



IV RICH-2 Symposium: Research Infrastructures as Engines for Maximising Impact of HE 13 November 2020



Roberta Zobbi

*European Commission DG RTD –
Research and Innovation Infrastructures*

Research Infrastructure challenges in Horizon Europe

Previous EU Framework Programmes, the work of ESFRI and the EU strategic approach for RI development have generated clear advantages, such as avoiding duplication of efforts, pooling resources, rationalising RI use, standardising processes and procedures as well as consolidating the global leadership of European RIs.

A number of outstanding issues have yet to be addressed in the forthcoming years.

New efforts are needed to ensure the contribution of research and technology infrastructures into Europe's wider policy objectives, thus maximizing the contribution of science and technology to the needs of the society and increasing Europe's competitiveness.

Horizon Europe - Towards the first RI WP: definitions and approach



Destination #1: Developing, consolidating and optimising European RIs landscape, maintaining global leadership

Enable disruptive research and breakthrough innovation, make the ERA attractive to researchers from all over the world and fill knowledge gaps among countries and regions.

Underpin the R&I effort *enabling systemic changes* needed for a truly transformative societal and economic recovery.

Increase the capacity of Europe to *respond*, in cooperation with international players, *to emerging challenges at global level*.

How ?

- ESFRI Roadmap 2021 implementation
- Development of new concepts for new RIs
- Consolidation of the RIs landscape
- International cooperation



Destination #2: Enabling an operational, open and FAIR EOSC ecosystem



Transform the way *research data is shared and exploited* leading to better quality and more productive research results, new innovative and value-added services.

Facilitate scientific *multi-disciplinary* cooperation, leading to discoveries and solutions in key areas such as environment and health.

Delivering a “Web of FAIR Data and Services” for Science: a trusted virtual environment supporting Open Science, based on key horizontal core functions, with their corresponding e-infrastructures, and service layers accessible to researchers across disciplines throughout Europe

EOSC Partnership Proposal (co-programmed) - R&I priorities in the EOSC SRIA (under preparation) will be taken into consideration



Destination #3: RI services to support health research, accelerate the green and digital transformation, & advance frontier knowledge

Enhance and increase society's long-term and consistent *problem-solving capacity* in areas linked to health, and the green and digital transition, including a better understanding of *socio-economic implications*. Create *new knowledge*.

- **Challenge driven provision of Research Infrastructures services:** Targeted approach based on EU policy priorities, in support of e.g.: health research; climate and environmental R&I; sustainability and circular economy, recovery from crisis; socio-economic research
- **Research Infrastructures services advancing frontier knowledge:** Targeted approach addressing specific large scientific domains on the basis of a multi-annual priority-setting plan

Destination #4: Next generation of scientific instrumentation, tools and methods and advanced digital solutions

Ensure that Europe remains at the forefront of *technological excellence* through investments into the development, in cooperation with industry, of forward-looking technical instrumentation and tools for European RIs, making them able to support the transition towards a sustainable and healthy society, while enhancing the competitiveness of European industry.

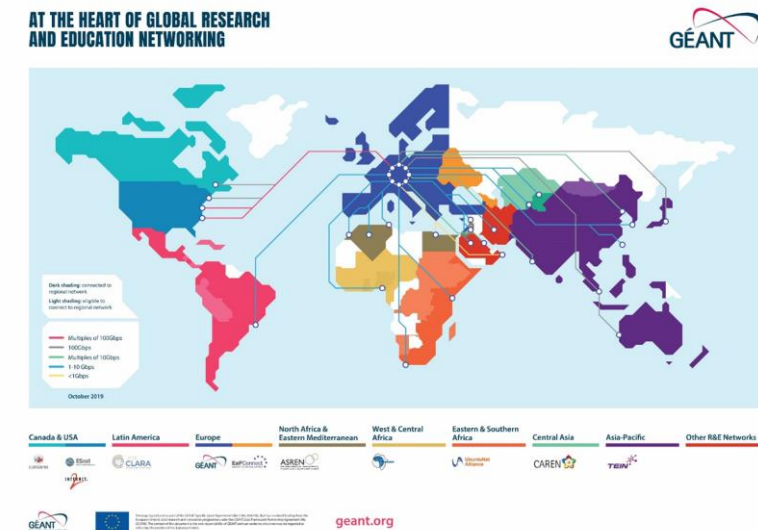
- R&I activities carried out by RIs
- Deliver advanced scientific instrumentation, tools and methods as well as interoperable, interdisciplinary digital solutions to serve a wide community of users and/or new areas of research

Destination #5: Network connectivity - enabler for collaboration without boundaries (GÉANT)

Put Europe at the forefront of global R&E by creating the necessary conditions to attract data and talent and offering borderless collaboration services, ensuring very high-bandwidth, reliable and secure end to end *cross-border connectivity* and paving the way for widespread access to common European Data Spaces.

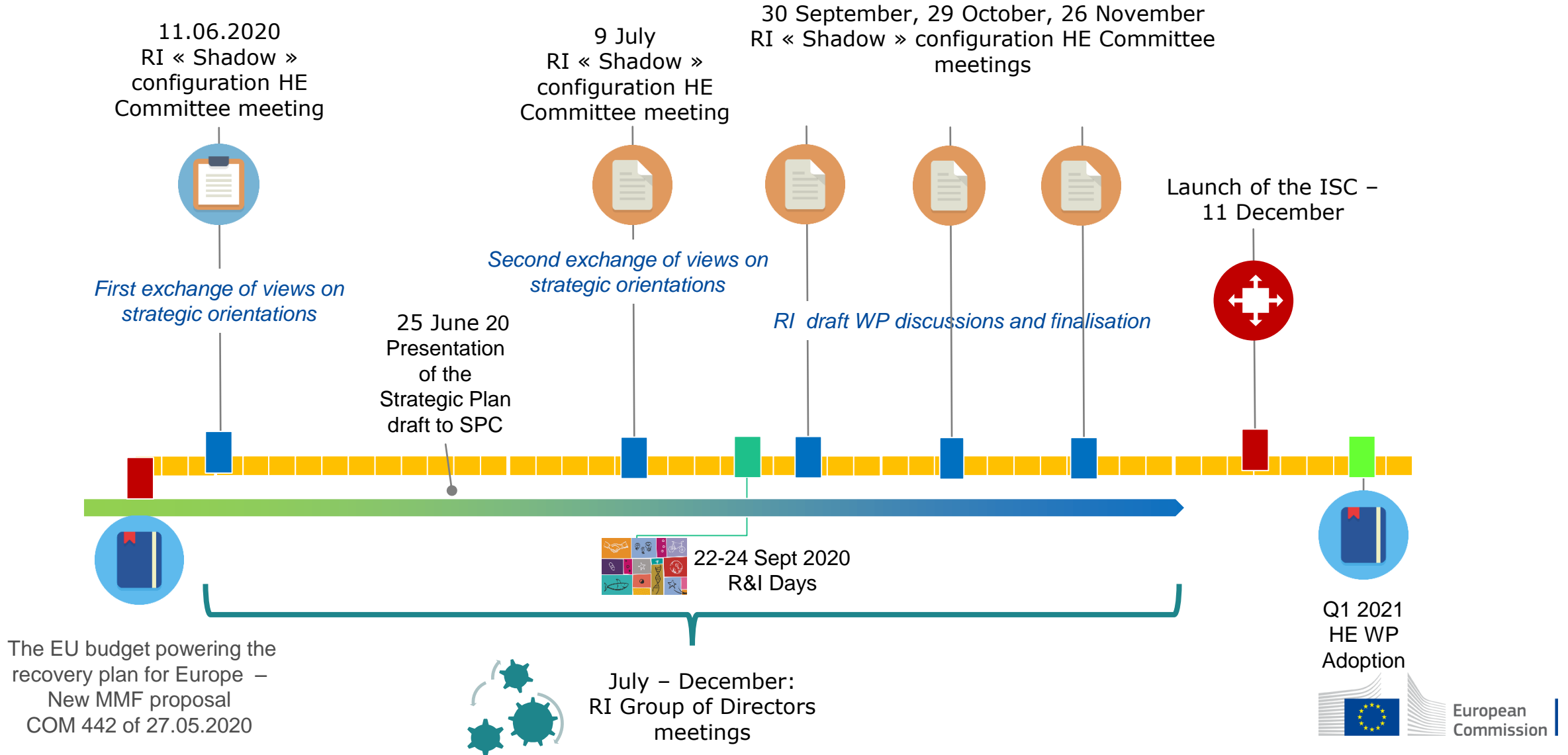
Achieve connectivity globally and foster Europe's international cooperation via enhanced connectivity of the R&E networks between Europe and different parts of the world.

- Connectivity and collaboration services for the ERA, including HPC
- Deployment and customization of European AAI (Authentication and Authorisation Infrastructures) for interoperability and compliant with eIDAS Regulation.
- Long-term contracts and agreements for international connectivity, upgrades to existing connections, new capacity (or spectrum) and new strategic links



Towards the RI Work Programme 2021-2022

TIMELINE



Thank you

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