



# Raising excellence in all regions: synergies between Horizon 2020 and future Cohesion policy

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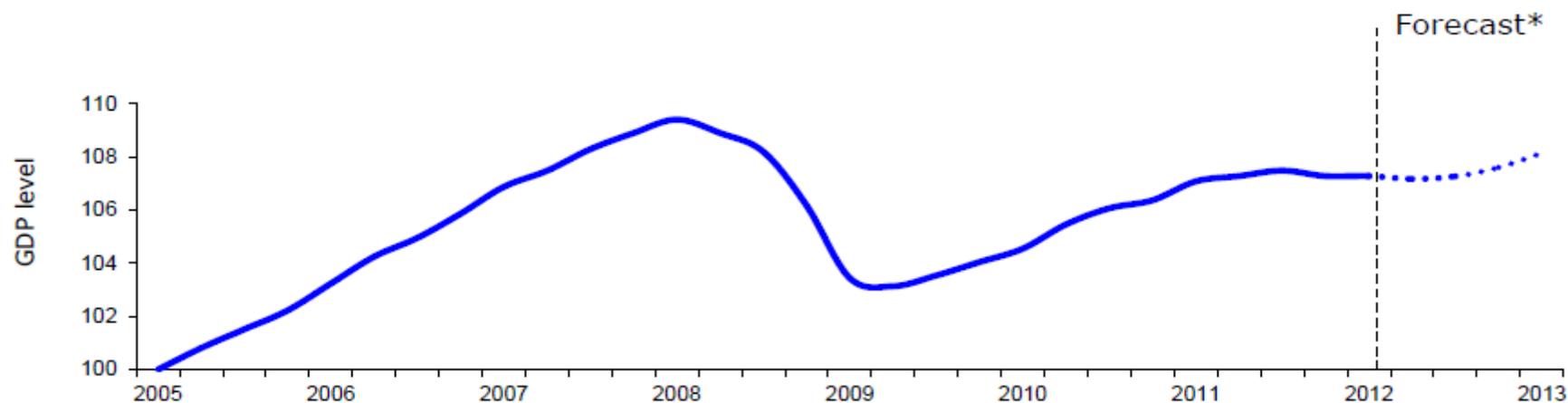
**Bucharest, 30/10/12, Innovative Cluster Days**



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# Restoring growth: a pressing priority

**EU GDP level in recent years**  
(first quarter 2005 = 100)

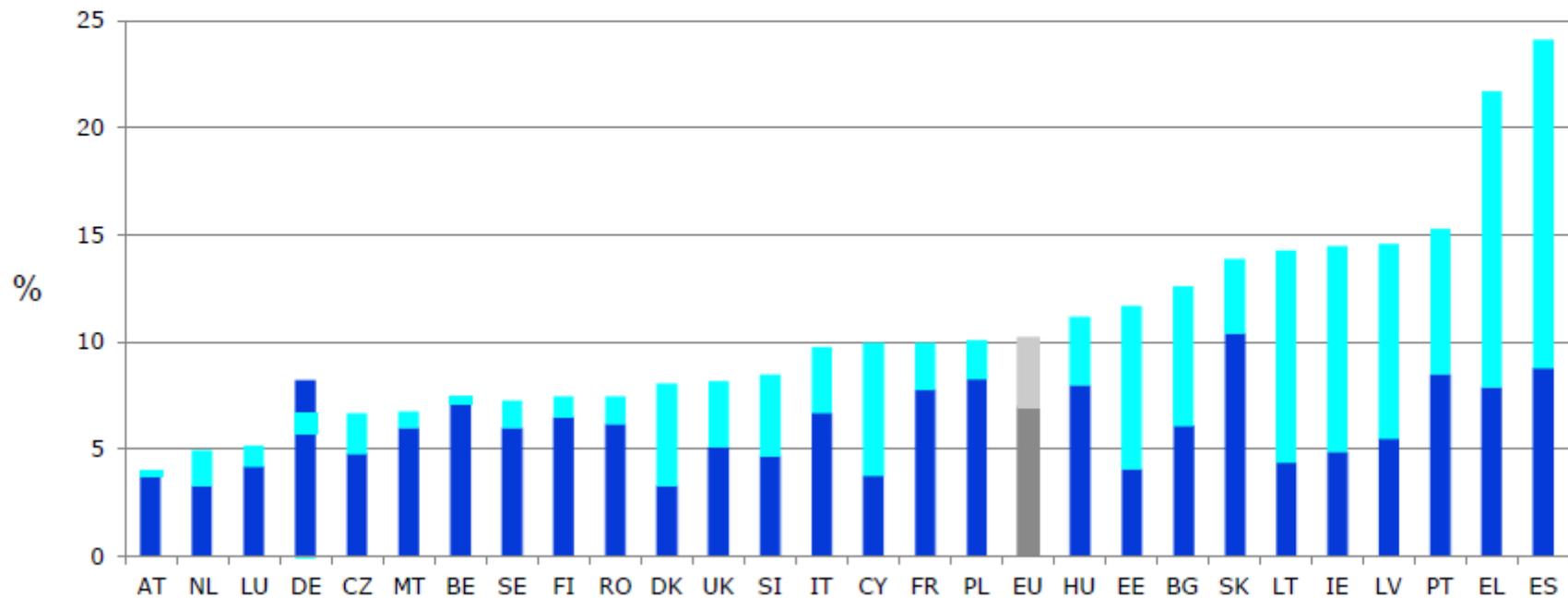


# High levels of unemployment

Unemployment rates in %

■ December 2007

■ March 2012





# Challenges for Europe

Europe faces:

- **Lack of growth, bleak economic climate;**
- **Increasing imbalances across the continent;**
- **Declining public confidence and high social costs of adjustment;**

Europe needs to:

- **Deliver stability in short-term and a long-term vision of a more integrated Europe**
- **Implement its Europe 2020 Strategy (2007-2014) setting out Flagship Initiatives (e.g. Innovation Union)**



# Fighting the crisis & reviving growth

## 1. Sound public finances

- Public deficits continue to shrink
- Stepping-up efforts to protect pro-growth public spending in consolidation processes.

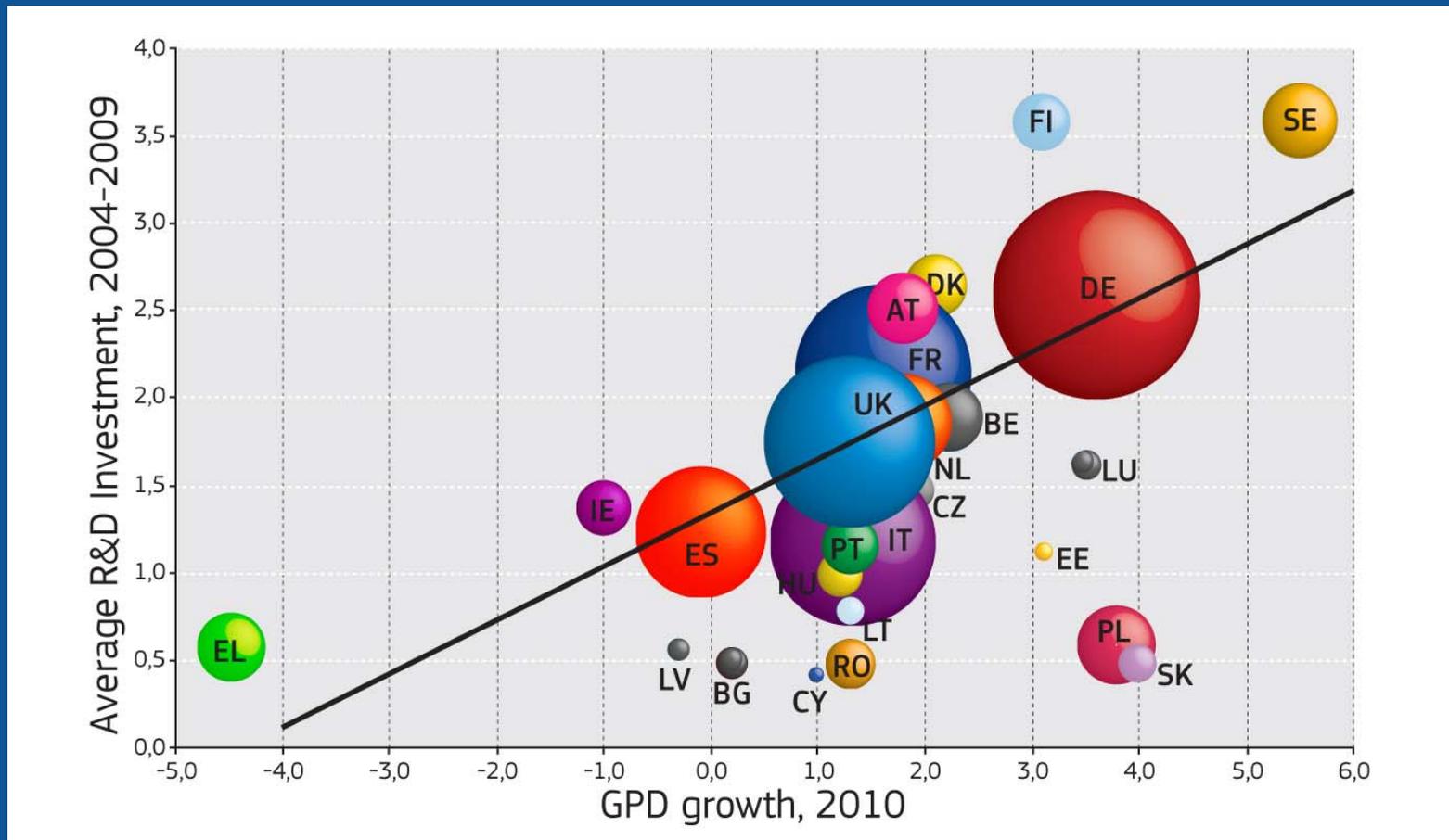
## 2. Structural reforms

- Restoring competitiveness of MS → country-specific recommendations;
- Reaping synergies from the world's largest Single Market.

## 3. Smart investment

- Pro-growth EU budget;
- Re-allocating Structural Funds to fight youth unemployment and frontload growth.

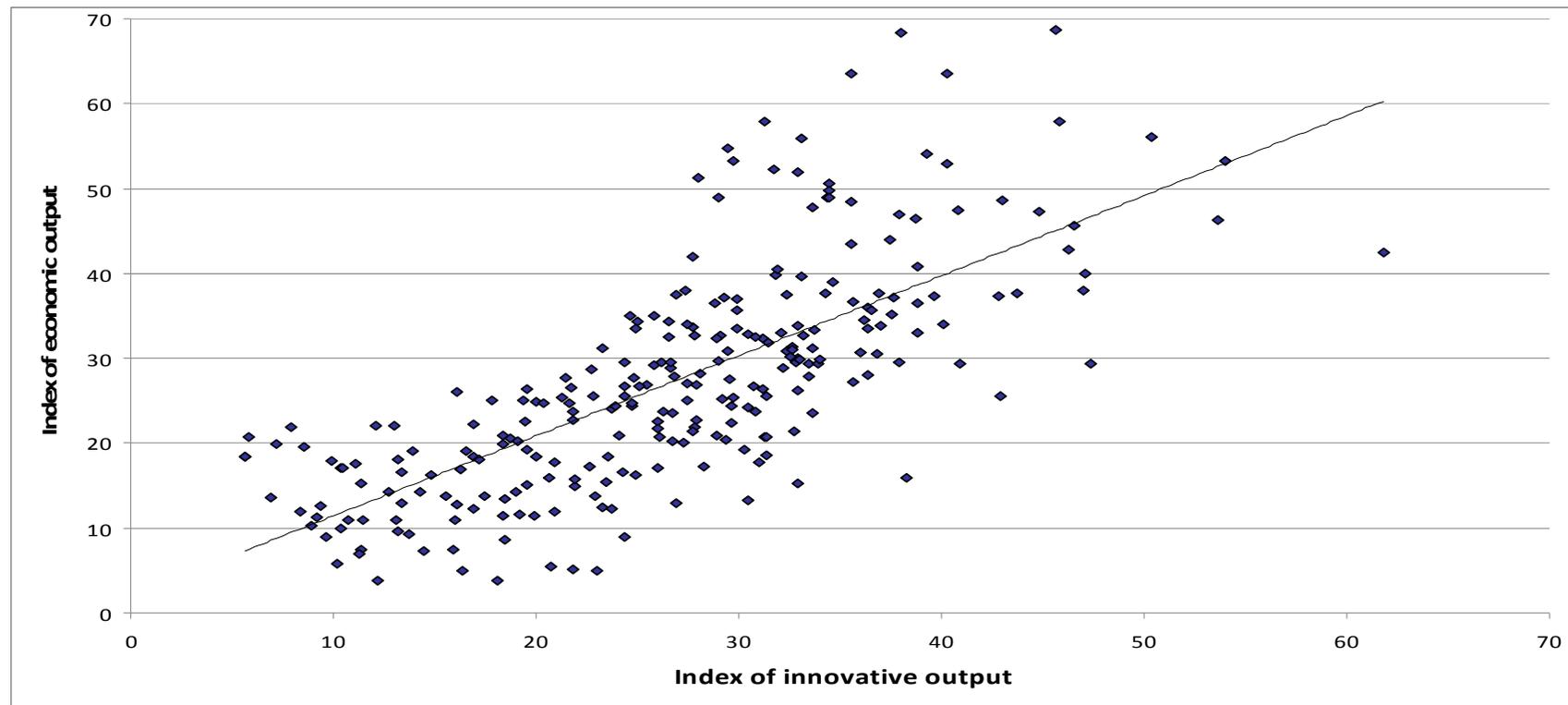
# Investment in R&D is part of the solution to exit from the economic crises





## Is there a link between innovation and regional growth?

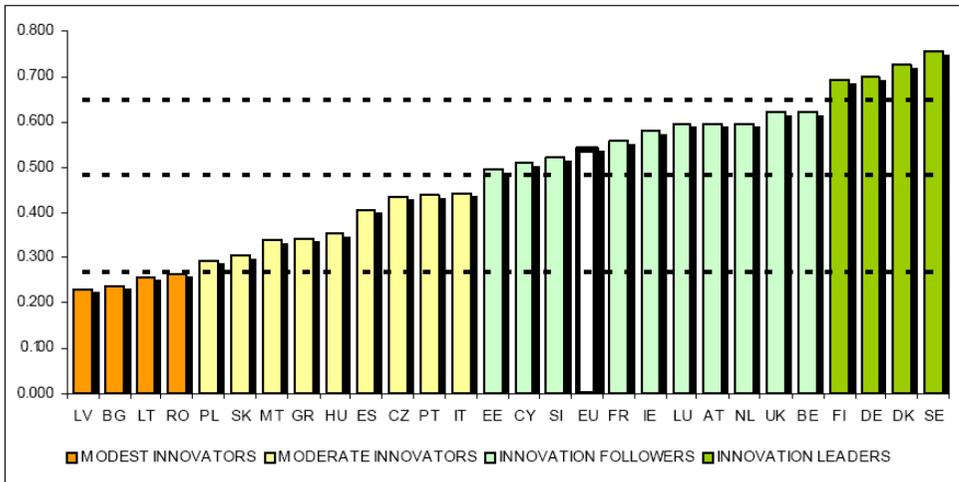
*“The general consensus...is that the driving force behind long-term economic growth is science, technology and innovation in its different forms and facets” (OECD 2011: Regions and Innovation Policy)*



**Source: Mikel Navarro et al, Basque Competitiveness Institute 2010.**

*"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)*

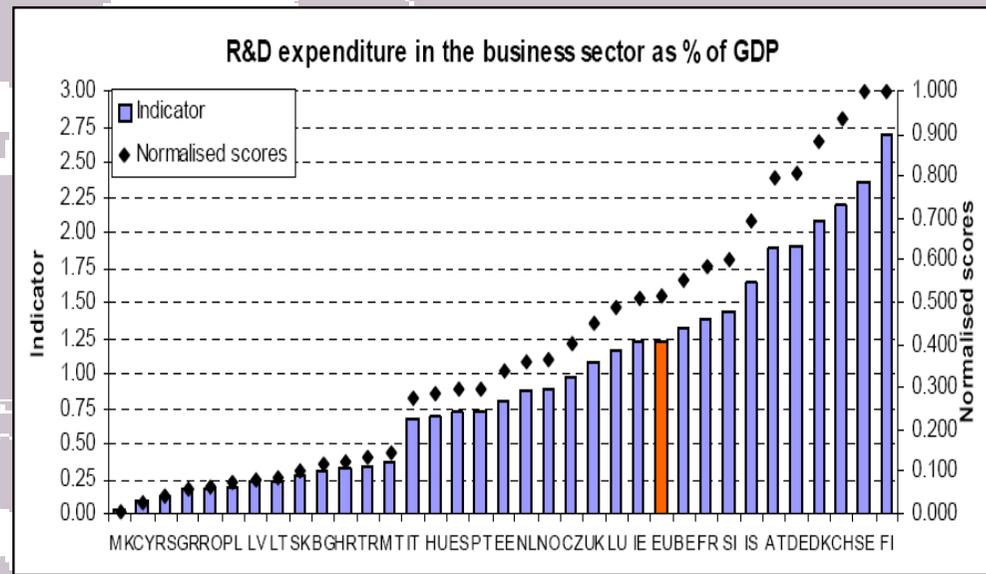
**FIGURE 2: EU MEMBER STATES' INNOVATION PERFORMANCE**



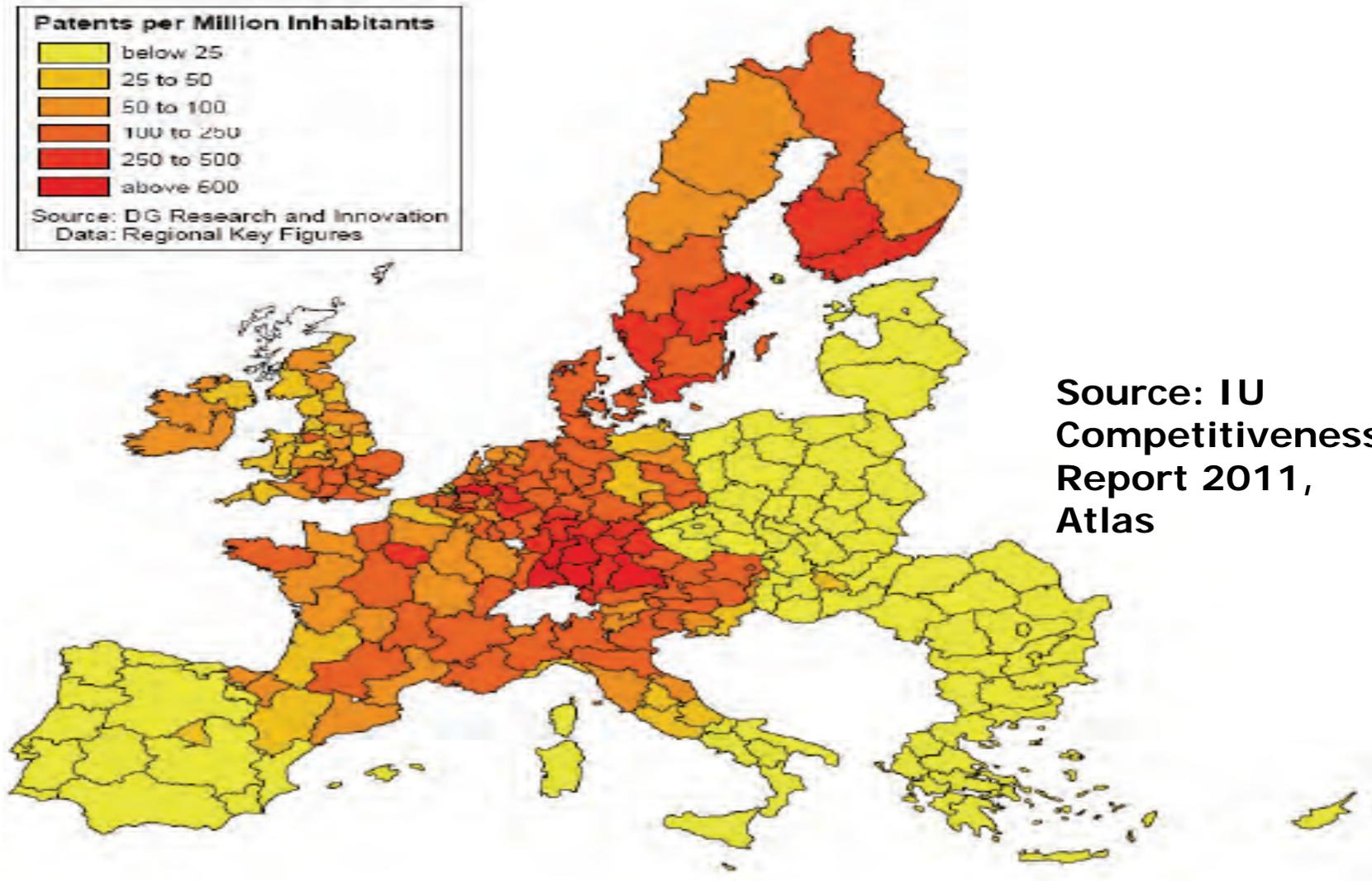
Note: Average performance is measured using a composite indicator building on data for 24 indicators going from a lowest possible performance of 0 to a maximum possible performance of 1. Average performance in 2011 reflects performance in 2009/2010 due to a lag in data availability.



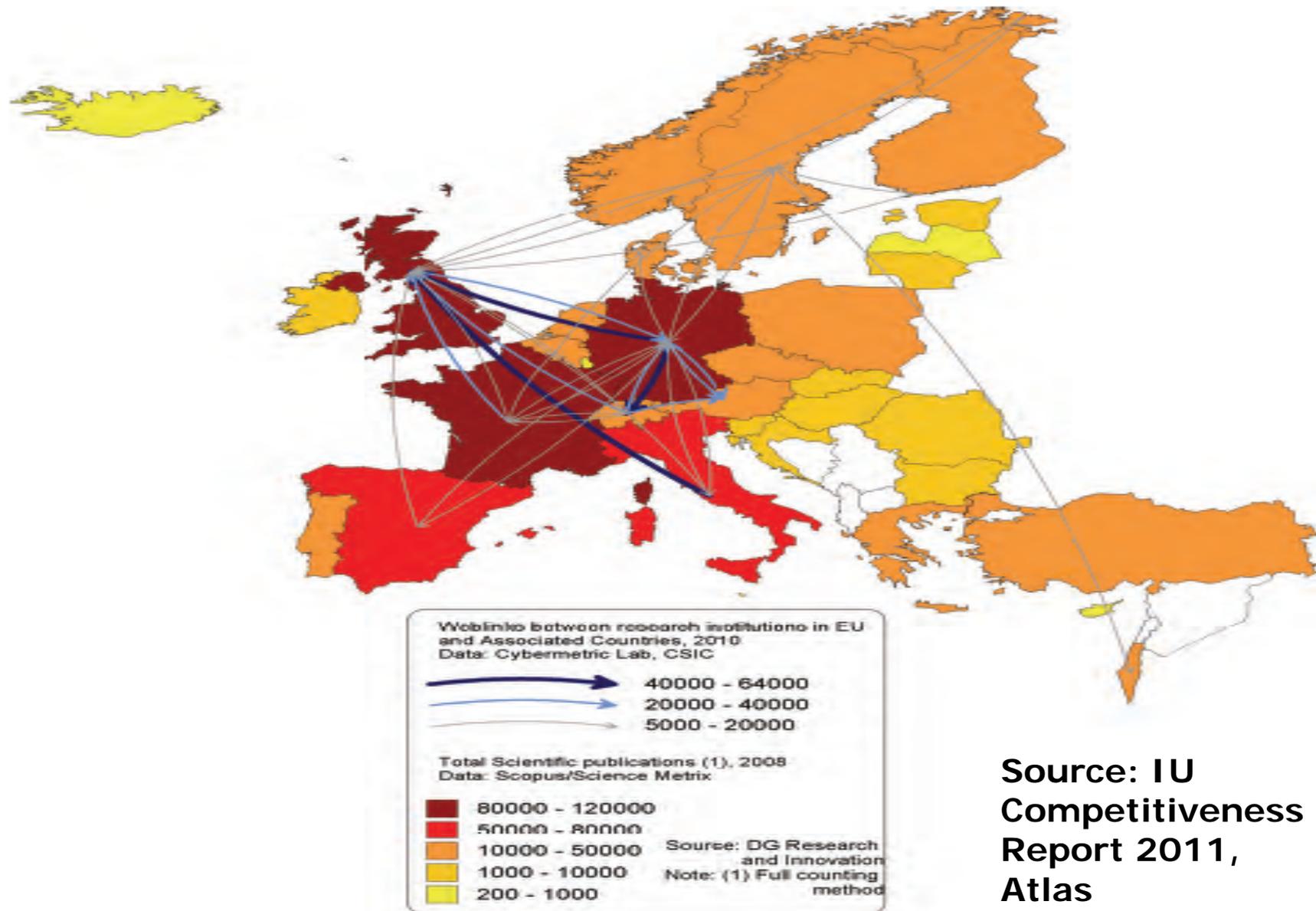
**R&D expenditure in the business sector as % of GDP**



# Patent intensity in the EU, NUTS 2 regions, 2007



# Web-based links between the top research institutions at country level , 2010



Source: IU  
Competitiveness  
Report 2011,  
Atlas

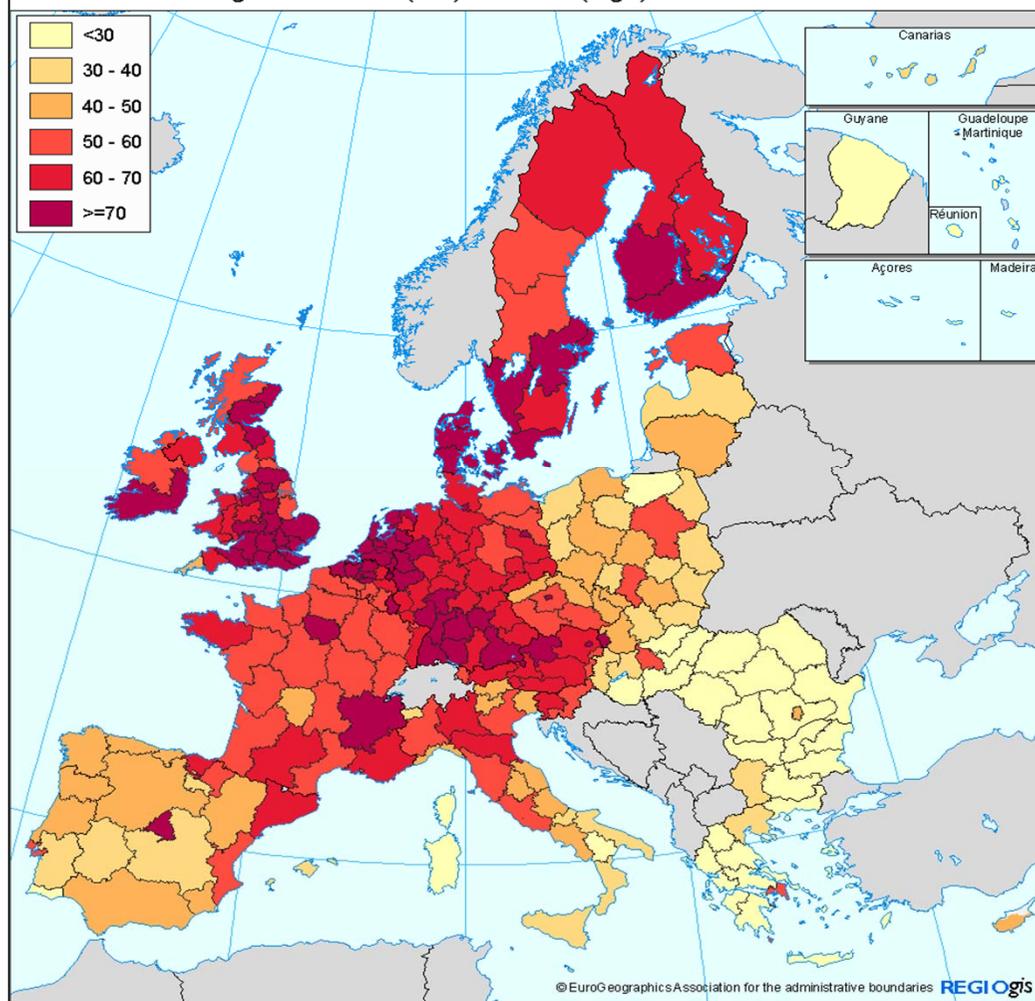




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## Competitiveness Index, 2010

Index - Values range between 0 (low) and 100 (high)





# What Europe will do for closing the innovation divide ?

*Mobilise Cohesion policy to build a Stairway to Excellence*

*Work through Horizon 2020*

*Deploy significant synergies between Horizon 2020 and Cohesion policy*





# Innovation Union

- **Creating a Single Innovation Market by setting the right conditions for investment in R&I:**

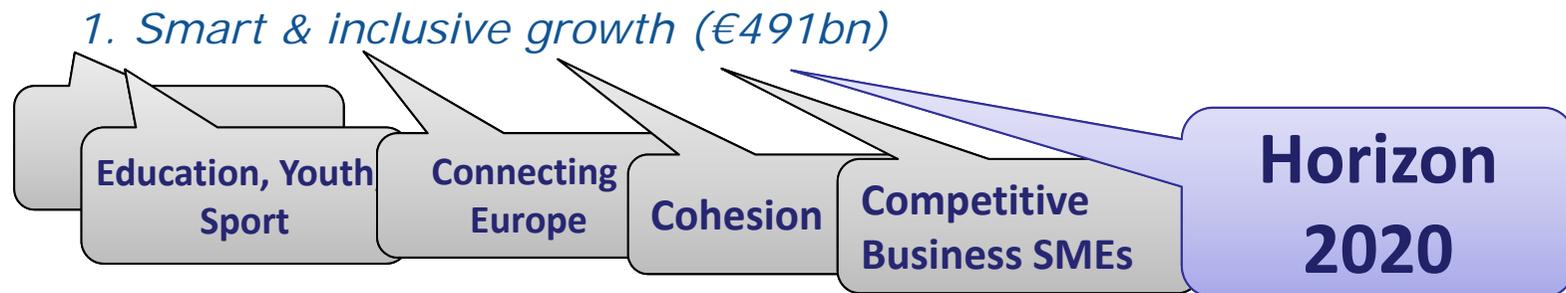
*34 commitments, including:*

- *Unitary patent – cutting cost of patents by up to 80%;*
- *Standards – modernising and cutting time-to-standard by half;*
- *Public procurement - buying innovation by public sector made easier;*
- *Policies for researchers to reside in Europe;*
- *Regulatory framework screening;*
- *A European passport for venture capital funds;*
- **EU committed to support R&I investment:**
  - *Horizon 2020 & Structural Funds proposals;*
  - *Squeezing the gap between ideas and market and frontloading growth: 2012 and 2013 FP 7 Work Programmes.*

**Positive outlook:** *Top R&D investing EU businesses expect their investments in R&D to grow by an average of 4% annually over the period 2012 to 2014*

# Multiannual Financial Framework 2014-2020 Commission's proposals June 2011

Key challenge: stabilise the financial and economic system while taking measures to create economic opportunities



2. *Sustainable growth, natural resources (€383bn)*

3. *Security and citizenship (€18.5bn)*

4. *Global Europe (€70bn)*

5. *Administration (€62.6bn)*

**Total:  
€ 1,025bn**



# What is Horizon 2020

- **Commission proposal for a 80 billion euro research and innovation funding programme (2014-2020)**
- **A core part of Europe 2020, Innovation Union & European Research Area:**
  - **Responding to the economic crisis** to invest in future jobs and growth
  - **Addressing people's concerns** about their livelihoods, safety and environment
  - **Strengthening the EU's global position** in research, innovation and technology



## What's new

- **A single programme** bringing together three separate programmes/initiatives\*
- **Coupling research to innovation** – from research to retail, all forms of innovation
- **Focus on societal challenges** facing EU society, e.g. health, clean energy and transport
- **Simplified access**, for all companies, universities, institutes in all EU countries and beyond.

\*The 7th Research Framework Programme (FP7), innovation aspects of Competitiveness and Innovation Framework Programme (CIP), EU contribution to the European Institute of Innovation and Technology (EIT)

# Priority 1      Excellent science

## *Why:*

- *World class science is the foundation of tomorrow's technologies, jobs and wellbeing*
- *Europe needs to develop, attract and retain research talent*
- *Researchers need access to the best infrastructures*

European Research Council <i>Frontier research by the best individual teams</i>	13 268
Future and Emerging Technologies <i>Collaborative research to open new fields of innovation</i>	3 100
Marie Curie actions* <i>Opportunities for training and career development</i>	5 752
Research infrastructures (including e-infrastructure) <i>Ensuring access to world-class facilities</i>	2 478



## Priority 2 Industrial leadership

*Why:*

- *Europe needs more innovative SMEs to create growth and jobs*
- *Strategic investments in key technologies (e.g. advanced manufacturing, micro-electronics) underpin innovation across existing and emerging sectors*
- *Europe needs to attract more private investment in research and innovation*

<i>Leadership in enabling and industrial technologies (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)</i>	13 781
<i>Access to risk finance Leveraging private finance and venture capital for research and innovation</i>	3 538
<i>Innovation in SMEs Fostering all forms of innovation in all types of SMEs</i>	619

## Priority 3 Societal challenges

*Why:*

- *EU policy objectives (climate, environment, energy, transport etc) cannot be achieved without innovation*
- *Breakthrough solutions come from multi-disciplinary collaborations, including social sciences & humanities*
- *Promising solutions need to be tested, demonstrated and scaled up*

Health, demographic change and wellbeing	8 033
Food security, sustainable agriculture, marine and maritime research & the bioeconomy	4 152
Secure, clean and efficient energy*	5 782
Smart, green and integrated transport	6 802
Climate action, resource efficiency and raw materials	3 160
Inclusive, innovative and secure societies	3 819

\*Additional €1 050m for nuclear safety and security from the Euratom Treaty activities (2014-18). Does not include ITER.



## Horizon 2020 will favour “smaller” players since it introduces:

- A completely new approach towards supporting research and innovation in SMEs (based on the concept of the well-known US SBIR scheme)
- A new approach to access to risk finance especially for high-growth innovative SMEs
- A major simplification effort in terms of administration and financial management





# How Horizon 2020 will interface with Cohesion policy?

*Through a host of measures on “Closing the Innovation Divide” in Europe  
Through a systematic interaction between Regional Innovation Strategies for Smart Specialisation and the Thematic Priorities (under Excellence, Industrial Leadership and Societal Challenges)*





# Twinning and Teaming research institutions

- *Linking emerging institutions, centres of excellence and innovative regions in less developed Member States to international leading counterparts elsewhere in Europe:*
  - measures include teaming of excellent research institutions and innovative regions, staff exchanges, expert advice and assistance and the development of joint strategies for the establishment of centres of excellence that may be supported by the Cohesion policy funds in less developed regions.
    - ***Building links with innovative clusters and recognising excellence in less developed regions, including through peer reviews and awarding labels of excellence to those institutions that meet international standards, will be considered.***





# Introducing ERA (European Research Area) Chairs

- Establishing 'ERA Chairs' to attract outstanding academics to institutions with a clear potential for research excellence, in order to help these institutions fully unlock this potential and hereby create a level playing field for research and innovation in the European Research Area.
  - *This will include institutional support for creating a competitive research environment and the framework conditions necessary for attracting, retaining and developing top research talent within these institutions.*
  - *A Pilot Call will be opened in FP7 before the end of 2012*





## Stimulating cross-border science networks

**COST, a bottom-up, open networking mechanism, encourages international exchanges and co-operation of researchers within Europe and beyond. Joint activities such as conferences, short-term scientific exchanges and publications are supported.**

*Within Horizon 2020, COST should further bring together "pockets of excellence" and play a mobilising role not only for the less participating countries but also for the enlargement countries and the European neighbourhood policy countries.*





# Measures to improve policy support as well as information and communication

**Introducing a Policy Support Facility for Member States and Regions**

**Improving information networks on European research and innovation would greatly facilitate further participation in the Framework Programme.**

**Improving information on the Framework Programme needs, will aim to significantly improve and monitor NCP performance in qualitative and quantitative terms, including training efforts and enhanced access to electronic information.**





## What is EU Cohesion Policy?

- A framework for financing a wide range of projects and investments with the aim of encouraging economic growth and social cohesion in EU member states and their regions.
- Biggest slice of the EU budget: proposed budget: €376 billion
- Allocation of funds from Cohesion policy will be linked to the Europe 2020 objectives for smart, sustainable and inclusive growth
- Strengthened partnership between Commission and Member States and regions and local communities

# Horizon 2020 and Cohesion Policy: differences and complementary objectives



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EU R&D Policy – future Horizon 2020	EU Cohesion Policy
<b>Differences</b>	
<b>non-territorial approach</b> , no pre-defined geographical distribution of funding	<b>place-based approach</b> ; defined financial envelope for different eligible categories of regions
Based <b>mainly on individual R&amp;D Projects</b> (to a certain extent also co-funding activities of programmes are supported) tackling the whole cycle of innovation from pre-competitive, leading edge basic research to demonstration projects, pilot activities, market replication as well as innovative public procurement and the award of prizes for the achievement of pre-specified targets.	Based on <b>multiannual Programmes</b> aiming at increased competitiveness through close to the market competitive R&D and innovation efforts
In general <b>awarded directly to final beneficiaries</b> like firms, public and private R&D centers, universities or research funding organisations (for ERA-net activities, Joint Programming etc.).	Awarded through <b>shared management</b> to national and regional public intermediaries
Mostly <b>competitive calls</b> addressed to international groupings (exception ERC and MC that also address individuals) through peer-review based on excellence criteria	<b>Non competitive attribution</b> addressed to regional players based on strategic planning negotiation
<b>Complementarities</b>	
<b>Horizon 2020</b> will focus on tackling major societal challenges, maximising the competitiveness impact of research and innovation and raising and spreading levels of excellence in the research base	<b>Cohesion policy</b> will focus on galvanising smart specialisation that will act as a capacity building instrument, based on learning mechanisms and the creation of critical skills in regions and Member States. One of the results will be a better capacity to participate in Horizon 2020.



## Cohesion Policy: More coherent use of available EU funds



- Aligned with Europe 2020 objectives (and measurement of progress towards targets)
- Simplification: reduction of administrative burden for beneficiaries
- Coordination of cohesion policy, rural development, maritime & fisheries funds
- Coherence with National Reform Programmes
- Effectiveness: ex-ante conditionalities, performance framework



## Cohesion policy: 11 Thematic Objectives to Deliver Europe 2020

- *Strengthening research, technological development and innovation*
- *Enhancing access to, and use and quality of, information and communication technologies*
- *Enhancing the competitiveness of small and medium-sized enterprises, the agricultural sector (for the EAFRD) and the fisheries and aquaculture sector (for the EMFF)*
- *Supporting the shift towards a low-carbon economy in all sectors*
- *Promoting climate change adaptation, risk prevention and management*
- *Protecting the environment and promoting resource efficiency*
- *Promoting sustainable transport and removing bottlenecks in key network infrastructures*
- *Promoting employment and supporting labour mobility*
- *Promoting social inclusion and combating poverty*
- *Investing in education, skills and lifelong learning*
- *Enhancing institutional capacity and an efficient public administration*



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## Research and Innovation Investment proposed priorities for the ERDF

### ***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 application, demand simulation, networking, clusters and open innovation through smart specialisation*
- *Supporting technological and applied research, pilot lines, early product validation actions, advanced manufacturing capabilities and first production in Key Enabling Technologies and diffusion of general purpose technologies*





## What do we mean by **Synergies**

A Greek word meaning that a complex result is accomplished through mutual positive interactions between a number of distinct but interrelated processes

Thus the Research and Innovation Framework Programme will have increased interactions with Cohesion policy, **although each policy will keep its distinct features**

The result should normally be reinforced competitiveness for Europe



# Keys to Synergies

- ✓ *Smart Specialisation  
ex-ante conditionality*
- ✓ *Thematic Concentration*



## The Synergies Matrix

	<b><i>STRUCTURAL FUNDS THEMATIC OBJECTIVE NO 1 ON STRENGTHENING RESEARCH, TECHNOLOGICAL DEVELOPMENT AND INNOVATION</i></b>	
<b><i>HORIZON 2020 TOP DOWN RESEARCH AND INNOVATION PRIORITIES</i></b>	<b><i>THEMATIC CONCENTRATION FOR MOST ADVANCED AND TRANSITION REGIONS FOR ALLOCATING 80% OF THE ERDF MONEY FOR 4 OBJECTIVES: R&amp;I, ICT, SME COMPETITIVENESS AND LOW CARBON ECONOMY</i></b>	<b><i>THEMATIC CONCENTRATION FOR LESS ADVANCED REGIONS FOR ALLOCATING 50% OF THE ERDF MONEY FOR 4 OBJECTIVES: R&amp;I, ICT, SME COMPETITIVENESS AND LOW CARBON ECONOMY</i></b>
<b><i>EXCELLENCE</i></b>	<b><u><i>SMART SPECIALISATION EX-ANTE CONDITIONALITY</i></u></b> <ul style="list-style-type: none"> <li>▪ <b><i>A STRATEGY FOR SMART SPECIALISATION</i></b></li> <li>▪ <b><i>THE EXISTENCE OF A WELL FUNCTIONING RESEARCH AND INNOVATION SYSTEM IN COMPLIANCE WITH THE NATIONAL REFORM PROGRAMME (European Semester, Annual Growth Survey, Country Specific Recommendations)</i></b></li> <li>▪ <b><i>(and where applicable) A CLEAR STRATEGY ON ESFRI INFRASTRUCTURES AT NATIONAL LEVEL</i></b></li> </ul>	
<b><i>INDUSTRIAL LEADERSHIP</i></b>		
<b><i>SOCIETAL CHALLENGES</i></b>		



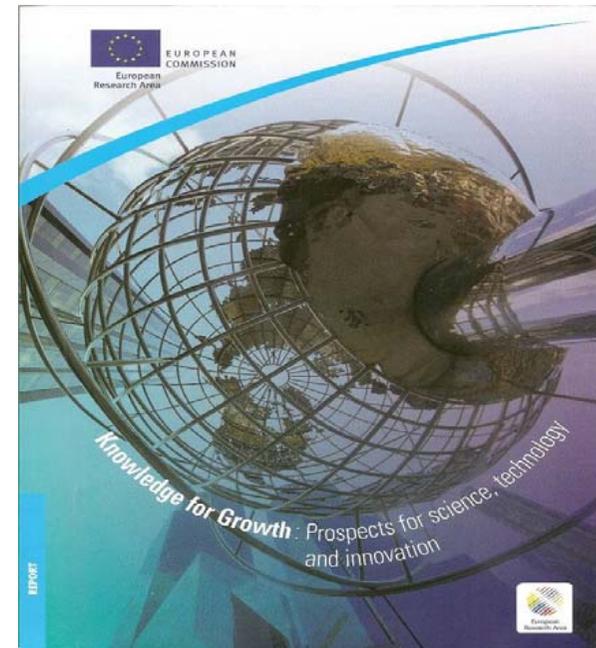
# What is Smart Specialisation ?

[http://ec.europa.eu/research/era/publication\\_en.cfm](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 comparative 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**



## Smart Specialisation: Policy

What are the main requirements?:

- Leadership: a long-term commitment of national and regional authorities
- Strategy: a plan with clear objectives and measurable deliverables based on a SWOT-analysis
- (Tough) Choices: select few priorities on the basis of international specialisation and integration in international value chains
- Competitive Advantage: mobilise talent by matching RTD + i and business needs & capacities
- Critical Mass: identify areas where scale and scope can be developed
- Stakeholder involvement / Ownership of the strategy

## Steps to RIS3

Step 1: Analysis of regional potential for innovation-driven differentiation

Step 2: RIS 3 design and governance – ensuring participation & ownership

Step 3: Elaboration of an overall vision for the future of the region

Step 4: Selection of priorities for RIS3 + definition of objectives

Step 5: Definition of coherent policy mix, roadmaps and action plan

Step 6: Integration of monitoring and evaluation mechanisms





# Smart Specialisation: Instruments

- Clusters for regional growth: business ecologies that drive innovation
- Social Innovation: new organisational forms to tackle societal challenges
- 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
- Innovation-friendly business environments for SMEs: good jobs in internationally competitive firms
- Financial engineering
- Lifelong Learning in research and innovation
- Public Procurement for market pull

## Example: Bremerhaven (DE)

- *Economy based on shipbuilding & commercial fishing in strong downturn end of 1990's*
- *Selection of 'offshore wind energy' as new development: clear & integrated industrial strategy and clustering of competencies*
- *Strong existing synergies between 'shipyard' & 'offshore wind' sectors*
- *Now Bremerhaven = major hub of offshore wind in DE, 4 major manufactures, already 1,000 jobs created*





# Support for RIS3 development:

- **S3Platform:**

- ✓ Website + Newsletter
- ✓ Guidance on process for development of RIS3
- ✓ Analytical support
- ✓ Organises "peer-reviews" of national / regional strategies
- ✓ Conferences, working groups, trainings ...



- **Informal expert reviews**

- **Guidance:** RIS3 step-by-step, thematic guides

- **Data material**, e.g. Regional Innovation Scoreboard, ERAWATCH, RIM, European Cluster Observatory, Digital Agenda Scoreboard, SME performance review, SSH studies, IPTS studies, etc.

- **Good practices:** e.g. RegioStars, European Entrepreneurship Awards ...

- **CoR, OECD, World Bank, JASPERS, EURADA, ERRIN, EBN**, etc.

## Commission support for RIS3:

### RIS3Platform:

- peer-reviews
- analysis&data
- training
- communication

- ✓ 85 regions + 1 MS
- ✓ 6 peer-reviews, trainings, thematic seminars
- ✓ RIR3 guide
- ✓ Web-site, Newsletter





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# What is Smart Specialisation ?

## RIS3 Guide

### Content:

- ▶ Step-by-step guide to strategy development
- ▶ Suggestions for delivery instruments
- ▶ Guidance for expert assessment

Target group: policy-makers, academics, innovation support providers

See: <http://s3platform.jrc.ec.europa.eu/s3pguide>



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## What future for “Regions of Knowledge” and “Research Potential” types of action ?

- **Provisions are made to integrate the objectives of these actions** under European Territorial Cooperation actions (former INTERREG) (recital 7 in draft ETC Regulation)
- **Support to Cluster Cooperation and to Twinning research institutions** also present in the mainstream ERDF



## Next steps in planning for Member States / regions

- ❑ *Perform a serious analysis of national, regional and local characteristics*
- ❑ *Position the Member State / Region in its particular international context and see what this implies for its future priorities (consider re-positioning)*
- ❑ *Lay out a strategy for smart specialisation, in a bottom-up process involving all relevant stakeholders*
- ❑ *Prioritise, evaluate, and choose*
- ❑ *Consider possible governance adjustments if needed*
- ❑ *Formulate a clear plan with limited and specific priorities, where an evaluation process has to be built-in, with relevant indicators*



## Timeline

- *Horizon 2020 Regulations to be adopted by mid-2013 by EP and Council*
- *Structural Funds Regulations to be adopted by early 2013 at the latest*
- *Informal discussions imminent with the MS on the draft Partnership Agreements – followed by formal negotiations early 2013*
- *Draft Partnership Agreements by MS by mid 2013*
- *Draft Operational Programmes by MS by early 2014*
- *Horizon 2020 first Calls for proposals in October-November 2013*

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**Thank you !**



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