



TechEthos

Ethics by design for technologies with high socio-economic impact

Eva Buchinger, AIT, TechEthos Coordinator



Ethics by design

TechEthos aim

We will discuss and facilitate “ethics by design” ...

...as an approach to bring ethical and societal values into the design and development of new and emerging technologies from the very beginning of the process.

*Ethics by design in HEU “For Horizon Europe projects (...) start thinking about ethics while designing your proposal (...) use the **ethics by design** methodology for highly innovative activities (...).” (https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/how-to-complete-your-ethics-self-assessment_en.pdf)*

Ethics guidelines

TechEthos result

We will make ethics operational ...

...by ensuring that reconciled needs of research and innovation and ethical concerns of the society are translated into actionable guidelines.

Ethical & Socio-economic relevance

TechEthos scope

The TechEthos portfolio comprises three new and emerging technologies with a high socio-economic impact and significant ethics dimensions.

Climate engineering | Digital extended reality | Neurotechnologies

For these technologies we will explore the awareness, acceptance and aspirations of academia, industry and the general public alike and reflect them in the guidelines.



Extended Reality XR

TechEthos focus

Extended Reality refers to AI-powered digital technologies (hardware and software) capable of perceiving and processing human sensorial outputs, e.g., voice, gestures, language, movement, emotions and other elements of human communication).

By processing such human-related data, extended or mixed virtual scenarios (e.g., visual, audio, linguistic or haptic) can be tailor-made or "customized" based on the user interest and behaviour. These technologies can be used to profile, model, predict, discriminate, and **influence the user's behaviour or nudge their choices**, as well as responding to these types of signals by creating an extended visual, audio, linguistic or haptic digital environment for users.

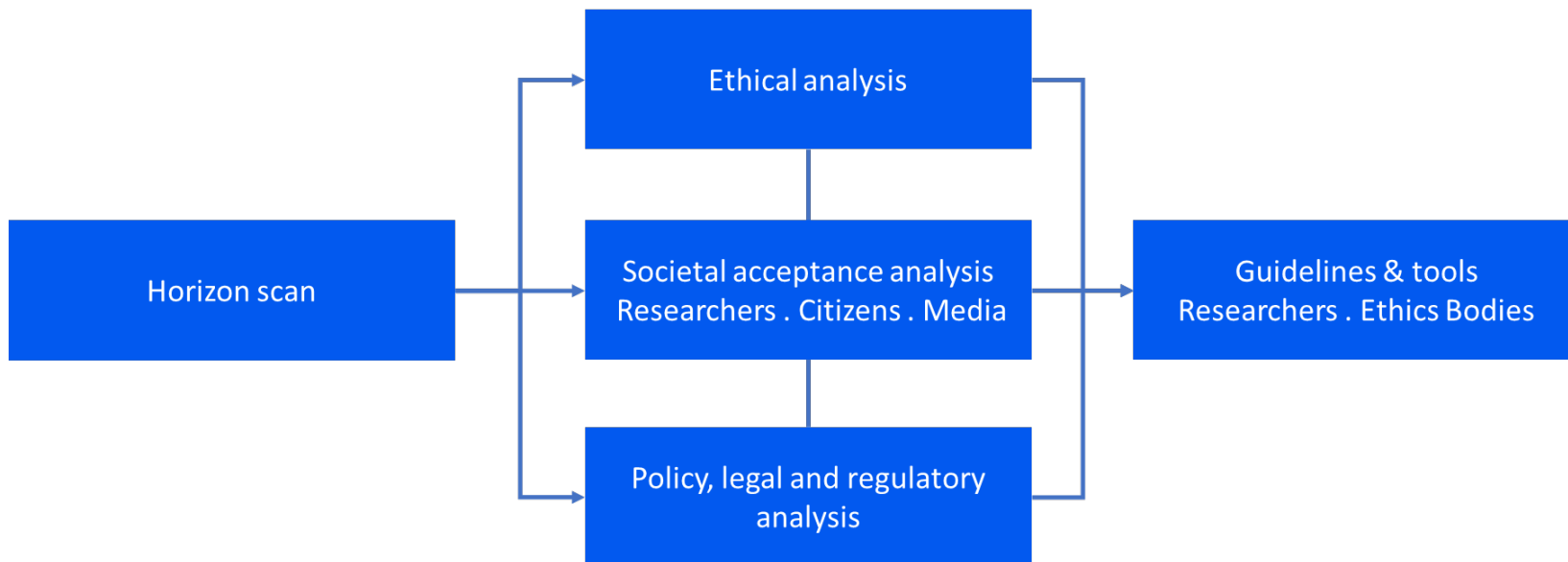


Approach TechEthos (2021-2023)

SCAN

ANALYSE

ENHANCE



Building on experience

e.g. projects

PANELFIT

SIENNA

SATORI

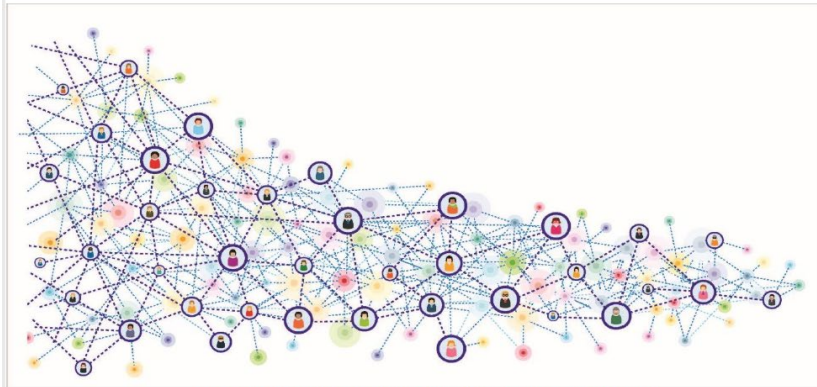
SHERPA



SHERPA

Shaping the ethical dimensions of smart information systems– a
European perspective (SHERPA)

**Guidelines for the Ethical Development of AI
and Big Data Systems: An Ethics by Design approach**



Main authors: Philip Brey, Björn Lundgren, Kevin Macnish, and Mark Ryan.

Other contributors: Andreas Andreou, Laurence Brooks, Tilimbe Jiya, Renate Klar, Dirk Lanzareth, Jonne Maas, Isaac Oluoch, and Bernd Stahl.

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AI Ethics by design principles

Example SHERPA on AI & Big Data

- Human agency, liberty and dignity
- Technical robustness and safety
- Privacy and data governance
- Transparency
- Diversity, non-discrimination and fairness
- Individual, societal and environmental wellbeing
- Accountability

Example EC on AI

- Respect for human agency
- Privacy, personal data protection and data governance
- Fairness
- Individual, social, and environmental well-being
- Transparency
- Accountability and oversight

TECHETHOS

FUTURE ○ TECHNOLOGY ○ ETHICS

Thank you for your attention