

Smart Specialisation in the Eastern Partnership Countries

Potential for knowledge-based economic cooperation



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Smart Specialisation in the Eastern Partnership – progress in 2021

	Progress until 2020 ¹
	Progress in 2021 ²

Country	Progress according to S3 Framework						
	Institutional Capacity Building	Mapping	Entrepreneurial Discovery Process	Implementation, monitoring and financial framework	Final strategy adopted	Official assessment	Implementation launched
Armenia							
Belarus*							
Georgia							
Moldova							
Ukraine							

* Belarus suspended the EaP membership in 2021

JRC support to EU Enlargement and Neighbourhood Region

Capacity
building

Targeted
expert support

Methodologies
and guidance

Knowledge-
based
cooperation

Smart Specialisation in the Eastern Partnership Countries – Potential for knowledge-based economic cooperation

Knowledge-
based
cooperation

Research questions:

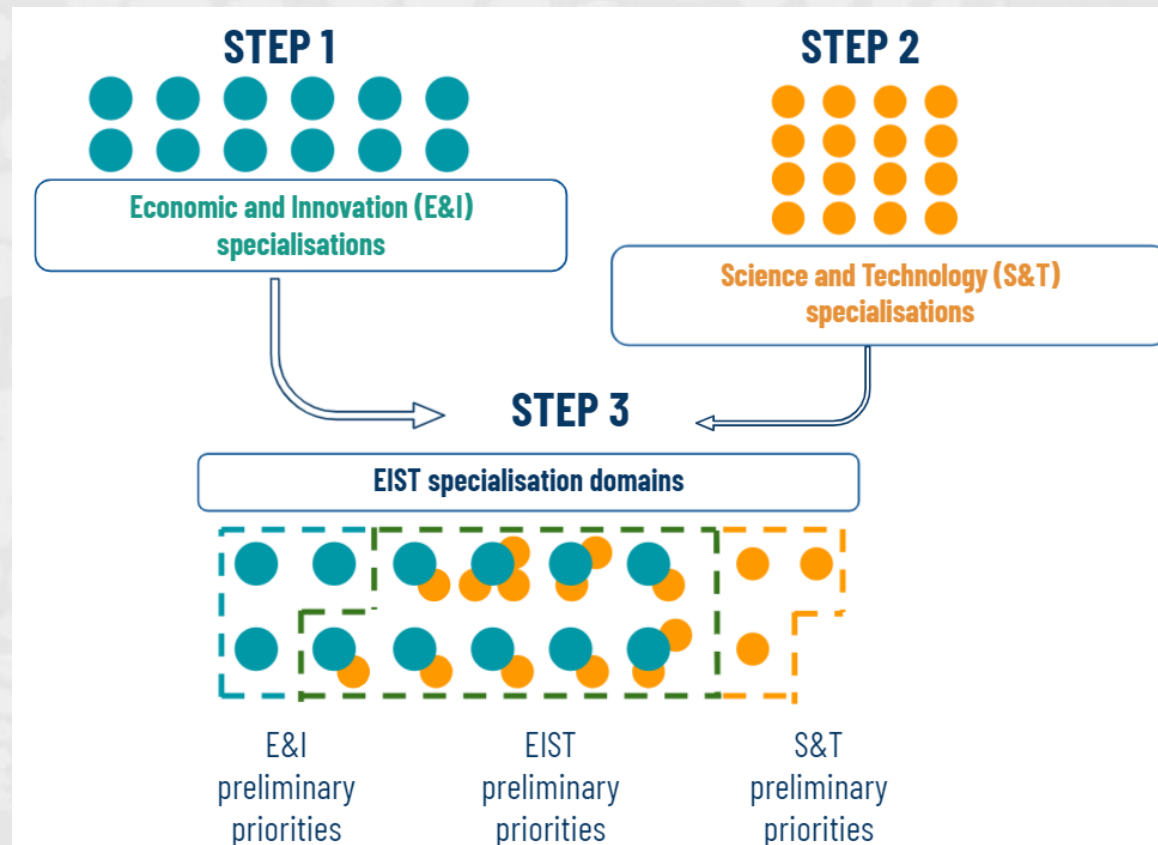
1. What are subsectorial specialisations of EaP countries in terms of economic critical mass, emerging sectors and innovative activities of companies?
2. Which of these specialisations are common in the EaP region and which specific to each country?
3. What are the areas of specialisation and excellence of EaP STI system that can be mobilised to support knowledge-based economic transformation?
4. What is the structure of the international and national STI collaboration networks and who are the main stakeholders?
5. Are there possible synergies/concordance between the economic, innovative, scientific and technological specialisations of the countries?

Smart Specialisation in the Eastern Partnership Countries – Methodological approach

Knowledge-
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Data sources:

- **Orbis** database, Bureau van Dijk
- Industrial Statistics Database (INDSTAT4), UNIDO
- UN's **Comtrade** database
- The **World Bank Enterprise Survey**
- The **docdb** database of the European Patent Office
- The **WIPO Global Brand Database**
- The **WIPO Global Design Database**
- **Crunchbase**
- The **European Cluster Collaboration Network**

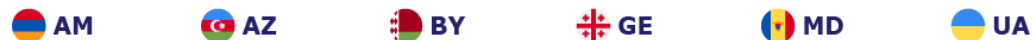


Data sources:

- **Scopus** by Elsevier
- The Community Research and Development Information Service (**CORDIS**)
- The **docdb** database of the European Patent Office

Smart Specialisation in the Eastern Partnership Countries – Economic, Innovation, Science and Technology Specialisations

Knowledge-based cooperation



Economic Cluster (i.e. E&I domain)	Corresponding NACE code(s)	Alignment with S&T domain(s)
Food Processing and Manufacturing	10 Manufacture of food products 11 Manufacture of beverages	Agrifood
Tobacco	12 Manufacture of tobacco products	
Leather, Apparel & Footwear	13 Manufacture of textiles 14 Manufacture of wearing apparel 15 Manufacture of leather and related products	Nanotechnology and materials
Wood Products	16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	Chemistry and chemical engineering Nanotechnology and materials
Media Production and Distribution	18 Printing and reproduction of recorded media	
Oil and Gas Production and Transportation	19 Manufacture of coke and refined petroleum products	Chemistry and chemical engineering Energy Nanotechnology and materials
Chemical Products	20 Manufacture of chemicals and chemical products	Agrifood Biotechnology Chemistry and chemical engineering Nanotechnology and materials
Vulcanized and Fired Materials	23 Manufacture of other non-metallic mineral products	Nanotechnology and materials
Metalworking Technology	25 Manufacture of fabricated metal products, except machinery and equipment	Nanotechnology and materials

Economic Cluster (i.e. E&I domain)	Corresponding NACE code(s)	Alignment with S&T domain(s)
Information Technology and Analytical Instruments	26 Manufacture of computer, electronic and optical products 27 Manufacture of electrical equipment	Electric and electronic technologies Energy Fundamental physics and mathematics ICT and computer science Nanotechnology and materials Optics and photonics
Production Technology and Heavy Machinery	28 Manufacture of machinery and equipment n.e.c.	Agrifood Energy Environmental sciences and industries Fundamental physics and mathematics Mechanical engineering and heavy machinery
Automotive	29 Manufacture of motor vehicles, trailers and semi-trailers	Transportation
Repair and installation of machinery and equipment	33 Repair and installation of machinery and equipment	Nanotechnology and materials
Wholesale Trade	46 Wholesale trade, except of motor vehicles and motorcycles	
Postal and Courier Activities	53 Postal and courier activities	
Hospitality and Tourism	55 Accommodation 56 Food and beverage service activities	

Smart Specialisation in the Eastern Partnership Countries – Science and Technology specialisations

Knowledge-
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AM



AZ



BY



GE



MD

















UA

Most relevant S&T domains	Countries with high specialisation in the domain
Agrifood	
Biotechnology	
Chemistry and chemical engineering	
Electric and electronic technologies	
Energy	
Environmental sciences and industries	
Fundamental physics and mathematics	
Health and wellbeing	
ICT and computer science	
Mechanical engineering and heavy machinery	
Nanotechnology and materials	
Optics and photonics	
Transportation	

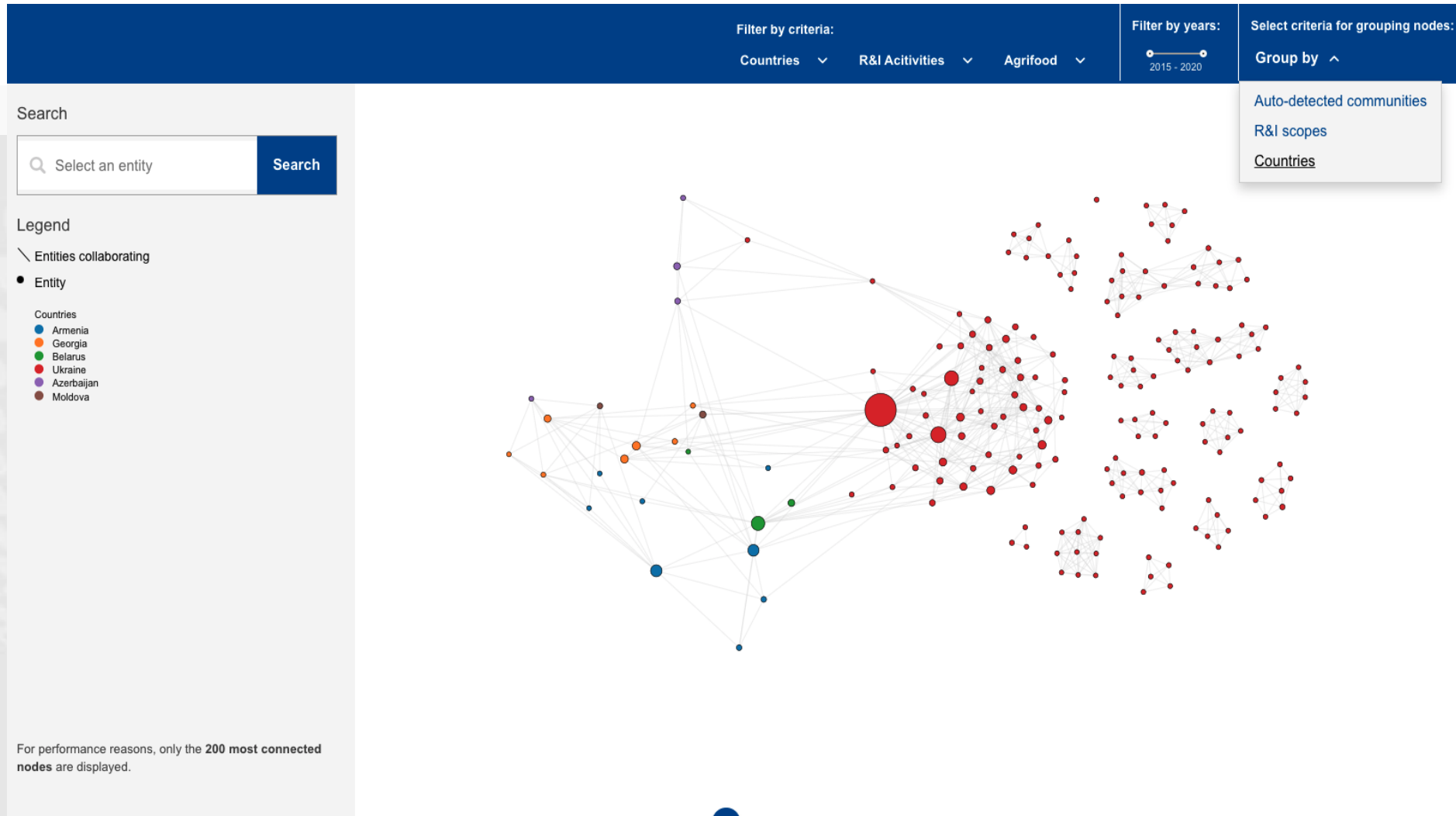
Smart Specialisation in the Eastern Partnership Countries – Typology of Science and Technology Specialisations

Knowledge-
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EaP S&T domains of specialisation <i>according to the internal distribution of the S&T data sources</i>		
Science-oriented S&T domains <i>domains where scientific publications are most relevant</i>	Balanced S&T domains <i>domains where publications and patents have a similar relative weight</i>	Technology-oriented S&T domains <i>domains where patents are most relevant</i>
 Fundamental physics and mathematics	 Health and wellbeing	 Mechanical engineering and heavy machinery
 Nanotechnology and materials	 Biotechnology	 Electric and electronic technologies
 Optics and photonics	 ICT and computer science	 Agrifood
	 Environmental sciences and industries	 Energy
	 Chemistry and chemical engineering	 Transportation
 Governance, culture, education and the economy is mainly composed of EC R&I projects		

Smart Specialisation in the Eastern Partnership Countries – Interactive online tool

Knowledge-
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2088 publications

1443 patents

7 projects

1300 organizations

Smart Specialisation in the Eastern Partnership Countries – R&I collaboration patterns

Knowledge-based cooperation

	Armenia	Azerbaijan	Belarus	Georgia	Moldova	Ukraine
Armenia		130	1471	1756	42	980
Azerbaijan	130		49	73	26	138
Belarus	1471	49		1440	83	1268
Georgia	1756	73	1440		58	1058
Moldova	42	26	83	58		202
Ukraine	980	138	1268	1058	202	

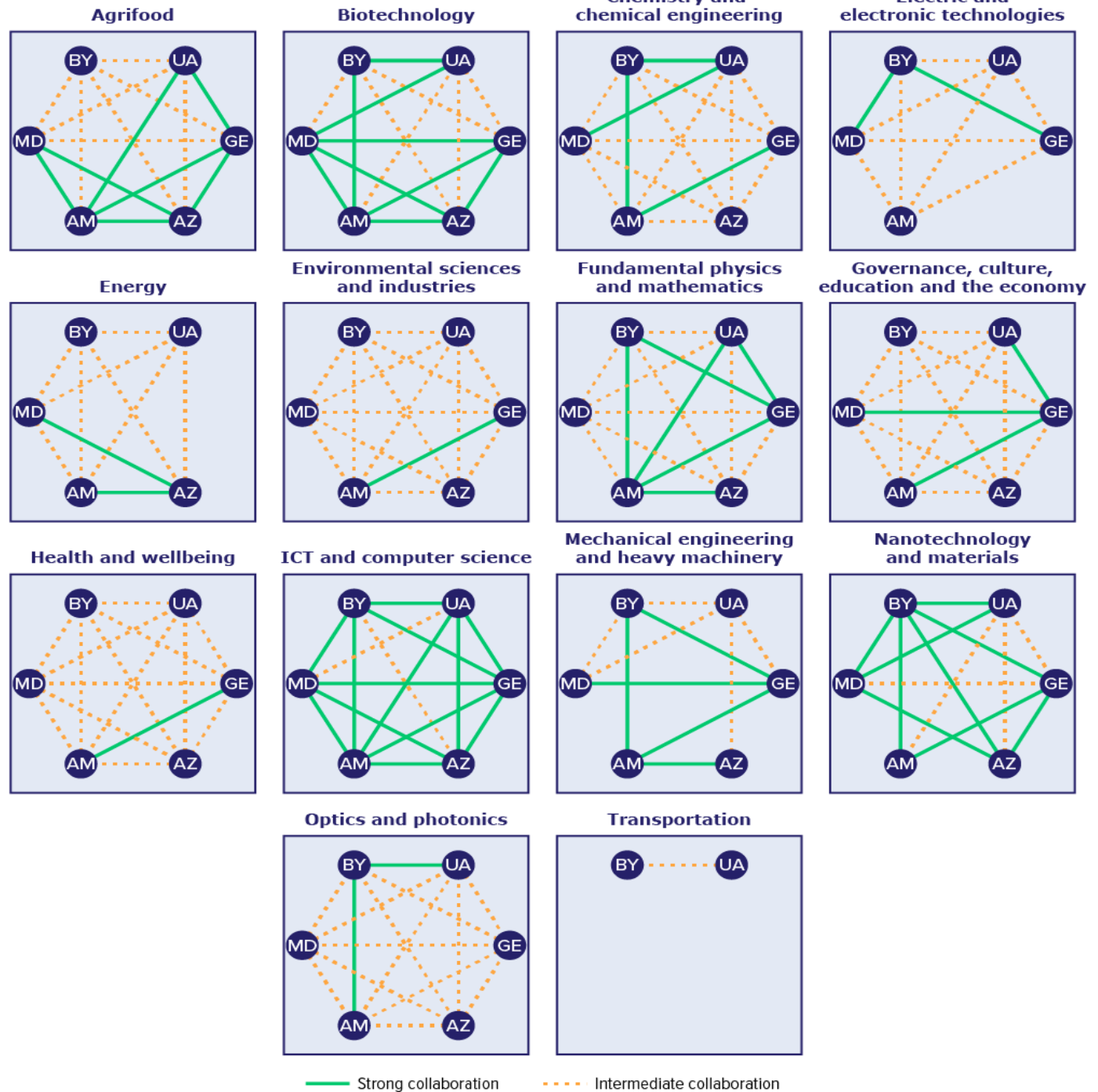
Publications

	Armenia	Azerbaijan	Belarus	Georgia	Moldova	Ukraine
Armenia		10	21	26	19	21
Azerbaijan	10		8	11	8	11
Belarus	21	8		20	17	33
Georgia	26	11	20		23	32
Moldova	19	8	17	23		25
Ukraine	21	11	33	32	25	

EC Projects

Smart Specialisation in the Eastern Partnership Countries – Thematic R&I collaboration

Knowledge-based cooperation



Soon to come:

Knowledge Hub for EU Enlargement and Neighbourhood Region



- Region-wide analyses
- Reports per economy
- Guidebooks
- Massive Online Open Course
- IT tool: STI cooperation network

<https://s3platform.jrc.ec.europa.eu/neighbourhood>

