

Co-creating societal impact: Supporting institutional change for Responsible Research & Innovation

RECOMMENDATIONS FOR POLICYMAKERS AND MANAGERS RESPONSIBLE FOR PERFORMING OR FUNDING RESEARCH AND INNOVATION

How can decision-makers in research, technology and innovation (RTI) policymaking, performing and funding contribute to science's overall goal of working to create a better world?

SETTING THE SCENE

Science substantially impacts people's day-to-day lives. In the light of societal challenges and current crises such as climate change, global pandemics or geopolitical struggles, individual researchers and research performing and funding organisations are strongly called upon to engage even more with the needs, expectations, and values of stakeholders while respecting other living creatures around us. Responsible Research and Innovation (RRI) provides **a range of engagement opportunities for aligning research processes and their results closer with society's needs, expectations, and values.**

In research that follows the RRI principles, multiple stakeholders work with scientists to align the research process and its results more closely with societal needs by employing diverse participatory techniques. The researcher and the research institute or research funder turn openly to stakeholders and involve them

in formulating research questions (for example through science cafés and other deliberative events) and collecting and analysing data (for example through citizen science initiatives). RRI-guided researchers always ask themselves: will our research also do good to people and the Earth? What will its long-term social, ethical, and ecological consequences be?

Based on the concrete lessons learned about conducting research in the spirit of RRI from the EU-funded project Co-Change, we have formulated recommendations for policymakers at the EU, regional, and national level as well as managers of research performing organisations (RPO) and research-funding organisations (RFO).

In the Co-Change project, eight 'Co-Change Labs' from five European countries have been working on RRI-inspired institutional changes within their organisations.

→ *Co-Change has established multiple platforms for transformative learning in the form of (1) monthly lab meetings for frequent exchange among the Co-Change Labs; (2) four Co-Change Forums that created space for interaction with a wider knowledge ecosystem (incl. associated partners, advisory board members, multiplier organisations); and, (3) a series of training workshops on Socio-Technical Integration Research (STIR).*

IMPLICATIONS AND RECOMMENDATIONS

The following recommendations are based on the lived and deliberated experience of the Co-Change Labs with implementing concrete institutional changes towards RRI and grouped as follows:

- » **Invest–Create–Engage (ICE)** for managers and decision-makers in research performing and funding organizations
- » **Advance–Build–Communicate (ABC)** for policymakers at national, regional, and European levels.

**MANAGERS IN RESEARCH PERFORMING ORGANISATIONS:
INVEST–CREATE–ENGAGE!**

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| INVEST in | time spent on science communication to increase impact |
| | incentives within your organisation to motivate your staff |
| | resource allocation to RRI in ways (money, time, etc.) that make your commitment credible |
| | innovators from within your organisation to enable them to lead the change |
| | public visibility of your RRI activities |
| | good practices to build and validate existing efforts and achievements of your staff |
| CREATE | Ethical knowledge infrastructure within your organisation (e.g., ethics officer(s), ethical board, ethical guidelines, a forum for frequent ethical reflection, etc.) |
| | awareness about ethics in all areas and fields of your research and innovation practice |
| | training and capacity development opportunities to provide space for continuous improvement |
| | indicators for social impacts and engagement (both outcome and process indicators) to evaluate, monitor and improve |
| | a culture of openness in which organisational self-assessment and self-reflection are given a safe space |
| ENGAGE | the entire organisation – RRI works better if not siloed but integrated throughout the organisation via activities that engage all staff members |
| | your organisational agenda – RRI cannot be ‘ticked off’ as a one-time effort. It needs to be monitored, updated, and be strategic as well as operational |
| | your organisational needs – respond to the specific needs of your staff and do not reduce your efforts to speaking RRI jargon |
| | dialogue and encounters between multiple actors, incl. your researchers and students, your researchers, and citizens |
| | your organisational model – RRI is not an add-on issue but can assist you to critically reflect upon and refine your organisational identity |

SUCCESS STORY #1

Making the Technical Research Centre of Finland responsible and sustainable

The Co-Change Lab team of the Technical Research Centre of Finland has been **raising awareness about RRI** in the research, development and innovation contents in the organisation. They were involved in **co-designing** the Centre’s **responsibility programme**, and designed **ethics, safety, and responsibility training** for all research teams. They are part of the **continuous development of the sustainability roadmap** of the organisation.

**MANAGERS IN RESEARCH FUNDING ORGANISATIONS:
INVEST–CREATE–ENGAGE!**

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| INVEST in | resource allocation for RRI to make your commitments credible |
| | feasibility – follow the principle of “less is more” and focus on taking steps that are within your organisational reach |
| | low-hanging fruit first , then move on to making progress – small successful steps create positive energy and motivation but should not stop there, otherwise you lose pace |
| | means and tools that support RRI initiatives within the organisation |
| | people who can and are willing to facilitate change within |
| CREATE | openness and transparency about funding processes to build and maintain trust |
| | awareness about ethics and RRI |
| | funding criteria closely and explicitly related to RRI |
| | an explanation of your role as an RFO in your research and innovation ecosystem |
| ENGAGE | the public through communicating the social impacts and results of your funding |
| | in communication and dialogue between researchers, students, and citizens |
| | the larger research and innovation (R&I) ecosystem |
| | in education and communication based on your hands-on experiences with institutionalising RRI |

SUCCESS STORY #2

The Council of Tampere Region (Finland) for responsible innovation policy

Discussions with local stakeholders about **embedding RRI elements into innovation funding** were conducted by the Co-Change Lab team. They developed and implemented **RRI evaluation criteria** into three funding calls with a focus on ethics, engagement, transparency, and safety related to artificial intelligence projects. They convened the **RRI Roundtable of Tampere Region**, a community of regional actors working for a more responsible future. They also developed a **comprehensive impact assessment, incl. RRI**, to monitor the regional funding.



**NATIONAL/REGIONAL POLICYMAKERS:
ADVANCE–BUILD–COMMUNICATE!**

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| ADVANCE | RRI in policies and funding – RRI needs to be explicitly included as a funding criterion and needs to be committed to as an integrated strategic objective in research and innovation (R&I) funding and policy |
| | leadership – lead the change towards institutionalising RRI in national and regional research and innovation ecosystems |
| | your role as a change agent of RRI in your R&I ecosystem |
| | commitment to RRI – “walk the talk” |
| | role models – share best practices and examples of institutionalising RRI within your R&I ecosystem |
| BUILD | awareness at all levels of R&I policy-making |
| | awareness of RRI among researchers and citizens |
| | evaluation indicators and objectives |
| | an inventory of knowledge and existing good examples and practices |
| | RRI into science education as an integrated component |
| | RRI related standardisation as necessary |
| COMMUNICATE | the role of R&I in society |
| | uplifting responsible practices and opposing anti-science rhetoric |
| | the positive and negative social impacts and results of R&I funding |
| | the necessity of ethics in R&I |
| | responsibility and sustainability in policy dialogues |
| | the connections among science and society |

SUCCESS STORY #3

Increasing gender equality at the Faculty of Agriculture, University of Novi Sad (Serbia)

The Co-Change Lab team implemented a survey and interviews with staff members to **analyse the current state of gender equality**. Based on this they established a **gender equality board** and **gender equality plan** for the faculty which was presented to top management, departments, the trade union, and students. They also got **the support of the top management** of the faculty. The team has been contributing to **increasing acceptance of and support for gender equality at the faculty** among both employees and students.



**EUROPEAN POLICYMAKERS:
ADVANCE–BUILD–COMMUNICATE!**

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| ADVANCE | policy frameworks for RRI |
| | the embeddedness of RRI in legislation related to research and innovation (R&I) |
| | the integration of RRI into industrial policy |
| | impact assessment demand |
| | strategy beyond funding |
| | a new research agenda for inclusive and participatory processes |
| | the monitoring of changes and the sustainability of changes |
| BUILD | RRI networks for and with multiple actors of the research and innovation (R&I) ecosystem |
| | public awareness of RRI |
| | clear rules, guidance, and recommendations for each target group |
| | an inventory and appreciation of good examples |
| | awareness of RRI principles |
| | public participation in science, technology and innovation governance |
| | incentives for private (industrial) actors |
| COMMUNICATE | the role of research and innovation (R&I) in society |
| | uplifting responsible practices and opposing anti-science rhetoric |
| | the positive and negative social impacts and results of R&I funding |
| | the necessity of ethics in R&I |

SUCCESS STORY #4

Embedding AI ethics into the research work of the Austrian Institute of Technology and beyond

The AIT AI Ethics Lab organised workshops on AI ethics. Some events took place at AIT, others at, e.g., the government’s AI Policy Forum and the Ministry for the Civil Service to discuss recent developments of AI ethics. Within AIT they **collaborated**, e.g., with management as well as legal and data-protection officers **about AI ethics-related issues** (e.g., regarding training and guidelines) and created **joint interdisciplinary research projects** on AI ethics. The Lab team also **cooperated with national experts** and engaged **with international AI communities**. They have started co-producing an **AI ethics practice guide** for the Austrian federal civil service, and workshops on AI ethics, e.g., for the Austrian Federal Academy for Public Administration and for TAFTIE, the European Network of Innovation Agencies.



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ABOUT THE PROJECT

The Co-Create Change in Research Funding and Performing (CO-CHANGE) project aims to build transformative capacity and leadership for responsible research and innovation (RRI) through systemic change coalitions. Seven Co-Change labs from five European countries (Austria, Finland, Serbia, Spain, and the Netherlands) have been working on institutional changes towards RRI within their organisations, incl. research-funding, research performing, and research and technology organisations.

This more than three-year-long collaborative experience has created many insights into RRI-related institutional changes in diverse fields, incl. artificial intelligence ethics, gender, open science, regional innovation policy, responsibility in standardisation, and sustainability. During their RRI interventions into their organisations, the Co-Change labs have collected lived experiences about the barriers to and leverage for institutional change towards RRI.

PROJECT IDENTITY

Project name

Co-Create Change in Research Funding and Performing (CO-CHANGE)

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Funding scheme

H2020-SwafS-2019-1
SwafS-05-2018-2019

Grounding RRI practices in research and innovation funding and performing organisations

Duration

January 2020 – April 2023

Budget

EU contribution: 1 498 833.75 €

Website

cochangeproject.eu

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 873112.
The views expressed in this section are the sole responsibility of their authors and do not necessarily reflect the views of the European Commission.