



The S3 Thematic Platforms

The interregional partnership on Sustainable Buildings

*BUILD2LC “Boosting Low Carbon Innovative Building Rehabilitation in European Regions”,
ONLINE FINAL MEETING*

3 December 2020

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Outline

The Smart Specialisation (S3) concept



The S3 Platform



The Thematic S3 Platforms & Partnerships



The S3 Interregional Partnership on Sustainable Buildings



The Smart Campus pilot action

The concept of Smart Specialisation (S3)

- A **place-based innovation policy**
 - A **place-based approach** to R&I policy that aims to boost growth and jobs in Europe
 - Based on a SWOT or similar analysis to identify **region's own competitive advantages**
 - Through **concentration of resources** on a limited set of R&I priorities (preferably going beyond sectoral definitions) in which innovation can most readily occur
 - Regional priorities are identified through an **open dialogue** between policy makers, industry, research/education institutions & civil society – **Entrepreneurial Discovery Process (EDP)**
- The development of Regional R&I Smart Specialisation Strategies (RIS3) = introduced as an ex-ante condition to access cohesion funds for R&I in the **2014–2020** period (ERDF, TO1)

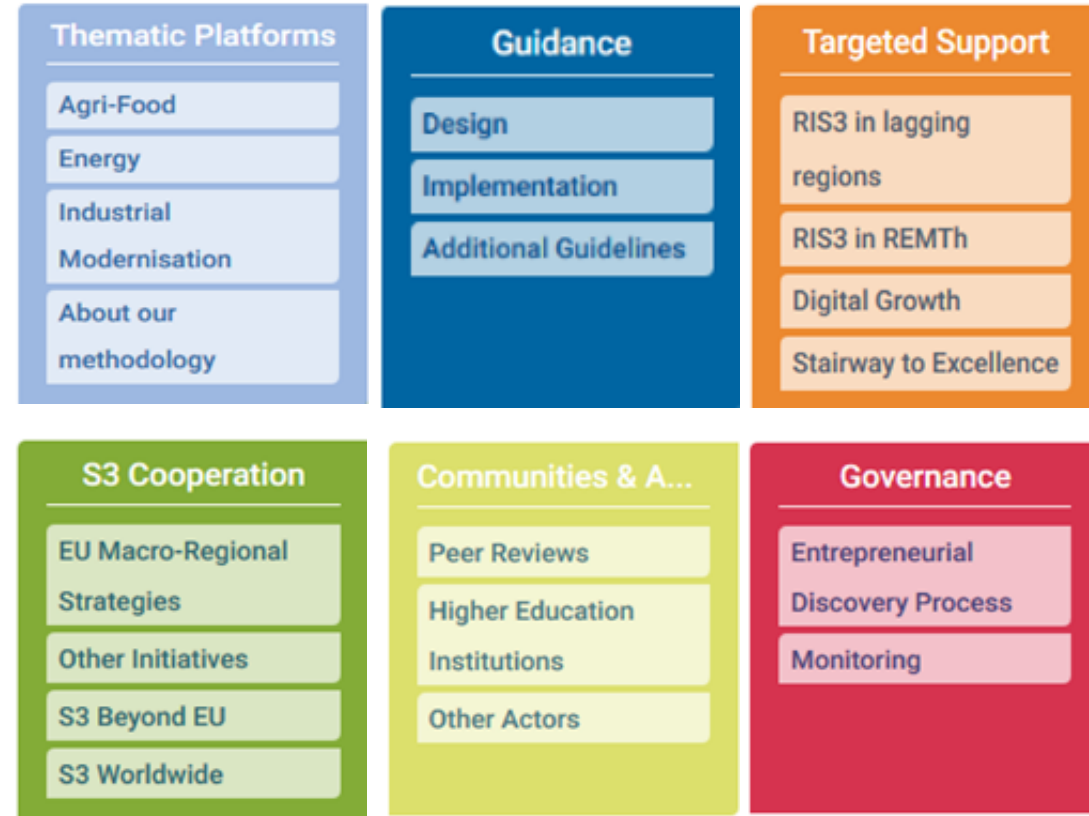
→ 2021-2027: “**S4: Smart Specialisation Strategies for Sustainability**”

The S3 Platform, supporting innovation-led growth in EU regions



The S3 Platform provides advice to EU countries and regions for the design and implementation of their S3:

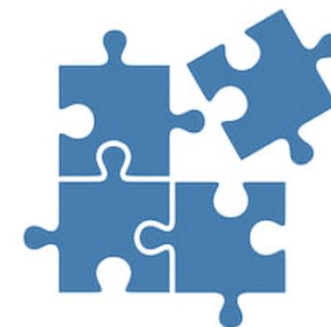
- [guidance material](#): *RIS3 Guide, Implementation Handbook...*
- [data and tools](#): *S3 priorities (Eye @RIS3), Regional Benchmarking, Digital Innovation Hubs catalogue...*
- [peer-reviews and mutual learning](#)
- [training](#) to policy-makers: *MOOC on monitoring S3...*
- [analysis](#): *Conceptual and empirical developments, policy briefs, working papers...*



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



Implementing S3 through transnational and interregional cooperation



Taking advantage of the outward-looking dimension of S3:

➤ 3 Thematic S3 Platforms: **S3P Agri-Food** - **S3P Energy** - **S3P Industry**

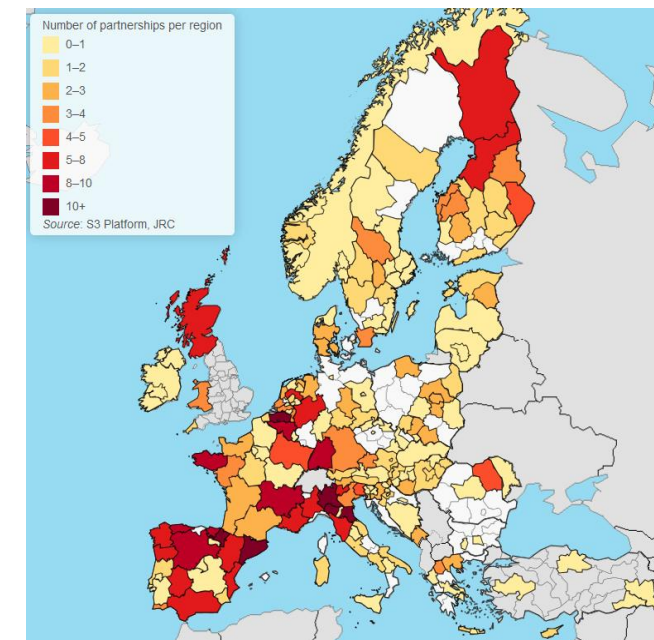
Connect regional **innovation ecosystems** and provide **interactive & participatory environment** as a support of S3 implementation through transnational / interregional cooperation

- Launched in 2015-2016
- 187 regions from 33 EU + non EU countries

➤ 35 Thematic Interregional S3 Partnerships:

Based on their local priorities (Q-helix and bottom-up), EU regions have partnered around **areas of common interest** and **joined forces** to:

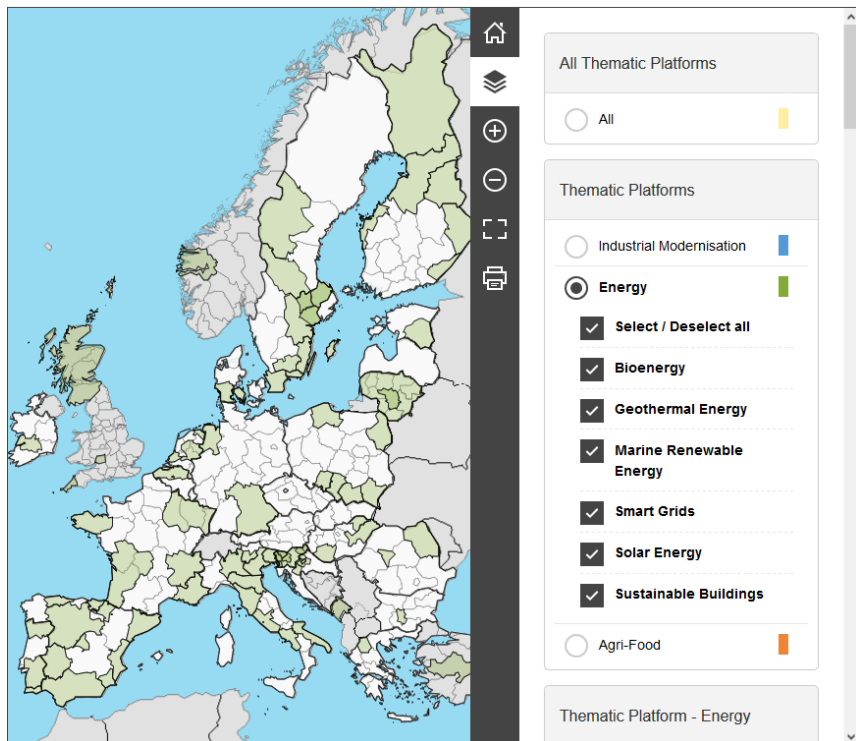
- **avoid duplication**,
- exploit **complementary strengths** across the EU,
- increase **critical mass**,
- enhance the development & investments in **EU value chains**,
- build **synergies** with other regional, national and EU networks and initiatives.



S3 Thematic Platform on Energy (S3PEnergy)

Since 2016, **S3PEnergy** has been promoting interregional cooperation in energy innovation:

- encouraging collaboration for joint demonstration solutions (co-investments with ESIF, EU Value Chains linkages...)
- advocating for strategic alignment between regions regarding energy & innovation → **new MFF 2021-2027!**
- **6 partnerships** in energy + Heating & Cooling initiative
- **57 territorial administrative units** (MS/regions/cities...) in 21 different countries
- DGs REGIO, ENER & JRC



<https://s3platform.jrc.ec.europa.eu/s3p-energy>



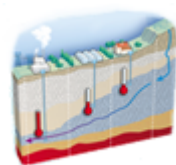
BIOENERGY



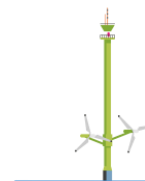
SMART GRIDS



SOLAR ENERGY



6 GEOTHERMAL



MARINE RENEWABLE ENERGY

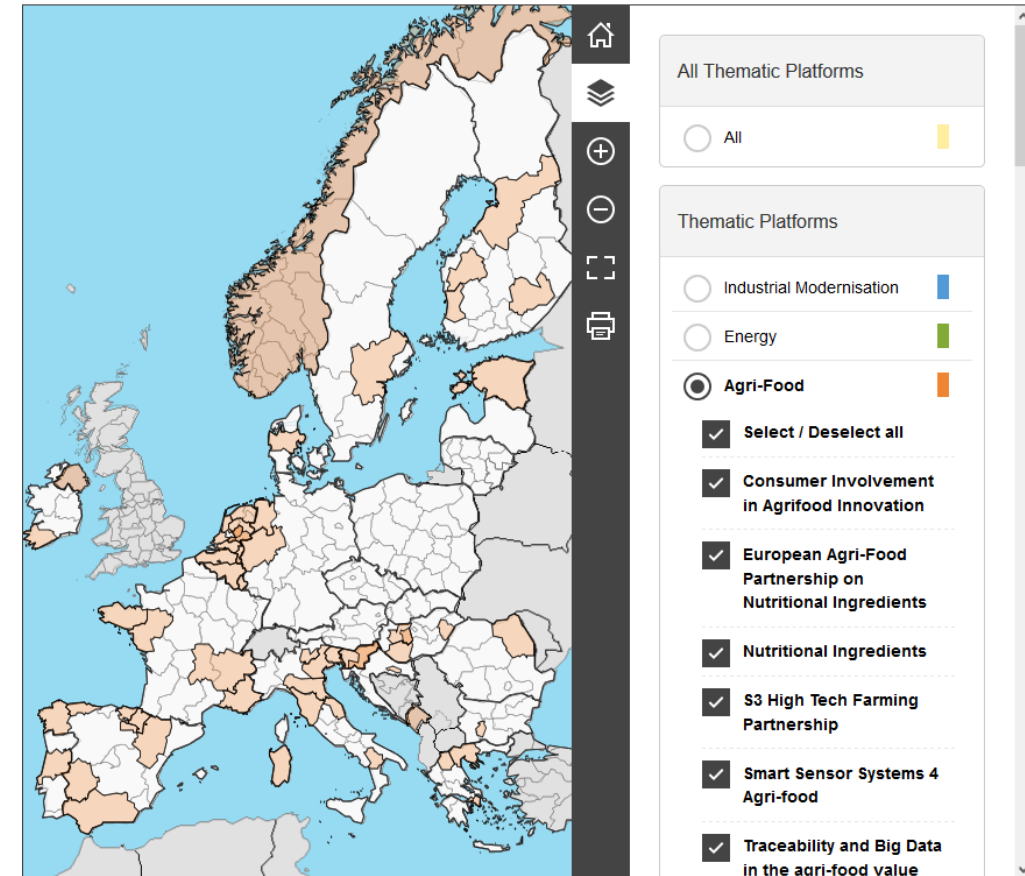


SUSTAINABLE BUILDINGS

S3 Thematic Platform on Agri-food

<https://s3platform.jrc.ec.europa.eu/agri-food>

- **5 partnerships:**
 - Consumer Involvement in AF
 - High-tech Farming
 - Nutritional Ingredients
 - Smart Sensors for Agri-Food
 - Traceability and Big Data
- **59 territorial administrative units**
- DGs AGRI, REGIO, RTD & JRC



High Tech Farming



Traceability & Big Data



Nutritional Ingredients



Consumer Involvement
in Agri-Food

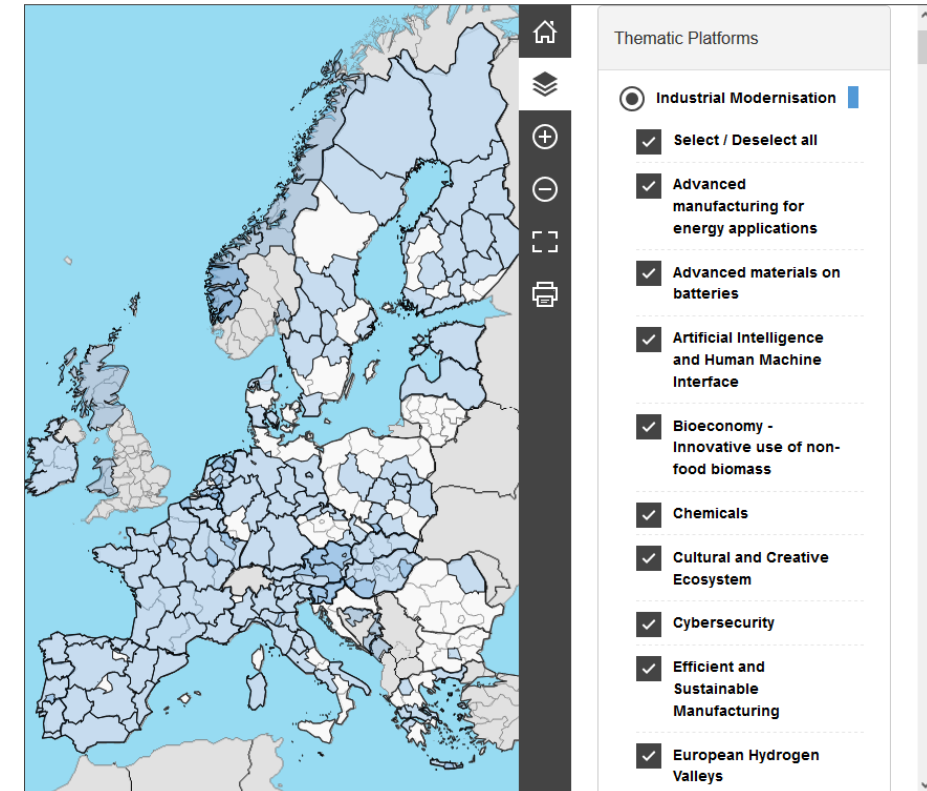
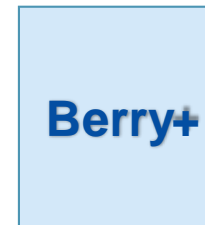


Smart Sensors 4 Agri-
Food

S3 Thematic Platform on Industrial Modernisation

- 24 partnerships
- 139 territorial adm. units
- DGs REGIO, GROW, RTD and JRC

<https://s3platform.jrc.ec.europa.eu/industrial-modernisation>



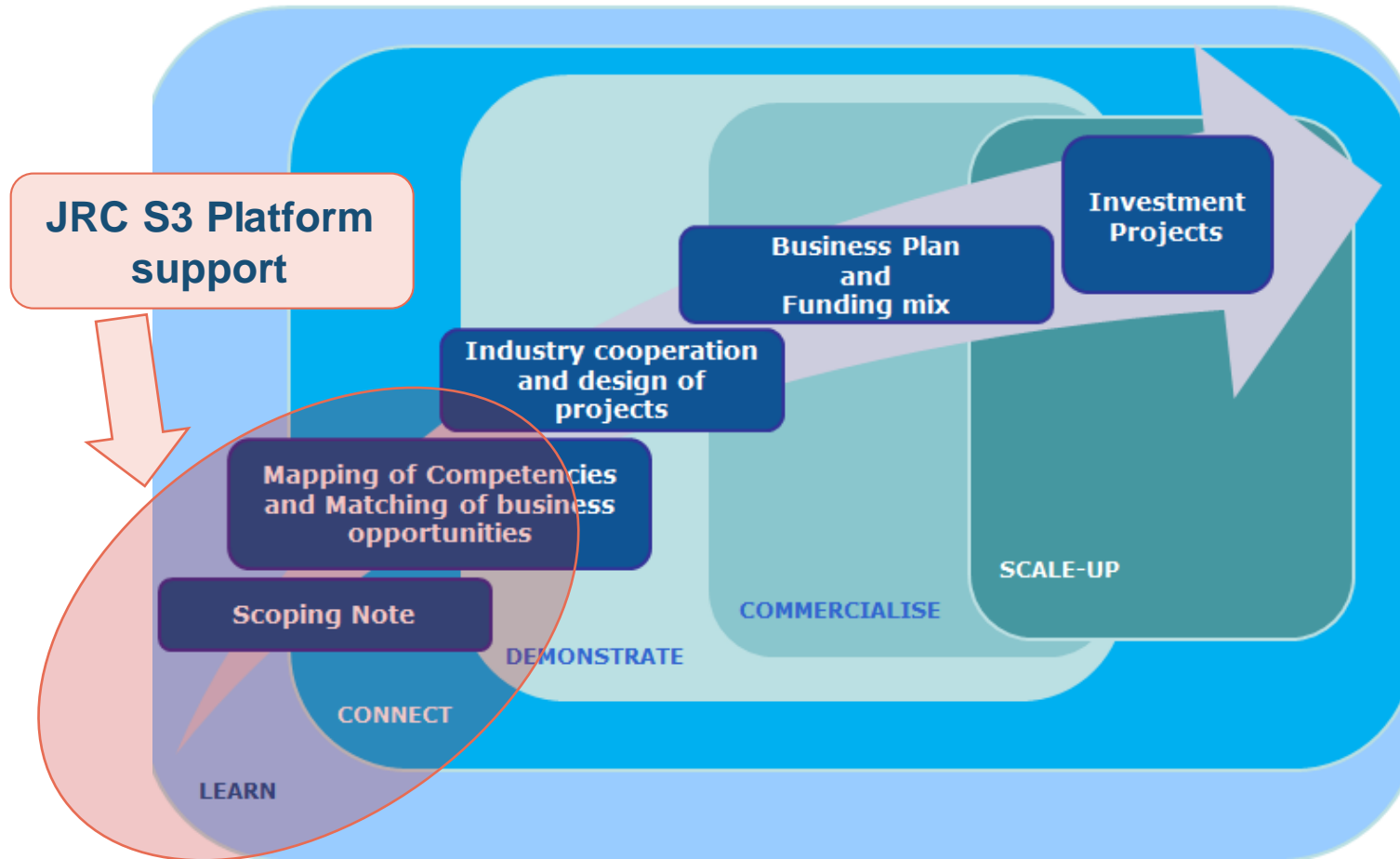
S3 partnerships development

Methodological Manual

To assist public authorities responsible for *designing and delivering interregional investment projects* in the S3 context



https://publications.jrc.ec.europa.eu/repository/bitstream/JRC116630/s3p-thematicmanual_online.pdf



Interregional partnership for Smart Specialisation on **Sustainable Buildings**



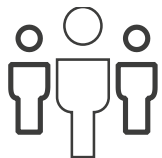
Leader

Andalusia (ES)

Co-Leaders

North Great Plain (HU); North West Croatia (HR)

The **Sustainable Buildings Partnership** was established to identify and solve key industrial challenges in the existing buildings and construction sector.



30 ACTIVE REGIONS AND MEMBER STATES



Sustainable Buildings Partnership



Scope: Areas of interest/work for the partnership



Eco-construction,
bioclimatism and
insulation of buildings

Lapland (FI)



Systems of maximum
energy efficiency in
buildings and cities

Valencia (ES)
Podravska region (SI)

Topic 1: New materials with low carbon footprint

Topic 2: Innovative constructive processes: light prefabrication of low-cost housing, advanced manufacturing for new construction elements

Topic 3: Bioclimatic solutions based on green bio elements (in roofs, facades, etc.)

Topic 1: Innovative solutions of high energy efficiency: evaporative cooling, LED lighting, micro-cogeneration...

Topic 2: Smart energy management systems and IoT Internet of Things

Topic 3: Advanced solutions for energy rehabilitation of historical heritage buildings



Renewable energy
integration in
buildings

Andalusia (ES)

Friuli Venecia Giulia (IT)

Topic 1: Climatisation with renewable energies

Topic 2: Self-consumption and energy storage

Topic 3: Low cost solutions aimed at **vulnerable groups**

Sustainable Buildings Partnership

Collaboration business ideas



Smart Campus Project:
Objective: improve the energy efficiency
of University Campuses



**New Technologies concerning NZEB applied to
public buildings**



**Creating a Living Lab-based laboratory to foster
energy-efficiency in buildings**



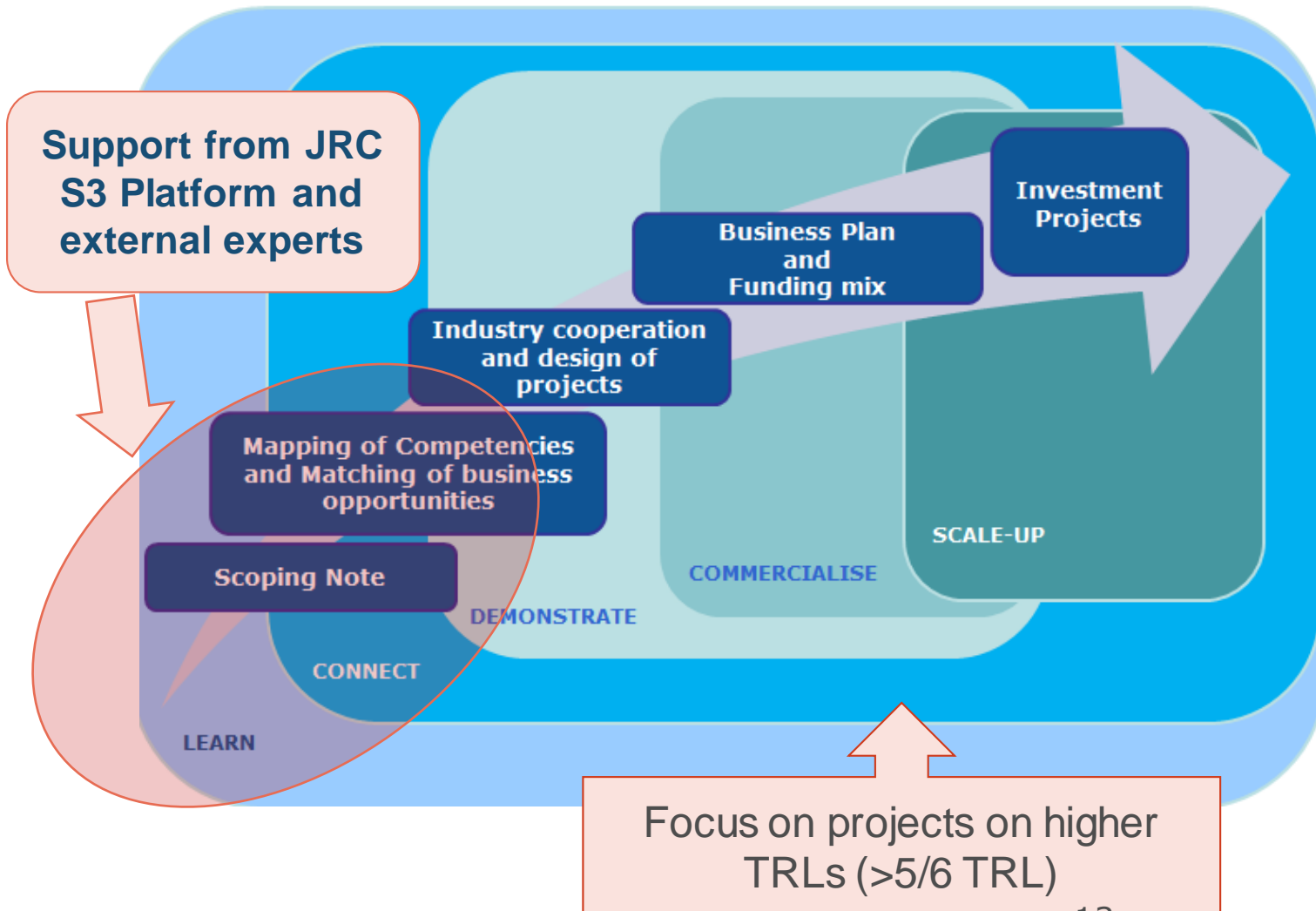
Low carbon wood robust construction



Interregional Innovation Projects

Pilot Business case on **Smart Campus**

S3 partnerships follow a 5-phase development:



Following a call for EoI in 2017, 8 pilots were selected by DG REGIO for TA:

- ▶ 3D Printing
- ▶ Bio-economy
- ▶ Cybersecurity
- ▶ De-&Re-manufacturing for circular economy
- ▶ High-tech farming
- ▶ Marine renewable energy
- ▶ **Sustainable Buildings**
- ▶ Traceability and big data
- ▶ Batteries (from 2019)

Sustainable Buildings Partnership

Pilot Business case on Smart Campus



OBJECTIVE: improve the energy efficiency of University Campuses

Regions involved:

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



Sustainable Buildings Partnership

Smart Campus - Partners - Quadruple Helix model



1. University of Trieste (Italy)
2. University of Udine (Italy)
3. University of Ljubljana (Slovenia)
4. University of Malaga (Spain)
5. Lappeenranta University of Technology (Finland)
6. University of Algarve (Portugal)
7. Eco campus de Sainte Tulle
8. Aix Marseille University



1. Directorate of the Energy Service - **RAFVG** (Italy)
2. Andalusian Energy Agency - **AAE** (Spain)
3. Lappeenranta City - **LAP** (Finland)
4. Energy Directorate - **SED** (Slovenia)
5. Agence des villes et territoires méditerranéens durables - **AVITEM** (France)
6. Areal Regional Energy and Environmental Agency - **AREEA** (Portugal)

1. **ABB SpA** - *industrial supplier*
2. **Blue Energy Group SpA** (Italy) - *energy trader*
3. **OverIT** (Italy) - *ICT for energy enterprises*
4. **Technological Corporation of Andalusia** (Spain) - *PPP*
5. **Green Energy Showroom**, *cluster* (Finland)
6. **Iskraemeco** - *energy collector* (Slovenia)
7. **GEN-I** - *energy supplier* (Slovenia)
8. **Enercoutim**, Alcoutim Solar Energy- *association* (Portugal)

1. **Academic** :students, professors and staff from the related campus.
2. **AEIT** (Italian Association of Electrical, Telecommunication, Automation and Computer Engineers) - *Network of stakeholders, FVG Section* (Italy)
3. **REDEJA** - *Energy Management Network of the Andalusian Regional Government* (Spain)
4. Responsible for **maintenance of public buildings** in the regions involved.

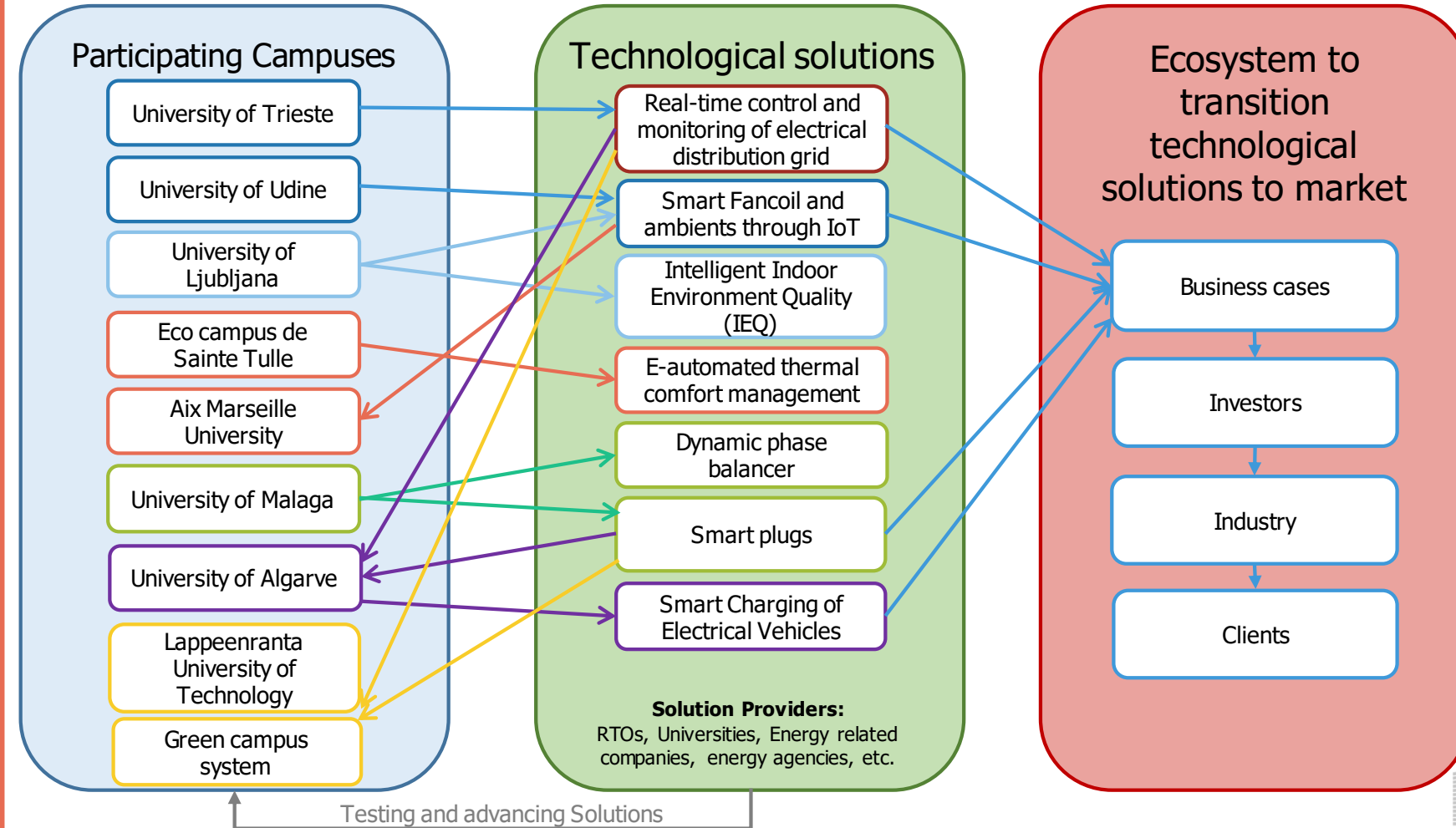
Sustainable Buildings Partnership

Smart Campus - interregional ecosystem



Smart Campus Ecosystem

Cross-regional Interface: Supporting exchange and development of technologies between campuses, agreement on governance structure, IPR, data sharing, etc.

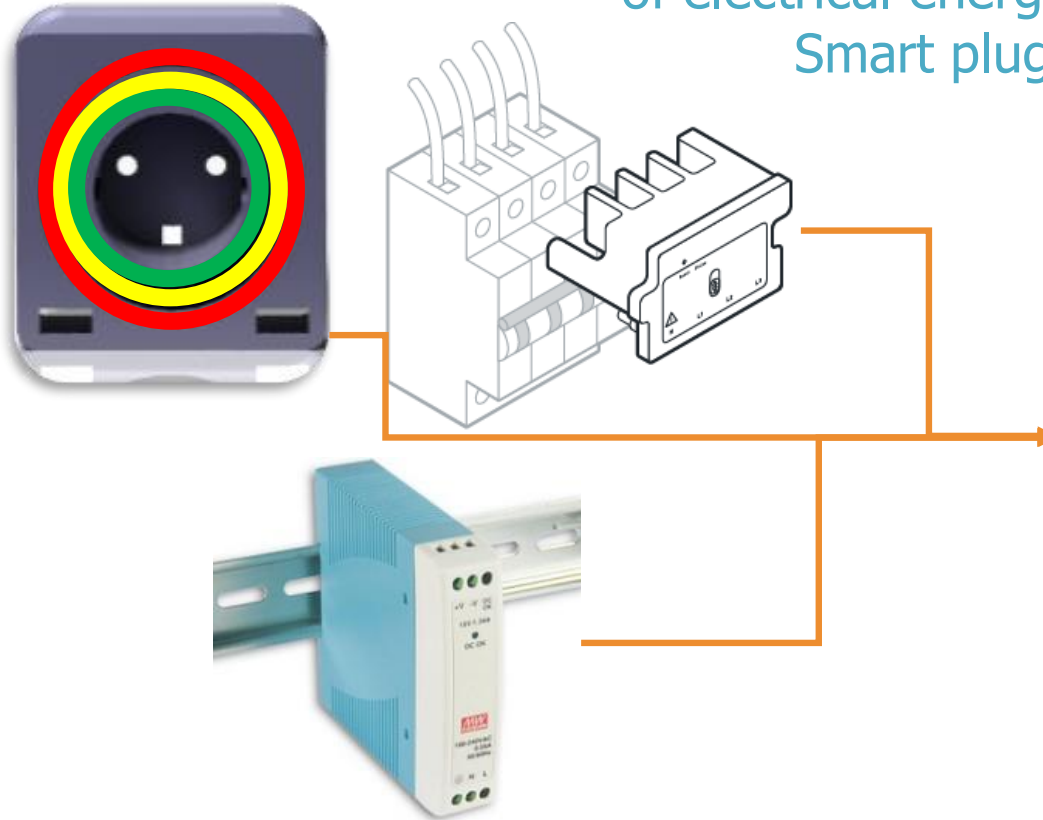


Sustainable Buildings Partnership

Smart Campus – Demo cases



Demo case 1: Intelligent control management of electrical energy consumption and local information by smart Smart plugs + energy totalizer + IDEE mini-server



Testing, implementation and collaboration together with University of Algarve

<https://www.ualg.pt/sites/ualg.pt/files/gcp/fotos/111.jpg>



Institute of Domotic and Energy Efficiency
Malaga University

Andalusia- Spain

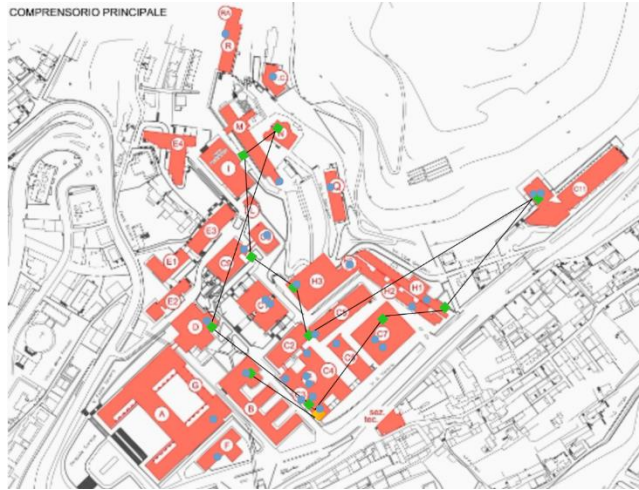


Sustainable Buildings Partnership

Smart Campus – Demo cases



Demo case 2: Real-time control and monitoring of electrical distribution grid (University of Trieste)



Electrical energy distribution system (27,5 – 3 kV)



Testing & implementation together with Lappeenranta University of Technology



The blue zone identifies where the platform was installed for testing.

Sustainable Buildings Partnership

Smart Campus – Demo cases

Demo case 3: Smart Fancoil and Indoor Quality through IoT system (University of Udine)



Testing & implementation together with
Aix Marseille University

Sustainable Buildings Partnership

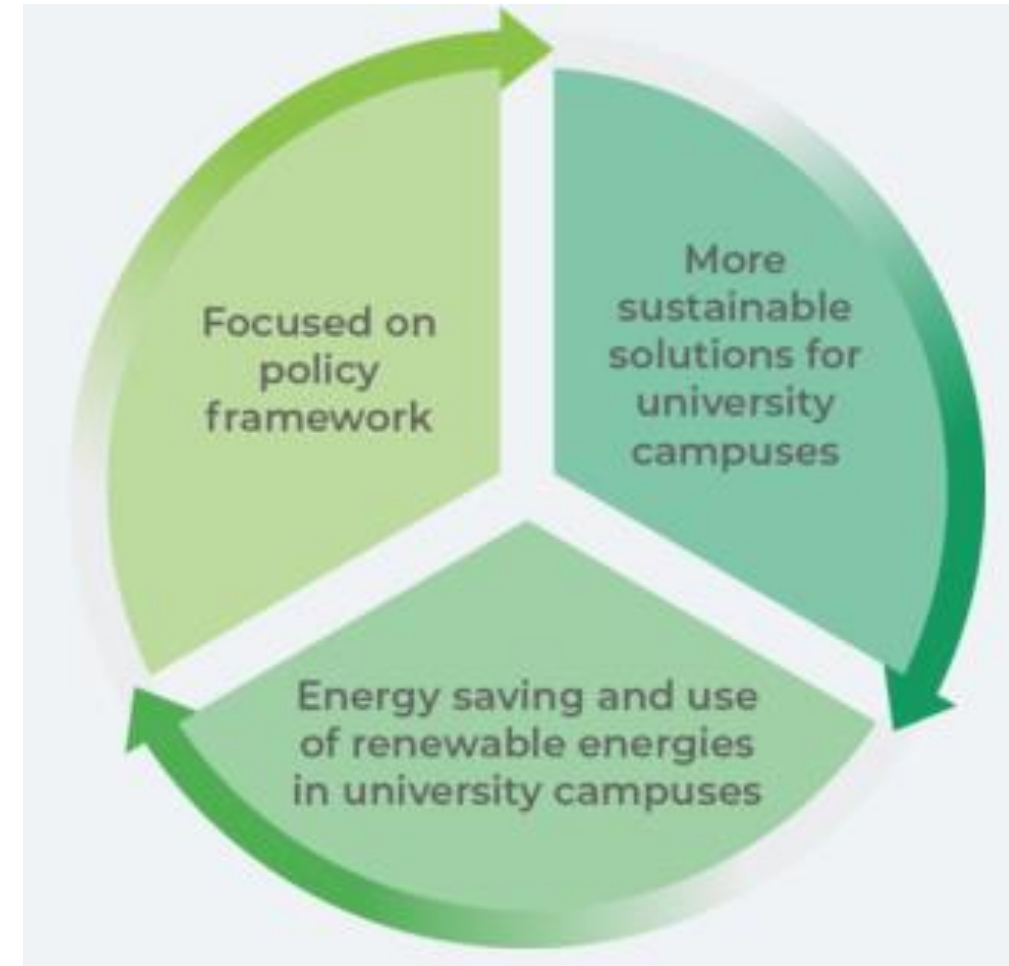
Smart Campus – Follow up: **S3UNICA!**



Smart SpecialiSation UNIversity Campus (2019-2023)

- aims at **emphasizing the role of Universities** in regional innovation policies, by providing **specialist research and technical expertise** in the field of energy sustainable buildings and by offering **campuses as a hands-on lab** where to implement these innovative solutions.
- Universities involved in the project can contribute to **regional knowledge exchange** and its translation into **innovative energy products, solutions and public/private services**.

<https://www.interregeurope.eu/s3unica/>



Thank you! Questions?



More information:

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

 [@S3Platform](https://twitter.com/S3Platform)

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