# Long term sustainability of Ris ESFRI report Jan Hrušák 02/11/2017 NDVI – Brno



The European Strategy Forum on Research Infrastructures (ESFRI) was established 2002 with a mandate from the EU Council to:

- support a coherent and strategy-led approach to policy-making on research infrastructures in Europe
- facilitate multilateral initiatives leading to the better use and development of research infrastructures

Brings together representatives of Ministers of the 28 Member States, 12 Associated States, and of the European Commission

Acts as an incubator for pan-European and global RI (RM 2006/2008/2010)

Facilitates decisions on implementation and ensures follow-up after assessment

Monitors state of Innovation Union and provides input as appropriate to the development of ERA Framework (Council of EU in 2010)

**Prioritises projects** (Council of EU in 2012) *ex-ante* condition fo funding

Provides advice on RI related issues including e-RI

Provides advice on LTS of Ris (Council of EU 2015)

Acts as **Hub of founders for e-RI** (Council of EU 2016)

Monitors the operational RIs (LM)





### The Roadmap

Upon mandate of EU Competitiveness Council ESFRI has completed the ESFRI Roadmaps 2006, 2008, 2010, 2016, and is in the update process that will lead to the *ESFRI Roadmap* 2018. The Roadmap

- identifies *new pan-European Research Infrastructures or major up-grades to existing ones*, corresponding to the needs of European research communities in the next 10 to 20 years, in all fields of research
- identifies the ESFRI Landmarks that are implemented projects leading in their domain and structuring the European and global landscape.
- indicate strategies for the necessary major financial investment (~20 b€) and long term commitment for operation (~2 b€/year). However, Member States and Associate Countries are the decision makers and funders of the ESFRI RI

### **Landscape Analysis**

- Survey and analysis of the context, in each domain, of the operational national or international research infrastructures open to European scientists and technology developers through peer-review of competitive science proposals.
- Identifies the *existing resources*, the *gaps* and the potential evolution of each field in the foreseeable future.
- Monitoring of implemented Ris (landmarks)
- Coordinatinon in HPC and data infrastructures (under discussion)



### Context

### **Competitiveness Council**

June 2014 – recognizes the importance of the LTS of RIs

May 2016 - discussion about the ESFRI Roadmap 2016 and LTS issue

" (...)underlines the importance of ensuring long-term sustainability of Research Infrastructures and invites the Commission to prepare together with ESFRI and relevant stakeholders a targeted action plan"

EC public consultation on long-term and sustainable investments (Dec. 2015)

ESFRI – WG on LTS 2016/17 "... to analyse the current LTS challenges and will formulate recommendations on potential policy measures which could be implemented at different levels – national, regional, European and International – to respond to these challenges."



### **WG LTS** composition

Jan Hrusak (Chair)	CZ	Academy of Sciences of the Czech Republic
Laurence Lenoir	BE	BELSPO
Bjørn Henrichsen	NO	Director of NSD – Norwegian Centre for Research Data
Andrew Harrison	UK	Diamond
Claudia Ritter	DE	DLR Project Management Agency
Merja Sarkjoia	FI	Academy of Finland
Caterina Petrillo	IT	ESS-neutron Council (Vice-Chair)
Jean-Pierre Caminade	FR	MESR
Kurt Clausen	СН	PSI - Swiss Academies
Massimo Cocco	IT	EPOS (Coordinator)
Catalin Miron	FR	ELI DC (Deputy DG)
Philippe Froissard		EC
Augusto Arjona		

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### **Report – main recommendations**

- **Establish and maintain excellence** through the **entire life cycle of RIs** by all appropriate means, by securing adequate framework conditions, and by opening the RIs up to the world
- Ensure that RIs have the **right people in the right place at the right time** by strengthening and harmonizing national research and educational systems to make sure that all essential skills are available.
- Harmonise and integrate a vision for convergent operation of RIs and e-infrastructures in Europe to ensure cost-effective service provision to the user communities.
- Fully exploit the potential of **RIs as innovation hubs** by incorporating strategies for their development into national and European innovation policies.
- Set up effective means of determining the **economic and wider social value of RIs**, and incorporate these benefits into science-policy-society dialogues.
- Establish adequate framework conditions for **effective governance and sustainable long-term funding for RIs** at every stage in their life-cycle, together with effective management.
- Foster broader **coordination at national and European levels** when designing processes for planning and supporting national and pan European RIs and so enhance their strategic value.





## Report – specific recommendations Establish and maintain excellence

#### **EU-National**:

- support by adequate means the endeavour for excellence at RIs throughout their entire lifecycle
- develop guidelines for standardized, effective and robust evaluation procedures of RIs through independent international peer-review

#### **EU-National-RIs:**

- develop a methodology to improve the tracking of the use of European RIs in publications and other outputs and encourage the implementation of this system at a Pan-European level
- develop or continue to support mechanisms for funding transnational access, recognizing that openness of RIs is a driver to achieve and sustain scientific excellence

#### RIs:

- keep pace with the development of science in their respective scientific fields, periodically assess their performance and relevance, and keep track of cutting edge technology
- ensure that their procedures to evaluate and select users' proposals and projects are based on transparent, excellence-driven processes
- attract the very best research groups through effective communication





## Report – specific recommendations Ensuring the right people are at the right place at the right time

#### All levels:

- recognise that sufficient staff equipped with specific skills are required at different stages of the life cycle of RIs and establish guidelines for qualifications and evaluation for the recruitment and training of RI managers and operators
- develop staff mobility and exchange programmes for project management and capacity building should be developed for RI personnel aided by greater harmonisation across countries of career paths, pension schemes and salaries as well as exchange and reintegration schemes between RIs, and universities and also with business and industry

#### EU:

- ensure that a sufficient number of suitably trained people of all types (users and staff) are made available to RIs through training programmes via EU-networked national schemes

#### **National**:

- support and harmonise research and education programmes linking RIs with universities and, where appropriate, also business and industry at PhD, post-doc and more advanced levels in order to provide specialised skills and training, some of which should go beyond traditional curricula (for example data scientists and RI managers)





## Report – specific recommendations Harmonise and integrate the operation of RIs and e-Is

#### **EU-National:**

- develop and implement a new culture, which acknowledges the need of new skills to optimise future use, reuse and multiple use of data, increasingly across disciplines
- harmonise different existing funding models between RIs and e-Infrastructures at all levels
- develop stable and robust certified repositories and registries for data preservation following the FAIR approach

#### **EU-National-RIs:**

- foster international cooperation to support the global dimension of data management and interoperability among RIs generating data, products, software and services for science and society

#### **National:**

- must assure that RIs have prepared data management plans as a basic eligibility criterion for funding right from the beginning; requirements for such plans have been developed by e-IRG/ ESFRI and others





## Report – specific recommendations Fully exploit the potential of RIs as innovation hubs

#### **FU-National:**

- encourage the development of innovation ecosystems around RIs and stimulate innovationoriented activities within RI's

#### **National-RIs:**

- facilitate procedures for RIs to become partners in the development and commercialization of innovations and of putting innovations at the service of the broader public and encourage RIs to facilitate early involvement of Business & Industry and Public Services in the supply of high tech components and increase the awareness of RI staff of these matters
- develop and co-fund exchange programs for staff and PhD students to raise mutual awareness by the RIs, Research Performing Organisations, Public Services and business & industry of their needs, opportunities, operations and culture

#### RIs:

- encourage and support Public Services and Business & Industry to engage with and exploit them more fully by identifying their needs and by tailoring user policies and practices to meet these needs
- establish structures and culture in which innovation is most likely to thrive, including: recruitment of an innovation Liaison Officer; raising the awareness and incenting of staff to engage in innovation activities





## Report – specific recommendations Demonstrating the economic and wider benefit to society of RIs

#### **EU-National**:

- support the development of a model with KPIs to evaluate the socio-economic value of RIs, support its adoption across Europe, and use the findings to promote and encourage the use of RIs for the greater good

#### **National:**

- be explicit about the role that socio-economic benefits play in their strategy and funding decisions so that RI operators are aware of its significance and take appropriate action when developing strategy and operating models to enhance it in the future. Periodic monitoring of societal impact should be a part of the regular assessment of the RIs
- adapt the model developed at a European level to their particular national needs, implement it in their national evaluation processes of the socio-economic value of RIs, and feed this back to provide comparisons across Europe. This value should be promoted to the broader society by all means

#### RIs:

- dedicate sufficient resources both to evaluate their value to the economy and society at large and to communicate this to targeted audiences to gain acceptance and support at all levels





## Report – specific recommendations Effective RI governance, long-term funding and effective management

#### EU:

- continue to launch initiatives which improve the management of RIs through the exchange of best practices and lessons learnt, and contribute to strategic planning, evaluation, and training.

#### **EU-National**:

- contribute to the development of a feasible business model that exploits innovation potential, supports for costs for Open Access and incorporates these into the national governance models
- explore improving the ERIC regulation so that its potential may be more fully exploited.

#### **National:**

- consider governance models which provide the right balance between long term funding commitments (including operation costs and strategic developments) and regular evaluation of the RI performance.

#### RIs:

- develop, right from the start of the planning phase and prior to the roadmapping exercise, a comprehensive business plan covering all stages of their life cycle including upgrading and decommissioning.





## Report – specific recommendations Coordination at National and European levels

#### **EU-National**:

- aim for stronger convergence of a broader range of research related policies at EU and national level (innovation, employment, social security, pension schemes and mobility rules etc.) and in particular, reinforce coordination between Member States on all aspects of the RI life cycle.

#### **National:**

- to harmonise and synchronise the development of investment strategy for their RIs to the greatest possible extent with a pan-European vision by taking advantage of the landscape analysis and roadmapping procedures developed by ESFRI and other players at the global level.

#### **EU-National-RIs:**

- further develop platforms for communication and promotion for RIs of potential metaregional, European, and global relevance which are mature enough for engagement strategies.

#### RIS:

- take full advantage of RI self-organisation and coordination at the EU level, which allows efficient sharing of best practices among them and includes also mutual learning exercises.
- ensure that they have effective means of communicating and engaging with all their stakeholders throughout their lifecycle and in particular new RIs should do this right from the start of their design phase.





### Next steps?

### EC - COMMISSION STAFF WORKING DOCUMENT Long-term sustainability of Research Infrastructures - SWD(2017) 323 final Brussels, 26.9.2017

#### **ELEMENTS FOR THE ACTION PLAN**

- > Ensuring RI at the forefront of scientific excellence,
- Configuring European RI as skills development and mobility actors,
- Unlocking RI Innovation potential and stimulating industry engagement,
- > Boosting RI impact, value and benefits of RI,
- Enhancing RI as the pillar for data production and sharing,
- > Ensuring effective governance and sustainable life-cycle management,
- > Promoting European RI in the international arena.

Policy discussion with the Member States and stakeholders on LTS Presidency events organized in 2018 – platform for debate Implementation of the action plan – MFF 2020+



