Working Group: Societal Impact High Level Forum, 2024

Joint report





Summary

Objective and Ambition

The Societal Impact Working Group aims to establish a shared understanding and practical framework for assessing the societal impact of research and innovation.

By 2027, the ambition is to **embed societal impact considerations into all stages of R&I projects**, helping organizations assess and communicate their societal contributions across economic, environmental, and social dimensions. This approach seeks to inform funding decisions and drive impactful, sustainable outcomes aligned with societal needs.

Key Outcomes

- 1. Common Definition of Societal Impact: The report defines societal impact as the full spectrum of intended and unintended effects on stakeholders, society, and the environment. It includes both positive and negative, short- and long-term impacts across areas like health, social inclusion, education, and the environment, emphasizing the need for a broad, adaptable understanding that captures evolving societal priorities.
- 2. **Preliminary Benchmark and Case Studies**: The report maps initial field data on tools and their applications across organizations, including Life Cycle Assessment (LCA), Social Return on Investment (SROI), and the SDG Impact Assessment Tool. Two categories of tools have been already identified: to qualify potential impacts and track integration into project stages.

Next Step

Moving forward, the group plans to build a toolbox, collect additional case studies to offer insights into best practices for assessing impact within diverse R&I environments.

Call to Action

Stakeholders in R&I are invited to join the ongoing effort in 2025, contributing to a more comprehensive societal impact framework. By participating, organizations can support the development of adaptable standards and tools that ensure R&I aligns with and supports societal goals.



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Objectives of the WG Societal Impact



Align on a common definition of societal impact of research / research project / research and innovation (R&I)



Propose a reference framework to be widely used

Methods and tools for qualitative and/or quantitative measurement of societal impact (in the context where a "Societal Readiness Level" (SRL) scale exists but is not widely used).

Our ambition: Scope

In 2027, we want to be able to...

Share a common understanding & approach

A shared understanding of societal impact (including its different dimensions) within and across organizations, researchers and managers in order to:

- set specific related **targets**
- qualify the impacts and define related indicators
- evaluate R&I projects

Assess and select R&I projects

The tool can help to merely **evaluate the potential** of impact of any project (ex ante), to **select** R&I projects, to **support**, and to **measure** (<u>in itinere / a posteriori</u>) its societal impact.

As a result, it indicates the **level of maturity of societal** impacts in research project

Embed societal impact all along R&I projects

- to reflect on its societal impact at any stage of development
- to **structure** all new research projects with societal impact at its core
- to **evaluate ex ante** the potential for societal impact, i.e. helping organizations to **anticipate** the impact of future technologies on the society and planet, in a positive way rather than negative

Help organizations to manage societal impact

Organizations are able to **evaluate** (**projection of potential impact)manage**, and **communicate** social impact of R&I and of their technologies. It also contributes to evaluate the overall societal impact of the organization.

Thus organizations can develop and implement their own 'SRL' policies and strategy based on the common framework.



Our ambition: Capacities to deploy

How to reach this ambition?

Discussions & co-validation

Discuss/ Challenge / Co-validate the proposed actions with stakeholders out of this group, and decision makers/top management/labs at every level, to collect feedbacks and identify ambassadors.

Beyond a common definition, **stakeholders** need to align on and adopt common vocabulary / framework.

Improve capacity-building

Develop and disseminate training materials, principles and guidelines, work tool, surveys... among organization teams.

Implement processes for capturing information (e.g. technology platform) to capitalize on experiments.

Communication

Present the tool through presentations and webinars, and its benefits to promote testing among researchers.

Communication between organizations should involve issuing policies from the top down.

Test & validation

Start with use cases to test the tool and validate the method and the indicators.

Build a pool of testers to use it on existing projects.

Indicators & methods

Provide a list / a shared database of indicators and methods that could help organizations to evaluate the societal impact.





Our ambition: Results

For which results?

Societal impact has became a tool that has transformed research into an agile process creating a continuum in the evolution of methodology and KPIs

Societal impact is a reflex

100% of the projects & processes are able to describe precisely their potential for negative / positive impact (at early stages) and their actual impact depending to the stage of development

As a result, 100% of the projects are **able to pivot or adapt** the project to deliver societal impact.

A new way of embedding society in the R&I process

The tool enables a **wider cooperation between RPOs and society** to address societal challenges & SDGs, and to prevent more environmental and social destruction.

This wider cooperation translates into:

- a flexible and on-going update to reflect the latest information and society's needs
- a clear and comprehensive reporting to society
- the inclusion of society to decide topics of research and allocation of funding

Inputs & Examples

A wide use of the tool will generate a lot of example / inputs, helping to **promote a better understanding** and illustration of what societal impacts really are.

A tool to attract funding

The tool is **a reference** for investors and governments **to allocate fundings** for research and innovation projects, according to the potential of societal impact.

The tool can also help justify current and increased levels of research investments.

Learnings from survey form* to participants

There is no recognized definition of societal impact within the participant's organization...

- The subject is still fresh and emerging.
- The concept of impact is still economically oriented.
- Definitions of societal impact already exists, covering social and environmental dimensions, as well as negative and positive impacts.
- This definition may or even must evolve as society needs and demands are evolving.

...but we need a consensus...

- It is an emerging topic, there is a lot of definitions, metrics, tools under development, nothing is set in stone and actual frameworks (like SDGs*) are just a starting point
- It is a growing requirement (regulatory & fundings) and new standards will emerge
- It is an **ethical requirement** and a **driver** of stakeholder engagement
- Today it varies according to stakeholders, to their intentions & objectives and we need to have a consensus

....adopting a systemic and pragmatic approach for deployment.

- The **scope might evolve to other dimensions** beyond social and environmental
- The impact ought to include the overall impact within society, not just the impact of a project or of the organization itself
- We need to **clarify** what is the impact of R&I projet in short, medium and long term
- The definition must remain flexible and be regularly updated according to evolving issues and societal needs: it is not a fixed definition

Potential barriers for implementation

It requires time to see benefits

Problem of data (access to/lack of) to evaluate ex ante the potential of impact

Economic impact prevails

Need for systemic change

Lack of knowledge and skills within organizations on the topic

Fear of an overly restrictive standard

Political barriers

Financial barriers





^{*} Find the form's questions in annex n°2 (p.28) and fill it in through this <u>link</u>.



Output #1 Common definition of societal impact





Output: Common definition of societal impact



The societal impact of research & innovation is all the consequences and effects on its stakeholders and more generally on society and on the planet - negative as well as positive - in a systemic perspective, whether those consequences are intended or not.

It can include long or short term impacts on areas such as economic, environmental, social inclusion, health and education...



Output: Common definition of societal impact



The **societal impact** of research & innovation is ...

What do we mean by this term?





The WG aligned to include the **social** and **environmental** categories.

As long as "social" includes other dimensions such as: inclusiveness, health, mobility, accessibility, education, cultural impact.

The broader, the better is to describe societal impact.

See our learnings on this topic on page 15.

"A similar debate occured for social innovation. It took 10 years to come up with a definition that is still challenged today. We need to keep the definition broad to engage everyone."



CORYELL BOFFY AXELYS





Output: Common definition of societal impact



The societal impact of **research & innovation** is ...



We explored several options before settling on this term.



SCIENTIFIC RESEARCH

Scientific research might be too upstream and doesn't take innovation and existing technologies into account.



ANGELICA LOPEZ



RESEARCH PROJECTS

Research projects might be too restrictive. What do we do with technologies and organisations that already exist?



organization as a whole (not just research

activity, but all types of activities)"





TECHNOLOGIES

There may be a risk of not questioning research activity and practices and of focusing on tech and tech solutions only.

"R&I already encompasses tech, some organizations do not separate technology and research - if we are doing it, we will need to explain why"





RESEARCH & INNOVATION

We aligned it is the best way to cover the continuum of research practices, technologies and organizations.

"R&I describes better the attitude that is to be adopted regarding societal impact, as technologies can promote a tech push vision"







Learnings from discussions (debunking misconceptions)

Societal impact of scientific research and innovation is not to be mistaken with...

Scientific communication

is sharing scientific knowledge and results to educate the public, strengthen scientific knowledge within society. To achieve societal impact, it is not enough to simply communicate and share research findings to other stakeholders in society, assuming or hoping that they will adopt and use them on the field to transform society.

Societal acceptability

is questioning users a posteriori to check whether they are ready to adopt new technologies. It is a techno push approach which is not co-constructed to take into account the societal impact and does not take into account the needs of society before development. It's an approach that rarely leads to the creation of societal impact, because the process is backwards. We ask society's stakeholders whether the solution suits them rather than co-creating it with them from the outset.

Societal relevance

is for a technology or a research project to be aligned with society's concerns/challenges. As stakeholders inclusion, relevance is crucial to deliver societal impact but being relevant is not the same as being impactful.

Including stakeholders

is necessary but not sufficient. To create positive impact, including stakeholders from society is one step, but the job is not finished. This collaborative process must lead to solutions that deliver societal benefits.

Knowledge transfer

involves promoting scientific results and/or applying technologies mainly from an economic and technical point of view. It is a means and not an impact per se.

Research outputs / outcomes

Societal impact is not measured in terms of results and performance, but in terms of changes within society.

Social quality

defined as "the extent to which people are able to participate in soci(et)al relationships under conditions that enhance their well-being, capacity and individual potential". This concept is more about capacity for action and empowerement than impact



Learnings from discussions (scope)

What is the scope of societal impact?



Societal impact can cover positive or negative or both.

At SoScience, we believe that there is no sense to exclude one or the other, the two must be considered together.



SPECIFIC / GLOBAL

The impact of a technology or a research project on one specific issue (the one adressed by the project) is not enough. Societal impact is only meaningful at a global level.

For example, a technology may have a very positive impact on carbon emissions but a terrible negative impact on biodiversity.



Societal impact must be discussed as part of a timeline even if it depends on the problem addressed and the project. It is important to differentiate between **results** (what is produced during the implementation of the project), **outcomes** (immediate results of actions on their targets, favored by the dissemination/exploitation strategy) and **impacts** (effects broader and long-term impact on society). (including the environment) enabled by the results)



SOCIAL / ENVIRONMENTAL / ...

What does societal mean?
Which categories should be taken into account?
What do those words encompass?

There is no standard category at all for societal impact.

Learnings from discussions (focus on categories of impact)



SOCIAL / ENVIRONMENTAL / ...

There is no standard category at all for societal impact. Hereafter are the most frequent categories referred to:













The **health** dimension can be separated from the **social** dimension because healthcare is seen as different as social care, social care being focused on the needs of individuals in their daily activities. But sometimes, the social category covers the health dimension.

A difference can be made between **social and societal**, social impact being focused on individuals and their daily needs and societal impact is the major forces transforming society, our ways of producing, communicating, learning and consuming (...) at the collective level

Some organisations include **economic** impact, but this is also very often excluded from research and innovation, because it is already dealt with by institutions and teams, using existing frameworks, skills and indicators to evaluate the economic impact.

Sometimes, it also includes political impact, the impact of research and innovation on public policies leading to social, societal, environmental impacts.

Today, the difficulty is that many organisations use the term societal impact, but it's never made explicit, we don't know what it means. It's not so much about "good" categories as it is about being clear about the elements that make them up.



Output #2 Reference framework

Output: Reference framework



A TOOLBOX LIBRARY with 2 entries

TOOLS

- 2 categories of tools:
- to qualify the (potential) societal impacts of the project
- to take a snapshot on the integration of societal impacts in the project

CASE STUDIES

Case studies of organizations that have used these tools in specific contexts.



Benchmark Tools*

Name	Start	Country	Organisation
Society Readiness Level (SRL)	2014	Europe 🔳	EIT InnoEnergy (ex KIC InnoEnergy)
Societal Readiness Level (SRL)	2019	Denmark 🎏	Innovation Fund Denmark (IFD)
Societal readiness Level (SRL)	2021	France 🚺	Laboratoire Commun DESTINS (CNRS-Université de Poitiers, Ellyx)
Societal Embeddedness Levels Level (SELs)	2019	Netherlands 🌊	The NL Organisation for Applied Scientific Research (TNO)
Sustainable Readiness Level (SRL)	2020	Sweden 🌉	Vinnova / KTH - KTH Innovation Readiness Level™ tool
Societal Readiness Level (SRL)	2023	Norway 🎏	SIVA
Societal Readiness Assessment (SoRA) framework for carbon free mobility solutions	2022	UK 🌉	DecarboN8
Societal Readiness Level (SRL)	1	Finland 🛨	CLIC Innovation
Societal Readiness Level (SocRL) for security technologies	2022	Europe 🔳	MultiRate (european project)
SDG Impact Assessment Tool SDG IMPACT ASSESSMENT TOOL		Sweden ==	Wexsus - West Sweden Nexus for Sustainable Development
Environment Life Cycle Assessment (LCA)			
Life cycle sustainability assessment (LCSA)			Life Cycle Initiative (hosted by UNEP)

Benchmark Tools*

Name	Start	Country	Organisation
Key Impact Pathway	2021	Europe 🛄	European Commission 🔲
Return on Sustainability Investment (ROSI) model			
Impact Framework IRIS (IRIS+ system)			Global Impact Investing Network (GIIN)
Impact Pathway SoScience Tool	2024	France	SoScience
Social Return on Investment (SROI)			

*Some of these tools will be shared and detailed on the **toolbox**



Learnings from discussions

- Delivering a new / updated SRL is too soon (to be continued in 2025), we should start with presenting the benchmark.
- We should not advocate for just one tool or one category of tools.
- We should have a broad approach for the HLF and present a toolbox.
- We should provide a template to collect more case studies in order to create a toolbox/library of tools.
- The toolbox shall focus on dimensions of societal impact that researchers are less familiar with (social, environmental impacts) as political & economical impacts are already well covered and metrics well known.



Output: Reference framework



[Name of the Tool - Clear, descriptive title]

Type of impacts targeted

Design to be done in 2025

Purpose	Brief statement of the tool's main objective - what's it for?
Application	What does it assess? When to use it? (ex ante, in itinere, ex post)
Outputs	What results or insights the tool provides?
Methodology	Concise explanation of how the tool works
Data Requirements	What information is needed to use the tool?
Accessibility	Open access / License /
Cost	How much does it cost to use this tool?
Strengths	Main advantages of the tool
Limitations	Potential drawbacks or constraints
Time Requirements	Estimated time effort needed
Expertise Level	Skills required to use the tool effectively / How difficult is it to use this tool?
Autonomy Level	1 (can be used alone) 2() 3() 4()
Examples	Brief real-world applications or case studies (redirect towards specific case studies from the library)
Related Tools	Other complementary methods
Origin	Year of creation, Organization, Context
Resources	Resources for further information (links + attached files)



Case studies* review



Life Cycle Sustainability Assessment axelys

KTH Innovation Readiness Level

SDG Impact Assessment tool



Environment Life Cycle
Assessment

Social Return on Investment (SROI)

Return of Sustainability Investment (ROSI) model



Key Impact Pathway

Impact pathway SoScience tool

*Some of these case studies will be shared and detailed in the **toolbox**





Output: Reference framework



[Name of the Case study - Clear, descriptive title]

[Type of impacts targeted]

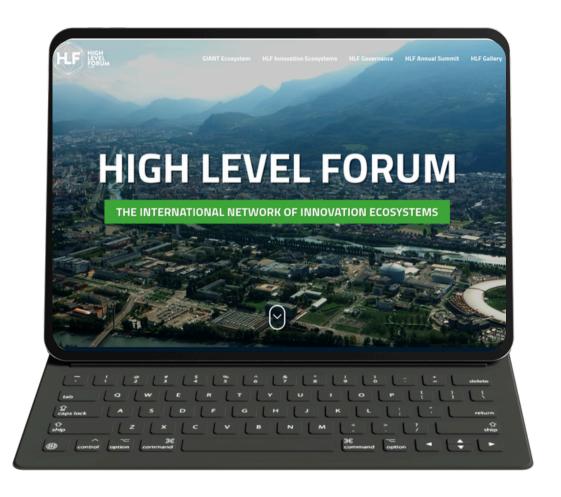
Design to be done in 2025

Tool used	
Organization	
Country	
Year / Timeframe	
Objective	
Resources needed	
Benefits	
Limits	
Key learnings	
Recommendations	
Resources	
Contact	



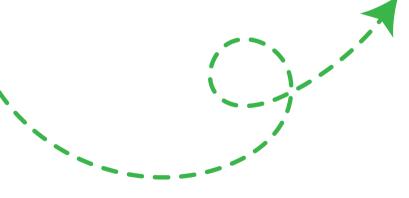
Next step: Contribute to the toolbox

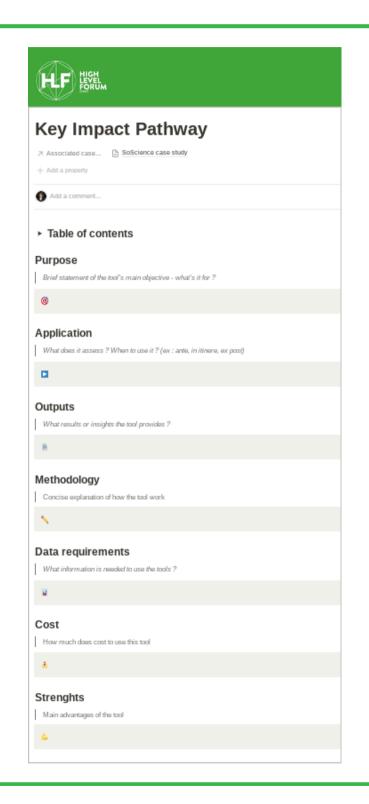




All tools & case studies soon available on the HLF website

Share your own through a form!









Call to action: Join the 2025 WG!

You are interested in the topic of societal impact of R&I?

And you want to **contribute** to co**building a reference framework** for research institutes?



JOIN THE 2025 WG







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Annex 1: WG Members

PROJECT TEAM

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Annex 2: Questions of the survey for organizations

Do you have anything to add on this subject?

Additional comment

Definition	 What is your institution's official definition of societal impact of R&I project / spin off? In your opinion, could this definition evolve? If your understanding of the societal impact of R&I differs, what is it?
Motivation	According to you, the question of the societal impact of technology is • an essential ethical question • a future obligation (regulatory, financial, industrial) • other: please speciffy
Obstacles	When this working group arrives at a common definition and shared tools, what would be the potential barriers to implementation within your organization and your country's institutions?
Current assessment tools	Have you set up tools to assess societal impact of your research projects / spinoff (measurement and/or projection, planning from the outset)? • [If yes] What tools do you use?
Current usages If yes to the previous question	 Are these tools used widely within your organisation or for a restricted target? If the second option, by whom? Are these tools used systematically or on an ad hoc basis? If the second option, when and why? Do you have documented case studies available online?



Annex 3: SoScience's impact framework (1/2)

Here is an example on how SoScience consider environmental impact. We make sure to be explicit. We formalized what could be the negative and positive impacts using existing frameworks like SDGs, the planet boundaries and the European Union green taxonomy.

environmental



Types of negative environmental impact

Ecological impacts on natural environments, terrestrial and marine **ecosystems** (inputs and outputs + intensity of disturbance)

- Pollution of soil, fresh or marine water, air (plastic, chemical, photochemical -mix of ozone and fine particles...)
- Destruction of natural habitats (deforestation, etc.)
- Decline / extinction of biodiversity
- Climate change / carbon emissions
- Acidification of air, soil and oceans
- Eutrophication on land, at sea and in fresh water
- Ozone layer depletion

Types of positive environmental impact

- Protection and restoration of biodiversity and ecosystems (EU taxonomy) ("regenerative" practices,)
- Climate change mitigation (EU taxonomy) (decarbonation, carbon recycling, local systems and short circuits...)
- Adaptation to climate change (EU taxonomy)













Impacts on consumption and resource depletion

- Depletion of non-renewable energy resources (fossil fuels: oil, gas, coal)
- Depletion of non-renewable mineral resources, both metallic (iron, aluminum, lithium, rare earths, gold, silver, etc.) and non-metallic (sand, granite, limestone, marble, etc.).
- Land use
- Depletion of renewable resources (water, wood, etc.) consumption higher than renewal threshold
- Plundering of biodiversity (biopiracy)

- Sustainable use and protection of aquatic, maritime (EU taxonomy) and terrestrial resources
- Regeneration of terrestrial, aquatic and marine ecosystems
- Sobriety/energy efficiency (renewable energies, etc.)
- Enabling the transition to a **circular economy** (EU taxonomy) (reuse, repair, recycling, pooling of uses and resources...)













Annex 3: SoScience's impact framework (2/2)

Here is an example on how SoScience consider **environmental impact.** We make sure to **be explicit.** We formalized what could be the negative and positive impacts using **existing frameworks** like SDGs, the planet boundaries and the European Union green taxonomy.

environmental



Impacts on human health (environmental health)

health

Ozone depletion (UV radiation harmful to human health)

• Terrestrial, marine and freshwater ecotoxicity related to soil, freshwater, marine and air pollution

social

 Human carcinogenic and non-carcinogenic toxicity through use and accumulation (chronic exposure to pesticides, endocrine disruptors, fine particles, etc.)

Types of negative environmental impact

• Ionizing radiation (e.g. released by nuclear power plants or certain medical treatments when of human origin)

Types of positive environmental impact

- Pollution prevention and control (EU taxonomy): reducing the presence of hazardous substances
- Enable waste management and prevention
- Enable waste treatment and disposal
- Informing consumers (giving them a choice)
- Repairing historical pollution (e.g. phytoremediation)









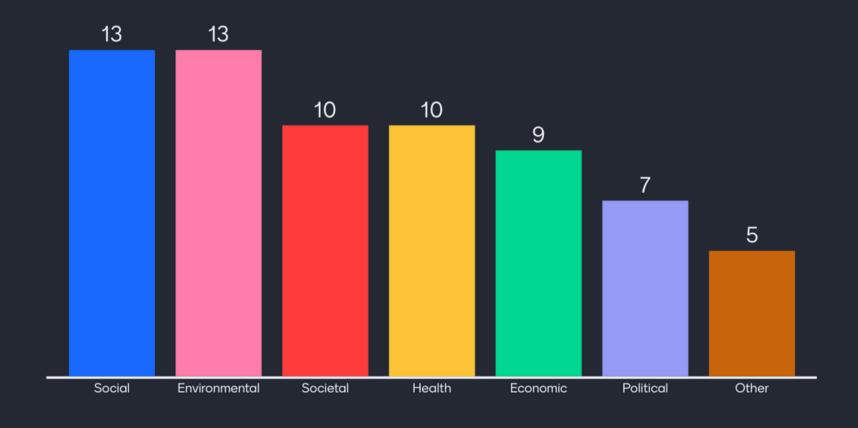


You can see here that the third category of <u>environmental impact overlaps with the social impact</u> (or health if you use this category) as <u>everything</u> is interconnected



Annex 4: WG participants' position before the discussion phase

Societal impact must cover the following topics:





Annex 4: WG participants' position before the discussion phase

