

Investing in Research and Innovation

Exchanging European Experiences in a Nordic Context

Copenhagen 16-18 October 2006

The Copenhagen Conference Conclusions (CCC)

The European countries are all, to various extents, influenced by globalisation and ever increasing pressures on national economic competitiveness. It is widely believed that there is a growing need to look into issues of research, education and innovation when seeking global competitiveness. Knowledge and innovation for growth and jobs are becoming the primary driving force for European economic development, and are being implemented through the new Lisbon strategy. Hence, research excellence and its supporting institutions, universities and research councils, have an ever more important societal and economic impact on the future. The so-called *European Paradox* must be overcome, i.e. the problem that Europe is unable to sufficiently turn research results into globally competitive products. The gap between research outcomes and their application is still experienced as wide. These two issues cannot be considered separately anymore. Hence, there is a need to reinforce the bridges between education, research, and innovation (i.e. the so called *Knowledge Triangle*).

There is a need to be far better at cultivating and developing our talents and unique skills. The European Charter for Researchers and the Code of the Conduct for the Recruitment of Researchers are key elements to make research an attractive career, which is a vital feature of its strategy to stimulate economic and employment growth. Giving individual researchers the same rights and obligations wherever they may work throughout Europe should help counter the fact that research careers in Europe are fragmented at local, national, regional or sector level, and allow Europe to make the most of its scientific potential.

Concentration of commitment to R&D is necessary, especially for small and medium sized European countries with relatively small knowledge communities. No country/region alone can be leading in everything, but might be in limited areas. No research area can develop excellence based on one research community only, but only through international research cooperation of many.

These issues have been piloted by the Nordic countries in collaboration, via national research and innovation agencies, common institutions like NordForsk, an independent Nordic research board, and Nordic Innovation Centre (NICE). The Nordic research and innovation area (NORIA) is to a large extent an example of a regional building block serving as an integral part the European Research Area (ERA). The Conference aimed to place Nordic efforts in research and innovation in a European context. How can the Nordic countries contribute to the ongoing processes, and what can be lessons for mutual learning between Europe and the Nordic Region?

The conference identified the following main challenges and provided the following recommendations

Strategic aspects of coordination and integration in the European Research and Innovation Area

The concept of ERA (European research area) and the concept of NORIA (Nordic research and innovation area) highlight the fact that there is a need for more regional cooperation in the future. The vision for ERA is an open inner market for research and innovation. Stronger regional collaboration between countries targeting knowledge and innovation for growth will also strengthen the ERA.

European countries are best served with, and should aim for, a strong ERA, where strong regional research and innovation areas, like that of NORIA, can be building blocks.

Standing still is not possible in research and innovation. You are either moving forward or sliding back.

Opening up national research and innovation programmes is an important part of the realisation of NORIA and ERA. Such opening is built on trust and confidence between the partners, and is in most cases gradual. The most realistic way of achieving the final goal, is a stepwise procedure:

1. Often research programme collaboration starts with joint planning of a programme, coordinated peer reviews and decision making, and joint calls, but with each partner funding its own researchers and teams in the joint projects within the joint programme.
2. A second stage may be a *virtual common pot*, where funding can consist of various degrees of *common-pot-no-fair-return*. Hence, national funding can to various degrees be secured for ones own research groups.
3. A third stage may be a real *common-pot-no-fair-return* (as for instance in the Nordic Centres of Excellence Programmes and the Nordic Graduate Schools).
4. Finally a fourth stage is the opening up of programmes (or some parts of them), so that researchers working in other countries can apply for funding within this programme.

Recommendations:

- Gradual opening up of selected national research and innovation programmes, in a series of stages starting with programme collaboration and ending with full cross border open programs (*common-pot-no-fair-return*).
- Actively use the instruments available, such as ERA-NET schemes, article 169-initiatives, Technology Platforms and Joint Technology Initiatives, in FP7 to coordinate and integrate research in the European Research and Innovation Area.
- Use European industrial experiences with Technology Platforms and Joint Technology Initiatives.
- Make sure that existing monitoring instruments (like ERAWATCH) are widely used.
- Regional cooperation should be open to interested parties.

Innovation - the role of trans-national cooperation for incubation and finance

A major challenge for Europe is to create an innovation friendly market, with the right conditions for private investment, with better regulation and more and better investments in research, from both the public and the private sector, so as to turn our ideas into societal and/or economic value.

There is a need to strengthen and integrate the links between the research and business communities and reinforce the importance of innovation policy as a tool for economic growth in Europe. Strengthening the innovation infrastructure in Europe is a key for the success of efforts. Modern approaches towards incubation and finance should be implemented and benchmarked in Europe.

Recommendations:

- Use business incubators, technology transfer networks, early stage financing funds, Triple Helix clusters and science parks to promote links between investors, academia and local government.
- Strengthen the use of structural funds and public procurement to boost R&D and innovation.
- Actively use the Competitiveness and Innovation framework Programme (CIP), which is a coherent and integrated response to the objectives of the renewed Lisbon strategy, and works in parallel with and complements other major programmes covering cohesion activities, research, technological development and demonstration activities and lifelong learning.
- Face the challenges of local adaptation and implementation through dialogue between relevant stakeholders.
- Support and facilitate the concept of User Driven Innovation, with the customer in focus and develop competencies in this field.
- Stimulate universities to home in on innovation opportunities, link up with enterprises, and to cultivate an entrepreneurial culture.
- Focus is on the entrepreneurs, the drivers of the European economy. Entrepreneurship and the development of an entrepreneurial mindset must therefore be promoted.
- One should consider policies which recognise that innovation is most likely to succeed, when people involved have stakes in the project, and get direct returns.
- Consider policies that support consolidation and growth of small/micro companies into more solid businesses.

An open and transparent European labour market for researchers

Researchers play a pivotal role in tackling the so-called "European Paradox", Europe's difficulty in turning research results into globally competitive products. However, at present, we do not have in all fields an environment which facilitates this. Therefore we need a labour market where movement between academia and industry is encouraged, structurally supported and rewarded. Such mobility is not a goal in itself, but an instrument that can effectively contribute to foster innovation by sharing and transferring knowledge and enhancing both university and industry-based technology initiatives. The assumption is that a lack of movement is largely due to cultural and structural barriers as well as lack of incentives.

Mobility of researchers, both geographical and between sectors, must be enhanced. The implementation of a European strategy developed by the European Community, regional actors and member states to create an open, single, and competitive labour market for researchers from all over the world, with attractive career prospects, is of the utmost importance. All must play their parts in its implementation, not least to ensure that researchers, who leave a sector or country for a temporarily more attractive career, have the opportunity to return.

Strategies for recruiting and retaining researchers must be part of a stimulating research and research training environment, which inter alia allows researchers to enrich their own professional portfolios and to broaden their career prospects. They should also acknowledge the efforts of those who are most successful at linking excellence in research and teaching to the business world, through fund raising, patenting, establishing external collaborations, management activities etc.

The European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers are important measures in this respect. At the conference the Research Council of Norway signed the Charter and the Code, setting a good example.

Recommendations:

- Create the environment for establishing attractive, more knowledge intensive jobs both in the public and private sectors, through public incentives and private investment.

- Create the necessary conditions so that mobility (geographical, intersectoral and interdisciplinary) can become a rewarding component of researchers' career paths.
- Permit researchers to have flexible arrangements: part-time teaching, consultancy, adjunct and honorary professors and encourage this through staff evaluation and promotion systems, since they have a positive impact on research productivity.
- Increase the use of industrial and other public and private R&D settings to train doctoral candidates, using the experience of the Nordic countries and NordForsk.
- Consider co-location of university, hospital and biotech centres, science parks, industrial research centres and Technology Transfer Organisations (TTO's) to stimulate innovation by knowledge transfer, and foster networking between such clusters.
- Reduce administrative and legal obstacles for geographical and inter-sectoral mobility.
- Continue working for a widespread adoption of the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, in all the European countries

**Research and innovation for regional growth:
Bringing regions faster into the knowledge economy**

Europe is continuing to expand, and now includes more and more heterogeneous regions. The status of research and innovation varies accordingly. Today, 25% of R&D investments are made in only eight regions of the EU member states. A major challenge is to overcome an ongoing polarisation among the regions of Europe. Economic growth and innovation are foremost taking place in a limited number of metropolitan regions while a huge number of other regions are lagging behind. A related challenge is the uneven territorial distribution of research and knowledge production. Today, almost 10 billion Euro from the structural funds, has been invested in research and innovation between 2000-2006. This is a positive development. But in line with the recommendations from the Aho-report, this proportion should be even higher. In FP7 the need for developing regional research driven clusters, will be addressed through the Regions of Knowledge programme.

The high North covers the areas of the Arctic area adjacent to Norway, the northern part of Scandinavia and Russia, and the ocean area to the North of these countries. This is an important region for the Nordic countries and the rest of Europe, as well as for the circumpolar north. Education and research will be central elements to a secure more sustainable use of natural resources in this region. At the same time education and research are vital for innovation and development in the high north. The EUROPOLAR ERA-NET has brought a coherent approach to Europe's polar research. The Nordic countries in cooperation with the other countries, should play a key role in knowledge production for and in the high north, in cooperation with other countries.

Recommendations:

- Strengthen inter-regional cooperation and partnerships.
- Support regional triple helix initiatives and Public Private Partnerships, particularly in key technology areas like for example those of the Baltic Sea Initiative.
- Better coordination of existing initiatives and formulating joint actions in order to strengthen competitiveness and innovation in the many European regions.
- Create clusters, geographical or virtual, in which research can gather critical mass, share expensive infrastructure, and where business can take over ideas and convert them into growth - in capital or urban areas. Universities and other knowledge institutions are at the heart of such clusters.
- Develop cooperation in the Baltic Sea region. Good examples are ScanBalt campus, Bonus ERA-NET (Article 169 candidate), Nordic Baltic Platform for creative industries.
- Promote knowledge production for and in the high north, by being active participants in the International Polar Year 2007-2008.