Opinion of the Committee of the Regions on ICT infrastructures for e-Science; a strategy for ICT R&D, innovation and research on future and emerging technologies in Europe

(2010/C 141/05)

THE COMMITTEE OF THE REGIONS

— encourages the European Commission and the Member States to take all necessary measures to ensure that local and regional authorities are fully and effectively involved in the governance of ERA-related initiatives;

— considers that European-scale ICT projects spanning from R&D to deployment have the potential to deliver substantial socio-economic benefits for their associated cities and regions;

— calls for the Commission and the Member State governments to actively foster the involvement of LRAs in the various stages of R&D processes as well as the use of ICT innovations in the public sector, namely by promoting best European practices and providing advice and methodological recommendations;

— strongly emphasises the particular importance of the service sector in drawing the benefits from ICT, since industries such as the wholesale and retail trade, financial and business services are among the most important investors in ICT.

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Reference documents

COM(2009) 108 final

COM(2009) 116 final

COM(2009) 184 final

I. **POLICY RECOMMENDATIONS**

THE COMMITTEE OF THE REGIONS

1. points out that information and communication technologies, underpinning an information society which is open to all, should meet the needs of all citizens, including those at risk of social exclusion. In this regard, the CoR has consistently called for investment in research at local, regional, national and European level in order to ensure growth and foster new businesses and believes that the use of ICT in innovation can address key socio-economic challenges;

2. encourages the European Commission and the Member States to take all necessary measures to ensure that local and regional authorities are fully and effectively involved in the governance of ERA-related initiatives. In the field of ICT research the significance of the regions stands out. They are key players in developing regional research and innovation strategies; they often govern research institutions; they have universities and other research institutions established in their territories and they foster innovative environments. Moreover, many regional governments and administrations have legislative powers and so deal themselves with their own allocated research budget;

3. points out that the promotion of e-Inclusion, meaning an inclusive, regionally and socially equitable information society, which uses ICT for increasing competitiveness and enhancing public services, has been identified by the CoR as a key objective within the EU's renewed Lisbon Strategy;

4. stresses that local and regional authorities are amongst the main recipients of the i2010 e-Inclusion initiative's proposals and can be key drivers for its implementation. E-Inclusion at local and regional level can enhance people's quality of life and drive socio-economic activity among the public, while fostering regional and more efficient and personalised public services as well as local businesses. Therefore local and regional authorities need to be partner in involving all generations in society, into ICT initiatives aiming at making their life easier and more comfortable. Several means are available to regions and cities to ensure that this potential is fully exploited;

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5. welcomes the fact that in this Communication the Member States and the regions are recognised as the main promoters of closer cooperation between users and producers of ICT innovations in different corners of government and administrations, which should lead to shared roadmaps of public service needs that ICT can help address [1]. The CoR has already expressed the view [2] that local and regional authorities should participate in wide-ranging cooperation to improve public administration interoperability and the effectiveness of public service delivery;

6. supports the Commission's conclusion that the success of the efforts to facilitate the emergence of markets for innovation and achieve interoperability and common standards depends on the continued support and participation of national, regional and local authorities, and that these efforts should be supplemented by actions at regional and local level [3];

7. welcomes the Commission's ambition to simplify procedures and reduce the administrative burden to make it more attractive for innovative companies, in particular local SMEs, to participate in local, national and EU-level actions;

8. considers that European-scale ICT projects spanning from R&D to deployment have the potential to deliver substantial socio-economic benefits for their associated cities and regions. The CoR has already stressed that ICTs play an important role in implementing the EU's Sustainable Development Strategy;

9. advocates that Europe's full potential for developing ICT services in the public and private sectors be fully exploited, and thus that ICT be used as a means of improving local and regional authorities' services in fields such as healthcare, education, job creation, public order, security and social services. The EU-supported public-private-partnership among local and regional authorities (LRAs) and ICT development SMEs in the area of public ICT services can serve as an excellent cornerstone for building local competences and knowledge EU-wide;

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[1] COM(2009) 116 final.
[2] CdR 10/2009 fin.
[3] COM(2009) 116 final.

10.   highlights that local and regional authorities can and do take leadership in using ICT for increasing energy efficiency and play a leadership role in identifying local ICT opportunities for sharing technological best practices, for identifying project partners and for allocating funding;

11.   calls for the Commission and the Member State governments to actively foster the involvement of LRAs in the various stages of R&D processes as well as the use of ICT innovations in the public sector, namely by promoting best European practices and providing advice and methodological recommendations;

12.   strongly emphasises the particular importance of the service sector in drawing the benefits from ICT, since industries such as the wholesale and retail trade, financial and business services are among the most important investors in ICT [1];

13.   notes that ICT has emerged over the past decade as a key technology with the potential to transform economic and social activity, thus contributing to sustainable development and enhancing competitiveness. However, policies to bolster ICT will not on their own lead to stronger economic performance and [2] cannot be realised without the active support and participation of the local and regional authorities;

14.   underlines the need for the social partners, LRAs and government to work together to ensure that a virtuous circle of human resource upgrading, organisational change, ICT and productivity is set in motion and that ICT are developed and used effectively. Policies aimed at enhancing basic literacy in ICT, building high-level ICT skills, fostering lifelong learning in ICT, and enhancing the managerial and networking skills needed for the effective use of ICT, are particularly relevant [3] and belong to the core competencies of the local and regional authorities;

15.   fully agreeing with the notion that researcher mobility is a principal factor for making ICT research careers more effective and in most of the cases more attractive, the Committee underlines that

— interest in research and innovation needs to be promoted in society, particularly among the young. The Member States should seek to adapt their national curricula in a way that would familiarise students with the potential of ICT in science and research, starting from early schooling programmes. LRAs, as the tier of governance directly responsible for organising education, should be an integral part of this process, combining local expertise and the European support measures to be developed in this field. The Commission should seek for an opportunity to develop adequate support mechanism;

16.   points out that it is also necessary to attract excellent academics from outside Europe and therefore emphasises the importance of EU mobility programmes such as the Marie Curie programme and measures that have been taken in some regions to support returning academics [4];

17.   recalls the conclusions of the ERA expert group [5] concerning the increasing importance of national and regional stakeholders in developing major new European initiatives such as ERA-NETs, Eurostars, EIT or Joint Technology and Cluster;

18.   suggests that all players, the EU, the Member States and the regions should explore all possible means of achieving complementarities between existing policies and cooperation instruments and establishing the mechanisms which will ensure that existing coordination programmes support ICT research to the full [6]. More specifically, as the CoR has stated in previous opinions [7], it calls for a coordinated use of FP7, SF and CIP, as this is essential for the competitiveness of the EU and the mutual synergy between cohesion, research, higher education and innovation policies at national and regional levels;

19.   would like to underline that coordination of major EU instruments such as FP7, SF and CIP, is not only a question of political intentions, but also a challenge in terms of policy coherence. Ensuring policy coherence in the case of multi-level and multi-stakeholder programmes requires the existence of an efficient multi-level governance system [8];

[1] The Economic Impact of ICT Measurement, Evidence and Implications
     http://browse.oecdbookshop.org/oecd/pdfs/browseit/9204051E.PDF
[2] The Economic Impact of ICT Measurement, Evidence and Implications
     http://browse.oecdbookshop.org/oecd/pdfs/browseit/9204051E.PDF
[3] The Economic Impact of ICT Measurement, Evidence and Implications
     http://browse.oecdbookshop.org/oecd/pdfs/browseit/9204051E.PDF

[4] CdR 83/2007 fin.
[5] Report of the ERA Expert Group 'Opening to the world: International Cooperation in Science and Technology'.
[6] CdR 283/2008 fin.
[7] CdR 263/2007 fin.
[8] CdR 263/2007 fin.

20. points out how important it is for the regions to make optimum use of FP7 coordination instruments. This would enable the regions to strive for excellence and European or international competitiveness in their research and innovation systems. This includes improving regional networking between research institutes, universities, SMEs and other relevant actors; creating clusters, regional technology platforms and poles; and helping the regional players connect with collaborative EU research and innovation projects and agendas such as ERA-Net and the European Technology Platforms (¹);

21. welcomes the opportunity for a greater acknowledgement of the role played by local authorities in supporting ICT research. Regions and cities can facilitate the market entrance of new products and foster innovation and research through pre-commercial procurement;

22. stresses that LRAs can also drive demand for new ICT-based solutions and therefore create new markets for the European research landscape. Furthermore, regions and cities may also adjust their R&D investments to support certain high-impact areas, linking such efforts into existing and emerging local industries and clusters, thus helping tackle economic recession and underinvestment in R&D;

23. points out the general lack of coordination of efforts in a number of different layers like education, innovation, research, investment and marketing of innovative ICT solutions. In this regard, the concept of user-driven innovation can serve as a key tool for improvement, which is being used in more and more regions and cities across Europe, and has proven to be a central driver of R&D investment and market entrance of new innovation; therefore, calls that this concept is more prominently present in the European Commission's Communication;

24. underlines the importance of closely linking R&D and industrial practices, and therefore urges the Member States and the Commission to make every effort to promote the rapid transfer of research into daily commercial and public practices;

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25. stresses that the process of building up research and innovation potential for moving the ICT frontiers can only succeed with the involvement of cities and regional authorities. Given their physical proximity, they are the main catalysts for knowledge and innovation in Europe. An increasing number of

European regions are making research and innovation a top priority of their public funding (²);

26. notes that, in the context of their research policies, through supportive programming, and structural and legislative framework conditions, the regions make a significant contribution to creating added value in the field of research and to the creation of a living European research area (³);

27. points out that in terms of strategy, networking and cluster initiatives continue to emerge, while support for them is also evolving with a view to creating world-class 'nodes' to link to global innovation chains, therefore, linkages and cooperation between regions both within and across countries are becoming increasingly important (⁴);

28. draws attention to the major importance of cities and regions in developing innovative environments through local innovation policies, technology centres, business incubators, science parks and venture capital (⁵);

29. welcomes the strategy proposed by the Commission to identify and launch two or three bold new FET research flagship initiatives which will drive larger multidisciplinary research community efforts towards foundational breakthroughs at the frontier of ICT;

30. recognises that Joint Programming, if well structured and governed, has the potential to become a mechanism that is at least as important as the EU Framework programme in terms of promoting FET research. In order to fully exploit this potential, the CoR would again point out the growing need to better coordinate public and private research funding (⁶);

31. stresses that the EU and the Member States should exploit all opportunities for streamlining and enhancing the synergies between the raft of existing trans-national policy instruments and collaboration mechanisms, adapting them in line with the European Research Area (⁷);

32. reiterates that the ERA-Nets coordinating regional and European research programmes have demonstrated their value and should be developed further (⁸), with the success of the ERA-NETs stemming from the inclusion of a wide range of stakeholders, including local and regional authorities;

(¹) CdR 263/2007 fin.

(²) CdR 263/2007 fin.
(³) CdR 83/2007 fin.
(⁴) OECD Science, Technology and Industry Outlook 2008 – Highlights.
(⁵) CdR 83/2007 fin.
(⁶) CdR 83/2007 fin.
(⁷) Report of the ERA Expert Group 'Optimising research programmes and priorities', see annex.
(⁸) CdR 83/2007 fin.

33.   calls for further efforts to enhance the openness and transparency of the European Technology Platforms, to ensure the involvement of other stakeholders beyond industry and the research communities, such as local and regional authorities, civil society organisations and SMEs (¹);

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34.   believes that the regions and local authorities play a crucial role in the European Research Area (ERA) in that they serve those representing local interests, bring this policy to the European people and are in touch with stakeholders' day-to-day concerns. The CoR therefore argues that the regions should play a strategic role in initiatives to strengthen and enlarge the ERA, especially in those which involve setting up robust research facilities in innovative settings and cooperating in research (²);

35.   reiterates the CoR's suggestions to the Commission and Member States to support regional and local authorities in applying for, building and implementing modern research infrastructures:

— to make sure the regional and local authorities are more fully involved in developing the European Strategy Forum on Research Infrastructures (ESFRI) (³) roadmap, and, especially, in prioritising the 35 key projects of European interest already approved;

— to take into account the importance of the regional and local authorities and their involvement in ERIs; and

— to make sure that local and regional authorities are truly involved in efficient governance of the ERIs (⁴);

36.   highlights the importance of the regional and local authorities in promoting joint research programmes, including

those with third country participation, as LRAs are more in touch with the specific local situation in terms of science, technology and the economy, and therefore know when cooperation on areas of strategic importance is required (⁵);

37.   considers the issue of implementing and financing the European Roadmap – which currently contains 35 key projects of European interest to be developed in the next 10-20 years (⁶) – to be an important milestone in the creation of a European Research Area;

38.   recalls the criterion of excellence to be at the forefront when implementing the European Roadmap and has urged the new Member States to be more closely involved in this initiative (⁷);

39.   supports the recommendations of the ERA expert group (⁸) that ESFRI should further improve its methodology for assessing large-scale pan-European research infrastructures, particularly with regard to the transparency of procedures and the involvement of relevant stakeholders;

40.   points out the need for local and regional authorities to be fully involved in the implementation and revision of the ESFRI Roadmap, in particular with regard to the necessary prioritisation of the projects and the coordination between the ESFRI roadmap and similar activities at national/regional level, integrating both physical and virtual facilities;

41.   stresses the need for the widest possible public to receive information on the opportunities provided by e-Science to the widest possible public, including the creation and promotion of public databases on best e-Science practices, examples and available successful solutions, while ensuring the provision of relevant information in all official EU languages.

Brussels, 3 December 2009.

The President
of the Committee of the Regions
Luc VAN DEN BRANDE

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(¹) European Commission, March 2007: Third status report on ETPs, chapter 4.1.
(²) CdR 283/2008 fin.
(³) European Strategy Forum on Research Infrastructures, http://cordis.europa.eu/esfri/home.html
(⁴) CdR 283/2008 fin.

(⁵) CdR 283/2008 fin.
(⁶) http://www.riportal.eu
(⁷) CdR 263/2007 fin; CdR 83/2007 fin.
(⁸) Report of the ERA Expert Group 'Developing World-class Research Infrastructures for the ERA'.