

# Thematic Smart Specialisation Platform for Industrial Modernisation

***Thematic Seminar - Industry 4.0 in Cities and Regions  
- in the context of the Knowledge Exchange Platform (KEP)  
Brussels, 28 June 2019***

***Dr Ruslan Rakhmatullin, S3 Platform, JRC, European Commission***



# Smart Specialisation Platform

**Inside the European Commission -**  
Support to various policy DGs

**Outside the Commission -** Support to countries and regions developing and implementing their RIS3 and to their 'triple/quadruple helix' partnerships

**In the scientific community -**  
Contribution to the conceptual and methodological debate around smart specialisation

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

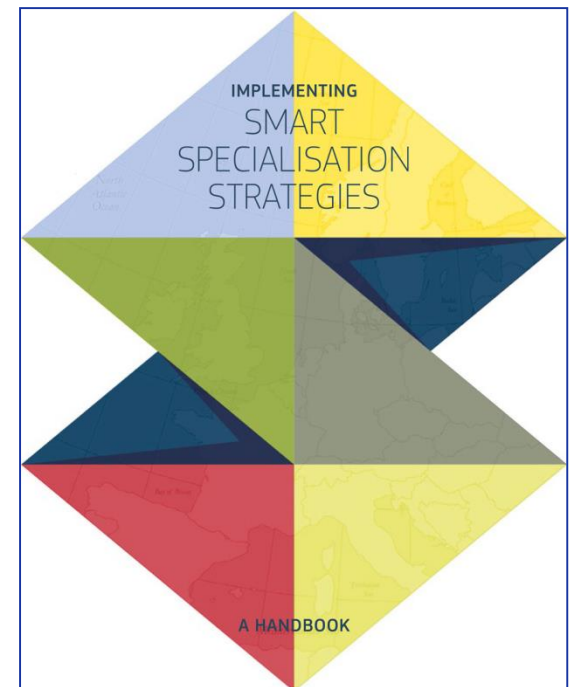


# Progress as of 2019

- Over 120 smart specialisation strategies (RIS3) have been developed and adopted
  - Increasing focus on technologies such as KETs and ICT
- Ambitious strategies come with their own challenges:
  - New technologies – transforming traditional industries
  - Adaptability, resource efficiency, new value processes, customer-driven innovation...

# Reasons for opening up smart specialisation strategies:

- *get access to wider business and knowledge networks*
- *develop necessary research capacity*
- *reaching out to other markets*
- *expanding business opportunities*
- *combining complementary strengths*
- *creating/joining GVCs*



Handbook: European Commission  
(2016), Implementing Smart  
Specialisation Strategies

# Create economic growth through transnational collaboration and innovation

- Economic growth can be facilitated through technological innovation leading to **new path-creation**.
- **The next technological revolution** will depend on multiple innovations across many industrial areas linked to emerging value chains with several technological components joined in new ways.
- This is where **European diversity** may contribute: **some regions have access to leading R&D and upstream innovation facilities**; others have industrial skills needed in downstream testing and industrial upscaling.
- In larger territorial frameworks, both attributes may exist. It is time to upgrade transnational networks of knowledge and expertise, and drive the development of transnational and macro-regional value chains.

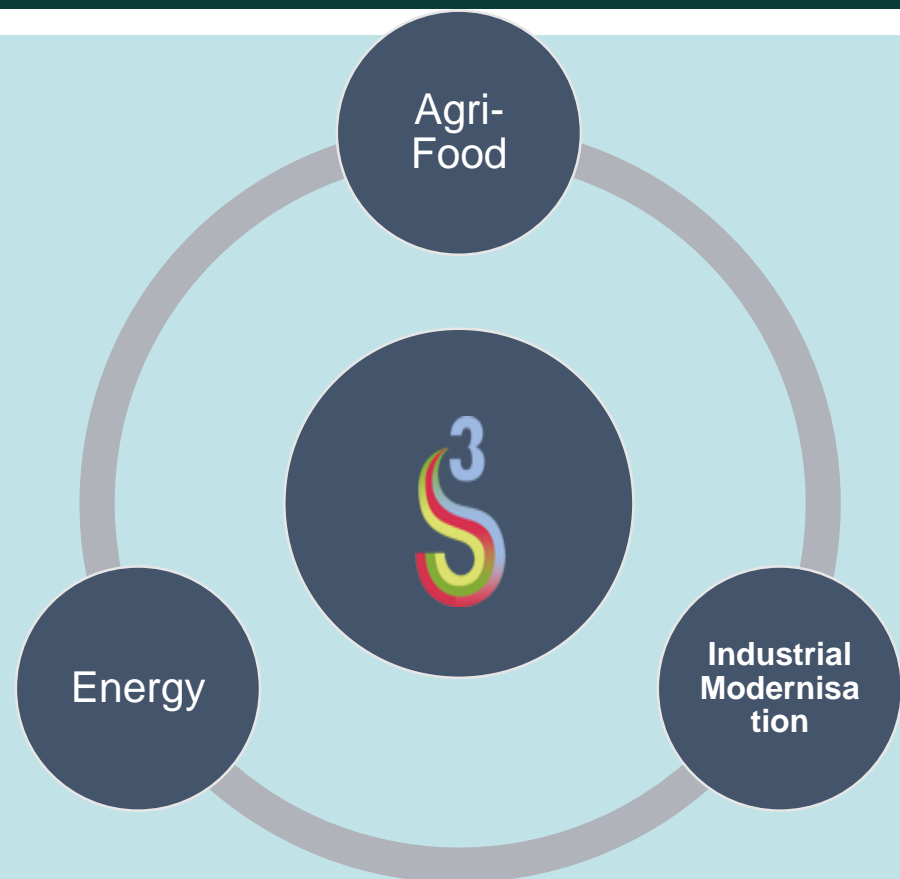
# Smart Specialisation Thematic Platforms

## Thematic focus on:

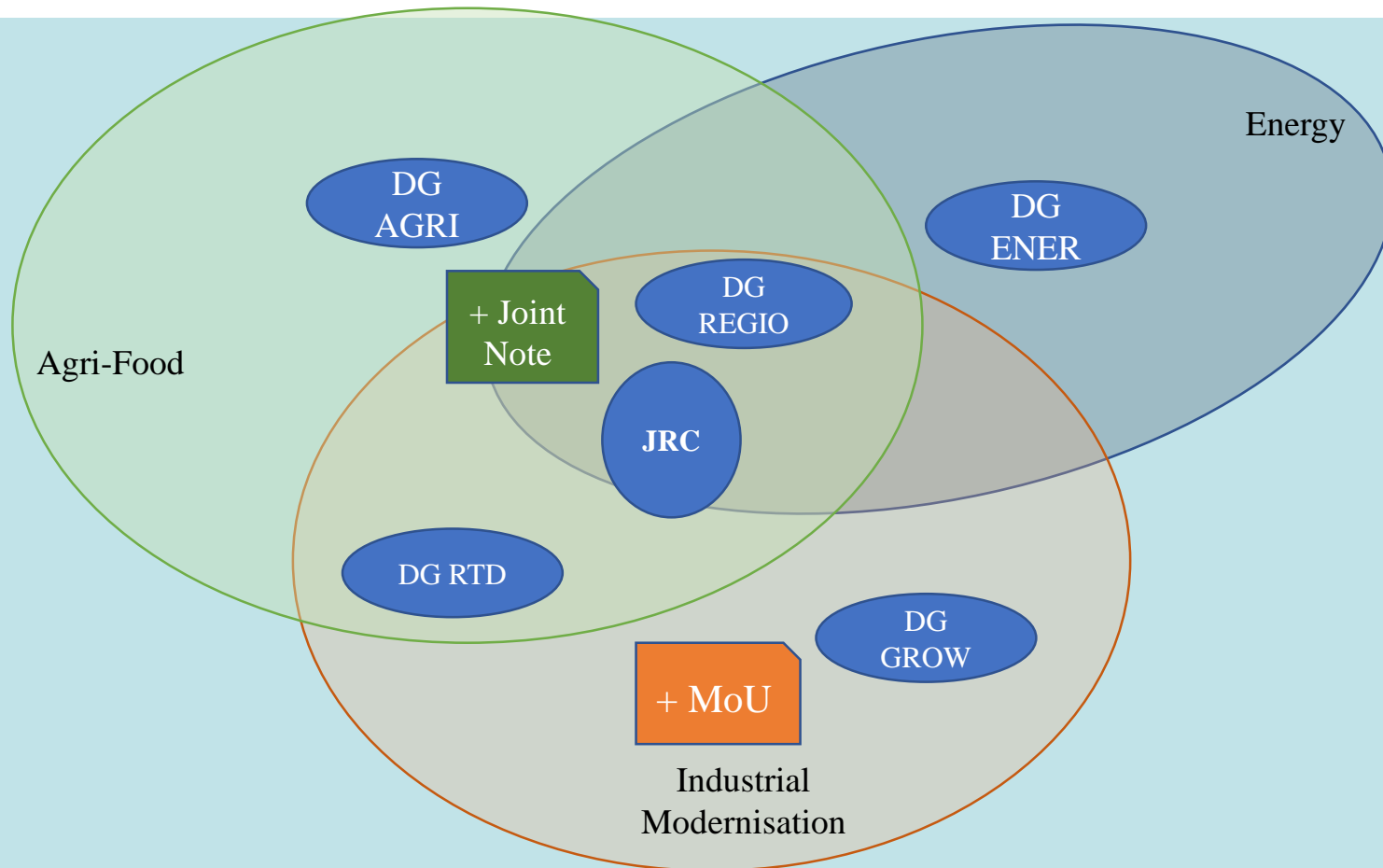
- **Agri-Food**
- **Energy**
- **Industrial Modernisation**

## Aim:

- To support interregional cooperation
- To provide tailored advice
- To help regions develop shared infrastructure



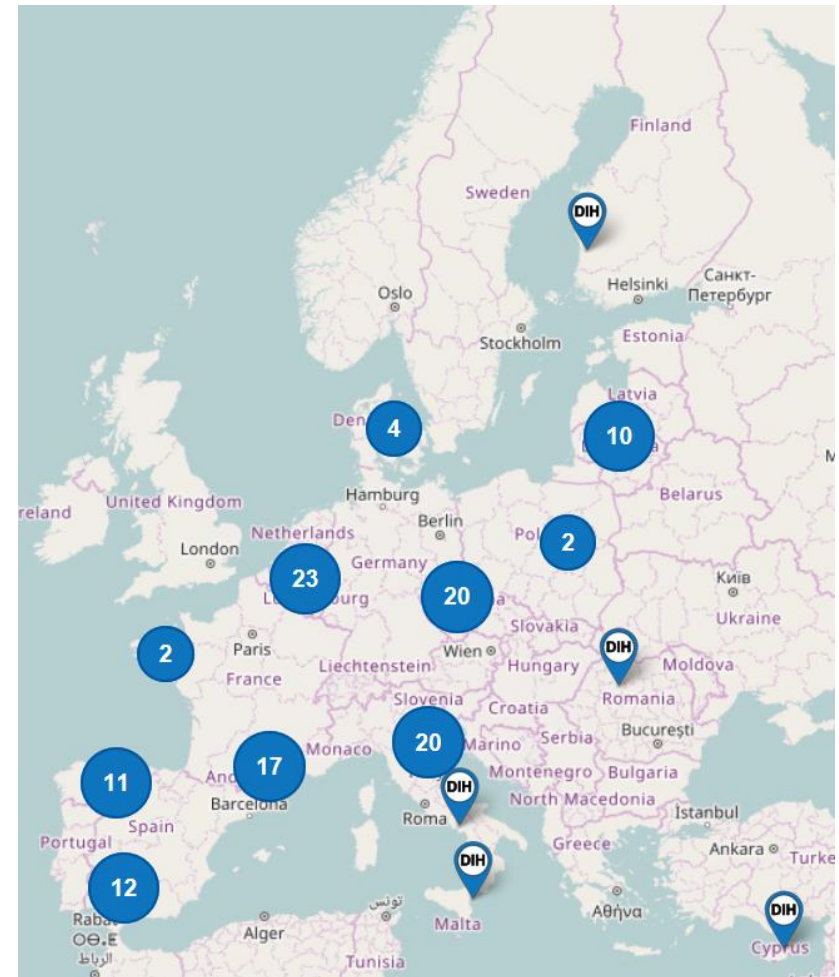
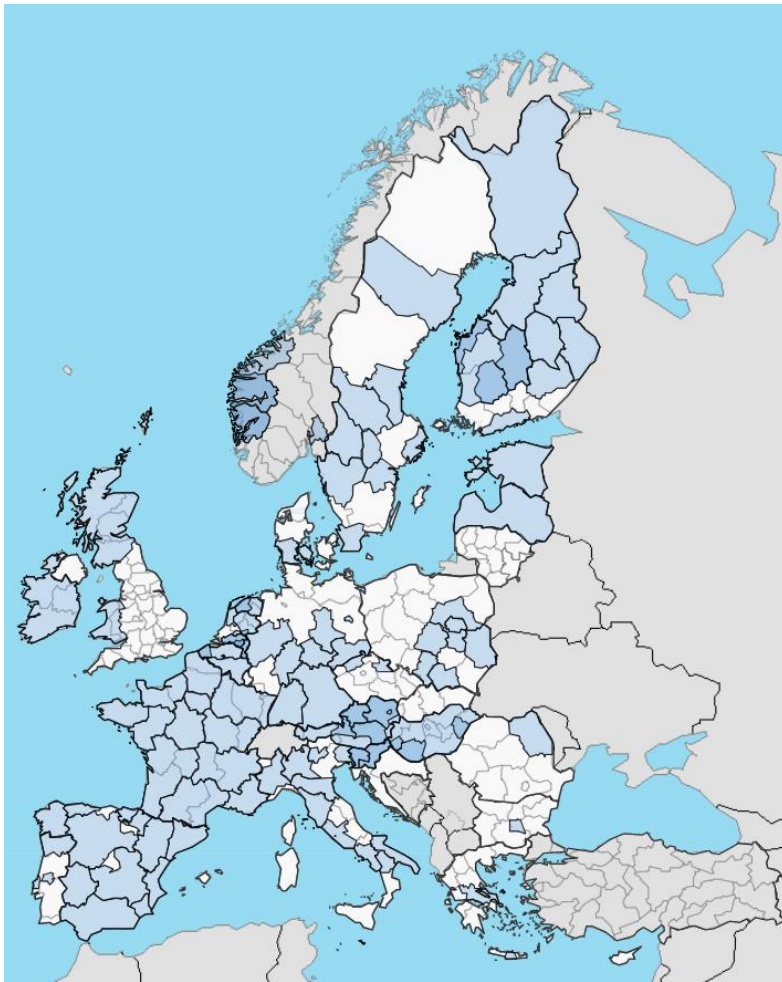
# S3 Thematic Platforms





# Industrial Modernisation Platform Member

# Digital Innovation Hubs – Industry 4.0



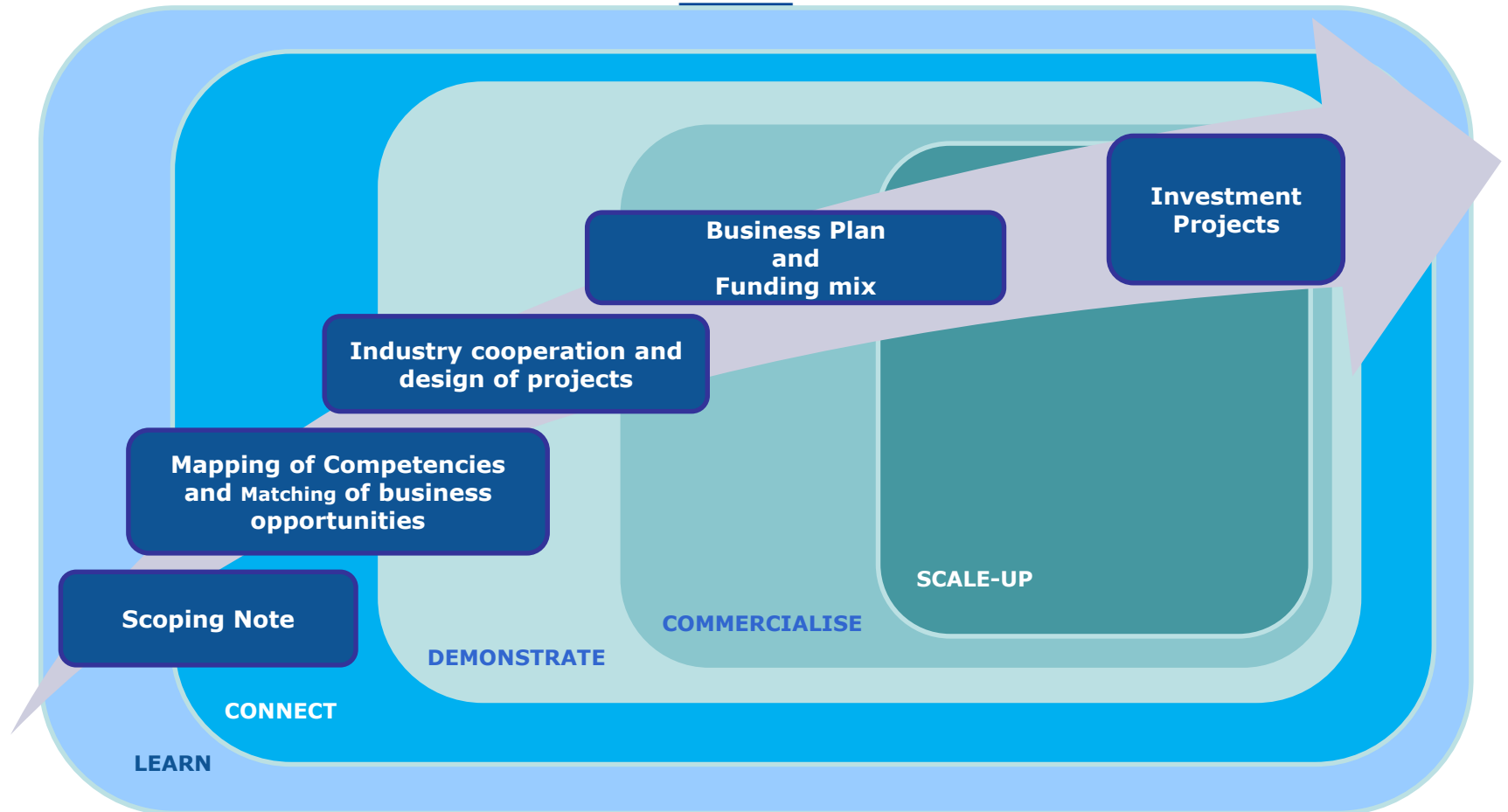


## S3P Industrial Modernisation

Steering Committee governing the  
S3P Industrial Modernisation

DG GROW, DG REGIO,  
DG RTD, and JRC





**Areas of  
Shared  
Interest**

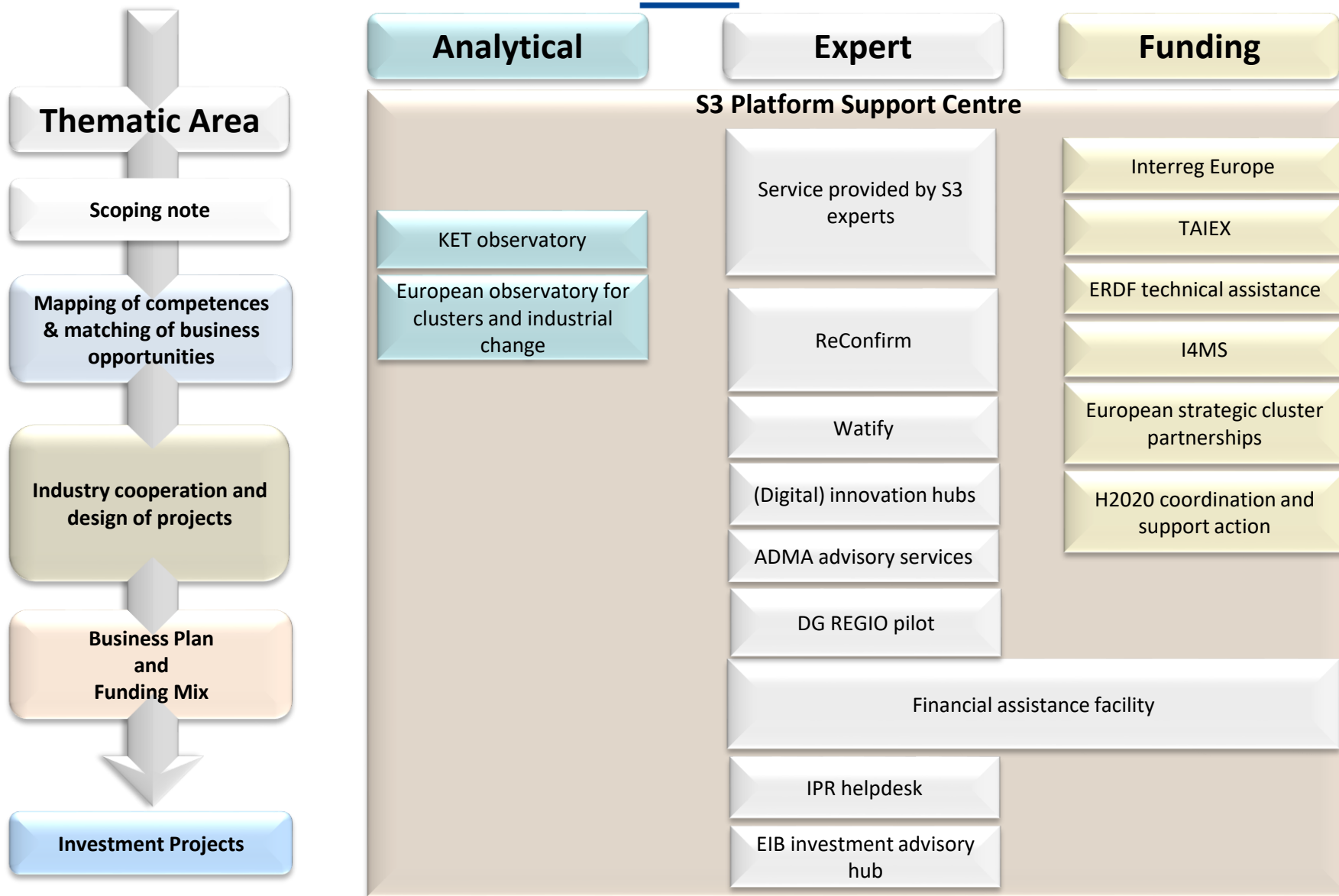
**Co-funded  
Joint  
Calls**

**Demonstration  
Projects (TRL6/7)  
Joint Pilots**

**Access to new  
funding and  
New  
Markets**

**New Products  
and Services  
New  
Value Chains**

# S3P Industrial modernisation – support services



# Fast-forward to 2019

# Three Thematic Platforms currently support 31 thematic S3 partnerships

A total of 31 existing thematic partnerships are currently supported by the 3 thematic S3 platforms include innovation actors from 179 regions in 28 countries (25 EU member states + Bosnia and Herzegovina, Norway and Turkey).

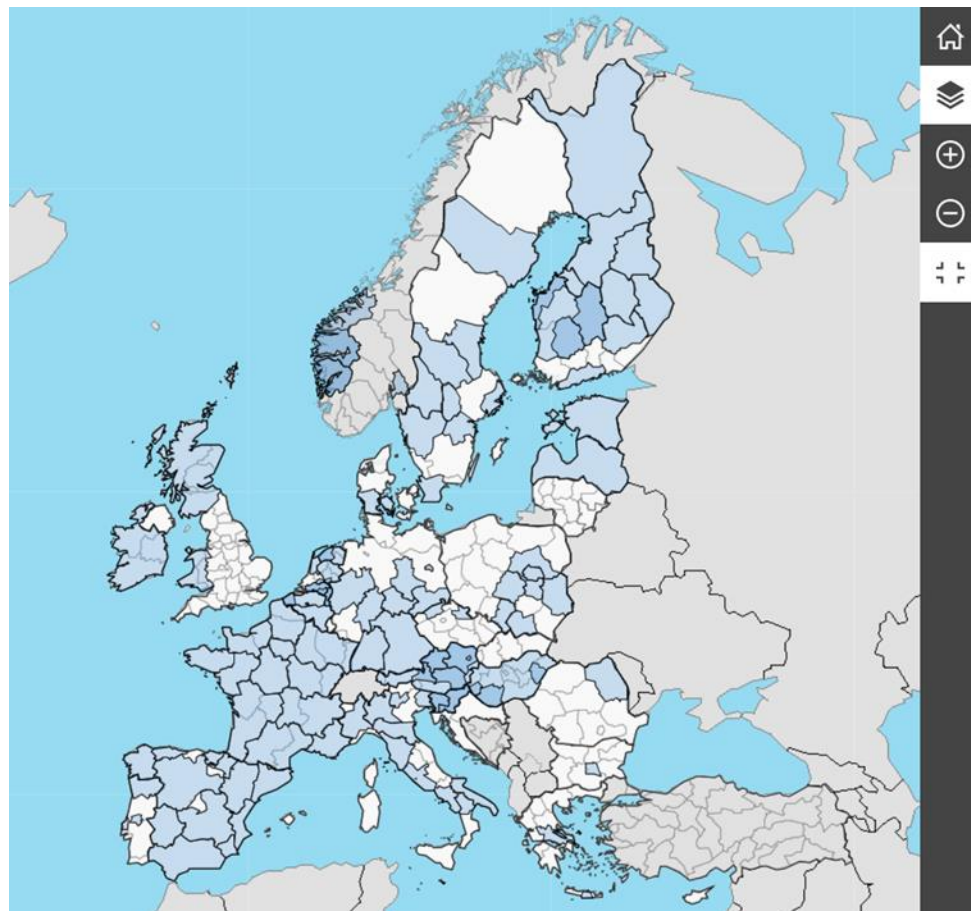
# Industrial Modernisation Platform

## S3P Industrial modernisation partnerships

### *Main objectives*

*It aims to support EU regions committed to generate a pipeline of industrial investment projects following a bottom-up approach - implemented through interregional cooperation, cluster participation and industry involvement.*

- ❑ **Steering Committee:**
  - ❑ Over 20 leading regions
  - ❑ DG GROW, DG REGIO, DG RTD and JRC
- Representing
  - ❑ 21 partnerships
  - ❑ 95 regions
- **EC DGs involved:** DG REGIO, DG GROW, DG RTD and JRC





# Industrial Modernisation Platform (Sept 2019)



Advanced manufacturing



Non-food Biomass



Efficient and Sustainable Manufacturing



European Cyber Valleys



Social Economy



Artificial Intelligence & Human Machine Interface



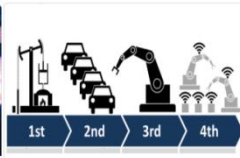
Textile Innovation



Medical technology



Photonics



SMEs to the Industry 4.0



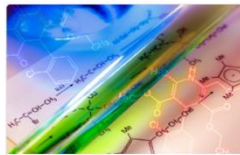
Sport



Digitalisation and Safety for Tourism



Personalised medicine



Chemicals



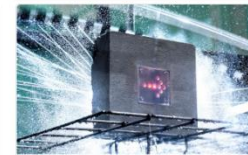
Safe and sustainable mobility



Advanced materials for batteries



Mining industry



Water Smart Territories



3D-Printing



New Nano-Enabled Products



Hydrogen Valleys

## Other Partnerships (Dual Affiliation)



High Tech Farming



Traceability & Big Data



Sustainable Buildings

# EYE@RIS3 (September 2019)

A snapshot of regions with at least one encoded RIS3 priorities related to Manufacturing and a policy objective such as Advanced Manufacturing (KETs) or Digital Transformation (a total of 67 entries):

9 Member States:  
Austria, Bulgaria, Czechia,  
Ireland, Luxembourg,  
Malta, Sweden, Slovenia,  
Slovakia

+ 48 regions

Title/Description of Priority

Territorial Level

Advanced search fields

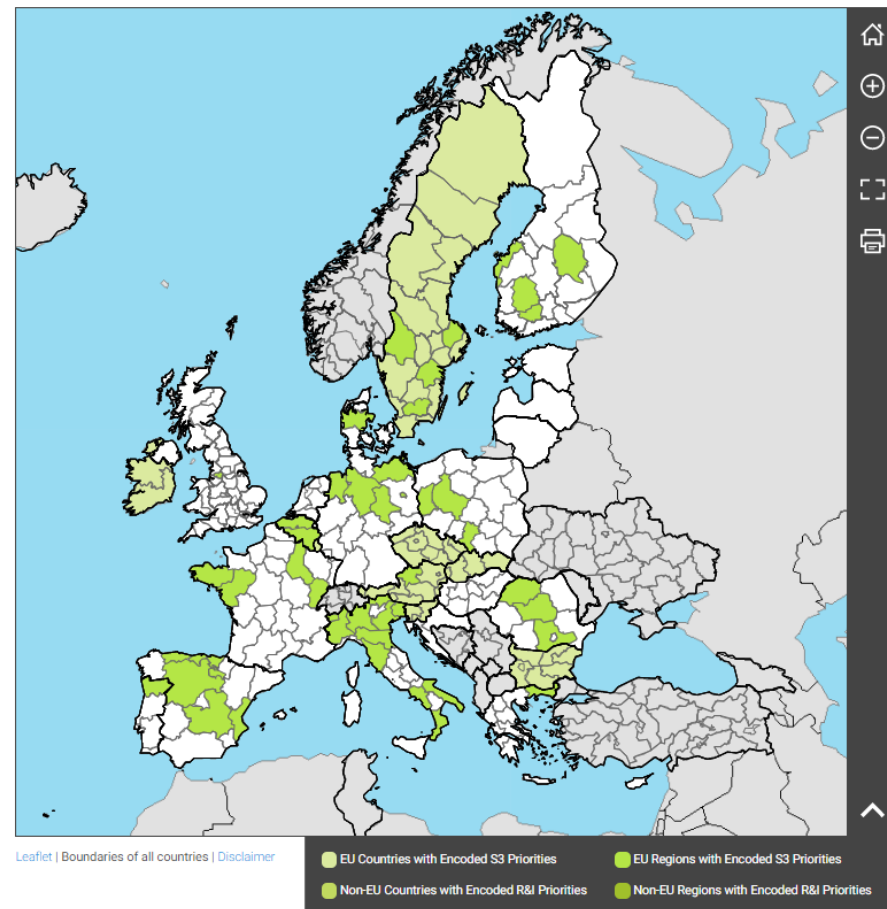
Economic Domains

Scientific Domains

Policy Objectives

[Close advanced search ^](#)

Click on the following link if you want to propose or edit priorities.

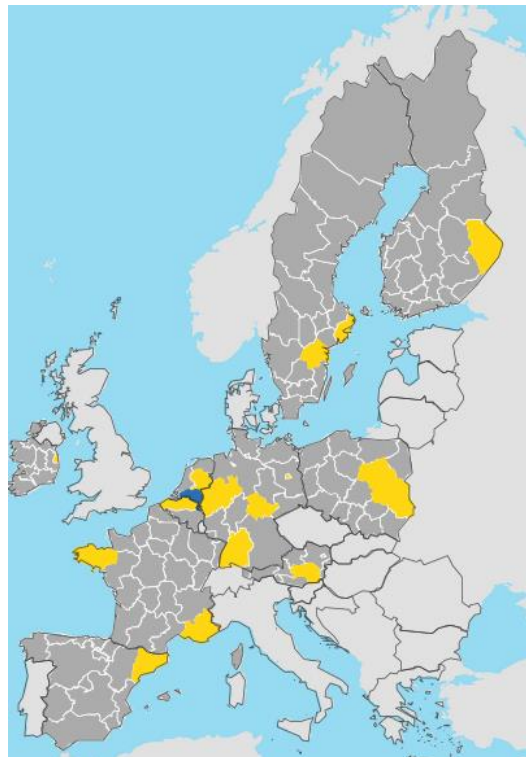


# 3D Printing

The key objective of the Vanguard 3DP Pilot is to accelerate market uptake of 3DP applications in the EU through development of industry-led, transregional demonstration platforms.

Partnership Focus is on 4 Value Chains:

Medical, machine vision, optical component, production technology



Leading regions:
South-Netherlands (NL)
Participating regions
Baden Wurttemberg (DE)
Berlin (DE)
Bretagne (FR)
Catalonia (ES)
Dublin (IE)
East Netherlands (NL)
Flanders (BE)
Lubelskie (PL)
Mazowieckie (PL)
North Karelia (FI)
North North Rhein Westfalia (DE)
Östergötlands (SE)
Provence-Alpes-Côte d'Azur (FR)
Stockholm (SE)
Styria (AT)
Thüringen (DE)

## About the partnership:

List of projects under development:

- Photonics Integrated Circuits (PICs),
  - Sensing, Measuring and Imaging,
  - Optical Fibres for Industry,
  - Pilot Facility for Photonics-based Manufacturing
- 
- Netherlands have signed an 8 year plan to accelerate the development of the Dutch photonics industry, to support the development and manufacture of integrated photonics chips investing an initial €242 million of public and private funds.

The latest Public Partnership Report:



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Document



# Photonics

**This partnership aims to accelerate the time-to-market, uptake and deployment of photonics related technologies by SMEs and corporates in view of addressing societal challenges.**

*Partnership Focus is on the following Value Chains:*

Automotive, high-end metals, machinery and tooling, healthcare



<span style="color: blue;">■</span>	Leading regions:
	Flanders (BE)
	Norte (PT)
	South Netherlands (NL)
<span style="color: yellow;">■</span>	Participating regions
	Aragon (ES)
	Asturias (ES)
	Auvergne Rhône-Alpes (FR)
	Baden-Württemberg (DE)
	Catalonia (ES)
	Dalarna (SE)
	East Netherlands (NL)
	Emilia-Romagna (IT)
	Lombardy (IT)
	Lower Austria (AT)
	North Rhine-Westphalia (DE)
	Orebrö Lan (SE)
	Saxony (DE)
	Skåne (SE)
	Slovenia (SI)
	Tampere (FI)
	Trentino (IT)
	Upper Austria (AT)
	Wales (UK)
	Wallonia (BE)

## About the partnership:

- List of projects under development:
- Automotive 1 - Multi-materials components by hybrid 3D Printing manufacturing
- Additive - subtractive high precision & high finish production (high-end metals)
- Machinery and Tooling - Structural Parts with Complex Shapes
- Automotive 2 - 3D-Printed automotive components (mono-material) for large (>2500 mm), medium and small complex part
- Healthcare - 3D-Printed customised components for orthosis, exoskeleton and exoprosthesis
- Ongoing development of a first industrial project involving cross regional funding (in the context of the demo case: Automotive 1)

**The latest Public Partnership Report:**



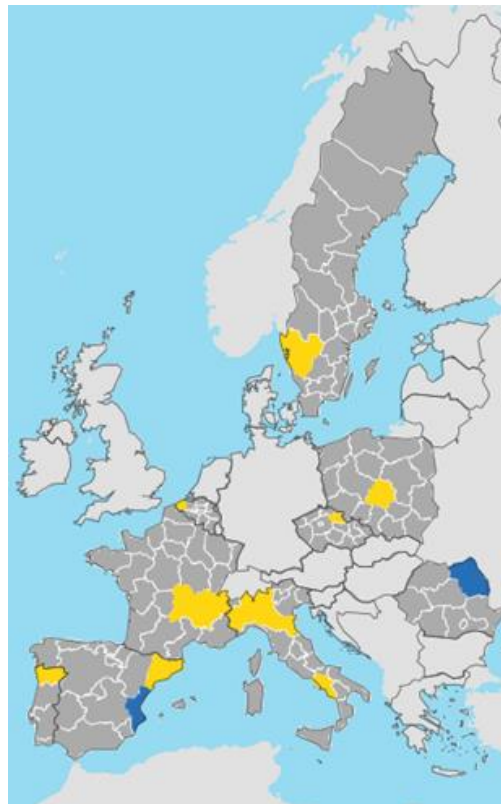
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# Textile innovation

The goal of the partnership is to facilitate investment in open innovation infrastructures or new technologies by SMEs to accelerate the emerging industrial renewal in traditional textile manufacturing regions across Europe.

Partnership Focus is on 4 Value Chains:

Circular economy, smart textiles, industry 4.0, creative industries



<span style="color: blue;">■</span>	Leading regions:
	Valencia (ES)
	North-East Romania (RO)
<span style="color: yellow;">■</span>	Participating regions
	Campania (IT)
	Lombardy (IT)
	Piedmont (IT)
	Emilia Romagna (IT)
	Catalonia (ES)
	Norte (PT)
	Hradec Kralove Region (CZ)
	West Flanders (BE)
	Auvergne-Rhône-Alpes (FR)
	Västra Götalands län (SE)
	Lodzkie (PL)

## About the partnership:

List of projects under development:

- Sustainability (resource-efficiency and circular economy),
- Industry 4.0 and new digital business models,
- Sector diversification (Technical & smart textiles),
- Design- and creativity-based innovation (incl. eco-design)
- Since 2013 the industry's turnover has grown by 14% to €181 billion and extra-EU exports by 15% to €48 billion while employment and company numbers have been maintained.
- Over the last 10 years, the industry has invested almost € 50 billion in the EU and is expected to maintain a strong investment rhythm in the near future.

**The latest Public Partnership Report:**



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# Industrial Modernisation Platform Partnership: European Cyber Valleys

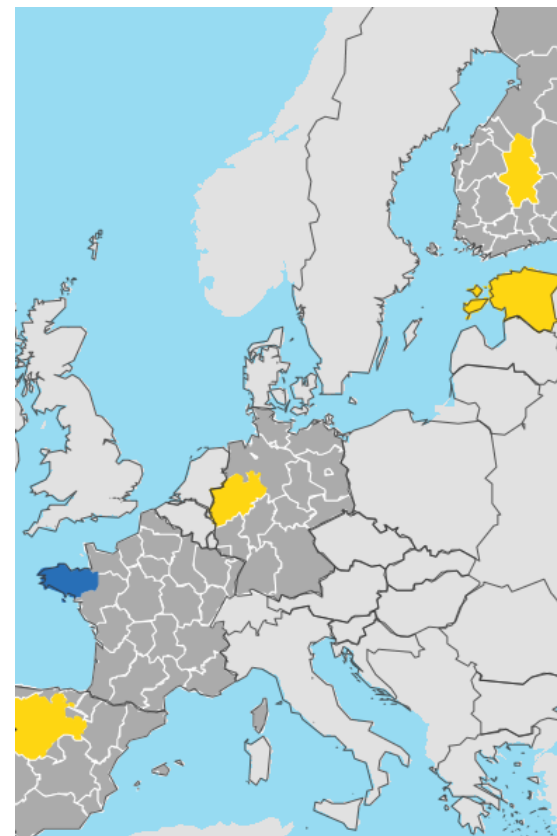


The aim of the partnership "European cyber Valleys" is to develop interregional cooperation in order to:

- create synergies among the existing specialised regions in cybersecurity
- address the challenges that hamper commercialisation of existing and new products and services in Europe
- foster business investment on cybersecurity.

Partnership Focus is on the following Value Chains:

Facilitate the development of a European Cybersecurity value chain



<span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span>	Leading regions:
	Bretagne (FR)
<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span>	Participating regions
	Castilla y Leon (ES)
	Central Finland (FI)
	Estonia (EE)
	North Rhine Westphalia (DE)

## About the partnership:

Focus on 4 Thematic Working Areas:

- Mapping of European cybersecurity capabilities (to support business development)
- Smart commercialisation (start-ups and SMEs)
- Business model for training platform / cyber range / cyber training platform
- Facilitating the visibility of "European cyber valleys"

## Pilot actions:

Inter-regional acceleration programme for local cyber security scale-ups, focusing on the Commercialization and Scale-up phase of local companies



**The latest Public Partnership Report:**

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# *Thanks*

Any questions?

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# **Lagging Regions 2: Targeted Support to RIS3 Implementation in Bulgaria**

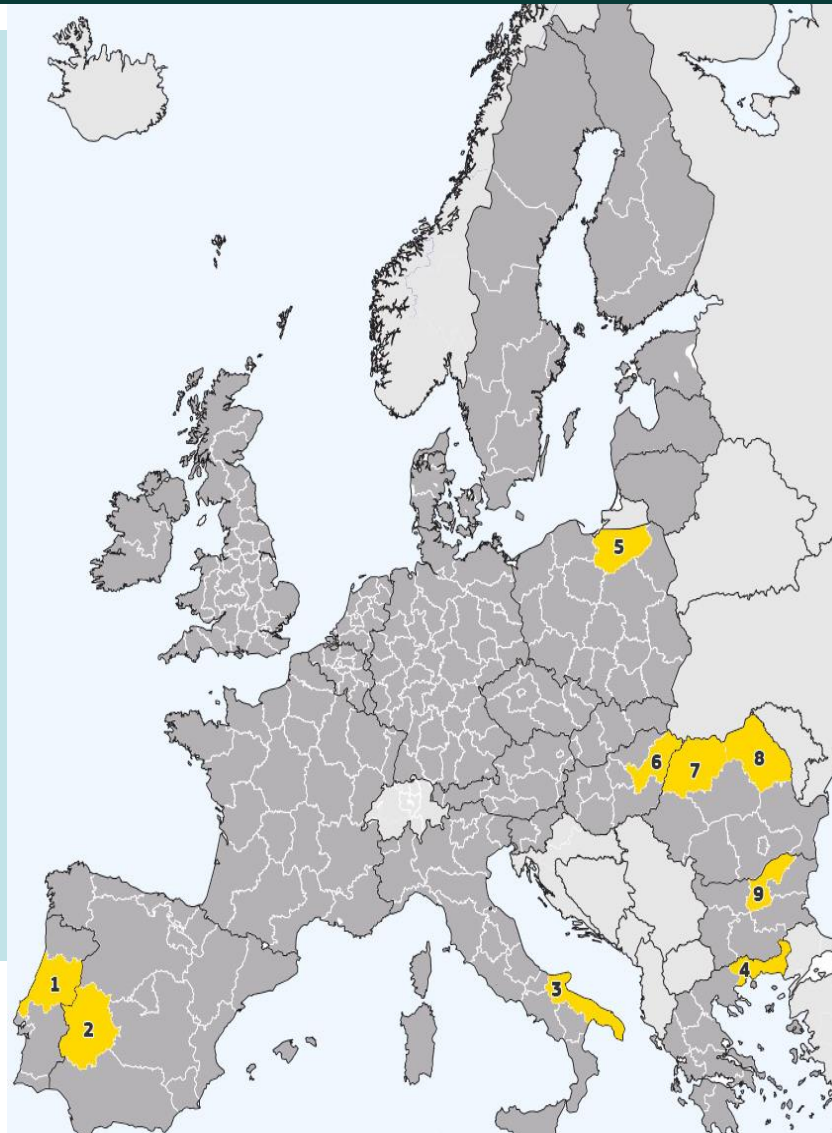
# Targeted support Lagging regions

**1- Support to the  
definition and  
implementation of RIS3  
in selected regions**

**2- Identification of  
needs and support  
activities**

**3 - Interaction with  
institutions and  
stakeholders**

**4 - Dissemination of  
results and wider  
lessons**



## SELECTED LAGGING REGIONS

- 1** Centro
- 2** Extremadura
- 3** Puglia
- 4** Eastern Macedonia and Thrace
- 5** Warminsko Masurskie
- 6** Észak-Alföld
- 7** Nord-Vest
- 8** Nord-Est
- 9** Severen Tsentralen

**+**  
**Croatia,**  
from July  
2018

# Main objectives

**MAIN AIM:**  
Support the refinement  
and implementation of  
the RIS3 of selected EU  
regions

**Low-growth regions:**  
GDP/capita below EU  
average

**Less developed regions:**  
GDP/capita <50% of EU  
average

Develop and provide  
appropriate and **specific**  
**support** to selected regions  
in RIS3 implementation

Develop and implement  
**horizontal approaches** to  
key issues in the growth  
and governance of RIS3

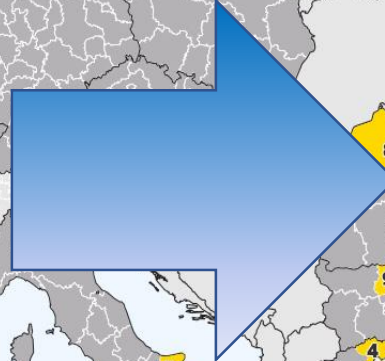
Help meet the 2021-7  
**enabling condition** of good  
governance of smart  
specialisation strategy with  
**7 fulfilment criteria**

Generate lessons and  
a model for other  
regions

Test-bed for theories  
on S3 and for  
understanding RIS3

## SELECTED LAGGING REGIONS

- 1 Centro
- 2 Extremadura
- 3 Puglia
- 4 Eastern Macedonia and Thrace
- 5 Warminsko Masurskie
- 6 Észak-Alföld
- 7 Nord-Vest
- 8 Nord-Est
- 9 Severen Tsentralen



# Project staging in Bulgaria

- Stocktaking
- Role of Higher Education Institutions
- Stakeholders' engagement
- Governance
- EDP

**Stage 1**  
(July 2016 – June 2018)

**Focus on Severen  
Tsentralen Region**

**Stage 2**  
(Lagging  
Regions II)  
(September  
2018 – June  
2020)

**Ongoing**

**Stage 3 (Post  
2020)**

**7 criteria  
Enabling  
condition**

# Ongoing activities

- **Analysis of S3 governance**
- **Participation in thematic meetings for S3 revision** (Sofia organized by the Ministry of Economy)
- **Bilateral meetings** with the Ministry of Economy, Operational Programmes Agencies, Ministry of Education
- **Study on intermediate organizations (governance, monitoring, evaluation)**
- **Horizontal activities and peer learning**
- **EDP focus groups in Plovdiv and Varna**



# Main challenges identified so far

- Need to reconnect the **centre with the periphery** (national S3 vs local strategies)
- Need to encourage the establishment of a network of S3 supporting **intermediary actors** (development/innovation agencies, business associations...)
- Fill the gap between **higher education institutions** and business
- Work on **capacity building** and awareness of S3 as a tool for growth and competitiveness

- For more information:
- Elisa Gerussi [elisa.gerussi@ec.europa.eu](mailto:elisa.gerussi@ec.europa.eu)
- Project webpage  
<https://s3platform.jrc.ec.europa.eu/ris3-in-lagging-regions>