'Open Science
Citizen Science
Responsible Research and Innovation'

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

'Citizen and DIY Science and Responsible Research and Innovation
European Stakeholders Round Table'
ECSA, Berlin, 08/11/2016
Summary

I. Open Science

II. Citizen Science

III. Science with and for Society

IV. Responsible Research and Innovation
Open Science: 5 policy action lines

1. *Fostering and creating incentives for Open Science,*
2. *Removing barriers for Open Science,*
3. *Mainstreaming and further promoting open access policies to research data and publications;*
4. *Developing research infrastructures for Open Science;*
5. *Embedding Open Science in society*
Open Science: 8 policy ambitions

1. FAIR open data
2. European Open Science Cloud
3. Altmetrics
4. New business models for scholarly communication
5. Rewards
6. Research integrity
7. Open science skills
8. Citizen Science
How? co-shaping with stakeholders

ERA & framework conditions for actors:
- European Charter for researchers
- Code of conduct for Research Integrity
- Charter for Access to Research Infra
- ...

DSM & framework conditions for data:
- Copyright - TDM
- Data Protection
- Free Flow of Data
- ...

European Commission

Open Science Policy Platform

Wide input from stakeholders:
- ad-hoc meetings and workshops
- e-platform with wider community
- reports and independent experts

- EG on open science cloud
- EG on altmetrics
- EG on alt. business models for OA publishing
- EG on FAIR open data

European Open Science Agenda:
- OA publishing models
- FAIR open data
- Science Cloud
- Alternate metrics
- Rewards & careers
- Education & skills
- **Citizen Science**
- Research integrity
- ...

advice

opinions

context
Summary

I. Open Science

II. Citizen Science

III. Science with and for Society

IV. Responsible Research and Innovation
Citizens Science

**Citizen Science:** Citizen scientists significantly contribute and are recognised as valid knowledge producers of European science

- A field new to DG RTD-B but
- Some experience in DG RTD-I, DG CNECT and DG JRC
- Green and White paper of SOSCIENTIZE project
- And many more academic analysis and Citizens Science networks (e.g. ECSA, CSA, ACSA)
Citizens Science

**Citizen Science:** Citizen scientists significantly contribute and are recognised as valid knowledge producers of European science

- **BUT:**
  - Citizen Science definition is far from being carved in marble
  - Beyond data collection and offering services to scientists, Citizen Science can extend to upstream agenda setting, education to science, popularisation of science, etc.
Summary

I. Open Science

II. Citizen Science

III. Science with and for Society

IV. Responsible Research and Innovation
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 (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
## Calls SWAFS WP 2014-15 Budget

<table>
<thead>
<tr>
<th>Calls</th>
<th>2014 budget M €</th>
<th>2015 budget M €</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAC</td>
<td>12,2</td>
<td>10,4</td>
<td>22,6</td>
</tr>
<tr>
<td>GERI</td>
<td>9,5</td>
<td>9,0</td>
<td>18,5</td>
</tr>
<tr>
<td>ISSI</td>
<td>10,3</td>
<td>22,0</td>
<td>32,3</td>
</tr>
<tr>
<td>GARRI</td>
<td>12,3</td>
<td>5,3</td>
<td>17,6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>44,3</td>
<td>46,7</td>
<td>91,0</td>
</tr>
</tbody>
</table>
No Citizen Science?

ISSI-2-2014 - Citizens and multi-actor engagement for scenario building

CIMULACT (Project ID: 665948)
"CIMULACT has as a main objective to add to the relevance and accountability of European research and innovation – Horizon 2020 as well as national - by engaging citizens and stakeholders in co-creation of research agendas based on real and validated societal visions, needs and demands."
VOICES
‘Views, Opinions and Ideas of Citizens in Europe on Science’

Project: FP7 Pilot pan-European participatory consultation process to investigate how the EC could reach out to citizens to help draft a targeted R&I policy agenda

Topic: how to tackle urban waste and transition to a zero waste society

Outcomes: 350 ideas; 5 waste-related topics in the Horizon2020 2014-2015 WP for over 116 M EUR
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.
Calls SWAFS WP 2014-15
No Citizen Science?

ISSI-1-2015 - Pan-European public outreach: exhibitions and science cafés engaging citizens in science

DITOs (Project ID: 709443)
"We propose moving from a model in which scientific research, innovation, and problem-solving is mainly driven by scientific/professional institutions to one based on active public participation and capacity building with various levels and strategies of engagement in the scientific process."
# Call SWAFS WP 2016

## Budget

<table>
<thead>
<tr>
<th>Call</th>
<th>2016 budget M €</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Change to Support Responsible Research and Innovation</td>
<td>19,5</td>
</tr>
<tr>
<td>Embedding Responsible Research and Innovation in Horizon 2020</td>
<td>6,8</td>
</tr>
<tr>
<td>Strengthening the Science with and for Society Knowledge Base</td>
<td>pm</td>
</tr>
<tr>
<td>Developing Inclusive, Anticipatory Governance for Research and Innovation</td>
<td>28,42</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>54,72</strong></td>
</tr>
</tbody>
</table>
Calls SWAFS WP 2016-17

Citizen Science?

SwafS-01-2016: Participatory research and innovation via Science Shops

...

SwafS-10-2017: Putting Open Science into action

...

Citizens' engagement across the EC...

An incomplete list...

With the Citizen in different roles:
- Artist
- Audience
- Consumer
- Curious
- Decision maker
- Funder
- Host
- Observer
- Participant
- Prosumer
- Researcher
- Resident
- Scientist
- Student
- Subject
- Supplier
- Teacher
- Vendor
- Voter
- etc...
- active, passive and everything in between!
Summary

I. Open Science

II. Citizen Science

III. Science with and for Society

IV. Responsible Research and Innovation
Responsible Research and Innovation in Horizon 2020

Public Engagement (including Citizen Science)

Gender Equality

Science Education

Ethics

Open Access

Unlock the full potential

Creative learning fresh ideas

Do the right "think" and do it right

Choose together

Share results to advance
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
RRI Embedded in the Horizon 2020 Governance Framework

A few RRI features are already embedded:

- **Ethics review of all selected projects**
- **Gender equality (advisory group target of 40%, best efforts in consortia, evaluation sub-criteria)**
- **Open Access to publications (rule) / data (pilot)**
- **An RRI sector on the organigram**
- **Public engagement (CSOs in evaluation panels...)**
RRI in Horizon 2020 WP 2016-2017

Clear improvement vs WP 2014-2015

• 16 lines out of 22 are addressing RRI
• Representing 53% 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
Further RRI Embedding

- **European Research Area** (Gender, Open Access to publications / data)

- **OECD** (RRI Workshop, Washington, 15-16/09/16; Blue Sky Conference, Ghent, 19-21/09/16)

- **Euroscience** (e.g. RRI as a selection criteria for the ESOF sessions)

- **Philanthropic organisations** (e.g. RRI award)
Citizens and 3 Os 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."

Thank you for your attention!

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

'Citizen and DIY Science and Responsible Research and Innovation European Stakeholders Round Table'
ECSA, Berlin, 08/11/2016