blank if one has not followed any people, and there is also lack of announcement about the new posts. This approach makes people feeling uncomfortable when accessing to their music

Solution:

- Change the approach in **Homepage** from **Stream** to **Recommended** (list of suggested tracks based on users listening habit) and **Recently Played** tracks anticipating the needs of replaying favorite music.
- Adjust **Stream** function so that user can get notification and are able to check newly upload anytime while browsing.
- Alter from **General Music Management** flow (**Collection** function: user see all liked tracks, playlist, following and history in one page) to **Playlist-Oriented** flow (user mostly interact with their playlists) and **History** function to minimize the amount of unnecessary information, helping user to focus on their choice of music.



OBJECTIVE 1: Personalize Discovery Flow

REQUIREMENTS FOR OBJECTIVE 3

Current Situation: One of the reasons users use SoundCloud is to find new music. On the other hand, it is said to have poor capabilities for discovering music compared with other music streaming services such as Spotify, Apple Music and so on. Almost all the function belongs to **Discover flow** such as **Stream**, **Chart** and **Station** are rated as "hard to recognize and use" by survey participants. In addition, audiences also feel frustrated because the service can satisfy their needs of playing music based on purposes and moods.

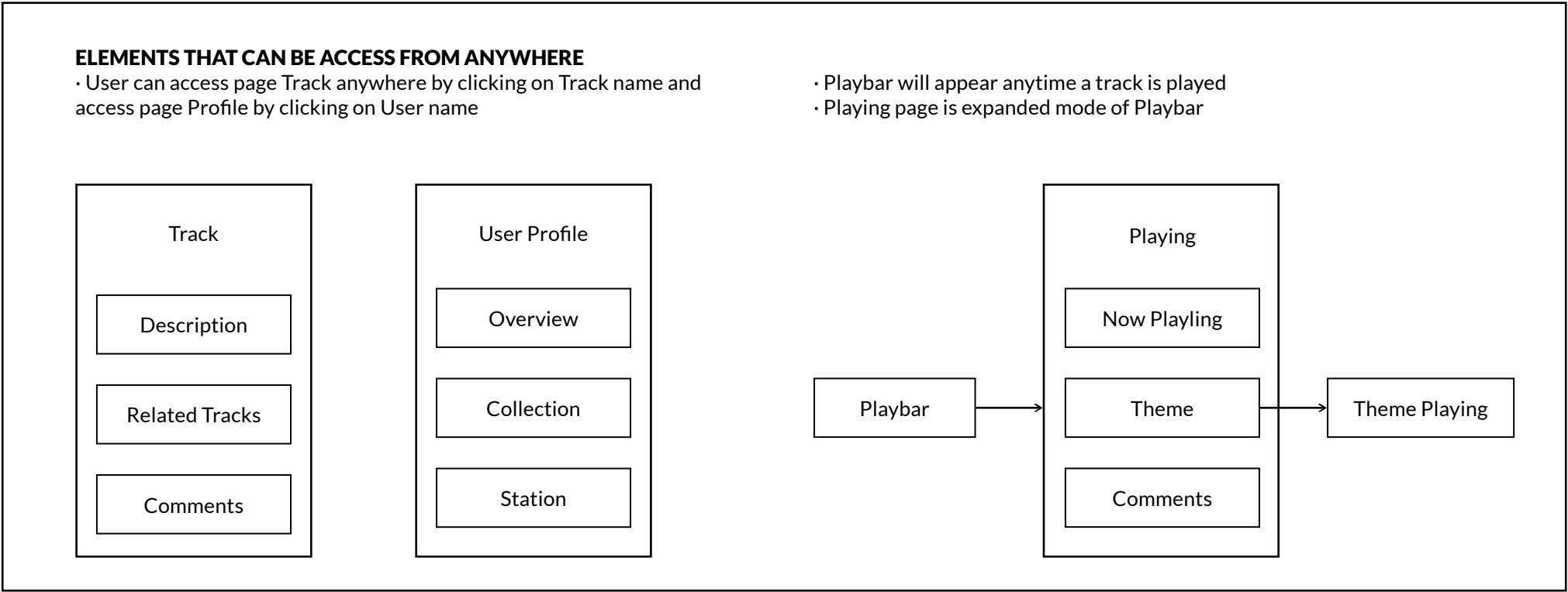
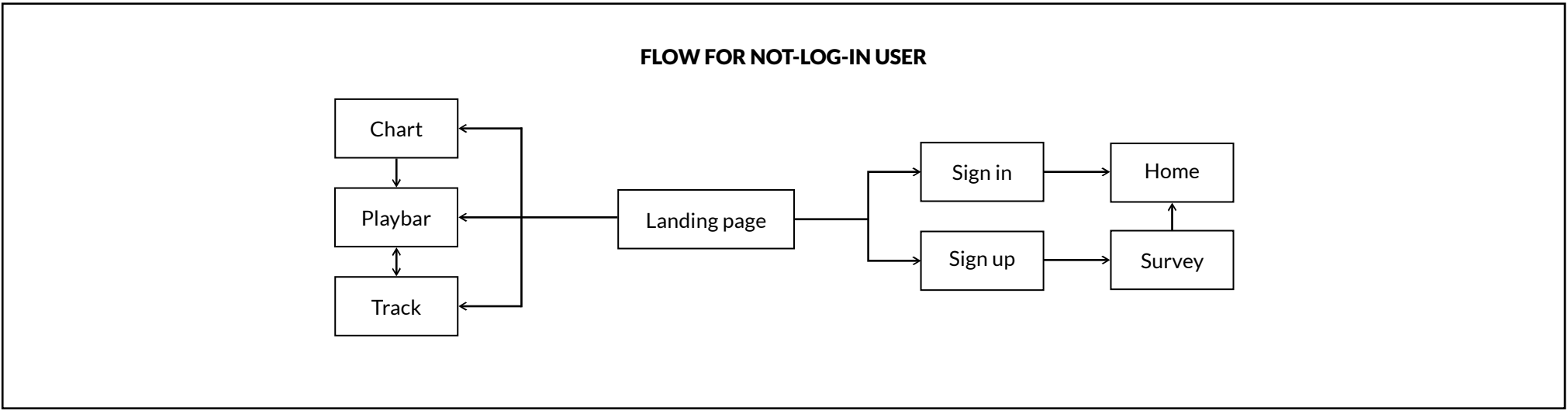
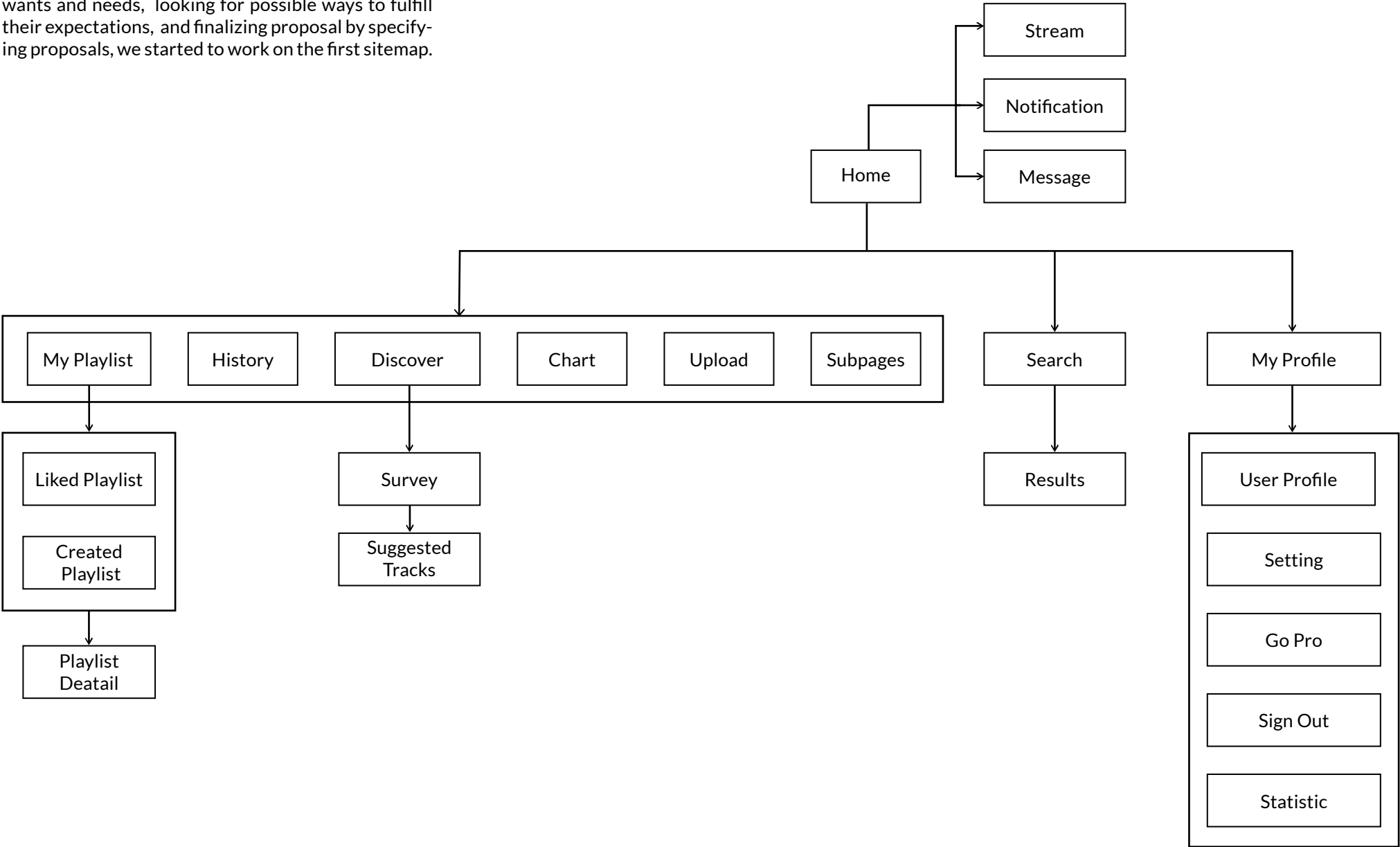
Solution:

- Enhance Discover flow by adjusting **Search**, **Chart**, **Stream** and **Moodstream** function.
- Adjust **Discover** function based on psychological effect of BPM and listening habit to suggest tracks.

DESIGN PROPOSAL

BUILDING FIRST SITEMAP

After doing in-depth researches to study about users wants and needs, looking for possible ways to fulfill their expectations, and finalizing proposal by specifying proposals, we started to work on the first sitemap.

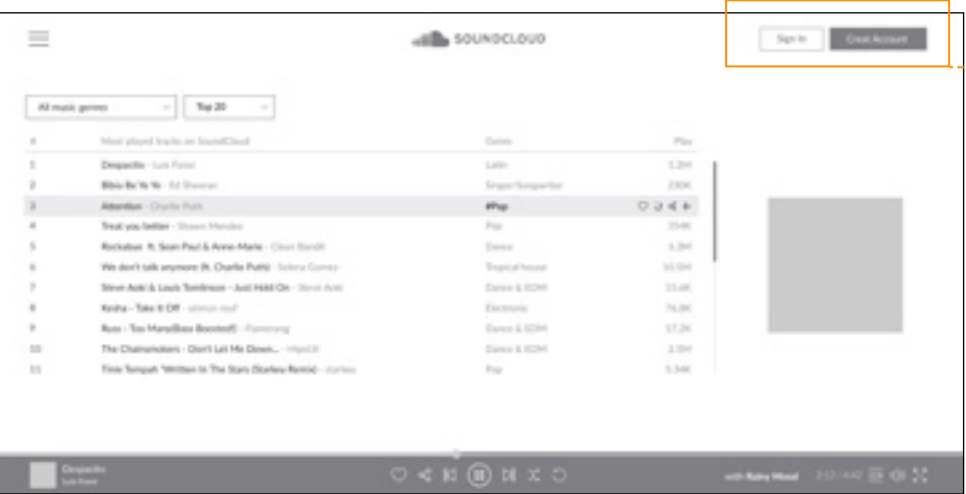
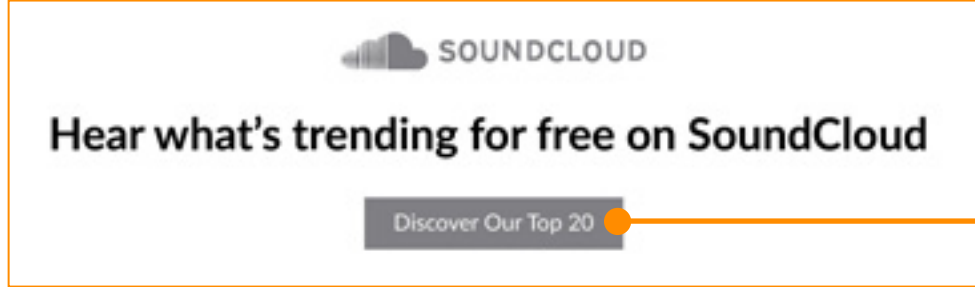
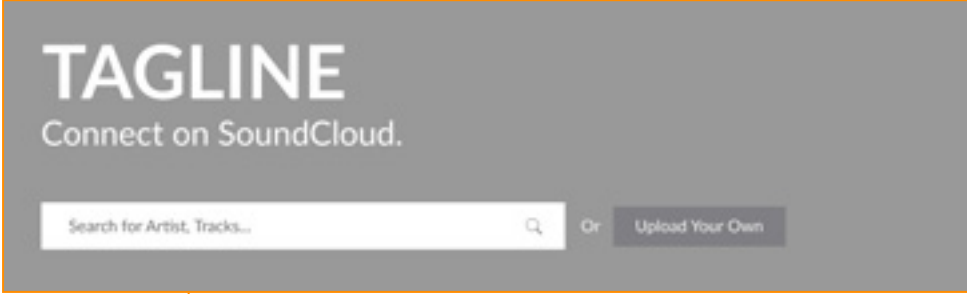


USER REQUIREMENT SPECIFICATION

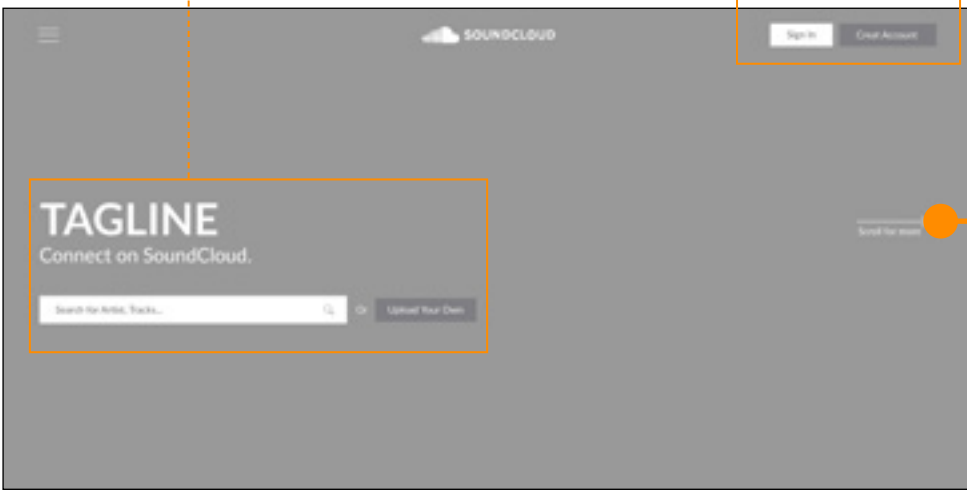
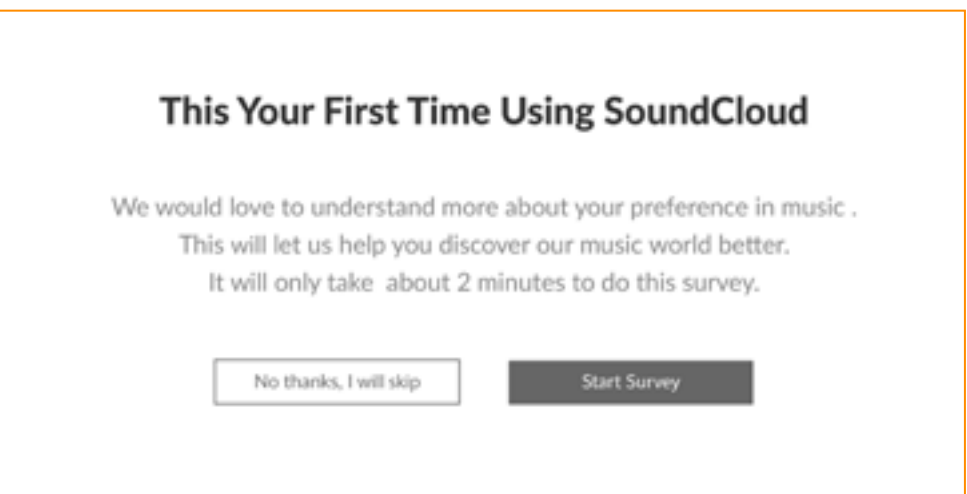
USER CASE	DESCRIPTION	FUNCTIONS REQUIREMENTS
1. NEW USERS GET TO KNOW SOUNDCLOUD	New users usually have their first touchpoint with SoundCloud through a link shared by their friends. If they find the site an interesting place to discover rare music, they might need clear instructions to be able to use SoundCloud easily.	<ul style="list-style-type: none">· Landing Page· First-login Survey· Recommended Track (Homepage)· Moodstream
2. Users look for new gernes	An user might need a clear and easy flow in order to expand one's collection or to try new taste on SoundCloud.	<ul style="list-style-type: none">· Search· Chart· Recommended Track (Homepage)
3. Users want to create their own playlists	A playlist might be created when an user feels like saving their favorite songs on SoundCloud or when they have particular purposes.	<ul style="list-style-type: none">· Add/ Create Playlist· Playlist Managing Flow· Moodstream
4. Users want to enjoy music with specific atmosphere	In some situations, merely listening to music can not be as enjoyable as listening with proper surroundings and harmonized background sound effects.	<ul style="list-style-type: none">· Moodstream· Listening Theme

BUILDING FIRST PROTOTYPE

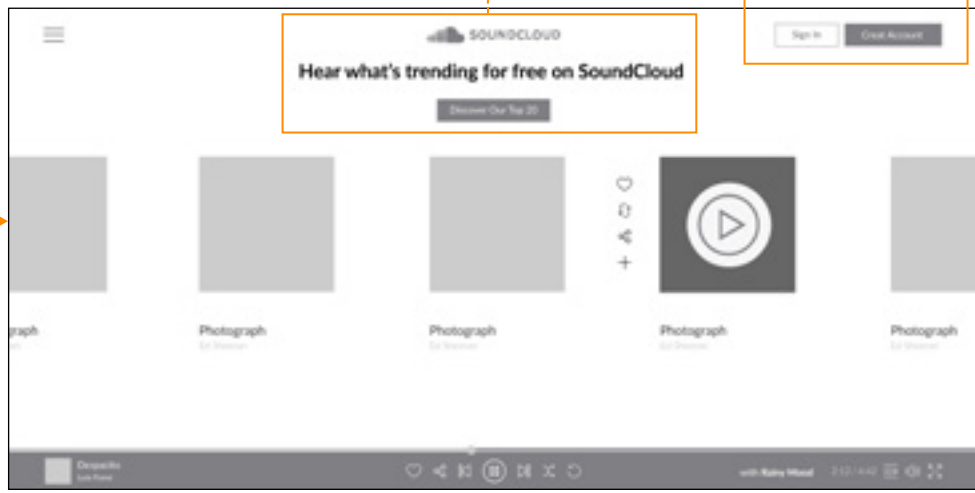
LANDING PAGE – FIRST - LOGIN – SURVEY



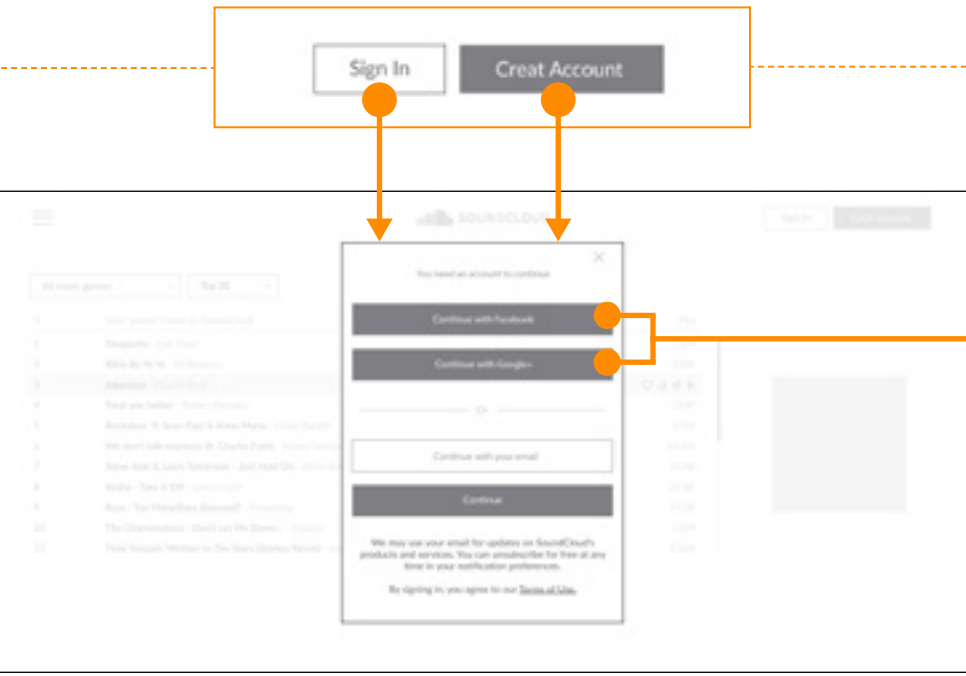
Chart



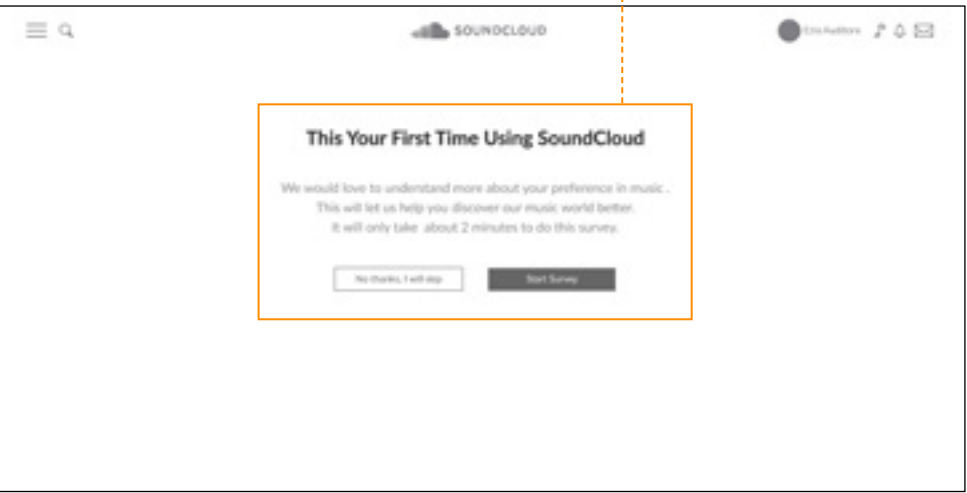
Landing page



Landing page

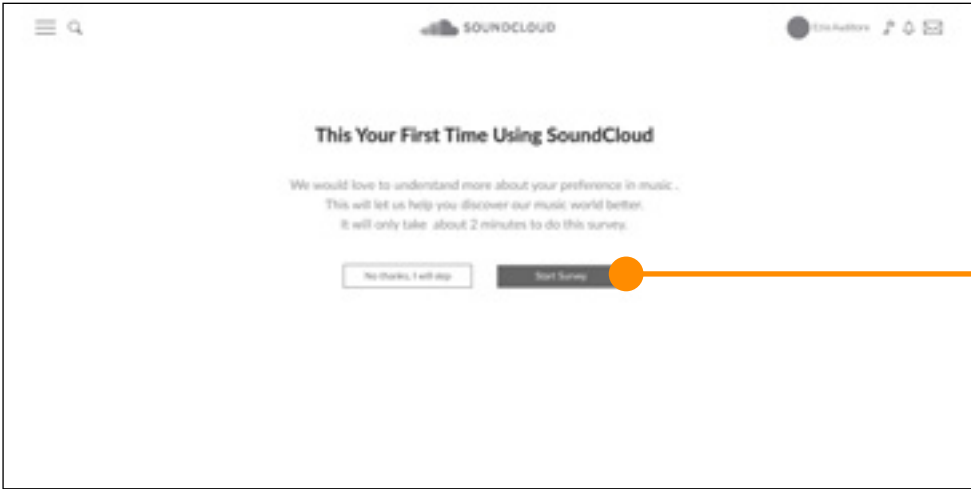


Sign in / Sign up

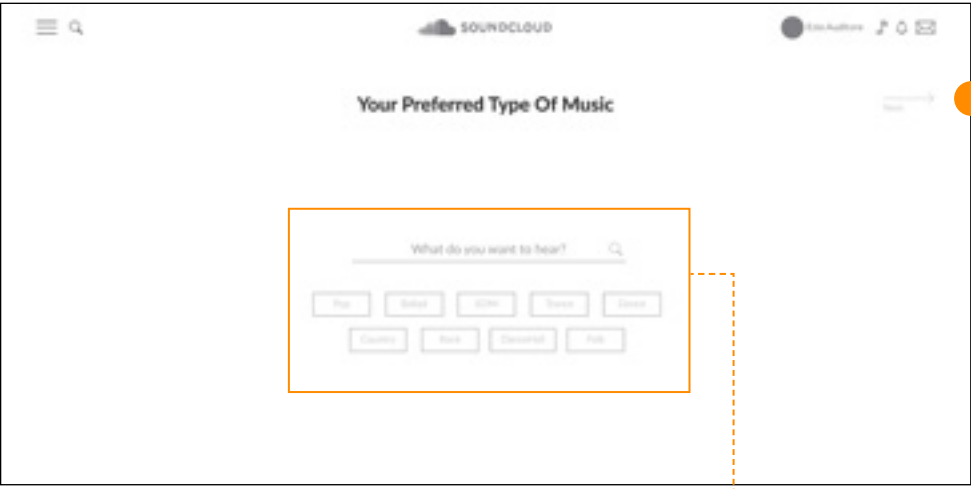


Survey

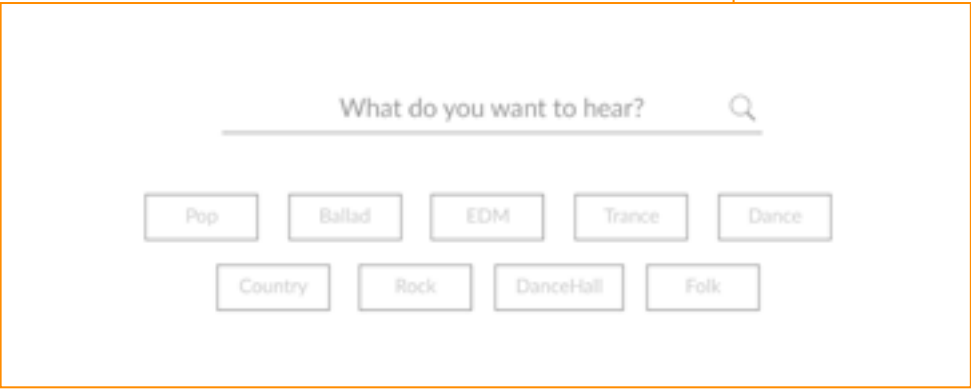
FIRST LOG-IN SURVEY FLOW



Survey - Welcome



Survey - Genre Question



Survey - Hovered and Selection



Survey - Who to follow



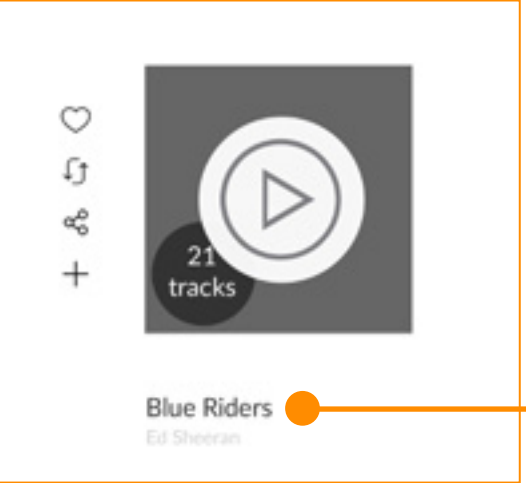
Home

“MY PLAYLIST” PAGE

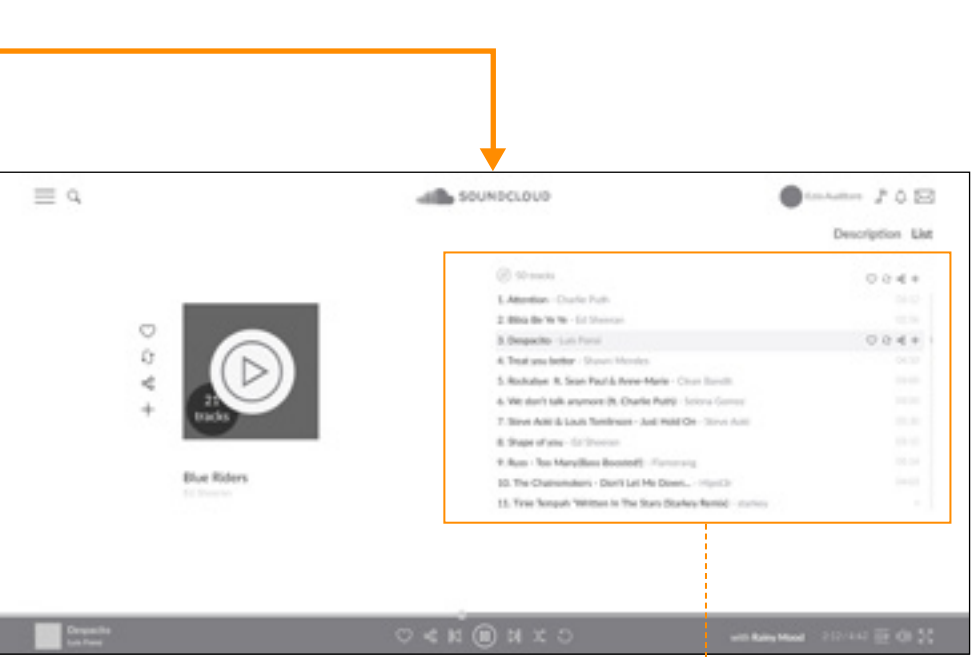


Menu

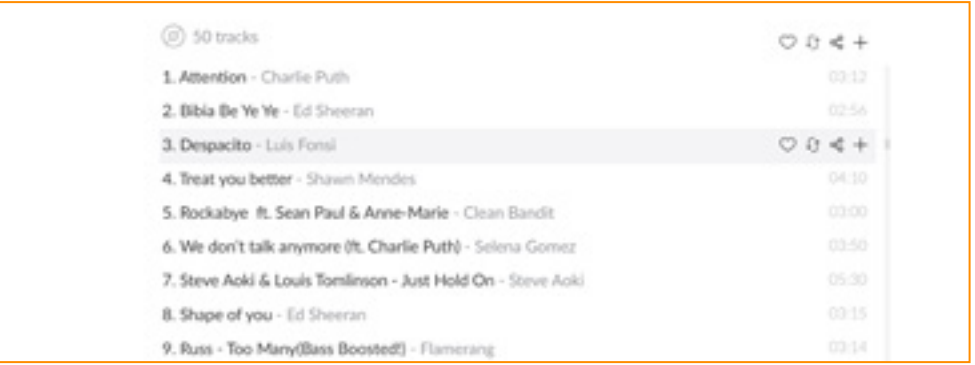
My Playlist



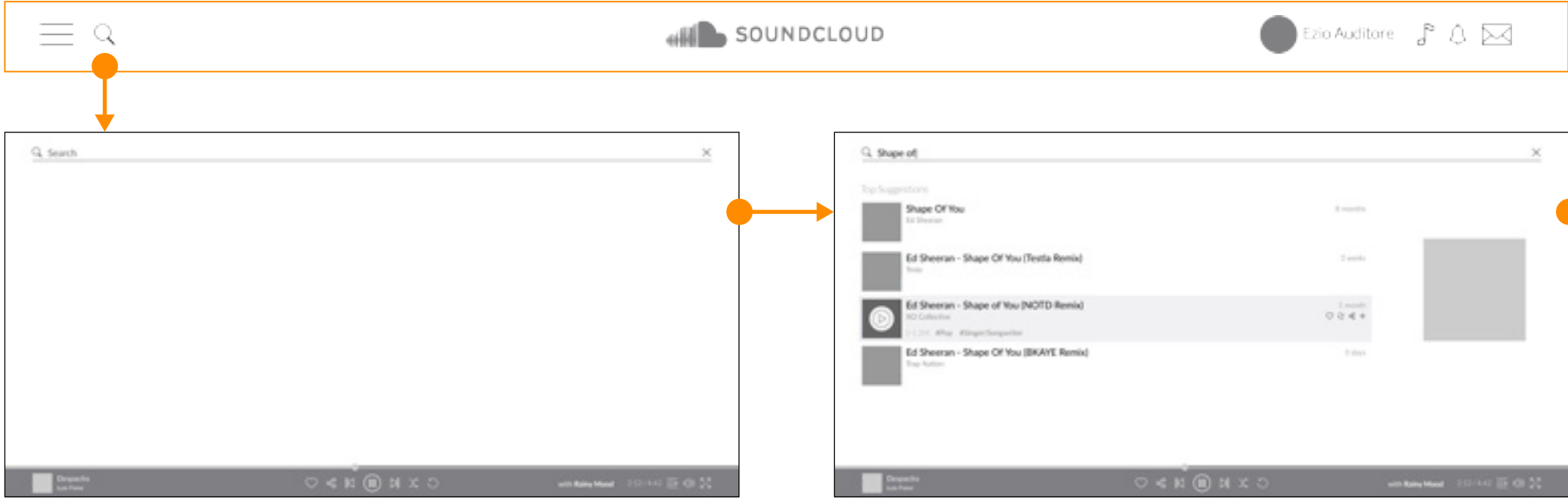
Playlist detail - Description



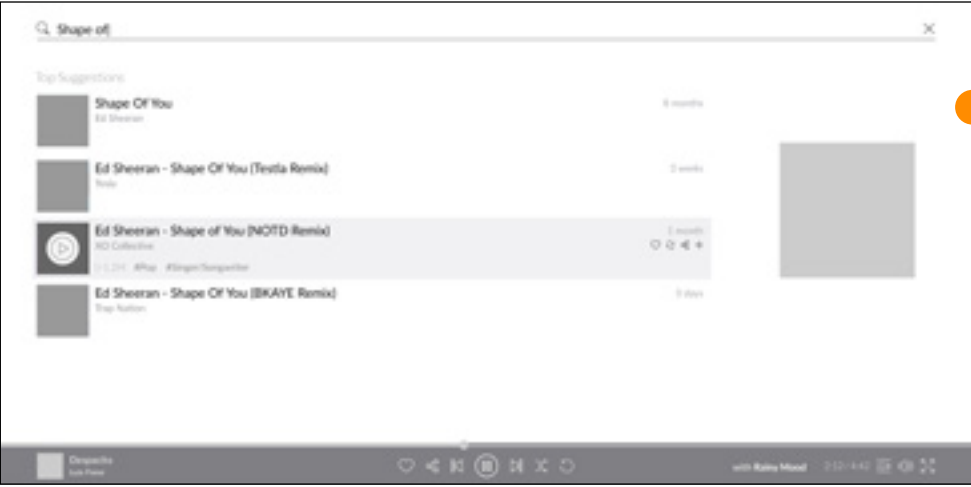
Playlist detail - List



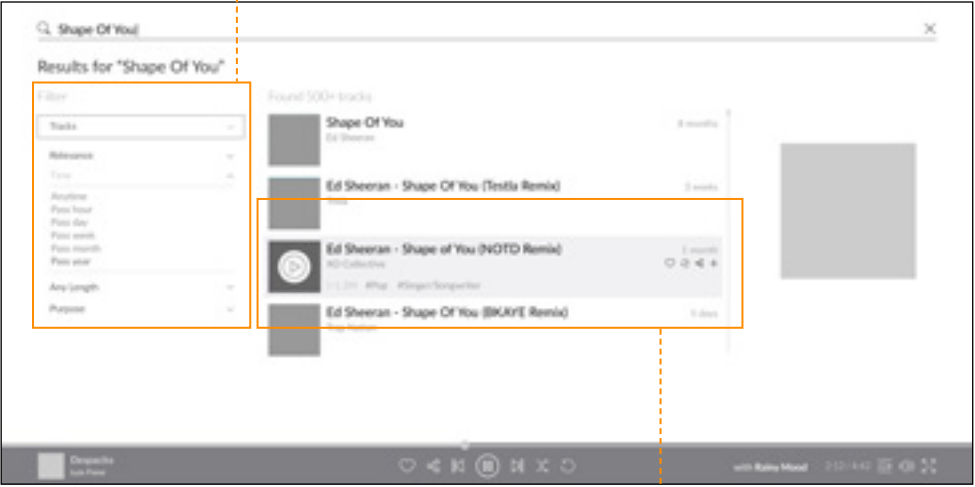
SEARCH FUNCTION



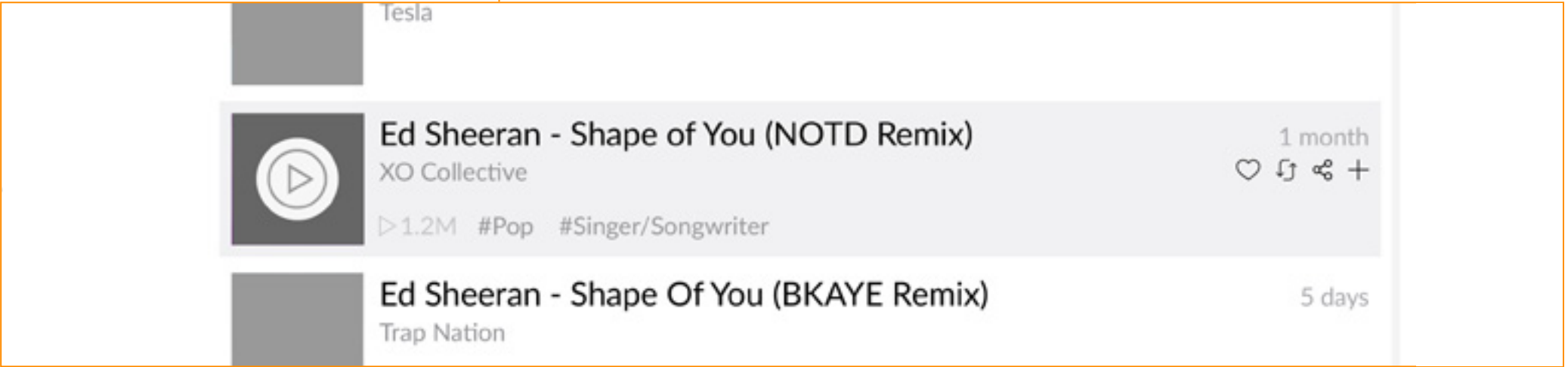
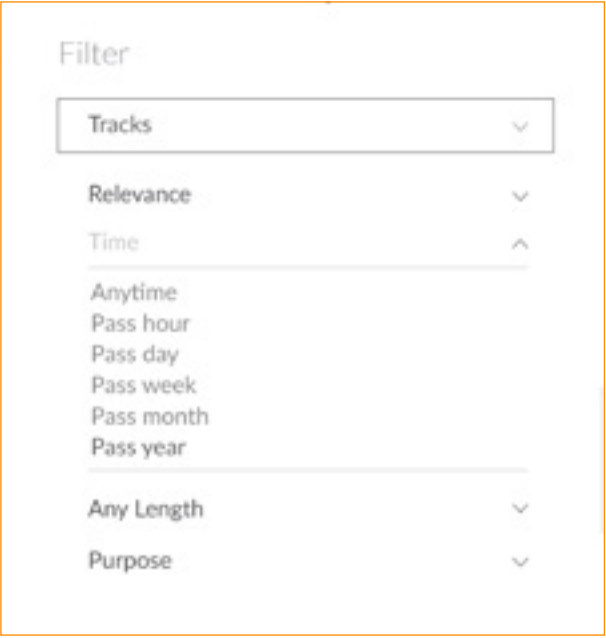
Search - Non input



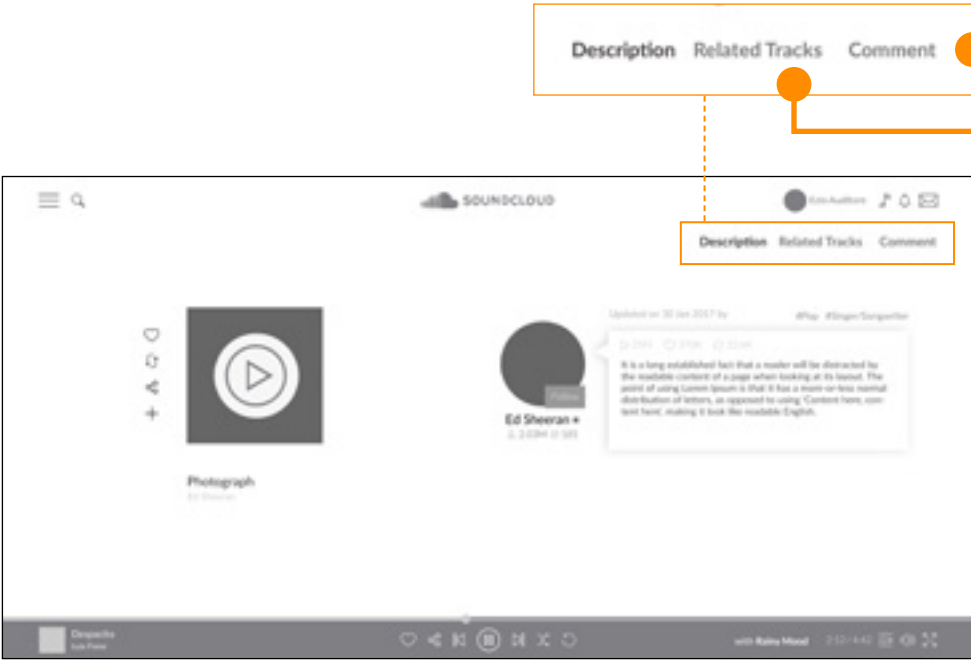
Search - Suggestion



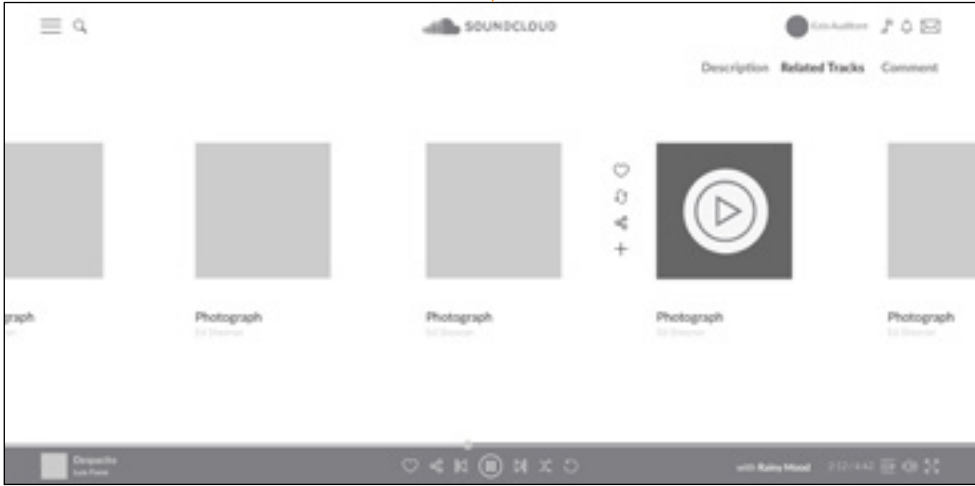
Search - Result



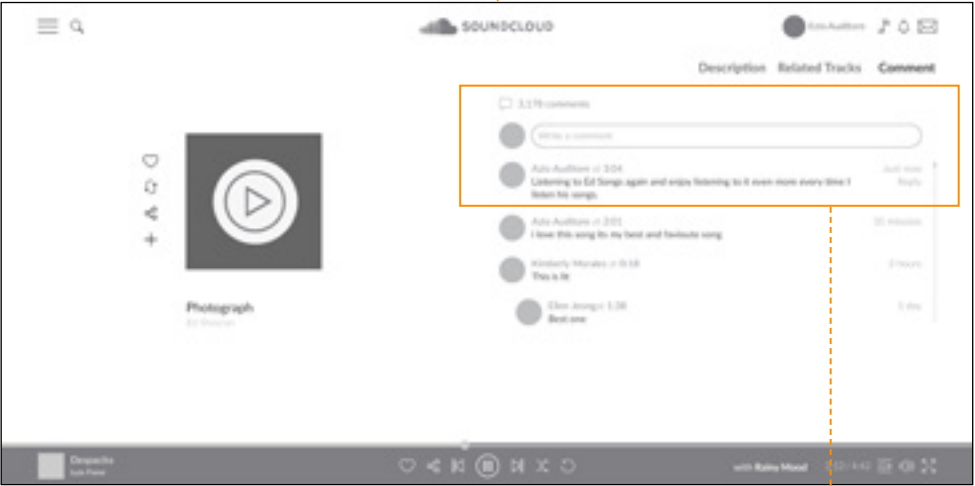
“TRACK” PAGE



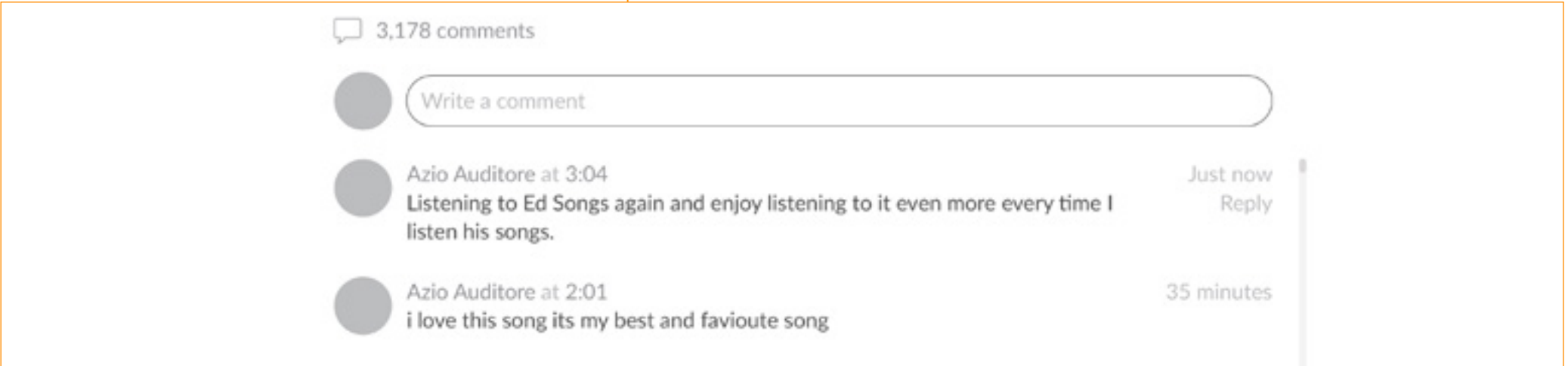
Track - Description

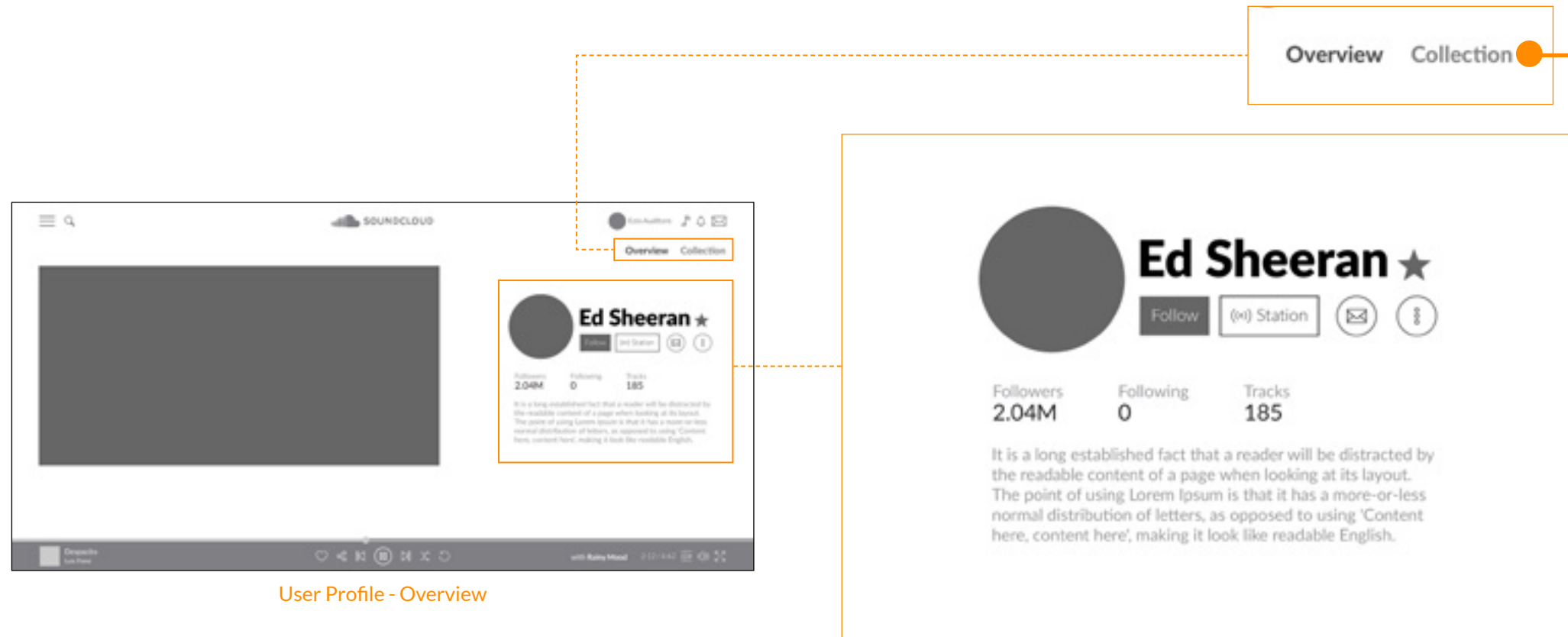


Track - Related Tracks

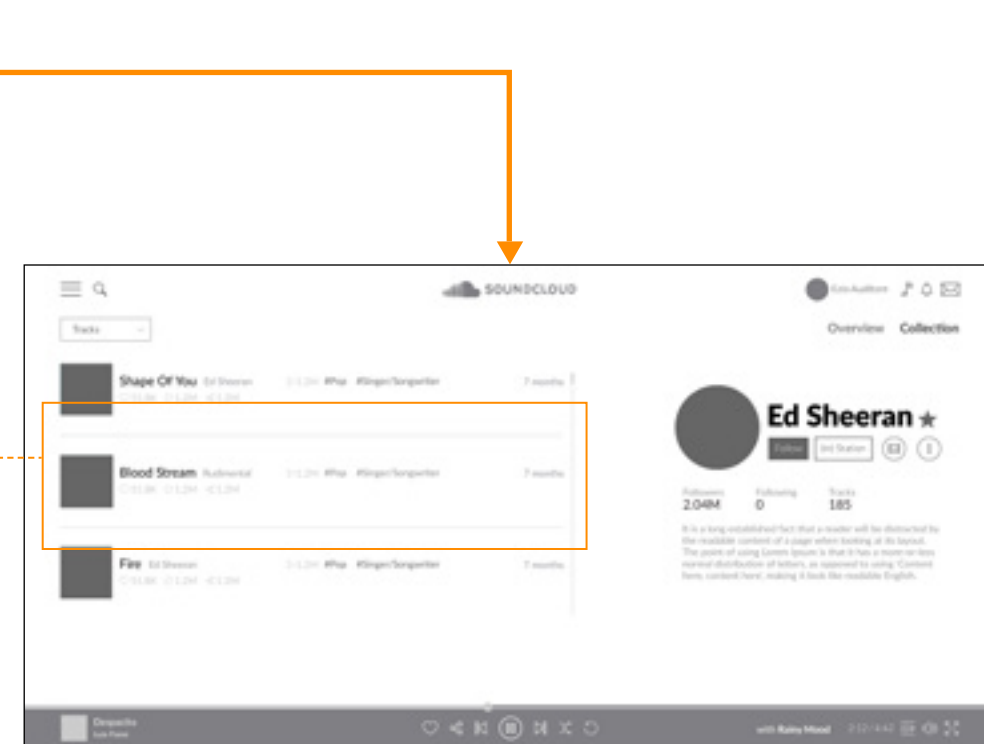


Track - Comments

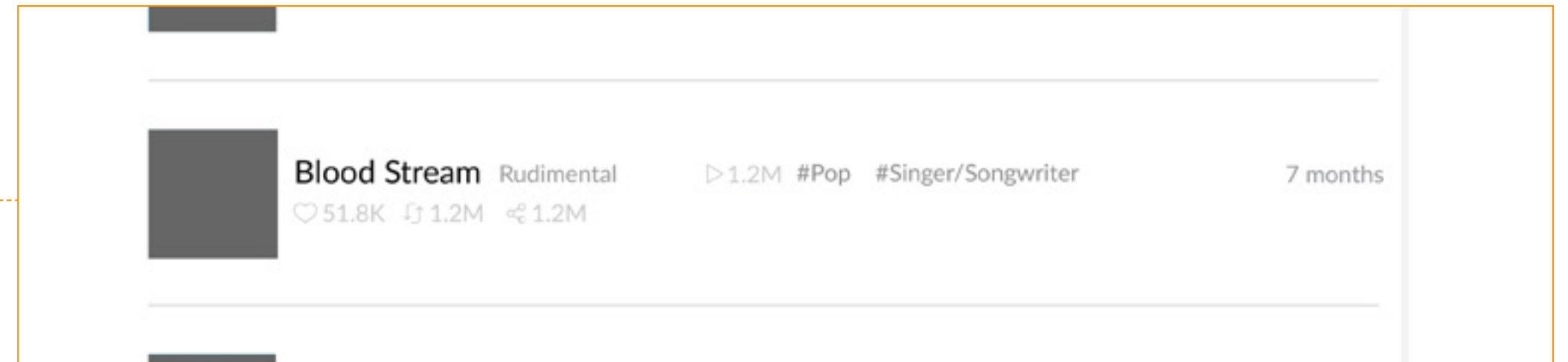




User Profile - Overview



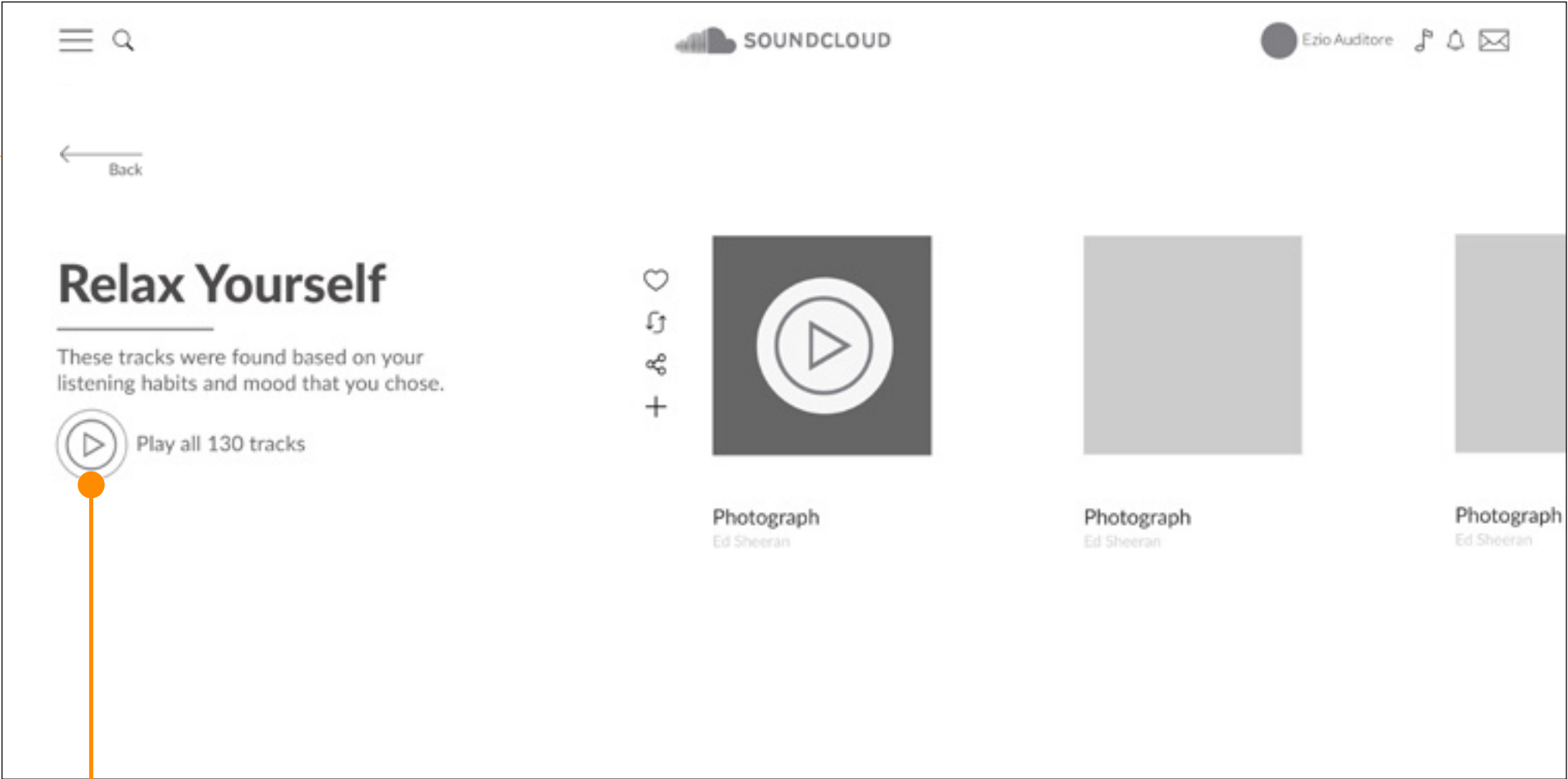
User Profile - Collection



“DISCOVER” PAGE



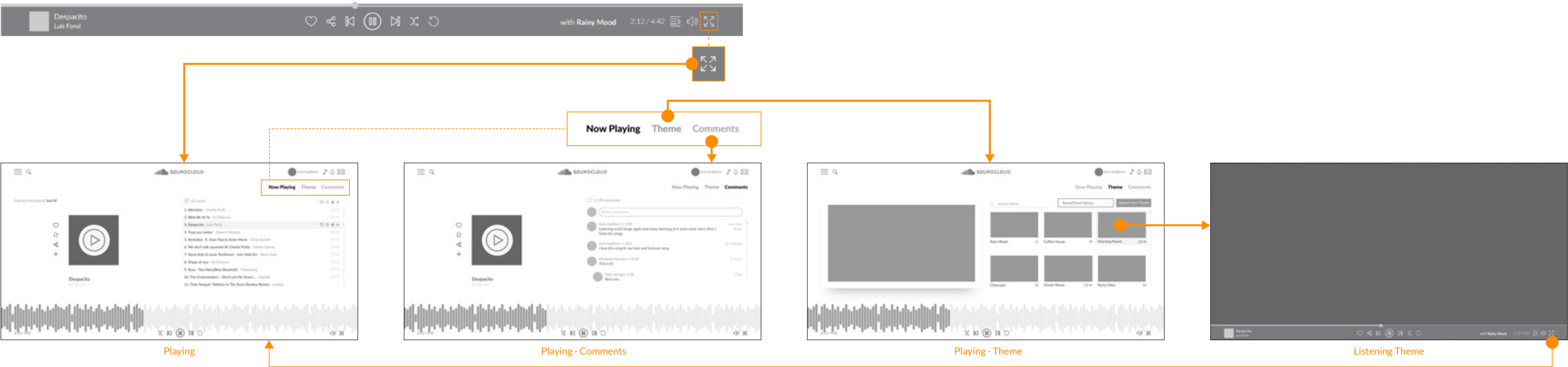
Discover - Survey



Discover - Suggested Tracks



“PLAYING” PAGE



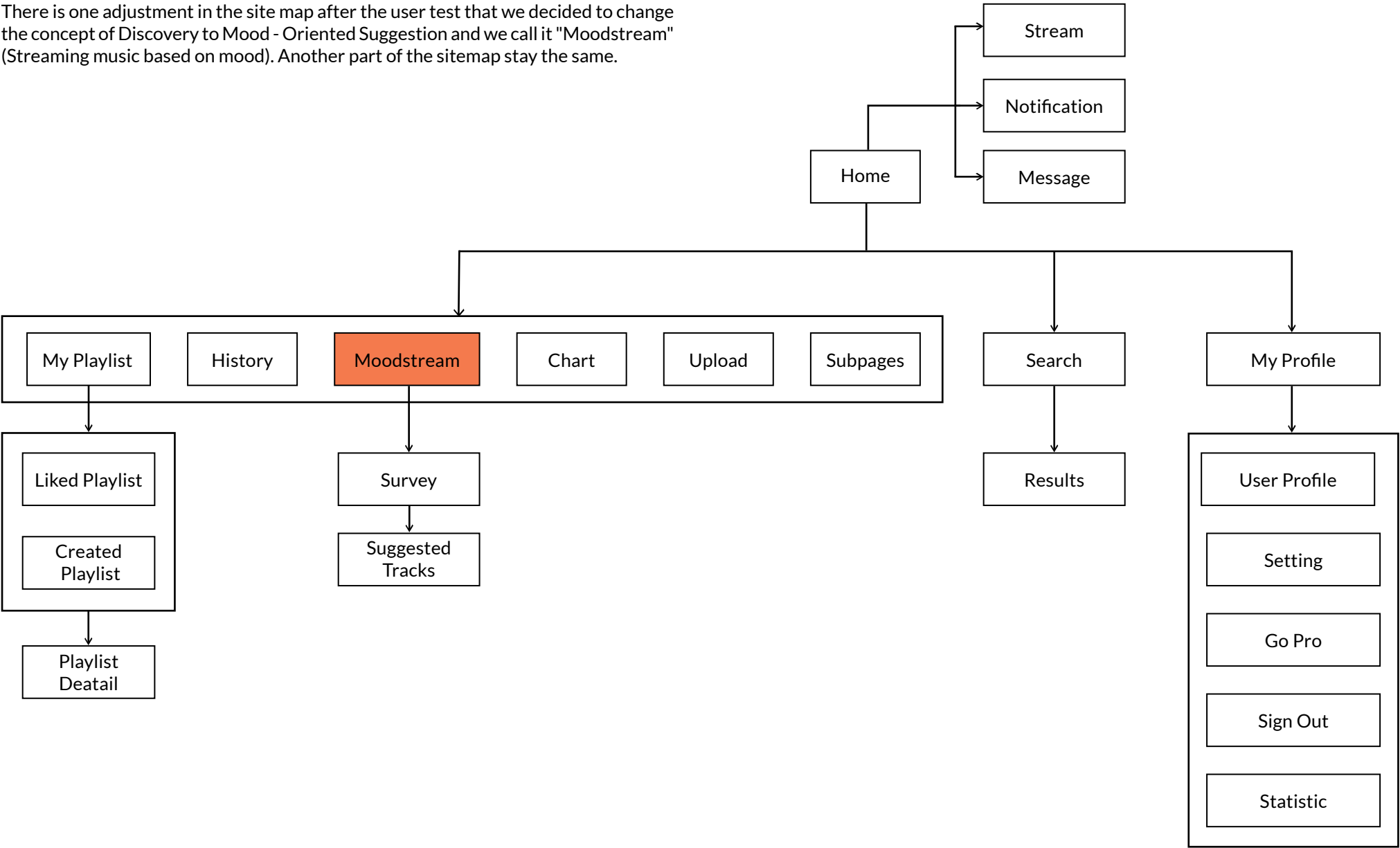
PRE DESIGN

USER TEST

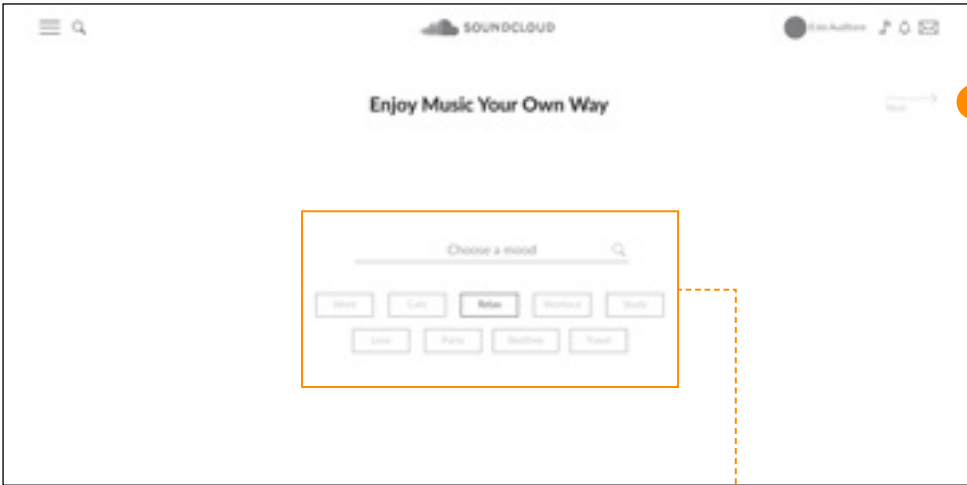
TASK	CURRENT SOUNDCLOUD' FLOW	OUR FIRST PROTOTYPE'S FLOW
1. First Login Experience (From Login to Homepage)	The page appear blank with a suggestion to use "Chart" and "Search" to discover music. Painpoints: There is no tempting hint that encourage user to explore SoundCloud actively.	Flow: Landing page - Sign Up - Survey - Homep- age with Recommended Tracks Painpoints: Homepage displays only a few sug- gestions and cannot be refreshed. The display of a hovered -track is not really relevant.
2. Use "Discover New Music" flow	Chart, Search and Discover pages. Painpoints: <ul style="list-style-type: none">• "Newly Uploaded" Playlist (Discover Page): All suggestions are not compatible with user's pref- erence.• Suggested Tracks (Discover Page): because they are only based on "Related Tracks" but not user listening's habit.	Chart, Search and Discover pages (Mood Survey) Painpoints: <ul style="list-style-type: none">• Meaning of "Discover": For some users, Discover page is not only finding music based on mood.• Users suspect Discover flow since there is only one simple question that the result cannot ensure to meet user's expectations.
3. Experience Playing page and Listening Theme	Only have playbars as a signature and control of music playing on the website. Painpoints: <ul style="list-style-type: none">• Lack of social interaction (only "Like" button)• New user might find playbar hard to recognize.	Playbar can expand into "Playing" page which include Listening Theme which is a new feature. Painpoints: Since it's a new feature. Some users do not get used to using it yet.
CONCLUSION OF USER REQUIREMENTS	<ul style="list-style-type: none">• Increase number of suggestions in Homepage• Redefine "Discover Flow" Meaning• Be more specific about survey's questions of "Discover Flow"	

BUILDING SECOND SITEMAP

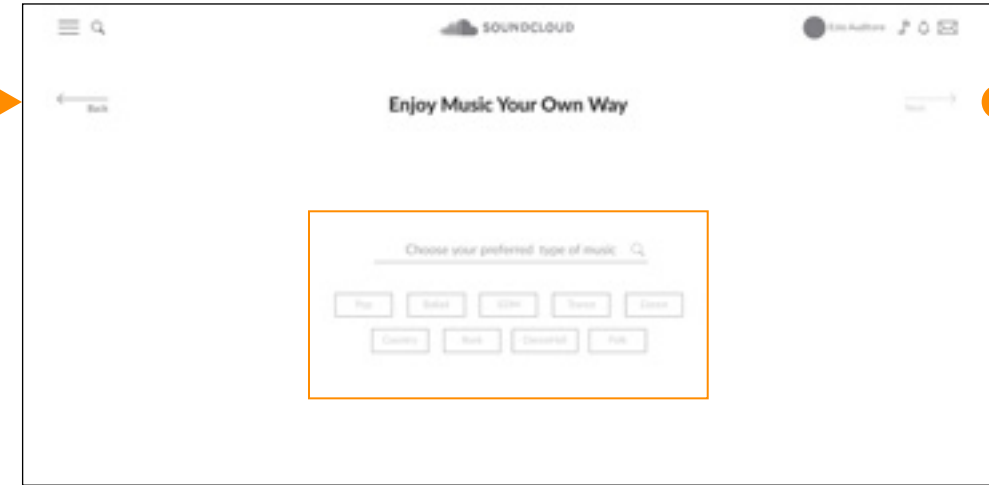
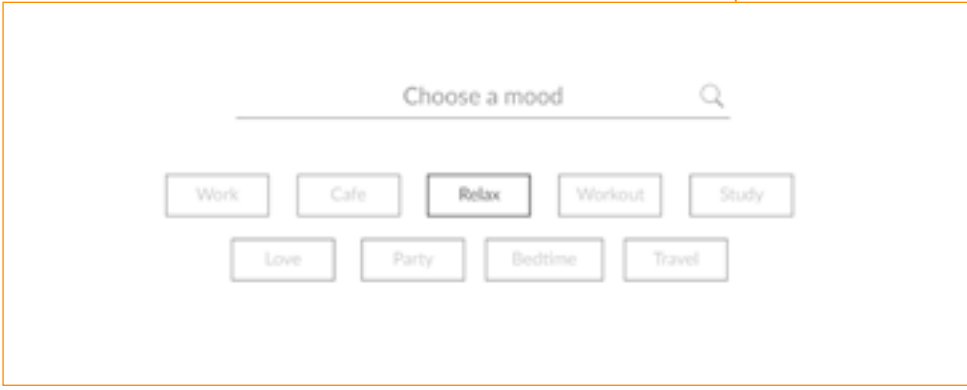
There is one adjustment in the site map after the user test that we decided to change the concept of Discovery to Mood - Oriented Suggestion and we call it "Moodstream" (Streaming music based on mood). Another part of the sitemap stay the same.



BUILDING SECOND PROTOTYPE



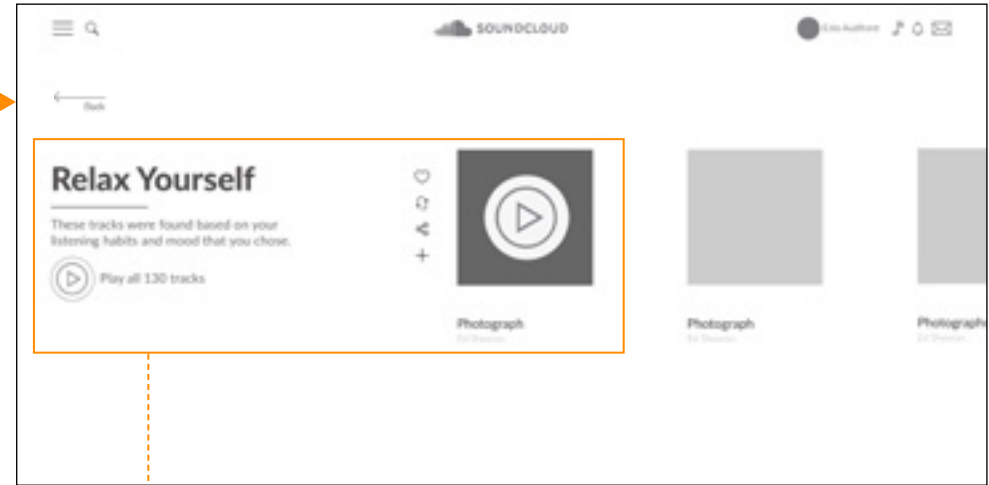
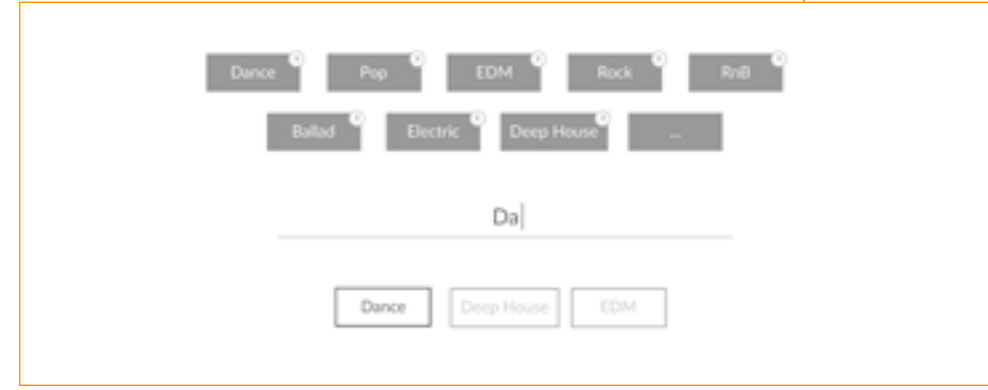
Moodstream - Mood Question



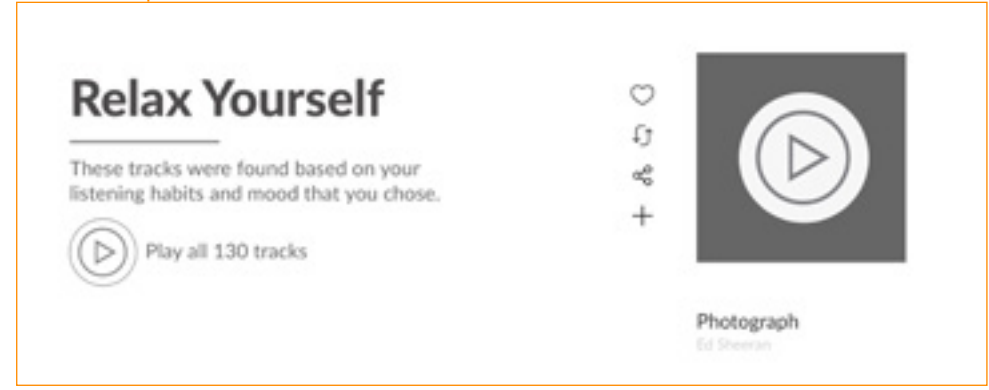
Moodstream - Genres Question

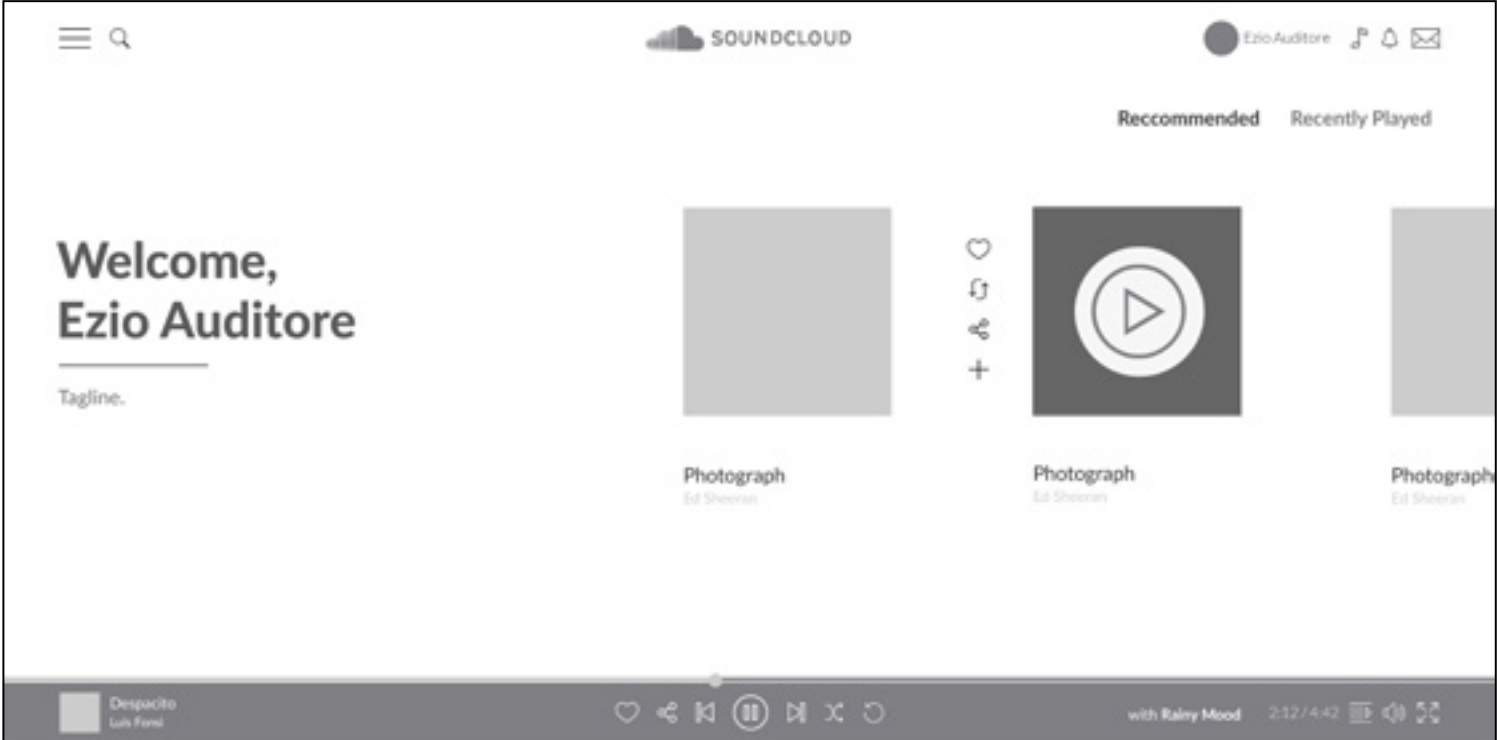


Moodstream - Genres Question (selected)



Moodstream - Suggested tracks





Improvements:

- Change from fixed layout to horizontal-scroll-layout to increase the amount of Recommended Track
- Separate Recommended from Recently Played to reduce cluster and adding more space.
- Use big template of track displays gain visual interest.

USER INTERFACE DESIGN

Typography

H1 24pt Lato Bold

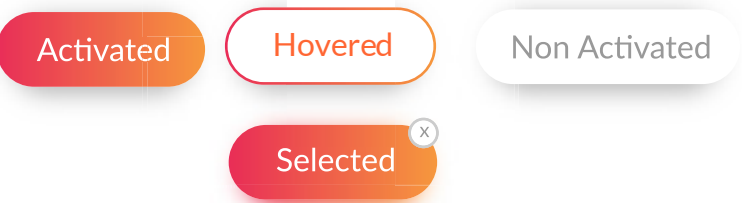
H2 16pt Lato Regular

H3 12pt Lato Regular

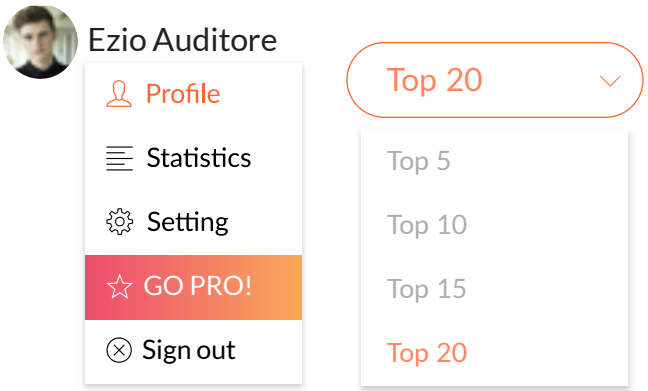
Color



Button




Drop down



Icon



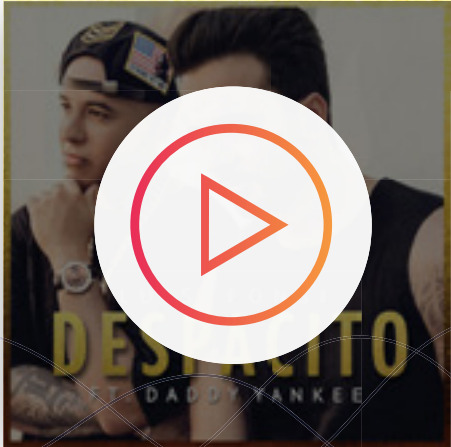
Track Module



Despacito

Ed Sheeran


Non - activated Track



Despacito

Ed Sheeran

Hovered Track




Despacito

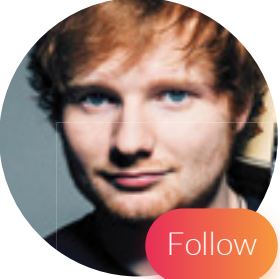
Ed Sheeran

Activated Track

User Module




Ezio Auditore



Follow

Ed Sheeran ★

2.03M 185



Follow

Ed Sheeran ★

2.03M 185

What do you want to hear?

Da|

Continue with your email

lahongquan0312@gmail.com

Shape Of You|

DESIGN FINALIZATION

DESIGN OVERVIEW

USER TEST - UI ELEMENT: SOUND VISUALIZER

Purpose:

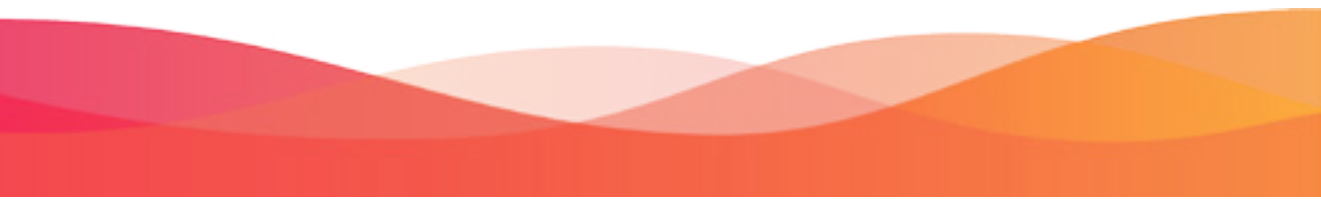
- To make sure users clearly understand UI element.
- To compare visual interest between two options.
- To check which sound visualizer interaction is more engaging.

Total testers: 10
Method: Face to face interview

VISUAL ELEMENT A



VISUAL ELEMENT B



TESTING RESULT:

1. Which visual element would you think is more likely to be a sound visuallizer?



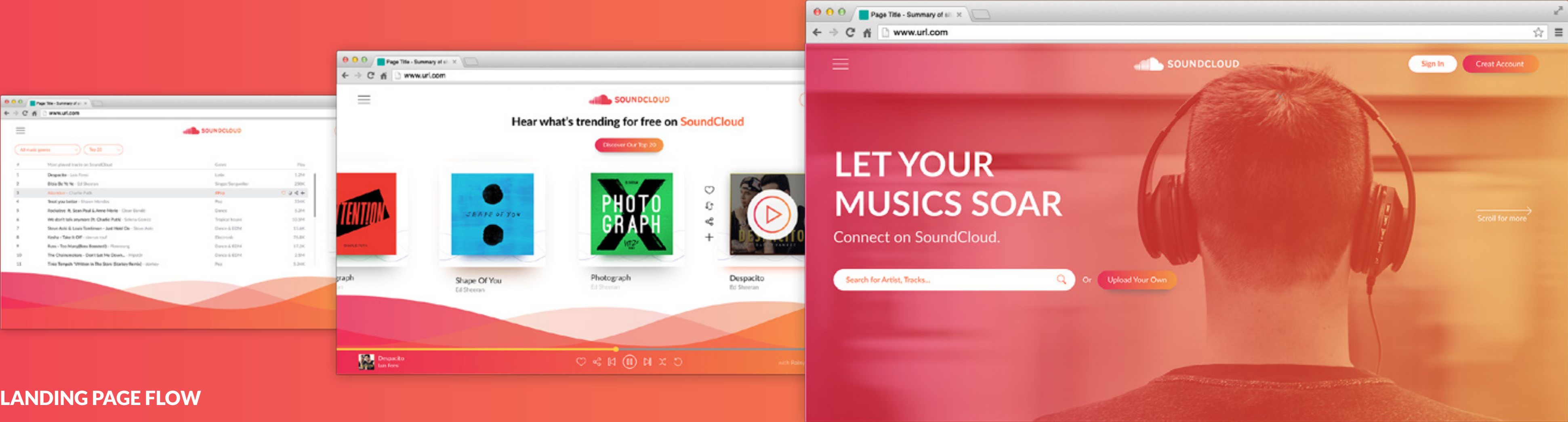
2. Which element would you find more interesting?



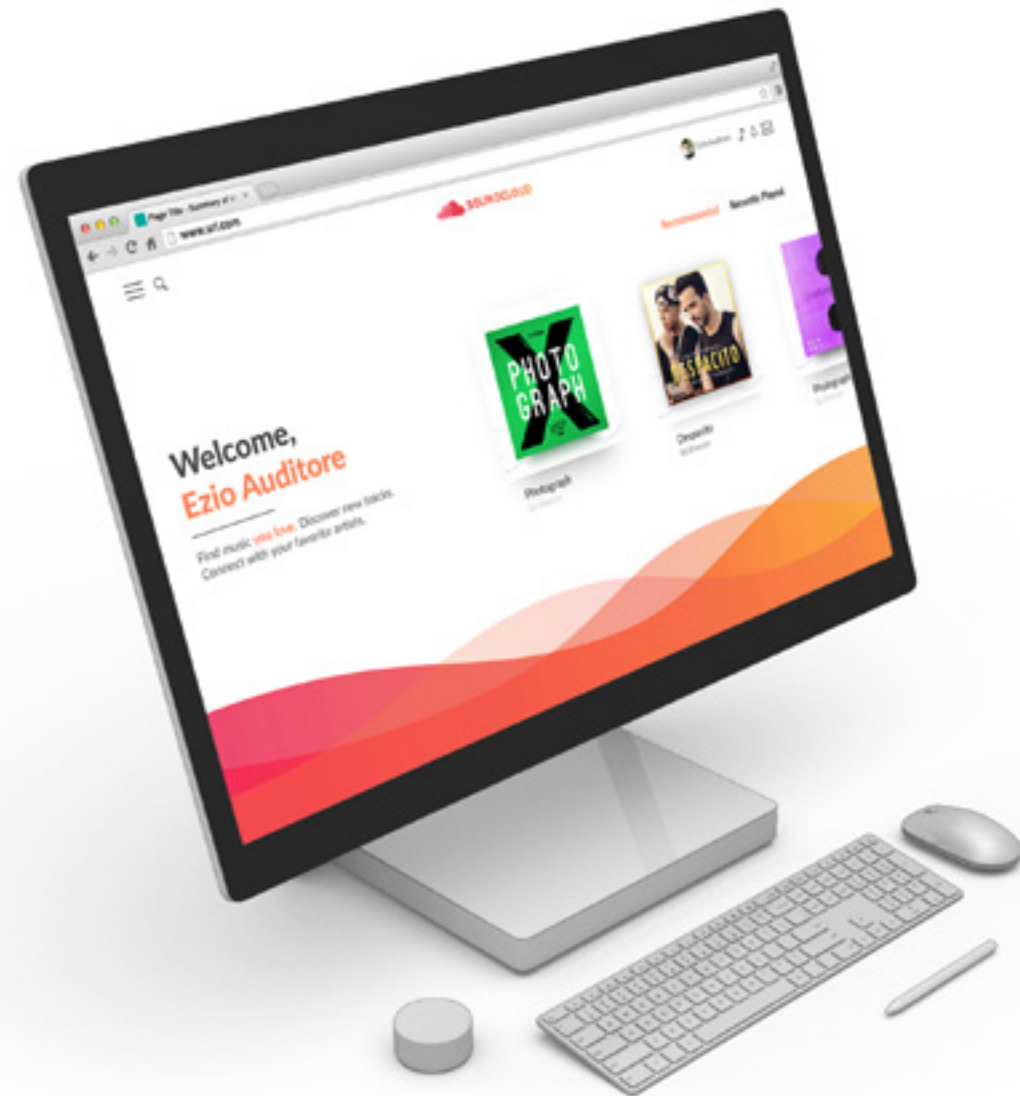
3. Which visual element would you feel more exciting when you interact with on website?
(The way of interactions have been described clearly with practical examples)



DESIGN FINALIZATION



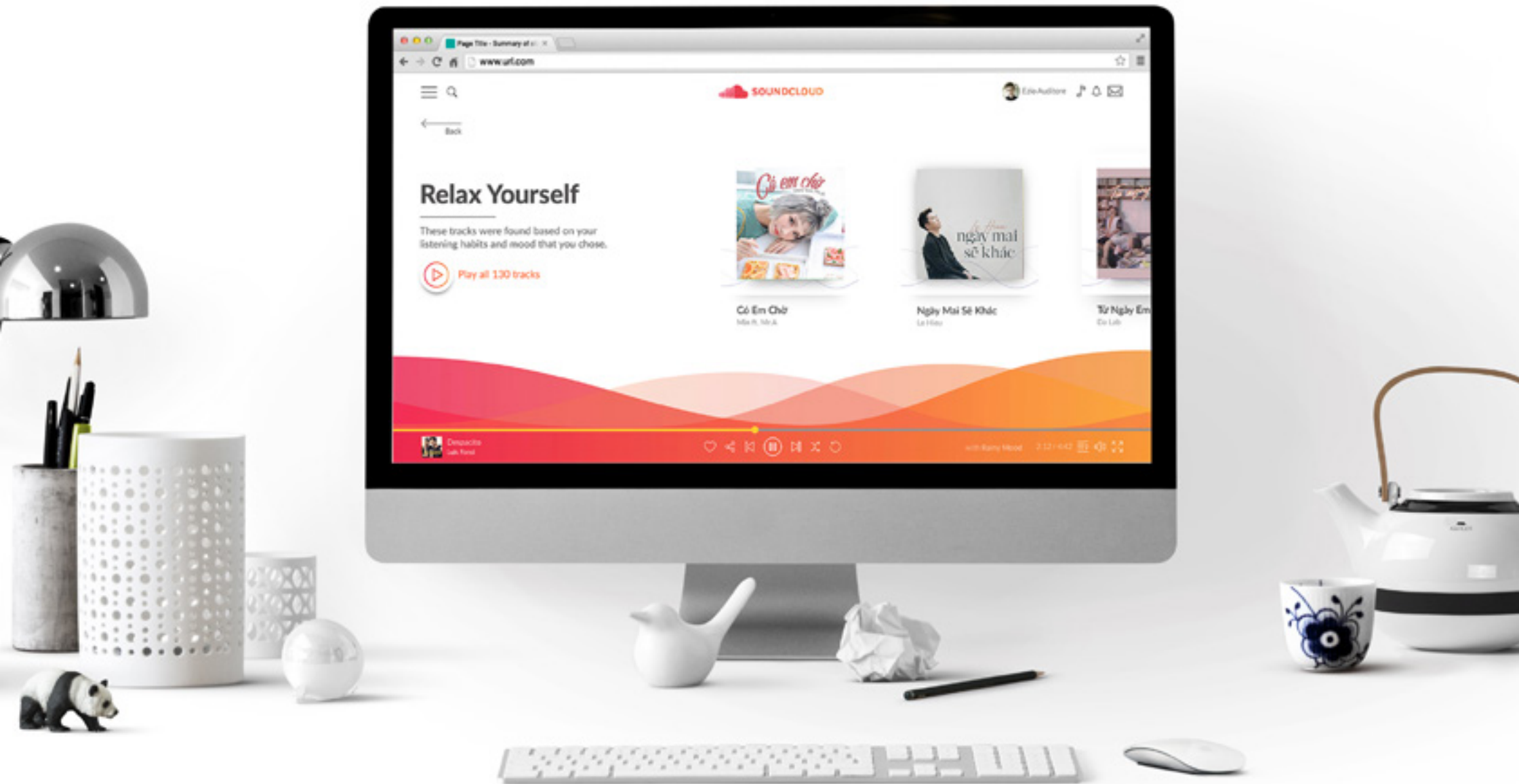
LANDING PAGE FLOW



HOME PAGE

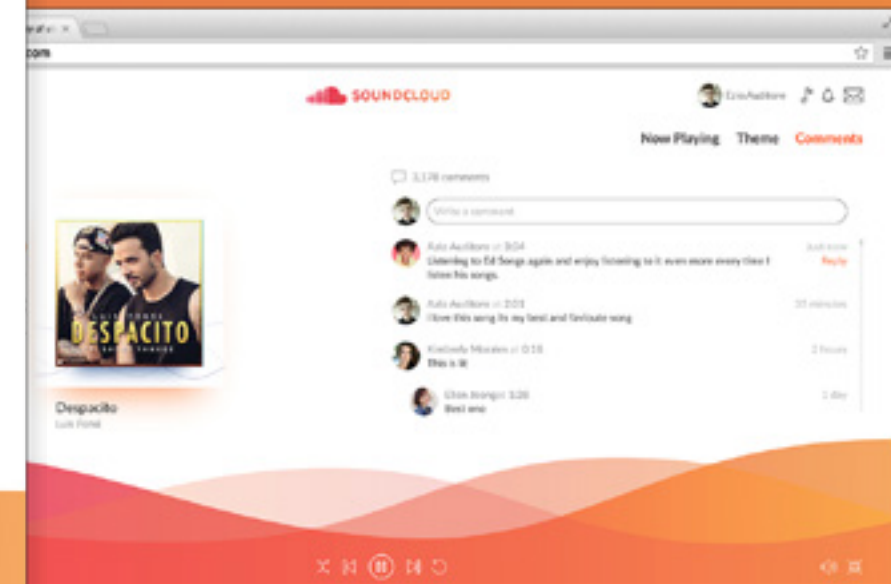
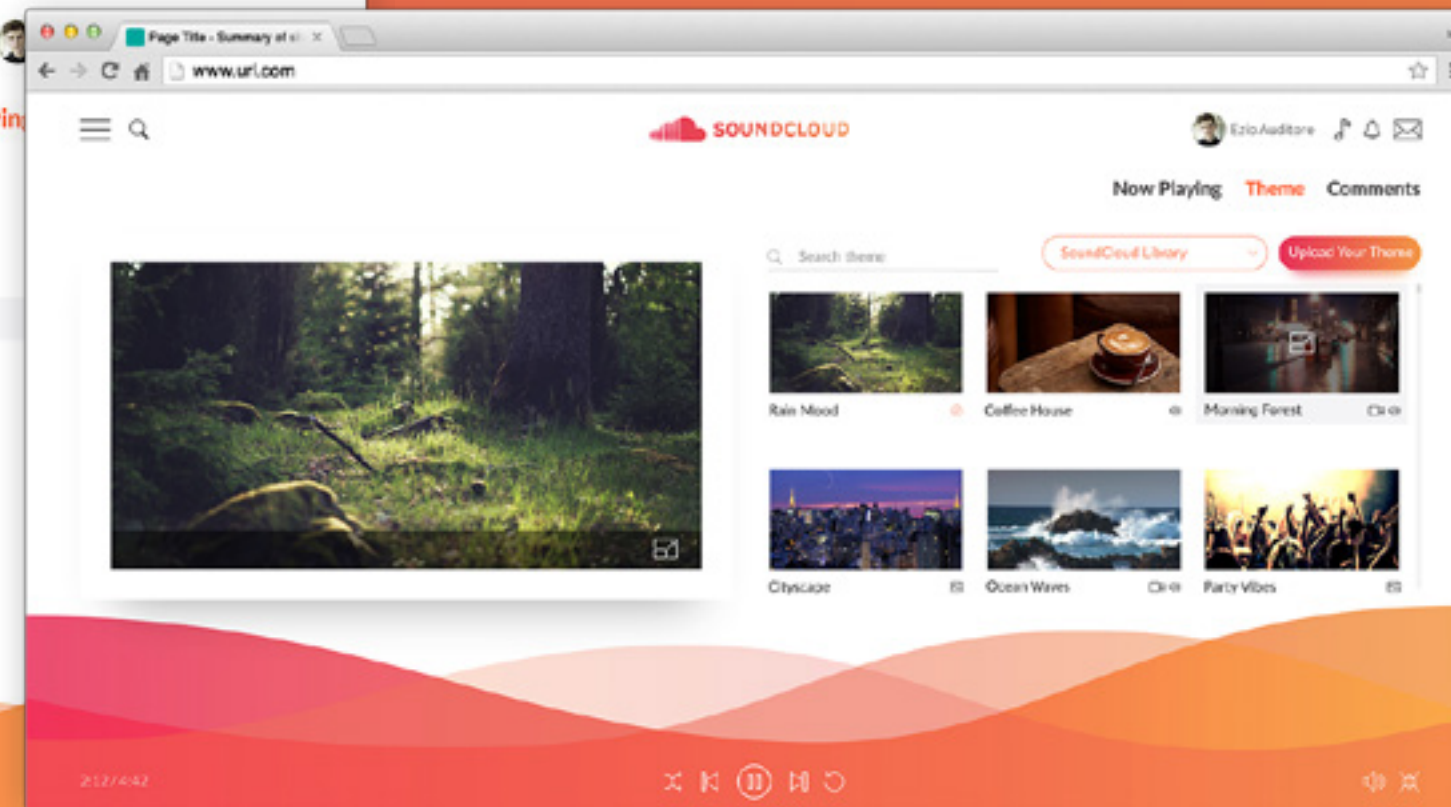
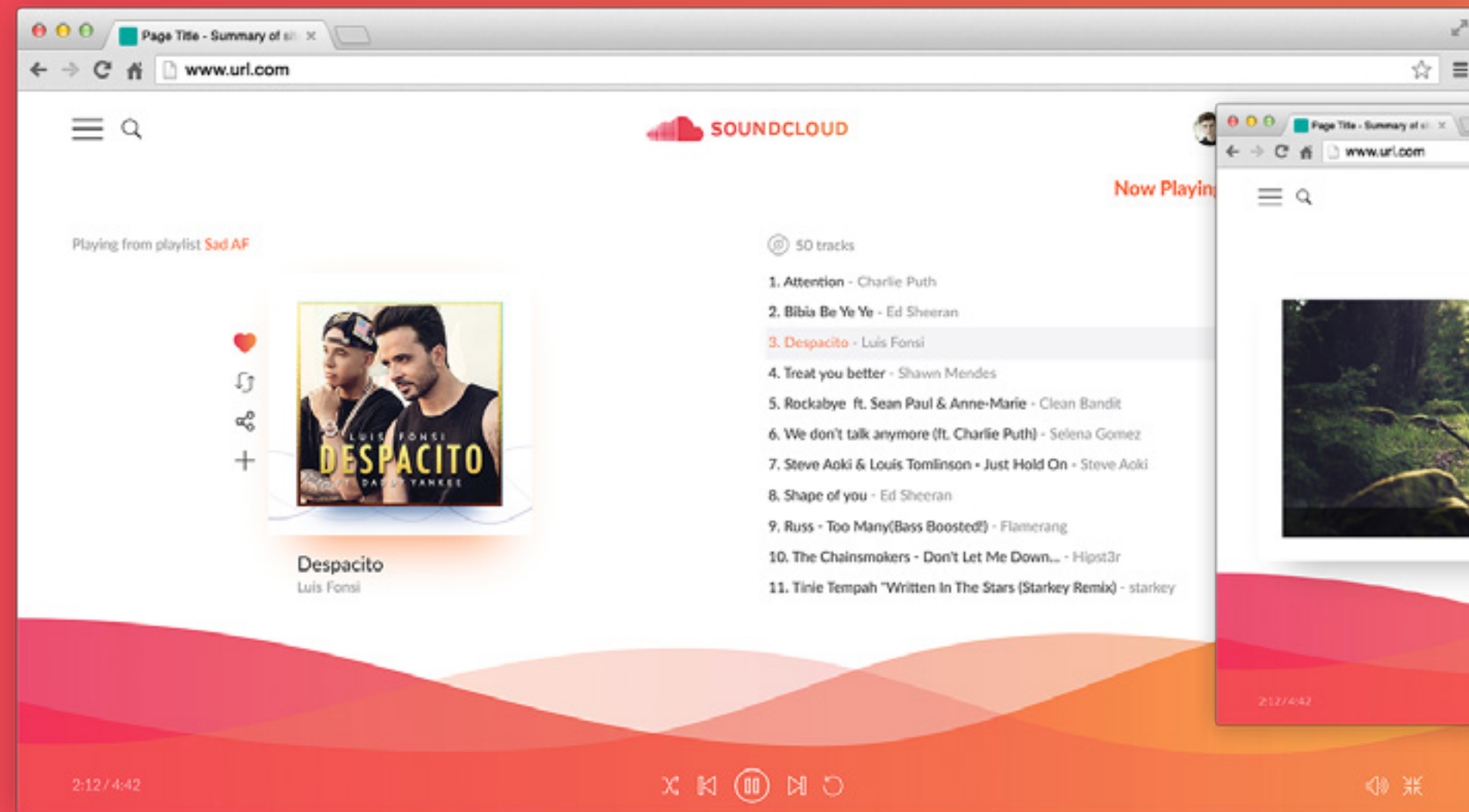


MANAGING
PLAYLIST
FLOW



MOODSTREAM FUNCTION FLOW





PLAYING · THEME · COMMENTS

SIMULATION FUNCTION

COMPLETE SIMULATION

1. Flow for new user: Landing Page - Sign In/Sign Up - Survey - Home
<https://invis.io/PYD33ZOJT>

2. Flow discover songs: Home - Menu - Chart - Add To Playlist
<https://invis.io/JRD40MGE9>

3. Flow MoodStream: Home - Menu - MoodStream
<https://invis.io/QT40N5UX>

4. Flow for Enjoying Music with Theme: Home - Menu - My Playlist - Now Playing -Theme
<https://invis.io/A2D45VC63>

SUMMARY

DEAR FRIENDS,

We are really appreciate if you can read through all this porfolio. Our document of research and ideas for this project are always with us. You can approach us anytime you want to discuss about this. But this letter is to send to you, my readers, as a message to the future designers to develop and enhance our audience.

Eventhough we have tried as hard as we can to enhance SoundCloud Audience's Personal Experience, in 4 months, we still go around in circles to improve the website. However, this project still can be developed more in the future with further touchpoints between SoundCloud and Audiences. We would like to suggest to you our vision for the 3 objectives that we have been focused.

1. Mobile App: As you know, listening to music has been used in mobility devices nowsaday and it will become more and more in the future. With more interactive technologies, mobility devices will a really great chances to make listening experience more real and awesome.

2. VR Technology: This technology had been developed recently. It simulate a virtual enviroment with real feeling. That 's a really good field for you to dig down, to make the "Theme" concept become more real.

The world will develop more and more awesome technologies with many way to interact with human body. Listening to music is not only about the ears, the whole body can feel it. So to make listening music experience will be more awesome, don't hesitate to take the steps.

Be someone that nobody thought you could be!

Love,

E.S.C.A.P.E Team.