Responsible Research and Innovation (RRI) en projectes europeus H2020

Europe’s ability to respond to societal challenges

Esther Alsina i Irene Jorge
UPC-Unitat de Projectes Internacionals
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Sumari

- Context
- Com s’implementa
  - Science Education
  - Open Acces
  - Ethic
  - Engagement
  - Gender
  - Governance
- Referències
RESPECT.

The Directorate-General for Research and Innovation of the European Commission is determined to bridge the gap between the scientific community and society at large.

In 2001, the «Science and Society» Action Plan was launched to set out a common strategy to make a better connection between science and European citizens.

In 2007, under the 7th Framework Programme for Research and Technological Development (FP7), «Science and Society» became «Science in Society (SiS)» with the main objective to foster public engagement and a sustained two-way dialogue between science and civil society.

Since 2010 the focus of SiS has been to develop a concept responding to the aspirations and ambitions of European citizens: a framework for Responsible Research and Innovation (RRI). The grand societal challenges that lie before us will have a far better chance of being tackled if all societal actors are fully engaged in the coconstruction of innovative solutions, products and services.

2015 -- Science with and for Society (SWAFS)

Responsible Research and Innovation means that societal actors work together during the whole research and innovation process in order to better align both the process and its outcomes, with the values, needs and expectations of European society.

RRI is an ambitious challenge for the creation of a Research and Innovation policy driven by the needs of society and engaging all societal actors via inclusive participatory approaches.
• The Responsible Research and Innovation framework consists of 6 keys:

1) Science Education
2) Open Access
3) Ethics
4) Engagement
5) Gender
6) Governance
COM S’IMPLEMENTA?

- Bàsicament a través **Science with and for Society (SWA)**

- Però alhora està integrada en altres convocatòries, es considera un “cross cutting issue”

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**Topic**

FETOPEN-02-2016: FET-Open Coordination and Support Actions

**Key words**

Engagement, Science Education

**Type of Action**

Coordination and support action

**Deadline**

11-05-2016

**Link**


**FET Communication (2016)**: raising the visibility and impact of FET through novel and creative approaches for reaching out to various stakeholders and well beyond the research communities. This may include, for example, collecting, aggregating and disseminating information from the entire range of FET projects and activities, and using an appropriate mix of channels and formats to engage with the target audiences, including scientists, students, media, policy makers, the business community and the general public. This subtopic should include public engagement processes as discussed in the introduction of this FET Work Programme.

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**Topic**

NMBP-34-2017: Governing innovation of nanotechnology through enhanced societal engagement

**Key words**

Engagement, Responsible Research and Innovation, Science Education

**Type of Action**

Coordination and support action

**Deadline**

19-01-2017

**Link**

Science Education

- enhancing the current education process to better equip citizens with the necessary knowledge and skills so they can participate in R&I debates

- increasing the number of researchers (promote scientific vocations)

*Creative learning fresh ideas*” Europe must not only increase its number of researchers, it also needs to enhance the current education process to better equip future researchers and other societal actors with the necessary knowledge and tools to fully participate and take responsibility in the research and innovation process. There is an urgent need to boost the interest of children and youth in maths, science and technology, so they can become the researchers of tomorrow, and contribute to a science-literate society. Creative thinking calls for science education as a means to make change happen.
Science Education. Examples

**Science Shops**

- Normalmente ubicadas en universidades
- Invitan a entidades de la sociedad civil a sugerir temas de investigación potencial
- Estudiantes llevan a cabo las investigaciones
- 40 años de tradición en Europa y a nivel global
- Promueven la cultura de investigación
- Promueven cambio transformativo

**Citizen Science**

- Proyectos de investigación que invitan a la ciudadanía a aportar datos
- Investigación estructurada donde el balance entre objetivos de investigación, educación, sociales y políticos varía según el proyecto.

Fuente: La Investigación y la Innovación Responsables (RRI). Investigación más abierta e inclusiva, que responda mejor a las necesidades de la ciudadanía. Rosina Malagrida, Responsable del Living Lab de Salud de IrsiCaixa, 2017.

**Science weeks, Scientific coffees, Open doors for science, etc**
Open Access

- **Social knowledge** growth through accessible science
- Breaking barriers to knowledge and **improving science collaboration for a better future**
- Enhances forms and levels of openness and transparency of R&I processes facilitating **society's participation**.

“**Share results to advance**” In order to be responsible, research and innovation must be both transparent and accessible. To make Open Access a reality means giving free online access to the results of publicly-funded research (publications and data). This will boost innovation and further increase the use of scientific results by all societal actors.
Serveis que s’ofereixen als investigadors:

✓ Open Access y Open Data. Obligacions segons mandat de la CE.
✓ Llistat de possibles revistes on publicar.
✓ Informació adicional: preus, períodes d’embargament, repositoris, com elaborar un pla de gestió de dades en projectes H2020, etc

Font: Requerimientos de Open Access y Open Data en proyectos europeos, Anna Rovira, Conferència Anual de la RedOTRI 2018

Les despeses de les publicacions en obert són elegibles en projectes H2020
Ethics

✓ Reflecting on people’s ideas and concerns about R&I
✓ Deliberating on the **moral issues of R&I** with a diversity of actors
✓ Aligning research to social values
✓ Sharing **responsibility** for the impacts of science

**Do the right “think” and do it right.** In order to adequately respond to societal challenges, research and innovation must respect fundamental rights and the highest ethical standards. Beyond the mandatory legal aspects, this aims to ensure increased **societal relevance and acceptability of research and innovation outcomes.** Ethics should not be perceived as a constraint to research and innovation, but rather as a **way of ensuring high quality results.**
Ethics. H2020 ethics review procedure and check list examples

<table>
<thead>
<tr>
<th>Activity</th>
<th>Who?</th>
<th>When?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethics self-assessment</td>
<td>Applicant</td>
<td>Proposal phase</td>
</tr>
<tr>
<td>Ethics screening and assessment*</td>
<td>Ethics experts</td>
<td>Evaluation phase</td>
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<tr>
<td>Ethics check/audit</td>
<td>Ethics experts</td>
<td>Implementation phase</td>
</tr>
</tbody>
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✓ Protecció de dades i privacitat: anonimització de les dades, codificació, encriptació, emmagatzematge,
✓ Investigació clínica. La intervenció humana no està justificada des d'una perspectiva ètica ni pel que fa a la protecció de dades (especialment aquelles sensibles), s'ignoren els formularis de consentiment.
✓ Investigació amb animals. No es fa referència a la metodologia, si existeixen alternatives per no fer ús d’animals, etc.
✓ Participació de tercers països.
✓ Referència a la normativa aplicable d’àmbit europeu, nacional i regional.
Engagement

- “Choose together”

The first key is Engagement of all societal actors - researchers, industry, policymakers and civil society – and their joint participation in the research and innovation process, in accordance with the value of inclusiveness, as reflected in the Charter of Fundamental Rights of the European Union.

A sound framework for excellence in Research & Innovation entails that the societal challenges are framed on the basis of widely representative social, economic and ethical concerns and common principles.

Moreover, mutual learning and agreed practices are needed to develop Responsible Research and Innovation joint solutions to societal problems and opportunities, and to pre-empt possible public value failures of future innovation.
Engagement. EXAMPLES

• IMRR Project - Integrated and sustainable water management of the Vietnamese Red-Thai Binh River System in a changing climate-
The IMRR project aims at developing and promoting strategies for the sustainable management of the Red-Thai Binh Rivers System in Vietnam through coordinated decision-making and negotiation, supported by modelling and optimization tools and through capacity building of local authorities in the water sector.

• MalariaSpot - play the 'Crandy Crush' against malaria. This project develops collective tele-diagnosis systems to empower citizens to collaborate in solving global health challenges

• The “mobility of care”: a new concept and category in transportation. The project’s objective was to use a gender perspective to analyse the main Spanish transportation surveys and to propose measures for improvement
Gender

• “Unlock the full potential”

The second key is Gender Equality. Engagement means that all actors – women and men – are on board. The under-representation of women must be addressed. Research institutions, in particular their human resources management, need to be modernized. The gender dimension must be integrated in research and innovation content.
Gender. EXAMPLE

- Política d’igualtat de la UPC. Línea estratégica 8. [https://igualtat.upc.edu/ca](https://igualtat.upc.edu/ca)


- Referent a l’estratègia de la HRS4R, l’acció número 6 es concentra en temes de gènere.

- Formació de Gabinet de Sostenibilitat i d’Igualtat d’Oportunitats (GSIO). Organitza: Gabinet de sostenibilitat i d’Igualtat d’Oportunitats [https://www.upc.edu/igualtat/recursos-i-formacio](https://www.upc.edu/igualtat/recursos-i-formacio)
Governance

- “Design science for and with society”

The last dimension is the umbrella for all the others: it is Governance.

Policymakers also have a responsibility to prevent harmful or unethical developments in research and innovation.

Through this key we will develop harmonious models for Responsible Research and Innovation that integrate public engagement, gender equality, science education, open access and ethics.
Governance. Examples

RUNIN – The Role of Universities in Innovation and Regional Development

The aim of the RUNIN network program is to train researchers on how universities contribute to innovation and economic growth in their regions through research seeking to examine how universities fulfill their third mission in relation to regional industry and explore the range of university engagement with regional firms and institutions.

The network program focuses on how universities can contribute to innovation and regional development through four main themes:

- People and Networks
- Policies and Interventions
- Places and Territories
- Practices and Governance.

**Topic:** AMIF-2017-AG-INTE-02: Community Building at local level for integration including through volunteering activities

**Publication date:** 26 October 2017

**Types of action:** AMIF-AG AMIF Action Grant

**Deadline:** 01 March 2018 17:00:00

**Opening date:** 21 November 2017

**Time Zone:** (Brussels time)
Impacte social (long term) és la millora que s’obté a partir dels coneixements creats (short term), la transferència (mid term) dels resultats i la disseminació d’aquests.

Com es pot valorar l’impacte social?

- "replicabilitat" de l’impacte
- Publicació de l’impacte social no només per organismes governamentals
- Sostenibilitat en el temps més enllà del projecte
Referències. Documents i links

- RRI Opportunities in H2020
- RRI toolkit
- RRI leaflet
- Informe sobre la Educación Científica, para promover el concepto de Investigación e Innovación Responsable (RRI) en la Sociedad europea
- Scientix es la comunidad para la enseñanza de las ciencias en Europa
- Towards better access to scientific information: Boosting the benefits of public investments in research
- Open access means video
- UPC_access obert
- Horizon 2020 - Regulation of Establishment: Ethical principles (Article 19)
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 multinational 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.