



## Survey and Interview Design

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### Executive summary

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This present deliverable builds on the findings of deliverable 5.1 (state of the art and literature review) and is also informed by deliverable 1.1 (guidelines for ethics by design). The objective of this deliverable is to support D1.1, providing an initial overview of what the interview and survey protocol used in the implementation of the ethics by design methodology will look like. It is important to point out that the questions contained within this document have been extracted from existing batteries (see Bechmann et al., 2020; AoIR 2019; Institute for the Future, 2018) and will need to be tailored more specifically to the GuestXR context. The interview questions contained in the deliverable will be modified and used by the ethics and responsible innovation researchers in conversation with project partners, as well as by project partners within their own meetings to encourage ethical reflection. The deliverable also contains an outline of the “7 questions” technique, pioneered by Shell in its scenario planning process and lists questions that can also be modified for use within the context of GuestXR. In addition, this document will contain the protocol for a visioning/scenario workshop which will be used in the place of a standard survey in order to engage project partners in ethical questions about GuestXR during the next face to face consortium meeting in June 2023. The protocol is currently under development and will be sent to all partners and added to this document before the workshop takes place. As with D1.1, the script and survey contained herein will be implemented by ethics and/or responsible innovation researchers, in the context of close collaboration with project partners, for example in the context of a research stay or “embedding” of an ethics and/or responsible innovation researcher within a laboratory or relevant scientific group.

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## List of abbreviations

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Abbreviation	Explanation
AoIR	Association of Internet Researchers
CEO	Chief Executive Officer
UM	Maastricht University

## Introduction

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This document provides a detailed overview of tools that will be utilised by UM in order to implement the ethics by design methodology. As outlined in D1.1, what makes ethics by design approaches different from other user-centred design methodologies is that they typically involve asking ethical questions right from the very start, involving diverse stakeholders in ongoing discussions, so as to embed values of ethical importance throughout the design and development process. These approaches then aim to steer technological artefacts towards desirable goals, by incorporating the needs and values of users, thereby presumably improving their moral acceptability in the long run (see D1.1).

As suggested earlier, the questions included below are drawn from existing batteries and have only been lightly modified. They will require further refinement in order to make them relevant and interesting from the perspective of GuestXR.

In each case, we first introduce the approaches, providing some context to how they were developed and are typically deployed, before describing the protocol for how we will use them within GuestXR.

Essentially, these protocols are intended to provide an idea of the types of activities the UM team will utilize to guide partners through how to embed ethics by design throughout the project. Project partners are also encouraged to regularly re-visit the questions provided below and to use them to encourage ethical reflection within their own teams. It is also important to note that these protocols are subject to change as the project grows and evolves as we will utilize knowledge gained throughout the project to feed into and develop these methodologies as we go along.



## 1 Interview Design

### 1.1 Reflection Gate Questions

As outlined in D1.1, stage-gating identifies different phases of the research process as distinct and punctuated by so-called decision gates. In the context of ethics by design however, we understand these moments as *reflection gates* (see D1.1). Though stage-gating may imply a somewhat linear understanding of the research process, it does provide a useful way of thinking about opportune moments for reflection. The questions outlined below provide an interview script that will be used by the UM team to reflect on with project partners as various stages throughout the project. Though they are grouped here under the phases prepare, explore, understand, and implement (see D1.1), these questions can be relevant at various stages and so should be reviewed regularly. The questions below have been put together based upon questions found in Bechmann et al., (2020); AoIR (2019) and the Institute for the Future (2018).



### 1.1.1 Prepare

Responsible Innovation Principle	Questions to be addressed
<b>Anticipate</b>	<p>Why should this project be done and what ethical issues could the project potentially give rise to?</p> <p>Is the researcher able to understand and explain in an accessible manner the technologies that are to be used in the research?</p> <p>To what extent can you predict the long-term societal outcomes of the project?</p> <p>How will the research benefit society and specific stakeholders?</p> <p>Will the research aims create potential risks of harm for the individuals and groups involved directly or indirectly?</p>
<b>Reflect</b>	<p>How can the researchers characterize the relevant norms (e.g. privacy, social hierarchy) and sensitivities?</p> <p>What actions should be taken to ensure research integrity and compliance with ethical standards?</p> <p>Does the project involve any risks of negative impacts?</p> <p>Should virtual worlds be considered “public” spaces?</p> <p>What constitutes “privacy” in such places?</p> <p>Should virtual agents be considered as persons and afforded the same protections as human subjects?</p>
<b>Include</b>	<p>Who are the data subjects and affected stakeholders involved in this project (directly or indirectly)?</p> <p>Who will be involved in identifying the ethical issues and possible solutions to the issues in the project, and how?</p> <p>What actions will be taken to ensure diverse perspectives on the potential ethical issues arising in your project?</p>
<b>Respond</b>	<p>Can you change the course of work in response to unforeseen ethical issues arising throughout the project, and how?</p>



## 1.1.2 Explore

<p><b>Anticipate</b></p>	<p>Is all of the data being collected necessary, relevant and not excessive in relation to the research aim?</p> <p>Do the datasets contain identifiers that are particularly sensitive or even protected classes? If so, what purpose do they serve?</p> <p>What future impacts may the methods developed for data collection/testing have, and will they be applicable for other types of research?</p> <p>Can you imagine possible scenarios of misuse? Can you think of examples?</p>
<p><b>Reflect</b></p>	<p>Does your data collection require informed consent from participants?</p> <p>Have the ethical aspects related to data collection and data storage been sufficiently addressed?</p> <p>Does your project involve any risks of breach of confidentiality and what might they be?</p> <p>Does the system collect more information than it needs for the immediate purposes of the project?</p>
<p><b>Include</b></p>	<p>Who has been involved in identifying the ethics-related issues to be considered in the data collection?</p> <p>Have certain groups of potential participants been excluded from the data collection due to ethical concerns, and how may this limit your analysis?</p>
<p><b>Respond</b></p>	<p>Is it possible to change procedures for data collection and storage in response to ethical issues arising in this phase?</p>





### 1.1.3 Understand

<b>Anticipate</b>	<p>What future impacts extending beyond the focus of this project may your findings have?</p> <p>Can you imagine possible scenarios of misuse?</p> <p>Could your findings be misinterpreted, and how?</p>
<b>Reflect</b>	<p>What ethics-related issues are involved in your data analysis?</p> <p>Did your analysis devote attention to possible variations across sub-groups of participants, and how?</p> <p>Does your analysis ensure full anonymity for the involved research subjects?</p>
<b>Include</b>	<p>Have you disaggregated the data analysis by socio-demographic categories?</p>
<b>Respond</b>	<p>Is it possible to change procedures for data analysis and evaluation in response to ethical issues arising in this phase?</p>

### 1.1.4 Improve & Implement

<b>Anticipate</b>	<p>What could be the downstream consequence for data subjects for erroneous identifications, labelling, or categorization?</p> <p>To what extent can the researcher foresee how the data collected through the research project inferences may be used in further, third-party systems that make decisions about people?</p> <p>Is it foreseeable that the methodologies, actions, and resulting knowledge may be used for malicious ends in another context than research and to what extent can this be mitigated?</p> <p>Is it possible to contain the potential malevolent future uses by design?</p> <p>Can you imagine possible scenarios where the outcomes of the project may be misrepresented or misconstrued in the public debate?</p>
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<p><b>Reflect</b></p>	<p>Which values did the project decide to promote, and how?</p> <p>Can the researcher give an account of how the model operates?</p> <p>Can the researcher give an account of how research data was generated?</p> <p>What choices have researchers made in constructing the model, choosing and cleaning the training data and how has this affected the results and prediction?</p> <p>What kind of negotiations have taken place in the decision-making around model selection, adjustments and data modelling in the research process that can affect the result and prediction?</p> <p>Is the researcher able to explain why the approach by technical means and the use of AI are better suited than any alternative methodology?</p>
<p><b>Include</b></p>	<p>What is the cultural and sociodemographic profile of the datasets used by the researcher to train the models?</p> <p>To what extent does the cultural and sociodemographic profile of the training data allow for generalizability of the resulting findings or predictors from the research study?</p> <p>Are there particular groups which may be advantaged or disadvantaged, in the context in which the researcher is deploying an AI-system?</p> <p>What is the potential damaging effect of uncertainty and error-rates to different groups?</p> <p>How has the demographic profile of the researcher(s) affected the composition of the training data?</p>
<p><b>Respond</b></p>	<p>What can be done to ensure that your results are not misrepresented or misinterpreted in the public debate?</p> <p>How will you brief the participating research subjects about the project results?</p>



## 1.2 7 Questions technique

The 7 questions technique was initially developed by Shell as part of its scenario planning process, which has now been in use for more than 45 years. It is essentially a foresight technique, designed to enable the identification of significant drivers of change. As an interview technique, the 7 questions approach can be used in order to gather insights from a diverse range of both internal and stakeholders. The open ended questions can be used both to structure meetings with key project stakeholders, as well as to generate insights regarding what the future of the project might look like. It can be used with individuals, groups, or as part of a workshop. The 7 questions technique is typically used as a first step in understanding the different goals, expectations, and concerns of various stakeholders. Further techniques (such as the workshop outlined in the next section) can then be used in order to expand on the findings.

Top tips for using the 7 Questions technique (from <a href="http://foresightprojects.blog.gov.uk">foresightprojects.blog.gov.uk</a> )
1. Seek out a diverse range of people to interview and try to reach beyond the usual organisations you contact.
2. Don't send out all the invites at once. We found that academia was happy to help, but CEOs less able to give up their time. Send invites for interviews in tranches to ensure a balance of views (this will also help manage the volume of work).
3. Some people find it hard to answer open ended, strategic questions prepare in advance some supplementary closed questions which can be used to prompt interviewees or bring the interview back on track.
4. The first two questions set the tone for the rest of the interview - if their answers are too narrow, ask for more examples before moving on to the next one.
5. Consider providing the person you are interviewing with generic examples of drivers, so they are primed to give you the kind of information you want.
6. Always ask who else you should be speaking to - finding people with the right expertise and background is more important than finding the right organisation.

As with any interview technique, with the 7 questions approach it is important to first clearly define what issues will be explored. It is also helpful to come up with a central focal question and to fully brief interviewees ahead of time on the issues and the objectives, as well as the format and purpose of the interview.

As already discussed, it is useful to start interviewing early in any project as interviews help to define the scope of the project and its critical issues. It is therefore important to think about who to interview as soon as possible. The number of interviews depends on



the scope of the project and the range of its stakeholders but to get representative results typically requires between 15 to 20 interviews.

Within the 7 Questions approach, the critical issues typically considered for the policy or strategy area being considered are:

- What a favourable outcome is
- What an unfavourable outcome is
- The key operational, structural and cultural changes that need to be made to deliver the favourable outcome
- Lessons from the past
- Decisions which must be prioritised
- What the interviewee would do if (s)he had absolute authority

The questions are open ended, providing a structured script for the interviewer, within which interviewees speak as much or as little as they want. Depending on the context, interviewers may or may not prompt interviewees with follow-up questions.

Further interviews may be carried out at later stages in the project in order to uncover remaining or emerging issues as well as to include more people in the process. For example, further external stakeholders can provide a different perspective on the issues at hand.

The interview typically begins with the invitation for the participant(s) to talk about what they see as the key factors shaping the future. When they have explained their initial thoughts, the questions are then used as a set of prompts in order to encourage them to explore their ideas further. The seven questions are as follows (from SAMI Consulting: <https://samiconsulting.co.uk/techniques-seven-questions/>):

Thinking over a time horizon of X years:

1. <b>Clairvoyant</b>	If you could spend some time with someone who knew the future of ....., a clairvoyant or oracle if such existed, what would you want to know? (i.e. what are the critical issues?)
2. <b>An optimistic outcome</b>	Optimistic but realistic. If things went well, how would you expect the ..... to develop and what would be the signs of success?
3. <b>A pessimistic outcome</b>	How could the environment change to threaten .....? How could ..... deteriorate?
4. <b>The internal situation</b>	From your knowledge of the culture, organization, systems and resources (including people), which impact on ....., how would these have to be changed to achieve the optimistic outcome?
5. <b>Looking back 10/20 years</b>	What factors shaped ..... as it is today?
6. <b>Looking forward</b>	What decisions need to be made in the near term to achieve the desired long-term outcome for .....?
7. <b>The Epitaph</b>	If you had a mandate, free of all constraints, what more would you do to ensure a successful future for .....?



Before the interview process is carried out it is also important to consider how the results are going to be recorded and analyzed and to ensure that this is keeping with the data collection protocols within the project. Interviews are typically transcribed or written up in order for the interviewee for them to verify – particularly if there are contentious issues or if quotations from the interviews are going to be used to produce a paper for wider circulation. In any case, concerns regarding anonymity and consent should be discussed in advance.

Insights generated by the 7 questions technique can be collated and thematized and used to inform later techniques, such as scenarios workshops, as well as revisited at various stages throughout the project.

## 2 Survey Design

### 2.1 Visioning Workshop

UM are in the process of designing a value sensitive visioning workshop which will be carried out with all project partners in June 2023. For an introduction to value sensitive scenario workshops see D1.1.

The workshop will be used as a means to survey project member's attitudes towards the future of GuestXR as well as to encourage interaction and engagement with ethical concerns throughout the project.

This section will be updated and a full protocol will be provided to project members before the workshop takes place.

### 3 CONCLUSIONS

This document provides a detailed overview of the interview design and survey strategy which will be used throughout the project as a part of the ethics by design methodology. The interview questions can be used by any project partner, at various stages, in order to encourage their own ethical reflection and deliberation. The UM team will use these questions to guide discussions with project partners during WP meetings as well as one to one sessions. Both the reflection gate questions and 7 questions technique will be used in order to broadly survey stakeholders within the project. Similarly, the visioning workshop planned for June 2023 will also be used in order to survey project partners as well as to engage all of the members of the consortium in thinking about the future of GuestXR. The workshop protocol will be developed and added to this document in M13 and M14.



## 4 REFERENCES

- [1] AOIR (2019). Internet Research: Ethical Guidelines 3.0. Retrieved December 2, 2022, from <https://aoir.org/reports/ethics3.pdf>
- [2] Bechmann, A. & Zevenbergen, B. (2020). AI and Machine Learning: Internet Research Ethics Guidelines, IRE 3.0 Companion 6.1, Association of Internet Researchers. Retrieved December 2, 2022, from <https://aoir.org/reports/ethics3.pdf>
- [3] Institute for the Future (2018). Ethical Operating System. Retrieved December 2, 2022, from <https://ethicalos.org/>



