# Long-term Sustainability of Research Infrastructures: Science Europe's Offer to Contribute to Ongoing Efforts

## Open Letter by Science Europe

Brussels, 21 March 2018

Science Europe welcomes all efforts made to ensure the long-term sustainability of Research Infrastructures, including the latest European Commission staff working document (SWD) on this topic.[1] With its 42 recommendations, the SWD informs the development of a European Call for Action on the long-term sustainability of RIs, to be presented at the 22 and 23 March high-level conference on RIs, hosted by the Bulgarian Presidency of the Council.

Science Europe would like to respond to the SWD recommendations and recall the key role its members have as funders, operators, and managers of RIs and make recommendations of its own. As the main research funding (RFOs) and research performing organisations (RPOs) in Europe, the members of Science Europe engage in activities to better align policies for RIs. They are convinced that harmonised approaches for their evaluation, priority-setting, and funding will help deliver a strong RI base for the European Research Area.

### SWD policy dimension 'Ensuring RI at the forefront of scientific excellence'

Recommendations 1 and 2 of the SWD state that access to RIs should be based on transparent access policies, driven by excellence. Science Europe agrees: in situations where access and operational time to the RI are limited resources, access should be prioritised based on a transparent review process that emphasises the scientific quality of projects. In cases where operational time needs to be reserved or is offered based on other criteria (such as education and training, partnership with industry, operator time slots), a share of access should be dedicated for use and operation based on project excellence alone: the quality of the research is the factor that ultimately ensures the beneficial impact of an RI. For those RIs that allow external access, this timeshare should be allocated following the recommendations of the European Charter for Access to RIs.[2]

Recommendations 5 and 6 call on RIs to "implement effective, robust and systematic evaluation" and to "assess the quality and impact of the RI and its services by […] Key Performance Indicators, based on Excellence principles." Many RIs already possess and continually look for self-evaluation tools for many different purposes, such as the adjustment of different practices in the RI, to prove impact to ensure continued funding, and so on. When assessing the overall impact of RIs, it is important to take into account scientific impact. This requires that both the research undertaken at and by the RI be evaluated. In both cases, external and internal research results, outputs, and impact should be monitored to assess the scientific impact of an RI.

1. European Commission staff working document on 'Long-term Sustainability of Research Infrastructures':
   https://ec.europa.eu/research/infrastructures/pdf/swd-infrastructures_323-2017.pdf
2. European Charter for Access to Research Infrastructures:
   https://ec.europa.eu/research/infrastructures/pdf/2016_charterforaccessto-ris.pdf

## SWD policy dimension 'Configuring European RI as skills development and mobility actors'

Science Europe agrees with the SWD that increased mobility and the development of skills must be further encouraged across the RI landscape at the European, national, and regional levels. Many of its member organisations already fund such activity through the grants they issue or membership agreements with RIs. It is common for administrative skillsets to vary between countries, but the scientific and technical skills needed within an RI may be very similar. According to Science Europe, harmonisation of career perspectives and job descriptions within RIs would benefit the development of specific skills, such as those related to data stewardship and sharing, while enhancing transnational access, networking, and employment.

Science Europe suggests new collaborative mechanisms to be explored at European level to maximise the opportunities for RI management and operation, in addition to enabling the ERA to meet its prime objectives. As an example, a collaborative mechanism between the RI and Marie Skłodowska-Curie Actions parts of the framework programmes could enable the mobility of RI managers and operators across Europe and beyond, with the principal aim of knowledge transfer and the sharing of best practices.

## SWD policy dimension 'Enhancing RI as the pillar for data production and sharing'

Recommendations 24 to 27 encourage the use of RIs to enhance data production and sharing. Science Europe supports this principle: as the move towards openness continues to develop through policies such as the Open Science agenda, many RFOs and RPOs have formulated policies, requirements, and templates for research data management (RDM) and data management plans (DMPs). Science Europe advocates for international alignment of RDM policies by exploring ways to establish core RDM requirements.[3] As various research communities become increasingly data-intensive or highly protocolled, this would allow for an optimal creation, curation, and re-use of data to advance technological and societal developments.

Practices and cultures of data stewardship and data sharing currently vary among and within domains, communities, countries, and organisations. While many researchers, funders, and research organisations recognise the benefits of better RDM, defining how to best approach it can be challenging. To reduce the administrative burden on researchers, RPOs, and RFOs, Science Europe has recently developed a framework for discipline-specific RDM protocols that can be used as standardised templates for the development of DMPs by researchers.[4]

## SWD policy dimension 'Ensuring effective governance and sustainable life-cycle management'

Science Europe acknowledges SWD recommendations 28, 29, and 30 for better alignment of RI roadmapping processes, dedicated national budgets for RI investment, and optimisation of the use of European funds throughout the RI life-cycle. Science Europe advocates for a more nuanced approach as each of these tasks is complicated by the diversity of the RI landscape: what is considered a strategic priority, how are such priorities defined, and at what level are they established? This diversity reflects the differences in the composition and institutional functioning of national research systems, and it has profound implications for RI sustainability and life-cycle management. As such, each of these recommendations requires assessment and dialogue with stakeholders to work out an approach that can adapt to these complexities.

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3.  http://scieur.org/rdm-initiative
4.  Science Europe Guidance Document Presenting a Framework for Discipline-specific Research Data Management: http://scieur.org/guidance-rdmps

Science Europe believes that the entire RI landscape needs to be taken into account when considering the sustainability of RIs, and not only individual RIs. There are a number of related challenges that are crucial for the RFOs and RPOs represented by Science Europe. These include: designing effective cross-border collaborations when setting up and running joint RIs; and managing balanced RI portfolios, by developing approaches to adequately support (i) existing and emerging RIs, (ii) national and international RIs, (iii) RIs of different sizes, and those serving different communities.

As a starting point for developing solutions to improve governance and sustainability in life-cycle management, Science Europe renews its 2016 recommendations:[5]

▶ Investigate all sources of funding (private, regional, national, and European) to create a portfolio of funders and to exploit all possible funding options; this will reduce the dependence on a single source of funding.

▶ Develop separate assessment and funding schemes for small, medium, and large RIs, or introduce assessment tailored to the different RI types: all types are important.

▶ Adopt a 'whole life-cycle' funding model or a sustainable, transparent, and long-term budget for RI design, construction, operation, and future decommissioning.

▶ Establish an internal quality assessment and control system in all RIs that supports and stimulates transparent, stable, and effective exploitation of the facility.

▶ Encourage, during and after a funding decision, a facility to have an internal quality control system, external monitoring, and regular evaluation of its performance, including access to the facility, as a necessary requirement for the successful development and operation of the RI and for feedback to the policy-making body responsible for RIs.

Science Europe member organisations work on aligning RI policies through the exchange of best practices, studies, and workshops. The work of Science Europe has already been endorsed beyond its membership: the Horizon 2020-funded InRoad project,[6] for example, builds upon the Science Europe survey report 'Strategic Priorities, Funding and Pan-European Co-operation for Research Infrastructures in Europe'. Science Europe remains committed to a more sustainable RI landscape in Europe and is willing to offer the expertise of its members to further advance the matter with relevant partners.

5.  Science Europe Survey Report 'Strategic Priorities, Funding and pan-European Co-Operation for Research Infrastructures in Europe': http://scieur.org/rif-survey
6.  InRoad website: http://inroad.eu/

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