Citizen Science

Philippe Galiay
European Commission
DG RTD B7.002
Mainstreaming RRI in Horizon 2020 and ERA
Summary

I. Citizens in Horizon 2020

II. Policy context: Citizens and the 3Os' strategy

III. Policy trends: Citizens 'en route' towards FP9
Science and Society

WHY?
RRI: A simple strategy

Science and society:

An Ecosystem

A systemic approach to Science and Society:

Responsible Research and Innovation
RRI – Five dimensions

- Choose together
- Creative learning, fresh ideas
- Share results to advance
- Do the right "think" and do it right
- Unlock the full potential

Citizens' Engagement
Science Education
Open Access
Ethics
Gender Equality

Governance
SWAIFS and RRI in the European Commission

Organizational Chart: (~46p)

SWAIFS: Units DG RTD.B7 + REA.B5 (21p+16p)

  Sector DG RTD.B7.002 (RRI, PE, SE)

  Sector DG RTD.B7.001 (Gender)

Ethics: Sector DG RTD.01.001 (7p)

Open Access: DG RTD.A6 (2p)
SWAFS and RRI in Horizon 2020

Framework programme decision

- Article 14 'Cross-cutting issues' (including RRI)
- Article 16 'Gender equality'
- Article 18 'Open access'
- Article 19 'Ethical principles'

No article related to citizen science...
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
Science with and for Society

Objectives:
1. Build effective co-operation between science and society,
2. Foster the recruitment of new talent for science,
3. Pair scientific excellence with social awareness and responsibility

Horizon 2020 KPI:
Number of *institutional change actions* promoted by the programme towards Responsible Research and Innovation (RRI)
Eight lines of SWAFS activities

1. Science careers
2. Gender equality
3. Societal integration
4. Science education
5. Open access/open data
6. Governance & ethics
7. Precaution
8. Science communication
Euroscience Open Forum (ESOF)

The largest interdisciplinary science meeting in Europe:

• 4000+ delegates from 80 countries,
• 150 conferences and workshops,
• 200+ events attended by 35,000 participants...
Sea for Society

Engaging citizens in participatory dialogue to share knowledge, forge partnerships and empower actors on issues related to oceans...

Living labs, youth parliaments, festivals...

http://seaforsociety.eu (FP7 - 2012-2015)
Citizen and Multi-Actor Consultation on Horizon 2020 (CIMULACT)

Engaging more than 3500 citizens to co-create European research agendas/topics based on citizen needs and visions...

Several consultation phases in 30 countries, conferences, targeted dissemination (including to the EC)

Do It Together Science (DITOs)

http://togetherscience.eu
(Horizon 2020, 2016-2019)

Activities in science galleries, museums, art institutions... 500 innovative workshops on citizen science, exhibitions, round tables, film nights, debates...

Biodesign Workshop #explore
SWAFS and RRI in HORIZON 2020

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Responsible Research and Innovation

**Aim:**
To encourage societal actors to work together during the whole research and innovation process in order to better align R&I and its outcomes with the values, needs and expectations of society

**Horizon 2020 KPI:**
Citizens, Civil Society Organisations (CSOs) and other societal actors contributing to the co-creation of scientific agendas and scientific contents
Example of integration of RRI in H2020

Leadership in enabling and industrial technologies (LEIT) Nanotechnologies, Advanced Materials, Biotechnology, and Advanced Manufacturing and Processing

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

Specific Challenge: In order to foster responsible research and innovation (RRI) in nanotechnologies, innovative processes are needed to improve the responsiveness of research & innovation processes to public values and concerns, and to ensure that research & innovation truly respond to societal challenges and take into account the social and environmental consequences from the outset.
RRI in Horizon 2020 WP 2016-2017

Clear improvement vs WP 2014-2015

- 16 lines out of 22 (vs 6 out of 22) address RRI explicitly
- These represent roughly half of the overall €14,100 budget
- RRI presentation is coherent across Horizon 2020
- Short narratives developed, linking society, RRI and Horizon 2020 activities
RRI in Horizon 2020 WP 2018-2020

Margins for progress toward WP 2018-2020

- Narratives could be more elaborated and
- RRI should appear in all parts of the Horizon 2020 WP,
- Need to evidence the RRI challenges, the strengths and weaknesses of each area and
- RRI should relate directly to topics as necessary
Types of CSOs in Horizon 2020

**CSO 1**: "core" CSOs, financed by individuals or non-profits, oriented towards individuals/citizens

**CSO 2**: oriented towards society/public, publicly financed

**CSO 3**: oriented towards society, financed by businesses

**CSO 4**: oriented towards businesses and financed by businesses (e.g. trade/business associations)

Source: 'CSO Study'
## CSOs participation in FP6 and FP7

### Percentages of funding by CSO type, programme, and thematic area

<table>
<thead>
<tr>
<th>Thematic Area</th>
<th>CSO1-CSO3</th>
<th>CSO1</th>
<th>CSO2</th>
<th>CSO3</th>
<th>CSO4</th>
<th>CSO1-CSO3</th>
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<tr>
<td>Activities of International Cooperation</td>
<td>0,9</td>
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<td>1,7</td>
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<td>Regions of Knowledge</td>
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<td>0,6</td>
<td>0,9</td>
<td>1,3</td>
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<td>Research for the benefit of SMEs</td>
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<td>Science in Society</td>
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<td>3,7</td>
<td>8,1</td>
<td>6,1</td>
<td>3,3</td>
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<td>Energy</td>
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<td>Socio-economic sciences and Humanities</td>
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<td>Joint Technology Initiatives</td>
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<td>0,0</td>
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<tr>
<td>Research policies</td>
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<td>Marie-Curie Actions</td>
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<td>0,1</td>
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</tbody>
</table>

**Total**                                    | 0,1       | 0,2  | 0,4  | 0,3  | 0,2  | 0,3       |

**Read:** Within FP6 in Activities of International Cooperation CSOs type 1 get 0,9% of funding.
Data source: CORDIS. Table: FASresearch.

Even more limited in terms of funding distribution

Table 9: Funding distribution among organisation types (in 1,000 Euro and %)

<table>
<thead>
<tr>
<th>Types</th>
<th>FP6 Thousand €</th>
<th>FP6 Percent</th>
<th>FP7 Thousand €</th>
<th>FP7 Percent</th>
<th>H2020* Thousand €</th>
<th>H2020* Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>HES</td>
<td>6.430.936,8 €</td>
<td>38,7%</td>
<td>19.424.028,1 €</td>
<td>43,3%</td>
<td>1.315.398,6 €</td>
<td>35,8%</td>
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<tr>
<td>REC</td>
<td>4.914.048,6 €</td>
<td>29,6%</td>
<td>12.206.798,1 €</td>
<td>27,2%</td>
<td>1.175.139,3 €</td>
<td>31,9%</td>
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<tr>
<td>PRC</td>
<td>4.206.080,6 €</td>
<td>25,3%</td>
<td>11.064.961,2 €</td>
<td>24,6%</td>
<td>930.606,8 €</td>
<td>25,3%</td>
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<tr>
<td>PUB</td>
<td>575.057,5 €</td>
<td>3,5%</td>
<td>1.293.869,0 €</td>
<td>2,9%</td>
<td>164.415,2 €</td>
<td>4,5%</td>
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<tr>
<td>OTH</td>
<td>258.771,2 €</td>
<td>1,6%</td>
<td>311.267,3 €</td>
<td>0,7%</td>
<td>6.582,5 €</td>
<td>0,2%</td>
</tr>
<tr>
<td>CSO1</td>
<td>15.732,7 €</td>
<td>0,1%</td>
<td>42.886,3 €</td>
<td>0,1%</td>
<td>8.084,0 €</td>
<td>0,2%</td>
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<tr>
<td>CSO2</td>
<td>51.315,2 €</td>
<td>0,3%</td>
<td>77.617,8 €</td>
<td>0,2%</td>
<td>19.300,0 €</td>
<td>0,5%</td>
</tr>
<tr>
<td>CSO3</td>
<td>32.339,4 €</td>
<td>0,2%</td>
<td>81.282,3 €</td>
<td>0,2%</td>
<td>12.125,1 €</td>
<td>0,3%</td>
</tr>
<tr>
<td>CSO4</td>
<td>133.988,1 €</td>
<td>0,8%</td>
<td>387.249,7 €</td>
<td>0,9%</td>
<td>46.525,5 €</td>
<td>1,3%</td>
</tr>
<tr>
<td>Total</td>
<td>16.618.270,0 €</td>
<td>100,0%</td>
<td>44.889.959,7 €</td>
<td>100,0%</td>
<td>3.678.177,1 €</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

Data source: CORDIS, WU. Table: FASresearch. *April 2015
These citizen Science projects have received funding from the European Union’s Horizon 2020 research and innovation programme and the 7th Framework Programme.
Engaging citizens in Horizon 2020

Citizens' Observatories

The **WeSenseIt** project "allows citizens to play an integral role in water governance by establishing a citizens’ water observatory [...] and by empowering them to play a more active role in decision-making process".

**WeSenseIt** is "validating the envisaged citizen observatories and demonstrating the applicability of its outcome through three case studies in distinctly different European areas (UK, Netherlands, Italy)".

[http://wesenseit.eu/](http://wesenseit.eu/)
Engaging citizens in Horizon 2020

Citizens' Observatories

SC5-19-2017: Coordination of citizens' observatories initiatives

**Specific Challenge:** Citizens' observatories are community-based environmental monitoring and information systems which build on innovative and novel Earth observation applications embedded in portable or mobile personal devices. Thanks to the vast array of ubiquitous information and data they can provide, citizens' observatories can enable authorities to obtain evidence and inform environmental policy making, complementing more authoritative in-situ observation and monitoring networks and systems with a very positive cost-benefit ratio.
Engaging citizens in Horizon 2020

**SC3 Energy - EMPOWER**: Aims to enable the active participation of citizens that consume and produce energy so as to improve how energy is consumed, and significantly reduce greenhouse gas emissions ([http://empowerh2020.eu/](http://empowerh2020.eu/))

**SC4 Transport - Mobility 4 EU**: Will draw out a vision for Europe's transport system in 2030 along with recommendations for R&I through a participatory multi-stakeholder approach ([http://www.mobility4eu.eu/](http://www.mobility4eu.eu/))

**LEIT ICT - HackAIR**: Will create and test an open platform to enable citizens to generate and publish outdoor air pollution data ([http://www.hackair.eu/](http://www.hackair.eu/))
Summary

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II. Policy context: Citizens and the 3Os' strategy

III. Policy trends: Citizens 'en route' towards FP9
A supportive policy context

3Os' strategy: Citizens at the centre (user-led innovation, citizen science)
3 O's strategy

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’, 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.

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."

A supportive policy context

**3Os' strategy**: Citizens at the centre (user-led innovation, citizen science)

**Open Science Policy Platform (OSPP)**: Citizen science is one of the 8 priorities
Summary

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Moving forwards (1)

EC response to the HLEG **FP7 Ex-Post Evaluation** report: "(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."

Strategic orientations suggested by the **SWAFS/RRI Advisory Group** for the WP 2018-2020: institutional change, the territorial dimension of RRI, and citizen science

**Horizon 2020**: Ongoing efforts to embed RRI in WP18-20
Moving forwards (2)

**FP9:** Building a strong narrative for citizen science

**Interim evaluation of Horizon 2020:** Very positive but still... could do better for engaging citizens and civil society

**NewHoRRIzon:** SWAFS project developing RRI narratives for each Horizon 2020 line

**MoRRI:** Developing a 'SMART impact' monitoring system for RRI
Moving forwards (3)

FP9: Building a strong narrative for citizen science

'Bohemia scenarios': 'New horizons: Future scenarios for research & innovation policies in Europe' – The participation of stakeholders and citizens is seen as "essential"

High-level (Pascal Lamy) group on 'maximising the impact of EU R&I': [Paper due on 3rd July 2017!]
Our ambition for RRI and citizen science

**RRI** approach fully mainstreamed, including citizen science:

- In R&I stakeholders organisations;
- At local and regional levels;
- In Member States;
- In EU policies;
- At international level (e.g. OECD, UN).
Our ambition for RRI and citizen science

Keep up the momentum!
Any questions?

Thank you for your attention!

Philippe Galiay
European Commission
DG RTD B7.002
Mainstreaming RRI in Horizon 2020 and ERA
Further information (EC)


SWAFS: http://ec.europa.eu/research/swafs/index.cfm?pg=home

Further information (external)

MoRRI: https://morri.netlify.com/
CIMULACT: http://www.cimulact.eu/
RRI Tools: https://www.rri-tools.eu/
Do it Together Science (DiTOs): http://togetherscience.eu
SWAFS/RRI NCP network: http://www.sisnetwork.eu/