

## **EUROHORC's commentary on the ERAB strategic paper: “Preparing Europe for a New Renaissance”**

Realising the European Research Area (ERA)<sup>1</sup> requires a number of different actors to take responsibility for implementing a diverse range of organisational changes in the delivery of science and innovation. Action must be coordinated at the national and European level. These changes need to anticipate new ways in which research will be performed in the future and how the European research community might address the grand challenges facing society. EUROHORCs strongly believe that fundamental principles of freedom and independence of researchers are prerequisites for enhancing excellence in science and for realising a globally competitive ERA.

In a 2007 commentary on the Green Paper consultation<sup>2</sup>, EUROHORCs and ESF regarded the Green Paper as a good starting point for in-depth discussion on how to progress the building of the ERA but argued that insufficient attention had been paid to the role of organizations outside the European Commission and national governments. The universities, regulatory bodies and private sector need to play an active role in developing the ERA as do national research performing and funding organisations. EUROHORCs and ESF member organisations recognise their responsibilities towards the construction of the ERA and have launched a joint vision for a globally competitive ERA and a road map of actions for its delivery<sup>3</sup>. There is now a need to build on the concept of the ERA that has been proposed and to identify specific opportunities for development.

The European Research Area Board has published its first annual report setting out a bold vision of where it believes the ERA needs to go by 2030. EUROHORCs welcome this document as it raises awareness of a broad range of issues and will stimulate further discussion amongst interested parties. While raising a number of challenges the document will help the different European actors to appreciate the scale of the task ahead and the broad direction of travel necessary. It will be up to the individual players to decide how best to make the journey.

There is a lot of overlap between the six areas for action proposed by ERAB and the EUROHORCs/ESF vision and we identify some of those here. The intention of this statement is not to provide a detailed analysis of the pathway to the ERA: this will be the subject of more detailed dialogue between all relevant stakeholders in the coming months and years. Instead we seek to emphasise those areas where we and ERAB have a shared vision and interest and to highlight where we might most effectively focus our joint activities. We note that not everyone will agree on the milestones that ERAB has set as markers of delivery but agree that the setting of milestones is an important conceptual contribution to making progress with ERA.

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<sup>1</sup> As originally envisaged in the 2000 Lisbon strategy: [http://www.europarl.europa.eu/summits/lis1\\_en.htm](http://www.europarl.europa.eu/summits/lis1_en.htm) and re-launched in the European Commission's Green Paper consultation exercise:

[http://ec.europa.eu/research/era/pdf/era\\_gp\\_final\\_en.pdf](http://ec.europa.eu/research/era/pdf/era_gp_final_en.pdf)

<sup>2</sup> [http://www.eurohorcs.org/SiteCollectionDocuments/EUROHORCs\\_ESF\\_Statement\\_On\\_Green\\_Paper\\_ERA.pdf](http://www.eurohorcs.org/SiteCollectionDocuments/EUROHORCs_ESF_Statement_On_Green_Paper_ERA.pdf)

<sup>3</sup> [http://www.eurohorcs.org/SiteCollectionDocuments/ESF\\_Road%20Map\\_long\\_0907.pdf](http://www.eurohorcs.org/SiteCollectionDocuments/ESF_Road%20Map_long_0907.pdf)

## **A United ERA**

The fifth freedom – the movement of knowledge across borders within the EU – is a central concept for the ERA. If researchers in the US choose to move to a different part of the country they will take for granted that their intellectual ideas are transportable and that they are free to move to the most effective environment for carrying out research. Having moved they will find that the basic education system in which they are working is the same: the regulatory environment won't change: filing patent applications is no different between states: local employment conditions may vary between institutions but the basic package of state welfare or pension provision will not change. Researchers in Europe can make no such assumptions. There is still movement of European researchers early in their career, where cultural differences may even enhance the appeal of moving country. But the obstacles to movement and often to simple collaboration can be difficult to surmount. EUROHORCs acknowledge the value of cultural, geographic and social diversity to research careers in Europe and have argued that it is necessary to develop shared strategic concepts that might feasibly be applied at the national level and regional levels.

ERAB point out that there also needs to be a greater freedom of movement between the public and private sector. EUROHORCs has placed high on its agenda the need to establish dialogue at European level between its (public sector) member organisations and the private sector. This dialogue is pivotal to opening up the opportunities for innovation and knowledge transfer need to increase European competitiveness. A truly open market for innovation will require changes to legislation and needs to take place to stimulate inward investment from our global partners.

E-science is changing the way that research will be done in the future. An increasing amount of work can be carried out remotely. Researchers can sit at a computer terminal in one part of the world and collate data being collected on instruments in other parts of the world. Data is analysed and shared in widely distributed networks breaking down the traditional silos of institutional ownership. Europe needs to be alert to this change and ensure that in establishing the ERA we do not neglect the importance of opening up to the rest of the world. The EUROHORCs ESF road map includes actions to connect Europe to the rest of world and for moving towards a global research area (GLOREA).

## **Grand Challenges**

A meeting held under the auspices of the Swedish presidency of the EU has resulted in the Lund declaration<sup>4</sup> calling for European research to “focus on the Grand Challenges of our time moving beyond current rigid thematic approaches”. The ERAB vision agrees that the ERA needs to be driven by societal needs and argues that the ERA must be organised to deliver solutions to these needs. EUROHORCs agree that research is a key element for society to address global challenges, and would emphasise the importance of public and private research funding bodies in defining and scoping solutions for those challenges. More fundamentally, EUROHORCs would like to highlight another of the Lund declarations statements which is that there is a need to strengthen frontier research initiated by the research community itself. While acknowledging the need to develop a stronger solutions approach to research there is also a need to preserve new innovative thinking through support for frontiers research as championed by the European Research Council (ERC). Without innovative blue skies research we will not be well placed to respond to new challenges or take a global lead in the delivery of solutions. EUROHORCs would thus welcome an increase of the ERC's budget and competences.

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<sup>4</sup> [http://www.se2009.eu/polopoly\\_fs/1.8460!menu/standard/file/lund\\_declaration\\_final\\_version\\_9\\_july.pdf](http://www.se2009.eu/polopoly_fs/1.8460!menu/standard/file/lund_declaration_final_version_9_july.pdf)

Education and training of the next generation of researchers will have to take on board the increasing need for multi-disciplinary approaches and the ability to operate in a more global context.

### **Shared Responsibility**

The first task on the EUROHORCs ESF roadmap maps closely to this aim of the ERAB vision. EUROHORCs intend to strengthen the relations between science and society to create a more open system that will speed up the use of research in society and to facilitate more effective science policies. The road map proposes that EUROHORCS and ESF member organisations coordinate their briefing of national ministers before Council meetings to make European policies more effective. ERAB propose that the EU appoints an independent chief scientific advisor (CSA) to support decision making. The CSA would not have authority over the national agencies who manage 85% of European research funding so the role and responsibilities of this post within the context of the ERA would need careful consideration. Indeed EUROHORCs as a body could provide the functionality of a scientific advisor to the Commission.

### **Open innovation**

Research intensive private sector companies, such as the pharmaceutical sector, are increasingly citing open innovation as a necessary model for collaboration for the development of new technologies in a world of widely distributed knowledge. Companies need to look externally for innovation and ideas and to be more open to a two way flow of information. EUROHORCs has not specifically addressed this issue in its road map as the initiative for open innovation needs to come from the private sector, but the action for increased dialogue is one way of ensuring that there is movement towards open knowledge institutions within the public sector.

EUROHORCs has addressed the issues of open access to research results and data. It was identified that in order to develop permanent access to research data there will need to be much wider global discussion with agencies, such as the National Science Foundation in the US, as the issues go beyond the European arena. Many of the commercial companies based in Europe are multinationals who operate globally and who can transfer activities to regions that offer the most competitive environment. For Europe to retain R&D intensive corporations in the future it will need to move decisively to bring coherence to fiscal policies and handling of intellectual property and invest in innovation parks or knowledge clusters. EUROHORCs has included the creation of ERA-CONNECT and regional clusters of excellence in their road map though this could go further to link in with the private sector.

### **Excellence**

This aim is one that all involved in European research can endorse. Excellence underpins all of EUROHORC's objectives, whether it be in the university sector and research institutions, world class research infrastructures or support for frontier science. Two particular actions that impact on excellence are EUROHORC's policies for peer review and for evaluation of the outcomes of research funding. European criteria for peer review could help ensure quality standards for European research and facilitate closer working through joint schemes and European grant union. To demonstrate excellence it is necessary to evaluate the outcomes of research, to measure their impact or achievement of policy goals. The outputs of different sectors of research will need to be assessed in different ways – there may be longer lead times for example or different evaluation criteria (e.g. impact on population behaviour compared to income from commercialisation).

With new competition from China and India, and innovation in South East Asia, Europe must maintain its ability to influence and lead on new intellectual ideas. The figures on European

research performance<sup>5</sup> generally indicate that unless we act soon to make the ERA a reality European excellence will make little impact in the future. Europe must continue to promote and integrate our highest standards of openness and excellence in peer review and evaluation. When developing European-wide standards and practices, we must avoid excessive bureaucracy and ensure that the freedom of excellent researchers to pursue their ideas is complemented by appropriate administrative and financial rules.

### **Cohesion**

EUROHORCs has addressed the issue of coherence through action for a European Grant Union, creation of ERA connect and regional clusters of Excellence and through developing shared funding and exploitation of research infrastructure. Developing the ERA will implicitly lead to greater cohesion and integration but only if there is a political willingness at the national levels to overcome many of the legal and regulatory hurdles that currently prevent development of a globally competitive ERA. A coherent ERA will benefit all European nations in the global research economy, and we must work together to ensure that the long-term benefits of the ERA are well-understood at national levels.

### **Conclusion**

The ERA is important for Europe. It is important for science, for society and for our global competitiveness. The ERAB paper provides a broad vision for the development of the ERA, much of which overlaps very well with the vision and action plan set out by EUROHORCs and ESF. The debate around implementation of the ERA, the role of national programmes and organisations and the concept of subsidiarity needs to continue amongst many different players; the ERAB vision will help to promote that debate. We have not discussed here the specific milestones set by ERAB: they raise many questions and are not equally weighted. What is more important is that they help to establish the direction of travel for Europe for delivering the ERA and that is to be applauded.

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<sup>5</sup> [http://ec.europa.eu/research/era/pdf/key-figures-report2008-2009\\_en.pdf](http://ec.europa.eu/research/era/pdf/key-figures-report2008-2009_en.pdf)