Policy alignment & progress - where EOSC sits towards the 20 ERA actions

Panel Discussion – Opening Remarks
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How to pursue action 8 by leveraging action 1?

Preamble

A three-fold objective for "Open Science":

- Support FAIR data-intensive research (enhancing innovation, software developments and cross-fertilization among researchers, computer scientists and technologists).
- Involve fellow citizens in the scientific research process (thanks to digital objects and ICT technologies).
- Enhance the commitment of scientists in socio-economic challenges (from all domains).

Definition of ESOC:

- Science, research and innovation data space.

ERA action 8 - Strengthening RIs

My suggestions:

- "Upgrade and sustain RIs that are already in operation" deserve longer term investments for competitiveness.

- "Update structure, terms and scope of investments" for emerging RIs.

- "Challenge new models and frameworks" for economy of scale and for federating innovation capacities.

- "Adopt a forward-looking approach" of RIs for structural impacts on regional policies and society.

- **Avenues to explore towards a global RI ecosystem pioneering Open Science (also though EOSC)**:

1) Design Study (DS), Preparatory and pre-construction phases (PP) of ESFRIs, need to be followed up with further phases, such as:
   "Updating technologies and widening cooperation actions for ESFRI in operation".
   Ex.: new countries willing to join an ERIC/ESFRI by taking in charge some upgrading or acting to enhance opportunities to access the RI.
   It concerns also the virtual access to RIs, the digital innovation and therefore EOSC.

2) Include into DS and PP a request of an *"Open Science Programme (OSP)"* according to its three-fold objective. It would imply the gradual alignment of new emerging RIs into the EOSC ecosystem as well as the enhancement of researchers involved in EOSC.

3) Invest to support the sustainability of Science Clusters through the implementation of corresponding "*Domain-based Competence Centre (CC)*".

CCs to drive the OSP (as in item 2), to leverage the cross-cluster coordination as well as the EOSC Core and EOSC Exchange services (strengthening the adoption of commons).
The CCs are also "*Science Cluster Instances delegated to operations*".
RIs in a Science Cluster would second some common functionalities to a CC:
a) data management services;
b) user analysis platforms;
c) scientific software and workflow catalogues;
d) operate the domain-based data federation.

This approach avoids the support of repetitive functionalities per each RI, save single RI funding, avoid single RI's spending cuts on software/data/archive and innovation (as the most vulnerable items out of the list of expenditures and running costs) in case of budget restrictions. Consequences:
I) more investments for the CC needed;
II) gains by economy of scale (saving budget on a longer term);
III) incentive to a global and continuous innovation in Open Science targeted to and brought by the scientific community at large that acts as a global "*open science foundation*";
IV) a booster for EU member state institutes and research agencies (behind the CCs) that in any case are always part of the international consortia implementing and exploiting the RIs (and that finally pay for them).

4) A "*Forward-looking approach chart*" for socio-economic engagement both regionally (host and partner countries) and globally requested to each RI, integrated in their OSP and operated within EOSC.
   RIs produce research digital objects to be fully articulated with the other sectoral data spaces defined in the European strategy for data.
   This should facilitate or strengthen the capacities of RIs to engage through the EOSC with industry, government, politics and the labour market.

5) "*EOSC strengthening legacy technology know-how to accelerate further innovation with and within RIs*".
   The Technology & Innovation (also produced by RIs) R&D published results have also a series of digital objects behind that potentially aimed at being FAIR and managed within the EOSC data federation.
   This is one more way to foster the articulation of EOSC with the other sectoral data spaces defined in the European strategy for data.
   The Science Cluster domain-based Competence Centre can be in charge of workout roadmaps and coordination among RIs for long-term technology and innovation prioritisation, coordination and direction of R&I investments for ERA … as well as their FAIRness.