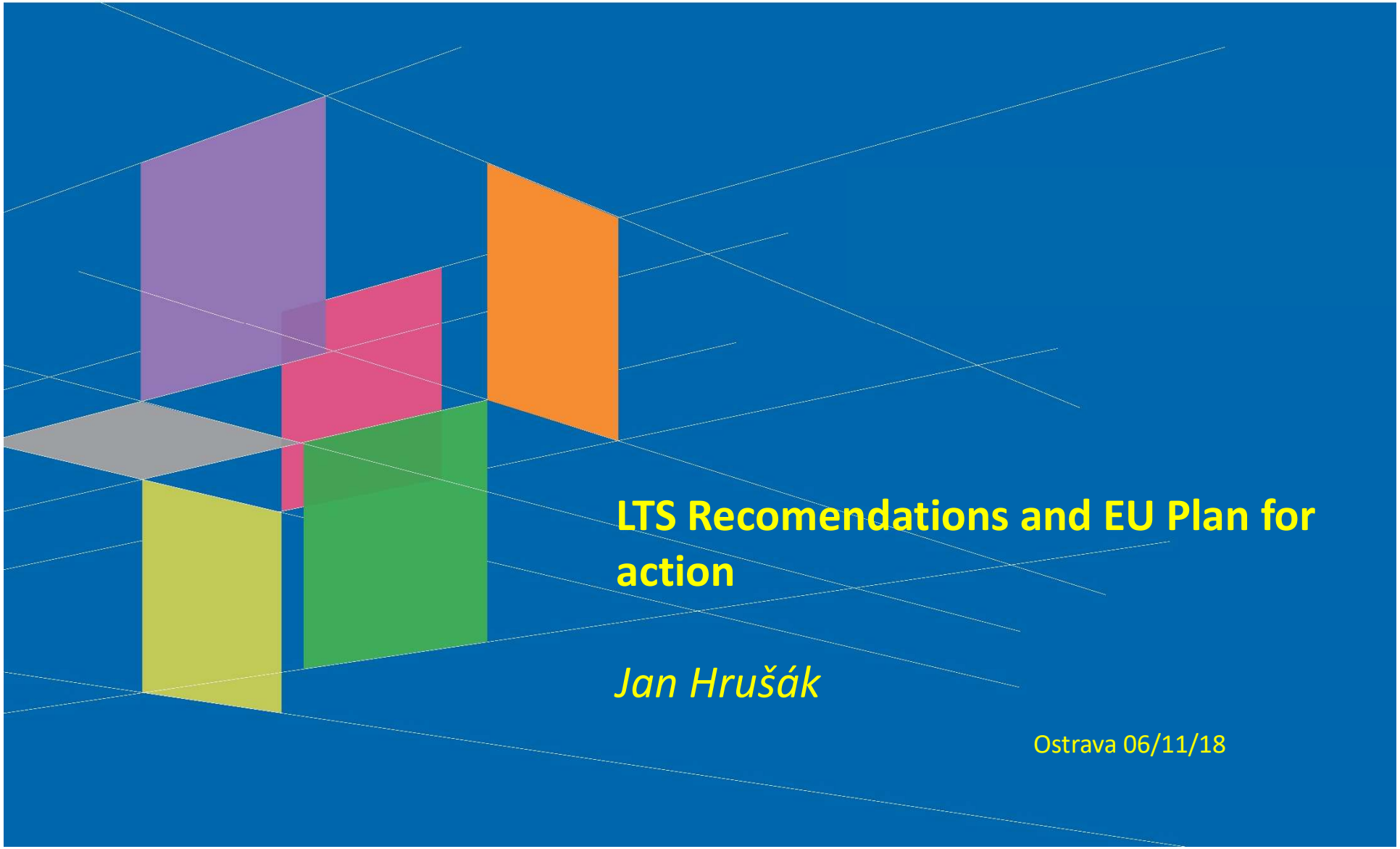
European Strategy Forum
on Research Infrastuctures

ESFRI



LTS Recomendations and EU Plan for action

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Ostrava 06/11/18

LTS Frame

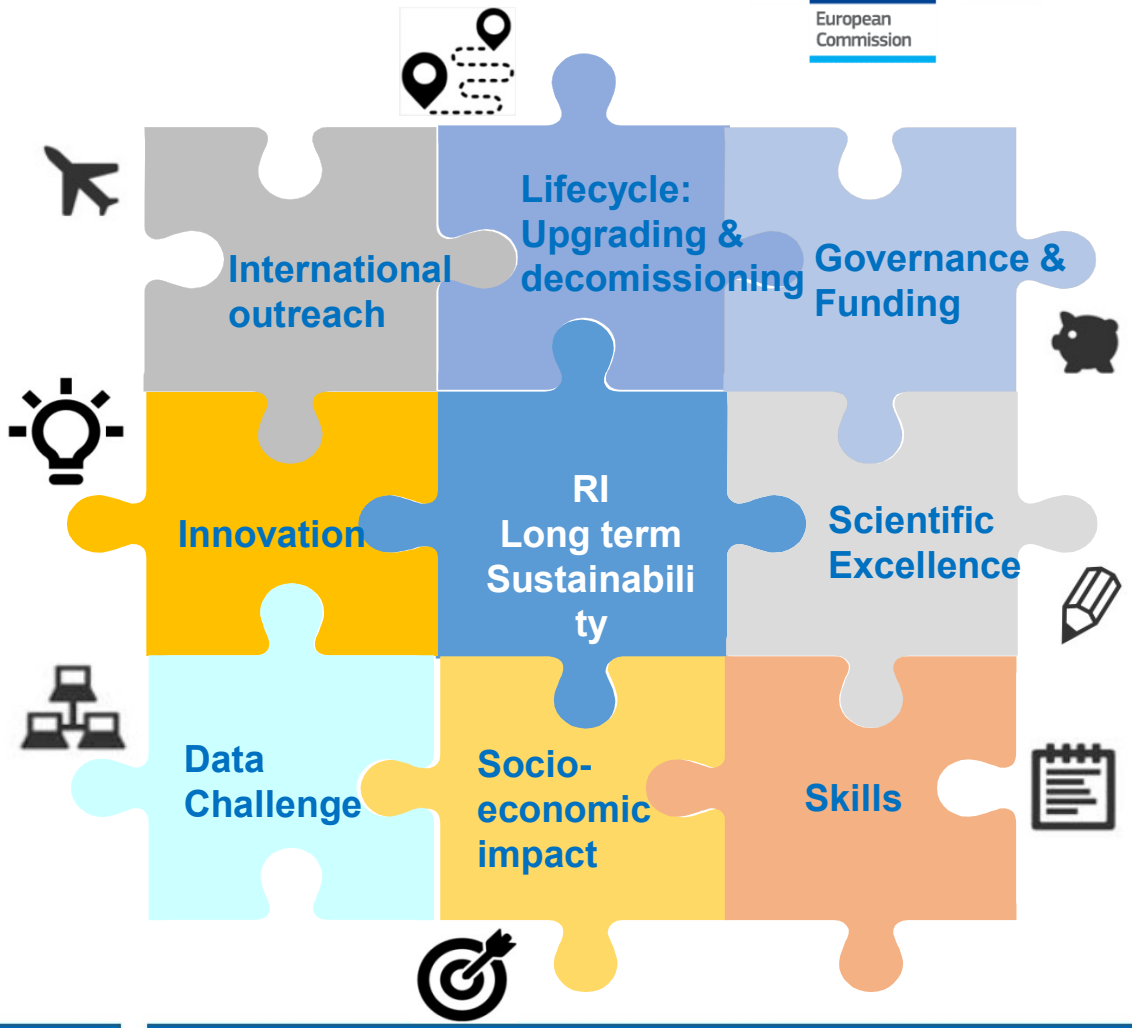
Competitiveness Council of July 2014 (IT Presidency) - highlighted the importance of long-term sustainability of RI

Council of 26 May 2016 (NL Presidency):

"*… INVITES the Member States to continue their efforts in developing and updating national roadmaps for Research Infrastructures compatible with the ESFRI roadmapping process and to secure appropriate funding in order to achieve their timely implementation; and ENCOURAGES the Member States to make use of EFSI to facilitate the implementation of these projects; 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. ….*"

Main recommendations (political message)

- **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 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.



ESFRI

Strategy Report on Research Infrastructures

ROADMAP 2018

How to move forward in LTS debate?

- Identify **RI best practices** in order to apply these where applicable across RI operators and users,
- Propose **concrete steps** to tackle the major challenges and show case possible actions to be considered by the stakeholders,
- Find possible **new approaches to bottlenecks** to be included in the action plan.
- Focus on 5 main sessions:

1. Unlocking the innovation potential of RI
2. Ensuring data preservation and exploitation
3. Up-skilling & mobility in RI
4. Governance & innovative funding mechanisms
5. International Outreach of RI

Conference conclusions (I)

Research Infrastructures beyond 2020 – sustainable and effective ecosystem for science and society

22-23 March 2018, Sofia

Aproach to prioretization od the action plan

Session 1 – Research Infrastructure Challenges beyond 2020

Session 2 – European Synchronisation of RI policies

Session 3 – Exploring Synergies (in policies and funding)

Session 4 – Excellence innovators

Session 5 – European Call for Action on Long-term Sustainability of RIs

Conference conclusions (II)

- identified the need to develop a service driven approach and integrate services across RI;
- recognized multidisciplinarity as a driver of excellence and as an opportunity for broadening the user base and maximizing impact;
- stressed that RI should develop an integrated and trusted high-quality data system and related business models taking fully into account ethical issues
- recognised that, full synchronisation of national RM is not required for the national facilities. For pan-European RIs, there is a need for central coordination at European level with possibly a common funding mechanism;
- agreed that, at national level, a dedicated specific budget line for pan European RI would be a concrete step for ensuring sustainable operation.
- Agreed on the need for better integration of RI in the scientific, economic and social ecosystem at regional, national and European level to maximize impact
- Stressed the need for systematic and commonly agreed monitoring of RI, impact assessment and KPI developments.

Conference conclusions (III)

- Identified the need for a coherent funding toolbox covering the whole life cycle of RI including decommissioning - proposed to develop one common instrument pooling resources from different funds for covering support to construction and early phase operation of RI;
- Recognised the need to build trust between RI and industry in order to create the appropriate innovation ecosystem for incentivizing collaboration
- Acknowledged the potential of RI to foster breakthrough innovation
- Identified the need for outreach activities to increase visibility and awareness of services and opportunities provided by RI
- Stressed the importance of education and training to exploit the innovation potential of RI

ESFRI Mandate on RI COCOM 2018 (I)

Council conclussions "*Accelerating knowledge circulation in the EU*"

29 May 2018

- *UNDERLINES the importance of further efforts within the framework of ESFRI for a **better aligned decision making** for setting-up and participating in ESFRI RIs in particular by exchanging experience about national roadmaps procedures and their national budget lines practices;*
- *Stresses the importance of **human resources and training skills** as key factors in the success for Research Infrastructures and ACKNOWLEDGES the need for Research Infrastructures to **strengthen a service-driven approach**; INVITES Member States and the Commission within the framework of ESFRI to **develop a common approach for monitoring** of their performance and INVITES the Pan-European Research Infrastructures, on a voluntary basis, to include it in their governance and explore options to support this through the **use of Key Performance Indicators**;*

ESFRI Mandate on RI COCOM 2018 (II)

Council conclussions on the European Open Science Cloud (EOSC)

29 May 2018

- *AGREES that the EOSC model should be based on a pan-European **federation of data infrastructures** in order to be flexible and adaptable to changing needs of the stakeholders; with regard to enabling this federation of national and European data infrastructures, ENCOURAGES Member States to invite their relevant communities, such as e-infrastructures**, research infrastructures**, Research Funding Organisations (RFO's) and Research Performing Organisations (RPO's), **to get organized so as to prepare them for connection to the EOSC** and CALLS ON the Commission to make optimal use of ongoing projects, **existing expertise and knowledge** available via existing initiatives, such as ESFRI, eIRG, GO FAIR and others;*
- *ESFRI – HUB of funders – ESFRI as part of the EOSC governance*

Follow up actions 2018

International Conference on Research Infrastructures – ICRI2018

12-14 September 2018, Vienna

Conclusions November 2018 (RI in global context innovation and science diplomacy)

Preparation of Council conclusion (reflection on the ESFRI RM process)

ESFRI Future plans

New update of the ESFRI RM postponed to 2021 - refined methodology

Setting up a group on RI Monitoring (Milano 19./20. November)

Council conclusions - Entry to the EC HLEG on impact evaluation

EOSC governance discussion (Vienna 21.-23. November)

Council conclusions – ESFRI expertize on RI – ESFRI as HUB of funders

Discussion about the further coordination of MS in the RI domain

InRoad Final conference RM coordination and synergies (Brussels 12. December)

Discussion with ESFRI landmarks and Member states (London 28./29. January)

Discussion on ESFRI future and RI related issues (Liblice 27./29. January)

European Strategy Forum
on Research Infrastuctures

ESFRI

Strategy Report on Research Infrastructures

ROADMAP 2018

Thank you for attention

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Establish and maintain excellence

- ***The European Commission, National Authorities and Industrial Partners*** *should all support by adequate means the endeavour for excellence at RIs throughout their entire lifecycle, which may include the pursuit of excellent in-house scientific research and the development of new technology for users.*
- ***The European Commission*** *should, together with* ***National authorities****, develop guidelines for standardized, effective and robust evaluation procedures of RIs through independent international peer-review.*
- ***The European Commission*** *should, together with* ***National authorities*** *and* ***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.*
- ***The European Commission, National authorities*** *and* ***RIs*** *should develop or continue to support mechanisms for funding transnational access (i.e. users from outside countries that fund the RIs), recognizing that openness of RIs is a driver to achieve and sustain scientific excellence.*
- ***Research Infrastructures*** *should 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, all in consultation with their user communities, to be able to provide state-of-the-art instrumentation and services.*
- ***Research Infrastructures*** *should ensure that their procedures to evaluate and select users' proposals and projects are based on transparent, excellence-driven processes.*
- ***Research Infrastructures*** *should ensure that they attract the very best research groups, including those that do not yet use them, through effective communication of the opportunities for excellent research that they provide.*

Ensuring the right people are at the right place at the right time

- ***All levels*** *should recognise that sufficient staff equipped with specific skills are required at different stages of the life cycle of RIs and they should establish guidelines for qualifications and evaluation for the recruitment and training of RI managers and operators.*
- ***At all levels*** *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 re-integration schemes between RIs and universities and also with industry.*
- ***At the European level*** *it must be ensured that a sufficient number of suitably trained people of all types (users and staff) are provided through training programmes via EU-networked national schemes e.g. organised and funded through I3-like programmes*
- ***National authorities*** *should support and harmonize research and education programs linking universities to RIs, and where appropriate also with industry, at PhD, post-doc and more advanced levels to provide specialised skills and training, some of which should go beyond traditional curricula (for example data scientists and RI managers).*

Harmonise and integrate a vision for convergent operation of - for RIs and e-infrastructures

- ***European and National authorities*** *should 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.*
- ***European and National authorities*** *should harmonise different existing funding models between RIs and e-Infrastructures at all levels.*
- ***European and National authorities*** *shall develop stable and robust certified repositories and registries for data preservation following the FAIR (Findable, Accessible, Interoperable, and Re-usable) approach.*
- ***European and National authorities (including RIs)*** *should 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 authorities*** *must assure that Research Infrastructures have prepared data management plans as a basic eligibility criterion for funding from the beginning on, requirements for such plans have been developed by e-IRG/ ESFRI and others.*

Fully exploit the potential of RIs as innovation hubs

- ***National authorities*** *should encourage the development of innovation ecosystems around RIs and stimulate innovation-oriented activities within RIs, including the innovation potential of data generation and service provision. National authorities should strongly support the implementation of Innovation Parks in the vicinity of the RIs, regardless of whether they are of national or of Pan-European interest.*
- ***National authorities*** *should facilitate procedures for RIs to become partners in the development and commercialization of innovations born there and encourage RIs to facilitate early involvement of industry in the supply of high tech components and increase the awareness of RI staff of these matters.*
- ***National authorities*** *should work with RIs, industry and universities to develop and co-fund exchange programmes for staff and PhD students to raise mutual awareness by the RIs and industry of their needs, opportunities, operations and culture.*
- ***Research Infrastructures*** *should encourage and support industry to engage with and exploit them more fully by identifying their needs and by tailoring user policies and practices to meet these needs.*
- ***Research Infrastructures*** *should establish an organisation and culture in which innovation is most likely to thrive, including: recruitment of an Industry Liaison Officer to implement innovation policies with dedicated resources, supported by an advisory body composed of representatives of appropriate industries or commercial activity; raising the awareness and incentivising staff to engage in innovation activities.*

Demonstrating benefits

- ***The European Commission*** *should together with* ***National authorities*** *support the development of a model to evaluate the socio-economic impact of RIs, support its adoption across Europe, and use the findings to promote and encourage the use of RIs for the greater good. This model should aim to provide comparisons between different types of RIs while recognising the great diversity in scientific domain and character, the wide range of benefits they bestow on society, and different national environments.*
- ***National authorities and funding bodies*** *should be explicit about the role that socio-economic impact plays 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. Periodic monitoring of societal impact should be a part of the regular assessment of the RIs.*
- ***National authorities*** *should 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.*
- ***Research Infrastructures*** *should dedicate sufficient resources both to evaluate their value to the economy and society at large and to communicate this to targeted audiences, from the general public to policy makers as part of local, national and European science-policy-society dialogues to gain acceptance and support at all levels.*

Effective RI governance

- ***At the European level*** *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.*
- ***European and National authorities*** *should contribute to the development of a feasible business model that exploits innovation potential, support for costs for Open Access and incorporate these into the national governance models.*
- ***European Commission*** *together with* ***National authorities*** *should explore improving the ERIC regulation so that its potential may be more fully exploited.*
- ***National authorities*** *should 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.*
- ***Research infrastructures*** *must 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.*

Coordination at National and European levels

- ***European and National authorities*** *should 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 authorities*** *are invited to harmonise and synchronize the development of 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.*
- ***National authorities and RIs*** *shall further develop platforms for communication and promotion for RIs of potential meta-regional, European, and global relevance which are mature enough for enlargement strategies.*
- ***Research infrastructures*** *should take full advantage of RI self-organization and coordination at the EU level, which allows efficient sharing of best practices among them and includes also mutual learning exercises.*
- ***Research infrastructures*** *should 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.*