

# **Draft Horizon 2020 Work Programme 2016-2017 in the area of Science with and for Society**

## **Important notice:**

This paper is made public just before the adoption process of the work programme to provide potential participants with the currently expected main lines of the work programme 2016-2017. It is a working document not yet endorsed by the Commission and its content does not in any way prejudice the final decision of the Commission.

The adoption and the publication of the work programme by the Commission are expected in mid-October 2015. Only the adopted work programme will have legal value.

This adoption will be announced on the Horizon 2020 website and on the Participant Portal. Information and topic descriptions indicated in this working document may not appear in the final work programme; and likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission.

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## **Introduction**

### General framework

The Horizon 2020 Specific Programme describes the aim of Part V 'Science with and for Society' (SWAFS) as follows: *"The aim is to build effective cooperation between science and society, to recruit new talent for science and to pair scientific excellence with social awareness and responsibility"*.<sup>1</sup>

To that end, it indicates that the focus will be on 8 specific activities lines: attractiveness of scientific careers, gender equality, integration of citizens' interests and values in research and innovation (R&I), formal and informal science education, accessibility and use of research results, governance for the advancement of responsible research and innovation and promotion of an ethics framework for research and innovation, anticipation of potential environmental, health and safety impacts, and improved knowledge on science communication. It also states the importance of the complementarities and cross-cutting issues between the various parts of Horizon 2020, notably for Science and Society<sup>2</sup> and for gender equality<sup>3 4</sup>.

Against the background of the eight keys defined in the Horizon 2020 Specific programme Science with and for Society, this Work Programme has been designed. It considers – inter alia – the work undertaken by the Science with and for Society Advisory Group (EAG), projects funded under FP7-Science in Society, several workshops and expert groups held to help prepare the next steps of Horizon 2020, and the results of a public consultation launched on 11 August 2014.

There is a regime shift in the evolution of science and of its interactions with society for a number of reasons. Some of them have been identified in the Communication of the Commission *"Taking stock of the Europe 2020 strategy for smart, sustainable and inclusive growth"*<sup>5</sup>, namely: societal changes in European and global societies (e.g. new forms of urban and rural lifestyles, new consumption and mobility patterns, new and more diverse family settings), globalisation and trade, productivity developments, and pressure on natural resources.

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<sup>1</sup> Horizon 2020 Framework Programme for research and innovation (R&I) (2014-2020)

<sup>2</sup> *"The relationship and interaction between science and society as well as the promotion of responsible research and innovation, science education, science communication and culture shall be deepened and public confidence in science and innovation reinforced by activities of Horizon 2020 favouring the informed engagement of and a dialogue with citizens and civil society in research and innovation."*

<sup>3</sup> *"Promoting gender equality in science and innovation is a commitment of the Union. In Horizon 2020, gender will be addressed as a cross-cutting issue in order to rectify imbalances between women and men and to integrate a gender dimension in research and innovation programming and content."*

<sup>4</sup> Council Decision 2013/743/EU

<sup>5</sup> COM (2014) 130

Strategic orientation for 2016-2017: "Open debates and learning by doing along the lines of Responsible Research and Innovation"

Responsible Research and Innovation (RRI) is cutting across Horizon 2020, engaging society, integrating the gender and ethical dimensions, ensuring the access to research outcomes and encouraging formal and informal science education. At the occasion of the Competitiveness Council on 4-5 December 2014, RRI was characterised as follows: Responsible research and innovation is a process for better aligning research and innovation with the values, needs and expectations of society. It implies close cooperation between all stakeholders in various strands comprising: science education, definition of research agendas, access to research results and the application of new knowledge in full compliance with gender and ethics considerations.

There is a regime shift in the evolution of science and of its interactions with society for a number of reasons. Some of them have been identified in the Communication of the Commission *"Taking stock of the Europe 2020 strategy for smart, sustainable and inclusive growth"*<sup>6</sup>, namely: societal changes in European and global society (e.g. new forms of urban and rural lifestyles, new consumption and mobility patterns, new and more diverse family settings), globalisation and trade, productivity developments, and pressure on natural resources.

This shift in the science-society interactions has been discussed and analysed in various contexts (including FP7 projects and Expert Groups) and has been referred to as a "*re-contextualisation of science in society*"<sup>7</sup>. The various (and tentative) accounts and narratives of the relationship between science and society (e.g. its importance, the degree of urgency to act, and the kind of activities that should be launched in response to these assessments) depend on the normative approaches adopted. This implies that learning-in-interaction (between and within science and society) must be important for the Science with and for Society Work Programme and for Responsible Research and Innovation (RRI) embedding in Horizon 2020.

For instance, FP7 Mobilisation and Mutual Learning Action Plans (MML) supported collaboration between researchers and citizens in the research cycle, from defining research agendas to exploiting research results; the Gendered innovations initiative provides case studies and methodologies to integrate the needs and behaviours of women as well as men in research content. This trend towards opening research and innovation activities to societal actors and concerns is seen as an important move to be pursued in order to improve the quality and relevance of R&I for society.

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<sup>6</sup> Document COM (2014)130.

<sup>7</sup> "*By the 1980s, the earlier regime 'Science, the Endless Frontier' was giving way to a new regime which could be labelled 'Strategic Science'. What kind of role do national governments and European governing bodies want science to play in society? What kinds of conditions frame science? What kinds of institutions are needed? How can they respond to societal changes? While parts of the older contract between an autonomous and separated science and society survived (especially as a self-perception of scientists and as cultural views of science), the contract was opened up in recent decades.*" (MASIS report, 2009)

The challenge therefore for Science with and for Society and Horizon 2020 is to foster and support the appropriate settings and collaboration to conduct R&I with and for society. This requires an open debates and learning-by-doing along the lines of Responsible Research and Innovation and ensuring adherence to highest ethical standards. The challenge is also to make the involvement of societal actors and the integration of societal concerns more systemic and sustainable, e.g. through institutional change in research performing and research funding organisations (RPOs and RFOs).

#### *European Research Area*

Institutional change at the level of RPOs and RFOs is at the core of collaboration with Member States in the ERA. Open access, gender equality and an open labour market for researchers are defined as key priorities in the ERA Communication of 2012<sup>8</sup>. Concerning gender equality, institutional change spurs RPOs and RFOs to remove cultural and institutional barriers that generate direct or indirect discrimination in scientific careers and decision-making and to integrate a gender dimension in research content. It could be complemented with institutional change contributing to a better engagement of civil society in R&I.

#### *Open Science*

There are far reaching changes in the modus operandi of the scientific system, which are enabled by digital technologies and driven by the globalisation of the scientific community, as well as the increasing demand to address the societal challenges of our times. They have an impact on the entire research cycle, from the inception of research to its publication, as well as on the way in which this cycle is organised. These changes have been referred to as '*science 2.0*', or '*open science*'. The institutions involved in science are affected (research organisations, research councils, funding bodies), as is the way in which science is disseminated and assessed e.g. the rise of new scientific disciplines, innovative pathways in publishing (among them a substantial rise of Open Access journals), new scientific reputation systems, and changes in the way the quality and impact of research are evaluated.

#### Science with and for Society (SwafS) objectives 2016-2017

Against this background, the main objectives for 2016-17 for SwafS are the following:

- Implement institutional changes that foster RRI in R&I organisations: Past pilot activities have shown great potential for the future, notably by establishing good practices, but there are still bottlenecks to suppress (e.g. in terms of knowledge, behaviours, and spreading of good practices) in public and private governance frameworks, notably in RFOs and RPOs;
- Extend and update Science with and for Society and RRI knowledge base: Although there is a good knowledge base regarding the relationships between science and society

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<sup>8</sup> COM(2012) 392.

and while actions can be already taken in a number of domains, this knowledge base shall be extended and constantly updated.

Support will be provided to embed RRI within the ERA.

Translation of the 2016-2017 strategy into a single call for proposals

The Science with and for Society will open only one call for proposals which is organised around the following four themes:

- **Institutional Change to Support Responsible Research and Innovation in Research Performing and Funding Organisations (2016-2017)**

The 'Institutional Change to Support RRI in Research Performing (RPOs) and Funding Organisations (RFOs)' part will contribute to implementing the RRI keys (public engagement, education to science, ethics including research integrity, gender equality, open science) in an integrated way and disseminate good practices. It will also allow to develop projects in association with researchers, citizens and industry and to monitor impact and progress. Developing new partnerships will also be a priority. Results should contribute to the implementation of the ERA priorities, a greater involvement of all stakeholders, and a better and more sustainable engagement with society.

- **Embedding Responsible Research and Innovation in Horizon 2020 Research & Innovation (2016-2017)**

The 'Embedding RRI in Horizon 2020 R&I' theme will be run and financed in association with other parts of Horizon 2020. It will support various types of engagement of citizens (e.g. focus groups, consensus conferences, MMLs), civil society organisations as well as other key stakeholders in the research and innovation policy implementation relating to Parts II, III, IV, V and VI of Horizon 2020. In this light, this theme can also support participatory research and innovation proposals that foster the uptake of transdisciplinary research, including understanding of the challenges and opportunities for interoperability of research data.

- **Strengthening the Science with and for Society Knowledge-Base (2016-2017)**

'The Science with and for Society-Knowledge Base' theme will be bottom-up and open to suggestions from researchers and other stakeholders on the eight specific activities of SWAFS. Results will help reinforce the understanding, uptake and dissemination of RRI among research communities, decision-makers and civil society actors. Results should also foster the definition of good practices and help analyse and improve the policy initiatives taken in the various keys of RRI.

- **Developing Inclusive, Anticipatory Governance for Research & Innovation (2016-2017)**

'The Developing Inclusive, Anticipatory Governance for R&I' part will develop scenarios regarding possible future RRI activities and how these activities are perceived by science and

society. It will promote the development of spaces of dialogue between researchers, academy, industry (including SMEs), Civil Society Organisations (CSOs) and policy makers, where systemic and institutional adaptation models to future priorities are explored and analysed. It will build scenarios that consider 2020 and beyond, including various governance levels. It will be grounded in integrated, inclusive and integrated assessments of future science and technology, for example by using methodologies from the fields of technology assessment, foresight and impact assessment. The outcomes shall contribute to inclusive and anticipatory governance in the context of strategic priority-setting for future R&I (funding) policy in Europe and contribute to the strengthening of the research and innovation ethics framework. Results of projects issued from this call should be available in time to inform the R&I and other EC policies when preparing the post-2020 period.

A novelty in Horizon 2020 is the Pilot on Open Research Data which aims to improve and maximise access to and re-use of research data generated by projects. Projects funded under the Science with and for Society Work Programme 2016-17 will by default participate in the Pilot on Open Research Data in Horizon 2020.

Projects have the possibility to opt out of the Pilot under certain conditions. Participation in the Pilot is not taken into account during the evaluation procedure. In other words, proposals will not be evaluated favourably because they are part of the Pilot and will not be penalised for opting out of the Pilot.

A further new element in Horizon 2020 is the use of Data Management Plans (DMPs) detailing what data the project will generate, whether and how it will be exploited or made accessible for verification and re-use, and how it will be curated and preserved. The use of a DMP is required for projects participating in the Open Research Data Pilot. Other projects are invited to submit a DMP if relevant for their planned research. Only funded projects are required to submit a DMP.

Further guidance on the Pilot on [Open Research Data](#) and [Data Management](#) is available on the Participant Portal.

It also shall be noted that before the adoption of the financing decision for the 2017 budget in the work programme, to be carried out in 2016, an assessment of the ongoing project (SiS.net2) to support to transnational cooperation of National Contact Points will be carried out. Depending on the outcome of this assessment, the project may either be granted an extension (no additional budget), or if sufficiently substantiated, a new topic and call may be added in the Work Programme.

## **Call - Science with and for Society**

*H2020-SwafS-2016-17*

### **1. INSTITUTIONAL CHANGE TO SUPPORT RESPONSIBLE RESEARCH AND INNOVATION IN RESEARCH PERFORMING AND FUNDING ORGANISATIONS**

‘Institutional change’ is a way to name the evolution of organisations while integrating a concept such as RRI. It builds on pilot actions undertaken in the gender field and for RRI in the Work Programme 2014-2015. The topics of this part are directed to what is happening in Research Funding and Performing Organisations as well and in (and at the level of) Member States and sectors, such as industry and services. That is particularly important because RRI needs new constellations of actors and be embedded in people and institutions..

In the 2009 Report of the MASIS Expert Group, 'Challenging Futures of Science in Society - Emerging Trends and Cutting-Edge Issues', the overall diagnosis is one of a patchwork of ongoing partial and contested transformations. Major trends include the increasing re-contextualization of institutions and practices of science in society, the growing interest in strategic research and accompanying institutional changes, greater citizen involvement and science becoming more reflexive about its own role and impacts. The Report underlines that the open debate about the place of science in society should continue, and experiments to address tensions and other challenges should be welcomed. It calls for ‘dynamic governance’, supporting ongoing dynamics rather than containing them.

The Rome Declaration<sup>9</sup>, even if it does not address overall changes and focuses on traditional science organisations, can be useful as one of the starting points for building proposals for the topics below. It calls 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;
- Creating experimental spaces to engage civil society actors in the research process as sources of knowledge and partners in innovation;
- Developing and implementing strategies and guidelines for the acknowledgment and promotion of RRI;
- 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.

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<sup>9</sup> [http://www.sis-rri-conference.eu/wp-content/uploads/2014/12/RomeDeclaration\\_Final.pdf](http://www.sis-rri-conference.eu/wp-content/uploads/2014/12/RomeDeclaration_Final.pdf)

In general, it is important to position RRI as opening up opportunities rather than introducing “red line” prescriptions. Topics include the possibility of identifying demonstration projects (for example, about quadruple helix approaches), and recognize the importance of “consortium engineering” by developing hubs with a critical mass, as well as capacity building (including annual meetings/conferences). Positioned as Coordination and Support Actions, there could be as well reflective components, e.g. on the barriers to change.

Proposals are invited against the following topic(s):

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

Specific Challenge: The Science Shop model of participatory research and innovation has been successful in bringing students, researchers and civil society together towards tackling real issues at the local and regional levels. Aside from positively impacting on the co-creation of solutions to real world problems, the process of engaging with society has strengthened both the research process and its outcomes, thereby contributing to research excellence and acceptability of innovation outcomes. It has also lead to improved teaching and learning methods in academia, which has benefitted both students and their teachers.

Scope: This topic will provide support to universities, and other research performers, to establish or strengthen science shops throughout Europe, and beyond. Science shops will serve to demonstrate how students and researchers can assist communities tackle real life problems or explore opportunities for sustainable futures. In most cases, research questions will be derived by community partners. The Science Shops will provide an inclusive and safe space for participatory dialogue, citizen science and co-creation with a variety of actors including civil society, public authorities, SME, designers and innovators. This topic will also create opportunities for twinning, whereby well-established science shops provide guidance to universities keen on setting up new science shops. It will allow for joint visits, mutual learning, and the exchange of students and trainers, as well as summer schools. It will compile an exhaustive database of case studies demonstrating the usefulness of the approach in multiple contexts, as well as their alignment with the RRI dimensions. Furthermore it will conduct a comparative assessment of science shops and assess the impacts they have had on their communities, and on the quality of teaching and research within the organisation. This topic shall seek to establish linkages with relevant international initiatives (e.g.: UNESCO Community-based research, Civic Universities, etc.). Particular attention will be placed on gender balance and the integration of gender in research. This topic shall benefit from the inclusion of SSH experts, and will support community processes favouring sustainable solutions.

In line with the strategy for EU international cooperation in research and innovation (COM(2012) 497), international cooperation is encouraged.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3 million would allow this specific challenge to be addressed appropriately.

Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The research will promote the growth and capacity building of science shops for socially responsible community-based research and citizen science. It will provide means through which students, researchers and teaching staff may transfer their knowledge and skills for the benefit of their community, while at the same time ensuring their learning, teaching and research activities benefit from real-life cases and interactions. At the same time it will connect with relevant international initiatives so as to ensure mutual learning across borders.

Type of Action: Research and Innovation action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

### **SwafS-02-2016: ERA-NET Cofund – Promoting Gender equality in H2020 and the ERA**

Specific Challenge: European research still suffers from persistent barriers and constraints to gender equality in the recruitment, advancement and mobility of scientists in the European scientific system, as well as the lack of women in decision-making and the unbalanced representation in the evaluation process of research projects. Statistical evidence suggests that research funding success rates are higher for male than for female researchers. The gender dimension also needs to be further integrated in research programmes and contents. The ERA Progress report 2014 indicates that there are wide disparities among Member States in their awareness and acknowledgement of direct and indirect gender discriminations in research systems as well as in the means they mobilise to overcome them. The challenge is to improve on all these points and advance towards completing the European Research Area in the field of gender equality in research and innovation.

Scope: A first ERA-NET on gender equality in R&I policy called GENDER-NET was funded under FP7 for the period 2013-2016. It helped mapping and analysing existing national and regional programmes and initiatives aiming at promoting gender equality through institutional change in research organisations, as well as the gender dimension in research contents and programmes. It also aimed at developing common indicators for the monitoring of gender equality policies, and identifying priority activities for strategic transnational cooperation.

On the basis of the priorities identified by GENDER-NET, collaboration will be further supported between Member States and Associated Countries, their research programmes and their initiatives addressing the shared challenges described above.

The ERA-NET Cofund action shall extend the partnership to other Member States and Associated Countries, and enlarge the mapping and analysis to these new partners. Moreover,

joint assessments will be extended to the quantitative and qualitative analysis of gender differences and bias in access to research grants. The ERA-NET Cofund action shall help define and develop appropriate conditions for equal opportunities in research funding.

The ERA-NET Cofund action will also launch, co-fund, and monitor strategic transnational cooperation/ actions in support of the implementation of the ERA objectives and based on the priorities identified by GENDER-NET, both from the angle of institutional change in research performing and funding organisations and in view of integrating the gender dimension in research programmes and contents. Priorities may include initiatives such as support to gender equality plans, and development of monitoring systems and of evaluation strategies.

Monitoring arrangements, including indicators, shall be further developed and used.

Proposals should pool the necessary financial resources from the participating national (or regional) research programmes with a view to implementing a joint call for proposals resulting in grants to third parties with EU co-funding, aiming at institutional change and integrating the gender dimension in research contents.

Proposers are encouraged to include other joint activities including additional joint calls without EU co-funding.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 5 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The ERA-NET Cofund action is expected to strengthen the development of gender equality measures in research and innovation across the EU and consequently improve the overall research productivity. Through mutual learning, it will improve the implementation of research and innovation programmes and monitoring of gender equality policies.

The ERA-NET Cofund action will help overcome the disparities among countries and implement appropriate conditions for equal opportunities in the research programmes of the participating countries. It will foster closer cooperation and greater pooling of resources between regional, national and EU-wide research programmes. By mobilising Member States and Associated Countries funding and scaling it up, it will contribute to the implementation of the gender priority of the ERA Roadmap.

Type of Action: ERA-NET Cofund

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

### **SwafS-03-2016-2017: Support to research organisations to implement gender equality plans**

Specific Challenge: Gender equality is a key priority of the European Research Area. The Communication "A Reinforced European Research Area: Partnership for Excellence and Growth" invites research performing organisations (RPOs), including Higher Education Institutions, as well as research funding organisations (RFOs) to take action to promote gender equality in R&I by implementing institutional changes relating to HR management, funding, decision-making and research programmes through Gender Equality Plans, with the following objectives :

Removing barriers to the recruitment, retention and career progression of female researchers;

- Addressing gender imbalances in decision making processes;
- Strengthening the gender dimension in research programmes.

Scope: The action provides support to RPOs and RFOs in order to implement Gender Equality Plans (GEPs) as "drivers" for systemic institutional changes. The proposed GEPs structure must address the following:

- Conduct assessment / audit of procedures and practices, including relevant data on HR management, teaching and research activities, in order to identify gender bias at organisation level;
- Implement effective strategies to address gender bias; this shall include actions such as family-friendly policies (e.g. work schedule's flexibility; parental leave; mobility, dual-career couples), gender planning and budgeting, training on gender equality in Human Resources (HR) management, the integration of gender dimension in research content and programmes and/or the inclusion of gender studies in Higher Education Institution curricula;
- Set targets and monitor progress via indicators at organisation level.

The proposals must include a first assessment of gender issues in each partner organisation. Based on this assessment, effective strategies will be designed to cover organisational features, people and processes, as well as potential impacts.

The proposals shall also explain the planned GEPs in the context of existing national provisions (national legislation, specific incentives, possible barriers, etc) relating to gender equality in research. They shall explain how they will contribute to the achievement of the European Research Area (ERA) objectives on gender equality.

The RPOs - including Higher Education Institutions- and RFOs, involved as partners in the consortium must be at a starting/initial stage in the setting-up of gender equality plans. The allocation of resources within the consortium shall focus on the implementation of GEPs in the partner organisations. If a limited number of other partners which are not implementing

GEP's are part of the consortium, they shall explain their role and their specific contribution to the project in line with the text and requirements of the call.

The proposals shall ensure the support from their highest management level and provide proof of their commitment in the implementation of GEPs. The role of the middle management in the implementation of the GEPs shall be explained.

Participation of RFOs and professional associations in the consortium is recommended.

The proposals shall include a methodology for impartially evaluating the progress made on gender equality plans throughout the duration of the project. The methodology for the evaluation should be thought as formative, helping the partners to adapt their GEP's as necessary. This activity could be dedicated to a specific partner organisation within the consortium with the appropriate expertise or it can be subcontracted. Specific work package and deliverable(s) should be associated to the evaluation.

Project duration of at least 48 months is recommended.

The Commission considers that proposals requesting a contribution from the EU of between EUR 1.5 million and 2.03 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The proposed action will contribute to increase the number of RPOs and RFOs starting to implement gender equality plans pursuing the three objectives mentioned above under "specific challenge". In the medium to long term, activities will contribute to the achievement of ERA in particular by increasing the number of female researchers, improving their careers and mobility. The integration of the gender dimension in research programmes and content will contribute to the quality of research and the social value of innovations.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SwafS-04-2016: Opening Research Organisations in the European Research Area**

Specific Challenge: This topic focuses on the institutional changes needed to cope with the new interactions between Research Funding and Performing Organisations (RFPOs) and RRI stakeholders. Existing RFPOs become more "porous", accepting inputs from what used to be seen as outsiders (extended peer review in funding agencies is an early example). There is a move towards "co-creation" (co-construction in policy and design phases; actual co-production of research organization and performance; co-evaluation of proposals, projects and

programmes). Overall, at the macro-level, so-called quadruple helix formations might be emerging, RRI dimensions being an integral part of these developments.

Within the general trend, the dissemination of RRI practices varies from one discipline to another and from one country to another. Not all researchers and research policy-makers have the same knowledge and skills to adapt to these changes. In order to address these gaps specific trainings for researchers and academics (in particular young scientist during under- and post-graduate training) but also policy-makers and staff working in funding bodies, need to be supported.

Scope: From the perspective of an open science and RRI in the ERA, the above developments are desirable, so it is important to support institutional changes through exchanges between RFPOs in order to benchmark governance settings, map what is happening, identify the drivers and the barriers, how to diagnose the interests and values at stake, and upgrade related skills.

Proposals shall consider co-creation experiences and experiments, some of them being conflictual and/or leading to controversies. They will also consider further issues, in particular of a longitudinal epistemological nature, as different competencies and epistemic authority are involved. They can as well design experiments and try them out, informed by the above reflective components (i.e. benchmarking, mapping, drivers and barriers, interests and values).

In addition, the proposals will support the improvement and consolidation of training material and reach through training the highest number of stakeholders in the European Research Area. The training actions proposed must be relevant for the specific scientific fields considered. They must be practical, engaging, and outcome-oriented. They would use as much as possible existing EC funded training initiatives (e.g. RRI-TOOLS<sup>10</sup>, FOSTER<sup>11</sup>, not excluding others). Online didactic material and training toolkits will be made available free of charge/open access for re-use linked with existing online material.

The Commission considers that proposals requesting a contribution from the EU of between EUR 3 and 3.35 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The funded activities:

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<sup>10</sup> <http://www.rri-tools.eu>

<sup>11</sup> <https://www.fosteropenscience.eu/>

- Will enrich and improve the quality of existing training materials on RRI and open science;
- Will increase general knowledge on RRI and open science practices by sharing experience across different disciplines;
- Will contribute to changes in RFPOs governance settings (including institutional changes and stakeholder behaviours) that are consistent with open science and RRI.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SwafS-05-2017: New constellations of Changing Institutions and Actors**

Specific Challenge: Key institutions like universities and funding agencies are changing, in general and occasionally with respect to RRI issues. In calls for 'civic universities' or 'citizen companies' one can see RRI issues at play, without necessarily having them labelled as such.

Member States are reconsidering their science, technology and innovation policy. New actors such as regions, cities, social entrepreneurs and NGOs of various kinds are becoming important, and new forms of governance are emerging, partly bottom-up. The 'triple helix' of science, industry and government is expanding to a model of a 'quadruple helix' with a fourth strand, the public sphere. At the same time, there is the move to smart specialization, of regions and countries, as well as sectors. Clearly, it is important to support such changes within and between actors and stakeholders when they help articulate good practices.

Scope: The present topic focuses on the importance of new constellations of actors, already visible in public-private partnerships and open science and open innovation, but now becoming broader and more heterogeneous. This is both about new constellations of existing actors (as in public-private interactions) and new or modified constellations because of new actors joining in. The proposals will be initiated by consortia of relevant existing and new actors (research organizations, industry, civil society organizations, and policy makers), articulating evolving practices against the overall backdrop of transformations and tensions as underlined above. There will be a reflective aspect as well, in mapping and analysing what is happening, and perhaps placing it in larger economic frameworks. The reflection is an essential complement to the interactions between the various relevant organizations and actors, in terms of exchanges about good practices and exploring new collaborations.

The proposals would require specific attention to RRI issues, but not necessarily be limited to it.

Given the variety of interests and possible tensions, a somewhat independent actor might lead the project, as some of these independent actors have actually already shown an interest and are engaged in RRI. One generally acknowledged way of managing conflict and nurturing

trust is via “boundary organisations” that act as brokers or mediators between science and society with credibility in the eyes of both.

The Commission considers that proposals requesting a contribution from the EU of between EUR 3 million and 3.55 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The proposed action is expected to enable diversification of constellations of actors and stakeholders in Research and Innovation processes, a spread of good practices among them, and a transformation in their governance framework.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SwafS-06-2017: Engaging industry – Champions for RRI in Industrial Sectors**

Specific Challenge: There is already experience with RRI issues in industry, for example in connection with Nanoscience and Nanotechnologies. Now that other domains are drawing public attention (e.g. synthetic biology, geo-engineering), the challenge is to take stock, drawing also on existing analyses, and to progress further in integrating RRI in industrial contexts.

Earlier and present activities initiated and carried by RRI 'champions' in industrial sectors can be a starting point. The early Responsible Care Programme of the chemical industry and various attempts at codes of conduct for Nano science and Nanotechnologies are quite well-known examples, as are various initiatives referring to sustainability, but one should not overlook smaller and less visible examples. There are also broad-brush initiatives related to social responsibility of organizations and sustainability (e.g. Vision 2050<sup>12</sup>) and which want to pay attention, explicitly or implicitly, to RRI (e.g. EIRMA Task Force on Responsible Innovation). There are the activities which go further than Corporate Social Responsibility, because they are linked to technological innovations.

There are various motives and drivers in these developments, including the importance of having or keeping a social licence to operate, i.e. an acceptance from various stakeholders and communities as a prerequisite to operations. Nevertheless, because of the variety of values and societal convictions, there will be no consensus about who or what is going to count as 'responsible'. This constitutes a structural problem, not only because of essential contestations in our societies, but also because what is 'responsible' can be interpreted differently by

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<sup>12</sup> <http://www.wbcsd.org/vision2050.aspx>

different actors, while each of them wants to use it to describe how he is doing the right thing. The narrative of ‘inclusion’ compounds this problem.

Scope: Two considerations are important within the scope of this topic. First, the narrative of ‘inclusion’, also implicitly in the way terms like ‘inclusive’ are used, suggests that more actors and more inputs should be included in the work of traditional organisations. These organisations might feel beleaguered, and be reluctant. Proposals to do better often start with suggestions on how to create more access for societal actors to the ‘beleaguered’ organisations, which reinforces the storyline. Second, to reduce the effect of mutual suspicions about intentions, the proposals should create (and be themselves) a space guided by actors (or a combination of actors) who would themselves be above the struggles of suspicion and the deadlocks these create. The participants in the project will be mostly companies and industry organisations, but can also include other entities, e.g. private foundations and/or so-called third parties like organisations specialized in supporting changes toward responsible innovation or re-insurance companies. It is expected that several companies join forces to experiment new ways of developing their research and innovation activities in the line of RRI.

To address this specific challenge, proposals should have a wide geographical coverage. It is therefore expected that consortia would include at least entities from 10 different Member States or Associated Countries, although smaller consortia will also be eligible and may be selected.

The Commission considers that proposals requesting a contribution from the EU of between EUR 3 million and 3.55 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: This action aims at the development of new approaches to innovation (be they technical, social or otherwise) in industrial context. It will use and improve existing training instruments funded by the European Commission (e.g. RRI-TOOLKIT of the project RRI-TOOLS<sup>13</sup>). It will help disseminate good RRI practices in industrial circles.

Type of Action: Coordination and support action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

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<sup>13</sup> <http://www.rri-tools.eu>

## **SwafS-07-2016: Training on Open Science in the European Research Area**

Specific Challenge: Open Science describes the on-going transitions in the way research is performed, researchers collaborate, knowledge is shared, and science is organised. It is driven by digital technologies, the globalisation of the scientific community, and the need to address grand societal challenges.

The acceptance of Open Science practices varies from one discipline to another and not all researchers have the same skills to adapt to this change.

In order to address this skills gap specific training for researchers and academics addressing key skills fostering the culture of Open Science will be supported.

Scope: While some aspects of open science, such as open access to publications, have become more widely known in recent years, significant knowledge gaps with regard to other aspects of open science still exist in both institutional settings and among individual researchers . Therefore, this topic supports actions with a clear European added value that are aimed at developing, improving or consolidating training activities at downstream level and reach the highest number of stakeholders in the European Research Area.

Actions proposed must be aimed at training stakeholders with a view to permitting them and/or their organisations to fully implement the practical aspects of open science. Stakeholders include academic staff (train the trainers approach), in particular young scientist during under- and postgraduate training, but also policy-makers and staff working in funding bodies.

The training actions proposed must be relevant for the specific scientific field, practical, engaging, and outcome-oriented .and aiming at linking up with other already existing training initiatives. They should reach the greatest number of stakeholders possible including those Horizon 2020 projects that do not participate in the Horizon 2020 Pilot on open access to data.

Online didactic material or training tool kits made available free of charge/open access for re-use must be developed and linked with existing online material.

As Open Science impacts the entire research cycle and its organisation introducing Open Science research practices education and training will be supported.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 900 000 would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: This action will increase knowledge of open science related issues across different disciplines, contribute to changes in behaviour that are consistent with the ideals

underlying Open Science, and prepare stakeholders for a real application of Open Science in the European Research Area, in particular in Horizon 2020.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SwafS-08-2017: European Community of Practice to support institutional change**

Specific Challenge: Gender equality strategy in research and innovation policy is given a growing attention at the level research performing organizations, including universities and funding organisations, in particular through institutional change and with the objectives of:

- Removing barriers to the recruitment, retention and career progression of female researchers;
- Addressing gender imbalances in decision making processes;
- Strengthening the gender dimension in research programmes.

These objectives are pursued at EU level in Horizon 2020 and at national level in the European Research Area, with the support to Gender Equality Plans and to research on gender (e.g. gender studies, gender medicine, gender in transport). Implementing these policy objectives entails the involvement and development of gender-in-science infrastructures, centres or departments. They need to learn from each other and work together to share best practice and knowledge. There is a need of exchange and cooperation between experienced and less experienced centres / stakeholders from which all should gain and progress on the gender equality objectives.

Scope: The funded action will create a community of practice of research and practitioners centres experienced in gender equality in research and innovation policies aim at:

- sharing lessons learned from institutional change projects and from institutions with higher expertise and transformation experiences
- developing tools to share their lessons learned and stimulate activities in less advanced institutions
- sharing experience with and mentoring institutions who want to implement structural change and advance on gender knowledge
- providing information and training about gender in academic careers and setting gender equality plans, thereby encouraging less advanced organisations to engage in institutional change
- creating and facilitating a forum in which experienced and less experienced stakeholders meet and share their experiences

The proposals shall undertake an assessment of the needs of the less advanced institutions or countries.

The Commission considers that proposals requesting a contribution from the EU of the order of 3 million EUR would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: Improved inter- centre and transnational learning on knowledge and practices on gender equality in research and innovation; increased gender expertise across Europe; ,increased engagement across Europe for institutional change to promote gender equality.

The activities will contribute to increase the number of research organisations implementing gender equality plans to the achievement of the ERA.

Type of Action: Research and Innovation action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

## **2. EMBEDDING RESPONSIBLE RESEARCH AND INNOVATION IN HORIZON 2020 RESEARCH & INNOVATION**

The 'Embedding RRI in Horizon 2020 R&I' theme will be run in association with other parts of Horizon 2020. It will support various types of engagement of citizens (e.g. focus groups, consensus conferences, MMLs), civil society organisations as well as other key stakeholders in the research and innovation policy implementation relating to other parts of Horizon 2020.

In this light, this theme supports also participatory research and innovation proposals that foster the uptake of transdisciplinary research, including understanding of the challenges and opportunities for interoperability of research data.

It supports as well Open Science as a transition within the sciences towards a systematic opening up of the research process, which includes among other:

- the inclusion of a wider range of knowledge producers beyond the academic context
- the (online) sharing of data, research findings and scientific outcomes among researchers and research communities prior to publication
- the open access to publications and data (infrastructures)"

Proposals are invited against the following topic(s):

## **SwafS-09-2016: Moving from constraints to openings, from red lines to new frames in Horizon 2020**

Specific Challenge: Responsible Research and Innovation (RRI) is cutting across Horizon 2020. RRI is a package<sup>14</sup> aiming to better engage society across all Horizon 2020 Research and Innovation activities. Nevertheless it is not immediately clear what the issues are in the various parts of Horizon 2020 and how they can be best addressed. The definition or characterisation of RRI is rather too open and this creates difficulties to operationalize it directly in each of the parts of Horizon 2020. This has also to do with the fact that RRI works out differently in different domains and for different industrial and societal challenges.

Furthermore, eventual desirable outcomes of RRI depend just as much on what is happening overall, also in the Member States, than what can be done within the confines of Horizon 2020. Still, Horizon 2020 activities can play a leading role, through articulating an evidence-based diagnosis, storyline or narrative for each of its parts, and through taking up and further developing approaches and tools, including training tools.

Scope: Applicants will select experts from different parts of Horizon 2020, project coordinators and participants as well as representatives of the main stakeholders with a view to engage together to compare experiences and identify opportunities to develop RRI in the various parts of Horizon 2020.

An RRI diagnosis will be developed for each of the parts of Horizon 2020, including substantial issues of science and technology developments, processes and institutions, as well as relevant societal aspects. Each part should try and formulate actions and activities to address items from the diagnosis (which might include work to improve the diagnosis). This will be articulated as a 'storyline' or a 'narrative' about overall present and future developments, which would then lead to identifying RRI aspects and activities specific to the different Horizon 2020 parts.

The work on the diagnoses, for each part of Horizon 2020, should lead to suggestions for further work, including RRI work (activities and studies). It will also be an occasion to adapt training tools as available today (e.g. RRI-TOOLS<sup>15</sup>, FOSTER<sup>16</sup>, not excluding others) to the specific situation of each part of Horizon 2020, so as to be more effective in reaching and supporting stakeholders. These training tools will be tested in the specific scientific and societal fields considered. They will be practical, engaging, and outcome-oriented. The online

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<sup>14</sup> See also Competitiveness Council of 4-5 December 2014: *“Responsible research and innovation is a process for better aligning research and innovation with the values, needs and expectations of society. It implies close cooperation between all stakeholders in various strands comprising: science education, definition of research agendas, access to research results and the application of new knowledge in full compliance with gender and ethics considerations.”* (16505/14, 3353rd Council Meeting)

<sup>15</sup> <http://www.rri-tools.eu>

<sup>16</sup> <https://www.fosteropenscience.eu/>

didactic material and training toolkits will be made available free of charge/open access for re-use linked with existing online material.

Sophisticated public engagement, including co-creation, will be one important set of tools for the present topic. It can also be interesting to explore the notion of 'society-readiness level', just as there is use of a notion of 'technology-readiness level' (TRL). The actual practices of using TRL can be somewhat limited, considering that TRLs are eventually always socio-technical, i.e. include economic and social (and sometimes political) readiness.

Good embedding practices can be drawn from the Horizon 2020 work programmes 2014-15 as well as from other similar public funding programmes at any governance level (i.e. international, national, regional or local levels) in Europe and beyond. Integration of the global dimension will be a must.

To address this specific challenge, proposals should have a wide geographical coverage. It is therefore expected that consortia would include at least entities from 10 different Member States or Associated Countries, although smaller consortia will also be eligible and may be selected.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 6.8 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: 'Storylines' or 'narratives' developed in relation to the various parts of Horizon 2020 will allow RRI to be an integral part of a more coherent Work Programme in Horizon 2020. They will impact as well on the relevant stakeholder communities as well as in the European Research Area and beyond.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SwafS-10-2017: Putting Open Science into action**

Specific Challenge: The challenge is to operationalise an Open Science rationale for one or more of the societal challenges defined under Horizon 2020. This should be done by a knowledge coalition based on a quadruple helix model of innovation in which civil society organisations, industry, government and academia are committed to work together and share knowledge and data among each other and interested third parties, thus putting Open Science in action in order to produce Responsible Research and Innovation solutions for a particular societal challenge. As citizens and civil society organisations are becoming increasingly

involved in research and innovation projects and processes, an input by Citizen Scientists can be considered for the present specific challenge.

Scope: Proposals can be inspired (but not exclusively) by previous Mobilisations and Mutual Learning Action Plans (MMLs) funded by the European Commission, in their methods or actual design and outcomes. MMLs bringing together a wide diversity of actors to deliberate and share on matters of science, technology and innovation, they can ensure an evidence-based, both knowledge and value-driven approach in support of EU policies. The proposals should enable trans-disciplinary research and innovation cooperation.

Proposals will focus on one or more of the following challenges, at multiple geographical scales (global to local):

- Health, demographic change and wellbeing;
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy;
- Secure, clean and efficient energy (in line with the Commission priority for 2014-2019, Energy Union<sup>17</sup>);
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Europe in a changing world - inclusive, innovative and reflective societies (in line with the Commission priorities for 2014-2019, 'Stronger Global Actor', 'a Union of Democratic Change' and a 'New Policy on Migration'<sup>18</sup>) including Social Science and Humanities and Big Data ;
- Secure societies - protecting freedom and security of Europe and its citizens.

To be of real impact, proposals must ensure research and innovation solutions and their possibility can be increased by public-private partnerships whereby Citizen Science can also be involved,

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

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<sup>17</sup> [http://ec.europa.eu/commission/2014-2019/president\\_en](http://ec.europa.eu/commission/2014-2019/president_en)

<sup>18</sup> [http://ec.europa.eu/commission/2014-2019/president\\_en](http://ec.europa.eu/commission/2014-2019/president_en)

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The knowledge coalitions and the adoption of a responsible research and innovation approach will facilitate the uptake of socially acceptable innovative solutions. The topic will provide an Open Science pilot which will become a reference for other scientific endeavours. It will demonstrate how Open Science and RRI can be used to foster effective science-policy-society interfaces to support research and innovation at various geographical levels, in Europe. It will foster socially responsible citizen science approaches embedding the concept of RRI. It will provide EU leadership in this emerging practice of science, within Europe and in a wider global context..

Type of Action: Research and Innovation action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **3. STRENGTHENING THE SCIENCE WITH AND FOR SOCIETY KNOWLEDGE-BASE**

The 'Science with and for Society-Knowledge Base' theme will be bottom-up and open to suggestions from researchers on the eight specific activities of SWAFS. Results will help reinforce the understanding, uptake and dissemination of RRI among research communities, decision-makers and civil society actors. Results should also foster the definition of good practices and help analyse and improve the policy initiatives taken in the various keys of RRI.

Proposals are invited against the following topic(s):

#### **SwafS-11-2017: Science education outside the classroom**

Specific Challenge: Much analysis has been carried out on the importance of science education both in schools and in higher education. However, science education outside the classroom, which refers to informal science education, and the science education effects of non-educational activities, are not well explored in their nature and effects. Acquiring knowledge, and in particular, evaluating knowledge, often with the help of the Internet, is what is frequently happening in reality, and should be recognised for what it contributes in terms of more sophisticated consumers and scientific citizenship. Consideration on what is available and what is being learnt would be useful to understand how science education outside the classroom influences today's citizens.

Scope: The available knowledge on science education outside the classroom and its impact on citizens need to be analysed, taking into account possible gender and geographical differences. The analysis include socio-economically disadvantaged groups. The proposed action shall specify if this type of learning complements the classroom or succeeds where the classroom might have failed. Consideration shall be given to the impact that can be achieved

by science education outside schools and how this form of informal schooling might be accredited and whether there is a way of assessing the quality of the educational contents.

To address this specific challenge, proposals should have a wide geographical coverage. It is therefore expected that consortia would include at least entities from 10 different Member States or Associated Countries, although smaller consortia will also be eligible and may be selected.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: In the short term, the proposed action will identify good practices in terms of science education outside the classroom and consider the impact this information has on formal and informal science education for students and citizens. In the medium term, the results of the present action will help the EU to better understand the effects of science education outside the regular education institutions and will increase the range of innovative products in science education that reflect societal needs. In the long term the results of the research should contribute to considerations on accrediting the available information.

Type of Action: Research and Innovation action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

### **SwafS-12-2017: Webs of Innovation Value Chains and Openings for RRI**

Specific Challenge: The challenge is to model and better understand the dynamics of the complex webs of innovation value chains and the openings they offer for RRI. The key idea is that of crisscrossing 'innovation value chains'. Innovations and prototypes, business-to-business products and final products move from one organization (entity) to another and are transformed in the process, value is added in the transactions and appropriated. Third-party actors are involved such as standardization bodies and insurance companies, but also, and increasingly, NGOs. While there is a direction to the eventual product flows, initiatives may emerge anywhere, there is no simple linearity (cf. the chain-link model of innovation) and, even more, no beginning nor end (cf. circular economy). Chains can change, split, be re-arranged, crisscross, and co-evolve with changing business models. In general, industry and service structures consist of webs of crisscrossing chains, forming broader structures, consisting of more than the traditional economic actors. There are uncertainties involved in the evolution of these webs, e.g. with the promise of large-area polymeric semi-conducting materials that can be printed. Will the key driver of the eventual chains in this domain be the materials manufacturers, the printing companies, or the various application sectors?

Scope: Given this perspective, the key point of the present topic is that there are openings for RRI in these webs of chains, building on what is there already and/or inserting it if there is an opportunity. Thus, this action shall start with the economic world rather than see RRI as only impinging on it from the outside. It draws on the theme of exploration of intermediaries and boundary spanners, but creates additional focus, as underlined here below by the questions and issues that could be addressed under this topic..

The experience with stage-gate approaches<sup>19</sup> in R&D and product development, as practiced within a few firms, has been taken up by some Member States as a framework for their approach to RRI, and applied in a few cases. What could be explored is whether stage-gate processes could be applied across organisations in an innovation chain, and create openings to include RRI not just in the assessments during the 'gate', but also during the 'stage', to anticipate on the eventual assessment.

When novelties (new options) are introduced, articulated and taken up, chains can shift and split (for example in additive manufacturing, and in the uses of mobile telephony) and new chains may emerge. This can just happen, but increasingly, actors try to anticipate and influence what happens to serve their interests, or otherwise pursue desirable goals. There is joint strategy articulation, occasionally supported by Constructive Technology Assessment, road mapping, and indications and narratives to monitor performance in a forward-looking manner, as in notions like technological readiness. There are openings here, for example by adding 'societal readiness' levels to technological readiness levels, and making sure that 'societal readiness' has pro-active elements, and is not just another term for 'societal acceptability'.

More generally, the reference to responsibility that is part of RRI is not about retrospective responsibility, as in accountability and liability, but about prospective responsibility, with its expectation, perhaps obligation, to do well. The requirement can be seen as a call 'to show an honest effort'. This phrase has been used to assess technology forcing measures (as in the California air pollution legislation). One opening for RRI would then be to operationalise it as 'an honest effort' to achieve desirable outcomes in innovation chains and eventual product-value chains, responding to societal values.

This illustration of possible openings for RRI becoming visible through the perspective of webs of crisscrossing and shifting/emerging chains, is not exhaustive. It shows, though, that it is a generative perspective. It can also contribute to other parts of Horizon 2020. For example, questions about the role of SMEs, or of small-holder farmers, can be explored by inquiring into their functioning in present and emerging webs of crisscrossing chains. 'Open innovation' can become more than a fashionable catchword, at the same time making operational how RRI fits in.

This action will show, and induce, relevant change, without having to go through definitional exercises about RRI first, because the thrust is to go for 'openings to do better'. Rather than

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<sup>19</sup> [http://www.stage-gate.com/resources\\_stage-gate\\_full.php](http://www.stage-gate.com/resources_stage-gate_full.php)

‘growth’ per se, often defined in terms of competition only, the result will be higher quality outcomes and better jobs ('better technology in a better society').

To address this specific challenge, proposals should have a wide geographical coverage. It is therefore expected that consortia would include at least entities from 10 different Member States or Associated Countries, although smaller consortia will also be eligible and may be selected.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The development of a model and a better understanding of the webs of Innovation Value Chains will set a stronger knowledge base for policy orientations regarding innovation. This will facilitate the dissemination and integration of good RRI practices thanks to the identification of 'openings' for RRI. This action will strengthen the SWAFS knowledge base, but also promote institutional changes in Research Funding (RFO) and Research Performing Organizations (RPO), as well as in and across organisations involved in innovation and its embedding in society.

Type of Action: Research and Innovation action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

### **SwafS-13-2017: Integrating Society in Science and Innovation – An approach to co-creation**

Specific Challenge: There is increasing interest, and occasional experiments in processes of co-construction (e.g. agenda-building and policy inputs, co-evaluation, co-funding) and co-production (e.g. citizen science). Sometimes, it is deemed sufficient to have such processes occur, but one could also consider their content and how society would be integrated through approaches like value-sensitive design and gender-sensitive design. There are also combinations of process and content, as with place-based activities involving smart cities, living labs, and the regional dimension linked to Smart Specialization Strategies. For the gender dimension, research has already been funded to outline the loss to society and economy of not taking gender aspects into account in research organization and research design. Such questions can be raised for other dimensions of RRI as well.

While traditional approaches to public engagement will remain, this topic constitutes an opening towards the ‘new wave’ of public engagement where ‘co-creation’ is a key notion. It

will provide innovative solutions to the more heavily technology and/or systems oriented approaches in other parts of Horizon2020.

Approaches and openings to the “creation of spaces for public engagement” (Rome Declaration), including the development and use of temporary and permanent physical spaces (e.g. exhibitions, events), will contribute towards the processes of involving European citizens and the co-creation of knowledge

Scope: The topic could become an umbrella for all sorts of projects, allowing benchmarking and comparisons.

An important focus for study in this topic is the question of what outcomes are being realised. Co-construction and society sensitive design are well intentioned, but what happens will be refracted through practicalities embedded in existing institutions and interests. This has been documented extensively for ICT. There is a structural element here, in the sense that co-construction and design necessarily take place at an early stage, while there are many other factors and circumstances at play in the later stages which co-determine outcomes.

There is a similar structural problem with regulation: good intentions, but actual implementation on the ground falls short. There have been calls for ‘implementable regulation’, where one would start with what are achievable effects in practice, rather than good intentions.

The present topic, on possible outcomes of integration of society in science, shall include the aspect of ‘implementable integration’. This requires study of dynamics of such initiatives, and will definitely improve their reflexivity.

The topic can also consider the role of science communication in improving the quality and effectiveness of the interactions between stakeholders.

To address this specific challenge, proposals should have a wide geographical coverage. It is therefore expected that consortia would include at least entities from 10 different Member States or Associated Countries, although smaller consortia will also be eligible and may be selected.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 4 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: This action aims at developing a better understanding of co-creation processes and outcomes under various cultural, societal and regulatory backgrounds. It will allow better-targeted policy support in the future.

Type of Action: Research and Innovation action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SwafS-14-2017: A Linked-up Global World of RRI**

Specific Challenge: At the moment, 'a linked-up global world of RRI', is a future, and speculative, perspective. But the world is definitely linked-up, and there is recurrent mention of, and occasional work on, RRI-type issues all over the world. In the field of nanotechnology, for some time (since the early 2000s) there were platforms and spaces for dialogue. What is the role of regulation and of civil society in a linked-up global society? What is the role of industry, with the dynamics of firms wanting to appear as 'good firms' rather than the contrary? Similarly, what is the role of nation states and international organizations in this global world?

One might actually consider that RRI could become a competitive advantage, definitely for Europe and directly contribute to Europe's jobs and growth agenda. That possibility will be one element of this topic. It is important to give industry's 'ethical behaviour' a concrete foothold, and not to leave it to abstract deliberations. To this end, domain and case studies in key areas, such as Digital Single Market and Energy Union, supporting the Commission's agenda<sup>20</sup> for jobs, growth, fairness and democratic change will be relevant. Other sectors of activities can be considered as case studies as well (e.g. bio-economy, waste management) provided that they yield significant insight into the possible rise of the global world of RRI.

Scope: There are interesting projects already that can be built on for the present topic. The EU-funded ProGReSS project<sup>21</sup>, aims to promote a European approach to Responsible Research and Innovation (RRI) through a global network, including partners and advisers from Europe, the US, China, Japan, India, Australia and South Africa, and involvement of relevant stakeholders from academia, international organisations, industry, SME research, NGOs, policy advisors and research funders. The GEST (Global Ethics in Science and Technology) project<sup>22</sup>, which has recently led to a major publication on Science and Technology Governance and Ethics, comparing Europe, China and India, is another example.

The present topic spans at least over three overlapping foci:

- Identification and analysis of platforms and spaces for RRI-type issues
- Comparative studies of major and minor players, taking into account differences especially the situation of developing countries

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<sup>20</sup> <http://www.eesc.europa.eu/resources/docs/jean-claude-juncker---political-guidelines.pdf>

<sup>21</sup> <http://www.progressproject.eu/>

[http://www.uclan.ac.uk/research/explore/projects/global\\_ethics\\_science\\_technology.php](http://www.uclan.ac.uk/research/explore/projects/global_ethics_science_technology.php)

<sup>22</sup> <http://www.progressproject.eu/>

[http://www.uclan.ac.uk/research/explore/projects/global\\_ethics\\_science\\_technology.php](http://www.uclan.ac.uk/research/explore/projects/global_ethics_science_technology.php)

- Advantages (up to competitiveness) of RRI, and ethical behaviour in general.

It is also important to locate these questions and trends in current and emerging governance frameworks.

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged, including with third countries beyond Associated Countries.

To address this specific challenge, proposals should have a wide geographical coverage. It is therefore expected that consortia would include at least entities from 10 different Member States or Associated Countries, although smaller consortia will also be eligible and may be selected.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: Better understanding of the dynamics of a 'linked-up global world of RRI' will allow benchmarking European RRI initiatives and integrating good practices from other contexts. It will help industry, civil society and policy makers to take decisions based on evidence. It will produce formal knowledge, easing the dissemination of good practices and improving existing training material.

Type of Action: Research and Innovation action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

#### **4. DEVELOPING INCLUSIVE, ANTICIPATORY GOVERNANCE FOR RESEARCH & INNOVATION**

The 'Developing Inclusive, Anticipatory Governance for R&I' line will develop scenarios regarding possible future RRI activities and how these activities are perceived by science and society. It will promote the development of spaces of dialogue between researchers, academy, industry (including SMEs), civil society organisations and policy makers, where systemic and institutional adaptation models to future priorities are explored and analysed. It will build scenarios that consider 2020 and beyond, including various governance levels. It will be grounded in integrated, inclusive and integrated assessments of future science and technology, for example by using methodologies from the fields of technology assessment, foresight and impact assessment. The outcomes shall contribute to inclusive and anticipatory governance in the context of strategic priority-setting for future R&I (funding) policy in Europe and

contribute to the strengthening of the research and innovation ethics framework. Results of projects issued from this call should be available in time to inform the R&I and other EC policies when preparing the post-2020 period.

Proposals are invited against the following topic(s):

**SwafS-15-2016: Open Schooling and collaboration on science education**

Specific Challenge: At the moment, Europe faces a shortfall in science-knowledgeable people at all levels of society. This is a good time to expand opportunities for science learning, in formal, non-formal and informal settings. Evidence shows that European citizens, young and old, appreciate the importance of science and want to be more informed, and that citizens want more science education. Over 40% believe science and technological innovation can have a positive impact on the environment, health and medical care, and basic infrastructure in the future. Therefore, collaboration between formal, non-formal and informal education providers, enterprises and civil society should be enhanced to ensure relevant and meaningful engagement of all societal actors with science and increase the uptake of science studies and science based careers, employability and competitiveness.

Scope: This action aims to support a range of activities based on collaboration between formal, non-formal and informal education providers, enterprises and civil society in order to integrate the concept of open schooling, including all educational levels, in science education.

"Open schooling" where schools, in cooperation with other stakeholders, become an agent of community well-being shall be promoted; families shall be encouraged to become real partners in school life and activities; professionals from enterprises and civil and wider society should actively be involved in bringing real-life projects to the classroom. Partnerships that foster expertise, networking, sharing and applying science and technology research findings across different enterprises (start-ups, SMEs, larger corporations) shall be promoted. Gender and geographical differences should be considered.

To address this specific challenge, proposals should have a wide geographical coverage. It is therefore expected that consortia would include at least entities from 10 different Member States or Associated Countries, although smaller consortia will also be eligible and may be selected.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The proposed action targets the creation of new partnerships in local communities to foster improved science education for all citizens. It is expected that in the

short term the development of partnerships between schools, local communities and local industry should contribute to a more scientifically interested and literate society and students with a better awareness of and interest in scientific careers. In the medium term the activities should provide citizens and future researchers with the tools and skills to make informed decisions and choices and in the long-term this action should contribute towards the ERA objectives of increasing the numbers of scientists and researchers in Europe.

Type of Action: Coordination and support action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

### **SwafS-16-2016: Mapping the Ethics and Research Integrity Normative Framework**

Specific Challenge: The area of Research Ethics and Integrity is fast evolving. In the EU and internationally, new legislation, codes and good practices are constantly being developed. In this complex environment, researchers cannot easily identify and be aware of the rules to be followed. This also constitutes a challenge for the ethics/integrity experts.

Scope: The action aims at providing a dynamic mapping of the ethics/integrity normative framework which applies to scientific research conducted by European research teams, in the EU and beyond. The work undertaken shall primarily aim at supporting the work of researchers and ethics/integrity review committees.

The action shall design the most appropriate mapping methodology, the processes and institutions to be mapped and produce appropriate process maps, indicating the criteria/dimensions (geographic scope, thematic coverage, stakeholder involvement, etc.) and enable comparative analysis. The outcome of the mapping action shall stimulate knowledge transfer and ultimately promote the uptake of the highest ethical standards. In order to facilitate this role, English summary/abstract of the normative elements (e.g. legislation, code, etc.) focusing on the main practical requirements/recommendations should be made available.

Researchers shall also be helped to distinguish between the legislation that must be applied (highlighting the practical obligations) and the soft laws and best practices that must be taken into account (illustrating them with concrete examples) in the research design and implementation to guarantee the compatibility with the highest ethical standards.

The resulting mapping shall be made available online and include beyond the constitutive elements of the normative framework information on the available trainings and education activities as well as on where to find appropriate ethics/integrity expertise Practical information on how to comply with the legislation and standards should be provided (e.g. website relevant bodies, etc.) and regularly updated. In addition, the work must rely on a real case and scenario building approach based on existing literature, court cases etc. The mapping shall also include contact details of the ethics and research integrity committees/bodies and other relevant authorities (e.g. for personal data protection) which shall deliver the necessary approvals/authorisations. The construction and update of this online database must be done in

close cooperation with the "European Ethics and Research Integrity Network" which is supported by Horizon 2020<sup>23</sup>. This cooperation shall notably ensure positive synergies and guarantee the long term continuity/sustainability of the resulting output.

In addition to the above cited network and in order to avoid duplication of work already undertaken, it is essential to ensure that the publicly available results from relevant EU funded research projects (from FP7 and Horizon 2020) are taken into account.

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3.8 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The proposed action will facilitate the work of the researchers to comply with research integrity and ethics standards and legislation while improving the effectiveness and efficiency of the research ethics/ integrity committees and competent national bodies. Consequently, the excellence of public and private research in the European Research Area will be promoted.

Type of Action: Coordination and support action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

**SwafS-17-2016: The Ethics of informed consent in novel treatment including a gender perspective**

Specific Challenge: The exponential development of knowledge resulting from biomedical research challenges the ethics of informed consent. Patients, practitioners, researchers, health authorities and other stakeholders are confronted with the difficulty to reconcile their legal and administrative environment, biomedical ethics, Human Rights and the increasing global availability of new effective treatments. For some worldwide high mortality diseases, this includes an important gender dimension. In addition to the ethical and social aspects, the economic dimension and potential impact of this challenge on EU health budgets is very significant.

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<sup>23</sup> Science with and for Society Work Programme 2014-2015, Topic GARRI.10.2015 This network aims to identify and share good practices and raise the awareness of ethics and research integrity among the research community, taking into account the diversity of stakeholders. It should notably create an e-community/database (using the EU commission tool SINAPSE hosted on the EU data centre) of European and whenever relevant international experts in the different fields of research ethics and integrity.

Scope: Although informed consent is the pillar of ethics in medical research, several cases with high public coverage have awakened society on the difficulty to simultaneously optimise the research objectives and the patients' wellbeing while limiting the various types of potential conflicts of interest. The proposed action shall study this complex and multidimensional ethics dilemma. The focus shall be on the involvement of patients in translational research and in clinical research based on existing and validated treatments. Similar type of clinical ethics challenges exists when physicians advise patients and have to handle financial aspects, notably the fact that some available effective treatments or tests are reimbursed or not (depending on the countries).

In this context, it is necessary to build up a set of guidelines helping the clinicians to find practical answers enabling the full respect of clinical ethics, in particular ensuring an actual informed consent for these patients involved or not in clinical studies. In order to be effective, the guidelines shall be elaborated with the active involvement of the different actors of the chain, from the clinical researchers/health practitioners and their institution to the health public authorities and the other actors of the health systems: the pharmaceutical industry, the patient groups etc. In order to increase the direct impact of the work, the general guidelines shall be applied to a minimum of two specific cases where the global availability of new treatments, tests/diagnosis tools challenge the clinical practice leading to different form of disparities. This shall include the additional complexity of the gender perspective and therefore be performed on at least one gender specific disease (e.g. breast/ovarian cancer).

The proposed action shall also analyse the use of social media and ICT technologies to facilitate the information supply and the interaction between the patients and the clinicians, particularly in cases where the optimal treatments become possible faster than through the institutional changes (public health measures) that make them available to society. The involvement of all relevant stakeholders is necessary for this step, including innovative industries and patients associations.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3.8 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: Taking into account the gender dimension, will increase the EU standards of clinical research ethics, in particular the quality of informed consent by developing practical guidelines supporting the work of clinicians while stimulating innovation and increase the use of effective new treatments.

Type of Action: Coordination and support action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

## **SwafS-18-2016: The Ethics of technologies with high socio-economic impact and Human Rights relevance**

Specific Challenge: Some technologies raise complex ethical issues that can have considerable socio-economic impact and generate lively debates on research ethics and Human Rights. The areas of genomics human enhancement and man-machine interactions are of particular importance due to their innovative nature and potential impact on jobs and growth. Although repairing an injured body is an accepted and welcome practice, genomics applications and a number of body and mental enhancements as well as the changing nature of the relationship between humans and machines (i.e. robots) raise complex ethical issues that need to be addressed at EU level. In order to promote an inclusive and sustainable socio-economic model, there is a pressing need to provide ethical responses and practical options which support innovation, the research community, facilitates the work of ethics committees and addresses the expectations of society.

Scope: While the work shall integrate the broad ethical perspectives of the emerging technologies, especially those with potentially high social and economic impact, the focus shall be on (a) genomics, in particular genetic testing and screening, genetic patents, genetic databanks and pharmacogenomics and (b) human enhancement, including a categorisation of human enhancement practices on the basis of social, medical and technical criteria and (c) human-machine interactions including the creation of intelligent environments. All the concerned technologies raise several interrelated ethical issues for which there is not yet a clear and stable framework at EU and international level.

A comparison, within the EU and with other regions of the world on both the legal framework (existing or under development) and the level of societal awareness and acceptance constitute therefore an important element of the work. Such an analysis shall integrate the role of ethics committees and other advisory and regulatory structures and examine the impact of these technologies while proving the necessary elements to support the research community in integrating the ethics dimension in their research protocols.

Building on and completing existing practices, the work undertaken shall result, for each of the three topics, with operational guidelines for research ethics committees as well as proposing a code of responsible conduct for researchers, taking into account the expectations of the different stakeholders. This shall be achieved by involving actively civil society organizations and panels of citizens from different socio-economic groups including vulnerable populations. As a result the possible enhancement of the existing ethical and legal frameworks shall be proposed while considering the rapid scientific evolution of the emerging fields.

The possibility to generalise the analysis to other new or emerging technologies shall be studied since a number of the conclusions that will be drawn could serve in other technological and research context raising similar ethical issues.

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged.

Publicly available results from relevant EU funded research projects (mainly from FP7) should be taken into account.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3.8 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The proposed action will contribute to the development and practical implementation of high ethics standards at EU and international level addressing the growing challenges and expectations vis-à-vis these technologies. The work undertaken will also offer concrete ways of better reconciling the needs of the research teams and the legitimate concerns of the citizens while stimulating innovation and contributing to the reduction of socio-economic inequalities including in health treatment and social status. Overall, it will contribute to the development of new approaches in addressing ethical issues of new and emerging technologies and promoting responsible conduct of research while enhancing the innovative nature and potential socioeconomic impact of these technologies.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SwafS-19-2016: Networking of National representatives and resources centres on Gender in R&I**

Specific Challenge: In the 2012 ERA Communication, Member States are invited to create a legal and policy environment and provide incentives to remove legal and other barriers to the recruitment, retention and career progression of female researchers while fully complying with EU law on gender equality; address gender imbalances in decision making processes; and strengthen the gender dimension in research programmes.

The Roadmap adopted by the Competitiveness Council of last May (TBC) commit the Member States to "Translating national equality legislation into effective action to address gender imbalances in research institutions and decision making bodies and integrating the gender dimension better into R&D policies, programmes and projects

Scope: This action focuses on the establishment of a forum/network of national representatives from EU Member States and Associated Countries in support of the implementation of the gender equality priority of the ERA Roadmap. Various activities will be developed, such as benchmarking, joint workshops, enhanced cross-border brokerage

events, specific training. Special attention will be given to mutual learning to enhance the competence of national gender representatives, including helping less experienced national gender representatives acquire rapidly the know-how accumulated in other countries.

The consortium should be composed of national representatives of all the EU Member States. The participation of national representatives of Associated Countries is welcome. National representatives from EU Member States and Associated Countries shall be officially appointed by the relevant national authorities and the corresponding appointment letters provided in the proposal. The consortium shall have a good representation of experienced and less experienced gender representatives.

The consortium should have a good representation of experienced and less experienced gender representatives.

The network/forum will liaise with the Helsinki Group on gender in research and innovation.

The duration shall cover at least the remaining period of Horizon 2020.

The Commission considers that proposals requesting a contribution from the EU of the order of 1.95 million EUR would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: This action will develop a more consistent and professionalised level of national gender representatives in support of the implementation of the ERA roadmap leading to better coordination of Member States' efforts; it will also help ensure the consistency between national gender equality strategies in research and innovation and the implementation of the gender equality objectives and initiatives in Horizon 2020

Type of Action: Coordination and support action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

### **SwafS-20-2016: ERA Mobility and Career Day**

Specific Challenge: The European Research Area (ERA) priorities underline the importance of an open labour market for researchers. This includes the removal of barriers to researchers mobility, training, and attractive careers. Europe will need around 1 Mio more researchers in the coming years; students, and young researchers need to be better informed about European opportunities so that they continue their research career.

EURAXESS – Researchers in Motion” is an initiative of the European Research Area (ERA) strategy that addresses barriers to the mobility of researchers and seeks to enhance scientific

collaboration between Europe and the world. The initiative strives to become the global support and career development tool for European and international researchers, not only for their mobility experience inside and outside Europe, but also for their social networking with researchers from all over the world. Designed as a comprehensive tool-set it provides access to a complete range of information and support services.

Scope: The ERA Mobility and Career Days, by building on the support of the members of the EURAXESS network, will help making a career in an European research institution more visible and hence attractive, both for researchers in Europe who are facing career decisions and for those who are currently outside Europe and might consider relocating to Europe to develop their research careers in Europe. This action aims at promoting jobs and growth by providing information on research careers, jobs and funding opportunities and support services to students and researchers on the ground. The career and mobility day will focus on countries where jobs and funding is scarce, in this respect information on European opportunities will be crucial for the young researchers' generation. The event shall be open to researchers from all fields.

This action will support activities of the EURAXESS Service Network represented by EURAXESS Bridgehead organisations to organise in collaboration with research universities or institutions an information day/event that addresses mobility and career development of (young) researchers and students to maximize the career prospects. The ERA Mobility and Career Days are considered as opportunity for employers, recruiters and HR manager to have a customized on-campus event, matching then with students and researchers. Students and young researchers shall be given the opportunity to accelerate their knowledge and careers by talking to different specialists in the field. The programme shall include inter alia insightful presentations, practical workshop (for example on CV drafting and presentation skills) and one-to-one meetings with recruiters. Throughout the day/s networking opportunities shall be foreseen.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 80 000 would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The proposed action aims at a better knowledge about European job and funding opportunities mainly published on the EURAXESS Jobs portal and personalised assistance tools such as EURAXESS. In the medium term, the action aims at supporting jobs and growth and will contribute directly to the Horizon 2020 objective of cross-national and international circulation of researchers; it will increase the number of researchers who have access to research infrastructures through Union support and the number of excellent researchers overall. An additional impact should be to convince young people to embark on research careers with mobility.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

**SwafS-21-2017: Promoting integrity in the use of research results in evidence based policy: a focus on non-medical research**

Specific Challenge: Research ethics is commonly associated with life sciences and in particular medical and biomedical research. The focus of the attention concerns interventions on humans, the involvement of children and vulnerable population. Because of the nature of the research and the lower risk attributed to the possible consequences of misconduct, non-medical research areas (such as social sciences) are less commonly associated with ethical concerns although researchers are regularly involved in protocols that have a direct impact on the wellbeing of people and as experts in policy making, provide evidence nurturing the decision process. In this context, ethical principles are of high importance. In case of breaches of these principles, the economic, social and environmental impact can be significant. Relevant principles are e.g. to only provide policy advice in fields related to one's expertise, to distinguish ideology from science, to state clearly limitations to one's scientific results, and be transparent on potential conflicts-of-interests.

In the current economic environment, the use of expertise in the definition of solutions and action plans constitutes a major challenge due to the high repercussions of related decisions on innovation capacities, jobs and well-being.

Scope: It is of paramount importance, especially when there are different schools of thought, to ensure that the channelling and processing of expertise is adequately organised so as to enable optimal policy decisions. When the principles of responsible conduct of research are not followed, the socio-economic impact can be significant.

In order to support the Commission's policy on boosting innovation, growth and high quality job and in the context of the post-2007 crisis, the action proposed shall aim at building an operational ethics and methodological framework facilitating that decision makers at national and EU level are provided with reliable evidence originating from cutting edge research. The conditions to maximise the Commission's policy outcomes and impact shall be studied, taking into account the necessity to comply with the highest standards of research ethics and integrity. Particular attention will be paid to the ethics of innovation and the enabling conditions for making innovation more relevant to the needs of society and more effectively meeting the Europe 2020 socioeconomic targets.

The proposed work shall also examine and analyse the relationship between science based policy advice, responsible conduct of research and research ethics. To this end an Oviedo/Helsinki type framework for non-medical research shall be proposed based on a wide consultation with all relevant stakeholders including industry and civil society. Such a framework shall discuss areas such as: a) covert research, b) working in dangerous

areas/conflict zones and c) behavioral research collecting data from social media/internet sources.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 4.2 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The proposed action will promote a more responsible and effective use of scientific information, originating from non-medical research areas, in support to EU policy making by increasing the understanding of the ethical challenges and proposing in response adequate ethical standards and normative framework for evidence based policy.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

**SwafS-22-2017: The ethical dimensions of IT technologies: a European perspective focusing on security and human rights aspects**

Specific Challenge: The ICT centred research methodologies is changing the way research is organised, proposed and conducted. The untapped potential of Social media for example is fast becoming a new arena of research activities, also generating new challenges for the existing ethical and legal framework. Of paramount importance in this area is the balance between the use of ICT technologies to collect massive amounts of data (including personal data) and the principles of fundamental rights. As evidenced by the opinion of the European Group on "Ethics of Security and Surveillance Technologies", the actual and potential impact of ICT technologies on our daily life is high and rapidly growing. This raises multidimensional questions related to how to effectively implement the Charter of Fundamental Rights in our e-society while balancing the interest of all socio-economic stakeholders, promoting innovation, enabling high quality job creation and ensuring a high level of privacy and cyber security.

Scope: The work undertaken shall analyse the existing and future possible ethical tensions between the technological evolution in the ICT field and the protection of human rights, in particular as regards privacy and personal data. Such analysis shall take into account the increasing number and unprecedented intensity of threats to public and private cyber security and the responses given by the competent international, European and national bodies.

The possibility to improve the regulatory framework at EU level in order to reduce the identified ethical tensions shall be reviewed. On the basis of an extensive dialogue with the concerned scientific, economic, security and political stakeholders and the involvement of

civil society organisations, a set of ethical standards and guidelines for research and innovation activities should also be proposed. The practical operationalisation of the proposals made shall be examined taking into account the international economic and political dimension. The guidelines for research ethics committees and the research community shall facilitate the incorporation of the highest ethical standards into research protocols without jeopardising the innovative nature of the research and its potential socioeconomic impact. The above balance must be adequately analysed and measures to address it must be proposed.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 4.2 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: The action will actively contribute to the reduction of the ethical tensions existing between the potential of ICT technologies and the protection of human rights notably by elaborating operational standards and guidelines as well as suggesting possible concrete improvements of the current regulatory framework, in the spirit of the EU commitment to better regulation.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

**SwafS-23-2017: Responsible Research and Innovation (RRI) in support of sustainability and governance, taking account of the international context**

Specific Challenge: This topic will contribute to the implementation of Principle 10 of the 1992 Rio Declaration on strengthening access to information, public participation, and access to justice, and the ensuing UNEP/UNITAR Bali Guidelines for National Action Plans, as well as other Rio principles. This topic will promote the uptake of responsible research and innovation within the context of sustainability actions, by involving multiple actors including researchers/academia, policy makers, industry/business and society to co-create solutions relevant to the further implementation of the Rio Declaration.

Scope: The action will examine how science and technology development are embedded in the growing sustainability governance and better regulation discourses at all levels (Global to local), and further RRI uptake in the search for solutions. It will showcase examples of good practice in the governance of research and innovation in Europe and beyond, and explore ways in which RRI can further strengthen the role of research and innovation for capacity building and governance for sustainability. It will make an effective and timely contribution to the implementation of the Rio Principle 10, as well as Rio principles generally. The topic must consider all aspects of RRI including research and innovation governance, access to

information, public engagement, ethics, science education and gender. This topic is open to international cooperation and should be alignment with European and global advances in this area.

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: This action will demonstrate how responsible research and innovation can effectively contribute to global and European sustainability governance. It will assist R&I stakeholders to play a decisive role in devising and implementing sustainable solutions together with other types of actors.

Type of Action: Coordination and support action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

#### **SwafS-24-2017: Trans-national operation of the EURAXESS Service network**

Specific Challenge: EURAXESS will help making a career in European research and innovation more attractive, both for researchers in Europe who are facing career decisions and for those who are currently outside Europe and might consider relocating to Europe to develop their careers here.

Scope: The objective of the action is to further intensify the services provided by the EURAXESS Service Centres expand the recently developed mandate of taking care of the career development of mainly young researchers in Europe with particular focus on female Higher Education Institution students and researchers. The newly developed services of the EURAXESS network reach out to mobile and non-mobile researchers with the aim to contribute to the completion of the ERA and the Responsible Research and Innovation field as well to open more career opportunities in the industry. This action will support activities the EURAXESS Service Network represented by Bridgehead organisations to address strategic issues related to the launched widening of the services from mainly mobility-related to services also for non-mobile researchers. The set-up of career development and/or support for dual careers centres shall be expanded over a wider geographical range of the network, support to researchers and young entrepreneurs for start-ups in SME's and industry and concepts for better integration of researchers into the culture of the host country and to the culture of a business environment, as well as mentoring programmes for researchers.

Other services for researchers shall be proposed: for instance, national EURAXESS website shall provide information on start-up schemes in the respective country and relate to policy information as provided on the European EURAXESS portal about EU research policies for researchers and EU schemes developing more career opportunities. This includes, issues related to ERA and Responsible Research and Innovation. Activities such as the deepening of existing services through trainings, seminars, networking and updating of national EURAXESS portals shall also be part of this action.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 3.85 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: Better take up of career development guidance and the collaboration with start-ups and SME will contribute to innovation in research.

Increased job and funding opportunities on the EURAXESS Jobs portal and personalised assistance to researchers will accelerate the career development of young researchers, in particular female researchers. In the medium term, the action will produce efficiency gains and reduce transaction costs by creating a better match of existing talent and R&I needs and capacity in European research institutions and businesses. It will contribute directly to the Horizon 2020 objective of cross-national and international circulation of researchers; it will increase the number of researchers who have access to research infrastructures through Union support and the number of excellent researchers overall. It will contribute to meeting ERA objectives on gender equality. Over time, the action will contribute directly towards European targets on R&DI intensity and percentage of researchers in the active population, and to boost European research and innovation competitiveness.

By increasing the service level of the whole EURAXESS Services Network the benefit for the research community will be long-lasting and far-reaching

Type of Action: Coordination and support action

***The conditions related to this topic are provided at the end of this call and in the General Annexes.***

### **SwafS-25-2016: Celebrating European Science**

Specific Challenge: Europe's vibrant research and innovation ecosystem produces a third of the world's high impact publications and patent applications. It is crucial to sustain this excellent track record. One of the ways to achieve this is by celebrating European science, thereby by reaching out to the public and stimulating interest in research careers among students. High level scientific events provide the optimal fora, especially when they bring

students into direct contact with experienced distinguished scientists so that they can gain useful insight and advice from those with successful and rewarding careers.

Scope: The events should be very high level, with a strong international presence, gathering prestigious speakers addressing an audience of young as well as experienced researchers. Gatherings should be recurrent, take place over several days, have a strong European focus with European science and its impressive results at its centre should benefit from. Public engagement methods will be employed to explore links between science, politics, industry and culture, to create a dialogue across disciplines and generations and to promote European integration.

Proposals should include plans to ensure that students from across Europe are made aware of the possibility to participate at such gatherings. The procedure for selecting candidates should be described and should respect the principles of transparency and fairness to ensure a balanced participation in terms of country and gender. The proposals should describe in detail the mechanisms through which the students will be able to meet and interact with experienced distinguished scientists.

A strong outreach strategy is mandatory. Consideration should be given to the use of audiovisual and internet media as a means of broadcasting the meetings between the students and the prestigious speakers, to a wider public. The meetings should use participatory methods to ensure public engagement. A workshop should be organised at each event to provide information on "European Research Career Opportunities". This should be open to all participants and should be scheduled during the main scientific program. An appropriate communication strategy should be described, designed to ensure proper and full visibility to European Union research policies and programmes and to the concrete opportunities offered to young researchers. It should include precise deliverables, to be implemented during the event, and in all communication activities and materials preceding and following the event.

The proposals will cover scientific gatherings or clusters of gatherings taking place in 2016, 2017, 2018, 2019 and 2020.

The proposals should be in line with the Horizon 2020 Responsible Research and Innovation (RRI) cross-cutting issues of engaging society, integrating the gender and ethical dimensions, ensuring access to research outcomes and encouraging formal and informal science education. The proposals should promote European Union actions in the field of science, research and innovation with a particular emphasis on the interaction between science and society.

The Commission considers that proposals requesting a contribution from the EU of EUR 0.5 million would allow this specific challenge to be addressed appropriately.

This action allows for the provision of financial support to third parties in line with the conditions set out in Part K of the General Annexes.

Expected Impact: Stimulate interest and retain graduates in research careers and strengthen the visibility of the EU as a hub for excellent science, research and innovation.

Type of Action: Coordination and support action

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

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### Conditions for the Call - Science with and for Society

Opening date(s), deadline(s), indicative budget(s):<sup>24</sup>

Topics (Type of Action)	Budgets (EUR million)		Deadlines
	2016	2017	
Opening: 15 Oct 2015			
SwafS-25-2016 (CSA)	0.50		26 Jan 2016
Opening: 13 Apr 2016			
SwafS-01-2016 (RIA)	3.00		30 Aug 2016
SwafS-02-2016 (ERA-NET-Cofund)	5.00		
SwafS-03-2016-2017 (CSA)	3.90		
SwafS-04-2016 (CSA)	6.70		
SwafS-07-2016 (CSA)	0.90		
SwafS-09-2016 (CSA)	6.80		
SwafS-15-2016 (CSA)	3.00		
SwafS-16-2016 (CSA)	3.80		
SwafS-17-2016 (CSA)	3.80		
SwafS-18-2016 (CSA)	3.80		
SwafS-19-2016 (CSA)	1.95		

<sup>24</sup> The budget figures given in this table are rounded to two decimal places.  
The budget amounts for the 2016 budget are subject to the availability of the appropriations provided for in the draft budget for 2016 after the adoption of the budget 2016 by the budgetary authority or, if the budget is not adopted, as provided for in the system of provisional twelfths.  
The budget amounts for the 2017 budget are indicative and will be subject to a separate financing decision to cover the amounts to be allocated for 2017.

**HORIZON 2020 - Work Programme 2016 - 2017**  
**Science with and for Society**

SwafS-20-2016 (CSA)	0.87		
Opening: 12 Apr 2017			
SwafS-03-2016-2017 (CSA)		6.10	30 Aug 2017
SwafS-05-2017 (CSA)		7.10	
SwafS-06-2017 (CSA)		7.10	
SwafS-08-2017 (RIA)		3.00	
SwafS-10-2017 (RIA)		3.00	
SwafS-11-2017 (RIA)		3.00	
SwafS-12-2017 (RIA)		3.00	
SwafS-13-2017 (RIA)		4.00	
SwafS-14-2017 (RIA)		3.00	
SwafS-21-2017 (CSA)		4.20	
SwafS-22-2017 (CSA)		4.20	
SwafS-23-2017 (CSA)		3.00	
SwafS-24-2017 (CSA)		3.85	
Overall indicative budget	44.02	54.55	

**Indicative timetable for evaluation and grant agreement signature:**

For single stage procedure:

- Information on the outcome of the evaluation: Maximum 5 months from the final date for submission; and
- Indicative date for the signing of grant agreements: Maximum 8 months from the final date for submission.

Eligibility and admissibility conditions: The conditions are described in parts B and C of the General Annexes to the work programme.

Evaluation criteria, scoring and threshold: The criteria, scoring and threshold are described in part H of the General Annexes to the work programme.

Evaluation Procedure: The procedure for setting a priority order for proposals with the same score is given in part H of the General Annexes.

The full evaluation procedure is described in the relevant [guide](#) published on the Participant Portal.

Consortium agreement: Members of consortium are required to conclude a consortium agreement, in principle prior to the signature of the grant agreement.

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## **Other actions<sup>25</sup>**

### **1. EU Prize for Women Innovators<sup>26</sup>**

Europe urgently needs more innovators to stay competitive in the coming decades and to spur economic growth. The large number of well-educated women researchers who, for various reasons, including lack of awareness, do not consider entrepreneurship as an option, represents a tremendous untapped pool of innovation.

Awards have a strong potential to drive innovation through the recognition of achievements and the promotion of role models. Therefore, the European Commission created in 2011 a Prize for Women Innovators to increase public awareness of this issue and to encourage women to exploit the commercial and business opportunities offered by their research projects and become entrepreneurs. After the success of the forerunners of the contest in 2011, 2014 and 2016, the Commission intends to continue its drive to spotlight women researchers who have brought outstanding innovations to the market. The Commission plans to award up to three "EU Prize for Women Innovators" following a European-wide contest. The prizes are addressed to women who have founded or co-founded a company and who themselves or their company have benefitted from EU funding related to research and/or innovation. The prizes will not reward research or innovation proposed for the future, but only achievements that have been already obtained by the contestant.

The specific rules of the contest will be published in 2017 by the European Commission on the [Participant Portal](#) but also actively publicised elsewhere to maximise participation, which will directly launch and manage the contest and award the prize based on the judgement of independent experts.

Applications have to be submitted by the contestant (natural person) via the web-based submission forms on [www.ec.europa.eu/women-innovators](http://www.ec.europa.eu/women-innovators). Applications will have to clearly state the involvement of the contestants in the research and innovation activities and the potential of their product or service to access the market, also highlighting the relevant economic and societal impact. The candidates will have to provide proof of eligibility and a written presentation of their achievements, which will be presented to a High Level Jury for evaluation.

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<sup>25</sup> The budget amounts for the 2016 budget are subject to the availability of the appropriations provided for in the draft budget for 2016 after the adoption of the budget 2016 by the budgetary authority or, if the budget is not adopted, as provided for in the system of provisional twelfths.

The budget amounts for the 2017 budget are indicative and will be subject to a separate financing decision to cover the amounts to be allocated for 2017.

<sup>26</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

The High Level Jury will consist of a group of independent experts from business and academia appointed by the Commission. They will appraise the quality of the entries and submit to the Commission the final list of up to 3 selected women to be awarded.

The first prize is EUR 0.1 million, the second prize EUR 0,05 million, and the third prize EUR 0,03 million.

Expected results: Although women are more and more active in research, there are still too few women creating innovative enterprises. This represents an untapped potential for Europe which needs all resources to remain competitive and find solutions to our societal challenges. The prizes will boost the public awareness of the, potential, importance and contribution of women researchers to entrepreneurship and will encourage entrepreneurial women to become innovators. This will help to achieve the objectives of the Europe 2020 strategy.

Eligibility criteria: Contestants for the "EU Prize for Women Innovators 2018" shall comply with the following eligibility criteria to participate:

1. The contestant must be a woman.
2. The contestant must be an ordinary resident in an EU Member State or a country associated to Horizon 2020.
3. The contestant must be the founder or co-founder of an existing and active company.
4. The company was registered before 1 January 2015.
5. The annual turnover of the company was at least EUR 0.10 million in 2015 or 2016.
6. Either the contestant as a natural person or the company founded/co-founded by the candidate have received or is receiving funding from Horizon 2020, the European Research Framework Programmes, the EURATOM Framework Programme, the Competitiveness and Innovation Framework Programme (CIP) or actions relating to research and/or innovation under the European Structural and Investment Funds (prior to 2014 known as the Structural Funds).

Exclusion criteria foreseen in the provisions of articles 106(1), 107, 108 and 109 of the Financial Regulation ([regulation 966/2012](#)) will apply. Contestants that have already received an EU or Euratom prize cannot receive a second prize for the same activities.

Essential award criteria: All eligible applications will be evaluated by a High level jury: The prize will be awarded, after closure of the contest, to the contestant(s) who in the opinion of the jury best addresses the following cumulative criteria<sup>27</sup>:

1. The originality and marketability of the developed product or service provided by the company of the candidate.

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<sup>27</sup> Further clarification of these criteria might be published in the Rules of Contest

2. The economic impact - The economic impact of a product or service of the company for Europe is measured by the number of countries (inside and outside the EU) where the product or service is sold, and by the size of the turnover achieved with this service or product in 2015 and 2016.

3. The high scientific content of the innovation - the contestant must have been involved in the research and innovation activities connected to the origin of the product or service provided by the company she has founded or co-founded. Entries will be compared according to the number of patents/co-patents, scientific publications (or co-publications) and trademarks.

4. The societal impact - the societal impact of a product or service of the company for Europe is defined by the potential of the service or product to help Europe address a grand societal challenges e.g. the ageing of the European population, global warming, clean water, renewable energy and resource efficiency.

Indicative timetable of contest(s):

Stages	Date and time or indicative period
Opening of the contest	First Quarter 2017
Deadline for submission of application	Fourth Quarter 2017
Award of the prize	First or second Quarter 2018

Type of Action: Recognition prize

The common Rules of Contest for Prizes are provided in part F of the General Annexes.

Indicative budget: EUR 0.20 million from the 2017 budget

## **2. European Union Contest for Young Scientists (EUCYS) 2016<sup>28</sup>**

The European Union Contest for Young Scientists brings together first prize winners of national contests for pre-Higher Education Institution school science projects to compete for prizes and awards. The EU Contest takes place each year in a different location. This Contest provides additional stimulus to young people who have already demonstrated that they are

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<sup>28</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

applying science to solve problems. Many go on to become successful scientists. It attracts a considerable level of co-funding in the host country, and high levels of international media attention. International research organisations and similar bodies donate many of the non-monetary prizes.

Expected Impact: The contest will bring greater awareness of and interest in science and research among high school leavers. In the medium term, it will help close the skills gap in STEM, as more young people consider enrolling in scientific career paths. In the long term, it will directly contribute towards the objective of a science literate, knowledge society where scientists are aware of social needs.

Legal entities:

Jeunesses Scientifiques de Belgique AISBL, avenue Latérale 17/1 – 1180 Brussels - Belgium.

Type of Action: Grant to identified beneficiary - Coordination and support actions

The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts D and H of the General Annexes.

Indicative timetable: 2nd Quarter of 2016

Indicative budget: EUR 0.80 million from the 2016 budget

### **3. SCIENTIX III Building and maintaining a Science Education Community in Europe by promoting Inquiry-Based Science Education and other initiatives at national level <sup>29</sup>**

This action is based on the first and fifth Recommendations of the report *Science Education Now; A Renewed Pedagogy for the Future of Europe* [[http://ec.europa.eu/research/science-society/document\\_library/pdf\\_06/report-rocard-on-science-education\\_en.pdf](http://ec.europa.eu/research/science-society/document_library/pdf_06/report-rocard-on-science-education_en.pdf)] and the recommendations of the *Science Education for Responsible Citizen* report which request a more active involvement of Member States in the renewal of science education as well as a better articulation between national activities and those handled at European level. It is therefore intended to promote a strategy in each country for the uptake and dissemination of Inquiry-Based Science Education (IBSE) and an effective community building among science education stakeholders. To this end, the beneficiary is requested to cooperate with Ministries in charge of Education or the most appropriate entities likely to bring changes in science education in each country. Moreover, the project should effectively address different geographical levels (local, national, European), as well as different stakeholders (policymakers, researchers, teachers, trainers, industries, academies, associations, local authorities, informal science education actors, parents, students ...).

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<sup>29</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

The project will ensure the continuation/adaptation of the current Scientix II activities and will contribute to the development of national strategies for a wide uptake and dissemination of IBSE. Continuation and adaptation of the current Scientix activities will include:

- Technical maintenance and hosting of the Scientix II Internet platform;
- Content search, adaptation, translation (including availability of at least two additional EU languages) and upload of all sections;
- Dissemination strategy: newsletters, presentations at events, workshops;
- Translation of teaching material for the widest dissemination of best practices;
- One major European conference to be held in Brussels;
- Publications (flyers, brochures, posters, etc.).

The adaptation of the current services shall be based on an analysis of the Scientix II outcomes (including feedback from users and experts).

Contribution to the development of national strategies:

- Assessment of the situation of science education in each Member State and monitoring of national strategies in cooperation with the relevant national stakeholders;
- Support to the development and implementation of national strategies for the uptake and dissemination of IBSE, the best use of Scientix II resources and community building, in cooperation with Ministries in charge of education and/or the most appropriate entities likely to bring changes to science education in each country.

The contractor shall suggest *a convincing, sustainable, viable business model for the operation and further development of Scientix.*

The duration of the project will be for a maximum three years. The proposal should include a plan for the sustainability and long term maintenance of the three Scientix activities after the end of the grant. An impartial assessment of the actions implemented should be ensured throughout the duration of the project in relation to its objectives and expected impacts.

Expected Impact: To bring about a change in the way that science is taught in schools through European collaborative activities focusing on teacher training on the use of techniques that have been successfully piloted, adapting and applying them on a European scale. The action will have significant wider benefits across Europe beyond those accruing directly to project participants. The long-term impact looked for is a significant increase in the numbers of young people in Europe taking up scientific careers as well as a general increase of the skills and knowledge in science needed to become responsible researchers/innovators and scientifically active citizens. Final impact shall be the sustainability of the project beyond its EC grant.

Legal entities:

EUN Partnership AISBL, rue de Trêves, 61B, 1040 Brussels, Belgium

Type of Action: Grant to identified beneficiary - Coordination and support actions

The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts D and H of the General Annexes.

Indicative timetable: 2nd Quarter of 2016

Indicative budget: EUR 3.00 million from the 2016 budget

#### **4. European Union Contest for Young Scientists (EUCYS) 2017<sup>30</sup>**

The European Union Contest for Young Scientists brings together first prize winners of national contests for pre-Higher Education Institution school science projects to compete for prizes and awards. The EU Contest takes place each year in a different location. This Contest provides additional stimulus to young people who have already demonstrated that they are applying science to solve problems. Many go on to become successful scientists. It attracts a considerable level of co-funding in the host country, and high levels of international media attention. International research organisations and similar bodies donate many of the non-monetary prizes.

The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts D and H of the General Annexes.

Expected Impact: The contest will bring a greater awareness of and interest in science and research among school students. This action will seek to garner collaboration from industry.

Legal entities:

Estonian Research Council, Soola 8, 5th floor, Tartu 51013, Estonia.

Type of Action: Grant to identified beneficiary - Coordination and support actions

The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts D and H of the General Annexes.

Indicative timetable: 2nd Quarter of 2017

Indicative budget: EUR 0.80 million from the 2017 budget

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<sup>30</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

## **5. The Euroscience Open Forum (ESOF) 2018<sup>31</sup>**

The Euroscience Open Forum (ESOF) is held bi-annually under the auspices of the researcher organisation Euroscience. It is dedicated to scientific research and innovation and designed by Euroscience as a unique opportunity in Europe to:

- Strengthen the links between Science & Society,
- Create an integrated space for S&T in Europe,
- Foster a European Platform for debate on S&T,
- Influence S&T policies

A grant support will be offered to this inter/trans-disciplinary pan-European meeting to ensure that a structured and expanded dialogue among all societal actors (researchers, citizens, policy makers, business, third sector organisations etc.) will be developed along the lines of the Science with and for Society Programme. In this context a special emphasis will be put on the promotion and further understanding of the Responsible Research and Innovation concept. A special focus will be put on the Engagement of Citizens in Science, the Engagement of Researchers and Innovators in Society and the Increasing Relevance of Research and Innovation Policies for Society. An inclusive and integrated combination of seminars, workshop, debates and round table discussion using new interactive and engaging formats will be provided and centred on Horizon 2020 key societal challenges.

Expected impact: The conference will be one of the biggest European science communication platforms; in the medium term. The Euroscience Open Forum will raise awareness among a very large public on the concept of Responsible Research and Innovation (RRI) as a cross cutting issue for Horizon 2020 and in the context of European Research Area (ERA).

Legal entities:

Université Fédérale Toulouse Midi-Pyrénées, 15 rue des Lois - BP 61321, 31013 Toulouse Cedex 6, France

Type of Action: Grant to identified beneficiary - Coordination and support actions

The standard evaluation criteria, thresholds, weighting for award criteria and the maximum rate of co-financing for this type of action are provided in parts D and H of the General Annexes.

Indicative timetable: 3rd Quarter of 2017

Indicative budget: EUR 1.00 million from the 2017 budget

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<sup>31</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

## **6. External expertise**

This action will support the use of appointed independent experts for the monitoring of running projects, where appropriate, as well as for the evaluation of applications submitted to prize contests.

Type of Action: Expert Contracts

Indicative timetable: 4th quarter 2016 and 4th Quarter 2017

Indicative budget: EUR 0.40 million from the 2016 budget and EUR 0.40 million from the 2017 budget

## **7. EURAXESS Services, Links, Rights and Jobs crosscutting issues<sup>32</sup>**

This action shall be cross-cutting promotional activities, conferences, events, mutual learning seminars, publications, promotional stands and materials and in particular:

- Preparation of the EURAXESS Services Network biennial Conference to be held in 2017;
- Researchers' Conference on ERA related topics; the conference will discuss topics that directly influence researchers careers, such as gender, open recruitment, access to information, ethics in research, science education and more;
- Promotion of the EURAXESS initiative with special emphasis on the online presentation (EURAXESS portal).

EURAXESS LINKS Implementation 2016<sup>33</sup>: This action will support to the EURAXESS Links network during the implementation of the new framework contract covering more countries or hubs during the period 2015-2018. The second specific contract implementing the EURAXESS Links Framework Contract will cover the animation of the network. This specific contract will guarantee the continuity of the operations of the network in the different destinations and allow the extension of the activities to new countries and tasks.

- EURAXESS Portal Maintenance<sup>34</sup> 2016

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<sup>32</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

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<sup>34</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

- Different activities will be undertaken to increase the capacity and ensure the user-friendliness of the EURAXESS portal. These activities include technical maintenance, architectural developments, and graphical and functional enhancements.

- Activities also include services by external information system provider who, on the basis of inputs provided by the responsible Commission services, guarantees the smooth running of the EURAXESS Portal.

- Support to the HR Excellence in Research <sup>35</sup>

This action will contribute to supporting better employment and working conditions for researchers thereby helping to enhance the attractiveness of European research careers with special emphasis encouraging countries with lower participation in the process to take up the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers.

Type of Action: Public Procurement - A maximum of 15 specific contracts using an existing framework contract.

Indicative timetable: First and second semester of 2016 and 2017

Indicative budget: EUR 5.75 million from the 2016 budget

## **8. Industrial talents dimension of the Innovative Doctoral Training Principle<sup>36</sup>**

The aim is to assess the feasibility of the set-up of a pan-European Agency or body to facilitate the bridge for young talents between academia and industry and academia with the aim of supporting Europe's top position.

First, the objective is to provide top class training for PhD and post-doctoral scholarships by implementing the Innovative Doctoral Training Principles to bridge the industry-academia-industry gap. It shall also be the link to industry for the students to provide suitable interns and on-site training modules.

As a second step, different stakeholders shall discuss the implementation modus.

This action will be managed by the European Commission as directly aimed at supporting the development and implementation of an attractive and innovative European Research Area.

Expected impact: The feasibility study will provide evidenced-based policy making in relation to bridging the gap between academia and industry and the need for training researchers in new skills.

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<sup>35</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

<sup>36</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

Type of Action: Public Procurement - One specific contract using an existing framework contract.

Indicative timetable: First quarter of 2016

Indicative budget: EUR 0.30 million from the 2016 budget

### **9. Monitoring of gender equality in Research and Innovation - Development, implementation and dissemination of indicators<sup>37</sup>**

Since 2003, every three years the European Commission has been publishing a wide-ranging set of statistics on Gender Equality in Research and Innovation through the SHE FIGURES publication series.

The series has been evolving over time, by addressing specific themes and the methodology to be applied in data collection. Taking stock of the work done so far over the four releases and the forthcoming fifth one, it is expected to enrich the coverage, frequency and comparability of existing data, with particular reference to the inclusion of the gender dimension in research and innovation content, organisational elements, seniority grades, boards' composition and funds. In addition, one of the core tasks to be performed will consist in identifying and collecting data of potential new indicators with particular focus on the themes of structural change, gender and innovation, gender dimension in research and innovation content and work-life balance. Some of the new indicators identified will be used in the 2018 publication, in addition to the set of indicators released in the She Figures 2015.

The main deliverable will be a publication, adding to a selection of existing main indicators relating to Human Resources in Science and Technology, R & D personnel, Education, Work-life balance and the new elements of the SHE FIGURES 2015, a further collection of new indicators, based on commonly accepted definitions and with clearly specified coverage.

Expected impact: It is expected that the development, implementation and wide dissemination of a reliable set of indicators on gender equality in research and innovation will be one of the key tool in driving Member States and research organisations towards the objectives set in the ERA Roadmap and in other relevant EU or national policies.

Policy makers, Research Performing or Funding Organisations as other stakeholders will take benefit of up to date statistics which will be used as a benchmark to evaluate the outcome and impact of the activities undertaken.

Type of Action: Public Procurement - Service contract.

Indicative timetable: 3rd Quarter 2016

Indicative budget: EUR 0.45 million from the 2016 budget

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<sup>37</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

## **10. Data Collection and analysis on researchers in the European Union and abroad in the context of ERA and RRI<sup>38</sup>**

The aim is to provide internationally comparable data and indicators to monitor progress towards a genuine open labour market for researchers including gender, mobility, career development, working conditions etc. to support further evidence-based policy developments.

This action will be managed by the European Commission as directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders.

Expected impact: The study will support evidenced-based policy making in relation to completion of the ERA and inform Responsible Research and Innovation policy action.

Type of Action: Public Procurement - A maximum of four specific contracts using an existing framework contract.

Indicative timetable: Fourth quarter of 2017

Indicative budget: EUR 1.20 million from the 2017 budget

## **11. Evaluation of the impact and effectiveness of the EURAXESS – Researchers in Motion initiative with special emphasis on the national implementation level in 40 European countries<sup>39</sup>**

The aim of the impact assessment is to provide evidence of the impact and effectiveness of the EURAXESS initiative after 15 years of operation. Special attention shall be paid to the national level impact in evidence based policy making based on the input received from the national EURAXESS coordinators. The study shall provide recommendations for the further development of the network at both levels, European as well as national.

[This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.]

Type of Action: Public Procurement - One specific contract using an existing framework contract.

Indicative timetable: Second quarter of 2017

Indicative budget: EUR 0.25 million from the 2017 budget

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<sup>38</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

<sup>39</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

## **12. EURAXESS Services, Links, Rights, Jobs and cross-cutting activities<sup>40</sup>**

This action will contribute to support to cross-cutting promotional activities, conferences, events, mutual learning seminars, publications, promotional stands and materials and in particular:

- Preparation of the EURAXESS Links International Conference to be held in 2018;
- Promotion of the EURAXESS initiative with special emphasis on the online presentation (EURAXESS portal).
- EURAXESS Portal Maintenance<sup>41</sup> 2017

- Different activities will be undertaken to increase the capacity and ensure the user-friendliness of the EURAXESS portal. These activities include technical maintenance, architectural developments, and graphical and functional enhancements.

- Activities also include services by external information system provider who, on the basis of inputs provided by the responsible Commission services, guarantees the smooth running of the EURAXESS Portal.

Type of Action: Public Procurement - A maximum of 10 specific contracts using an existing framework contract.

Indicative timetable: Second quarter of 2017

Indicative budget: EUR 0.60 million from the 2017 budget

## **13. Industrial talents dimension of the Innovative Doctoral Training Principle<sup>42</sup>**

After the assessment through a feasibility study in 2016, the concept shall be discussed by different stakeholders through mutual learning seminars.

This action shall provide top class training for PhD and post-doctoral scholarships by implementing the Innovative Doctoral Training Principles to bridge the industry-academia-industry gap. It shall also be the link to industry for the students to provide suitable interns and on-site training modules.

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<sup>40</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

<sup>41</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

<sup>42</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to REA and will be managed by the Commission services.

Expected impact: The seminars shall provide input to prepare the ground for a potential publication of a call for proposals in the future.

Type of Action: Public Procurement - A maximum of three specific contracts using an existing framework contract.

Indicative timetable: First quarter of 2017

Indicative budget: EUR 0.30 million from the 2017 budget

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## Budget<sup>43</sup>

	Budget line(s)	2016 Budget (EUR million)	2017 Budget (EUR million)
<b>Calls</b>			
H2020-SwafS-2016-17		44.02	54.55
	<i>from 08.020600</i>	44.02	54.55
<b>Other actions</b>			
Prize			0.20
	<i>from 08.020600</i>		0.20
Expert Contracts		0.40	0.40
	<i>from 08.020600</i>	0.40	0.40
Public Procurement		6.50	2.35
	<i>from 08.020600</i>	6.50	2.35
Grant to Identified beneficiary		3.80	1.80
	<i>from 08.020600</i>	3.80	1.80
<b>Estimated total budget</b>		<b>54.72</b>	<b>59.30</b>

<sup>43</sup> The budget figures given in this table are rounded to two decimal places.

The budget amounts for the 2016 budget are subject to the availability of the appropriations provided for in the draft budget for 2016 after the adoption of the budget 2016 by the budgetary authority or, if the budget is not adopted, as provided for in the system of provisional twelfths.

The budget amounts for the 2017 budget are indicative and will be subject to a separate financing decision to cover the amounts to be allocated for 2017.