Appendices

Appendix A: Project brief

TU Delft

IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

In this document the agreements made between student and supervisory team about the student's IDE Master Graduation Project are set out. This document may also include involvement of an external client, however does not cover any legal matters student and client (might) agree upon. Next to that, this document facilitates the required procedural checks:

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project's setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student's registration and study progress
- IDE's Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME

Complete all fields and indicate which master(s) you are in

Family name	Dwarkasing
Initials	C.V.D.
Given name	Claudia Vanita
Student number	4655303

IDE master(s) IPD ☒ DfI ☐ SPD ☐

2nd non-IDE master

Individual programme *(date of approval)*

Medisign ☐

HPM ☐

SUPERVISORY TEAM

Fill in he required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Chair	Fernando Secomandi	dept./section	
mentor	Hosana Morales	dept./section	Sustainable Design Engineering
2nd mentor	Nina Grootendorst - van Mil		
client:	Erasmus MC		
city:	Rotterdam	country:	Netherlands
optional comments			

! Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why.

! Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter.

! 2nd mentor only applies when a client is involved.

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in **by the Chair** of the supervisory team

Sign for approval (Chair)

Fernando Del Caro Secomandi

Digitally signed by Fernando Del Caro Secomandi
Date: 2023.11.29 13:43:57 +01'00'

Name _____ Date _____ Signature _____

Personal Project Brief – IDE Master Graduation Project

Name student Claudia Dwarkasing **Student number** 4655303

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT

Complete all fields, keep information clear, specific and concise

Project title Acceptance and Utility of a Digital Avatar in Medical Environments

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

This graduation project is in collaboration with Erasmus MC, they want to study the effects of different AI personas on patients' acceptance in order to create the best fitting AI persona for taking off anamnesis. This project will mainly focus on understanding how the choice of AI persona impacts patient acceptance. Eventually the user interface of the AI persona has to be designed and conceptualized.

The healthcare sector keeps embracing technological advancements to enhance healthcare delivery. When looking at the ever evolving digital age, the use of Artificial Intelligence keeps increasing. In this specific project AI will be used through the form of AI personas, an AI persona is a persona that is generated by AI which makes it a digital humanlike character. These personas are usually used to imitate the qualities and behaviour of a real human persona (Salminen, 2023) . The target group are patients who have just been through surgery and could possibly be in need of real human interaction. This is something that should be investigated, whether the patients want the human aspect or not. AI personas are already being used in the healthcare sector through chatbots. Chatbots are used to answer standard and specific questions from patients, these are usually not allowed to share or react to personal medical information. they are also not yet linked to a specific embodiment (NOS, 2023). Possible advantages of implementing AI personas in the healthcare environment are that it can take some of the workload from doctors and also that it can help to transcribe information more accurately.

The AI persona will be adapted throughout different medical departments at Erasmus MC. The main stakeholders in this case are the doctors and the patients. The AI persona will be used to take anamnesis from the patients after they've had surgery and are recovering at home. An anamnesis is retreiving the patients medical history which consists of a set of questions about their symptoms during the aftercare of a surgery. This is usually done by doctors through several methods such as observations, conversations and examinations. It is mostly beneficial for the doctors because part of their work is being digitalized. It is important to also make the benefits for the patients clear in order for them to accept this new way of communicating their medical history. This project will focus on the embodiment of the AI persona and how this will have the best effect on the patients when looking at acceptance. Acceptance is a broad term and should be investigated in this specific context.

➔ *space available for images / figures on next page*

Personal Project Brief – IDE Master Graduation Project

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)

For this graduation project, an AI persona has to be created for the Erasmus MC (EMC). This avatar will mainly be used in the phase after a patients treatment to take of a patients personal medical history. The main challenge will be to investigate what acceptance means in this case and how this can be tested based on different attributes.

The main research question will be:
- Which attributes are needed in order to create an AI persona that is accepted by the patients of EMC?
Sub questions:
- How will the patients of EMC benefit from the AI persona?
- How can different emotional expressions contribute to the embodiment of the AI persona

I want to research and test the different ways possible to create an AI persona in a way that it is accepted by patients. In order to do this I will first research the different attributes which contribute to the feeling of acceptance.

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Design a prototype of an AI persona to collect personal medical history of patients (anamnesis) in a way that is accepted by them.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

In the first phase I will conduct desk research, firstly, I will explore the topic Artificial Intelligence, interactive AI, which is designed to enable meaningful conversations with humans such as the use of AI personas. I also want to understand more about acceptance, which shall not only consist of a user wanting to engage with something but also looking into the ethics of the use of AI in healthcare. I will look into the guidelines of designing for expressive emotions and see whether users prefer this or not. Lastly, I will look into the different types of questions which an anamnesis can consist of.
I eventually want to identify different attributes that can contribute to the feeling of acceptance for patients in this specific scenario, this I want to do firstly through literature research. My next step will be to start qualitative research with doctors and patients. The patients I will conduct this research with will have to have had surgery in the passed year, this way the information I collect from them will be based on recent experience. During these interviews I want to ask about their experiences during the ananmesis while also collecting more attributes which contribute to the feeling of acceptance. Apart from identifying new findings, the goal is to also find overlaps with the previous attributes found through literature research. After the research phase I will use the data collected to create a visual where all attributes become clear and can eventually also be used to evaluate my prototypes during the design phase. After coming up with prototypes, I want to co-design with the target group and together decide on 1 concept which will be developed into the final concept.

Project planning and key moments

*To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting**, **mid-term evaluation meeting**, **green light meeting** and **graduation ceremony**. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).*

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting	28-11-23 13-14h
Mid-term evaluation	30-01-24 13-14h
Green light meeting	26-03-24 13-14h
Graduation ceremony	23-04-24 13-14h

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	
For how many project weeks	
Number of project days per week	

Comments:

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

In the first year of my master's I made it my mission to really find my passion in the design field. I realised during several different assignments that the importance of the user's wellbeing always stood out to me. Wether it was during a project for people with dementia or desiging a light experience for car drivers, if it was physical or mental wellbeing, this topic really intrigued me. A natural collaboration for me was to work together with the Erasmus MC.

During my master's program, IPD, I focused on the whole design process from research to problem definition to creating an end product. I think this approach will help me during this specific assignment.

I will have 3 main learning goals for this project :

1. Learn more about the topic Artificial Intelligence and all its possibilities.
2. Improve my documentation skills.
3. Improve my UI and UX skills.

Appendix B: IC form usertest

Designing an AI avatar experience to collect personal medical history of users in such a way that they accept using it

-Participant information

You are being invited to participate in the research study entitled Designing an AI persona experience to collect personal medical history of users in such a way that they accept using it. This interview study is part of the Master's research conducted by Claudia Dwarkasing at the Industrial Design Engineering Faculty of TU Delft.

1. About the study

This interview study aims to gather a better idea of how users currently are experiencing doctor appointments and how they would possibly experience the use of an AI Avatar. This interview will last approximately 30 minutes. The information gained from these interviews will be used to broadly identify the needs of the user. The collected data will be used for qualitative analysis, publications in the TU Delft repository, and presentations. We will ask you to share how you think that an AI Avatar could match or improve the experience of a doctor's consultation.

If you wish to withdraw from the study at any time before, during, or after the interview, please let Claudia know. However, once the results of the interviews are analysed and used as part of further research or publications, it may not be possible to withdraw your individual (deidentified) data from the research.

2. Risks and benefits of participating

As part of this study, one risk is feeling uncomfortable with answering a question to which you are free not to respond. Another risk could be the identification of your participation in this study. We will de-identify your data to manage this risk; we explain this process in the next section. In addition, the risk of disclosure of sensitive information due to a data breach will be handled by storing your anonymised data on OneDrive, a secured server from the TU Delft.

The benefits consist of contributing to a possible more efficient and valuable way of doctor's consultations which in the future will be beneficial for multiple users.

3. Personal information collected

During and after this study, the researcher will not show your name in any of the publications or presentations, nor your contact information will be shared with anyone outside the supervisory team. The master's candidate will always use a pseudonym when referring to your interview.
In case you refer to someone else or mention a company/project name when providing an example, the researcher will change the name and other details about the person or company (e.g., company position, location) in the publication and the presentation. Example: "When I was presenting to Julie, the finance director at [company] in [city], she told me..." will be changed into "When I was presenting to Marie, from the finance unit, she told me…"

During this (online) interview, the researcher will ask you some open questions and ask you to give your preference based of different options provided. In addition, the audio will be recorded, and pictures of the set-up will be taken.

- The audio file will be transcribed and used for qualitative analysis. This audio file will be deleted after the analysis phase. The researcher will use only the quotes from the transcript to report the study findings following the de-identification procedure mentioned above.
- The pictures will be used to illustrate the research set-up and will not show your face.

Designing an AI avatar experience to collect personal medical history of users in such a way that they accept using it

-Consent form

Please tick the appropriate boxes	**Yes**	**No**
I have read and understood the study information, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
I understand that taking part in the study involves an interview. And that the information I provide will be used for qualitative analysis and publications in the TU Delft repository and presentations.	☐	☐
I give permission to make an audio recording of this interview.	☐	☐
I give permission to make pictures during this interview.	☐	☐
I understand that personal information collected about me that can identify me, such as my name or email, will not be shared beyond the study team.	☐	☐

Signatures

_____	_____ ____/____/_____
Name of **participant**	Signature Date

Claudia Dwarkasing

_____	_____ ___/____/_____
Researcher name	Signature Date

Appendix C: HREC form usertest

Delft University of Technology
HUMAN RESEARCH ETHICS
CHECKLIST FOR HUMAN RESEARCH
(Version January 2022)

IMPORTANT NOTES ON PREPARING THIS CHECKLIST

1. An HREC application should be submitted for every research study that involves human participants (as Research Subjects) carried out by TU Delft researchers
2. Your HREC application should be submitted and approved **before** potential participants are approached to take part in your study
3. All submissions from Master's Students for their research thesis need approval from the relevant Responsible Researcher
4. The Responsible Researcher must indicate their approval of the completeness and quality of the submission by signing and dating this form OR by providing approval to the corresponding researcher via email (included as a PDF with the full HREC submission)
5. There are various aspects of human research compliance which fall outside of the remit of the HREC, but which must be in place to obtain HREC approval. These often require input from internal or external experts such as Faculty Data Stewards, Faculty HSE advisors, the TU Delft Privacy Team or external Medical research partners.
6. You can find detailed guidance on completing your HREC application here
7. Please note that incomplete submissions (whether in terms of documentation or the information provided therein) will be returned for completion **prior to any assessment**
8. If you have any feedback on any aspect of the HREC approval tools and/or process you can leave your comments here

I. Applicant Information

PROJECT TITLE:	**Designing an AI avatar experience to collect personal medical history of users in such a way that they accept using it**
Research period: *Over what period of time will this specific part of the research take place*	**The master thesis will start on the 28th of November and will take place for a period of 20 weeks**
Faculty:	**Industrial Design Engineering**
Department:	**Integrated Product Design**
Type of the research project: *(Bachelor's, Master's, DreamTeam, PhD, PostDoc, Senior Researcher, Organisational etc.)*	**Master thesis**
Funder of research: *(EU, NWO, TUD, other – in which case please elaborate)*	**Erasmus MC**
Name of Corresponding Researcher: *(If different from the Responsible Researcher)*	**Claudia Vanita Dwarkasing**
E-mail Corresponding Researcher: *(If different from the Responsible Researcher)*	**c.v.dwarkasing@student.tudelft.nl**
Position of Corresponding Researcher: *(Masters, DreamTeam, PhD, PostDoc, Assistant/ Associate/ Full Professor)*	**Masters**
Name of Responsible Researcher: ***Note:** all student work must have a named Responsible Researcher to approve, sign and submit this application*	**Fernando Secomandi**
E-mail of Responsible Researcher: *Please ensure that an institutional email address (**no Gmail, Yahoo, etc.**) is used for all project documentation/ communications including Informed Consent materials*	**f.secomandi@tudelft.nl**
Position of Responsible Researcher : *(PhD, PostDoc, Associate/ Assistant/ Full Professor)*	**Assistant Professor**

II. Research Overview

***NOTE:** You can find more guidance on completing this checklist here*

a) Please summarise your research very briefly (100-200 words)

What are you looking into, who is involved, how many participants there will be, how they will be recruited and what are they expected to do?

Add your text here – (please avoid jargon and abbrevations)
For this master graduation project the research method which will be used is interviews. The goal of conducting these interviews will be to get an idea of the current situation and to understand the needs of the participants who will use the AI Avatar. The interviews will be conducted with 5-6 participants who have experience with regularly going to the doctor. By regularly is meant atleast once a month. It is necessary that they visit the doctor regularly so that they have enough reference on how they experience these visits. They will be asked about their previous experiences at their doctors consultations and how they will possibly experience the use of an AI Avatar. These participants will be recruited through personal connections.

b) **If your application is an additional project** related to an existing approved HREC submission, please provide a brief explanation including the existing relevant HREC submission number/s.

Add your text here – (please avoid jargon and abbrevations)
N/A

c) **If your application is a simple extension of, or amendment to,** an existing approved HREC submission, you can simply submit an HREC Amendment Form as a submission through LabServant.

III. Risk Assessment and Mitigation Plan

NOTE: *You can find more guidance on completing this checklist here*

Please complete the following table in full for all points to which your answer is "yes". Bear in mind that the vast majority of projects involving human participants as Research Subjects also involve the collection of **Personally Identifiable Information (PII)** and/or **Personally Identifiable Research Data (PIRD)** which may pose potential risks to participants as detailed in Section G: Data Processing and Privacy below.

To ensure alignment between your risk assessment, data management and what you agree with your Research Subjects you can use the last two columns in the table below to refer to specific points in your Data Management Plan (DMP) and Informed Consent Form (ICF) – **but this is not compulsory**.

It's worth noting that **you're much more likely to need to resubmit your application if you neglect to identify potential risks**, than if you identify a potential risk and demonstrate how you will mitigate it. If necessary, the HREC will always work with you and colleagues in the Privacy Team and Data Management Services to see how, if at all possible, your research can be conducted.

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
A: Partners and collaboration						
1. Will the research be carried out in collaboration with additional organisational partners such as: • One or more collaborating research and/or commercial organisations • Either a research, or a work experience internship provider[1] *[1] If yes, please include the graduation agreement in this application*	X		**This project is part of a larger project with Erasmus MC. Erasmus MC may ask to collect data which has been retrieved during interviews, this way possible vulnerable information could be shared.**	All interviews and sessions will be locally stored on the corresponding researcher's device. In addition, the names and personal information will be anonymized.		
2. Is this research dependent on a Data Transfer or Processing Agreement with a collaborating partner or third party supplier? *If yes please provide a copy of the signed DTA/DPA*		X				
3. Has this research been approved by another (external) research ethics committee (e.g.: HREC and/or MREC/METC)? *If yes, please provide a copy of the approval (if possible) and summarise any key points in your Risk Management section below*		X				
B: Location						

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
4. Will the research take place in a country or countries, other than the Netherlands, within the EU?		X				
5. Will the research take place in a country or countries outside the EU?		X				
6. Will the research take place in a place/region or of higher risk – including known dangerous locations (in any country) or locations with non-democratic regimes?		X				
C: Participants						
7. Will the study involve participants who **may** be vulnerable and possibly (legally) unable to give informed consent? (e.g., children below the legal age for giving consent, people with learning difficulties, people living in care or nursing homes,).		X				
8. Will the study involve participants who **may** be vulnerable under specific circumstances and in specific contexts, such as victims and witnesses of violence, including domestic violence; sex workers; members of minority groups, refugees, irregular migrants or dissidents?	X		Participants will be people who have experience with regularly going to the doctor. The reason behind their visits could cause mental discomfort when talking about it. Seeing as they visit the doctor regularly, they are extra vulnerable and could possibly be chronic patients.	The corresponding researcher will try to make sure that participants will not be expected to share too vulnerable information. The interview protocol will focus on the information retrieval and will not be about their reason for going to the doctor itself. Seeing as they could be chronic patients, they will be treated with extra care. The participants will also be able to refuse to answer any question at any time if they do not feel comfortable.		
9. Are the participants, outside the context of the research, in a dependent or subordinate position to the investigator (such as own children, own students or employees of either TU Delft and/or a collaborating partner organisation)? *It is essential that you safeguard against possible adverse consequences of this situation (such as allowing a student's failure to participate to your satisfaction to affect your evaluation of their coursework).*		X				
10. Is there a high possibility of re-identification for your participants? (e.g., do they have a very specialist job of which there are only a small number in a given country, are they members of a small community, or employees from a partner company collaborating in the research? Or are they one of only a handful of (expert) participants in the study?		X				
D: Recruiting Participants						
11. Will your participants be recruited through your own, professional, channels such as conference attendance lists, or through specific network/s such as self-help groups	X		**Participants will firstly be recruited through personal connections, this could possible mean that they could be easily identified.**	.All direct and indirect identifiers will be removed from transcribed qoutes		

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
12. Will the participants be recruited or accessed in the longer term by a (legal or customary) gatekeeper? (e.g., an adult professional working with children; a community leader or family member who has this customary role – within or outside the EU; the data producer of a long-term cohort study)		**X**				
13. Will you be recruiting your participants through a crowd-sourcing service and/or involve a third party data-gathering service, such as a survey platform?		**x**				
14. Will you be offering any financial, or other, remuneration to participants, and might this induce or bias participation?		**x**				
E: Subject Matter *Research related to medical questions/health may require special attention. See also the website of the CCMO before contacting the HREC.*						
15. Will your research involve any of the following: • Medical research and/or clinical trials • Invasive sampling and/or medical imaging • Medical and *In Vitro Diagnostic Medical* Devices Research		**X**				
16. Will drugs, placebos, or other substances (e.g., drinks, foods, food or drink constituents, dietary supplements) be administered to the study participants? *If yes see here to determine whether medical ethical approval is required*		**X**				
17. Will blood or tissue samples be obtained from participants? *If yes see here to determine whether medical ethical approval is required*		**X**				
18. Does the study risk causing psychological stress or anxiety beyond that normally encountered by the participants in their life outside research?		**X**				
19. Will the study involve discussion of personal sensitive data which could put participants at increased legal, financial, reputational, security or other risk? (e.g., financial data, location data, data relating to children or other vulnerable groups) *Definitions of sensitive personal data, and special cases are provided on the TUD Privacy Team website.*		**X**				
20. Will the study involve disclosing commercially or professionally sensitive, or confidential information? (e.g., relating to decision-making processes or business strategies which might, for example, be of interest to competitors)		**X**				
21. Has your study been identified by the TU Delft Privacy Team as requiring a Data Processing Impact Assessment (DPIA)? *If yes please attach the advice/ approval from the Privacy Team to this application*		**X**				
22. Does your research investigate causes or areas of conflict?		**X**				

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
If yes please confirm that your fieldwork has been discussed with the appropriate safety/security advisors and approved by your Department/Faculty.						
23. Does your research involve observing illegal activities or data processed or provided by authorities responsible for preventing, investigating, detecting or prosecuting criminal offences *If so please confirm that your work has been discussed with the appropriate legal advisors and approved by your Department/Faculty.*		**X**				
F: Research Methods						
24. Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g., covert observation of people in non-public places).		**X**				
25. Will the study involve actively deceiving the participants? (For example, will participants be deliberately falsely informed, will information be withheld from them or will they be misled in such a way that they are likely to object or show unease when debriefed about the study).		**X**				
26. Is pain or more than mild discomfort likely to result from the study? And/or could your research activity cause an accident involving (non-) participants?		**X**				
27. Will the experiment involve the use of devices that are not 'CE' certified? *Only, if 'yes': continue with the following questions:*		**X**				
• Was the device built in-house?						
• Was it inspected by a safety expert at TU Delft? *If yes, please provide a signed device report*						
• If it was not built in-house and not CE-certified, was it inspected by some other, qualified authority in safety and approved? *If yes, please provide records of the inspection*						
28. Will your research involve face-to-face encounters with your participants and if so how will you assess and address Covid considerations?	**X**		**Face-to-face interviews and sessions will be planned, so the risk of spreading covid during these sessions exists.**	**Covid measures will be taken into consideration, such as the 1.5m distance between interviewer and interviewee and the use of masks.**		
29. Will your research involve **either:** a) "big data", combined datasets, new data-gathering or new data-merging techniques which might lead to re-identification of your participants **and/or** b) artificial intelligence or algorithm training where, for example biased datasets could lead to biased outcomes?		**X**				

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
G: Data Processing and Privacy						
30. Will the research involve collecting, processing and/or storing any directly identifiable PII (Personally Identifiable Information) including name or email address that will be used for administrative purposes only? (eg: obtaining Informed Consent or disbursing remuneration)	**X**		**During the interviews the email addresses might be collected because of possible follow up questions. This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. Their personal information will be saved in a secure server from the university and the name and email will not be in the same document as the transcript of quotes.		
31. Will the research involve collecting, processing and/or storing any directly or indirectly identifiable PIRD (Personally Identifiable Research Data) including videos, pictures, IP address, gender, age etc and **what other Personal Research Data** (including personal or professional views) will you be collecting?	**X**		**During the interviews there might be pictures taken. This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. All faces will be blurred from pictures and raw images will be removed from all personal devices after being moved to TU Delft's OneDrive server.		
32. Will this research involve collecting data from the internet, social media and/or publicly available datasets which have been originally contributed by human participants		x				
33. Will your research findings be published in one or more forms in the public domain, as e.g., Masters thesis, journal publication, conference presentation or wider public dissemination?	**X**		This master project will be published on TU Delft repository. **This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. The quotes used in publications will be anonymized and the identifiable data will be removed.		
34. Will your research data be archived for re-use and/or teaching in an open, private or semi-open archive?	**X**		The used anonymized quotes will be published in the appendix of the master thesis. **This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. The quotes used in publications will be anonymized and the identifiable data will be removed.		

H: More on Informed Consent and Data Management

NOTE: *You can find guidance and templates for preparing your Informed Consent materials) here*

Your research involves human participants as Research Subjects if you are recruiting them or actively involving or influencing, manipulating or directing them in any way in your research activities. This means you must seek informed consent and agree/ implement appropriate safeguards regardless of whether you are collecting any PIRD.

Where you are also collecting PIRD, and using Informed Consent as the legal basis for your research, you need to also make sure that your IC materials are clear on any related risks and the mitigating measures you will take – including through responsible data management.

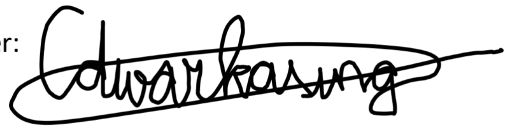
Got a comment on this checklist or the HREC process? You can leave your comments here

IV. Signature/s

Please note that by signing this checklist list as the sole, or Responsible, researcher you are providing approval of the completeness and quality of the submission, as well as confirming alignment between GDPR, Data Management and Informed Consent requirements.

Name of Corresponding Researcher (if different from the Responsible Researcher) (print)

Signature of Corresponding Researcher:



Date: 28-02-2024

Name of Responsible Researcher (print)

Signature (or upload consent by mail) Responsible Researcher:

Date: 28-02-2024

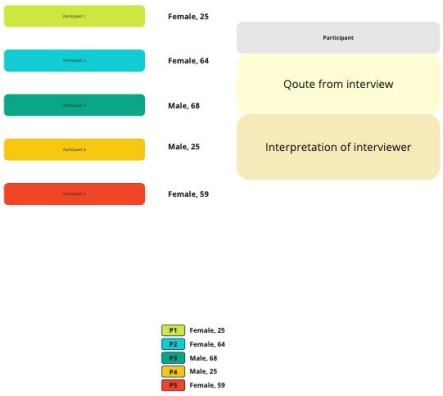
V. Completing your HREC application

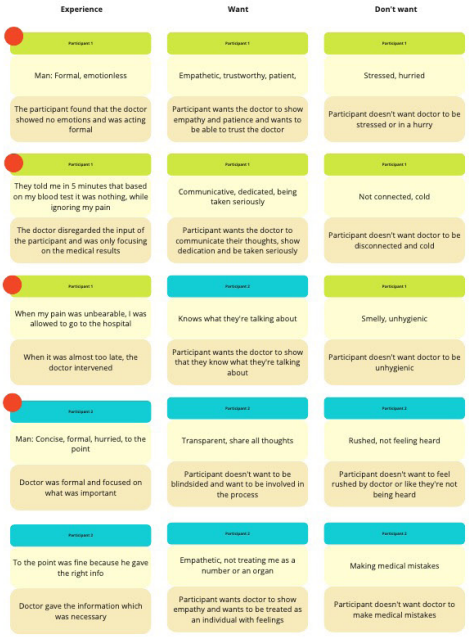
Please use the following list to check that you have provided all relevant documentation

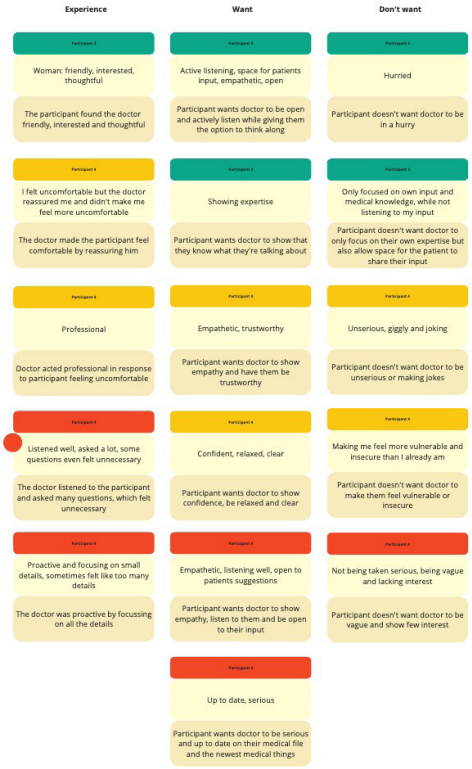
Required:

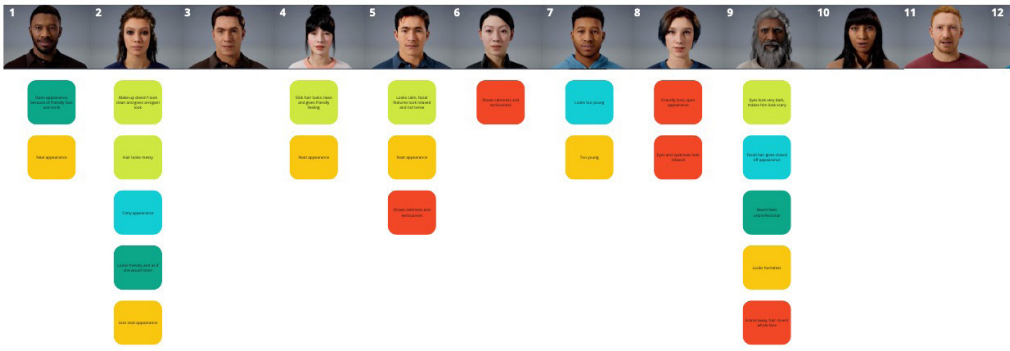
- **Always:** This completed HREC checklist
- **Always:** A data management plan (reviewed, where necessary, by a data-steward)
- **Usually:** A complete Informed Consent form (including Participant Information) and/or Opening Statement (for online consent)

Appendix D: Data analysis usertest









Man: Formal, emotionless

The participant found that the doctor **showed no emotions** and was acting formal

They told me in 5 minutes that based on my blood test it was nothing, while ignoring my pain

The doctor **disregarded the input of the participant** and was only focusing on the medical results

When my pain was unbearable, I was allowed to go to the hospital

When it was **almost too late**, the doctor intervened

Man: Concise, formal, hurried, to the point

Doctor was **formal and rushed** but focused on what was important

Listened well, asked a lot, some questions even felt unnecessary

The doctor listened to the participant and asked **many questions, which felt unnecessary**

Empathetic, trustworthy, patient,

Participant wants the doctor to show empathy and patience and wants to

Empathetic, not treating me as a number or an organ

Participant wants doctor to show empathy and wants to be treated as

Patients want their doctors to show empathy, be trustworthy and open and actively listen to them

Active listening, space for patients input, empathetic, open

Participant wants doctor to be open and actively listen while giving them the option to think along

Empathetic, trustworthy

Participant wants doctor to show empathy and have them be trustworthy

Empathetic, listening well, open to patients suggestions

Participant wants doctor to show empathy, listen to them and be open to their input

Stressed, hurried

Participant doesn't want doctor to be stressed or in a hurry

Rushed, not feeling heard

Participant doesn't want to feel rushed by doctor or like they're not being heard

Hurried

Participant doesn't want doctor to be in a hurry

Patients don't want their doctors to act stressed and rushed

Smelly, unhygienic

Participant doesn't want doctor to be unhygienic

Patients don't want their doctors to be unhygienic

Patients want their doctors to communicate clear and transparant while being confident and relaxed

Participant wants the doctor to communicate their thoughts, show dedication and be taken seriously

Participant wants the doctor to show that they know what they're talking about

Showing expertise

Participant wants doctor to show that they know what they're talking about

Transparent, share all thoughts

Participant doesn't want to be blindsided and want to be involved in the process

Confident, relaxed, clear

Participant wants doctor to show confidence, be relaxed and clear

Up to date, serious

Participant wants doctor to be serious and up to date on their medical file and the newest medical things

Not connected, cold

Participant doesn't want doctor to be disconnected and act cold

Only focused on own input and medical knowledge, while not listening to my input

Participant doesn't want doctor to only focus on their own expertise but also allow space for the patient to share their input

Not being taken serious, being vague and lacking interest

Participant doesn't want doctor to be vague and show few interest

Making me feel more vulnerable and insecure than I already am

Participant doesn't want doctor to make them feel vulnerable or insecure

Patients don't want to feel disconnected from their doctors and want their input to be taken seriously

Making medical mistakes

Participant doesn't want doctor to make medical mistakes

Patients don't want their doctors to make medical mistakes

Hair covers too much of face

Hair covers too much of face

Hair covers too much of face

Eyes don't look rested

Angry and strict appearance

Mouth looks tense

Older looks more reliable

I would not trust the younger looking ones

Leaning more towards female avatars

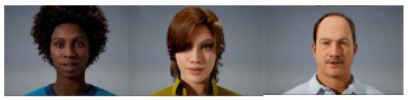
Male avatars look angry and threatening

I'd rather have someone look a bit more strict but knows what they're talking about than just being sweet but unclear

hierarchy from reassurance to otgers

Experience	Want	Don't want
Man: Formal, emotionless		Stressed, hurried
e participant found that the doctor owed no emotions and was acting formal		Participant doesn't want doctor to be stressed or in a hurry
They told me in 5 minutes that based on my blood test it was nothing, while ignoring my pain		Not connected, cold
The doctor disregarded the input of the participant and was only focusing on the medical results		Participant doesn't want doctor to be disconnected and cold
When my pain was unbearable, I was allowed to go to the hospital		Smelly, unhygienic
When it was almost too late, the doctor intervened		Participant doesn't want doctor to be unhygienic

Experience	Want
Man: Concise, formal, hurried, to the point	Knows what they're talking about
Doctor was formal and focused on what was important	Participant wants the doctor to show that they know what they're talking about
To the point was fine because he gave the right info	Transparent, share all thoughts
Doctor gave the information which was necessary	Participant doesn't want to be blindsided and want to be involved in the process
	Empathetic, not treating me as a number or an organ
	Participant wants doctor to show empathy and wants to be treated as an individual with feelings



Open look from slightly bigger eyes makes them look interested

Open look makes them look interested

Open look makes them look interested

Bigg

Make-up doesn't look clean and gives arrogant look

Eyes look very dark, makes him look scary

Hair looks messy

Messy hair and make up --> arrogant/scary

Catty appearance

Looks too young

Facial hair gives closed off appearance

Experience	Want	Don't want
I felt uncomfortable but the doctor reassured me and didn't make me feel more uncomfortable	Empathetic, trustworthy	Unserious, giggly and joking
The doctor made the participant feel comfortable by reassuring him	Participant wants doctor to show empathy and have them be trustworthy	Participant doesn't want doctor to be unserious or making jokes
Professional	Confident, relaxed, clear	Making me feel more vulnerable and insecure than I already am
Doctor acted professional in response to participant feeling uncomfortable	Participant wants doctor to show confidence, be relaxed and clear	Participant doesn't want doctor to make them feel vulnerable or insecure

Experience	Want	Don't want
Listened well, asked a lot, some questions even felt unnecessary	Empathetic, listening well, open to patients suggestions	Not being taken serious, being and lacking interest
The doctor listened to the participant and asked many questions, which felt unnecessary	Participant wants doctor to show empathy, listen to them and be open to their input	Participant doesn't want doctor vague and show few intere
Proactive and focusing on small details, sometimes felt like too many details	Up to date, serious	
The doctor was proactive by focussing on all the details	Participant wants doctor to be serious and up to date on their medical file and the newest medical things	

Neat appearance

Neat appearance

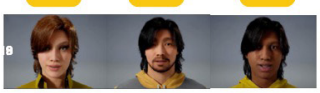
Neat appearance

Looks strict but also knows what he's doing

Less neat appearance

Too young

Looks homeless



Hair in front of face doesn't look professional

Hair in front of face doesn't look professional

Hair in front of face doesn't look professional

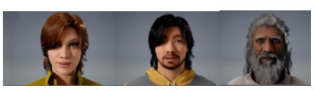
Messy hair and make up --> less neat
Too young --> unserious
Too much facial hair --> unserious
Hair in front of face --> unprofessional

Shows calmness and seriousness

Shows calmness and seriousness

Friendly look, open appearance

Eyes and eyebrows look relaxed



Hair in front of face doesn't look customer friendly

Hair in front of face doesn't look customer friendly

Looks away, hair covers whole face

Don't want

Participant 2

Rushed, not feeling heard

Participant doesn't want to feel rushed by doctor or like they're not being heard

Participant 2

Making medical mistakes

Participant doesn't want doctor to make medical mistakes

Experience

Participant 3

Woman: friendly, interested, thoughtful

The participant found the doctor friendly, interested and thoughtful

Want

Participant 1

Showing expertise

Participant wants doctor to show that they know what they're talking about

Don't want

Participant 3

Hurried

Participant doesn't want doctor to be in a hurry

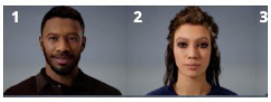
Participant 3

Only focused on own input and medical knowledge, while not listening to my input

Participant doesn't want doctor to only focus on their own expertise but also allow space for the patient to share their input

ger eyes --> open look --> transparent/empathetic

Dark make up --> catty appearance
Too young --> unprofessional
Too much facial hair --> closed off appearance



Looks friendly and as if she would listen

Beard looks unprofessional

Doesn't look open to suggestions, looks like he knows it better

Looks angry

Too much facial hair --> unprofessional
Angry squinted eyes --> Not open to suggestions

vague

to be st

ested eyebrows --> calmness / seriousness
Relaxed eyes --> friendly

Hair in front of face --> unprofessional
cial hair covering whole face --> scares away

Participant 1

It's quicker, multiple patients can be helped at the same time, no wait lines

Participant 1

It will be probably listen attentively and active and ask the right questions

Participant 2

Saves time, can ask quick questions

Participant 2

More accessible and threshold is lower

Participant 4

Will be able to reassure patients

Participant 4

AI avatar will guaranteed be empathetic and with a doctor you're not always sure

Participant 4

Anamneses will probably be more extensive

Participant 1

Concerned about trusting this robot and maybe it won't show the right emotions

Participant 1

Not sure if elderly will be able to understand

Participant 2

I know too little about AI Avatars so I don't fully trust it and find it a bit scary

Participant 2

I'm concerned about the safety and whether it could be hacked

Participant 4

Some people could miss personal contact, especially really sick people

Appendix E: IC form evaluation test

Designing an AI avatar experience to collect personal medical history of users in such a way that they accept using it

-Participant information

You are being invited to participate in the research study entitled Designing an AI avatar experience to collect personal medical history of users in such a way that they accept using it. This interview study is part of the Master's research conducted by Claudia Dwarkasing at the Industrial Design Engineering Faculty of TU Delft.

1. **About the study**

This user test study aims to evaluate the interaction between the participant and the platform, focusing on the emotions which are experienced. This test will last approximately 30 minutes. The information gained from these tests will be used to further determine the features of the AI avatar platform. The collected data will be used for quantitative and qualitative analysis, publications in the TU Delft repository, and presentations. We will ask you to share your experience on how you interacted with the avatar.

If you wish to withdraw from the study at any time before, during, or after the user test, please let Claudia (c.v.dwarkasing@student.tudelft.nl) know. However, once the results of the tests are analysed and used as part of further research or publications, it may not be possible to withdraw your individual (deidentified) data from the research.

2. **Risks and benefits of participating**

As part of this study, a risk could be the identification of your participation in this study. We will de-identify your data to manage this risk; we explain this process in the next section. In addition, the risk of disclosure of sensitive information due to a data breach will be handled by storing your anonymised data on OneDrive, a secured server from the TU Delft.

The benefits consist of contributing to a possible more efficient and valuable way of doctor's consultations which in the future will be beneficial for multiple users.

3. **Personal information collected**

During and after this study, the researcher will not show your name in any of the publications or presentations, nor your contact information will be shared with anyone outside the supervisory team. The master's candidate will always use a pseudonym when referring to your interview.
In case you refer to someone else or mention a company/project name when providing an example, the researcher will change the name and other details about the person or company (e.g., company position, location) in the publication and the presentation. Example: "When I was presenting to Julie, the finance director at [company] in [city], she told me..." will be changed into "When I was presenting to Marie, from the finance unit, she told me…"

During this test, the researcher will ask you to verbalize all your actions and thoughts while exploring the platform. In addition, a voice recording will be made.

- The recording will be transcribed by the researcher.

Designing an AI avatar experience to collect personal medical history of users in such a way that they accept using it

-Consent form

Please tick the appropriate boxes	**Yes**	**No**
I have read and understood the study information, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
I understand that taking part in the study involves a user test. And that the information I provide will be used for quantitative and qualitative analysis and publications in the TU Delft repository and presentations.	☐	☐
I give permission to record my voice this interview.	☐	☐
I understand that personal information collected about me that can identify me, such as my name or email, will not be shared beyond the study team.	☐	☐

Signatures

_____	_____ ____/____/_____
Name of **participant**	Signature Date

Claudia Dwarkasing

_____	_____ ___/____/_____
Researcher name	Signature Date

Appendix F: HREC form evaluation test

Delft University of Technology
HUMAN RESEARCH ETHICS
CHECKLIST FOR HUMAN RESEARCH
(Version January 2022)

IMPORTANT NOTES ON PREPARING THIS CHECKLIST

1. An HREC application should be submitted for every research study that involves human participants (as Research Subjects) carried out by TU Delft researchers
2. Your HREC application should be submitted and approved **before** potential participants are approached to take part in your study
3. All submissions from Master's Students for their research thesis need approval from the relevant Responsible Researcher
4. The Responsible Researcher must indicate their approval of the completeness and quality of the submission by signing and dating this form OR by providing approval to the corresponding researcher via email (included as a PDF with the full HREC submission)
5. There are various aspects of human research compliance which fall outside of the remit of the HREC, but which must be in place to obtain HREC approval. These often require input from internal or external experts such as Faculty Data Stewards, Faculty HSE advisors, the TU Delft Privacy Team or external Medical research partners.
6. You can find detailed guidance on completing your HREC application here
7. Please note that incomplete submissions (whether in terms of documentation or the information provided therein) will be returned for completion **prior to any assessment**
8. If you have any feedback on any aspect of the HREC approval tools and/or process you can leave your comments here

I. Applicant Information

PROJECT TITLE:	**Designing an AI avatar experience to collect personal medical history of users in such a way that they accept using it**
Research period: *Over what period of time will this specific part of the research take place*	**The master thesis will start on the 28th of November and will take place for a period of 20 weeks**
Faculty:	**Industrial Design Engineering**
Department:	**Integrated Product Design**
Type of the research project: *(Bachelor's, Master's, DreamTeam, PhD, PostDoc, Senior Researcher, Organisational etc.)*	**Master thesis**
Funder of research: *(EU, NWO, TUD, other – in which case please elaborate)*	**Erasmus MC**
Name of Corresponding Researcher: *(If different from the Responsible Researcher)*	**Claudia Vanita Dwarkasing**
E-mail Corresponding Researcher: *(If different from the Responsible Researcher)*	**c.v.dwarkasing@student.tudelft.nl**
Position of Corresponding Researcher: *(Masters, DreamTeam, PhD, PostDoc, Assistant/ Associate/ Full Professor)*	**Masters**
Name of Responsible Researcher: ***Note:** all student work must have a named Responsible Researcher to approve, sign and submit this application*	**Fernando Secomandi**
E-mail of Responsible Researcher: *Please ensure that an institutional email address (**no Gmail, Yahoo, etc.**) is used for all project documentation/ communications including Informed Consent materials*	**f.secomandi@tudelft.nl**
Position of Responsible Researcher : *(PhD, PostDoc, Associate/ Assistant/ Full Professor)*	**Assistant Professor**

II. Research Overview

***NOTE:** You can find more guidance on completing this checklist here*

a) Please summarise your research very briefly (100-200 words)

What are you looking into, who is involved, how many participants there will be, how they will be recruited and what are they expected to do?

Add your text here – (please avoid jargon and abbrevations)
For this master graduation project the research method which will be used is user testing. The goal of conducting this user test will be to evaluate different ways of interaction between an AI Avatar and participants while looking at different emotional expressions and level of interest and reactions from the avatar. The user test will be conducted with 7-8 participants who have experience with going to the doctor. They will be asked one specific question which doesn't go too deep into their personal medical history on which they will respong by talking to the avatar in order to receive a reaction from it. It is important to mention that their answers will not be recorded seeing as these are not relevant for this research. The the focus will only be on how they experienced the different interactions with the avatar. These participants will be recruited through personal connections.

b) **If your application is an additional project** related to an existing approved HREC submission, please provide a brief explanation including the existing relevant HREC submission number/s.

Add your text here – (please avoid jargon and abbrevations)
N/A

c) **If your application is a simple extension of, or amendment to,** an existing approved HREC submission, you can simply submit an HREC Amendment Form as a submission through LabServant.

III. Risk Assessment and Mitigation Plan

NOTE: *You can find more guidance on completing this checklist here*

Please complete the following table in full for all points to which your answer is "yes". Bear in mind that the vast majority of projects involving human participants as Research Subjects also involve the collection of **Personally Identifiable Information (PII)** and/or **Personally Identifiable Research Data (PIRD)** which may pose potential risks to participants as detailed in Section G: Data Processing and Privacy below.

To ensure alighment between your risk assessment, data management and what you agree with your Research Subjects you can use the last two columns in the table below to refer to specific points in your Data Management Plan (DMP) and Informed Consent Form (ICF) – **but this is not compulsory**.

It's worth noting that **you're much more likely to need to resubmit your application if you neglect to identify potential risks**, than if you identify a potential risk and demonstrate how you will mitigate it. If necessary, the HREC will always work with you and colleagues in the Privacy Team and Data Management Services to see how, if at all possible, your research can be conducted.

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
A: Partners and collaboration						
1. Will the research be carried out in collaboration with additional organisational partners such as: • One or more collaborating research and/or commercial organisations • Either a research, or a work experience internship provider[1] [1] *If yes, please include the graduation agreement in this application*	**X**		**This project is part of a larger project with Erasmus MC. Erasmus MC may ask to collect data which has been retrieved during this test, this way possible vulnerable information could be shared.**	All interviews and sessions will be locally stored on the corresponding researcher's device. In addition, the names and personal information will be anonymized.		
2. Is this research dependent on a Data Transfer or Processing Agreement with a collaborating partner or third party supplier? *If yes please provide a copy of the signed DTA/DPA*		**X**				
3. Has this research been approved by another (external) research ethics committee (e.g.: HREC and/or MREC/METC)? *If yes, please provide a copy of the approval (if possible) and summarise any key points in your Risk Management section below*		**X**				
B: Location						

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
4. Will the research take place in a country or countries, other than the Netherlands, within the EU?		**X**				
5. Will the research take place in a country or countries outside the EU?		**X**				
6. Will the research take place in a place/region or of higher risk – including known dangerous locations (in any country) or locations with non-democratic regimes?		**X**				
C: Participants						
7. Will the study involve participants who **may** be vulnerable and possibly (legally) unable to give informed consent? (e.g., children below the legal age for giving consent, people with learning difficulties, people living in care or nursing homes,).		**X**				
8. Will the study involve participants who **may** be vulnerable under specific circumstances and in specific contexts, such as victims and witnesses of violence, including domestic violence; sex workers; members of minority groups, refugees, irregular migrants or dissidents?	**X**		Participants will be people who have experience with going to the doctor. The reason behind their visits could cause mental discomfort when talking about it.	The corresponding researcher will try to make sure that participants will not be expected to share too vulnerable information. The interview protocol will focus on the information retrieval and will not be about their reason for going to the doctor itself. Seeing as they could be chronic patients, they will be treated with extra care. The participants will also be able to refuse to answer any question at any time if they do not feel comfortable.		
9. Are the participants, outside the context of the research, in a dependent or subordinate position to the investigator (such as own children, own students or employees of either TU Delft and/or a collaborating partner organisation)? *It is essential that you safeguard against possible adverse consequences of this situation (such as allowing a student's failure to participate to your satisfaction to affect your evaluation of their coursework).*		**X**				
10. Is there a high possibility of re-identification for your participants? (e.g., do they have a very specialist job of which there are only a small number in a given country, are they members of a small community, or employees from a partner company collaborating in the research? Or are they one of only a handful of (expert) participants in the study?		**X**				
D: Recruiting Participants						
11. Will your participants be recruited through your own, professional, channels such as conference attendance lists, or through specific network/s such as self-help groups	**X**		**Participants will firstly be recruited through personal connections, this could possible mean that they could be easily identified.**	.All direct and indirect identifiers will be removed from transcribed qoutes		

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
12. Will the participants be recruited or accessed in the longer term by a (legal or customary) gatekeeper? (e.g., an adult professional working with children; a community leader or family member who has this customary role – within or outside the EU; the data producer of a long-term cohort study)		**X**				
13. Will you be recruiting your participants through a crowd-sourcing service and/or involve a third party data-gathering service, such as a survey platform?		**x**				
14. Will you be offering any financial, or other, remuneration to participants, and might this induce or bias participation?		**x**				
E: Subject Matter *Research related to medical questions/health may require special attention. See also the website of the CCMO before contacting the HREC.*						
15. Will your research involve any of the following: • Medical research and/or clinical trials • Invasive sampling and/or medical imaging • Medical and *In Vitro Diagnostic Medical* Devices Research		**X**				
16. Will drugs, placebos, or other substances (e.g., drinks, foods, food or drink constituents, dietary supplements) be administered to the study participants? *If yes see here to determine whether medical ethical approval is required*		**X**				
17. Will blood or tissue samples be obtained from participants? *If yes see here to determine whether medical ethical approval is required*		**X**				
18. Does the study risk causing psychological stress or anxiety beyond that normally encountered by the participants in their life outside research?		**X**				
19. Will the study involve discussion of personal sensitive data which could put participants at increased legal, financial, reputational, security or other risk? (e.g., financial data, location data, data relating to children or other vulnerable groups) *Definitions of sensitive personal data, and special cases are provided on the TUD Privacy Team website.*		**X**				
20. Will the study involve disclosing commercially or professionally sensitive, or confidential information? (e.g., relating to decision-making processes or business strategies which might, for example, be of interest to competitors)		**X**				
21. Has your study been identified by the TU Delft Privacy Team as requiring a Data Processing Impact Assessment (DPIA)? *If yes please attach the advice/ approval from the Privacy Team to this application*		**X**				
22. Does your research investigate causes or areas of conflict?		**X**				

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
If yes please confirm that your fieldwork has been discussed with the appropriate safety/security advisors and approved by your Department/Faculty.						
23. Does your research involve observing illegal activities or data processed or provided by authorities responsible for preventing, investigating, detecting or prosecuting criminal offences *If so please confirm that your work has been discussed with the appropriate legal advisors and approved by your Department/Faculty.*		**X**				
F: Research Methods						
24. Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g., covert observation of people in non-public places).		**X**				
25. Will the study involve actively deceiving the participants? (For example, will participants be deliberately falsely informed, will information be withheld from them or will they be misled in such a way that they are likely to object or show unease when debriefed about the study).		**X**				
26. Is pain or more than mild discomfort likely to result from the study? And/or could your research activity cause an accident involving (non-) participants?		**X**				
27. Will the experiment involve the use of devices that are not 'CE' certified? *Only, if 'yes': continue with the following questions:*		**X**				
• Was the device built in-house?						
• Was it inspected by a safety expert at TU Delft? *If yes, please provide a signed device report*						
• If it was not built in-house and not CE-certified, was it inspected by some other, qualified authority in safety and approved? *If yes, please provide records of the inspection*						
28. Will your research involve face-to-face encounters with your participants and if so how will you assess and address Covid considerations?	**X**		**Face-to-face user tests will be planned, so the risk of spreading covid during these sessions exists.**	**Covid measures will be taken into consideration, such as the 1.5m distance between interviewer and interviewee and the use of masks.**		
29. Will your research involve **either:** a) "big data", combined datasets, new data-gathering or new data-merging techniques which might lead to re-identification of your participants **and/or** b) artificial intelligence or algorithm training where, for example biased datasets could lead to biased outcomes?		**X**				
G: Data Processing and Privacy						

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
30. Will the research involve collecting, processing and/or storing any directly identifiable PII (Personally Identifiable Information) including name or email address that will be used for administrative purposes only? (eg: obtaining Informed Consent or disbursing remuneration)	**X**		**During the tests the email addresses might be collected because of possible follow up questions. This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. Their personal information will be saved in a secure server from the university and the name and email will not be in the same document as the transcript of quotes.		
31. Will the research involve collecting, processing and/or storing any directly or indirectly identifiable PIRD (Personally Identifiable Research Data) including videos, pictures, IP address, gender, age etc and **what other Personal Research Data** (including personal or professional views) will you be collecting?	**X**		**During the tests there might be pictures taken. This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. All faces will be blurred from pictures and raw images will be removed from all personal devices after being moved to TU Delft's OneDrive server.		
32. Will this research involve collecting data from the internet, social media and/or publicly available datasets which have been originally contributed by human participants		x				
33. Will your research findings be published in one or more forms in the public domain, as e.g., Masters thesis, journal publication, conference presentation or wider public dissemination?	**X**		This master project will be published on TU Delft repository. **This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. The quotes used in publications will be anonymized and the identifiable data will be removed.		
34. Will your research data be archived for re-use and/or teaching in an open, private or semi-open archive?	**X**		The used anonymized quotes will be published in the appendix of the master thesis. **This may cause that participants can be tracked down.**	All recruited participants will be required to sign a consent form indicating their understanding of such risks. The quotes used in publications will be anonymized and the identifiable data will be removed.		

H: More on Informed Consent and Data Management

NOTE: *You can find guidance and templates for preparing your Informed Consent materials) here*

Your research involves human participants as Research Subjects if you are recruiting them or actively involving or influencing, manipulating or directing them in any way in your research activities. This means you must seek informed consent and agree/ implement appropriate safeguards regardless of whether you are collecting any PIRD.

Where you are also collecting PIRD, and using Informed Consent as the legal basis for your research, you need to also make sure that your IC materials are clear on any related risks and the mitigating measures you will take – including through responsible data management.

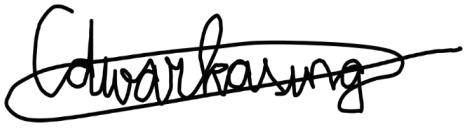
Got a comment on this checklist or the HREC process? You can leave your comments here

IV. Signature/s

Please note that by signing this checklist list as the sole, or Responsible, researcher you are providing approval of the completeness and quality of the submission, as well as confirming alignment between GDPR, Data Management and Informed Consent requirements.

Name of Corresponding Researcher (if different from the Responsible Researcher) (print)

Signature of Corresponding Researcher:



Date: 05-04-2024

Name of Responsible Researcher (print)

Signature (or upload consent by mail) Responsible Researcher:

Date: 05-04-2024

V. Completing your HREC application

Please use the following list to check that you have provided all relevant documentation

Required:

- **Always:** This completed HREC checklist
- **Always:** A data management plan (reviewed, where necessary, by a data-steward)
- **Usually:** A complete Informed Consent form (including Participant Information) and/or Opening Statement (for online consent)

Appendix G: Data analysis evaluation test

Empathy

Participant

he word choice of the avatar is very empathetic en relaxing and feels personal

Interpretation of interviewer

Extra

Participant

Request appointment option felt too random

Interpretation of interviewer

Interface

Care

Trust

Participant

The data safety is in the top bar, because of this i can easily see it

Interpretation of interviewer

Participant

The infographic really helps my trust

Interpretation of interviewer

Participant

The data safety overall puts me at ease to use the platform

Interpretation of interviewer

Empathy

Extra

Participant

The faqs cover everything for if I'd be confused in some way

Interpretation of interviewer

Participant

i usually dont like talking to avatars, but i like that there is a type version

Interpretation of interviewer

Usability

Participant

If i click on med his first, its unclear if i should fill it in or what it is

Interpretation of interviewer

Participant

i would like to see the faq earlier on because i think they are really important

Interpretation of interviewer

Participant

The platform already felt trustworthy so i didnt read all the data safety

Interpretation of interviewer

Participant

avatar voice sounds robotic

Interpretation of interviewer

Participant

the chat could be bigger en clearer

Interpretation of interviewer

Interface

Participant

I like that the first thing I see is the avatar

Interpretation of interviewer

Care

Trust

Empathy

Participant

The avatars face looks pleasant

Interpretation of interviewer

Participant

i like that the pop up asks if im okay

Interpretation of interviewer

Usability

Participant

unclear that the medical history page is a summary, i thought i had to fill it in

Interpretation of interviewer

Participant

the medical history summary should be understandable for the patient (not too much medical terms)

Interpretation of interviewer

Participant

i would like to see the faqs earlier, before i start the anamnesis, maybe a reference to it

Interpretation of interviewer

Participant

the data safety page looks more clear than im used to, not too much text and straight to the point

Interpretation of interviewer

Participant

the talking version looks nice, i do wonder what it would feel like when you feel bad

Interpretation of interviewer

Participant

i like that my progress is shown

Interpretation of interviewer

Interface

Participant

i didnt realise i could scroll the page

Interpretation of interv

Extra

Participant

Id like more explanation on wether i have an intake or checkup conversation

Interpretation of interviewer

Participant

i would like to have the option throughout the whole convo to say wether i'm ok or not

Interpretation of interviewer

down on

ewer

Care

Trust

Participant

the faqs covers a lot of my doubts, especially surrounding data safety

Interpretation of interviewer

Participant

everything looks clear and well formulated

Interpretation of interviewer

Empathy

Participant

the avatar looks friendly and approachable

Interpretation of interviewer

Extra

Participant

i think showing the faqs earlier on or more prominent would create even more trust

Interpretation of interviewer

Usability

Participant

i think showing the faqs earlier on or more prominent would create even more trust

Interpretation of interviewer

Participant

unclear if i should fill in the medical history page

Interpretation of interviewer

Participant

it could be more clear on why an appointment would be necessary

Interpretation of interviewer

Participant

i wouldn't read the data safety page to an extent but i would be interested

Interpretation of interviewer

Interface

Participant

The layout looks really clean

Interpretation of interviewer

Participant

the hierarchy in text could be more clear

Interpretation of interviewer

Participant

the text in the med his document should be changed to lists and not actions

Interpretation of interviewer

Participant

i like the slide down function for the faqs

Interpretation of interviewer

Care

Participant

the colors are soft and a nice combination

Interpretation of interviewer

Trust

Participant

i like that it shows erasmus mc

Interpretation of interviewer

Participant

i like that i can give feedback and that it is valued

Interpretation of interviewer

Participant

i like that i can read about my rights and that some parts are visualized

Interpretation of interviewer

Participant

the faqs create trust

Interpretation of interviewer

Participant

the blue makes it look medical which feels trustworthy

Interpretation of interviewer

Empathy

Participant

the realism of the avatar made more empathetic

Interpretation of interviewer

Usability

Participant

it is unclear if i should type in my medical history myself

Interpretation of interviewer

Participant

the faqs are all very nice

Interpretation of interviewer

Participant

nice that i can provide feedback

Interpretation of interviewer

Interface

Participant

it would be nice to have an
before the anamnesis to kno
it an intake or follow u

Interpretation of intervie

Extra

Participant

add option with do u need to talk to a doctor for anything else?

Interpretation of interviewer

Participant

the appointment button could be under the faqs because the faqs already answer a lot of questions

Interpretation of interviewer

Participant

if the hierarchy in the data safety texts is better, i would feel more invited to read it

Interpretation of interviewer

Participant

i would change the progress bar to dots

Interpretation of interviewer

Participant

pop up message: i noticed that u haven't been active in a while....

Interpretation of interviewer

Care

Participant

i like that i can also have the option to ask the avatar for help with the questions

Interpretation of interviewer

Participant

i feel reassurance from the fact that i can physically push a save button which leads to a summarized page

Interpretation of interviewer

Trust

Participant

i actually already trust the platform based of the faqs and the emc mark, so i wouldnt read data safety

Interpretation of interviewer

Participant

the summary gives me confirmation that it goes to my doctor

Interpretation of interviewer

Empathy

Participant

i like that its a physical talking face and that it's a young woman, makes me feel more comfortable

Interpretation of interviewer

Extra

Participant

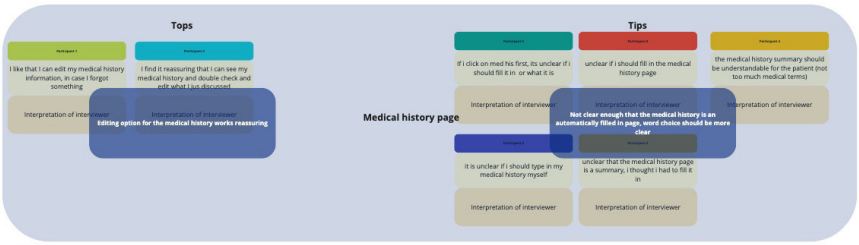
would be nice if the avatar also says a specific sentence before passing on to doctor

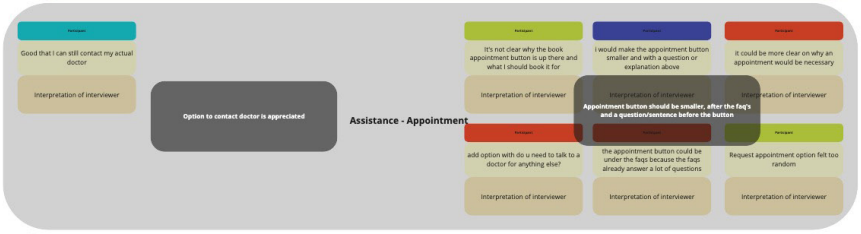
Interpretation of interviewer

Participant

i would make the appointment button smaller and with a question or explanation above

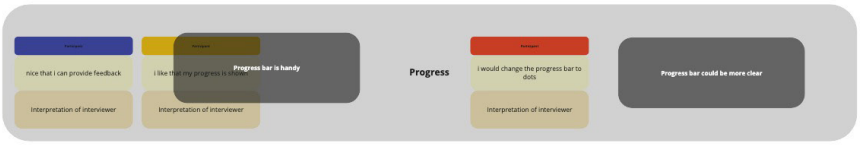
Interpretation of interviewer


Tops
I like that I can edit my medical history information, in case I forgot something
I find it reassuring that I can see my medical history and double check and edit what I us discussed
Interpretation of interviewer
Interpretation of interviewer
Editing option for the medical history works reassuring
Medical history page
Tips
if i click on med his first, its unclear if i should fill it in or what it is
unclear if i should fill in the medical history page
the medical history summary should be understandable for the patient (not too much medical terms)
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
Not clear enough that the medical history is an automatically filled in page, word choice should be more clear
it is unclear if i should type in my medical history myself
unclear that the medical history page is a summary, i thought i had to fill it in
Interpretation of interviewer
Interpretation of interviewer


Good that I can still contact my actual doctor
Interpretation of interviewer
Option to contact doctor is appreciated
Assistance - Appointment
It's not clear why the book appointment button is up there and what I should book it for
I would make the appointment button smaller and with a question or explanation above
it could be more clear on why an appointment would be necessary
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
Appointment button should be smaller, after the faq's and a question/sentence before the button
add option with clo u need to talk to a doctor for anything else?
the appointment button could be under the faqs because the faqs already answer a lot of questions
Request appointment option felt too random
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer


I really like the faqs, and now I know how the ai avatar works and that is not a replacement for my doctor
The faqs answers a lot of questions i had and i usually go through these on websites
the faqs are all very nice
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
Assistance - faqs
I would like to see the faq earlier on because i think they are really important
i would like to see the faqs earlier, before i start the anamnesis, maybe a reference to it
i think showing the faqs earlier on or more prominent would create even more trust
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
The faqs cover everything for if I'd be confused in some way
Interpretation of interviewer
FAQ's cover almost everything and clear up confusion
I think showing the faqs earlier on or more prominent would create even more trust
Interpretation of interviewer
The faq's should be shown or referred to before the anamnesis starts, this will create more trust


Normally I wouldn't check data safety, but I like that there is a visualisation of the infrastructure
The data safety really reassures me about my data usage
the data safety page looks more clear than im used to, not too much text and straight to the point
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
if the hierarchy in the data safety texts is better, I would feel more invited to read it
Interpretation of interviewer
The platform already felt trustworthy so i didnt read all the data safety
Interpretation of interviewer
Interpretation of interviewer
The data safety page creates a trustworthy feeling, it is clear and straight to the point and the visualisation increases the level of interest
Data safety
Hierarchy in the data safety text will increase interest even more


nice that i can provide feedback
Interpretation of interviewer
Progress bar is handy
Progress
I would change the progress bar to dots
Interpretation of interviewer
Progress bar could be more clear


I like the chat version more now, but mainly because of the robotic voice but normally i would prefer talking
I like that I have the choice to type or talk
The interaction felt natural with the avatar
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
avatar voice sounds robotic
Id like more explanation on wether i have an intake or checkup conversation
would be nice if the avatar also says a specific sentence before passing on to doctor
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
The avatar is empathetic when talking, she reassures me
I feel like i am in good hands even though she's an avatar
the talking version looks nice, i do wonder what it would feel like when you feel bad
Interpretation of interviewer
Interpretation of interviewer
Interpretation of interviewer
Avatar
the chat could be bigger en clearer
pop up message: I noticed that u haven't been active in a while
Add before anamnesis: Intake or follow up
Interpretation of interviewer
Interpretation of interviewer
I usually dont like talking to avatars, but i like that there is a type version
Interpretation of interviewer
Chat version adds to the experience, conversating with the avatar feels natural, empathetic and comforting
Voice of avatar sounds too robotic, chat version can be bigger
Add to pop up: I noticed you've been inactive


The colours don't clash and the interface looks simple and clean
Interpretation of interviewer
I like that the first thing I see is the avatar
Interpretation of interviewer
GOOD
The layout looks really clean
Interpretation of interviewer
I like the slide down function for the faqs
Interpretation of interviewer


i didnt realise i could scroll down on the page
Interpretation of interviewer
the hierarchy in text could be more clear
Interpretation of interviewer
TIPS
the text in the med his document should be changed to tists and not actions
Interpretation of interviewer
it would be nice to have an option before the anamnesis to know wether it an intake or follow up
Interpretation of interviewer


The word choice of the avatar is very empathetic en relaxing and feels personal
Interpretation of interviewer
The interaction with the avatar feels very caring, she tells me not to worry
Interpretation of interviewer
AVATAR INTERACTION
I like that I can continue later and that I get reminded to save first
Interpretation of interviewer
I like that I can also have the option to ask the avatar for help with the questions
Interpretation of interviewer

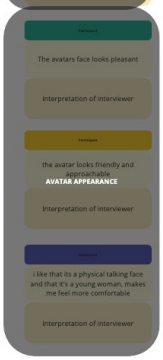

The word choice of the avatar is very empathetic en relaxing and feels personal
Interpretation of interviewer
The interaction with the avatar feels very caring, she tells me not to worry
Interpretation of interviewer
AVATAR INTERACTION
I like that I can continue later and that I get reminded to save first
Interpretation of interviewer
I like that I can also have the option to ask the avatar for help with the questions
Interpretation of interviewer


SAVE BUTTON
Interpretation of interviewer

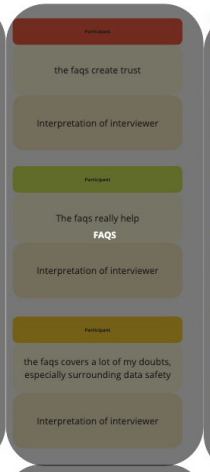

COLOURS
Interpretation of interviewer

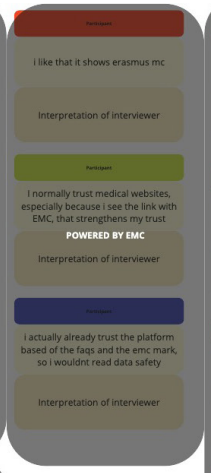

The word choice of the avatar is very
AVATAR CONVERSATION
Interpretation of interviewer

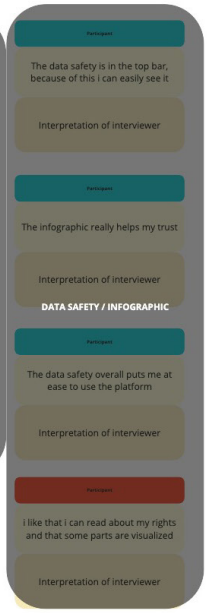

POP UP
Interpretation of interviewer


The avatars face looks pleasant
Interpretation of interviewer
the avatar looks friendly and approachable
AVATAR APPEARANCE
Interpretation of interviewer
i like that its a physical talking face and that it's a young woman, makes me feel more comfortable
Interpretation of interviewer

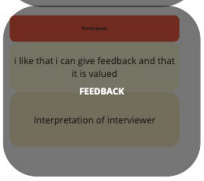

The clean layout creates more trust
Interpretation of interviewer
the blue makes it look medical which feels trustworthy
CLEAN LAYOUT / COLOURS
Interpretation of interviewer
everything looks clear and well formulated
Interpretation of interviewer

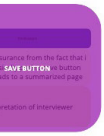

the faqs create trust
Interpretation of interviewer
The faqs really help
FAQS
Interpretation of interviewer
the faqs covers a lot of my doubts, especially surrounding data safety
Interpretation of interviewer

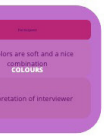

i like that it shows erasmus mc
Interpretation of interviewer
I normally trust medical websites, especially because i see the link with EMC, that strengthens my trust
POWERED BY EMC
Interpretation of interviewer
i actually already trust the platform based of the faqs and the emc mark, so i wouldnt read data safety
Interpretation of interviewer

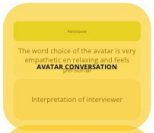

The data safety is in the top bar, because of this i can easily see it
Interpretation of interviewer
The infographic really helps my trust
Interpretation of interviewer
DATA SAFETY / INFOGRAPHIC
The data safety overall puts me at ease to use the platform
Interpretation of interviewer
i like that i can read about my rights and that some parts are visualized
Interpretation of interviewer


the summary gives me confirmation that it goes to my doctor
MEDICAL HISTORY
Interpretation of interviewer


i like that i can give feedback and that it is valued
FEEDBACK
Interpretation of interviewer


SAVE BUTTON
Interpretation of interviewer


COLOURS
Interpretation of interviewer


The word choice of the avatar is very
AVATAR CONVERSATION
Interpretation of interviewer


i like that the pop up asks if im okay
POP UP
Interpretation of interviewer


The avatars face looks pleasant
Interpretation of interviewer
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AVATAR APPEARANCE
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Interpretation of interviewer


The clean layout creates more trust
Interpretation of interviewer
the blue makes it look medical which feels trustworthy
CLEAN LAYOUT / COLOURS
Interpretation of interviewer
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Interpretation of interviewer
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FAQS
Interpretation of interviewer
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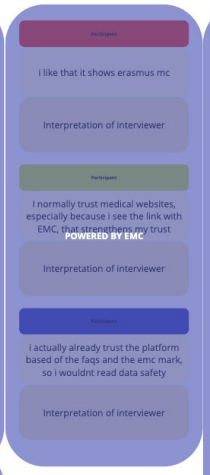
Interpretation of interviewer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Interpretation of interviewer
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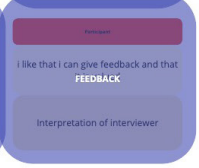
Interpretation of interviewer


The data safety is in the top bar, because of this i can easily see it
Interpretation of interviewer
The infographic really helps my trust
Interpretation of interviewer
DATA SAFETY / INFOGRAPHIC
The data safety overall puts me at ease to use the platform
Interpretation of interviewer
i like that i can read about my rights and that some parts are visualized
Interpretation of interviewer


the summary gives me confirmation that it goes to my doctor
MEDICAL HISTORY
Interpretation of interviewer


i like that i can give feedback and that it is valued
FEEDBACK
Interpretation of interviewer

Appendix H: Evaluation interviews

Viability

P1
What are your initial thoughts?
Overall, I think it is very good, especially for the basic questions. There are many people with low literacy and those who are socio-economically disadvantaged. I wonder if the avatar can adjust its language and vocabulary to effectively communicate with these individuals. I think it is quite workable, for example, in surgery, where the patients are relatively healthy younger individuals. However, I think it may be more challenging for older, complex patients with multiple comorbidities.
How well do you think this concept addresses the defined problem?
I can imagine that it is quite applicable there. Yes, definitely. For those standard pre-operative conversations.
What features or aspects stand out to you? (elaborate)
You get questions immediately, and I think many older people will wonder how to interact with it. And then you get an option right away that answers all your questions, so that is good.
Do you see any potential challenges in bringing this into the market?
I do think this is the future... In my field, I don't think so, but that's what everyone always thinks at first. But in a field where it is more routine to answer these questions and identify what to focus on, it can certainly be important.
Yes, I think it is very good in their field. It saves a lot of time, and people can often go off on tangents about things that are not relevant to the question. At my work, we are also dealing with this, but people are very resistant. The digitization of healthcare. But I think, specifically for what it was designed for, the pre-operative screening, as I understand it, it is quite good.
What improvements or changes do you suggest?
Maybe you could even consider showing the FAQ'S even as an pop up first and not a small icon in the corner.
Are there any particular concerns you have about the concept?
How does the AI adjust to the educational level of the person it is interacting with? I work in internal medicine. It is characterized by many diseases related to lifestyle, but also often by socio-economic status.
What if someone does not speak Dutch well? Low literacy remains a problem.
What I am concerned about is what if a patient does not really know what they have. Does the AI filter that out? Does it keep asking questions?
In terms of what you have set up now, I don't have major concerns. I think you have already solved a lot. It is very user-friendly.

P2
What are your initial thoughts?
"Yes, look, I currently work at Erasmus, and what I often notice is that people, at least in our department, take a long time to get an appointment. Sometimes, they just need a bit of reassurance. In that case, such an avatar would be in the right place because, if I understand correctly, this is for people who want to discuss something in the short term. The letter goes to the doctor, and they review it and provide an answer. In many specialisms, it can be quite an outcome because it can keep the pressure on the work list or waiting lists lower. Some people, I think, also just have a short question or need a bit of reassurance because it takes a long time before they get another appointment. So, I think it's good."
How well do you think this concept addresses the defined problem?
"What I do wonder about is, what answers does the avatar provide? Because I think that's AI-generated, right? Yes, okay. I think with that emoji, the avatar you have, and if you can change it, it must give people a good feeling. Even if they don't see the doctor, they get something similar from time to time. Yes, exactly. Yes, okay. No, but I think it's something that people could use. I think it's especially good for younger people be-

cause, with work and such, they might not easily equip themselves in the short term. So, that's fine. They can do it on their own time, which I think the new generation needs anyway."
Do you see any potential challenges in bringing this into the market?
"For older generations, I don't know. I have a lot of elderly people in the clinic, and they see it as a kind of outing; they finally can express themselves. This doesn't replace the social and emotional aspect; it's purely to alleviate concerns for the patient and the hospital itself. But for the cost, it is very good. Otherwise, it feels like customer service on a website, very impersonal. This is personal. People may not see the value initially, but it can help. The function where you can talk or type is also good. Some people might worry about their Dutch, so the talk feature is helpful."
What features or aspects stand out to you, and could you elaborate?
"I think the talking feature is good. You have patients with low literacy for whom this is harder, but if someone can help them get started, they can use the talking feature. They might not be able to type well. The ability to read through everything at the end is also nice, especially for people unfamiliar with AI. They want to make sure everything is correct, and many people want their own records. So, being able to download the brief is also good."
What improvements or changes do you suggest?
"It shouldn't be a replacement because it misses the emotional part, but as you said, it's not meant to replace. Adding more language options could be useful. If someone always sees the same doctor and suddenly sees an avatar of the opposite gender, it might feel odd. Keeping consistency in appearance might help."
Are there any particular concerns you have about the concept?
"One concern is for people with acute issues who might use this approach and delay seeking help. People who avoid care might prefer this, but they often need the most help. In emergencies, they should go to the hospital directly. Also, making sure the avatar is not too different from their usual doctor can help make the interaction feel more familiar. Overall, the avatar's friendly appearance and attentive demeanor are more important than specific lip movements. I think these are things you've probably heard before, but overall, it looks good and could be very useful."

P3
What are your initial thoughts?
Ja Ik denk dat heel handig is. Ik heb zelf ook gewerkt als consult assistent, dat is dan net een iets andere insteek waarbij je ook allemaal vragenlijsten vooraf aan het gesprek al invult en ik denk dat het ook heel handig is om te gebruiken. zeker bij dat soort standaard dingen, denk ik dat het heel veel tijd kan schelen. Als je die vragenlijst afwerkt, denk ik dat het wel handig is dat je aan het eind inderdaad dan ook zo een overzicht krijgt. Van oké, wat heb ik nou eigenlijk beantwoord en klopt het inderdaad. Maar ik denk dat het wel heel handig is voor een arts om bepaalde dingen al op voorhand te weten en te kunnen lezen. En Ik denk dat het zoals ik het nu zie dat het best wel gebruiksvriendelijk is. Je moet wel opletten met patiënten, dat ze het niet te afstandelijk vinden. Maar ik denk dat het al beter is dan alleen een chatbox, en dat je hier er ook echt mee kunt praten.

How well do you think this concept addresses the defined problem?
Ja ik denk dat het heel veel tijd bespaart om zo een gesprek vooraf te doen online. Als dit platform alles verzamelt en de dokter het bij het consult krijgt te zien, dan kan dit heel veel tijd schelen.
Ook voor een patiënt dat hij dan van tevoren dit al kan doen en dat die bij de arts andere dingen kan aankaarten die hij misschien niet snapte. Ook voor de patient scheelt het tijd en hoeft die niet zo lang te zitten in het ziekenhuis. Op deze manier kan hij het zegmaar invullen in zn eigen tijd.

What features or aspects stand out to you, and could you elaborate?

Nou, Ik vind het wel leuk dat je beide opties hebt dat je kan praten en kan kan typen, meestal heb je Alleen dat je maar kan typen bij zo een simpel iets, dus Ik vind het wel grappig dat je nu ook kan praten gelijk.
Ja, het is heel simpel ontworpen en dat dan op een goeie manier, het spreekt voor zich. En ook wel fijn dat de patient kan aangeven als hij vragen heeft.

Do you see any potential challenges in bringing this into the market?
De MR dat je daarmee moet uitkijken, de Medical Device Regulation Omdat Ik weet niet of dit wordt gezien als software. Het is software, maar of het ook wordt gezien als een Medical device ondersteuning. Daar moet je even naar kijken of dat geen of dat geen probleem is. Data safety die heb je denk ik al uitgezocht, dus Dat is wel een goeie. Als je met het software bedrijf Hix samenwerkt of in ieder geval met een beschermd platform kan dat ook nog wat toevoegen. En misschien samenwerken met een bestaand EMC platform zodat patienten niet opnieuwe iets hoeven te downloaden.

What improvements or changes do you suggest?
op eerste blik denk ik dat het gewoon best wel gewoon voor zichzelf spreekt. Het is heel simpel, dus Ik heb geen directe verbetering.

Are there any particular concerns you have about the concept?
Ja concerns, ik denk dat je rekening moet houden voor welke arts dit wordt gebruikt. Elke arts heeft misschien net andere vragen. Bij een pre operatief gesprek zou het perfect werken met een standaard vragen lijst. Maar voor in de toekomst als het verder moet worden gebruikt zou ik je aanraden om specifiek met artsen te praten om te achterhalen watvoor vragen zij zouden stellen. Ook wel ervoor zorgen dat het gesprek goed samengevat naar de arts door gaat en niet dat de arts nog 10 paginas moet lezen maar dat alleen het relevante erin staat..
En dat je dus de relevante dingen eigenlijk eruit pikt. Je hoeft niet te weten. En ja dat de avatar niet gaat v astlopen, maar ik denk dat dat wel goed komt.

Feasiblity

What are your initial impressions?
Nice, het ziet er heel clean uit
Het is gewoon minimalistisch ontworpen wat heel duidelijk maakt voor patiënten wat ze er kunnen doen. Je kunt bijna niet op een verkeerde knop klikken of iets verkeerds doen, dus Dat is denk ik vanuit user experience en een usability perspectief heel goed

Can you discuss the usability and user experience of the prototype? Are there any particular features or interfaces that stand out to you?
De FAQ 's, maar ook de data policy, die legt veel uit. Vragen die mensen zowieso hebben waarvan we eigenlijk al weten dat ze ze hebben, die pak je proactief aan en die worden getackeld.
Wat ik zelf geloof ik anders zou doen, is ik zou gewoon 1 user interaction maken waarin zeg maar zowel praten als typen ondersteund is en dat ze met een microfoontje een speaker icoontje dit aan of uitzetten en op die manier zelf kunnen kiezen wat ze willen. Ik denk dat Mensen dat wel snappen, maar dat is een persoonlijke design keuze.Nou ja dus nog eventjes aandacht voor die dataretentie. Misschien nog 1 stap waar je mensen een avatar laat kiezen, bijvoorbeeld dat je er 4, 5 of 8 laat zien en dat mensen daar klikken en dan beginnen.
Maar ja, ziet er goed uit.

Based on the design, how feasible do you think it will be to implement the underlying technology for this platform? What are its potential strengths and weaknesses?
Ik kan de technology voornamelijk vanuit het perspectief van de avatar bekijken. Nou, Dat is feasible, het bestaat, dus dat de 100% feasible. Wat ik niet zo goed kan inschatten, maar waarschnijnlijk wel mogelijk zal zijn is de verwerking van het gesprek naar een puntgewijze samenvatting. Die samenvatting zag er heel mooi uit en duidelijk. Ik durf niet volmondig te zeggen dat dat kan, dus daar kan nog onderzoek naar worden

gedaan.

Considering the current design, what do you think about the platform's potential to scale and integrate with existing systems? Are there any foreseeable challenges?
Zoals ik eerder zei, de informatie die naar de patientendossier wordt verwerkt is een hele belangrijke integratie en dat moet wel echt goed gaan. Ook moet het worden onderzocht hoe de data ook echt veilig blijft en bijvoorbeeld allemaal in Europa blijft. Dus dat zijn de voornaamste dingen waar je gewoon goed op moet letten, maar ook daarvoor zijn natuurlijk allemaal oplossingen voor te verzinnen. Het moet alleen duidelijk worden gemaakt dat degene die dit mogelijk zou implementeren daar ook bewust aandacht aan zou besteden.

Although this is a prototype, what security measures and compliance considerations should be kept in mind when developing the actual platform?
Inderdaad wat ik al een beetje benoemd heb, de security, maar ook GDPR moet aandacht aan worden besteed.

What improvements or changes would you suggest to enhance the prototype's feasibility for actual development? Are there any particular concerns or risks you foresee?
Identificatie van de patiënt, dus hoe weten ze zeker dat ik het ook echt ben en dat de data ook in het goede record terecht komt. Er moet een identificatie stap zijn zodat ik niet bijvoorbeeld voor de grap voor de buurman kan invullen. Dus ja, identificatie authenticatie. Ook zoals ik al zei, zou ik 1 UI doen waar degene makkelijker aangeeft of ze willen typen of praten en zou ik een optie voor avatar choice toevoegen.