Global Science Forum- ESFRI
Workshop on assessing public expenditures committed to RIs

10 July 2024

Virtual meeting

Research infrastructures (RIs) play a critical role in the scientific enterprise. They are now an essential component for all scientific domains and not only allow to push the boundaries of existing knowledge and the production of breakthrough research but they also play a major role in structuring the research system through the development of networks, of user communities and of rich ecosystems that bring together many research and innovation stakeholders.

This increasing role of RIs in the science system, and the increasing complexity of RIs, has led to their a steady increase in their funding requirement: not only have RIs become a necessity in all scientific disciplines, but the cost of individual RIs can reach billions or even tens of billion euros. While data is readily available on total research funding in each country, the same cannot be said for the share of funding specific to RIs. Only a few countries are currently able to provide rough estimates, and even in such cases, estimates do not always reflect the contributions from all domestic players. Estimating RI funding is complex for several reasons:

- There is no single definition of what is a research infrastructures. In recent years, the term has been used to define single large research equipments (such an electron microscope) up to very large distributed networks of monitoring sensors (such as arrays of buoys), from virtual data bases to complex international projects spaning over several continents… While there is an agreement on a few common general principles (typically RIs are considered as facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields, and usually are open to users outside the laboratory or institution that hosts the facility), this can still include a vast diversity of equipments or sets of instruments, scientific collections, archives, scientific data infrastructures etc.
- Funding may address the different phases of the life cycle of RIs (conception/design, construction, operation, upgrades, phasing out)
- RI funding may come from very different sources, supporting different elements (investment, staffs, projects, international partnerships…) and this is often very context specific as countries have different mechnsisms and processes to support these different elements

While there are indication that RI investments are indeed increasing steadily and, in some case, thet funders indicate that this has reached their funding capacity, it is, however, unclear whether the share dedicated to infrastructure is growing commensurately or faster than total public investments into R&D, and how RI funding requirements are distributed between new RIs, participation to international RI projects, needs for upgrading existing facilities or just operating RIs and providing access to all interested users.

The gathering of RI funding data (e.g., RI funding trends, funding distribution along different needs…) alongside trends in research funding would enrich discussions around RI planning and financing for national funding and decision-making stakohlders.

The proposed workshop, which is co-organised by the OECD (Global Science Forum) and the European Strategy Forum for Researcn Infrastructures (ESFRI) would be dedicated investigating what are the demands from relevant stakeholders regarding RI funding data, existing data-gathering mechanisms for RI funding and their limits, what funding could reasonably be assessed (should this include restricted or categorised definitions of RIs, specific phases of the RI life cycle, full cost of RIs or only elements that are more easy to investigate) and how better standardised RI funding information might be generated.

Registration:

This workshop will be virtual only (Zoom). Participants need to register using the following link: https://meetoecd1.zoom.us/meeting/register/tJckf-GorjwvHteN1tI1J88z86PEidONkTu3

Agenda outlines:

Time	Session
10:00-10:10	**Introduction (***OECD and ESFRI: rationale for this workshop, workshop organisation and expectations***)**
10:10-11:00	**Needs and expectations from decision-makers regarding the need for better data on RI-funding** Definition of RIs; Increasing share of R&D funding dedicated to RIs; Data requirements from research and finance ministries and international bodies… *Open debate: officials from EC, Germany, Japan, Canada, Science Europe, RICH…*
11:15-11:30	**Break**
11:30-13:00	**Current challenges in measuring public expenditures on RIs and lessons learned from existing data gathering at regional/international level** Diversity of RIs; National vs international contributions; construction vs operation; assessing full cost… *Case studies:* • *Fernando Galindo (OECD NESTI):* existing work on measuring the contribution of the diverse type of R&D institutions across different sectors to the R&D effort; possibilities and limits of measurement based on existing government R&D budget data etc… • *Elena Hoffert:* results and lessons learned from the ESFRI survey on RI funding *Discussion*
13:00-13:30	**Lunch break**
13:30-15:00	**Gathering public expenditures data on RIs** Existing exercises and processes used at national or agency level to collect data on RI funding; lessons learned, goals, scope, methodologies and challenges *Case studies: Spain or Italy ministry, Korea NFEC, Germany BMBF, Sweden Research Council, NSF, CFI, NOW, UKRI ?* *Discussion*

15:00-15:45	**Possible options to standardise public expenditure on RIs data collection** What minimal set of data would be necessary to respond to currend and future demand? Can standardised definition and data information be generated and how ? *Open discussion: OECD NESTI/STP, EC, ESFRI…*
15:45-16:00	**Closing words and follow up**