
EURAB 05.041

**EUROPEAN RESEARCH ADVISORY BOARD
FINAL REPORT**

**Stimulating the regional potential
for research and innovation**

November 2005

RECOMMENDATIONS

The capacity of Europe's regions to undertake research and innovation is a crucial factor in delivering the Lisbon Agenda. The challenge facing the Union is to unlock regional potential wherever it might be located and to harness this to support economic growth and the creation of employment. In order to achieve the Lisbon objectives, European policies should be focused on supporting all regions to achieve their potential for research and innovation. We recommend:

1. That the EU's Financial Perspective reflects the emphasis attached to research and innovation in delivering the relaunched Lisbon strategy, and that it recognises the crucial role which stimulating regional capacity for research and innovation will play in this. Moreover, the financial guidelines adopted must ensure that less wealthy regions are not penalised in their ability to participate in actions designed to promote regional research and innovation capacity more generally.

2. That horizontal programmes are implemented which promote co-operation and collaboration between regions. Through co-operation and collaboration regions can build a critical mass for research and innovation, drawing on skills and knowledge developed elsewhere, whilst contributing to their own stock of knowledge and expertise. The EU has had strong success in stimulating research and innovation networks through its Framework Programmes, it must now seek to achieve similar success in developing networks of regions. We commend the good start made by the Regions of Knowledge Pilot Action and recommend its continuation and further development. We further recommend that building regional research and innovation capacity be a key objective of the future transnational programmes of the Structural Funds.

3. That DG Research supports the strengthening of knowledge, skills and expertise in policy-making for regional research and innovation. We recommend three actions that should be supported in this area:

- To facilitate regional inventories/audits of strengths and weaknesses in research and innovation. The value of such actions in guiding future strategies has been fully demonstrated.
- To establish a strong, regionally-focused, communication mechanism aimed at facilitating the dissemination of good practice and exchange of information between regions. As a starting point it might start to bring together the myriad of initiatives currently operating at a European level.
- To support the development of a Knowledge Hub for Europe. This centre of expertise would be dedicated to providing the practical training, tools and experience required to support the development of regional innovation capacity. It should also stimulate research into regional innovation issues and help to build a community of practice in this area. The Knowledge Hub might be a single point or co-ordinate a wider linked network of expertise. The activities of the Hub should be aimed at organisations, particularly those in the public sector, involved in stimulating research and innovation at a regional

level. The facility should provide training materials as well as facilitate on-the-spot training, secondments and (virtual) mentoring arrangements.

4. That DG Research supports the development of actions which emphasise the crucial role of education in strengthening regional potential for research and innovation. We acknowledge that this has its foundations in national education systems but the European Commission must encourage regions to invest in talent, to promote the mobility of researchers and to develop entrepreneurial skills. Building on this base DG Research should continue to develop its mobility scheme for young and for experienced researchers. Moreover we recommend that DG Research should encourage the 'twinning' of universities, research institutes and other research centres to stimulate regular exchange of staff and students, particularly where strong reciprocal benefits to the regions involved can be demonstrated.

5. That DG Research supports actions for developing a strong physical capacity for research and innovation within, and across, regions. Different regions have different needs but small to mid-sized units, connected to EU knowledge networks encouraging co-operation and collaboration, provide an important capacity base for research and innovation at a regional level. Building on the GEANNT network will also be critical in stimulating the regional potential for research and innovation in the future. The European Commission, through its various financial programmes has a duty to ensure that infrastructure is not only developed but can also connect to the wider European innovation system, placing the region at the heart of this system.

6. That within the 7th Framework Programme RTD support actions are developed aimed at stimulating the engagement of regionally-based SMEs, as well as universities and larger enterprises. These should support smaller, shorter projects which are attractive to SMEs and build on-going research and innovation capacity. Eligibility requirements in the first instance might be trans-regional rather than trans-national. To facilitate connections to wider knowledge networks, we recommend that mechanisms that promote intra-regional collaboration between SMEs and universities should be encouraged.

7. That a sound evidence-based strategic framework should be required for all regions as part of a partnership approach to developing regional innovation capacity. It is essential that efforts to stimulate regional research and innovation capacity are well-directed. This is best done through the development of specific regional strategies. Benchmarking exercises, foresight exercises and audits of research and innovation capacity within the region, in conjunction with wide-ranging consultation, can prove valuable in identifying regional strengths and weaknesses and help to guide strategy development.

1. Mission

The aim of this paper is to advocate actions that will stimulate the regional potential for research and innovation across the Union in support of the EU's stated objectives in this area.

2. Introduction

The capacity of regions to undertake research and innovation is an important consideration if Europe is to succeed in its aim of becoming the most dynamic knowledge based economy in the world¹. Evidence emerging from several recent studies² reinforces the importance of the territorial dimension to levels of R&D and innovation across Europe. This has implications for both the prosperity of regions and for the overall competitiveness of the European economy.

The challenge facing the Union is to unlock regional potential wherever it might be located and to harness this to support economic growth and the creation of employment at both a regional and a European scale. This requires a stronger focus - throughout the Union - on policies to stimulate research and innovation at a regional level. The regional level is crucial, for it is at this scale that the dynamic relationship between firms, universities and intermediary bodies can be most effectively mobilised. Failure to do so will not only hinder the Union's objectives of securing knowledge-based growth and competitiveness but will also lead to a widening of inter-regional disparities and a lack of territorial cohesion.

Regional cohesion and a competitiveness agenda are not mutually exclusive aims; rather they should be seen as necessary complements if Europe is to achieve its overall goals³. In seeking to stimulate regional potential for research and innovation actions will be needed that support the continuing development of Europe's strongest regions and that can release the latent potential existing in less advanced regions. Different actions will be needed in different regions, but this is for reasons of path-dependency and institutional context; the goal of stimulating research and innovation remains the same.

¹ CEC 1998 Com (1998) 275: Reinforcing cohesion and competitiveness through research, technological development and innovation; and CEC 2001 Com (2001) 549 Final: The regional dimension of the European Research Area.

² See for example: ESPON 2004 The territorial impact of EU R&D policy; DG REGIO 2004 Factors of Regional Competitiveness

³ CEC 2003 Investing in Research: an action plan for Europe. Com (2003) 226 final/2

3. Clarifications

Regions in Europe vary greatly, in terms of population size, territorial area and political/administrative powers. European regions⁴ are related to the political and administrative boundaries of different Member States but the two approaches are not always coterminous. We do not attempt to define a 'region' in this paper but recognise the diversity which exists. The actions that are set out can be applied at different scales as appropriate. In considering the notion of regional capacity for research and innovation it is worth bearing in mind the importance of many cross-border 'regions' in Europe. Although these do not necessarily conform to administrative or political units they do form functional areas, with strong potential for research and innovation.

Regions differ in their ability to generate and exploit new ideas. Their capacity to develop and absorb knowledge is influenced by the skills of the labour force, the capabilities of local firms, the availability and strength of knowledge-based infrastructures - such as universities and research institutes – and access to investment capital. The prevailing social and institutional context also plays a role.

The extent, and depth, of interactions between different players in the innovation process (such as universities, firms and governance authorities) are particularly important. Many companies in Europe (particularly SMEs) are region-specific whilst universities often take a wider view. That said, universities and research institutes do have strong links with their local regional economic base. The potential that these linkages offer is increasingly being recognized within policy circles. Equally, policies aimed at stimulating regional capacity are more likely to mobilize the critical SME community than actions taken at other levels.

4. The challenge

Levels of research and innovation in a region have long-term and cumulative effects on regional prosperity. The challenge which policy makers are facing is how to unlock the potential for research and innovation which exists in each region through mobilising the actions of individuals and organisations. This is best undertaken at a regional level for it is within regions that policies to stimulate research and innovation combine to influence levels of activity 'on the ground'.

Policies seeking to stimulate research and innovation must be appropriate to the needs of particular regions, and to the requirements of organizations within that region. At an EU level, horizontal mechanisms that provide a facilitating framework offer the

⁴ Eurostat, the Statistical Office of the European Union has defined an administrative classification of the European Union, called NUTS (Nomenclature of Territorial Units for Statistics). This is to provide a single uniform breakdown of territorial units for the production of regional statistics for the European Union. The NUTS classification has been used since 1988.

scope to meet these different needs. Such frameworks should address the needs of SMEs, particularly those engaged in high value-added, knowledge intensive activities, as the engines of innovation itself; as well as supporting the research base in a region and providing support for governance arrangements. To stimulate regional capacity for research and innovation means putting regions themselves into the policy picture.

5. Actions to stimulate regional potential

Many positive actions are being undertaken to stimulate research and innovation in regions. Well-founded European policies can be a valuable means of encouraging and facilitating activity in areas where it is not already occurring. Some of these actions can be supported by the European Framework programmes, others by domestic funding streams and other European financial instruments such as the Structural Funds in those areas eligible and, potentially, the proposed Competitiveness and Innovation Programme. It is crucial that regions harness the various opportunities available in a coherent and co-ordinated programme of activities. Actions are particularly to be encouraged in the following areas.

- ***Improving the regional skills base***
The availability of skilled, flexible and motivated workers is of fundamental importance to a region's capacity to undertake research and innovation. Regions may seek to develop the skills and qualifications of their own population, either through education and training programmes or through schemes that introduce workers to new ideas and approaches. In addition regions that can attract the best talent are able to cumulatively enhance their capabilities. Such initiatives must be well co-ordinated between the governing bodies and the specific demand of the economy. Mobility schemes, such as those promoted by the Framework Programmes, provide one valuable means of building the talent base. Developing linkages between universities, firms and research institutes can provide another.
- ***Stimulating co-operation and collaboration***
Well functioning networks – both formal and informal - are needed to realise regional potential for research and innovation. They stimulate knowledge and information exchange, joint learning and help to build the critical mass required for successful research and innovation. Within a region, actions to encourage links between businesses, universities, research institutes and public sector intermediaries have all proved successful. Stimulating linkages outside of the region provides an important means of bringing new knowledge and capabilities into the region.
- ***Improving and strengthening regional infrastructure***
Ensuring that there is an adequate regional 'knowledge' infrastructure is fundamental. Actions in this area can focus on the provision of public sector or academic research facilities, or on developing facilities to stimulate private sector activities and infrastructure for private-public-partnership research initiatives such as centres of competence. The presence of universities with a strong research base and active

links to local firms provides a focus for promoting innovation in many successful regions. The development of Science Parks, Technology Parks and Incubation Facilities - enabling the development of spin-off businesses and connections to be made between research activities and innovative firms - have all proven valuable in stimulating regional potential in this area. Actions to promote high-speed communications networks and connections between universities, research institutes and firms also have a place to play in stimulating research and innovation capacity. Many regions have found it profitable to concentrate their resources in the development of one or more regional clusters of activity.

- ***Mobilising capacity***

Very often the secret of stimulating the potential for research and innovation in a region rests upon mobilising the capacity that already exists, rather than simply seeking to add more. It is about stimulating ambition and encouraging universities, SMEs and others to 'raise their game'. This has been one of the big success stories emerging from the Regional Innovation Strategies supported by the European Commission. Champions and entrepreneurs that act as role models can all raise the profile of innovation within a region, helping to stimulate others to emulate their actions.

- ***Financing research and innovation***

Financial tools, such as specialised Venture Capital funds and proof of concept funds, play a valuable part in stimulating levels of research and innovation. The difficulties faced by many firms and researchers in securing finance are well documented. Initiatives that help to bridge this gap can unlock regional potential, stimulating the commercialisation of ideas and higher levels of private-sector finance for research and innovation. European funding instruments play an important role in helping to unlock regional potential in this area, particularly in those areas eligible for support through the Structural Funds. Ensuring that the advantage is taken of all sources of finance available, in a co-ordinated manner, is a key challenge for authorities seeking to stimulate regional potential for research and innovation.

- ***Establishing the evidence base***

Regional efforts to stimulate research and innovation should play to their strengths and opportunities, as well as tackling identified weaknesses. A solid evidential base is required. This can be established through benchmarking exercises, foresight exercises and audits of research and innovation capacity within the region. European actions in this area, such as the European Innovation Scoreboard, Trend Charts and Community Innovation Survey, provide powerful informative tools, which, in some cases, are available at a regional level. The importance of engaging businesses, particularly SMEs; the research base of the region and regional politicians in these exercises have repeatedly been demonstrated by the RIS/RITTS programmes⁵. It is

⁵ In parallel with the main interventions of the Structural Funds between 1994-99, DG Regional Policy launched pilot schemes for the implementation of *Regional Innovation Strategies* (RIS) funded under Article 10 of the European Regional Development Fund (ERDF). In parallel with this action, the

the choices made by these actors that will determine the future level and direction of research and innovation in a particular region.

6. Stimulating regional research and innovation through EU actions

The focus of this paper is on the role of the EU's Framework Programmes in stimulating regional potential for research and innovation. European regions are central players in efforts to stimulate the generation of new knowledge and its exploitation by firms. Their efforts need to be supported and enhanced through concerted policy actions at a European policy level. This requires a financial commitment to meet the existing political goals. We fully support the proposed increase in the budget for EU R&D activities and measures supporting innovation and recommend that this is respected in the agreed Financial Perspective⁶.

Policies seeking to stimulate research and innovation must be appropriate to the needs of particular regions, and to the requirements of organizations within that region. At an EU level, horizontal mechanisms that provide a facilitating framework offer the scope to meet these different needs. There are already many positive actions being undertaken to stimulate research and innovation in regions and European policies must harness this energy and stimulate actions where they are lacking.

An important role is also to be played by the Competitiveness and Innovation Programme and by the Structural Funds. In the case of the latter we fully support the Commission's view that "Cohesion policy can help **all** regions to build up research and innovation capacity thus contributing to the effective participation of these regions in the European Research Area and research and innovation activities in the Union in general"⁷. It is beyond the remit of this Group to consider these different initiatives closely and, in the case of the Structural Funds, valuable work has already been completed⁸.

Integrated actions that support leading edge research, the development and retention of highly skilled personnel and the commercialisation of innovative products and processes are crucial. Equally important are those actions that help to build the capacity of European regions, individually and as a whole, to engage in research and innovation. We fully endorse the Commission's proposals for regional strategies to

former DG XIII (now DG INFSO) launched a *Regional Innovation and Technology Transfer Strategies and Infrastructures* programme (RITTS – Innovation Programme within the Fourth RTD Framework Programme)

⁶ EURAB Report and Recommendations on The Financial Perspective for Framework Programme 7 and Criteria for the Selection of Topics for the Work Programmes (10 May 2005)

⁷ CEC 2005 Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines 2007-2013 Com(2005) 0299 p18 emphasis added.

⁸ EURAB Report and Recommendations on The Structural Funds and The Research Component (May 2004)

set out the synergies between Framework Programme activities in regions and actions supported through the Structural Funds and the Competitiveness and Innovation Programme⁹.

The many actions that can be taken to stimulate research and innovation throughout Europe's regions have been highlighted in this paper. In support of these actions we recommend seven points for consideration by DG Research. These recommendations are set out at the beginning of this paper. We firmly believe that EU action in these areas will pay dividends in strengthening the Union's capacity to undertake research and innovation, promoting economic growth and supporting economic cohesion.

⁹ CEC 2005 Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines 2007-2013 Com(2005) 0299