

CASI/PE2020 Conference
Brussels, 16-17 November 2016

'Mainstreaming PE in Horizon 2020: perspectives and ambitions'

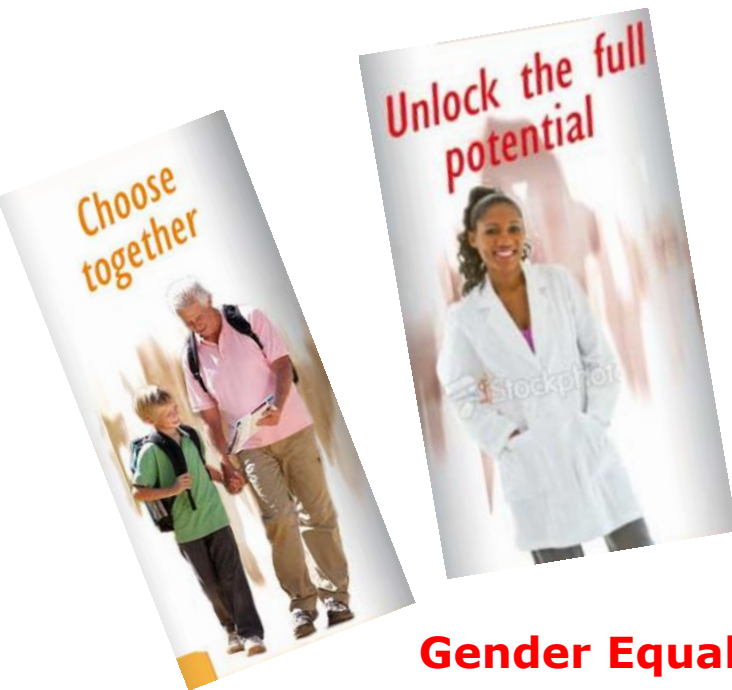


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DG RTD B7.002
**'Mainstreaming RRI in
Horizon 2020 and ERA'**

Summary

- I. RRI: Where are we?*
- II. RRI: What is going on?*
- III. RRI: Where are we going?*

RRI across Horizon 2020



Gender Equality



**Science
Education**



Ethics



**Open
Access**

**Engagement
(including Citizen
Science)**

In a few words...

RRI is:

- Aiming to make the **interplay between science and society** more harmonious and more efficient;
- Inviting all stakeholders to **open up** to and work with each other;
- Engaging in particular all citizens, women as well as men, in science, technology, research and innovation in order to ensure that societal **values, concerns and needs** are taken care of.

SWAFS and RRI in the European Commission

Organizational Chart:

SWAFS: Units DG RTD.B7 + REA.B5	(23p+10p)
RRI: Sector DG RTD.B7.002	(8p)
Gender: Sector DG RTD.B7.001	(8p)
Ethics: Sector DG RTD.01.001	(7p)
Open Access DG RTD.A6	(2p)

SWAFS and RRI in HORIZON 2020

Three main priorities

(Part I) Excellent science, EUR 24441 million

(Part II) Industrial leadership, EUR 17015 million

(Part III) Societal challenges, EUR 29679 million

Part V: Science with and for Society EUR 462,2 million

RRI in Horizon 2020 WP 2016-2017

Clear improvement vs WP 2014-2015

- 16 lines out of 22 (vs 6 out of 22) are addressing explicitly RRI
- Representing roughly half of the overall M€ 14,100 budget
- RRI presentation is coherent across Horizon 2020
- Short narratives have been developed, linking society, RRI and Horizon 2020 activities

RRI in Horizon 2020 WP 2016-2017

Example of narrative:

14. Secure societies – Protecting freedom and security of Europe and its citizens

Meaning of Responsible Research and Innovation

The calls under 'Secure societies – Protecting freedom and security of Europe and its citizens' are **in line with the Horizon 2020 Responsible Research and Innovation (RRI) cross-cutting issue**, **engaging society** on sensitive security issues, integrating the **gender** and **ethical dimensions**, ensuring the **access** to security research outcomes whenever possible and encouraging formal and informal **science education** relating to security. **Activities will be multi-actor and underpinned by public engagement.**

RRI in Horizon 2020 WP 2016-2017

Example of topic:

DS.08-2017 Cybersecurity PPP: Privacy, data protection,
Digital identities

.../...

For all strands, proposals should **identify and address the societal and ethical dimensions** of the strand they choose to cover taking into consideration the possibly divergent perspectives of pertinent stakeholders.

Proposals have to **address the specific needs of the end-user**, private and public security end users alike. Proposals are encouraged to **include public security end-users and/or private end users**.

RRI in Horizon 2020 WP 2016-2017

Examples of topics:

ICT-18-2016: Big data PPP: privacy-preserving big data

ICT-28-2017: Robotics Competition, coordination and support

ICT-35-2016: Enabling responsible ICT-related research an

RRI in Horizon 2020 WP 2018-2020

Margins for progress toward WP 2018-2020

- **Narratives** could be more elaborated and
- should appear in **all parts** of the Horizon 2020 WP,
- evidencing the **RRI challenges**, the strengths and weaknesses of each area and
- relating directly to **topics** as necessary

Summary

I. RRI: Where are we?

II. RRI: What is going on?

I. SiS/SWAFS activities (184/53) projects

II. European Commission: 3 Os, WP18-20

III. International (e.g. OECD)

III. RRI: Where are we going?

SiS/SWAFS ongoing work

I. FP7-Science in Society

- I. SiS Portfolio (184): e.g. RRI TOOLS (Training the trainers...)**
- II. SiS and FP7 Ex-post evaluation (published May 2016)**

II. Horizon 2020-Science with and for Society

- I. Portfolio (53): e.g. NUCLEUS, CIMULACT, DITOs**
- II. MORRI Study: KPIs**
- III. AG's strategic report; Public Consultation; Scoping paper**
- IV. Interim Evaluation (to be published early 2017?)**

SiS and FP7 Ex-post evaluation

(published May 2016) – strategic recommendations

- *Strengthen the linkages between the programme and high-level policy priorities*
- *Stronger focus on 'on the ground' impacts as opposed to new knowledge*
- *Greater involvement of policy makers and CSOs at national and EU levels*
- *Stronger involvement of industry*
- *Follow up funding for take up*

FP7 Ex-Post Evaluation: Response to the Report of the High Level Expert Group

Recommendations:

"(d): Bring science closer to the citizens

The Commission agrees with the HLEG that the engagement of the general public with the Programme and more generally the active participation of citizens in science is important. In its implementation, Horizon 2020 engages citizens and other relevant stakeholders through the development of responsible research and innovation agendas and by providing greater support to public outreach activities."

Brussels, 19.1.2016, COM(2016) 5 final



CIMULACT

`Citizen and Multi-Actor Consultation on Horizon 2020'

Project: CIMULACT, funded under the SWAFS programme, is currently gathering the views of a representative sample of about **2500 citizens from 30 countries** on future EU research and innovation policies and topics.

Outcomes: CIMULACT will provide **concrete input for the preparation of WPs 2018-2020** of Horizon 2020.

Science with and for Society (SwafS)

- **Aim:** To build effective cooperation between science and society, to recruit new talent for science, and to pair scientific excellence with social awareness and responsibility
- **KPI:** Number of institutional change actions promoted by the programme towards Responsible Research and Innovation

Responsible Research & Innovation

- **Aim:** To encourage societal actors to work together during the whole research and innovation process to better align R&I and its outcomes with the values, needs and expectations of society
- **KPI:** Percentage of projects where citizens, Civil Society Organisations (CSOs) and other societal actors contribute to the co-creation of scientific agendas and scientific contents

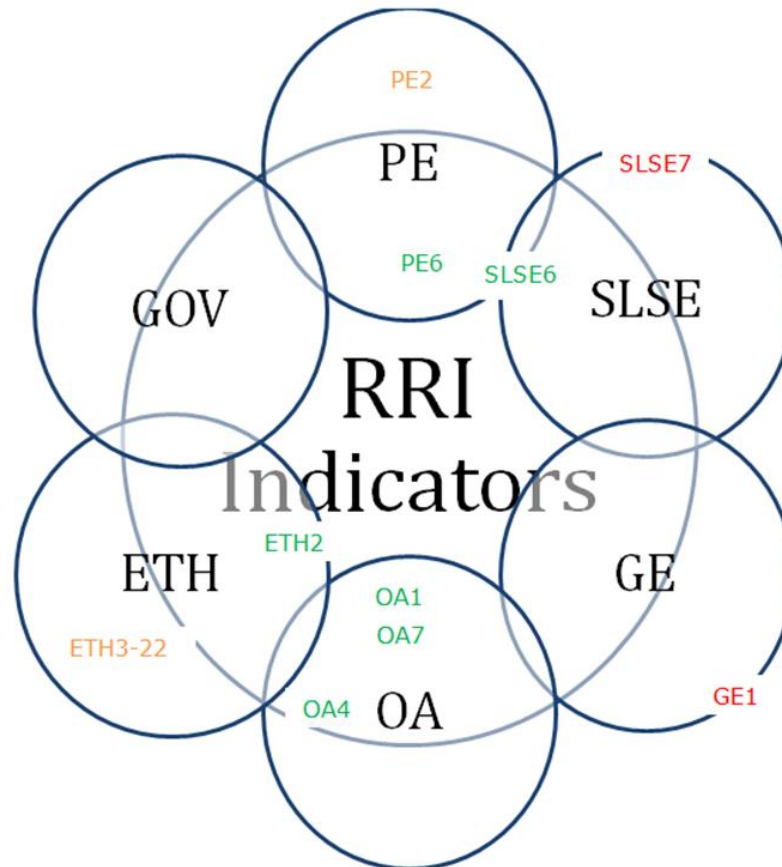
Intervention logic model

FIGURE 7.1. Intervention logic model: Context

DRAFT

Source:

'Monitoring the evolution and benefits of Responsible Research and Innovation' (MoRRI), 2015-2018, Fraunhofer ISI, Technopolis



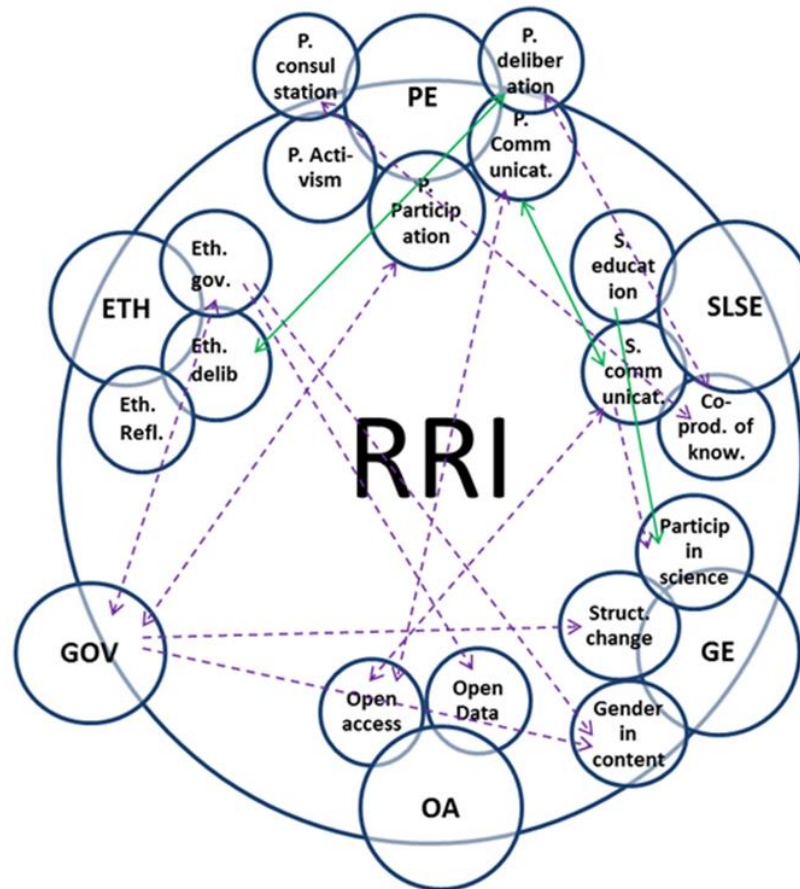
Intervention logic model (II)

Figure 5.1. Existing and potential interlinkages/overlaps *between* RRI dimensions/sub-dimensions

DRAFT

Source:

'Monitoring the evolution and benefits of Responsible Research and Innovation' (MoRRI), 2015-2018, Fraunhofer ISI, Technopolis



Indicators (**Public Engagement**)

DRAFT

- 15. Models of Public Involvement in S&T decision making
- 16. Policy oriented engagement with science
- 17. Citizens preferences for active participation in S&T decision making
- 18. Active information search about controversial issues
- 19. Public engagement performance mechanisms in research institutions
- 20. **Dedicated resources for Public Engagement**
- 21. **Embedment of Public Engagement in RFOs**
- 22. Public Engagement elements as evaluative criteria in proposal evaluation
- 23. R&I democratisation index
- 24. National infrastructure for involvement of citizens and societal actors

Third and fourth point

*III. AG's strategic report; Public Consultation;
Scoping paper*

IV. Mid-Term review Horizon 2020

Member States (e.g. Italian Senate)

".../... The foundation must be laid both to increase the involvement of citizens in science topics and to transform that involvement into active participation in European calls [] in order to take advantage of all the opportunities offered by the EU."

p. 6

Resolution of the 7th standing committee (Education, heritage, scientific research, entertainment and sport), Doc. XXIV, No 61, Italian Senate, 29/06/2016

Context of the SwafS Scoping Paper

An increasing policy attention on SwafS/RRI dimensions

- **Rome Declaration** on Responsible Research and Innovation in Europe (21 Nov 2014)
- Council conclusions, e.g. on The transition towards an Open Science system: "[O]pen science entails amongst others **open access** to scientific publications and optimal reuse of research data, **citizens science**, and **research integrity**..." (27 May 2016)

Inputs to the SwafS Scoping Paper

1. Open Innovation, Open Science, and Open to the World
2. SwafS Advisory Group Strategic Opinion
3. SwafS Open Public Online Consultation
4. Commission services (including SwafS 2014-2017 gap analysis)

Open Innovation, Open Science, Open to the World

- *"An invention becomes an innovation only if users become a part of the value creation process... Notions such as 'user innovation'... emphasize the **role of citizens and users** in the innovation processes as 'distributed' sources of knowledge. **This kind of public engagement is one of the aims of the Responsible Research and Innovation programme**"*
- *"The research process of the future will be global, networked and open... **Citizen Science can contribute to the Commission's goal of Responsible Research and Innovation**" (Commissioner Moedas, 30 May 2016)*

Strategic orientations for SwafS 2018-2020

1. Accelerate and catalyse processes of **institutional change** towards RRI
2. Build the **territorial dimension** of SwafS partnerships
3. Explore and support **citizen science**
4. Build the **knowledge base** for SwafS (clustering & focusing)

The Council (Competitiveness), at its session of 26-27 May 2016:

ACKNOWLEDGES that:

the Commission has already taken important measures in Horizon 2020 to connect **science and society**, as well as to promote open science, and ENCOURAGES the Commission to step up its efforts to bring science closer to the citizens and to involve citizens and civil society more in the strategic agenda-setting of R&I priorities at EU level, including in Horizon 2020 advisory and expert groups;

<http://data.consilium.europa.eu/doc/document/ST-8785-2016-INIT/en/pdf>

The Council (Competitiveness): 'The transition towards an Open Science system'

The Open Science Policy Platform and European Open Science Agenda

4. and other aspects of open science such as fostering research integrity and developing citizen science;

<http://data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf>

3 O's strategy

Open Innovation

Open Science

Open to the World



<https://ec.europa.eu/digital-single-market/en/news/open-innovation-open-science-open-world-vision-europe>

3 O's strategy

Open Innovation

"An invention becomes an innovation only if users become a part of the value creation process. Notions such as '**user innovation**', as coined by Eric von Hippel, emphasize the role of citizens and users in the innovation processes as 'distributed' sources of knowledge. **This kind of public engagement is one of the aims of the Responsible Research and Innovation programme in Horizon 2020.**"

<https://ec.europa.eu/digital-single-market/en/news/open-innovation-open-science-open-world-vision-europe> p. 13

The roles of the different actors in Open Innovation

THE PUBLIC SECTOR

THE FINANCIAL SECTOR

INNOVATIVE BUSINESSES

ACADEMIA

CITIZENS

Citizens, users and Civil Society Organisations have a central and transversal role to play in bringing innovation to the market. They create a demand for innovative products and services, they can fund and / or finance projects that are relevant to them, they can be at the source of innovative ideas worth spreading and scaling up and they can have a say in what research is meaningful to them and can impact their lives.



3 O's strategy

Open Science

"Citizen Science can contribute to the Commission's goal of Responsible Research and Innovation, as it reinforces public engagement and can re-direct research agendas towards issues of concern to citizens."

<https://ec.europa.eu/digital-single-market/en/news/open-innovation-open-science-open-world-vision-europe> p. 54

Open to the world (e.g. OECD)

“Neurotechnology and Society: Strengthening Responsible Innovation in Brain Science”

15-16 September 2016


Washington D.C., United States



<https://www.innovationpolicyplatform.org/project-emerging-technologies-and-brain-oecd-bnct>

Open to the world (e.g. OECD)

Blue Sky Forum agenda



INFORMING SCIENCE AND INNOVATION POLICIES:
TOWARDS THE NEXT GENERATION OF DATA AND INDICATORS
Ghent, 19-21 September 2016

[Registration](#) | [Venue and dates](#)

The OECD Blue Sky 2016 Forum will run from 9:00 on **Monday 19 September**, preceded by a welcome dinner on Sunday 18 September, through 13:30 on **Wednesday 21 September**, followed by a farewell lunch.

<https://www.oecd.org/sti/blue-sky-2016-agenda.htm>

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III. RRI: Where are we going?

Time Table for the Elaboration of the Work Programme 2018-2020

2016

Advisory groups	(30/05/16)
Stakeholder consultation	(04/07/16)
Consultation Member States	(Q2/Q3)
Strategic Programming Document	(Q3)
Start of drafting of WPs	(Q4)

Time Table for the Elaboration of the Work Programme 2018-2020

2017

Consultation PC configurations	(Q1-Q3)
Adoption of the WP 2018-20	(Q4)

Probable Timetable for the Elaboration of FP9

2017

Horizon 2020 Interim Evaluation (Q4)

2018

Stakeholder Consultations (Q1)

Adoption of EC Proposal for FP9 (Q4)

2019-2020

Negotiation Council-EP (Q1/Q3)

2020

Adoption of FP9 decisions (Q4)

Conclusion (I)

RRI is a systemic approach to science and society:

- Aiming to make the interplay between science and society more harmonious and more efficient;
- Inviting all stakeholders to open up to and work with each other;
- Engaging in particular all citizens, women as well as men, in science, technology, research and innovation in order to ensure that societal values, concerns and needs are taken care of;

Conclusion (II)

RRI is a systemic approach to science and society:

- In need of indicators and data for better monitoring and assessing the impacts of various initiatives (MoRRI study)
- In need of supports from all stakeholders, notably from policy makers (e.g. Horizon 2020 and next Framework Programme for Research and Innovation) but as well from researchers, CSOs and industry.

Our ambition

RRI approach fully mainstreamed:

- In R&I stakeholders organisations
- At local and regional levels,
- In Member States and EU policies,
- At international level.

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**Thank you for your
attention!**



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Science and Society Ecosystem

HOW?

**Policy debate on the 'Rome
Declaration on RRI' at the
Competitiveness Council
(04/12/2014)**

http://ec.europa.eu/research/swafs/pdf/rome_declaration_RRI_final_21_November.pdf



Science and Society

HOW?

We call on **European Institutions, Member States, Regional Authorities and Research and Innovation Funding Organisations** to:

- **Build *capacity* for RRI by:**
 - Securing resources for RRI activities;
 - Integrating RRI in R&I programmes;
 - Networking existing initiatives;
 - Supporting global RRI initiatives.



Science and Society

HOW?

We call on European Institutions, Member States, Regional Authorities and Research and Innovation Funding Organisations to:

- **Review and adapt **metrics** and narratives for R&I by:**
 - Monitoring the performance of Funding and Performing Organisations with respect to RRI as well as the socio-economic impacts of RRI;



Science and Society

HOW?

We call on European Institutions, Member States, Regional Authorities and Research and Innovation Funding Organisations to:

- **Review and adapt **metrics** and narratives for R&I by:**
 - Providing guidelines for the implementation and assessment of RRI;
 - Setting and communicating a forward looking vision of RRI.



Science and Society

HOW?

We call on public and private Research and Innovation Performing Organisations to:

- Implement **institutional changes** that foster RRI by:
 - Reviewing their own procedures and practices in order to identify possible RRI barriers and opportunities at organisation level;



Science and Society

HOW?

We call on public and private Research and Innovation Performing Organisations to:

- Implement **institutional changes** that foster RRI by:
 - Creating experimental spaces to engage civil society actors in the research process as sources of knowledge and partners in innovation;



Science and Society

HOW?

We call on public and private Research and Innovation Performing Organisations to:

- Implement **institutional changes** that foster RRI by:
 - Developing and implementing strategies and guidelines for the acknowledgment and promotion of RRI;



Science and Society

HOW?

We call on public and private Research and Innovation Performing Organisations to:

- Implement **institutional changes** that foster RRI by:
 - Adapting curricula and developing trainings to foster awareness, know-how, expertise and competence of RRI;
 - Including RRI criteria in the evaluation and assessment of research staff.

