

# SERVING EUROPEAN SCIENCE: THE EIROFORUM COLLABORATION

CLAUS MADSEN (ESO)



OVER THE LAST FEW years, the idea of a “European Research Area” (ERA) has gained strong support among science policy makers and, increasingly, among scientists themselves.

The goal of the ERA is to establish a single “market” for research on our continent, allowing for better co-ordination of research efforts, synergies between projects, the achievement of “critical mass” (both human and financial) and thus to strengthen the competitiveness of European research. These goals necessitate deep structural changes in the way science is organised, breaking up existing borderlines and barriers between national research systems in Europe.

Behind the ERA concept are strong drivers, as expressed not least in the now famous Conclusions from the pivotal European Council meeting in Lisbon (March 2000) and the European Council meeting two years later in Barcelona, firstly setting out very ambitious aims for Europe’s further development towards becoming the world’s most dynamic knowledge-based economy by the year 2010 and secondly recommending an increase in research spending in Europe by 50 % over the same period of time. These decisions have catapulted research policies to the centre stage of the European political discourse, both at the national level and in the context of the European Union.

While there is thus a strong political imperative behind the changes in European research and the goals seem clear, much discussion takes place over the way to realise the ERA. Indeed questions abound: What can we do to tackle the imminent recruitment crisis for European science and technology personnel? How can we increase the mobility of scientists in a way that enables attractive career perspectives and takes account of social issues and other legitimate concerns? How should the relationship be between fundamental, researcher-driven research and targeted research and technology development? To what extent should the public finance research – to what extent industry? How can we – at the European level – best support the pursuit of excellence as the primary driver for improving overall

research performance? Are the current decision-making processes and structures adequate to support research at the European level? How do we best deal with research infrastructures in Europe? How do we co-ordinate decisions on new facilities in a way which makes sense to the scientific community and to society which pays for them? Clearly, these issues are very complex and challenging.

## RESPONDING TO THE CHALLENGE

Dealing with the challenges ahead of us and offering our experience and expertise in the common effort to forge a successful ERA is the background for the establishment of a close collaboration, under the name of EIROforum, among Europe’s leading inter-governmental research organisations: the European Organization for Nuclear Research (CERN), the European Fusion Development Agreement (EFDA), the European Molecular Biology Laboratory (EMBL), the European Space Agency (ESA), the European Southern Observatory (ESO), the European Synchrotron radiation Facility (ESRF), and the Institut Laue-Langevin (ILL). Between them they cover a wide spectrum of scientific disciplines – from particle physics, astronomy and space research to molecular biology, materials science and neutron research. Each of them operates major research infrastructures for their respective scientific communities, most of which are highly organised. Within their disciplines, they had created their own European Research Areas long before the term was coined. These organisations represent a particular operating model, owned by their member-states, belonging to their scientific communities and with a European remit. At the same time, they represent “European success stories” having provided facilities and a working environment in which European scientists could develop and reach the highest standards amidst strong international competition. Given the overall problems regarding European scientific and technological competitiveness, this is a noteworthy achievement of which these organisations and European science can be proud.

## A FORUM FOR EXCHANGE

The added value of the EIROforum collaboration lies in synergies between their individual activities – both at the technical level and concerning other areas, such as outreach, human resources and science policy – cross-fertilization through interdisciplinarity and the sharing of resources and ideas. Significantly, the EIROforum partnership represents an annual research investment in Europe of almost the same size as that of the European Union’s Framework Programme. By working together, the partner organisations therefore achieve a higher visibility and considerably increased attention from science policy makers, raising the possibility for engaging in fruitful dialogue on matters of crucial importance to the long-term future of our Continent.

The EIROforum Council is comprised of the Directors General (or equivalent) of the partner organisations. Currently, the chair is held by EFDA, but rotates every July. The next period will be presided over by ESA. The Council is supported by a Co-ordination Group with senior staff members from the partners constituting the operational interface between the member organisations. A series of thematic working groups and ad-hoc teams complement the Council and the Co-ordination Group, dealing with a wide range of practical topics.

## A PLATFORM FOR JOINT PROJECTS

Most, but not all, activities that are organised within the EIROforum frame involve all the member organisations. Among the most visible examples are a series of successful outreach activities targeting secondary school pupils. The programmes, carried out

### ESO’s Current EIROforum Team

**Council:** Catherine Cesarsky  
**Co-ordination Group:** Claus Madsen, Peter Shaver  
**TWG on Human Resources:** Roland Block  
**TWG on Outreach and Education:** Richard West  
**TWG on Instrumentation:** Guy Monnet  
(**Detector Sub-group:** Reinhold Dorn)  
**TWG on Grid:** Klaus Banse, Markus Dolensky  
**TWG on EU matters:** Claus Madsen  
**Conference on infrastructure management and voting rights:** Ian Corbett  
**Scientific Conferences:** Peter Shaver



The signing of the EIROforum Charter in Brussels on the 12th of November 2002.

in collaboration with the European Commission, have included *'Life in the Universe'*, *'Sci-tech/Couldn't be without it!'* (dealing with links between basic science and technology). A new programme, *'Einstein's Magic City Contest'* is under development for possible implementation during the Year of Physics in 2005.

A longer-term, Europe-wide activity targeting science teachers, has also been organised by the EIROforum. This programme was so far known under the name *'Physics on Stage'* and has involved many thousands of teachers since it commenced in the year 2000. From 2006, the programme will change name to *'Science on Stage'* to reflect the wider range of disciplines to be covered and an increased focus on interdisciplinarity.

While our organisations are of course devoted to front-line research, the engagement in educational activities is based on very worrying trends as regards the future recruitment of talented young people to science. For example, a recent survey showed a decline of 17 % in physics graduates over the period 1997/98–2001/2002.

None of these activities could have been carried out by the individual EIROforum organisations. Yet by working together and joining forces with some of Europe's most innovative and enthusiastic science teachers – and with substantial financial support by the European Commission – it has been possible to carry out activities of sufficient scale and visibility. Starting as *ad-hoc* activities, they have developed into a coherent, long-term programme aiming to reverse the serious drop in numbers of young people who declare themselves ready to pursue studies and careers and science (particularly in physics).

Scientific and technical collaboration is, by its very nature, more specialised and tends to involve clusters of organisations, rather than the whole group. Accordingly,

EMBL, ESRF and ILL have established a Partnership for Structural Biology (PSB), whereas the collaboration between CERN, ESA and ESO is based on our traditional close links. Thematic Working Groups in detector development and Grid technologies are investigating possibilities for joint activities and has held first workshops. Other areas where cooperation may prove to be of great benefit are technology transfer and issues relating to human resources.

#### A VOICE IN THE SCIENCE POLICY DEBATE

On the background of the ERA development, science policy issues are clearly of high priority to the EIROforum. A series of briefings in the European Parliament, as well as frequent meetings and consultations with high representatives of the European Commission has enabled a fruitful dialogue with key decision makers. This dialogue has been reinforced by a Statement of Intent between the EIROforum partners and the European Commission, in which both parties pledge to cooperate towards the devel-

opment of the ERA. The statement was signed by the Directors General of the organisations and the European Commissioner for Research, Philippe Busquin, in October last year. Among the current science policy issues we find the debate about the character and operational aspects of the new European Research Council, the preparation for the 7th EU Framework Programme and the long-term implications of the legal base for research as implied by the proposed Constitutional Treaty.

#### FORGING THE ERA

EIROforum is a child of the ERA, both with respect to its remit and regarding the particular time in which it was created. Together with its partners, ESO played a crucial role in its formation, not the least during its first tenure as EIROforum Chair (2001). The original team, the ESO DG assisted by Peter Quinn and Richard West, helped to shape the collaboration and prepare it for the challenges posed by the emerging European Research Area.

When, on 12 November 2002, the collaboration was sealed with the official signing of the EIROforum Charter at the Palais du Heysel, Commissioner Busquin, who attended the ceremony, stated that *"The establishment of EIROforum is a concrete example of the dynamic created by the European Research Area. Europe has unquestioned excellence in science. By working together, Europe's leading research organisations can make that more visible on the European and world stage."*

In this sense, ESO's continued engagement in the EIROforum collaboration both provides a window for European astronomy and supports a partnership whose common expertise and experience constitutes a great asset as the European research landscape is re-modelled.

Further information is given at the EIROforum website: [www.eiroforum.org](http://www.eiroforum.org).



The EIROforum information stand at the 2002 FP-6 Launch Conference in Brussels.