

European Strategy Forum  
on Research Infrastructures



ESFRI

EUROPEAN STRATEGY FORUM  
ON RESEARCH INFRASTRUCTURES

ANNUAL REPORT  
2009





## >Foreword



It is my great pleasure to present the 7th Annual Report of ESFRI. This report provides a summary of the many activities carried out by the Forum during 2009.

Research Infrastructures of Pan-European relevance are major building blocks in the construction of the European Research Area. In this context and to fulfil its goals, ESFRI has been operating successfully on several issues since its inauguration in 2002. Following the selection of the priority projects out of proposals from the EU Countries and the publication of the ESFRI Roadmap in 2006, updated in 2008, the ESFRI delegates were committed during 2009 to monitoring the progress of these projects in the context of the EU research landscape, including the best use of the existing Pan-EU infrastructures and making every effort to ensure their timely implementation. In this respect, I am happy to note that ten of the projects on the Roadmap are nearing the realization phase, whilst others are in an advanced negotiation stage. Several countries are using the ESFRI roadmap as a blueprint for the development of national roadmaps and the setting of national priorities, including existing and new research infrastructures. We are clearly witnessing today, more than ever before, excellent cooperation between scientists and policy-makers with a common goal towards the construction of a truly integrated European Research Area, capable to make the best use of its vast endowment in Research Infrastructures also to attract the best scientists and technicians at world level.

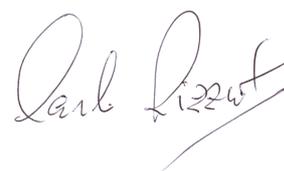
In addition, ESFRI has launched in mid-2009 the process for the new update of the ESFRI Roadmap, which will deal with projects in the fields of Energy, and biology applied to Food and Agriculture. These subjects are just some of the Grand Challenges, high on Europe's agenda for the coming years.

The implementation of the ESFRI Roadmap underscores the importance of the wider mandate to support a coherent and strategy-led approach to policy-making issues. In this vein, important work was carried out by the ESFRI delegates during the reporting period addressing, amongst others, Regional, Siting and Management Issues. As far as the former is concerned, an excellent conference on "Research Infrastructures and the Regional dimension of ERA" was organised and hosted by the Czech Presidency to the EU, which has given specific indications on how all Regions of Europe can be involved in the construction and operation of high quality research infrastructures and therefore introduce a brain circulation in stead of a brain drain. Regarding Siting Issues, a Working Group examined this topic in detail, and has given specific advice on how to manage in an effective way the case of multiple siting bids. ESFRI was also pleased to contribute at a technical level to the constructive way in which an informed decision on site selection for the European Spallation Source was achieved. In addition, ESFRI delegates participated actively to the RAMIRI seminars organised to develop best management practices for Large Scale Research Infrastructures, in particular those practices which aim at developing research excellence while increasing the socio-economic returns. Finally, the adoption by the Council of a pan-European legal framework for research infrastructures was a major achievement in 2009, which will smooth the decision-making process for many future pan-European facilities.



Looking to the future, 2010 promises to be another busy and exciting year. ESFRI will have to respond to new recommendations of the Research Council, as well as of those proposed by the ERA expert group on Research Infrastructures. Relations and integration between Research Infrastructures and the e-infrastructure will be strengthened and made more consistent. The 6<sup>th</sup> European Conference on Research Infrastructures, ECRI 2010, will take place in March under the auspices of the Spanish Presidency. This conference will build on previous ones by tackling challenges such as a European strategy for research infrastructures, prioritisation, decision-making, governance, management and financial issues. Later on, end of November 2010, a conference on Research Infrastructures and Energy will be hosted under the banner of the Belgian Presidency of the EU, in time to present the outcome of the update of the roadmap on Energy, while the balanced development of the European Research Area will continue to be followed by the ESFRI Regional Working Group. The progress of all these activities brings into focus more and more details and this will require many other activities to be developed to strengthen the European strategic approach towards an ERA having the effective support of Research Infrastructures of pan-European interest!

My chairmanship will come to an end in 2010. It was surely a very exiting and productive period. I would like to take the opportunity to thank all delegates and the secretariat, as well as the Executive Board and my Vice-Chair Beatrix Vierkorn-Rudolph for their support and wish all the best to ESFRI for the remaining work to be done.



Carlo Rizzuto  
ESFRI Chair



## Overview

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## OVERVIEW OF ESFRI MEETINGS

### 28th Meeting, Prague, 25-26 March 2008

**EU2009.CZ**

Czech Presidency  
of the European Union

2009

The Czech Delegation to ESFRI extended an invitation to the Forum to hold its 28th meeting in Prague, Czech Republic. This meeting took place on 25 and 26 March 2009, following the Czech Presidency Conference on Research Infrastructures. During this meeting, the Forum welcomed representatives of ESF and RAMIRI, the EU funded project dealing with the Realisation and Management of Research Infrastructures, an initiative born within ESFRI and led by its ex-Chair, Professor John Wood. The Forum would like to extend its sincere gratitude to the Czech Republic delegates and the team in Prague for the excellent hospitality offered.



ESFRI , Prague, 26 March 2009

### 29th Meeting, Brussels, 12 June 2009

The 29th meeting of ESFRI took place in Brussels. The Forum was pleased to welcome interventions from DG Regio, ESF, EIB, and e-IRG during this meeting. The Gennesys project was also presented. In addition ESFRI approved the creation of its 2009-2010 working groups, for which the different chairs were elected. The forum also reviewed the main issues related with the implementation of the ESFRI projects.



## 30th Meeting, Brussels, 02 October 2009

The meeting was the opportunity to get more precise information on the implementation of some ESFRI projects, with the view to prepare the implementation report, scheduled for the end of the year. In addition, ESFRI approved the composition of the different Working Groups and reviewed its relationship with the e-IRG, requesting specific analysis and recommendations to be inserted in its 2010 update of the roadmap.

## 31st Meeting, Stockholm, 11 December 2009



The last meeting of 2009 took place in Stockholm on 11 December, kindly hosted by the Swedish Delegates to ESFRI. Discussions took place on legal aspects and management of research infrastructures. The vision 2020 document was also discussed, in view of the conference ECRI 2010. Additional inputs were provided by the e-IRG representative on the management of scientific data. The Forum approved the 2009 implementation report of the ESFRI projects, as well as its annual report. It also decided on the election of its new Chair.

## ESFRI WORKING GROUPS IN 2009

### Regional Issues

ESFRI undertakes to develop policy options for all EU Member States in the building of world-class research infrastructures. The development of an EU policy capable of global visibility cannot be only based on an "average EU" approach, but must make full use of the opportunities given by the intrinsic diversity of EU Regions, with their rich cultural and historical background.

2009 was a very significant year for the ESFRI Regional Issues Working Group.

In March 2009, on the occasion of the Czech Presidency Conference on Research Infrastructures and the Regional dimension of ERA, the Working Group presented its report. This report presented Research Infrastructures in – and for – the regions, their role with ERA; cooperation between states and makes recommendations for the next five years.

### Siting Issues

The Siting Issues Working Group (SIG) continued its work during 2009 under the leadership of Paul Zinsli - Switzerland. The main task of this Group was to make recommendations on "how to identify, compare and choose the best sites for pan-European research infrastructures in proposing relevant criteria and optimised procedures".

The report will be available to the public in early 2010, both via the ESFRI website and in printed format.



## Thematic Working Groups

The ESFRI Roadmap for Research Infrastructures is a vital policy document and paves the way for the planning, implementation and upgrading of RIs for the coming decades. ESFRI is committed to stimulate the implementation of these facilities and update this document as the need arises. The work of ESFRI Thematic Working Groups (TWGs) underpins this strategic process.

As such, in June 2009, Working Groups were confirmed in the following domains: Biological and Medical Sciences (BMS); Energy (ENE); Environmental Sciences (ENV); Engineering Sciences and Physics (ESP) and Social Sciences and Humanities (SSH), with the following mandate.

- Monitoring of the scientific development and the need for RIs in the thematic areas, in consultation with existing relevant scientific organisations.
- Following the implementation of the projects on the ESFRI Roadmap and giving expert feedback to ESFRI, e.g. on the needed coordination between different projects in the area.
- Advising ESFRI on whether projects should remain on future editions of the Roadmap, and following a decision by ESFRI, to evaluate possible proposals according to the agreed procedure for the update of the Roadmap.
- Advising ESFRI on potential improvement in the pan-European availability and management of existing RIs.
- Coordinate interdisciplinary activities with the other TWGs.

Following due process, ESFRI gave consideration to the nomination of Chairs to lead the groups and take the work forward for the next two years. Eckhart Curtius (Germany) was re-nominated to lead the Biological and Medical Sciences group. Gabriele Fioni (France) was chosen to lead the newly-created TWG dealing with RIs in the Energy field. Eeva Ikonen (Finland) was re-elected to chair the group dealing with Environmental Sciences. Jørgen Kjems (Denmark) was re-nominated to lead the Engineering Sciences and Physics TWG and finally, Peter Farago (Switzerland) took over the reins from Bjørn Henrichsen in leading the group dealing with Social Sciences and Humanities. At this point, ESFRI would like to warmly thank Bjørn for the excellent work he has carried in the SSH domain since the Roadmap process began. At the same time, the Forum also thanks all experts who have devoted their valuable time to the work of the TWGs in the past and for the future.

## Research Infrastructure Roadmaps

### ESFRI Roadmap – Update 2010

In the framework of the 2010 Update of the ESFRI Roadmap, ESFRI launched a Call for new projects in the fields of Energy and Food, Agriculture and Fisheries as well as Biotechnology. The Call was launched in September 2009 and proposals for new (or major upgrades of) research infrastructures of pan-European relevance were invited in the specific fields of Energy (Energy Thematic Working Group) and Food, Agriculture and Fisheries, Biotechnology (incl. Systems biology) (Biological and Medical Sciences Thematic Working Group).

The deadline for submission of proposals was set at the end of 2009. The related Thematic Working Groups shall now examine the proposals and recommend to ESFRI whether or not they should be included in the ESFRI Roadmap 2010 update, to be published at the end of 2010.



## Implementation of the ESFRI Roadmap

The publication of the ESFRI Roadmap in 2006 and its update in 2008 has had a real impact on how Member States, Associated Countries and in some cases non-European countries see the realisation of new research infrastructures of pan-European (and in a few cases global) relevance. Using the ESFRI Roadmap as a blueprint, Member States have started their own national roadmap exercise, in order to take stock of internal capacity, establish needs of national communities, and start the prioritisation exercise needed to allocate funding for selected new facilities.

The first steps towards implementation of the Roadmap are encouraging. Nine projects can effectively be declared underway, although much remains to be done to finalise all the details. At the same time, Europe demonstrated with the European Spallation Source that an informed decision on the site selection can be taken in a way that leaves all stakeholders in a win-win situation. The approval by the Competitiveness Council of the ERIC Regulation is another important step forward. It is hoped that in the next couple of years many more projects now close to implementation can also be considered as underway.

The majority of the Roadmap projects are however still in various stages of preparation, and the Member States need to continue working with the scientific communities to solve problems of governance, legal and of funding before their implementation phase can begin. National prioritisation should continue and dedicated funds for their construction, operation and decommissioning need to be allocated. The example of the projects now being implemented shows that one country needs to play a leading role in these discussions. Without a “champion” (which is not necessarily the host country) projects face an uphill struggle.

## National Roadmaps

ESFRI activities and its roadmap aim to integrate national resources into a common, pan-European effort. The first positive response in this direction has been the fact that the ESFRI Roadmap has prompted several countries to develop their own national roadmaps. The earmarking of national budgets for large research infrastructures is indeed necessary to participate in a common pan-European effort.

Overview of National Roadmaps

Austria	Yellow	Hungary	Yellow	Slovenia	Yellow
Belgium	Yellow	Ireland	Green	Spain	Green
Bulgaria	Yellow	Italy	Yellow	Sweden	Green
Cyprus	White	Latvia	White	Netherlands	Green
Czech Republic	Yellow	Lithuania	Yellow	UK	Green
Denmark	Green	Luxembourg	Yellow	Iceland	Green
Estonia	Yellow	Malta	Green	Israel	Yellow
Finland	Green	Poland	Yellow	Liechtenstein	White
France	Green	Portugal	White	Norway	Green
Germany	Yellow	Romania	Green	Switzerland	Yellow
Greece	Green	Slovak Republic	White	Turkey	Yellow
National Roadmap in Place		Green			
National Roadmap under Preparation		Yellow			



## Management of Research Infrastructures

### A new Community Regulation - ERIC

ESFRI has recognised that the next generation of European Research Infrastructures needs a new legal and governance structure if they are to be built quickly and operate efficiently. Until now, the absence of an adequate legal framework for partners from different countries had been a major difficulty for Member States and negotiations regarding terms and conditions under existing legal forms under national, EU or international law have led to frustrating delays.

In July 2008, the European Commission, supported by ESFRI, responded to these concerns by presenting its proposal for a Council Regulation on the Community legal framework for a European Research Infrastructure Consortium. The proposal was made in response to requests from Member States, who wish to jointly develop world-class research facilities in Europe and were missing a common and ready-to-use legal vehicle. This tailor-made legal framework defines the criteria for a research infrastructure to qualify as an ERIC and their governing rules. Recognised European research infrastructures will be granted the status of international organisations, and the related advantages such as VAT exemption.

Member States interested in establishing research infrastructures with the status of ERIC would submit an application, including a declaration from the host Member States that it recognises the ERIC as an international organisation. The European Commission will ensure eligibility, registration and compliance of European Research Infrastructures using the Regulation.



"The Council's agreement is excellent news for EU research and for the EU economy. Investing today in the construction of large-scale research infrastructures can certainly contribute to the EU economic recovery and will surely reinforce our competitiveness when we get out of the recession. It will help to create jobs, economic activities, and help produce the cutting-edge scientific knowledge which will be the new engine for EU's growth and competitiveness". June 2009  
EU Commissioner for Science and Research, Janez Potocnik

### Socio-Economic Impacts

Increased attention to the implementation of the 44 ESFRI Roadmap projects has led to focus on studies measuring the scientific, social and economic benefits deriving from these infrastructures. With this in mind, on 29-30 June 2009, the Commission, together with ESFRI, organised a seminar on the "Role of Research Infrastructures for a Competitive Knowledge Economy". The aim of the seminar was threefold: (1) to take stock of actual & recent innovations stemming from European Research Infrastructures; (2) to reflect on the development of best practices to improve the innovation chain where Research Infrastructures are involved; (3) to identify gaps, needs and possible specifications for possible future impact and foresight studies.

Following the seminar, a report was prepared and is available for consultation at: [\[URL\]](#). This report is intended to support further reflection on impact assessment work of the different stakeholders. In particular ESFRI highlights that Research Infrastructures can contribute in a unique way to both social and economic development. Therefore, close cooperation and teamwork between the different sets of actors, such as, universities (fundamental research), research institutes (both basic and applied research) and industry (industrial research, development and innovation) has to be built up and combined with carefully thought out programmes of Public Engagement with Science and Technology.



The Council of Ministers in its May 2009 meeting invited the Member States and the Commission, in consultation with ESFRI, to analyse the socio-economic returns and cost effectiveness of research infrastructures for the regions hosting them and Europe as a whole, as well as to develop common set of criteria which may be used to assess the efficiency of research infrastructures at European level.

## RAMIRI



Recognising the vital importance of disseminating good practice and shared challenges across the European Research Area, RAMIRI has been designed to provide an annual programme for discussion, learning and networking between senior- and middle-level managers, policymakers and funders across the European Union.

Funded by the European Commission under the 7th Framework Programme, the RAMIRI project was designed to build on recent developments in the management of Research Infrastructures, specifically the publication of ESFRI Roadmap, and the four previous European conferences (ECRI) which discussed how to develop regional, national and international policy in this area, particularly the legal, financial, operational and governance aspects of managing large and complex research infrastructures.

RAMIRI aimed primarily at the training of senior policy-makers and scientific decision-makers, particularly in New EU Member States and Associated States, in the practical governance and management requirements of pan-European and transnational Research Infrastructures; and aimed to develop a policy framework directed at managing future large Research Infrastructures across national boundaries.

The RAMIRI project has successfully delivered three conferences held in London (July 2009) and Grenoble and Hamburg (September 2009).

As a result of these events, a "Manual of Best Management Practices" is currently being put together and shall be available in mid 2010.

## Conferences related to Research Infrastructures

### Research Infrastructures and the Regional Dimension of the European Research Area



“Research Infrastructures and the Regional Dimension of ERA – RIC” was held under the Czech Presidency of the Council of the EU in Prague on 24 - 25 March, 2009. The conference was organized by the Ministry of Education, Youth and Sports of the Czech Republic and European Commission. The conference was attended by more than 300 participants.

- The research infrastructures are not only at the root, but also the future of the competitiveness of Europe. RIs being effective knowledge triangles are a component of building ERA, and contribute to the fifth freedom and socio - economic development of regions.
- The current situation of economy can be reversed by advancing the investments in research and development; the investments in RIs being a part of these investments with long term and short term benefits for the European economy. In this context RIC stresses the need for a quick implementation of the ESFRI Roadmap update.
- The importance of balanced distribution of RIs throughout Europe is crucial, contributes to reversing brain drain into brain circulation, alleviates unemployment in regions, and promotes European cohesion.
- Europe suffers from fragmentation, therefore networking and integration is a way forward for Europe. Distributed infrastructures contribute robustly to the integration of Europe, giving opportunity to regions and smaller or less research intensive countries to participate in the ERA. Member States are called to develop Regional Partner Facilities where possible.
- RIC welcomes the Report of the European Commission on e – Infrastructures; e – Infrastructures is a key factor to overcome fragmentation and the digital divide of Europe, and can lead to scientific excellence throughout Europe.
- The adoption of the legal frame for pan- European research infrastructures – ERIC becomes a priority, as the demand for a legal status of ESFRI Roadmap projects is growing.
- Talent becomes the most sought-after asset for regions, countries and the world; research infrastructures form the basis to bring these talents into research and attract them to the region.
- The international dimension was shown to play a crucial role for the small countries (regions) in their aspirations to become major players in knowledge generation.
- RIC calls on the Member States and the Commission to develop in partnership a common set of criteria for the evaluation of RIs both on European and national levels.
- There is a need to develop international partnerships for RIs throughout Europe

Research infrastructures are special components of the ERA. They are the basic conditions for research to be performed, backbones of research and development. .... they have an important influence on other aspects of the knowledge cycle shaping it from thoughts to inventions, from ideas to new products. Ondrej Liška, Minister of Education, Youth and Sports of the Czech Republic





## European Research Area Conference 21-23 October 2009



European Research Area

What are the next steps in developing world-class research infrastructures in Europe?

This conference engaged a wide range of stakeholders in an open, focused and action-orientated debate and highlighted the fact that Europe has to be able to integrate its Research Infrastructure resources and to speak with one voice at international level.

The main question addressed during the session was how to identify and avoid the main bottlenecks in developing an integrated system and establishing priorities for the future. These include funding and quality issues, prioritisation of resources, attraction, education and mobility of human resources as well as governance structures. A lively debate and discussion followed. The presentations and conclusions of the conference can be consulted at:

[http://ec.europa.eu/research/conferences/2009/era2009/index\\_en.htm](http://ec.europa.eu/research/conferences/2009/era2009/index_en.htm).

## EU Policy related to Research Infrastructures

### Competitiveness Council of 5-6 March, 2009

During this meeting, the Council held a debate on the future of the European Research Area and on research infrastructures. On behalf of ESFRI, Professor Rizzuto was invited to make a presentation to the Council. The Chair explained that the Roadmap process is an ongoing one, but at the same time underlined the Forum's commitment to the implementation of the Roadmap projects. Reference was also made to the continuing emergence of national roadmaps, discussions around siting issues and key challenges for the future of research infrastructures.

### Competitiveness Council of 28-29 May, 2009

During the 28-29 May meeting of the Council of Ministers, the Council reached political agreement on a draft resolution establishing a legal framework applicable to a European Research Infrastructure Consortium (ERIC). In addition, it also adopted conclusions on research infrastructures and the regional dimension of the European Research Area.



The European Council "recognises the importance of excellent research infrastructures, single-sited and distributed, in promoting the development of the knowledge triangle and fostering the socioeconomic development and competitiveness of Europe and its regions, as highlighted at the conference "Research Infrastructures and the Regional Dimension of the ERA" held in Prague on 24 and 25 March 2009"



## The Lund Declaration, Sweden, July 2009

"Europe must focus on the grand challenges of our time"  
"New Worlds – New Solutions"

On 8 July, during the Swedish Presidency of the EU, 350 researchers, research funders, business people and politicians gathered to discuss the future development of European Research.

The declaration states that European Research Policy should move away from the present bureaucratic structure and instead focus on the Grand Challenges to the World – e.g. climate change, water shortage, demography and pandemics. An interesting conference, with many exciting discussions, the Lund Declaration made a strong plea for increased resources for European research, for better cooperation between different levels and for a more edgy innovation system. The Lund Declaration acknowledges that meeting the Grand Challenges requires:

"The creation and maintenance of world class research infrastructures in Europe including installations for big science as well as those serving the needs of social sciences and humanities."

## Competitiveness Council of 3-4 December, 2009

The Council of the European Union acknowledged that research policies, programmes and activities at European level encompasses those at Community and inter-governmental levels as well as those at national/regional level which contribute to the overall development of ERA. It highlighted the importance of world class research infrastructures, including e-infrastructures, to facilitate the further growth of knowledge, technology and e-science as well as regional partner facilities. It recommended that the ESFRI process and decision-making mechanisms should be enhanced to better identify Member States' common priorities so as to take more effective decisions to implement the ESFRI roadmap.

## ESFRI and Contacts with other organisations

During the reporting period, ESFRI continued to nurture its relationships with other organisations, vital for the research infrastructure community.

### e-Infrastructure Reflection Group



ESFRI has enjoyed a mutually beneficial working relationship with e-IRG during the reporting period. The e-IRG Chair has observer status within ESFRI and attends the plenary meetings. After discussion about the need to continue a specific working group, ESFRI decided instead to request the e-IRG to produce a report for the Forum, to be completed in the middle of 2010, and to be used as input for the 2010 update of the ESFRI roadmap.

### EIROForum

ESFRI considers that close relations with EIROForum are essential for the future of large scale facilities in Europe. Analysing the needs of ESFRI with respect to the capabilities of EIROforum and its members, ESFRI delegates have recommended that regular exchanges information on the update of their long term priorities for new (upgraded) large scale RIs are organised through e.g. direct relations with the Thematic Working Groups.

## European Science Foundation



The European Science Foundation (ESF), established in 1974, is an association of 80 member organisations devoted to scientific research in 30 European countries. ESF's core purpose is to promote high quality science at a European level.

Since its formation, ESFRI has enjoyed an informal, but constructive, relationship with the ESF. A representative was regularly present at meetings. At the end of 2009, ESFRI is working alongside ESF to propose possible scenarios for the future of relations between the two organisations.

## International aspects

A workshop was organised early November in Beijing, China, with the Chinese Academy of Sciences (CAS) to present some of the ESFRI and CAS projects and analyse the potential for increased cooperation between the two regions.



CAS-EU Workshop, Beijing, 9 November 2009

A common understanding was that fostering collaboration worldwide will be essential to develop solutions to global challenges like climate change, energy supply and increase in usable and shared knowledge. Research Infrastructures, including e-infrastructures, are essential for achieving research excellence. The impact of such infrastructures is greatly amplified by designing and building them to be globally accessible, interoperable and open to scientific talent, wherever it is located. The importance of EU-CN relationships in the field of RIs to face global challenges was therefore acknowledged and a new workshop agreed in principle for the autumn 2010.

On 1 June 2009, a meeting took place with the Russian Ministry of Science. Discussions between the ESFRI Chair and the Russian Science Minister focused around respective Roadmaps and possible future cooperation.



## FUTURE OUTLOOK AND ACTIVITIES

### Roadmap Implementation

During 2010, the Forum will continue to pay close attention to the projects appearing on the ESFRI Roadmap. ESFRI shall continue to encourage Member States to give the necessary support to ensure that as many facilities as possible are realised in a timely way.

### Roadmap Update

During 2010, the Forum will work, through its Thematic Working Groups, to the next update of the roadmap, focusing on energy, food and biology, scheduled for the end of the year, at the time of the Research Infrastructure conference to be organised under the Belgian Presidency of the EU.

### Management of Research Infrastructures

The Forum will follow with interest the next actions and initiatives for training managers of RIs of pan- European relevance, though e.g. the RAMIRI 2 project.

On 23 and 24 March 2010, the 6th European Conference on Research Infrastructures will take place in Barcelona under the Spanish EU Council Presidency. Key themes of ECRI2010 will include: European strategy for RIs; prioritisation of research infrastructures; political decision making; e-Infrastructure for Science; Management and financial issues and governance and future RIs in ERA

In addition, the Forum will continue to work on defining best practice for RIs, including for managing access.

### International Cooperation

The importance of global issues will be taken into account by the Forum representatives, either during international meetings and workshops, or during bilateral events, such as those to be organised with India, China or the USA, during 2010.

### Regional Dimension

The regional dimension will continue to be a very strong focus of ESFRI activities. The Regional Working Group will prepare a specific report with recommendations to be discussed during the conferences to be organised under the HU and PL Presidencies, in 2011.

### Energy issues

The energy issue will be an important focus of the ESFRI work in 2010. Not only the update of its roadmap will concentrate on this subject, but also a specific conference will be organised end of November 2010, under the BE Presidency, on the crucial relation between Research Infrastructures and the Research on Energy.

### Scientific Data Management

The efficient management of scientific data is one of the key challenges to be faced during the next years. ESFRI, together with e-IRG, will analyse this challenge and make recommendations. The best practices developed under the current ESFRI and e-IRG related projects will serve as important inputs to this reflexion work.





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