

*ERA-Instruments* aims at initiating coordination and a sustainable network of ministries, charities, funding agencies and research councils active in funding of life science research infrastructure (RI). This European platform of relevant stake-holders will set up comprehensive tools for adequate treatment of instrumentation related topics enabling conclusions for research policies on both a national and European level. The ERA-NET will focus on bio-analytical instrumentation including post-genomic high-throughput techniques, NMR, mass spectrometry, microscopy, micro-array platforms etc. These midsize equipments have become an essential and strategic strength for European countries. *ERA-Instruments* can build on the broad experience with RI funding of its partners and its scientific advisory board. Contact to scientists will thus remain close and continuous. Promotion of RI funding in FP-7 and support for new member states will also strengthen the position of European research.

## Content

The final period

Meeting #5 in Munich

Past activities:  
Management workshop

Partnering activity

Dissemination in  
Brussels

Recommendation  
papers

MERIL & Member  
organisation forum

Final Reports

News & Links

About ERA-Instruments

The ERA-Instruments  
Partners

### The final period of *ERA-Instruments*

#### *The last one and a half years of ERA-Instruments offered opportunities for discussing new issues and disseminating results*

Due to the cost neutral extension of the project, it was possible to conduct further activities in addition to originally planned activities. These included a workshop held in April 2011 in Berlin, which addressed the important issue of facility management in the life sciences, a partnering activity for academic and industrial stakeholders in London, and a dissemination event for policy makers and other stakeholders in September 2011 in Brussels.

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### Meeting #5 in Munich, 27./28. June 2011

#### *The final workshop originally planned to be held on Iceland had to be cancelled and was finally held in Munich*

The eruption of Grimsvötn on the 21<sup>st</sup> of May 2011, only two days before the workshop organised by RANNIS in Reykjavik, left a few partners experiencing an icy-cold, windy and volcanically active island but prohibited most partners from travelling to Iceland.

In order to provide an alternative venue within a relatively brief time span, the coordinators set up the workshop just a month later in the Bavarian Academy of Science in Munich.

The workshop allowed to report on past and remaining activities, to take a look-back at the project and summarise some "thematic" results on structural biology, advance light microscopy, proteomics and next generation sequencing and the data challenge, and finally discussed the impact of *ERA-Instruments*.



The eruption of Grimsvötn (as seen from Reykjavik in the late hours of the 21<sup>st</sup> of May 2011) led to cancelling the last workshop meeting. Instead the meeting was held a month later in Munich.

### **Impact and feed-back**

A clear benefit from knowledge exchange was perceived. Partner organisations received a wealth of input. In particular, several issues did strongly resonate with all partners and have led to changes in the daily practice of the partners. Issues, set out in the *ERA-Instruments* work plan were considered as highly relevant, such as funding/costs and access issues in relation to running of instrumentation facilities, good practice in conducting funding schemes and many specific recommendations concerning specific technologies.

In addition, further issues have come into focus: facility management has been recognised as a crucial point for improvement, and the issues concerning data analysis, as a major and growing challenge for the present and future. There was common agreement that awareness about the need for improvement of RI management and securing the effective longer-term running of RI are going beyond the LS and need to be raised and spread further. The project helped reflecting the partner organisations' directions and let to implementing some concrete changes to funding schemes.

## **Past activities**

### **Management workshop in Berlin**

Facility management is gaining importance in the life sciences. Facility management is a key success factor for a research facility. However, various aspects of facility management in the life sciences are still in need of improvement. Therefore the main aim of the workshop was to identify relevant issues which can and should be addressed by research and funding bodies. Input to the discussion was provided by invited RI managers and organisations experienced with issues of facility management.

The following management issues were discussed:

Training of managers, facilitating employment of professional managers, opportunities of exchanging best practices, the sustainability of facilities, and the role funding organisations can fulfil in relation to these issues.

The following statements were derived from the discussion:

Research facilities need to be evaluated by a different matrix than pure research proposals. Standards of good practice need to be further disseminated and ultimately enforced. Hereby funders could play a larger role. The need for longer term sustainability of facilities needs to be further recognised by funders. The contribution of facility managers to research efforts needs to be more explicitly appreciated by scientists and research councils. At the same time, facility management should be further professionalised. Larger organisations experienced in facility management and training managers, such as ESRF, are willing to share their experience.

### **Partnering activity in London**

BBSRC organized a partnering activity held in London. The report of a questionnaire survey and the discussions held in three parallel sessions high-lighted the following points: The role of IP appears to be often overvalued at universities while long contracts between industry and universities may be more important than IP. However, industry needs relatively quick results. Problems in sustaining relationships can be caused by lack of funding, or when contact persons within the industrial partner move on. Personal contacts in particular to individuals with the right profile are essential for establishing partnerships.

### **Two more recommendations papers for research infra-structures were published in 2011**

The series of ERA-Instruments brochures was continued with two further publications. "Development of Research Infrastructures in Europe" describes the broader picture of the European RI landscape, and its developments, challenges and approaches. Hervé Péro from the European Commission, José Carrascosa and Dietmar Manstein, both members of the ERA-Instruments Scientific Advisory Board, contributed interesting statements to the publication.

In "Advanced Light Microscopy", a joint publication of *ERA-Instruments* and the ESFRI-project EuroBioImaging, specific recommendation concerning this technology are made.

Both brochures can be obtained from the coordinator as hard copies or down-loaded from the project webpage.

### **Dissemination activity in Brussels**

A final dissemination activity was held in September 2011 in Brussels in form of lunch time talks.

Primarily representatives of relevant stakeholders residing in Brussels (including representatives of the member states, national funding and research bodies, and the European Commission) were invited to attend. About 40 persons registered for the event. *ERA-Instruments* results were presented by the coordinator, a member of the Scientific Advisory Board, and the partner responsible for the analysis of non-European research funding systems. The event, resp. the results of *ERA-Instruments*, proved to be of interest to a wider audience and offered an opportunity to discuss the positioning and interactions of *ERA-Instruments* in the European context.

### **Final reports**

The last period report and the final report for *ERA-Instruments* have been submitted to the European Commission. Despite the cost-neutral extension and further activities *ERA-Instruments* did not spend the allocated total budget but made considerable savings demonstrating the efficient work of the partner organisations.

The final report summarizing the major results and impacts of *ERA-Instruments* will be made publicly available at the project website.

### Where ERA-Instruments continues ...

#### MERIL

The MERIL project is looking forward to updating and upgrading the inventory of national research infrastructures with European significance which was initiated by the EUROHORCS, the European Commission and the ESF. Results from *ERA-Instruments*, namely with the inventories on NMR/MRT and NGS, have a direct influence on the design of the MERIL project; for instance our partner CNRS who has been in charge of the *ERA-Instruments* inventories is the working group chair for mapping in the MO Forum.

#### ESF Member Organisation forum on Research Infrastructure

The MO Forum has published a document "basic requirements for research infrastructures" (see Links below) listing criteria for identifying a minimum quality standard for access to research infrastructures (RIs) at the European level across scientific fields. This list has its roots in the ERA-Instruments recommendations on Access and Operation (paper I of the recommendations series) and has in its current form been endorsed by the EUROHORCS and the scientific committees of the ESF. Nevertheless, it should be a living document and be refined in the future.

Secondly, the MO forum has engaged with ESFRI in a discussion on criteria to define European relevance. Again, ERA-Instruments had laid the grounds for this development and the topic is addressed in the recent recommendations paper III on Development of Research Infrastructures in Europe.

### Further related projects...

#### Project EIRISS by STFC, UK

EIRISS is a project that responded to the EC call: INFRA-2011-3.3: *Study for the development of a possible future EU action on scientific instrumentation*. Some of you might remember that Hervé Pero had invited ERA-Instruments to respond to this call during our Vienna workshop in May 2010.

EIRISS "intends to quantify the current size and potential for growth of the instrumentation market, identify the current bottlenecks in the industrial implementation process, and determine the activities in the process of RI instrumentation development and subsequent industrial exploitation that would benefit most from an EU supported activity.

The view from industry of the perceived risks and benefits associated with industrial engagement with the RIs will be recorded so that it can also be taken into account in programme development planning. The evidence for the need and the recommendations on the financial, technological and geographical scope for EU support will be presented to support the development of a new EU action."  
(quoted from the published abstract)

A midterm workshop was held on 1<sup>st</sup> of December last year and Christian Renner attended on behalf of ERA-Instruments. Input from ERA-Instruments' experiences was welcome, although EIRISS decided to focus on RI in physics and industry. Interestingly, it appears that the market analysis of EIRISS includes only large single sited RI projects, but with the inclusion of buildings and all. The real high-end instrumentation part is not easily separated.

A very rough estimate of the market for scientific instrumentation in the life sciences (by DFG and based only on DFG figures) indicates that this sector is on a similar order of magnitude as the "big science" investments that are supposed to be around 4 billion Euros per year in Europe.

Further progress of EIRISS will be followed with interest and we will report again in a future newsletter.

### Upcoming events:

(For further news please visit the project's webpage at [www.era-instruments.eu](http://www.era-instruments.eu))

### News & Links

- **MERIL** <http://www.esf.org/activities/science-policy/research-infrastructure/meril-mapping-of-the-european-research-infrastructure-landscape.html>
- **Member Organisation Forum on Research Infrastructures** <http://www.esf.org/activities/mo-fora/research-infrastructure.html>  
(the **Basic Requirements for Research Infrastructures** can be downloaded from the column on the right)
- **Germany has begun its RI road map process:**  
The Federal Ministry for Education and Research (BMBF) has launched a national roadmap process in 2011. A selected number of ESFRI projects were invited to submit proposals until mid of January 2012, among them EuroBioImaging, Instruct and EU-Openscreen. A scientific evaluation by the "Wissenschaftsrat" and a financial controlling of the budget plans by an agency should be concluded by this autumn and will be followed by a prioritization procedure of the ministry. The decision of the ministry to include projects on the roadmap (finished some when in 2013) is supposed to be linked to funding of those RIs.  
<http://www.wissenschaftsrat.de/1/fields-of-activity/research-infrastructure/news/>

### About ERA-Instruments

#### The Programme

It has become increasingly obvious that concepts and strategies for research infrastructure (RI) funding should be harmonised and coordinated within the EU. ESFRI has determined requirements for European RI funding and has presented a roadmap. Growing attention is paid to life sciences that rely on RIs of a less centralised, but more networked dimension. There is a clear need for action in the interdisciplinary area between physics, chemistry, biology and medical sciences as cutting edge instrumentation becomes increasingly expensive and, yet, indispensable for world-class research. However, promotion of research policies, apart from the ESFRI projects, has been restricted so far to national efforts without managing these actions with a European view. Funding and research organisations can not afford to remain at the national stage in view of world-wide competition for the best scientists and the most promising projects. Frontier research is an international undertaking since long and funding organisations have to follow scientists to the European level.

#### The new ERA-Instruments Publications:



Updates and further information on:  
[www.era-instruments.eu](http://www.era-instruments.eu)

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#### The ERA-Instruments Partners

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