SATORI

Policy Brief:

Industry and Research and Innovation (R&I): Towards Ethical, Responsible and Sustainable R&I

The Stakeholders Acting Together On the ethical impact assessment of Research and Innovation (SATORI) project, funded by the European Commission (FP7 scheme), aims to develop a common framework of ethical principles and practical approaches. It also aims to strengthen shared understandings among actors involved in the design and implementation of research ethics.

For whom is this policy brief?

Policy-makers, policy advisors, government R&I departments interested in research and innovation (R&I), private companies, industry associations, CSR and sustainability officers and departments.

Why was it prepared?

To publicise the SATORI frameworks for ethics assessment and ethical impact assessment of R&I, foster their widespread adoption and enhance ethical, responsible and sustainable R&I.

Share the message.

Please share this policy brief with your networks and contacts who might be interested in tools for addressing ethical issues and impacts of R&I.

SATORI website: http://satoriproject.eu/

This policy brief was prepared by University of Twente, on behalf of the SATORI consortium.

EXECUTIVE SUMMARY

Despite various efforts, SATORI findings show that ethics, responsibility and sustainability of R&I in the business context, have not yet been sufficiently addressed by policy makers and industry. Building on this, this policy brief:

- discusses implications and suggests to policy-makers how to improve the design of deployment policies and navigates businesses in policy-induced markets,
- provides tools to help policy-makers and industry to foster ethical, responsible and sustainable R&I in industry, namely ethics assessment (EA) and ethical impact assessment (EIA) of R&I.

INTRODUCTION

Industry is focusing on research and innovation (R&I) to improve its financial performance and market share. At the same time, companies are increasingly improving their corporate social responsibility (CSR) practices to gain greater social acceptance of their activities. However, the processes of innovation are not necessarily governed by ethics assessment. While the EU sees opportunities in R&I to contribute valuable solutions to societal challenges, such as the climate change, demographic change and wellbeing, energy security, and food safety, it also strives for R&I that is ethically acceptable and socially desirable[1].

The **issue** is that the concepts of ethics, responsibility and sustainability of R&I in industry are not necessarily embedded in tangible procedures. This can lead to societal and environmental issues, which in turn can drain economic resources and decrease the competitive advantage of European companies.

The SATORI project investigated the forms of assessment carried out and identified directions in which policy is needed.

The main **recommendations** of the SATORI project are for policy-makers to:

- Raise **awareness** and **use** of the SATORI Ethics Assessment (EA) and Ethical Impact Assessment (EIA).
- Promote good quality and transparent procedures of EA and EIA
- Facilitate dialogue about them to make them part of management practices

1 See e.g.: Science With And For Society (SWAFS) and Responsible Research and Innovation (RRI): http://ec.europa.eu/research/swafs/index.cfm?pg=home

FACTS AND NUMBERS

R&D

Research and development (R&D) is a major driver of innovation. R&D expenditure and intensity are two of the key indicators used to monitor resources devoted to science and technology worldwide.

Science and technology contribute new innovations that are essential to Europe's international competitiveness.

The EU strives for R&I that takes societal expectation into account with the aim to foster the design of inclusive and sustainable R&I.

64%

The business enterprise sector in EU is the main sector in which R&D expenditure is spent, accounting for 64% of total R&D condudted in 2014.

INDUSTRY PLAYS A CRUCIAL ROLE IN THE EU EFFORTS TO BETTER ALIGN BOTH THE PROCESS AND OUTCOMES OF R&I WITH THE VALUES, RULES, NEEDS AND EXPECTATIONS OF EUROPEAN SOCIETY.

79%

Some 79% of companies that introduced at least one innovation since 2011 experienced an increase of their turnover by more than 25% by 2014.

Industry is crucial for EU competitiveness, and research and innovation (R&I) is a key factor in this regard.

Sources: Eurostat, innobarometer, http://ec.europa.eu/growth/industry/innovation_en
http://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation

BASIC TERMS

SATORI claims that ethical aspects or implications of R&I should be assessed and evaluated with the goal of influencing R&I processes to make them more ethical, and to ensure that they have more ethical outcomes, for the benefit of society and the greater good. Different forms of assessment exist and can be defined as follows:

- **Ethics assessment (EA)** is any kind of assessment, evaluation, review, appraisal or valuation of research or innovation that makes use of ethical principles. Ethical principles are criteria that aim to determine whether certain actions or developments are right or wrong. They define individual rights e.g., rights to freedom and privacy, and include principles of justice and principles that say that harms to individuals and society should be avoided and benefits for them should be promoted.
- **Ethical guidance** is different from ethics assessment in that it does not concern an evaluation of practices and products of R&I that have already occurred, but rather presents rules, codes, and recommendations to which future scientific practices, innovation practices, and developments in science and technology are expected or recommended to adhere.
- **Ethical impact assessment (EIA)** is a non-prescriptive process of assessing the ethical impacts of R&I activities, outcomes and technologies. Ethical impacts concern or affect human rights and responsibilities, benefits and harms, justice and fairness, well-being and the social good. Specific examples include: negative impact on human rights (such as discrimination, inequality), problematic genetic modifications, safety risks, and privacy violation.

KEY FINDINGS

The SATORI findings and results are based on an extensive inventorisation of ethics assessment practices, literature reviews of ethics and CSR policies and codes of conduct. Additionally, they are based on interviews focusing on ethics assessment of R&I with 25 representatives of multinational corporations (different branches, including e.g., pharmaceutics, ITC, nanotechnology, automotive industry), SMEs, consultancy firms, chambers of commerce, national and international organisations and non-governmental organisations (NGOs) engaged in human rights. The interviewees came from ten different countries and at the EU and global international level (Austria, France, Germany, the Netherlands, Poland, Serbia, Spain, the United Kingdom, the US and China).

Ethics assessment of R&I by industry: Prevalence and aims

- Companies are increasingly using structured approaches to monitor economic, environmental and societal impacts of their activities, taking

into account ethical principles and values acknowledged by stakeholders and society. These approaches are broadly known as Corporate Social Responsibility (CSR)[2].

- Most corporations have policies, and officers, or divisions, for CSR. A CSR policy is intended to function as a self-regulating mechanism for business to ensure its compliance not just with laws, but also with the spirit of the law, with international norms, and with ethical standards.
- Small and medium sized enterprises (SMEs) typically do not have CSR structured strategies. SMEs are constrained by the lack of financial and human resources, which lead them to have relatively short-term and profit-oriented goals and impairs their ability to undertake research and development as well as their and potential commercialisation of innovation.

Ethics assessment of R&I and CSR

- CSR strategies and activities can be perceived as a form of ethics assessment or ethics guidance. However, CSR is broader than ethics assessment of R&I. It is because CSR does not exclusively relate to companies' R&I activities.
- CSR covers all aspects of a company's activity, including R&I. CSR is, in large part, a form of ethics assessment and ethics guidance that emphasises impacts on the society and environment.
- Companies that also conduct human subjects research and/or biomedical research often carry out additional ethics assessment of such research: an ethics committee or ethics officer evaluates ethical considerations and measures
- In practice, ethics assessment of R&I in companies is either part of CSR, or a combination of that part of CSR that is concerned with R&I and ethics assessment for biomedical or human subjects research.

Procedures for Ethics Assessment

- Companies use the term "ethics" in a narrow context referring to a professional behaviour e.g., anti-corruption. Companies do not use the term "ethics assessment". Preferably, they refer to responsibility, responsible behaviour, sustainability, and sustainable behaviour. Companies often refer to "innovating and doing research in a responsible way". The assessment conducted by companies is not however strictly an "ethics assessment", but it rather focuses on applicable CSR instruments. Through CSR initiatives, companies also engage in ethics guidance.

2 European Commission, *Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of Regions: A renewed EU strategy 2011-14 for Corporate Social Responsibility,* Brussels, 25 October 2011, COM(2011) 681 final.

- The most common assessment procedure that companies implement is impact assessment (IA). IA is a process of identifying the future consequences of a current or proposed action (impact prediction/ forecasting), and an assessment of the social significance of those impacts (impact evaluation).[3] The IA may concern the effects of actions on environment, society, or more specifically on ecology, biodiversity, human rights, health, culture, gender, etc. Companies therefore use different types of impact assessment, e.g., environmental impact assessment (EIA), human rights impact assessment (HRIA) and social impact assessment (SIA).

Institutional setup of ethics assessment of R&I

- The level of institutionalisation of ethics assessment in industry varies greatly across different countries, and companies and industry sectors.
- The ethics assessment and ethical guidance of R&I in the context of industry relates to companies CSR strategies. CSR tools include standards, principles, codes of conduct, and reporting initiatives to provide quantitative data on CSR performances.
- Multi-stakeholder initiatives play a key role in the diffusion of CSR policies in industry. In the last two decades, these have supported the development of shared practices and methodologies (standards) to define, apply, measure and report CSR actions and performances.
- Standardisation plays an important role in companies' activity, as it provides clear requirements on development and implementation of management strategies. The advantage of the standards system is its compatibility and applicability in every organisation regardless of sector or size.[4] See e.g. ISO 26000 on social responsibility; Social Accountability 8000; OHSAS 18001 regarding health and safety of employees and minimizing the risk of accidents; ISO 14001 and Eco-Management and Audit Scheme (EMAS) on environmental management.
- EU policy initiatives aim to stimulate companies to endorse CSR initiatives such as *the United Nations Global Compact*; *the United Nations Guiding Principles on Business and Human Rights*; *ISO 26000 Guidance Standard on Social Responsibility*; *International Labour Organization Tripartite Declaration of Principles concerning Multinational Enterprises on Social Policy;* and *the OECD Guidelines for Multinational Enterprises*.[5]

3 The International Association for Impact Assessment, http://www.iaia.org/iaiawiki//History.aspx?Page=impactassessment&Revision=1

4 Konstantinos Iatridis, "Identification of CSR tools related to RRI principles", published 27 March 2015, Deliverable for the Responsible Industry Project, http://www.responsible-industry.eu/dissemination/deliverables

5 http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/index_en.htm

Implementation of ethics assessment of R&I

➤ Companies and industry associations have various roles in the implementation of ethics assessment of R&I.

- First, they engage in the regulation and guidance through CSR policies intended to function as a self-regulating mechanism for business.
- Second, they carry out ethics assessment of R&I (e.g., internal CSR officers or divisions and external CSR consultancy).
- Third, they engage in dissemination and awareness raising of CSR, e.g., business and industry associations and Chambers of Commerce facilitate networking, knowledge-sharing and collaboration among companies.

CHALLENGES AND DRIVERS

SATORI has identified challenges and drivers for industry in performing assessment of ethical, societal and environmental impacts of their activities. These help us understand the industry's perspective and will help create effective policies and incentives to enhance ethical, responsible and sustainable R&I.

CHALLENGES	DRIVERS
• Additional bureaucracy, eventual extra costs • Heterogeneity in approaches and guideline implementation (variety of CSR initiatives and standards) • Lack of awareness of ethics issues • Lack of structured approaches • Lack of resources (financial, human, time, knowledge, particularly for SMEs) • Inability to implement non-binding guidelines (failures of self-regulation) • Problem accepting ethical criteria in the R&I community (beyond what is provided for by law) • Possible slowdown of innovation • Additional ethical constraints may limit creativity • Ethics is culture-sensitive (requirements might change depending on context)	• Improve product sustainability, desirability and acceptability, quality, safety and reliability • Increase customer satisfaction • Positive effect on quality of life and health of customers • Create value, build corporate image and reputation, give competitive advantage • Motivate workers, improve health and safety standards • Improve community relations • Reduce environmental impacts • Reduce costs (e.g., use of resources, efficiency of the decision-making process) • Market penetration • Profit, access to financial support, minimisation of the risk of lower financial performances • Compliance with regulations

To respond to these challenges and drivers, there should be an incentive structure and the mechanisms in place taking into account the interplay between regulations, voluntary actions, incentives and sanctions. CSR global initiatives, standards and principles can successfully support responsible R&I among companies. At the same time, there is a need for tools that are better tailored to the specific character of RRI.

SATORI offers a new tool for 'Ethical Impact Assessment (EIA)' which brings together the variety of ethical issues and methods of impact assessment to enable an organisation mitigate negative ethical impacts of it R&I activities and better manage the R&I process. The use of this tool needs to be incentivized by policy-makers.

SATORI ETHICS ASSESSMENT AND ETHICAL IMPACT ASSESSMENT (EIA)

Ethics Assessment

The SATORI Ethics Assessment provides common basic ethical principles and joint approaches and practices with the objective of harmonising and improving ethics assessment practices of research and innovation. The SATORI ethics assessment makes recommendations for the composition, role, functioning and procedures of ethics committees. Ethics committees include, but are not limited to, research ethics committees, institutional review boards, ethical review committees, ethics boards, and units consisting of one or more ethics officers.

The full ethics assessment framework is documented in the SATORI CEN Workshop Agreement *Ethics assessment for research and innovation — Part 1: Ethics committee and the SATORI report A reasoned proposal for set of shared ethical values and principles for ethics assessment in the European context*.[6]

While the SATORI ethics assessment may not be fully applicable to companies due to the private character of their activities, it can assist policy-makers and companies in developing specific R&I mechanisms in industry to enrich general CSR instruments. This is because SATORI ethics assessment provides common basic ethical principles and definition of these principles, such as scientific freedom, conflict of interests or dual use. Therefore, SATORI ethics assessment can help companies strengthen and/or improve the ethics assessment of their R&I projects.

Ethical Impact Assessment (EIA)

SATORI defines an EIA as the process of determining and addressing the ethical impacts of research and innovation activities, outcomes and technologies in consultation with stakeholders. With the aim of enhancing the overall benefit of research and innovation for society, the **SATORI EIA** assists in determining whether an R&I project raises any ethical risks, helps identify and evaluate ethical impacts

6 See http://satoriproject.eu/publications/cwa-part-1/

using different methods and tools, and facilitates taking remedial actions to mitigate negative ethical impacts of the project. EIAs may be useful in all fields of research and innovation – both traditional (e.g., medical research) and emerging areas (e.g., human-machine interactions).

The full EIA framework is documented in the SATORI CEN Workshop Agreement *Ethics assessment for research and innovation — Part 2: Ethical impact assessment framework*.[7] SATORI has also published a policy brief on EIA: enhancing responsible research & innovation[8].

Policy makers and companies can use SATORI EIA as a tool for determining and addressing the ethical impacts of industrial R&I activities, outcomes and technologies. It can be part of companies CSR strategies. The advantage of EIA in the industry context, is its comprehensiveness. While there is a variety of tools and methods that help to address impact of the activities of companies, SATORI EIA is a comprehensive methodology for addressing a whole range of ethical impacts that concern or affect human rights and responsibilities, benefits and harms, justice and fairness, well- being and the social good.

CALL FOR ACTION

SATORI RECOMMENDATIONS	WHAT POLICY-MAKERS CAN DO
Raise awareness about the SATORI Ethics Assessment and Ethical Impact Assessment (EIA) frameworks and their benefits in research and innovation (R&I) contexts.	• Organise consultations with companies (including SMEs), industry associations and other stakeholders to discuss the relevance, use of the ethics assessment of R&I and EIA frameworks and how it could complement existing CSR frameworks. • Share industry experiences and good practices for ethical, responsible and sustainable R&I.
Increase the general use of ethics assessment and EIA	• Create soft law for ethics assessment (general or specific guidelines, policy declarations or codes of conduct). • A model for ethics assessment and guidance in industry should be integrated within already exciting CSR framework (CSR global initiatives, standards and principles). • Include ethics assessment and EIA as criteria in R&I procurement policies and grant funding conditions, or subsidies.

7 See http://satoriproject.eu/publications/cwa-part-2/

8 See http://satoriproject.eu/publication_type/policy-briefs/

SATORI RECOMMENDATIONS	WHAT POLICY-MAKERS CAN DO
Promote the conduct of good quality and transparent ethics assessment and EIA	• Incentivise the certification of socially responsible R&I and accreditation of certification bodies or agencies certifying ethics assessment and EIA of projects. • Organise European Awards for ethical, responsible and sustainable R&I and ensure recognition and visibility for these awards. Put a special focus on SMEs and start-ups • Encourage publication of ethics assessment and EIA reports (or summaries) as part of companies' non-financial reporting.
Support ethics assessment and EIA (as tools to address ethical issues and impacts) as an essential part of the management of a company's R&I process	• Integrate ethics assessment and EIA into research management and/or corporate social responsibility procedures and practices. • Dedicate resources (human, financial, time) for carrying out ethics assessment and EIAs and their review. Pay a special attention to SMEs and start-ups. • Encourage publication of ethics assessment and EIA reports (or summaries) as part of companies' non-financial reporting.
Facilitate discussion and mutual learning about ethics assessment and EIA at the EU and local levels	• Set up an ethics assessment and EIA mutual learning portal or community at EU and/or national level. • Create a platform to discuss and exchange experiences between EU institutions that are responsible for business, economy, finance and Research and Innovation. • Develop ethical, responsible and sustainable R&I guidance in the industry context based on the results of SATORI.

FURTHER READING

- Callies, Ingrid, et al, *SATORI Outline of an Ethics Assessment Framework*, V.1.1, Deliverable 4.2, December 2016.
- Gurzawska A., Porcari A., *A reasoned proposal for a set of shared ethical values and principles for ethics assessment in European context; Annex 7: Models for ethics assessment and guidance in industry*, Deliverable 4.1., March 2016, available online: http://satoriproject.eu/media/D4.1_Annex_7_Industry.pdf
- Gurzawska A., et al., *Ethical Assessment of R&I: A Comparative Analysis; Annex 3h: Ethics Assessment In Different Types of Organisations: Industry*, Deliverable 1.1, June 2015, available online: http://satoriproject.eu/media/3.h-Industry.pdf
- SATORI, *CEN Workshop Agreement Ethics assessment for research and innovation*, CWA SATORI, May 2017.. Please add the current weblink where the CWA is downloadable from
- SATORI, *Ethics assessment for research and innovation — Part 1: Ethics committee*, Secretariat, NEN, 2017.
- SATORI, *Ethics assessment for research and innovation — Part 2: Ethical Impact Assessment Framework*, Secretariat, NEN, 2017.
- Trilateral Research Ltd., *Policy Brief: Ethical Impact Assessment: enhancing responsible research & innovation*, May 2017.

PROJECT IDENTITY

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