"Smart specialisation for economic development and transnational cooperation"

Smart Specialisation in the Atlantic Arc Regions

Bordeaux, 20 November 2012

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1. Research & Innovation (R&I) and economic development:
   • What is it?
   • Why is important?
   • What to do about it?
2. R&I in the new Cohesion Policy Regulatory Framework
3. RIS3: What and How?
4. Atlantic Arc and Macro Strategies: common features
Economic rationale: can you trust economists?

« Sollow’s residual »

g_Y = p + \& g_L + (1-\&) g_K

- \( g_Y \) (Output growth rate)
- \( g_K \) (Capital growth rate)
- \( g_L \) (Labour growth rate)
- \( \& \) (Output related to labour)
- \( p \) (growth of multifactor productivity)
“...in the last 50 years innovation has been responsible for at least half the economic growth of our nation...”
(Neal Lane, Director National Science Foundation - NSF, February 1997, Seattle, U.S.A)

i) increases in growth rates (Solow 1957, Rothwell and Zegveld 1981: 29, Quintanilla 1992: 46),
ii) higher rates of exports and trade (OCDE 1982, 1986),
iii) gains in productivity (Mansfield 1965, Amable and Boyer 1992: 45),
iv) growth in income and output (Freeman 1982: 198),
v) bigger business profits and lower inflation rates (Goddard et al 1987: 10),
vi) increased firms international competitiveness (Nelson 1993:509)
vii) appearance of new or improved products and services (Mansfield 1988, Pavitt 1994), etc.

"Until the 1980s, technology and innovation were under recognised influences in the explanation of differences in the rates of economic growth between regions in advanced industrial nations..." (Townroe)
AN AGENDA FOR A REFORMED COHESION POLICY:
A place-based approach to meeting European Union challenges and expectations, Fabrizio Barca (2009)

“...A particular case is made for selecting Innovation as a core priority. Place-based interventions, building on the strengths and taking account of the weaknesses of previous experience as regards cohesion policy in this area, could complement policies aimed at developing a European Research Area, by selecting in each region a limited number of sectors in which innovation can most readily occur and a knowledge base built up. Through such an approach – defined in the current policy debate as “smart specialization” - the most could be made of the present diversity of industrial agglomerations and networks, while their “openness” beyond regional or national boundaries would be promoted...”
What is innovation?

An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.

A product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics.

A process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.

An organisational innovation is the implementation of a new organisational method in the firm’s business practices, workplace organisation or external relations.

A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

What is regional Competitiveness?

(Regions are) a competitive location to the extent that the companies operating in them are able to compete successfully in the global economy while supporting high and raising living standards for their citizens (from Porter et Al, 2012 with acknowledgments to R. Vietor and M. Weinzierl)
Is there a link between innovation and regional growth?

“The general consensus...is that the driving force behind long-term economic growth is science, technology and innovation in its different forms and facets” (OECD 2011: Regions and Innovation Policy)

Source: Mikel Navarro et al, Basque Competitiveness Institute 2010.
Innovation and (exit from) the crisis
The rationale for public intervention to promote innovation

“… the most important job for economic policy is to create an institutional environment that supports technological change. “ Paul Romer 1994

"Innovation is a critical factor for growth but a well-functioning market economy cannot generate by itself the optimal levels of R&D" (World Bank, 2011), because of two main market failures:

Partial appropriability (owing to knowledge spillovers - employee mobility and FDI - and positive externalities) and "public good" nature of R&TD+i: innovators cannot capture the full benefits of their investment and social returns from innovation may be far larger than private returns (Jaffe 1998)

Information asymmetries and "funding gap": in the absence of demonstrated cash flows or collateral there are barriers to traditional sources of finance – there is a significant gap between what an innovator knows and what an external agent can gauge – Importance of F³: fools, friends and family
Climbing the development ladder calls for more innovation in the policy mix

P_mix = f (NC, SF) adapted to each regional context: business culture, institutional setting, sectoral/technology specialisation, firm size, inward investments, etc...
A fragmented regional economy: Less favoured regions
Innovation-friendly business environments v.s. promoting R&D excellence

Innovation is not just R&D. For most companies and the majority of regions their competitiveness are not mainly or primarily dependent on R&D efforts but on knowledge absorption (education and training, advanced business services) and diffusion (technology transfer, ICT, entrepreneurship) largely dependent on internal and external connectivity

Proportion of innovation active enterprises with no R&D, 2006-2008


"Innovation is not just science and technology; it is also the creation of a multitude of new products and services in all sectors of the economy, new marketing methods and changes in the ways of organising businesses, in their business practices, workplace organisation and external relations" (OECD 2010).

"Innovations are not just the results of scientific work in a laboratory-like environment...this is the exception rather than the rule...the causality between science and innovation has proven weaker than expected...innovation emerge increasingly in practice-based processes based on the ability to interact and build networks with other innovation agents" (V. Haarmaakopi et al 2008)
Structure

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Cohesion Policy funding for R&I 2007-2013

Cohesion Policy innovation support over total aid:
- 4% in 89’-93’
- 7% in 94’-99’
- 11% in 00’-06’
- 25% in 07’-13’
Problem:

- Lack of interaction between levels of government and ministries
- Strategies without external perspective – duplication
- Lack of critical mass
- Measures only for R&I supply push and not for demand stimulation /market access
- Focus on fashionable themes / prestige projects
- Focus on existing sectors and not on emerging R&I activities

See: Regional Innovation Monitor
www.rim-europa.eu
Thematic objectives

1. Research and innovation
2. Information and Communication Technologies
3. Competitiveness of Small and Medium-Sized Enterprises (SME)
4. Shift to a low-carbon economy
5. Climate change adaptation and risk management and prevention
6. Environmental protection and resource efficiency
7. Sustainable transport and disposal of congestion on major network infrastructure
8. Employment and support for labour mobility
9. Social inclusion and poverty reduction
10. Education, skills and lifelong learning
11. Increased institutional capacity and effectiveness of public administration
1). Strengthening research, technological development and innovation:
   - enhancing research and innovation infrastructure (R&I) and capacities to develop R&I excellence and promoting centres of competence, in particular those of European interest;
   - promoting business R&I investment, product and service development, technology transfer, social innovation and public service applications, demand stimulation, networking, clusters and open innovation in SMEs through smart specialisation;
   - supporting technological and applied research, pilot lines, early product validation actions, and advanced manufacturing capabilities and first production in Key Enabling Technologies and diffusion of general purpose technologies;

2). Enhancing access to and use and quality of ICT:
   - extending broadband deployment and the roll-out of high-speed networks;
   - developing ICT products and services, e-commerce and enhancing demand for ICT;
   - strengthening ICT applications for e-government, e-learning, e-inclusion and e-health;

3). Enhancing the competitiveness of SMEs:
   - promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new firms;
   - developing new business models for SMEs in particular for internationalisation;
ERDF 2014-20: Concentration on R&I and SMEs to maximise impact

Research and Innovation

SMEs competitiveness

Energy efficiency and renewable energy

Developed regions and transition regions

60%

20%

Less developed regions

44%

6%

Flexibility (different regions present different needs)

Special arrangements for the previously convergence regions

Cohesion Policy
ERDF Investment Priorities

2. Improve the access, quality and use of ICT:
   a) diffusion of broadband and high speed networks
   b) development of ICT products and services, electronic commerce and increased demand for ICT
   c) strengthening the application of ICT for eGovernment, eLearning, eInclusion and eHealth

3. Improve SMEs competitiveness:
   a) promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new businesses
   b) development of new business models for SMEs, in particular for internationalisation
## Thematic ex-ante conditionalities

... state-of-play regarding RIS3 conditionality...

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<tr>
<th>Thematic objectives</th>
<th>Ex ante conditionality</th>
<th>Criteria for fulfilment</th>
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<tr>
<td>1. Strengthening research, technological development and innovation (R&amp;D target) (referred to in Article 9(1) )</td>
<td>1.1. Research and innovation: The existence of a national or regional research and innovation (strategy) <em>(strategic policy framework(s))</em> for smart specialisation in line with the National Reform Programme, to leverage private research and innovation expenditure, <em>[which complies with the features of well-performing national or regional research and innovation systems.]</em> For research infrastructures only: 1.2 The existence of a multi-annual plan for budgeting and prioritization of investments.</td>
<td>– is based on a SWOT analysis to concentrate resources on a <strong>limited set of research and innovation priorities</strong>; – outlines measures to <strong>stimulate private RTD investment</strong>; – contains a <strong>monitoring [and review]</strong> system. A <strong>framework outlining available budgetary resources</strong> for research and innovation; A [indicative] <strong>multi-annual plan for budgeting and prioritization of investments</strong> linked to EU priorities [and, where appropriate, the] European Strategy Forum on Research Infrastructures -ESFRI).</td>
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### Thematic ex-ante conditionalities

… to what else does the RIS3 apply?

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| 2. Enhancing access to and use and quality of ICT  
(Broadband target)  
(referred to in Article 9(2))  
(R&D target)  
(referred to in Article 9(1)) | 2.1. Digital growth:  
[The existence within the national or regional innovation strategy for smart specialisation of an explicit chapter for] A strategic policy framework for digital growth to stimulate demand for affordable, good quality and interoperable ICT-enabled private and public services and increase uptake by citizens, including vulnerable groups, businesses and public administrations including cross-border initiatives. | [A strategic policy framework for digital growth, for instance, within the national or regional innovation strategic policy framework for smart specialisation is in place that contains]:  
- budgeting and prioritisation of actions through a SWOT analysis [carried out in Alignment] consistent with the Scoreboard of the Digital Agenda for Europe;  
- an analyses of balancing support for demand and supply of information and communication technologies (ICT) should have been conducted;  
- indicators to measure progress [measurable targets for outcomes] of interventions in the field of digital literacy, skills, e-inclusion, e-accessibility, and e-health [within the limits of Article 168 TFEU] which are aligned with existing relevant sectoral national or regional strategies.  
- assessment of needs to reinforce ICT capacity-building. |
Fact-sheet:

InfoRegio website:

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What is Smart Specialisation?

http://ec.europa.eu/research/era/publication_en.cfm

- ‘Knowledge for Growth’ expert group (DG RTD) launched concept in the framework of ERA;
- Problem: fragmentation/imitation/duplication of public R&D investments;
- Stresses role for all regions in the knowledge economy, if they can identify competitive advantages in specific R &I domains/clusters (not just winning sectors);
- Challenges: Smart specialisation has to embrace the concept of open innovation, not only investment in (basic) research.

“Most advanced regions invest in the invention of general purpose technologies, others invest in the co-invention of applications of the generic technology in one or several important domains of the regional economy”

Dominique Foray 2010
An explanation by Prof. D. Foray

- It is not a planning doctrine that would require a region to specialize in a particular set of industries.
- It is an approach to policy that considers whether those activities already strong or showing promise for a region can benefit from R&D and innovation.
- Regions need to focus on certain domains but being focused is not enough; they need to focus by developing distinctive and original areas of specialization (not by imitating each other).
- Smart specialization is largely about the policy process to select and prioritize fields or areas where a cluster of activities should be developed: let entrepreneurs discovering the right domains of future specialisations.

Collège du Management de la Technologie – CDM
Chaire en Economie et Management de l'Innovation – CEMI
What is Smart Specialisation?

= evidence-based: all assets
= no top-down decision, but
dynamic/entrepreneurial discovery
process inv. key stakeholders
= global perspective on potential
competitive advantage & potential
for cooperation
= source-in knowledge, & technologies
etc. rather than re-inventing the
wheel

= priority setting in times of scarce
resources
= getting better / excel with something
specific
= focus investments on regional
comparative advantage
= accumulation of critical mass
= not necessarily focus on a single sector,
but cross-fertilisations

“...The elements of economic productivity – strong infrastructure, a skilled workforce, and interrelated networks of firms – come together with smart economic strategy on the regional level to drive prosperity”.

(Guidance on developing place-based policies for the USA FY 2012 Budget)
What smart "specialisation" means?

- It means avoiding duplication and fragmentation of effort with scarce public resources within the Union, thus helping in deepening the single market.

- It means being selective and support the R&I activities that are relevant in view of existing conditions and assets (e.g. evidence based policy evaluation, sound SWOT,...) and breaking away from established lobbies and rent-seekers.
  - Relevant in the sense of assessing how R&I can help develop the existing economic structure in order to face globalization
  - Relevant in the sense of selecting that R&I activities with the highest potential for knowledge spillovers to irrigate large sections of the economy

- It is neither "coffee for all" nor "picking winners from above". It is not about selecting firms or sectors but the R&I activities and/or generic technology(ies) that can help a regional economy diversify into higher value added markets, modernise or exploit new/emerging economic activities.
In a nutshell: RIS3 is based on 4 Cs + C

**Competitive advantage**: match R&I potential with business needs and capacities & develop links between sectors (related variety); adoption of (generic/new) technologies for specialised diversification/modernisation of sectors + explore emerging areas

Policy **Choices** (tough ones): select few priorities on basis of specialisation & integration in international value chains.

**Critical mass** of resources & talent: cooperation between regions by avoiding duplication and fragmentation

**Collaborative Leadership**: involve key stakeholders from academia, businesses, public administrations and civil society ("quadruple helix") for efficient innovation systems & synergies between funding instruments (EU, national, regional)

+...**Common sense** = *Integrated agenda for place-based economic transformation*, strengthening RTD, innovation and increasing access to ICT and its use
RIS3 is a process …
of «entrepreneurial discovery»

What do they need?
With whom to cooperate?
Who are your customers / competitors?
Is there critical mass / excellence?

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Atlantic Arc: an Interreg project

- **European Territorial Cooperation**
  The European Union's regional policy seeks to reduce structural disparities between EU regions, foster balanced development throughout the EU and promote real equal opportunities for all.

- Transnational cooperation on the Atlantic Area has a historical tradition. Pioneer frameworks began in the 1989-1993 programming period of the European structural funds, with the ATLANTIS pilot project.

- The main goal of the Programme is to contribute to the territorial cohesion of this area through transnational cooperation projects on all four programme priorities between the European Union Member States of the Atlantic seaboard.
The Atlantic Arc strategy and regions

A Maritime Strategy for the Atlantic Ocean Area

Rationale

- Ecosystem approach
- Reducing Europe's carbon footprint
- Sustainable exploitation of the Atlantic seafloor's natural resources
- Socially inclusive growth

Tools:
- enhanced cooperation
- targeted actions
- Strategic combination of EU's financing – SF, Horizon 2020
Building on examples

The EU Strategy for the Baltic Sea Region

- BONUS fund a thematic focus on the quality and productivity of the Baltic Sea eco-system
- (€ 100 million) joining FP7 (50%) and national funds (50%), including ‘in kind’ contributions
- will launch transnational research calls and mobility programmes by the end of 2012, following the ERA net procedures

The EU Strategy for the Danube Region

- Following the same direction but using further opportunities opened by the increased synergies between Structural Funds and Horizon 2020
ERA-NET and ERA-NET Plus

'ERA-NET actions' - providing a framework for actors implementing public research programmes by developing joint transnational activities or by mutually supporting joint calls for trans-national proposals,

'ERA-NET Plus actions' - providing, in a limited number of cases with high European added value, additional EU financial support to facilitate joint calls for proposals between national and/or regional programmes

Future Cohesion Policy

Promoting internationalisation: Art. 60.2 (b) (CPR Reg.): if the operation is for the benefit of the programme area: "The total amount allocated under the programme to operations located outside the programme area [but within the Union] does not exceed 10% of the support from the ERDF, CF and EMFF (3% for EAFRD)"

and interregional collaboration: Art. 87.2 (c) v (CPR Reg.): "An Operational Programme shall set out the contribution to the integrated approach for territorial development set out in the Partnership Contract (Agreement), including the arrangements for interregional and transnational actions with beneficiaries located in at least one other Member State"

Complementary funding: Art. 55.8 (CPR Reg.): "An operation may receive support from one or more CSF Funds and from other Union instruments, provided that the expenditure item included in a request for payment for reimbursement by one of the CSF Funds does not receive support from another Fund or Union instrument,..."
Thank you for your attention
EXAMPLES
Thematic guides

- Incubators
- Universities & regional development
- Broadband
- Creative industries

Soon available:
- Clusters
- Social Innovation
- Green growth
- Entrepreneurial spirit
- Service innovation
- ….

Inspiration for innovation support:
- Oslo Manual (OECD)
- Community framework for State Aid to Research and Innovation
- Analysis of regional innovation [http://www.rim-europa.eu](http://www.rim-europa.eu)
- EURADA • Directory of "No-Nonsense" Activities to Build S³-minded Regions; • All money is not the same [http://www.insme.org/files/3019](http://www.insme.org/files/3019)
Annex: Horizontal issues and policy delivery instruments for RIS³

- Green Growth: only sustainable is smart – Eco-innovation & Energy efficiency
- Digital agenda: enabling knowledge flows throughout the territory – connected regions
- Clusters for regional growth: business ecologies that drive innovation
- Innovation-friendly business environments for SMEs: good jobs in internationally competitive firms
- Social Innovation: new organisational forms to tackle societal challenges
- Stronger focus on financial engineering: not only grants
- Lifelong Learning in research and innovation: support knowledge triangle (KICs) and university-enterprise cooperation
- Key Enabling Technologies: systemic potential to induce structural change
- Research infrastructure/centres of competence: support to ESFRI and EU wide diffusion of leading edge R&D results
- Creativity and cultural industries: innovation beyond technology and outside manufacturing
- Public Procurement for market pull: pre-competitive PP to open new innovation friendly market niches
Innovation & Green Growth are interdependent: two sides of same coin!

Develop regional strategy/approach to foster green growth though innovation

Key sectors such as energy efficiency and renewables, eco-innovation, resource efficiency, water, transport, eco-construction, bio-based products…

“A green growth strategy is centred on mutually reinforcing aspects of economic and environmental policy. It takes into account the full value of natural capital as a factor of production and its role in growth […] By pushing the frontier outward, innovation can help to decouple growth from natural capital depletion.”

OECD, Towards Green Growth, May 2011
Innovation for Green Growth

Upcoming Guides by DG REGIO on:
- Green Public Procurement in water infrastructure development
- Carbon Evaluation tool of regional programmes: enable regional authorities to assess the CO2 impacts on investments

Upcoming Guide by DG REGIO on “Innovation for Green Growth”
provide practical guidance on HOW regions can build synergies between innovation & green economy to boost growth, jobs and preserve the environment

The “Enworks” programme, North-West England: eco-innovation in practice
Environmental advice, training and support to SMEs to improve resource efficiency and reduce waste. Good practice exchange and development of synergies with ERDF support.
Over 3600 businesses benefited; 190.000 tonnes of CO2 saved; 3.000.000m2 of water saved; over 700 people developed specific skills

www.enworks.com
Clusters for regional growth

- European Cluster Alliance: [http://www.proinno-europe.eu/project/eca](http://www.proinno-europe.eu/project/eca)

**Cluster links over Europe (CLoE, Karlsruhe 2005):**
- Pilot project of the Regions for Economic Change initiative - Good mixture of developed and less favoured regions.
- Development of an action plan for each of the 11 regions.
- Sustainable impact on the institutional regional actors in the "cluster scene" + the entrepreneurs who want to go international;
- Transnational contacts between clusters continue after the conclusion of this project, 20 clusters + initiation of many activities under FP7 Regions of Knowledge and CIP programmes.
- Budget: €1.808 million (€800,000 ERDF)

«Approximately 20% of all European Cluster Programmes in the EU were financed by Structural Funds… » (Oxford Research 2008, « Cluster Policy in Europe »)
Cluster Cooperation in Northern Central Sweden: a major “testing lab”

- An answer to a demand by local companies and the result of a bottom-up process. Agents between people and organisations to generate ideas and provide potential for new business opportunities.
- The cluster organisations in Northern Central Sweden: Critical success factors by creating an infrastructure for project development and developing interaction between corporate research and universities.
- ERDF: € 1.302.000

“38% of all European employees work in industries that concentrate regionally – in clusters…The focus of cluster programmes needs to shift from capacity building…towards a clear orientation on excellence, focusing on clusters with the ability to upgrade in the face of global competition and ensuring the consistent provision of public knowledge infrastructure…”

(European Cluster Policy Group – Final recommendations – A call for Policy Action 2010)
Innovation-friendly business environment for SMEs

**ifex: Initiative for Start-ups and Business Transfer – Baden-Württemberg, DE (European Enterprise Awards Winner in 2006)**

- Online portal for start-up and business transfer policies, giving access to 1,400 providers to tailor-made educational and support services to specific target groups (schools, universities, women, ethnic and minority groups).
- A permanent Unit in the State Ministry of Economic Affairs and managing the nation-wide “German Agency for Women's Start-ups” on behalf of three federal Ministries.

**Units for Intellectual Property Promotion (UIPP) PT, ERDF (2001-2007)**

- Bringing the National Patent Office closer to companies and universities. Services to researchers, students and to SMEs for pre-diagnosis of IPR needs.
- Training, awareness activities and seminars, IPR advertising and dissemination, technical assistance and advice by specialists.
- Partnerships network between 2 business associations, 10 universities, 7 technological centres and 3 science and technology parks.
- 2001-2007: the number of hi-tech patent applications to EPO per million inhabitants increased from 0.4 to 7.5 in PT (European Innovation Scoreboard).
Innovation-friendly business environment for SMEs

“Knowledge Vouchers: Tickets to success”, NL
IRE Award for best European Scheme
Limburg Regional Technology Plan 1997-08’ ERDF pilot
Pioneering an innovative, hands-on approach to knowledge transfer for SMEs.

- SMEs entitled to a number of consultancy or research days, and allow for visiting large, knowledge providers besides the universities (companies, research and educational institutions).
- Huge impact on the province – improving money flows, solving problems and creating opportunities and boosting cross-border cooperation (NL, BE, DE).

« Policies need to distinguish clearly between a few highly innovative and high growth potential firms and the great majority of SMEs, reflecting the different ways in which they innovate. The different needs can be characterised by a distinction between Science, Technology and Innovation mode of innovation on the one hand, focused on R&D and breakthrough innovation and Doing, Using and Interacting mode of innovation on the other, focused on incremental innovation in the « ordinary » SME. Both must be encouraged » (OECD, 2010)
Stronger focus on financial engineering

ACHIEVE MORE, UK:

- A Joint Venture (Rivers Capital Partners & E-Synergy) to invest M€ 20 in 75 to 100 companies over the next 5 years: € 8.5 M from the ERDF JEREMIE programme
- A high leverage effect: an additional M€ 11 from Angel Investors across the UK.
- Approach: evaluation of the variety of funding mechanisms used around the world
- Results: a tool which ventures quicker (6 -10 weeks) helps in the selection of ventures that deserve funding to get them early market revenues.
- Replication: this model will be followed for the European Creative Industries Alliance and the European Mobile and Mobility Industries Alliance
**Lifelong learning and University-enterprise cooperation**


**Innovation Assistant Programme, Lower Austria, AT (2002):**
- Encouraged SMEs to include a strategic orientation in their business plans with help from newly graduated students (University of Applied Sciences).
- Until March 2007 the programme funded 52 Innovation Assistants. Average cost for each action: 30,000 € (contributed by ERDF and regional funds).
  - 60% of the SMEs a permanent post ‘innovation assistant’ was kept;
  - 80% of the SMEs developed one or more new products during the project;
  - 70% of the SMEs had increasing turnover based on the innovations;
  - A significant number of new firms have grown and reached international markets in 2-3 years;
- Results were passed on to 10 other regions through ERIK (ERDF funded network).

**Knowledge Economy Skills Scholarships (KESS), Wales, UK**
Managed by Bangor University on behalf of the HE sector in Wales and part funded by ESF, the Knowledge Economy Skills Scholarships programme (KESS) currently has 302 doctoral and masters level research projects in collaboration with companies across the convergence region of Wales. With its focus on developing higher-level skills in the region and boosting the research and development capacity of businesses, KESS is reaching an international audience both through its company links and the quality of research being undertaken. KESS is helping welsh universities, businesses and students compete on a world stage.
[http://www.higherskillswales.co.uk/kess](http://www.higherskillswales.co.uk/kess)
Key Enabling Technologies (KETs)

KETs: Nanotechnology, Micro and Nanoelectronics, Industrial Biotechnology, Photonics, Advanced Materials and Advanced Manufacturing Systems

“Knowledge and capital intensive technologies associated with high R&D intensity, rapid and integrated innovation cycles, high capital expenditure and highly skilled employment. Their influence is pervasive, enabling process, product and service innovation throughout the economy. They are of systemic relevance, multidisciplinary and trans-sectorial, cutting across many technology areas with a trend towards convergence, technological integration and the potential to induce structural change”.

“...the nation requires a coherent innovation policy to ensure U.S. leadership...Private investment must be complemented by public investment. Key opportunities to overcome market failures include investing in the advancement of new technologies with transformative potential, supporting shared infrastructure and accelerating the manufacturing process through targeted support for new methods and approaches”

“Report to the President on ensuring American leadership in advanced manufacturing” President’s Council of Advisors on Science and Technology, June 2011
Research infrastructure/centres of competence

**Smart Guide to Innovation-Based Incubators (IBI) published by DG REGIO/ENTER based on 25 years of incubation experience in the Union**

- Business and Innovation Centres for new entrepreneurs and SMEs that intend to develop innovative ideas.

- European Business Network started by the Commission in 1984 and continuously supported by nearly 15 years: 100 BICs created between 1984 and 1998.

- Support services to entrepreneurs, helping them to transform into reality their innovative business ideas, and the delivery of tailored services to existing SMEs, aimed at modernising and innovating them.

“To achieve a sustainable social market economy, a smarter greener economy...the EU needs to provide more attractive framework conditions for innovation and creativity...we need technical support to promote the incubation and growth of small innovative firms…”

Creativity and cultural industries

Berlin, DE: regional revitalisation through creative industries (2008)

- Kreativ Coaching Centre (KCC) in Berlin, established in 2008 and supported by ERDF;
- Helps emerging entrepreneurs in creative industries by providing individual assistance: experienced coaches, qualified in business administration and creative industries, who offer advice and expertise to young and growing companies to solve their problems in a non bureaucratic, hands-on way.

Debrecen, HU – Creative Industry Incubator

- The university of Debrecen set up a Creative Industries Incubator in 2009
- Hosted in a former Soviet Army Camp (transformed into a top-notch facility offering offices, attractive operation conditions, access to high-tech equipment).
- By February 2010 85% of space was rented out to young and start-up companies as well as spin-offs from the University at well below market rates
- The incubator proved to be highly popular particularly among high-tech ICT for which it provides a steady flow of knowledge and human resources from the university, which is next door.
Design for user-centred innovation

Design support for SMEs, De Montfort Univ., East Midlands, UK

- Design support: generation of over 40 commercial products and created over 50 new jobs for regional SMEs over the past 5 years.
- Partnerships with regional design consultancies and universities to meet the needs of SMEs.
- An €800,000 ERDF grant which provided a 7.5x return on investment with respect to GVA increase and increasing as more products are brought to market.

The SEE project (‘Sharing Experience Europe – Policy, Innovation, Design’ (ERDF INTERREG IV C)

- A network of 11 organisations sharing knowledge for developing new thinking, disseminating good practice and influencing local, regional and national policies for design and innovation.
- Members from UK, BE, DK, EE, FI, FR, IE, IT, PL, SI, ES and their regional governments committed to exploring improvements in the delivery of innovation, entrepreneurship and design through individual or joint policies.

“When the arts are integrated with business and science, they can influence solutions and productivity: Creative design provides a way to add a value to products in niche markets. That value is rooted in the aesthetic or emotional appeal of these products to certain markets, which can create a brand loyalty”.

(‘Unveiling the Creative Economy in Arkansas’ 2009, Regional Technology Strategies Inc.)
Digital agenda


**B3 Regions: Regions for Better Broadband connection:** spreading good practices of the expert partners relating to broadband implementation in disadvantaged areas and share experience with Managing Authorities and ICT agencies willing to implement successful broadband strategies with Structural Fund support.

**IMMODI:** Making the most of good practice in e-Government and e-health, which contribute to the development of mountain and rural areas. Selected examples are presented at technical and regional workshops, detailed in a published guide and discussed with Managing Authorities in order to transfer them into the regional development programmes of participating regions.

**PIKE: Promoting Innovation and the Knowledge Economy:** to improve regional and local Innovation & Knowledge Economy policies through the exchange and transfer of examples of e-Government and Wireless Broadband good practice, and through the integration of these into the development policies of participating regions.
Digital agenda RegioStars winners


High Speed Broadband roll out in Auvergne 2006-9 (10 M€ ERDF)
- One of the most sparsely populated regions in France, launched the first telecommunications public/private partnership in the country.
- EU funding: EUR 10 million ERDF grant to extend high-speed broadband coverage to all households.
- Goal: extend high-speed broadband coverage to 100% of households. Mission Accomplished: Some 99.6% of lines in Auvergne are now eligible for high-speed broadband through DSL technology, while the other 0.4% have a satellite option.

Computer Literacy Basics for a Lithuanian e-Citizen, 2006-8 (EUR 2,694,534)
- Provides computer literacy training, in line with the objectives established by the national Knowledge Society Council, establish Public Internet Access Points
- Key target groups: people living in remote areas with little access to digital services, in particular in rural regions, the elderly and those with disabilities.
- Private and public partnership with local municipalities made to reach directly persons living in district centres and rural areas.
- Over 50,400 adults have completed the LIA courses - helping to boost the overall competitiveness of Lithuania’s economy by upgrading skills.

“Freedom of location increased thanks to ICTs will emphasize the significance of features of place”.

(Talvitie, J. 2003)
Public Procurement for innovation market pull

East of England pre-commercial procurement for health care innovations

- May 2009: first pre-commercial procurement of an innovative process, material, device, product or service to help meet current health priorities in the region;
- ERDF funded initiative: Up to £100,000 was awarded for winning tenders in a first phase with the potential of further financial assistance to develop and evaluate projects in a second phase.
- The aim is to provide procurement opportunities for innovative health care businesses and bring the benefits of new innovations and technologies to patients.

RAPIDE ERDF Fast Track Network of 12 regions from across the EU
Exploring how the public sector can influence innovation.
Led by the Regional Development Agency of South West England (UK), between 2008-2010 selection and adaptation of:
1. Innovation Voucher Schemes
2. Pre-Commercial Procurement projects (PCP)
3. Business Angel Networks
4. Assessment tool for start-ups in incubators
5. Pitching tool (media-based) to bring innovators to investors

« The public sector constitutes an enormous market accounting up to 16% of GDP...public procurement is potentially one of the most powerful levers for effecting behavioural change amongst its private sector suppliers » Kevin Morgan 2010
EU /OECD project: Designing smart specialisation strategies for cluster development in global value chains

OECD (TIP group) and (Australia, AT – Lower and Upper Austria, BE -Flanders, FI -Lahti, DE - Brandenburg, NL - Brainport, PL -Makopolska, ES – Andalucia, Basque Country and Murcia, UK – West Midlands, Turkey, South Korea, CZ, EE, SW - Västra and South Africa): aims at identifying good practices in policy development, methodologies and selection criteria for designing and assessing smart specialisation strategies.
Information


• RIS3 guide: http://s3platform.jrc.ec.europa.eu/s3pguide