



European Economic and Social Committee

CCMI/038
Innovation: impact on
industrial change and the
role of the EIB

Brussels, 11 July 2007

OPINION
of the
European Economic and Social Committee
on
Innovation: impact on industrial change and the role of the EIB
(own-initiative opinion)

On 6 July 2006, the European Economic and Social Committee, acting under Rule 29(2) of its Rules of Procedure, decided to draw up an own-initiative opinion on

Innovation: impact on industrial change and the role of the EIB.

The Consultative Commission on Industrial Change, which was responsible for the Committee's work on the subject, adopted its opinion on 20 June 2007. The rapporteur was **Mr Tóth**. The co-rapporteur was Mr Calvet Chambon.

At its 437th plenary session, held on 11 and 12 July 2007 (meeting of 11 July), the European Economic and Social Committee adopted the following opinion by 138 votes to 1, with three abstentions.

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1. Conclusions and recommendations

- 1.1 In its own-initiative opinion, the EESC, having studied the links between innovation and industrial change, and numerous relevant EU and national initiatives, has decided to analyse and present recommendations on aspects of the innovative system which are conducive to making direct commercial use of research findings, and to strengthening and promoting the development of European industry and economic performance.
- 1.2 The EESC feels it is worth pointing out that in many countries and regions there is a close correlation between successful innovation and the openness of society and of educational systems. Insofar as in our century innovation occurs - and is indeed a critical factor - not only in economic life, but in all areas of activity, human resources can become a strong growth factor. The EESC feels that this factor will become increasingly crucial as a catalyst for development, and that therefore innovation must above all build on the basis of broad education and training in line with the criterion of lifelong learning; this should make use of equal access to an open-sourced, open-content knowledge base.
- 1.3 The EESC feels that it is vital for companies to achieve synergies between innovation, human resource policy and knowledge sectors, which not only act as a basis for innovation but also enable it to flourish. At the same time, a means must be found of ensuring that industrial restructuring flexibly adapts to changes in employment structures, and the requisite financial conditions must be in place for this to happen.
- 1.4 The EESC feels that it is vital to raise public awareness of successful innovative initiatives, while enhancing their public presence and boosting support. The innovative role played by

society is of key importance in the overall innovative process. Non-technological innovation such as new business models, better planning, enhanced work organisation and competencies is at least as important as technological innovation. In general, innovation in terms of organisation or organisational development is needed to fully tap into the potential of technological innovation.

- 1.5 The social partners and players and institutions of organised civil society already play a very important role in ensuring that modernising impulses emanating from innovation are identified, reinforced and accepted; we suggest strengthening this role, not least in the formulation of strategic priorities and policy.
- 1.6 The EESC is convinced that the answer to the European paradox - our strength in basic research, combined with a weakness in translating findings into practical, commercial results - should involve shifting the emphasis on increasing R&D expenditure as a percentage of GDP to changing the structure of that expenditure. While we need to make more effort in terms of increasing expenditure, we also need to pay more attention to new approaches.
 - 1.6.1 To a large extent, R&D in EU Member States is dominated by the supply side: the supply of R&D research findings exceeds entrepreneurial demand. Demand must be stimulated by reducing entrepreneurial risks, improving conditions for private-sector research, changing the business climate, and promoting cooperation between universities, research institutes, and business.
 - 1.6.2 Enhancing the sustainable innovative capacity of business requires a coordinated effort at EU, national and regional levels in the fields of financing, R&D, industry, taxation, education, environmental protection and media and communications.
 - 1.6.3 We feel that it is worth considering a solution which has already been put into practice in some Member States: companies which are engaged in development or in outsourcing development to research organisations could be awarded additional budgetary or private-sector funding, on the basis of expressions of interest.
- 1.7 The EESC would stress that recognition and protection for intellectual property in the EU is increasingly unable to meet the intensifying demands of global competition. It is important to continue to acknowledge the importance of publishing scientific findings, and the role of the resulting evaluation - the importance of the "scientific market"; equally, commercial exploitation and patenting of research findings, the exercise of intellectual property rights, and stronger assertion of Community interests are issues which call for closer attention and comprehensive measures. The EESC feels that, at the same time as developing Community law, Member States need to consider appropriate policy instruments for developing legislation on intellectual property rights, including institutional monitoring of patent use, as well as improved intra-EU cooperation.

- 1.8 The EESC believes that in order to focus on innovation and dynamically boost competitiveness and to move towards sustainable development, it is essential to put in place management functions for strategic innovation, as well as solutions to the issue of training researchers and business specialists in this field. It is especially important to integrate information and communication technologies into education¹, so that e-learning pays special attention to training in the management of innovation and on developing the accompanying systems of incentives and organisational conditions.
- 1.9 In the EESC's view, in the interests of promoting innovation efforts must be made to align the priority axes of industrial change with those of training and further training, enabling a timely response to market needs and changes, including in the field of training. It is important to ensure researcher mobility and appropriate mobility in the management of innovation, enabling broad-based cooperation between managers in institutions dealing with innovation and their counterparts in science and technology parks.
- 1.10 The EESC feels that management and organisational structures which are capable of making technology transfer more effective have a special role to play in promoting industrial change. Industrial, science and technology parks and technology centres are extremely important instruments for providing the necessary expertise and assistance together with the requisite laboratories for small and medium enterprises to start up, become established, secure a share of the market, and keep up with technological advances. Providing businesses with the requisite conditions for innovation with high-quality content and at relatively low cost is increasingly essential for technology transfer bodies to operate in networks, so that, using information and communication technologies, they are able to perform logistical tasks. The Commission needs to consider various approaches to developing such structures, with particular emphasis on promoting the development of science and technology (competitiveness) poles and knowledge centres. Science (competitiveness) poles, which encompass universities, science and technology parks, incubators and technology centres, should be given a key role in pursuing EU development priorities; in addition, steps should be taken to facilitate the setting up of such structures.
- 1.11 The EESC feels that the EU's emphatically stated objectives - such as the Lisbon strategy's vision of Europe becoming the most competitive economy in the world in the foreseeable future - have not been reflected in the debates on the budget, and in particular in the figures agreed in that budget. The Commission is devoting significant resources to R&D programmes but their role and importance are not growing in line with expectations. For these programmes to work effectively, their impact would have to be multiplied within the Member States, and they would have to generate programmes which take the particular circumstances of each country into account. However, this is not happening. The EESC feels that the Commission should review its system for managing innovation, and provide support for more effective

¹ IT-supported lifelong learning and industrial change, CCMI/034, 21.9.2006.

coordination of Member States' efforts, enabling the multiplier effect of R&D resources to be felt more strongly, particularly in view of the EU's priorities for development.

- 1.12 With regard to financing, the EESC welcomes the various efforts by the European Investment Bank (EIB Group) to boost European economic performance and innovation capacity, both supply side and demand side. The EESC would point out that this is only one element of a range of financing instruments: it is essential for the EU budget to ensure that funding for innovation matches Lisbon strategy objectives. In addition, contributions of similar proportions from national and regional budgets are also needed.
- 1.13 Based on the experiences to date, the EESC considers that the activities of the EIB Group have generally exerted a leverage effect. This is why the EESC calls for the EIB Group to continuously monitor and review leverage, and to coordinate with the European Commission together with other financial institutions in general, in order to achieve as much leverage as possible.
- 1.14 In the EESC's view the EIB Group has enormous capacities both as a public-sector bank and as a service provider. The EESC recommends that the EIB Group expand its activity as a manager of financial resources, with the involvement of private funding as well as Community funding.

2. **An innovation-friendly, modern Europe**

- 2.1 Commission Communication COM(2006) 589, which was published for the informal meeting of EU heads of state or government held under the Finnish presidency on 20 October 2006 in Lahti, Finland, concerns issues connected with the impact of innovation on industrial change in various ways. According to the communication, the EU and its Member States possess many innovation assets. But we also suffer from a number of paradoxes: we Europeans invent and innovate but frequently do not convert our inventions into new products, jobs and patents; there are many small, highly innovative start-ups but they do not easily grow into big, globally successful companies; moreover, whereas in certain sectors, such as telecommunications, take-up of (ICT) innovations has significantly boosted productivity, in other sectors this has failed to happen, as illustrated by several examples. Innovation and industrial change require thorough, flexible legislation on patent registration and on intellectual property. To this end, the Proposal for a Council Regulation on the Community patent of 1 August 2000 needs to be reviewed and brought more into line with rapidly changing economic trends (see, in particular, compulsory licences and the causes of lapse of the Community patent). Thus, procedures are necessary for facilitating the use of registered patents in various industrial and/or commercial applications and recognising the intellectual ownership of innovation by individual operators – researchers, managerial staff, engineers – or groups of operators, including where they are part of a business or administrative structure and the innovation is external to that structure.

- 2.2 Innovation can have an optimal impact on industrial change, provided that there is a system for coordinating instruments at the level of companies, sectors, regions, Member States, and the EU, providing easily accessible, user-friendly instruments for businesses, employees, scientific and educational institutions, and other stakeholder organisations participating in this process.
- 2.3 At the level of individual businesses, pro-active drivers for promoting innovation include, in particular (i) strategic management of innovation, (ii) strategic human resource management, (iii) development of skills, (iv) using new methods to organise work, (v) corporate agreements on innovation. The transition from static to more dynamic organisation of work which focuses on respecting and building individual workers and professionals' skills and capacity and provides for choice between further training and/or retraining programmes, must foster knowledge and innovation, and production of a broader range of new concepts across the board.
- 2.4 At the level of individual businesses, active drivers for managing change are, above all, (i) competence assessments and personal career development plans, (ii) outsourcing of services, (iii) further training and re-training, and (iv) collective agreements and social plans on corporate restructuring.
- 2.5 The main pro-active drivers which can be used at both sectoral and regional levels are (i) development of local production clusters, (ii) innovation-oriented networks and partnerships, (iii) innovation poles, science, technology and industrial parks, (iv) regional innovation strategies and development plans, together with institutions to implement them, and (v) knowledge regions.
- 2.6 The European Commission is continuously monitoring which areas are the most promising for European innovation.
- 2.7 The European Economic and Social Committee would also emphasise that in no sector can the possibility be ruled out of rapid growth in innovative capacity or an increase in the proportion of value added. It is worth supporting any innovative idea relating to new methods of using materials, the development of technologies or of new products, ensuring new levels of quality and generating added value.
- 2.8 The best way for Member State governments to proactively facilitate the impact of innovation is by coordinating at all levels of public administration their own national-level policies on employment, industry, innovation, environmental protection, education and trade. The added value offered by partnership with social partners and organised civil society in this process is obvious. Again at national level, there is also a need for emphasis on the following elements: (i) research into sources of new employment, and a forecasting system to identify them, (ii) vocational training and re-training programmes, (iii) a lifelong learning strategy, (iv) labour market regulation which is conducive to mobility and the development of skills.

- 2.9 Innovative cross-border approaches to cooperation can play a particularly important and specific role as a catalyst in the field of innovation and industrial change. This includes Joint Technology Initiatives (JTIs) in the fields of nanotechnology, innovative medicines, hydrogen and fuel cells, embedded computing systems, aeronautics and air transport, and global monitoring for environment and security. In addition, the significance of European Technology Platforms should be stressed in this context, together with the importance of pursuing their development. A particularly good example is the widespread dissemination of the experiences of the European Steel Technology Platform, the Clean Coal Platform and the Waterborne Platform - initiatives which already have a solid track record.
- 2.10 At the level of the European institutions, there should be coordinated, pro-active use and development of the following elements: (i) the Lisbon strategy, (ii) the Sustainable Development Strategy, (iii) the Partnership for Growth and Jobs, (iv) European social dialogue (both sectoral and cross-sectoral), (v) Community programmes on R&D, innovation, employment and lifelong learning, (vi) Community regional policy, (vii) the European Social Fund (ESF), the European Regional Development Fund (ERDF), (viii) the European Monitoring Centre on Change, and (ix) a European system to forecast new sources of job creation.
- 2.11 The initiative on founding a European Institute of Technology (EIT)² is promising. It should be emphasised in this opinion that it is the current initial phase of developing the institute's operational framework which offers the most scope for ensuring that it makes a real contribution to translating innovation into new products and jobs.
- 2.12 Among initiatives by the European Commission, particular mention should be made of Communication COM(2006) 728 final, *Towards a more effective use of tax incentives in favour of R&D*, published on 21 November 2006.
- 2.13 Of equal relevance for promoting R&D together with innovation is the Commission's initiative on state aid rules³.
- 2.14 The European Economic and Social Committee agrees that it is particularly important to: (i) build a leading role for Europe in strategic technologies of the future, (ii) act effectively to forge much stronger links between academic, research and business circles, and (iii) improve general conditions.
- 2.15 In terms of improving general conditions, special attention should be paid to the following aspects: (i) the single market, (ii) financing innovation, and (iii) intellectual property rights in

² COM(2006) 604 final.

³ Commission regulation (EC) No 364/2004 of 25.2.2004 amending regulation (EC) No 70/2001, OJ L 63 (28.2.2004).

the 21st century and (iv) helping EU business to develop foreign trade and economic links, and to secure access to markets in third countries.

- 2.16 In addition, sectoral evaluations should be conducted as soon as possible, so that sector-specific conditions can be improved to the maximum possible extent; in doing so, special attention should be paid to the following aspects: (i) SME-related factors, (ii) contributing to the implementation of the Lisbon strategy and (iii) networking between regions.

3. **The role of the European Investment Bank (EIB) Group**

- 3.1 The EESC would point out that the full range of financing instruments together with coordinated use of such instruments are needed to ensure that the effects of innovation associated with industrial change are as beneficial as possible. All appropriate products on financial and capital markets must be made available, regardless of whether they are created by conventional financial institutions, regional or national governments or the European Union. Financing instruments must be available to cover the entire innovation process, right up to its completion, and there must be funding to ensure market push/pull. In the context of the wider subject of financing, this opinion focuses on one of the key players in this field, the European Investment Bank Group, bringing together the European Investment Bank (EIB) and the European Investment Fund (EIF) instruments.

- 3.2 The EIB and the EIF have identified boosting European economic performance and innovation as one of their primary goals. Appropriate financial instruments will be mobilised and developed to achieve this objective of contributing to the Lisbon strategy and to the European Action for Growth. The Innovation 2010 Initiative (i2i) constitutes the EIB's main contribution in the process of making Europe more innovative and competitive, with the lending objective of EUR 50 billion for the decade to support investment projects across Europe, in the fields of education and training; research, development and innovation (RDI); and in advanced information and communication technologies (ICT) – including audiovisual media services and content- and e-services.

- 3.2.1 Funding committed to projects already supported through i2i since 2000 is estimated at EUR 46 billion by end of 2006, indicating that the target of EUR 50 billion by 2010 may be exceeded. By means of the Structured Finance Facility (SFF) - which is not confined to R&D objectives - the EIB has also expanded its financing capacity, in order to channel financial resources to cutting edge R&D and innovative products, processes and systems. This involves support for individuals participating in projects and start-ups requiring sub-investment-grade and therefore higher-risk loans. In order to finance investment activities developed by SMEs, the EIB establishes lines of credits with appropriate financial intermediaries.

- 3.2.2 In addition, innovative transactions are being developed, including risk-sharing mechanisms and/or combinations of national and regional support tools with EIB's products in order to answer the specific needs of SMEs. The EIF focuses on small and medium-sized enterprises

(SMEs) by means of venture capital and guarantees. The action of the EIF is complementary to the support for SMEs provided by the EIB.

- 3.2.3 With regard to SMEs' access to credit, the detrimental effect of the Basel II Accord should be noted. Broadly speaking, this agreement establishes specific obligations for the banking system, forcing banks to give a rating for every SME that applies for credit. For this rating to be calculated, SMEs will have to provide a range of information that is much wider in terms of both quality and quantity. SMEs that do not have ERP (Enterprise Resource Planning) information systems will not be able to provide all the information required. ERP systems are extremely expensive and the vast majority of SMEs do not have them, thus rendering themselves ineligible for credit on favourable terms, which will have a detrimental effect on their development. The EIB and the European Commission are requested to remain attentive and monitor the level of SMEs' access to the financing they require and the relationship between this access and the effects of the Basel II Agreement.
- 3.3 Support for innovation from the EIB Group requires development of new financing mechanisms and products, appropriate to the risk profile of transactions. At the same time, in order to increase the value added and synergies between the different Community financing instruments, new joint initiatives between the EIB Group and the Commission are being implemented through the creation of partnerships with programmes financed from the EU budget such as the Seventh Framework Programme (FP7) and the Competitiveness and Innovation Programme (CIP). Although such joint initiatives are not limited to the Risk-Sharing Finance Facility (RSFF), starting in 2007, and new initiatives implemented by the EIF under the CIP, they are particularly good examples of it.
- 3.4 The Risk-Sharing Finance Facility (RSFF)
- 3.4.1 The RSFF (Risk-Sharing Finance Facility) is a new and innovative initiative, jointly created by the European Commission and the European Investment Bank to foster investment for Europe in research, technological development and demonstration implemented by means of the private sector, as well as innovation, by building appropriate guarantees for loans to riskier European projects in the field of innovation. This new scheme should facilitate access to debt financing for activities with a higher-than-average risk profile, on the basis of a risk-sharing between the European Community, the EIB and promoters of RDI projects. EIB financing provided under RSFF will be available to the European research community on a complementary basis to FP7 grant resources.
- 3.4.2 The RSFF, implemented using the same framework as under the existing EIB SFF rules, will have two windows financed by contributions from the European Commission (FP7) and EIB respectively, each for an amount of up to EUR 1 billion for the 2007-2013 period. It will also be possible to use FP7 resources for the financing of research, development and demonstration projects, whereas EIB resources can be used to finance innovation projects. The application of these two windows for up to EUR 2 billion for risk provisioning purposes,

which will enable more extensive funding of research, development and innovation programmes with a higher than average level of risk, implies that the EIB is expected to be able to support additional financing up to EUR 10 billion, a sum capable of providing a substantial boost. The RSFF is intended to support European research initiatives such as the European Strategy forum on Research Infrastructures (ESFR), the European Technology Platform, the Joint Technology Initiative or projects launched under Eureka (European Research Coordination Agency).

3.4.3 Based on the idea of sharing risks between the Community, the EIB and beneficiaries, the RSFF serves as an additional instrument for financing research, development and innovations, thus opening up a wide range of options both to the private sector and to the research community and completing the portfolio of existing instruments to finance RDI. The RSFF enables the EIB to develop financial products to offset market shortcomings, in line with the specific needs of a given sector and of each project promoter, widening the scope of potential financing beneficiaries. The RSFF will be available to legal entities of all size and ownership including large companies, mid-caps, SMEs, research organisations, universities, collaborative structures, joint ventures or Special Purpose Vehicles. Through risk sharing agreements with the banking sector, RSFF will contribute to boost the financial community's overall ability to support RDI activities, particularly with regard to SMEs.

3.4.4 In order to ensure a rapid launch of RSFF with a sufficient critical mass in terms of funding, the July 2006 Competitiveness Council initially decided to allocate EUR 500 million for the period up to the mid-term review of the 7th Framework Programme. An additional EUR 500 million may be released from the Community budget up to 2013, on the basis of mid-term evaluations and potential requests for the use of the new instruments. Whereas general conditions for the use of funding and operation of the RSFF - including eligibility requirements, rules and risk-sharing between institutions - are defined under the Cooperation and Capacity specific programmes of the FP7, detailed measures will be regulated by a bilateral agreement between the European Commission and the EIB, which was signed on 5 June 2007.

3.5 EIF support for innovation

3.5.1 EIF implements mandates on behalf of its shareholders (EIB, European Commission), or third parties (at Member State level) to support innovation and SME finance, in line with Community objectives. By the end of 2006, total EIF transactions amounted to EUR 15 billion, of which EUR 11.1 billion was for guarantees and EUR 3.7 billion for venture capital operations.

3.5.2 The Lisbon strategy, which aims to strengthen European competitiveness, is one of the core drivers of EIF activities (the EIF being only the European body specialising in SME finance). With EUR 3.7 billion invested into 224 venture capital funds, EIF has helped to bridge the innovation gap by leveraging some EUR 20 billion for high-growth SMEs and start-ups

(including some worldwide success stories such as Skype, Bluetooth/Cambridge Silicon Radio or Kelkoo). In its presidency conclusions, the March 2005 European Council recommended that the EIF diversify its activities towards the financing of technological transfer. In 2006, the first technology transfer operations were signed for licensing and spin-off activities.

- 3.5.3 In the framework of the new financial perspective, the EIF is managing the Competitiveness and Innovation Programme (CIP) and is one of the main players of the JEREMIE initiative. Both programmes aim at enhancing SME finance and financial engineering.
 - 3.5.3.1 The CIP, as one of the EU's core SME and innovation policy instruments, provides venture capital (including funding for technology transfer activities, a network of business angels and eco-innovation) and access to guarantee mechanisms for SMEs.
 - 3.5.3.2 Under the JEREMIE initiative (Joint European Resources for Micro to Medium Enterprises), national and regional authorities can opt to deploy resources from the ERDF in the form of tailored market-driven financial instruments, such as equity, venture capital, guarantees or loans. JEREMIE has been designed in a way that optimises ERDF funding by leveraging additional resources while its implementation is facilitated by a more flexible regulatory framework. In 2007, EIF capital increase should complement CIP and JEREMIE resources, and it is estimated that by 2013, over one million SMEs will have benefited from EIF financial instruments.
 - 3.5.3.3 With a high leverage (e.g. EUR 1 from the Community budget leverages up to EUR 50 for SMEs by means of guarantees), and a strong catalytic role vis-à-vis the financial community (particularly in the case of venture capital funds), the Community financial instruments should be seen as an example of best practice in the context of the Lisbon agenda. To ensure wider take-up of technological applications under the CIP, universities and SMEs should be targeted, with greater emphasis on financing projects, on publicity to assist in identifying intellectual capital, on approvals and issuing approvals, on cooperation agreements and on the resulting benefits; b) to ensure successful implementation by means of JEREMIE, on similar lines to rules for financing and state aids.

3.5.4 In 2006 the EIB and EIF signed a cooperation agreement, enabling in particular combinations of EIB credit lines and EIF guarantees for innovative SMEs. Such operations are likely to be further developed, in particular in the context of JEREMIE.

Brussels, 11 July 2007.

The President
of the
European Economic and Social Committee

The Secretary General
of the
European Economic and Social Committee

Dimitris Dimitriadis

Patrick Venturini

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N.B.: Appendices overleaf.

Appendix 1

List of opinions adopted by the EESC on innovation, R&D, financing and the EIB Group:

INT/326 - Exploratory opinion of 13.12.2006, on "Unlocking and strengthening Europe's potential for research, development and innovation", rapporteur Mr Wolf - OJ C 326/30.12.2006/p.16-27.

INT/294 - EESC opinion of 5.7.2006, on the Communication "More Research and Innovation - Investing for Growth and Employment: a Common Approach" (COM(2005) 488 final), rapporteur Ms Fusco- OJ C 309/16.12.2006/p.10-14.

INT/291 - EESC opinion of 14.12.2005 on the Communication: "State aid for innovation" (COM(2005) 107 final), rapporteur Mr Pezzini - OJ C 65/17.3.2006/p.1-8.

INT/288 - EESC opinion of 20.4.2006, on the Communication "Implementing the Community Lisbon programme: A policy framework to strengthen EU manufacturing – towards a more integrated approach for industrial policy" (COM(2005) 474 final, rapporteur Mr Ehnmark – OJ C 185/8.8.2006/p.80-86.

INT/270 - EESC opinion of 14.12.2005 on the Proposal for a Decision on "Competitiveness and Innovation-Framework Programme (2007-2013)" - COM(2005) 121 final - 2005/0050 (COD), rapporteur Mr Welschke – OJ C 65/17.3.2006/p.22-26.

INT/261 - EESC opinion of 9.3.2005 on the Proposal for a Decision amending the Council decision 2000/839/EC on a "Multiannual programme for enterprise and entrepreneurship and in particular for small and medium-sized enterprises (SMEs) (2001-2005)" (COM(2004) 781 final - 2004/0272(COD)), rapporteur Mr Pezzini – OJ C234/22.9.2005/p.14-16.

INT/185 - EESC opinion of 25.9.2003 on the Communication on "Innovation policy: updating the Union's approach in the context of the Lisbon strategy" (COM(2003) 112 final), rapporteur Mr Soares – OJ C 10/14.1.2004/p.78-85.

TEN/252 - EESC opinion of 14.12.2006, on the Communication "i2010 eGovernment Action Plan – Accelerating eGovernment in Europe for the benefit of all" (COM(2006) 173 final), rapporteur Mr Hernández Bataller – OJ C 325/30.12.2006/p.78-81.

TEN/189 - EESC opinion of 27.10.2004 on the Communication "Connecting Europe at high speed: recent development in the sector of electronic communications "(COM(2004) 61 final), rapporteur Mr McDonogh – OJ C 120/20.5.2005/p.22-27.

TEN/160 - EESC opinion of 31.3.2004 on the proposal for a Directive establishing a "Framework for the setting of Eco-design requirements for Energy-Using Products and amending Council Directive 92/42/EEC" (COM(2003) 453 final-2003/0172(COD)), rapporteur Mr Pezzini – OJ C 112/30.4.2004/p. 25-29.

TEN/156 - EESC opinion of 28.1.2004 on "Promoting renewable energy: Means of action and financing instruments", rapporteur Mr Sirkeinen – OJ C 108/30.4.2004/p.45-51.

ECO/174 - EESC opinion of 15.3.2006 on the joint initiative "JEREMIE" (Joint Resources for micro to medium Enterprises), rapporteur Mr Pezzini – OJ C 110/9.5.2006/p. 39-46.

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Appendix 2

Definitions

Basic research: focuses on experimental, systematising or theoretical activities aimed at adding to scientific knowledge about the nature of phenomena and observable facts. Types of basic research are:

Pure basic research: research which sets out to add to scientific knowledge and which does not aim to achieve direct social or economic benefits or use findings to solve practical problems;

Targeted basic research: research which sets out to add to scientific knowledge and which is likely to serve as a basis for solving known or predictable problems at present or in the future;

Applied (or industrial) research: original research intended to acquire new knowledge, primarily with a definite practical objective in mind (hereafter referred to as applied research);

Experimental (or pre-competitive) development: activity based on existing knowledge derived from research and/or practical experience, intended to create new materials, products, processes, systems or services, or to substantially develop them if they already exist (hereafter referred to as experimental development);

Research and development: encompasses basic research, applied research and experimental development;

Use of the results of R&D activity and technological innovation: this includes use by businesses for commercial purposes with a view to generating profits, and use for the benefit of the community resulting in improved quality of life and public services, conservation of natural and built environments, as well as the sustainable development of a country, improving its defence capacities and its security situation (hereafter referred to as use);

Technological innovation: all scientific, technical, organisational, administrative and commercial operations intended to make economic activity more efficient and profitable, and resulting in the creation of new or significantly altered products, processes or services, with the use or market launch of new or significantly altered processes or technologies, including changes which could only be considered innovative within a particular sector or organisation;

National innovation system: all institutions, companies and other organisations, together with resources, rules, conditions and measures, which influence the creation, transfer, dissemination and use of new knowledge and technology;

Research centre: organisation, organisational entity or individual entrepreneur engaged in research and development activity, either as its basic or main activity or in connection with its main activity;

Public-funded research centre: Public-funded organisation or organisational entity engaged in research and development activity, either as its basic or main activity or in connection with its main activity;

Non-profit research centre: non-profit organisation within the meaning of the Non-profit Organisations Act, or a research centre operating within such an organisation;

Researcher, developer: a natural person engaged in creating or developing new knowledge, intellectual works, products, services, processes, methods or systems, and in organising the implementation of projects intended to lead to such outcomes (hereafter referred to as researcher);

Consortium: cooperation regulated by a civil-law contract (the parties to which are members of the consortium) and based on a division of tasks in order to jointly carry out research and development or technological innovation activities, or to jointly implement a research and development or technological innovation project;

Enterprise: an individual entrepreneur, company, cooperative, water company, water infrastructure operator, or forestry company;

State funding: funding from sub-systems of the State budget within the meaning of Article 13(a) of Act No XXXVIII, 1992 (hereafter referred to as the State Budget Act), including European Union (hereafter referred to as the EU) funding, in addition to funding within the competences of regional development councils and funding received from abroad on the basis of international agreements concluded by States or local and regional authorities;

Research and development/technological innovation programme: call for expressions of interest, or series of such calls repeated on a regular basis, relating to support for the implementation of research and development or technological innovation projects consistent with an objective set by the authority in charge of public funding or falling within a well-defined category (hereafter referred to as programme);

Project: an activity based on a plan agreed on by stakeholders with a view to carrying out a well-defined research and development task or technological innovation process;

Innovation means the introduction into commercial practice, organisation of the work place or external relations of:

- a new or significantly improved product (goods or services) or process,
- a new marketing method, or
- a new organisational method.

Start up: New businesses which are still at the development and market research stage and which have not yet started generating profits.

Incubator: Organisations which help entrepreneurs follow through an initial concept right up to its market implementation and which enable them to launch their own businesses are usually known as incubators. Incubators create an environment for new businesses which enables them to grow faster and more efficiently. Incubation involves providing new businesses with preferential services, assistance and consultancy. In a broad sense, the term can refer not only to organisations such as technopoles and science parks, but also to "incubators without walls" (also known as "virtual incubators"), which are not tied to a specific physical location.

Cluster: Clusters comprise independent businesses, knowledge-generating organisations, organisations playing a bridging role, and networks of business clients combined in production/services chains offering added value. Clusters develop at regional level.

National innovation system: National innovation systems comprise all the private- and public-sector organisations of a given country which impact on how fast innovation and technology are disseminated and in which direction.

Seed capital: Investment prior to the launch of a business to support research, development or to explore an idea. Usually small sums of capital are provided to develop good ideas into marketable products or services. This is the form of venture capital which is associated with the highest risk, given that there is no certainty of either concept, technology, entrepreneur, or market. As a result, despite the success of certain new projects, the supply of seed capital in Hungary is very limited.

Spin-offs: New, high-technology, knowledge-intensive business which draws its intellectual capital by various means from a university, a State-funded research organisation or another technology-intensive business.

Knowledge transfer: Knowledge transfer can be broken down into three elements: compilation of existing knowledge, transferring and using such knowledge, and the emergence of new knowledge. Institutional arrangements/operational spheres for knowledge transfer can be classified according to which of these three elements is involved and to what extent.

Science, technology and industrial park: Organisation run by experts with a view to achieving economic growth for the community by means of support for a culture of innovation, and by enhancing the competitiveness of associated knowledge-based organisations and businesses. It manages the flow of knowledge and technology between universities, R&D organisations, businesses and the market. It also stimulates the launch of innovation-based businesses and enhances their growth potential by means of incubation or the provision of high-quality services and premises.

Science policy: Science policy is a unified and reasoned basis for national decisions influencing R&D investment, the institutional system, creative capacity and the use of scientific research (Brooks Report, OECD).

Competitiveness and innovation pole: A competitiveness pole is a **partnership** between businesses and public-/private-sector education and research centres, located within a well-defined geographical area and working on a **joint project** of an innovative nature. The **three priorities** of relations between the partners (criteria of the pole) are partnership, a joint project, and international visibility. The three **basic elements** are a combination of production/sales, education/training, and R&D/innovation.

Business angels: Business angels are private individuals on capital markets engaged in business development and financing activity on similar lines to venture capitalists. They provide businesses with venture-capital-type finance, and in addition often become personally involved in the strategic management of a company and, if necessary, in its operations, in order to assist its development and growth.
