

# Joint Research Centre

the European Commission's in-house science service

*Serving society  
Stimulating innovation  
Supporting legislation*

## Smart Specialisation – What is there for the Countries beyond the EU

Dr. Ales Gnamus

Smart Specialisation Platform

JRC, Growth & Innovation Directorate

[www.ec.europa.eu/jrc](http://www.ec.europa.eu/jrc)

# Outline



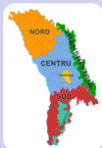
What is Smart Specialisation



S3 Platform Activities



S3P activities is the EU Enlargement and Neighbourhood countries



Launching S3 in Moldova

# Smart specialisation in the EU

REGULATION (EU) 1303/2013  
Applies to the European Regional  
Development Fund (ERDF)

## Ex-ante conditionality

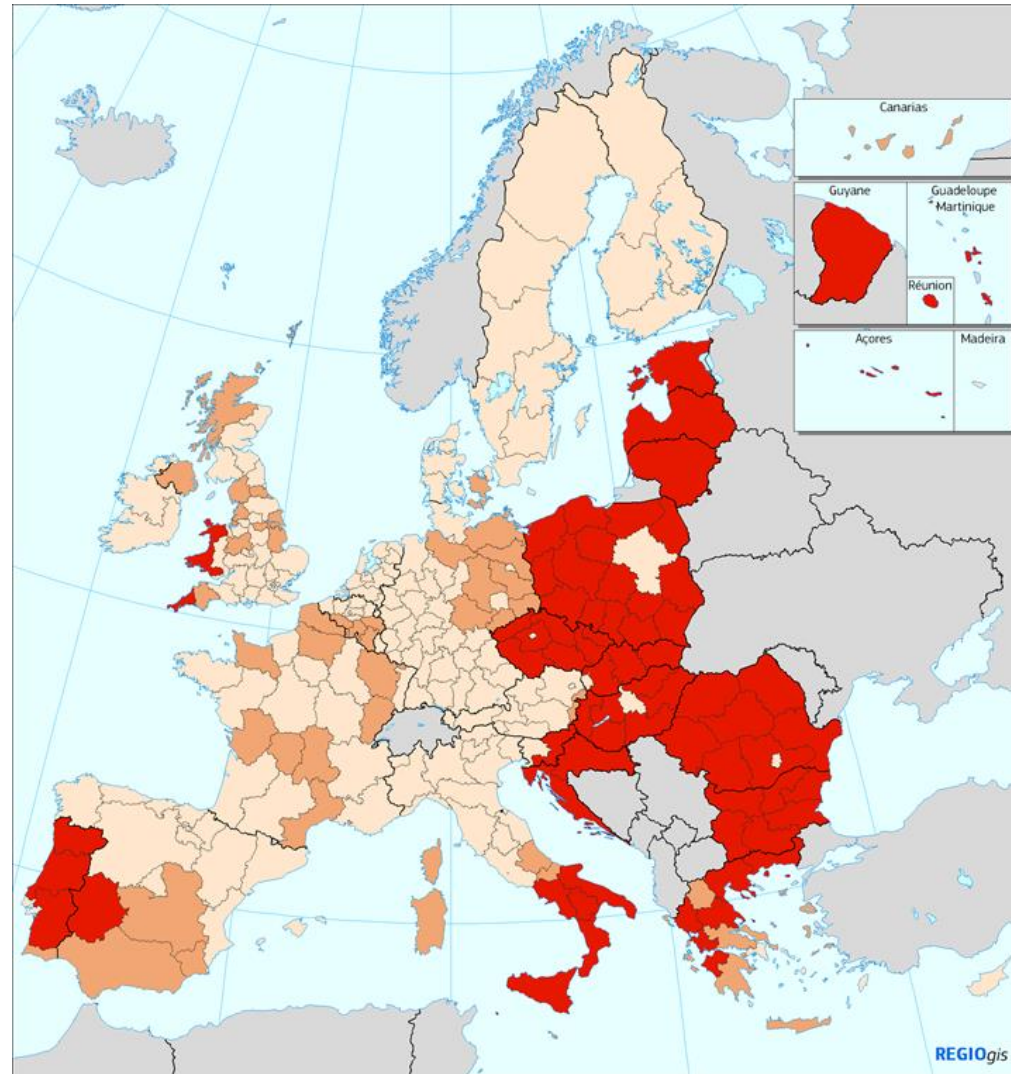
A national or regional **smart specialisation strategy** is in place that:

- **concentrate resources** on a limited set of R&I priorities
- to **maximise the positive impact** on growth and jobs

over **120 smart specialisation strategies** for ERDF prepared

more **than EUR 40 billion** allocated

to **create 350 000 new jobs** by the end of the programming period



**Eligibility map 2014-2020**

- Less developed region (GDP/head: less than 75%)
- Transition regions (GDP/head between 75% and 90%)
- More developed region (GDP/head: more than 90%)

2014-2020 ERDF Eligibility map  
based on GDP per capita in  
PPS, 2007-2009

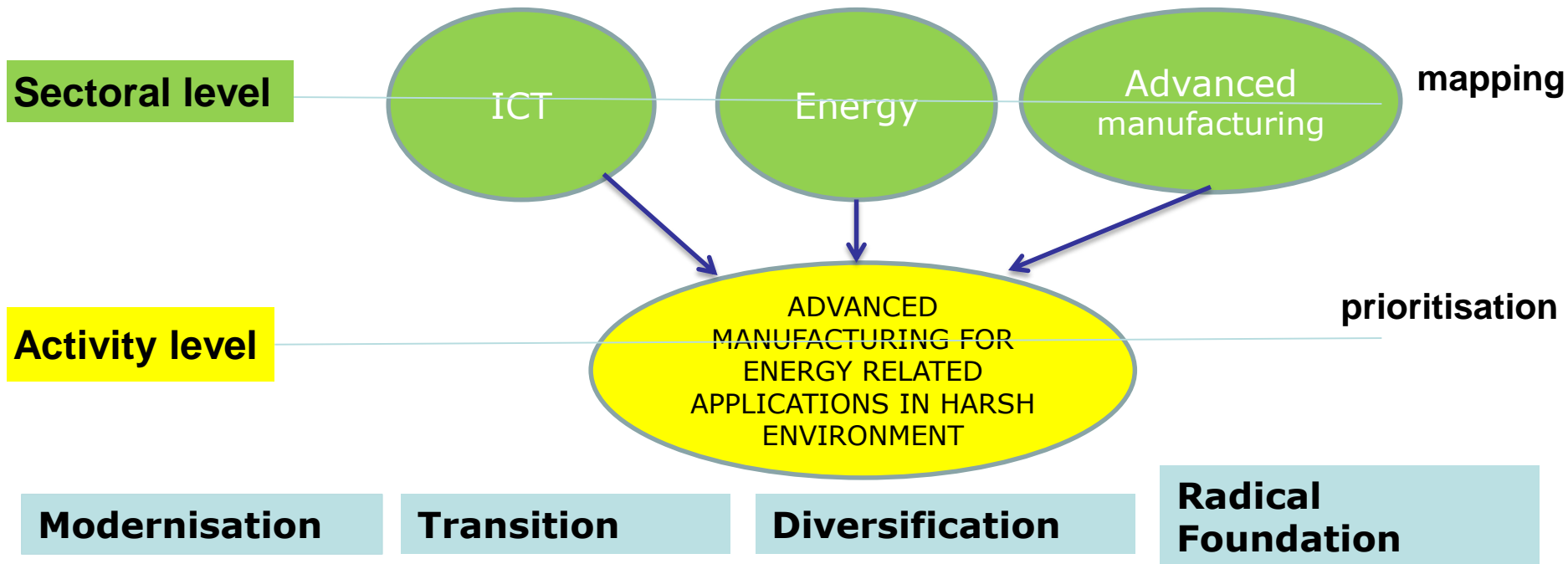
# What is Smart Specialisation?

- = **fact-based**: all assets + capabilities + **bottlenecks** in a region, incl. external perspective, cooperation potential, global value chains
- = no top-down decision but **dynamic entrepreneurial discovery process** uniting key stakeholders around shared vision
- = **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-regional); 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

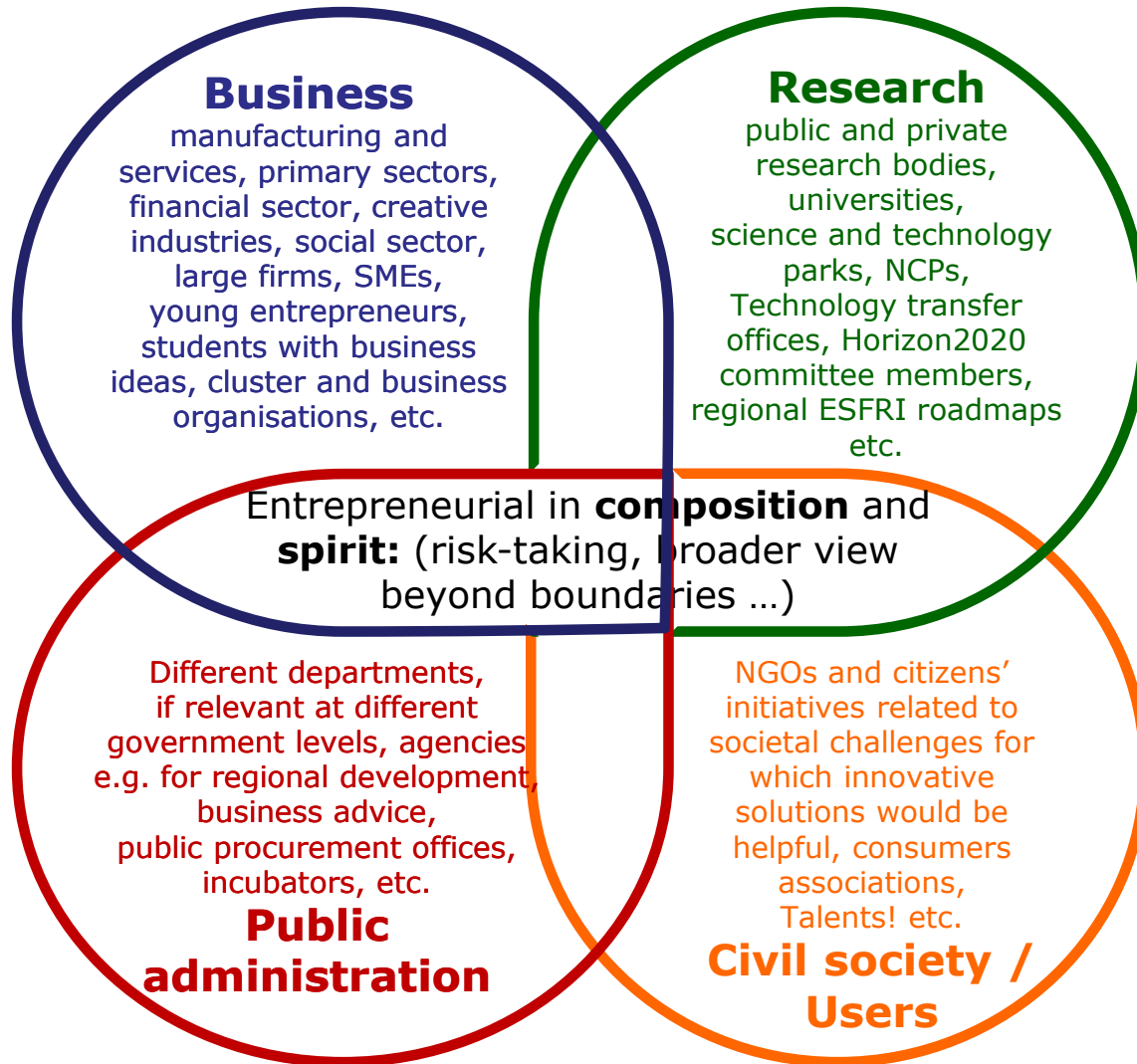
# S3: The Notion of Specialisation

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

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



# Smart Specialisation – Participatory...



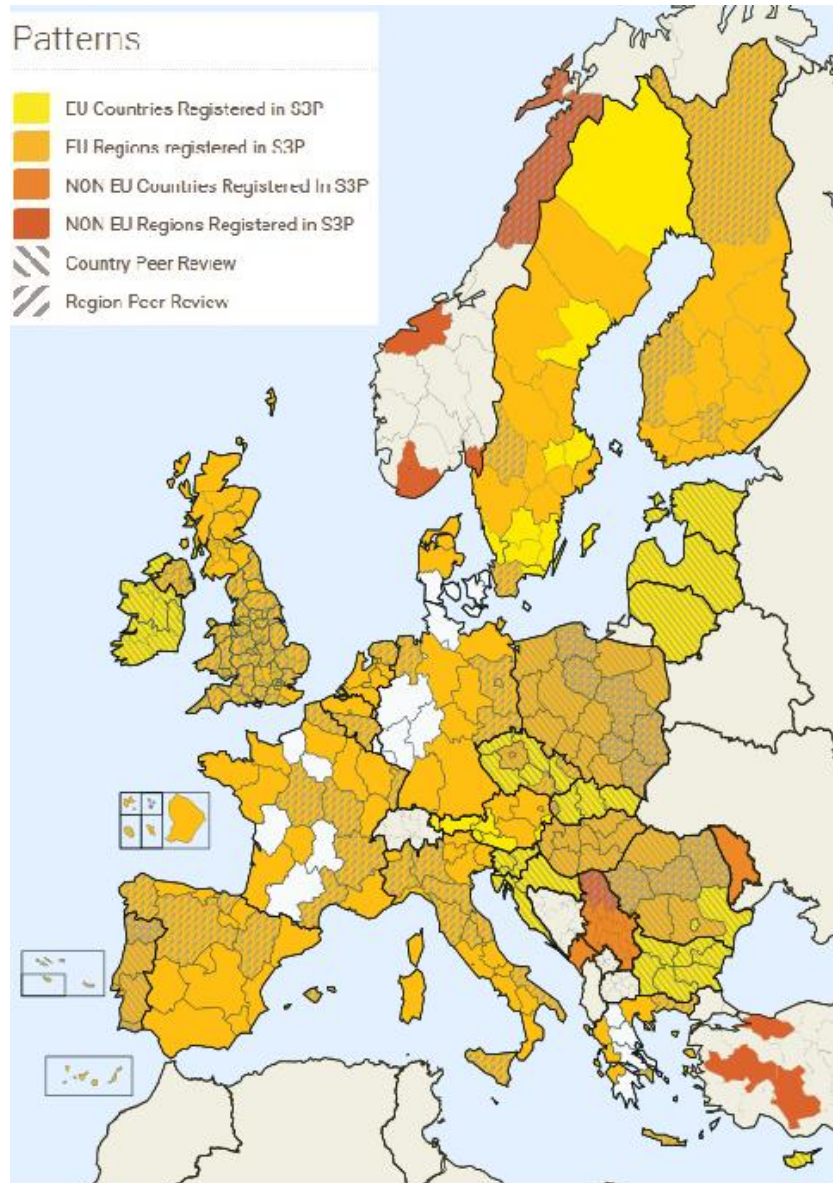
## ...ongoing process

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

# Smart Specialisation Platform



## Broad membership



## Guidance - Analysis - Support

**Comprehensive guidance tools** – RIS3 Guide, Digital Agenda Toolbox, FAQs, Implementation Handbook

**S3 Publication series** - Policy briefs co-authored with leading academics and practitioners; Working papers contributing to conceptual and empirical developments related to smart specialisation

**Supporting tools:** S3 self-assessment (assessment wheel), regional S3 priorities (EYE@RIS3), regional benchmarking, bilateral trade flows, ESIF investment

## Some achievements

**Wide membership:** 180 regions, 21 countries (incl. non EU: RS, MD, ME & regions from NO & TR)

**Strong endorsement** by national/regional policy makers: average 4.5/5 satisfaction ranking

**High "fidelisation rate":** >50% of regions attending workshops come back

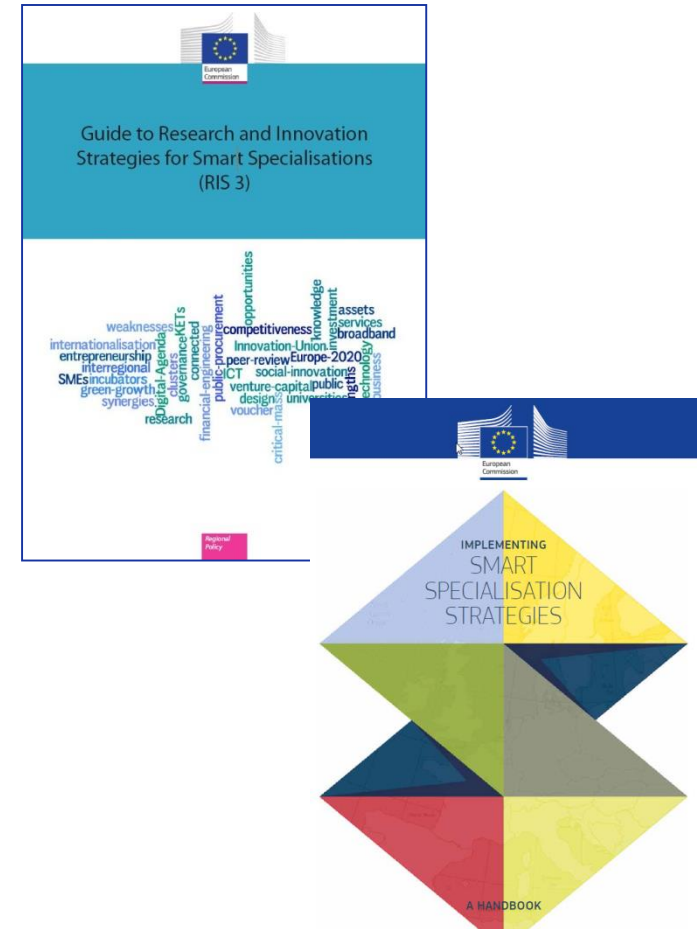
**Political endorsement at EU level:** EC (Hahn, Cretu), EP (Winkler), CoR (Markkula), Council



# Design principles for RIS3

RIS3 Guides

- 1. ANALYSIS:** discovery of the socio-economic and innovation engines of regional 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>



# Key steps for developing RIS3

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

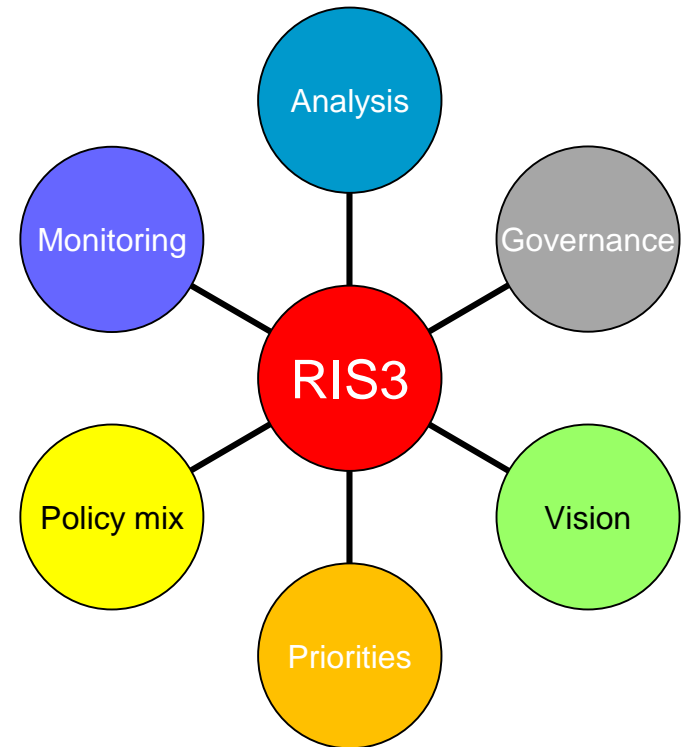
**Step 2 – Governance**

**Step 3 – Vision for the future**

**Step 4 – Identification of priorities**

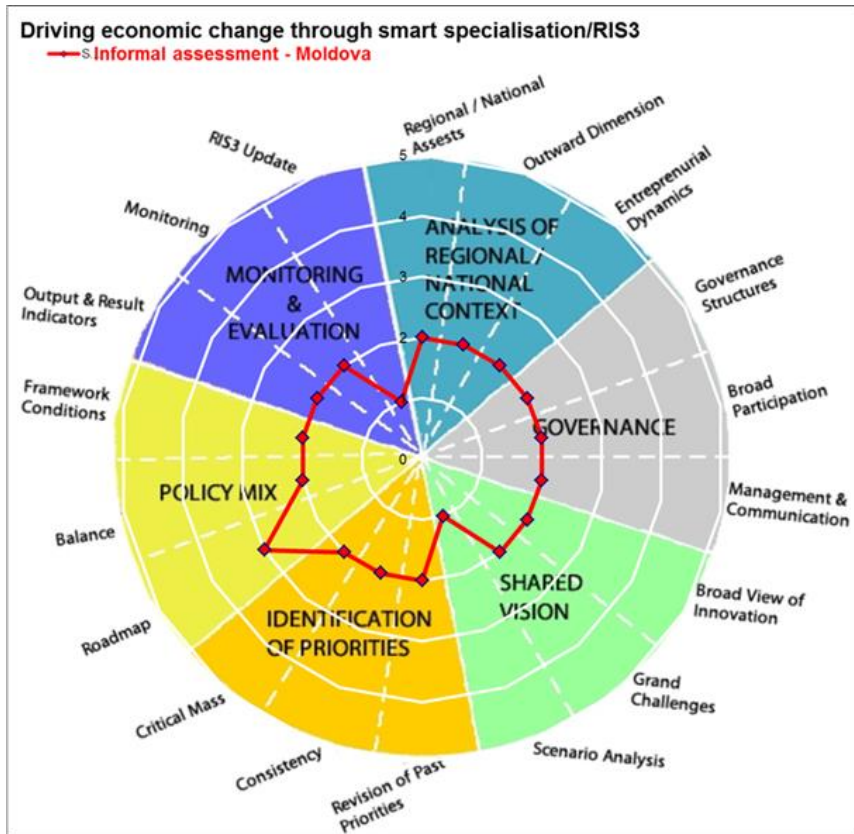
**Step 5 – Policy mix**

**Step 6 – Monitoring & Evaluation**

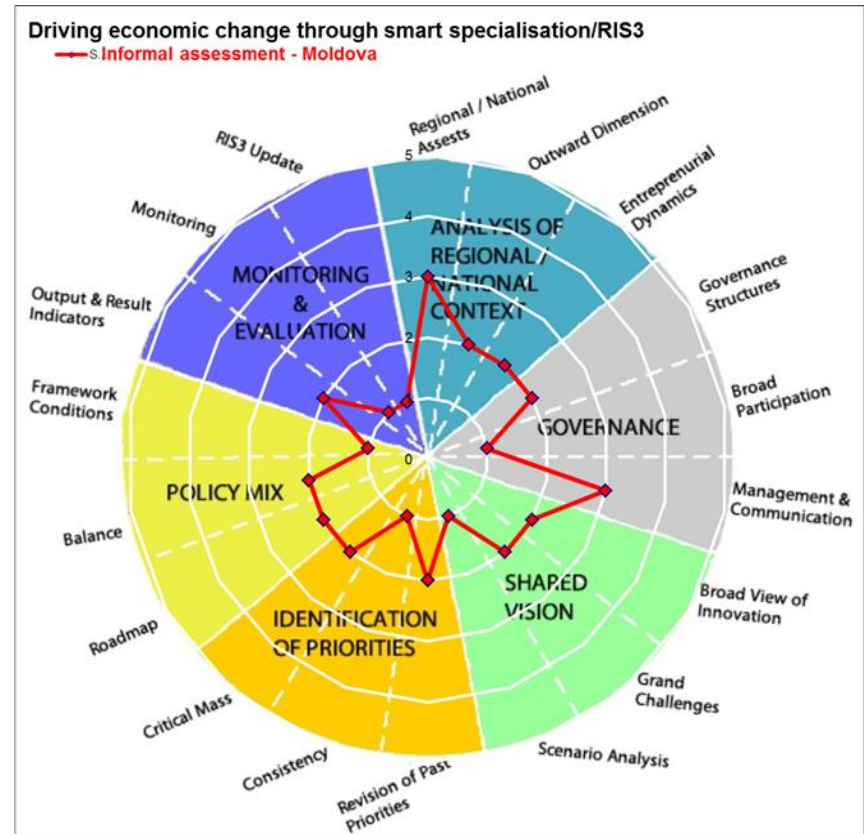


# RIS3 Assessment – MOLDOVA

## Expert assessment



## National assessment



# Main activities of the S3 Platform

**Support to lagging regions & Synergies ESIF-H2020 "Stairway to excellence"**

**S3 Knowledge Base: Guidance and Analysis, RIS3 Guide, DA Toolbox, S3 publications, S3 Seminar Series on Territorial Development**

**S3 Website & Newsletters**

**Trans-national focus Peer Reviews (in total 75 regions/countries)**

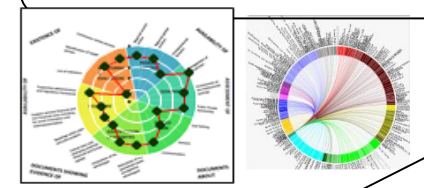
**S3 Interactive web tools**

**Peer eXchange & Learning Thematic focus on actors, process, common features and priorities**

**RIS3 assessment and support to REGIO desks**

**Support to the EU Macro-Regional Strategies & Alignment of innovation roadmaps**

**Focused approach on Value Chains - Thematic S3 Platforms: Energy, Agro-Food, Industrial Modernisation....**



# Main S3 Online Tools (I)

## Benchmarking Regional Structure

Reference regions = those that share similar structural conditions relevant for innovation-driven economic developm.

### Benchmarking Regional Structure

Finding reference regions based on structural similarities

A key to build sound innovation strategies for smart specialisation at the regional level is to identify opportunities for learning policy lessons and transferring practices from other regions. But what are the regions one should consider as a reference for these purposes? Our proposal is to start by identifying regions that share similar structural conditions which are relevant for innovation-driven development (social, economic, technological, institutional and geographical characteristics). That is, characteristics that cannot be easily changed in the short term and that are demonstrated to affect the way innovation and economic evolution take place in a region. Below you will find an [interactive tool](#) that allows you to identify reference regions across Europe based on a methodology jointly developed by Orkestra - Basque Institute of Competitiveness and the S3 Platform.

#### Documents

- Methodological paper
- List of structural characteristics
- Regional NUTS codes

#### Interactive tool

region

Burgenland (at11)

number of peers

20

refresh

The 20 nearest regions to Burgenland (at11)	Distance index
Kärnten - Austria (at21)	0.0116
Tirol - Austria (at33)	0.0197
Provincia Autonoma Trento - Italy (it2)	0.0225
Steiermark - Austria (at22)	0.0226
Oberösterreich - Austria (at31)	0.0245
Salzburg - Austria (at32)	0.0247
Niederösterreich - Austria (at12)	0.0252
Vorarlberg - Austria (at34)	0.0273
Umbria - Italy (it2)	0.0300
Syddanmark - Denmark (dk03)	0.0314
Comunidad Foral de Navarra - Spain (es22)	0.0319
Cantabria - Spain (es13)	0.0320
Sjælland - Denmark (dk02)	0.0343
Poitou-Charentes - France (fr53)	0.0347
Bourgogne - France (fr26)	0.0352

#### How it works

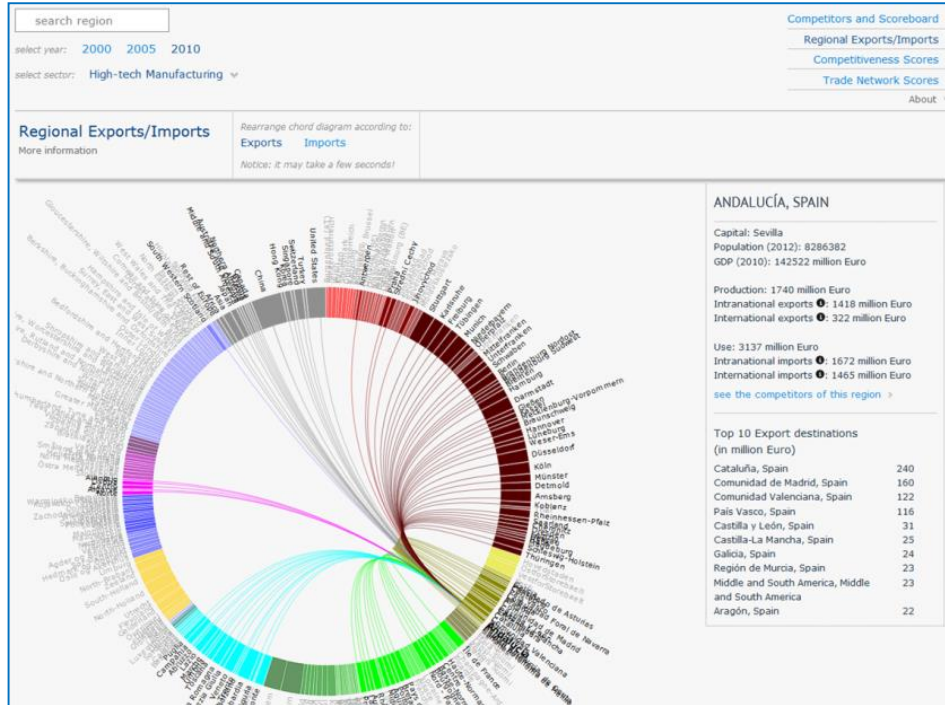
- Select a region in the top window
- Choose the number of reference regions you want to be displayed
- Press "refresh" to get the results
- A list of regions will appear on the right side of the screen sorted in descending order from the ones that are more similar (top) to the less similar (bottom) to the region selected
- The order is given by a synthetic index of structural distance (lower value=structurally closer to the selected region) explained in the methodological paper.

DIMENSIONS	ELEMENTS	VARIABLES	SOURCES	YEAR	UNIT		
1. Geo-demography	Regional size	Total Population	Eurostat	2011	people		
	Ageing	Population >= 65	Eurostat	2011	%		
	Urbanisation	Population <15	Eurostat	2011	%		
	Accessibility	Pop. in urban and comm. areas	DG Regio	2006	%		
2. HHRR educ. Level	HHRR educational level	Multimodal accessibility	ESPON	2006	0-100 index		
		Pop. with upper secondary and tertiary ed.	Eurostat	2012	%		
3. Technological specialization	Technological distribution (patents)	Electrical engineering	OECD REGPAT	2006-2010	%		
		Instruments	OECD REGPAT	2006-2010	%		
		Chemistry	OECD REGPAT	2006-2010	%		
		Mechanical engineering	OECD REGPAT	2006-2010	%		
Technological concentration (patents)	Other fields	OECD REGPAT	2006-2010	%			
	GINI index of 35 subfields	OECD REGPAT	2006-2010	0-100 index			
4. Sectoral structure	Economy's sectoral distribution	Agriculture, forestry and fishing (A)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Industry (except const.) (B-E)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Construction (F)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Wholesale and retail trade, transport etc. (B-I)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Information and communication (J)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Financial and insurance activities (K)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Real estate activities (L)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Professional, scientific and technical activities (M-N)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Public administration (O-Q)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Arts, entertainment and recreation (R-U)	Eurostat LFS <sup>(1)</sup>	2012	%		
		Sectoral concentration	Industrial sectoral structure	Top of 5 subsectors (2 digits) (% total employment)	Eurostat SBS	2011 or closest	%
				Mining and quarrying (05-09)	Eurostat LFS	2011	%
Food, drinks and tobacco (10-12)	Eurostat LFS			2011	%		
Textiles, apparel and leather (13-15)	Eurostat LFS			2011	%		
Wood, paper and printing (16-18)	Eurostat LFS			2011	%		
Chem., pharm., rubber, plastic and refined petroleum (19-22)	Eurostat LFS			2011	%		
Non-metallic mineral products (23)	Eurostat LFS			2011	%		
Basic metals and metal products (24-25)	Eurostat LFS			2011	%		
Electric, electronic, computer and optical equipment (26-27)	Eurostat LFS			2011	%		
Machinery (28)	Eurostat LFS			2011	%		
Transport equipment (29-30)	Eurostat LFS			2011	%		
Other manufacturing (31-33)	Eurostat LFS			2011	%		
5. Firm size	Firm size	Average firm size	Eurostat SBS	2009 or closest	# employees		
6. Openness	Trade openness	Total exports (% GDP)	Fraunhofer ISI and Orkestra	2009 or closest	%		
		Decentralisation	BAK Basel Economics	2009	0-100 index		
7. Institutions / Values	Multilevel government	Quality of institutions	Charron et al.	2012	standardized values		
		Social and institutional capital	Feeling of safety of walking alone in local area after dark	ESS	2010 or closest	1-4 index	
			Most people can be trusted or you can't be too careful	ESS	2010 or closest	0-10 index	
		Entrepreneurial / innovative attitudes	Important to think new ideas and being creative	ESS	2010 or closest	1-4 index	
Important to try new and different things in life	ESS		2010 or closest	1-4 index			

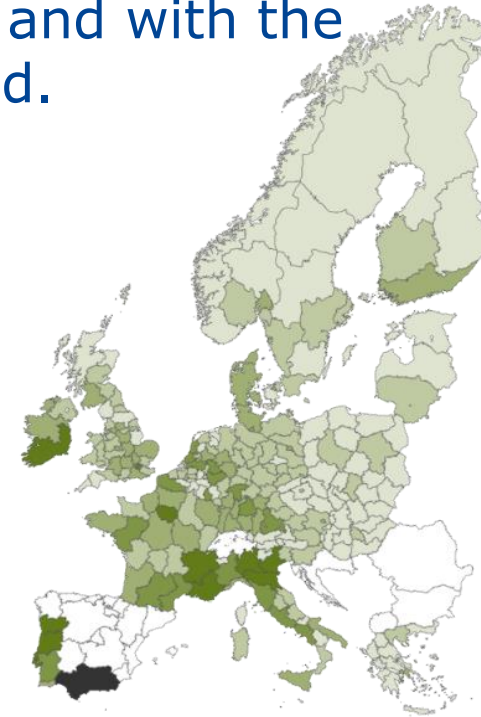
Note: (1) Data compiled through a request to Eurostat.

# Main S3 Online Tools (II)

## Inter-regional Trade and Competition Tool



Visualising the trade flows (yrs 2000/2005/2010) between 256 European NUTS2 regions and with the rest of the world.



The revealed competition map shows which region competes internationally with whom, on what and where.

**Note! BG, HR and RO not covered! Similarly Non-EU countries not covered!**

# Main S3 Online Tools (III)

## "EYE@RIS3" tool mapping S3/R&I priorities

Select region Refresh Match All of the following domains filters:

**Economic Domains** ? None selected **Scientific Domains** ? None selected **Policy Objectives** ? None selected

**Macro-region/Country** None selected **Region** None selected **Description of Priority**

Refined Search  
 Approximated Search

**Country/Region type**

- EU Countries with Encoded S3 Priorities
- EU Regions with Encoded S3 Priorities
- Non-EU Countries with Encoded R&I Priorities
- Non-EU Regions with Encoded R&I Priorities

Search Add/Edit priorities Export

**In total >1380 of regional/national R&I priorities in Europe encoded!**

EU Countries with Encoded S3 Priorities EU Regions with Encoded S3 Priorities  
Non-EU Countries with Encoded R&I Priorities Non-EU Regions with Encoded R&I Priorities

[Guides on - "How to Search the Tool" and "Add/Modify the Priorities"](#)

# Main S3 Online Tools (IV)

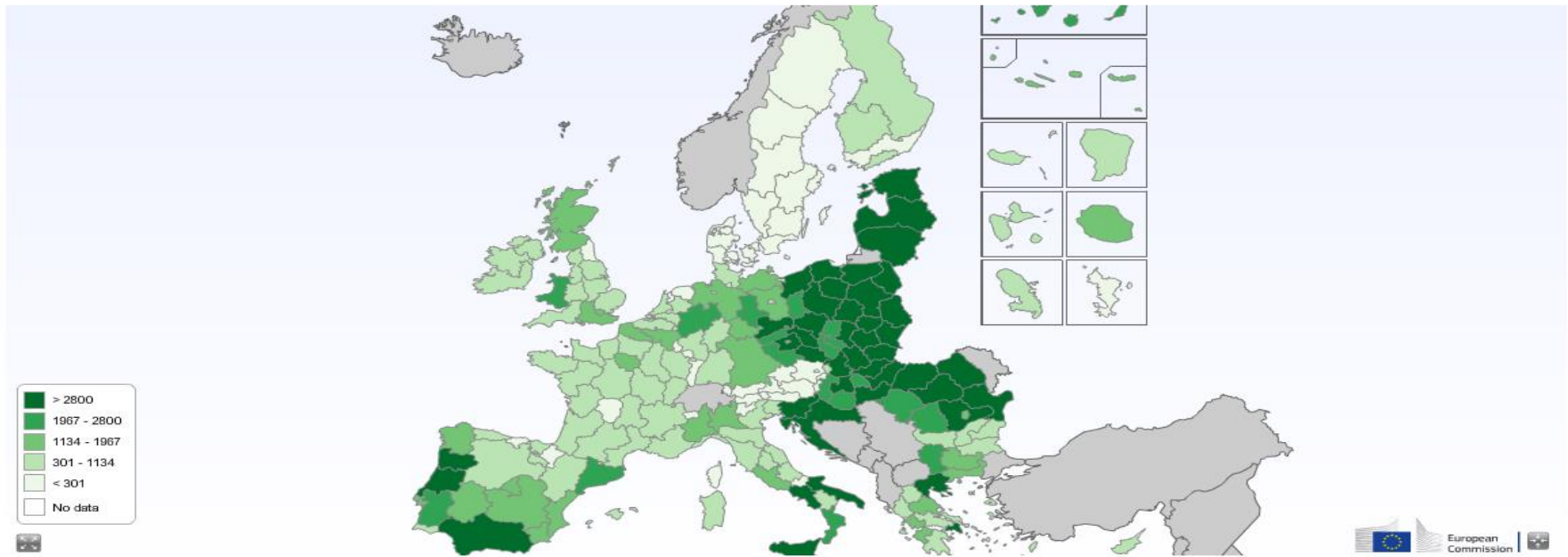
## ESIF-Viewer (visualising planned investments using European Structural and Investment Funds)

Countries: All selected (28) ▾  
Regions: All selected (209) ▾  
OP Types: All selected (4) ▾  
Intervention fields: All selected (17) ▾

► Show advanced filters

Reset Search

► Show selected search parameters



Total: 346,957 million

[Share this search](#)

[Export summary to pdf](#) [Export summary to csv](#) [Export summary to word](#)

Grouped by country (28) | [By region \(209\)](#) | [By operational programme \(380\)](#) | [By category of intervention \(123\)](#) | [By thematic objective \(13\)](#)

<http://s3platform.jrc.ec.europa.eu/esif-viewer>



# S3 Thematic Platforms

## Global value chains (GVC) in the context of smart specialisation

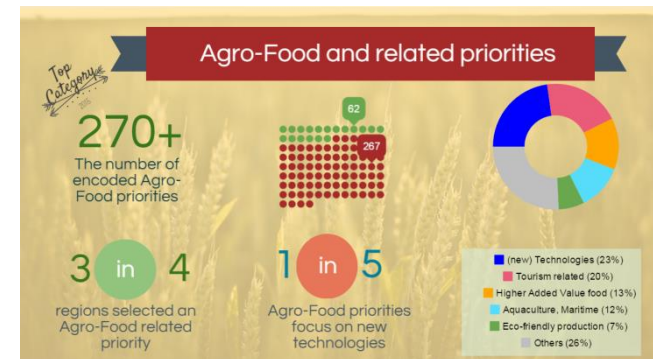
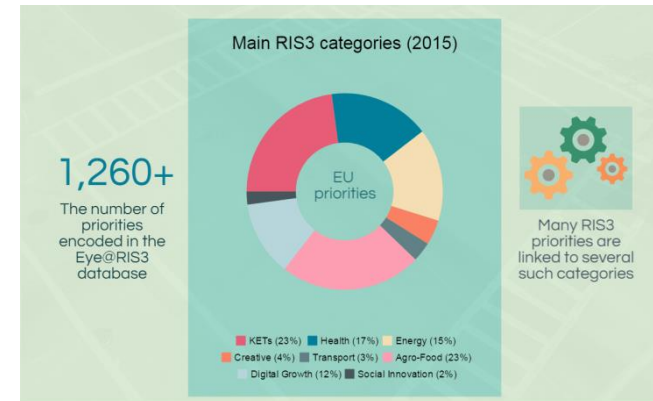
**What is it about?** The GVC aims at assisting regions in their efforts to facilitate the development of **new value chains through the interconnection of regional eco-systems** and their actors in quadruple helix in specific S3 investment areas.

**Why?** S3 is an engine for the development of European eco-systems that are necessary to gather critical mass for market breakthroughs.

**How?** Thematic S3 Platform provide **a multi-level support mechanism, combining efforts at regional, national and European level**, addressing in particular market and system failures that prevent breakthroughs, starting with information and coordination failures. The development of interregional collaboration is driven by opening-up regional smart specialisation strategies.



## Thematic S3 Platforms on Energy, Agro-Food, Industrial Modernisation





# Smart Specialisation beyond the EU

JRC's Enlargement and Integration Action



## S3 pilot project - Serbia, Moldova & Ukraine

*Support (awareness/trainings/advice/expertise)*

Identification of **economic competitive advantages** by exploitation of the innovation potential



Building **Entrepreneurial Discovery Process**- engaging **business, academia, research, policy makers and civil society** in search of the smart specialisation priorities



Designing the **smart specialisation strategy** and setting the necessary **governance structures**

# Why Smart Specialisation beyond the EU ?

**AN OPPORTUNITY** *to advance*  
*economic reforms:*



- **to kick-off and promote structural change and economic transformation.**
- **to advance the on-going economic reforms and to improve R&I policies**
- **to improve the governance of R&I strengthening existing institutional structures and developing interaction mechanisms**

# Why Smart Specialisation beyond the EU ?

**AN OPPORTUNITY** *for businesses*



- **to create transnational linkages and connections to global value chains and to get paths to new markets**
- **to gain from technology and knowledge transfer and transnational extensions contributing with new knowledge or capabilities**
- **access to additional funding sources and access to the EU programmes**

# Timeline of the JRC activities in support of the E&N countries

2013

- S3 trainings in Belgrade & Skopje (RS/MK)
- S3 for Danube seminar

2014

- Peer review in Novi Sad (RS)
- S3 for Danube workshop

2015

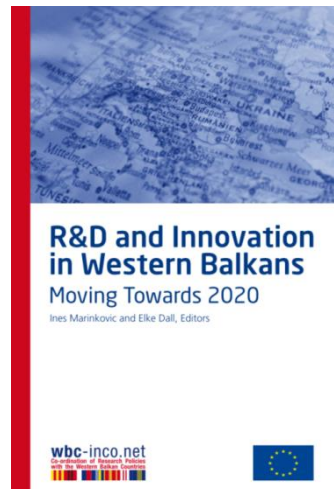
- JRC Annual EUSDR Event with particular attention to non-EU Danube partners

2016

- S3 design WS in Chisinau (MD)
- JRC S3 info day in Kiev (UA)

2017

- Launch JRC S3 pilot project for **Serbia, Moldova Ukraine**



# Recent & planned S3 pilot activities

Preparatory

Mapping

EDP

2017  
23-27 Jan

2017  
5-7 April

2017  
3-5 July

2017  
5 Oct

- **S3 Training Seminar in Seville** for pilot country officials in Seville
- **Start S3 event in Chisinau**
- Launching S3 Mapping
- Discussing first R&I mapping results
- **Presenting S3 mapping results for Moldova at SME conference in Chisinau**



# Mapping Economic, Innovation & Scientific Potentials of Moldova

## Preliminary priority areas

### North

- Agriculture and Food processing
  - Crop and animal production (A01)
  - Food products (C10)
- Textile, Apparel, Footwear and Leather goods
  - Wearing apparel (C141)
- Electrical equipment (C27)

### South

- Agriculture and Food processing
  - Crop and animal production (A01)
  - Grain mill products, starches and starch (C106)
  - Bakery and farinaceous products (C107)
  - Manufacture of beverages (C11) (*incl. wine production*)

### Gagauzia

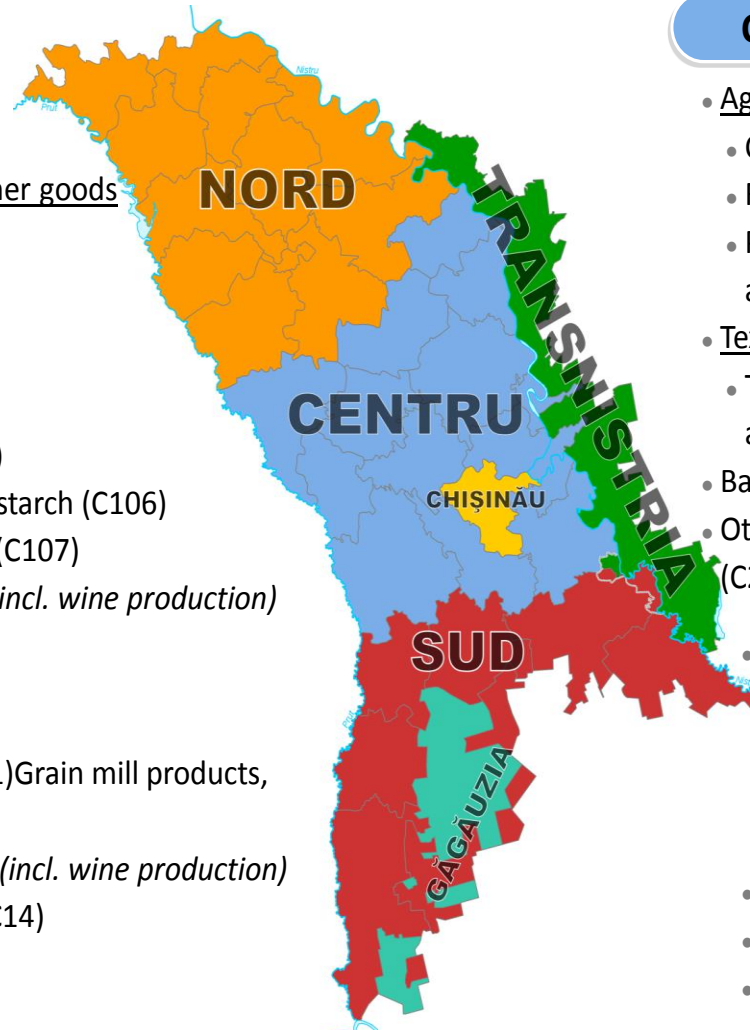
- Agriculture and Food processing
  - Crop and animal production (A01)
  - Grain mill products, starches and starch (C106)
  - Manufacture of beverages (C11) (*incl. wine production*)
- Manufacture of wearing apparel (C14)

### Centre

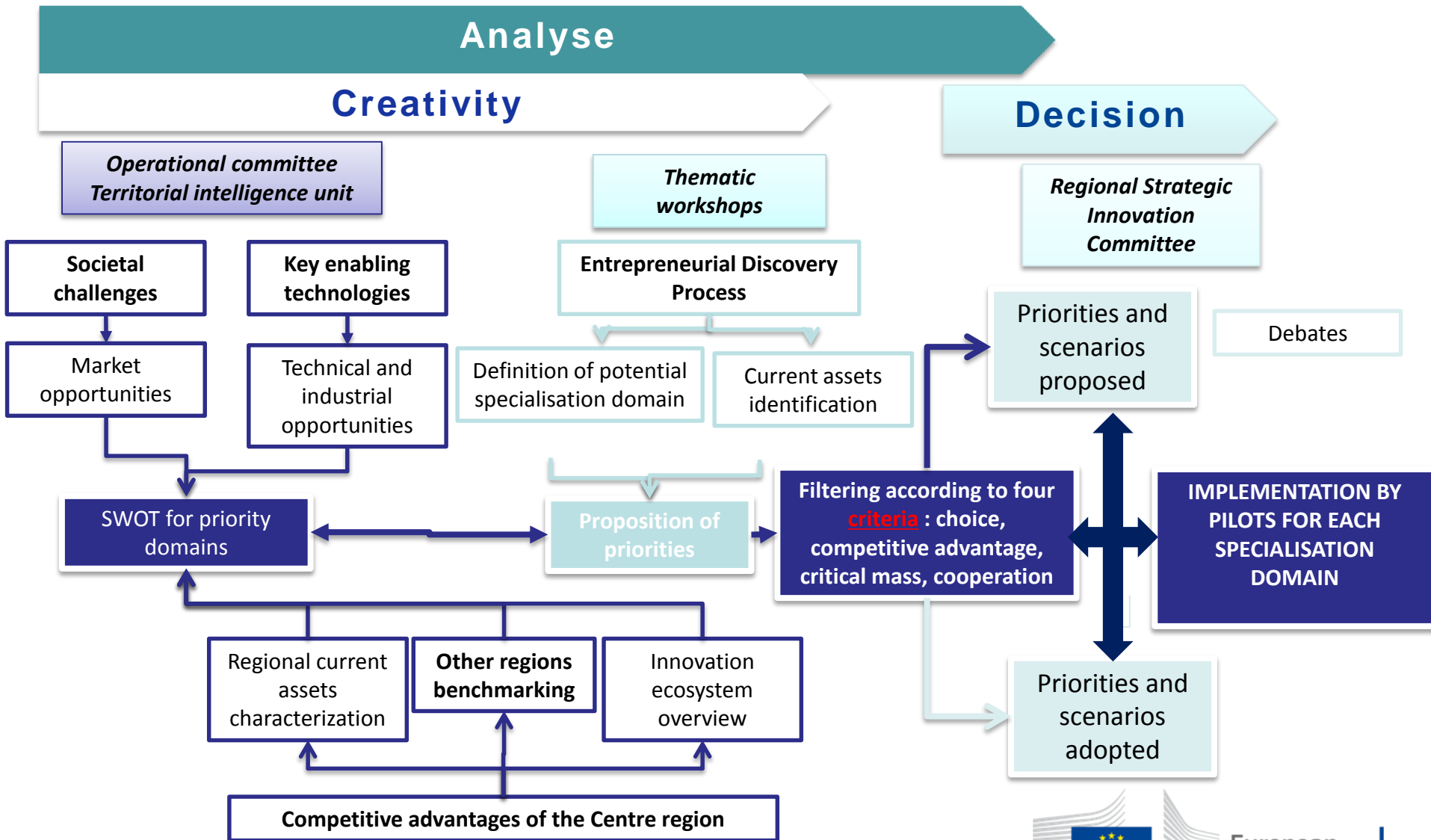
- Agriculture and Food processing
  - Crop and animal production (A01)
  - Forestry and logging (A02)
  - Processing and preserving of meat and production of meat (C101)
- Textile, Apparel, Footwear and Leather
  - Textiles (C13), Knitted and crocheted apparel (C(143), Footwear (C152)
- Basic pharmaceutical preparations (C21)
- Other non-metallic mineral products (C23)

### Chisinau

- ICT
  - Computer, electronic and optical products (C26), Telecommunications (J61), Computer programming, consultancy and related activities (J62)
  - Paper and paper products (C17)
  - Chemicals and chemical products (C20)
  - Machinery and equipment (C28)



# Next Steps – Entrepreneurial Discovery and Priority Setting



# Key pre-conditions for the robust Smart Specialisation process



**Political willingness, commitment and consensus** towards the S3 based process perceiving it as a viable and necessary approach

A country should have sufficient **institutional governance and coordination capacities** to ensure interaction mechanisms among the relevant stakeholders in research, high education, private sector and public authorities.

**Involvement of all stakeholder groups** : business, research, academia, public authorities and society



# Besides basic preconditions the countries should take into account :

## Apply broad innovation concept



- S3 is not just a part of R&I policy it should be on the **top of strategic agenda** integrating all relevant policies relevant for the economic transformation!
- S3 embraces a **broad view of innovation**, supporting technological as well as practice-based and social innovation.
- Developing favourable framework conditions and **support for business innovation** would allow developing capacities to respond to higher technological challenges in the future.

European Commission / Smart Specialisation Platform / Home

Home | S3 Platform | S3 Guidance | S3 Sections | S3 Tools | News | Events | Knowledge Repository

### Invitation for Smart Interregional Cooperation in Energy

The S3Energy platform launches an open invitation to EU regions to cooperate on S3 priorities in the fields of bioenergy, Sustainable Construction, Smart Grids and Marine Offshore

### What we can do for you

The Smart Specialisation Platform provides professional advice to EU countries and regions for the design and implementation of their research and innovation strategies for smart specialisation (S3S). Our services include:

- Provide guidance material and good practice examples
- Conduct high quality research projects to inform strategy formation and policy-making
- Facilitate peer-reviews and mutual learning
- Support access to relevant data
- Train policy makers
- Organise information sessions for policy makers and present at conferences

### S3 Themes

- S3 Governance
- S3 Targeted Support

### S3 Actors

- S3 Cooperation
- S3 Communities

### S3 Tools

The Platform provides interactive tools that can help you in identifying key features of regions and their Smart Specialisation Strategies, such as the **CYCROD** - an online tool showing the R&D priorities of regions/countries, the **CTI-viewer** - a tool to search planned investments in European Structural and Investment Funds (ESIF) data (ERDF, ERDF, ESF and YES), the **ICT Monitoring** - Tool to search European Structural and Investment Funds (ESIF) data (ERDF, ERDF, ESF and YES) on planned investments in the ICT, the **Regional Benchmarking** tool showing structural similarities of the EU regions and the tool presenting four regions of trade flows, as well as other **Data Sources** to benchmark the EU regions and Member States.

- EYE@RIS3
- ESIF - viewer
- ICT Monitoring
- Regional Benchmarking
- EU Trade
- Data Sources

### S3 Tag Cloud

agreed digital agenda and to fish news funds global value chains innovation innovation strategies for smart specialisation (s3) inter-regional collaboration north s3 s3 baltic s3 danish s3 energy s3 kiev s3 ukra s3 value chains smart specialisation synergies transnational collaboration value chains

### S3P Calendar

September 2016

M	T	W	T	F	S	S
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	2

### Event Highlights

- JRC Information Events in Kiev
- 14 Sep 2016 - 15 Sep 2016
- ESF Governance | ES Targeted Support
- Open S2E Workshop
- 22 Sep 2016
- ES Targeted Support
- Macro-Regional Innovation Week At the crossroads of three European Macro-Regions: Danube, Adriatic-Ionian and Alpine
- 29 Sep 2016 - 30 Sep 2016
- Adriatic | ES Governance | ES Governance
- 1st SMARTER Conference on Smart Specialisation and Territorial Development
- 08 Oct 2016 - 08 Oct 2016
- ES Governance | ES Governance
- Smart Specialisation in Energy and innovation in European Regions
- 13 Oct 2016 - 14 Oct 2016
- ES Governance | ES Governance
- Kick-off Event of the Smart Specialisation Platform on Industrial Hub attraction
- 18 Nov 2016 - 17 Nov 2016
- ES Governance | ES Governance | ES Targeted Support

### Reports & Publications

- ES3 Hub / S3 in Media
- RIO - Research & Innovation Observatory

### S3 Platform

Open invitation to EU regions to cooperate on cross-cutting S3 energy priorities

Report: "Opportunity Now: Europe's Mission to Innovate" now available

# Thank you for the attention!



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