



Art For Two

Interdisciplinary Project (119450)

Production Interactive Media / Multi Media (223536)

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1 INTRODUCTION

The COVID-19 pandemic has changed our lives in one stroke. Social contacts are to be avoided and due to the lockdown, shops, institutions and cultural facilities have to close. Art lovers and museum goers are faced with closed museum doors and have to look for alternatives. Alternatives that cultural institutions are also currently looking for. There is already a lot available online. From digital collections, videos, gamifications or Zoom tours to 360° tours of the exhibitions, everything is offered.

But does art and culture work on the internet just as well as offline, in the "real" world? A major shortcoming of digital offerings, apart from the frequent lack of interaction, is the lack of a social aspect.

Museum visits are often social events. Friends go to exhibitions together and make this an "experience" through conversations and joint interaction. Transferring this to the digital world was the task of the interdisciplinary project "ArtForTwo". The following text explains how we approached this project, what results we produced and what happens next.

2 STATE OF THE ART RESEARCH

2.1 Digital Offers from Museums

Before we started to design our own project idea, we researched and analyzed what digital offerings currently existed from museums and other cultural institutions. We did this to get an initial overview, to see which approaches we found good and which we would like to do better. In addition to this, it was also important to see what is not yet available on the market at all.

We proceeded in such a way that we compiled our research results, which included museum websites and applications as well as many online articles. We then decided on 21 digital offerings, which we looked at more closely and examined for pros and cons. Among them were very different museums from different countries. The majority were art museums, but some history museums were also represented.

We found the large selection of digital alternatives to be quite good and enjoyable. Almost every museum had digitized its collection and made it available online. Most museums also presented themselves on social media channels, with videos about the exhibitions and offered virtual 360° views of the exhibitions. Some also offered apps or were app-based, but these apps were meant to be applied on-site at the museum to support the exhibition with additional information or gamification.

What we found lacking overall was the social aspect. For the most part, the offerings were designed to be used alone. If you still wanted to use the offers in pairs or in a group, you had to resort to other tools, such as Zoom.

The "feeling" for the art and the atmosphere of a museum visit was also missing, since the artworks were displayed two-dimensionally on a small screen and videos or virtual tours also seemed very static.

To better assess the social aspect in particular, we divided into groups and visited the digital offers several times together via Zoom, including various 360° virtual tours (including those

of the Museum Barberini¹, the Louvre² and the Byzantine and Christian Museum Athens³. In doing so, we realized how important it was for us to facilitate a shared, social experience and stimulate conversations about art.

Since we were not fully satisfied with the virtual tours, as there were constant problems with the internet connection, often missing information, the works were displayed too small, there was no real interaction with the application. Either the social aspect was missing, as everyone looked at the works and read through the information, or the art was missing, as people talked to each other and moved from the topic of art to other topics. We wanted to look deeper into what constitutes a social experience and how social experiences can already function digitally.

2.2 Digital Social Experiences

After we had intensively studied various online presences of museums and galleries, we wanted to look for successful social experiences on the internet in the next step. The previous research showed us that art in the digital space is hardly a social experience. Since our goal is to make art experienceable together online, it seemed to make the most sense to look for social experiences on the internet detached from art, in order to possibly learn from them.

In the beginning, everyone in our team searched for possibilities independently. Then we summarized and clustered everything. This allowed us to filter out the best experiences. The question we were most interested in was: what methods or aspects make this online experience so good? Below, we go into the main categories and describe some examples.

The most obvious category of online social experiences for us is social networks and online conferencing tools. Here there are a number of different ways for people to have community via the internet. These can be texting, audio calling, starting a video conference and so much more. Social interaction can be between two people or involve many people. People can communicate in real time or time shifted. One person can interact with hundreds of

¹ Museum Barberini, n.d.

² Louvre, n.d.

³ Byzantine and Christian Virtual Museum, n.d.

thousands around the world or a small group can interact together⁴. Individual options include Facebook groups, Zoom, Instagram stories, Whatsapp chats, and Twitter messages. These services were helpful in the research because it allowed us to think about different features, such as chats and auto calls, that were useful for our eventual product.

The next category that became interesting for us is online games. On the one hand, there are the classic online games such as League of Legends. On the other hand, games such as Online Escape Rooms⁵ have become popular, especially in times of Corona. In games like League of Legends, players usually play in teams and rely on good communication with the other participants. Difficult tasks have to be mastered together. The better the communication within the team, the greater the success. Communication takes place via an audio group room⁶.

Games like the Online Escape Room are also about team communication.⁷ The interesting thing here, however, is the origin of the idea. The online Escape Room was transferred from the real world to the online world. The participants sit at home and control a person in the livestream, who is in the real Escape Room. Everything the participants tell the person to do, the person will do. So, this offline experience was brought into the online world. That was really interesting for us in the ideation process, because we were trying to do the same thing. We wanted to take an experience that existed in the real world and bring it into the virtual world.

Another big category that we defined for ourselves is online live courses. These vary greatly and also represent an online social experience. Koch dich Türkisch⁸, ArtNight Live⁹ and BakeNight Live¹⁰ are just a few examples. The idea is actually always the same. There is a group of participants who want to cook, bake or paint. The group is together with the organizers in a video conference and can watch them cooking, for example. The special feature is that real interaction is possible. Participants can ask live questions and also interact with other participants. Some online courses even send ingredients or other

⁴ Bendel, O. (2018)

⁵ The Escape Game, n.d.

⁶ Kou, Y., & Gui, X. (2014), P. 162

⁷ The Escape Game, n.d.

⁸ KochDichTürkisch, n.d.

⁹ ArtNight, n.d.

¹⁰ BakeNight, n.d.

products in advance of the course to the participant's home. Again, this is an experience that has been translated from the real to the virtual world.

In addition, we also looked at services that make it possible to watch movies and series together over the Internet without having to be in the same place. The best-known providers here are probably Amazon Watch Party¹¹ and Netflixparty/Teleparty¹².

From this research, we took away some important insights for our idea development. It is possible to transfer social experiences from the real to the virtual world without losing their charm (online live courses). Some events are social and can only take place in the digital world (League of Legends). We discovered that the right combination of features that already exist on the Internet will make our social experience possible.

2.3 Events and Crucial Social Factors

2.3.1 Interview on social experiences

2.3.1.1 Goal

Social contacts and interactions affect our experience and can have a significant impact on our positive or negative emotions. Our aim was to get insights on what makes a good social event, how expectations influence an experience and whether good experiences lead to social interactions afterwards. Additionally, we wanted to learn about what expectations our interviewees had especially for online events.

2.3.1.2 Method

In order to understand specificities of this influence, we conducted a survey for potential users from different age groups. For this purpose, we prepared a short questionnaire that contained 8 questions about social online and offline events and expectations related to them. Our research was designed as qualitative interviews with a standardized questionnaire held via Zoom. The interview was mostly based on the concept of a narrative interview by asking them about an experience in the past that they should tell us about¹³.

¹¹ Amazon Watch Party, n.d.

¹² Netflix Party, n.d.

¹³ Hopf, C. (2012), P. 355

To gain insights on our interviewees' experiences we not only asked them about a recent good social experience but built more open questions on this event regarding their impressions, expectations and the most enjoyable moments. We intended to generate more narrative by the interviewee¹⁴. Only at the end did we ask more specific questions about expectations and digital events. The questions can be found in the appendix („Questions Interview on Experiences“).

The total number of participants who took part in this qualitative interview was limited to 11 persons (5 females and 6 males between 19-75 years old). The largest group consisted of young people between 19 and 25 years old (5 persons). The collected data were used for a qualitative analysis.

2.3.1.3 Results

After having prepared a transcript of interviews, we tried to summarize the answers and came up with the following key insights. The most pleasurable moments in social activities are often related to meeting people, socializing, communication and pleasant atmosphere. Offline events are most often associated with certain expectations, for example an opportunity to spend time with friends, get to know new people or expand a professional network. We got many answers that it is about feeling comfortable and not going too far from your comfort zone. Additionally, fun or open-mindedness play an important role. A good mix between familiarity and new people and experiences was also mentioned. People had often high expectations for offline events and they were for the most part fulfilled. Offline events often led to another social interaction afterwards. The extent of these social interactions differed a lot. Some participants stated that they just went to a bar afterwards or made plans to meet again a few days later. Others said they found new contacts that they stayed in touch with.

Our participants were familiar with digital events related to studies and work. Most of them have low or no expectations regarding digital events because they don't give any real chance of getting to know new people and to communicate with them. The social part of digital events seems to be very limited and doesn't create an enjoyable atmosphere. For

¹⁴ Mey, G., & Mruck, K. (2007), P.251

others the digital events were often seen as surprisingly good, even though the participants thought they cannot be compared to physical events and rated the experience from physical events generally higher than from digital events.

2.3.2 Crucial Factors of social experiences

Taking into account the results of this survey we decided to create a unique digital experience representing a balanced mixture of culture, education and entertainment with a strong focus on social interaction. People involved in social activities feel motivated to learn and experience something new. They interact with others to share their experience, thoughts and skills. In our project we were focused on positive aspects of social interaction that can appear in a comfortable friendly environment.

We also managed to identify several crucial factors that make social experience unique and unforgettable. These factors can be associated with 9 different feelings that appear under certain conditions. The feeling of being involved can be caused by intellectual and emotional efforts. Rewards for these efforts stimulate the feeling of being valued. Success in individual or group activities makes the feeling superior to others grow. Aesthetic pleasure creates a feeling of comfort. Novelty is something what makes people believe that they have a colorful social and cultural life. The recognition of familiar things or similarities to our own personality results in the feeling of being understood. Pleasant surprises and unexpectedness can be considered as a source of the feeling of having true emotions. Contacts with people having similar interests and mindset are a prerequisite for the feeling of being accepted. The feeling of being able to change appears if our mind absorbs a new experience and gets transformed. Our goal was to create a user experience for a digital product that could generate all these feelings in a cultural context.

Keeping all these insights in mind we also decided to explore some existing solutions and analyze their social aspects. We visited some virtual exhibitions in pairs (Digitale Kunsthalle, the Hermitage Museum, The Russian Museum) and found out that most of them are intended to be used individually and far from being unique and unforgettable. They also don't create feelings that we described above. These findings revealed potential for improvements that inspired us for a new solution.

In the next stage of our research, we created a list of crucial factors that seemed to be important for a new user experience and suggested possible solutions. Some of them have been implemented in our final high fidelity prototype.

Table 1: Crucial factors and possible solutions of experiences

Crucial Factors of experiences	Possible solutions
creating "Vorfreude" (looking forward, being excited)	text the user before hand, getting a physical product
atmosphere before the exhibitions	waiting in the zoom meeting music/audio effects "waiting in line"
break from daily life	
try something what is not possible in real life	
feeling connected to the environment, other visitors and the exhibition	receive a physical product that is linked to the exhibition and encourages visitors to share what they have seen and experienced
experience art as it is in reality (3D art,sculptures)	advanced technology (VR / 3D technology)
social aspect coordinate and communicate with other people	see where the other person is (on the map), chat, video call
exclusive experience	not available for everyone, limited visitors, ticketing solution
getting new insights and information that is memorable	multimedia exhibitions (text, audio, video,...)
connected with emotions (positive or negative)	
interaction with the physical product, the exhibition and the other visitors	gamification (quiz about what you have seen)

3 IDEA DEVELOPMENT

3.1 Storyboard and User Flow Development

In the next step we used all the insights from the research to develop our first ideas of what solution we want to offer at the end. To get all aspects from our research and interviews down to something more understandable, we decided to create storyboards that would give us a visual understanding of what we wanted to create¹⁵. Initially, we had five storyboards that ranged from a video conversation with a museum guide who engages the user in puzzles and quizzes to a storyboard about a 3D art experience combined with a before-and-after event. There was a more traditional map navigation that worked as first-person gameplay. Storyboard four had the aspects of a 3D social media dating App where you meet your friend in a virtual room and discuss the art that is displayed, with Go-event options. The last storyboard was a multimedia tour with different tools for conversation and visual communication.

After evaluating our first set of storyboards, especially regarding the crucial factors, we divided the group into two teams to present their best ideas in a more detailed storyboard. The first idea was Your Gallery “You have never seen art like this!”. A multimedia gallery tour that you can watch directly from your sofa with a friend online on your computer or smart TV. There should be an event calendar that's build the event. In the gallery you could choose a topic that would provide you info and understanding in art from the topic. You could answer a Quiz with your friend or try out other visual tools that are made to give impulses for conversation. After the exhibition there were different options like a lounge area, an online shop, a let's play and a sign up for a new meeting.

The second idea was ArtWalk “Transform your surroundings into the most famous paintings”. Users could buy a ticket and a packet. They would invite a friend to meet up online and go for a tour of their choice. On the tour they would see several paintings on their phone. While talking on the phone the two users should take a photograph of each artwork that they think has something in common with the paintings. You upload the pictures to the App and make it visual for your friends, discuss it or move on to the next artwork. The tour is

¹⁵ Krause, R. (2018)

shown on a map and has a start and end with a predetermined route. In the package you will get something nice to enjoy after the tour in the online lounge area.

We decided to move on with the ArtWalk solution. The concept was new to us and it had interesting interactions from the user and gave us reason to work on the social and intellectual content, in a new way. The ArtWalk Storyboard can be found in the appendix.

Before making the first tests on the ArtWalk concept we had to make a User Flow diagram. All interactions from A to Z had to be clear and understandable before the tests on a WhatsApp could be instructed. These first user-flow ideas can be found in the appendix. First there were six options to be tested with WhatsApp then we narrowed it down to three options for a second test. The details on these tests are explained in the following User Test Chapter.

3.2 User Tests WhatsApp Walk

3.2.1 Research Goal

We had different options for the ArtWalk, regarding timing of the pictures and other features. Our goal with the testing was to find out which options would work best.

3.2.2 Methods

We used remote user testing with an online questionnaire about the critical points we needed feedback on. We decided on an online questionnaire because we only had one week per set and online surveys are not as time consuming. Additionally, the social desirability has less impact on the results ¹⁶. There are of course also many cons for online surveys, which were in this case acceptable to us. To test the options, we simulated ArtWalks by using WhatsApp to send the artwork and information. The users also used the WhatsApp chat to share their pictures with each other and used their smartphone to call each other.

¹⁶ Taddicken, M. (2013), pp. 209-214

We did two rounds of user testing with WhatsApp. The first round included 6 different options that were only tested once or twice to get an overview over what could work. After that we decided which options to go on with for the second set.

3.2.3 Study design 6 versions

The 6 versions tested in the first round were different regarding time between the pictures and the snooze function. In four cases the users received a new artwork after a specific time, either 10 or 15 Minutes. They also had the option to snooze either once per picture or twice on the tour. Then the snoozed time would either be added to the tour length or they saw fewer artworks to meet the scheduled time. In the other two options the users could decide themselves when to see the next picture. In one option they were supposed to do all the artwork, in the other one, they could end the tour whenever they wanted.

Table 2: Six options for the first WhatsApp ArtWalk

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Option	Option Time Limit	Option Time Limit	Hybrid Option	Hybrid Option	Limit of pictures	Limit of pictures
Minutes between pictures	10	15	10	15		
Snooze	1 snooze / pic	2 snoozes / tour	1 snooze / pic	2 snoozes / tour		
Limit Time	ca. 60 Minutes	ca. 60 Minutes	60-90 Minutes	60-70 Minutes		
Limit Pictures	3-5	3-4	5	4	max. 9	max. 9
Other Limits					users have to do all the pictures	stop the tour at any point
Reminders before the tour						
1 hour	yes	yes	yes	yes	yes	yes
30 min	yes	yes	yes	yes	yes	yes
10 min		yes		yes		
Starting Point	after 10 minutes	at the beginning	after 10 minutes	at the beginning	Whenever they want	Whenever they want

3.2.4 Results

From the first set of user tests, we got insights on which tour options work best, as well as general insights on how the concept was received in general.

In the first four options the testers got the artwork after a certain amount of time. It was seen as very positive that they only got the first artwork a few minutes after they had started the walk. The team that saw new artwork after 10 minutes described it as enough time, 15 minutes were seen as too long, and part of the participants would have liked to choose the time between the artwork themselves. The snooze function was not used at all and the overall time of ca. 60 minutes was just right for everyone.

The teams that could choose the time between the pictures liked it that way and did not want to have a given time between the artworks. They felt like they had a good time management, found the time they took just right (30-90 minutes) and liked the option to stop the tour on the way.

Since we only did tests with one or two teams per option, we felt like we needed more tests to decide on one final version. We narrowed our options down to 3. This step was taken because some of the 6 options were very similar and we wanted to have more insight on the general differences, rather than smaller details.

3.2.5 Study design 3 versions

Based on the results from the first round of tests, we did a second round with only 3 options. We kept option 1 and option 6 from the first round and added another option, in which the users have a fixed time frame for the tour but can choose freely when to see the next artwork.

Table 3: Six options for the second WhatsApp ArtWalk

	Option 1 (Option 1)	Option 2 (Option 6)	Option 3
	Snooze Option	Picture Limit	Time Limit
Limit	Time Limit	Fixed amount of pictures, no time limit	Fixed Time, flexible number of pictures
Time between the pictures	10 minutes	flexible (when user are ready)	flexible (when users are ready)
Snooze/Skip	One snooze per pic	none	possibility to skip (2 times per tour)

Limit Time	Default 60 Minutes, variable	none	users choose time limit
Limit Pictures	3-5	users choose the amount of pictures	inform them about max number of pictures
Other Functions	you can stop the tour whenever you want	you can stop the tour whenever you want	you can stop the tour whenever you want
Reminder 1 hour before	yes	yes	yes
Reminder 30 min before	yes	yes	yes
Starting Point	after 10 minutes	whenever they want	whenever they want

3.2.6 Results

Out of the testers that did the tour with the time limit between the artwork, one half would have liked it better to be able to choose the time themselves, while the vast majority of the users without a time limit liked it that way. We therefore decided to continue our concept without a fixed time between the pictures. This also makes the snooze function unnecessary.

On the skip function we got very different feedback. Some users did not like it, while others did. We therefore decided to keep it for now for further testing. The function to stop the tour whenever the users wanted was generally approved by the test users.

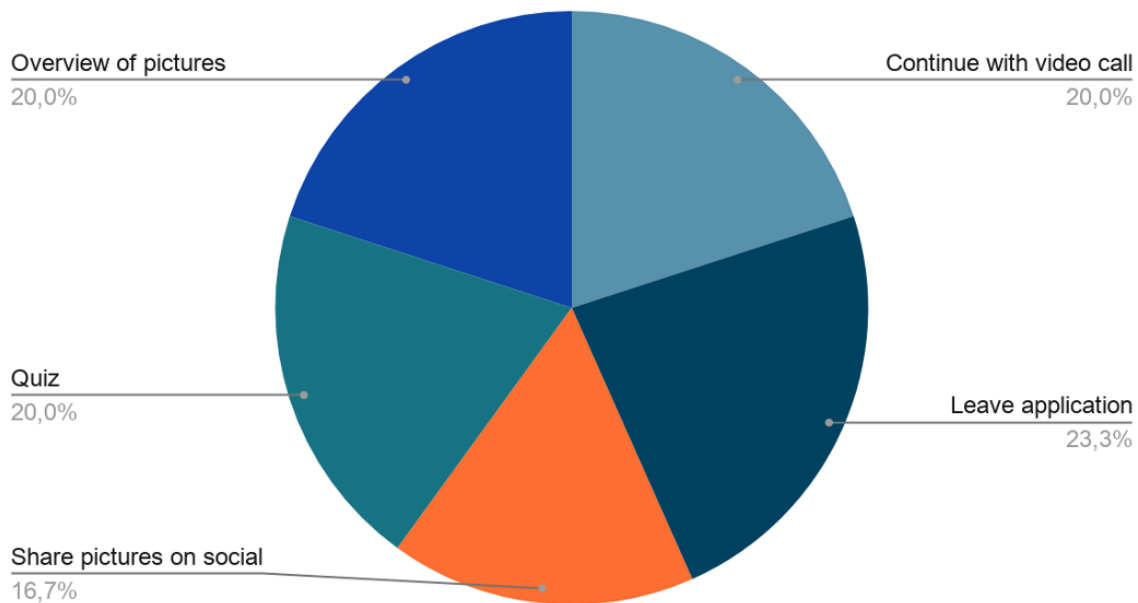


Figure 1: Activities after the tour from the WhatsApp ArtWalk

We also got feedback from both sets of user tests on the general idea and a lot of ideas about what else to think about when implementing ArtWalk. As an example, we asked what the users would like to do after the tour. The answers can be seen in the following chart.

The general feedback on the idea was very positive. The test users enjoyed doing an ArtWalk, regardless of the details of their option. This positive feedback also reinforced our team to follow the idea of ArtWalk and to create a new final User Flow as the basis to a high-fidelity app prototype. The final concept and the user flow will be introduced in the following.

We did the second set of user tests with 10 groups, which equals 20 people, split on the 3 options. We are aware that this is still a small number of users to base the final concept on. We therefore did more user tests with the app prototype later on and keep the other options in mind for future reassessment.

3.3 Concept Description

Combining ideas and innovative thoughts has given us a totally new type of art experience. We want people to keep on admiring art, and at the same time feel inspired to be creative and critical.

The concept is an App (for now a high-fidelity prototype) that is based on interaction between friends. In the App you can choose a walk while you are on the phone with your

friends. The App shows you pieces of art along the way, and you and your friends will enjoy the creative freedom of finding the right spot for a photo. Your photographic understanding of several artworks is a main focus of the experience. The App will make you come closer to the art, combining art with the physical world. Our interest with the app is to give you a life lifting experience that is mentally uplifting adventure on the distance of each other. Talk, discuss and share photos, later you can chat about the tour at home.

After having tested the idea on a WhatsApp test setup, we were sure on how the User flow in general would look. The final User flow diagram looks very different to the first with a detailed explanation on each step. First the user has to log in make a tour group name and selecting the right tour out of three, select time and date and send the generated invitation to some friends. The first screen you and your friends see is the explanation on the tour and on how it all works. There are three reminder notifications before the tour starts. When the tour starts you and your friends will have the first artwork showed. Now you can take a photo with the App and show it to the group. You can also choose to skip the artwork and move on to the next. This process continues throughout the whole tour. On the way you get frequently notifications on what to do as the next step, when you are halfway you get a notification and before the last artwork you get a notification. You will always be able to quit the tour.

As we knew what features we wanted to include and how the tour would be conducted in detail, there were a basis to start working on the first prototype. The final User flow can be found in the appendix („User Flow ArtWalk“).

4 ORGANISATION

4.1 Project Management Methods and Roles

At the beginning of the project, we decided in the group to organize the project with agile project management due to the structure of the project. At the beginning of the semester, the framework conditions set the goal of developing a virtual concept for an art experience between two people. The focus was particularly on the social interaction between two people. Since we were to develop the concept on the basis of comprehensive research, it was clear that we could not define by the beginning of the semester what the concept and the prototype would ultimately look like. Due to these conditions, we decided not to organize the project with classic project management, but with agile project management.

Agile project management had the advantage for us that we could adapt our virtual concept at any time through further feedback. We were also able to further develop our concept through the weekly presentations with the professors. Since we have constantly adapted the concept dynamically and through ever new insights from feedback, we were able to react perfectly to it with agile project management.

Through our regular meetings with the professors on Wednesdays, the time frame for working on subtasks of the project was also clear from the beginning. In the period from one meeting to the next, we implemented the new tasks and changes in order to get closer to the goal of the virtual concept for an art experience piece by piece. We added all the tasks that arose in the project in the project management tool Asana. In the following chapter, under the subchapter Asana, we will explain how we used the tool for task management.

By presenting our results on a weekly basis, we could make sure that our results were checked. This had the advantage for us that we could present the progress of our concept and could more easily integrate the feedback into the concept by making adjustments.

In our team, we decided for a flat hierarchy without a classic project manager. At the beginning of the project, we all took the position of a researcher. We investigated the market for digital possibilities to experience art together with a friend. After we had decided on a virtual concept in the course of the project, we carried out the first user tests and then analyzed the data from the tests. We integrated the feedback from the user test into our concept and created the prototype for the MediaNight from this concept.

For further development, we divided our team into four sub-groups. This resulted in a design team, a tour content team, a video team and a team for the technical implementation of the prototype, which also helped a lot for the organization and presentation at the MediaNight.

The respective teams worked independently on the implementation of the concept. However, we met regularly to discuss the partial results from each group and to clarify open questions.

Composition of the Teams:

Design Team: Liliya and Peter

Tour Content and Communication Team: Tamara, Lena and Daniel

Video Team: Daniel

Technical implementation of the prototype: David and Antonia

Through this division, as well as regular meetings, we were able to successively ensure the progress of the project.

Through the group contract created at the beginning, we regulated how we want to work with each other. At all times, the group contract served as a guideline for our cooperation. Points such as punctuality, honesty, openness and respectful interaction with each other, as well as personal responsibility and the preparation of each individual for our meetings, are a central part of this contract. We have also laid down our communication rules, how we want to communicate with each other transparently and openly, in this contract. In order to make the best possible decisions, we have set out in the contract how to proceed in voting. The process of our group meetings as well as the obligation to participate in each of them is also laid down in the contract.

We met as a group at least three times a week via Zoom. The meetings on Mondays and Fridays served as an opportunity for a brief update. This allowed us to ensure that questions that arose were answered promptly and that no group member was left alone with a task. Our meeting, where we defined and distributed new tasks and debriefed the meeting with the supervising professors, was held on Wednesday evenings. This allowed us to make the best use of the time until the next meeting with the supervising professors, thus ensuring that we had enough time for the new tasks. Additional meetings that were necessary, e.g., in the individual subgroups, organized themselves and agreed on when a meeting should take place.

4.2 Project Tools

Asana:

We structured and organized all the tasks that arose during the project using the "Asana" tool. Asana is a software-as-a-service that helps organize team collaboration and project management. We collected all the tasks to be completed in Asana and assigned them to the respective team members. This way, we could ensure that all tasks were visualized transparently and easily accessible for everyone. This had the advantage that at any time the progress of the project was comprehensible for everyone. With the deadlines included in the tasks, we were able to ensure that the necessary tasks were completed for the project to progress. Asana offers the advantage of quickly creating new projects and tasks, and the user-friendly interface makes it easy to work with and assign tasks to project partners, set deadlines, and view completed tasks.

Mattermost:

Mattermost was our college-assigned communication tool that we used throughout the semester. All communication that took place about the project went through Mattermost. We were able to quickly create our own Mattermost channels for the subgroups needed for subtasks and organize ourselves through them. For coordination on deadlines, design proposals, or other necessary decisions that we didn't discuss in our regular meetings, we were able to handle them through Mattermost. Thereby we use the possibility of the "Reaction" (e.g.: thumbs up or thumbs down) button. This allowed us to make decisions quickly and easily, even when we weren't in a Zoom Call.

Zoom:

Zoom served as a video call tool that we use for meetings with professors as well as our group meetings. Zoom offers the great advantage of a user-friendly interface and the possibility of screen transfer. This made working on shared documents or presentations very easy.

Google Drive:

For collaborative work, we used the Google Drive cross-platform web app. We created a large folder in Google Drive for our project, where we subdivided our subfolders for the task areas. Ultimately, we use Google Drive like a server. Our main use was for Google Docs

and Google Presentations, which we used to record and prepare our weekly evaluations and presentations.

umfrageonline:

We used "umfrageonline" to create our surveys for the user tests. The tool offered us the advantage that we could create the surveys in such a way that they could be answered via desktop as well as via smartphone. For us, it also offered the advantage that the evaluation was standardized and the results could be viewed quickly. Since we were able to filter within the surveys, we were able to better derive individual results and thus improve the quality of the user tests.

Whatsapp:

We conducted the first user tests with "whatsapp". Thereby we enabled a first simulation of our idea: One of the groups functioned as the "app" that sent pictures of certain artworks to the whatsapp group at regular intervals. Those who were in a call could not only talk to each other but now also send the first of their interpretations of the artworks to the same whatsapp group. This created an initial dynamic that we could also imagine for the future app and gave us our first glimpses of how the functionalities would work. To collect the data, we used the tool "umfrageonline", as already described in the upper paragraph, with which we were able to collect and evaluate the results of the first user test. With these results and the feedback, we were able to adjust the functionalities in our user flow.

5 TECHNICAL IMPLEMENTATION

5.1 Tool Introduction

5.1.1 Introduction: How did we come to this tool?

At the beginning of the project, the focus was on research and the importance of creating an experience. When we got to the point of initial implementation, we started by getting a rough overview of all the tools that would be suitable for this. We also had to weigh up which competencies had already been brought into the team and how these could be optimally used. After some further research and discussion, we decided to create the first prototype with Glide.

5.1.2 Glide Introduction

For the first application simulation we chose the tool "Glide". Glide is a no-code platform that makes it very easy and fast to create fully functioning prototypes from Google Sheets. With Glide, Google Sheets can be transformed into well designed, user-friendly applications with simple UX. Changes are inserted in such a way that you change the individual sheets of the Google Sheet, which function as a database. However, Glide only allows CRUD (create, read, update, delete) interactions with the stored worksheets. In the Glide application worksheet, rows function like objects. One can select a layout for objects such as lists, titles, calendars, details, cards, galleries and columns. For each object type, the column must be mapped to the appropriate display field. Each label on the worksheet becomes a "page" in the application. Glide does not have a drag-and-drop editor, so layout options are more limited. In return, a big advantage is that Glide offers very fast startup times, and you can preview your changes live and directly. Sharing the Glide application is also designed to be very simple. By copying the link or scanning the QR code, the Glide application can be used as a PWA (Progressive Web Application) and run on iOS and Android devices. Glide offers many free and paid templates to create different applications. For our prototype, we picked the "Instagram" template as a guide. We fundamentally changed the design as well as the logic to adapt it to our needs. For each screen displayed, another sheet is created in the Google Sheet. These sheets can be linked to each other by logical references. In the following, we will go more into detail about these logics and show

the most important functionalities and features of our prototype using screenshots and the corresponding explanations.

5.2 Implementation

5.2.1 Tour

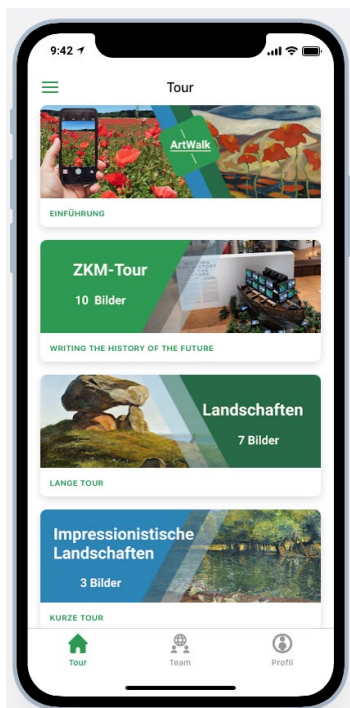


Figure 3: Tour Detail Screen

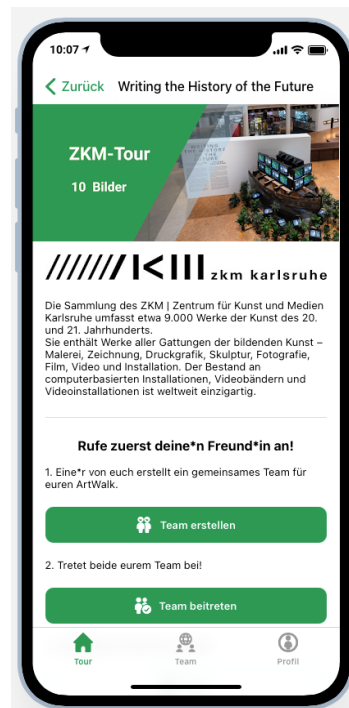


Figure 2: Overview Tour Screen

The three main navigation points of the TAB Bar are: Tour, Team and Profile. The Tour Screen serves as an overview page showing all possible tours, as well as an introduction to how the app works. Here the user can click on the individual tours, which will redirect them to an overview page with more information about the tour.

Glide offers the great advantage that the preview layout is displayed on the end device just like a fully functioning app. To make the tour screen look like this, we filled the first sheet in the sheet with the data in such a way that the individual objects (the different tours) are all in their own single row and can thus be edited individually in the layout.

In order to be able to see the detail page with the overview information for the respective tour, we have activated the function "view detail screen" and adapted it in the layout.

5.2.2 Help area



Due to the fact that we were not able to implement all the desired automated processes, such as making phone calls, out of the prototype with Glide, we created a guide. This should help the user to understand the social interaction that the app offers on the one hand, but also to get to know the functionalities on the other hand. This has the advantage for us that we were able to create a connection between the maximum possibilities of Glide and our concept. In this way, we were also able to solve the problem that we could not actually implement calls between two people with the tool. With the instructions, however, we were able to circumvent the problem and ask the users to use the phone function in the mobile phone to make calls. For the current state of development of the prototype, we had to resort to the tool of the guide. In the future development of the app, we would like to create a fully automated process that can be used without a guide due to its ease of use and appealing UX.

Figure 4: Help Area Screen

5.2.3 Starting a tour

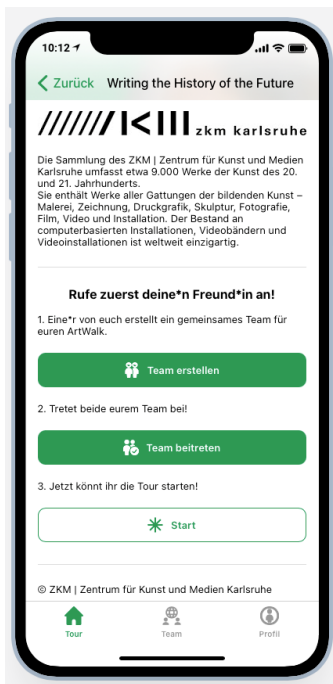


Figure 6: Tour Detail Screen (lower half)



Figure 5: Creating a Team Screen

After you have read the guide and the info text of the tour and you would like to do the selected tour, this screen explains again the most important steps for the start, in order to do the tour together with a friend. The step-by-step explanation in the form of buttons allowed us to create a workaround where we could best implement our idea of a shared social experience with the possibilities of Glide.

The buttons are fully functional and lead to the appropriate area to realize the social experience in Glide. Due to the structure of Glide, we could not realize an all-in-one solution, such as making phone calls in the app, but had to help ourselves with workarounds to implement changes in the team and profile sheet, which is important for the described social event and experience.

In order to start a tour with a friend, the users are first asked to call each other. For the whole experience both users should arrange to go for a walk. The idea behind this is that the walk provides a good basis for interpretation of the artworks and a new way of experiencing art. To be able to compare their interpretations of the artwork together at the end of the tour, one of the two users has to create a team that both join. The "Create Team" button opens a form that allows a user to create a new team. This entry is saved in the Teams sheet. When this team is created, the user is asked to enter a team name and confirm the tour they want to take. After the form has been confirmed and thus "sent", the team is created.

Now both users can join their created team via the button "Join team". This joining is done via the own profile screen, to which one is linked by the button "Join Team". We had to choose this way so that the logical link is correct. Since we are at the tour level where we cannot make any changes to the profile, we had to include this button that links to the profile to make the necessary assignment in the corresponding sheet of the Google Sheet (profile).

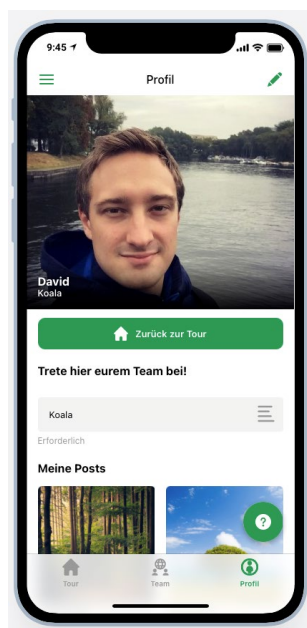


Figure 8: Profile Screen

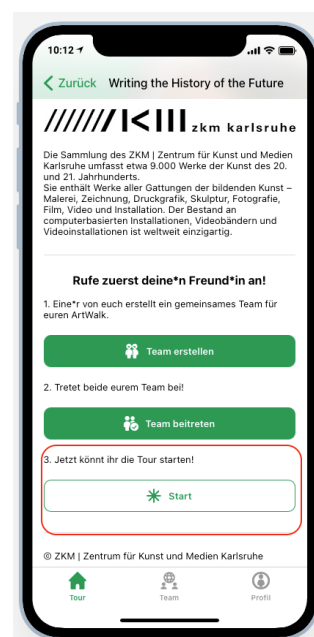


Figure 7: Tour Detail Screen
(Start Button now visible)

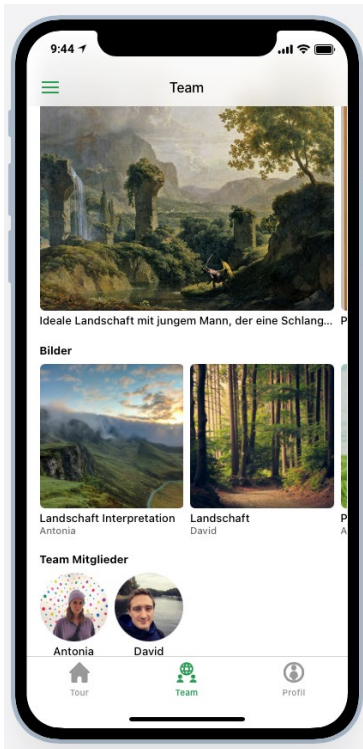


Figure 9: Team Screen

Glide offers the feature of "Visibility" that allowed us to show some functions as they would later look in a fully developed app. For example, we were able to show the "Join your team here" section only if you have previously chosen a tour and clicked on the "Join team" button by changing its visibility. The logic behind this is that we set the visibility of the button so that these actions mentioned above must be performed in order to see the team selection option. The corresponding team is assigned to the profile in the Google Sheet. This is necessary in order to later assign the images of each individual to the correct team.

Once you have joined your team, you can return to the tour start screen by clicking the "Back to Tour" button. At this moment, the "Start" option will also be displayed, as all the necessary basic settings have now been completed. If both users click on

"Start", they can both view the first image of the tour after a short info about the museum. At the same time, the users are already on the walk and talking to each other on the phone.

The tour shown here is a curated exhibition of the ZKM in Karlsruhe.



Figure 11: First Picture in Tour Screen

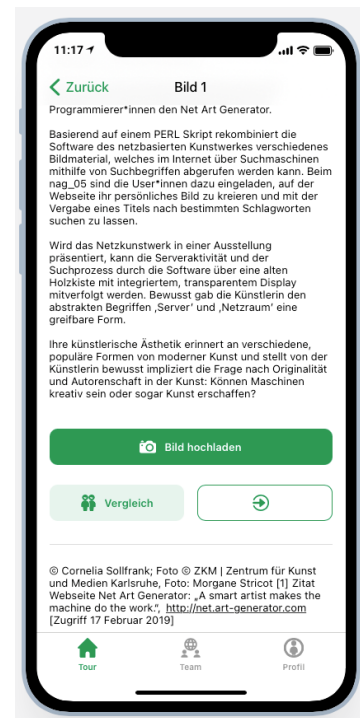


Figure 10: Picture in Tour Screen (buttons in lower half)

Information about the artwork is displayed in text and audio form and offers the user the possibility to choose the format. Now you have the opportunity to exchange ideas with your friend (by phone) about the shown artwork, find your own interpretations and upload them. Glide offers the possibility to open the smartphone camera and upload a photo with a description. These user inputs are stored in the "feed" sheet and assigned to the respective team by a link. This way the pictures are played out in the right team and can be compared by the team members.

Below the image information there are three buttons. A form to upload the image, a button that leads directly to the created and selected team of the user and a button to click to the next image.

As a conclusion of the respective artwork screen, the image source is inserted.

5.2.4 Team and logic

During and after the tour both users can navigate in "Team" and compare their interpretations of the artworks. Through the visibility settings, it is only possible to see your own team. In a larger view, the artworks of the tour are displayed, and below them, in a smaller view, the uploaded images of the two team partners. Currently, this is still a static view, as we are displaying three different sheets of the Google Sheet here and linking the corresponding references. Thus, we were able to present the superimposed view, through which users still have to navigate manually to see both the next artwork and the corresponding interpretation. We would like to automate this point in the future development of the project.

To better illustrate the logic, let's explain this using Team Sheet as an example. The column "Tour" as well as the column "Teams" are created when the team is created. These are necessary here to implement the following logic.

A Teams	Team Reference	Bilder	A Tour	Alle Bilder
Koala	Antonia David	ZUf6WuKcSd69i9y1pNZuFg	Lange Tour	Ideale Landschaft mit jungem M

Figure 12: Teams Sheet





A User	Photo	Photo title	Date posted	User relation	Name lookup	All user's posts	Other posts title	Other Posts Title	Author Photo Lookup	Team
ZUf6WuKcSd69i9y1pNZuFg		Landschaft Interpretation	2021-01-21T19:34:20.18	Antonia	Antonia	ZUf6WuKcSd69i9y1pNZuFg	## Weitere Bilder von An	## Weitere Bilder von An		Koala
mJhZxDPHT1KzNhQhm		Landschaft	2021-01-21T19:37:01.99	David	David	mJhZxDPHT1KzNhQhmQ1A	## Weitere Bilder von Da	## Weitere Bilder von Da		Koala

Figure 13: Feed Sheet

A ID	Signed Up Email	A Benutzername	Profilbild	Date joined	Posts	A Team	Team Reference	A Tour	A Daten
ZUf6WuKcSd69y1pNZ	optiz.antonia@yahoo.de	Antonia		2021-01-02T19:39:07.66	ZUf6WuKcSd69y1pNZuFg	Koala	Koala		1
mjHZkDHPT1KzNhQhm	David.heiermann@gmail	David		2021-01-19T18:47:09.53	mjHZkDHPT1KzNhQhmhQ1A	Koala	Koala		1

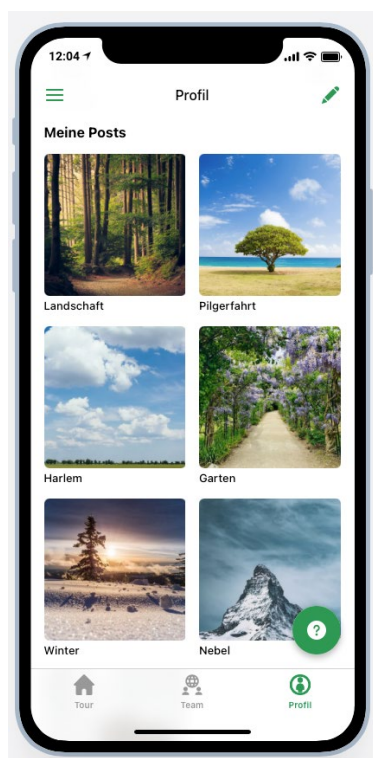
Figure 14: User Sheet

A Tour	Bilder	A Name	A Artist
Kurze Tour		Le barrage	Dominique Lang
Kurze Tour		Die Jerma bei Tran	Nikola Petrov

Figure 15: All pictures Sheet

In the column "Team References" we search the usersheet by a function, which team members are part of the team. In the example here of Team Koala, it is David and Antonia. In the "Images" column, we reference the Feed Sheet and play out the data about which images have been uploaded. It searches for the respective image that was assigned to a specific team when it was uploaded and plays it out. In the column "All images", the sheet "All images" is searched for the respective artworks of the tour and played out. As search information for this reference the column "Tour" is necessary for logical reasons.

5.2.5 Profile



Also in the own profile screen the uploaded interpretations can be viewed. In addition, there is a floating button "?", which leads the user to the introduction area, if they need help. On the top right, the user has the possibility to edit their profile by changing their name and profile picture.

We decided to display all our own interpretations in the profile, like a kind of archive. Should the user start a new tour in a new team in the future, they can still view all old pictures of past tours collected in their profile.

Figure 16: Profile Screen

5.2.6 Menu and other features

Glide automatically creates a menu that is available throughout the user flow and throughout the time of use. It is represented by the three small horizontal lines in the upper left corner. Among other things, you can also switch to the feed view, which shows all the posts of all users. There is also the possibility to view your favorites, the posts marked with a heart. In addition to the feed, the help area is linked again in the menu, as well as an overview of all users and Glide's preset displays of the "About" and the option to "Logout".

5.3 Difficulties and their solutions

We have set ourselves a lot of goals for this prototype and went into development with the aim of implementing everything that is possible. In fact, we had to deal with a few hurdles

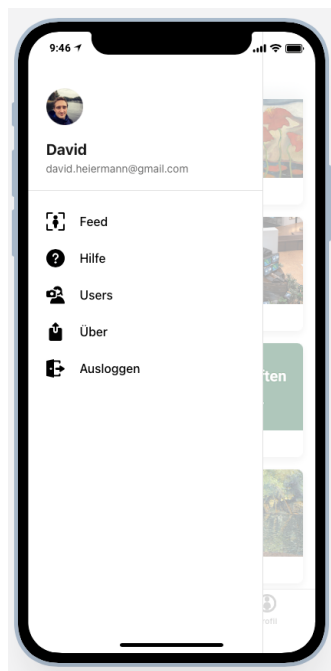


Figure 17: Menu Screen

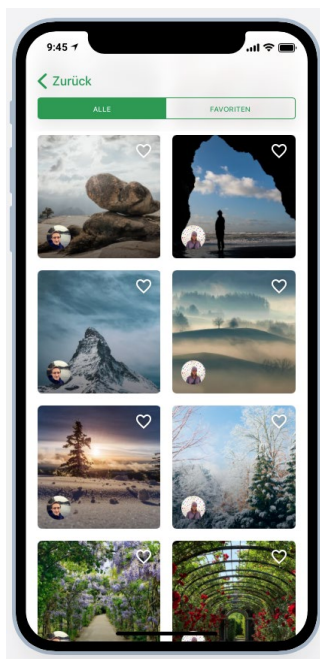


Figure 18: Menu Detail Screen

and difficulties.

We were guided by the user flow that we had worked out in our previous team meetings and research. This user flow describes all the steps and features that the user goes through. We were now faced with one of the biggest hurdles in app development: getting the wishful thinking as far and as good as possible in the first prototype.

We had to outsource some of our features of the app, as they were unfortunately not feasible in Glide. For example, the registration and invitation process or making phone calls. Since Glide is a static tool, no automation process can take place unless you link external code to the prototype, but we didn't have enough time for that. Also, the desire to build the app like a social network could not be fully realized.

In addition to the difficulties which we had with the Tool Glide during the implementation of the prototype, there was a further difficulty in the shared and simultaneous use of the tool. Unfortunately, Glide does not allow several people to work on the project at the same time. Due to the current Corona situation, we were unable to sit together in front of a computer

while implementing the prototype. However, as a team we were able to solve this problem as well. One of the team members had the Glide Tool open and shared their screen via Zoom. This allowed us to work on the prototype more or less simultaneously and in pairs. This had the advantage that we could realise the important process of working on the prototype together, which created synergies.

Also, when embedding the data in Glide, such as the different tours, we found a way to work on the tool from two different computers at the same time. Since Glide is based on Google Sheets, one of us could enter the data into Google Sheets while the other one did the layout in Glide.

With these workarounds, we were able to move forward with the development of the prototype despite the limitations of the tool.

In the development process of the prototype, however, we also encountered some problems that we could not solve with a suitable workaround. These include, above all, the process before and after the tour. In our user flow, we had planned to integrate the process of choosing a tour and inviting a friend to the tour, as well as other possibilities after the tour, into the prototype. However, this was not possible with Glide. For this reason, we provided the users of the prototype with a step-by-step guide on how to use our prototype in order to make the shared interactive experience between two people tangible. This has the advantage for us that we were able to create a connection between the maximum possibilities of Glide and our concept. In this way, we were also able to solve the problem that we could not actually implement calls between two people with the tool. With the instructions, however, we were able to circumvent the problem.

Unfortunately, we were not able to implement the option that users can exchange their interpretations like in a social network with Glide. In the development of a future app, we want to implement this function.

5.4 Current state

During the technical implementation with Glide, we reached the limits of feasibility and especially scalability with the free version of Glide. Thus, with the "Free" version of Glide, we could only make a maximum number of changes to the sheet of 1,000 updates, as well as insert data in a maximum of 500 lines in the sheet. Since our idea of the prototype is mainly to focus on the actual testing of a tour, these two limitations are difficult for us. The

limitations were mainly due to the function of uploading images and creating new user accounts, as these processes require several sheet changes and lines.

For this reason, after a discussion with Prof. Dr. Gruel, we decided to buy the "Pro" version of Glide in order to offer a good experience to the participants of the MediaNight as well as other interested users. Through the update, we were able to offer the users of the prototype the best possible experience with Glide.

5.5 Future outlook

With the first version of a working prototype with Glide, we want to test the prototype more in the near future and so start the next steps of the project. Based on the feedback, we would like to revise and adapt our concept. With the data from the feedback, we want to create a prototype that combines all relevant functions. This is to be created with the programme Adobe XD. Based on this prototype, we want to develop an app and launch it in the popular app stores. We also want to use the revised concept to create a marketing concept for customers and cooperation partners. The business model and a strategy for winning new cooperation partners should also be formulated on the basis of the concept.

6 USER TESTING

6.1 Goal

To test our prototype user experience and usability testing was necessary. We wanted to get an insight on the usability issues of our prototype and on the experience of the ArtWalk in general. The experience was tested before with the WhatsApp Walks but since a lot of the experience was now different since it is its own app and not a chat, a new insight on the experiences was needed.

6.2 Method

We used remote user testing, like we did before with the WhatsApp Walks. With this method we could engage users in different locations, which would otherwise not be possible. Additionally, the use case of the ArtWalk App is outside while doing a walk. Therefore, it was the most logical method for testing to get real insights on the problems that might occur during a walk. Remote usability testing also promises better insights due to often more diverse testers¹⁷. To get the best possible insight we held qualitative interviews with the users after their ArtWalk via Zoom. Interviews are supposed to be effective for getting comparable insights on subjective ratings, evaluations, interpretations and opinions¹⁸. They are therefore an effective way to get detailed insights on usability issues¹⁹. These are the reasons why we chose to work with interviews for collecting data on usability.

We had 12 teams do the ArtWalk, which made 24 users. Spool and Schroeder found that severe usability issues can be found with the 13th to 15th user²⁰, so we are confident that the user tests could identify all the important issues.

¹⁷ Tullis, T., Fleischman, S., McNulty, M., Cianchette, C., & Bergel, M. (2002, July)

¹⁸ Möhring, W., & Schlütz, D. (2013), P. 185

¹⁹ Hom, J. (1998), P.13

²⁰ Spool, J., & Schroeder, W. (2001, March), pp. 285-286

6.3 Study Design

The basic task we gave the users was to do one ArtWalk with a partner. We gave them instructions and an explanation on how to download the prototype, since this was different from a usual download in the App store and not part of the relevant usability. They also knew that they would have to do the ArtWalk with a partner. In this case it was more important that they did the ArtWalk properly than let them figure out first that they need a partner. We had a prepared questionnaire for our qualitative interviews. Different team members held interviews with the testers, and it was important to us that we get feedback on the same questions from every team. The questionnaire can be found in the appendix („Interview Questions for the Usability Testing of the Prototype“).

6.4 Results

The most important issue that all our testers pointed out was the process of creating and joining a team before the tour. It was not clear to everyone whether they should create a new team or join an existing one. It was also not clear why there were two steps of first creating and then joining the team.

It was not possible to fix the two steps issue since they were connected to the teams and to the profile datasheet. Therefore, we needed to keep the two steps while working with Glide as a tool.

Another thing that was confusing about the teams was the fact that everyone can see and join every team. We fixed parts of this by only making the team that each user joined visible in the “Team” section. This way the users should not get confused by the existing teams because they cannot just view every team without joining it. However, they could still join every team since we did not work with private sections in Glide.

We also made the process clearer by giving our users step by step instructions on the now more visible help section and at the beginning of every tour.

The users also provided us with feedback about the content. This was however quite diverse. Some users found the text too long, others found it very interesting. Most of them did not use the audio guides as much as the text. This was mainly because they were on a call and did not want to stop it for the audio files. Others had technical problems playing the

audio files or found they were not loud enough. We concluded that the usage of audio files should be tested more in the future since they are a lot of work to create.

Most users agreed that the facts and inspiration between the artwork were helpful and inspiring. They told us that they took this inspiration to talk about it and some even liked it more than the actual description of the artwork.

In general, the users also like the compare mode, where they could see the original picture on top, and their pictures below it. There were some issues because the users had to swipe every time to see the picture that they were at right now. For some it took some time to figure out that they need to swipe to see the other pictures. It was also mentioned that there should be the possibility to swipe all the pictures at the same time. This issue is something we plan on fixing when we have a real app since Glide is a static tool and not meant to remember which picture the users are at right now to use that information on another sheet.

Our test users also noticed some technical problems. They were however mainly because of Glide and nothing we could fix using this software. Other problems were due to the user's devices (e.g. Suddenly closing the app, intensive battery use). This is also something to consider when programming a real app.

Another topic our users mentioned was privacy. We need to consider for the future that not everyone wants to make their pictures public and not everyone wants to be found with their profile. This was a very important insight for us since we had so far mostly thought about the concept and not that much about the privacy of our users.

In general, the feedback for the idea was very positive. Even though there were some issues with the usability of the App, all our users were able to complete at least one tour and understood the basic concept. Some really liked that there are not too many functions, so the app is easy to understand.

The users also gave us some feedback on who they would recommend it to. This allowed us to get more insights on our possible target group. We were told the following target groups:

- People who like art.
- People who have no problem with the technical side of things, if they are not used to using apps, they will not use or understand this one.

- People who like going for a walk, being outside.
- People who like taking photos.

We used the feedback to create a second prototype that we presented at the media night. As mentioned above, not all the usability issues could be fixed with Glide as a tool. Therefore, we will also take the results of the user testing into account when we might develop a functioning app. Especially feedback on privacy and comments on the user flow are an important basis for starting to develop an app.

7 COOPERATION

One of the most important components of our idea was the art - because the app should revolve around it, it should be brought closer to the users and they should exchange ideas about it. The exhibitions or "tours" therefore had to be chosen carefully. We wanted curated exhibitions to offer the user added value from an artistic point of view and to relate to the procedure of a museum visit. A difficulty for us was the motifs. Since the works were to be interpreted outside, during a walk, the motifs had to be adapted to these conditions, which limited our choice. The biggest difficulty, however, was the legal situation. Since we knew that our app or prototype would at least be published at MediaNight, we agreed from the outset that we would only use artwork of which we had all the necessary rights. These three conditions (rights, motif and curation), initially presented us with major challenges in finding exhibitions.

After a few hours of research, we realized that the best solution was a cooperation with a museum. From such a cooperation we hoped to gain access to the museum's own collection, help with curation as well as with the creation of the work texts.

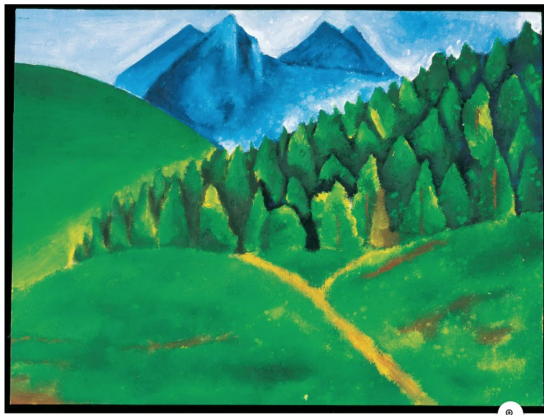
We thought about which museums we could ask, for example, which are from Stuttgart and therefore already know the HdM and have already had collaborations, which have a collection with many royalty-free works, and which might be interested in the idea of a digital alternative. We asked the Staatsgalerie Stuttgart, the Bauhausmuseum Dessau, the Städelmuseum Frankfurt and the Zentrum für Kunst und Medien (ZKM) Karlsruhe if they were interested in a cooperation. Initially, the Staatsgalerie Stuttgart expressed interest, but they did not respond to further mails.

In the meantime, we continued to search online for already curated, license-free exhibitions and found what we were looking for on the website of the Europeana Collection.

At relatively short notice, the ZKM also contacted us and agreed to cooperate. In order to better clarify our plans and the requirements of the collaboration, we discussed over Jitsi with Jenny Starick from the ZKM. Together we selected artworks from the current exhibition "Writing the History of the Future", discussed the structure of the exhibition, the work texts and additional information texts, and talked about the basic goal of the app and the exhibition. In the following days, we were provided with the works and the texts so that they could be implemented.

8 COMMUNICATION, BRAND ENGAGEMENT, MARKETING

8.1 Design



Countryside
Vojtech Jakab 1992

The International Museum of
Children's Art
Oslo, Norwegen

Details

Titel: Countryside
Ersteller: Vojtech Jakab
Datierung: 1992
Abmessungen: w40 x h29 cm
Typ: Gouache on paper
Externer Link: <http://www.childrensart.com/>

Figure 20: Artwork „Countryside“ of Jakab Vojtech

In our design work we were limited by technical constraints of the prototyping tool. Glide offers many themes from different categories with limited opportunities for customization. The “Instagram” themes that we chose for our project had a predefined layout structure that could not be changed. It also contained a number of components (for example buttons, fonts, icons and control elements) that allowed very limited styling. Most changes that could be made were about primary theme-based colors, images and font size. Nevertheless we managed to create an individual look for the “ArtWalk” app using styled cover images for the tours page and

a visualization of the “this is how it works” page. The choice of the color palette - dark blue (#1b84b6), light blue (#aacee5), dark green (#286a47), light green (#2d9953) and black (#0d1614) - that we have used in our project was inspired by the artwork “Countryside” of the artist Jakab Vojtech that we discovered using the color generator of “Google Arts & Culture”. These colors are associated with walks in nature and convey a sensation of harmony and serenity.



Figure 19: Color palette

On the tours page we have a list with CTA (Call-to-Action) buttons. It seemed like a good design ground for how the App should look. We decided to layout the buttons with a two layer crossing area in two gradients. The buttons shift from right to left having art as background then gradients and then text. When choosing each separated tour you first meet

a textural introduction to the tour. When you move on to start the tour you meet the first page of the tour itself. Here there is one artwork, descriptive text, audio and camera button. To give the page an easy flow and layout we placed the artwork first then audio control, then the textual description, and then the camera button all centred, last there is a compare button and beside that the next button. There is a scroll bar to the right side that makes it easy to work with longer text on the page.

For our design work we used Figma, Adobe Photoshop and Adobe Illustrator.

8.1.1 Logo

We started out with a stylistic logo that had black text on a white background. The font in Artwalk was Georgia and there was a long slogan underneath. From the top right corner to the bottom left there were two straight lines on each side of the logo name.



Figure 21: Logo „ArtWalk“

After ideating on how to move on from the old logo to something that could be used as an icon on a smartphone, we went for a shorter slogan under the name in a more standard font family, something that should match the primary App font. Roboto was the system font we decided on. We replaced the slogan text with an underlined and kept the crossing line from right to left on both sides of the logo name in an aesthetic and minimalist design. The background color should match the rest of the App design, green gave a clear indication of nature and freedom. Our decision on using this logo was based on having a clear visible name that is easy to recognize. That will give the logo a longterm credibility and appeal. The good use of form language is easy to recognize.

8.2 Website

As a part of our preparation for Media Night we created a website using Google Sites. Our goal was to present information about the project and establish a digital connection with our audience. Websites are an important marketing tool and a good way to build an online presence. It also helps to attract potential users, investors and partners. In addition to that it serves as an important communication channel that enables us to stay in touch with interested people, react on requests and answer questions that might appear.

Google Sites is a service provided by Google based on Google Drive. Our choice was influenced by the fact that Google Sites has a number of advantages compared with other popular CMS. It is provided for free and can be used by everyone who has a Google account in collaboration with other team members. This application is template based and doesn't require programming skills and database knowledge. The setup can be done without installation of any software and doesn't take a lot of time. Google Sites is integrated with other Google apps and can be accessed from the same Google account. The content of the webpage can be updated by drag&drop or uploaded in real time without any code manipulations. The principle "What you see is what you get" makes this service very fast and easy to use. The website has a responsive layout that automatically adjusts to all types of devices (desktop, laptop, tablet and mobile phones). Owners of the webpage get full control on page access and permissions. The link can be made public and accessible to everyone or be shared with individual persons. Google Site provides notifications about last updates on the website in order to keep the visitors up to date. Google Sites is a perfect "ad hoc" solution for short-term event-based campaigns that helps to share ideas with interested audiences.

1. Our one-page website consists of the following sections:
2. header with a large banner
3. section with a short textual description of our app
4. section with a promotional video
5. section with textual information about collaboration with our partner (Zentrum für Kunst und Medien Karlsruhe (ZKM))
6. section inviting to explore the prototype with QR code and a button redirecting to our Glide account.
7. section with screenshots of selected pages of the app "ArtWalk".
8. section with photos of all team members and a contact email address
9. footer with information about the university, study programs, supervisors and links to Twitter accounts.

Each section can be edited separately. The settings on the left side of the page allow editors to move, duplicate or delete sections. It is also possible to change their background color.

The content of the website includes texts, videos, images and embedded links redirecting to external resources (Glide prototype) and social media (Twitter account).

For the large banner we prepared an image splitted into two parts that is supposed to convey the idea of the app “ArtWalk”. A green logo in the middle of the image connects an artwork on the right side with an interpretation of this artwork on the left side. The section with photos of team members adds a personal touch to our project and reveals personalities behind it. It is also a good way to gain trust from potential partners and users and benefit from it on a long-term perspective. The promotional video is supposed to give a first impression and to inspire visitors to explore the prototype. The screenshots of the main pages of the app explain the most important parts of our user story: choosing a tour, navigation through the content of the tour and the compare mode.

8.3 Video

At the beginning of the video creation process, we first thought about the requirements. Our video will be shown at the MediaNight and should explain in maximum two minutes what ArtWalk is and create interest for it. It was clear to us that we had several options to convey this message. Either through a screen recording of the app or through a video in which you can see the app in action. After thinking about it for a while, we decided to take a middle course. We want to show how the app looks and works, but at the same time we want to show how an ArtWalk looks like in practice. Additionally, we wanted to make the video personal and emotional by including a narrator in the video. But there was an obstacle. We couldn't get together to do the filming because of the Corona situation. So, we decided to have everyone film a part themselves with their smartphones and then bring it all together.

After these initial considerations, we started by writing our first voiceover based on our press release. This gave us a good framework to plan the other elements of the video. Daniel had film equipment at home and has agreed to make the video. After the voiceover was recorded with video, we could add the other parts and finalize our first version of the video. After a joint discussion and feedback from Prof. Dr. Gruel and Katja Schechtner we decided to build on our first version and improve it further. Our challenge now was to reduce the voiceover to a maximum of one minute in order to really only say the absolutely essential things. After a few attempts and support from our supervisors, we achieved a very good result for us. Daniel finalized our new concept in a storyboard (see „Storybaord Video“ in the appendix).

After that we went back to the implementation. Some scenes we filmed again as a team. Others we could use from our first version. It was important to us that the art is also in the foreground in the video, which we achieved with our intro. At the same time, we managed to convey emotions through the new voiceover, which should arouse interest in our app. The exact sequence and the individual scenes can be found in the storyboard in the attachments.

We are very grateful for the development process and now very happy with our final video. It was shown in the livestream of the MediaNight. At the same time, we also included it on our website and the MediaNight page.

8.4 PR and Interviews

As the Media Night approached, we received two requests for interviews. Since we wanted to draw more attention to our project at the Media Night, we gladly accepted to do these interviews.

The first interview was for the Media Night special of edit. Magazine. For this, two first-year CR/PR students interviewed Tamara via Zoom and asked her about the idea of the project, the implementation, the collaboration and the future of the project. The finished article appeared on the day of the Media Night on the website of the edit. online magazine and can be read under this [link](#).²¹

Another interview that generated more attention and directed more interested people to our Media Night project page was the live interview of the studio production of the Audiovisual Media degree programme. This interview was more elaborate, as it was necessary to take part in an information event and a rehearsal a few days in advance. During the rehearsal, there was also a preparatory discussion with the moderator to clarify which questions would be asked and what information should be included in the interview so that the live broadcast could go off without a hitch. The interview during the live broadcast then went off without a hitch and led to some viewers wanting to find out more about ArtWalk afterwards. The interview can be watched [here](#).²²

²¹ Dias da Motta, I.; Meister, A., (2021)

²² Virtuelle MediaNight LIVE, (.2021)

9 RESULTS, FEEDBACK & FUTURE PERSPECTIVE

Looking back at our initial task to find a way to make an art experience for two possible and enjoyable in a digital setting, we have come a long way. The team started with researching a lot about existing digital tools from art galleries and museums and found that none of them were focused on a social experience. We then proceeded to research existing social online activities like social media or video games. Additionally, we focused research on what are essential factors of a social experience. Therefore, we did scientific research, reflected our own opinions and held interviews on experiences.

From there we developed different ideas and storyboards for possible art experiences until we decided to continue with the concept of ArtWalk. We finalized a first concept after user tests using WhatsApp to a user flow that was ready to be implemented as a prototype.

The first prototype was built with Glide and as soon as it was functional, we used it for usability tests to figure out how to improve it. After those tests, we managed to get an updated version of the prototype that we could present at the media night to present our project. Not only did we work on the technical implementation but also on the content and promotion for the project. We started a first partnership with the ZKM Karlsruhe, created a website and promotion video and gave interviews to other student productions about our project.

Working together as a group of seven people in times of corona and distance learning was a big challenge of this project. We learnt a lot about project management and holding well-structured online meetings without wasting everyone's time. After the semester we can say that we managed to handle the challenge well and took a lot of learnings from this way of working together as a team.

At this point, we are confident that the concept of ArtWalk is very promising and has potential to be implemented as an app. The feedback that we got from the usability tests and at the Media Night was overall very positive. The users told us that they liked the idea a lot and have never done something like it before. We therefore started to think about possible business models for the app, how to make it scalable and eventually be able to make profit with it.

The business model is far from final and has to be worked out in the near future. To get help developing the business model and also the app, we already applied to the program “BW goes mobile” and are finalizing our application for the “Sandbox” program.

Our first ideas on the business model are summarized in a business model canvas that can be found in the appendix („Business Model Canvas“).

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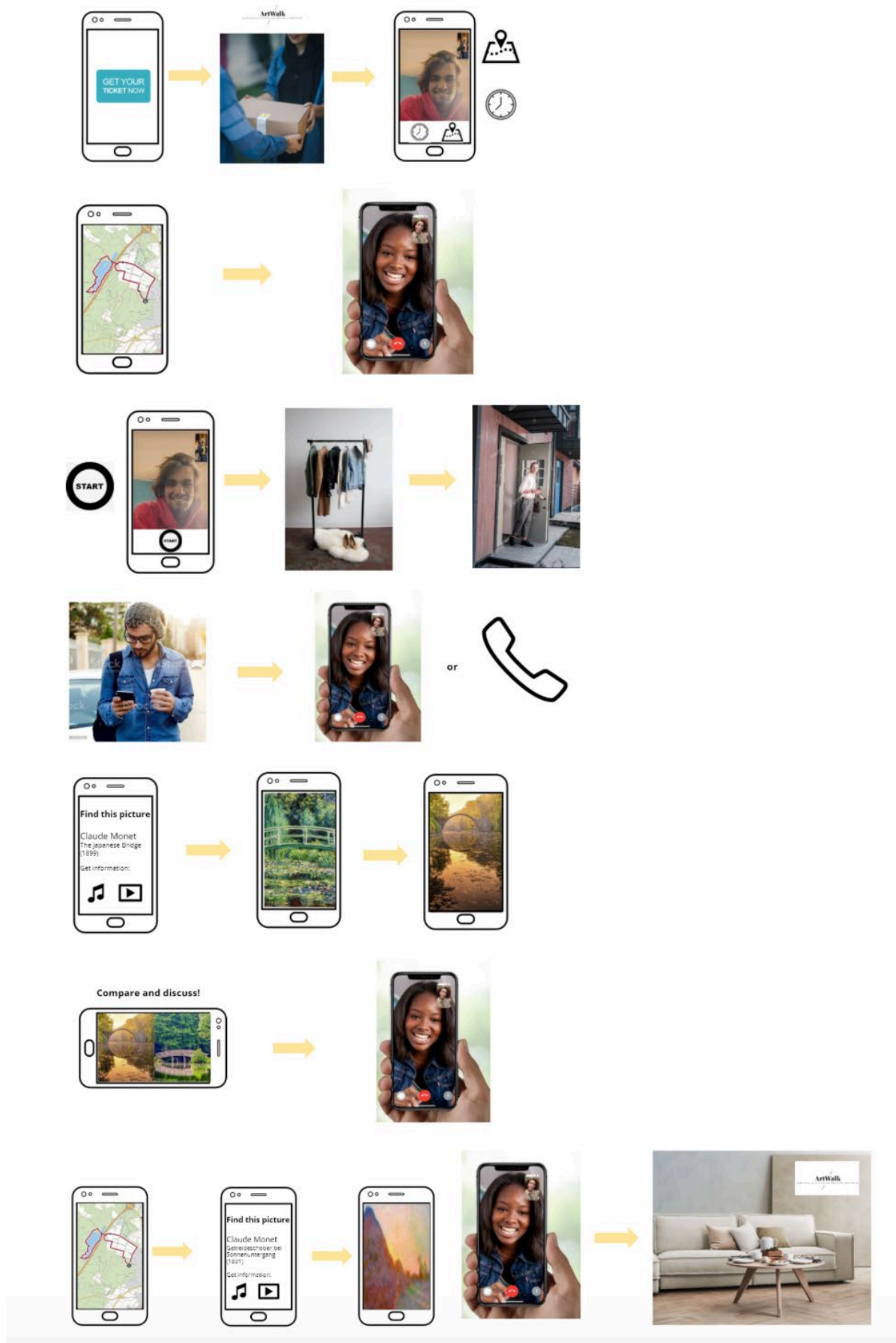
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APPENDIX

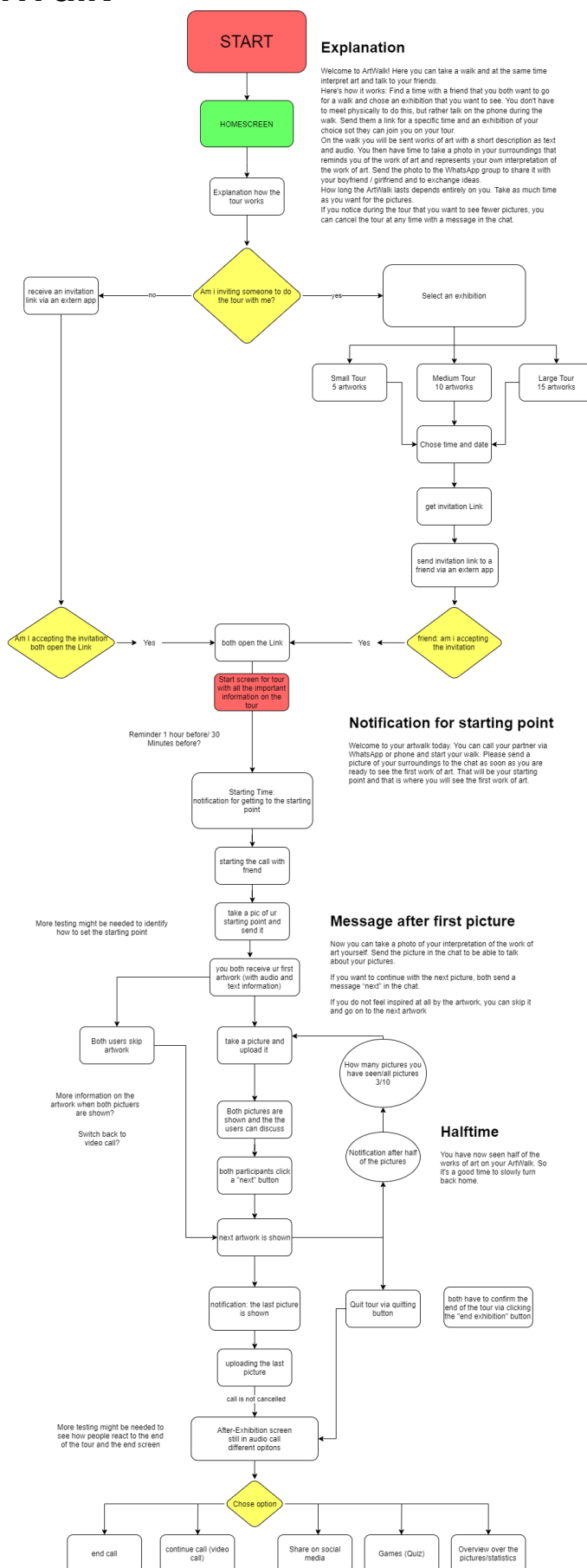
Questions Interview on Experiences

- Gender, age
- What makes a good social event experience for you?
- Can you think of a good social event experience that you had recently?
- How good was the experience in general?
 - Scale 1-5
- What made the experience pleasurable for you?
- Did you have any expectations before the event? Did the experience meet the expectation?
- Did the experience lead into another social interaction afterwards?
- Did you already have a digital experience / a digital event?
- What would you expect from a digital experience?

Storyboard Artwalk



User Flow ArtWalk



Interview Questions for the Usability Testing of the Prototype

The interview questions are provided without translation because the interviews were conducted in German.

- Wie oft nutzt ihr Smartphone-Apps in eurem Alltag?
- Wie viel telefoniert ihr in eurem Alltag?
- Beschreibt in deinen eigenen Worten, was “ArtWalk” ist und wie es funktioniert. (beide Teilnehmer sollen es beschreiben)
- Würdet ihr sagen, dass der ArtWalk eine bereichernde Erfahrung war? Erläutert.
- Würdet ihr ArtWalk euren Freunden/Freundinnen weiterempfehlen?
- Ist euch die Bedienung der App allgemein leichtgefallen?
- Habt ihr die Funktion aller Menü-Buttons verstanden?
- Habt ihr alle Hilfetexte verstanden?
- Habt ihr verstanden, wie ihr eine Tour auswählt und startet? (Incl. Team erstellen und beitreten)
- Habt ihr verstanden, was ihr machen sollt, nachdem ihr ein Kunstwerk gesehen habt?
- Was habt ihr gemacht, nachdem ihr ein neues Kunstwerk gesehen habt?
- Habt ihr die gesamte Information zu den Kunstwerken gelesen, bzw. angehört?
- Wie fandet ihr die Fakten und Inspirationen zwischen den Bildern? (nur bei langer Tour)
- Habt ihr bei jedem Kunstwerk ein Foto gemacht oder habt ihr Kunstwerke übersprungen?
- Hattet ihr irgendwelche Probleme Photos hochzuladen oder anzuzeigen?
- Gab es weitere Probleme während des Walks? Sowohl mit der App, als auch generell (z.B. Ablauf nicht verstanden, Internetverbindung war instabil,...)
- Auf welchem Weg habt ihr miteinander kommuniziert? (Telefon, WhatsApp,...)
- Wie viel habt ihr während des ArtWalks geredet?
- Über was habt ihr euch hauptsächlich unterhalten? (Themengebiete, wie “privates”, “Kunst”, “Funktionalität” reichen)
- Sonstige Anmerkungen

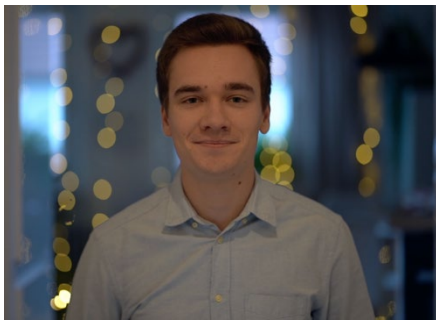
Storyboard Video

1. Logo (Artworks in the background (animation))



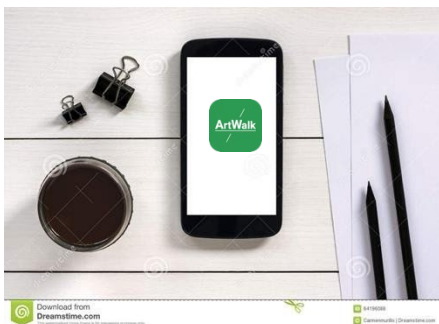
Just an example of how to simulate a start image. Artworks are still being selected.

2. Speaker



(Normalerweise erleben wir Kunst im Museum. Aber warum eigentlich? Wir bei Artwalk haben das unmögliche möglich gemacht. Mit unserer App kannst du Kunst erleben, egal wo du gerade bist. Und zwar nicht allein, sondern zu zweit. Und so funktioniert's:) *Speaker setting similar to previous.*

3. Screen Recording of opening the app

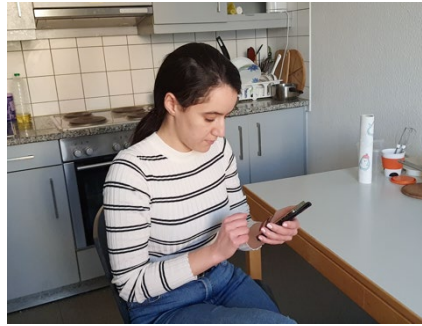


(Öffne einfach die App...)
*Filming the smartphone on the table.
This way the functions of the app can be shown within an aesthetic image.*

4. Two friends call and set a date

Two different scenes. (People need to talk and laugh with each other)

(...und verabrede dich zum Spazieren gehen.)



5. People get dressed and go outside / people laugh while on the phone



(Ihr müsst dazu gar nicht am gleichen Ort sein - Artwalk verbindet euch und die Kunst trotzdem miteinander. Solange ihr Internet und ein Smartphone habt, seid ihr dabei.)
An example of several similar scenes

6. Screenrecording of one tour and the first artwork. People are still on the call



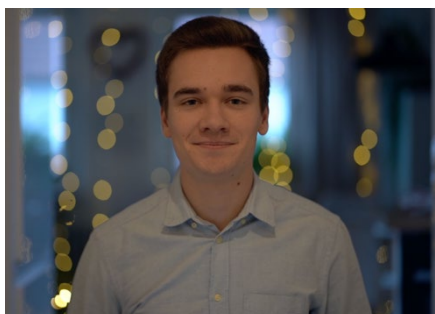
(Es geht darum, dass ihr diskutiert, lacht und euch einfach über die Kunst austauscht. Aber nicht nur das.)
Filming the smartphone on a table. This way the app's functions can be shown within an aesthetic image.

7. People taking pictures of their surroundings



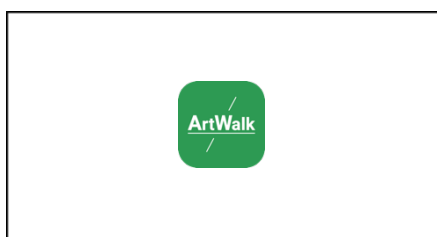
(Ihr könnt euch zusammen als Foto-Künstler ausprobieren und die Kunstwerke selbst interpretieren.)
An example of several similar scenes

8. Filming Speaker



(Interessiert?
Dann lade die App runter und erlebe
wie viel Kunst in deiner Umgebung
steckt!)
Speaker setting similar to previous.

9. Logo



Business Model Canvas

The Business Model Canvas

Designed for:
ArtWalk

Key Partners <ul style="list-style-type: none"> - Museums - Galleries - Artists - Service provider for server capacities - Curators - App Store (Apple / Android) - Advertising partners - Developer (consulting) - Sponsors - Patrons of the arts 	Key Activities <ul style="list-style-type: none"> - Development and programming of our app. - Marketing to new users. - Partner acquisition (museums, galleries, artists, advertising partners) - Maintenance of the app (new content, design, further development) - Communication with our partners. Key Resources <ul style="list-style-type: none"> - Provision of content and rights (works of art) - Server capacities - Qualified staff for the development of the app. - Suration - Specialists (developers, marketing, curation ...) - Our app - website 	Value Propositions <p>User:</p> <ul style="list-style-type: none"> - The app offers you the unique opportunity to experience art in your immediate surroundings. - Social platform for the joint art experience and social exchange in the digital world. - Interpretation of the works of art <p>Cooperation partner: (content)</p> <ul style="list-style-type: none"> - Our app gives museums, galleries and artists the opportunity to showcase their exhibitions or works of art digitally and thus draw attention to their other offers. - Additional promotional opportunities for our cooperation partners - The app should serve as a supplement to classic art exhibitions, but also be an independent experience. 	Customer Relationships <ul style="list-style-type: none"> - Social experience between users - Interact with the artwork in a new way. - Art experience - Confidence in data protection - Constantly new content - High quality content - Further developments of the app (AR / VR ...) Channels <ul style="list-style-type: none"> - Website - App stores - Influencers - Newsletter - Press - Social media - Funding programs - Forums - In museums (posters, flyers ...) - On external websites (museums) - TV and online video advertising 	Customer Segments <ul style="list-style-type: none"> - Art lovers - People who go to museums - Digital natives who are open to new things - People who would like to visit a tour in a museum, but cannot come to the location due to the distance. - People who like to go for a walk and are looking for a change.
Cost Structure <ul style="list-style-type: none"> - Employees - Marketing and acquisition costs (advertising, travel) - Infrastructure (server, domain, applications) - App Store - App development 			Revenue Streams <ul style="list-style-type: none"> - Sale of advertising space in the app - Premium functions (freemium) - In the event of success and many users, museums, galleries, etc. could pay for additional promotional opportunities (additional functions for exhibitions, direct integration of the ticket shop, ...) 	