



Innovation

Building a successful future for Europe

October 2009

INCREASE PUBLIC AND PRIVATE INVESTMENTS

ENHANCE PUBLIC SUPPORT POLICIES

NURTURE FUTURE TALENT

STIMULATE DEMAND AND MARKETS FOR INNOVATION

IMPLEMENT INTEGRATED POLICY APPROACHES

Who ARE WE?

BUSINESSEUROPE's members are 40 central industrial and employers' federations from 34 countries, working together to achieve growth and competitiveness in Europe.

BUSINESSEUROPE, the Confederation of European Business, represents more than 20 million small, medium and large companies.

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FOREWORD



Innovation, the process whereby new ideas are generated and turned into economic value, is a crucial requirement for economic growth in the long term and for job creation in Europe. It is also a key element for addressing the major challenges facing society today, particularly those linked to climate change, ageing population and energy security.

Against this background, the EU must reinvigorate its innovation strategy, adapting some of its elements and introducing new ones.

The existing R&D pillar of the strategy must be strengthened by increasing the volume of EU actions and improving the underlying management models. In addition, new cross-border cooperation approaches should be designed, helping to maximise the impact of every euro spent by governments.

Europe needs a broader supply of venture capital. This calls for establishment of a genuine European market. In addition, the European Investment Bank (EIB) should introduce specialised new financial instruments.

It is essential to foster sustained demand for innovative products and services, while defining framework conditions that facilitate capital investment by suppliers to meet that demand.

Finally, policies must ensure an adequate supply of skilled workers to tackle the innovation challenge.

The 2004-2009 Barroso Commission rightly recognised the need to develop such a broad-based innovation strategy. It is essential now to implement this vision with determination. The forthcoming European Innovation Plan and, in the longer term, the Eighth European Framework Programme (FP8) and the next Financial Perspectives (2014-2020) should be decisive milestones in this process.

A handwritten signature in black ink, reading "Jürgen R. Thumann". The signature is written in a cursive, flowing style.

Jürgen R. Thumann
President
BUSINESSEUROPE



1 INCREASE PUBLIC AND PRIVATE INVESTMENTS

Europe has excellent capacities for generating new ideas and inventions. For example, it scores very well globally in the field of clean technology, as measured by number of patents (see chart 1).

Yet, Europe invests less in R&D than other regions. With an average rate of 1.8% for R&D-intensity (R&D expenditure as a percentage of GDP) in 2007, Europe is lagging behind its main competitors USA (2.7%) and Japan (3.4% - data in 2006).

Furthermore, Europe underinvests in post-R&D activities (industrialisation, market development, etc.), which require access to specialised finance like venture capital. Early-stage venture capital is too scarce (only one third of the level in the USA). Chart 2 illustrates how Europe underperforms in mobilising venture capital in clean technology.

Many promising European innovation projects are in fact financed by American venture capitalists, who have acquired strong financial know-how, due to the large size of the USA venture capital market.

Chart 1

Clean technology patents in 2007 (country share, in %)
Source: INSEAD, 2008*

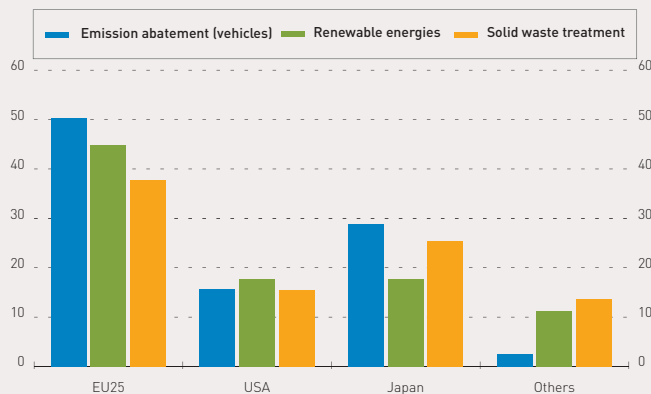
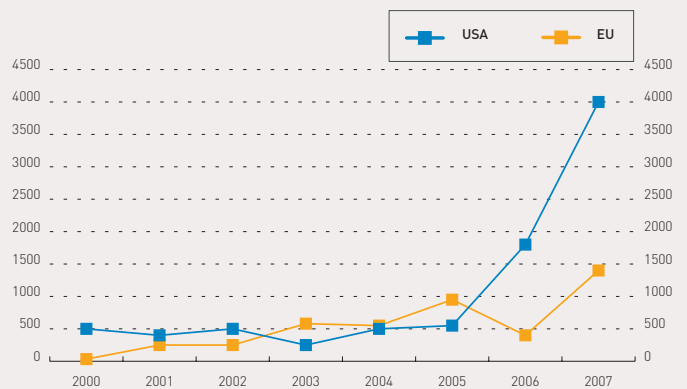


Chart 2

Annual venture capital investments in clean technology in US \$ million (2000-2007)
Source: INSEAD, 2008*



*FEB-INSEAD, Greening the economy. New energy for business, 2008. Reproduction rights given by INSEAD.

RECOMMENDATIONS

Improve conditions for self-financing

- 1 Develop tax incentives to support investments in R&D and innovation, in particular for young innovative companies.

Strengthen access to specialised innovation finance

- 2 Establish an integrated venture capital market within the EU.
- 3 Expand the permanent risk-sharing products offered by the European Investment Bank (EIB).

Increase EU and national support to R&D and innovation

- 4 Increase funding for projects on innovations that address challenges facing society.
- 5 Increase the share of the EU budget spent on R&D and innovation in the next Financial Perspectives (2014 - 2020).
- 6 In particular, boost the budget devoted to the Competitiveness and Innovation Framework Programme (CIP).

EXAMPLE OF AN EFFICIENT NATIONAL TAX INCENTIVE

French “Jeune Entreprise Innovante” Scheme

The “Young Innovative Company” status that France adopted in 2004 confers tax exemptions on SMEs (fewer than 250 employees) that spend at least 15% of their total annual expenditures on R&D. These companies are exempt from all corporation tax and all capital gains tax for 8 years after their creation. These fiscal measures provide incentives for both companies and investors.

A pan-European initiative inspired by this example and aiming to give special recognition, under EU state aid rules and national fiscal policies, to young and innovative companies could boost EU innovation capacity.

2 ENHANCE PUBLIC SUPPORT POLICIES

In 2000, the **European Research Area** (ERA) strategy was launched with an action agenda aiming to strengthen coordination between national R&D policies and programmes in Europe.

In 2009, the effective governance system needed to implement this agenda is still missing.

This needs to change if **we are to give momentum to ambitious concepts like “Joint Programming”** that aims to pool national resources in key areas, on a voluntary basis.

Joint Technology Initiatives (JTIs) offer a promising way of realising large scale public-private partnerships in key areas. Yet, JTIs were established under the rigid rules of the “Community body” statute, imposing financial and staff regulations that are not well adapted to efficient management of industrial operations. It is vital to replace bureaucratic procedures that have resulted in excessive delays for launching JTIs, in particular the “Clean Sky” JTI.

ARTEMIS: JOINT TECHNOLOGY INITIATIVE ON EMBEDDED COMPUTING SYSTEMS

- Launched in **2008**
- **Objective:** to define and implement a Research Agenda for embedded IT systems.
- **Structure:** a **public-private partnership** between ARTEMISIA Association (176 R&D actors), European Commission, 22 EU member and associated states.
- A **10-year €2.5 billion research programme**
- **Benefits:** ARTEMIS helps build a critical mass. It combines for the first time Community, national and private resources in a single programme with common objectives. It will help overcome fragmentation in Europe’s R&D efforts in the domain of embedded systems.

RECOMMENDATIONS

Ensure the effective functioning of the European Research Area (ERA)

- 1 Define an effective governance model for ERA.
- 2 Implement the “Joint Programming” approach actively.

Make EU instruments more efficient

- 3 Implement future EU public-private research partnerships through lean instruments, without resorting to the “Community body” statute.
- 4 When introducing new initiatives, give attention also to eliminating older initiatives that have served their purpose or proved unsuccessful.
- 5 Promote the principles of “Responsible Partnering” in EU projects on public-private partnerships.

Implement a more risk-tolerant and trust-based approach in EU programmes

- 6 Simplify audit and reporting procedures to encourage business participation in European research and innovation programmes.
- 7 Revise the 2002 EU Financial Regulation* to enable more flexibility in funding and staff management for research and innovation.

EXAMPLE OF GOOD PRACTICE IN COLLABORATIVE RESEARCH

“Responsible Partnering” Initiative

Five European organisations, including BUSINESSEUROPE, have endorsed this voluntary code of conduct. It provides guidance to innovative companies and public research institutions to enable them to collaborate more effectively in research projects and make it more profitable to all parties. The code provides a set of tools which can be used at all stages from project planning to termination. It aims to facilitate regular interactions between European universities and industry, by building trust and establishing mutually beneficial relations, while respecting their core objectives.

¹ Council Regulation (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities



3 NURTURE FUTURE TALENT

Education and training are fundamental prerequisites for innovation and the ability to create useful new knowledge.

To underpin sustainable economic growth, Europe needs to upgrade its capacity to innovate by ensuring a sufficient supply of skilled workers, in the three main categories:

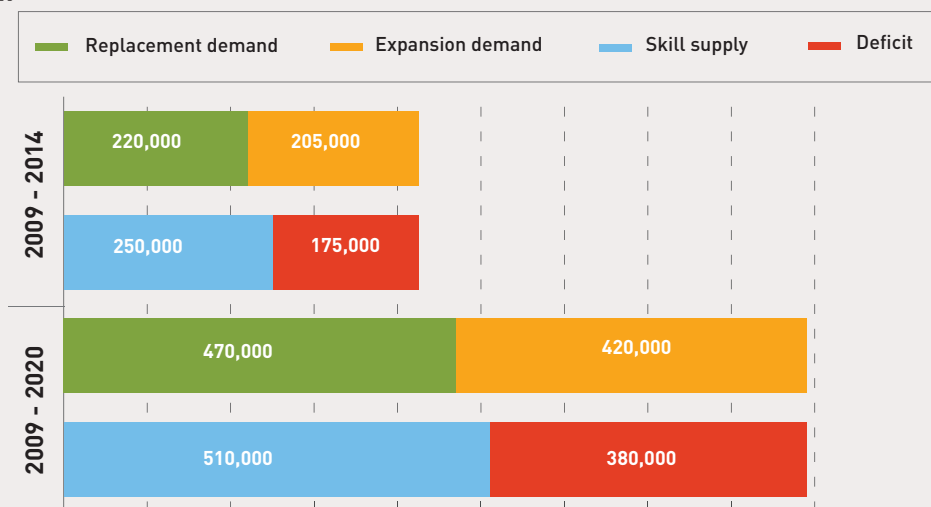
- basic skills (literacy, maths, computer use);
- occupational skills related to the specific needs of the employment market (IT specialists, chemical engineers, etc.);
- global knowledge-economy skills, including the capacity to innovate in response to new issues (e.g. climate change).

Europe's tougher skills challenge lies in the area of global knowledge-economy skills². Some European countries also face acute situations regarding occupational skills (see for example the German situation in chart 3).

In a growing global competition for talent, Europe must do its utmost to maintain an attractive environment for its researchers and to attract foreign talents.

Chart 3

Estimated shortage in STEM (science, technology, engineering, mathematics) skills in Germany
Source: IW Köln/BDA study, 2008



² FEB - INSEAD, Who cares? Who dares? Providing the skills for an innovative and sustainable Europe, 2008.

RECOMMENDATIONS

Raise skill and competence levels: actions at national level

- 1 Accelerate reforms of general education and training systems: ensure basic skills, include more cross-cutting skills in curricula and better recognise competences acquired on the job.
- 2 Increase the budgetary, hiring and wage-setting autonomy of universities.
- 3 Develop lifelong learning through partnership between schools and enterprises.

Actions at European level

- 4 Further develop EU Programmes (ERASMUS, Marie Curie actions) that promote and facilitate the international and intersectoral mobility of students and researchers.
- 5 Launch a European industrial doctorate, supported through grants from the EU Marie Curie fellowships, inspired by the the Danish Industrial PhD scheme.
- 6 Strengthen EU instruments that attract and facilitate the participation in European projects of top talent from outside the EU.

EXAMPLE OF GOOD PRACTICE IN FOSTERING COMPETENCE DEVELOPMENT

Danish Industrial PhD (Doctorate) Scheme

Under this scheme, an employee working in a company can obtain a PhD conferred by a Danish university. The application presented by a company must be approved by the university and the Ministry of Science, Technology and Innovation. During the training period, the employee must share (50/50) his/her time between company and university and attend at least six months of courses, including business courses. The employee is encouraged to take courses abroad. The company receives a wage subsidy (approx. € 60,000 for the whole 3-year period).



4 STIMULATE DEMAND AND MARKETS FOR INNOVATION

Market demand for new products and services is a key factor influencing the level and strategic orientation of R&D investment.

Following the Aho report³, the 2006 “broad-based innovation strategy for Europe” calls for policies that aim to create more innovation-friendly markets.

The EU “Lead Market Initiative” is a good step in that direction as it aims to create better and more innovation friendly market framework conditions (including regulation, procurement and standardisation - see table 1) to stimulate markets of high economic value. Yet, progress in implementing the Initiative is rather slow.

Public procurement can play an important role in promoting innovation by helping to shape production and consumption trends. It should be used more to that end.

Table 1
Implementation of the EU Lead Market Initiative

LEAD MARKET AREAS	EU policy tools		
	Legislation	Public procurement	Standardisation Labelling Certification
eHealth	✓	✓	✓
Sustainable construction	✓	✓	✓
Protective textiles			✓
Bio-based products	✓		✓
Recycling	✓	✓	✓
Renewable energies	✓		

³ Creating an Innovative Europe. Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit chaired by Mr Esko Aho, 2006

RECOMMENDATIONS

Develop demand-side instruments

- 1 Further implement the EU “lead market” concept in an open competition context.
- 2 Encourage more use of pre-commercial procurement of R&D services by national public authorities.

Unlock the potential of markets for innovative products and services

- 3 Promote the development of formal standards at the international level and ensure that they are fully transposed and applied globally.
- 4 At the European level, develop standards in areas where Europe has a specific interest which is not shared by the international community or in areas which have a specific regional characteristic (e.g. construction materials).
- 5 Ensure high quality and timely implementation of the Services Directive.

Develop European markets for eco-innovations

- 6 The future EU Energy Labelling Directive⁴ should help to harmonise the minimum levels of performance for which energy-efficient products can receive national tax incentives and which must be specified in public procurement orders.

EXAMPLE OF GOOD PRACTICE IN PUBLIC PROCUREMENT

British “Innovation Nation” Plan

The “Innovation Nation” White Paper launched in 2008 spells out how the British government creates demand for new innovative products and services covering £150 billion in public spending (on both goods and services) each year. In 2006/2007, public procurement in the UK was £ 175 bn (€ 195 bn). The paper recommended a series of actions such as the publication by each Department of an Innovation Procurement Plan as part of its commercial strategy. A supervisory body is nominated, targets are set and exchange of good practice is facilitated.

⁴Proposal for a Directive of the European Parliament and of the Council on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (COM(2008)778final).



5 IMPLEMENT INTEGRATED POLICY APPROACHES

As chart 4 illustrates, **successful innovation** does not only rely on technology, skills, markets and finance but also on the **existence of an innovation-friendly policy and legislative framework**.

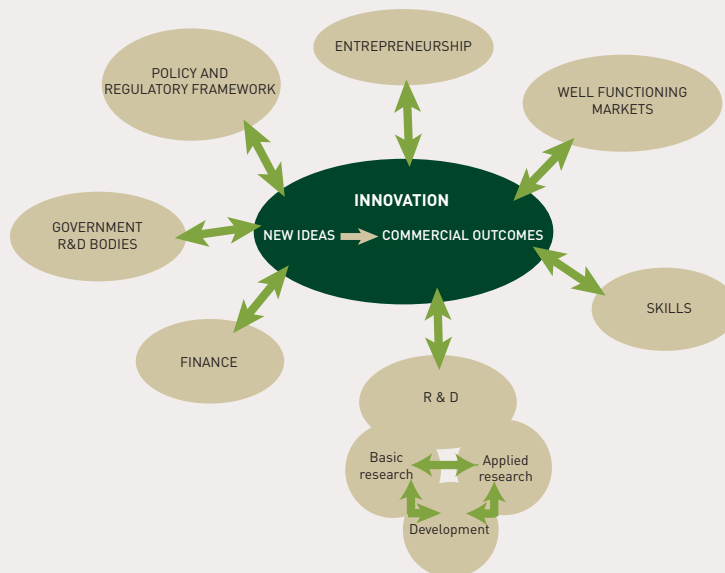
Such a framework calls for close interaction between European Commission Directorates-General (DGs), which design and implement policies influencing research and innovation performance.

Since 2004, the EU has been developing a **new industrial policy**, with a combination of horizontal policies and sectoral initiatives aimed at improving the specific operating framework for sectors. This is a **good example of policy integration supporting innovation**.

The **European Institute of Innovation and Technology (EIT)** is also a promising tool for strengthening synergies between education, research and innovation policies.

Societal objectives of a horizontal nature can facilitate the creation of synergies between EU policies (R&D, internal market, finance, education, etc.) which influence the innovation process.

Chart 4
Systemic innovation process
Source: BUSINESSEUROPE



RECOMMENDATIONS

Design and implement EU policies with a holistic view

- 1** Improve horizontal coordination between the Commission's Directorates-General that deal with rules influencing innovation.
- 2** Place the European Institute of Innovation and Technology (EIT) on a secure financial footing with additional budget resources and robust funding models.
- 3** Organise multistakeholder dialogues to arrive at a shared evaluation of the benefits and risks linked to new technologies.

Boost EU industrial policy

- 4** Implement EU horizontal and sectoral industrial policy initiatives actively, in line with the May 2009 Competitiveness Council conclusions.

Ensure effective intellectual property protection

- 5** Governments to adopt a Community patent and set up a common European patent litigation system, with favourable conditions for SMEs.

THE IMPORTANCE OF POLICY INTEGRATION AT EU LEVEL: THE CASE OF NANOTECHNOLOGY

Nanotechnology is an example of an emerging technology where policy-makers have to find the right balance between addressing and managing potential risks whilst ensuring the enormous benefits technology can bring to society and future generations. Regulators should develop mechanisms to deal responsibly with the inherent uncertainties linked to the development of emerging technologies, so that societies can progress.



EU SPENDING ON R&D AND INNOVATION

Chart 5

European public and private R&D expenditures put in context
 Source: Eurostat, "Science, technology and innovation in Europe", 2008

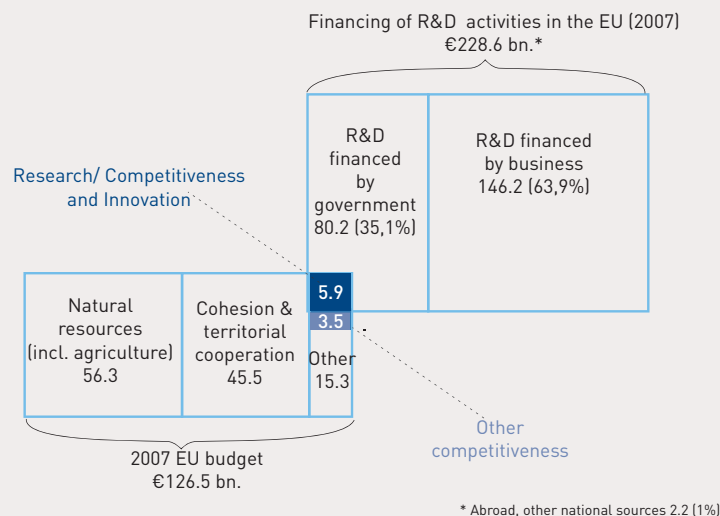


Table 2

EU budget in 2009 and 2013
 Source: Financial Perspectives 2007 - 2013

	2009		2013	
	€bn	percentage	€bn	percentage
Natural resources (including agriculture)	59.2	43.8%	61.1	40.3%
Cohesion and territorial cooperation	48.4	35.9%	54.2	35.7%
Competitiveness, including EU R&D and innovation programmes	10.7	7.9%	15.5	10.2%
Other	16.8	12.4%	21.1	13.8%
Total EU Budget	135.1	100%	151.9	100%

INTERESTING WEBLINKS

- French “Jeune entreprise innovante” Scheme
<http://www.industrie.gouv.fr/enjeux/innovation/plaquette-jei.pdf>
- “Responsible Partnering” Initiative
<http://www.responsible-partnering.org/library/handbook.pdf>
- Danish Industrial PhD (Doctorate) Scheme
<http://en.fi.dk/research/industrial-phd-programme/the-industrial-phd>
- British “Innovation Nation” Plan and public procurement
http://www.dius.gov.uk/reports_and_publications/~media/publications/S/ScienceInnovation_web

For further information: **Industrial Affairs**

Daniel Cloquet, Director

Tel +32 (0)2 237 65 41 - **E-mail** d.cloquet@businessseurope.eu or

Anne-Sophie Paquez, Adviser

Tel +32 (0)2 237 65 97 - **E-mail** a.paquez@businessseurope.eu

BUSINESSEUROPE AV. DE CORTENBERGH, 168 / BE-1000 BRUSSELS

TEL + 32 (0) 2 237 65 11 / E-MAIL: MAIN@BUSINESSEUROPE.EU / WWW.BUSINESSEUROPE.EU



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