



# *The Smart Specialisation Platform on Energy*

*Thematic Workshop on Energy Efficiency in Buildings*  
*Interreg Europe Policy Learning Platform*  
*Florence, 28 June 2018*



# What is Smart Specialisation?

## REGULATION (EU) 1303/2013

Applies to the European Regional Development Fund (ERDF)

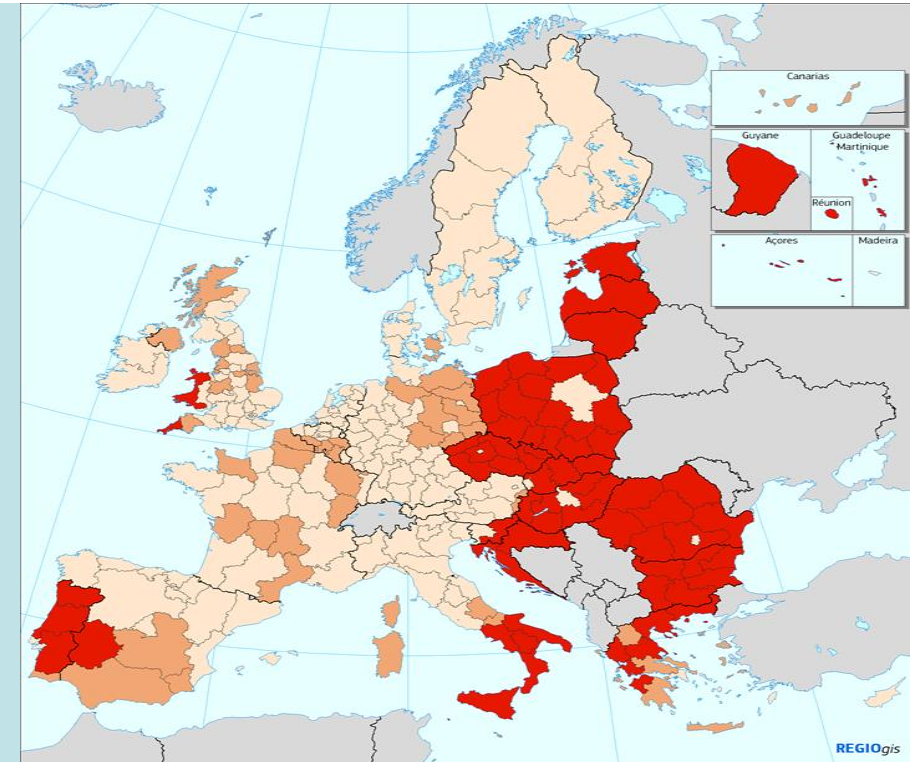
### Ex-ante conditionality for Thematic Objective 1

(Strengthening research, technological Development and innovation)

" ...

A national or regional Smart Specialisation Strategy (RIS3) is in place that:


- is based on a SWOT or similar analysis to concentrate resources on a limited set of research and innovation priorities
- outlines measures to stimulate private RTD investment
- contains a monitoring mechanism..."




## Eligibility map 2014-20








SMART SPECIALISATION PLATFORM



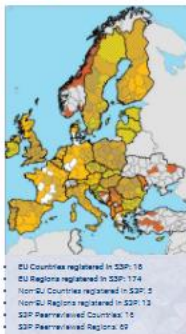
[Home](#)
[S3 Platform](#)
[Sections](#)
[Tools](#)
[News](#)
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[Knowledge Repository](#)

S3P Agri-food Working Committee Semi-annual Meeting

Many partnership activities on Agri-food are built on regular exchanges between the European Commission services and European regions leading and/or taking part in various thematic partnerships (Bologna, Finland on 11 June 2018).



Join the SMART SPECIALISATION PLATFORM



- EU Countries registered in S3P: 18
- EU Regions registered in S3P: 174
- Non-EU Countries registered in S3P: 2
- Non-EU Regions registered in S3P: 13
- S3P Peer-reviewed Countries: 16
- S3P Peer-reviewed Regions: 69

What we can do for you

The S3 Platform provides advice to EU countries and regions for the design and implementation of their Smart Specialisation Strategy (S3):

- Provide guidance material and good practice examples
- Inform strategy formation and policy-making
- Facilitate peer-reviews and mutual learning
- Support access to relevant data
- Train policymakers

Thematic Platforms

Guidance

Targeted Support

S3 Cooperation

Communities & Actors

Governance

S3 Tools

These various tools are designed to support S3 implementation and monitoring.

Eye@RIS3

ESIF - viewer

ESIF - Energy

ESIF - Digital

Regional Benchmarking

EU Trade

R&I Regional Viewer

Digital Innovation Hubs

S3P Calendar

June 2018

M	T	W	T	F	S	S
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1

S3 Thematic Platforms

S3 Governance

S3 Targeted Support

S3 Cooperation

S3 Communities

Reports & Publications

[RIO - Research & Innovation Observatory](#)

S3 Platform

g3dPerform

Viktoria Bocharova, the regional EURAXESS North America representative, visited the #SmartSpecialisation Platform for the scientific seminar "European Science and Innovation Diasporas in North America". So productive workshop! europe.eu/mGSDV @euraxessna

2 days

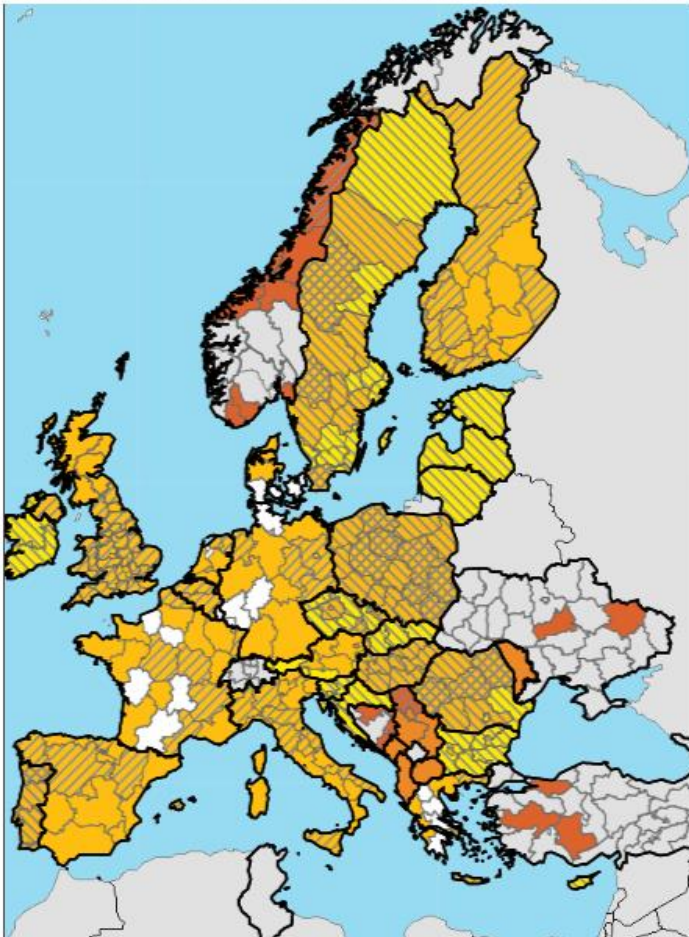
More tweets

S3 in the Media

[S3 Platform](#)
[S3 Platform](#)
[Registered Regions](#)

[Tools](#)
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[Knowledge Repository](#)

Registered countries and regions in the S3 Platform



Home

Legend

EU Countries Registered in S3P

EU Regions registered in S3P

NON EU Countries Registered in S3P

NON EU Regions Registered in S3P

Country Peer Review

Region Peer Review

EU Members

Registered countries are marked in **bold**!

Registered regions are listed below.

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Denmark

Estonia

Finland

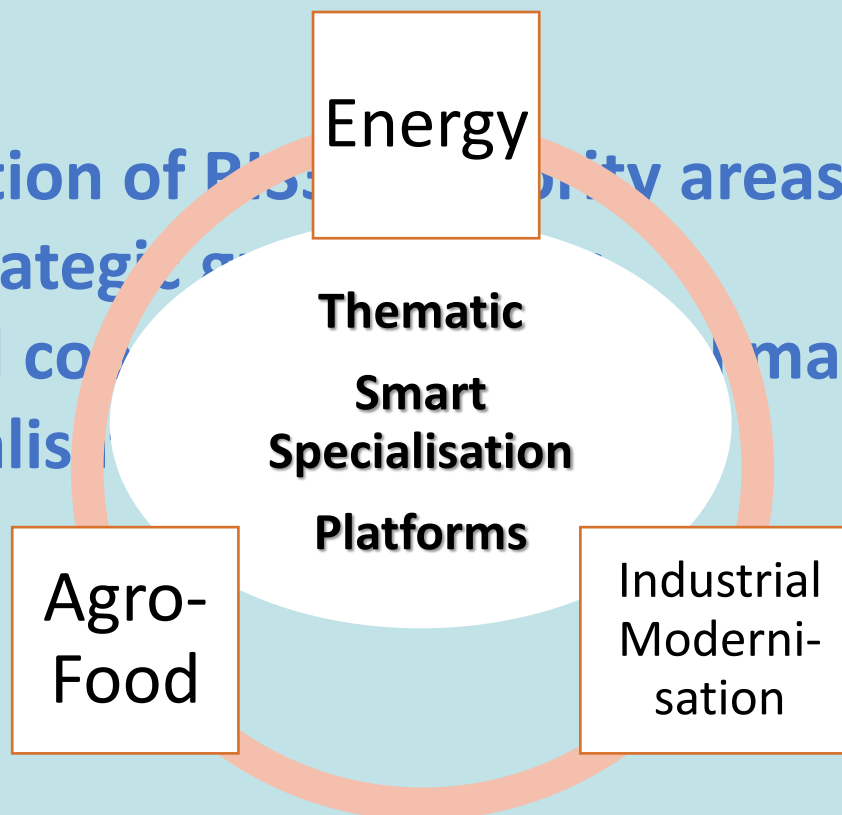
France

Germany

Leaflet | Boundaries of all countries | Disclaimer

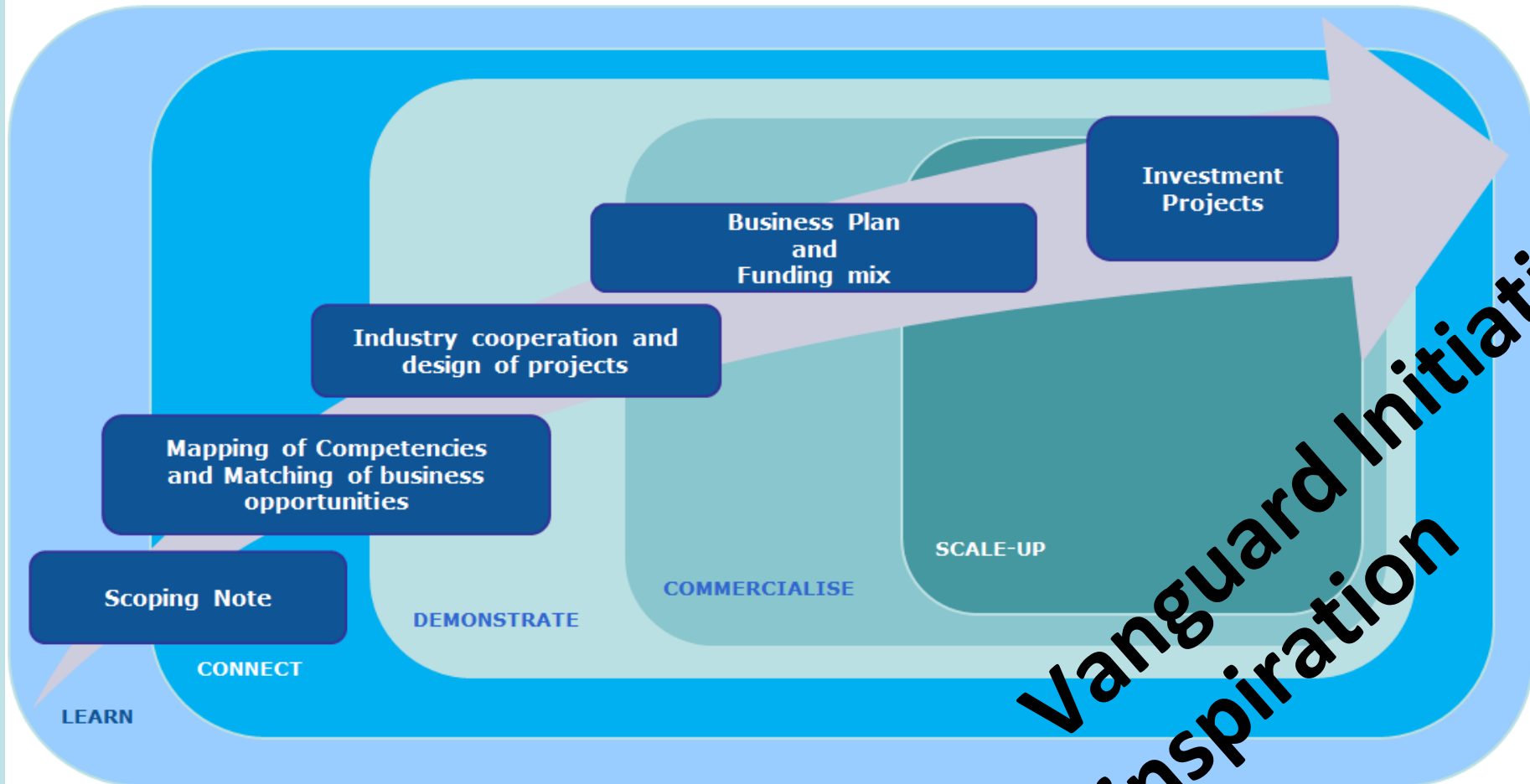
# Support for targeted innovation & transformation

- Implementation of PIS in priority areas
- European strategic support for mass, avoiding duplication
- Interregional cooperation
- Smart Specialisation



# S3 Thematic Platforms

## Methodology

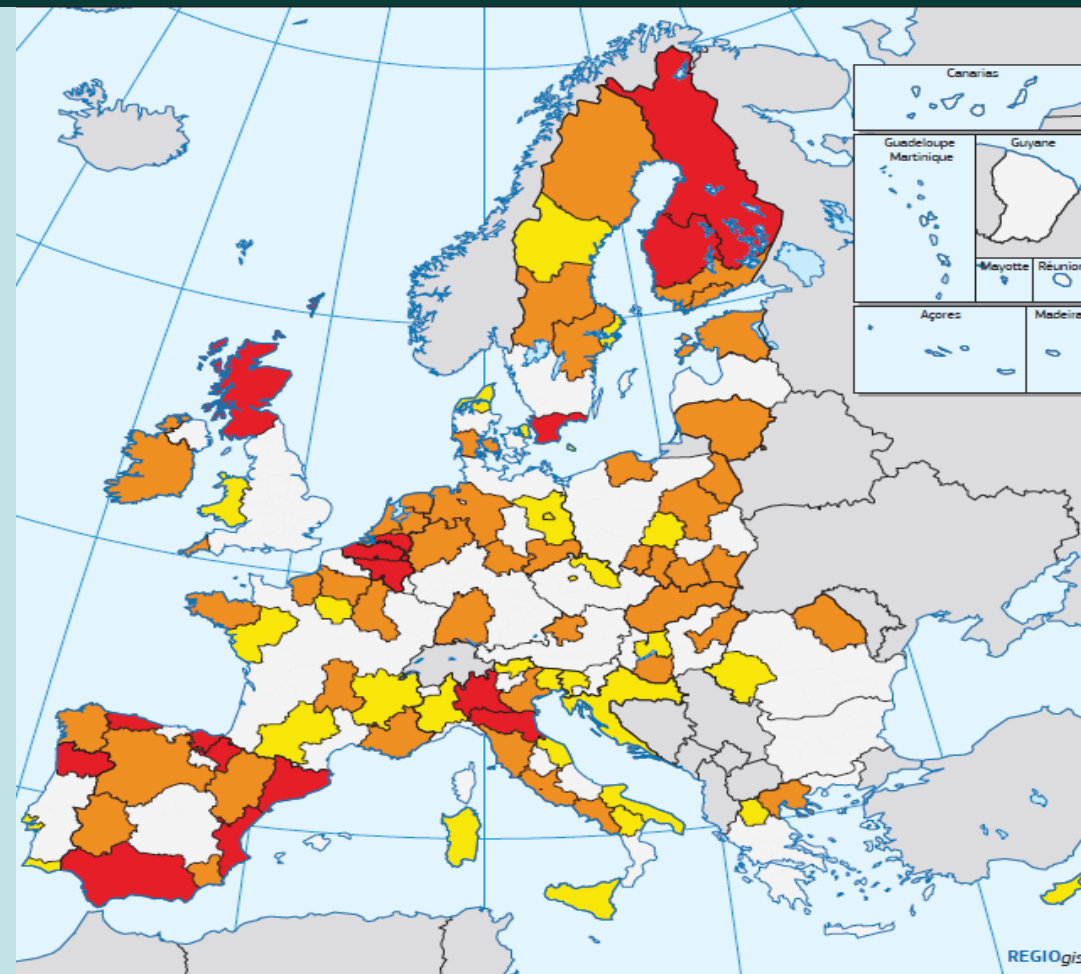


# Interregional cooperation

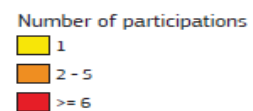
## Partnerships:

1. **Outward** perspective for RIS3: **positioning** of priorities & **upscaling** regional innovation efforts
2. Exploit **complementarities** between RIS3 investments in co-creating **EU value-chains** in S3 partnerships
3. Coalitions of **committed** partners: **politically** committed lead-regions + **active** partners (leading-by-example)
4. Organising shared spaces for **joint demonstration** of solutions
5. Mobilising **bottom-up** cluster actors for forging new business opportunities

# S3 Thematic Platforms



Thematic Smart Specialisation Platforms:  
Which regions participate and in how many different partnerships?



Source: JRC, DG REGIO

# S3 Thematic Platforms – SP3Energy

## Energy is the most popular priority in S3

**Joint initiative** that have engaged DGs REGIO, ENER and JRC

- **Main objectives**

- Support the implementation of the S3 of the regions/countries that have chosen energy-related priorities in their S3 (TO1)
- Assist countries in the optimal uptake of the Cohesion Policy funding opportunities for energy (TO4 & TO7e)





# The thematic Smart Specialisation Platform on Energy



The S3PEnergy is the space where Member States, regions and energy stakeholders receive support for an optimal and effective uptake of European Structural and Investment Funds for sustainable energy.



The S3PEnergy promotes activities at national, regional and local levels, for achieving a shared vision on knowledge-based energy policy, with the aim of better alignment of regional and local activities through the identification of the technologies and innovative solutions.



The S3PEnergy allows its members to share experiences and activities on innovation and energy-related policies and establish partnerships between regions and Member States that have identified renewable energy technologies and innovative energy solutions as priorities in their S3.

# What does the S3PEnergy expect from Member States and regions?

## What does the S3PEnergy expect from Member States and regions?



**BENEFITING** from the S3PEnergy hub position.



**COLLABORATING** with territorial actors of EU regions and Member States.



**COOPERATING SPIRIT** with other S3PEnergy members.



**SHARING INFORMATION** on related initiatives, key results and good practices.



**BEING AWARE** of (and committed with) the significance of bottom-up approach in Smart Specialisation.



**ACTIVATING PARTICIPATION** in S3PEnergy activities and feedback request.



# Who is part of S3PEnergy?



## THE EUROPEAN COMMISSION

Through joint action between DG REGIO, DG ENER and the DG Joint Research Centre.



## MEMBER STATES AND REGIONS

lead the implementation of S3 innovation and energy-related priorities in joint cooperation with business, research, education sectors and civil society.



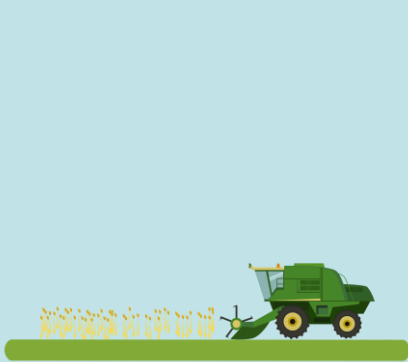
## Everyone related to energy innovation!

of Member States and regions who designed a Smart Specialisation Strategy have set energy as a priority.

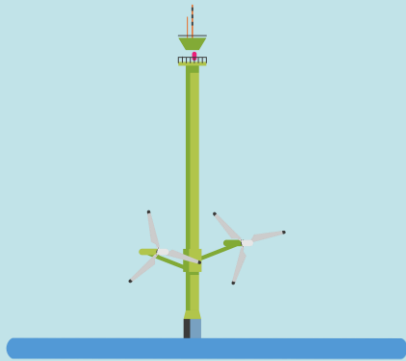
€40 BILLION

have been allocated from the European Cohesion Policy to support investment in the low carbon economy transition. (*Thematic Objective 4*)

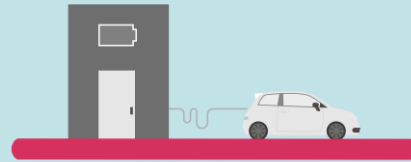
# SP3Energy Partnerships



**BIOENERGY**



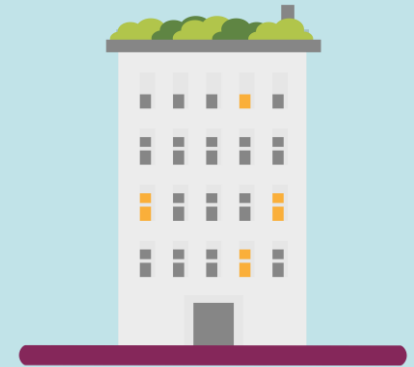
**MARINE  
RENEWABLE  
ENERGY**



**SMART  
GRIDS**



**SOLAR  
ENERGY**



**SUSTAINABLE  
BUILDINGS**

# Interregional partnership for Smart Specialisation on **SUSTAINABLE BUILDINGS**



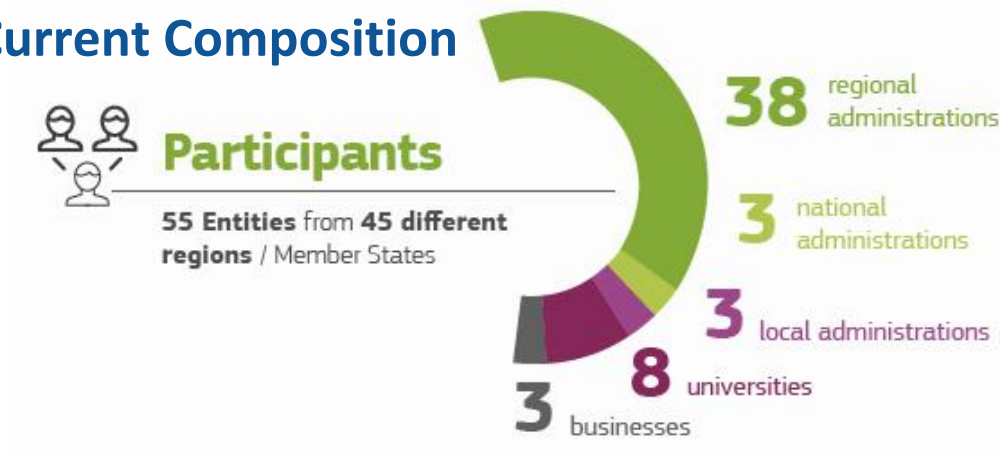


# SUSTAINABLE BUILDINGS

## Objective:

Alliance between regions to boost new markets for sustainable buildings

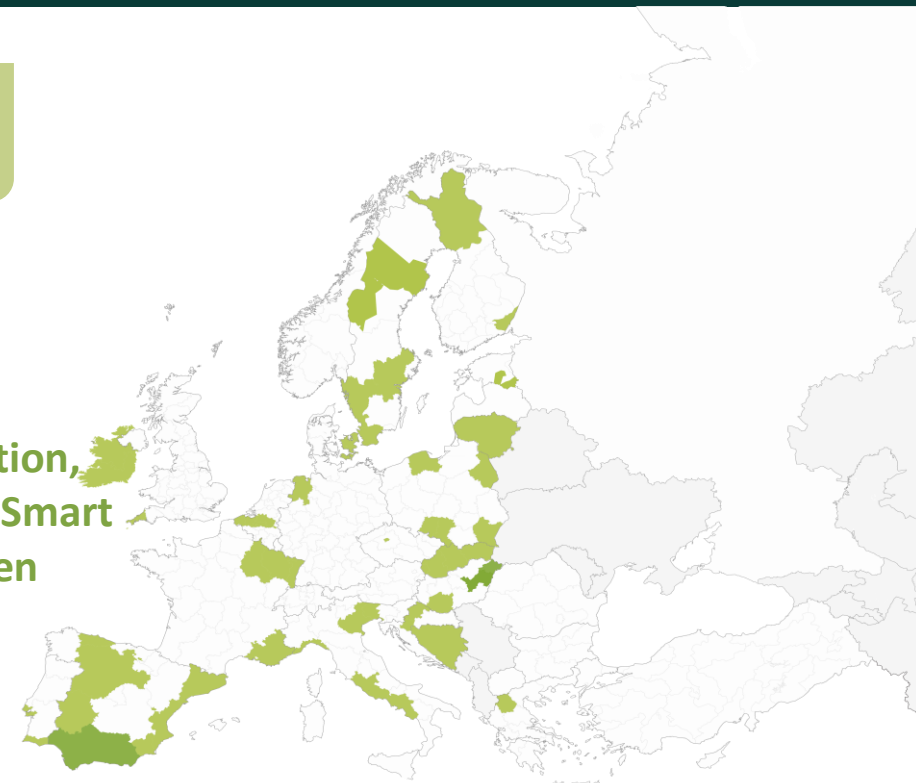
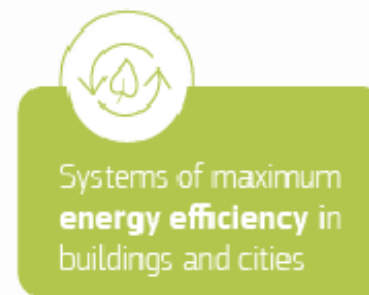
## Current Composition



## Key Elements:

Commitment, Collaboration,  
Added Value, Integration, Smart  
Specialisation and Open  
Innovation

## Priority Areas (Pas)



# SUSTAINABLE BUILDINGS



## Reference topics

The Sustainable Buildings partnership works on the following reference topics:



**Eco-construction, bioclimatism and insulation** of buildings

**New materials** with low carbon footprint.

**Innovative constructive processes:** light prefabrication of low-cost housing, advanced manufacturing for new construction elements.

**Bioclimatic solutions** based on green bio elements (in roofs, etc.).



Systems of maximum **energy efficiency** in buildings and cities

Innovative solutions for **high energy efficiency:** evaporative cooling, LED lighting, microcogeneration, etc.

**Smart energy** management systems and Internet of Things (IoT).

Advanced solutions for **energy rehabilitation** of historical heritage buildings.



**Renewable energy** integration in buildings

**Climatisation** with renewable energies.

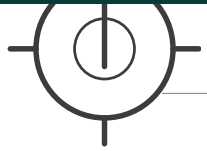
**Self-consumption** and energy storage.

**Low cost solutions** aimed at vulnerable groups.



European  
Commission

# SUSTAINABLE BUILDINGS



## Key factors

1

### Energy and environment

The building sector is the largest energy consumer in Europe, amounting to **40% of the total EU consumption** and 36% of CO<sub>2</sub> emissions.



2

### Innovation

High innovation potential through innovative solutions of **maximum energy efficiency**, ecomaterials, or renewable energy installations.

3

### Employment and Industry

The construction industry generates about **9% of European GDP** and accounts for 18 million direct jobs.



Construction activities that include renovation work and energy retrofits add almost twice as much value as the construction of new buildings. SMEs contribute more than **70% of the value** added in the EU building sector.

4

### EU and Regional Collaboration

The decisive commitment of the EU to improve the energy efficiency of the building stock is highlighted by the reformulation of the energy regulatory framework within the framework of the Clean Energy for All Europeans strategy.



# SUSTAINABLE BUILDINGS

## Summary of activities in 2017/18

**Review on the Partnership strategic documents**



**Participation in European events**



**Elaboration of a Map of capacities**



**Opening of collaboration business offers**

**Implementing the first pilot project: Smart Campus project**



# SUSTAINABLE BUILDINGS

## Governance

- **Steering Committee**
- **Interregional working groups**
- **Supporting entities**



## Bottom up

## Top down



### Regional scope

- **Regional Administration**
- **Regional representative entities**
- **Regional companies**
- **ROT**
- **Users of energy solutions:**



# SUSTAINABLE BUILDINGS

## Main Challenges



# SUSTAINABLE BUILDINGS

## Smart Campus Project

One of the eight projects selected under call launched by EC to pilot interregional innovation projects

**Objective:** to improve the energy efficiency of University Campus

1. Andalusian, LR (Spain)
2. Friuli Venezia Giulia Region, SC (Italy)
3. Central Slovenia - Osrednjeslovenska (Slovenia)
4. South Karelia (Finland)
5. Provence-Alpes-Côte-d'Azur (France)
6. Algarve Region (Portugal)

**Support from EU:** advice for scale-up and commercialization



European  
Commission

# SUSTAINABLE BUILDINGS

## WP1: Smartness Assessment of University



- Survey among University Campuses
- Survey among Industrial Stakeholders

## WP2: Interregional Innovative Pilot Cases



- Business Plan of selected Pilot Cases
- Commercialization and scale up of selected Interregional Innovative Pilot Cases
- Technical and legislative solutions to Pilot Cases bottlenecks
- Blending of funds to support the Pilot Cases realization

## WP3: Definition of Smart Campus requirements



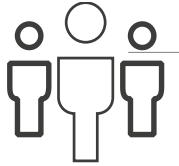
- Policy dialogue among Regions
- University Buildings Energy Efficiency Roadmap for the Development of Smart Campuses



# Interregional partnership for Smart Specialisation on **SMART GRIDS**



# SMART GRIDS



## Leaders

Led by Provence-Alpes-Côte d'Azur (FR) and Basque Country (ES) the partnership has engaged the participation of

# 10

REGIONS AND  
MEMBER STATES

**Basque Country  
(ES)**

**Provence-Alpes-  
Côte  
d'Azur (FR)**



The aim of the partnership is to increase the competitiveness of the partner regions by collectively fostering new business opportunities in order to develop an overall approach to the value chain of smart grids.



European  
Commission



# SMART GRIDS



## Reference topics

The partnership focuses on **innovative and industrial capabilities**, ranging from industry-oriented R&D to full large-scale deployment (market and industrialisation of solutions). The **priority areas** identified so far are the following:



**Demand** response

**Management**  
& tariffs.



**Cybersecurity**

For **smart homes**.  
Compliance of Assets  
(all grid equipment)  
**Infrastructure** /  
sub-stations R&D.



**Network**  
management

**Artificial**  
**Intelligence** for load  
management.  
Analytics for flexibility.  
Fostering the adoption  
of **solutions**.



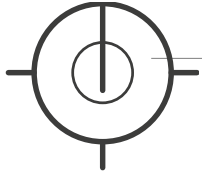
**Mobility**

Power to **Gas**.  
**Vehicle** to grid.  
Fast-charging **stations**.



European  
Commission

# SMART GRIDS



## Key factors

1

Smart grids are set to play a **crucial role in the decarbonisation** of the European economy.

2

Smart grids can enable **active consumers** and energy communities, supporting their direct participation into **more flexible energy markets**.

3

The growing installation of renewable energy sources (RES) is challenging the transmission and distribution grid infrastructure. The deployment of **smart grid solutions** can help to make these grids more flexible and able to cope with intermittent RES and with **new load consumption**.

4

Smart grids deployment will enable new services and create business opportunities for new and established actors thus contributing to **new jobs and growth**.

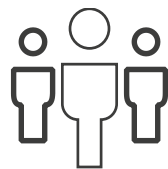
# Interregional partnership for Smart Specialisation on **BIOENERGY**



# BIOENERGY



Lapland  
(FI)



## Leaders

Led by Lapland region (FI) and  
Castille and Leon (ES), the partnership  
has engaged the participation of

# 25

REGIONS AND  
MEMBER STATES



Castille and Leon  
(ES)

This interregional  
partnership aims at  
developing a  
collaborative  
framework to facilitate  
joint business among  
EU regions with  
bioenergy-related  
priorities in their Smart  
Specialisation  
Strategies.



European  
Commission

# BIOENERGY



## Reference topics

Collaboration has been framed along 4 concrete lines of work:



### **Biofuels**

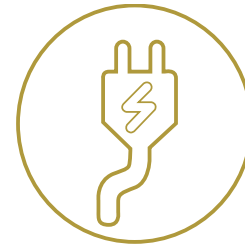
(bioethanol, biogas)



### **Heating & cooling** (biomass-based)

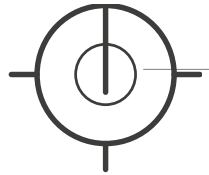


### **Knowledge transfer** on biomass feedstock, installations and energy consumption



### **Electricity** (forestry power plants, agriculture power plants)

# BIOENERGY



## Key factors

In line with the EU goals, bioenergy represents about **two-thirds** of the renewable energy production in the European Union...

... and it is one of the main energy sources contributing to fulfilling the **20% objective** with renewables for 2020.



### 1

The partnership aims to demonstrate the **validity and sustainability** of decentralised production of 2nd generation bio-fuel for transport, heating and cooling from forest-based and non-food **agriculture feedstocks**.

### 2

To date, the partnership has launched a survey to identify **regional capacities** in the bioenergy field among participant regions.

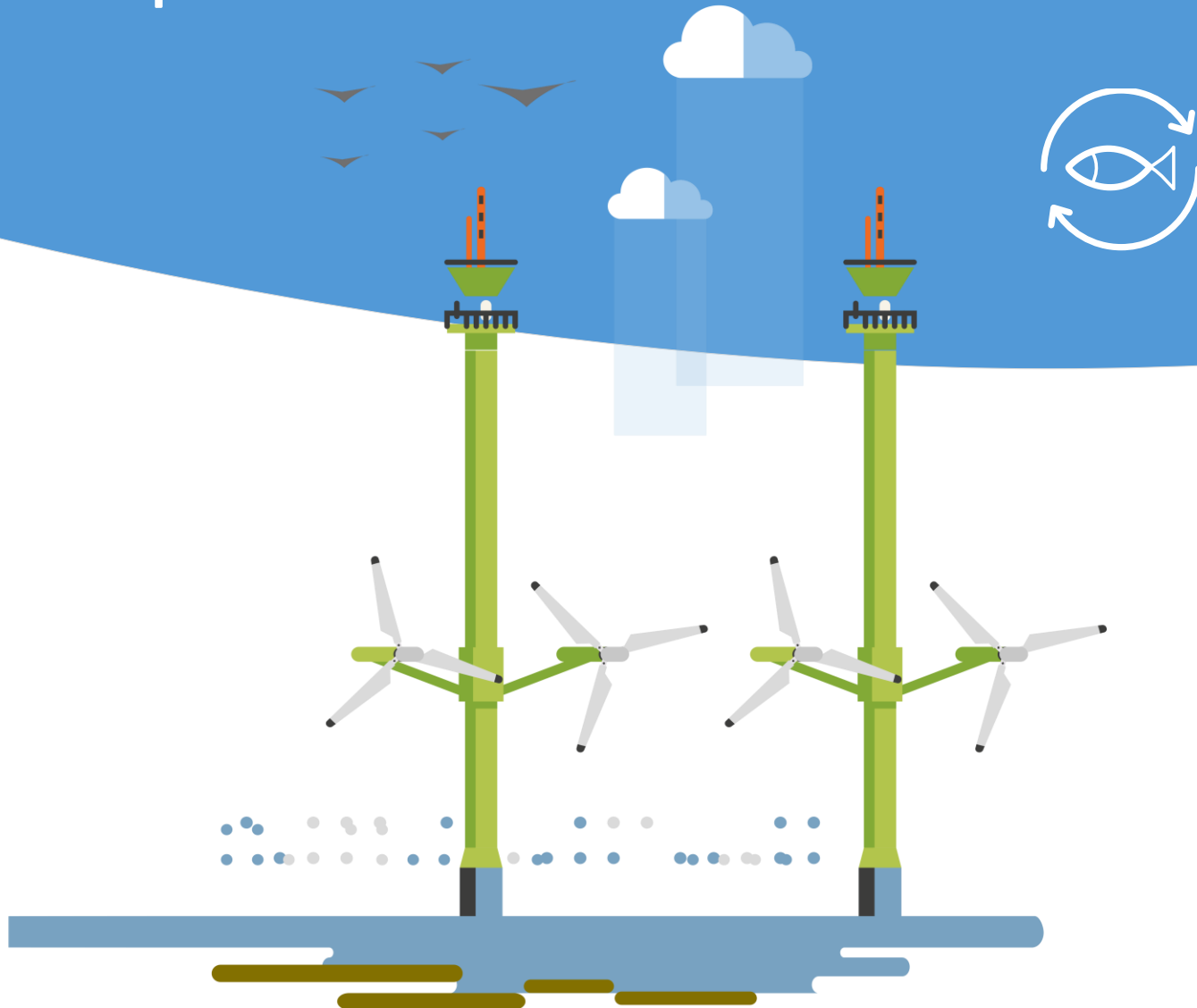
The results of this exercise will allow to identify complementarities to develop joint business pilot cases.

### 3

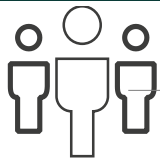
The next step is to identify **business demo cases** by combining assets and ambitions of regions.



# Interregional partnership for Smart Specialisation on **MARINE RENEWABLE ENERGY**



# MARINE AND RENEWABLE ENERGY



## Leaders

Led by **Scotland (UK)** and **Basque Country region (ES)**, the partnership has engaged the participation of

**16**  
REGIONS AND  
MEMBER STATES

**Scotland  
(UK)**



**Basque  
Country  
(ES)**



EU regions have worked together since 2014 helping companies across Europe strengthen their supply chains and helping smaller companies to grow their businesses.

Scotland and the Basque Country have led this work, and are extending the approach to other leading regions in Europe in the development of marine renewable energy (MRE).



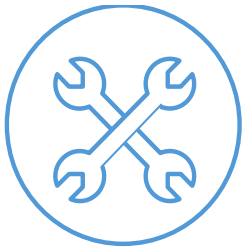
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# MARINE AND RENEWABLE ENERGY

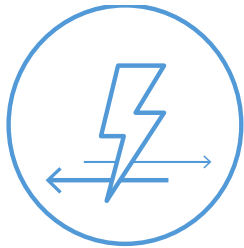


## Reference topics

The S3 interregional partnership in MRE aims to pool regional resources and expertise in order to create new business opportunities and increased growth for the MRE sector, with a focus on identifying and solving the key industrial challenges of the sector, in areas such as:



Manufacturing  
of large  
**components**



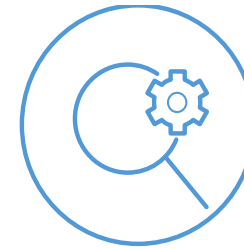
**Power** transfer  
and conversion



**Corrosion**  
in water



**Sensing,**  
instrumentation  
and monitoring

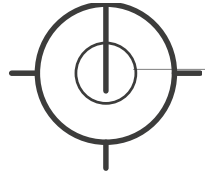


**O&M**  
(operation &  
maintenance)  
optimisation



**Testing** and  
demonstration  
in real  
environments

# MARINE AND RENEWABLE ENERGY



## Key factors

1

Ocean energy is recognised as a **key low-carbon technology for Europe**. It has potential to deliver significant economic development and create high-value jobs, especially in those regions of Europe with traditional Blue Growth industries.

2

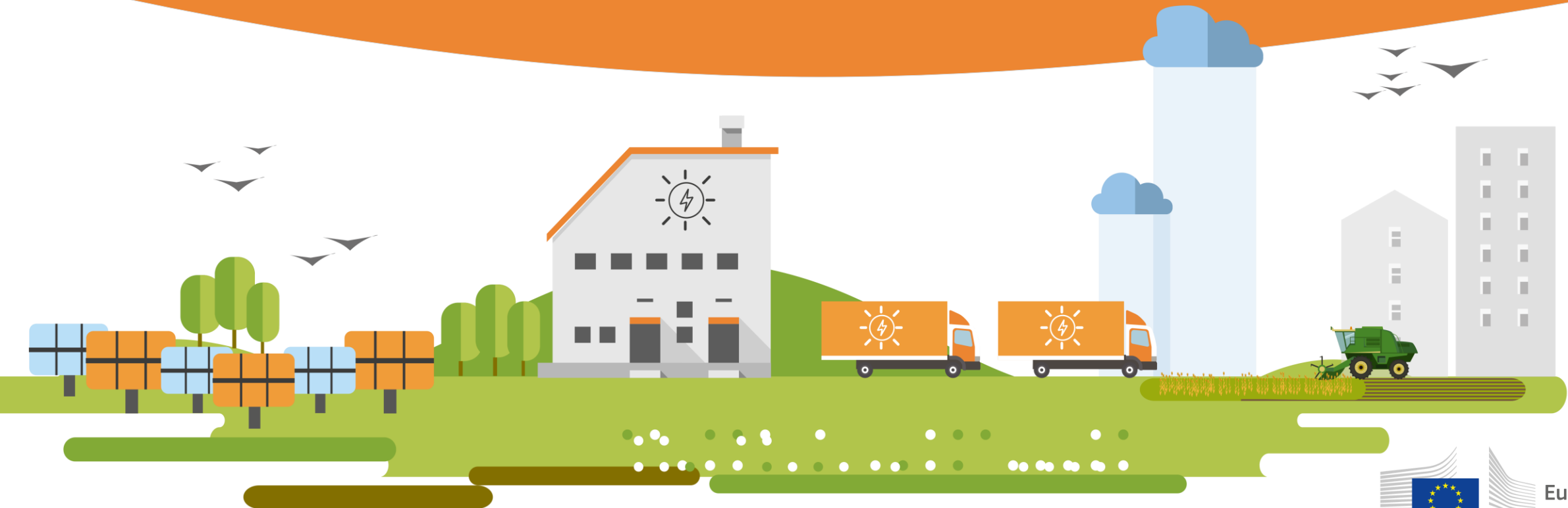
It is estimated that 100GW of ocean energy capacity could be deployed in Europe by 2050, equal to **10% of the total estimated EU energy demand**, and thus avoiding the equivalent of 276m tonnes of CO2 emissions per year.



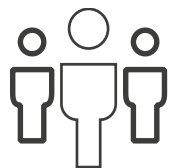
3

Marine Renewable Energy lies at the heart of EU regions' Smart Specialisation Strategies, and the partnership brings together partners with a **strong track record of cooperation** and collaboration in the Advanced Manufacturing for Energy Related Applications (ADMA Energy Pilot) of the Vanguard Initiative (VI).

# Interregional partnership for Smart Specialisation on **SOLAR ENERGY**



# SOLAR ENERGY

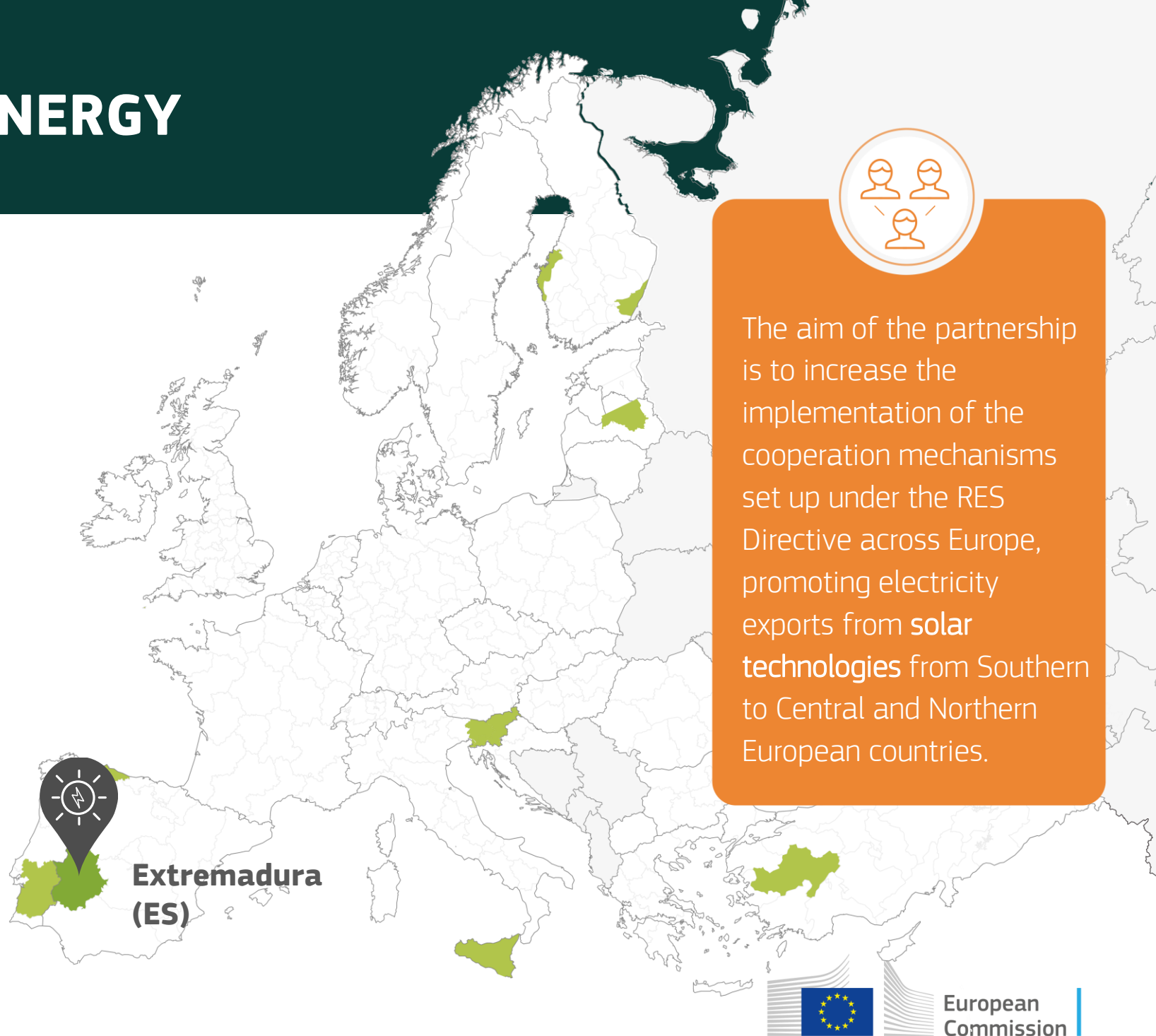


## Leaders

Led by **Extremadura** region (ES) the partnership has engaged the participation of

# 9

REGIONS AND  
MEMBER STATES



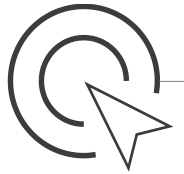
The aim of the partnership is to increase the implementation of the cooperation mechanisms set up under the RES Directive across Europe, promoting electricity exports from **solar technologies** from Southern to Central and Northern European countries.



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Commission

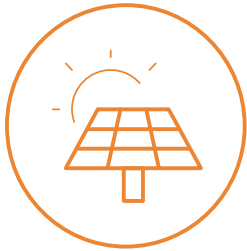


# SOLAR ENERGY



## Reference topics

An interregional partnership for solar energy and Smart Specialisation is currently working on 4 different Projects



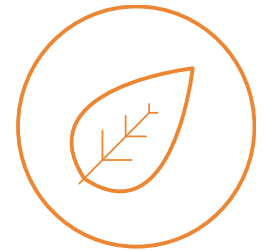
FOAK Plant: A **large-scale Sustainable Energy Technology** (SET) First of a kind (FOAK) project: Concentrated Solar power (CSP) Plant hybridised with Photovoltaic (PV) including storage to provide fully dispatchable power and to allow for more flexible generation.



**Research:**  
A solar technologies research facility.

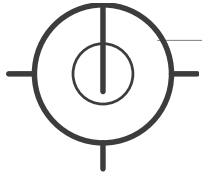


Use of **Cooperation** mechanisms to export solar energy from Southern to Central / Northern European countries.



Use of medium temperature solar energy in the **agro industry**.

# SOLAR ENERGY



## Key factors

1

European CSP Industry is the **worldwide leader** along the full CSP value chain.

2

Solar energy is one of the main **carbon-free energy** sources leading the shift to a European low carbon economy.

3

Solar energy import/export across EU borders is needed to **fulfil the EU energy** and climate targets. According to the Paris Agreement, more than 80% of electrical energy must come from low carbon sources by 2050.

4

The solar partnership is **open to European regions** with common interests.

5

Working on signing an agreement, specialised in solar energy across EU.

# How to get involved

S3PEnergy:

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

[JRC-B3-S3PLATFORM-ENERGY@ec.europa.eu](mailto:JRC-B3-S3PLATFORM-ENERGY@ec.europa.eu)

**[fernando.merida-martin@ec.europa.eu](mailto:fernando.merida-martin@ec.europa.eu)**

# Thanks a lot for your attention



**More information:**  
<http://s3platform.jrc.ec.europa.eu>

 @S3Platform #S3PEnergy

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