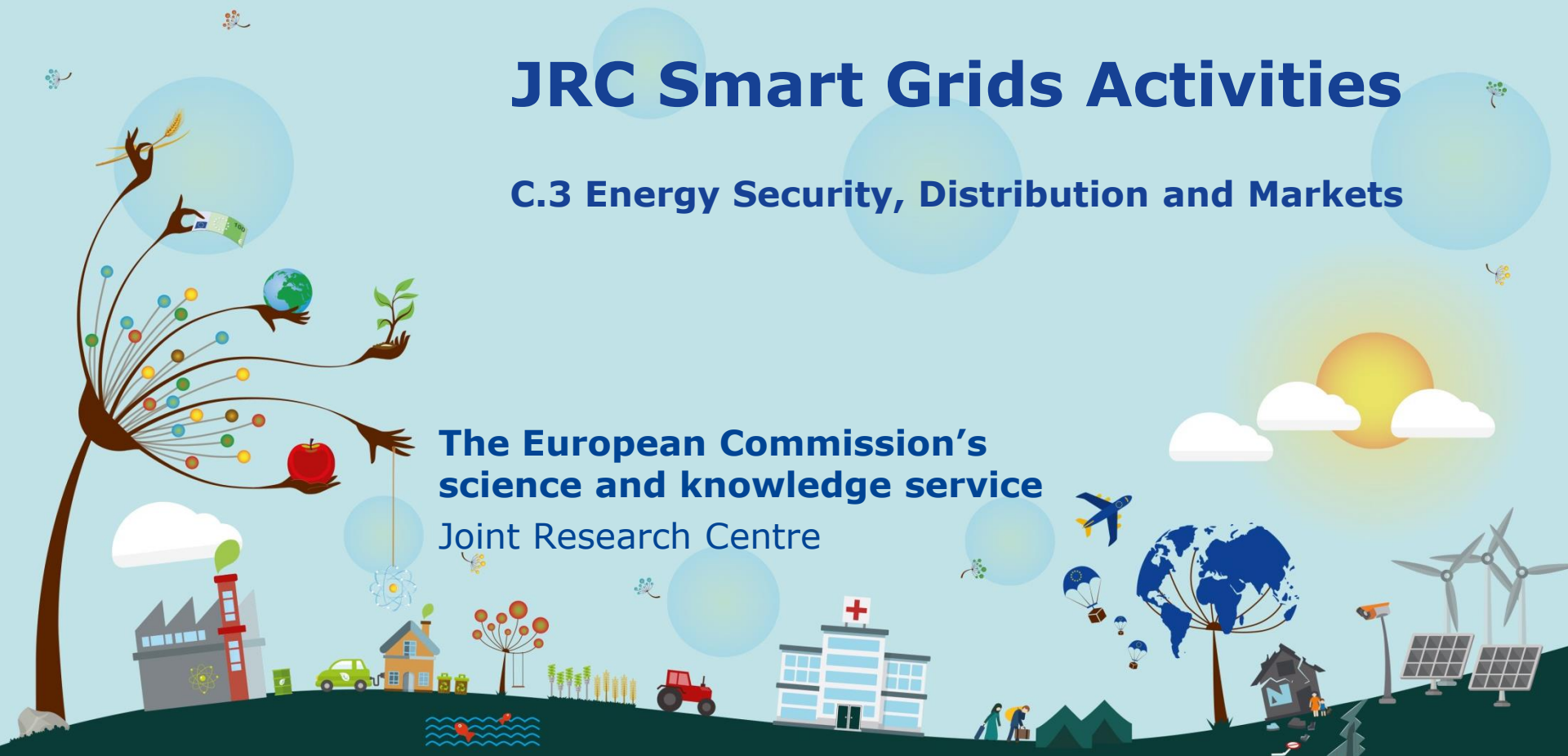


JRC Smart Grids Activities

C.3 Energy Security, Distribution and Markets

**The European Commission's
science and knowledge service**
Joint Research Centre

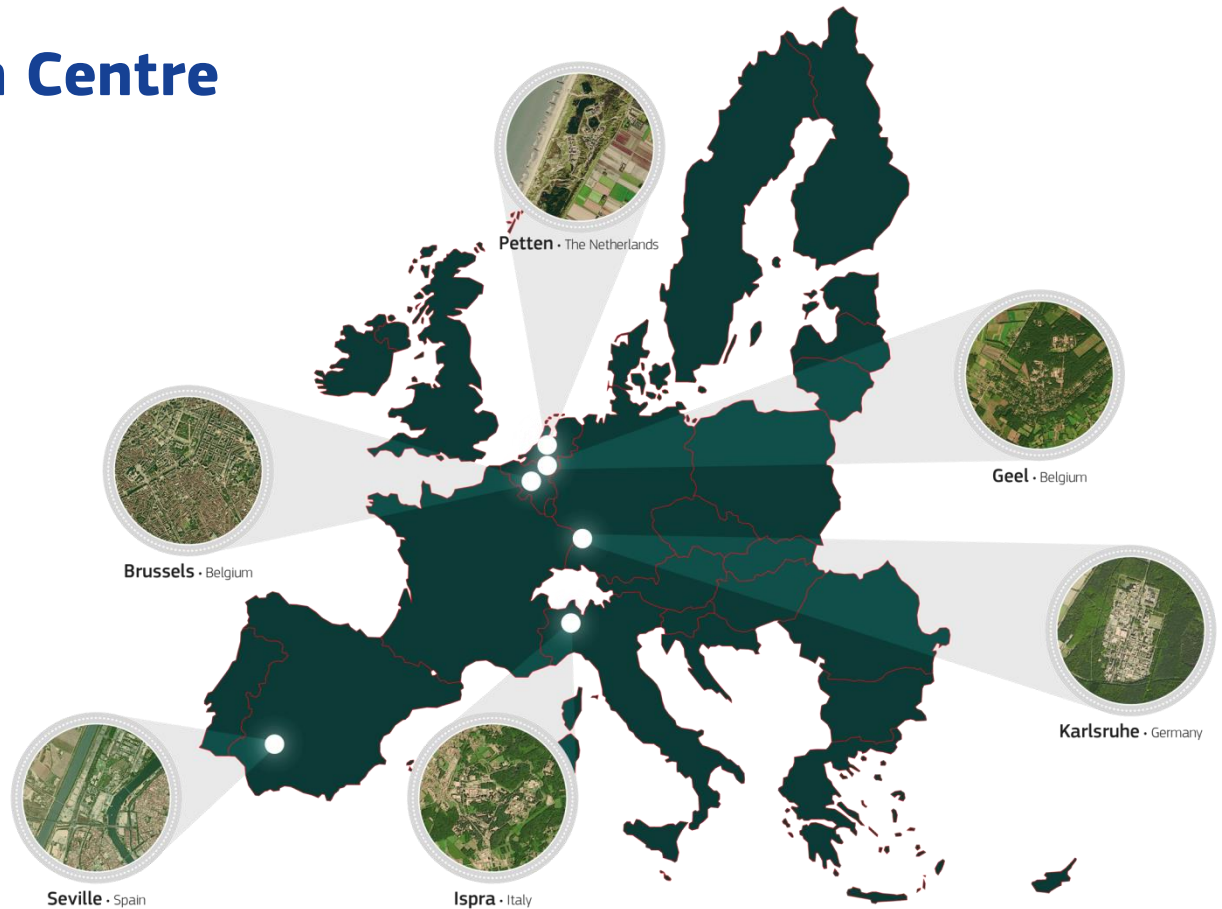


The Joint Research Centre

3000 staff

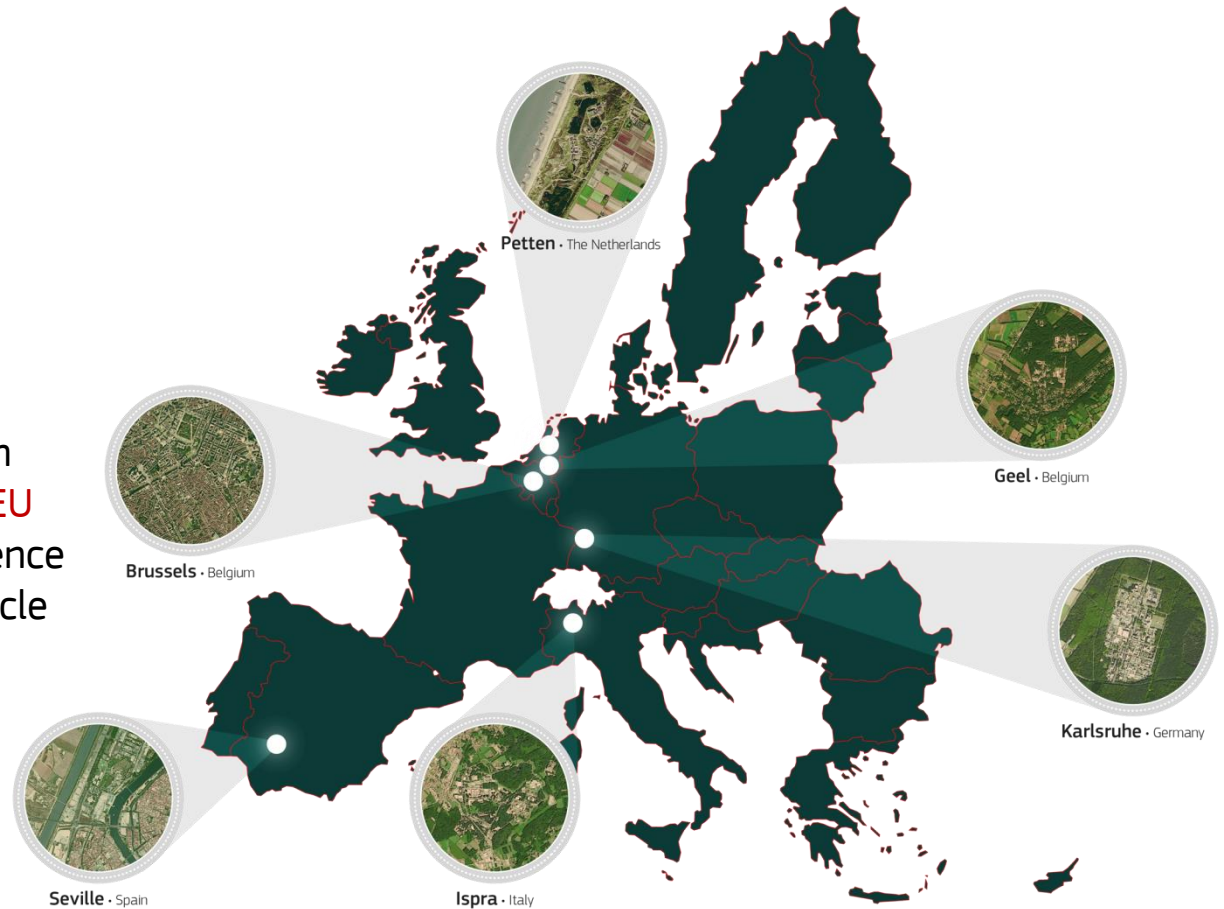
Almost **75%** are scientists and researchers.

Headquarters in Brussels and research facilities located in **5 Member States**.



Our Mission

As the **science** and **knowledge service** of the European Commission, the Joint Research Centre's mission is to **support EU policies** with **independent** evidence throughout the whole policy circle



Main Activities

- Smart Specialization and Smart Grids Partnership
- Smart Grids Interoperability Labs
- Smart Grids Outlook
- Smart Grids Project Mapping Tool
- Interactive Smart Grids Dissemination Tool
- Publications



What is Smart Specialization?

Smart specialisation is an innovative approach that aims to **boost growth and jobs** in Europe

- By enabling each region to identify and develop its own **competitive advantages**.
- By bringing together local authorities, academia, business spheres and the civil society (**quadruple helix**).
- Through **cross-regional cooperation**, minimizing duplication and fragmentation.
- By exploring complementarities.
- By being **outward looking**.

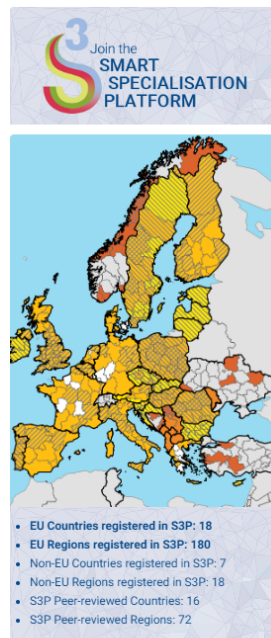
Ex-ante conditionality: having a Smart Specialization Strategy (S3) in place is a **legal pre-requisite** for having access to **structural funds**.

To support regions and member states in the development of their S3 strategies, the Commission set up the **S3 Platform**

S3 Thematic Platforms

There are 3 thematic platforms

- Agri-food
- Industrial Modernization
- **Energy**



Smart Regions



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 policy-makers



S3 Tools

These various tools are designed to support S3 implementation and monitoring

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

The S3 Platform on Energy

What does the S3PEnergy do?

- Supports the **implementation** of S3 for regions that have chosen energy-related priorities
- Helps members access **ESIF**

Who is involved?

- Member States and **Regions**
- **The European Commission** (DG JRC, DG REGIO, DG ENER)



Smart Grids Partnership

Lead Regions

- Basque Country (Spain)
- Sud - Provence-Alpes-Côte d'Azur (France)

Partners

- Algarve (Portugal)
- Brittany (France)
- Ostrobothnia (Finland)
- Pomorskie (Poland)
- Puglia (Italy)
- Slovenia
- North-West Croatia
- Scotland
- Dalarna (Sweden)
- Cyprus
- East Central Sweden



Photo by [Cytonn Photography](#) on [Unsplash](#)

Objectives of the Partnership

Push the **deployment** of **smart grids** across European regions

Create new **opportunities** and **develop** existing ones

Foster an overall and combined approach to the **global value chain** of smart grids

Ambitions

- Build upon existing regional capabilities
- Discover & exploit complementarities
- Create synergies
- Level up regional growth and capabilities

Operational Principles

- Co-investment/co-application for EU funds
- Horizontal aspects (influencing policy/regulators, training harmonization, training etc.)



Smart Grids Interoperability Lab (JRC Petten)

[Press Release](#)

[Project Page](#)

Objective: promote the **interoperability** of digital energy and the interface between **smart homes** and **smart grids**



Smart Grids Interoperability Lab (JRC Ispra)

[Press Release](#)

Objective: promote the interoperability of digital energy in smart grids and the interface with electric vehicles



Smart Grids Interoperability Laboratories

They are testing facilities on the **interoperability of smart grid systems** for both commercial and research solutions

Why?

- To **assess** technological implementations against
 - **proposed standards,**
 - **use cases,**
 - **processes,**
 - **reference architectures.**
- To promote the use of a **common IoP testing methodology** based on the CEN-CENELEC-ETSI framework
- To become a **knowledge hub** by disseminating processes and results of testing campaigns
- **Network** with European industry, laboratories and research centres
- To contribute to **policy making** and industrial innovation regarding the **modernization of the electricity grid.**

How?

- ¹⁹ By **verifying** the interworks among grid components
- **Benchmarking** of different solutions

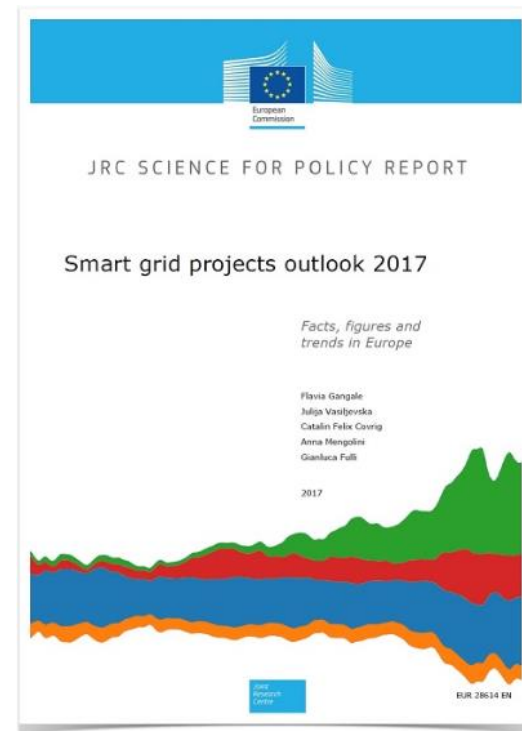
Smart Grids Projects Outlook

Old editions:

- 2010: data collection effort with the launch of a **survey** that collected **quantitative and qualitative data** about smart grid projects in Europe
- The first smart grid projects outlook was released in **2011** and updated twice, in and **2014**.

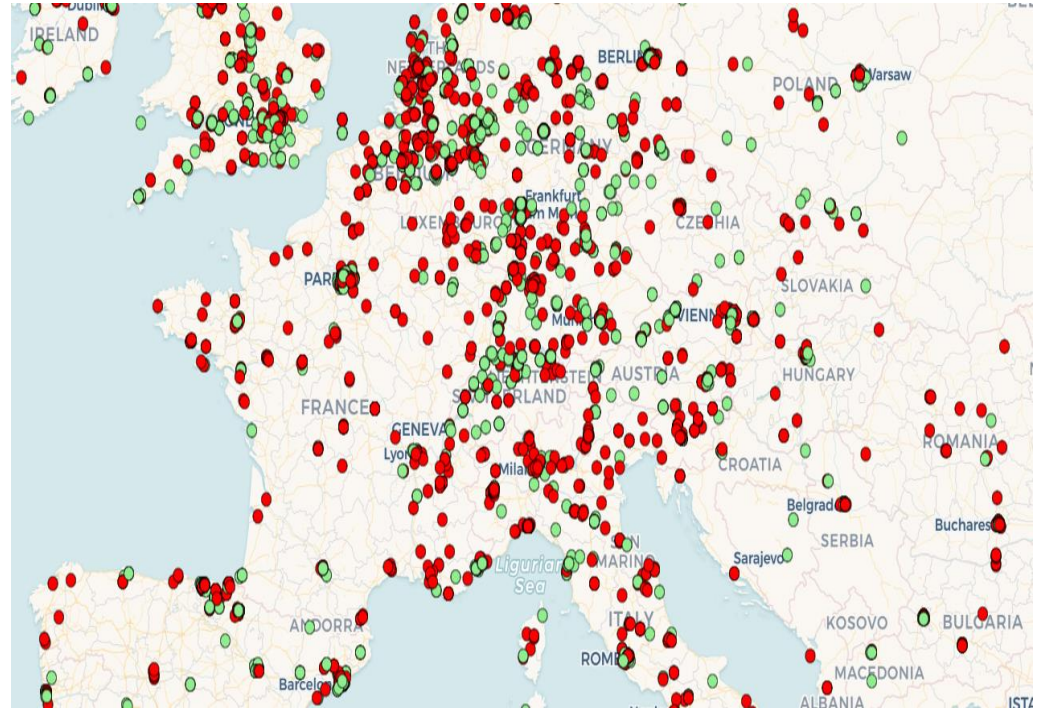
Current edition (2017):

- **New online survey**;
- **Data collection** through project websites;
- Online **databases** such as **CORDIS** and **GRIDinnovation** online and **ERA-Net** smart grid plus
- Presents **analyses** and **insights** from the most comprehensive database of smart grid projects across EU Member States
- **950** smart grid projects, launched from 2002 up until today, amounting to **€5 billion investment** are indexed



Smart Grids Project Map

- **Interactive Mapping** tool
- Generate customisable **maps**, **graphs** and **charts** to track **progress** on smart grid projects realised in the EU Member States, plus UK, Switzerland and Norway.
- Based on the **Smart Grids Projects Outlook Database**



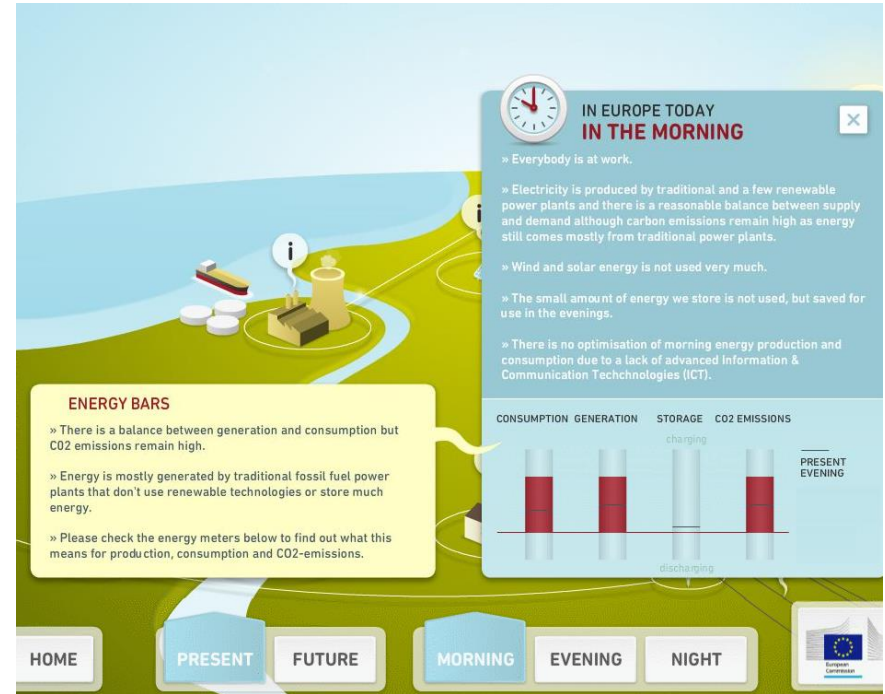
https://ses.jrc.ec.europa.eu/sites/ses.jrc.ec.europa.eu/files/u24/sgp_outlook_map/map.html

Smart Grids Interactive Tool

- Interactive **dissemination tool** for the general public
- Explains **the challenges and benefits** of large-scale deployment of smart grids.

For an animated flash version of the interactive tool please visit this page:

<https://ses.jrc.ec.europa.eu/smart-grid-interactive-tool>



Publications

- Distribution System Operators (DSO) Observatory
- The social dimension of Smart Grids
- Digital Transformation in Energy
- Etc.



Many more at <https://ses.jrc.ec.europa.eu/publications-list/a>

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Stay in touch



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