

Overview of RRI: Responsible Research and Innovation

Towards an open science and innovation system that tackles the societal challenges of our world

by Dr. George Eleftherakis,
adopting the slides from

RRI Tools

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- The motivation (Why RRI?)
- What is RRI?
- Some definitions
- Nice! But HOW? The RRI Toolkit

Why Responsible Research & Innovation?

Society is facing many challenges today...



Health,
demographic
change, and
wellbeing



Food,
agriculture and
forestry, and
water



Secure, clean
and efficient
energy



Smart, green
and integrated
transport



Climate action,
environment,
and resources



Europe in a changing
world: inclusive,
innovative and
reflective societies



Secure societies:
freedom and
security of Europe
and its citizens



Science & technology sometimes create risks and dilemmas

- GMOs
 - fracking
 - food safety
 - affordable medication
- among many others...



Society needs a new R&I approach to address present and future controversies more efficiently.



RRI tackles these Grand Challenges by aligning the values, needs and expectations of all actors involved in Research and Innovation.



What do you do when you do RRI?



RRI seeks to **bring issues related to R&I into the open** in order to anticipate their consequences, and to **involve society** in discussing how science and technology may help us **create the world we want**.

What is RRI?



Implementing RRI: process dimensions



The process dimensions in depth



Diversity and Inclusion means **early involvement** of a wide range of actors and publics in R&I practice, deliberation, and decision-making **to yield more useful and higher quality knowledge**. This strengthens democracy and broadens sources of expertise, disciplines and perspectives.



Anticipation and Reflection means to **envision impacts** and **reflect on the underlying assumptions**, values, and purposes **to better understand how R&I shapes the future**. This produces valuable insights and increases our capacity to act on what we know.



Openness and Transparency means **to communicate** in a balanced, meaningful way methods, results, conclusions, and implications **to enable public scrutiny and dialogue**. This benefits the visibility and understanding of R&I.



Responsiveness and Adaptive Change means to be able to **modify modes of thought and behaviour**, overarching organizational structures, **in response to changing circumstances**, knowledge, and perspectives. This aligns action with the needs expressed by stakeholders and publics.



The process dimensions in depth



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Who are the main actors in R&I processes?



POLICY MAKERS

From funders to policy officers, research centre directors and representatives of learned societies, whether at a European, national, or local scale



RESEARCH COMMUNITY

Researchers, innovators, research managers, public affairs and communication officers, and all those who support the diversity of the R&I system



EDUCATION COMMUNITY

Teachers, students, science museums' staff, families and all those concerned with education at all levels



BUSINESS & INDUSTRY

From contractors and SMEs to large transnational companies with strong R&I activity



CIVIL SOCIETY ORGANISATIONS

From individuals to organisations, NGOs and the media, civil society is crucial to shape the R&I our society needs

A normative framework for RRI: the six Policy Agendas



ETHICS

Ensuring research integrity, and science & society



GENDER EQUALITY

Promoting human resources in research for attaining gender balance



GOVERNANCE

Providing instruments to foster shared responsibility in R&I practices



OPEN ACCESS

Guaranteeing access to scientific knowledge to boost R&I



PUBLIC ENGAGEMENT

Fostering collaborative and multi-actor processes in R&I



SCIENCE EDUCATION

Increasing the knowledge and skills of citizens in order to promote scientific vocations and participation



RRI is about: including all actors, and considering specific key issues and process dimensions



Adopting RRI results into the following outcomes

LEARNING OUTCOMES

Engaged publics
Responsible actors
Responsible institutions

R&I OUTCOMES

Ethically acceptable
Sustainable
Socially desirable

SOLUTIONS TO SOCIETAL CHALLENGES

Seven Grand Challenges
identified by the EC



Definitions:

What is Responsible Research & Innovation?

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What is Responsible Research & Innovation?

Involving society in R&I processes is crucial in order to align its results with society's values



Involving society in R&I processes is crucial in order to align its results with society's values





RRI is an umbrella that covers various aspects of the relationship between R&I and society's different actors



RRI provides an opportunity to build greater trust
in the science and innovation system





RRI seeks to bring issues related to research and innovation into the open, to anticipate their consequences, and to encourage society's involvement



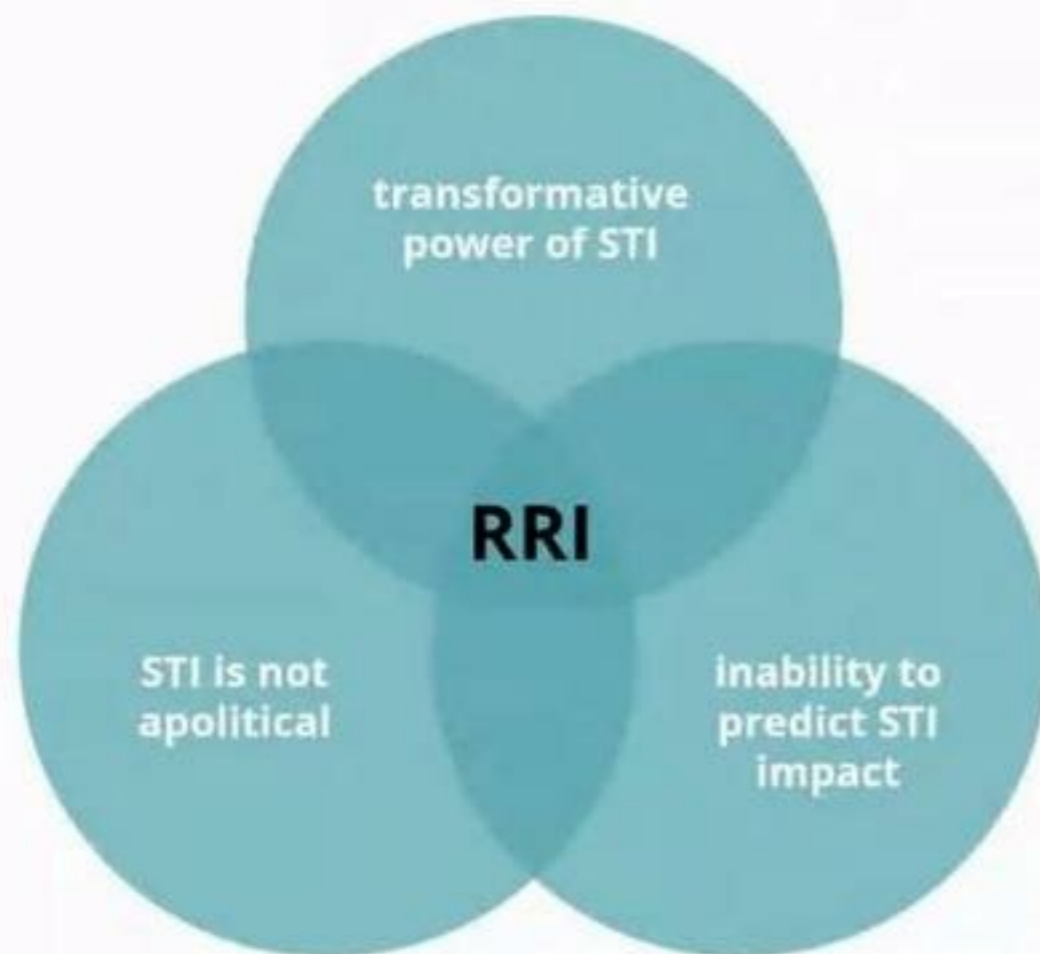
RRI brings more democracy into science
and more science into democracy





RRI is a cross-cutting issue in Horizon 2020,
the EU Programme for Research and Innovation 2014-2020

RRI: Systemic approach in Europe for responsible STI



RRI can be seen as an attempt to **build a better future** for the next generations

Nice! But HOW? The RRI Toolkit

The RRI Toolkit: A wealth of resources to help you implement RRI



TOOLS

Use manuals, guidelines, and 'how tos' to implement RRI.



INSPIRING PRACTICES

Find inspiration in RRI success stories across Europe.



PROJECTS

Get to know other projects on RRI and find potential partners.



LIBRARY

Learn of RRI from articles, reports, cross-analyses, and more.



HOW TOs

Get concrete examples on how to put RRI into practice in different contexts.



SELF-REFLECTION TOOL

Reflect on how RRI your own professional practice is.



TRAINING MATERIALS

Organise trainings in RRI using showcases and presentations.



COMMUNICATION MATERIALS

Spread the word on RRI with videos and presentations.



Relevant sample resources on RRI

- 
TOOLS
- 
 INSPIRING PRACTICES
- 
 PROJECTS
- 
 LIBRARY ELEMENT



TYPE OF RESOURCE

TOOL

Access a diversity of instruments to implement RRI in different contexts

Top Resources of the platform



Tool

Action Catalogue



Tool

The Research Ethics Library



Tool

Sij Toolbox (Social Innovation Journey Toolbox) by TRANSITION project

SEE ALL



Relevant sample resources on RRI


 TOOLS


 INSPIRING PRACTICES


 PROJECTS


 LIBRARY ELEMENT



TYPE OF RESOURCE

INSPIRING PRACTICE

Good practices in RRI. Want to follow their lead?

Top Resources of the platform

APPLIED NANOPARTICLES

Inspiring Practice

Spinning off under RRI Principles: Applied Nanoparticles case



Inspiring Practice

SoScience



Inspiring Practice

Fundación Ibercivis

SEE ALL



Relevant sample resources on RRI

TOOLS

INSPIRING PRACTICES

PROJECTS

LIBRARY ELEMENT

TYPE OF RESOURCE

PROJECT

Get to know other projects addressing RRI values

Top Resources of the platform

Project

ETHICSWEB. Inter-connected European information and documentation system for ethics and science: European Ethics

Project

HEIRRI. Higher Education Institutions and Responsible Research and Innovation

Project

IRRESISTIBLE. Including Responsible Research and innovation in cutting Edge Science and Inquiry-based

[SEE ALL](#)



Relevant sample resources on RRI


 TOOLS


 INSPIRING PRACTICES


 PROJECTS


LIBRARY ELEMENT



TYPE OF RESOURCE

LIBRARY

Documents, videos, presentations, blogs – a whole range of background info

Top Resources of the platform



Library Element

White Paper on Citizen Science for Europe



Library Element

Making a difference to research strategies



Library Element

Responsible Innovation: from Concept to Practice - Introduction

[SEE ALL](#)



Looking for more resources? Try the Search Engine

The screenshot shows the RRI Search Engine interface. At the top, there are tabs for 'Resources' (selected) and 'Users'. A search bar contains the placeholder text 'I am looking for...' and 'Type here what you are looking for'. A 'SEARCH' button is to the right. Below the search bar is an 'UPLOAD A RESOURCE' button. On the left, a dark sidebar titled 'Filter resources by:' contains three sections: 'Type:' with options 'Tool', 'Inspiring Practice', 'Project', and 'Library Element'; 'Useful for:' with options 'Policy Makers', 'Research Community', 'Education Community', 'Business & Industry', and 'Civil Society Organizations'; and 'Address:' with options 'Ethics', 'Gender Equality', 'Governance', 'Open Access', and 'Public Engagement'. The main content area shows 'Showing 1-12 of 453 results' and a grid of search results. The first row includes 'The Norwegian National RESEARCH ETHICS COMMITTEES' (Tool), 'eurec' (Project), and 'FOSTER' (Project). The second row includes 'RECODE', 'ethicsweb', and 'chist-era'.

The Toolkit includes a powerful search engine with several filters and sorting options to allow tailor-made searches

The RRI Toolkit: A wealth of resources to help you implement RRI



TOOLS

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Find inspiration in RRI success stories across Europe.



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HOW TOS

Get concrete examples on how to put RRI into practice in different contexts.



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TRAINING MATERIALS

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COMMUNICATION MATERIALS

Spread the word on RRI with videos and presentations.



Get concrete examples on how to put RRI into practice

How Tos offer guidance and concrete examples on how to use specific resources of the Toolkit to address common challenges according to **your profile**:



RESEARCH COMMUNITY



How to incorporate RRI in policy/funding institutions



How to incorporate RRI in higher education institutions



How to set up a participatory research agenda



How to incorporate the RRI principles in a funding call



How to design a RRI-oriented project proposal



How to co-create community-based participatory research



How to embed RRI in citizen science



Get concrete examples on how to put RRI into practice

How Tos offer guidance and concrete examples on how to use specific resources of the Toolkit to address common challenges according to **your interests**:



[SEE ALL HOW TOS](#)

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How RRI is your practice?



The Self-Reflection Tool

The SRT offers you room for reflection on those aspects of RRI you already consider in your work, those you don't, and how you and your organisation can move towards a more responsible practice.

[SELF-REFLECTION TOOL](#)



How RRI is your practice?

Step by step, the SRT will guide you through six policy agendas, offering you a variety of questions addressing different aspects of RRI



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The image displays two screenshots of the RRI Tools website interface, illustrating the 'Ethics' policy agenda.

Left Screenshot: Shows the 'Ethics' page with a central heading and a grid of six questions:

- How do you ensure the integrity of your R&I practices?
- Who is involved in ethics-related reflection and decision-making for your R&I practices, and how?
- How do you provide for different values, interests and needs?
- How do you prevent potentially harmful impacts on the public or the environment?
- What are possible strategies for preventing the negative implications of your R&I practices?
- What are possible ethical considerations for your R&I practices?

Buttons at the bottom include "START YOUR REFLECTOR" and "JUMP TO ANOTHER POLICY AGENDA".

Right Screenshot: Shows the 'Ethics' page with a central heading and a grid of six questions, with the first question highlighted in a dark blue box:

- How do you ensure the integrity of your R&I practices?
- Who is involved in ethics-related reflection and decision-making for your R&I practices, and how?
- How do you provide for different values, interests and needs?
- How do you prevent potentially harmful impacts on the public or the environment?
- What are possible strategies for preventing the negative implications of your R&I practices?
- What are possible ethical considerations for your R&I practices?

Buttons at the bottom include "JUMP TO ANOTHER QUESTION" and "JUMP TO ANOTHER POLICY AGENDA".



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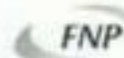
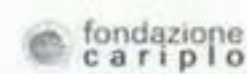
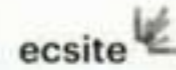
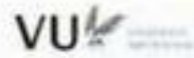
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www.rri-tools.eu



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