

**EMOBILITY RESPONSE TO THE “LAUNCH A WIDE INSTITUTIONAL AND PUBLIC DEBATE” ON THE GREEN PAPER “THE EUROPEAN RESEARCH AREA: NEW PERSPECTIVES” SEC(2007) 412**

**INTRODUCTION TO THE EMOBILITY RESPONSE:**

The communication of the Commission states the following objectives for the European Research Area:

- a European "**internal market**" for research, where researchers, technology and knowledge freely circulate;
- **effective European-level coordination** of national and regional research activities, programmes and policies; and
- **initiatives implemented** and funded at European level.

For the future it is stated that the scientific community, business and citizens have the need for ERA to have the following features:

- **An adequate flow of competent researchers** with high levels of mobility between institutions, disciplines, sectors and countries;
- **World-class research infrastructures**, integrated, networked and accessible to research teams from across Europe and the world, notably thanks to new generations of electronic communication infrastructures;
- **Excellent research institutions** engaged in effective public-private cooperation and partnerships, forming the core of research and innovation 'clusters' including 'virtual research communities', mostly specialised in interdisciplinary areas and attracting a critical mass of human and financial resources;
- **Effective knowledge-sharing** notably between public research and industry, as well as with the public at large;
- **Well-coordinated research programmes and priorities**, including a significant volume of jointly-programmed public research investment at European level involving common priorities, coordinated implementation and joint evaluation; and
- **A wide opening of the European Research Area to the world** with special emphasis on neighbouring countries and a strong commitment to addressing global challenges with Europe's partners.

*Based on an assessment of the situation in these main areas, this Green Paper raises a number of questions on how to deepen and widen the European Research Area, so that it fully contributes to the renewed Lisbon strategy.*

*As part of the public consultation the Commission invites comments and answers to a specific set of questions.*

## **GENERAL OBSERVATIONS OF *EMOBILITY***

We welcome the consultation on the European Research Area, its objectives and approach. As industry we have the position that any measure to overcome obstacles to co-operative research would be most welcome, both at national, as well as at EU-level.

Consistent research-friendly procedures should be used to reduce the excessive overheads in the bidding, administration and coordination of research to a fraction of current levels. The concept of subsidiarity should be applied to coordination as well, since it inherently creates more administration and delays. Coordination should concentrate on situations where it can be shown to add significant value. Otherwise the freedom of an internal market, based on fair competition, should be the preferred choice.

The internal market for research has after more than two decades, progressed well towards the free movement of people, technology and know-how. Acknowledging that further progress is desirable, the European Research Area may be a useful instrument, though the comparative merits of different approaches may need to be clarified.

The concept of an internal market for funding of research activities is, in our understanding, largely a reality established by the framework programs. The advantages of extending the coordination to include national and regional funding mechanisms would need to be demonstrated. There may be a case for the coordination of basic research, subject by public funding, where the academic interests outweigh the commercial importance of the issues. Economically motivated research, of the kind implied in the Lisbon Agenda, is largely driven by industrial research investment with some public funding, and in this context the coordination of research is a much more complex matter and not easily served by the European research area concept in its present form.

The opening of the European Research Area to the world is a laudable notion and industry is already extensively practising international collaboration. This is a dynamic process based on a fair and equitable approach taking into account commercial and strategic interests of the sector and the industries concerned. An opening of the European Research Area should reflect intellectual property, justified commercial interests and be mutual.

In conclusion, we have given the Green Paper on European Research Areas careful consideration and welcome both the consultation as well as the ideas reflected in the Green Paper. In implementing this concept, we would advise that one should take into account that research encompasses a wide range of situations and that, for example, an efficient European-level coordination of basic research and industrial investment in research requires a differentiated approach, last but not least, because of competition policy. At the same time there is the need to view this matter from an international perspective.

## REFLECTION ON THE SPECIFIC QUESTIONS ASKED BY THE COMMISSION

### Elements of the European Research Area vision

1. Are these the essential elements that the European Research Area should provide? Are there other elements which should be taken into account in the vision?

*The “elements” are all of a desirable nature, assuming that addressing them would, per se, result in an improvement in achieving the Lisbon objectives. For example, sharing of knowledge and being open to the world, are attractive objectives and in some cases essential. However, in a knowledge oriented economy, **knowledge assets are strategic assets which need to be carefully managed**. Our global competitors are very carefully reflecting on when to share and when to protect IPR. For this reason it is difficult to subscribe to these principles across the board.*

*Today, many national and international instruments to share knowledge and cooperate openly are already available, where this corresponds to common interests, e.g. standardisation related work. However, in other areas there is fierce competition in R&D and the sharing of knowledge is carefully managed. As the border between basic scientific discovery and economic exploitation is increasingly difficult to generalise, one will inevitably have to differentiate and “manage” rather than establishing mechanisms which might result in indiscriminate disclosure.*

*The coordination of research programmes is certainly desirable, particularly if they fund R&D in the same area. Having to submit at EU, national or regional level and then according to rules and procedures differ, is a waste of effort which should be avoided. A big improvement could be achieved if the same rules and procedures, adapted to the area of work, would be adopted throughout the EU. Coordination of programmes and priorities might entail the risk of losing the stimulation of competition and diversity. Only some areas have inherently the need of large scale investments were the “cost of coordination” in terms of funds and time, is acceptable, e.g. aerospace. **The implications of coordinating programmes and priorities need to be understood**. One should not overlook the extensive experience in terms of coordinated R&D from CERN, to aerospace and the Genome Project. Each time careful thought was*

given to “what needs to be included in coordination” and what should be independent and competitive.

*Coordinating priorities may be beneficial in some cases but implies that the options are fully understood, which is rarely the case in R&D. Under those circumstances “coordinating priorities” might not be optimal.*

2. What should be the roles of EU, national and regional policies to establish such a European Research Area and take best advantage of the European dimension in the context of globalisation and national and regional specialisation?

*The roles of political institutions in establishing a European Research Area should be the same as the roles they play in other policy areas. In general, political institutions should provide an optimal framework in which research can complete its mission in an effective and competitive manner.*

*The past has shown that political institutions are not well positioned when it comes to the question of choosing R&D priorities or of organising and managing R&D establishments. In conclusion, the political institutions should set a favourable framework for R&D coordination and concentrate on remove obstructions to cooperation but **leave it to the sector actors to choose where to cooperate and where to compete.***

3. What EU initiatives could best leverage overall public and private efforts to realise the vision?

*The EU should concentrate on defining goals and funding objectives as was done for CERN, ARIANE and other successful high technology ventures. Advanced communications infrastructures, collision-free road-transport, solar desert power stations, etc. This approach of funding objectives, is extensively used in the US and results effective and specific coordination of efforts drawing also on the benefits of competition. Once the objective is reached, others take the place and new coordinated efforts arise. It is also used by industry both within the EU and with partners in other parts of the world.*

*The technology platforms, such as eMobility, can also make a worthwhile contribution to leveraging the vision, through their organisation, their Strategic Research Agendas and their membership.*

## **Realising a single labour market for researchers**

4. Is there a need for a more effective European framework to improve significantly the recruitment, working and geographical and inter-sectoral mobility conditions for researchers, including enforceable measures?

*On the whole the fact that the Internal Market allows for mobility and free choice of employment of EU citizens goes a long way to meet these needs. Over the years, the practical aspects of moves, such as transfer of pension rights, etc. have been addressed and the European-wide recognition of academic qualifications is making progress. Further work may be required to overcome obstacles, but the need for “new European Frameworks” is less evident.*

In particular:

5. How could the principles established in the European Charter for Researchers and the Code of Conduct for their Recruitment be effectively implemented, in order to develop fully the European dimension of research careers, including the transnational opening of vacancies and funding opportunities for researchers?
6. Is there a need for a European framework to ensure portability of social security provisions for researchers across Europe?
7. How could 'flexicurity' principles (e.g. combining labour market flexibility with employment security) be applied to the researcher labour market?
8. How could we increase the numbers and quality of researchers in Europe by attracting young research talents, ensuring real equal opportunities for men and women and exploiting the experience and expertise of end-of-career researchers, for example in advisory and training roles?
9. Should joint approaches be developed to increase the coherence and impact of the various schemes aiming at networking European researchers abroad as well as foreign researchers in Europe? Similarly, is there scope to increase the coherence and impact of European and national schemes for international mobility of researchers (for example by jointly developing international 'Fulbright-like' fellowships)?
10. How could the specific education and training needs of researchers be addressed at all stages of their careers, starting with post-graduate and doctoral curricula, building on the Bologna process for higher education?

## **Developing world-class research infrastructures**

11. How could the EU, on the basis of identification of needs by ESFRI, effectively decide on pan-European research infrastructures and their funding – the latter involving the Community (including possible synergies with EU cohesion policy instruments), Member States, industry, the EIB and other financial institutions?

*R&D covers today such a range of subjects and expertise, that there is rarely a single source for the identification of needs or opportunity for R&D and associated with that of R&D infrastructures. The EU, as well as other public funding agencies, have detailed procedures, which are prescribed by legislation, on how to contribute to R&D or its infrastructure. All work on the basis of proposals, which have to be approved according to the rules.*

*Because of the divergence of the legislation governing the different agencies, the “EU could effectively decide on pan-European infrastructures” if all other agencies agreed or were bound to comply. Without such agreement, the domain will always be subject to a range of decisions outside of European level control and responsibility. Agreement would be dependent on the development of consensus, as is the case at present, with EURKA.*

12. Should a European legal framework be developed to facilitate, in particular, the emergence and operation of new forms of research infrastructures of pan-European interest, including electronic infrastructures? What other policy and legal changes are necessary to encourage the private sector to invest more in research infrastructure?

*While it is still not trivial to operate throughout the EU as a single company, it is possible to do it. If there were progress on EU company law and the associated rules for management, taxation, etc., then such issues might cease to be severe constraints. However, any research infrastructure being subject to different legislation and rules for each Member State would have undue administrative overheads.*

13. Is there a need to define common and transparent principles for the management of, and access to, infrastructures of European interest?

*If public money is used to finance infrastructures legislators usually make provisions to ensure due access. However, that depends on the nature of the facility. In practice such facilities have, in the past, managed quite well to ensure fair and equal access based on principles of excellence. Not everyone can get access, but those that have a good research case have generally managed to be successful in a fair competition for access. It is probably something best defined in the context of the specific area and facility. For some, the right of access may not be the issue while for others access is a scarce resource needing careful management (e.g. trial infrastructure).*

14. How can the longer-term continuous improvement of research infrastructures be ensured, e.g. through S&T programmes associated with them and European electronic infrastructures?

*The viability of research infrastructures is ultimately linked to their ability to evolve with new technology. Improvement will come from serving the research needs of as large a constituency of researchers and subjects as possible. The momentum comes as much from business requirements as from academic interests. Flexibility, adaptability and motivation to evolve will be as important as funding.*

15. Should a global forum on research infrastructures be created, involving third countries and international organisations, where Europeans could speak with one voice (as they did in the ITER project on nuclear fusion research)?

*The question of appropriate scale: global, EU, national, company or institute can not be answered in general terms as it depends on the subject and its relative merits. Inherently the smallest organisation able “to do the job” has the least overhead. When either the scale of resources or the need of consensus dominates, one will look for EU or international approaches.*

### **Strengthening research institutions**

16. How can the resources of European research institutions be strengthened in the most cost-effective manner, in order to enable them to achieve excellence and compete on a world scale?

*In many cases the answer to this question involves ensuring closer coupling with the area benefiting from the R&D results. One of the weaknesses of research institutions is often that there are no “leading-edge-users” for their technology, the result often being that the results go where the market demand exists. This has been a problem with Europe’s R&D programmes for many years. Funded by public funds, the results were exploited by the competitors of the EU since there was a shortage of leading-edge customers for the new technology in Europe. More money for the institutions may not be the best way of ensuring their longer-term viability.*

17. How can research actors be better encouraged to create world-class virtual centres of excellence, such as in the context of the proposed European Institute of Technology, the FP7 ‘networks of excellence’ and national and regional initiatives, and to share structures that pool the research management capabilities of several institutions?

*Irrespective of other factors, a researcher will be motivated by his personal prospects for success, recognition and career advancement. Working in an environment which supports professional success and attracts further excellence remains a major factor in motivation.*

18. Is there a need for a European regulatory initiative to facilitate the creation of public-private partnerships?

*Public-private partnerships can be formed at a national level without much of a problem. They can also operate throughout the EU. In this sense, there is no need for new regulations. However, there are many practical constraints due to the lack of completion of the Internal Market, but these need to be addressed in the appropriate policy context.*

19. How can the EU and Member States best stimulate the emergence of European and global virtual research communities, exploiting fully the potential of computing, information and communication infrastructures?

*The facilities for virtual research communities are progressing rapidly and with further efforts will be quite rich and of good performance. However, research collaboration is not just effective communication and other factors may not be as easily addressed.*

20. Should action be taken to develop: (i) principles for autonomy and for the management of research by research institutions, notably universities; (ii) shared criteria for the funding and assessment of research institutions, notably universities, giving stronger weight to linkages beyond academia, as well as to output and performance factors?

*If the principles of an “Internal Market for Research” are applied, competition would introduce a natural motivation to address some of these factors.*

## **Sharing knowledge**

21. Is there a need for EU-level policies and practices to improve and ensure open access to and dissemination of raw data and peer-reviewed publications from publicly funded research results?

*IPR is in most cases a complex subject. If the public supports research it should have a say in the use of the results. However, as the work is based on previous know-how, most research is only partially funded by the public and as it may be against strategic interests of the public to indiscriminately disclose know-how, which is intended to serve the competitiveness of the EU, any kind of general disclosure policy may*

*be counter productive. Industry and academia may hesitate to ask for public funding in attractive areas, if disclosure is beyond their control.*

22. What should constitute a European Framework for knowledge sharing between research institutions and industry based on identified good practice and models?

*A framework for sharing of knowledge should be based on a fair and equitable reflection of the justified interest of all parties according to their contribution. For example, in a project where the public contributes, say 50%, the public authorities can not expect to dictate the disclosure of all results including foreground and background know-how. There must be a fair and equitable balance found.*

23. Are there specific R&D-related issues, such as the grace period, joint ownership regimes and the research exception that need to be looked at from a European perspective?

*Looking at real cases one finds a considerable range of situations which do arise and are subject of negotiation between the parties. Some general principles are shared, but the specifics are often adjusted to the specific conditions. Solutions for typical situations have been developed and adopted. For example, solutions for contribution to standardisation have been widely adopted.*

24. What conditions should be created to promote innovative approaches in the way that science and technology is communicated, taught, discussed and valued by Europeans, and taken up for evidence-based policy-making?

*One condition one should keep in mind in this context is the nature of technological change in recent decades. It has evolved rapidly, become more economically motivated and gone global. So whatever approaches one may choose, they will have to be able to deal with the evolving situation while at the same time ensuring the transparency and continuity key to planning certainty for all.*

### **Optimising research programmes and priorities**

25. Should common principles be developed and used for peer review, quality assurance and joint evaluation of European, national and regional research programmes? Should these programmes be opened to participants from other Member States, and how?

*If the “Internal Market for Research” is to be achieved, then the equivalent of opening “public procurement” should apply. As in that case, one would need consistent procedures and the definition when and under what condition opening to participants from all Member States should apply.*

26. Is there a need for shared principles for the accountability of public research funding, which would enhance simplification of rules and procedures and increase its effectiveness and efficiency?

*An Internal Market for Research implies that accountability be consistently applied and that there is a “Competition Policy for Research”, which is crucial for the functioning of the Internal Market in general.*

27. What participative processes need to be put in place to enable public authorities to jointly identify and decide upon major societal issues requiring a pooling of resources and capacities?

*There are national and European political institutions which have the mandate to take up such subjects. Various NGOs and interest groups are operating nationally, as well as internationally, to represent their interests and concerns. To set up additional processes may not be useful, as with any new issue, new pressure groups form and they may not consider themselves adequately represented by whatever processes there are in place.*

28. On such societal issues of European or global dimension, how could principles and modalities be established and tested for joint programming of research, involving all stakeholders (research institutions, business, civil society etc.) and bringing together funding from EU, national, regional, business and philanthropic sources?

*Taking the example of the UN work on global warming, one can see that there are effective modalities available for joint programming of research. The problems arise due to divergence in motivation and interests. The modalities tend to be adapted to find compromise solutions and it is not evident that a “new modality” could resolve the problems due to different interests.*

29. Should the European Community seek membership of intergovernmental research organisations?

*If the Commission uses public money to fund research, it has a responsibility to see that it is optimally used. The Commission has,*

*therefore, its intergovernmental consultation mechanisms in place. Replacing this by Membership in intergovernmental research organisations, is an institutional matter to be considered with Council and European Parliament. In practice the Commission is “observing the intergovernmental research organisations” and vice versa, thereby ensuring transparency.*

## **Opening to the world: international cooperation in S&T**

30. How can the European Commission and Member States work together to (i) define priorities for international S&T cooperation in close coordination with the other dimensions of external relations; (ii) ensure the coordinated and efficient use of instruments and resources; (iii) speak with one voice in multilateral initiatives?
31. How can the European Commission and Member States work together to explore the potential of initiatives for international research programmes on issues of a global dimension, involving the Community, Member States and third countries?
32. How should S&T cooperation with various groups of partner countries be modulated to focus on specific objectives? Should complementary regional approaches be explored?
33. How can neighbouring countries be best integrated into the European Research Area as part of the European Neighbourhood Policy?
34. How can the EU's bilateral S&T agreements be made more effective? Are there alternative or complementary instruments that can be used, such as joint calls for projects, involving where possible the Member States?
35. How can common European agendas for S&T cooperation be promoted in multilateral organisations and agreements as well as with regional organisations?