

# The European Commission's science and knowledge service

## Joint Research Centre





# Smart Specialisation for Sustainable Development Goals

*Localised STI Roadmaps  
for transformation and development*

Guilin, 11 December 2019

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# The DNA of Smart Specialisation



*Setting transformative agendas relying on **four main features***



**Localisation:** focused on territorial specificities



**Customisation:** no "one size fits all" – adapted to local context and institutions



**Prioritisation:** targeting most promising potential for development/transformation



**Mobilisation:** involving public and private stakeholders

**→ Combining evidence-based and community-based knowledge**

# The biggest experiment in innovation policy in the world...



**Scale**



**Flexible framework**



**Support structure**



**Innovation in policy-making**



**International partnerships**

**130 000 R&D&I projects (estimate)**

**68 billion euro investment**

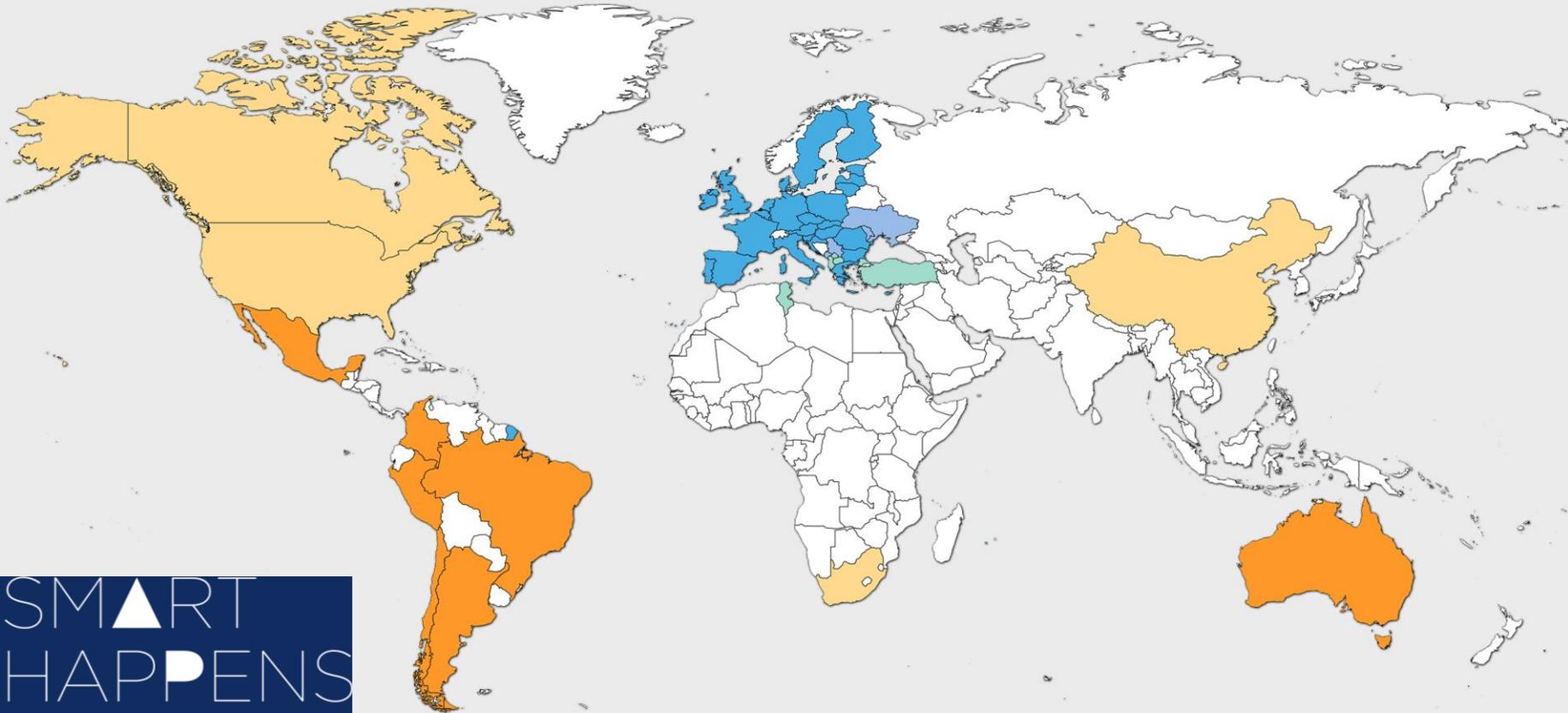
**120 S3 strategies**

**120 000 jobs to be created**

Data above for 2014-2020, new budget opening for 2021-2027



# Outreach



**EU:** 120 strategies, 68 billion euro 2014-2020

**EU Neighbourhood:** 10 countries in the process, 2 finished. Financing based on the progress

**Worldwide:** 9 countries, Support based on country-EC dialogue

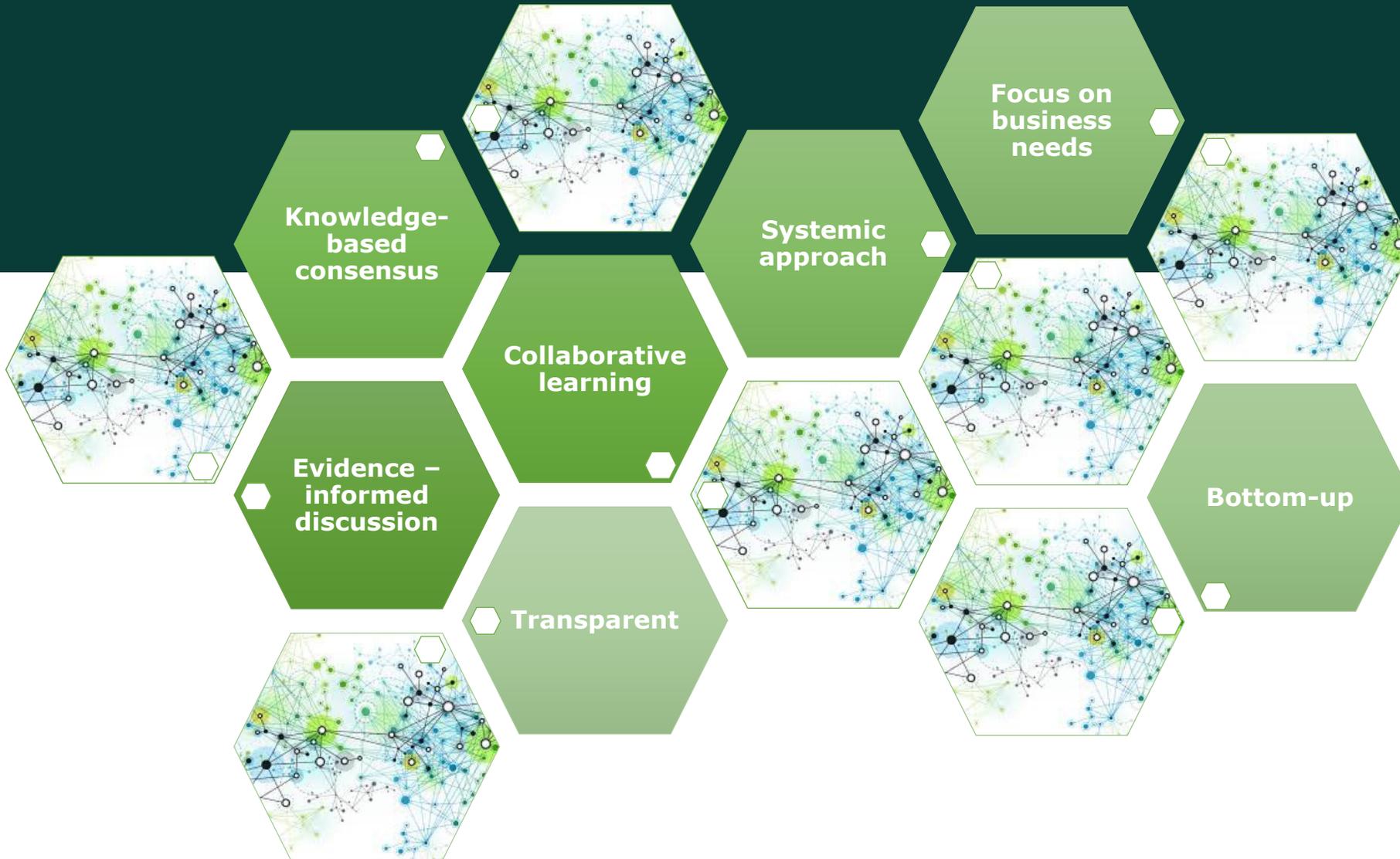


Logo: S3 from Hunter, Australia

- EU countries implementing Smart Specialisation Strategies
- Countries with advanced S3 development process
- Countries that have initiated S3 process development
- Countries that cooperate with JRC on Smart Specialisation
- Countries that expressed interest in Smart Specialisation



# Key elements of Smart Specialisation approach



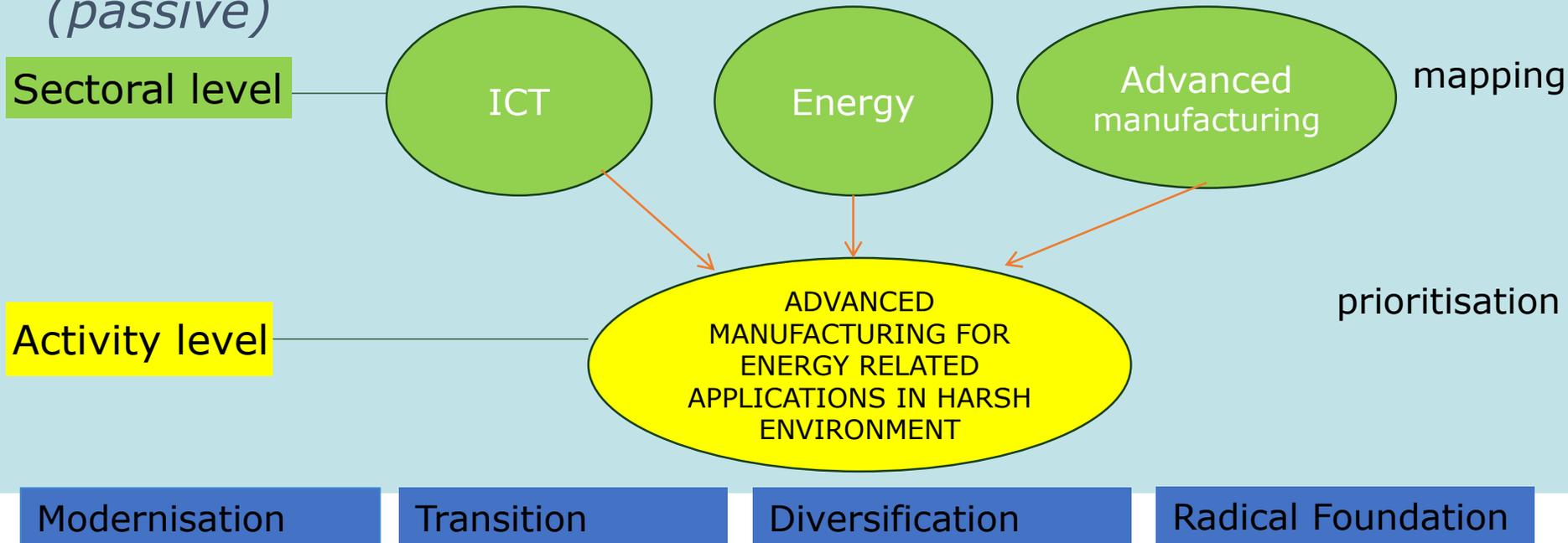
# What is **Smart Specialisation?** – (S3)

- ❑ **Evidence-informed:** all assets + capabilities + bottlenecks in a region, incl. external perspective, cooperation potential, global value chains
- ❑ **Bottom-up:** no top-down decision but dynamic entrepreneurial discovery process uniting key stakeholders around shared vision
- ❑ **Supporting all forms of innovation,** not only technology-driven, existing/new knowledge
- ❑ **Ecosystem approach:** creating environment for change, efficiency of institutions
- ❑ **Differentiation:** focus on competitive advantages, potential for excellence, emerging opportunities, market niches, at the level of activities – granularity
- ❑ **Concentration of resources on priorities,** problems and core needs, for critical mass/critical potential
- ❑ **Synergies across different departments and governance levels** (EU-national-subnational); cross-sector/technology links – NO Silos Thinking!
- ❑ **Place-based economic transformation:** rejuvenate traditional sectors through higher-value activities; aiming at developing a strategic approach to territorial development

# S3: the notion of specialisation

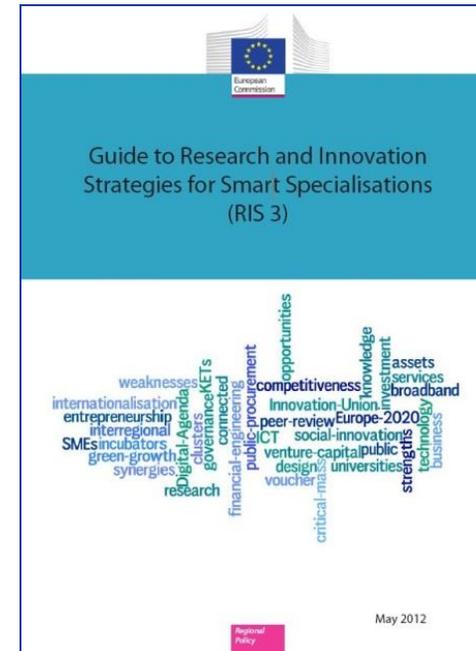
*S3 is about developing new specialisations based on territorial concentration of knowledge, competence and market potentials (dynamic)*

*S3 is NOT to be understood as a sector specialised or relative to other territories (passive)*



# Design principles for S3

1. ANALYSIS: discovery of the socio-economic and innovation engines of territorial growth, competitive advantages & weaknesses
2. MAKE CHOICES: identify a limited set of priorities for development where to concentrate investment
3. STAKEHOLDER INVOLVEMENT: setting priorities should be an inclusive and interactive process centred on *entrepreneurial discovery*
4. BROAD VIEW OF INNOVATION: support technological as well as practice-based and social innovation
5. MONITORING AND EVALUATION: feeding back information into the policy cycle and allowing strategy revision



Available on the S3 Platform webpage  
<http://s3platform.jrc.ec.europa.eu>

## S3 Guides



# Key steps for S3 design

STI for SDG Guidebook

**Step 1 – Analysis of territorial context/  
potential**

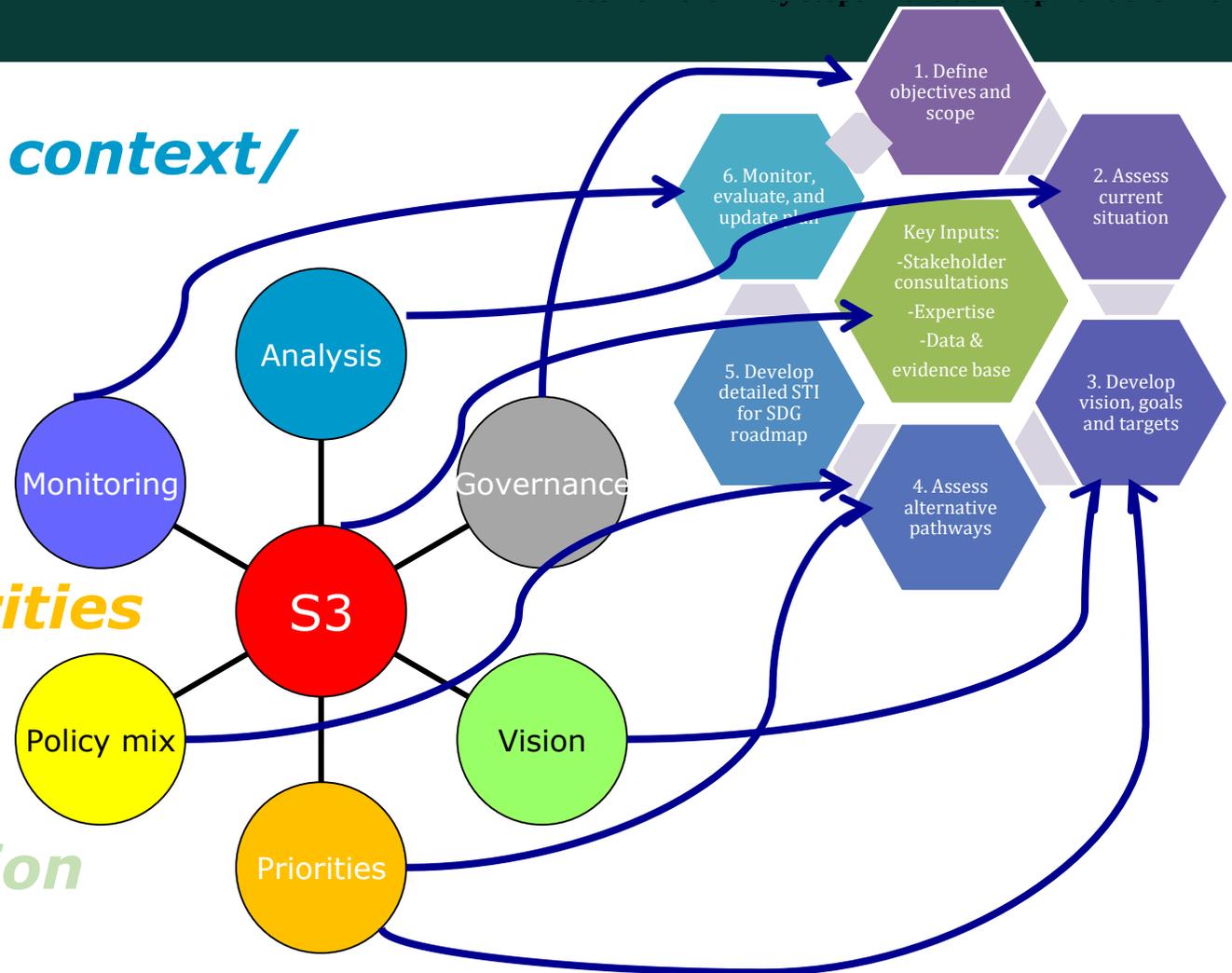
**Step 2 – Governance**

**Step 3 – Vision for the future**

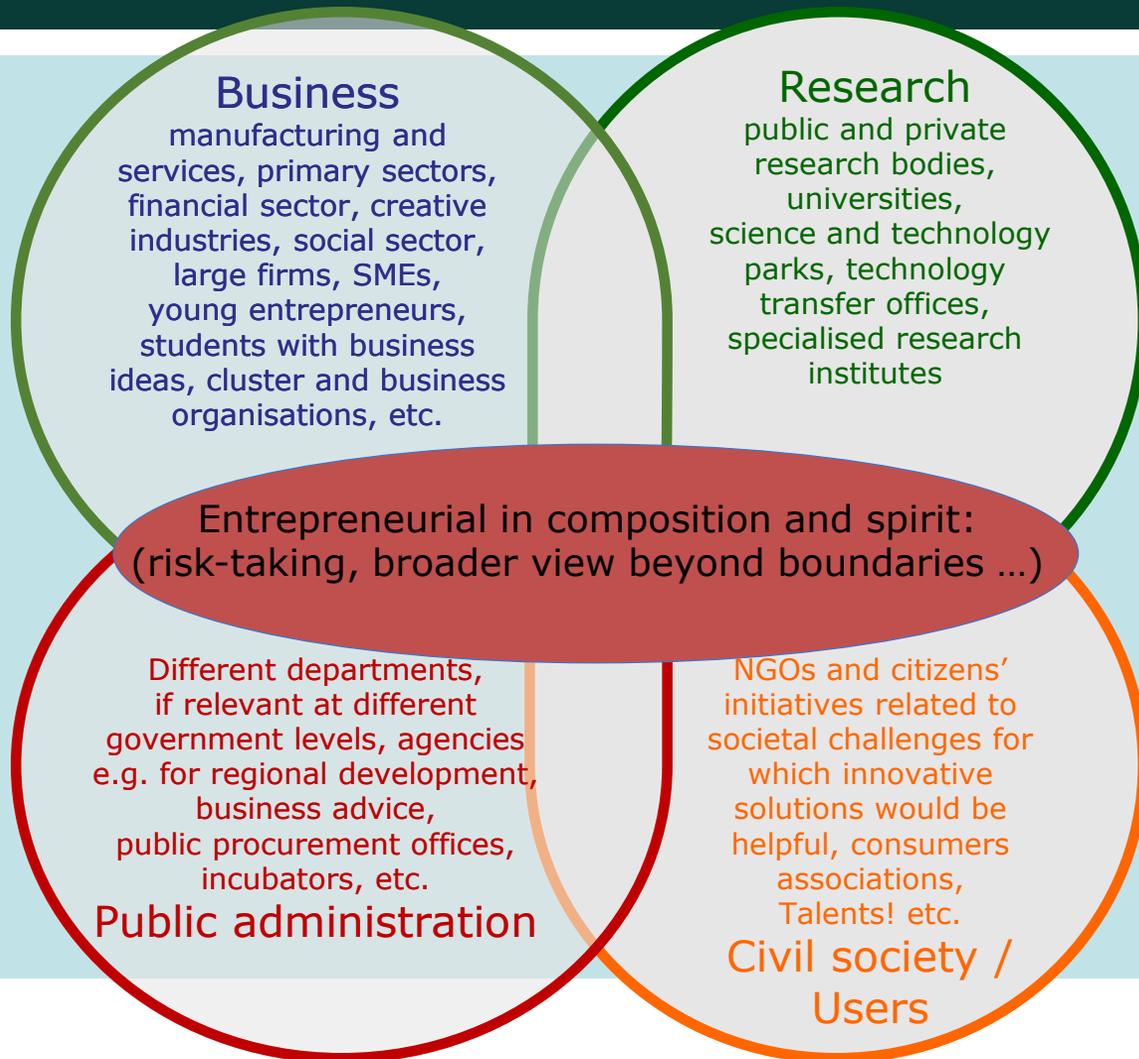
**Step 4 – Identification of priorities**

**Step 5 – Policy mix**

**Step 6 – Monitoring & Evaluation**

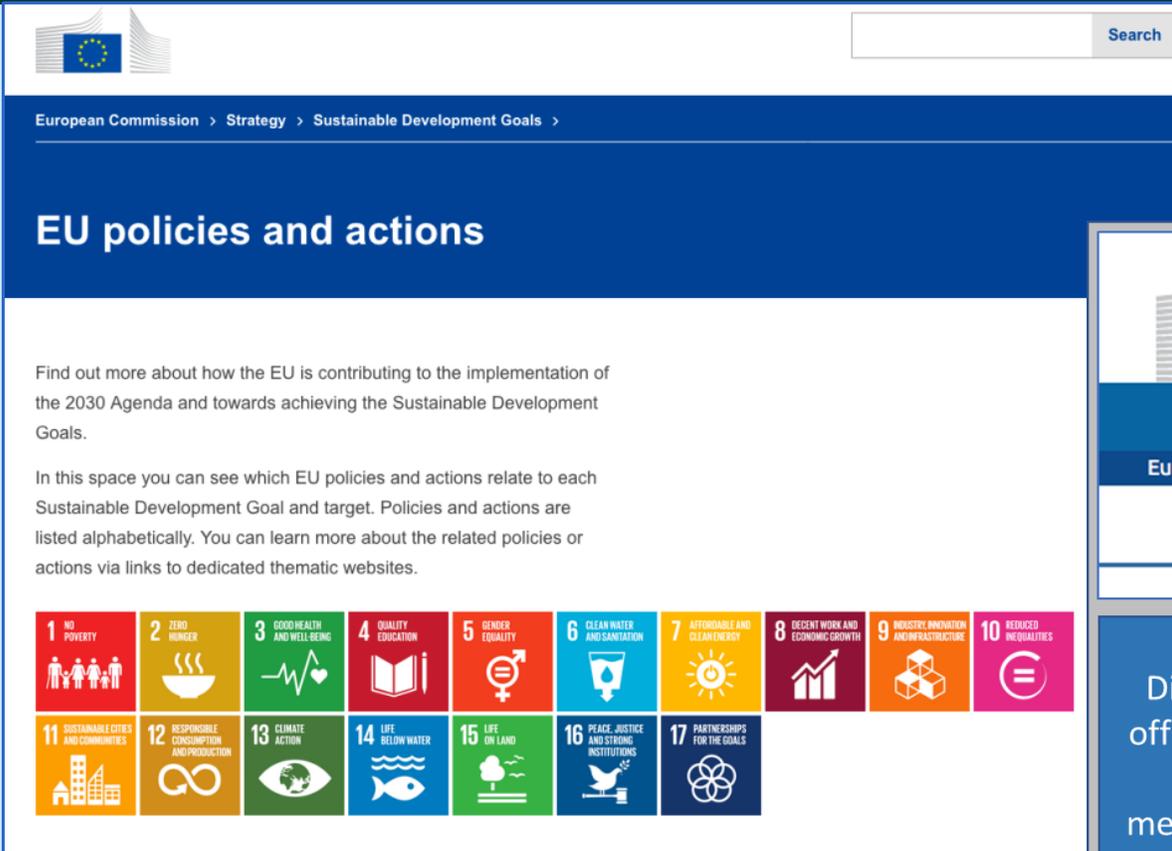


# S3 ecosystems: quadruple helix



- Businesses are best placed to lead the identification of new opportunities for growth
- The process of discovery of the new niches/markets inspire public policies on innovation

# Mainstreaming the 17 SDGs across the EU policies and projects



European Commission > Strategy > Sustainable Development Goals >

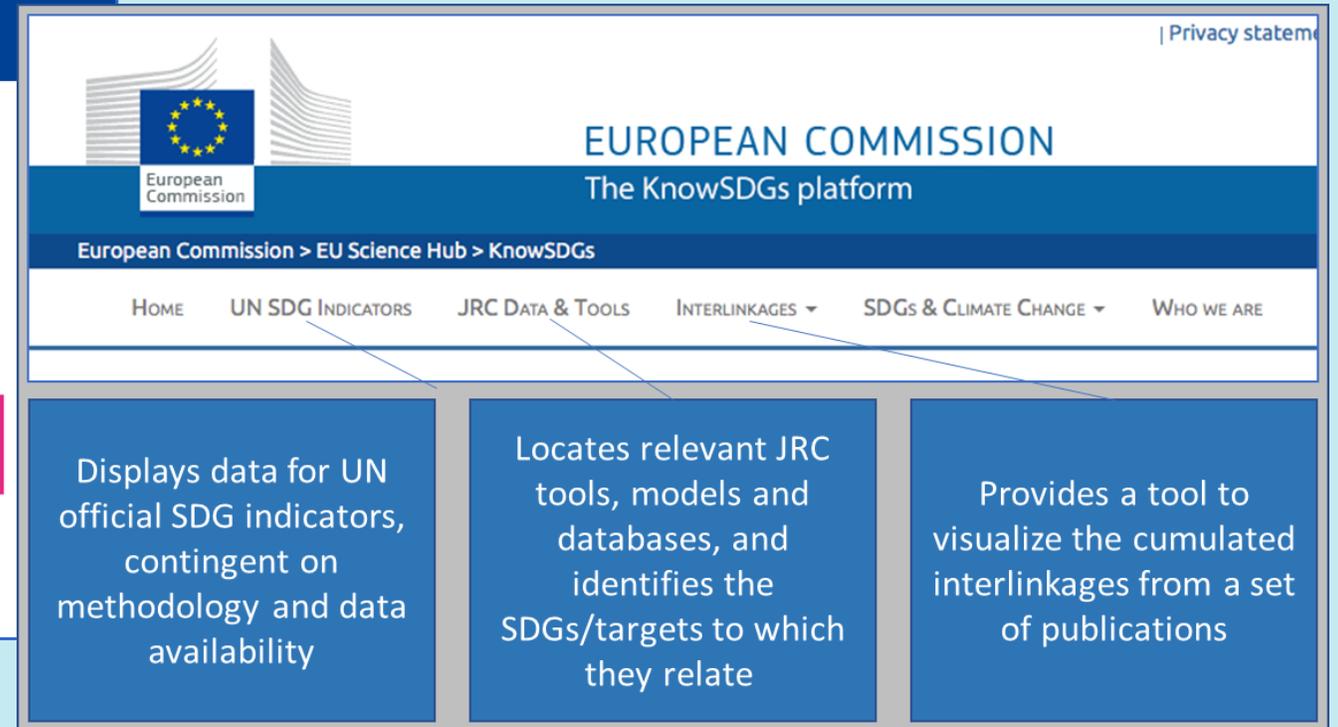
## EU policies and actions

Find out more about how the EU is contributing to the implementation of the 2030 Agenda and towards achieving the Sustainable Development Goals.

In this space you can see which EU policies and actions relate to each Sustainable Development Goal and target. Policies and actions are listed alphabetically. You can learn more about the related policies or actions via links to dedicated thematic websites.



1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS			



European Commission

## The KnowSDGs platform

European Commission > EU Science Hub > KnowSDGs

HOME UN SDG INDICATORS JRC DATA & TOOLS INTERLINKAGES SDGs & CLIMATE CHANGE WHO WE ARE

Displays data for UN official SDG indicators, contingent on methodology and data availability

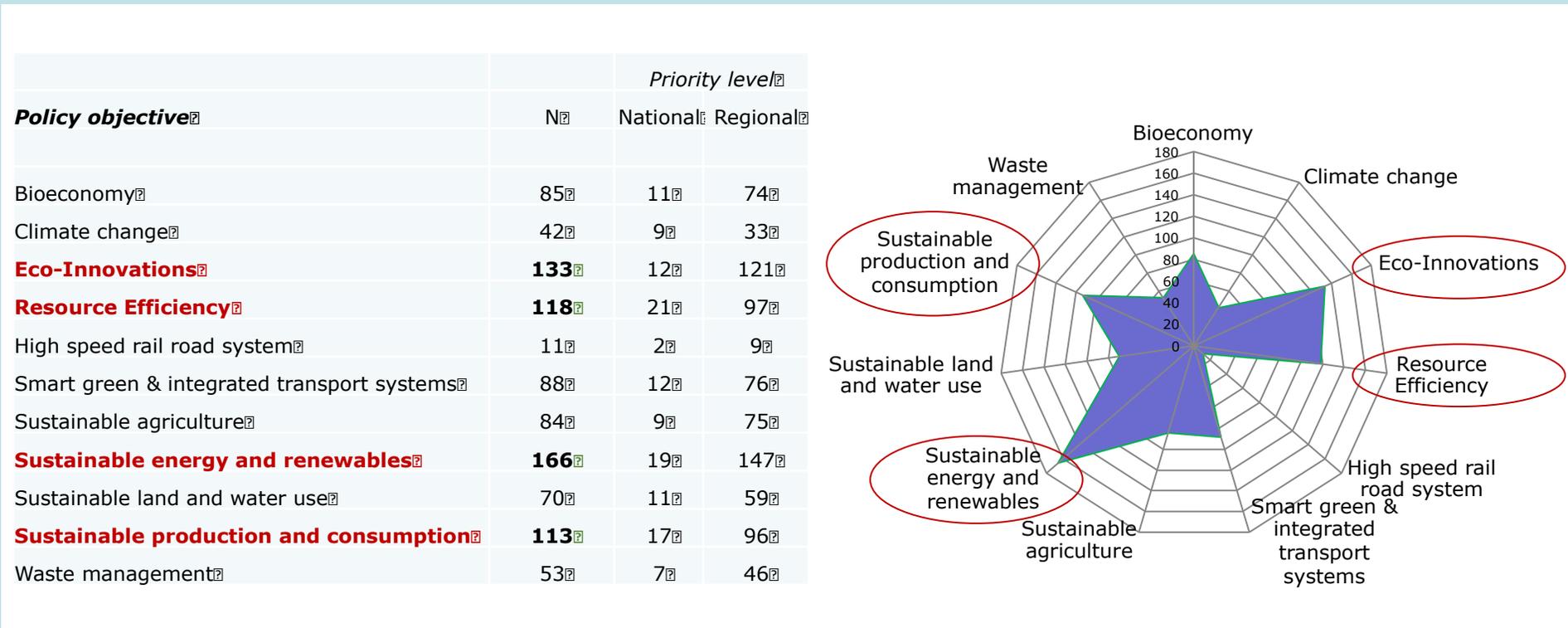
Locates relevant JRC tools, models and databases, and identifies the SDGs/targets to which they relate

Provides a tool to visualize the cumulated interlinkages from a set of publications



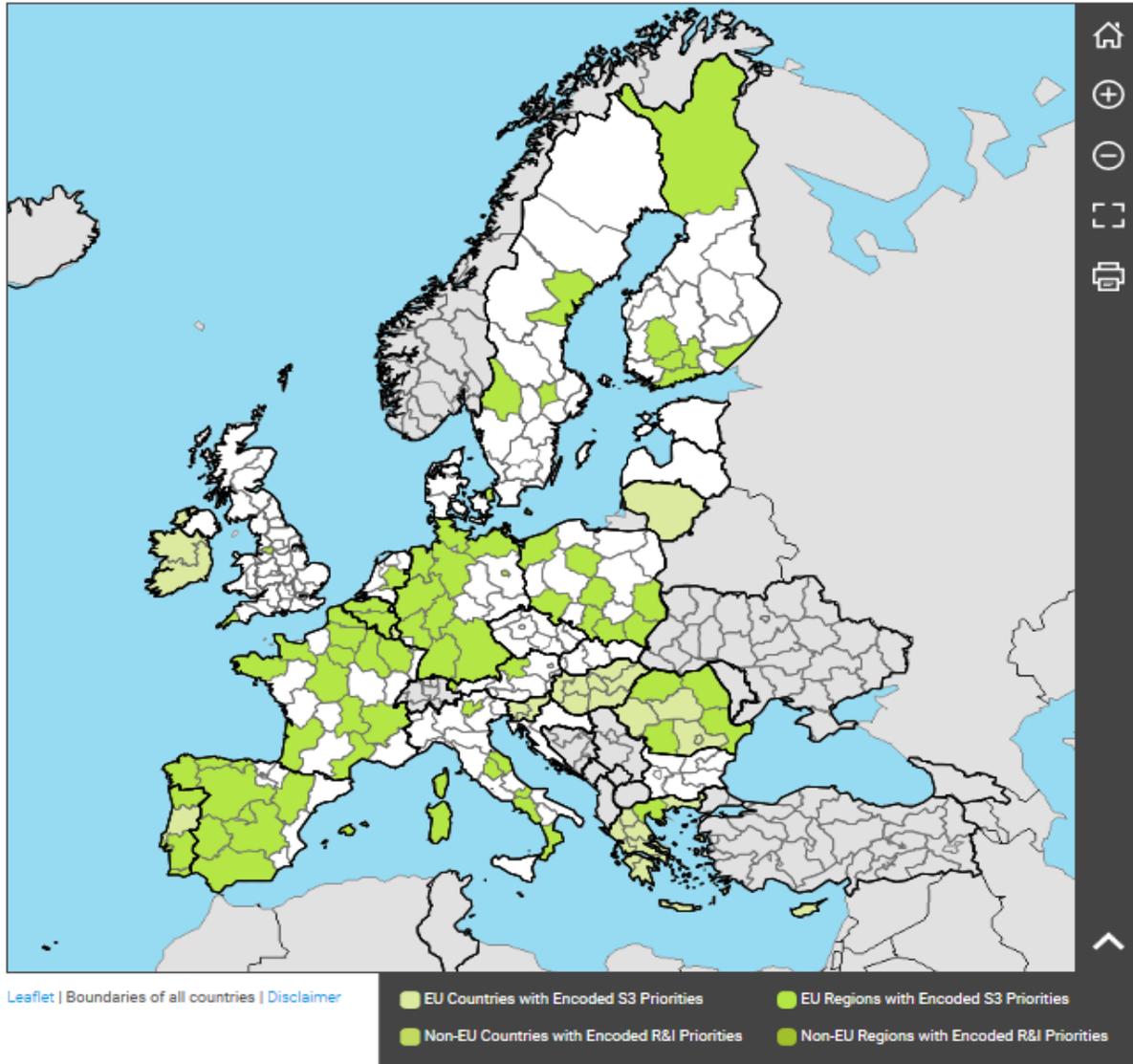
# S3 for SDGs: new work stream

## Sustainable Innovation: S3 priorities



Source: JRC, S3 Thematic Platforms Team

# S3 for SDGs: new work stream



Example: European Union regions and countries investing in priority domains such as cleaner environment, energy-efficient networks and low energy computing

Read more:

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

Source: European Commission, Joint Research Centre

# S3 for SDGs: international partnerships



Advanced manufacturing



Non-food Biomass



Efficient and Sustainable Manufacturing



3D-Printing



New Nano-Enabled Products



Textile Innovation



Medical technology



Photonics



Cybersecurity



Social Economy



Artificial Intelligence & Human Machine Interface



Personalised medicine



Chemicals



SMEs to the Industry 4.0



Sport



Digitalisation and Safety for Tourism



Advanced materials for batteries



Safe and sustainable mobility



Mining Industry



Water smart technologies



High Tech Farming



Traceability & Big Data



Smart Sensors 4 Agri-Food



Nutritional Ingredients

The 30 existing thematic partnerships supported by the 3 thematic S3 platforms include innovation actors from 153 regions in 28 countries (25 EU member states + Bosnia and Herzegovina, Norway and Turkey).



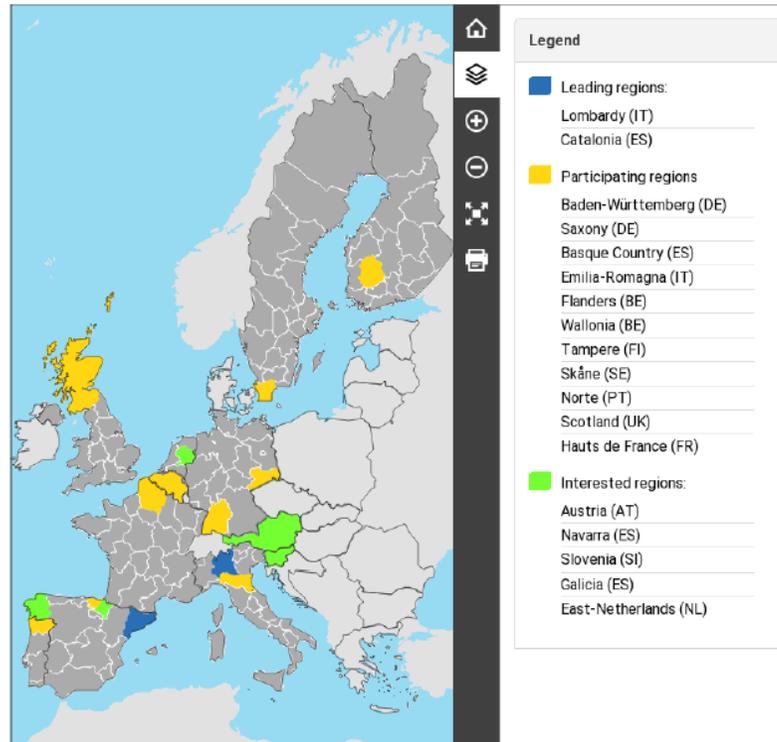
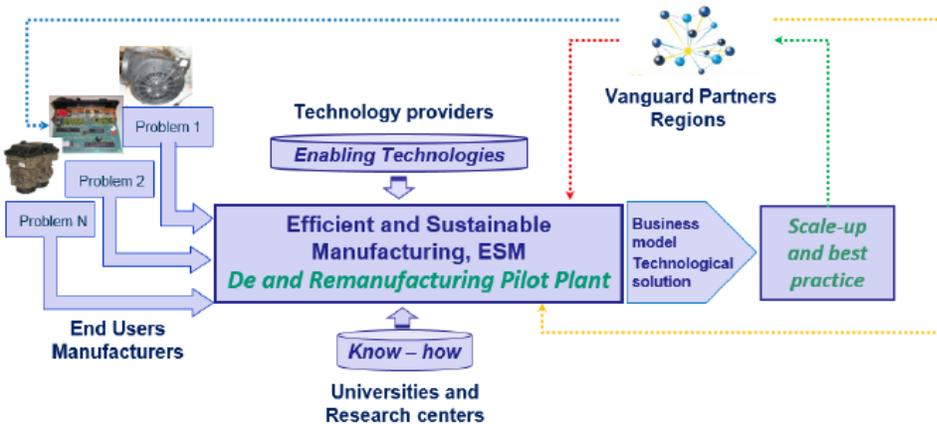
# S3 for SDGs: international partnerships



Platform: **Industrial Modernisation**  
Partnership: **Efficient and Sustainable Manufacturing (VT)**  
Pilot: **De-and Remanufacturing pilot network**



**De- and Remanufacturing** includes the set of technologies, tools and knowledge-based methods to **recover, re-use and upgrade functions and materials from industrial waste and post-consumer high-tech products**, under a new producer-centric Circular Economy perspective.



# JRC contribution to the Global Pilot Programme on STI for SDGs



- ❑ Collecting and sharing experience on smart specialisation
- ❑ Support for Serbia as a pilot country
- ❑ Contributing to the Guidebook
- ❑ Development and testing of SDG-STI mapping methodology
- ❑ Mobilising EU support from different programmes
- ❑ Meetings and workshops: next one **5-6 March 2020**

# Looking at impacts: Smart specialisation contributes to better quality of government

QoG Maps

Please choose a variable to plot and the year of reference. Hover over the countries to see their score in the selected variable and scroll on the map to zoom in and out.

Select a Category

- Quality of Government
- Civil Society
- Conflict
- Education
- Energy and Infrastructure
- Environment
- Gender Equality
- Health
- History
- Judicial
- Labor Market
- Media
- Migration
- Political Parties and Elections
- Political System
- Public Economy
- Private Economy
- Religion

Map About this app

## ICRG Indicator of Quality of Government

This variable is available from 1984 to 2018  
This variable is available for 139 countries for 2015

+  
-

0.0 – 0.1  
0.1 – 0.2  
0.2 – 0.3  
0.3 – 0.4  
0.4 – 0.5  
0.5 – 0.6  
0.6 – 0.7  
0.7 – 0.8  
0.8 – 0.9  
0.9 – 1.0  
NA

Source: [International Country Risk Guide - The PRS Group](#)

Variable Description

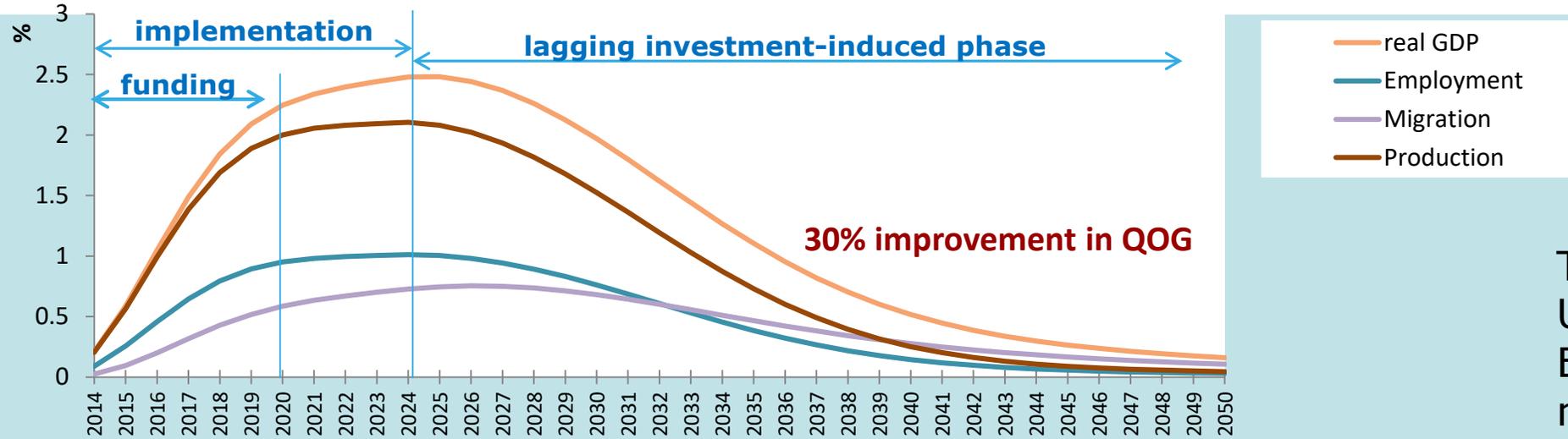
The mean value of the ICRG variables "Corruption", "Law and Order" and "Bureaucracy Quality", scaled 0-1. Higher values indicate higher quality of government.

## ICRG Indicator of Quality of Government

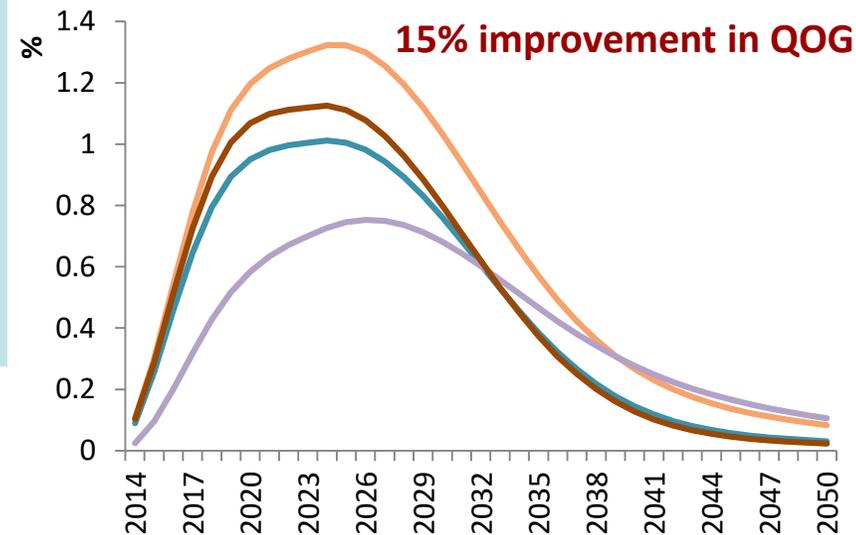
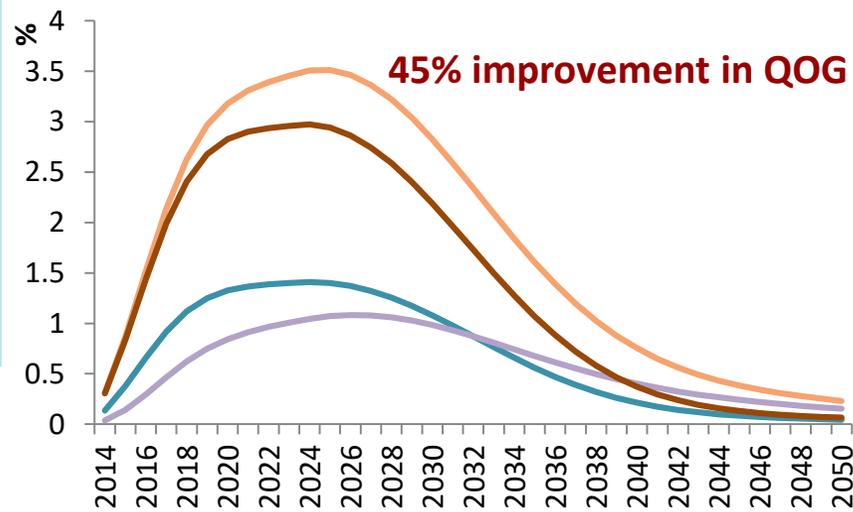
The Worldwide Governance Indicators (WGI) report on six broad dimensions of governance for over 215 countries and territories over the period 1996-2018: (I) Voice and Accountability; (II) Political Stability and Absence of Violence; (III) Government Effectiveness; (IV) Regulatory Quality; (V) Rule of Law; and (VI) Control of Corruption. The WGI are composite governance indicators based on over 30 underlying data sources.

# Looking at impacts: better government contributes to growth

## Policy impacts of improving QOG in Ukraine, % deviation from the baseline projections



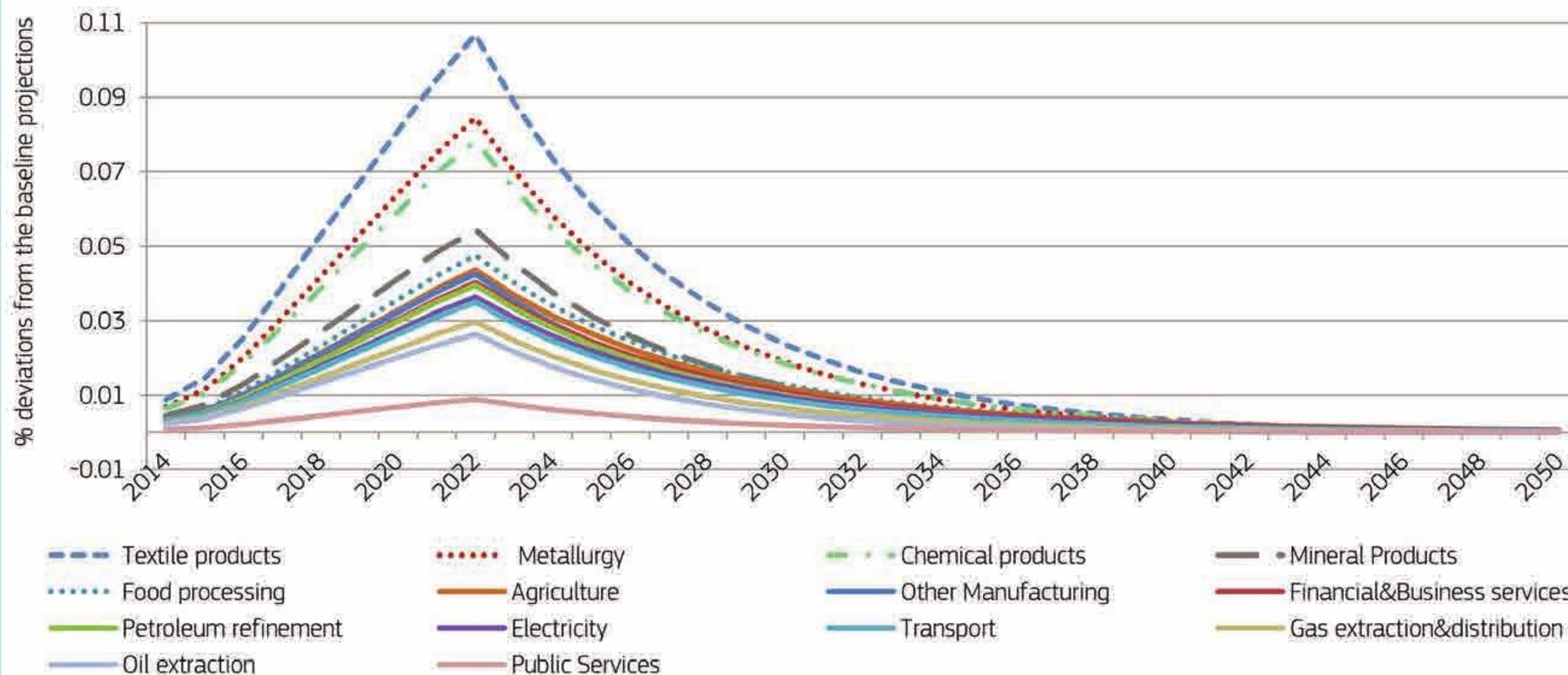
Total EU support for Ukraine since 2014: EUR 13,8 billion, mostly focused on regulatory and governance reforms



Source: JRC, RHOMOLO Modelling Team

# Looking at impacts:

## Targeted support for research and innovation can be more effective for economic transformation



Source: JRC, RHOMOLO Modelling Team

**Sectoral effects of IPA II investment for competitiveness and innovation in Albania**



# Thank you

## Any questions?

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