

A FRAMEWORK FOR ETHICAL IMPACT ASSESSMENT

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ETHICS ASSESSMENT

Ethics assessment of research and innovation:

The determination and evaluation of ethical aspects of R&I, as done in research ethics committees, a.o. (AKA ethics review)

SHORTCOMINGS OF ETHICS ASSESSMENT

EA tends to focus on ethical issues that occur **DURING** R&I processes (e.g., treatment of human subjects and animals, informed consent, research integrity)

No good method to address potential and actual **IMPACTS** of R&I on **SOCIETY**

ETHICAL IMPACT ASSESSMENT

A structured procedure for (1) anticipating, (2) identifying, (3) evaluating and (4) resolving ethical impacts of research and innovation

Ethical impact = impact that raises one or more ethical issues (e.g., privacy, fairness, freedom, human dignity, harm)

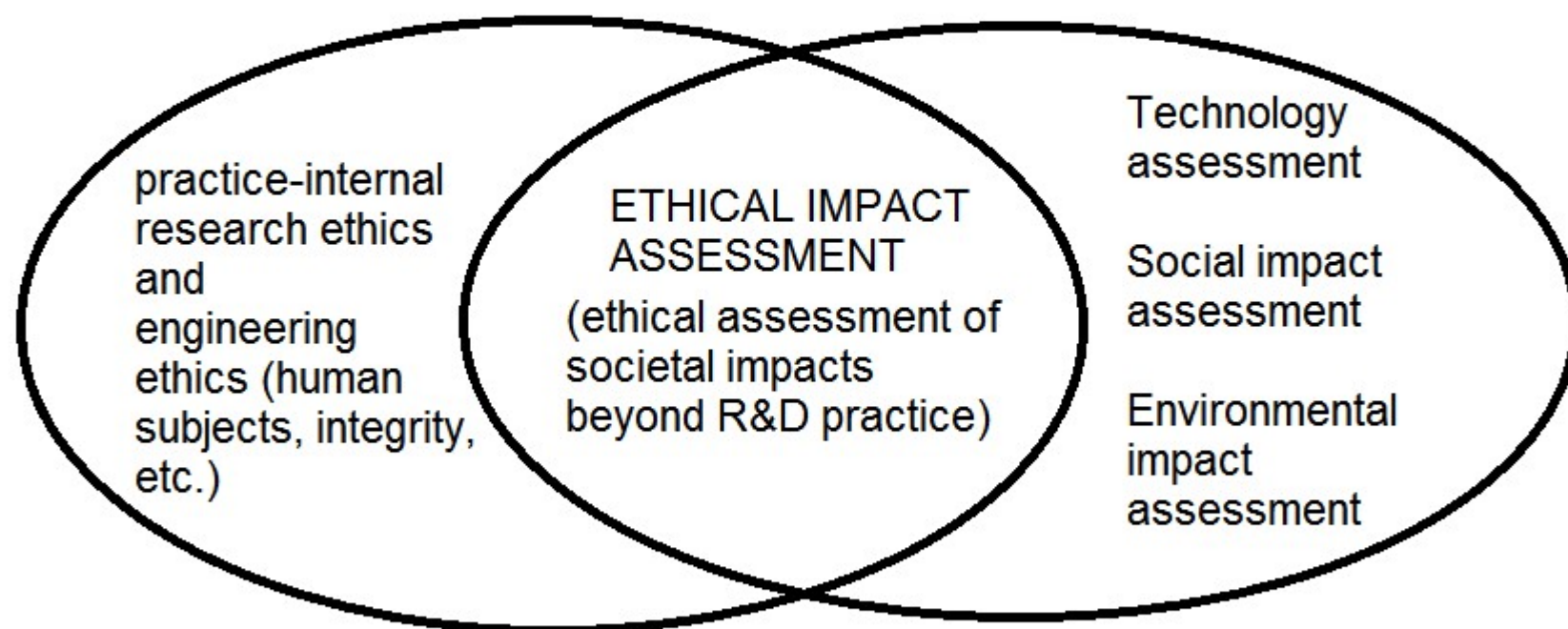
ETHICAL IMPACT ASSESSMENT AND RRI

EIA will allow researchers and innovators,
and associated organisations, to take
responsibility for impacts of R&I

Thus it is a method for including ethics in
Responsible Research and Innovation (RRI)

ETHICS ASSESSMENT

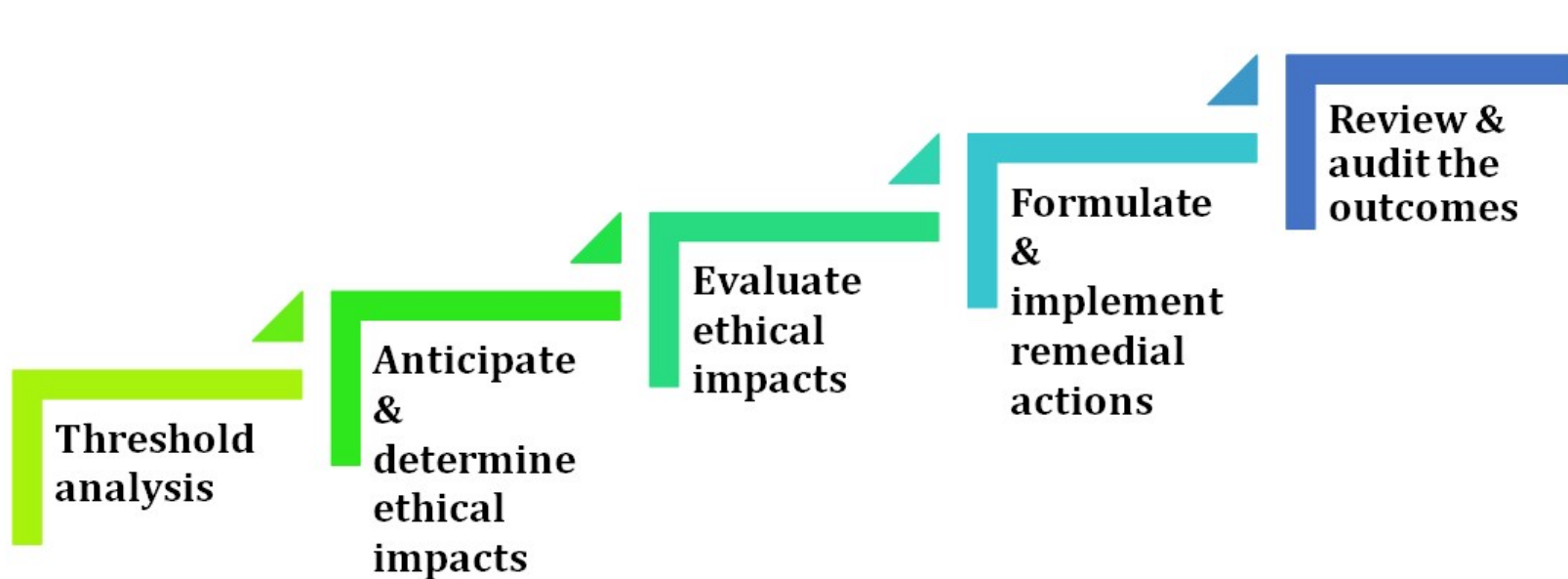
IMPACT ASSESSMENT



- The EIA framework (100+ page report) has been constructed as a synthesis of the literature on ethical impact assessment and foresight studies
- A CEN standard (out in a few months) has been based on this report

STRUCTURE OF EIA

- Five stages:



THRESHOLD ANALYSIS

- Purpose is to determine whether an EIA is needed and what level of EIA is needed
- The assessor needs to complete a questionnaire
- The outcome of the questionnaire determines the level of the EIA
- According to the outcome of the threshold analysis, the assessor needs to prepare the EIA (budget allocation, team composition) and present an EIA plan

ETHICAL IMPACT ANTICIPATION AND DETERMINATION

- Existing work in the relevant field is reviewed
- Appropriate foresight methods are selected
- Relevant data is collected (evidence based, expert consultations, stakeholder consultations, creativity exercises)
- Possible, probable and/or preferable ethical impacts are determined
- These impacts are documented and presented to the relevant stakeholders

EXAMPLE ETHICAL IMPACTS

- Future robots may limit freedom of movement of human beings
- Self-driving cars may make collision choices that are morally problematic and introduce new liabilities
- Human genomics research may expose patients to information about health risks that they may not want to receive
- Human enhancement technologies may exacerbate inequalities in society

ETHICAL IMPACT EVALUATION

- This is the stage at which ethical issues are studied and evaluated
- The relative importance of ethical impacts is assessed
- Potential or actual conflicts of values are identified and, if possible, resolved
- The ethical impact evaluations are documented and presented to the relevant stakeholders

REMEDIAL ACTIONS

- Aim is to propose actions for the involved R&I actors to mitigate negative ethical impacts
- Gather and review relevant information on remedial actions proposed by similar R&I projects
- Formulate different types of recommendations for improving R&I
- Document and present the remedial actions to the relevant stakeholders

REVIEW AND AUDIT

- This stage runs throughout the EIA process
- At the beginning of the EIA: milestones and criteria for review and audit are set and agreed upon
- During the EIA: documentation and progress towards the milestones is evaluated
- At the end of the EIA: proper documentation, follow-up and signing off of the EIA need to be taken care of
- The outcomes of the review and audit are documented and presented to the relevant stakeholders

THANK YOU FOR YOUR ATTENTION

- Any questions/comments?