**Workshop to Launch the
ESFRI Roadmap 2016
- Report -**

Beate Warneck: 28/10/2014

CoPoRI

CoPoRI is an EU project, funded under FP7, and supports the European Strategy Forum on Research Infrastructures (ESFRI) in labour intensive activities. The acronym **CoPoRI** stands for "**Co**mmunication and **Po**licy development for **R**esearch **I**nfrastructures in Europe". Coordinator of the project is the German Aerospace Center (DLR). Partner is the German Electron Synchrotron (DESY).

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Introduction

In its conclusions of 26th May 2014, the Council of the European Union welcomed the strategic agenda of ESFRI (European Strategy Forum for Research Infrastructures) to update its roadmap for Research Infrastructures in 2015-2016 [1]. This update of the roadmap will be the third since its inception by ESFRI in 2006. To launch the ESFRI Roadmap 2016 a workshop was organised by CoPoRI on 25th September 2014 in Trieste, Italy.

The ESFRI Roadmap identifies new Research Infrastructures of pan-European interest to meet the long term needs of the European research communities, covering all scientific areas. The main objective of the roadmap activity is to ensure Europe has world-class Research Infrastructures accessible to all researchers in Europe and beyond and fully exploit their potential for scientific advancement and innovation.

Potential new Research Infrastructures (or major upgrades) identified by ESFRI are likely to be realized in the next 10 to 20 years. While they may have different degrees of maturity they should be supported by a relevant European partnership or intergovernmental research organisation. A growing number of countries have prepared national roadmaps that establish their prioritisation of national and pan-European Research Infrastructures, using the ESFRI Roadmap as a reference. These national Research Infrastructure roadmaps help to define national budgets, facilitate political support and allow long-term financial commitment, therefore, to achieve a clear vision of the overall European ecosystem.

Objective of the workshop
The objective of the workshop on 25th September 2014 in Trieste (Italy) was to raise awareness of the scientific community about the next ESFRI Roadmap in 2016, and the associated landscape analysis of Research Infrastructures within their specific scientific fields.

In particular the workshop aimed to:

- Present an overview of the Research Infrastructures Landscape within different scientific fields and show how ESFRI has analysed current gaps;
- Clarify submission and selection procedures for potential candidates to the Roadmap;
- Provide a timetable and the pre-conditions and assessment process for setting-up proposals for the ESFRI roadmap and;
- Increase the awareness on the role of ESFRI and the perspectives for the next Roadmap update;
- Provide an overview of the roadmap update and the interface with Horizon 2020, and relevant national and European interfaces

The workshop was organised by CoPoRI, in close cooperation with ESFRI and the European Commission.

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[1] http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/142794.pdf

Summary

The Workshop to launch the ESFRI roadmap 2016 took place on **25 September 2014** in the Hotel Savoia Excelsior Palace in Trieste, Italy. The location was chosen with view to the Italian Presidency and the ESFRI meeting the day after.

The overall **objective** of the workshop was to raise the scientific community's awareness of:
- the next roadmap in 2016 and
- the associated landscape analysis of Research Infrastructures within their specific scientific fields.

The workshop was organised within 4 months by the CoPoRI coordinator DLR, after the decision has been taken by ESFRI and EC on 25th May 2014. Within the preparation of the workshop two challenges occurred: firstly the request of ESFRI to provide a live stream of the workshop as the participation at the workshop was limited to invited persons only and secondly to produce a flyer about the roadmap process in a time span of 3 weeks. Both requirements could be successfully fulfilled.

The workshop was attended by more than 130 people representing Ministries, the national managing authorities, ESFRI, and the European Commission, multipliers of the scientific community and other ERA stakeholders and policy makers. Two hundred and thirty seven visitors followed the workshop via live stream the same day worldwide. Thereof 53% from Europe (17% from Germany and 16% from Italy) and 32% from the US, but also visitors from Russian, Japan, Australian and Brazil were linked to the live stream. A survey of the participants (quality check) was conducted after the end of the workshop. It turned out that 90% of the participants were very satisfied/satisfied with the outcome and organisational flow of the workshop. The main bottleneck was the geographical location of the workshop in Trieste as this town is complicated to reach by public transportation.

The first session of the workshop was dedicated to the launch of the ESFRI roadmap 2016, the submission and selection procedure and an assessment report of the implementation of the ESFRI roadmaps 2008 and 2010 including the definition of maturity of proposals as preconditions to enter the roadmap 2016. In this context, the main roadmap evaluation criteria were addressed by ESFRI.

The second part of the workshop was dedicated to the landscape analysis in each scientific field such as Environment, Health and Food, Social and Cultural Innovation, Energy, Physical Sciences and Engineering and e-Infrastructure. It was also demonstrated how the ESFRI projects have modified their landscape.

The outcomes of the workshop can be summarised as following:

- ESFRI is about identifying priorities in the development of the European RI system, and to help coordinating efforts towards implementation of the most relevant projects.

- A new Roadmap is needed that will be suitable for political and financial support by Member States and Associated States. The new Roadmap shall contain no more than 25 projects that have a maximum term of 10 years to reach full maturity and implementation decision.

- This implies that the new projects (8-10 in 2016 plus 10 more in 2018 and 6 more in 2020) must demonstrate a high degree of maturity as science enterprises beyond the pure scientific interest.

- Accordingly a much more detailed application form is required and a staged selection process has been designed to ensure that the retained projects of the new active list do have maximum likelihood to come to implementation within ten year.

- An explicit commitment by at least three Countries or by the EIROforum Council is required in order to submit the projects, through the National Delegations.

- The Landscape Analysis of the RIs available to European scientists will represent a substantial part of the new Roadmap 2016, and will include the evidence of the role of ESFRI implemented projects in shaping the ERA and in fostering European competitiveness.

All the presentations in paper form and a live stream about the workshop can be downloaded on the CoPoRI web sit under www.copori.eu. The following chapters provide a summary of each presentation of the workshop.

I. Launch of the ESFRI Roadmap 2016 including information about submission and selection procedures and lessons learned from previous practises.

1. Launch of the 2016 ESFRI Roadmap / *Professor John Womersley, Chief Executive, Science and Technology Facilities Council (UK) and Chair of ESFRI*

- There is a broad consensus that future competitiveness in a globalising knowledge economy depends on research capability. This requires Investment in higher education and research institutions, and access to first class research infrastructures.

- Coordination on European (and global) scale increasingly needed because limited investment funds available, and increasing level of infrastructure investments needed to remain at the cutting edge

- Problems require broad data sharing and networking between national nodes – distributed RIs

- RIs are Innovation and skills hubs, not (just) big machines or big datasets

- ESFRI was set up by the EU Council of Research Ministers in 2002. It brings together representatives of Ministers of the 27 Member States, 10 Associated States, and of the European Commission, to Support a coherent and strategy-led approach to policy making on Research Infrastructures in Europe

- Mandate to develop a Roadmap and prioritise research infrastructures

- ESFRI provides a forum for coordination, information sharing, help and best practice, but Member States must be the major source of funding, in variable geometry

- ESFRI mandate updated at Informal Competitiveness Council in Milano (July 2014) to complete a new Roadmap for 2016 with new criteria of selection and format

- New Roadmap will contain fewer, more mature projects

- It will also be more of a strategy document that analyses the landscape of RIs in EU and internationally; gaps in the EU RI ecosystem; pan-European projects; synergies with the national/regional projects; synergies with existing RIs and strategies for optimal use, continuous upgrade, sustainability and end of life perspectives; and global research infrastructure opportunities

- The new roadmap will be much shorter – only ~25 Projects on the new Roadmap

- Projects that have been on the roadmap and not implemented will automatically roll off after 10 years

- Any project that wants to be considered again after 10 years must reapply, either in a different form or with bottlenecks resolved

- This means there will be room for 8-10 new projects on the 2016 roadmap

- Entry level projects will be at a more mature level - conceptual design and feasibility done, and supported by at least three MS

- Every 2-3 years audit of the project by ESFRI Implementation WG

- Opportunities to add more projects in 2018, 2020 as others roll off

- The proposal process for the 2016 roadmap will be on-line (reserved to National Delegations and EIRO forum)

- Proposals will be screened for eligibility and assigned to one of ESFRI's strategic working groups

- Scientific merit and pan European relevance (based on ESFRI criteria) will be assessed by the SWG, using the advice of independent peer reviewers

- e-science aspects will be coordinated with e-IRG

- Project and governance maturity will be assessed by the Implementation working group, again using advice from external experts, based on the approach used by the Assessment Expert group in 2012

- Key dates:

- 25 September 2014: Open for applications from national delegations and EIROforum (Most countries will have their own internal selection process)

- 31 March 2015: Deadline for new project proposals

- January 2016: New roadmap presented

2. Submission and Selection Procedures of the Roadmap update /*Giorgio Rossi,* *Professor of the Università degli Studi of Milan; vice Chair of ESFRI and Chair of the Strategic Working Group "Physical Science and Engineering" of ESFRI*

- The online submission procedure is under the responsibility of the National Delegation or of the EIROforum that support the proposal

- The National Delegations will guarantee that the required statements of support and financial engagement by public authorities of the presenting Member State or Associate State were obtained and are attached to the proposals

- The very detailed submission form is itself a guide to the structure of the proposal as many questions are asked that will be analysed by ESFRI in the selection process

- The science case will be analysed by the Strategy Work Group of the science domain the RI belongs to, but, in case of multidisciplinary RIs a secondary SWG can be engaged in the process. Peer review of all the eligible proposals will be carried out, the SWGs being responsible for the choice of independent international referees.

- The SWGs will also perform the ex-ante analysis of Pan-European relevance of the RI, following the same indicators that are offered for reference to the proponents.

- In parallel a thorough analysis of the project "maturity" as regards governance, finance, human resource strategy, will be carried out by the Implementation Group (IG)

- ESFRI will receive the results of all SWGs and IG and will shortlist the projects and finally chose those 8-10 to appear in the active list of the Roadmap 2016, along with the 16 that carry on from the Roadmap 2010.

- The Roadmp will have 10 new possible entries in 2018 and at least 6 new entries in 2020 as the 10-year rule applies to all projects on the active list.

- Successful projects, including partial (phased) implementations that are actually producing science, as well as major RI construction works, will be given full evidence in the "Landscape Analysis Part" of the Roadmap 2016 along with the existing national, EIROforum and international facilities available to European scientists.

3. Assessment of implementation of the 2008 and 2010 ESFRI Roadmaps and of maturity of proposals for the 2016 ESFRI Roadmap / *David Bohmert*, *SwissCore, branch office of the Swiss National Science Foundation in Brussels, Belgium; Chair of the "Implementation" Working group of ESFRI*

- The assessment of maturity of proposals for and of the assessment of implementation of projects on an ESFRI roadmap will lead to statuses, which are based on UK gateway process and the AEG matrix (modules/phases) and are consistent and coherent with Horizon 2020. While the same definitions for the statuses for ALL RI apply, different key requirements have to be met by single-sited and by distributed RI.

- All assessment is directed towards enabling projects to move towards implementation (recommendations and follow up). 'Implemented' RI will be highlighted as success stories in the landscape analysis.

- The dimensions of assessment are a) preparatory work, b) stakeholder commitment, c) planning, d) governance, scientific & legal management, e) human resources policy & project management, f) finances and g) feasibility & risks.

- The following sixteen projects from the active list in the 2010 ESFRI Roadmap that were introduced in the 2008 and 2010 updates are invited to undergo a `light` assessment of implementation and thus might remain in the active list of the 2016 ESFRI Roadmap: AnaEE, CTA, ECCSEL, EISCAT_3D, EMBRC, EMFL, EPOS, ERINHA, EU-OPENSCREEN, EUROBIOIMAGING, EU-SOLARIS, ISBE, MIRRI, MYRRHA SIOS and WINDSCANNER.

- The assessment of implementation follows a simple three step procedure consisting of 1) projects complete questionnaire (01-01-2015), 2) independent experts assess questionnaires and rapporteur delivers evaluation to IG and SWG (01-04-2015) and 3) IG formulates recommendation on project and offers it via EB to Plenary Forum for decision (30-04-2015).

- The assessment of maturity follows a five step procedure consisting of 1) ESFRI Delegation or EIRO Forum Member completes online submission form (31-03-2015), 2) two independent Experts assess proposal and Rapporteur delivers report to IG and SWG, 3) IG formulates drafts recommendation, 4) IG Member participates in (on site) hearing with projects and/or relevant (governmental) stakeholders and 5) IG formulates final recommendation on project and offers it via Executive Board for decision to Plenary Forum.

The description of the Roadmap 2016 update process, assessment criteria, and identification process is outlined in the Guidelines for applicants and can be downloaded under the ESFRI web site likewise the online submission form for applicants.

http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri-roadmap

II. Landscape of Research Infrastructures and how ESFRI Projects have modified the landscape in their specific scientific fields:

1. Landscape of Research Infrastructures on Environmental and how the ESFRI projects have modified the landscape / *Dr. Gelsomina Pappalardo*, *National Research Council of Italy (CNR); Chair of the Strategic Working Group "Environment" of ESFRI*

- Environmental Research Infrastructures provide new knowledge and methodologies in environmental sciences (i.e. climate change mitigation and adaptation, hazards, sustainable land use and food production);
- Environment is a complex system with different components (atmosphere, ocean, land, solid-Earth, biodiversity and ecosystems; and all strongly linked and interdependent) and a multidisciplinary approach is needed.
- All the Research Infrastructures in the environmental domain are distributed, as expected by nature reflecting the diversity of the geographical areas.
- It is important to bring the existing Research Infrastructures to work together, to cluster, and ensure that new Research Infrastructures complete the existing ones in order to make efficient use of sparse resources.

2. Landscape of Research Infrastructures on Health and Food and how the ESFRI projects have modified the landscape / *Dr. Gabriela Pastori*, *Biotechnology and Biological Sciences Research Council; Chair of the Strategic Working Group "Health and Food" of ESFRI*

Two main subjects were presented:

- The contribution of current Health and Food Research Infrastructures (RIs) in the ESFRI Roadmap
- Progress towards building a complete landscape of Research Infrastructures in Health and Food fit to the challenges ahead of 2050

Health and Food RIs are contributing to building the European Research Area via:
- Pan-European open access to cutting-edge technology platforms for academia and industry
- Interdisciplinary research across Europe, harmonising and standardising the research landscape and reducing fragmentation
- Translating findings from basic science to new applications in health, food and bioeconomy sectors
- High interoperability of research processes, creating seamless value chains
- Opportunities to maximise the competitiveness of Europe's knowledge-based industry – e.g. the pharmaceutical and biotechnology industries
- Training and education to future professionals in the life sciences
- Attracting and retaining world-leading scientists
- International impact and outreach
- Helping co-ordinate national RI budgets and leveraging additional MS investments

Health and Food landscape keeps evolving:
- Sustainable and healthy food
- Unlocking non-food systems: biorenewables, bioenergy, bioeconomy
- Personalised medicine

Landscape analysis is work in progress – new areas will demonstrate:

- Contribution to the advancement of science and technology
- Potential for structuring the ERA and addressing fragmentation
- Timeliness (urgency; opportunities Europe will lose if delayed)
- Range of scientific communities covered and potential for integration
- Potential for knowledge and technology transfer, training and increasing capacity
- The extent to which the new area meets a gap and effectively connects to current infrastructures in SWG landscape
- The extent to which the new area responds to the needs and improves the access for scientific communities

3. **Landscape of Research Infrastructures on Social and Cultural Innovation and how the ESFRI projects have modified the landscape /** *Jacques Dubucs, French Ministry of Research and Higher Education; Chair of the Strategic Working Group "Societal and Cultural Innovation" of ESFRI*

- Social Sciences and Humanities Research Infrastructures (SSH-RIs) support the contribution of SSH to major societal challenges:
    - Migrations and ageing
    - Public health risks
    - Economic growth, innovation and global trade
    - Risk, security and freedom
    - Cultural and linguistic diversity

- SSH-RIs contribute to the European Digital Agenda by providing a wide range of digital data relevant for SSH research and public decision-making:
    - Administrative data
    - Dynamic data arising from longitudinal surveys
    - Data issued from digitization of Cultural Heritage (historical and linguistic archives, etc.)
    - New born-digital social data

- SSH-RIs face specific challenges:
    - Multilingualism
    - Geographical coverage

- SSH-RIs are distributed, not single-sited
They raise specific sustainability issues:
    - Training of suitable human resources (SSH data scientists)
    - Continuity of financial support

- One of the challenges of the new ESFRI roadmap deals with the synergy and connection between SSH-RIs and RIs for biomedical or natural sciences

4. Landscape of Research Infrastructures on Energy and how the ESFRI projects have modified the landscape / *Ricardo Migueis,* *Foundation for Science and Technology; Chair of the Strategic Working Group "Energy" of ESFRI*

- Impact of the economic crisis on the energy sector reinforced supply-related challenges;

- The vision for the future is embedded in the SET-Plan – the European Strategic Energy technology Plan, focusing on accelerating the development of cost effective low carbon technologies;

- Energy RIs play a central role as part of the integrated strategy for structural change towards a green economic recovery based on efficient energy systems; Energy Research Infrastructures play a crucial role in the innovation cycle, by working as platforms where different scientific fields come together to provide solutions to energy problems;

- Energy Landscape Analysis is divided in five main chapters; Renewable energies; Efficient energy conversion and use; Energy distribution and storage; nuclear energies; Cross-sectional energy Research Infrastructures – each encompassing the relevant specific technologies;

- Concerted action around energy related topics is expected to have an integrating and innovation boost effect, foster multidisciplinarity in various scales of action, support the establishment of a competitive European community for energy research an strengthen the overall position of Europe by contributing to diminish the innovation gap with other world regions.

5. Landscape of Research Infrastructures on "Physical Science and Engineering" and how the ESFRI projects have modified the landscape / *Professor Giorgio Rossi,* *Università degli Studi of Milan; Chair of the Strategy Working Group "Physical Science and Engineering" of ESFRI*

- Physics and Engineering Infrastructures represent a large fraction of the investment needs for the implementation of the ESFRI Roadmap, but are at the basis of a large "physics-based" sector of the European MS economies, of 7.5% and 8.5% of total GDP in Italy an in the UK as examples.

- The landscape analysis of PSE has been organized in three areas: astronomy/astrophysics; nuclear/high-energy particle physics; analytical facilities.

- A special group is working on the evolution of the landscape concerning the availability of neutron sources for scattering and spectroscopy as several nuclear-reactor based sources are planned to shut-down in the mid 2020's and the novel ESS will only start ramping up production at that time.

- The ERANETS and EIROforum foresight exercises provide the horizon scanning of the PSE fields.

- As new projects may appear in the vast area of engineering, the SWG will seek for the proper competent people to account for the landscape in that specific area.

6. Landscape of Research Infrastructures on e-Infrastructures and how the ESFRI projects have modified the landscape / *Professor Sverker Holmgren, Scientific Computing at Uppsala University, Sweden; Chair of the European e-Infrastructure Reflection Group (e-IRG)*

- e-IRG consists of national delegates and is founded to provide strategic advice and guidance on the development of European e-infrastructure for science and research.

- e-Infrastructure includes networks/connectivity, computing (HPC, distributed computing,…), data and tools/services. e-Infrastructure supports research (all types) and other research infrastructures (all types).

- All international research infrastructures and large research collaboration need sustainable e-Infrastructure.

- There is an existing landscape of e-Infrastructures, built by both general-purpose (horizontal) initiatives and disciplinary efforts (e.g. in ESFRI projects).

- Improved coordination of European e-Infrastructure in needed for the benefit of research. The e-IRG White Paper 2013 focuses on a description of the European e-Infrastructure Commons.

- The collaboration between ESFRI and e-IRG has been developed further significantly lately
  - Joint working group on data management (report presented 2013).
  - ESFRI has invited e-IRG representatives to be members of the ESFRI Working Groups.
  - e-IRG has provided input to the ESFRI proposal form and will provide further input via the representative in the ESFRI Implementation Group.
  - e-IRG will take part in the evaluation process of ESFRI proposals via the representatives in the ESFRI Strategic Working Groups. e-IRG has formed an Overarching Working Group consisting of these e-IRG representatives.
  - The Overarching Working Group is assigned as editorial board of next e-IRG White Paper, with the topic Best e-Infrastructure Practices for large-scale RIs

Speaker Profiles

Name: Professor John Womersley
Organization: The Science & Technology Research Council
Function in respect to the workshop:
Chair of the European Strategy Forum for Research Infrastructures (ESFRI)

John WOMERSLEY is Chief Executive of The Science & Technology Research Council. He holds a graduate of Cambridge and Oxford (D. Phil. Experimental Particle Physics) and he has played a leading role in particle physics both in Europe and the United States. He worked at the Florida State University and Fermilab before becoming a scientific advisor to the Department of Energy in the US. He returned to the UK in 2005 to become Director of the Particle Physics Department at the STFC Rutherford Appleton Laboratory at a time when it was building and delivering vital components to CERN's Large Hadron Collider. He was then appointed as STFC's Director of Science Programmes and subsequently as Chief Executive.

John Womersley scientific achievements include his time as spokesperson for Fermilab's D-Zero experiment, when he coordinated analysis and publications, including placing the first experimental particle physics paper in Nature for more than 70 years. He was the lead author of numerous scientific papers analysing the properties of high energy particle collisions and searching for the Higgs Boson and other new physics phenomena. John Womersley has 288 articles published in refereed journals, including the co-discovery of the top quark in 1995.

John Womersley represents the UK in a number of international forums including the Council of CERN and the Chair of the ESFRI. He is a member of the ESFRI Executive Board and chaired the European Commission's expert group on cost control and management of large research infrastructures. He has also recently been involved in the development of the European Strategy for Particle Physics and is Chair of the Board of the Square Kilometre Array radio telescope project.

Name: Professor Giorgio Rossi
Organization: Università degli Studi of Milan
Function in respect to the workshop: Vice-Chair of ESFRI, Chair of the Strategy Working Group "Physical Science and Engineering" of ESFRI

Giorgio ROSSI is Professor of Physics at the Università degli Studi di Milano; he leads the APE group at IOM and Elettra performing research in surface and interface science and operating advanced beamlines and instrumentation open to users. He coordinates the Nano Foundries and Fine Analysis European infrastructure project since 2008. He is currently vice-president of ESFRI and Chair of the Physical Science and Engineering Strategy Work Group and also Member of the ESFRI Executive Board and Italian Delegate to the GSO of G8+5.

Name: David Bohmert
Organisation: SwissCore, branch office of the Swiss National Science Foundation in Brussels, Belgium
Function in respect to the workshop: Chair of the "Implementation" Group of ESFRI

David BOHMERT holds a Master in Public Administration from the University of Amsterdam (UvA). He worked at the same institution as Officer for third party funding from 1996 to 2003. From 2003 to 2006, he was responsible for International Affairs at the Dutch Rectors' Conference. As Senior Policy, he co-established the Netherlands house for Education and Research in Brussels from 2006 to 2010. As of 2011 he serves as Head of Office at SwissCore, the branch office of the Swiss National Science Foundation co-financed by the State Secretariat for Education, Research and Innovation (SERI) in Brussels. He was Swiss Delegate in ESFRI and Member of its Working Group on Implementation (IG) until 9 February 2014 mandated by SERI. He then was appointed permanent Expert to ESFRI and Chair of the Implementation Group of ESFRI.

Name: Dr. Gelsomina Pappalardo
Organization: National Research Council of Italy (CNR)
Function in respect to the workshop: Chair of the Strategic Working Group "Environment" of ESFRI

Gelsomina PAPPALARDO is a Senior Scientist, Institute of Methodologies for Environmental Analysis of the National Research Council of Italy (CNR-IMAA), Italy. She is the chief scientist of the CNR-IMAA Atmospheric Observatory (CIAO) at the Institute of Methodologies for Environmental Analysis of the Italian National Research Council. She has over 20 year's experiences in the field of atmospheric studies with lidar techniques. She is the coordinator of the FPVII ACTRIS Project. Gelsomina Pappalardo is also chair of EARLINET and co-chair of GALION, the GAW Aerosol Lidar Observation Network. She is a member of the Scientific Advisory Group for Aerosols of the Global Atmosphere Watch program of WMO and of the Scientific Advisory Group on Volcanic Ash (VA-SAG) of WMO and IUGG. She is the Chair of the ESFRI Strategy Working Group for Environmental Science.

Name: Dr. Gabriela Pastori
Organization: Biotechnology and Biological Sciences Research Council
Function in respect to the workshop: Chair of the Strategic Working Group "Health and Food" of ESFRI

Gabriela PASTORI, Head of European Relations, Biotechnology and Biological Sciences Research Council (BBSRC). Gabriela has a PhD in Biological Sciences, and obtained her Habilitation à Diriger des Recherches at the University of Paris XI in 2003. After working several years as a researcher in plant science, Gabriela moved to BBSRC's Head Office as Programme Manager for Engineering and Biological Systems, and then into European Affairs becoming responsible for European initiatives and activities, with emphasis on ERANETs, JPIs, and Research Infrastructures. Gabriela is UK delegate at ESFRI Forum and has been recently elected Chair of the Health and Food Strategic Working Group. Gabriela is co-lead with INRA-FR of the Joint Programming Initiative on Agriculture, Food Security and Climate Change Secretariat; chair of the Legal, Funding and Governance Advisory Committee of the ESFRI Infrastructure for Systems Biology (ISBE), and co-chair of the Governance, Legal and Finance Advisory Group of the ESFRI Infrastructure for Analysis and Experimentation of Ecosystems (ANAEE).

Name: Jacques Dubucs
Organization: French Ministry of Research and Higher Education
Function in respect to the workshop: Chair of the Strategic Working Group "Societal and Cultural Innovation" of ESFRI

Jacques DUBUCS is head of the Department of Human and Social Sciences, Directorate-General for Research and Innovation, Ministry of Higher Education and Research. He is also a Member of "Individuals, Societies, Cultures and Health" Domain Committee, COST and Senior Scientist of the "Sciences, Normes, Décision", Centre National de la Recherche Scientifique & Université Paris Sorbonne.

Name: Ricardo Migueis
Organization: Foundation for Science and Technology
Function in respect to the workshop: Chair of the Strategic Working Group "Energy" of ESFRI

Ricardo MIGUEIS is Senior Science Manager and has solid background in research, project management and Science and Technology policy. Ricardo Migueis participated in the development of the Portuguese National Roadmap of Research Infrastructures at FCT and now coordinates its Implementation Committee. National Delegate at the H2020 Research Infrastructures priority and to the European Strategy Forum on Research Infrastructures (ESFRI); Chair of the ESFRI Strategy Working Group on Energy Issues and in 2014; Chair of the Implementation Board of the European Research Infrastructure EMBRC (European Marine Biology Resource Centre).

Name: Professor Sverker Holmgren
Organization: Scientific Computing at Uppsala University, Sweden
Function in respect to the workshop: Chair of the European e-Infrastructure Reflection Group (e-IRG)

Sverker HOLMGREN is a Professor in Scientific Computing at Uppsala University, Sweden, where he is also the head of the Computational Science research program and the Dean of Mathematics and Computer Science. Holmgren is the current chair of the European e-Infrastructure Reflection Group (e-IRG) and the Director of the Nordic eScience Globalisation Initiative at the Nordic research facilitator NordForsk. Earlier assignments include being Director for the Swedish National Infrastructure for Computing (SNIC) and Co-Director for the Swedish e-Science Research consortium eSSENCE.

Name: Beate Warneck
Organization: German Aerospace Centre (DLR)
Function in respect to the workshop: Coordinator of CoPoRI (communication and policy development for Research infrastructures)

Beate WARNECK is a Senior Economist with 18 years of working experience in international relations, business development and marketing in national and international organisations (German Aerospace Center, BMBF, European Commission, ACEA, DeBeLux, John Holt Ltd.). She is responsible for project management and policy development and supports the Federal Ministry of Education and Research (BMBF) in issues concerning the Framework Programme and Horizon 2020. Beate Warneck was seconded (2005-2008) to the European Commission in Brussels /department of Research Infrastructures where she worked in the ESFRI Secretariat as National Expert (END). She was a member in several international management boards and steering committees in order to support the development of the first European Roadmap for RIs, and the Community legal framework for a European Research Infrastructure Consortium (ERIC).

ESFRI European Strategy Forum on Research Infrastructures

Workshop to launch the ESFRI Roadmap 2016
25 September 2014, Hotel Savoia Palace, Trieste, Italy
AGENDA

Time	Event	Speaker
12:30-13:30	Registration	
13.30-14.30	Buffet lunch	
14:30	Announcement new Roadmap	John Womersley, Chair of ESFRI
15:15	Submission and Selection Procedures	Giorgio Rossi, Vice-Chair ESFRI
15:45	Assessment of implementation of the 2008 and 2010 ESFRI Roadmaps and of maturity of proposals for the 2016 ESFRI Roadmap	David Bohmert, Chair Implementation Working Group
16:00	Landscape of RI on Environment and how the ESFRI projects have modified the landscape	Gelsomina Pappalardo Chair, Environment Strategy Working Group
16:10	Landscape of RI on Health and Food and how the ESFRI projects have modified the landscape	Gabriela Pastori, Chair, Health and Food Strategy Working Group
16.20	Coffee	
16:35	Landscape of RI on Social and Cultural Innovation and how the ESFRI projects have modified the landscape	Jacques Dubucs, Chair, Social and Cultural Innovation Strategy Working Group
16:45	Landscape of RI on Energy and how the ESFRI projects have modified the landscape	Ricardo Migueis, Chair, Energy Strategy Working Group
16:55	Landscape of RI on Physical Sciences and Engineering and how the ESFRI projects have modified the landscape	Giorgio Rossi, Chair, Physical Sciences and Engineering Strategy Working Group
17:05	e-INFRA Landscape of e-RI and how the ESFRI projects could intervene in the landscape	Sverker Holmgren; e-IRG Chair
17.15	Question and answers	Panel of the speakers
18:00	Conclusions and deadlines	John Womersley, ESFRI Chair
18:30	End of Meeting	

20:00 Dinner invitation in the Hotel Savoia Excelsior, hosted by CoPoRI

Flyer of the Roadmap update process
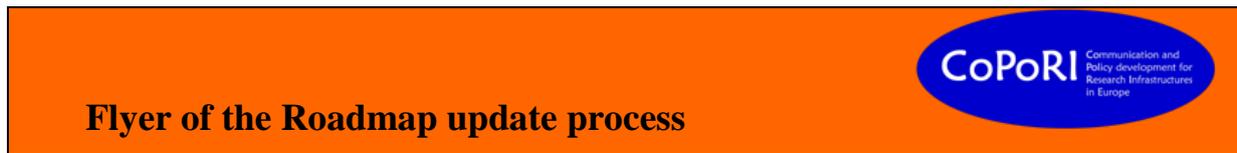
A flyer was produced by CoPoRI together with a German Graphic Agency (Fleischmann&Kirsch) on a very flexible and uncomplicated manner because of the short time span of three weeks. Altogether 3.500 flyers were printed and some hundreds distributed to interested persons already the day of the workshop itself. Some more requests for flyers arrived the week after the workshop took place. The flyer can be downloaded from the Web Site of CoPoRI and also from the ESFRI Web Site. It presents a summary of the ESFRI roadmap update process, the purpose and it provides an overview of the main evaluation criteria as precondition for new initiatives to enter the ESFRI Roadmap 2016.

Fig. 1+2: Flyer of the roadmap update process

Live Stream of the workshop and statistics

A highly professional *Live Stream* service with a full set of qualified equipment including five technicians was provided by an Italian Model Agency ("be nice") in Trieste. Three cameras were installed in the conference room and the interface was linked to the CoPoRI webpages (http://www.copori.eu/1392.php). The coordination was executed by CoPoRI.

An announcement of the live stream was prepared by CoPoRI three weeks beforhand the start of the workshop and circulated by the EC to all National Contact Points (NCP) of Europe. In Germany e.g. the information of the workshop to launch the next ESFRI Roadmap 2016 and the link to the live stream on the CoPoRI web pages was mailed to 2.275 adresses of scientists focused on research infrastructures. ESFRI and EC/RIs itself has also linked to the CoPoRI webpages.

Fig. 1: CoPoRI website of workshop

Fig. 2: Link to live stream on CoPoRI Website

Two hundred and thirty seven visitors followed the workshop via live stream the same day worldwide. Thereof 53% came from Europe (17% from Germany and 16% from Italy) and 32% from the US, but also visitors from Russian, Japan, Australian and Brazil were linked to the live stream.
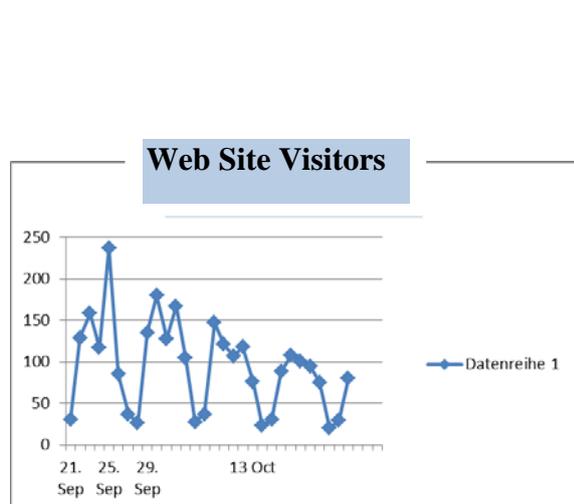

Fig. 3: Statistic of CoPoRI Web Site visitors from 22nd September – 20th October 2014
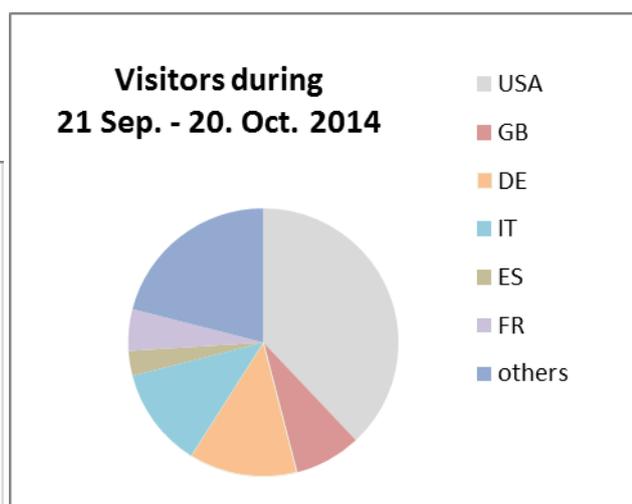
Fig. 4: Number of Visitors by Nations

Analyse of Feedback Forms

26 Feedback Forms by 136 participants → 19% return runs

Voting: 2 very satisfied; 1 satisfied; 0 no opinion; -1 not satisfied; -2 completely unsatisfied

No	Feedback	- 2	- 1	0	1	2	%
1.	Did the workshop meet your expectation?			2	5	19	92
2.	Did the speeches help you to get informed about the roadmap update process?				7	19	100
3.	Did the speeches help you to get informed about landscape of RI?			7	10	9	73
4.	Did the workshop provided enough time for discussion?		1		12	13	96
5.	Did the workshop structure meet your expectation?		1		15	10	96
6.	Did the workshop organisation flow smoothly?			1	4	21	96
7.	Did the technical equipment of the workshop meet your expectation?		1	1	8	16	92
8.	Did you have enough time for a "get together"?		1	3	11	11	85
9.	Were you satisfied with the workshop venue?		1	5	5	15	77
	Result in %:		2	8	33	57	100
		90% (satisfied/very satisfied)					

ESFRI, the European Strategy Forum on Research Infrastructures, is a strategic instrument to develop the scientific integration of Europe and to strengthen its international outreach. The competitive and open access to high quality Research Infrastructures supports and benchmarks the quality of the activities of European scientists, and attracts the best researchers from around the world.

The mandate of ESFRI is to support a coherent and strategy-led approach to policy-making on research infrastructures in Europe, and to facilitate multilateral initiatives leading to the better use and development of research infrastructures, at EU and international level. According to its adapted mandate, ESFRI will address the existing challenges and has to deal with the follow-up of the implementation of already on-going ESFRI projects after a comprehensive assessment, as well as with the prioritization of the infrastructure projects listed in the ESFRI roadmap.

ESFRI's delegates are nominated by the Research Ministers of the Member States and Associate Countries, and include a representative of the Commission, working together to develop a joint vision and a common strategy. This strategy aims at overcoming the limits due to fragmentation of individual policies and provides Europe with the most up-to-date Research Infrastructures, responding to the rapidly evolving Science frontiers, advancing also the knowledge-based technologies and their extended use.

Created in 2002 by the Member States and the European Commission, ESFRI has become an increasingly important Forum to advise Ministries and Funding Agencies on strategic issues of research infrastructures.

With the setting up of the first Roadmap for pan-European research infrastructures ESFRI has been a major contributor to the realisation of the European Research Area. To date, 48 research infrastructures have been identified to be of pan-European (or global) relevance. Of these, 10 have been considered "under implementation" in the 2010 ESFRI Strategy Report and Roadmap update, and another 17 had started their implementation by the end of 2012.

The 48 projects were identified by ESFRI in an extensive consultation process involving more than 1000 international scientific experts in three cycles so far, published in 2006 and updated in 2008 and 2010. The next Roadmap update will be in 2016. The projects cover all areas of research: from Humanities and Social Sciences to Biological and Medical Sciences, Environment, Energy, Physical Sciences and Engineering, Materials and Analytical Sciences and also e-infrastructures.

The European roadmap process has also stimulated the preparation of national roadmaps in many of the Member States and the Associated Countries contributing to an overview on major developments in the European Union. It fosters coordination, helps to avoid duplications and further develops complementarities of national investments.

The main task of ESFRI is now to help the projects on the ESFRI roadmap to move towards implementation. This focus is in line with the commitment in the Europe 2010 Flagship Initiative - Innovation Union and the Digital Agenda, which states that by 2015, Member States together with the Commission should have completed or launched the construction of 60% of the priority European Research Infrastructures currently identified by ESFRI. However, to keep Europe at the rapidly evolving forefront of science and technology, and increase the capacity to meet the needs of the EU and World scientific community, much remains to be done: ESFRI looks forward to the challenging times ahead.

Further information and contact details:
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www.ec.europa.eu/research/esfri

The Project CoPoRI

CoPoRI Communication and Policy development for Research Infrastructures in Europe

Background Information

CoPoRI is an EU project funded under FP7 and started its activities in December 2011. It is a support measurement in the context of research infrastructures and will after an extension of 6 months comes to an end on 30th November 2014. The acronym **CoPoRI** stands for "**Co**mmunication and **Po**licy development for **R**esearch **I**nfrastructures in Europe".

Objectives

CoPoRI acts as a service tool for the European Strategy Forum on Research Infrastructures (ESFRI) by providing support in labour-intensive activities. This includes in particular the organisation of workshops and networking activities among ESFRI projects, but also the enhancement of ESFRI's communication tools and resources.

Activities

- **Promoting exchanges of experience and best practices (EoE) among ESFRI projects:** To support the implementation of the ESFRI roadmap projects, CoPoRI provides a platform for the exchange of experience and best practices between ESFRI projects in the different development stages. To this end, an expert group organises workshops and compiles a FAQ catalogue which is available on the CoPoRI web page.

- **Workshop about structural funds and the launch of the roadmap update 2015/2016:** These workshops were organised to increase the awareness of the scientific community and other interest groups or stakeholders on policy activities of ESFRI and provide substantial information about the necessary preconditions (process , instruments and criteria) to facilitate the implementation of pan-European Research Infrastructures

- **Increasing the visibility of ESFRI:** CoPoRI has developed and upgraded a set of communication tools of ESFRI to enhance the communication capacity of ESFRI and facilitate its interaction with the scientific community, national and international authorities and other stakeholders. This includes the update of ESFRI's webpage, a new brochure and a flyer highlighting achievements of ESFRI, an exhibition booth for conferences, a public relations contact database and an intranet platform to facilitate internal communication and the workflow between CoPoRI project partners and ESFRI projects in general.

Organisation

CoPoRI is coordinated by the German Aerospace Centre (DLR) / European and International Cooperation, which works together with its partner organisation the German Electron-Synchrotron (DESY). To ensure consistency with the overall ESFRI objectives, the project is carried out in close connection with the ESFRI Chair, the Executive Board, the Implementation Working Group (IG) and other working groups of the European Strategy Forum for Research Infrastructures (ESFRI). The project consortium of two research organisations and the strong connection with ESFRI bring together substantial academic and operational experience in the field of Research Infrastructures from across the European Union.

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