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Audio Tour App

A more personal approach on
museum audio tours



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My Android experience

This is going to be my first time working with Android (Kotlin & Java included). I have some experience with the IDE, because I have done a React-Native and Flutter project where I needed to adjust some settings and use the emulator tools. In my Smart Mobile specialization semester I chose iOS over Android. This was because I heard from others that iOS was less 'messy/all over the place' with documentation since iOS is more controlled by Apple and Android has more freedom/open source. However, just because I chose iOS at the time it doesn't mean I don't want to try Android.



I'm the newbie stereotype

Goals

During the project I will mainly try to use 'Basic' & 'Intermediate' level techniques. This, of course, depends on the concept I'm going to choose. If I feel like I need to do some simple POCs/exercises first to get used to Android, I'll probably pick specific techniques from the PowerPoint (e.g. learning Kotlin) so that I can show my progress in developing with Android.

What I used

I used Kotlin as programming language for my project.

I used the [Android Beacon Library](#) to send notifications and audio to the user.

For some POC'/small practice projects I used:

- Fragments
- Manifest, Colors
- Styling, Material Design

Tour guide app

Problem

A lot of museums use interactive technologies to let their visitors get more information about history or art. The interactive devices you get as a visitor are often annoying because they don't fit well or they are difficult to use and often the software fails. The museum also has to pay a lot of money for the devices.

Initial concept

Visitors to a museum can get information about historical objects by scanning checkpoints in the room with their phones. They will be able to add a Bluetooth device (provided by themselves or possibly the museum) to make use of the audio tour. The museum can promote merchandise or other products they sell. For example, the user gets recommended books that they can read to get more knowledge on a subject.







This wearable can make scanning the checkpoints more convenient and is less expensive for museums

Sketches




The Night Watch



Rembrandt's largest and most famous painting was made for one of the three headquarters of Amsterdam's civic guard. These groups of civilian soldiers defended the city from attack.

		Order some night watch View →
		

The significance of this bird, particularly its claws, lies in its direct reference to the Kloveniers. Each guild had its own emblem and for the Kloveniers it was a golden claw on a blue field. The girl then is not a real person, but acts as a personification of the company.


Probably the most unusual feature is the mysterious girl who emerges from the darkness just behind the musketeer in red. With flowing blond hair and a fanciful gold dress, the young girl in all her brilliance

Select your audio device 

-  **David's Earbuds**
-  **Sony Headphones**

Play background music in between checkpoints




Default music 


[Choose own music here](#)


Start tour



The Night Watch










Mug - The Night Watch

1


Add to cart 







Mug - The Night Watch

1


Add to cart 







Mug - The Night Watch

1


Add to cart 





Mug - The Night Watch

1

Add to cart 

Opportunity

A lot of museums/theme parks have merchandise they want to sell and some visitors are really into buying merchandise, because they're big fans of something (e.g. a movie/rollercoaster/painting) or want to buy something as a souvenir as a memory or to show off to others.

Feedback on the initial concept

Keep the app simple, don't just start applying standard/general 'media' aspects just for the sake of it. Might be interesting to show people art in different ways without tarnishing the interpretation people have. Try to focus on a specific group of people, narrow the target audience as much as you can.

Design Challenge

<https://www.designkit.org/methods/frame-your-design-challenge>

<https://www.designkit.org/methods/align-on-your-impact-goals>

1. **Start by taking a first stab at writing your design challenge down. It should be short and easy to remember.**

2. **Explore and align on the goal or outcome you hope to achieve.**

Short term goal: a prototype is made that offers a potential solution to the problem

Long term goal: every organisation that offers audio tours gives visitors the option to use their own devices (e.g. phone and headphones)

3. **Think about the audience you're aiming to serve and the context, constraints, and influences in their lives.**

Target audience:

Teenagers/young adults; they carry their phones and other pieces of technology (e.g. headphones) with them at all times. These devices basically become part of their body and thinking as they are growing up with them. Smartphones learn what we like and provide it. The consequence of this is that teenagers/young adults expect to get a personalized experience and have a hard time concentrating.

The audio tours of most of the museums are not personalized at all. Most still use wacky, uncomfortable headphones and sometimes not even headphones (e.g. Muiderslot audio tour, see picture).



Teenagers/young adults (based on assumptions and personal experience!) don't like this impersonalized approach and will quickly get bored with the audio tour as a consequence. The target audience will have to be interviewed in order to back these statements up.

Frame Your Design Challenge

1. Take a stab at framing this challenge as a question
 - How might we make audio tours of museums more pleasant?
 - How might we make audio tours of museums more immersive?
 - How might we make audio tours of museums more personalised?
 - How might we design an audio tour that feels more personalized and immersive compared to the old designed audio tours?
 - How might we design an audio tour that provides a better experience to each visitor compared to the current audio tours?

2. Now state the key outcome you're trying to achieve

All visitors can use their own devices to experience the audio tour so that they will get a better experience and stay interested.

3. Write down important aspects of the context or constraints that you need to consider:

These could be shifts that we need to see in the ecosystem around the user, or factors that are technological, geographic or time-based.

- Teenagers/young adults can forget to take their headphones/earbuds, with them
- Teenagers/young adults can still get distracted by their phone leading to less interest in the audio tour

The environment of the users differ per location. For example, a beer brewery will have a noisier environment compared to a museum

4. What are some possible solutions to your design question?

Think broadly. It's fine to ... sentence is same as existing.

What if museum visitors could use their own headphones for audio tours?

What if museum visitors could personalize their experience by selecting certain in-app options?

5. Does your original design question need a tweak? Try it again.

How might we design an audio tour that provides a personalized experience to each visitor?

Market research - competitive analysis

Goal

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

Research Questions

What existing audio tour platforms are there?

What target audience do these audio tour platforms have?

What are the strengths of the audio tour platforms?

What weaknesses do the audio tour platforms have?

Competitors

Izi.TRAVEL

This audio tour platform is focused on delivering location based audio tours for cities worldwide.

Name	Concept	Target audience	+/-
Izi.TRAVEL	Visitors of cities can take an audio tour which is location based. Visitors can go to certain areas in the city to get information through audio.	Travelers who visit cities worldwide.	+ users can download audio tours so that they don't need connection to the internet while walking around a city. + users can add information about certain places themselves through audio, video or text & images.
Rijksmuseum	Visitors of the Rijksmuseum can start audio tours from music themed to art themed.	Lovers of Dutch art, culture and history	+ option to listen to the tours at home

Interviews

Goal

The goal is to find out what the experiences of the target audience (teenagers/young adults) are when it comes to taking audio tours.

Motivation

By interviewing the target audience we can learn if they're struggling with something when they're taking an audio tour.

Research Question

What are the audio tour experiences of teenagers/young adults?

Plan of Action

A set of questions will be formed and directed towards the target audience. A minimum of 5 people from the target audience will be interviewed. The answers they give will help answer the research question and from there we can use the information to design solutions.

Questions

1. Have you ever been to a museum, beer brewery or other place and taken an audio tour?
Where was it?
2. Can you describe the way the tour worked?
3. What kind of equipment did you get?
4. Were there any type of interactions? (QR-codes, sound effects, etc.)
5. Was there something that annoyed you about the tour?

Interview 1

21 years old:

1. Have you ever been to a museum, beer brewery, or other place and taken an audio tour?
Where was it? **Yes I have, I have been to the Rijksmuseum, but that was a long time ago. I don't think I had an audio tour. I just walked through the museum. I also went to the Diamantenmuseum in Antwerpen and I vaguely remember that I had some kind of equipment to listen to information.**
2. Can you describe the way the tour worked? **I think you just walked around on your own. I don't remember how it worked exactly.**
3. What kind of equipment did you get? **I don't know. It was either headphones or just some kind of audio output device that you had to hold in your hand.**
4. Were there any type of interactions? (QR-codes, sound effects, etc.) **I don't remember**
5. Was there something that annoyed you about the tour? **All I know is that I had trouble understanding the narrator because they had a Flemish accent.**

Interview 2

20 years old:

1. Have you ever been to a museum, beer brewery, or other place and taken an audio tour? Where was it? **I have, I have been to a few museums. One of them was the Spoorwegmuseum in Utrecht but they didn't have audio tours. I also went to Texel to the local beer brewery and they did have one.**
2. Can you describe the way the tour worked? **Their was a tour guide who showed us the whole brewery and was giving information throughout the tour. He was telling us about the history and how the beer is made by machines.**
3. What kind of equipment did you get? **It was small headset connected to a device that you had to put on your belt or pants.**
4. Were there any type of interactions? (QR-codes, sound effects, etc.) **You could press a button on the device to notify the tour guide that you wanted to ask a question and if he gave you permission you could speak through the microphone so that the other people could hear you.**
5. Was there something that annoyed you about the tour? **Sometimes it was difficult to hear the tour guide because of the loud machines and the headset was too small for my head.**

Conclusion

What are the audio tour experiences of teenagers/young adults?

So far the audio tour experiences of teenagers/young adults aren't great. I only spoke with two persons of the target audience, but I also spoke with others that also said they were specifically annoyed with the devices you get to deal with. Headphones too small, not even getting headphones and having to carry an audio output in your hand during the whole tour, bad controls, etc. were common complaints. The audio tour experience could definitely be improved.

Club museum app

Defining target audience

In order to narrow the target audience I started looking at what types of museums there are. There are archaeology museums, art museums, military/war museums and even football club museums.

Concept 1

Museum visitors can get an audio tour. By scanning NFC checkpoints along the way users can get short audio fragments of historic people

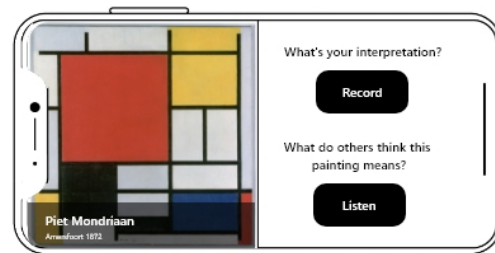
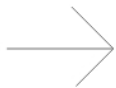


User scans NFC

Concept 2

Art museum visitors can leave their own interpretation of a painting behind by scanning an NFC checkpoint which are located nearby a specific painting/ statue. Visitors can audio record with their phones/smartwatch. These interpretations will be saved in the app so that they can be listened to by other visitors or art lovers who are at home. The visitors can stay (more) anonymous

Target audience: art lovers/visitors of art museums



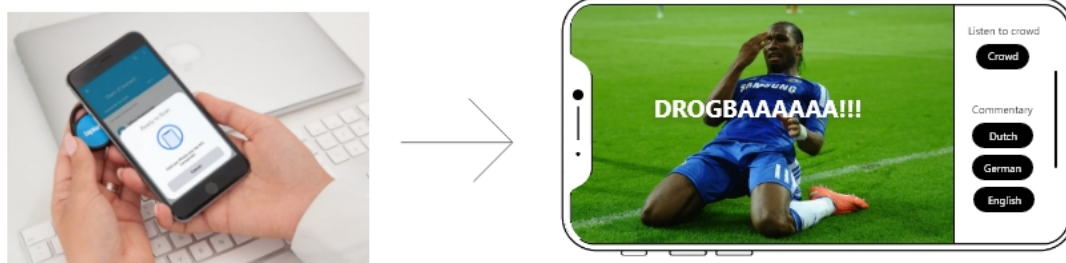
Football club museums are everywhere in Europe. Specifically the bigger clubs like Chelsea, Arsenal, Manchester United, Barcelona, Inter, Real Madrid, etc. have big indoor museums where people can look at the history of the club. I remember when I was about 10/11 years old and went to the FC Barcelona museum. At the time I didn't know much about the club and its history. I remember that there were a lot of trophies and cool photos/videos, but it didn't mean much to me. It would have been cool if there was an audio tour offered where I can walk through the museum and get information (in a fun way, not just with some boring narrator) about how a club got their trophies and other objects as I walk past.

Concept 3

Visitors of football club museums can relive the best moments of a club. If they scan a checkpoint of an historic football club event they will be able to hear the commentary of that event and possibly a video. Experienced fans can relive moments, younger fans can learn club history.

Optional: additional audio overlay -> sound effects e.g. the sound of the crowd/fans going wild.

Target audience: young football fans/visitors of football club museums



Feedback on club museum concept

There is potential in the 'club museum tour' concept. Instead of an interaction with NFC or another type of scanning technology, it is better to see if the interaction can take place through location tracking as it offers a hands-free experience. You should investigate whether location tracking is accurate enough to track a user within a closed space in a consistent manner. If this is possible, then you should be investigating what kind of audio experience the user gets. Defining a target audience is important.

Reframing the design challenge

“How might we design an audio tour that provides a personalized experience to each visitor?” was the design challenge.

Now the design challenge is: **“How might we design a football club audio tour for kids (7-14 years old) that provides an immersive experience?”**

The design challenge has shifted to ‘immersive experience’ instead of ‘personalized experience’, because the target audience has changed. Kids (generally speaking) don’t care much about settings on their phones. They just want to explore the club museum uninterrupted.

