

TechEthos: Eliciting Values & Attitudes through a scenario-based research approach

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Brief Abstract

The EU-funded TechEthos project aims to develop ethical guidelines for new and emerging technologies. To develop these guidelines, we use a scenario-based research approach that allows stakeholders to express their values and attitudes on the ethical dimension of uncertain (new and emerging) technologies and their promises in climate engineering, digital extended reality, and neurotechnologies. By using scenarios as boundary objects, the approach allows for the integration of different levels of understanding and perspectives. Taking digital extended reality technologies as an example, this paper will provide insight into the methodological framework and the results of expert and citizen responses and reflections.

Extended Abstract

Given the uncertainty accompanying the progressing path of new and emerging technologies, guidelines for their development are necessary to consider social desirability accordingly. However, as RRI and STS literature points out, eliciting the social desirability of diverse stakeholder groups, involving different levels of understanding and perspectives, creates practical challenges.

TechEthos is an EU-funded project that deals with the ethical challenges connected to new and emerging technologies anticipated to have high socio-economic as well as socio-cultural impact. It aims to facilitate “ethics by design” and will produce operational ethics guidelines for three technology families (Neurotechnologies, Climate Engineering Technologies and Digital Extended Realities) for researchers, research ethics committees and policy makers. To reconcile the needs of research and innovation and the concerns of society, this paper will present a framework to elicit the values & attitudes using a scenario-based research approach. Using scenarios as boundary objects, that represent possible futures under the impact of new and emerging technologies, the approach enables stakeholders to express their positions with regards to the ethical dimension of these uncertain technologies.

The scenario-based research approach was separated into three steps:

1. The work began with the identification of trends, drivers and 'wildcards' which lead into three basic scenarios for each selected technology family (nine in total). These scenarios were the foundation of the process and served as boundary objects for facilitating further discussions and to obtain reflections on the ethical implications of the selected technology families.
2. Through digital focus groups, we discussed the developed scenarios with experts from different fields. Using the scenarios as stimulus for discussion, they allowed to detect values & attitudes towards the implications of the selected technologies, for the discussion about possible further ethical implications and enabled the development of early proposals or solutions.
3. In a third step, we conducted citizen engagement activities in six different European countries. We invited participants from the general public and vulnerable groups in particular to engage with the scenarios in form of a card game. Here, the scenarios helped to elicit societal values & attitudes towards the technology families. The created results will feed into operationalizing, complementing, and enhancing ethical and legal frameworks. These results will feed into operationalizing, complementing, and enhancing ethical and legal frameworks.

The results from the expert and citizen engagements will feed into operationalizing, complementing, and enhancing ethical and legal frameworks of the technology families mentioned above.

Along the example of digital extended reality technologies (e.g. Natural Language Processing, VR & AR, Metaverse, and others), this paper will present the methodological framework concerning the scenario-based research approach and allow an insight into the first results of the study.

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