COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 9.9.2009
SEC(2009) 1194 final/2

CORRIGENDUM: Concerne les notes en bas
no 86, 87, 94, 100 et 109.

COMMISSION STAFF WORKING DOCUMENT

Assessing Community innovation policies in the period 2005-2009

TABLE OF CONTENTS

1. INTRODUCTION

This Staff Working Document presents a review of the progress made since 2005 in delivering Community policies in support of innovation. It gives an overview of the work done to fulfil the objectives set in the 2005 Communication "More Research and Innovation – Investing for Growth and Employment: A Common Approach"[1] and the 2006 Communication "Putting knowledge into practice: A broad-based innovation strategy for Europe"[2].

A recent ex post evaluation of DG Enterprise and Industry's innovation activities that were funded through FP6[3] highlighted the **need for better assessing the impact of the actions rather than mainly describing their output**. Accordingly, this staff working document also takes a critical look, and besides describing the accomplishments, it also gives an account of the results of the actions and possible lessons to be learnt.

The 2005 Communication was adopted at a time when the Lisbon Strategy had just been re-launched, including research and innovation policies as instruments to enhance the competitiveness of the European economy. Accordingly, the Communication presented 19 points for action around these two policy areas.

The Aho Report[4] published in February 2006 at the request of the European Council, put innovation at the top of the political agenda. It formulated the need to complement supply side instruments with demand side innovation measures and underlined the urgency of making Europe more innovation friendly ("innovate before it is too late"). The Commission's response to the Aho Report was the Communication on the broad-based innovation strategy adopted in September 2006. It was conceived as a combination of new and up-dated policy instruments.

The different instruments of the broad based innovation strategy vary considerably in their scope and depth, as well as in the time needed for their implementation and until first impacts should be felt. They also presented a mix of actions under Community competence and of actions under Member States' competence. Therefore, the expectations in terms of implementation and impact should be commensurate with these considerations.

To facilitate the reading of this paper, policies have been categorised in three groups according to whether they pursued mainly improving framework conditions for innovation, supply-side measures, or the combination of supply with demand-side measures.

---

1 COM(2005) 488 final available at http://ec.europa.eu/invest-in-research/action/2005_communication_en.htm

2 COM(2006) 502 final available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0502:FIN:en:PDF

3 "Ex post evaluation of the activities carried out by DG Enterprise and Industry under FP6", GHK, Technopolis, September 2008

4 See http://ec.europa.eu/invest-in-research/pdf/download_en/aho_report.pdf

2. EU'S RECENT PROGRESS IN INNOVATION PERFORMANCE

According to the European Innovation Scoreboard (EIS) 2008[5], the EU27 has experienced considerable progress in its innovation performance since 2004. This progress is attributed to three main dimensions: human resources (the availability of high-skilled and educated people), finance and support (the availability of finance for innovation projects and the support of governments for innovation activities) and throughputs (the technology balance of payments (TBP) flow and IPR generated through research, which does not mean the IPR is necessarily translated into innovative goods or services).

In terms of individual Member States, a five-year calculation of their innovation performance growth suggests that all countries have improved, although with considerable differences amongst them. The EIS 2008 classifies countries according to this calculation into innovation leaders, followers, moderate innovators and catching-up countries. It can be observed that over recent years most countries with below average performance (moderate innovators and catching-up countries) have made faster progress than the innovation leaders or followers. **In other words, innovation performance has been converging across the EU-27**. However, this positive trend may not continue in the coming years, taking into account that the current economic crisis hits the Member States differently. Indeed, the data from the recent 2009 Innobarometer survey[6] suggests that companies in moderate innovator and catching up countries are cutting back on innovation investments at a greater rate than in those in the innovation leaders and followers.

Overall, the innovation performance of the US and Japan is above that of the EU27. Based on a set of 17 available indicators, the EU-US innovation gap has been dropping steadily and significantly for the last five years. The EU is performing better than the US only in science and engineering graduates, EPO patents, trademarks, technology balance of payments (TBP) flows and medium-high and high-tech manufacturing employment. However, the EU is actually outperforming the US in growth performance in all indicators, except business R&D and Patent Cooperation Treaty (PCT) patents. The EIS also shows that IT expenditures in the EU remain much lower than in the US and Japan, and that companies are reporting lower investments in other types of innovative expenditures (e.g. training, purchase of equipment, market introduction of new products and processes).

It has to be noted that the data on which the above analysis are based predates the current financial and economic crisis. It seems clear that the EU-27 was on a good track to reduce the innovation gap with the US and Japan before these crises. The crises risks having an impact on private and public spending in R&D and innovation and therefore slowing down or even reversing this catching-up Europe trend in innovation performance. The 2009 Innobarometer survey among 5000 companies in suggests that although around half the interviewed companies expect to maintain their innovation budget in 2009, some 28% expect it to shrink.

---

5 See http://www.proinno-europe.eu/EIS2008/website/docs/EIS_2008_Final_report.pdf (The European Innovation Scoreboard has recently revised its methodology to assess innovation performance in the EU Member States)

6 See at http://www.proinno-europe.eu/admin/uploaded_documents/Innobarometer_2009.pdf

It has also to be underlined that it is difficult to draw a direct cause-effect link between the EU innovation measures in this report and the development of the indicators. Innovation is a complex process with many interactions and is affected by many factors outside the reach of public policy measures. In addition, the main competencies and public budgets lie with the Member States and regions, not within EU competencies. The EU budget for research is estimated to represent only some 5-6% of the national public budgets. Moreover, it has to be noted that the innovation process as such has changed over the years in its nature, speed and players involved, which requires constant up-dates of the policy and analytical tools.

3. ASSESSING PROGRESS IN DELIVERING COMMUNITY INNOVATION POLICY

3.1. Framework conditions

3.1.1. A more research and innovation-friendly State aid regime

Objectives:

The Commission started in 2005 its State aid reform with the objective to redirect Member States'' aid to Lisbon-related objectives, such as R&D and innovation, risk capital measures, training, renewable energy/climate change and other measures for environmental protection, while ensuring a level playing field for European companies.

Activities:

Under the Commission's State Aid Action Plan a number of State aid regulatory texts were revised and adopted, including the Research, Development and Innovation (R&D&I) Framework[7], a new de minimis Regulation (exempting aid below €200,000 from notification)[8] and the Environmental Aid Guidelines[9] to support environmental technologies.

In the **R&D&I Framework, the existing possibilities for granting aid to R&D were expanded** to cover activities supporting innovation such as: aid for young innovative enterprises, aid for process and organisational innovation in services, aid for innovation advisory services and for innovation support services, aid for the loan of highly qualified personnel and aid for innovation clusters. Further, the Environmental Aid Guidelines cover the stage of eco-innovation, which means more favourable treatment for eco-innovation projects that address the double market failure linked to the higher risks of innovation, coupled with the environmental aspect of the project. In addition, the Commission has recently adopted the General Block Exemption Regulation (GBER) under which most of the above mentioned R&D&I activities and, to a limited extent, the risk capital financing (see in section 3.2.1) **no longer need to be notified** to the Commission.

Impacts and lessons:

---

7 OJ C 323, 30.12.2006, p. 1, available at http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/c_323/c_32320061230en00010026.pdf

8 OJ L 379, 28.12.2006, Commission Regulation (EC) No 1998/2006 of 15 December 2006

9 OJ C 82, 01.04.2008, p. 1

The substantial modernisation of the EU's State aid rules[10] has given Member States a very effective policy tool which has facilitated the granting of public support to innovation. Member States currently dispose of a clear framework which allows them to better target public support towards research and innovation. In addition, Member States are now in a position to grant a number of different types of State aid for innovation without having to notify individual measures to the Commission, which significantly reduces the administrative burdens they face.

Since 2006 the modernised State aid framework has been used by the Member States and regions to adopt numerous new aid instruments such as schemes for young innovative companies, which are often mixed with other R&D and innovation projects. In 2007 16 Member States introduced State aid measures for R&D&I. [11] However, it is not possible to tell from the published data how much public support was directed to innovation alone,[12] as prior to 2007, innovation schemes often formed part of other State aid initiatives (e.g. for SMEs). Available data shows that in the current financial crisis Member States put emphasis on measures where quick results can be obtained and where serious economic disturbance can be avoided. Since October 2008, R&D&I measures have been notified by Belgium (1), the Czech Republic (1), Denmark (1), Germany (6), Malta, the Netherlands (1), Spain (4) and the UK (1). Only Finland and Germany have introduced schemes targeted especially to start-ups or young innovative enterprises since the financial crisis started. Nevertheless, the qualitative impact of the schemes is probably more significant than the quantity of measures.

The number of state aid cases for R&D&I notified to the Commission since the beginning of the financial crisis suggest that State aid for innovation has not been a prominent part of the response to the financial and economic crisis in many Member States. Therefore, further efforts seem necessary to encourage Member States' measures to support innovation and to reconcile short-term priorities of Member States with longer-term necessity to support innovation.

3.1.2. Promote an optimal use of R&D tax incentives

Objectives:

The objective of the Commission’s promotion of tax incentives for R&D was to encourage the dissemination of good practice among the Member States because of the positive impacts on private R&D investments such incentives can have. In recent years, there has been a trend in the Member States away from R&D subsidies and grants towards tax incentive schemes. The interaction between such schemes within and between Member States, and their interactions with other policy actions, can have a potential impact on the location of R&D activities within the EU and also

---

10 DG Competition: State aid reform web page http://ec.europa.eu/competition/state_aid/reform/reform.html

11 Germany (12 schemes), Spain (10 schemes) and Austria (5 schemes) have made most frequent use of these provisions.

12 From the 674 State Aid cases notified by Member States in 2008, only 16 were reported as being merely about innovation.

influence the flow of R&D expenditure into or away from the EU itself. In addition, tax incentive schemes can affect the nature and intensity of R&D by influencing companies' R&D expenditure and by inducing companies to start carrying out R&D in the first place.

Activities:

Following the Commission's 2006 Communication "Towards a more effective use of tax incentives in favour of R&D"[13], activities have focused on encouraging the dissemination of good practice via a **network of national experts**. In 2008, an expert group produced a report comparing practices in the evaluation of R&D tax incentives[14]. During 2009, a further expert group is reviewing a **set of guidelines** produced by CREST[15] in 2006, and also analysing evidence about the impact of tax incentive schemes on the nature and intensity of R&D and on the location of R&D within the EU. The results are expected by the end of 2009.

Impacts and lessons:

Given that the Community has no competencies in the field of direct taxation, including tax incentives for R&D, the type of Commission actions in this field is limited to supporting mutual learning among national policy-makers. The take-up of good practices from abroad depends, however, on a number of considerations (e.g. domestic priorities; economic, societal and cultural background) outside the field of innovation and research policy and on players not directly involved in the research centred peer learning process.

3.1.3. Improving the IPR regime and its effective use

Objectives:

The Commission aimed at fostering the effective use of Intellectual Property Rights (IPR) through providing a suitable legislative framework, in particular through a Community Patent, improving awareness of the innovation potential represented by IPR use and, where relevant, by offering financial support. Although the effective exploitation of research results has long been recognised as a critical driver of the EU's competitiveness, European companies, especially SMEs, are still facing a **considerable competitive disadvantage** compared to businesses of Europe's main trading partners. Patenting rates are lower in the EU than in the US and the cost of a European patent is estimated to be 9 times as high as a US patent. The Commission's actions therefore aimed at improving three conditions for effective IPR exploitation:

- a functioning and affordable intellectual property protection system;

---

13 COM(2006) 728 final available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0728:FIN:EN:PDF

14 See at http://ec.europa.eu/invest-in-research/pdf/download_en/rd_tax_incentives_expert_group_report2008_rtd_final1.pdf

15 CREST (Scientific and Technical Research Committee, see: http://www.consilium.europa.eu/showPage.aspx?id=1422&lang=en)*Evaluation and Design of R&D Tax Incentives*, Report of the CREST Expert Group on Fiscal Measures, March 2006

- a coherent framework for transferring the results of research to the commercial sector;

- the awareness of and ability to use the first two.

The Commission therefore announced to present a new patent strategy before the end of 2006, to prepare a more comprehensive IPR strategy in 2007, facilitating inter alia the circulation of innovative ideas and continue its work to ensure that the legal framework and its application are conducive to the development of new digital products, services and business models.

Activities:

In April 2007, the Commission adopted a Communication on "Enhancing the patent system in Europe"[16], where it repeated that "patents are a driving force for promoting innovation, growth and competitiveness" and that "Europe has not yet been able to create a single and affordable Community-wide patent" and set out options for a patent system in Europe that is more accessible and would bring cost savings to all stakeholders.

On this basis, further progress has been made in negotiations in the Council on the **Community Patent** and the **unified patent litigation system.** On the Community patent, pragmatic solutions have been put forward in working documents from the Council Presidencies to resolve main outstanding issues. These include ideas for a language regime to provide both affordability and legal certainty and improve patent information, the distribution of maintenance fees under a unitary patent right, and how patent offices can work together in enhanced partnerships under the Community patent.

In addition, concerning the unified patent litigation system, the Commission adopted a Recommendation to the Council in March 2008 to open negotiations that would bring about the establishment of a unified court for European and Community patents[17]. As Member States have worked towards an emerging consensus, stakeholder dialogue has been ongoing to ensure support from European businesses and professional practitioners for patent reform. An Industrial Property Rights Conference organised in collaboration with the French Presidency in October 2008 showed that there is broad consensus in almost all segments of European industry for urgent action on both the Community patent and court system. The Commission therefore remains firmly committed to a comprehensive patent reform package involving a unified patent litigation system and a Community patent.

As a follow up to the Communication on knowledge transfer between research institutions and industry[18], an IPR Expert Group submitted in June 2007 a memorandum on removing barriers for efficient use of IPR systems by SMEs.[19] A

---

16 COM(2007) 165 final, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0165:FIN:EN:PDF

17 SEC(2009) 330 final, available at http://ec.europa.eu/internal_market/indprop/docs/patent/recommendation_sec09-330_en.pdf

18 COM(2007) 182 final, available at http://ec.europa.eu/invest-in-research/pdf/com2007182_en.pdf

19 http://www.proinno-europe.eu/NWEV/uploaded_documents/IPR_Expert_group_report_final_23_07_07.pdf

Recommendation and Code of Practice on the management of intellectual property in knowledge transfer activities by universities and public research organisations[20] was adopted in April 2008, and is now being implemented in partnership between Member States and Commission under the European Research Area (see section 3.2.2). A Communication on a comprehensive industrial property rights strategy[21] was adopted in July 2008. A Best practice expert group on support to SMEs for IPR enforcement issued recommendations in April 2009 about improving coordination between relevant administrations, types of services needed, and elements of successful support services. A joint Commission-European Patent Office conference on IPR and innovation, *Patinnova*, is organised every second year, underlining the importance of continuing efforts towards achieving a Community patent and a unified patent litigation jurisdiction.

Further, the European Commission decided to lower the fees payable for granting **EU-wide trade mark** rights and to simplify the registration procedure. This measure will make trade mark protection much cheaper and easier to obtain for businesses operating in the EU single market, saving them some €60 million a year.

At the same time the Commission initiated measures to fight against counterfeiting. The Communication "An industrial property rights for Europe"[22] of July 2008 proposed new actions on enforcement of intellectual property rights. These were endorsed by the Council in September 2008 who adopted a Resolution on an anti-counterfeiting action plan[23]. In April 2009, following the endorsement from this Resolution, the Commission launched the **EU Observatory on Counterfeiting** in order to improve exchange of information and good-practices and improved cooperation between customs and industry. The European Commission is financing tailored measures to help SMEs to enforce their rights and fight counterfeiting, like the **SME IPR China Helpdesk** (see section 3.2.6) which provides direct advice to SMEs operating in China. Besides, a wide range of **IPR support** measures are offered by Member States and by the EU to improve IPR awareness, use, and access (helpdesks projects mobilising national patent offices, etc.), but more remains to be done.[24]

Impacts and lessons:

Despite the developments described above, the achievements fall short of the objectives. Efforts should be continuously made towards achieving a Community patent and a unified patent litigation jurisdiction, as it was also underlined in the Commission Communications on the Community Patent (April 2007) and on a Comprehensive industrial property rights strategy (July 2008). In the current economic climate, there is a pressing need for European businesses to have access to an affordable single patent covering the entire EU and a unified patent court system to protect their new innovations and enforce their rights. The legislative framework for copyrights, of particular significance for today's digital economy, also has room

---

20 C(2008)1329, available at http://ec.europa.eu/invest-in-research/pdf/ip_recommendation_en.pdf

21 COM(2008) 465 final.

22 COM(2008) 465 final, available at http://ec.europa.eu/internal_market/indprop/docs/rights/2008_0465_en.pdf

23 http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/103101.pdf

24 http://ec.europa.eu/enterprise/policies/innovation/policy/intellectual-property/index_en.htm

for further harmonisation to allow the full benefits of the internal market to be realised. The Commission will continue its efforts to ensure that the IPR system plays its fundamental role in transferring knowledge from research organisations towards enterprises or disseminating this knowledge for the purpose of further research by promoting the disclosure of research results and supporting their commercialisation.

IPR initiatives need to be **better integrated in innovation policies** and innovation support measures to mutually increase their effectiveness. Efforts to promote cooperation between IPR experts (national patent offices) and innovation intermediaries need to be continued.

There is an on-going debate on which are the best types of IPR protection and future scenarios given the increasing speed of innovation e.g. in the ICT sector or new forms of innovation (e.g. mass innovation, crowd sourcing or similar approaches involving a large number of innovation actors, including consumers) that might require a rethinking of certain IPR approaches. This involves addressing challenges to the speed of the patent system and envisages more use of differentiated strategies combining for instance patent, design, copyright or informal protection methods.[25]

3.1.4. Education and human resources

Objectives:

Excellence in the education systems is a pre-requisite for innovation. The lack of well-qualified human capital affects almost all sectors and is likely to turn into a major constraint for the innovation capabilities and as a consequence the competitiveness as well as the long-term growth potential of the EU Member States. Promoting e-skills (the capabilities required for the development and the effective use of ICT solutions by practitioners and individuals as well as the potentials for exploitation of opportunities provided by ICT for business and innovation purposes) proved to be a key issue to reduce the growing skills shortages and mismatches and to foster change management, innovation and employability.

The Commission therefore had the objective to mobilise the Member States to significantly increase the share of public expenditure devoted to education, especially higher education, and to identify and to tackle obstacles in their education systems to promoting an innovation friendly society. The Commission also aimed at raising the number of Mathematics, Science and Technology graduates and increasing the number of scholarships for S&T students.

A further objective of the Commission was to continue to develop and implement a strategy of the Member States to create an open, single, and competitive European labour market for researchers, with attractive career prospects, including possible incentives for mobility.

Activities:

[25] For the potential future scenarios of a European IPR strategy, see http://www.proinno-europe.eu/extranet/upload/deliverables/3_3_Rutz7995.pdf

Universities, as providers of the highest levels of education, advanced research and path-breaking innovation, are at the heart of the knowledge triangle. They play a key role in the transfer of knowledge and technology from the science base to industry. Therefore, the Commission invited Member States to implement the recommendations of the Communication "Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation"[26] adopted in May 2006, and also of the Council Resolution on "Modernising Universities for Europe's Competitiveness in a Global Knowledge Economy"[27] (December 2007), and promoted the increasing quality of education and research, the reform of degree structures, better management and financing and closer cooperation with the private enterprises and actors. A **University-Business forum** was set up in order to strengthen the links between education and business that are an important aspect of the functioning of the knowledge triangle both under the perspective of facilitating enterprises to find suitable creative human resources and to align the curricula to the demands of a knowledge society (see section 3.2.2).

In May 2008, the Commission adopted a Communication[28] on the ERA initiative "Better Careers and More Mobility: a European Partnership for Researchers" proposing actions in four key areas: open recruitment and portability of grants; meeting the social security and supplementary pensions needs of mobile researchers; making employment and working conditions more attractive; and enhancing the training, skills and experience of researchers. In June 2008 the Commission launched the web portal EURAXESS - Researchers in Motion[29] providing information and assistance to mobile researchers.

Finally, on e-skills**,** the European e-Skills 2008 Conference[30] acknowledged the key steps taken by Member States and at European level to promote e-skills and encourage rapid dissemination of good practices. Current activities include the development in 2009 of European ICT curriculum guidelines, the promotion of relevant fiscal and financial incentives and support for the widespread use of effective e-learning. Stakeholders welcomed the intention to organise the EU e-Skills Week in March 2010, a major European awareness campaign highlighting the merits of ICT education and of working in the ICT area, to encourage more students to consider careers in that field.

Impacts and lessons:

The 2008 European Innovation Scoreboard shows that the EU27 made good progress in the preceding five years on indicators of human resources for innovation and closed the gap with the US and Japan on numbers of Science and Engineering graduates while improving its lead in numbers of researchers and the share of the population with tertiary education. The EU has achieved the benchmark to **increase the number of Mathematics, Science and Technology graduates** with 15% by

---

26 COM(2006) 208 final, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0208:FIN:EN:PDF

27 See at http://register.consilium.europa.eu/pdf/en/07/st16/st16096-re01.en07.pdf

28 COM(2008) 317, 23 May 2008

29 http://ec.europa.eu/euraxess/

30 See : www.e-skills-conference.org

2010[31], but the future innovation skills needs have widened beyond R&D in science and technology. Therefore, human resources remains an area of weakness for most Member States with lower levels of innovation performance ("catching-up countries" and "moderate innovators" as defined in the Scoreboard).

The reforms of Higher Education degree structures and governance through university-business partnerships have been moving forward, but Europe still is far below the US level in the funding of higher education, especially in private funding for education and research. A further important step is that innovation, creativity and entrepreneurship shall be among the four new strategic priorities of European education cooperation up to 2020[32].

Lifelong learning has become a policy priority as the innovation processes open up, reach beyond technology and innovation increasingly takes place in collaboration with users and customers. In that respect, the fact that most **Member States have adopted comprehensive lifelong learning strategies**[33] is a major achievement of the open method of coordination in education and training. Providing key competencies of lifelong learning[34] for all has become another policy priority. Critical thinking, creativity, inventiveness, problem solving skills, risk assessment and decision taking capabilities are underpinning all these key competencies. Increasing emphasis for all innovation is given to transversal competencies, such as learning to learn and entrepreneurship[35].

In terms of e-skills, employers can now specify their staffing requirements more easily because of the availability of a European e-Competence Framework[36]. Job-seekers and their advisers are being helped by the launch of a European e-Skills and Careers portal[37] and the success of multi-stakeholder partnerships seem to extend to organisations of all sizes, including small and medium-sized enterprises. Despite the good progress, much remains to be done to fully implement a long-term e-skills strategy for Europe, for example to help industry and the public sector to capitalise on the breakthroughs emerging from research and innovation projects. It is important to move forward in the implementation of an e-skills strategy that is resilient to changes and turbulence in the world economy and meets the needs of all citizens in Europe.

All in all, Europe needs to do more to attract and retain the best talent around the world in research. Promoting creativity and innovation at all levels of education, as

---

31 EU Education Council (2008) "*Delivering lifelong learning for knowledge, creativity and innovation*", 2008 Joint progress report of the Council and the Commission on the implementation of the Education & Training 2010 work programme, doc. 5723/08;

32 Commission Communication on "An updated strategy for European cooperation in education and training" (16.12.2008)

33 EU Education Council (2008) "*Delivering lifelong learning for knowledge, creativity and innovation*", 2008 Joint progress report of the Council and the Commission on the implementation of the Education & Training 2010 work programme, doc. 5723/08;

34 Recommendation of the European Parliament and of the Council on Key competences for lifelong learning, 18 December 2006/962/EC, OJ L 394/10.

35 See Small Business Act

36 See: www.ecompetences.eu

37 See : http://eskills.eun.org

the Council[38] has invited the Member States to do, calls for a major change in education. The EU as a whole still needs to improve access and quality of lifelong learning, providing key competencies for all and new skills for new jobs, while qualifications require continuous updating.

3.1.5. Policy monitoring and trans-national cooperation for evidence-based policy-making

Objectives:

As innovators are becoming more internationally linked through global value chains and the intensifying globalisation of R&D and open innovation processes. An active and comprehensive innovation policy for Europe needs the support of R&D&I policy that strengthens and further develops the innovative capacity of European firms in their international activities. Therefore, a core objective of the Commission's innovation policy has been to mobilise national and regional research and innovation programmes and other sources of funding in order to generate the critical mass necessary for innovation activities, to benefit from the wealth of creative potential and innovation capacities in Europe that still is fragmented along national borders and to improve innovation policy through mutual learning.

As these issues are Member States competencies, the Commission supports innovation policy development on the one hand side through performance benchmarking and policy monitoring – also as part of the Lisbon partnership for growth and jobs – and through policy learning platforms to facilitate trans-national policy learning and cooperation.

Activities:

The Lisbon Growth and Jobs Strategy placed research and innovation policy at the heart of the shift towards the knowledge based economy. In 2007, the Commission issued a Communication[39] providing integrated guidelines covering, amongst other things, complementarity between EU research activities and those conducted by the Member States. In 2008, the Commission prepared a Technical Guidance Note[40] on Member States' actions in the priority area "Investing More in Knowledge and Innovation", and invited the Member States to address any remaining shortcomings of their research systems and to create a more attractive research and innovation policy framework. The INNO-Policy TrendChart[41] and ERAWATCH[42] have provided an overview of Member States' policy responses in this context.

The Commission improved its **policy analysis instruments** for research and innovation. The methodology and indicator system of the European Innovation

---

38 Conclusions of the Council and of the Representatives of the Governments of the Member States, meeting within the Council of 22 May 2008 on promoting creativity and innovation through education and training (2008/C 141/10) OJ

39 COM(2007) 803, part V available athttp://ec.europa.eu/growthandjobs/pdf/european-dimension-200712-annual-progress-report/200712-annual-report-integrated-guidelines_en.pdf

40 http://ec.europa.eu/growthandjobs/pdf/lisbon_guidance_20080620_final.pdf

41 The Next Cycle of the Lisbon Strategy for Growth and Jobs (2008-2010): Technical Guidance on Member State Actions in the priority area "Investing More in Knowledge and Innovation"

http://www.proinno-europe.eu

42 http://cordis.europa.eu/erawatch/

Scoreboard was improved to better capture non-technological aspects of innovation, innovation in service sectors, outputs of innovation, and trends over time in innovation performance[43]. The European Innovation Scoreboard has been referenced in number of national innovation strategy documents and was rated as highly useful by policy makers.[44] The geographic scope of the innovation policy TrendChart was broadened to include the analysis of other non-EU countries such as Brazil, China, India, Canada and Israel. The re-launched European Inventory of Research and Innovation policy measures[45] now provides a joint seamless view of research and innovation policy measures available across the EU-27 and 12 other countries . The analytical capacity of the Commission was also strengthened through a faster and more flexible system of short term studies and expert workshops.[46]

The Commission expanded its monitoring and analysis of private research investment and sectoral innovation performance. Regarding the monitoring of industrial research, the EU **Industrial R&D Investment Scoreboard**[47] (IRMA Scoreboard) aims to help improve the understanding of trends in R&D investment by the private sector and the factors affecting it. It was created in response to the Commission's Research Investment Action Plan[48], which aims to help close the gap between the EU's R&D investment and that of other developed economies. The annual publication of the IRMA Scoreboard is intended to raise awareness of the importance of R&D for business and to encourage firms to disclose information about their R&D investments.

The **PRO INNO Europe**[49] initiative supports innovation policy learning between policy-makers and public innovation support bodies across the EU. It includes 10 trans-national policy cooperation projects (INNO-Nets) focusing on cluster policy cooperation, support to knowledge-based SMEs and start-ups, transnational knowledge valorisation, the links of industry and research as well as innovation in services. By bringing together a number of policy actors, the INNO-Net projects have contributed to highlight the success factors for developing a common understanding of strategic issues and for designing possible joint initiatives, and have proven the great potential of transnational cooperation at policy level, as demonstrated in the field of cluster policies (see section 3.1.6). The PRO INNO Europe initiative includes also six cooperation projects among innovation policy implementers (INNO-Actions) to provide incentives for joint actions of different innovation agencies and other not-for-profit organisations in areas such as early stage investment, technology transfer in clusters, IPR, opening international markets for SMEs, and an award for design management. In order to ensure the learning among the different projects and themes, PRO INNO Europe includes a Learning Platform (INNO-Learning Platform[50]) that brings together dedicated experts and

---

43 See the 2008 Methodology Report at http://www.proinno-europe.eu/extranet/admin/uploaded_documents/EIS_2008_Methodology_Report.pdf

44 "Ex post evaluation of the activities carried out by DG Enterprise and Industry under FP6", GHK, Technopolis, September 2008

45 See http://www.proinno-europe.eu/index.cfm?fuseaction=page.display&topicID=262&parentID=52

46 http://grips.proinno-europe.eu/, http://www.proinnoeurope.eu/index.cfm?fuseaction=page.display&topicID=56&parentID=56

47 EU Industrial R&D Investment Scoraboard, for monitoring Industrial Research 2008 (IRMA project)

48 COM(2003) 226 final/2, available at http://ec.europa.eu/invest-in-research/pdf/226/en.pdf

49 http://www.proinno-europe.eu

50 http://www.proinno-europe.eu/index.cfm?fuseaction=page.display&topicID=57&parentID=57

representatives from national and regional innovation agencies[51]. The Learning Platform has been conceived as an 'incubator' for innovation support ideas and partnerships, exploring the scope for improving the effectiveness of innovation support in Europe and for stimulating more and better transnational cooperation among innovation agencies across Member States and regions. It has an experimental nature and provided insights for the formulation of future INNO-Nets that will be launched mid 2009. Further, it initiated a dialogue with national and regional innovation agencies on how to better apply the subsidiarity principle in the field of innovation.

The OMC in research policy has been supervised by CREST[52] and has been based on a system of yearly cycles, each of them addressing a limited number of topics[53]. The **OMC-NET scheme** was launched in 2005 as a complement to the OMC activities of CREST. OMC-NET is implemented through bottom-up calls for proposals and has provided groups of Member States and their regions with the possibility of developing policy coordination activities on specific issues of their own interest. Two calls were launched (in 2005 and 2007) resulting in a total of 17 projects covering a broad range of policy issues[54]. A new **R&D Policy Mix** website[55] also aims at helping national and regional policy-makers revise or fine-tune their policy mix for more and better R&D investment, both public and private. Users are guided towards concrete policy mix experiences in EU and other countries. Besides, a Communication on "A Strategic European Framework for International Science and Technology Cooperation", adopted in 2008[56], emphasised the need to further widen the ERA in order to increase the attractiveness of European research and improve the policy framework for sustainable development.

The **Europe INNOVA**[57] initiative was designed to become the laboratory for the development and testing of new tools and instruments in support of innovation with the view to help innovative enterprises innovate faster and better. The Sectoral Innovation Watch project provides policy-makers and stakeholders with detailed insights into sectoral innovation performance and a better understanding of sectoral drivers, barriers and challenges for innovation across the EU, which are essential for sound policy making. It exploited the sectoral expertise gathered in networking projects to draw conclusions on specific innovation support needs in those sectors. The sector-based approach of Europe INNOVA reinforced cooperation between public and private innovation support providers, business clusters and finance and

---

51 The INNO-Learning Steering Group consists of 16 representatives from different national and regional public innovation funding agencies. For further information see at: http://www.proinno-europe.eu/index.cfm?fuseaction=page.display&topicID=257&parentID=57

52 Scientific and Technical Research Committee,

53 For further information, see http://ec.europa.eu/invest-in-research/coordination/coordination01_en.htm. Examples of topics that have been addressed : public research base and its links to industry, industry-led competence centres, fiscal measures and research, intellectual property and research, SMEs and research, public research centres and universities, R&D in services, internationalisation of R&D, coordination of the Framework Programme and the Structural Funds and peer reviews of national policy mixes

54 Topics have included: technology transfer, research infrastructures, public procurement, regional research policies, the role of global value chains, assessing the impact of public R&D funding, the development of targeted R&D policies.

55 http://www.policymix.eu/policymixtool/

56 COM(2008) 588, available at http://ec.europa.eu/research/press/2008/pdf/com_2008_588_en.pdf

57 http://www.europe-innova.org/

standardisation practitioners in Europe through the establishment of networks and learning platforms for exchanging experiences, good practice and knowledge. In 2009, a new set of Europe INNOVA actions is being launched, based on European Innovation Platforms in three high priority policy areas: trans-national cluster cooperation, knowledge-intensive services and eco-innovation. The actions are oriented towards the development and testing of new innovation support services for SMEs, notably start-ups, delivered in the field by public-private partnerships made up of European professionals in innovation. The support services will be tested in view of their wider application, e.g. by the Enterprise Europe Network (see section 3.2.6).

The development of regional innovation and technology transfer strategies was supported by the Commission since the mid 1990ies. The **Regional Programmes of Innovative Actions**[58] co-financed by the European Regional Development Fund (ERDF) was launched for first time in the period 1995-1999. The Commission granted 25 European regions a budget of €250 000 to develop a Regional Innovation Strategy (RIS). The aim was to give regional authorities, in partnership with the main local bodies, an opportunity to develop a range of actions designed to increase the innovative capacity of their region. In 2000-2006 the programme was enlarged and included 181 programmes and 144 regions (from EU15) and reached EUR 416 million. These programmes have in many cases been used to feed the regional innovation strategies for 2007-2013 and regions were encouraged to include this experimentation approach in their operational programmes.

Between 2005 and 2008 some 33 new RIS projects were funded from the 6th Research Framework Programme, mainly to support innovation policy development in the new Member States. In addition, eight projects involving several countries encouraged regions that have implemented an innovation strategy to critically appraise the success of their policies with a common Impact Assessment and Benchmarking scheme. A secretariat provided the platform for ensuring the sharing of experiences and the mutual learning between the projects through the "**Innovating Regions in Europe**" (IRE) network and ran a number of thematic groups and networks among regional innovation policy actors[59]. After the start up funding from the Commission, the IRE Network is currently at the state of becoming a self-sustained organisation. The community, which has grown out of the Network, bonded together by the common goal of promoting economic development through innovation will therefore continue to exist. The IRE network has expanded in the last years to cover around 240 members at the end of 2008. In 2008 76% of the responding IRE Network members indicated that their RIS project had an impact on the design of the operational programme for their region.[60] The IRE Award for Best European Regional Innovation Scheme has been created to reward those who have been particularly successful in enhancing innovation capacity in their region. In 2007 the award went to the innovation forum Sistema madri+d. This was pointed out as a prime example of a RIS project that has raised the profile of innovation and broadened awareness of science and innovation policy. In an environment where the memory of new innovation projects is generally short, the scheme achieved a long-

58 http://ec.europa.eu/regional_policy/innovation/intro_en.htm

59 http://www.innovating-regions.org/

60 from IRE network survey in 2007

term coherence in the provision of innovation promotion services, and is now to be regarded as a successful example of permanent mechanism for regional innovation policy governance and implementation. What the IRE Network has been successful in accomplishing over the years is showing that regions can learn from each other. It has helped trans-regional cooperation, providing a platform for regions to exchange knowledge. However, while transferring best practices is good, there are no magic recipes for effective innovation policies, and what is good for one region may not be transferable to another.

In November 2006 the European Commission adopted an initiative "**Regions for Economic Change**[61] that aims to make good practices in regional innovation policy accessible to other regions. It allows the networks involved to make a real difference by going beyond networking and evolve to the construction of partnerships on the ground at all levels. The Fast Track Networks are committed to making Cohesion policy investments more effective. The initiative is about partnership in action, involves many Commission services and enables to create synergies with the broader spectrum of EU innovation activities and funding programmes. In the context of Regions for Economic Change initiative the RegioStars Awards highlight original and innovative projects which could be attractive and inspiring to other regions. The finalists and winners of the RegioStars[62] are made accessible together with case studies on projects implemented through Cohesion policy in the area of innovation through a new database[63]. The Commission has published the EU Baltic Sea region strategy on 10 June 2009[64]. The aim of the Strategy will be to coordinate the efforts of various actors in the Region (Member States, regions, financing institutions, the EU, pan-Baltic organisations, non-governmental bodies etc.) so that by working together they would promote a more balanced development of the Region.

ICT uptake is a key enabler and driver of innovation and competitiveness today. Capital investments in ICT derive productivity gains that are three to five times those of other investment. Nonetheless, European SMEs fail to fully exploit the ICT potential in their businesses. In this respect, the **eBSN initiative**, *an eBusiness policy coordination platform*, was instrumental in exchanging good policy practices and in shaping a common *strategic policy direction.* Over the last 5 years, eBusiness policies have evolved, from general ICT awareness raising and co-financing basic ICT infrastructure, towards the so called sector-specific policy approach to eBusiness. Following major eBusiness policy developments, eBSN actions also shifted up a gear to support Pan-European large-scale pilot actions to help European enterprises implement eBusiness. These actions will seek to streamline entire sectors by digitising the whole supply chains and helping all enterprises take full advantage of ICT-enabled innovations.

A concrete example is e-Invoicing, that is expected to offer huge advantages for companies: a recent report predicts potential annual benefits of up to €40 billion across Europe in the business-to-business field alone. In 2008, the Commission set

---

61 see: COM(2006) 675 and http://ec.europa.eu/regional_policy/cooperation/interregional/ecochange/index_en.cfm?nmenu=1

62 http://ec.europa.eu/regional_policy/cooperation/interregional/ecochange/regiostars_en.cfm?nmenu=4

63 http://ec.europa.eu/regional_policy/cooperation/interregional/ecochange/studies_en.cfm?nmenu=5

64 COM(2009) 248, available at http://ec.europa.eu/regional_policy/cooperation/baltic/pdf/communication/com_baltic_en.pdf

up a group of experts to prepare a European e-Invoicing Framework by the end of 2009. This Framework will include legal and best practice guidelines, commercial and operational rules for e-invoicing systems and technical standards. Its aim is to support the wider uptake of secure, high-quality and compatible e-invoicing services across Europe.

Impacts and lessons:

The stock of knowledge at EU level on innovation policy making, evaluation and strategy building as well as the availability of good practice examples was significantly improved since 2005. The linking up of EU Member States' innovation and research support has made progress, but much more could be done. The actual take-up of good practices from other countries with other economic, legal and social contexts remains challenging. It also appears that the expertise remains largely clustered in groups of stakeholders (research support providers, regional development agencies, IPR advice, etc.) and according to the origin of the EU funding (Research Framework Programme, CIP, Structural Funds, LIFE, etc.). The Commission has tried out a number of approaches to overcome this compartmentalisation and to facilitate the take-up of good practices (e.g. the Regions for Economic Change initiative under Cohesion Policy – including connecting INTERREG IV C[65] and URBACT projects to the Structural Fund mainstream and other Commission measures -, the Regions of Knowledge[66] under the Research Framework Programme, IRE Mutual Learning Platforms, etc.).

Despite this, there remains scope for further actions and intensifying efforts to foster knowledge management, mutual policy learning and transnational cooperation in support of innovation. There should be a strong interest in learning from each other and sharing experience, in particular in new fields that require new policy responses.

The results of the public consultation on the effectiveness of Community innovation support mechanisms[67] indicate that institutional actors who knew about them rated the added value of Europe INNOVA and PRO INNO Europe reasonably high. A majority of institutional players who are aware of the European Innovation Scoreboard evaluate it as having a high added value. However, this Scoreboard does not provide information at sectoral and regional levels and this may explain why a significant number of respondents considered that it had low added value.

A preliminary analysis has been performed of the outcome of both OMC-NET calls against their objectives as initially stated in their respective work-programmes. The results show a low level of interest in the scheme, with an insufficient number of high-quality proposals submitted, and a limited impact on policy coordination. An in-depth, ex-post evaluation of the outcome of the FP6 (2005) call for proposals will be carried out during 2009. The findings will help in the decision on whether or not to launch a further OMC-NET call, and in what form, in the period 2011-2013.

---

65 http://ec.europa.eu/regional_policy/cooperation/index_en.htm

66 http://cordis.europa.eu/fp7/capacities/regions-knowledge_en.html

67 See the accompanying Staff Working Document "Making public support for innovation in the EU more effective, (SEC(2009)...)

3.1.6. Promote innovation poles and knowledge-driven and industrial clusters

Objectives:

Over the last past years many cluster policies and initiatives have been developed at regional and national level in the European Union as a promising policy response to increase the competitiveness and innovation capability of firms and territories and better respond to the new challenges of the global knowledge-based economy. The activities undertaken at EU level in this area mainly aim at leveraging and exploiting synergies between the various efforts at all levels in order to get a higher impact and accelerate the development of **more world-class clusters** in the EU.

To this end, the key components of the EU strategy are to strengthen both policy and business cooperation across EU countries as well to improve the statistical analysis of clusters in the EU and raise the level of excellence of cluster organisations as new and efficient innovation support providers to companies, especially SMEs.

Activities:

The **European Cluster Alliance**[68] (ECA) was founded in September 2006 in order to drive a dialogue at EU level on cluster policies. This open cooperation platform brings together now more than 80 ministries, regional authorities and innovation agencies willing to work together in order to share experiences and views, and to develop common tools such as methodologies and guidelines. The Alliance was initially based on the four INNO-Net projects that were funded under the PRO INNO Europe initiative (see in section 3.1.5) bringing together about 50 organisations but then was opened up to participation of external partners. The platform will continue its operation for the period 2009-2012 under the CIP and contribute to developing better cluster policies in different areas such as international cluster cooperation.

The **European Cluster Observatory**[69] (ECO) was established in June 2007 with the aim to provide a web- based statistical mapping of innovation clusters located in 32 European countries across 38 sectors identified through a common and sound methodology based on employment data. To make cluster mapping more useful to European companies, the European Cluster Observatory is also developing a complementary list of cluster organisations and tools in order to further support trans-national cooperation between them in the future. Cohesion

The Commission supported trans-national cooperation networks mainly through the **Europe INNOVA initiative** of CIP, the **Regions of Knowledge** of FP7 (see in section 3.1.5) and Cohesion policy (see in section 3.2.7). The aim was and is to assist clusters finding complementary activities between each other, develop common research projects, and establish common strategies in different areas including those promoted by the Lead Market initiative (see in section 3.3.1). In the future, the European Innovation Platform for Clusters (Cluster-IP) under the Europe INNOVA initiative will particularly focus on strategic partnerships and more practical,

---

[68] Further information about how to join the European Cluster Alliance is found at: www.proinno-europe.eu/ECA

[69] The cluster database is accessible from the ECO website at: http://www.clusterobservatory.eu

implemented cooperation between cluster organisations in order to further strengthen their position in the global market.

Cohesion policy supports the development of clusters in regions through the European Territorial Co-operation objective, which strengthens cross-border co-operation, trans-national and interregional co-operation. The activities within this objective help regions to work together, decrease market barriers and incentive the exchange of good practices among regions.

Many of the Operational Programmes (see section 3.2.7) set down by regions include actions related to the nurturing of clusters. Cohesion policy funds support the development of clusters infrastructures and the non-profit agencies/bodies that launch inter alia cluster initiatives, networking and pre consultation activities with SMEs and strategic studies to identify which clusters should be supported. Direct financial schemes for innovative SMEs and/or start-ups and spin-offs can also be co-financed[70].

The Commission adopted the **Commission Communication** entitled "Towards world-class clusters in the European Union: Implementing the broad-based innovation strategy"[71] in October 2008. The Communication outlines a coherent framework to facilitate the emergence of more competitive clusters in EU countries. The policy orientations and specific actions outlined in this Communication were welcomed and supported by the Conclusions of the EU Competitiveness Council adopted in December 2008[72].

The **Commission Staff Working Document** on "The concept of clusters and cluster policies and their role for competitiveness and innovation: main statistical results and lessons learned"[73], was adopted in 2008 and provides an overview of the key concepts related to clusters and presents available evidence for the economic importance of clusters. This report was built upon a previous **DG Enterprise and Industry report** on "Innovation Clusters in Europe: A statistical Analysis and overview of current policy support"[74] that was published in 2007 based on the first results of the European Cluster Observatory.

Further, **a Commission Decision**[75] for the establishment of a **European Cluster Policy Group** drew policy recommendations on further EU initiatives that could be launched in the few coming years to support the development of more world-class clusters in the EU. The Group was set up in April 2009 and is composed of 20 experts from academia, policy developing authorities as well as the business community, and will last for 18 months. The work of this group will be built on the results obtained from a previous high level group, which prepared in January 2000 the **European Cluster Memorandum**[76] signed by more than 80 organisations in Europe.

---

70 http://ec.europa.eu/regional_policy/cooperation/interregional/ecochange/studies_en.cfm?nmenu=5

71 COM (2008) 352 final, available at http://ec.europa.eu/enterprise/policies/innovation/policy/clusters/

72 http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/104497.pdf

73 SEC(2008) 2637, available at http://ec.europa.eu/enterprise/policies/innovation/policy/clusters/

74 http://ec.europa.eu/enterprise/newsroom/cf/itemlongdetail.cfm?item_id=1072

75 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:288:0007:0011:en:PDF

76 http://www.clusterobservatory.eu/upload/European_Cluster_Memorandum.pdf

Impacts and lessons:

While cluster policy remains foremost the task of regions and Member States, the above actions have deepened the understanding about cluster development in the EU and enabled more evidence-based cluster policy-making – as no cluster database existed so far at EU level. Besides, they have further supported transnational business cooperation to develop stronger cluster partnerships in different traditional and emerging sectors, and finally have taken some measures for preparing the next generation of actions on clusters to be launched and implemented under the new programming period 2013-2020.

A success story of how such efforts have helped policy makers to strengthen cooperation across Europe is the **Baltic Sea Region Innonet**[77] project that was funded under the PRO INNO Europe initiative under CIP during the period 2006-2009. This project has produced an exhaustive list of existing cluster initiatives, and a cluster mapping covering all Baltic Sea Region countries, and established a joint conceptual framework for cluster and innovation policy formation in this region. The results achieved by this project over the last 3 years will become the basis for the further development of the innovation agenda as part of the **EU strategy for the Baltic Sea region** (see in section 3.1.5), which will be proposed to the European Council for adoption by the end of 2009.

Further, the **cluster mapping** work undertaken over the last 3 years is a step towards a better identification of cluster patterns in the EU. More than 2000 European clusters were identified statistically indicating that Europe does not lack clusters, but seems to lack world-class clusters. This work has, however, revealed a number of challenges such as the difficulty for getting updated and detailed regional data from all EU countries and the unavailability of data on new sectors such as biotechnology, eco-innovation or creative industries. Therefore, complementary cluster mapping approaches will be used to consider new interconnections between sectors which will help to better reflect emerging cluster patterns in the EU. The following phase of the European Cluster Observatory will look at these issues more carefully during the next three years.

New concepts and challenges are arising from the **emergence of new industries** such as eco-industries, creative industries and knowledge-intensive services, and the potential role of **macro-regions** as new drivers of innovation and regional prosperity in the EU. Therefore the conceptual work should be further strengthened in the future to help identifying how clusters could better address these new challenges and develop appropriate ecosystems for innovation for emerging sectors.

Besides, clusters may also be seen as value-chain linked economic structures crossing sectoral and national boundaries. The European automobile industry is one such example. It is important to ensure effective knowledge flows and networking in such clusters as well as cross-national participation via, e.g., the 7th Framework Programme. Also, increased capabilities for participating in global knowledge networks will be crucial for fostering an innovative business community in Europe. Cluster policies developed at national and regional level should consider the strategic

[77] http://www.proinno-europe.eu/index.cfm?fuseaction=page.display&topicID=65&parentID=55

priorities, specificities and strengths of each state and region. Encouraging the development of joined cluster programmes between EU regions or states seems very difficult. Furthermore, given the importance of **cluster organisations** for providing or channelling specialised and customised innovation services to cluster firms, especially SMEs, there is a need to raise their excellence and efficiency.

3.2. Supply-side measures

3.2.1. Provide better access to finance for innovative SMEs

Objectives:

The financing of innovation in Europe continues to face structural shortcomings. The lack of private investors in early-stage financing makes seed and start-up investment difficult. Venture capital funds are concentrating on larger deals, leaving the small and risky early-stage deals aside. Furthermore, few European venture capital funds operate across borders because of the expense and complexity of structuring funds. The objective of the Commission has been to create the conditions for a more performing European venture capital industry, especially focusing in the seed and start-up phases of investment.

Europe could also perform better in commercialising research results. This requires an ecosystem of entrepreneurial finance that draws together entrepreneurs, investors and the public sector (policy-makers, universities and research institutions). Entrepreneurs often lack adequate knowledge of the nature and motives of investors, in particular venture capitalists. The Commission has promoted efforts to raise awareness among entrepreneurs on funding opportunities and promote technology transfer.

These challenges have become more acute with the onset of the financial crisis and economic downturn. Innovative companies face increased difficulties in securing finance. Many business angels have seen their wealth reduced by the stock market crash and have less money available for investment in young innovative companies. At the same time venture capital fundraising has become very difficult because of poor returns and difficult exit markets. The Commission has continued structural reforms to improve the funding environment of SMEs, while at the same time using all available flexibility to address the effects of the crisis.

Activities:

Over the period 2005-2009 the Commission has addressed several of the structural challenges of the European venture capital market. To establish an international basis for comparison, it had an expert group with the US Department of Commerce to look at various aspects of venture capital financing. Under the presidency of the United Kingdom, the Risk Capital Summit in 2005 discussed how risk capital could support Europe as a leader in innovation. With the Member States, the Commission made in 2005 an inventory of policy instruments addressing the early-stage funding gap and identified criteria for good practice. In 2006 under the Commission's State Aid Action Plan the Risk Capital Guidelines[78] were adopted to address the insufficient

[78] OJ C 194, 18.08.2006, p. 2

level of risk capital available for start-ups and innovative young businesses in Europe. Under the Portuguese presidency in 2007, the Estoril Declaration set out the principles for successful innovation financing.

The key effort in addressing the fragmentation of the European venture capital markets was focused on facilitating cross-border investment. In December 2007 the Commission issued a Communication on Removing obstacles to cross-border investments by venture capital funds[79] and advocated a broad partnership with and between Member States to work towards mutual recognition of national frameworks for venture capital funds either through reviewing existing legislation, or by adopting new laws. The short-term approach of mutual recognition, as proposed by the Commission, was endorsed by the Council in May 2008 and has been included in the Small Business Act[80] and the Partnership for Growth and Jobs Programme.

The Commission has also improved awareness of investment readiness by funding several pilot programmes (Gate2Growth, EASY, Ready4Equity), and has improved entrepreneurs' understanding of banks and their rating process under the Capital Adequacy Directive[81] by organising a series of seminars and publishing a guide on how to deal with banks.

Besides, the Commission has continued to focus on developing the markets in microcredit in Europe. It has met both the Member States and market experts in a series of workshops that have reviewed both European and national rules, and provided recommendations for improvements. The Commission has also used its financial instruments to underpin its broad-based innovation agenda. The Financial Instruments of the Multiannual Programme (MAP) (2001-2006)[82] and of the Competitiveness and Innovation Framework Programme (CIP) (2007-2013)[83] have been deployed to address the early stage finance gap in Europe. These instruments have been proactively marketed through a series of Finance Days in the Member States and other participating countries in 2008-2009. The European Technology Facility (ETF Start-up) and the Seed Capital Action under the MAP provided venture capital funds through financial intermediaries to high growth and innovative companies in Europe. The instruments have yielded clear investment successes such as Sonaptic Ltd, one of the leading developers of advanced audio technologies for the mobile device market. The High Growth and Innovative SME Facility (GIF) under the CIP continues to address the early-stage equity gap in Europe. The instrument also supports the take-up of environmental technologies through co-investment in risk capital funds that provide equity for firms investing in eco-innovation. Additional flexibility is offered by supporting side-funds linked to business angels.

In addition, the Commission together with the European Investment Bank (EIB) and the European Investment Fund (EIF) created JEREMIE, the Joint European Resources for Micro to medium Enterprises to promote increased access to finance

---

79 See COM(2007) 853 final at http://ec.europa.eu/enterprise/newsroom/cf/itemlongdetail.cfm?item_id=2033

80 http://ec.europa.eu/enterprise/entrepreneurship/sba_en.htm

81 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:177:0201:0255:EN:PDF

82 See at http://europa.eu/scadplus/leg/en/lvb/n26006.htm

83 See at http://ec.europa.eu/cip/index_en.htm

for the development of micro, small and medium-sized enterprises in the regions of the EU. JEREMIE's resources are derived from EU Structural Funds for the funding period 2007-2013. National and regional Managing Authorities of the EU Member States are using this opportunity to develop venture capital and other risk schemes to support innovative SMEs.[84]

Impacts and lessons:

The financial instruments have contributed to help SMEs to access essential venture capital and debt finance. By the end of 2008, under the High Growth and Innovative SME Facility (GIF) of CIP, 14 deals with venture capital funds from 13 countries had been approved, committing €153 million of EU investments. Three of these venture capital funds are investing in eco-innovation. At the same date, under the SME Guarantee Facility of CIP, 12 deals with Financial Intermediaries from 9 countries had been approved, committing €110 million from the EU budget for guarantees.[85]

Between 1998 and 2007 around 365 000 SMEs have benefited from the financial instruments and about 90% of beneficiary SMEs are micro-enterprises, and about 99% are either micro- or small enterprises. On average, each SME that gets a guaranteed loan creates 1.2 jobs. This has resulted in over 200 000 new jobs under MAP (2000-2006) and over 400 000 new jobs since the launch of the financial instruments in 1998. Until the end of 2008, The ETF Start up Facility under the Growth and Employment initiative of 1998-2000 generated revenue of €61.6 million. As for the Guarantee Facility, the actual losses have been lower than expected, although this could change in the coming years.

Two thirds of the SMEs receiving a guaranteed loan reported that alternative sources of finance would not have been available to them without the loan guarantee provided under the SME Guarantee Facility (SMEG) of CIP. Concerning micro-credits in particular, 86% of SMEs receiving guaranteed credit via the micro-credit window of the SMEG reported that alternative sources were not available to them. The venture capital funds have addressed a market gap in the field of access to early stage, pre-seed and seed capital with positive results and impacts on the needs of start-up businesses.

However, the public consultation on the effectiveness of Community innovation support mechanisms[86] revealed that although the majority of enterprises surveyed indicated to have received public support, it accounted for the majority for less than 10% of their overall spending on innovation. Consequently**,** the received public funds did not represent a significant share of enterprises' overall expenditures on innovation over the last three years.

---

84 http://ec.europa.eu/regional_policy/funds/2007/jjj/jeremie_network_en.htm

85 Source of data: Quarterly report on SMEG 2001 Facility - data as of 30 September 2008, Report issued on 16 December 2008, European Investment Fund; and Quarterly report on ETF Start-up - data as of 30 September 2008, European Investment Fund.

86 See the accompanying Staff Working Document "Making public support for innovation in the EU more effective", (SEC(2009)1197).

To conclude, progress towards the wider policy objective of a more effective European venture capital market has been slow, despite the good behaviour of the financial instruments. Regardless of years of efforts, the structural pathologies of the European early-stage finance market persist. The venture capital sector cannot yet benefit fully from the single market, and its fragmentation contributes to a low performance that does not attract enough private investment. In spite of their favourable disposition towards mutual recognition of venture capital funds, only one Member State (Finland) has taken concrete steps aimed at facilitating cross-border investment.

The level of risk capital available in the EU has been volatile between 2006 and 2009, and no durable improvement in early-stage finance has been achieved. In the current crisis, the venture capital funds have trouble raising new funds and focus on keeping the best portfolio companies alive, which is likely to depress investment levels in the coming years. In addition, the business angel market has not developed as well as the Commission had hoped.

Regardless of the structural problems, the evaluation of the financial instruments noted that they are an efficient form of intervention because they are implemented on a commercial basis and target financially viable SMEs. They are based on a strong rationale concerning market failure in access to finance faced by start-up and growing SMEs. The financial instruments have addressed this market failure trying to minimise unintended consequences (such as moral hazard or crowding out effect) while at the same time promoting private financial market activity (for example, through demonstration effect). The financial instruments have reached a large number of SMEs at a relatively low cost to the EU. Further, they have demonstrated a leverage effect in SME financing, and have increased the supply of debt and equity finance in most Member States. Feedback from the financial intermediaries indicates that some implementation and reporting requirements were seen to be burdensome, in particular concerning the guarantees. Overall, however, the reporting requirements were not considered onerous, and it is important that there is full accountability for the publicly supported financial instruments. The visibility of the financial instruments is still relatively poor among fund managers and SME beneficiaries, although financial intermediaries are generally aware of them. In accordance with the Council conclusions, the Commission will further report in 2009 on the results of the process towards a more integrated European venture capital market. In parallel, it continues to analyse possible double taxation for cross-border venture capital, and to work on a possible private placement regime at EU level.

The challenges of financing innovation and SMEs, and the Commission actions and policies addressing these challenges in the period 2005-2009 are described in detail in a separate accompanying Staff Working Document "Financing innovation and SMEs"[87].

3.2.2. European Institute of Innovation and Technology and improving science-industry collaboration and knowledge transfer

Objectives:

[87] SEC(2009) 1196

The transfer of knowledge and technologies, in particular between public research in universities and industry, is an important driver of innovation. However, this transfer and the collaboration between universities and enterprises (in particular SMEs) in Europe leave ample scope for improvement. The Commission therefore set itself the objective to establish a European Institute of Technology by 2009 as an embodiment of the knowledge triangle idea that brings together education, research and innovation.

In order to address the poor up-take of research results in Europe, the Commission also aimed to adopt a Communication in 2006 - including voluntary guidelines and actions of Member States and stakeholders-concerned, and to define guidelines to improve research collaboration and knowledge transfer between public research and industry.

Activities:

The European Institute of Innovation and Technology

The regulation establishing the **European Institute of Innovation and Technology**[88] (EIT) entered into force in April 2008. The EIT's first Governing Board, consisting of prominent representatives of from all corners of the knowledge triangle, was appointed in July 2008 following a European Commission Decision, and Budapest was soon selected as the EIT host city. The EIT's mission is to become the flagship for European innovation by exploring excellence in education, research and business for world class innovation. Since the EIT shall primarily operate through Knowledge and Innovation Communities (KICs) the present top priority is to make the selection and designation of the first KICs by end of 2009. In a first phase, two or three KICs will be established. These first two or three KICs will address themes within the fields of sustainable energy, climate change mitigation and adaptation, and future information and communication society. Subsequent partnerships will follow later, after the adoption of the first Strategic Innovation Agenda defining the long-term priority fields for the EIT.

A KIC is an EIT-specific innovation, a legally and financially structured and managed collaborative public-private partnership integrating education, technology, research, business and entrepreneurship. A KIC must involve at least 3 independent partner organisations. The partners must be established in at least 3 different EU Member States and must include at least one higher education partner and one business. The key objectives of the KICs are to drive effective knowledge transfer between partners and to create new business for existing industry and for start-ups with high growth potential. Educating entrepreneurial masters and doctors and enhancing their ability to work across stakeholder boundaries is going to be a strong component of KIC activities. KICs are also expected to have a significant societal impact, not only through their thematic work, but also through the creation of a new culture of entrepreneurial education and innovation in Europe. The KIC must address a long-term horizon of 7 to 15 years, but with short-, mid- and long terms objectives that follow the mission of a KIC.

88 http://eit.europa.eu/

Co-location is an essential feature of a KIC. Geographical juxtaposition on a given site is not sufficient, but it is necessary to link organizations and people involved in the KIC to obtain the benefits of co-location. Co-location centres will get people and organisations connected and work together for significant periods and allow stakeholders' serendipitous interaction face-to-face. The co-location centres are expected to be the lead nodes amongst a much larger number of partners in the network. Mobility within a KIC and across co-location centres will be essential. It is anticipated that KICs will typically involve four to six co-location centres or lead nodes.

Knowledge sharing

The Seventh Research Framework Programme (FP7) includes several measures to facilitate the **participation of SMEs in research collaborations** with other partners, including universities and research organisations. The requirement for collective financial responsibility has been removed and replaced by a guarantee fund, which significantly reduces the need for ex ante controls or bank guarantees. SMEs benefit from an increased funding rate of 75% for the costs related to R&D, compared to the previous framework programmes. In the Cooperation Programme of FP7, the aim is to dedicate 15% of the budget to SMEs. In addition, under the Capacities Programme, the actions covered by "Research for the benefit of SMEs" enable innovative SMEs with little or no research capacity to outsource R&D tasks to research performers.

As a follow-up to the Commission's Recommendation on the management of intellectual property in knowledge transfer activities and the Code of Practice for universities and public research organisations[89], the Commission organised a **biannual forum with university and industry stakeholders** to discuss knowledge transfer activities as part of a broader university-business cooperation programme. The forum, which first met in November 2008, discusses good practice and the implementation of the Code of Practice.

A key element within the university modernisation agenda set out in 2006 (see section 3.1.4) was that universities should develop structured partnerships with the world of enterprise in order to "become significant players in the economy, able to respond better and faster to the demands of the market and to develop partnerships which harness scientific and technological knowledge". On this basis, the Commission has launched the European University-Business Forum[90], as a platform for dialogue between the two worlds. The first Forum meeting in February 2008 was followed during 2008 by three thematic workshops and a second plenary Forum in February 2009 with around 400 participants. The Forum's reflections to date can be summarised under 6 themes of reform: New curricula, fostering entrepreneurship, knowledge transfer, mobility across borders and between business and academia, opening up for lifelong learning, and better governance.

Impacts and lessons:

---

89 C (2008) 1329 ; see above section on IPR

90 Commission Communication on "A new partnership for the modernisation of universities: the EU Forum for University-Business Dialogue" (COM(2009) 158 final), available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0158:FIN:EN:PDF

Even though there are clearly identified incentives, SME participation in FP7 has remained somewhat modest. Their overall share in retained proposals is around 12 % in terms of requested EC contribution. More efforts are needed to simplify and to promote SME participation in FP7, including the immediate implementation of commitments taken in this respect in the Small Business Act. The Commission will undertake further analysis and reflection on the current SME support instruments and how to design future research support schemes aiming to improve SME access to knowledge at European level.

The progressive integration of education aspects in the scope of innovation policy is a promising path, as enterprises indicate consistently the shortage of human resources as an obstacle to their further innovation activities, while universities with the double vocation for conducting research and education could benefit both through better alignment of their curricula to enterprises needs and through financial returns in the form of licensing or sponsoring.

3.2.3. *Joint Technology Initiatives*

Objectives:

Joint Technology Initiatives (JTIs)[91] are public private partnerships set up at European level to integrate industrial research in key areas where research and technological development can contribute to European competitiveness and help address major societal challenges. By fostering stronger links between research and industry, they are intended to play a significant role in increasing the scale and impact of research investment. In this way, they can enhance co-ordination and integration of research in Europe and help raise the technology content of industrial activity with a view to establishing European leadership in future strategic technologies.

Activities:

On the basis of a thorough and rigorous identification process, JTIs have been launched in five fields: innovative medicines (IMI), embedded computing systems (ARTEMIS), aeronautics (Clean Sky), nanoelectronics (ENIAC) and fuel cells and hydrogen (FCH). They are currently in their build-up phase, and are expected to become operationally autonomous before the end of 2009.

The JTIs have created dedicated, Europe-wide and industrially-driven R&D programmes that can help EU industry achieve world leadership in their fields. JTIs are facilitating a co-ordinated approach to investment, and so are enabling different sources of funding to be combined in a way that could not otherwise be achieved. By

[91] Joint Technology Initiatives (JTIs) are long-term public-private partnerships managed within dedicated structures based on Article 171 of the EC treaty. They support large-scale multinational research activities in areas of major interest to European industrial competitiveness addressing issues of high societal relevance. JTIs are a way of implementing the strategic objectives of a limited number of European Technology Platforms (ETPs) where the scale and scope of these objectives is such that coordination via an ETP and support through the regular instruments of the FP are not sufficient.

focusing on European-level research agendas, they are also facilitating greater co-ordination with the priorities of national programmes and initiatives. Because they are based on long-term partnerships, they are increasing the breadth of technological coverage in the areas they focus on and so contribute to a greater mobilisation of research across Europe.

Impacts and lessons:

The combined financial resources committed in the JTIs amount to more than €10 billion over the the period 2008-2017. Industry partners have committed over €5 billion of the budget in order to ensure sufficient resources to achieve the ambitious objectives of the individual JTIs.

To date, the priority has been the immediate implementation of the Strategic Research Agendas of the JTIs and this has been achieved with the organisation of the first calls for IMI, ARTEMIS, ENIAC and FCH and the first payments to named beneficiaries in the case of Clean Sky. The response of the research community to the first calls has been strong and the overall success rate has been satisfactory.

Although launched relatively recently, the experiences with the JTIs to date have confirmed the commitment of industry in practice and that there is sufficient coordination between the partners. The experiences of the first year of implementation of the JTIs also point to the potential of public-private partnerships as a means of promoting pre-competitive research in Europe and identifying priority action to foster downstream competitiveness and innovation.

At the same time, a key message emerging is that the Community regulatory and financial framework needs to be updated to take account of the particular challenges for the Community in participating with private players on a partnership basis in the research and innovation field.

If the full benefits of the JTIs in contributing to enhanced European competitiveness and innovation are to be realised, the role of the Commission must not be limited to providing financial resources but must extend to ensuring that the necessary enabling conditions for competitive success are put in place. These conditions include an appropriate regulatory and competitive environment, innovative approaches to intellectual property, prospective standardisation frameworks and appropriate public procurement rules.

3.2.4. Joint initiatives with Member States to foster knowledge generation

Objectives

About 85% of the R&D financed by the public sector is still done at national level. By a better coordination of the programmes supporting research and innovation, and the creation of joint programmes, additional opportunities can be created for European organisations to enter into trans-national research partnerships, create synergies and avoid unnecessary duplication of efforts. This is particularly relevant for SMEs, since it lowers the threshold to participate in cross-border R&D as they can enter via their national or regional programmes.

One possibility is offered by Article 169 of the EC Treaty, allowing the Community to participate in research and development programmes undertaken by several Member States. Another option relates to the use of the ERA-NET scheme under FP7 to coordinate national and regional R&D programmes.

Activities:

Based on Article 169 of the EC Treaty, the Community participates in the Eurostars Joint Programme[92]. This initiative, undertaken in the context of EUREKA, involves 26 Member States and 5 countries associated to FP7 and aims at supporting innovative R&D performing SMEs willing to undertake close-to-market research. The overall public funding is €400 million, with €100 million coming from FP7 and €300 million coming from the participating countries. Two calls were launched in 2008, attracting more than 530 project applications, demonstrating the high interest of SMEs for this new programme. It is expected that about 180 of these SME projects will be financed.

The Ambient Assisted Living (AAL) is an Article 169 initiative that aims at enhancing the quality of life of older people and strengthen the industrial base in Europe through the use of Information and Communication Technologies (ICT).

ERA-NET initiatives such as CORNET and EraSME aim at reinforcing the cooperation between national and regional SME programmes. Via their joint calls, they offer additional opportunities to SMEs and SME Associations to participate in transnational research. Other ERA-NET initiatives have been launched with topics relevant to SMEs, like EUROTRANSBIO, MATERA, and MANUNET.

Impacts and lessons:

One Article 169 initiative has been launched under FP6 on clinical trials (EDCTP); under FP7, two initiatives are up and running (Eurostars and Ambient Assisted Living), and a third one (Metrology) is almost through the inter-institutional decision-making.

The first experience with large initiatives with Member States such as Eurostars shows that a careful preparation of the joint programme and a commitment at the highest political level from the Member States are essential. Progress has been achieved in terms of developing common rules, and in terms of central management of the joint programme with support from the Member States. Such initiatives would benefit from a simplified financial framework. In particular, a better harmonization of national funding rules, or even the development of a common financial framework, will certainly be beneficial. Akin to the case of the JTIs, the Community's participation in these initiatives, and the management of the programme at central level, could certainly benefit from a simplified Community financial framework.

3.2.5. Develop a policy approach to innovation in services

Objectives

[92] http://www.eurostars-eureka.eu/

The service sector offers an important and still under-exploited opportunity for innovation, while existing EU or national innovation policy instruments do not always adequately take into account the overall importance and specific needs of services innovation. The Commission therefore announced assessing the role of services innovation and taking a comprehensive look at policies relevant for services innovation in order to reassess their focus from the viewpoint of service-related innovation.

In sectors such as space and space-based services the objective is to develop an estimated market of more than € 200 billion by 2017. Such growth target implies that a number of actions will have to be promoted to establish strong synergies among innovation players and to further assist the integration of the innovation value chain in the field at European level.

Activities:

The Commission prepared in 2007 an overall review of innovation in services evaluating e.g. the related needs for policy adjustments, including both horizontal policies as well as specific measures in support of innovation[93]. The following public on-line consultation of all stakeholders confirmed in general this review, and it could be concluded that current innovation support mechanisms in Europe are not neutral with respect to all forms of innovation. At the same time, it was confirmed that horizontal policies, such as the further completion of the internal market for services, are critical to unleash the innovation potential in the EU.

In 2008 the Commission launched under the Europe Innova initiative (see in section 3.1.5) a programme on knowledge intensive services, the European Knowledge Intensive Services Innovation Platform (KIS-IP), consisting of three sectoral partnerships in the fields of ICT, renewable energy and satellite downstream applications and a horizontal support action. In 2009, the KIS-IP will be enlarged by three new sectoral partnerships. The KIS-IP tests new tools and instruments in support of innovative service companies, in particular innovation vouchers and new approaches to facilitate access to finance, with the aim to further leveraging the tools in national and Community innovation support measures and to demonstrate how innovation champions in this domain can be best supported. The sectoral partnerships of the KIS-IP are directly involving more than 750 innovative service companies across Europe in these pilot actions. Due to the current financial crisis, the projects have identified access to finance as a key challenge for the potential high growth innovative services companies in the three sectors and are working to launch a new cross-border European KIS Venture Fund in 2009, which would be a real breakthrough as innovative service companies often face specific problems in access to finance.

In some KIS fields some accomplishments have already been obtained. For example, in the field of space-based services the EC-ESA coordination has been increased, and an integrated set of innovation support activities was put in place to support new business ideas from generation to market development. Network of clusters such as ENCADRE and providers of innovation support services such as

[93] The Staff Working Paper "Towards a European strategy in support of innovation in services – Challenges and key issues for future action", SEC(2007) 1059

KIS4SAT have been joining at a European level in a combined effort to provide Europe with new, competitive businesses. Besides, more than € 20 million have also been allocated under FP7 to a number of projects aiming at developing various space-based services.

The INNO-Net Innovation Policy Project in Services (IPPS), which brought together 12 authorities and innovation agencies across Europe under the PRO INNO Europe initiative (see in section 3.1.5), was a first step towards services innovation policy cooperation across the EU. It resulted in the elaboration of the European Services Innovation Memorandum launched in December 2007 and signed by eight national and regional innovation agencies in the EU. The Memorandum called for the Commission to continue to support the development of services innovation policy at European level with the aim to speed up the development of services innovation policy across Europe at national and regional levels. Furthermore, it emphasised that these activities are important to raise the status of this new policy area that is still at an early stage of its life-cycle.

This project will be followed up in 2009 by a new INNO-Net on “Better policies in support of services innovation” with the participation of more than 15 national and regional innovation policy makers. The INNO-Net will look into a number of different aspects of innovation policy as well as develop and test new innovation support measures. A separate accompanying Staff Working Document "Challenges for EU support to innovation in services"[94] provides further arguments on the needs and opportunities to strengthen services innovation in Europe as an enabler for growth and new jobs. It presents the latest available statistical information on the drivers, barriers and potential impact of services innovation and identifies a number of policy challenges which should be addressed at European level as a matter of high priority in order to fully valorise the potential of services innovation in Europe.

Impacts and lessons:

As pointed out in the European Services Innovation Memorandum, services innovation requires a shift of mindset to better include services innovation in the Community, national and regional innovation policies. Services innovation is also of great importance for innovation in manufacturing sectors, and is also enabled by some of the same technologies.

In this respect, the analysis and consultation have shown that it may be opportune to follow a more sectoral approach combined with putting in place supportive framework conditions for emerging markets. It may also be fruitful to look further into the role clusters can play for innovative service companies with the ambition to grow and internationalise.

The issue of innovation in public services has so far only been addressed marginally at EU level, and mainly as part of the interoperability of public ICT applications, and as part of innovative actions under the European Social Fund in the sense of testing methods how to improve social and employment services. As public procurement represents 16% of the economy and a large share of this are services, there may be a need to look further into supporting the procurement of innovative services.

94 SEC(2009) 1195

3.2.6. Provide innovation support services to enterprises (in particular SMEs)

Objectives:

The Commission has aimed to overcome some of the innovation problems such as access to technologies, assessment of the innovation needs and potentials of enterprises, in particular SMEs, by providing specific business support services, stimulating research and innovation, including the promotion of good innovation management practices.

Activities:

The main achievement of the Commission in this field is the merger of the Innovation Relay Centres' functions with those of the Euro Info Centres early 2008 in the "no wrong door" spirit. Their activities were taken over by the **Enterprise Europe Network**[95] under CIP and extended with additional tasks such as the promotion of SME participation to the FP7 programme.

The Enterprise Europe Network services are provided by 554 partners in 44 countries (EU27, EEA countries and major economic areas like USA, Russia and China). Additionally, conditional terms for Associated and Affiliated membership have been defined where 8 and 5 memberships have been signed respectively. The official launch of the Network in February 2008 has received a high political visibility with keynote speakers on SME policies and workshops with more than 1100 participants. National events were organized by the partners in each country explaining and promoting the services offered by the Network to SMEs.

The Executive Agency for Competitiveness and Innovation[96] (EACI) was created through a Commission's Decision of 31 May 2007 to manage the Enterprise Europe Network on behalf of the Commission. The organisation of the agency has been put in place and concluded with the hand-over for the project management and network animation tasks. A network governance structure has been put in place where strategic decisions on the role and future of the network are discussed in the Steering and Advisory Group. More specific working groups have been put in place to analyse the needs and developments for communication, partnership tools and quality & performance. Various training sessions have been organised with special attention to the newcomers' trainings with a total of 500 participants in 2008. A communication strategy, guidelines and graphical charter for the network has been developed and promoted throughout the network. Guidelines and procedures have been developed to ensure the quality of the provided services.

Partnership tools have also been put in place to support the business processes needed by the network. This includes all tools needed for collaboration, business

---

95 Enterprise Europe Network is a "one-stop shop" for the innovation and business needs of SMEs in the EU and beyond. It provides enterprises with a range of quality and free-of-charge business and innovation support services to help make them more competitive, such as information, guidance and customised assistance on EU funding opportunities including in the Research area (FP7), technology audits, technology transfer, and business partner finding. See http://www.enterprise-europe-network.ec.europa.eu/index_en.htm

96 http://ec.europa.eu/eaci/

cooperation and technology transfer; about 7500 profiles of cooperation request and offers have been introduced. About 30 to 40 match-making and technology brokerage events are organised every month to promote business and technology partnerships between SMEs. It is estimated that about 3000 partnership agreements will be signed during the first reporting period. The first annual conference was organised in Strasbourg in association with the French Presidency, where about 800 network partners took stock of the first year's activities and had an outlook to the main priorities for 2009 included in the annual guidance note disseminated to the partners.

The Commission also supported the development of the IMP³rove **innovation management self-assessment tool**[97] for enterprises under the Europe INNOVA initiative. The Innovation Management approach that has been developed for IMP³rove is covering all aspects of innovation management relevant for small and medium-sized enterprises (SMEs). It includes the innovation strategy, innovation organisation and culture, innovation life cycle processes with idea management, development of new products, services, processes, organisational structures and business models. The IMP³rove approach also covers the enabling factors relevant for innovation management at SMEs such as project management, HR, and knowledge management. In this regard, IMP³rove builds on a holistic approach to innovation management.

In particular, innovation support to firms needs to include support for effective IPR use. While it is up to the entrepreneur to decide whether to use IPR to protect intellectual assets, the limited specialist resources available to SMEs in this regard may mean that it is for public authorities to provide tools offering small firms with knowledge and/or finance to assist innovation and the related use of IPR by SMEs. The Commission therefore set up the **China IPR SME Helpdesk,** which offers first-line advice to European enterprises facing IPR problems relating to trade and investment in or from China[98], and the **IPR Helpdesk** that provides IPR assistance related to FP7 projects[99].

Impacts and lessons:

The Enterprise Europe Network is progressively becoming a fully operational instrument for promoting the use of the single market and to support innovation in SMEs. It also became a good instrument for Commission services to inform SMEs and promote innovation policies and programmes through the 18 defined sector groups covering the major industrial and services sectors.

Also, the collected opinion of SMEs on a broad range of EU policy initiatives or programmes is important for Commission services when analysing the impact of new legislations and programmes on SMEs. Two mechanisms are operated via the Enterprise Europe Network to test the impact of EU legislation and programmes – either in advance with the SME panels, or retrospectively via the SME feedback mechanism.

97 https://www.improve-innovation.eu/opencms/opencms/en/02_SAT/

98 http://www.china-IPRhelpdesk.eu/

99 http://www.ipr-helpdesk.org/

Results under IMP³rove include:

- the successful development and testing of the approach with more than 2 000 SMEs across Europe, exceeding the required targets in quantity, quality, geographic scope, and in the number of languages on which the IMP³rove platform is available;
- the training of more than 300 innovation management consultants and intermediaries across Europe establishing the IMP³rove network;
- the IMP³rove assessment in the CWA 2007/35 to establish a common European standard in innovation management assessment.

The cost benefit analysis of IMP³rove is very positive. The project has resulted in the largest and most up-to-date benchmarking database available regarding innovation management capabilities at SMEs in Europe covering more than 25 EU Member States. The awareness for innovation management as a key growth driver has been significantly increased at more than 2 000 SMEs, who have conducted the IMP³rove assessment, and also at the consultants and intermediaries.

In the first year of operations, the China Helpdesk counselled over 1 000 businesses in workshops and training sessions, handled about 350 more specific individual cases, and developed a practice-oriented website which has received over 600 000 hits. These efforts are to be continued until the end of 2010 and, in light of the broad and deep use made of the website (50+ hits per individual site user), a suite of e-learning materials is being developed to enable the China Helpdesk's advice to be as widely available as possible to SMEs 'close to home'. An analysis will be undertaken of whether and how best to offer such support in the future.

The conclusions drawn from a public consultation on the effectiveness of Community innovation support mechanisms are presented in a separate accompanying Staff Working Document *"Making public support for innovation in the EU more effective"*[100]. Although the results of this consultation clearly indicate that a **vast majority of stakeholders is in favour of EU involvement in innovation support,** the public consultation revealed a high degree of dissatisfaction with existing innovation support measures. This suggests that there is a gap between what enterprises would expect to receive as innovation support and what they actually get.

3.2.7. Cohesion policy: an increased focus to support innovation

Objectives:

Included in the road map of the "Broad-based innovation strategy for Europe: Putting knowledge into practice" the goal of mobilizing support to regional innovation through Cohesion policy was highlighted. Cohesion policy is the Community's largest source of investment in the real economy. With significant financial resources (€ 347 billion over the period 2007-13), this policy provides vital support and stable

100 SEC(2009)1197

investment at local and regional level, and is one of the main instruments for the broad-based innovation strategy. The anticipated contributions of Cohesion policy to this strategy was assessed by two strategic evaluations: "The potential for regional policy instruments, 2007-2013, to contribute to the Lisbon and Göteborg objectives for growth, jobs and sustainable development" and "Strategic Evaluation on Innovation and the knowledge based economy in relation to the Structural and Cohesion Funds, for the programming period 2007-2013"[101].

Cohesion policy plays a relevant role in helping lagging regions (convergence regions) to create the capabilities to identify their growth potential and use their tangible and intangible territorial assets aiming at achieving sustainable growth that includes synergies between environmental, economic and social concerns. Through the competiveness and employment objective, which is open to all other regions, support is provided to develop measures, projects and initiatives that contribute to an increased competitiveness. Another objective, European Territorial Co-operation, strengthens cross-border co-operation through joint local and regional initiatives, trans-national co-operation aiming at integrated territorial development, and interregional co-operation for exchange of experiences and decreasing of barriers.

Activities:

The development of regional innovation strategies was supported by the Commission through Cohesion policy since the mid 1990ies. The **Regional Programmes of Innovative Actions** and the **Regions for Economic Change** initiatives aiming at increasing the innovative capacities of the regions and making good practices in regional innovation policy accessible to other regions were already described in section 3.1.5.

For the period 2007-2013, with a total amount of €347 billion, the focus on innovation was enhanced by an alignment between the National Strategic Reference Frameworks, the Operational Programmes[102] and the Lisbon National Reform Plans, mainly in the aspects referring to the types of measures and actions that can lead to the development of a knowledge-based society in all European regions.

In order to further reinforce the integration of the Lisbon priorities in the negotiation of the national and regional programmes, the European Council endorsed the addition of quantitative allocation targets to these mechanisms (earmarking). This approach set targets for the EU-15 of 60% of the financial allocations for convergence regions, and 75% of allocation for regional competitiveness and employment regions to be invested in spending categories deemed as priorities in relation to the growth and jobs objectives. These targets have been more than attained with 65% and 82% respectively in convergence and competitiveness regions

---

101 http://ec.europa.eu/regional_policy/sources/docgener/evaluation/rado_en.htm

102 The national strategic reference framework (NSRF) is a new system programming instrument applicable for the period 2007–13. NSRF were prepared by the Member States with consultation of their institutional stakeholders and in dialogue with the Commission. They were the basis for the development of 335 ERDF and the 120 ESF Operational Programmes produced by the Member States and adopted by the Commission.

now being earmarked for Lisbon-related priorities. This corresponds to € 250 billion (70% of the total envelope)[103].

The focus on innovation was strengthened by the legislative package[104] governing cohesion policy as follows:

- A focussing of the scope of the European Regional Development Fund (ERDF) and of the European Social Fund (ESF) on investment directly relevant to innovation. In addition, the mainstreaming of innovative activities is called for by both funds.

- The Community strategic guidelines on cohesion policy (2007-2013)[105,] adopted by the Council, stress that to promote sustainable development and strengthen competitiveness it is essential to concentrate resources on research and innovation (RTDI), entrepreneurship, information society and training and adaptability of workers.

Impacts and lessons:

In the Staff Working Document "Regions delivering Innovation through Cohesion Policy"[106] the Commission made an assessment of the role of Cohesion policy in supporting innovation and also purposes that Member States and regions have regarding the use of Structural Funds for innovation during 2007-2013.

The result was that in over 380 of the 455 operational programmes (OP) of the Structural Funds there are innovation related measures included. The budget foreseen for them is some € 86 billion. These investments are intended to go into research, technological development, including the creation of regional and trans-regional cluster initiatives, networking among enterprises and with research, development of science parks, incubators and research infrastructure, technology transfer, and promotion of environment-friendly products and processes in SMEs. It also includes entrepreneurship to support self-employment and business start-ups, advanced support services for businesses and access to finance (some €8.3 billion in 287 OP), innovative ICT, in particular services and applications for businesses and citizens (such as e-government, e-health, etc.) and the take up and efficient use of ICTs by SMEs (some €13 billion in 261 OP). Further, these investments addressed the development of human capital potential in the field of research and innovation through training and services for employees and firms to step up their adaptability to change and the design and dissemination of innovative and more productive ways of organising work (some €14.4 billion in 181 OP). The amounts mentioned will be topped-up in different proportions (higher for the competitiveness regions) by national public and private funds.

Compared to the period 2000-2006, the Commission achieved together with the national and regional authorities a massive progress in terms of redirecting Cohesion

103 COM (2008) 301 of 14.5.2008.
104 http://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/newregl0713_en.htm
105 http://ec.europa.eu/regional_policy/sources/docoffic/2007/osc/index_en.htm
106 http://ec.europa.eu/regional_policy/sources/docoffic/working/doc/SEC-2007-1547.pdf

Policy funding towards innovation. The share went up from some 11% to 25% of the Structural Funds.

The implementation of Operational Programmes is at an early stage. The financial and economic crisis has put additional pressures on governments and national authorities that might lead, to a certain extent, to changes in previous investment plans. Cohesion policy has responded to these new conditions in a quick manner by offering possibilities to increase advances to Member States and accelerate intermediate payments to increase liquidity in their economies, speed-up of delivery of JEREMIE, the financial engineering scheme to promote entrepreneurship (see in section 3.2.1), enhancing cooperation with EIB and EIF and simplifying several types of procedures. The results of these efforts will be compiled in 2010 and a Strategic Report will be delivered to the Council and European Parliament.

Against the background of the current economic crisis, an important challenge is to make the best possible use of the € 86 billion earmarked for support to research and innovation. The Commission has recommended a continued effort on spending on all components of innovation in order to ensure a successful post-crisis sustainable growth.

Experience also shows that the innovation dimension of Cohesion policy needs to be reinforced through the combined efforts of other Commission services that play a prominent role in innovation as well as of networks and platforms developed by these policies to support innovation. The shared management of Cohesion policy, i.e. the decentralised allocation of tasks and responsibilities for implementation accorded to the Member States and regions and the supervisory role to the Commission, is effective for the delivery of innovation. To increase its effectiveness a combined effort to provide more direct support to the Managing Authorities of the Structural Funds and to gather evidence of the mechanisms put in motion and their results is needed.

3.3. Combination of supply with demand-side measures

To improve the efficiency and effectiveness of Europe's innovation eco-systems, combination of 'demand pull' from innovative markets with 'supply push' from new knowledge, technologies and infrastructures is needed. Since the launch of EU innovation policy in the 1980ies until 2005, the emphasis was – just like in the Member States' innovation policies – on investing in the creation and diffusion of knowledge. However, analyses show consistently that one of Europe's innovation challenges is to translate this into commercially successful innovative goods and services. Demand side innovation policy addresses this issue through mobilising instruments to make the uptake of innovation in European markets easier and faster.

3.3.1. Facilitate the emergence of lead markets

Objectives:

The European Commission's Lead Market Initiative (LMI) aims to facilitate the emergence of innovation friendly Lead Markets in Europe through a coherent, short-term, package of demand-side innovation instruments, targeted to sectors (six in the ongoing Initiative), that are expected to grow and where Europe's companies can expand globally from a strong home basis. These are areas eHealth, sustainable

construction, protective textiles, bio-based products, recycling and renewable energies.

Activities:

The **Communication on the Lead Market Initiative** (LMI), which had been announced in the broad based strategy, was adopted in December 2007[107]. The LMI calls for urgent and coordinated action along six ambitious action plans, with a timeline of 3-5 years. Action plans[108] consist of a tailored policy mix of demand-side policy measures in the fields of legislation, standardisation and labelling, public procurement and complementary activities (mainly through CIP and FP7).

Impacts and lessons:

This was the first time that the EU has launched a coherent demand-side innovation policy package. Many European countries, such as Finland, the UK and the Netherlands are now putting demand-side innovation policy at the heart of their innovation strategies. The endorsement of the Lead Market Initiative by the May 2008 Competitiveness Council of the EU Member States made it clear that expansion to new areas should depend on the results of the review of the initiative.

The main results to date and conclusions of the Lead Market Initiative are described in a separate accompanying Staff Working Document *"Mid-term progress report of the Lead Market Initiative"*[109].

In short, the three main conclusions of the LMI mid-term progress report are as follows:

Firstly, progress has been made with the practical implementation of all actions plans. The economic crisis already has a strong impact on a number of lead market sectors. Some action plans, notably in sustainable construction, have broadened the scope of their activities to deal with the effects of the crisis. For other action plans, it is even more important that planned actions are delivered on time, such as in standardisation in bio-based products. Eighteen months into its implementation, it is too early days to be able to measure the impact of the LMI on market developments.

Secondly, the choice of demand-side innovation instruments (regulation, public procurement, standardisation and complementary activities) for the 'policy mix' of each action seems to be appropriate. Some CIP and FP7 funding was available at Community level to set up demand-side innovation policy activities and to bring down barriers in getting innovation products to the markets. For example, a joint call in FP7 on sustainable bio-refineries is aimed at developing technologies to make bio-refinery production cost-effective; and at coordinating better existing bio-refinery related research in Europe.

---

107 COM(2007) 860 final, available at http://ec.europa.eu/enterprise/leadmarket/doc/com_07_en.pdf

108 The implementation of each action plan is led by a lead DG - Lead DGs are: DG TREN for renewable energy, DG ENV for recycling, DG INFSO for eHealth and DG ENTR for bio-based products, sustainable construction and protective textiles. Each lead DG is responsible for the implementation of its action plan in the LMI.

109 SEC(2009) 1198

Thirdly, since its launch in January 2008, the LMI has led to new forms of cooperation in innovation policy between key decision makers from market sectors, innovation policy and most importantly other policy areas (regulation, public procurement etc).

A key action in all 6 markets was **promoting networking and cooperation among public procurers**. Two calls under the Competitiveness and Innovation Framework Programme (CIP) were published (a total of € 4 Mio), which resulted in funding of four networks that will be set up in Autumn 2009; two in the area of sustainable construction, one in protective textiles, and one in the area of eHealth. In recycling, the CIP call on "Championing Eco-innovation"[110] will support activities in public procurement, particularly Green public procurement.

Concerning **standardisation, labelling and certification** , in the area of e-health, recommendations on cross-border interoperability of electronic health record systems have been adopted. The Commission has also issued two standardisation mandates to CEN on bio-based products; a mandate for the elaboration of standards for bio-lubricants and bio-polymers, and a mandate for the programming of standards for all types of bio-based products. Technical specifications and a work plan are expected by mid-2010. CEN has also set up a Working Group on sustainable construction to carry out an inventory of currently existing standards and to identify possible needs for further contributions to the Lead Market Initiative. Technical specifications and a work plan are expected by mid-2010. In the recycling area the Commission is starting to implement a new mandate received from the legislator to set EU wide criteria for "end of waste" status of recycled goods. This will facilitate the use of recycled goods since they can be traded as products without additional controls from waste legislation. It will also strengthen demand by strengthening trust into the quality of such goods.

Recently adopted **legislative measures** strongly contributed to the objectives pursued by the Lead Market Initiative. Moreover, the LMI may have had a noteworthy impact on the direction and scope of new and changing existing legislation, despite the long timelines of the regulatory process. Under the Renewable Energy Sources Directive (RES), Members States will submit their national plans by the end of June 2010 on how they will reach the set target (20%) for use of renewable energy by 2020. The new Waste Framework Directive (WFD) was adopted by the Council in 2008. The WFD will be instrumental in improving markets conditions and further stimulating recycling performance. It sets targets for 2020 on household waste (50%) and for construction and demolition waste (70%). In addition, the development of end-of-waste criteria will improve market conditions for recycled material. In the area of eHealth, existing EU legislation has been screened and preparatory work done in providing guidance for applying the current legal framework for eHealth products and services and analysing possibilities for adopting a separate legal initiative for eHealth and telemedicine. The proposal of Construction Products Regulation lays down rules on how to express the performance of construction products, in particular with respect to the sustainability requirements of construction works.

[110] See call PROINNOEurope-ENT-CIP-09-C-N02S00

The fourth LMI policy action measure are **complementary actions**, both demand- and supply side. Advisory Groups and events have been set up in each of the markets to facilitate the exchange of knowledge and best practice between relevant stakeholders. For example, the Ad-hoc Advisory Group for bio-based products, composed of representatives from national governments, industry and academia, is the first cross-disciplinary expert group to be set up at European level to discuss renewable raw materials as well as bio-based products and make recommendations for future actions in the area.

Some CIP and FP7 funding was available at Community level to bring down barriers in getting innovations to the markets. A FP7 NMP[111] call targeting the personal protective equipment and clothing sectors addressed not only technical aims, but many funded projects (with a strong SME participation) have the implementation of the LMI and/or better use of standards among their aims. Other highlights are: the FP7 joint call for bio-refinery research was also published in autumn 2008, the 2009 FP7 Regions of Knowledge call[112] which engaged regional actors to the LMI sectors and the 2009 CIP-EIP networks funded under the Europe INNOVA umbrella[113].

In sustainable construction, an EU-wide strategy has been created on how to facilitate the upgrading of skills and competences of construction workers to best meet future skills' needs within the sector for continued innovation.

The Enterprise Europe Network (EEN) will be a strong partner to disseminate these results to innovation intermediaries, regional policy makers and SMEs, as well as obtaining feedback from these stakeholders.

To conclude, forceful implementation of the LMI's action plans is essential in the second half of the LMI. More efforts should be invested in improving high-level visibility and in liaising the actors of the innovation ecosystem, regulators, professional bodies, sectoral stakeholders and civil society. However, for a real impact, a more active involvement of Member States and corresponding policy take-up of the LMI at national level are needed.

Demand-side innovation policy tools, such as the CIP-funded networks of public procurers in LMI sectors, should be developed further, as effective tools in this area are currently lacking. More generally, it should be considered to strengthen the links between supply-side and demand-side activities

3.3.2. Promoting wider access and better use of new technologies ready for market uptake

Objectives:

The Commission has aimed at fostering industrial competitiveness also by promoting all forms of innovation through innovation pilot projects stimulating the uptake of innovative solutions based notably on new technologies in the fields of eco-innovation, ICT, intelligent vehicle systems and intelligent energy.

[111] 2nd call of the Nanotechnologies, Materials and new Production technologies (NMP) theme in FP7, see LMI mid-term progress report for more details

[112] See: http://cordis.europa.eu/fp7/capacities/regions-knowledge_en.html

[113] See call reference: EuropeINNOVA-ENT-CIP-09-C-N01S00

Activities:

Implementation, pilot and market replication projects under the Competitiveness and Innovation Framework Programme (CIP) are promoting innovation, technology transfer and the dissemination of new technologies that are ready for market uptake.

The Entrepreneurship and Innovation Programme (EIP) under CIP supports projects in eco-innovation through three initiatives: 1) financial instruments, 2) network of actors and 3) pilot and market replication projects. A first call under the CIP-EIP for market replication and pilot projects in the field of eco-innovation was launched in 2008 and resulted in 40 projects being selected for funding (28 Million € in total).

The ICT Policy Support Programme under the CIP is stimulating uptake of innovative ICT solutions, especially for public services. For instance, the STORK project develops an EU-wide system for the recognition and authentication of electronic identity; the PEPPOL project is making electronic communication between companies and government bodies possible for all procurement processes in the EU; and the epSOS project enables health professionals to electronically access patient summaries and electronic prescriptions from another country in their own language.

Furthermore, in February 2006, the Commission launched the "Intelligent Car initiative" to remove legal and institutional barriers to rolling out intelligent systems and to speed up the development of smarter, safer and cleaner transport for Europe by using a mix of policy (ensuring interoperability across EU countries and technological solutions), research (supporting ICT-based research and the take-up of research results), and communication (raising awareness among consumers to stimulate their demand for ICT-based solutions) instruments.

Impacts and lessons:

Innovation pilot projects supported by the CIP programme have notably advanced co-operation and interoperability between different systems and their users. This is leading to wider uptake of innovative solutions, especially in areas of public interest.

There is a demand to support innovation through pilot projects at European level. Innovation pilot projects launched in areas such as eHealth, eGovernment, digital libraries and ICT for energy efficiency have stimulated the uptake of innovative information and communication technologies and services based on digital content. They have enabled the actors of the value chain to get precise insights into user requirements and into the legal and financial hurdles for the uptake of their solutions and to prepare for the wider development of lead markets in these fields. They have also proven relevant and attractive to national authorities through their active involvement and co-investment, notably in testing and deploying innovative ICT solutions for pan-European public services.

3.3.3. Promote public procurement to stimulate research and innovation

Objectives:

In order to stimulate demand for innovation, the public sector offers some important potential, as in the EU around 16% of GDP go into public procurement. The

Commission therefore announced to enhance the innovation orientation of public procurement and the "lead customer" potential of the public sector by producing a **guide on dealing with innovative solutions in procurement**.

Activities:

The guide was published in February 2007[114]. It builds on concrete examples to identify how public authorities can facilitate competitive market demand for innovation.

Some provisions in the current EU regulatory framework on Public procurement significantly stimulate the conditions for innovation. In fact, according to both Directives 2004/17/EC and 2004/18/EC,[115] on the one hand, technical specifications can be formulated either by reference to specifications expressly listed in the Annexes to the Directives or to national standards transposing, *inter alia*, European or international standards, or, finally, in terms of performance of functional requirements. This represents a stimulus for economic operators to innovate since it makes it possible to draw up technical specifications in terms of functional performance and requirements. On the other hand, neither of the Directives 2004/17/EC and 2004/18/EC applies to R&D services,[116] unless the benefits of these services accrue exclusively to the contracting authority for its use in the conduct of its own affairs and the services provided are wholly remunerated by the contracting authority.

In particular, as to this provision, a **Communication on Pre-commercial Procurement**[117] was adopted in December 2007, pointing out some aspects of its implementation.[118] The communication addresses the need for more innovation in public services and provides an approach to procure R&D services. The approach provides for risk/benefit sharing between private and public players, and collaborations between public procurers to allow for economies of scale.

The Communication has launched a debate to identify concrete mid-to-long term public service challenges that require the development of new technological solutions, and to determine in which areas the current pre-commercial procurement framework could be used. It also explores the extent to which pre-commercial procurement could contribute to more R&D and innovation in Europe. The Competitiveness Council of May 2008 adopted conclusions on pre-commercial procurement.[119]

The Commission is also supporting actions which promote awareness raising and experience sharing, and which examine ways of providing incentives for jointly implemented pre-commercial procurement. Networking sessions have been held in the context of the ICT 2008 event in Lyon.

---

114 http://www.proinno-europe.eu/doc/procurement_manuscript.pdf

115 Articles 23 of Directive 2004/18/EC and 34 of Directive 2004/17/EC.

116 See Articles 16 f of Directive 2004/18/EC and 24 e of Directive 2004/17/EC as well as the Commission Communication on pre-commercial Procurement COM (2007) 799 at p. 2

117 COM(2007)799, available at http://ec.europa.eu/invest-in-research/pdf/download_en/com_2007_799.pdf

118 2004/17/EC and 2004/18/EC

119 ftp://ftp.cordis.europa.eu/pub/fp7/ict/docs/pcp/final-fresh-impetus-council-conclusions_en.pdf

In addition, calls were launched under ICT in FP7 and under ICT-PSP in the CIP for coordination actions to support information exchange and cooperation among public procurement authorities in the process. The Regions for Economic Change initiative (see in section 3.1.5) is also opened for implementation of pre-commercial procurement projects by the Fast Track Networks of regions that work close to the Managing Authorities of the Structural Funds.

Concerning green public procurement (PPP), a recent DG Environment report shows that in seven Member States 45% of procurement n 2006/2007 was "green" and this led a 25% reduction in CO2 emissions across 10 product groups and considerable savings in operating costs over the life cycle of the products.

Finally, the Commission supported in 2009 the establishment of networks of public procurers to support collaboration in the sectors covered by the LMI. These networks aim at raising the demand for innovative goods and services by public procurers.

Impacts and lessons:

Despite the above-mentioned efforts, the potential for using the public sector purchasing power to drive innovation remains largely untapped. Influencing public procurement orientations cannot be achieved by simply providing good practice examples and stronger uptake of innovation in public procurement at all levels is necessary to achieve visible results. Better cooperation between public procurers is a promising way forward to achieve this.

3.3.4. Creating a pro-active standard-setting policy

Objectives:

Standards can also be an important driver of innovation as they provide legal security for innovative companies, creating large scale markets and building confidence among consumers. Therefore, in the 2005 Communication on "More Research and Innovation" standardisation was pointed out as a part of the regulatory environment that needs to be adapted to promote the development of new markets and technologies. The 2006 Communication on a broad-based innovation strategy brought the discussion on standardisation forward and highlighted global promotion of EU norms and standards as a source of first mover advantages for European companies. Consequently, the objective of the Commission in this field has been to set up a predictable regulatory environment, and it aimed at speeding up the adoption of open, interoperable standards.

Activities:

The Commission Communication "**Towards an increased contribution from standardisation to innovation in Europe**"[120] was adopted in March 2008. It identified key elements for focusing EU standardisation policy on innovation such as commitment to market-led standardisation and to the voluntary use of standards, inclusion of new knowledge in standards and access to standardisation of all

[120] COM(2008) 133, available at http://www.cc.cec/sg_vista/cgi-bin/repository/getdoc/COMM_PDF_COM_2008_0133_F_EN_ACTE.pdf

interested stakeholders, in particular small and medium enterprises, but also consumers and researchers.

Standardization is also addressed in the Europe INNOVA initiative (see in section 3.1.5). The second phase of the programme was launched in autumn 2008 with calls for proposals consisting of 3 different innovation platforms: for clusters, for knowledge-intensive services, and for eco-innovation. The latter two platforms will cover the issue of standards: in both cases, one of the (optional) activities in the call for proposals is to promote the use of standards. The contractors should develop either information and guidance material on how to use available standards, or a tool helping to decide which standards that are most relevant for use. One idea pursued within Europe INNOVA is to establish market validation tools helping businesses screening and selecting standards for their integration into innovative solutions. This issue was discussed at a Europe INNOVA workshop in the first week of June.

Further, the Commission has administered a study[121] on access to standardisation, the aim of which is to determine to what extent the European standardisation system actually guarantees appropriate access to all interested parties, and to recommend how the system can be improved. The "access" aspect of the study concerns the entire standardisation process, as well as the results in the form of published standards. The final report was presented in March 2009. Many of its recommendations concern organisational issues, but some are of relevance also from an innovation perspective, for instance broader stakeholder involvement and more efficient use of ICT tools.

The Commission has also brought together experts to make strategic recommendations regarding standardisation in Europe for the decade to come. This is done in the "Expert panel for the review of the European standardisation system" (Express). The group will present its recommendations towards the end of 2009 in the form of a report "2020: outlook for European Standardisation", which will also take into account innovation aspects.

As for the standardisation in the ICT sector, the European ICT standardisation policy is being reviewed with a view to facilitating the creation in Europe of an environment which meets both industry's needs and society's expectations, and to promoting the competitiveness of European industry while ensuring that all citizens can further benefit from the opportunities created by the Information Society. In 2007, a major study was launched, with the aim of analyzing the European ICT standardization policy and of making recommendations for its future development. The study undertook an extensive survey, and identified issues which could challenge the EU ICT standardisation policy system. Consultation of stakeholders demonstrated a unanimous agreement on the establishment of a high level policy dialogue platform drawing together representatives of all European standardisation stakeholders to advise the European Commission on ICT standardisation priorities and monitor implementation of a coherent and consistent ICT standardisation policy. There was also a large consensus on the need to better integrate the work of so-called

121 Access to Standardisation, Study for the European Commission, Final Report, March 2009, available at http://ec.europa.eu/enterprise/standards_policy/access_to_standardisation/doc/access_to_standardisation_study_eim.pdf

fora and consortia, as well as on the need to ensure adequate SME and user participation in ICT standardisation. Major topics that will need further consideration include interoperability, the relationships between ICT standardisation and R&D, the treatment of IPR and the use of ICT standards in public procurement. The Commission is publishing in spring in 2009 a White Paper on the future ICT standardisation policy to consolidate the results of the review so far, to describe the Commission's vision, and to launch a formal public consultation on the opportunity of new legislation.

Impacts and lessons:

Although new initiatives have been brought forward under the priority area of standards, there is more scope for action in this field.

3.3.5. *Better regulation for new technology and emerging markets*

Objectives:

The Commission aims at improving its regulation, mainly in order to reduce the administrative burdens on enterprises, but also to be conducive for other policy objectives, such as innovation and SME support.

Whether regulation helps or hinders research and innovation depends on its design, including its impact on commercial risk and legal certainty, its timing and its capacity to accommodate alternative technical solutions. It is also important to have a predictable, anticipative approach to legislation, in particular for **product market regulation**. The Commission therefore aimed to identify instances where existing legislation or standards, or their absence, constitute obstacles to developing and deploying new technologies and to the emergence of new markets. Conversely, future regulatory measures should be taken into account in the planning of research and innovation activities.

Activities:

The Commission stepped up dialogue with stakeholders to identify regulatory barriers to research and innovation, particularly using **European Technology Platforms** and **Sectoral Innovation Panels** under the Europe INNOVA initiative (see in section 3.1.5).

Besides, **impact assessments** have been made mandatory for all new Community legislative proposals. This includes an assessment of the effects of such proposals on research and innovation, stressing in particular the aspect of non-technological and organisational innovation. In this respect, the Commission created an independent Impact Assessment Board (IAB) in 2006 to ensure more consistent and high quality of impact assessments. In 2008, the Board examined 135 draft impact assessments, compared to 102 in 2007. The number of impact assessments that the Board asked to examine for a second or third time also increased, which is a clear indication that further improvements in quality are needed.

Impacts and lessons:

The three top challenges facing all industries as assessed in the Sectoral Innovation Watch project are related to human capital, the support of knowledge creation, diffusion and technology transfer, and financial constraints. Other aspects like regulation, innovation culture, competition or demand factors play a significant role in some sectors, as the analysis revealed that these issues were very sector specific and hence not of equal importance to all industries.

The Impact Assessments Board's main conclusion is that two issues in particular need more attention. First, greater efforts must be made to improve the quality of impact assessments before they are sent to the Board. Commission services should make better use of the expertise of their impact assessment support units, and reinforce the role that they play in quality control. Second, better planning and respect of procedures are also an essential aspect of improving quality. Sufficient time should be allowed not only for the Board to examine the impact assessments, but in particular for services to follow-up on its recommendations.

4. CONCLUSIONS

The assessment presented in this paper shows that since 2005, innovation policy moved up in terms of EU policy priorities and became widely recognised as a key enabler of competitiveness, productivity growth and sustainability. It is also increasingly recognised that enhanced European cooperation is the way to fully exploit the innovation and creativity potential of Europe in all its diversity. It however also shows that progress in addressing each of the identified weaknesses of the innovation environment has been uneven. A number of important weaknesses remain, not the least in the area of IPR protection.

Innovation support became firmly anchored in Cohesion Policy and was integrated in a wide range of EU funding programmes (e.g. FP7, CIP, LIFE, Life Long Learning). However, implementation of these programmes is directed by over 20 committees with the participation of some 7 Directorates General of the Commission. The programme implementation is done by four different executive agencies, the EIF (and financial intermediaries in the Member States) and a number of Directorates General. This situation triggered already in 2006 the call of the Council for more synergies between these funding programmes.

Indeed, further changes in the range and number of EU instruments and policies used to support innovation seem necessary, notably to promote coherence between instruments, critical mass and to complement or extend them to cover also demand-led innovation measures. This could allow inter alia the backing of projects that cut across the phases of research, testing, procurement and deployment of innovative products and services as described for instance in the Communication *"A Strategy for ICT R&D and Innovation in Europe: Raising the Game"*[122].

In order to improve policy making, there seems to be a need for better assessing the impact of the actions. For this, it would be necessary to identify ex-ante and in much

[122] COM(2009) 116, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0116:FIN:EN:PDF

more detail the problem to be addressed, against which the impact of the action has to be measured later on. A recent ex post evaluation of DG Enterprise and Industry's innovation activities that were funded through FP6[123] stressed the need to have "a clear statement in respect of the intervention logic underpinning the Commission's programme of innovation activities in order to improve overall coherence and clarify the roles of individual activities". Consequently, "there should be a more systematic use of metrics in order to ascertain the impacts of the innovation activities".

Also, the increasing popularity of innovation in a broader range of policy areas bears the risk that the concept and possible economic impacts become diluted as virtually every change in policy measures is classified as innovation related.

The degree of connectivity and communication between the different elements of national, regional and local innovation eco-systems needs to be enhanced, to strengthen the collaboration between stakeholders (public-public, public-private, private-private).

Finally, the great interest in the European Year of Creativity and Innovation 2009 with hundreds of innovative projects funded from national and EU programmes to foster innovation capacities and innovation friendly environment in Europe bears witness to this. The European Year itself raises the general awareness and policy debate on the role of creativity and innovation in society and economy, widening its traditional scope from research and development to design and creative industries.

[123] "Ex post evaluation of the activities carried out by DG Enterprise and Industry under FP6", GHK, Technopolis, September 2008