



## ***European Research Infrastructures for a smarter future***

### **Croatian Presidency Conference**

**15 May 2020**

9:00 – 10:00	<b>Registration</b>
10:00 – 10:15	<p><b>Opening Session</b></p> <p><u>Welcome</u></p> <p>Blaženka Divjak - Minister for Science and Education, Croatia</p> <p><u>Introduction to the agenda</u></p> <p>Croatian Presidency</p>
10:15 – 10:30	<p><b>Evolution of the European Research Area</b></p> <p>Mariya Gabriel – European Commissioner for Innovation, Research, Culture, Education and Youth</p>
10:30 – 11:30	<p><b>Research Infrastructures and the European strategic agendas – Green Deal and Energy Transition</b></p> <p><u>Setting the scene</u></p> <p>Barbara Weitgruber – Director General for Scientific Research and International Relations at the Austrian Federal Ministry of Science and Research</p> <p><u>Panel Discussion</u></p> <p>Moderator: Inmaculada Figueroa – Vice Deputy Director General for the Internationalisation of Science and Innovation, Ministry of Science and Innovation, Spain, ESFRI Vice-Chair</p> <p>Speakers:</p> <p>Christos Arvanitidis – CEO, LIFEWATCH-ERIC</p>

	<p>Sverre Quale – Director, ECCSEL ERIC</p> <p>Tonci Tadic – Head of Croatian fusion unit, Ruđer Bošković Institute</p> <p>Jana Kolar – Executive Director, CERIC-ERIC</p>
11:30 – 12:30	<p><b>Research Infrastructures for Regional Development</b></p> <p><u>Setting the scene</u></p> <p>Karina Angelieva – Deputy Minister of Education and Science, Bulgaria</p> <p><u>Panel Discussion</u></p> <p>Moderator: Anna Panagopoulou – Director ‘Common Implementation Centre’, DG Research and Innovation, European Commission</p> <p>Speakers:</p> <p>Sanja Damjanovic – Minister of Science of Montenegro and Chairperson of the SEEIIST Steering Committee</p> <p>István Szabó – Vice-President for Science and International Affairs, National Research, Development and Innovation Office of Hungary</p> <p>Markus Dettenhofer – Chief Executive Officer, CEITEC, Czech Republic</p> <p>Karen Amram – Director for Europe &amp; International foresight, CEA Technology Research Unit, Chair of the HIGH LEVEL FORUM - Grenoble Innovation Campus</p> <p>Luciano Catani – Senior Expert, Department of Research, Ministry of University and Research, Italy</p>
12:30 – 13:30	<p><b>Lunch Break</b></p>
13:30 – 14:30	<p><b>Research Infrastructures in the fight against COVID-19</b></p> <p><u>Setting the scene</u></p> <p>ERAvsCORONA – Henriette Van Eijl – Deputy Head of Unit ‘Economic and Social Transitions’, DG Research and Innovation, European Commission</p> <p><u>Panel Discussion</u></p>

	<p>Moderator: Yannis Ioannidis – President and General Director at Athena Research and Innovation Center, Professor of Informatics &amp; Telecom at Nat. Kapodistrian University of Athens, ESFRI Vice-Chair</p> <p>Speakers:</p> <p>Jean-Louis Romette – Universite Aix Marseille, European Virus Archive</p> <p>Antonio Andreu – Scientific Director, EATRIS</p> <p>Niklas Blomberg – Director, ELIXIR</p> <p>Caterina Biscari – Director, ALBA Synchrotron, LEAPS Chair</p>
14:30 – 15:30	<p><b>Making Science Happen – a new ambition for Research Infrastructures</b></p> <p><u>ESFRI White Paper presentation</u></p> <p>Jan Hrusak – ESFRI Chair</p> <p><u>Panel Discussion</u></p> <p>Moderator: Johannes Klumpers - Head of Unit ‘Research and industrial infrastructures’, DG Research and Innovation, European Commission</p> <p>Speakers:</p> <p>Giorgio Rossi – Università degli Studi di Milano Statale, EOSC Governing Board Member</p> <p>David Bohmert – Secretary General, CESAER</p> <p>Sandrine Dixson-Declève – Co-President of the Club of Rome, Chair of the Expert group on the economic and societal impact of research and innovation</p> <p>John Womersley - Director General at European Spallation Source ERIC, Chair of the ERIC Forum</p>
15:30 – 15:45	<p><b>Break</b></p>
15:45 – 16:45	<p><b>European Research Infrastructures for a smarter future – policy panel</b></p> <p>Moderator: Jean-Eric Paquet – Director General, DG Research and Innovation, European Commission</p> <p>Speakers:</p> <p>Tome Antičić – State Secretary for Science and Education, Croatia</p>



	<p>Dietrich Nelle – Deputy Head of Directorate-General 1 “Policy Issues and Strategies; Coordination”, Federal Ministry of Education and Research, Germany</p> <p>Jose Paulo Esperanca – Vice-President, Foundation for Science and Technology, Portugal</p> <p>Jure Gašparič- State Secretary, Ministry of Education, Science and Sport, Slovenia</p> <p>Václav Velčovský – Deputy Minister for EU Affairs and European Structural and Investment Funds, Ministry of Education, Youth and Sports, Czech Republic</p>
<p>16:45 – 17:00</p>	<p><b>Conference conclusions</b></p> <p>Croatian Presidency</p>

## Session Concept Notes

### **Research Infrastructures and the European strategic agendas – Green Deal and Energy Transition (10:30 - 11:30)**

#### Moderator:

**Inmaculada Figueroa** – Vice Deputy Director General for the Internationalisation of Science and Innovation, Ministry of Science and Innovation, Spain, ESFRI Vice-Chair

#### Setting the scene

Barbara Weitgruber – Director General for Scientific Research and International Relations at the Austrian Federal Ministry of Science and Research

#### Speakers:

Christos Arvanitidis – CEO, LIFEWATCH-ERIC

Sverre Quale – Director, ECCSEL ERIC

Tonci Tadic – Head of Croatian fusion unit, Ruđer Bošković Institute

Jana Kolar – Executive Director, CERIC-ERIC

### ***The European Green Deal***

The [European Green Deal](#) is the most ambitious package of measures that should enable European citizens and businesses to benefit from sustainable green transition. The measures proposed cover a number of topics: [clean energy](#); [sustainable industry](#); [building and renovating](#); [sustainable mobility](#); [biodiversity](#); [from farm to fork](#); [eliminating pollution](#). The Green Deal is also an integral part of the Commission's strategy to implement the United Nations' [Sustainable Development Goals](#) (SDGs). As part of the Green Deal, the Commission will refocus its policies to put the SDGs at the heart of the EU's policymaking and action.



## ***The Energy Union***

In 2015, the Commission published its [Communication](#) “A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy” which aimed at fundamentally changing Europe’s energy system. The Commission, in its [fourth report](#) on the State of the Energy Union published in 2019, recognizes the results achieved (i.e. ambitious targets for 2030 in renewable energy and energy efficiency, a regulatory framework and a vision for the policies required, promoting the creation of European value chains in emerging sectors like batteries and hydrogen) and the way forward.

## ***The role of Research Infrastructures***

In this context, **Research Infrastructures** are key in driving the necessary transitions toward a greener and innovative society by providing new technologies, sustainable solutions and disruptive innovation. A number of RIs have been supporting the European objectives in the fields related to the Green Deal and the Energy transition. Solar, wind, nuclear and marine energy, technological advancements in the energy storage sector and innovative studies on biological diversity and ecosystem functioning are some of the main areas in which European RIs have contributed so far. However, In order to increment the contribution of RIs in the future, there is a need for more integration between the RIs scientific agendas and European broader policies. Moreover, now, RIs investment priorities are set mainly in the science sector, and the alignment with other sectorial policies remains indirect. The lack of integration of RIs into other sectoral policies represents a missed opportunity to fully exploit the potential of RIs in providing science-driven solutions to global challenges.

ESFRI, in its White Paper, acknowledges the strategic importance of further strengthening the coherence between European, national and regional priorities and policies for Research Infrastructures development. Furthermore, ESFRI invites the EC and the MS/AC to maximise synergies and interplay between regional funds, national funds and European programmes, hence including RIs’ investments in a wider framework of funding decisions.



**Guiding Question**

How can RIs help (also in terms of services and data provided) in the implementation of the European Green Deal and the Energy Union?



## Research Infrastructures for Regional Development (11:30 - 12:30)

### Moderator

**Anna Panagopoulou** – Director ‘Common Implementation Centre’, DG Research and Innovation, European Commission

### Setting the scene

Karina Angelieva – Deputy Minister of Education and Science, Bulgaria

### Speakers:

Sanja Damjanovic – Minister of Science of Montenegro and Chairperson of the SEEIIST Steering Committee

István Szabó – Vice-President for Science and International Affairs, National Research, Development and Innovation Office of Hungary

Karen Amram – Director for Europe & International foresight, CEA Technology Research Unit, Chair of the High Level Forum - Grenoble Innovation Campus

Markus Dettenhofer – Chief Executive Officer, CEITEC, Czech Republic

Luciano Catani – Department of Research, Ministry of University and Research, Italy

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Research Infrastructures have the potential to promote greater cohesion in Europe through their capacity for facilitating excellent science. A Europe-wide distribution of RIs would help to reduce the “excellence gap” caused by lagging capacities in parts of the EU. Developing the concept of Smart Specialisation Strategies, by including the scheme of regionally anchored RIs and ensuring that the EU state aid rules are more RDI friendly, would sizably contribute to closing the research and innovation gap. This would help to realise the full research potential from all EU regions while equally respecting at the same time the excellence criterion as the major guiding principle. Effective complementarity and practical synergies between all EU funded programs should therefore be assured.



Research and RIs play a key role also in the creation of effective innovation systems especially through the strategic identification of regional development priorities. RIs are strongly rooted in the regions and critically influence regional development. The outreach of RIs extends from scientific output to the impact on educational systems, from economic development to overall market effects and general societal benefits. Investments in RIs help increasing regional competitiveness and thus cohesion between the different European countries and regions. The full potential of RIs has not yet been realised by many regional authorities and as a consequence RIs are not sufficiently included in the planning, design and implementation of the Regional Smart Specialisation Strategies.

#### **Guiding Question**

How to accelerate the development and exploitation of European Research Infrastructures as regional knowledge and innovation hubs, boosting their role as drivers of economic growth, social and environmental transitions, and place-based innovation?



## Research Infrastructures in the fight against COVID-19 (13:30 - 14:30)

### Moderator:

Yannis Ioannidis – President and General Director at Athena Research and Innovation Center, Professor of Informatics & Telecom at Nat. Kapodistrian University of Athens, ESFRI Vice-Chair

### Keynote speaker: Setting the scene

ERAvsCORONA – Henriette Van Eijl – Deputy Head of Unit ‘Economic and Social Transitions’, DG Research and Innovation, European Commission

### Panelists: Diverse viewpoints

Jean-Louis Romette – Université Aix Marseille, European Virus Archive

Antonio Andreu – Scientific Director, EATRIS on behalf of the Alliance of Medical Research Infrastructures (BBMRI, ECRIN, EATRIS)

Niklas Blomberg – Director, ELIXIR

Caterina Biscari – Director, ALBA Synchrotron, LEAPS Chair

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COVID-19 outbreak represents an unprecedented public health crisis in the European history of the last decades. All relevant stakeholders have been coordinating at European and International level in order to support the development of diagnostic tools and the search for a vaccine and cure, as well as to alleviate the economic and social damages.

In this context, Research Infrastructures (RI) have been playing a fundamental role in putting together all available knowledge and resources to fight the outbreak, supporting governments, researchers and hospitals around the globe. Many RIs have developed dedicated services and prioritized access pipelines for work related to fighting the virus. Several initiatives have also tried to gather all relevant information on what exactly is available at RIs’ level in order to help researchers finding the most appropriate service or resource. These include the ESFRI “[RIs against COVID-19](#)” website, the “[ERIC Forum against COVID-19](#)” initiative, and the “[Research](#)



[“Infrastructures and COVID-19 Research”](#) website of the Association of European Research Infrastructures Facilities. Other initiatives on the e-infrastructure side include the [OpenAIRE/Zenodo COVID-19 community](#) multi-disciplinary repository, the [OpenAIRE COVID-19 Gateway](#) to a linked literature-data-software knowledge graph, the [EGI and Open Science Grid joint call](#) for specialized resource provisioning across the Atlantic, and the [PRACE fast track for proposals](#).

The Commission has developed the [ERA vs. Corona Action Plan](#) setting out key measures to coordinate, share, and increase support for R&I such as adding and reorienting [funds](#) to support RI projects, and establishing a European [data exchange platform](#) in the framework of the [European Open Science Cloud](#).

The COVID-19 outbreak clearly demonstrated the readiness of the European RIs to effectively respond to an emergency and ensure the scientific community access to the best cutting-edge technologies and facilities in order for them to work towards finding a solution to the problem.

This session will explore the ways in which Research Infrastructures at European and National level were able to react to the pandemics, the lessons learnt and the way forward.

#### **Guiding Question**

What is the expected role for RIs in a crisis situation (such as the one of COVID-19) and how serving such present term societal challenges balances off in the RIs mission with serving long term scientific research?



## **Making Science Happen – a new ambition for Research Infrastructures (14:30 - 15:30)**

### Moderator

**Johannes Klumpers** - Head of Unit 'Research and industrial infrastructures', DG Research and Innovation, European Commission

### ESFRI White Paper presentation

Jan Hrusak – ESFRI Chair

### Speakers

Giorgio Rossi – Università degli Studi di Milano Statale, EOSC Governing Board Member

David Bohmert – Secretary General, CESAER

Sandrine Dixson-Declève – Co-President of the Club of Rome, Chair of the Expert group on the economic and societal impact of research and innovation

John Womersley - Director General at European Spallation Source ERIC, Chair of the ERIC Forum

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In April 2020, ESFRI published its [White Paper](#) 'Making Science Happen – a new ambition for Research Infrastructures in the European Research Area'. This is the result of a 15-month reflection on the state of development of the European Research Infrastructure landscape and the ways to strengthen its relevance and impact on achieving broader societal goals.

The White Paper concludes that the organisation of the RI landscape needs optimisation to address the overall objectives of the new European Research Area. ESFRI considers that the following is needed for a stronger Europe:

- i. Reinforce the position of Research Infrastructures as an essential pillar of the European Research Area, forming a healthy, sustainable and integrated Research Infrastructure

ecosystem that strives for scientific excellence with impact and provides transnational services, supporting education and skills development.

- ii. Enhance the role of Research Infrastructures as truly strategic investments across borders of sectorial domains, contributing to European strategic agendas and enabling European research and innovation to address pressing and complex societal challenges.
- iii. Develop and exploit the potential of European Research Infrastructures as knowledge and innovation hubs, integrated into local communities, forming the basis of European competitiveness, with regional impact and with global outreach.
- iv. Further strengthen the coherence between European, national and regional priorities and policies for Research Infrastructure development and funding.
- v. Exploit the potential of Research Infrastructures as major promoters of Open Science providing FAIR (Findable, Accessible, Interoperable and Reusable) and quality certified Open Data, supporting their contribution to the success and impact of the European Open Science Cloud and so strengthening their capacity to serve their users.
- vi. Better use the potential of the ESFRI to contribute to the development of coherent Research Infrastructure policy and investment in Europe, ensuring its appropriate capacity to that end.

This represents a vision of a fully consolidated European ecosystem of Research Infrastructures, offering cross-disciplinary services and enabling their users to both pursue the greatest of scientific challenges and generate new knowledge facilitating science-led economic, social and environmental transitions, improving the everyday life of European citizens. Achieving this vision requires an integrated approach bringing together research, innovation and education, exploiting the opportunities of advanced data science, underpinned by smart, coherent policies.

### Guiding Question

What needs to be done by different actors to further consolidate the European Research Infrastructure ecosystem and increase its broader impact, as outlined in the ESFRI White Paper?



## European Research Infrastructures for a smarter future – policy panel (15:45 - 16:45)

### Moderator:

**Jean-Eric Paquet** – Director General, DG Research and Innovation, European Commission

### Speakers:

Tome Antičić – State Secretary for Science and Education, Croatia

Dietrich Nelle – Deputy Head of Directorate-General 1 “Policy Issues and Strategies; Coordination”, Federal Ministry of Education and Research, Germany

Jose Paulo Esperanca – Vice-President, Foundation for Science and Technology, Portugal

Jure Gašparič- State Secretary, Ministry of Education, Science and Sport, Slovenia

Václav Velčovský – Deputy Minister for EU Affairs and European Structural and Investment Funds, Ministry of Education, Youth and Sports, Czech Republic

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The European Research Area (ERA) was launched by the European Commission in 2000, with the idea of developing attractive opportunities for researchers within Europe. It aimed to address the problem of fragmentation of the efforts carried out at European level, to mobilise resources and create a movement towards coherence of research policies in Europe.

As the quality of research infrastructures is decisive for our capacity to deliver scientific breakthroughs and to foster innovation, one of the key initial objectives was to develop a European approach to research infrastructure policy as a key element of the emerging European Research Area. This led to the establishment of the European Strategy Forum on Research Infrastructures (ESFRI) in 2002. Since then, its work has radically transformed the availability of state-of-the-art facilities for researchers by making common investments easier at regional, national and European levels, reinforcing Europe’s global leadership in this field.



Given the broad agreement on the need to rapidly address the societal challenges facing Europe and the world, science has an important mission to lead and prepare the necessary economic, social and environmental transitions. The renewal of the European Research Area will be key to this mission.

Within the framework of ESFRI, the Commission, Member States and Associated Countries as well as the scientific community have reflected together on how to foster the further development of a European research infrastructure system capable of effectively supporting the enabling role of research and innovation for achieving Europe's wider policy goals.

As a result of this reflection, the ESFRI White Paper suggests that the following is needed for a stronger Europe:

- i. Reinforce the position of Research Infrastructures as an essential pillar of the European Research Area, forming a healthy, sustainable and integrated Research Infrastructure ecosystem that strives for scientific excellence with impact and provides transnational services, supporting education and skills development.
- ii. Enhance the role of Research Infrastructures as truly strategic investments across borders of sectorial domains, contributing to European strategic agendas and enabling European research and innovation to address pressing and complex societal challenges.
- iii. Develop and exploit the potential of European Research Infrastructures as knowledge and innovation hubs, integrated into local communities, forming the basis of European competitiveness, with regional impact and with global outreach.
- iv. Further strengthen the coherence between European, national and regional priorities and policies for Research Infrastructure development and funding.
- v. Exploit the potential of Research Infrastructures as major promoters of Open Science providing FAIR (data which meet principles of findability, accessibility, interoperability, and reusability) and quality certified Open Data, supporting their contribution to the success and impact of the European Open Science Cloud and so strengthening their capacity to serve their users.
- vi. Better use the potential of the ESFRI to contribute to the development of coherent Research Infrastructure policy and investment in Europe, ensuring its appropriate capacity to that end.



### Guiding Questions

- What are the most important directions for the development of Research Infrastructures in Europe?
- How can the renewed European Research Area reinforce the global leadership of European Research Infrastructures in pursuit of solutions for the most pressing societal challenges?