

Smart Specialisation Platform on Energy

RIS3: Energy related Innovations vs. Economic Development in the EU

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www.jrc.ec.europa.eu



*Serving society
Stimulating innovation
Supporting legislation*



From R&I Strategies (RIS) to R&I Smart Specialisation Strategies (RIS3)

Building on the past (RIS)

- ❑ Widespread experience of national/regional innovation strategies in the framework of the EU Cohesion Policy
- ❑ Achieved greater co-operation among private and public stakeholders and better communication between technology providers and clients

Breaking with the past and into RIS3

- ❑ Not in tune with the industrial and economic fabric of regions
- ❑ Too narrow vision of only 'technological' innovation
- ❑ The best performing regions were just copied or resources spread across 'all sectors'
- ❑ Lack of international and trans-regional perspective

EU Cohesion Policy:



...investing in all EU regions ... Growth through 11 Thematic Objectives

Smart

Sustainable

Inclusive



Research and Innovation



Combating climate change



Employment and Mobility



ICT



Environment and resource efficiency



Social inclusion



Competitiveness of SMEs



Sustainable transport



Better education, training



Low-Carbon Economy



Better public administration


RIS3



Business

- Manufacturing and services
- Primary sectors
- Financial sector
- Creative industries
- Enterprises (large and SMEs)
- Clusters and organisations

Research



- Public and private research bodies
- Universities
- Education and training
- VET centres
- Science and technology parks
- Technology transfer offices



Public Administration

- Different government levels
- Energy and innovation agencies
- Regional development agencies
- Business advice offices
- Public procurement departments
- Public incubators

Civil Society/Partners



- Non-Governmental Organisations
- Citizens' initiatives
- Societal challenges
- Cooperative innovative solutions
- Consumers associations
- Talents

Entrepreneurial discovery.

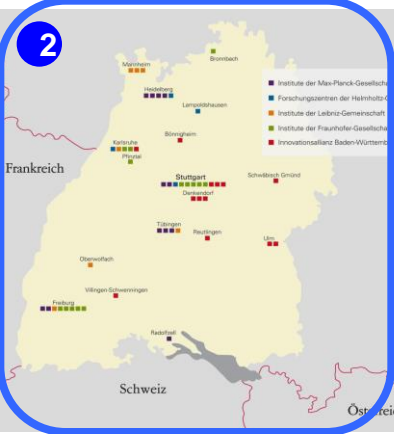
The process of systematically scanning for technological, political and regulatory, social, and demographic changes to discover opportunities to produce new good and services



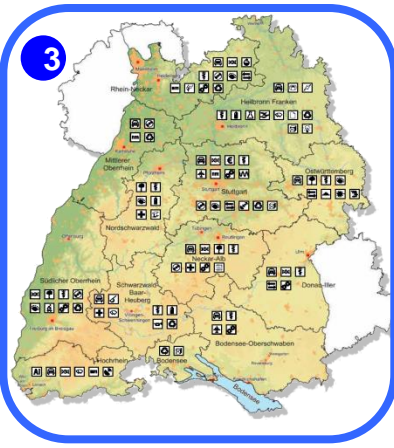


Internationalisation

Applied Sciences, Research and development



Clusters



Technology Transfer

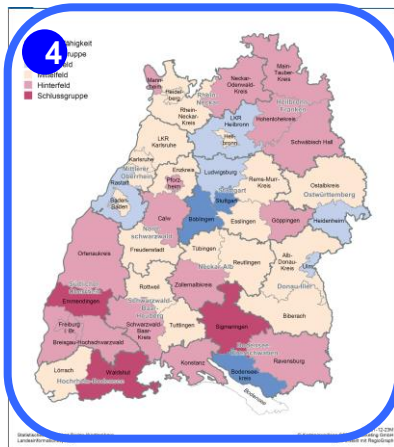
Linkages and Networks



Universities and Higher Education



Regional Specialisation



Access to Knowledge, Qualification

Innovation performance
Matching economic structure <-> innovation system



Activating EDP Actors at Subregional Level



- Competition Regions defined by local actors based on functional coherence
 - All relevant actors included in the strategic process: economy, administration, science, social partners, environmental partners, municipalities
 - Regional strategy concept, based on socio-economic analysis, coherent to EU2020 and innovation strategy, focused on local strengths/challenges
- ➔ **Dialogue activated by announcement of the competition**
- ➔ **New sets of EDP Actors at sub-regional level**



REGIO, JRC & Spec.policy DGs

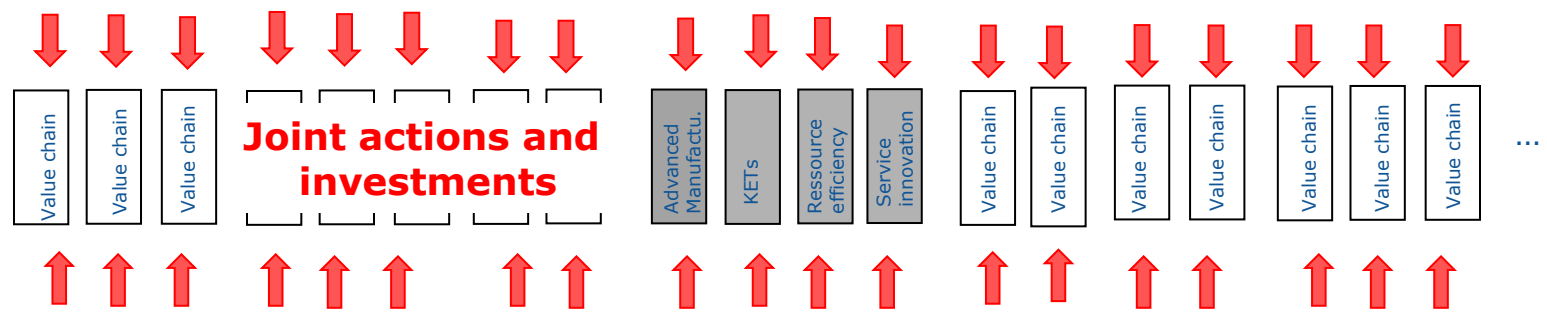
S3 Strategic Developments - EU

Regional authorities

Thematic Smart Specialisation Platforms

Energy Agro-Food Digital Growth **Industrial Modernisation** (Health) (Circular Economy)

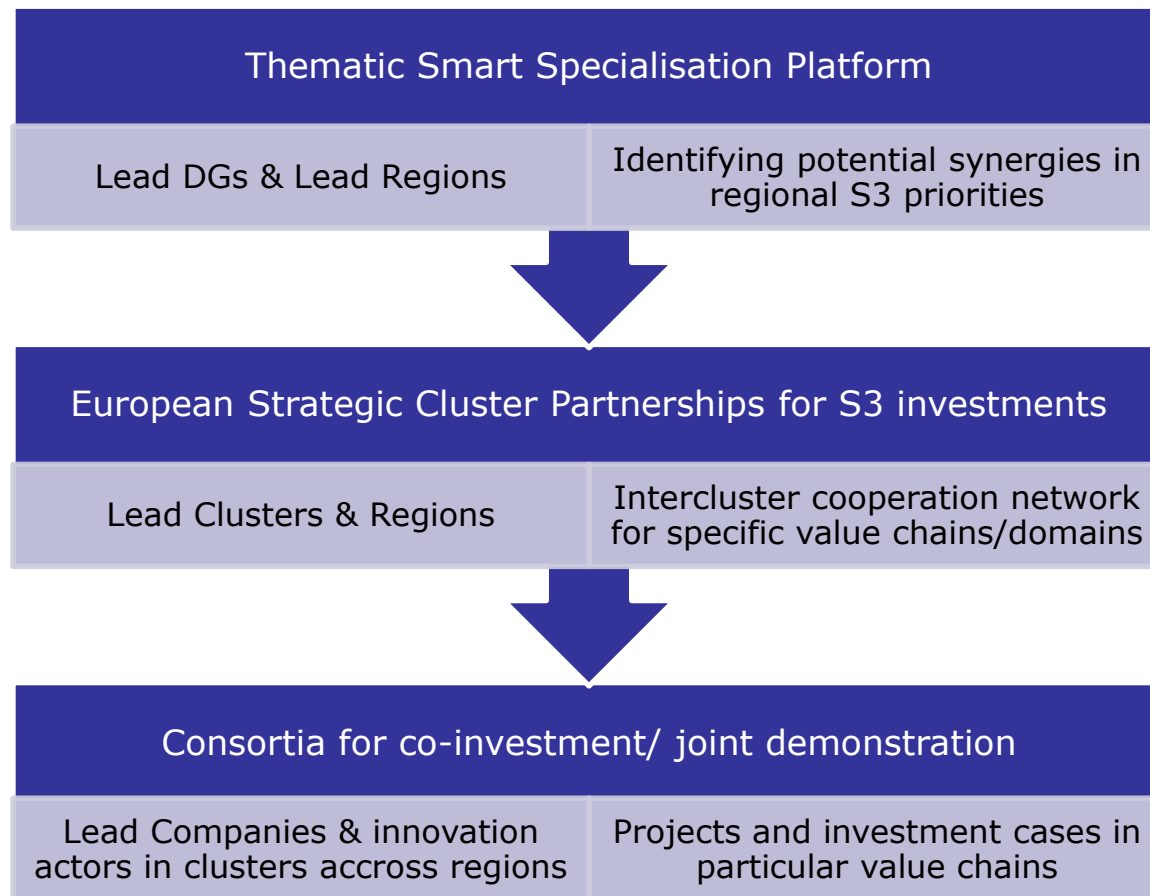
Business



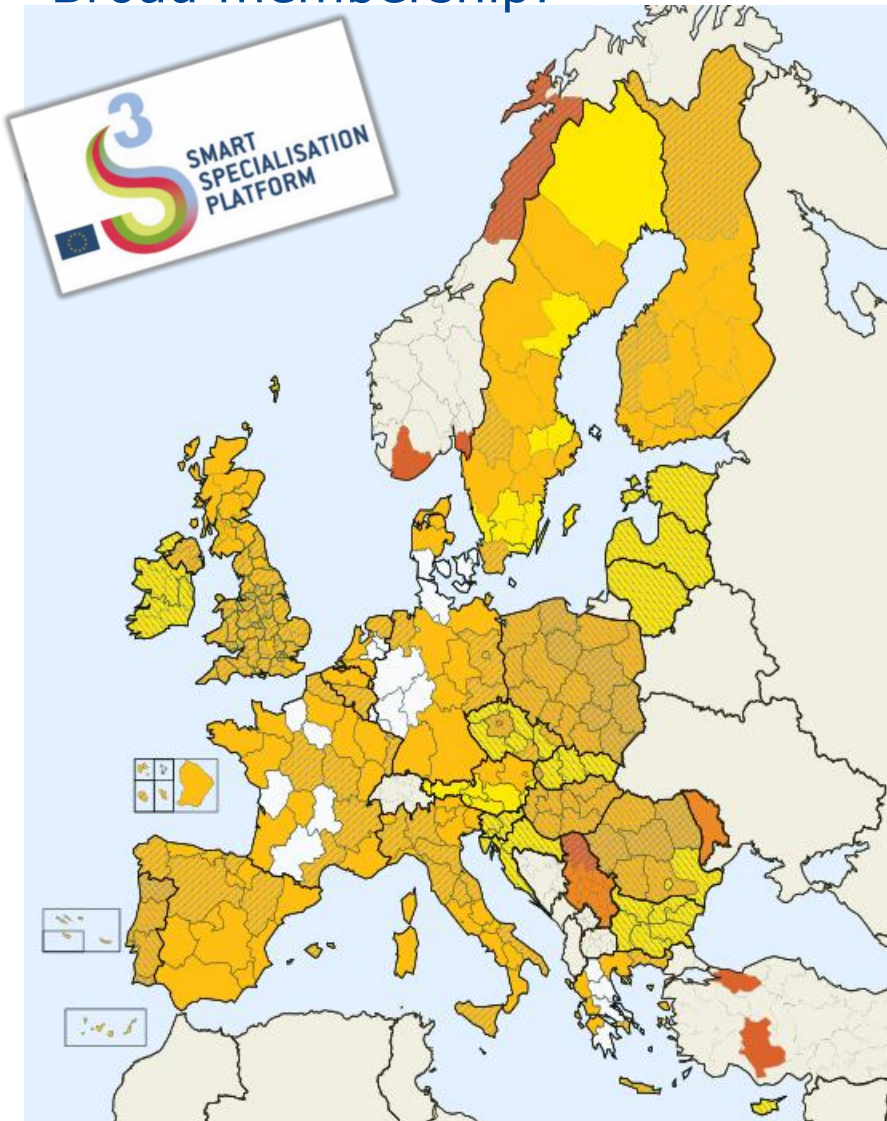
Cluster organisations

European Strategic Cluster Partnerships for Smart Specialisation Investment

Three steps of the 'Entrepreneurial Discovery Process' at the EU-level



Broad membership!



Guidance - Analysis - Support

Comprehensive guidance tools – RIS3 Guide, Digital Agenda Toolbox, FAQs, Implementation Handbook

S3 Publication series - Policy briefs co-authored with leading academics and practitioners; Working papers contributing to conceptual and empirical developments related to smart specialisation

Supporting tools: S3 self-assessment (assessment wheel), regional S3 priorities (EYE@RIS3), ESIF investments (ICT, Energy), regional benchmarking, bilateral trade flows, etc.

Some achievements

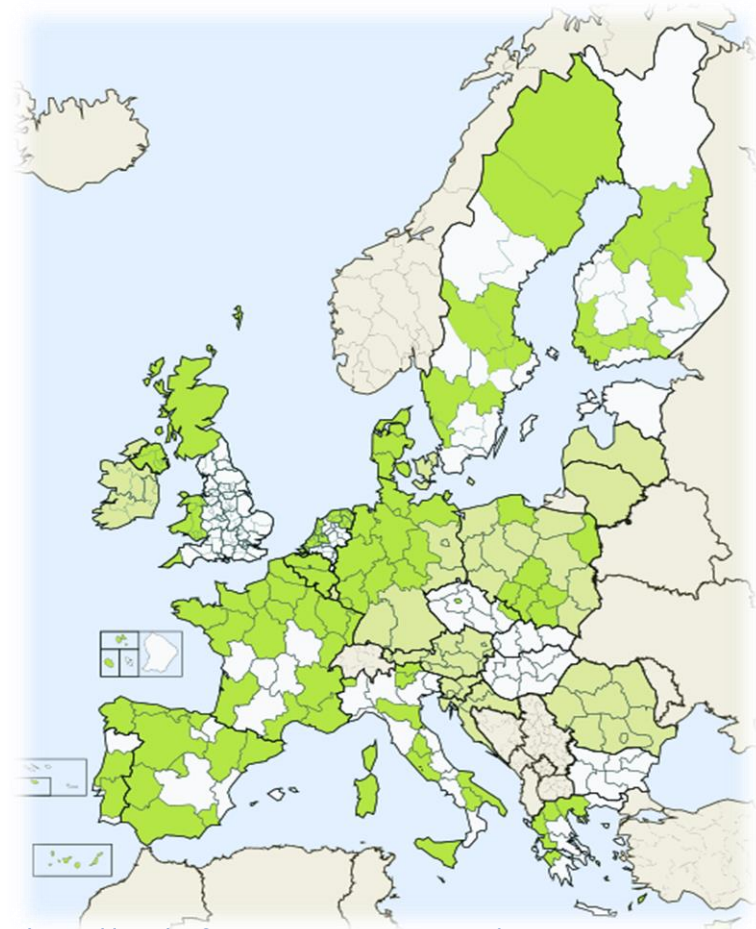
Wide membership: 175 regions, 20 countries (incl. RS, MD & regions from NO, RS and TR)

Strong endorsement by national/regional policy makers: average 4.5/5 satisfaction ranking

High "fidelisation rate": >50% of regions attending workshops come back

Political endorsement at EU level: EC (Hahn, Cretu), EP (Winkler), CoR (Markkula), Council

- **Methodological guidance** (RIS3 Guide, S3 Implementation Handbook, etc.)
- **Tools**
Eye@RIS3 & ESIF Viewer
and other searchable online databases
- Network the **Communities around the Value Chains!**
- **Communication**
(website, leaflets, social networks)
- **Transnational** learning workshops
- **Inter-regional** collaboration events



EU-28 S3 priorities (Eye@RIS3):
for more than 2/3 of EU regions
Energy = S3 Priority → 1st
Thematic S3 Platform #S3PEnergy

From S3P to #S3PEnergy



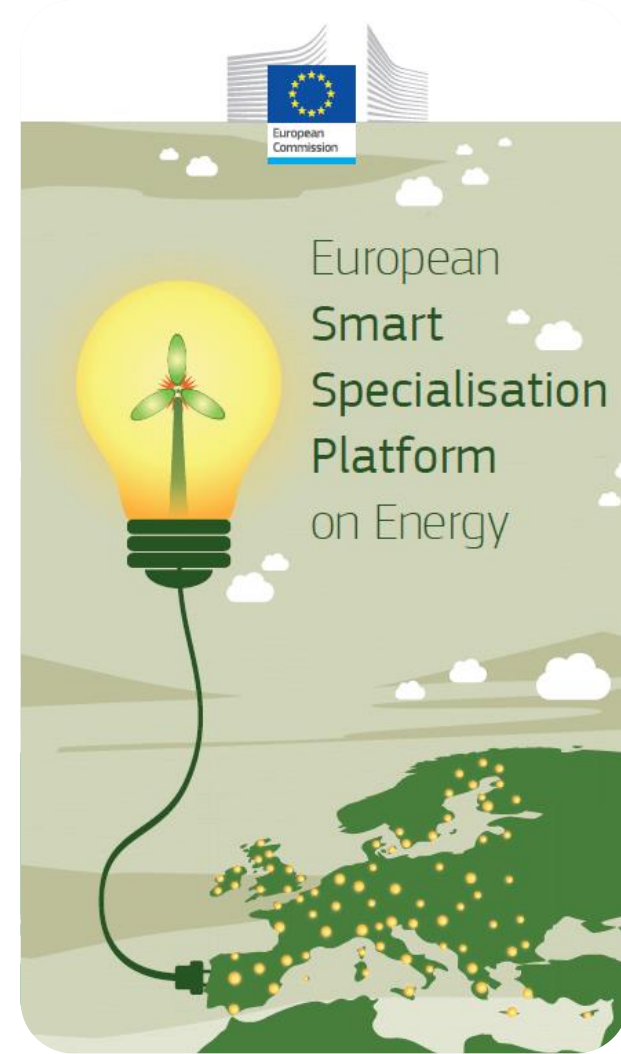
- **Joint** initiative that engages DGs REGIO, ENER and Joint Research Centre
- **Objectives:**
 - Optimal uptake of the Cohesion Policy funds for energy;
 - Support energy innovation at all levels and their alignment with EU priorities;
- **Bottom-up** work with regions!
- Targeted **activities:**

1. Policy research and implementation advice

2. Mutual transnational learning arena

3. Information, communication and dissemination

4. Specific information and analysis in support of DGs ENER & REGIO



Facts #S3PEnergy



- How to focus R+I investments on few strategic priorities?
- How to deliver more targeted innovation funds?
- How to harness the real growth potential of a specific EU region?



- SMART**
Identify the region's own strength, potential and competitive advantages.
- SPECIALISED**
Boost existing and emerging regional strengths through research and innovation efforts.
- STRATEGIC**
Define smart specialisation strategy together with entrepreneurs and partners, prioritising R+I investments in key domains.

Cohesion Policy: Doubling of low-carbon economy investments

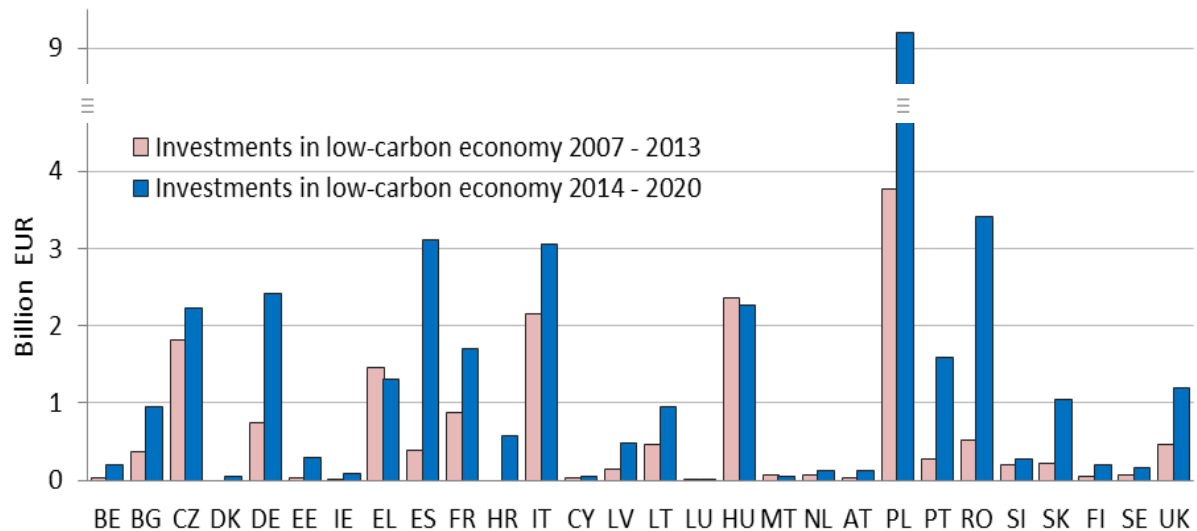


Figure shows the ERDF and the CF investments!

#S3PEnergy-Analysis

Regional S3 Energy Mapping

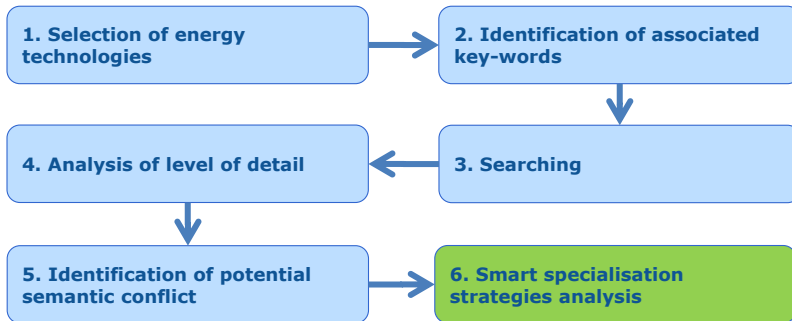


Goal

to identify and to map capacities of regions based on their energy interests!

Methodological remarks

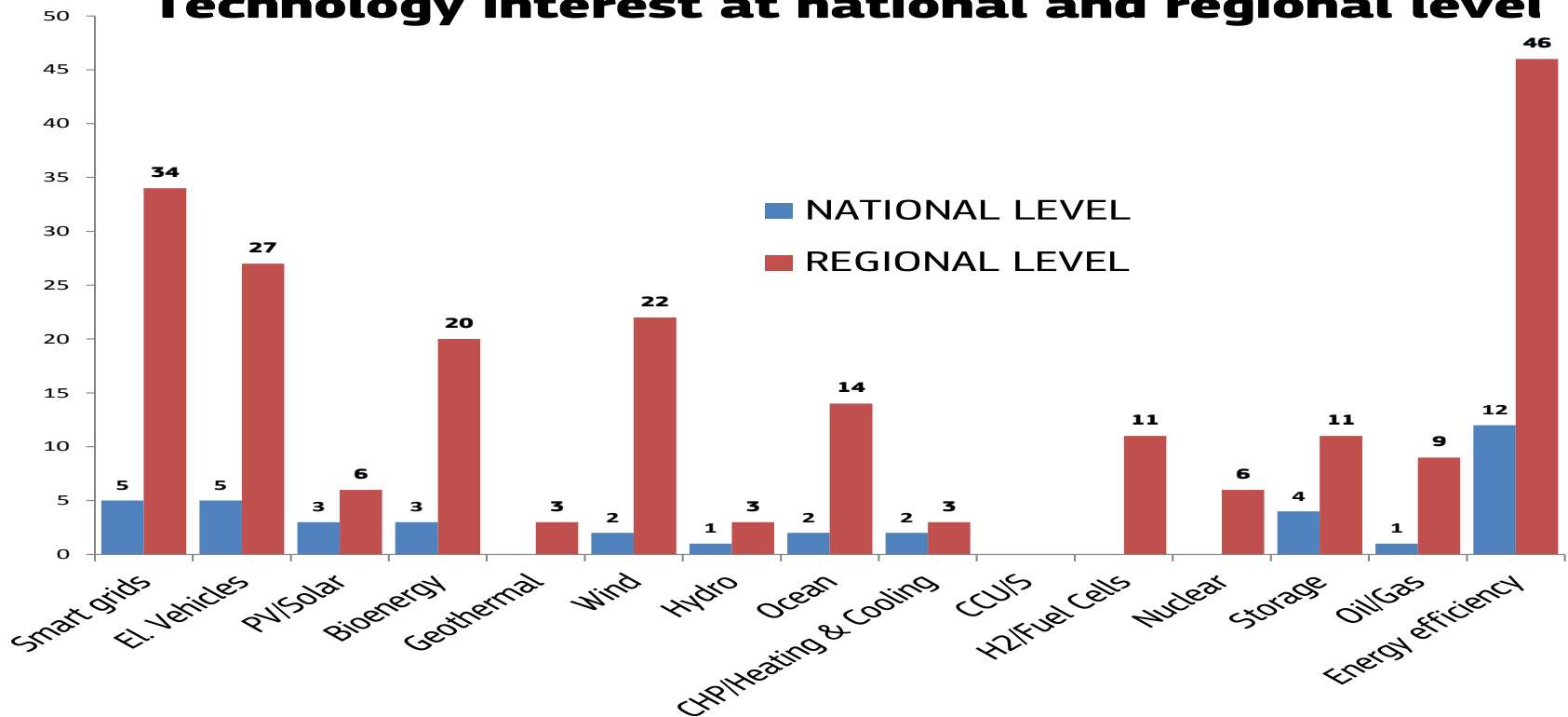
- Analysis based on the description included in the EYE@RIS3 database



Name (NUTS ID)	Description	Research & Innovation Capabilities	Business Areas & Target Market	EU Priority
Austria [AT]	Energy & env.	1. Energy production & distribution	1. Sustainable innovation 2. Eco-innovations	
Austria [AT]	ICT (embedded s...	1. Information & communication technologies (ICT)	1. Information & communication technologies (ICT) 1. Digital Agenda	
Austria [AT]	Life sciences	1. Human health & social work activities	1. Human health & social work activities	1. Public health & security
Austria [AT]	Materials & p...	1. Manufacturing & industry	1. Manufacturing & industry	1. KETs 2. Advanced manufacturing systems
Austria [AT]	Mobility	1. Transporting & storage	1. Transporting & storage	1. Sustainable innovation 2. Smart green & integrated transport systems

- 198 territorial units in the EU incl. countries and regions refer to Energy in their S3 strategies
- Different technologies involved (Smart Grids, Energy Efficiency, Smart Cities, e-mobility, Wind, PV/Solar, etc.)

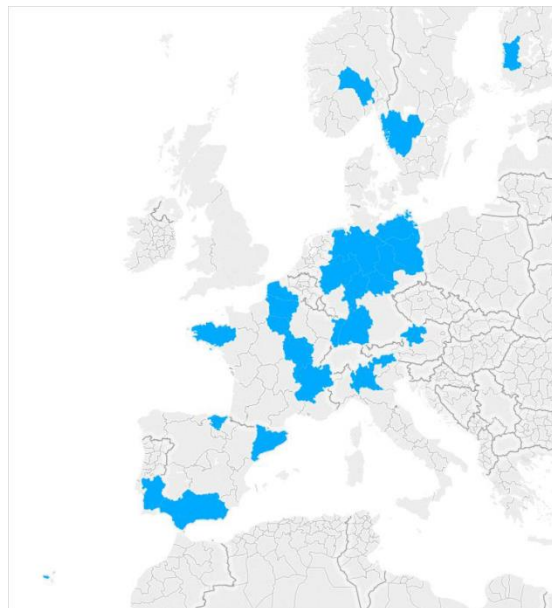
Technology interest at national and regional level



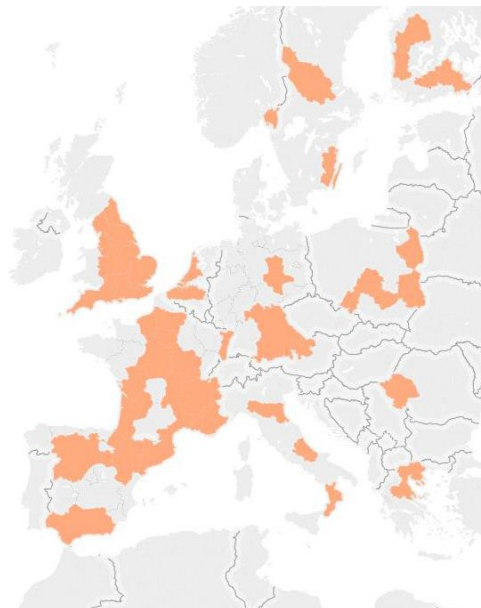
S3 Energy priorities in the EU at Regional level:

Certain level of geographical aggregation for some technologies: **Wind & Ocean**

Scattered regions on cross-cutting technologies: **Energy Efficiency , e-Mobility**



e-Mobility



Energy Efficiency



Wind



Ocean

#S3PEnergy-Analysis

Some findings (III)



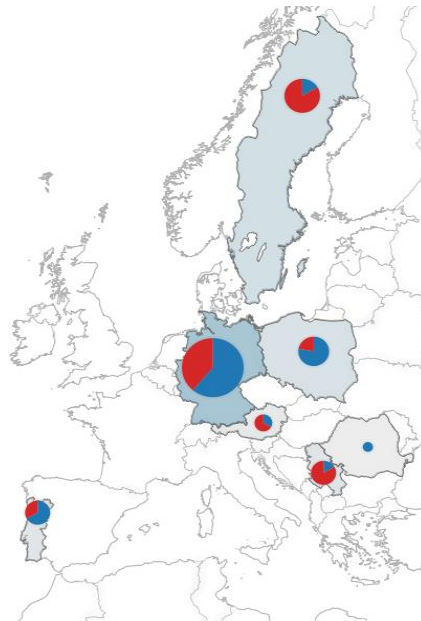
#S3PEnergy

There is **no clear correlation** between:

- innovative capacities (patents, R&D expenditures,...) and the level of interest of regions
- Energy costs
- Size and regional wealth

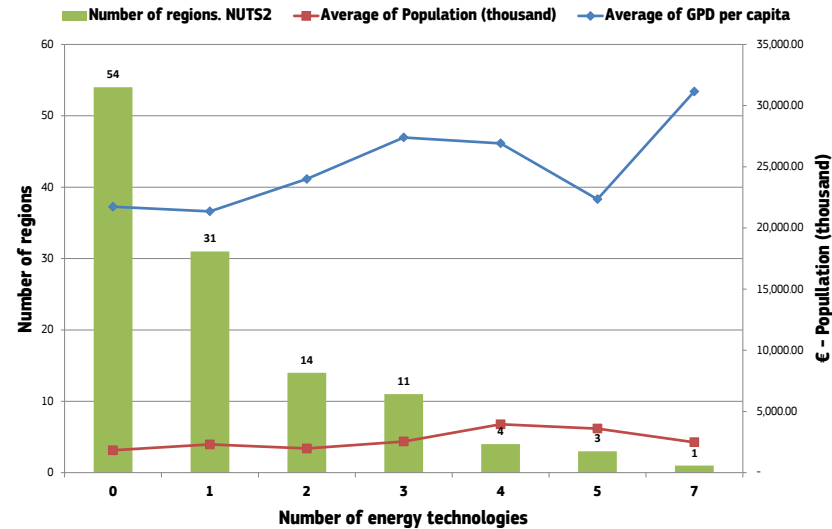
The **alignment of regional and national S3 priorities** is also **not very clear**

Status
■ Aligned
■ NOT Aligned

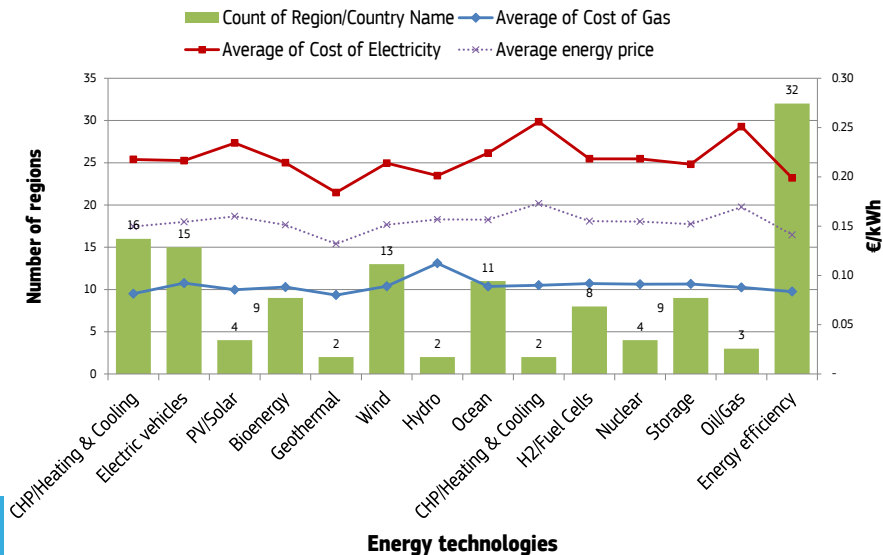


Joint Research Centre

Average NUTS2 regional population and GDP per number of energy technology interest



Average energy cost per NUTS2 regions with common energy technology interest



#S3PEnergy – Events



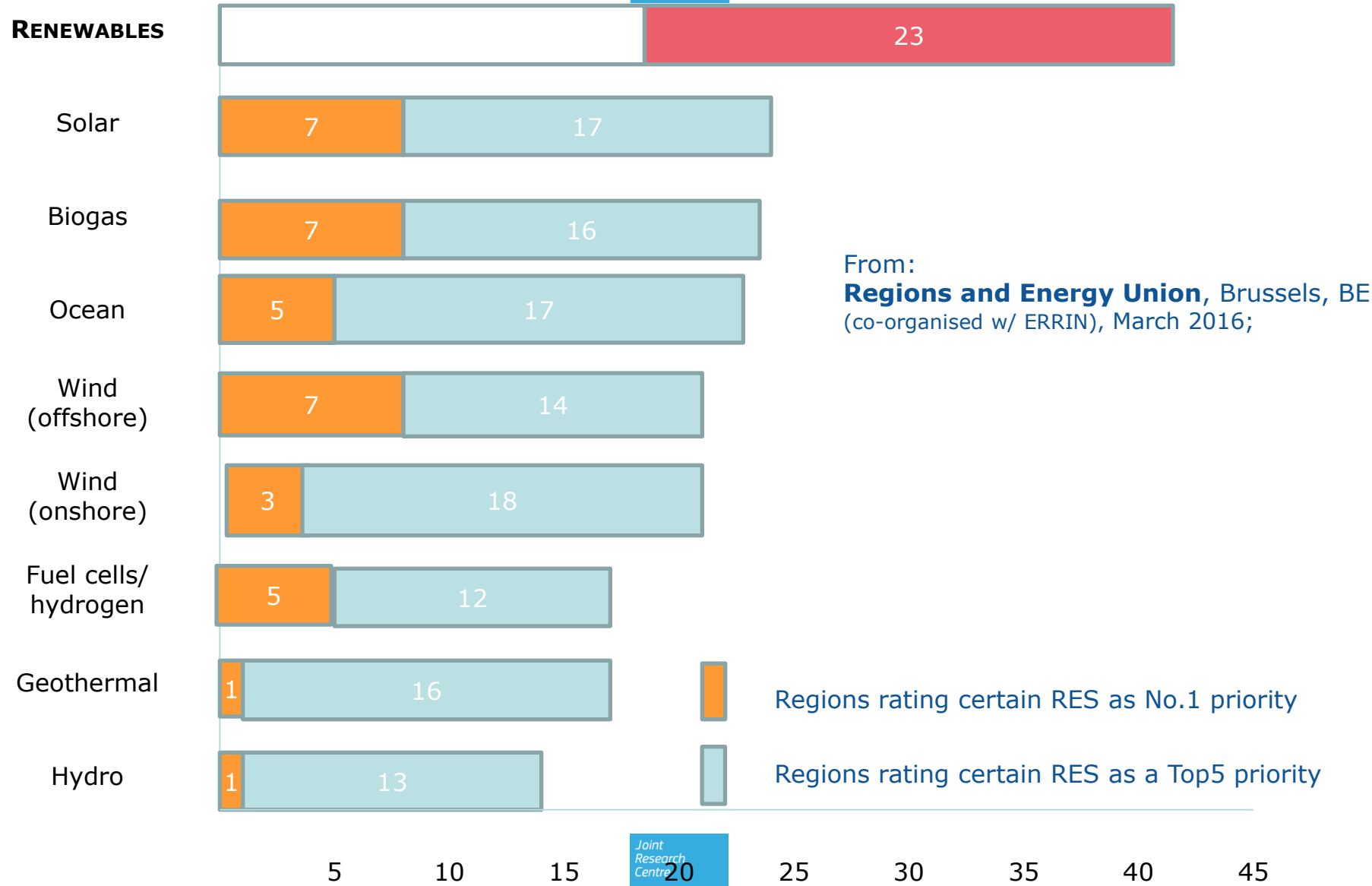
- **2015:**
 - **Fuel Cells & Hydrogen**, Lyon (co-organised w/ FCH-JU), April;
 - High level **launch** event of the "S3PEnergy", Brussels, May;
 - Blue Growth and **Marine Energy**, Las Palmas, October;
 - Sustainable Construction (**Heating & Cooling**), Seville (co-organised w/ Junta de Andalucía), December;
- **2016:**
 - Regions and **Energy Union**, Brussels, (co-organised w/ ERRIN), March;
 - Implementation of the Smart Specialisation Strategy (S3) in Slovenia (**Energy priorities!**), Ljubljana, April;
 - **Smart Regions Conference** - Workshop on Thematic Smart Specialisation Platforms-S3PEnergy, Brussels, (co-organised w/ DG REGIO), June;
 - **Blue Growth** and Energy, Vigo, June;
 - **Smart Specialisation in Energy** - How Europe's regions are implementing their priorities, Brussels, June;
 - **Open Days: European Week of Regions and Cities 2016**, Brussels, (co-organised w/ DG REGIO & CoR), October;

S3 Energy Priorities

ERRIN Regions, 3/16



#S3PEnergy



#S3PEnergy – Outlook & Perspectives



European Commission



Teaming up with regions, interregional cooperation and S3 priorities' matching:

THEMATIC INTERREGIONAL GROUPS

Topic of the table	Other interested networks, regions and cities
1. Energy Efficiency in buildings	Paca (FR) Valencia (ES) Campania (IT) Trento (Province) (IT) <u>Praga (City) (CZ)</u>
2. Water and energy	ERRIN
3. Smart Mobility	1 region (UK) Catalonia (ES) Bavaria (DE) Flanders (BE) 2 regions (RO)
4. Adv. Manuf. for energy applications in harsh environments	13 regions of the Vanguard Initiative <u>Pomorskie (PO)</u>
5. Heating and cooling	Central Macedonia (GR) ERRIN
6. Bioenergy	East & North Finland (7 regions?) (FI) East Norway (8 regions?) (NO) Extremadura (ES) Westerns Macedonia (GR)
7. Smart Grids	Provence – Alpes Côte d'Azur (FR) <u>Northern Netherlands (Groningen) (NE)</u> Pomorskie (PO) – <u>Energa S.A. Lower Saxony (DE)</u>



Identifying the main themes for collaboration...and

- supporting energy deployment in regions based on specific needs
- analysing impacts of ESIF funds on energy related activities
- supporting other related activities that may help region meeting its energy needs (energy efficiency,...)

Thematic energy technologies workshops (foreseen in Q4 2016 & 2017)

- Heating & Cooling; Offshore energy; FCH2; Smart Mobility, Smart Grids; Bio-Energy, etc.

Approach: to combine policy & technology aspects. Showcase successful related cases in applying S3 practices into energy activities!

Regions interested in hosting such events...?

Thank you for your kind attention!



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



#S3PEnergy @S3Platform

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