



BACHELOR THESIS

Designing a Job Interview Space in Mibo

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Abstract

In a world in which the role that technology plays increases every day, more and more processes are being digitalised. However, the process of job interviewing seems to stay behind, while this is a crucial organisational process. Since the way in which job interviews are already being conducted online is not always a positive experience for both organisations and job seekers, it is important to find a new way for conducting job interviews online. For this reason, the goal of this graduation project was to design and develop a virtual job interview space in Mibo. Before starting the actual design process of this job interview space, a background research has been carried out, which was then used as a foundation for the rest of the research. Based on the information gained through this background research, the co-design process of the eventual product started. Throughout the course of this process, various prototypes were developed. After the first round of prototyping, two paper prototypes were designed which were then evaluated with end-users. Based on the results of these paper prototype tests, a lo-fi prototype of the virtual job interview space was made. This prototype was shared and discussed with stakeholders, after which various adaptations to the prototype were suggested. Based on these results, the final (hi-fi) prototype was developed using Unity. This final prototype is the end product of this graduation project, and has been evaluated thoroughly with potential end-users. After this final evaluation, it became clear that the virtual job interview that has been developed can, if developed for real, substantially contribute to the way in which job interviews are conducted online.

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1. Introduction

In the world we live in, the role that technology plays increases every day. Logically, the professional field does not stay behind in this digitalisation. More and more organisations make use of technology to facilitate everyday processes. This often enables employees to work (partly) remote. The arrival of the COVID-19 pandemic has accelerated this process of remote working. When the coronavirus was declared a global pandemic, governments from all over the world have forced organisations to start working from home (WFH) [1]. Many believe that this way of working might even be the ‘new normal’, due to uncertainty around the pandemic and its duration [2]. Nonetheless, there are many organisations that are still struggling to find a way in which they can shape processes, that would normally occur physically, in a digital manner. Given the fact that WFH will most probably remain, even after the pandemic will be over, it is of great importance for organisations that they are able to perform all of their processes digitally. For many organisations, the recruitment and selection (R&S) of new employees is a crucial process, as this plays a significant role in the expansion of human capital within the organisation [3]. However, despite the fact that many organisations have been forcedly WFH for over a year now, no tools have been found yet that are specifically developed to provide organisations the opportunity to recruit and select new employees digitally. Therefore, there is a high need for a technology that enables organisations to perform their R&S processes while WFH.

Over the past year, various platforms that enable individuals, who are not able to meet physically, to stay connected have grown in popularity. Mibo is one of those platforms that aims to connect people digitally. This platform combines the technology of video conferencing with a 3D-world in which the user can move around. Mibo has become increasingly popular during the pandemic, especially for informal meetings. However, several organisations that already use Mibo have requested a new world, that is suitable for job interviewing. Therefore, the goal of this research is to design and develop a generic space in Mibo that can be used during the job application process. By developing a generic space, which organisations can customize their selves, there is a higher possibility of different organisations actually adopting this job interview space. The main research question of this research is:

“To what extent can the unique features of Mibo be used in a generic space, that can be customized by an organisation, to positively contribute to different stages of a job interview?”

In order to answer this research question, the three following sub-questions have been formulated:

SQ₁: *What are the unique features that distinguish the virtual world of Mibo from other video conferencing platforms?*

SQ₂: *To what extent can customization options for a generic space in Mibo offer organisations the opportunity to create a brand experience for their applicants?*

SQ₃: *Which different stages of a job interview need to be facilitated by Mibo?*

These sub-questions will be answered prior to answering the main research question. The different sub-questions will be answered in different sections of this report.

In the following report, the design and development process of the virtual job interview space in Mibo will be described. To begin with, a thorough background research will be performed, in order to get a more in-depth view on the requirements of the job interview space. During this background research, SQ₁ will be answered. This background research will form the foundation for the rest of the research. Thereafter, the requirements that were captured during the background research will be analysed and structured. Then, the actual development process of the virtual job interview space will be described. Throughout this process, the Creative Technology Design Process [4] will be used as the common thread. This design process is essentially an iterative process, which means that the different phases of the process are repeated and the product is being tweaked and improved continuously. However, for the clarity of this graduation project report, the different phases of the Creative Technology Design Process will be described linearly. This co-design process, in which potential end-users of the product play a central role, will start with an ideation phase. In this section of the report, SQ₃ will be answered. In the ideation phase, the initial idea is explored and a brainstorm session is held, after which a first (paper) prototype will be provided. This prototype will be tested and discussed with users, after which it will be improved. After having tested the paper prototype, a more in-depth specification of the eventual job interview space will be provided. In this section, a lo-fi prototype of the job interview space is developed, which will then be iterated and improved. Thereafter, a final prototype will be developed, which will be described in the realisation section of this research. Finally, the final prototype of the virtual job interview space will be tested and evaluated with potential users and SQ₂ will be answered, after which the outcomes will be discussed. Based on these outcomes, final conclusions and future recommendations will be formulated.

2. Background Research

Before being able to design and develop an online job interviewing space, it is important to gain more insight of the subject and State of the Art technologies. Therefore, a thorough background research is conducted that will form the foundation for the rest of the study. This research consists of three main sections. First, a literature analysis is conducted, to broaden the knowledge about working from home, job interviewing in general and other online video conferencing tools. Thereafter, a closer look is taken at various State of the Art technologies, amongst which Second Life. Although a tool designed specifically for organisations to conduct their job interviews online has not yet been found, it might be valuable to consider comparable technologies. By doing this, potential challenges might be observed before creating a prototype. Lastly, interviews with potential users of the eventual product will be conducted. Through these interviews, it is hoped to obtain more knowledge about the users' needs.

2.1. Literature Analysis

In this literature analysis, two main themes will be discussed. To begin with, a closer look will be taken at the forced WFH situation that resulted from the COVID-19 pandemic, and how this impacts individuals in the professional field. Then, the process of job interviewing will be explained and elaborated upon, after which literature on performing job interviews online will be discussed. Finally, general conclusions will be drawn from all findings discussed in this literature analysis.

2.1.1. Working From Home (WFH)

Due to the sudden arrival of the COVID-19 pandemic, countless organisations were ill-equipped for the rapid transformation from the conventional way of working to WFH [1]. However, as long as the pandemic will last, WFH will most likely remain a governmental measure in most countries in order to prevent more outbreaks of the coronavirus [5]. Even after the pandemic will be over, the expectations are that WFH will remain the norm, as many organisations have seen the advantages of this situation, like the fact that it is very time efficient. However, it has been proven that the forced WFH situation as a result of the COVID-19 pandemic has also negatively influenced employees in numerous ways. To begin with, research has shown that individuals who are in this situation have reported an increase in their stress level, as they are sitting behind a computer screen all day [6]. Another aspect that resulted

from the forced WFH situation, is the fact that individuals perceive the work efficiency of their co-workers more negatively when these co-workers are working at another place than the workplace (e.g. at home) [6]. Another research has found that employees who are obliged to WFH, due to the coronavirus, often feel isolated and disconnected from their colleagues and managers [5]. O Connor, Conboy and Dennehy [1] even add on to this that managers should plan regular social meetings in order to recreate the daily breaks a workday normally would have. From these findings, it can be concluded that the forced WFH situation resulting from the COVID-19 pandemic can negatively influence individual's performance and well-being in the professional context. Moreover, it was found that group relations between colleagues can be affected by being physically distant from each other in this situation.

All of the previous literature has proven that the COVID-19 pandemic has had a negative effect on individuals who are forcedly WFH. This has resulted in social isolation among individuals in the professional field. However, there are also organisations that deliberately choose to work (partly) remote, regardless of the coronavirus. In situations like these, the adverse effects associated with WFH might be less severe than in situations in which organisations are forced to WFH due to the pandemic. Nonetheless, by considering how the COVID-19 pandemic and the imposed WFH situation have negatively influenced individuals, insights can be gained on how to potentially overcome these disadvantages. Despite the fact that the focus of this study will be on job interviewing, and not on WFH in general, these findings can be valuable.

2.1.2. Job Interviewing Process

Before being able to start the design and development process of a job interviewing space, a closer look must be taken at the process of job interviewing and the broader context: the recruitment and selection (R&S) process. Holm and Haahr [3] have described such a R&S process and have combined all tasks and subtasks of this process into one figure. An overview of the R&S process as described by Holm and Haahr [3] can be found in Figure 2.1. As can be seen in this model, the R&S process starts with setting the hiring objectives for the specific job opening. After the required applicants for this opening are identified, they have to be attracted. When a pool of potential applicants has been selected, candidates who fit the job description will be pre-selected. Finally, after having assessed those candidates, a final candidate selection can be made, and the organisation can make a final decision on which candidate(s) to hire. In this larger R&S process, there are various moments at which an organisation and an applicant

are in direct contact with each other. While this process is not equal for all organisations, the most common moments of direct contact are: communicating with, screening, testing and checking candidates.

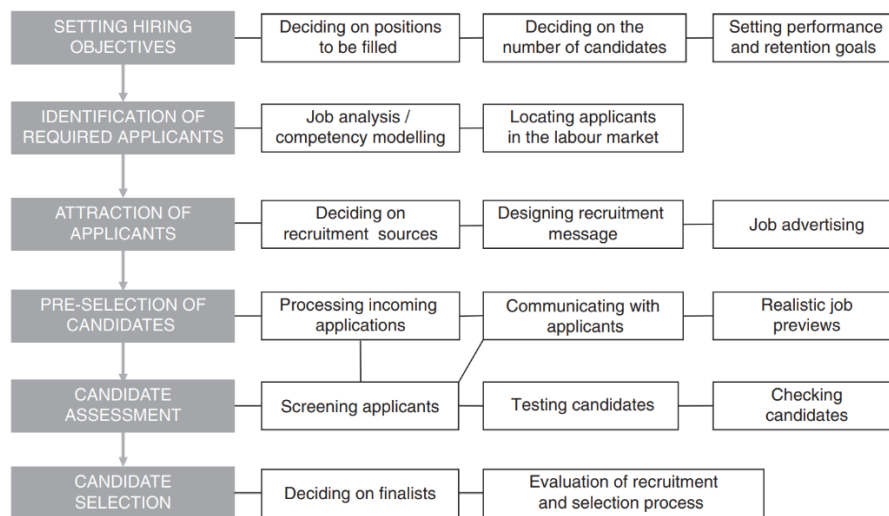


Figure 2.1 - R&S process: tasks and subtasks [3]

According to Holm and Haahr [3], this traditional R&S process is a linear process. This means that the tasks are being performed in a particular sequence, and that the next task will only start when another task has been completed. When (parts of) the R&S process are digitized through the means of technologies, this is often referred to as e-R&S. This process consists of the same components, but the difference with a traditional R&S process is that e-R&S is not a linear process, and that different tasks or subtasks can occur simultaneously [3]. For example, while some candidates are already being assessed, it might be that there are still new applicants being attracted. Given the fact that several sub-tasks can occur simultaneously in e-R&S, this is often regarded as a more efficient process than a traditional R&S process. What is striking, is that a substantial part of this R&S process has already been digitized in order to increase efficiency and reduce costs [7], but that the actual job interviews still occur physically. There are technologies available that can help R&S employees to structure and facilitate an interview process [7], but a technology that was developed specifically for organisations to perform job interviews digitally has not yet been found.

By considering the fact that a job interview is a part of a larger process, i.e. the R&S process, a better understanding can be formed about the concept of job interviewing. In this study, the main focus will be on creating a tool for enabling organisations to conduct their job interviews online. Nonetheless, considering the broader context of a R&S process might result in identifying additional opportunities for the study.

2.1.3. Online Job Interviewing

A job interview is a traditional way for the selection of new employees, and it is still among the most used methods [3]. Currently, job interviews that would normally happen face-to-face are often replaced with a video conference or an online interview. Logically, this can partially be explained by the COVID-19 pandemic, but this method of interviewing through video conferences happened before the pandemic as well. Nevertheless, research has found that an online interview is often not equivalent to a face-to-face interview [3]. Several factors play a role in this. To begin with, Dickter and Jockin [8] found that candidates' preferences for the structure of a job interview are different if the interview is held online instead of face-to-face. According to their research, candidates prefer a very structured interview when it is conducted online, whereas they prefer an unstructured interview when it is conducted face-to-face. This does not implicitly mean that one way of interviewing is better than the other, but it is something that needs to be taken into consideration when facilitating an (online) job interview. Moreover, Dickter and Jockin [8] found that interviews that are mediated by technology (like video conferencing interviews), reduce the opportunity for candidates to make a personal connection with the interviewer in comparison to a face-to-face interview.

Another reason for the fact that online interviews are usually not equivalent to a face-to-face interview, is the fact that an online interview can affect an applicant's perception of fairness. Often, applicants feel like an online job interviewing procedure is less fair, as they may not be able to completely convey their abilities through an online interview [3], while they would be able to do so face-to-face. This, in combination with the uncertainty about the interview procedures of other candidates, negatively influences candidates' perception of fairness. In order to ensure fairness amongst candidates, Holm and Haahr [3] state that organisations must ensure equality in interviewing methods for all applicants. Another disadvantage of online job interviewing is that these interviews are often seen as a cost-saving strategy [3]. For candidates, applying for a job is often an important step. If organisations then decide to conduct the job interviews online "just to save costs", a candidate might feel like they are not important to the organisation. Logically, this can be offensive for the candidate. However, given the fact that many organisations are currently not able to perform their job interviews face-to-face, due to the COVID-19 pandemic, this might not be an issue at this time. Nonetheless, it should be taken into consideration that this factor might start playing a role again when the COVID-19 pandemic will be over.

Several studies have examined the use of a virtual reality (VR) simulation of a job interview. From these studies, interesting conclusions were drawn. According to Villani et al.

[9], the idea that technology cannot increase the feeling of “presence” in a situation is no longer true. Due to the rise of technologies like augmented reality (AR) and VR, which can add a ‘technological layer of information’ to the actual world, being “present” in a technological environment is possible. It appears that a user’s experience in an AR or VR environment can largely be influenced by whether the environment appears ‘logical’ or ‘makes sense’ to the user. A study researching the level of graphical realism that is required in a VR environment adds onto this that the degree of graphical realism in a VR environment has a direct impact on the user’s sense of presence in that same environment [10]. While these examples are closely related to VR, which is a technology that was decided not to be used during this study, valuable information can be gained from them. Apparently, the extent to which a virtual environment is perceived as logical for a certain situation, and the degree to which graphical realism is added can influence the user’s experience there.

2.1.4. Conclusions from Literature Analysis

From the literature analysis that was conducted, several findings stand out. To begin with, it came to light that people who are forcedly WFH often feel isolated from their co-workers and experience more stress. While this is not directly related to job interviews, this information can be used for creating a better experience for both organisations and job seekers. By developing a job interview space that, for example, allows candidates to meet their potential new colleagues during the interview, organisations could move towards preventing these feelings of social isolation among their employees. Moreover, during the development of the virtual job interview space it should be taken into consideration that individuals who are WFH already experience more stress than normally. Therefore, it would be desired to create a space that does not stress out the organisational employees nor the candidates even more.

Another finding in this literature analysis is that a job interview is part of a much larger R&S process. During the R&S process, there are several moments at which organisations and candidates are in direct contact with each other. This information can be taken into consideration during the development process of the interview space. That way, a virtual space could be developed that could potentially be used for more contact moments than just the job interview during the R&S process. However, during this study, the main focus will remain on developing a job interview space. The goal of this project is to develop a job interview space that can facilitate all different components of a job interview, to make it more attracting for organisations to adopt the product.

Finally, it became clear that online job interviews are often perceived as unfair. Therefore, organisations must at all times ensure that the interviewing procedure and methods are equal for all applicants. Another finding is directly related to how the appearance of a virtual environment can impact a job applicant's perception of the environment. The more graphical realism and the more appropriate and suitable the environment seems for the occasion, the more positive the experience of the applicant.

2.2. State of the Art

In the following section, a closer look will be taken at State of the Art technologies that are related to this study. First, the most common way for organisations to communicate while WFH, video conferencing, will be discussed. By establishing the disadvantages of these types of platforms, it can be prevented that the same mistakes will be made in the development process of the prototype. Thereafter, a real life example of how ABN ARMO (a Dutch bank) has tried to incorporate a normally digital process into a virtual world will be examined. While ABN AMRO did not succeed, valuable lessons can be learned from their example. Finally, conclusions from both State of the Art technologies will be drawn in relation to this study.

2.2.1. Video Conferencing Tools

During the COVID-19 pandemic, people are reliant on technology in order to stay connected with others [11]. For organisations, technology plays an even bigger role, as all employees are reliant on their technological facilities for all contact with each other, their managers and their clients. Many organisations started using video conferencing tools to replace all meetings that normally occur physically. The findings of Mahr et al. [12] support this, as it became evident that many organisations have started using Zoom as a video conferencing tool since the start of the pandemic. However, despite the fact that various video conferencing tools have grown in popularity, there are still various concerns that have been expressed about these types of applications. Especially Zoom has received loads of critique. For example, when it came to light that private user information from Zoom was not stored and secured properly, people started doubting the privacy terms and conditions of Zoom [12].

Other problems regarding online video conferencing platforms include anxiety, stress and tiredness resulting from overusing platforms like these. These psychological problems even started becoming so serious that researchers started calling this phenomenon “Zoom fatigue” [13]. Abdelrahman [14] elaborates on this stating that Zoom fatigue can leave

individuals feeling “mentally and physically wiped out” after a day of video conferencing. In the professional context, this phenomenon can be seen by employees who are currently WFH. Often, people who are WFH have a lot of contact moments with managers, colleagues or clients. Where these meetings normally occur at the office, face-to-face, they are currently mostly scheduled online, through a video conference. Wiederhold [13] has proven that having a meeting through a video conference is mentally more exhausting and draining than having a physical meeting. This can be explained through various factors. To begin with, video calls always have a small delay, which is subconsciously registered by our brains. This delay makes it harder for us to restore synchrony in a conversation, which we normally automatically do in a physical conversation. This means that our brains need to work harder to process all of the information during a video conference call [14]. Moreover, video conferences often only allow users to see the shoulders and head of the person they are talking to. This, together with the fact that facial expressions are harder to read through video calling, make it harder for individuals to properly understand the other person [13]. All of these reasons combined result in the fact that our brains need to work a lot harder in video conference meetings.

Aside from these reasons that make meeting people through video calling mentally more exhausting than meeting physically, there is a stressful element to WFH as well. Especially for employees who are living together with a partners or family, there is always the risk of being interrupted by someone talking through the video call, or even walking past them in the background of the call [13]. This can cause feelings of stress or anxiety for the individual who is WFH. Abdelrahman [14] supports this, and elaborates that individuals who constantly have to be in such an ‘alert’ state experience an increase in their anxiety level. Moreover, it was found that many people find it stressful to constantly see their own face whilst being in a conference call [13]. This can lead one’s attention away from the actual meeting as they are constantly checking how they are looking during the video conference. All of the abovementioned literature describes the disadvantages of the technologies that we are reliant on during the COVID-19 pandemic. These different problems that individuals encounter with technology during WFH negatively influence their attitude towards WFH and thus their productivity.

While these adverse effects of video conferencing are not found in a direct relationship to job interviews, this information might still be valuable. During a job interview, two parties are involved: the employees from the organisation who interview the candidates, and the candidates themselves. For both parties, the adverse effects that were found to be related to video conferencing can have an impact. The organisational employees, who have been WFH

for over a year now, will likely experience one or multiple of the abovementioned adverse effects of video conferencing already. The candidates might also experience feelings of stress or anxiety, depending on their situation. Therefore, the adverse effects of video conferencing and, more specifically, the factors leading to these adverse effects must be taken into consideration whilst developing the job interview space.

2.2.2. *ABN AMRO in Second Life*

Second Life is a virtual world, that is often described as a role playing game. Users of this game can create their own avatar, after which they can walk around in the virtual world of Second Life. They can meet other people there or create objects in the virtual world. Second Life was designed in order to offer users the opportunity to control several aspects of the environment they are in [15]. By offering users these opportunities, the developers aimed to stimulate self-expression and creativity amongst their users. In this virtual world, the user can be whoever or whatever they aspire to be, and they are free to do whatever they want. The developers provide the users with the tools they need to create everything they want, which results in the fact that the user can create their own game [16]. Back in 2006, a Dutch bank (ABN AMRO) opened a branch in the virtual world of Second Life. This new, virtual branch was developed with the aim to offer information about the bank and provide customers the opportunity to get in contact with each other through a chat function [16]. At first, ABN AMRO was not offering banking services, but there were aspirations for implementing that in the future. They decided to build a branch similar to a real-life one, in order to create a link between the virtual world and the real world. Despite the fact that the virtual world would offer far more creative and innovative options, it was decided to stick with a real life scenario, as something that seems familiar would not alienate clients. ABN AMRO created a virtual world with several places to visit, each serving its own purpose.

Despite all of ABN AMRO's efforts and ambitions, their goals were not met. According to Papagiannidis et al. [16], this could be explained by the fact that there was a lack of things that visitors could engage with. Visitor who would enter the virtual branch would walk around there, explore the different places and then lose interest, due to the limited amount of content with which they could engage. Another explanation of this failure could be that visitors did not have a specific purpose to be in the virtual environment. For example, if a client of ABN AMRO wanted to visit the virtual branch in Second Life to obtain information, they could walk around there to find it. When they eventually find this information, they are often redirected to

a specific page of the website [16]. This could result in the situation that, the next time this client would want more information, they would go directly to the ABN AMRO website. Given the abovementioned reasons, the virtual branch of ABN AMRO in Second Life was not a success. Nonetheless, the experience of incorporating a real-life process into a virtual world highlights the endless opportunities (and challenges) there are with regard to this study.

2.2.3. *Conclusions from State of the Art*

While both State of the Art technologies that were examined in this section are not directly related to job interviewing, useful insights are gained. To begin with, various disadvantages of communicating through video conferencing tools have been established. In the process of developing a job interview space in the virtual world of Mibo, which uses video conferencing technology, these disadvantages must be taken into consideration. A multitude of requirements has been established to prevent making the mistakes leading to those disadvantages. To begin with, an important aspect of an ideal video conferencing platform, especially when the platform is being used for professional purposes, is that the platform should be secure and properly handles private user information. Another large problem established in current video conferencing platforms is the fact that it can often be mentally exhausting. Therefore, alternatives should be considered on how video conferencing can be made less formal and less mentally exhausting. Moreover, it should be taken into consideration that using the current video conferencing platforms can cause stress and anxiety for users. Therefore, an alternative video conferencing platform should be developed in such a way that it is less stressful for all parties involved. During the development process of the virtual job interview space, all of these factors need to be considered.

From the example of ABN AMRO, who tried to incorporate a real-life process into a virtual world, several insights were gained as well. To begin with, ABN AMRO established that a virtual world must, to some extent, resemble the real world, to prevent alienating the users. Another interesting observation is that the virtual branch of ABN AMRO failed, partly due to a lack of things to engage with and a lack of purpose to be there for clients. Therefore, the job interview space must be developed in such a way that the users have a purpose to be in the virtual environment. For an organisation to have a purpose to enter the virtual job interview space, there must be an added value of doing a job interview in Mibo instead of another video conferencing platform. Moreover, there should be enough options for interaction in the virtual job interview space, to encourage engagement with the environment.

2.3. *Expert Interviews*

To form a better understanding of the virtual world of Mibo and job interviews in general, expert interviews have been conducted. All interviews have been conducted in a semi-structured way, in order to leave room for further questioning. Before the interviews, all interviewees received an information brochure (Appendix A.1.) and a consent form (Appendix A.2.). The interviewees were asked to read both documents carefully, and, if they agreed to all terms, sign the consent form prior to the interview. At the start of the interviews, the interviewees were asked to consent to being recorded, after which the interviews started. In Appendix A.3., all interview questions can be found. During the interviews, three different types of experts were questioned. The interviewees are divided into three categories: (1) experts about the virtual world of Mibo, (2) experts in the field of job interviewing from the organisational perspective and (3) experts in the field of job interviewing from the job seeker perspective. Of category 1, one expert is interviewed, whose work has been closely related to Mibo ever since the launch of the platform. For both category 2 and 3, three experts were interviewed. While selecting those subjects for the interviews, the participants' experience with job interviewing was taken into consideration. In the following sections, the main findings from all categories will be discussed and elaborated upon.

2.3.1. *The Virtual World of Mibo*

According to the interviewee, who is an expert on this subject, Mibo is a tool through which people can meet online, in a different way. Mibo allows for communication in a private three-dimensional (3D) environment where users can walk around while video calling. There are numerous advantages of using Mibo over another video conferencing platform, like Zoom, the interviewee says. To begin with, Mibo is more intuitive, as it creates a sense of dynamism. For example, if you tell someone to look at the person on their left, it actually makes sense in Mibo, as it is a 3D environment where spatial dynamic is present. If you tell people in Zoom to look at the person on their left, it is a lot more complicated as the layout of the users' screens is often different per user. In Figure 2.2, a screenshot of a group meeting in the virtual world of Mibo can be seen, to form a better understanding of what the interaction in Mibo looks like. Another advantage of Mibo is that it is less formal than other video conferencing tools, as it is less static and more playful. Moreover, the interviewee says, Mibo combines the advantages of



Figure 2.2 - Screenshot of group meeting in Mibo

the online world (e.g. being able to meet anytime, anywhere) with the advantages of the physical world (e.g. being able to form groups or take a walk together). Finally, Mibo provides user the opportunity to interact with the environment around them, which feels more natural than other video conferencing tools. In the scope of this research, these characteristics that differentiate Mibo from other video conferencing platforms could substantially contribute to a job interview. This technology offers organisations and candidates the opportunity to feel as if they are actually together.

The interviewee also recognizes that Mibo is not perfect, and that there are some disadvantages to this platform as well. In comparison to other video conferencing tools, the screen on which you see the people you are talking to is rather small. You can compensate this by standing closer to each other but, particularly in larger groups, you will not be able to see everyone as good as on other platforms. The interviewee also mentions other disadvantages of meeting online, through video conferencing in general, instead of meeting face-to-face. The main general disadvantages that the interviewee mentions about meeting digitally, is that the behaviour, energy and emotions of people are often different in a video conference. A complete summary of the interview transcript can be found in Appendix A.4.1.

2.3.2. Organisational Perspective

The three subjects that were interviewed for this category all have experience with conducting job interviews. It was decided to interview subjects from different fields of work, with different amount of experience, in order to get an elaborate overview. In comparing the interview results between all three subjects that were interviewed for this category, some similarities and some differences can be detected. To begin with, all interviewees mention that they have experienced

some changes in the way of job interviewing since the start of the COVID-19 pandemic. While one interviewee mentioned that the entire recruitment process has changed after the start of the pandemic, another interviewee states that they have only noticed a few minor changes. One interviewee mentioned that, at the start of the pandemic, they did not believe that doing a job interview over the internet would be possible. Now, however, they acknowledge that online job interviewing is actually quite efficient. The interviewee even mentions that, during online job interviews, they have started paying attention to other factors than they would normally do in a physical job interview.

All three interviewees have named both advantages and disadvantages of doing a job interview over the interview. The main advantages that stand out in all interview answers, is the fact that online job interviewing can save a lot of time and money, as people do not have to travel to an office location for a job interview. Another advantage that was named by two interviewees, is the fact that applicants might be more comfortable during an online job interview than during a physical one. This could be explained through the fact that for an online job interview, an applicant can stay in their comfort zone more as they are at a familiar location. Several disadvantages of doing a job interview online were named as well. The number one disadvantage of an online job interview, according to all interviewees, is the fact that an applicant is harder to read through a video call. Given the fact that facial expressions and body language are harder to read, all interviewees mentioned that they have experienced difficulties in forming a clear image of an applicant and the other way around. Other disadvantages that were mentioned by interviewees were the fact that you cannot see how someone is dressed, how (lack of) technological facilities sometimes interrupt a conversation, or the fact that some applicants might be excluded from the selection procedure due to a lack of facilities.

All interviewees were asked what a regular job interview in their opinion looks like. From the different answers to these questions, it became clear that many job interview (procedures) are quite similar. While two interviewees mentioned that most job interviewing procedures usually consist of several rounds of job interviews, one interviewee mentioned that they often only do one job interview. But, from their answers could be noticed that the structures are quite alike. All interviewees stated that the first job interview (or in the case of the third interviewee the first part of the job interview) started with a general introduction. Thereafter, often a conversation about the applicant's prior education, work experiences and motivation follows. Then, two of the three interviewees stated that there is usually some sort of test, which tests the knowledge, characteristics of personality traits of an applicant. Interestingly, all interviewees believed that, apart from the personal conversation, all different

parts of the interview could be done through an online interview. A complete summary of the interview transcripts can be found in Appendix A.4.2.

2.3.3. Job Seeker Perspective

For this interview, three job seekers have been interviewed who all have experience with both physical and digital job interviews. For this category, it was decided to interview subjects from different ages, in different fields of expertise, to get a larger representation of job seekers. During the interviews with the experts in the field of job interviewing from the job seeker perspective, it is striking that two main topics are discussed. The main topics that are discussed in all three interviews, are the advantages of doing online job interviews and the disadvantages of doing online job interviews. To begin with, several advantages of doing online job interviews are mentioned by the interviewees. Firstly, all interviewees mention that a large advantage of online job interviewing is that it is very efficient. For the job seeker, an online job interview means that they can save both time and money as they can simply join the meeting from home and do not have to spend any time or money on transportation. For the organisation, an online job interview means that multiple job interviews can be done quickly after each other, as online job interviews often take less time than physical ones. The fact that more job interviews can be held in the same amount of time could mean that more applicants of the list of ‘potential candidates’ will be invited for a job interview. This could, on its turn, result in a larger inclusion of applicants.

Another topic that was debated widely during the interviews, are the disadvantages that the interviewees associated with online job interviewing. The first and foremost disadvantage that all interviewees mentioned, is related to the fact that video conferencing does not allow people to completely see and read the person they are talking to. For the interviewees who have applied for jobs through online job interviews, this often meant that they experienced difficulties in reading the other person. Multiple interviewees have expressed that they could not entirely see how the person that was interviewing them was feeling. This was mainly due to the fact that they felt like they could not read the body language and facial expressions of these people. During the interview, this made them feel insecure. One interviewee mentioned that, during a physical job interview, they usually know whether the conversation is flowing smoothly. Depending on how they feel that the conversation is going, they might or might not change anything in their conversation style. However, during the online interview, the interviewee said to have difficulties reading the other person, which resulted in the fact that the

interviewee experienced anxiety during the interview. A complete summary of the interview transcripts can be found in Appendix A.4.3.

2.3.4. Conclusions from Interviews

In the expert interviews, several interesting insights that can be valuable for the rest of the study were gained. To begin with, more insight were gained on the unique features of Mibo. With this newly obtained information, SQ₁ has been answered. The spatial and intuitive features of Mibo have the potential to positively contribute to a conversation. However, there are also some features of Mibo that make it less suitable for certain types of conversations. An aspect of Mibo that can influence the job interviewing process, is the fact that you cannot see people as good as in other video conferencing platforms. This aspect makes the virtual world of Mibo less suitable for a serious conversation in which it is important to see and read the other person. However, due to the interactive nature of the environment, Mibo could be very useful for more interactive conversations or meetings, like the assessment of candidates during a job interview procedure.

After reviewing the main findings from the interviews with experts in the field of job interviewing, several advantages and disadvantages of online job interviewing come to light. Many interviewees mention the fact that for an online job interview, people will not have to travel to a specific location, as they can just do the interview from home. This saves both parties involved a lot of time and also effort. On a large scale, this could even positively contribute to the environment, as the travel from and to interview locations will be reduced. Another advantage that multiple interviewees mention, is the fact that applicants will most probably feel less stressed during a on online job interview, as they are in a familiar location.

Several disadvantages are associated with online job interviewing as well. The first and foremost disadvantage, that is mentioned by all interviewees, is the fact that it is harder to read someone's facial expressions and body language through a video call. Both parties involved in the job interview can experience difficulties in reading and understanding the other person. Another disadvantage of online job interviewing that is mentioned a lot, is the fact that online job interviews are often less spontaneous and more formal than physical job interviews. This could negatively impact what the individuals in the job interview think of each other. Another disadvantage that is mentioned repeatedly, is the fact that technological facilities might be an issue during an online job interview, whereas this would not be a problem during a physical job interview.

3. Requirements Capture

Before being able to develop a first prototype of the virtual job interview space, the insights that were gained during the background research must be concretised. By analysing the results from all subsections of this background research more thoroughly, a set of requirements can be captured. In the following section, these requirements will be organised. First, a MoSCoW analysis will be performed to prioritize the captured requirements. Then various user scenarios are provided. By putting some of the important requirements that were captured into context, a better understanding of these requirements can be formed.

3.1. MoSCoW Analysis

In the different subsections of the background research, various insights were gained with regard to requirements of the virtual job interview space that is to be developed. These requirements are not all equally important, so a distinction must be made between which requirements are extremely important to take into account and which requirements are less important to take into account when developing the job interview space. This decision has been based on the results of the background research. Besides the different types of requirements that were named, some topics were discussed that will not be included in the prototype at all. In order to organise all of those different requirements and nonrequirements, a MoSCoW analysis is carried out. This MoSCoW analysis, which can be seen in Figure 3.1, provides a structured and clear overview of the different (non-)requirements that were found during the background research. Besides providing an overview, this MoSCoW analysis also ranks the requirements from most important to least important.

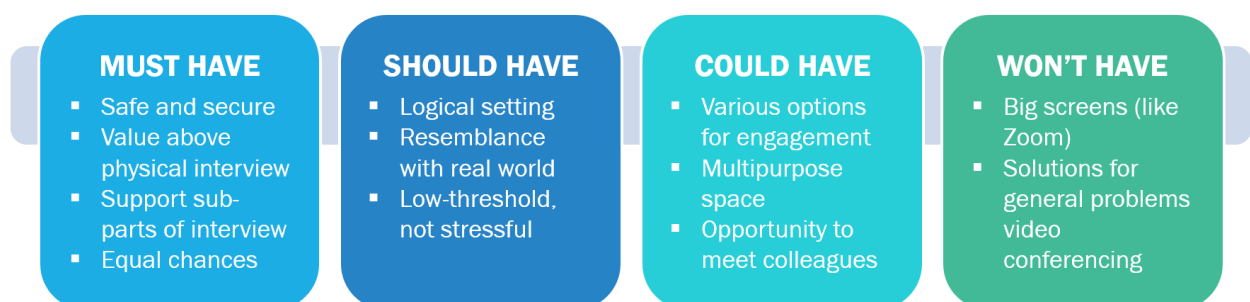


Figure 3.1 - MoSCoW analysis

3.2. User Scenarios

In order to put the requirements that are captured in the MoSCoW analysis into perspective, several user scenarios are made. These scenarios each emphasize how different requirements are important for different people from different backgrounds.

3.2.1. Organisational Perspective

In the first user scenario (Figure 3.2) Karen's situation is described. She is a HR manager at a large multinational media corporation. As Karen interviews candidates for filling the top positions of the marketing and sales department, privacy is very important to her. Aside from the fact that it is important to Karen that the platform she uses is safe and secure, she also wants to reassure the candidates she interviews that she handles confidential information carefully. Therefore, Karen would prefer a more serious and formal environment for the formal aspects of the interview. Another aspect that is essential for Karen in an online job interview platform, is that the platform is low-threshold and easy to use. As can be seen in Figure 3.2, Karen is usually not very good at adjusting to new technologies. If the platform would be too complex, it could cause Karen to experience stress which will eventually lead her to stop using the platform. Therefore, it is important that the platform that offers the virtual job interview space is user friendly, and easy in use. Finally, Karen is planning on using the virtual job interview space for multiple purposes, and for multiple types of occasions. For that reason, she would



Figure 3.2 - User scenario 1: organisational perspective

find it useful if the job interview space could be used for different purposes and/or occasions. The job interviews that Karen conducts are usually quite extensive. Therefore, Karen often needs a lot of different tools during an interview. Since Karen is not the best at adapting to different technologies, it would be ideal for her if the virtual job interview space could facilitate all processes that Karen could possibly do during an interview in one single environment.

In Figure 3.3, Ayoub's situation is elaborated upon. He is a recruiter at an employment agency, and conducts a lot of interviews a week. Ayoub normally works at the office for one half of the week, and remote the other half of the week. Normally, he conducts all job interviews when he is working at the office, but he is interested in doing them online. For Ayoub, the number one requirement for a platform that facilitates online job interviews, is that it has value above a physical interview. Otherwise, he prefers to keep on doing the interviews physically. But, if there are advantages to doing the job interview online, he is very open to the opportunities. Moreover, it is important to him that the online job interview space has a familiar setting. Ayoub usually interviews a lot of different people in a short amount of time. In order to keep on meeting his targets, it is important that the job interviews he conducts are time efficient. If the virtual job interview space has a weird or confusing environment, candidates could get confused which could then lead to needing more time for an interview.



Figure 3.3 - User scenario 2: organisational perspective

3.2.2. Job Seeker Perspective

Derek's user scenario is described in Figure 3.4, where it becomes clear that he is currently looking for a job. Given the fact that Derek is momentarily not living in the Netherlands, he

works remote almost completely. He has applied for a job, and he has been invited for an online job interview. Despite the fact that Derek has done online job interviews before, he is very nervous for this one. He has heard that other candidates who applied for the job have their job interviews face-to-face, so he is afraid that the other candidates will be judged differently. The insecurity about the fairness of the selection procedure causes Derek to feel anxious. For him, it would be important to know that the organisation he is applying at treats all applicants equally. Another important aspect of the online job interview space for Derek is that it resembles the real world. Derek has a lot of experience working in software, and he regards himself a professional. If he were to enter a virtual job interview space filled with imaginary objects and creatures, he would feel like he is not being taken seriously. For that reason, it is quite important to Derek that the virtual job interview space he will enter during his interview resembles the real world and radiates a sense of professionalism.



Figure 3.4 - User scenario 3: job seeker perspective

The final user scenario that will be discussed is that of Susan (Figure 3.5). She has prior experience with the virtual world of Mibo, as she once had a virtual drink there. Susan remembers that it was interesting to meet online in such a real way, but she is not sure about doing a job interview there yet. For Susan, it is very important that she can show some of her skills and knowledge during a job interview, especially in the field she is working in. For Susan, it is a must that she can show her portfolio during the job interview, but she would like it if there were also options for showing her creativity. Therefore, Susan would prefer it if there are options in Mibo to engage with the environment surrounding her. If she, for example, would be able to interact with objects in the virtual world and complete an assignment or minigame,

she would feel like she could show more of herself during the interview. Another aspect about a job interview that is often important to Susan, is that she wants to meet the people she might start working with. She is specifically looking for a job at a small organisation, as she likes working in a close-knit team. Since collaboration is a very important aspect in Susan's work, she would like the opportunity to meet some potential new colleagues during a job interview already. Therefore, it would be perfect for Susan if she could talk to some colleagues somewhere during the application procedure.

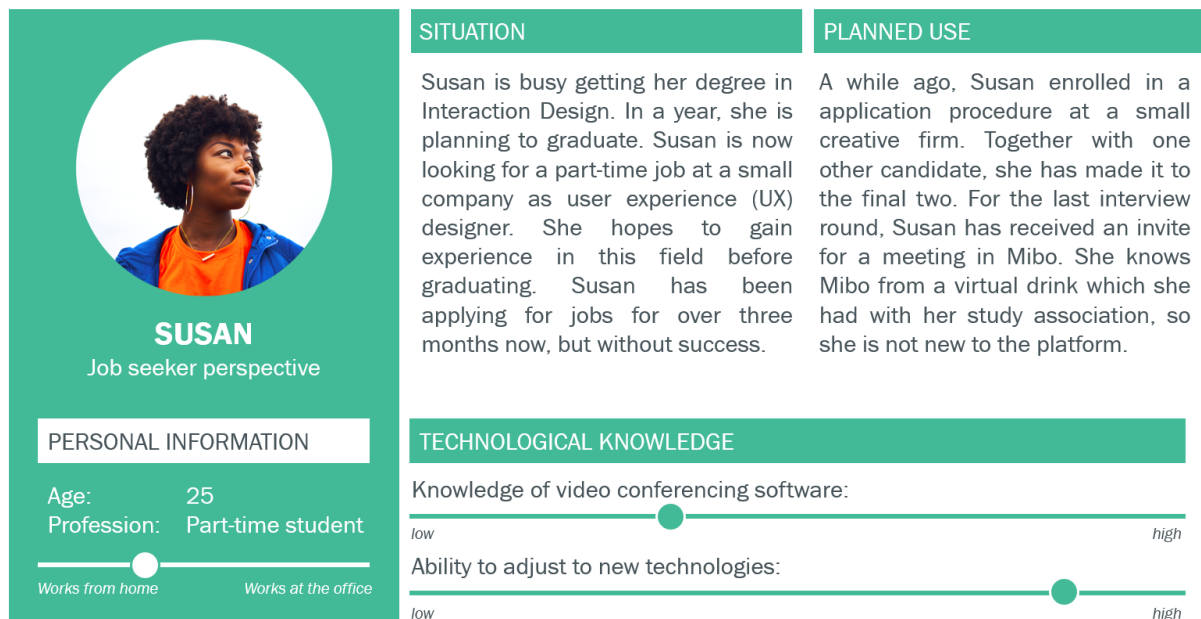


Figure 3.5 - User scenario 4: job seeker perspective

4. Ideation

In this chapter, the ideation phase of the design and development process will be discussed. In this ideation phase, several steps were taken in order to create a first prototype of the virtual job interviewing space. After an initial idea for a job interview space has been defined, a brainstorm session was carried out. During this brainstorm, different design options for shaping the virtual job interview space were explored. From this brainstorm, the two design options that seemed most fitting in the context of job interviewing were chosen. Both of these designs were worked out further into a paper prototype. These paper prototypes were then tested and evaluated upon. Finally, conclusions from these paper prototype tests were drawn.

4.1. Initial Idea

The initial idea for this project, was to develop a virtual environment that can be used for job interviewing. A job interview often consists of several sub-parts, or even several rounds of interviews. Usually, these separate sub-parts or -rounds of a job interview all serve their own purpose. In the background research, it became apparent that not all job interviews include all of these different sub-parts. Given this insight, it can be argued that there is a high probability that the job interview space will eventually be used in different ways by different users. Therefore, in order to increase the probability that organisations can benefit from using this virtual job interview space, it is important that all of these sub-parts are facilitated by the environment. Therefore, the initial idea was to develop a virtual job interview space that consists of several sub-spaces, which all serve their own purpose. The different sub-parts or sub-rounds of a job interview that need to be facilitated in the virtual job interview space are:

- A space in which the organisation and candidate can have a formal and serious conversation;
- A space in which candidates can meet their (potential) new colleagues;
- A space in which organisations can test their candidates (on paper);
- A space in which organisations can test their candidates by letting them execute assignments;
- A space in which candidates can learn more about the job by seeing a short video, or hearing experiences from colleagues;
- A place where the organisational employee and candidate can see an overview of the entire job interview space.

These sub-spaces are based on the different sub-parts of common job interviews that were established during the expert interviews and literature analysis. With this information, SQ₃ has been answered. By including all of these different sub-spaces within the entire job interview space, users can decide for themselves in what way they want to use the job interview space.

Despite the fact that users have the opportunity to use all of these different sub-spaces for different stages in their job interview, there is a high likelihood that they will not be using all sub-spaces during a job interview. Therefore, a round space will be developed, which has a central point from which users can easily navigate to all sub-spaces. This way, users will not have to walk a long way past several sub-spaces they will not need during the interview to reach a certain space. In this central point in the job interview space, an overview of all sub-spaces will be offered to inform users where they can go for different parts of the interview. It could be argued that it would be an option to let users teleport to another sub-space, which would then save time walking. However, it should be taken into consideration that the prototype that is being developed might be implemented in Mibo eventually. Therefore, it is essential to take the overall Mibo style into consideration while developing the prototype. Given the fact that users walk from one spot to another in Mibo, this way of transportation will be implemented in the prototype as well.

4.2. *Brainstorm*

Based on the initial idea, a brainstorm session was held to explore the different design options for the virtual job interview room. During this brainstorm, all ideas for potential places that could form the foundation for the job interview space were considered without judgement. After having explored all of the different places, the brainstorm results were worked out on paper. A mind map (Figure 4.1) was made containing all potential places that were explored, categorized in indoor and outdoor places. Thereafter, different characteristics about these different places that could positively contribute to a job interview were established.

After having finished this mind map, the two places that seemed most fitting for the job interview were chosen to work out further into paper prototypes. It was decided to work out one indoor space and one outdoor space further on paper. The decision on which two potential design options from the brainstorm would be worked out further into a paper prototype was based on the requirements that were established for the job interview space. By considering all of the characteristics per place as described in Figure 4.1, a judgement was made about which two spaces (and their characteristics) fit the requirements best. Based on this evaluation, the

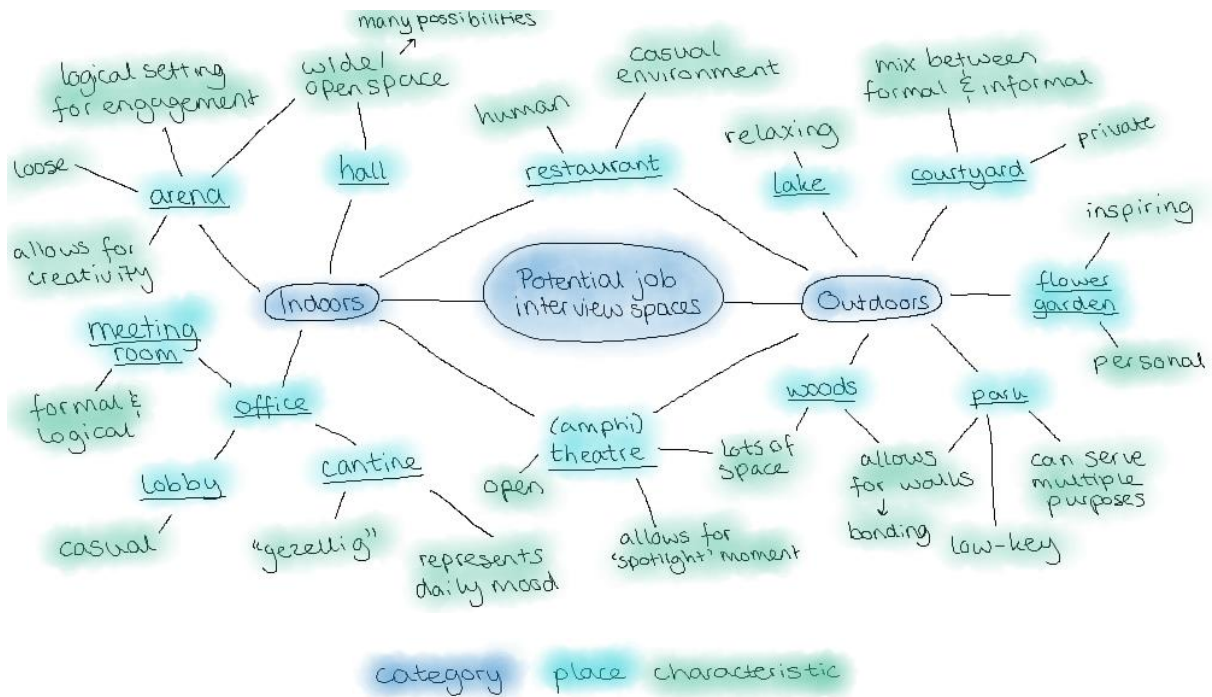


Figure 4.1 - Brainstorm design job interview space

decision was made that for an indoor space, the arena would be most suitable within the context of a job interview, and that a park would be most suitable as the outdoor space. By performing user tests with these paper prototypes, it will then be determined which of these two spaces is preferred by the target group.

4.3. Paper Prototypes

After the brainstorm session, it became evident that the arena would be the most suitable indoor space for a job interview. Therefore, this place was worked out into one of the two paper prototypes. For an outdoor space, it appeared that the park would be most suitable. For that reason, it was decided to work out a paper prototype of a park as well. In the process of sketching the paper prototypes, the initial idea was taken into consideration. This initial idea was then transformed into two paper prototypes: an arena (Figure 4.2) and a park (Figure 4.3).

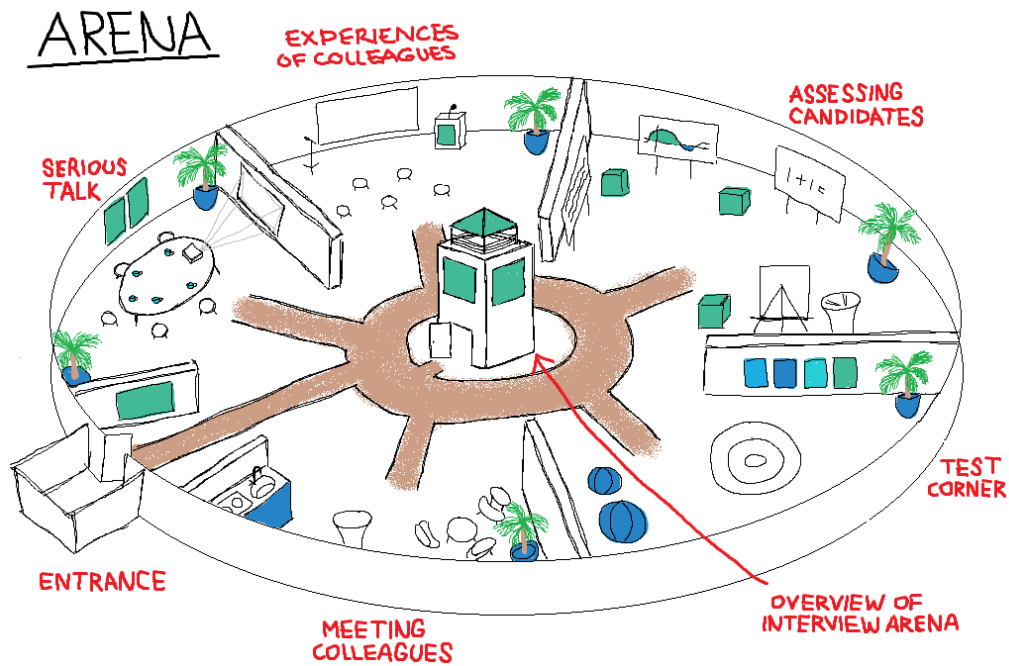


Figure 4.2 - Paper prototype arena

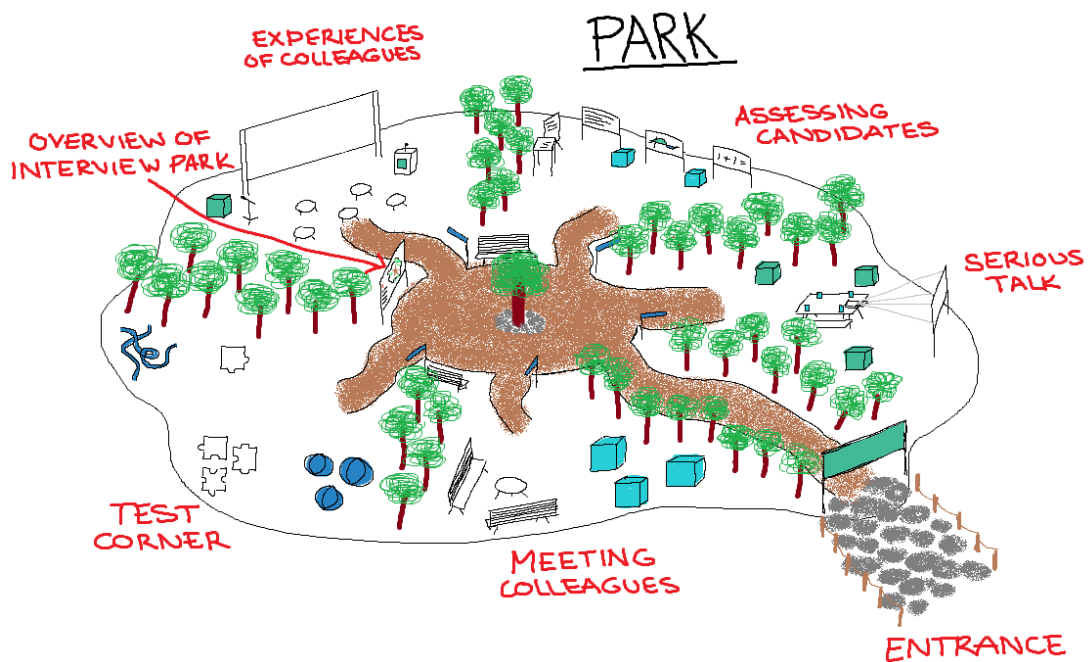


Figure 4.3 - Paper prototype park

As can be seen in both prototypes, the space is designed in a round shape, with a central point. From this central point, users can easily navigate to all sub-spaces within the interview space, based on their preferences. Organisational employees and candidates are offered the opportunity to have a conversation about former work experience and knowledge in the ‘Serious Talk’ space. However, organisations can also decide to test their candidates, either in

the ‘Assessing Candidates’ space or in the ‘Test Corner’. Furthermore, applicants are offered the opportunity to hear the experiences of potential new colleagues in the ‘Experiences of Colleagues’ space, or they can simply have an informal chat with them in the ‘Meeting Colleagues’ space. Another aspect that is clearly reflected in both paper prototypes, is that there is an overview point in both prototypes. For both options, this overview point is located in the central points of the interview spaces.

4.3.1. Paper Prototype Tests

In order to find out which of the two prototypes is preferred by the potential users, user tests have been conducted with different stakeholders. For the user tests, two categories of stakeholders have been interviewed: (1) organisational employees who are familiar with conducting job interviews and (2) job seekers who have had both physical and online job interviews before. In both categories, three subjects were interviewed with different professions and different amounts of experience, in order to get an extensive overview. For these user tests, interviews were conducted in a semi structured way, in order to leave enough room for further questioning. Before the interviews, all interviewees received an information brochure (Appendix A.1.) and a consent form (Appendix A.2.). The interviewees were asked to read both documents carefully, and, if they agree to all terms, sign the consent form prior to the interview. At the start of the interviews, the interviewees were asked to consent to being recorded, after which the interviews started. In Appendix B.1. the interview questions can be found.

The procedure for both interviews was the same, the only difference is that there is a slight nuance difference in some questions (e.g. looking from your role as interviewer/interviewee). During the user tests, the interviewees were given a short introduction about the research and the goal of the paper prototype user test. Before showing the interviewees the prototypes, the interviewees were taken to a Mibo island, which uses similar technologies but presents a different environment, to let them experience the platform. This information was aimed to help them in forming a better image of the eventual job interview room. After having shown the interviewees the Mibo island, the interviewees were asked how they envision a job interview space in the platform. After having discussed this, the paper prototypes were shown and explained, and the actual interview started.

4.3.2. *Paper Prototype Test Results*

In the following section, the main findings from the paper prototype user tests with both categories of interviewees will be provided and discussed. These main findings are based on the individual interview transcriptions, which can all be found in Appendix B.2. During the interviews, the main focus was on the difference between the arena and the park. The interviewees were asked questions about their preferences regarding these two options, when it comes to all sub-parts of the interview.

During the interviews with the job seekers, who have the role of candidate during a job interview, they stated that they regarded the arena as a ‘more professional’ space than the park. All three interviewees stated that they would feel more relaxed during an interview in the park, and that they would be more alert in the arena. This mainly had to do with the fact that the arena appeared as a more serious environment to the interviewees. Subsequently, the interviewees all agreed that the arena would be more suitable for the serious talk, as this is often an important part of a job interview. One interviewee mentioned that ‘you don’t want to be distracted by chirping birds and whirling leaves during such an important and serious conversation’. For speaking with potential new colleagues, the interviewees agreed that the park would be more suitable, as this is often a lighter conversation. However, one interviewee mentioned that they would prefer to hear from experiences of colleagues in the arena, as this kind of conversation will most probably regard work related topics. The other two interviewees both stated that such an informal activity would be relaxing to do in the park. When it comes to the assessment of candidates, the opinions of the candidates differed somewhat. One interviewee did not have a strong opinion on this matter, according to them it would not really matter in which kind of environment the assessment takes place. The other interviewees did think that the environment matters. According to both of the other interviewees, testing candidates by letting them carry out assignments would be more suitable in a park. Assessing candidates by the means of a case or another written assignment on the other hand, would be more appropriate in the arena according to them.

During the interviews with organisational employees who conduct job interviews on a regular basis, it stood out that their opinion differed rather much from the candidates. The employees all agreed with the candidates that the arena would be the more serious and formal option, while the park would be more relaxing and low-threshold. However, all three organisational employees stated that they believe that the relaxing environment of the park could benefit a serious conversation. This was striking, considering that this was a complete opposite view of what the job seekers mentioned. One of the interviewees said that ‘the park is

a relaxing environment, which could result in the fact that the candidate might be more at ease there than in the arena, which could lead to a more honest and real conversation'. For this reason, the interviewee thought that the park might be more suitable for a serious conversation. The other two interviewees shared that opinion. All three interviewees agreed that the only part of the job interview that was better suited in the arena than in the park, was the (paper) assessment of candidates. This opinion differed from the opinions of most job seekers too, as two out of the three job seekers stated that they would prefer to do the assessment outside. The reason that all three organisational employees preferred to do the assessment inside was based on the fact that an assessment is often a very important part of the interview, which could make the difference between being hired or not for a candidate. Therefore, they agreed that only this part of the interview needed to take place in a serious environment. Other than that, the park was perfect to them. However, there is one minor adaption that the interviewees would make to the park. All interviewees mentioned that they liked the watching tower in the arena better as an overview point than the map that is currently the overview point of the park. They stated that they would prefer the watching tower over the map when it comes to an overview point.

4.4. Conclusions from Paper Prototype Tests

From the results obtained during the user tests, several insights were gained. It became clear that, among all interviewees, there is no obvious preference for either the arena or the park. Rather it appeared that a combination of the two paper prototypes would form the perfect job interview space. In the interview results, it is evident that the park is most preferred by all employees for most sub-parts of the interview. Therefore, the paper prototype of the park will form the foundation for the eventual prototype. However, there do need to be some changes made to the prototype of the park as it is. Two sub-spaces of the job interview space were named as spaces that need to be facilitated inside, in a more serious environment. One of those spaces is the 'serious talk' space, which was preferred to be inside by the interviewees from the candidate perspective. The other space that was mentioned a multiple times is the 'assessing candidates' space. All three organisational employees and one candidate mentioned to prefer this sub-part of the job interview to be inside. Therefore, both of these sub-spaces of the job interview space will contain some sort of building which users can enter. That way, the park will still form the main environment job interviewing, but there is an opportunity for users to go inside if needed. Moreover, several interviewees stated to prefer a watching tower instead of a map as an overview point.

5. Specification

From the results of the paper prototype tests, various conclusions were drawn with regard to the design of the virtual job interview space. Based on these results, a lo-fi prototype has been developed with a new design proposal for the job interview space. In the following sections, the process of developing this lo-fi prototype will be described. Thereafter, the lo-fi prototype will be evaluated, after which iterations are provided.

5.1. *Lo-fi Prototype*

During the user tests with the paper prototypes, various recommendations were made on how to improve the design of the job interview space. The main findings were that the paper prototype of the park should form the foundation for the next prototype, but that the ‘Serious Talk’ and ‘Assessing Candidates’ should occur inside. Moreover, most users stated to like the watching tower (arena) as a centred overview point more than the map (park). Based on these recommendations, a low-fidelity (lo-fi) prototype has been made using Sketch-up. Sketch-up is a 3D modelling program, that is often used in the building industry for various processes like urban design and landscape architecture [17]. Given the simplistic nature of the program, it was decided to build the lo-fi prototype of the virtual job interview space in this program. In Figure 5.1, the lo-fi prototype can be seen. Additional images of the different sub-spaces from various points of view can be seen in Appendix C.1. through Appendix C.6.

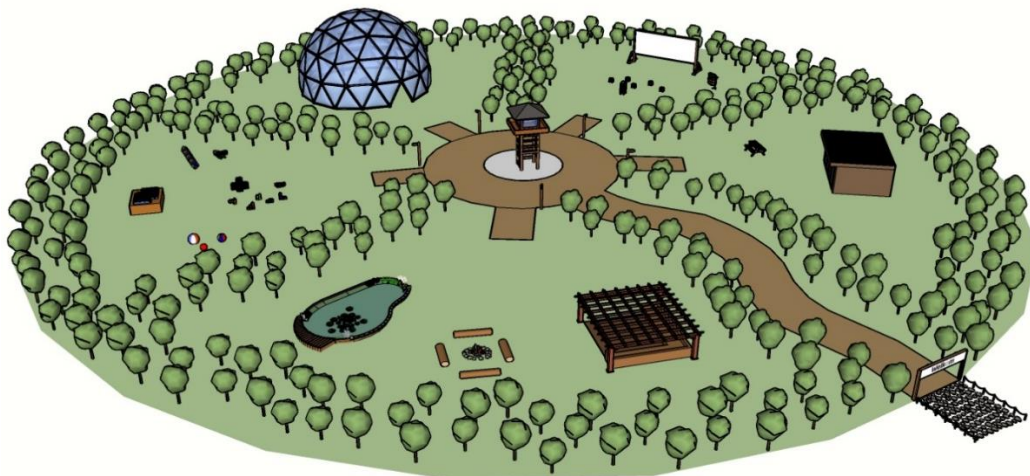


Figure 5.1 - Lo-fi prototype

In Figure 5.1, it can be seen that the lo-fi prototype of the job interview space is fairly similar to the paper prototype of the park. The main exceptions are the ones as described

previously. The decision to choose a dome for the ‘Assessing Candidates’ space was made to recreate the feeling of a real life assessment arena. While the candidates are actually indoors in the arena, they still have the opportunity to see the outside world, to stimulate creativity. A small cabin-like building was chosen to represent the formal building for the ‘Serious Talk’. This decision was based on the fact that some interviewees stated that they would not like to be distracted during a serious and formal conversation. The cabin is a very simplistic building, with white walls and glass doors, to create a closed-off building while still offering users the opportunity to look outside and see the calming environment of the park. Another large difference between the paper prototype of the park and the lo-fi prototype is the watching tower in the centre of the park.

Besides these large changes, some minor adaptations are made in the set-up of the different sub-spaces as well. For example, in the paper prototype of the park there were some benches placed in the centre of the park, which have been removed in the lo-fi prototype. These benches and some additional stools that were present in the paper prototype have been removed as they did not serve a specific purpose.

5.2. Adaptations of Lo-fi Prototype

The reason that this lo-fi prototype was built as an intermediate prototype before starting to develop the high-fidelity (hi-fi) prototype, was to experience what the park environment would feel like in 3D. In 2D, the park environment appeared suitable for job interviewing to all interviewees during the paper prototype evaluation. However, when a prototype appears suitable in 2D, it does not explicitly mean that it is actually suitable in 3D. Therefore, the paper prototype was transformed into a 3D lo-fi prototype, while adapting the design changes as described in the previous section. This lo-fi prototype was then shared with one of the interviewees from the paper prototype user evaluation, and the employees of the client company. They were asked to provide feedback on the prototype. While asking for feedback, no specific questions were asked, in order not to steer people towards specific answers. In the feedback on the lo-fi prototypes, various iterations are proposed that could be taken into account during the development of the hi-fi prototype. An overview of the respective feedback and the iterations resulting from this feedback can be seen in Figure 5.2.

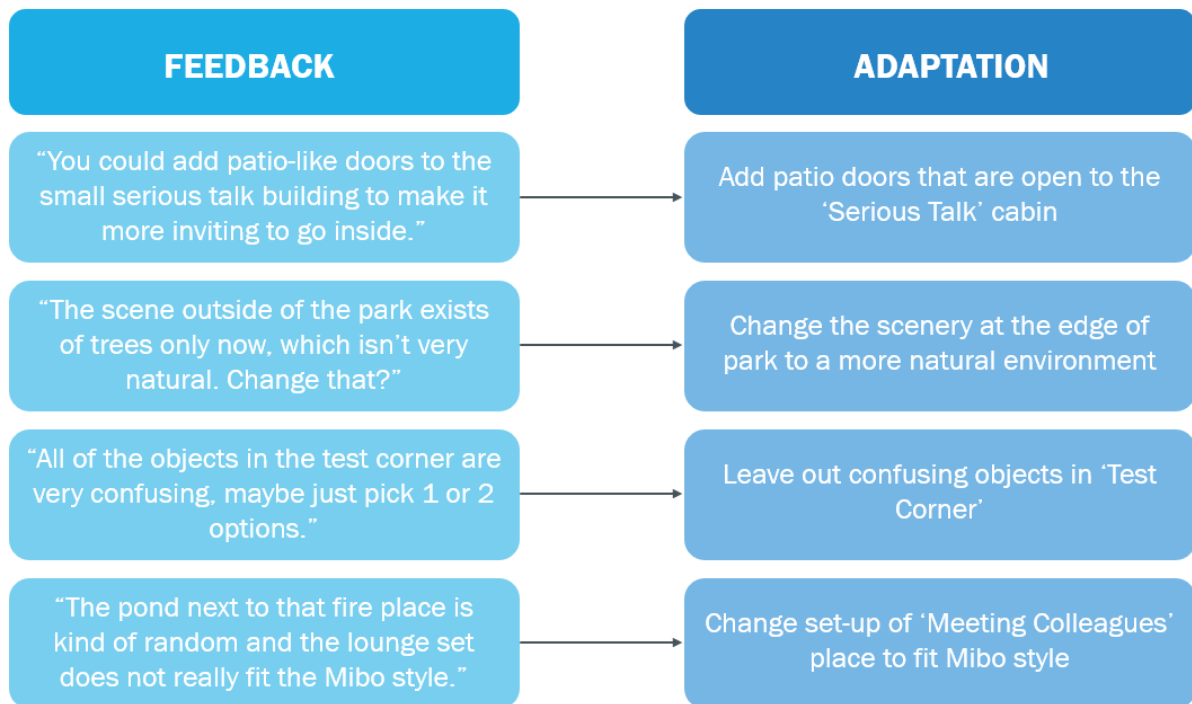


Figure 5.2 - Adaptations of lo-fi prototype based on feedback

The adaptations that were suggested through the feedback on the lo-fi prototype will be taken into consideration during the realisation process of the final prototype. Based on the lo-fi prototype (Figure 5.1) and the recommended adaptations to this prototype (Figure 5.2), a hi-fi prototype will be developed. This hi-fi prototype will be the final prototype, and will be evaluated with users during the final evaluation.

6. Realisation

In the following sections, the realisation process of the final prototype will be discussed and explained. First, the technical aspects of the prototype will be elaborated upon. Thereafter, the design choices that were made during the development process will be motivated.

6.1. *Building the Prototype*

The final prototype of the virtual job interviewing space was developed in Unity. Unity is a game engine that is increasingly popular for developing interactive media (e.g. (video) games) [18]. The decision to use Unity for this project has been based on the fact that the existing Mibo environments have also been built in Unity. An overview of the final (hi-fi) prototype of the job interview space can be seen in Figure 6.1.

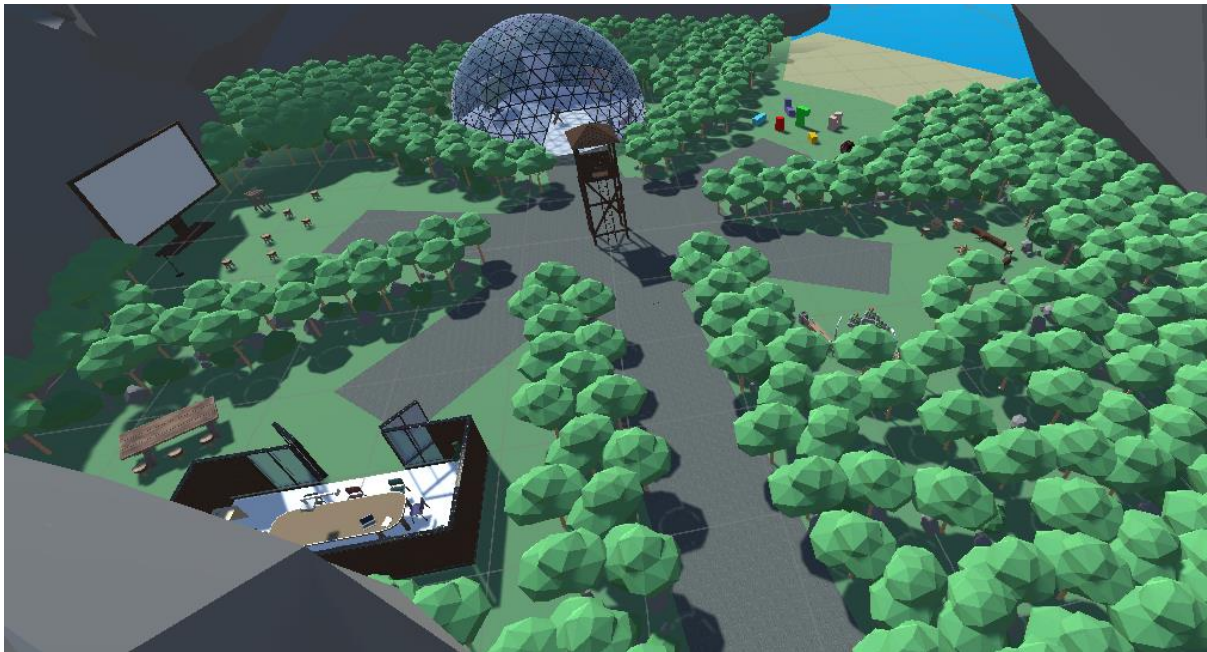


Figure 6.1 - Final prototype

The process of developing the prototype started with creating a surface from standard 3D objects in Unity. Then, natural boundaries between the sub-spaces of the job interview environment were created using trees, bushes and rocks from the Unity Asset Store. When the foundation of the job interview environment was ready, all of the sub-spaces were decorated. Almost all objects used during the development of the final prototype were carefully selected from the Asset Store. The two buildings that are present in the park – the serious talk cabin and the assessment arena – were manually built. The cabin intended for the serious talk was built

out of individual walls, corners, doors and materials. These individual objects and materials were downloaded from the Asset Store. In the Unity scene, the individual subparts were combined to form the eventual cabin. The other object that was made manually, the dome, was built in Maya. This Autodesk program is a 3D modelling tool [19]. Additional images of the virtual job interview space can be found in Appendix D.1. through D.6.

After having completed the virtual job interview environment, multiple additions were made to the prototype to make create a better experience for users. To begin with, a scenery at the edge of the job interview environment was added, to create a more natural looking environment. A combination of cliffs, trees and water now surround the job interview park. Furthermore, background noise was implemented in the prototype, to create a more natural experience. When you enter the job interview space, you can hear a constant breeze of the wind (2D sound effect). Additionally, some audio files of birds chirping were implemented as well, and a sound of waves was implemented in the surf. Both of these audio effects were implemented as 3D sound effects, which means that you only hear them when you stand close to the source.

The Unity program can be published as a WebGL build, which means that the program is accessible for use in a web browser. The motivation for publishing the program in a web browser, is that Mibo is a web-based platform as well. Moreover, publishing the program in a web browser enables other people, who might not have Unity installed on their PC, to open the program as well. This is a convenient feature for user testing. When you enter the Unity program, you are dropped at the entrance as a FPS controller. This can best be explained as a character that can be controlled from a first-person perspective. By using the WASD-keys the user can move, and the mouse is used to control where the user looks, just like in Mibo. Moreover, the user can jump by pressing space.

6.2. *Design Choices*

During the development process of the final prototype, many design choices were made. As mentioned in the previous section, most objects that are included in the hi-fi prototype were downloaded from the Asset Store. All of the objects that were used have been chosen with care. Given that the job interview has been developed for Mibo, the style that Mibo uses in their other virtual worlds has been recreated. Mibo's style can be best described as playful, simplistic and lively. In the different Mibo environments, they make use of low poly objects and basic textures. Based on this, the same style has been used for the job interview space as well. For

the common objects (stools, benches, trees, etc.), objects were selected from the Asset Store that are comparable to the objects in Mibo. For some of the larger, more unique objects (e.g. the serious talk cabin), no examples from existing Mibo worlds were available. In order to fit the Mibo style best, the design choice was made to design these objects in a simple way, using basic and recurring materials.

7. Evaluation

The final prototype has been evaluated with potential end-users through user tests. In the following section, the procedure for these evaluations will be described and elaborated upon. Thereafter, the results that were obtained during the evaluations will be provided and discussed in the results section.

7.1. *Evaluation Procedure*

For evaluating the final prototype of the job interview space in Mibo, user tests were conducted with potential end-users of the product. During the user tests, both job seekers and organisational employees who often conduct job interviews have evaluated the product, in order to gain insights from both perspectives. The subjects that were asked to evaluate the final prototype have been selected with care. A total of five subjects were interviewed for the organisational perspective, and two subjects were interviewed for the job seeker perspective. It was decided to interview both subjects who have already participated in the research before, and subjects who are completely new to the graduation project. This way, it was hoped to get an elaborate evaluation of the final prototype. In order to test the final prototype, semi-structured interviews were conducted. A set of questions was prepared, but there was room for further questioning. Before the user tests, all interviewees received an information brochure (Appendix A.1.) and a consent form (Appendix A.2.). The interviewees were asked to read both documents carefully, and, if they agreed to all terms, sign the consent form prior to the interview. At the start of the user tests, the interviewees were asked to consent to being recorded, after which the evaluations started. In Appendix E.1. the full interview questions that were prepared for the user tests can be found.

At the start of the user tests, the interviewees were given a short introduction. In this introduction, the interviewees were told about the purpose of the project. Then, the interviewees were asked to imagine that, during the user test, they were having an actual job interview (from their own role as organisational employee or job seeker). After the introduction, the user tests started. During the user tests, the interviewees were shown the prototype through a screen share. Throughout the user evaluations, all different sub-spaces of the job interview space were shown, explained, and discussed. In every sub-space of the prototype, the interviewees were asked questions about the environment and the design thereof.

7.2. *Evaluation Results*

From the user evaluations, various insights were gained about the design of the final prototype. In essence, two different types of insights were gained, which are (1) what are the good design choices and (2) what are the bad design choices. In the following section, the ‘bad’ design choices will be named and explained. These are the comments that the participants of the user tests made on what could be done better in the final prototype. The first and foremost comment that the participants of the user tests made on the final prototype, was the fact that the candidate assessment dome was made of glass. Both job seekers and organisational employees stated to feel like they were being watched when they were inside the dome. Due to the fact that the dome is made of glass, users can look through the dome, both from the inside and outside. Almost all of the participants imagined that this would make candidates feel insecure while doing the assessment. Therefore, some participants suggested to change the transparency of the glass, or even the material of the dome. However, various participants did state to appreciate the fact that, when they were standing inside the dome, they had the opportunity to look outside. Therefore, these participants suggested to change the type of glass to reflective glass, to maintain the aspect of being able to look outside when a user is standing inside, but to make sure that users will not feel watched.

Furthermore, some comments were made on design choices with regard to the chosen objects in the virtual environment. These recommendations will be described per sub-space. For the serious talk space, a minor suggestion was made. Two of the interviewees proposed to move the picknick table a little closer to the cabin, to make it more of a whole. All of the other participants stated that they would not change anything about the serious talk space. In the experiences of colleagues space, some participants suggested to move the chairs a little further from the whiteboard. Furthermore, one participant suggested to add small tables with a notepad to make the space a little more lively and real-looking. For the arena, the biggest point of feedback was the material of the dome, as explained before. Additionally, one participant suggested to make the table in the centre of the dome larger, as this would be more logical in their opinion. For the test corner, multiple participants proposed to change the scenery at the edge. Currently, the test corner is bordered by a sea, which appeared a little off to some participants. One participant suggested to ‘break’ the view, by adding an island or something else on the horizon. Another participant proposed to change the sea to a river-like view, as this would be more in line with the rest of the virtual environment in their opinion. The final sub-space that was evaluated in the user tests, was the meeting colleagues space. The opinions about

this sub-space differed between participants. Some participants stated to think that the fireplace was a little too informal for a serious conversation like a job interview. However, other participants actually mentioned to value the informality of the fireplace.

Finally, the participants of the user tests were asked to what extent they thought that the job interview space could be customized, in order to create a brand experience for an applicant. All of the participants believed it would be fairly simple to create a sense of brand experience, through adding certain characteristics of the brand. Some interviewees suggested adding logo's, while other added onto this that a personalized message at the entrance could contribute as well. Both interviewees from the job seeker perspective mentioned that the customization of the environment should not be exaggerated, as it could easily become too much. According to one of these interviewees, that might have the opposite effect for a candidate. Based on this information, it can be concluded that adding a personalized message at the start of an interview and adding multiple logos of the organisation throughout the environment would suffice. With this information, SQ₂ has been answered. The full interview summaries can be found in Appendix E.2.

8. Conclusion

The objective of this graduation project was to design and develop a virtual job interviewing space in the virtual world of Mibo. The research question of this research was: *“To what extent can the unique features of Mibo be used in a generic space, that can be customized by an organisation, to positively contribute to different stages of a job interview?”*. In order to answer this research question, multiple sub-questions have been answered over the course of this project. Throughout this co-design process, multiple prototypes of the job interview space were developed and tested with potential end-users. All of the knowledge gained through these user tests, have led to the development of the final prototype. This final prototype has been evaluated in user tests, from which conclusions with regard to the research question can be drawn.

During the user evaluations, it became clear that both organisational employees and job seekers thought that there was an advantage of using the Mibo environment over other video conferencing tools for job interviewing. All participants believed that the 3D environment of the virtual job interviewing space could positively contribute to a job interview. The primary reason for this, is the fact that Mibo is a lot less static and formal than other video conferencing tools, according to the participants. Furthermore, the participants of the user tests stated that, through minor customization options, the virtual job interview space could be easily branded. From the results of the final prototype evaluations, it can be concluded that the unique features of Mibo can be used in a (generic) space, in order to positively contribute to a job interview. Moreover, it can be concluded that the generic space that was developed in the final prototype can offer a brand experience to an applicant, through minor customization options.

9. Discussion

While the evaluations of the final prototype were positive, and the research question has been answered properly, there are still some aspects about this graduation project that are up for discussion. The first and foremost point of discussion in this graduation project, is that the final prototype does not work similarly to Mibo yet. While the prototype depicts a virtual environment in a way similar to Mibo, the interaction that is present in Mibo has not been implemented in the prototype yet. Due to limitations in both time and resources, it is not possible to enter the final prototype with multiple people at the same time. This results in the fact that people are not able to see and interact with each other in a way they can in Mibo. Therefore, it might be argued that the evaluations of the final prototype have not been performed fairly, as they do not give an accurate representation of what the true product would look like. However, due to these limitations, it was decided to perform the user tests with the prototype as it is, but to show the participants of the user tests the virtual world of Mibo before. This way, the participants can better imagine what the overall picture would look like once the job interview space is finished in Mibo.

Another aspect about this graduation project that should be taken into account, is related to ethics. Logically, a job interview is an important event, especially for the candidates. It would not be ethically right to perform a job interview in a virtual environment like Mibo if there is a possibility that this might negatively influence the candidate in any way. Logically, not all candidates might have access to the proper technological facilities for attending an online job interview. In this scenario, it would not be ethically right to conduct the interview online, since some candidates might be excluded. Another scenario in which using Mibo for job interviews might exclude candidates, is when candidates will be wrongly judged based on their technological skills. Especially when this lack of technological skills has nothing to do with the job the candidate is applying for. In order to determine whether it is ethically right to use Mibo for job interviews, an ethical reflection has been carried out (Appendix F). After considering all ethical issues related to this topic and product, an ethical flowchart has been made. This flowchart focuses on determining whether it is ethically right to use the virtual job interview space for an actual job interview. The flowchart can be found in Appendix F.3.

A final aspect about this project that should be discussed, is the way in which the interviews for the different user tests were processed. All of the interviews that were conducted during this research, were semi-structured interviews. During the interviews, the audio was recorded (with consent of the participants) for processing purposes. After having conducted the

interviews, these recordings were listened back. Then, a summary was made about the interview, highlighting all of the answers given by the participants. It might be argued that this way of processing information is not transparent to the readers of this thesis. Since the interviews were not transcribed but summarized, there is a possibility that some interview answers have been interpreted wrongly. However, the decision was made to summarize the interviews instead of transcribe them for a multitude of reasons. To begin with, it is important to anonymise the interview results, so that the answers given in the interviews cannot, in any way, be linked to a person or organisation. Since the interviews were focused on quite a specific organisational process, there were a lot of 'clues' that could be linked to a certain organisation. Another reason for summarizing the interviews, was that some interviews were conducted with multiple interviewees at the same time. Since these interviews were conducted in groups, transcribing would have been quite complex. For these reasons, it was decided to summarize the interview results.

10. Future Work

After having designed, developed and evaluated the final prototype of the job interview space, insights were gained on how future work could build onto this research. From these insights, various recommendations for future work can be formulated. To begin with, the virtual job interview space can be improved by considering the feedback that was obtained during the user evaluations. After having processed all this feedback and adapted the prototype accordingly, it could actually be built in Mibo, using Mibo's video conferencing technology. If this virtual environment would be built for real in Mibo, interaction can be added as well. Only then, when the Mibo world has actually been developed and launched for real, it can truly be tested whether this virtual environment can positively contribute to a job interview.

Another recommendation for future work would be to further research the effects of customization options in the virtual environment on user's brand experience in the environment. While this subject has been a main theme in one of the sub-questions of this research, it has not actually been tested yet. After the final prototype evaluations, ideas about what type of customization options could be added to create a sense of brand experience were formulated. However, in order to actually find out whether these ideas and recommendations would work for real, they need to be tested. Therefore, a future recommendation is to test the different options for customization and see how user's experience the different options of environments.

Another way in which this research can, and will be used for future work, is for developing new propositions related to job interviewing. Besides the final prototype that was developed during this graduation project, a lot of knowledge has been gained in the subject of job interviewing in general. This knowledge can be used for developing other job interviewing programs as well. In the future, I will continue working for Welkom, my client company, where I will continue working on developing another job interview program, using another online tool. In these future activities, the knowledge gained over the course of this graduation project will be put to use directly.

References

- [1] M. O Connor, K. Conboy, and D. Dennehy, "COVID-19 affected remote workers: a temporal analysis of information system development during the pandemic," *Journal of Decision Systems*, 2021, doi: 10.1080/12460125.2020.1861772.
- [2] L. Bonacini, G. Gallo, and S. Scicchitano, "Working from home and income inequality: risks of a 'new normal' with COVID-19," *Journal of Population Economics*, vol. 34, no. 1, pp. 303–360, Jan. 2021, doi: 10.1007/s00148-020-00800-7.
- [3] R. Bates, A. B. Holm, and L. Haahr, "Introduction 11 e-Recruitment and selection." [Online]. Available: <http://ebookcentral.proquest.com/lib/griffith/detail.action?docID=5434841>.
- [4] A. Mader and W. Eggink, "A Design Process for Creative Technology," in *International Conference on Engineering and Product Design Education*, Sep. 2014, pp. 1–6.
- [5] J. Oakman, N. Kinsman, R. Stuckey, M. Graham, and V. Weale, "A rapid review of mental and physical health effects of working at home: how do we optimise health?," *BMC Public Health*, vol. 20, no. 1, Dec. 2020, doi: 10.1186/s12889-020-09875-z.
- [6] M. Jackowska and J. Luring, "What are the effects of working away from the workplace compared to using technology while being at the workplace? Assessing work context and personal context in a global virtual setting," *Journal of International Management*, vol. 27, no. 1, Mar. 2021, doi: 10.1016/j.intman.2021.100826.
- [7] D. H. Reynolds and D. N. Dickter, "Technology and employee selection.," in *Handbook of employee selection.*, New York, NY, US: Routledge/Taylor & Francis Group, 2010, pp. 171–193.
- [8] D. N. Dickter and V. Jockin, "E-SELECTION," in *The Brave New World of eHRM 2.0*, 2018, pp. 47–79. [Online]. Available: www.infoagepub.com
- [9] D. Villani, C. Repetto, P. Cipresso, and G. Riva, "May i experience more presence in doing the same thing in virtual reality than in reality? An answer from a simulated job interview," *Interacting with Computers*, vol. 24, no. 4, pp. 265–272, Jul. 2012, doi: 10.1016/j.intcom.2012.04.008.
- [10] J. H. Kwon, J. Powell, and A. Chalmers, "How level of realism influences anxiety in virtual reality environments for a job interview," *International Journal of Human Computer Studies*, vol. 71, no. 10, pp. 978–987, Oct. 2013, doi: 10.1016/j.ijhcs.2013.07.003.

- [11] G. Salzano *et al.*, “Quarantine due to the COVID-19 pandemic from the perspective of adolescents: the crucial role of technology,” *Italian Journal of Pediatrics*, vol. 47, no. 1, Dec. 2021, doi: 10.1186/s13052-021-00997-7.
- [12] A. Mahr, M. Cichon, S. Mateo, C. Grajeda, and I. Baggili, “Zooming into the pandemic! A forensic analysis of the Zoom Application,” *Forensic Science International: Digital Investigation*, vol. 36, Mar. 2021, doi: 10.1016/j.fsidi.2021.301107.
- [13] B. K. Wiederhold, “Connecting through Technology during the Coronavirus Disease 2019 Pandemic: Avoiding ‘zoom Fatigue,’” *Cyberpsychology, Behavior, and Social Networking*, vol. 23, no. 7. Mary Ann Liebert Inc., pp. 437–438, Jul. 01, 2020. doi: 10.1089/cyber.2020.29188.bkw.
- [14] M. Abdelrahman, “The Indefatigable Worker: From Factory Floor to Zoom Avatar,” *Critical Sociology*, 2021, doi: 10.1177/0896920521990739.
- [15] C. R. Ondrejka, “A Piece of Place: Modeling the Digital on the Real in Second Life,” *SSRN Electronic Journal*, Jul. 2005, doi: 10.2139/ssrn.555883.
- [16] S. Papagiannidis, M. Bourlakis, and M. Vafopoulos, “Banking in Second Life: Marketing Opportunities and Repercussions,” Sep. 2005. [Online]. Available: <http://ssrn.com/abstract=1887570>Electroniccopyavailableat:<http://ssrn.com/abstract=1887570>
- [17] T. Sakuma and T. McCauley, “Detector and event visualization with sketchup at the CMS experiment,” in *Journal of Physics: Conference Series*, 2014, vol. 513, no. TRACK 2. doi: 10.1088/1742-6596/513/2/022032.
- [18] J. K. Haas, “A History of the Unity Game Engine,” 2014. [Online]. Available: <https://digitalcommons.wpi.edu/iqp-all>
- [19] M. Labschütz *et al.*, “Content Creation for a 3D Game with Maya and Unity 3D,” 2011. [Online]. Available: <http://www.cg.tuwien.ac.at/maya/>
- [20] Institute of Electrical and Electronics Engineers, “IEEE Code of Conduct,” 2014.
- [21] L. Piercy, “The Story of English: How an Obscure Dialect Became the Worlds Most-Spoken Language,” Michael O'Mara Books, 2012.

Appendix A: Expert Interviews

A.1. Information Brochure

Hello! My name is Noa van der Klooster, and I am currently in my last year of the study Creative Technology at the University of Twente. For the last phase of my studies, I am working on a bachelor thesis. I would like to invite you to participate in an interview for this research. Your participation is completely voluntary, and you are free to withdraw from this research at any given moment. I will now further explain my research, if you have any additional questions about the research, feel free to ask them.

For my bachelor thesis, I am performing a research to get more insight into online job interviewing. Currently, numerous organisations are working from home, as a result of the COVID-19 pandemic. Due to the uncertainties around the duration of the pandemic, and the fact that working from home even seems to have benefits for some organisations, the expectations are that working from home will be the ‘new normal’ way of working. For many organisations, job interviewing is something that occurs on a regular basis. Therefore, it is important that this process can be facilitated in an online environment as well. The goal of this research is to design and develop an online job interviewing space.

This research could substantially contribute to the way in which organisations operate from home. An online job interviewing space would create opportunities for organisations to continue their recruitment process during the COVID-19 pandemic and after. By participating in this interview, you would help me to get a better understanding of how online job interviews are currently shaped. This information would then be used to set requirements for the online job interviewing space that I am going to design and develop.

No risks are involved if you decide to participate in this interview. The interviews will be held through a (video) call, in order to respect the COVID-19 restrictions. If, during the interview, you decide you no longer want to continue, you may withdraw at any time without consequences. Please let me know during the interview if you feel the need to withdraw.

Data handling

During the interview, the audio will be recorded if you consent to this. The audio footage will solely be analysed by me, and will not be made public. All audio footage and personal data will be carefully stored and secured according to the AVG guidelines. The interviews will be transcribed after analysing the audio footage, after which the audio footage will be deleted. In

the interview transcriptions, there will be no links between your name and your interview answers. If I will quote one of your answers in my final thesis publication, I will ensure that the quote will not be linkable to you personally. If, in the 24h after the interview, you decide that you no longer want to participate in this study, your interview data will not be included in the research, and the audio footage will be deleted.

Additional information

If you request any further information about this research, you may contact me at any time (noa@welkom.video). Additional questions or remarks can also be directed at my supervisor: Job Zwiers (j.zwiers@utwente.nl). If you would like to submit a complaint about the research, please direct them to the secretary of the Ethics Committee of the Faculty of Electrical Engineering, Mathematics and Computer Science at the University of Twente, P.O. Box 217, 7500 AE Enschede (NL), email: ethics-comm-ewi@utwente.nl).

A.2. Informed Consent

‘I hereby declare that I have been informed in a manner which is clear to me about the nature and method of the research as described in the aforementioned information brochure “Job Interviewing in Mibo”. My questions have been answered to my satisfaction. I agree of my own free will to participate in this research. I reserve the right to withdraw this consent without the need to give any reason and I am aware that I may withdraw from the experiment at any time. If my research results are to be used in scientific publications or made public in any other manner, then they will be made completely anonymous. My personal data will not be disclosed to third parties without my express permission.

I have been informed that, due to the COVID-19 restrictions, the interviews will be conducted through a (video) call. Therefore I declare to be informed of the reason that my consent will be asked through a digital form instead of a physical form. Furthermore I give my consent for the audio being recorded during the interview, for analysing purposes.’

If you request further information about the research, now or in the future, you may contact the researcher Noa van der Klooster (noa@welkom.video) or her supervisor Job Zwiers (j.zwiers@utwente.nl). If you have any complaints about this research, please direct them to the secretary of the Ethics Committee of the Faculty of Electrical Engineering, Mathematics and Computer Science at the University of Twente, P.O. Box 217, 7500 AE Enschede (NL), email: ethics-comm-ewi@utwente.nl).

Signed in duplicate:

.....

Name subject

.....

Signature

‘I have provided explanatory notes about the research. I declare myself willing to answer to the best of my ability any questions which may still arise about the research.’

.....

Name researcher

.....

Signature

A.3. Interview Questions

All interviews have been conducted in the form of a semi-structured interview. A set of questions was prepared, but during the interview there was room for additional questioning.

A.3.1. The Virtual World of Mibo

The interview starts after the interviewee is given a short introduction about the interview, and after they have given their consent for being recorded.

- Could you explain to me, in your own words, what Mibo is?
- Why would someone use Mibo instead of, for example, Zoom or Microsoft Teams?
- Why do you think that people use Mibo?
- For what type of conversation or meeting is Mibo currently being used the most?
- For what type of conversation do you think Mibo is most suitable?
- Do you think there are types of conversations for which Mibo is not suitable?
- What kind of organisations are usually interested in using Mibo?
- Do you think that Mibo will continue to be popular after the COVID-19 pandemic is over?
- Could you describe what characteristics make Mibo such a unique video conferencing tool?
- How do you think that these characteristics can positively contribute to a virtual conversation?
- Do you think that there are disadvantages of using Mibo instead of, for example, Zoom or Microsoft Teams?

A.3.2. Organisational Perspective

The interview starts after the interviewees are given a short introduction about the interview, and after they have given their consent for being recorded.

- Could you tell me a bit more in detail about your job?
- Does interviewing applicants fall within your actual job responsibilities?
- How frequently do you, on average, interview applicants?
- Have you ever interviewed applicants before the start of the COVID-19 pandemic?

- If so, were these interviews always face-to-face or did you also do online interviews before the pandemic?
- Have you ever interviewed applicants during the COVID-19 pandemic?
 - If so, were these interviews always online or did you also see applicants face-to-face since the start of the pandemic?
- Which tools/platforms do you usually use for an online job interview?
 - Does this platform have functions that are essential for you to do your job?
 - Are there functions that you are missing in this platform?
- What are, in your opinion, the main differences between a face-to-face job interview, and an online job interview?
- Do you think that there are advantages of doing an online job interview over a face-to-face job interview?
 - If so, what are these advantages?
- Do you think that there are disadvantages of doing an online job interview over a face-to-face job interview?
 - If so, what are these disadvantages?
- Which way of doing a job interview has your preference and why?
- Does a job interview, in your opinion, consist of different (standard) elements (e.g. introduction, motivation, etc.)?
 - If so, what are these different elements and in which sequence do they often occur?
- Which of these elements of a job interview do you think can be done online and why?
 - Which of these elements can absolutely not be done online and why?

A.3.3. Job Seeker Perspective

The interview starts after the interviewees are given a short introduction about the interview, and after they have given their consent for being recorded.

- Could you make an estimation of the total amount of job interviews you have done in your life?
- Have you ever had a job interview before the pandemic?
 - If so, were these interviews always face-to-face or did you also do online interviews before the pandemic?
- Have you ever had a job interview during the pandemic?

- If so, were these interviews always online or have you also had a face-to-face interview since the start of the pandemic?
- Do you remember on which platform(s) your online job interview(s) were?
 - What did you think of this platform?
 - Did the platform have functions that were very useful during the interview?
 - Were there functions of the platform that were not useful or even obstructive?
 - Did you feel like you missed a function in the platform?
- What are, in your experience, the largest differences between a face-to-face interview and an online interview?
- Do you think that there are advantages of doing an online job interview over a face-to-face job interview?
 - If so, what are these advantages?
- Do you think that there are disadvantages of doing an online job interview over a face-to-face job interview?
 - If so, what are these disadvantages?
- Do you feel like there are opportunities in an online interview that you don't have during a face-to-face interview?
 - Or the other way around?
- Do you feel like you are judged differently in an online interview than in a face-to-face interview?
- Have you experienced a difference in your nervousness in either of the two interviews?
- If you look back on your different interviews, do you prefer a face-to-face interview or an online interview?

A.4. Interview Results

A total of seven subjects were interviewed in the method described above. The interviewees were divided into three categories: (1) experts about the virtual world of Mibo, (2) experts in the field of job interviewing from the organisational perspective and (3) experts in the field of job interviewing from the job seeker perspective.

A.4.1. The Virtual World of Mibo

For gaining more knowledge of the virtual world of Mibo, an expert about the virtual world of Mibo was interviewed. The interviewee described Mibo as a tool through which people can

meet in a different way. Mibo allows for communication in a private 3D environment where you can walk around while video calling. Currently, there is an island and a forest, but in the future there will be more possibilities for custom worlds, according to the interviewee. For the interviewee, the main reason to use Mibo over other video conferencing platforms (e.g. Zoom), is that Mibo is more intuitively. In other video conferencing platforms, the interviewee says, you are looking at a screen and you see all other people in the call right in front of you. This does not feel right. In the normal world, you don't see people right in front of you, but around you. Mibo recreates this sense of dynamism, as you can stand next to someone, or form groups. In Mibo, if you tell someone to look at the person on their left, it makes sense, whereas this is not possible in Zoom for example. According to the interviewee, the main reason that people use Mibo is because it combines the advantages of the online world (being able to meet anytime, anywhere) with the advantages of the physical world (the fun aspects of meeting physically, like being able to form groups or take a walk together).

The interviewee mentions that many organisations currently use Mibo for informal activities, like virtual drinks or team building activities. But, according to the interviewee, Mibo would be most suitable for 2 different types of situations. The first situation for which Mibo is suitable, is for considering potential scenarios in the future that not yet exist. For example, for looking at a product, building or place that not yet exists, as if it is there already. In this situation, the true value of animation is emphasized. By considering something that has not been made yet, potential design flaws or mistake can be spotted and corrected before actually making it. Another situation for which Mibo can be suitable, according to the interviewee, is for translating the real world into a virtual one. By recreating an existing place, users are provided to visit that place at any moment, from any place in the world. This would allow users to exploit the advantages of both the real world and the virtual world. With regard to the type of organisations that use Mibo the most, the interviewee says, it strikes that these are often organisations who are open minded. Often, organisations who are accustomed to very advanced technological programs get bored with Mibo after a while, therefore, these organisations are not main part of the target group. The main target group exists of organisations who have some technological knowledge, and are open to new experiences.

The interviewee also highlights some disadvantages of Mibo. According to the interviewee, the fact that you cannot see each other very well can have an adverse effect on a conversation. In Mibo, the screens on which you see the people you are talking to are smaller compared to other video conferencing tools. When you are meeting one other person, this can be compensated by sitting down together somewhere, close to each other. But in groups, the

interviewee says, this is not possible. Therefore, a serious conversation in a group is often easier through Zoom or another video conferencing platform. Other disadvantages of Mibo that the interviewee highlights are the fact that people's energy, behaviour and emotions are often different in any video conference. The interviewee mentions this could be due to the fact that there is a slight delay, or the fact that (group) relationships are often different online. Often, people are more awaiting before saying something, which takes away some spontaneity in the conversation.

But, the interviewee says, there are also many advantages of Mibo over using other video conferencing platforms. Some advantages were already discussed earlier in the conversation, but also new advantages are listed. The main advantages are, like said before, the spatial effect that Mibo offers. But also the fact that Mibo is less formal than other video conferencing tools is a large advantage. This is due to the fact that it is often perceived as less serious and less static and that you can interact more freely with others and the world around you. For these reasons, the interviewee believes that Mibo will keep on being a popular tool, also after the COVID-19 pandemic will be over.

A.4.2. Organisational Perspective

For gaining a more in-depth view of how organisational employees experience (online) job interviews, three subjects were interviewed. All of the interviewees work at different organisations and have different types of job, in order to get a more elaborate overview of this subject.

Interviewee 1

The first subject that was interviewed as a job interview expert from the organisational perspective has done job interviews both before and during the pandemic. While job interviewing is not specifically part of the interviewee's job, the interviewee has been present at over twenty job interviews over the past years. The company at which this interviewee works is quite internationally oriented, which has resulted in the fact that the interviewee has done both online and physical job interviews before the pandemic. At our company, we usually have around three interview rounds, the interviewee says. The first interview is often an introduction, in which we get to know more about the applicants and their past experiences. During the second interview, we often test the applicants' knowledge, by asking them substantive questions. When we invite someone for the third round of interviews, we usually already

decided to hire the candidate. The third round often is more of a formality in which we check whether our impressions during the first two rounds were right.

Before the start of the pandemic, we often did the first round of interviews online, through a video call, the interviewee says. Then for the second and third rounds, we always invited the applicants to our office. However, since the start of the pandemic, this has changed. Now we often do both the first and second rounds of interviews online. However, for the third round we always try to see the candidate in person at least once before hiring them. For the online job interviews we always use Microsoft Teams. The reason that we use this platform is that it is the platform we use for all internal communication within the company. Therefore I am quite experienced with this platform, and I prefer using this platform over others. The interviewee mentions that a huge advantage of Microsoft Teams is that people can mute themselves, and that the host of a meeting also can mute other people. A disadvantage of this platform, according to the interviewee, is that it is hard to see all people you are talking to. When you are in a meeting with more than two people, the different screens become smaller and smaller, which makes it hard to keep an overview of the group.

The interviewee mentions that the reason for which they, despite the pandemic, still insist on inviting candidates to the office, is that they feel that you can form a better image of someone if you have met them in person. While video calling offers a lot of opportunities, the interviewee says, I still feel like you cannot see how someone dresses, how they behave in a space together with other people and how they talk (using body language). Through a video call, it is simply harder to pick up non-verbal cues that you can way more easily pick up in person. But, despite the fact that it is harder to get a complete image of a person through a video call, the interviewee says, there are several advantages as well. A large advantage for the interviewees is that they do not have to come to our office. This means that they will not miss a large part of their day, as the interview can just be scheduled in between other appointments. Another advantage for interviewees is that they can stay in their comfort zone more easily, as they can just attend their interview from home. The interviewee mentions that their company will most probably remain on doing the first two rounds of interviews online, also after the pandemic is over. Both of these rounds can just as easily be done online, as no personal connection is required for the first two interviews. The interviewee mentions that, ever since the pandemic, they have experienced that if the first two interview rounds are done over the internet, they can get quite a clear image of a person. And usually, during the third (physical) interview, the image that they have of this person appears to be right. Therefore, the interviewee says that after the pandemic is over, they will remain doing most interviews online.

Interviewee 2

The second interviewee of this category has a job that does include doing job interviews on a regular basis. The interviewee mentions to do approximately two or three interviews a week. This interviewee says that the job interviews at their organisation are always through Google Meet, as this is the same tool they use for internal meetings. The interviewee likes this video conferencing platform, as it is automatically scheduled in your Google Calendar as well. The invitation of a Google Meet meeting also offers you the opportunity to include a short description, like: “Don’t forget to bring your CV and passport”. This often appears to be very useful. Another advantage of using Google Meet for a job interview, is that interviews are often less time consuming and that you can easily record to interview to watch it again later.

An aspect about meeting through Google Meet that the interviewee does not like is the fact that applicants are sometimes struggling to turn on their camera or microphone. But, the interviewee says, this does not have anything to do with Google Meet specifically, but rather with video calling in general. The interviewee also mentions that, if it happens that an applicant has some struggle turning on their camera or microphone, this often feels unprofessional. This sometimes results in the fact that an interviewee is considered less competent, while the job they are applying for might have nothing to do with technology. According to the interviewee, this sometimes results in the fact that applicants who are, on paper, perfect for a job get rejected because of the fact they are not experienced with technology. Another disadvantage the interviewee mentions about video conferencing, is that you cannot completely see the other person. This can result in the fact that an applicant can be harder to read, the interviewee says. Moreover, conversations through a video call, the interviewee mentions, are often less spontaneous. This sometimes results in the fact that you cannot see someone’s energy or enthusiasm.

In the job interviews that the interviewee has done, there has always been a certain structure, which is always the same. To begin with, the interviews usually start with an introduction. In the introduction, both the applicant and the organisational employee tell something about themselves. This introduction is often followed by discussion the applicant’s CV and prior experience. Then, the interviewee says, there is often a part where I ask the applicant about their motivation, and why they think they are suitable for the job. Finally, we often test applicants. The tests we do (e.g. personality test, cognitive test etc.) are often dependent on the job we are trying to fill. The interviewee mentions that, from their experience, both the introduction and the motivation parts of an interview are probably best to do face-to-face, as these are personal conversations. However, the formal parts of the interview about the

applicant's CV and the tests can easily be done online. The interviewee expects that, after the pandemic will be over, more interviews will be done through an online meeting than before the pandemic.

Interviewee 3

The final subject that was interviewed for this category is someone whose job it is to recruit and select employees in the professional HR field. The interviewee works at a company that is often approached by other organisations with the question to recruit a new HR staff member for them. Usually I have two contact moments with applicants, the interviewee says. When the interviewee gets a request from a company to find a HR employee for them, the interviewee starts with looking for appropriate candidates. All of these candidates are screened through a phone call first. After this first screening, the candidates that seem suitable for the job are invited for a physical job interview. During this round, the interviewee determines which of the candidates are most suitable. These candidates are then presented to the client. From that point, the client will take over the final rounds of job interviews and decide on which candidate will get the job. The interviewee mentions that the procedure before and during the pandemic has mostly remained the same. The first moment of contact that the interviewee has with the applicants still happens through a phone call, and for the actual job interview, the applicants are still invited to the office.

The reason that all applicants are still (despite the pandemic) invited to the office, the interviewee says, is that I cannot get a clear image of someone through a video call. I have done some job interviews online over the past year, and while you can have a conversation that way, I feel like it is still different. Of course, it depends on the job you are trying to fill. One of my colleagues works on hiring interim employees. These people often work at an organisation for half a year tops. In these situations, an online job interview will suffice. I however, often receive job to find new HR managers for large companies. If I have such a large client with an important job opening to fill, I often feel like I need to do everything in my power to ensure that I have found suitable employees. If I interview people online, I feel like I am not able to determine who the best candidates for a job are.

However, if other people feel like they can assess people online in the same way as they do in person, this problem should not matter. In that case, an online job interview can even have large advantages for both the organisation and the applicant. For the applicant, this would mean that they won't have to lose half a day to traveling to and from the office, and for us, it

would mean that we would have to spend less time per interviewee as well. So I think that if you are accustomed to doing job interviews online, there are more pros than cons.

A.4.3. Job Seeker Perspective

For gaining a more in-depth view of how job seekers experience (online) job interviews, three subjects were interviewed. All of interviewees have a different level of experience with job interviews. Moreover, it was decided to interview subject from different fields of work, in order to get a more elaborate overview of this subject.

Interviewee 1

The first subject that was interviewed has applied for multiple jobs, through both physical and online job interviews. The interviewee tells about their last experience with an online job interview. When I applied for this job, the interviewee says, I had two interviews with the employment agency, after which I had one real life meeting with the company itself. The first interview was conducted in Microsoft Teams. At first, the interviewee was not familiar with this tool. However, after a while, it became clear that this tool was fairly easy to use, the interviewee says. A large advantage of MS Teams is that you can share files with each other, in a way similar to Google Drive. This can be useful for e.g. uploading your CV or other documents. The interviewee mentions that an advantage of an online job interview is that it saves a lot of travel time and costs. In addition, given the fact you are at home in a familiar setting, it is less stressful to have a job interview online instead of physically.

The interviewee also recognizes some disadvantages. Technology can cause some troubles, the interviewee mentions. During my interview, the interviewer's screen froze multiple times, making it sometimes impossible to hear everything clearly. This could be explained by a poor internet connection. Another disadvantage of doing a job application online is that it is difficult to look representative through a camera. For a job interview you want to look representative, however, this is more difficult through a camera in which you can only see someone from the shoulders and up. Moreover, in a video call it is often hard to read someone's body language. In addition, the assessment of an online application might be slightly different from a real life one, because the personal aspects are way more difficult to convey online. For example, the interviewee says, you are less able to convey your enthusiasm online. When asking the interviewee whether they would rather have an online job interview than a physical one, the interviewee stated that they would prefer to meet physically. The main reason for this

is that personality traits can be better transferred physically, and you can really make a connection with someone. The interviewee thinks that it is better to do the second round of interviews online instead of the initial introduction round. As you can already form an image of a person and determine whether this person matches the company during a first interview round. Therefore, the interviewee mentions, it is easier to do the initial introduction round physically, and then conduct further interviews online.

Interviewee 2

The second interviewee has had several experiences with doing online job interviews during the pandemic, but before the pandemic, the interviewee had also had physical job interviews more than once. During their most recent online job interview, the interviewee had a meeting in Zoom. Using Zoom for the interview, the interviewee stated, was generally a positive experience. However, it sometimes felt uncomfortable and difficult to estimate to what extent the interviewee expected an in-depth answer on certain questions. When having a face-to-face conversation, it is much easier to estimate whether someone understands your answer and whether it is considered as complete. But, given the fact that body language is really hard to see in an online setting, the interviewee thinks that the interview would have gone slightly different than when it had been in real life. In real life it would probably have been more spontaneous and personal.

Advantages of applying online are the lack of traveling time and the efficiency that this aspect entails. This allows job seekers to apply for multiple jobs in a short period of time. However, according to the interviewee, it is easier to give a good impression to an organisation when you are actually visiting the office. Additionally, it is easier to get a clear understanding of an organisation as well physically. When you visit the office of a company you might be interested in working at, you usually can get an impression of the employees and the organisational culture. When you are having an online job interview however, it is much harder to determine whether the company you are applying at actually fits your ideas and values, the interviewee says. A final negative aspect of online job interviewing, it that it is harder to break the ice. Usually, when you enter a job interview, there is some chitchat before the actual interview starts. Often you are offered a drink and guided to a meeting room. For me, this ritual often helps to calm my nerves. In an online job interview, however, you do not have the opportunity to do any of that, which results in the fact that the official conversation often starts immediately.

Interviewee 3

The third interviewee has a lot of experience with job interviews, both physical and online. Despite all of my different experiences, the interviewee says, I still prefer physical job interviews over online ones. The main reason for this is that it is easier to break the ice when you are standing in the same room with someone else. You can make comments on space around you for example (e.g.: “What a cool poster!”). Online, this icebreaker is often missed out on, as you usually tend to dive into detail more quickly. Another disadvantage of online job interviews is that you usually miss out on non-verbal signals. Often, when I am doing a job interview, I notice how the other person feels about the conversation. Usually, I can determine whether they like me or not, based on the non-verbal cues they give me. During a physical job interview, I can anticipate on these non-verbal cues. But, during an online job interview, I often experience more difficulties in reading the other person. This results in the fact that I do not know how the other person is feeling and whether I am doing well in the interview. Due to this reason, I have experienced anxiety during online interviews while I have never experienced this during a physical interview.

Another aspect that is very important to me during an online interview is the journey towards the interview. I once had an interview on an online video conferencing platform where I had no idea where to go or what button to click. This was very stressful, as I logically wanted to be on time for this job interview. Therefore, I think that it is very important that it is clear for an applicant what they have to do and what is expected from them during an online interview. If the journey towards the interview is clear and logical, it could help in calming down your nerves during an online interview.

Appendix B: Paper Prototype Evaluation

B.1. Paper Prototype Evaluation Questions

For evaluating the paper prototypes of the virtual job interview room, interviews with potential users have been conducted. All interviews have been conducted in the form of a semi-structured interview. A set of questions was prepared, but during the interview there was room for additional questioning. For these interviews, two categories of subjects were interviewed: (1) experts in the field of job interviewing from the organisational perspective and (2) experts in the field of job interviewing from the job seeker perspective. For both categories of interviewees, the questions are equal, aside from some differences in nuances (e.g. looking from your role as interviewer/interviewee). The interview starts after the interviewee is given a short introduction about the interview, and after they have given their consent for being recorded.

- After having seen the paper prototypes, do you have a first impression about which of these two environments you would find more suitable for a job interview?
 - If so, what is this first impression?
- When considering your own role during a job interview (interviewer/interviewee), which of these two environments would you prefer to be in during a job interview?
- How would you feel if you had a serious and formal conversation in an environment like the arena?
 - And what about the park?
 - Would you prefer either of these two environments above the other?
- How would you feel if the 'Experiences of Colleagues' part of the interview would be in an environment like the arena?
 - And what about the park?
 - Would you prefer either of these two environments above the other?
- How would you feel if you had a candidate assessment in such an environment as the arena?
 - And what about the park?
 - Would you prefer either of these two environments above the other?
- How would you feel if you would test a candidate/be tested as a candidate in such an environment as the arena?

- And what about the park?
- Would you prefer either of these two environments above the other?
- How would it feel for you to (let a candidate) meet potential new colleagues in an environment like the arena?
- And what about the park?
- Would you prefer either of these two environments above the other?
- In both of the environments, there is a central point in which you will have the opportunity to overlook the entire environment. In the arena, this is a watching tower, and in the park this is a map. Which of these options would you prefer and why?
- Do you think having such an overview point can contribute to a job interview?
- Imagine that you would have a job interview in one of those two environments, how would you feel about the fact that all of the different sub-spaces are connected to each other?
- Are there spaces that, in your opinion, need to be closed-off from the rest more?
- Imagine that you would have a job interview in one of those two environments, how would it make you feel if there would be other job interviews happening in the simultaneously with yours?
- Would you mind if there were other candidates walking through the same environment as you during your job interview?
- In such an environment, do you think it would be necessary to walk from one place to the other?
- What if there was an option to teleport between places, would you use that? Or would you still choose to walk?
- Do you think that there are advantages of conducting job interviews in such an environment instead of in Zoom or comparable technologies?
- And do you think there are disadvantages?

B.2. Paper Prototype Evaluation Results

A total of six subjects were interviewed for evaluating the paper prototype, by following the method described above. The interviewees were divided into experts in the field of job interviewing from the organisational perspective and experts in the field of job interviewing from the job seeker perspective.

B.2.1. Organisational Perspective

For gaining a more in-depth view of what organisational employees think of the two paper prototypes, three subjects were interviewed. All of the interviewees work at a large Dutch company, and they have similar jobs (recruiting and selecting new employees). All of the interviewees have a lot of experience with job interviewing, as this is a large part of their tasks. The interviewees all work as recruiters for the same accountancy corporation in the Netherlands.

Interviewee 1

The first interviewee initially thought it would be most logical to design an indoor space for a job interview. Their motivation for this was the fact that “normal” (physical) job interviews are also conducted indoors most of the time. However, when presented the option that a job interview space in a virtual environment could be designed in any way imaginable, the interviewee started thinking. I have never thought about this options, but when you say it like that it makes a lot of sense, the interviewee said. They elaborated: why would you recreate a boring office if you can make anything you want. Maybe an outdoors setting like a park would be refreshing. When asking the interviewee which of the two paper prototypes they would feel most comfortable in during a job interview, they answered that it did not matter for them. Since I’ll be the one conducting the interview, the interviewee said, I will know the virtual environment before the interview, so I would prepare for that scenario. The main difference between the arena and the park, according to the interviewee, is that the arena seems more formal, and more serious. The park, on the other hand, appeared more informal and low-key to the interviewee.

In the second part of the interview, questions were asked with regard to the different sub-spaces and elements that can be found in both prototypes. For the ‘Serious Talk’, the interviewee mentioned to prefer the park environment, as it is more open and free. This would allow an applicant to speak more openly and honestly compared to the more formal and static environment of the arena. For both of the sub-spaces that include meeting or hearing from colleagues, the interviewee preferred the park as well, as these are quite informal activities, which allow for a more informal setting. With regards to both test spaces, the interviewee stated, I do not know whether our organisation would use them, as we have a standard online assessment that candidates are required to do from home. However, when considering a scenario in which it would be possible to do the assessment in Mibo, they would prefer an indoor space (i.e. the arena). For a more interactive assessment, like testing one’s personality

through physical assignments, the park would be my preference, they stated. Moreover, the interviewee said to prefer the watching tower over the map as an overview point of the job interviewing environment. They liked the idea of being able to see the entire environment at one glance, and the fact that ‘walking upstairs’ creates some sort of real-life dynamic.

Interviewee 2

The second subject that was interviewed, was surprised after seeing the paper prototypes. The interviewee at first did not think it would be possible to have a job interview outside. However, after having shown and explained both paper prototypes, the interviewees opinion on this changed completely. I think that the park might actually be a better place to conduct a job interview, they said. Personally I love nature, and I always feel comfortable when I am walking through a park or any other place outside actually. The soothing and calming characteristics of a park might actually positively contribute to a job interview. I think that candidates might feel more at ease in a park, which could positively influence the conversation during a job interview. Such an environment could actually lead to more honest and real job interviews, in which you actually can get to know a person instead of their professional background. The only sub-part of the interview that the interviewee would not prefer to do in a park, is the assessment of candidates. They stated that this is often a very important component in the recruitment procedure. Normally, I always call candidates to emphasize that the assessment is important, and that they should take it seriously. I usually also advise them to make the assessment in a non-distracting room, the interviewee said. Therefore my preference for the assessment would be the arena, but other than that I love the park. One minor addition of the interviewee was to choose the watching tower as an overview point, as it offers you the opportunity to look at a situation from above.

The interviewee thought that there would be a lot of advantages of conducting a job interview through a platform like Mibo, instead of through Zoom. In our branch, the interviewee elaborated, there is a lot of competition. Often, when we offer a candidate a job they have also received an offer from one or even more of our competitors. For that reason I believe it is truly important to distinguish ourselves. I think that conducting job interviews this way could radiate to our candidates that we are an innovative organisation, always open to new experiences and ideas. Maybe this could give us an edge.

Interviewee 3

During the third interview, the preferences of the interviewee appeared very similar to the preferences of the other two interviewees. This interviewee too named the fact that a park appears more low-key, while the arena is more serious. In the arena, candidates might feel like they are having a serious and actual job interview. The park on the other hand, might make candidates feel more like they are meeting someone. I guess that it depends per organisation what they want to radiate to a candidate during a job interview. For our organisation, I think the park would be more appropriate, as we see job interviews as conversations in which two equal people can meet one another, the interviewee said. So for us, the park would be very appropriate. However, there are a lot of organisations out there who consider a job interview as a conversation in which candidates and interviewee are not equal, and candidates has to 'prove' their selves. In that scenario, an environment like the arena might be more suitable.

The only part of the job interview that we probably won't use, the interviewee said, is the assessment place. We have our own assessment, which will probably not change soon. Moreover, the interviewee stated to like both the map and the watching tower as an overview point. The map would be more accessible in my opinion, the interviewee elaborated, but I like the watching tower better. Although there might be a higher threshold to 'climb' the walking tower than to walk up to the map, I believe the tower would have a better result, as you can actually overview the entire world from there.

When asking the interviewee what their opinion was on inviting multiple candidates to the same Mibo world simultaneously, they stated that they would not prefer to do this. During a job interview candidates might be quite nervous, the interviewee said, I would not want to scare them off by letting them see their competition while their doing an interview. Moreover, privacy is a very important aspect during a job interview. I would not want anyone to overhear potentially confidential information.

B.2.2. Job Seeker Perspective

For gaining a more in-depth view of what job seekers think of the two paper prototypes, three subjects were interviewed. All of the interviewees have applied for jobs both physically and digitally. Subjects from different ages, different fields of work and different amounts of experience have been selected for these paper prototype tests, in order to get a comprehensive and elaborate view of the subject.

Interviewee 1

The first interviewee of the three subjects that were interviewed has applied for jobs both physically and digitally before. Initially, they thought that an indoor environment would be more suitable for a job interview, as this the more obvious choice. After having seen both prototypes, the interviewee said that the arena is more formal than the park in their opinion. That makes the arena more suitable for serious job interviews where professionalism is preferred, they said. I do think that the park has its advantages as well. For example, if you have a job interview for a very social or outgoing job, the park might be better, as it is more low-key. I think that people will be more at ease in the park, which will make it easier for them to show their personality/character.

Regarding the different sub-spaces and their purposes, the interviewee overall preferred the park. I love being in nature, so I would feel at ease in a park-like environment, they stated. I would be pleasantly surprised if I had a job interview in such a virtual park. The arena would be very cool as well, but I think I'd feel more at ease in the park. However, for both the serious talk and the candidate assessment, the interviewee stated that the arena would be more suitable. Since these are two important and quite serious moments during a job interview, they elaborated, I would prefer to do these two sub-parts of an interview in a more serious environment.

When asked whether the interviewee liked the fact that they have the opportunity to walk from one place to another, the interviewee stated that they like that aspect about Mibo very much. I think that that could substantially contribute to the interview, the interviewee elaborated. Normally in an interview you also walk to a certain room together with the interviewer. These short moments are usually quite valuable as they give you the opportunity to get a feeling of someone/the company. Usually you can get to know a lot during these 1 minute walks. During online interviews, this is often not possible, so the fact that this job interview environment offers the opportunity to bring back those moments is very cool. Furthermore, the interviewee mentioned to like the fact that the job interview space is designed in an open and accessible way in both prototypes.

Finally, the interviewee said that they would prefer a job interview in Mibo over a job interview in any other platform online. Mibo offers a lot more opportunities, they said. First of all, it's innovative, which I personally very much appreciate. Mibo offers you almost all opportunities of a video game. This means that the space can be designed more specifically for a certain target group. That simply offers endless (creative) opportunities for organisations to experiment with, which can't be done in Zoom or anything alike. Moreover, everything in

Mibo is integrated, which means that there is only 1 program needed. That makes it a lot easier to design, organise and structure an interview.

Interviewee 2

For the second interview, a subject was interviewed who has a lot of experience with job interviews, and also offers coaching sessions on how to prepare for a job interview. When asked what kind of environment would be more suitable in a virtual environment, the interviewee stated that both could work. I do think it depends on the organisation whether an inside or outside space would be more fitting or appropriate, they said. I think more traditional companies would feel more at ease at an inside space, whereas creative or innovative companies could really like the outside space. However, I think that if a company chooses to use such a platform for job interviewing, it does not really matter anymore which one you choose, because they have already decided to use the platform, so they're already an innovative and progressive company. Then it is a matter of taste. I personally would like the park better. I would feel way more at ease at such a location. The arena would be very cool as well, but I feel like the park would make me more comfortable as it is a more low-key environment.

When asked what sub-spaces would be more suitable in which environment, the interviewee stated that this would depend on the job opening and organisation. They said: I would not think one is better than the other, but I think that the arena would be more suitable for most people, since it is the most 'serious' environment. The only two sub-spaces of which the interviewee thinks the environment could matter are the serious talk and meeting colleagues spaces. The serious talk would be more appropriate in the arena according to the interviewee, while the meeting colleagues space would be more appropriate in the park.

Finally, the interviewee was asked various questions regarding the comparison between Mibo and other online platforms for job interviews. The interviewee mentioned that it is important to take into consideration that technical issues might arise, which could cause trouble. I think that most people are now accustomed to working with Zoom or MS Teams, they continued, whilst this is not the case with Mibo. So people might have trouble navigating through Mibo, which could make the experience more stressful. But I think that if you communicate beforehand that you are planning on doing the interview there, and inform people about what to do if their connection gets lost or something, everything should be fine.

Interviewee 3

The third subject that was interviewed has had various interviews, which were all in person. By interviewing this subject, an unbiased opinion on digital job interviewing was asked. When asked whether the interviewee would think an outdoor or indoor space would be more suitable for a job interview, the interviewee answered: for jobs that are outside (e.g. forester, carpenter etc), I would think an outdoor space would be more appropriate. However, for indoor jobs (e.g. office jobs, educational jobs) I would think an indoor space would be more suitable. After having seen both paper prototypes, the interviewee stuck to their first impression. However, they did mention that they would most likely prefer the arena for a job interview, as they think they might be confused by an environment like a park during a job interview, as it is 'not what you expect'.

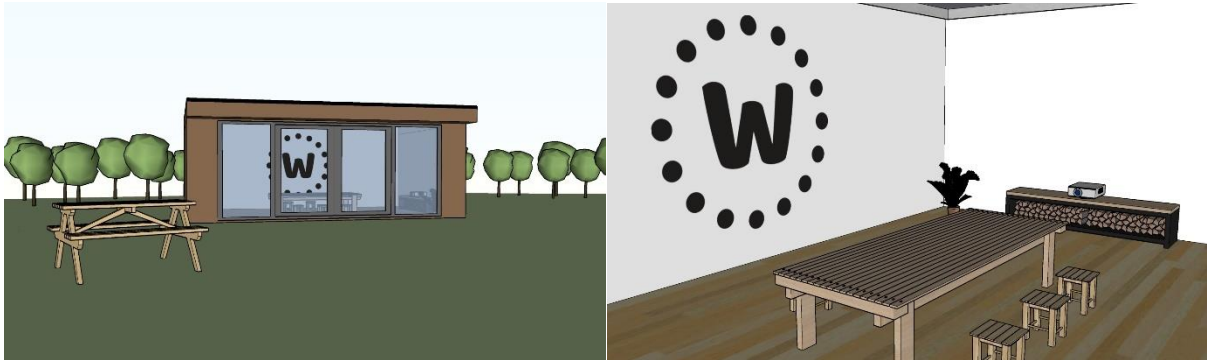
When asked about which sub-spaces would be more suitable in which environment, the interviewee shared the opinion as interviewee 2. The only two spaces which the interviewee would prefer to be in an arena-like environment would be the assessment and the serious talk. For the other subspaces, the interviewee mentions that the park would suffice. For younger people, the interviewee says, I can imagine that it is interesting to do almost everything in the park. Usually, I think that younger generations are better at adapting to new technologies, so for them the environment might be less confusing than for me. Moreover, the interviewee emphasized to leave out the map as an overview point, and go with the watching tower instead.

Another aspect about both prototypes that was appealing to the interviewee, was the fact that different sub-spaces were kind of closed-off from each other, but still all connected. One sidenote to that, the interviewee said, is that I would not like the fact that it is open if there would be others walking around there as well. I think candidates would behave differently if they see their competition walking around. I would personally be more occupied with the others than my own interview. With regard to the questions about using this platform for a job interview over other video conferencing platforms, the subject was very enthusiastic. If organisations offer job interviews in such a platform, I would like that very much, as it shows innovation and experimental/new thoughts, the interviewee said. Also, Zoom is not very personal, while a virtual environment like Mibo does feel way more personal and more relaxing as well.

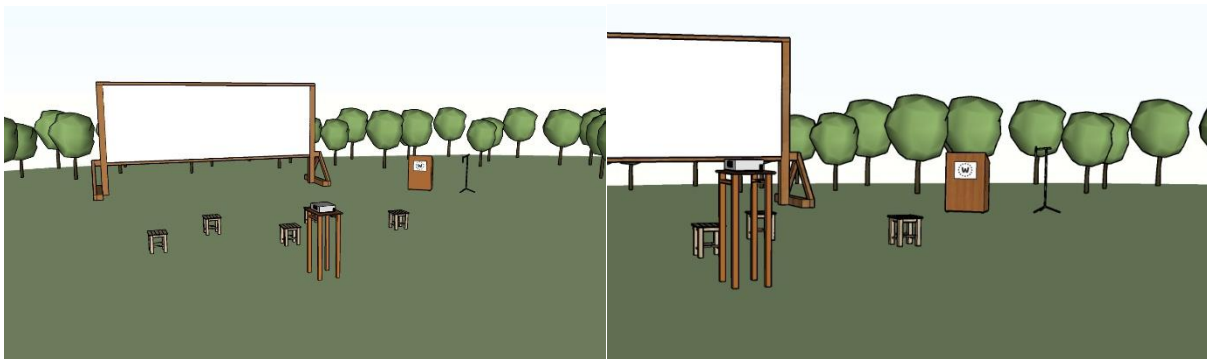
Appendix C: Lo-fi prototype

In this appendix, additional images of the lo-fi prototype are provided. The appendix is divided into subsections, to create a more clear overview of how all of the sub-spaces within the job interview space look.

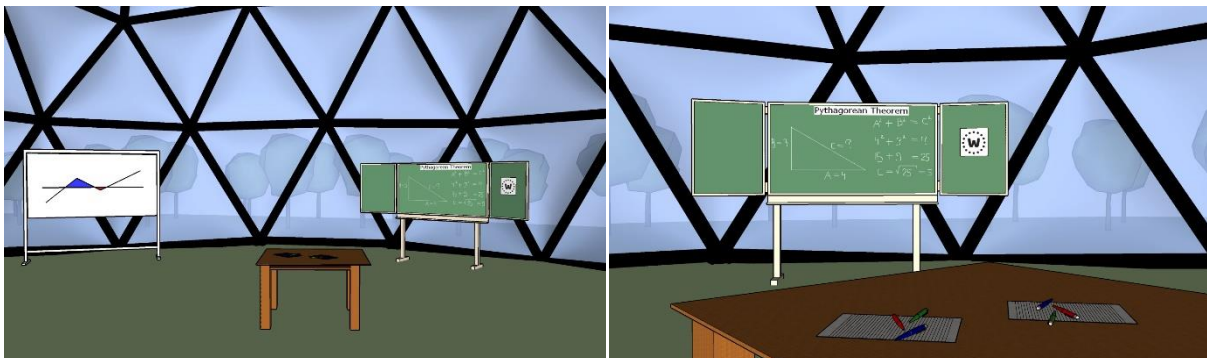
C.1. Serious Talk



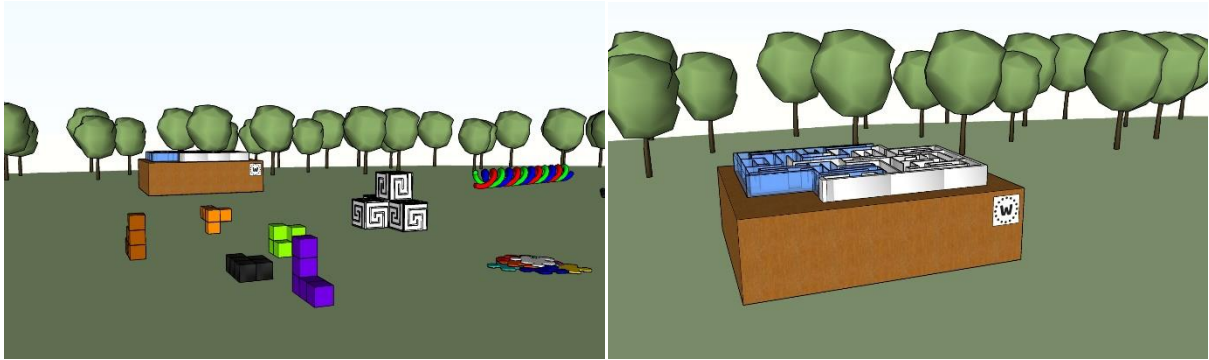
C.2. Experiences of Colleagues



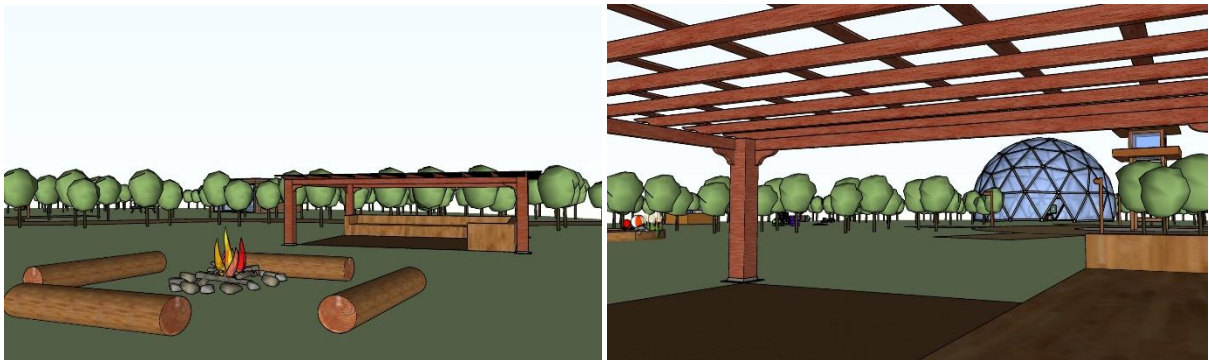
C.3. Assessing Candidates



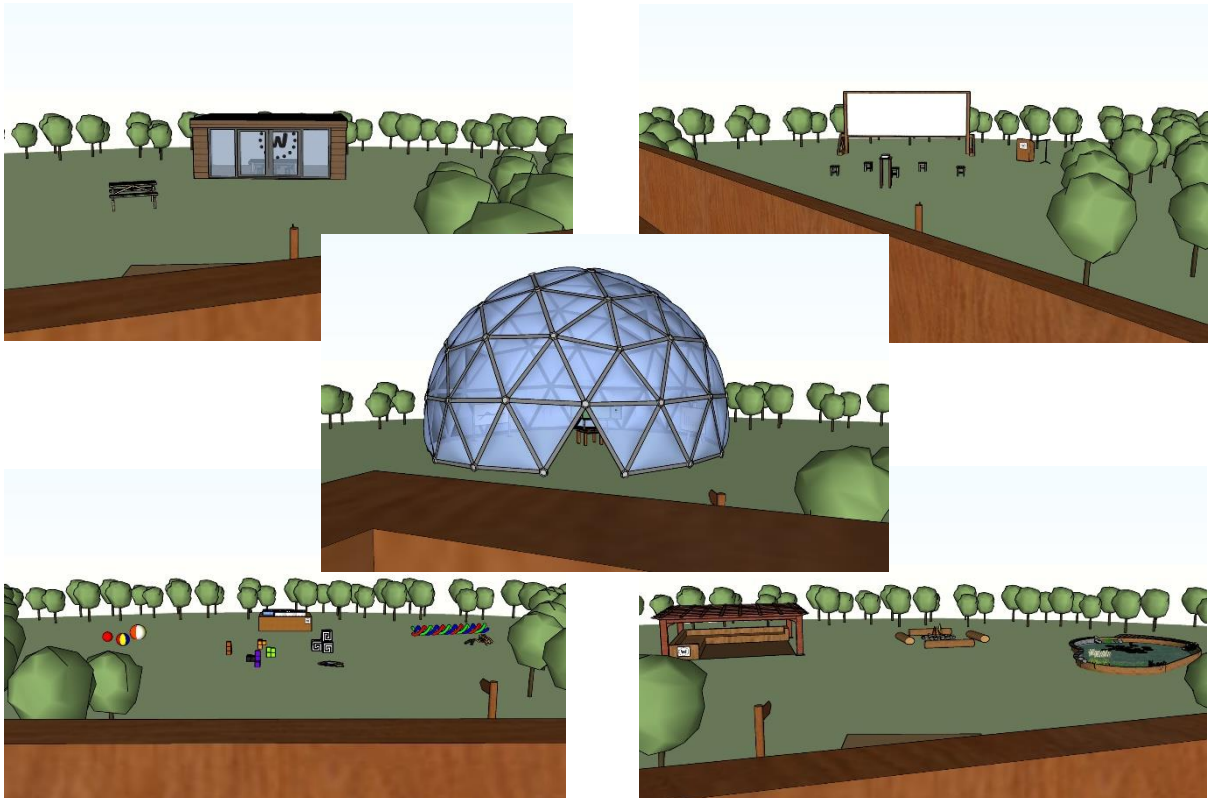
C.4. Test Corner



C.5. Meeting Colleagues



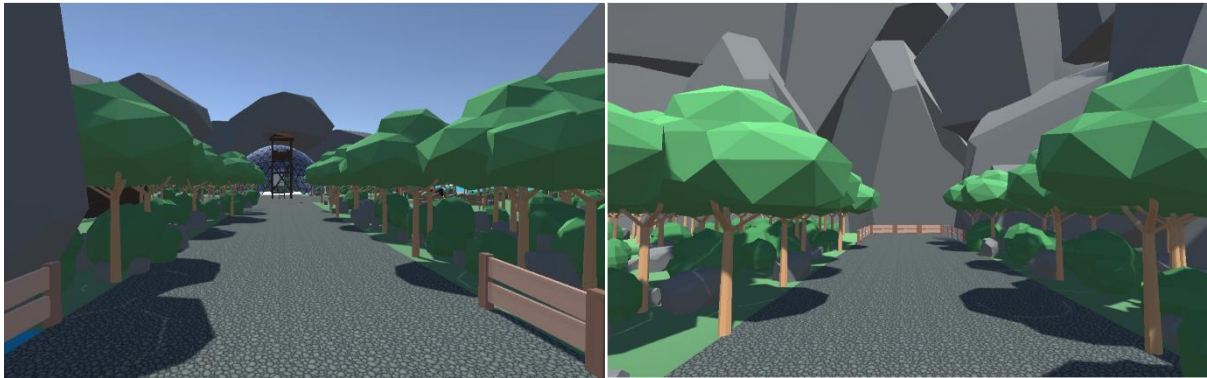
C.6. Watching Tower



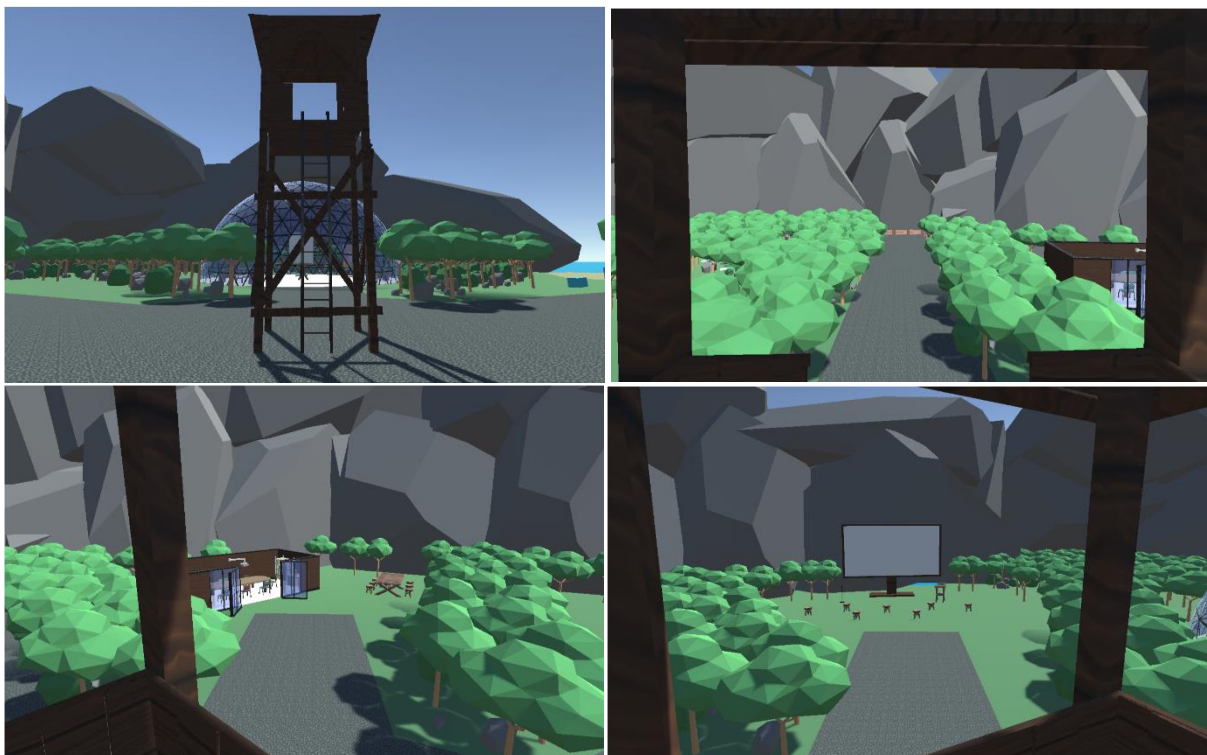
Appendix D: Final prototype

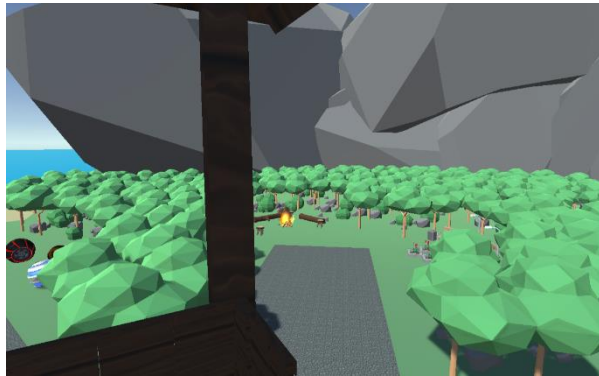
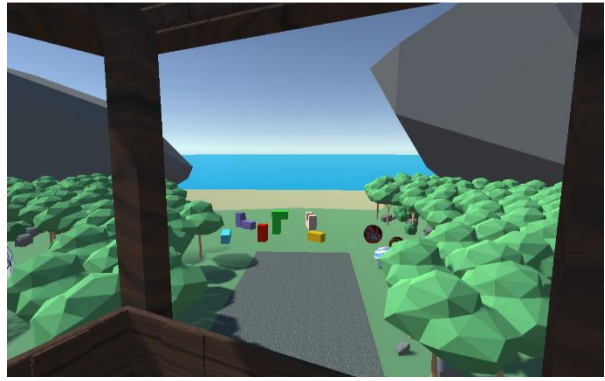
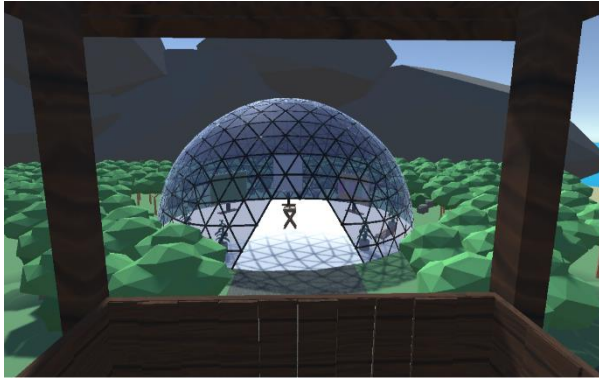
In this appendix, additional images of the final prototype are provided. The appendix is divided into subsections, to create a more clear overview of how all of the sub-spaces within the job interview space look.

D.1. Entrance

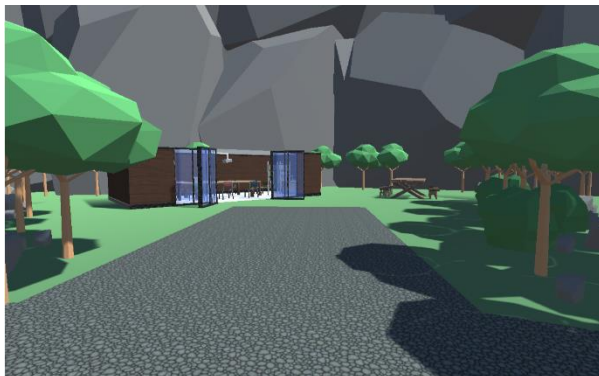


D.2. Watching Tower

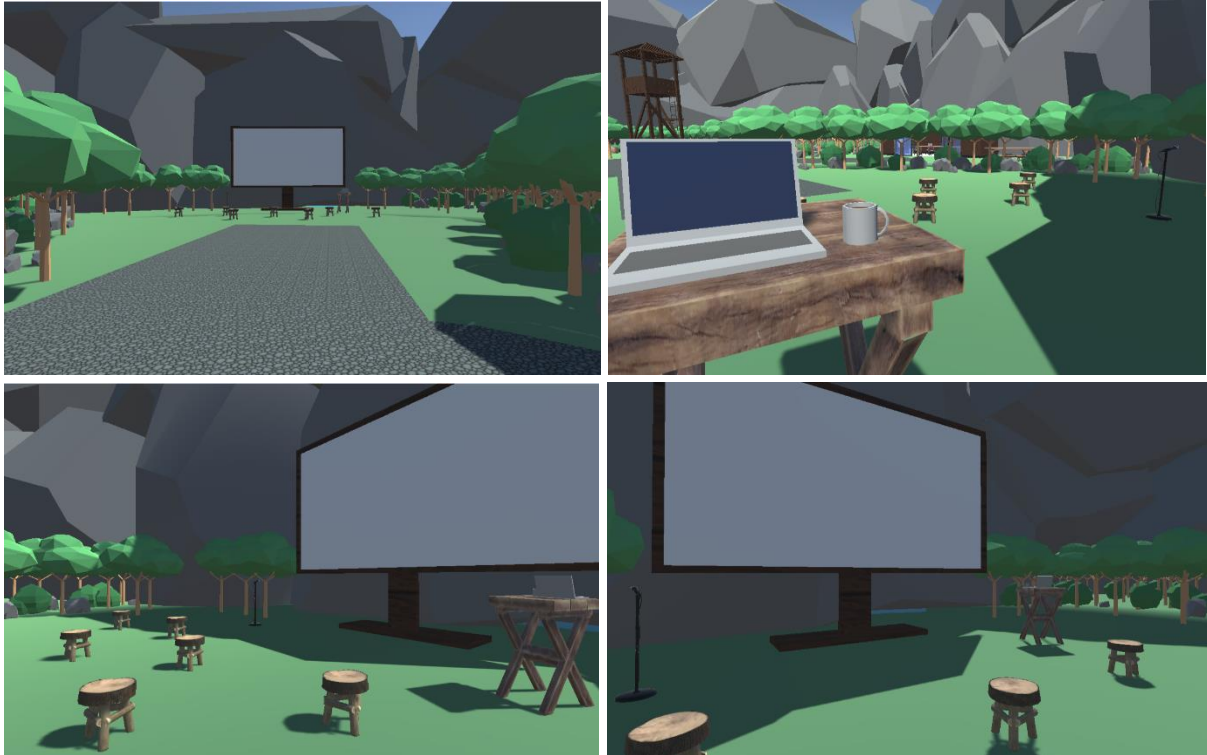




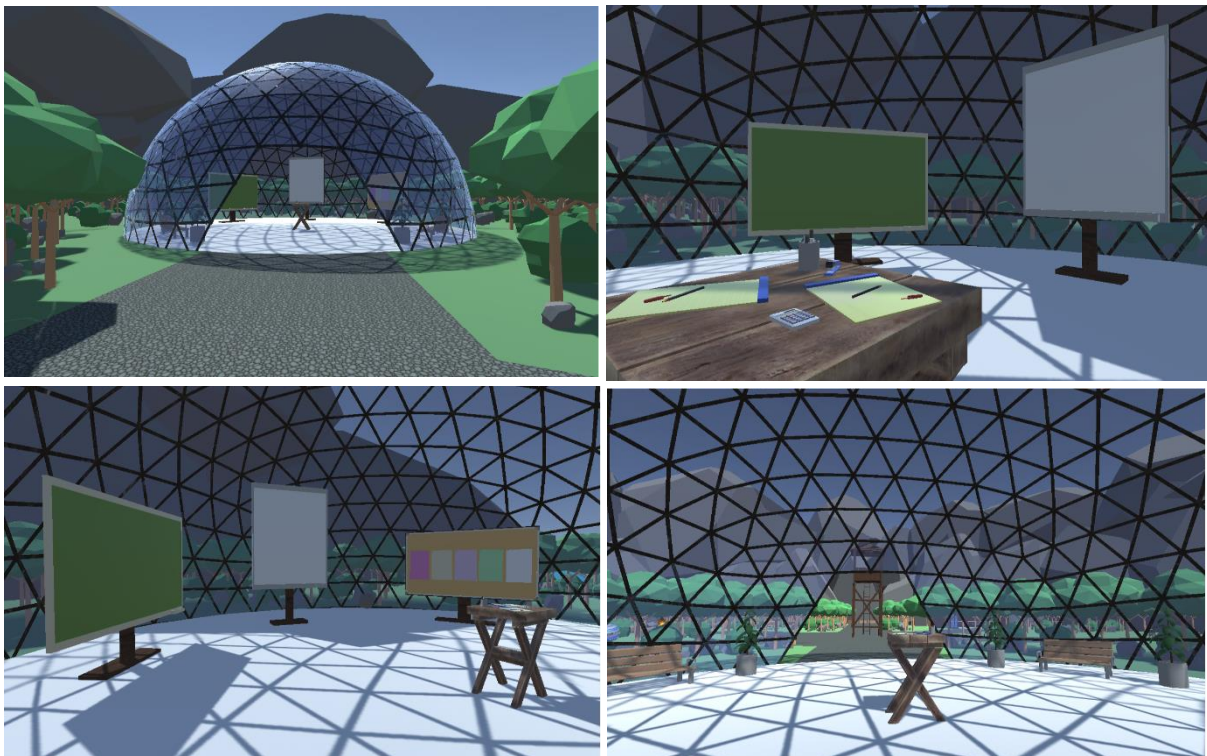
D.3. Serious Talk



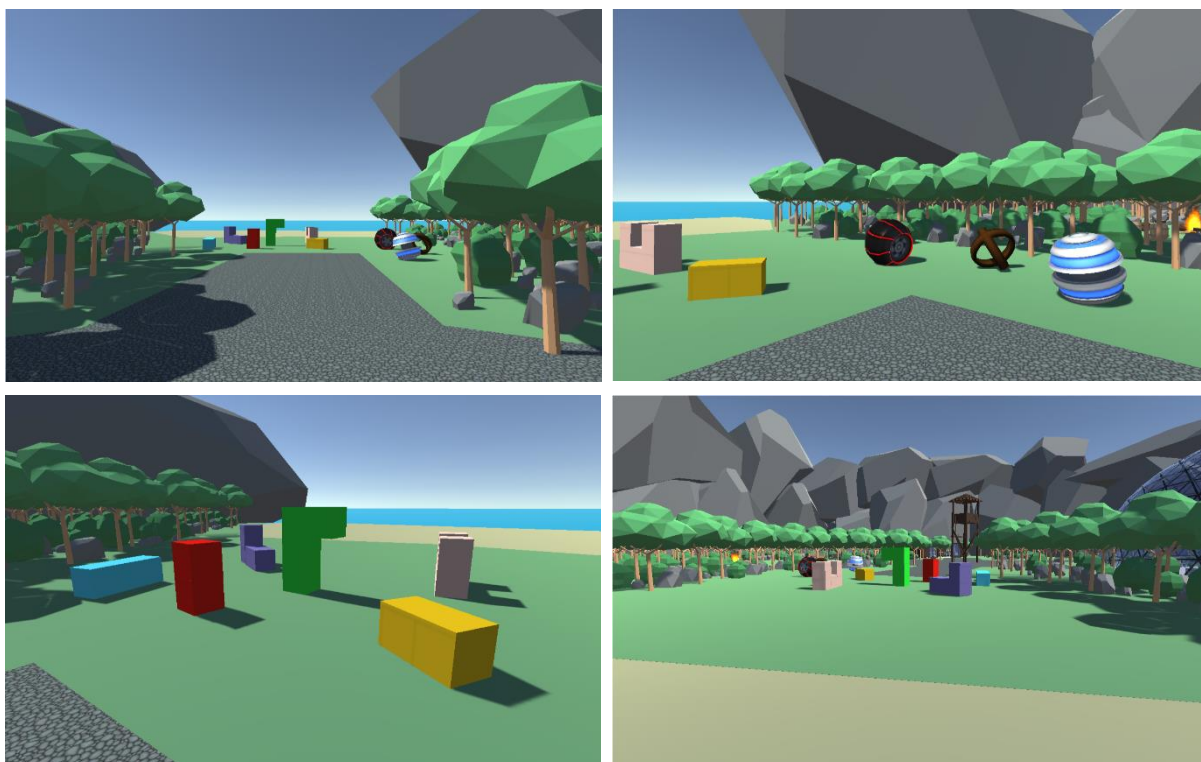
D.4. Experiences of Colleagues



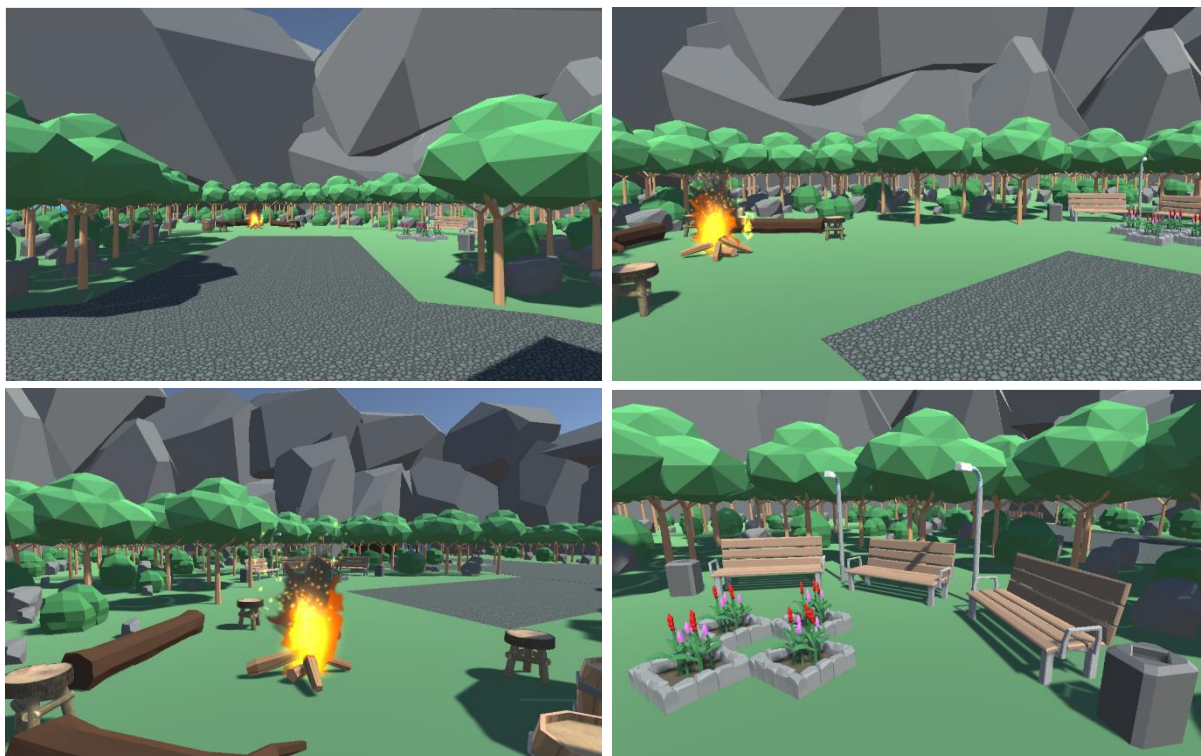
D.5. Assessing Candidates



D.6. Test Corner



D.7. Meeting colleagues



Appendix E: User Evaluation

E.1. User Evaluation Questions

For the user evaluation of the final prototype, interviews with potential users have been conducted. All interviews have been conducted in the form of a semi-structured interview. A set of questions was prepared, but during the interview there was room for additional questioning.

E.1.1. Organisational Perspective

The interview starts after the interviewee is given a short introduction about the interview, and after they have given their consent for being recorded. Since the final prototype will be evaluated during this interview, the interviewer will start a screenshare and walk through the virtual job interview environment.

lands at starting point, shows all around view from there

- So this is where you enter the world, for you as an organisational employee you would probably already know what the world looks like during a job interview, but what is your first impression for now?

walks to central point and shows all around view

- This is the centre of the world, from here, you can easily walk to all different spaces. What do you think of that?
- You can also climb the watching tower to watch out over the entire world with a candidate, do you think you'd do that during an interview? And why would you/won't you do that?

shows video of view from watching tower all around

- What do you think that seeing the entire world from up here at the start of an interview would do to a candidate?
- Would you use the watching tower during an interview? At what point in the interview?

shows serious talk space

- As you can see you can decide to sit outdoors or indoors, what do you think of the fact that you can choose?
- Where would you prefer to have a serious conversation?

- Imagine that you are doing job interview inside this cabin, how do you think you would feel about the fact that the doors are made from glass?

shows serious talk space

- Here, candidates can see a video or live presentation from a colleague about the job or organisation. What is your first impression of this space?
- How do you feel about the placement of this setting? Would you change it if you could? (E.g. letting the screen face another direction, placing the chairs differently)

shows assessment arena

- Imagine that a candidate has to do an assessment here, how do you think they would feel about that?
- How do you feel about the fact that we are now “indoors” but still able to look outside?

shows test corner

- Here you can test candidates on different abilities. What do you think about this space?
- How do you feel about the fact that there is a beach at the edge of this space? Would you have chosen to place another sub-space next to the beach?

shows meeting with colleagues space

- What is your first impression of this space?
- If you were having a job interview, and you would enter this sub-space, how would you feel about the fact that there are two, quite different, sitting areas?
- Would you have changed anything about this space if you could have?

walks back to central space: general questions about the job interviewing environment

- As you can see, the interview environment is isolated by cliffs, trees and a sea, how do you feel about that?
- Do you feel like these ‘natural’ barriers are in proportion to each other?
- What do you think about the background noises you hear when you are walking over the island?
- Did the background noises, at any point, distract you?
- This job interviewing environment is now quite generic, do you think it would be possible to create a brand experience in here (through customization)?
- How do you think that a sense of brand experience can be added to this environment? (think of colours, logo’s, flags, tunes?)

E.1.2. Job Seeker Perspective

The interview starts after the interviewee is given a short introduction about the interview, and after they have given their consent for being recorded. Since the final prototype will be evaluated during this interview, the interviewer will start a screenshare and walk through the virtual job interview environment.

lands at starting point, shows all around view from there

- So this is where you enter the world, for you as a job seeker, it will probably be the first time you enter this environment during a job interview, what is your first impression?

walks to central point and shows all around view

- This is the centre of the world, from here, you can easily walk to all different spaces. What do you think of that?
- You can also climb the watching tower to watch out over the entire world, do you think you'd like that during an interview? And why would you/won't you like that?

shows video of view from watching tower all around

- What do you think that seeing the entire world from up here at the start of an interview would do to you? Would that make you feel more calm or nervous?
- Would you like it if you are taken to the watching tower during an interview? At what point in the interview?

shows serious talk space

- As you can see you can decide to sit outdoors or indoors, what do you think of the fact that you can choose?
- Where would you prefer to have a serious conversation?
- Imagine that you are doing job interview inside this cabin, how do you think you would feel about the fact that the doors are made from glass?

shows serious talk space

- Here, you can sit down and see a video or live presentation from one of your potential new colleagues about the job or organisation. What is your first impression of this space?
- How do you feel about the placement of this setting? Would you change it if you could? (E.g. letting the screen face another direction, placing the chairs differently)

shows assessment arena

- Imagine that you would have to do an assessment here, how do you think that would make you feel?

- How do you feel about the fact that we are now “indoors” but still able to look outside? would that contribute to the assessment in a positive or negative way?

shows test corner

- Here you might be tested on different abilities. What do you think about this space?
- How do you feel about the fact that there is a beach at the edge of this space? Would you have chosen to place another sub-space next to the beach?

shows meeting with colleagues space

- What is your first impression of this space?
- If you were having a job interview, and you would enter this sub-space, how would you feel about the fact that there are two, quite different, sitting areas?
- Would you have changed anything about this space if you could have?

walks back to central space: general questions about the job interviewing environment

- As you can see, the interview environment is isolated by cliffs, trees and a sea, how do you feel about that?
- Do you feel like these ‘natural’ barriers are in proportion to each other?
- What do you think about the background noises you hear when you are walking over the island?
- Did the background noises, at any point, distract you?
- This job interviewing environment is now quite generic, do you think it would be possible to create a brand experience in here (through customization)?
- How do you think that you can experience a sense of brand experience in this environment? (think of colours, logo’s, flags, tunes?)

E.2. User Evaluation Results

A total of six subjects were interviewed for evaluating the final prototype, by following the method described above. The interviewees were divided into two categories: (1) experts in the field of job interviewing from the organisational perspective and (2) experts in the field of job interviewing from the job seeker perspective.

E.2.1. Organisational Perspective

For gaining a more in-depth view of how organisational employees experience (online) job interviews, a total of five subjects has been interviewed. The first three subjects that were interviewed all work at a large Dutch company, and they have similar jobs (recruiting and

selecting new employees). All of three interviewees have a lot of experience with job interviewing, as this is a large part of their tasks, as all of the three interviewees work as recruiters for the same accountancy corporation in the Netherlands. Due to limited availability of the interviewees, the three subjects were interviewed together, in a group. The other two interviewees of this category were also interviewed together. These subjects both work in the educational field, and are closely involved in the recruitment and selection of new teaching staff.

Interview 1

The three subjects that were interviewed in the first interview have also been interviewed before during the paper prototype evaluation. It was decided to interview them again to see how they feel about the changes that were made to the paper prototypes. During the interview, the interviewees were shown the final prototype of the job interview space. When entering the virtual world, the interviewees were impressed by the view. One of the interviewees mentioned immediately that they were curious to see the rest of the environment. All interviewees agreed that they would start walking towards the middle immediately if they were to land in this virtual environment by themselves. When showing the interviewees the view from the watching tower, one interviewee mentioned that they would use the watching tower to preview the entire environment at the start of an interview, together with a candidate. Another interviewee stated that this would have their preference as well, and that they would also offer the candidate the opportunity to go up in the watching tower at the end of an interview again.

The first sub-space that was visited during the interview was the serious talk space. When asked, the interviewees all agreed to like the possibility that they could sit either outdoors, at the picnic table, or indoors, in the cabin. One subject mentioned that this choice might depend on the applicant as well as the type of interview that is being conducted. Sometimes, a job interview is more of a mutual acquaintance, the interviewee said, then the picnic table would be more natural an appropriate to sit down at. However, when you have a very serious job interview and there is a lot to discuss, it might be better to sit inside where you are not distracted by the environment and the sounds of birds chirping. The fact that the doors are made of glass did not bother the interviewees. One of the interviewees stated that the fact that the doors are made of glass made it look more natural and real, and resulted in the fact that you will not be closed off from the rest of the environment when you are inside the cabin. When asked if the interviewees noticed anything they did not like about the serious talk space, none of the interviewees had anything in mind.

The next sub-space that the interviewees were shown, was the experiences of colleagues space. When asked what the first impression of the subjects was when seeing this space, one of the subjects mentioned to like the fact that this space is 'out of context'. Normally, you would not expect such a setting in an outdoors environment, the interviewee elaborates. However, given the fact that you have already completely let go the concept of 'real' when using this virtual environment for an online job interview, I actually like that this space is out of context. One of the other subjects added on to this that I might be nice to sit in a more outdoors environment after having had a serious talk in a more closed off cabin inside. This could create more dynamic in an interview. For this sub-space the interviewees did not have any further recommendations or propositions on what to improve.

The assessment of candidates arena was the third sub-space to be shown to the interviewees. The first thing that the interviewees asked was whether the candidates will be alone in this arena when doing the assessment. All three interviewees questioned the fact that the arena was made of glass, as they thought that this might make candidates feel watched during the assessment. One interviewee emphasized how important the assessment is for candidates applying for a job at their organisation. They continued that doing an assessment in such an open space might make candidates feel stressed unnecessary. Therefore, one of the interviewees suggested to change the transparency of the glass of the dome, or even the material. However, another subject added that, given the assessments they perform at their organisation, the chances of doing the assessment in the virtual job interview space will be very small.

After having shown the assessment arena, the subjects were taken to the test corner space. At first, the interviewees did not entirely understand the concept of the space, but after having explained further, the interviewees did understand. While the interviewees liked the idea and concept of this sub-space, they agreed that their organisation would most likely not use this space. The reason for that is that they do not perform these kinds of tests at their organisation. However, one subject mentioned that they could imagine that other organisations would make use of such a space. Another candidate added on to this that the space itself appeared right for such a procedure. The subjects all agreed that it was a good decision to have the beach attached to this sub-space, as this sub-space appeared playful and informal to them. Therefore, the casual characteristics of a beach were appropriate for the test corner, according to the interviewees.

When showing the meeting colleagues sub-space, all three interviewees agreed to like the option for users to decide between two sitting areas. One interviewee mentioned to that

they thought the fireplace area was more suitable when looking at the rest of the virtual environment. The benches seem a little out of context, they elaborated. The other two interviewees agreed to this, and stated that a picknick table, like in the serious talk space, would be more appropriate as a substitute for area with the benches.

At the end of the interview, the interviewees were asked questions about the environment in general. In this concluding part of the interview, it became clear that the interviewees were, overall, quite impressed by the environment. The interviewees all stated to like the audio that was added in the prototype, and to not find it disturbing to hear some natural sounds. When presented with the option to customize the environment in order to create a brand experience, the interviewees were enthusiastic. One of the interviewees stated that adding their organisation's logo to some places in the virtual world could already create a sense of brand experience. One of the other interviewees added onto this that a personalized message at the start of the interview could even emphasize this.

Interview 2

For the second interview, two HR staff members of an educational organisation were interviewed. The interviewees had both seen the original Mibo island before, after which they were both in doubt whether this kind of virtual world would be suitable for something serious like a job interview. However, when entering the virtual world, both subjects mentioned to be surprised by how formal the environment looked. Both interviewees in this interview have not been interviewed for this project before, and thus had a fresh look at the job interview space. After having shown the entrance and watching tower, the interviewees mention to be curious about the rest of the environment. Furthermore, one of the interviewees stated that they thought candidates would enjoy using such a platform for a job interview.

Both of the interviewees in this interview liked the serious talk space. One interviewee liked the fact that there is an opportunity to sit either inside or outside. The only thing that you could change, one of the interviewees said, is that you can move the picknick table a little closer to the cabin. Right now those two elements are quite far apart, which gives the impression that you can either choose for one option or the other. However, maybe people would like to start outside and then move inside at some point, the interviewee continues. If you would move the table a little closer to the cabin, it is more of a whole, and it would be more inviting to switch places at some point.

For the experiences of colleagues sub-space, the interviewees did not have any feedback at first sight. One of the interviewees said that it was smart to place the beamer screen in front

of the rocks, which form a solid, non-distracting background. The other interviewee had one minor recommendation to make the space feel more real. If you add small tables next to each chair, the interviewee said, you could place pen and paper on them. That would make the environment feel more like real life. The other interviewee suggested that an U-shaped table would also suffice for this.

In the arena, the two candidates experienced the same thing as the interviewees in the first interview. They mentioned that they felt like they were being watched in the arena. I can imagine, one of the interviewees said, that if you are doing an assessment in this arena as a candidate, that you might feel insecure. Given the fact that people standing outside can look inside, a candidate might get extra nervous for the assessment, which could then negatively influence their results. Other than the transparency of the dome, both interviewees agreed, the assessment arena space was designed in a good way.

After having seen and explained the test corner space, the interviewees mentioned to like the motivation behind including this space. In their field of work, one subject said, I am not sure whether we would use such a space, but I do think it has a lot of potential for different organisations. One aspect that both interviewees did not like about this space was the horizon outside of the job interview space. At the edge of the test corner, there is a sea. According to the interviewees, this sea did not fit the rest of the environment. One of the interviewees suggested to change the sea to something more like a river, to create a little more dynamic in the environment. The other interviewee agreed to this, and said that a river or something alike would fit better with the rest of the virtual environment as well.

The last sub-space that was shown to the interviewees was the meeting colleagues space. The first thing that came to mind for one of the interviewees was that the flower bed in front of the benches reminded them of gravestones. They suggested to change the flower beds or just leave out the rocks to change this. Furthermore, the other interviewee said to think that the fireplace was too informal for a job interview. During a job interview, they elaborated, you are in a professional relation with each other, not a friendship. The other interviewee agreed to this, and suggested to change the fireplace to a picknick table like the one in the serious talk space.

Near the end of the interview, both interviewees were asked about their general impression of the environment and the sound effects included. The interviewees both stated to really admire the environment overall, aside from the minor changes in design they suggested. With regard to the sound effects, one interviewee mentions to not even have noticed them during the interview. According to them, this was positive, as the background noises apparently

were very natural and non-disturbing. Finally, the interviewees answered questions on how this job interview space could be customized in such a way that it creates a brand experience for users. One of the interviewees stated that adding a logo in certain places would already do the trick, but that subtly adding the organisation's colours would increase the sense of brand experience even more.

E.2.2. Job Seeker Perspective

For learning more about how users from the job seeker perspective would experience having a job interview in a virtual environment like Mibo, two subjects were interviewed. Both interviewees have different amounts of experience with job interviewing, and have different field of work.

Interviewee 1

The first subject that was interviewed in this round, was a subject that has been interviewed before, during the paper prototype tests. It was decided to interview this subject again to see how their suggestions from the paper prototype tests have worked out in the final prototype. This interviewee is a starter in the professional field, but does have quite some experience with job interviewing for part-time jobs, both in person and digitally. Since the interviewee had already seen the plans for the final prototype, the elements of the job interview space were not new to them.

The first impression of the overall job interview environment as well as all of the sub-spaces was good, as the interviewee stated. However, after having shown all sub-spaces and elaborated upon them, there were some minor suggestions with regard to design choices that the interviewee mentioned. To begin with, the interviewee suggested to move the chairs in the experiences of colleagues space a little further from the screen, as they appeared to be standing very close. Furthermore, the interviewee mentioned that they did not know what to feel about the fact that the assessment dome was made of glass. On the one hand, the interviewee said, it is nice that you can look outside and see nature while doing an assessment. However, on the other hand, it makes me feel like I am being watched from the outside. I think that that would not reassure me during a job interview. The interviewee suggested to change the material to reflective glass, to keep the aspect of being able to look outside, but to block the view from outside. Another remark that the subject made was about the meeting colleagues space. The interviewee thought that it would not be necessary to be able to choose from two sitting areas

at that point of the interview. Therefore, they suggested to keep the fireplace, but to get rid of the benches.

When asked about their global opinion of the job interview space, the interviewee had a few remarks. The cliffs at the edge of the environment are quite high, and a little intimidating, the subject said. Maybe you can make them a little less high, and add some trees and flat areas to create a more natural looking boundary. Furthermore, the interviewee said to notice that the bird sounds were played quite frequently. It kind of feels like I am in a tropical rain forest, the interviewee explained. If you change the frequency of the bird sounds, it might appear more natural to me. Finally, the interviewee stated that adding an organisations logo a few times would be enough to create a brand experience for an interviewee. Keep it simple, the interviewee said, if there are too many elements related to the organisation, it might feel like you are in some sort of merchandise shop. That would have adverse effects for me personally.

Interviewee 2

The second, and final, interviewee for the final prototype evaluations, is a young professional working in the building industry. This interviewee has not been involved in the research before, which means that they could not have any preconceptions of the environment yet. The interviewee did visit the Mibo island before, so they were familiar with the interactive nature of the technology. At first sight the interviewee was perplexed by the design of the job interview space. They said that this was because the prototype is a very different kind of environment than the island, which the interviewee was used to. However, the interviewee stated to be very curious about the rest of the environment.

During the interview, the interviewee was taken to all different sub-spaces, and informed about why they were included and why they were designed in such a way. Overall, the subject stated to agree to most of the design choices, and said that the environment appeared very thought-through. However, there were some details about the environment about which the interviewee made some remarks. To begin with, the interviewee, like the other interviewees before, stated not to like the fact that the assessment dome was made of glass. Besides suggesting to change the material of the dome, the interviewee suggested to add a screen on which the users can see how many people are present in the virtual environment. This way, when the candidates see a '1', they can know for sure that they are actually alone in the virtual world, and can freely do the assessment without having to be scared that they are being watched. Another suggestion that the interviewee made was to change something about the view from the test corner space. From there, users can see an infinite, empty sea, which

appeared a little off to the interviewee. If you add something like a boat on that horizon, they elaborated, it will probably break the view, and feel more real. Other than that, the interviewee did not have any specific recommendations for the different smaller sub-spaces.

When asked to reflect on the job interview space as a whole, the interviewee said that their overall impression was very good. As the entire concept of doing a job interview in such a virtual environment was new to the interviewee, they were pleasantly surprised by the virtual world. The interviewee did suggest to create a little more dynamic at the edges of the job interview space. In order to create a brand experience for a candidate during an interview, the subject said, I would not add too much. Just adding a personalized message like: “Hi **name**, welcome to your interview at **company**!” and adding the company’s logo a few times would do the trick. However, they added, if you overdo it, it might become too much and work against the company.

Appendix F: Ethical Reflection

Job interviewing is a serious and important process, which can have large consequences for both parties involved. Additionally, private or sensitive information is often discussed. Therefore, it is of greatest importance to ethically reflect on the effects that the product developed in this research can have. During the course of this graduation project, a full-fledged ethical report has been made. In this appendix, the concepts of this ethical report that are relevant for the ethical considerations regarding the product will be provided.

F.1. Moral Principles

In the reflection outline, three key moral principles that need to be taken into account for this project were established. These three principles are based on the IEEE code of conduct [20]. While all three moral principles that were established initially in the reflection outline are still extremely relevant and important, they were not very precise. Therefore, all three principles will be reformulated in the following section. After having reformulated the principles, their relevance will be explained, after which an elaboration will be provided on how these principles influenced the product design.

The first principle that was established initially is: *'Treat people fairly'*. Given that the product that is being developed during this project will be used for job interviews, it is needless to state that this product may not, in any way, discriminate against anyone. Candidates may not be excluded from the application procedure because of characteristics protected by law, nor may they be rejected because of one of those characteristics after the job interview. Another way in which the product could discriminate against individuals, is in a scenario in which not all applicants have access to the proper technological facilities to attend such an online job interview. In this situation, organisations utilizing the product should offer individuals who cannot attend an interview due to a lack of technological facilities an opportunity to attend the interview in a different way. Finally, people should be treated fairly regardless of their technological knowledge. Imagine that an individual who is not very familiar with using technology is invited for a virtual job interview in Mibo. In this situation, there is a large possibility that this applicant will experience difficulties with navigating through the virtual world. This technological 'clumsiness' could then negatively influence the organisations' image of this applicant, while the vacancy that the applicant applied to could have nothing to do with technology, and the applicant might be perfectly suitable for the job. In all of these

situations, equal chances for all candidates must be ensured. This goal can be reached by designing both the product and procedure used for the job interview in a way that is not discriminatory. Given that the goal of this project is to develop the job interview space, which is the product – not the procedure – the focus will remain on the product for now. A new, more precise formulation of this principle is as follows: *‘The product may not, in any way, discriminate against candidates’ characteristics that are not relevant for the job interview or their (potential) later work’*. This moral principle largely influenced the design of the virtual job interview space that was developed. A defining design choice was made with this moral principle in mind. In order to promote fairness and, even more important, give applicants the feeling they are not being judged on who they are, a very neutral environment was chosen for the job interview space. This space has been designed in a park-like environment. By designing the virtual job interview space in the form of such a neutral and well-known environment for everyone, it is hoped to create a space in which all candidates feel comfortable. This, on its turn, is hoped to create a sense of ‘You can be whoever you are here’ for the candidates.

Another initial moral principle that was established is: *‘Be respectful of others’*. A job interview can often be an exciting and personal experience, especially for a candidate when there is a lot at stake. Therefore, it is important to make candidates feel comfortable and at ease during such a conversation. Moreover, there is a high likelihood that confidential information will be discussed during a job interview. Logically, both organisations and candidates must take responsibility for carefully handling this information. However, for a candidate it might be comforting to feel like they can talk freely and discuss personal or confidential information during an interview. Therefore, the following moral principle has been reformulated: *‘The product should radiate that the organisation using it has respect for their candidates and their confidential information’*. This moral principle is another reason to design a job interview space in a calm and comforting environment, like a park. Besides playing a role in the decision on how to design the main environment for the job interview space, this principle has led to other design choices as well. The park that was developed for the final prototype is an open space, with several sub-spaces. All of these sub-spaces serve their own purpose. Two of these sub-spaces are intended for serious and important parts of the job interview. While the park contributes to radiating respect in many ways, it may not radiate that the organisation is serious about confidentiality, due to the informal nature of a park. Therefore, the design choice was made to make two closed spaces in the form of buildings, which the users can enter when having to have a serious or more formal talk. By letting candidates walk inside into a more

isolated space for the more serious parts of the job interview, it is hoped that the product radiates a sense of professionalism and confidentiality.

The final moral principle that was established initially was: *‘Comply with applicable laws in all countries where IEEE does business and with the IEEE policies and procedures’*. The platform on which this job interview space might be built, Mibo, is growing fast and being noticed in foreign countries as well. Therefore, it is important to take into account that the product must not only comply to Dutch laws, but the laws of other countries as well (e.g. when it comes to protecting users’ privacy). Moreover, the product should be made in such a way that it *can* be used outside of the Netherlands as well. Therefore, the newly formulated moral principle is as follows: *‘The product should be developed in such a way that it can be used by everyone, regardless of where they live, and that it complies to the laws of all countries the product might be used in’*. The fact that this job interview space might be used outside of the Netherlands as well plays a minor role in the design process. All aspects that are incorporated in the job interview space that can be linked to a country, like text and communication, should be understandable for everyone. For that reason, all communication and text (e.g. direction signs) in the virtual job interview space will be in English.

F.2. Ethical Analysis

Three options for actions are proposed to solve the moral problems as stated in the moral principles section. The first option for action is designing the job interview space in the form of a park, to promote fairness during the selection procedure. An ethical judgement that can be made would be that a park is an environment that would be ‘too informal’ for a conversation like a job interview. However, it can be argued that it is, from an ethical point of view, more important that candidates are treated fairly than that the environment is very formal. Therefore, the advantages of designing a park-like environment outweigh the disadvantages.

Another option for action is related to the second moral principle: *‘The product should radiate that the organisation using it has respect for their candidates and their confidential information’*. The proposed action is to include two closed-off buildings in the park, to create a more formal and confidential space for users to discuss private or confidential information. This action can be judged on its genuineness, as the job interview space that will be built will be developed in a virtual environment. It can be argued that the design of the virtual space will have no relation to how confidential data will be handled. However, the aim of designing those closed-off subspaces is to create a feeling of professionalism and confidentiality, not actually

ensuring that. The platform in which the job interview space will be built, Mibo, has already considered all privacy related issues and ensured that all private information shared through the platform is handled with integrity. Therefore, it can be concluded that this action is ethically right to solve the moral problem as stated before.

The final action that was proposed to solve a key moral principle, is a design choice regarding communication within the platform. It is proposed to do all communication and text related to the platform in English. This decision is based on the fact that English is a universal language which most people understand. It might be argued that not everyone can understand English, and that the product could discriminate against those people. However, given the fact that English is the most-spoken language in the world [21], the amount of people who might not be able to utilize the product would be minimized compared to using any other language. For this reason, it can be stated that the potential disadvantages (the possibility that people will not understand the communication within the job interview space) will be minimized.

F.3. Ethical Flowchart

In the former section, the moral principles related to this graduation project have been analysed. While the virtual job interview space offers an innovative way for performing job interviews online, and has been tested and evaluated with potential end-users who stated to see a lot of possibilities in this virtual job interview environment, the ethical issues related to the topic must be taken into consideration. There are various conditions that can influence whether it is ethically right to use the job interview space. In order to provide users of the product the means to check whether using the virtual job interview space should be used for an interview, a flowchart has been developed. In this flowchart, the various ethical dilemmas that need to be considered by organisations before deciding to do a virtual job interview through Mibo are listed. Organisations can follow this ethical flowchart to determine for themselves whether it is ethically right to use the virtual job interview space or not. This flowchart can be seen below.

