

Regional Innovation Scoreboard

2025

Independent Expert Report



Regional Innovation Scoreboard 2025

European Commission
Directorate-General for Research and Innovation
Directorate G - Common Policy Centre
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Regional Innovation Scoreboard

2025

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EXECUTIVE SUMMARY

The 11th edition of the Regional Innovation Scoreboard (RIS) offers a comparative assessment of the research and innovation (R&I) performance of 241 regions in 22 EU Member States, Norway, Serbia, Switzerland, and the United Kingdom (UK). Five countries (Cyprus, Estonia, Latvia, Luxembourg, and Malta) are included in the RIS only at the country level because their NUTS 1 and NUTS 2 regions are identical to their national territory.

The RIS is a regional extension of the European Innovation Scoreboard (EIS) and provides a comparative assessment of innovation performance at the regional level. The RIS uses 23 indicators in comparison to 32 indicators in the EIS. The difference in the number of indicators between the two Scoreboards stems from the more limited availability of regional data compared to national data.

Over the last decades, the RIS indicator framework has evolved following the EIS to better reflect the availability of new and more suitable indicators and the factors influencing innovation performance, as well as changes in the socio-economic and geopolitical context. Based on a revision process undertaken in late 2024 and early 2025, the RIS 2025 applies a slightly revised indicator framework to the one used for 2021–2024.

DESPITE VARIATION IN REGIONAL PERFORMANCE WITHIN COUNTRIES, REGIONAL PERFORMANCE GROUPS LARGELY MATCH THE CORRESPONDING EIS COUNTRY PERFORMANCE GROUPS

All regional Innovation Leaders are in countries identified as Innovation Leaders or Strong Innovators in the EIS. Similarly, most regional Strong Innovators are situated in countries that are themselves classified as EIS Innovation Leaders or Strong Innovators.

Only 11 regional Strong Innovators are found in countries categorised as Moderate Innovators by the EIS. These 11 regions represent regional pockets of excellence and include: Praha (CZ01), País Vasco (ES21), Comunidad Foral de Navarra (ES22), Comunidad de Madrid (ES3), Catalunya/Cataluña (ES51), Comunitat Valenciana (ES52), Provincia Autonoma di Trento (ITH2), Friuli-Venezia Giulia (ITH4), Emilia-Romagna (ITH5), Grande Lisboa (PT1A), Zahodna Slovenija (SI04). Finally, most regional Moderate Innovators (55 out of 74) and Emerging Innovators (59 out of 60) are in the countries belonging to these two performance groups.

INNOVATION PERFORMANCE CONTINUES TO BE UNEVENLY DISTRIBUTED ACROSS EUROPE

The most innovative region overall and in Europe in 2025 is Stockholm in Sweden, followed by Hovedstaden in Denmark (which was the most innovative region in 2019, 2021, and 2023¹), London in the UK, Zürich in Switzerland, and Oberbayern in Germany. All top

¹ Regional rankings for 2019, 2021 and 2023 are all based on the RIS 2025 framework to ensure comparability.

50 performing regions are in Northern and Western Europe. In contrast, the 50 lowest-performing regions are predominantly situated in Central, Eastern, and Southern Europe.

OVER THE LONG TERM, STRONG PROGRESS IN REGIONAL INNOVATION PERFORMANCE IS OBSERVED ACROSS EUROPE

From 2018 to 2025, the regional innovation index (RII) performance relative to the EU27 in 2018 has risen in 233 out of 241 regions², with those regions recording an average increase of 12.2%-points. A total of 110 of these regions have increased their performance at a faster pace than the EU27 on average. During the same period, RII performance relative to the EU27 in 2018 has decreased in eight regions in France, Sweden, and Switzerland. Their performance decreased on average by 3.1%-points.

Nonetheless, short-term progress has slowed and remained close to stable. From 2023 to 2025, RII performance has risen in 159 regions, by an average of 3.5%-points, while 82 regions have seen an average decline of 3.6%-points.

DESPITE PERSISTENT DISPARITIES, LOWEST PERFORMING REGIONS ARE SLOWLY CATCHING UP TO TOP PERFORMING REGIONS

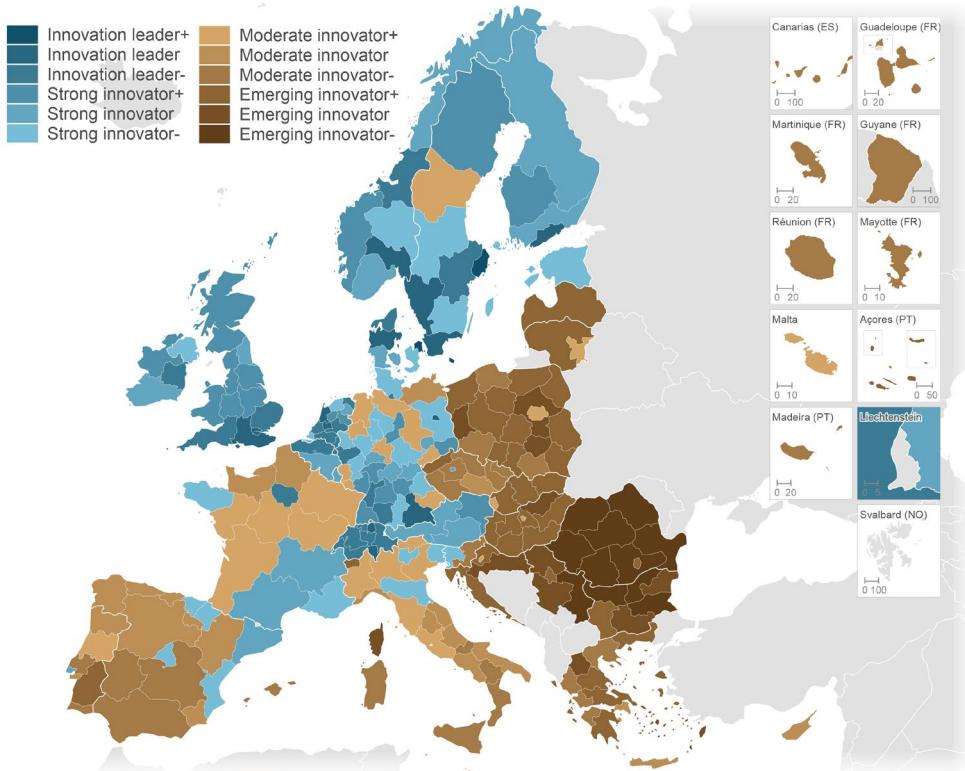
The average RII score relative to the EU27 in 2018 of Innovation Leaders was 2.9 times higher than that of emerging innovators in 2018 – a gap that has slightly decreased to 2.6 times by 2025. In addition, in 2018, the highest-performing region had an RII score relative to the EU27 in 2018 that was 9.6 times higher than the lowest-scoring region³. By 2025, this ratio of RII score relative to the EU27 in 2018 has declined to 6.9⁴. Finally, a study on the RIS 2000-2022 time series estimates⁵ also provides some evidence that the lowest performing regions are slowly catching up to top performers.

² This excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta).

³ Zürich (CH04): 166.15, Sud-Vest Oltenia (RO41): 17.31.

⁴ Stockholm (SE11): 174.97, Sud-Vest Oltenia (RO41): 25.53

⁵ Calculation of consistent 2000-2022 time series data for the Regional Innovation Index (RII) and the individual indicators in the Regional Innovation Scoreboard (RIS), Expert report for DG Research and Innovation prepared by Hugo Hollanders (Maastricht University).



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

This map uses the NUTS 2024 classification for all countries except the United Kingdom (UK). As the UK is no longer part of the NUTS system, the map applies the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics.

1. INTRODUCING THE REGIONAL INNOVATION SCOREBOARD

Innovation is essential to meet challenges and to support economic growth within the EU. Within this context, the European Innovation Scoreboard (EIS) provides a comparative assessment of the performance of innovation systems at the country level of the EU Member States, neighbouring countries and selected global competitors. The EIS helps to assess the innovation systems in these countries, track changes in performance over time, and provide insights into factors that drive or hinder innovation. While the EIS provides these insights at a national level, regions are crucial engines of economic development and measuring innovation performance at the regional level is therefore also important. In addition, economic literature on regional systems of innovation⁶ has shown that innovation is often unevenly distributed across regions and concentrated in specific areas, and even when regions have similar innovation capacities, their economic growth patterns vary. As such, the Regional Innovation Scoreboard (RIS) acts as the regional extension of the EIS and provides a comparative assessment of innovation performance at the regional level.

The RIS can be used to support EU, national or regional policy makers in understanding regional innovation performance and addressing its key challenges to eventually help shape fitting policies that enhance innovation. In addition to this, researchers, think tanks, and others can benefit from the RIS to better understand regional innovation trends and their impact on, for example, industry, markets, and the economy, or employment rates, productivity and wellbeing.

Deepening our understanding of regional innovation is essential to narrowing the gaps in innovation performance. Fostering a more balanced innovation landscape within national borders brings shared benefits and strengthens overall competitiveness.

This report presents the 2025 RIS measurement framework and a note on how the results can be interpreted (Chapters 1.1 and 1.2). It then compares innovation performance in European regions (Chapter 2) and analyses performance for each RIS indicator (Chapter 3). This is followed by a brief description of the RIS methodology (Chapter 4).

1.1 Measuring regional innovation

The RIS measures regional innovation performance using the same framework as in the EIS. However, for several indicators used in the EIS, regional data are not available, and the RIS is limited to using data for 23 of the 32 EIS indicators (see Annex 1). The RIS measurement framework is divided into four main categories and 12 dimensions to assess regional innovation performance (Figure 1). The four main categories include:

Framework conditions: Innovation stems from knowledge-based activities, where education, research, and digital capabilities interact to drive progress. A solid scientific

⁶ Annex 6 in the RIS 2014 report provides a more detailed discussion of regional systems of innovation: <https://publications.europa.eu/en/publication-detail/-/publication/69a64699-18d7-40b9-8f92-1db3226cd2ec>

foundation is therefore essential for developing innovative solutions to address pressing challenges. Consequently, the RIS assesses the prevalence of tertiary education and lifelong learning, research excellence and collaboration in research, and the extent of digitalisation, recognising that a robust digital infrastructure is instrumental in fostering innovation.

Investments: Financial resources play a vital role in developing new solutions and facilitating their adoption by the market or firms. The RIS evaluates investments directed towards R&D and innovation coming from diverse sources such as the public sector and businesses. In addition, the RIS assesses the use of cloud computing services and employment of ICT specialists, acknowledging the expanding digital landscape in Europe and globally.

Innovation activities: This dimension measures the extent to which SMEs introduce novel products or business processes and engage in collaboration or co-publication across different sectors. An invention must be successfully commercialised or exploited to be considered an innovation. Therefore, the RIS examines how often companies translate inventions into marketed products or commercial outcomes. To gauge the intellectual output of a region, the RIS also measures the number of patents, trademarks, and designs. To evaluate a region's innovation activities, the RIS places an emphasis on small and medium enterprises (SMEs). This focus helps avoid over-concentration of innovation data around company headquarters, which are often located in capital cities, and can obscure regional disparities. In addition, when large enterprises are included in the analysis, confidentiality concerns may limit data availability for certain regions.

Impacts: Lastly, the RIS evaluates the impact of innovation activities on employment, sales, trade, environmental sustainability, and labour productivity. The RIS assesses *Employment in innovative enterprises* and the success of new product innovations in generating sales revenue. In addition, the RIS complements economic metrics with environmental impacts and labour productivity, underlining the intricate relationship between innovation, economic development, and environmental sustainability.

As part of a small-scale revision of the indicator framework for the EIS and RIS in late 2024 and early 2025, several indicators were updated⁷. The revision fine-tuned the measurement framework in light of newly available data and to better reflect evolving European R&I policy priorities. It introduced several new indicators designed to better capture the factors driving and hindering innovation, address gaps identified during the review, and respond to emerging priorities such as digitalisation, industrial resilience, and societal challenges. These changes are implemented in the 2025 editions of the EIS and RIS. The new indicators are described in Box 1.

⁷ Reid, A., et al. (2025). European Innovation Scoreboard 2025: Technical report on the revision of the scoreboard methodology. Independent expert report prepared for the European Commission, Directorate-General for Research and Innovation

Box 1: Description of new indicators in the 2025 RIS framework

Broadband penetration (proxy for High-speed internet access in EIS, 1.3.1) replaces the previous indicator measuring broadband penetration in enterprises, which did not have regional data. The new RIS indicator measures share of households with broadband access. As a result, Individuals with above basic overall digital skills (1.3.2) is removed, as it was previously measured with a proxy indicator regionalising the EIS indicator based on the regional score for Households with broadband access⁸.

Cloud computing in enterprises (2.3.1) assesses the share of businesses using advanced online services like data storage, accounting, or customer management tools. It reflects the extent to which enterprises are adopting more advanced digital technologies.

Sales of new-to-market and new-to-firm innovations is retained within the framework but now replaces Employment in knowledge-intensive activities (4.1.1).

Exports of medium and high technology products (4.2.1) was added to the Trade impacts dimension. It is a proxy calculated based on the FIGARO regional dataset⁹ and EIS indicator values. The indicator was selected after an analysis of five alternatives.

Labour productivity (4.3.3) reflects how much economic value is created for each hour worked. Higher scores reflect greater efficiency and innovation-driven growth.

⁸ The indicator was calculated using the following formula: Individuals with above basic overall digital skills = Regional score for Households with broadband access / Country score for Households with broadband access * Country score for Individuals with above basic overall digital skills.

⁹ Lopez Alvarez, Jorge; Galiano Bastarrica, Luis Antonio; Rueda-Cantuche, José Manuel (2017): FIGARO-REG 2017 10 sectors. European Commission, Joint Research Centre (JRC) [Dataset] PID: <http://data.europa.eu/89h/dff29c8d-b85b-41fa-9cb7-7289c7324937>

Figure 1: Measurement framework of the 2025 Regional Innovation Scoreboard

**Legend**

- New indicator

The RIS uses regional innovation data from European and international statistical services, such as Eurostat and the OECD. For several indicators, regional data were calculated by Science Metrix and Fraunhofer ISI using bibliometric data and raw data from the European Union Intellectual Property Offices (EUIPO). In some cases, the RIS indicators slightly differ from the EIS indicators, as there is no data for these indicators available at the regional level. Comparison between the indicators included in the RIS and EIS is provided in Annex 1. All indicators used in the RIS are explained in detail in the RIS methodology report¹⁰.

The regional classification system, NUTS (Nomenclature of territorial units for statistics), is used in this report. The system distinguishes between three levels: NUTS 1 captures major socio-economic regions, NUTS 2 captures basic regions for the application of regional policies, and NUTS 3 captures small regions for specific diagnoses. For this edition of the RIS, the NUTS 2024 classification is used, covering NUTS 1 and NUTS 2 levels, depending on differences in regional data availability¹¹. Due to differences in the average size of regions, there are implications for the variation of performance scores within countries. In general, a higher number of regions will lead to larger differences between regions in the same country.

The Regional Innovation Scoreboard covers 241 regions in 22 EU Member States, Norway, Serbia, Switzerland, and the United Kingdom (UK) (46 NUTS 1 regions and 195 NUTS 2 regions). In addition, in the EU Member States Cyprus, Estonia, Latvia, Luxembourg, and Malta NUTS 1 and NUTS 2 levels are identical to the country territory. Hence, these five countries are not analysed in the RIS report, as they are already analysed in the EIS¹².

1.2 Interpreting the RIS results

The regional innovation index (RII) provides a single, comparable score that reflects the overall innovation performance of each region. It is calculated as the unweighted average of 23 indicators, each contributing equally to the final score. To ensure comparability, the RII scores are indexed to one of two reference years: either the baseline year (2018) or the current year (2025). These scores represent relative performance rather than absolute values. For example, a score of 110.0 in 2025, when indexed to the EU average in the same year, indicates that the region is performing 10% above the EU average in 2025. The reference of the baseline year (2018) is used when comparing performance trends over time. The reference of the current year is used when examining performance in 2025.

¹⁰ Antanavičius, J., Bernotas, I., and Rosenfeld, D. (2025). Regional Innovation Scoreboard 2025: Methodology report. Independent expert report prepared for the European Commission, Directorate-General for Research and Innovation and Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs.

¹¹ Since previous editions of the RIS were published before the NUTS 2024 revision, they were based on earlier NUTS versions. The NUTS 2024 update introduced changes to the regional classification used in the RIS for two Member States. In the Netherlands, the boundaries of two regions were modified. In Portugal, the boundaries were changed in one region and two regions were split into four. Another important NUTS2024 update concerns the UK. After 2024 update, the UK is no longer part of the NUTS system. Thus, this report uses the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics. More information on the NUTS2024 revision can be found here: <https://ec.europa.eu/eurostat/web/nuts> <https://ec.europa.eu/eurostat/web/nuts>

¹² Cyprus, Estonia, Latvia, Luxembourg, and Malta are, however, included in the EU-27 average. In addition, they are shown on maps presenting regional performance groups to provide contextual information and are included while ranking regions in Chapter 2.6 and regional country profiles.

A comprehensive understanding of regional innovation performance and its evolution over time requires consideration of multiple metrics and contextual factors. Regions are grouped into performance groups (Emerging, Moderate, Strong, and Leader) and sub-groups (three sub-groups per group) based on how their RII compares to the EU average in the current year. In addition, all RIS regions (including Cyprus, Estonia, Latvia, Luxembourg, and Malta) are ranked from highest to lowest based on their performance relative to the EU average in 2025, providing an additional comparative perspective. Finally, strengths and weaknesses are identified by analysing each RIS indicator separately and comparing regional performance relative to the EU average in 2025. For each indicator, regions are ranked and grouped into 12 equally sized performance groups. A region's strengths correspond to indicators where it belongs to the top-performing groups, while weaknesses refer to indicators where it falls within the lowest-performing groups. Taken together, these elements enable a nuanced interpretation of innovation performance within and across European regions.

Some parts of the report compare regional performance across years. Unless stated otherwise, all comparisons with previous years are based on RIS 2025 framework and data to ensure consistency in the indicator framework and data sources. RIS 2025 comparisons with results from the RIS 2023 report or other RIS editions are not possible, not even for the same years in both reports, as the underlying indicators differ between editions, data updates affect time series, and breaks in data series impact comparability.

Users are encouraged to refer to the EIS report, consult the interactive online tool¹³, explore individual country regional profiles, and access the underlying data and methodology files to conduct further analysis or draw tailored insights.

¹³ <https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis>

2. HOW ARE EUROPEAN REGIONS PERFORMING IN TERMS OF INNOVATION?

This chapter discusses the most recent innovation performance of regions in EU Member States and neighbouring countries. It differentiates between four broader and 12 narrower innovation performance groups (Chapters 2.1-2.3), listing the top performing regions (Chapter 2.4), and discussing how the performance of regional innovation systems has changed over time (Chapter 2.5). In addition, this chapter presents the performance of regions within each country (Chapter 2.6).

2.1 Regional performance groups

The innovation performance of each region is measured by the RII. The RII is a composite indicator calculated as the average of 23 equally weighted, normalised indicators.

Based on regions' RII index relative to the EU in 2025, regions are categorised into four different groups, namely Innovation Leaders, Strong Innovators, Moderate Innovators, and Emerging Innovators. More specifically¹⁴:

- Innovation Leaders include 38 regions where performance is above 125% of the EU average in 2025.
- Strong Innovators include 69 regions with a performance between 100% and 125% of the EU average in 2025.
- Moderate Innovators include 74 regions where performance falls within the range from 70% to 100% of the EU average in 2025, inclusive.
- Emerging Innovators include 60 regions that show a performance level below 70% of the EU average in 2025.

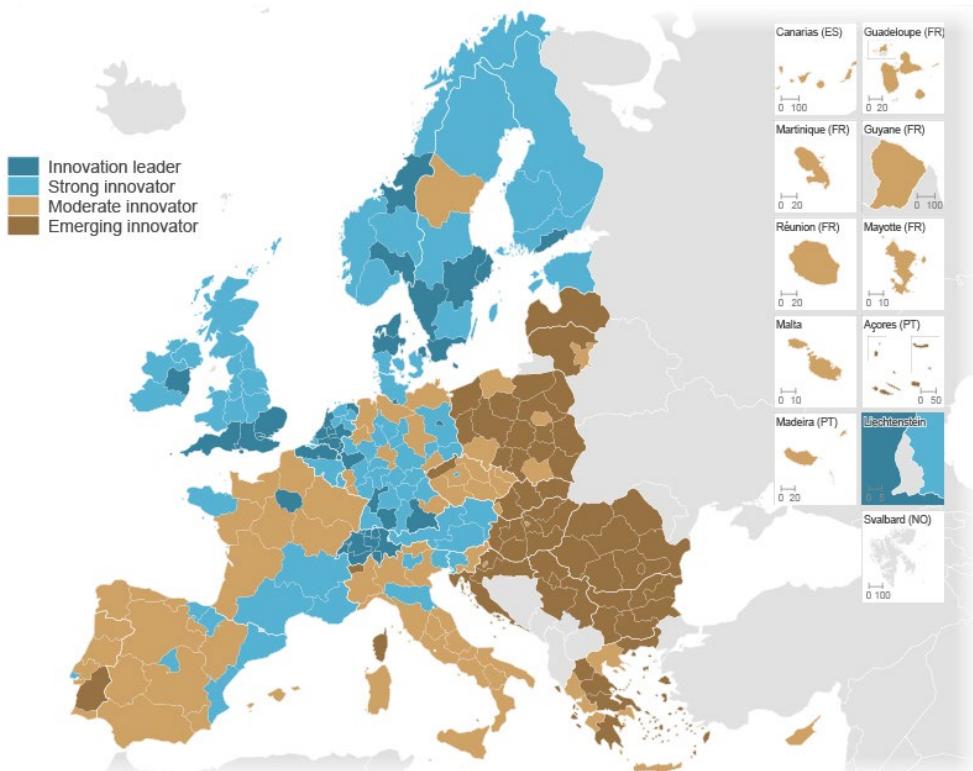
Figure 2 below provides a map displaying these regional performance groups in 2025.

Compared to the RIS 2023 edition¹⁵ 35 regions moved from one performance group to another. A total of 21 regions moved up: six to Innovation Leaders (CH02, CH06, IE06, NL11, UKH, UKK), five to Strong Innovators (ES52, FI2, NO02, SE31, UKN), and 10 to Moderate Innovators (ES42, ES43, ES7, FRY, ITG1, ITG2, PL51, PL63, PT15, PT3). A total of 14 regions moved down: four to Strong Innovators (AT1, CZ01, DE11, DE25), five to Moderate Innovators (CZ06, DEC, HR05, HU11, LT01), and five to Emerging Innovators (EL61, EL65, ITC2, LT02, RS11). It must be noted that RIS 2025 and RIS 2023 use different indicator frameworks. Therefore, changes in group membership may reflect not only shifts in regional performance but also differences in the underlying indicators.

¹⁴ The number of regions in each performance group excludes five countries (CY, EE, LV, LU, MT), as in these countries NUTS 1 and NUTS 2 levels are identical to the country territory.

¹⁵ The RIS 2023 edition was completed in June 2023, based on the data available at that time. Data updates were performed in the RIS 2025 edition based on new available data, including for previous years. In addition, indicator framework revision took place in late 2024 and early 2025, resulting in changes in four indicators in RIS 2025 compared to RIS 2023. Finally, NUTS classification was revised in 2024, resulting in changes in region borders. As a result the comparison was done only for the regions available in both RIS 2023 and RIS 2025.

Figure 2: Regional performance groups in 2025



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

This map uses the NUTS 2024 classification for all countries except the United Kingdom (UK). As the UK is no longer part of the NUTS system, the map applies the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics.

2.2 How do performance groups compare to each other

The most innovative regions, on average, perform best on most of the indicators (see Figure 3). The Innovation Leaders, on average, have the highest performance on 20 indicators. They perform below other performance groups on *Non-R&D innovation expenditures*, *Sales of new-to-market and new-to-enterprise* (both indicators from the Community Innovation Survey), and *Exports of medium and high technology products*. Strong Innovators perform above the EU average in most indicators (16 out of 23). The reasons for performing below EU average in 2025 for CIS indicators are explained in the paragraph below. In the case of the export indicator, the lower relative performance of Innovation Leaders reflects a broader trend: no performance group, on average, scores above the EU27 average. This is because the EU27 score is calculated as a weighted average, where each region's share of high tech exports is weighted by its total export volume. As a result, regions with larger overall exports have a greater influence on the EU average. Since these regions also tend to have higher shares of high tech exports, they pull the EU27 average upward, making it harder for other regions to exceed it.

The Moderate Innovators perform above the EU27 average on six indicators. They perform best in *Non-R&D innovation expenditures* and *Sales of new-to-market and new-to-firm innovations*. Strong performance of Moderate Innovators and Emerging Innovators on *Non-R&D innovation expenditures* might be due to a common pattern in less innovative regions: enterprises often innovate by purchasing advanced machinery or external knowledge, rather than investing in in-house R&D, which is typically more expensive and riskier¹⁶. Similarly, these types of externally sourced innovations may more quickly lead to measurable outcomes such as sales of new-to-market or new-to-firm products, helping explain why less innovative regions can outperform stronger innovators on this particular indicator.

Figure 3: Average indicator scores by regional performance group



Notes: (1) Average scores for each performance group are relative to the EU average in 2025 (=100). (2) Scores were calculated excluding countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta). (3) For several indicators, the average performance scores of all four

regional performance groups are either below or close to 100. This may seem counterintuitive, as one might expect more group averages to exceed 100, given that the EU27 average represents the overall mean. The primary explanation lies in the calculation method: the EU average is a weighted average, where larger regions or countries contribute more due to their size. In contrast, group averages are unweighted, giving equal weight to all regions, regardless of their size. Additionally, the EU average includes data from Cyprus, Estonia, Latvia, Luxembourg, and Malta, which are not included in the regional performance group averages. This also affects comparability and can further raise the EU27 benchmark.

Despite variation in regional performance within countries, regional performance groups largely match the corresponding EIS country performance groups (see Table 1):

- All regional Innovation Leaders belong to countries identified as Innovation Leaders or Strong Innovators in the EIS.
- Most regional Strong Innovators belong to the EIS Innovation Leader and Strong Innovator countries, only 11 regional Strong Innovators belong to the EIS Moderate Innovator countries. These 11 regions can be considered **regional pockets of excellence** (see Annex 3): Praha (CZ01), País Vasco (ES21), Comunidad Foral de Navarra (ES22), Comunidad de Madrid (ES3), Catalunya/Cataluña (ES51), Comunitat Valenciana (ES52), Provincia Autonoma di Trento (ITH2), Friuli-Venezia Giulia (ITH4), Emilia-Romagna (ITH5), Grande Lisboa (PT1A), Zahodna Slovenija (SI04).
- Most (49 out of 74) regional Moderate Innovators belong to EIS Moderate Innovator countries. In addition, 18 out of 74 regions belong to the EIS Strong Innovators, while six regions belong to EIS Emerging Innovators, and one region belongs to EIS Innovation Leaders.
- Almost all (59 out of 60) of the regional Emerging Innovators belong to EIS Moderate Innovator and Emerging Innovator countries. The only exception is Corse (FRM) which is part of Strong Innovator France.

For most countries, there is limited variation in regional performance groups. Only in France is there at least one region in each of the four regional performance groups. In six countries, there is at least one region in three different regional performance groups, and in 14 countries there is at least one region in two different regional performance groups. In Austria, Bulgaria, Romania, Serbia, and Switzerland, all regions are in the same performance group. Thus, in order to better show diversity of regions, Chapter 2.4 breaks the regional performance groups into 12 sub-groups.

Table 1: Occurrence of regional performance groups by country

COUNTRY	PERFORMANCE GROUP IN THE EIS	INNOVATION LEADER	STRONG INNOVATOR	MODERATE INNOVATOR	EMERGING INNOVATOR
All countries	-	38	69	74	60
Switzerland	Innovation Leader	7	0	0	0
Sweden	Innovation Leader	4	3	1	0
Denmark	Innovation Leader	3	2	0	0
Netherlands	Innovation Leader	7	5	0	0
United Kingdom	Innovation Leader	4	8	0	0
Finland	Innovation Leader	1	4	0	0
Ireland	Strong Innovator	1	2	0	0
Belgium	Strong Innovator	2	1	0	0
Norway	Strong Innovator	2	4	0	0
Austria	Strong Innovator	0	3	0	0
Germany	Strong Innovator	6	22	10	0
France	Strong Innovator	1	4	8	1
Slovenia	Moderate Innovator	0	1	1	0
Italy	Moderate Innovator	0	3	17	1
Spain	Moderate Innovator	0	5	12	2
Portugal	Moderate Innovator	0	1	6	2

COUNTRY	PERFORMANCE GROUP IN THE EIS	INNOVATION LEADER	STRONG INNOVATOR	MODERATE INNOVATOR	EMERGING INNOVATOR
Lithuania	Moderate Innovator	0	0	1	1
Czechia	Moderate Innovator	0	1	6	1
Greece	Moderate Innovator	0	0	5	8
Croatia	Moderate Innovator	0	0	1	3
Hungary	Emerging Innovator	0	0	1	7
Poland	Emerging Innovator	0	0	4	13
Slovakia	Emerging Innovator	0	0	1	3
Serbia	Emerging Innovator	0	0	0	4
Bulgaria	Emerging Innovator	0	0	0	6
Romania	Emerging Innovator	0	0	0	8

Notes: (1) The table excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta). (2) Countries in the table are ordered by their performance score in the European Innovation Scoreboard 2025. (3) Purple colour highlights regions that are outperforming country's performance group. Red colour highlights regions that underperform country's performance group.

2.3 Zooming in on regional disparities: defining 12 performance sub-groups

To better demonstrate the diversity in innovation performance of regions, the four regional performance groups are broken down further into 12 sub-groups. Three sub-groups are defined within each performance group by dividing the performance range in each group in three equal parts: the top one-third of regions (+), the middle one-third of regions, and the bottom one-third of regions (-) (see Table 2).

Table 2: Defining regional performance sub-groups

GROUP	TOP SUB-GROUP (+)	MIDDLE SUB-GROUP	BOTTOM SUB-GROUP (-)
Innovation Leaders	Innovation Leaders + Above 145.3% of EU average	Innovation Leaders Between 135.1% and 145.3% of EU average	Innovation Leaders - Between 125% and 135.1% of EU average
Strong Innovators	Strong Innovators + Between 116.7% and 125% of EU average	Strong Innovators Between 108.3% and 116.7% of EU average	Strong Innovators – Between 100% and 108.3% of EU average
Moderate Innovators	Moderate Innovators + Between 90% and 100% of EU average	Moderate Innovators Between 80% and 90% of EU average	Moderate Innovators – Between 70% and 80% of EU average
Emerging Innovators	Emerging Innovators + Between 54.2% and 70% of EU average	Emerging Innovators Between 38.4% and 54.2% of EU average	Emerging Innovators – Below 38.4% of EU average

At the level of sub-groups, there is more diversity in performance of regional innovation systems within countries (see Table 3 and Figure 4):

- In France and Germany there are seven different performance sub-groups.
- In Sweden there are six different performance sub-groups.
- In Denmark, Italy, the Netherlands, Norway, Portugal, Spain, and the UK there are five different performance sub-groups.
- In Czechia, Finland, Greece, and Poland there are four different performance sub-groups.

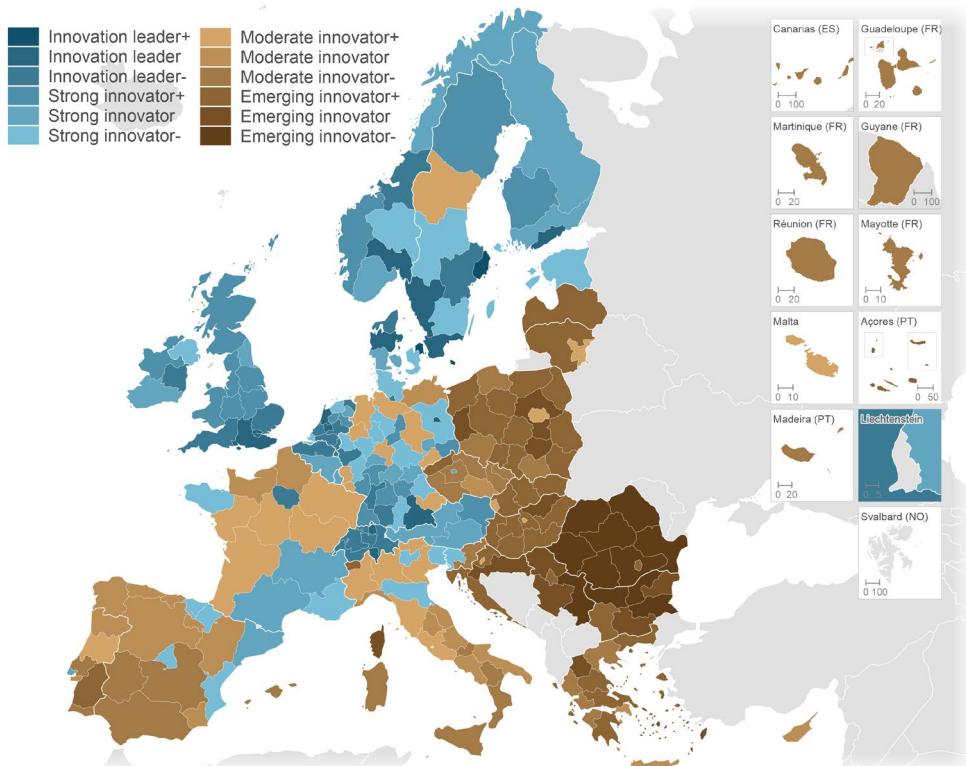
Hence, Chapter 2.6 presents the regional performance differences within countries using 12 performance sub-groups.

Table 3: Occurrence of regional performance groups by country

COUNTRY	PERFORMANCE GROUP	INNOVATION LEADER		STRONG INNOVATOR			MODERATE INNOVATOR			EMERGING INNOVATOR			
		+	-	+	-	+	-	+	-	+	-	-	
All countries	-	2	13	23	20	20	29	27	21	26	35	14	11
Switzerland	Innovation Leader	2	5										
Sweden	Innovation Leader	1	2	1	1		2	1					
Denmark	Innovation Leader	1	1	1		1	1						
Netherlands	Innovation Leader		2	5	2	1	2						
United Kingdom	Innovation Leader		2	2	6	1	1						
Finland	Innovation Leader		1	0	1	2	1						
Ireland	Strong Innovator			1	1	1							
Belgium	Strong Innovator			2		1							
Norway	Strong Innovator		1	1	1	2	1						
Austria	Strong Innovator				1	2							
Germany	Strong Innovator	2	4	7	4	11							
France	Strong Innovator			1		2	2	5	2	1			
Slovenia	Moderate Innovator					1				1			
Italy	Moderate Innovator					3	6	6	5	1			
Spain	Moderate Innovator				1	4		7	5		2		
Portugal	Moderate Innovator				1		1	2	3	2			
Lithuania	Moderate Innovator						1			1			
Czechia	Moderate Innovator				1			1	5	1			
Greece	Moderate Innovator							2	3	6	2		
Croatia	Moderate Innovator						1			2	1		
Hungary	Emerging Innovator						1			6	1		
Poland	Emerging Innovator						1		3	10	3		
Slovakia	Emerging Innovator						1			3			
Serbia	Emerging Innovator								1	2	1		
Bulgaria	Emerging Innovator								1	2	3		
Romania	Emerging Innovator								1		7		

Notes: (1) Countries ordered by their performance score in the Regional Innovation Scoreboard 2025. (2) The table excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta)

Figure 4: Regional performance sub-groups in 2025



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

This map uses the NUTS 2024 classification for all countries except the United Kingdom (UK). As the UK is no longer part of the NUTS system, the map applies the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics.

2.4 Most innovative regions

The most innovative region in Europe in 2025 is *Stockholm* (SE11) in Sweden, followed by *Hovedstaden* (DK01) in Denmark, *London* (UKI) in the UK, *Zürich* (CH04) in Switzerland, and *Oberbayern* (DE21) in Germany (see Table 4). *Hovedstaden* (DK01) is second in 2025 but was the most innovative region in 2019 and 2021, and 2023¹⁷. *Stockholm* (SE11) and *Zürich* (CH04) were among the top five regions across all these years.

¹⁷ Regional rankings for 2019, 2021 and 2023 are all based on the RIS 2025 framework to ensure comparability.

Most regions in the top 25 (four per country) are in Sweden, the UK, Switzerland, Germany, and the Netherlands. Looking beyond the top 25 regions, **innovation performance remains unevenly distributed across Europe**. All top 50 performing regions (based on RII score relative to EU in 2025) are in Northern and Western Europe - notably in Belgium, Denmark, Finland, France, Germany, Ireland, the Netherlands, Norway, Sweden, Switzerland, and the UK. In contrast, the 50 lowest-performing regions are predominantly situated in Central, Eastern, and Southern Europe, including Bulgaria, Croatia, Czechia, Greece, Hungary, Poland, Romania, Serbia, Slovakia, Spain, and Portugal, with one exception in France (Corse). However, there are some pockets of excellence in these countries with regions performing above the EU average (namely *Praha* (CZ01), *País Vasco* (ES21), *Comunidad Foral de Navarra* (ES22), *Comunidad de Madrid* (ES3), *Catalunya/Cataluña* (ES51), *Comunitat Valenciana* (ES52), *Grande Lisboa* (PT1A).

Table 4: Top-25 Regional Innovation Leaders

	2019	2021	2023	2025	RII2025
1	Hovedstaden (DK01)	Hovedstaden (DK01)	Hovedstaden (DK01)	Stockholm (SE11)	155.4
2	Zürich (CH04)	Stockholm (SE11)	Stockholm (SE11)	Hovedstaden (DK01)	147
3	Stockholm (SE11)	Zürich (CH04)	Helsinki-Uusimaa (FI1B)	London (UKI)	144.7
4	Nordwestschweiz (CH03)	Ticino (CH07)	Zürich (CH04)	Zürich (CH04)	144.4
5	Ticino (CH07)	Nordwestschweiz (CH03)	London (UKI)	Oberbayern (DE21)	143.1
6	Helsinki-Uusimaa (FI1B)	South East (England) (UKJ)	Midtjylland (DK04)	Ticino (CH07)	142.1
7	Noord-Holland (NL32)	Sydsverige (SE22)	Västsverige (SE23)	South East (England) (UKJ)	141.2
8	Utrecht (NL35)	Helsinki-Uusimaa (FI1B)	Oberbayern (DE21)	Helsinki-Uusimaa (FI1B)	140.8
9	Ostschweiz (CH05)	London (UKI)	Noord-Holland (NL32)	Västsverige (SE23)	140.3
10	Région lémanique (CH01)	Midtjylland (DK04)	Ticino (CH07)	Sydsverige (SE22)	140.1
11	Sydsverige (SE22)	Oberbayern (DE21)	South East (England) (UKJ)	Noord-Holland (NL32)	139.4
12	South East (England) (UKJ)	Ostschweiz (CH05)	Sydsverige (SE22)	Berlin (DE3)	139
13	Midtjylland (DK04)	Noord-Holland (NL32)	Utrecht (NL35)	Utrecht (NL35)	136.2

	2019	2021	2023	2025	RII2025
14	London (UKI)	Région lémanique (CHO1)	Berlin (DE3)	Oslo og Viken (NO08)	135.8
15	Västsverige (SE23)	Västsverige (SE23)	Nordwestschweiz (CHO3)	Midtjylland (DK04)	135.6
16	Zentralschweiz (CH06)	Utrecht (NL35)	Oslo og Viken (NO08)	Nordwestschweiz (CHO3)	134.6
17	Östra Mellansverige (SE12)	Berlin (DE3)	Karlsruhe (DE12)	East (England) (UKH)	134.4
18	Berlin (DE3)	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	Zuid-Holland (NL36)	Ile-de-France (FR1)	133.2
19	Zuid-Holland (NL36)	East (England) (UKH)	Ostschweiz (CH05)	Karlsruhe (DE12)	133
20	Trøndelag/Trööndelage (NO06)	Zentralschweiz (CH06)	East (England) (UKH)	Östra Mellansverige (SE12)	132.9
21	Noord-Brabant (NL41)	Oslo og Viken (NO08)	Noord-Brabant (NL41)	Ostschweiz (CH05)	131.5
22	Oslo og Viken (NO08)	Östra Mellansverige (SE12)	Nordjylland (DK05)	South West (England) (UKK)	131.2
23	Espace Mittelland (CH02)	Trøndelag/Trööndelage (NO06)	Östra Mellansverige (SE12)	Trøndelag/Trööndelage (NO06)	130.7
24	Oberbayern (DE21)	Karlsruhe (DE12)	Gelderland (NL22)	Gelderland (NL22)	130.4
25	Groningen (NL11)	Zuid-Holland (NL36)	Région lémanique (CHO1)	Zuid-Holland (NL36)	129.9

Notes: (1) Regional rankings for 2019, 2021 and 2023 are all based on RIS 2025 scores to ensure that the same indicator framework and data sources are used. (2) RII2025 in the table shows RII score relative to the EU27 average in 2025.

The top-ranking region in 2025 in the Strong Innovators group is *West Midlands* (England) (UKG), followed by another region in the UK, *East Midlands* (England) (UKF), and a region in Ireland, *Northern and Western* (IE04). All top-10 regions in the Strong Innovators group perform at least 15%-points above the EU27 average (see Table 5).

Mellersta Norrland (SE32) in Sweden is the top-ranking region in the Moderate Innovators group, followed by *Saarland* (DEC) in Germany, and *Budapest* (HU11) in Hungary. All three regions are very close to the EU27 average. Almost all top-10 regions in the Moderate Innovators group perform less than 3%-points below the EU27 average.

In the Emerging Innovators group, *Alentejo* (PT1C) in Portugal ranks first, followed by *Valle d'Aosta/Vallée d'Aoste* (ITC2) in Italy, and *City of Belgrade* (RS11) in Serbia. All top-10 regions in the Emerging Innovators group perform between 63% and 70% of the EU average.

Table 5: Top-10 Regions by regional performance group

RANK	TOP-10 STRONG INNOVATORS		TOP-10 MODERATE INNOVATORS		TOP-10 EMERGING INNOVATORS	
	REGION	RII2025	REGION	RII2025	REGION	RII2025
1	West Midlands (England) (UKG)	125	Mellersta Norrland (SE32)	99.6	Alentejo (PT1C)	69.1
2	East Midlands (England) (UKF)	124.4	Saarland (DEC)	99.6	Valle d'Aosta/Vallée d'Aoste (ITC2)	69
3	Northern and Western (IE04)	123.7	Budapest (HU11)	99.5	City of Belgrade (RS11)	69
4	Mittelfranken (DE25)	123	Pays de la Loire (FRG)	99.2	Thessalia (EL61)	68.1
5	Övre Norrland (SE33)	122.9	Lombardia (ITC4)	98.7	Anatoliki Makedonia Thraki (EL51)	66.6
6	Scotland (UKM)	121.8	Lüneburg (DE93)	98.4	Pest (HU12)	66.6
7	Darmstadt (DE71)	120.3	Chemnitz (DED4)	97.6	Vidurio ir vakarų Lietuvos regionas (LT02)	66
8	Dresden (DED2)	120.2	Münster (DEA3)	97.2	Podkarpacie (PL82)	65.5
9	Vestlandet (NO0A)	119.9	Nouvelle-Aquitaine (FRI)	97.1	Śląskie (PL22)	63.2
10	Yorkshire and The Humber (UKE)	119.6	Sostinės regionas (LT01)	96.6	Voreio Aigaio (EL41)	63.1

Notes: (1) RII2025 in the table shows RII score relative to EU average in 2025. (2) The table excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta).

2.5 Performance changes over time

Strong progress in regional innovation performance has been observed across Europe over the long term. From 2018 to 2025, RII performance relative to the EU27 in 2018 has risen in 233 out of 241 regions¹⁸, with those regions recording an average increase of 12.2%-points. The EU27 average has increased by 12.6%-points during this period. A slightly larger EU27 increase could be linked to large increases in Cyprus, Estonia, and Malta that are included in the EU27 average, but not included as part of 241 regions analysed¹⁹. Moreover, 110 regions have increased their performance at a faster pace than the EU27 average. During the same period, RII performance relative to the EU27 in 2018 has slightly decreased on average by 3.1%-points in eight regions in France, Sweden, and Switzerland.

However, **short-term progress has slowed and remained close to stable**. From 2023 to 2025, RII performance has risen in 159 regions, by an average of 3.5%-points, while 82 regions have seen an average decline of 3.6%-points. Although more regions have continued to improve, the EU27 average increased by only 0.8%-points during this period.

Despite persistent disparities, lowest performing regions are slowly catching up to top performing regions. The average RII score relative to the EU27 in 2018 of Innovation Leaders was 2.9 times higher than that of emerging innovators in 2018 – a gap that has slightly decreased to 2.6 times by 2025. In addition, in 2018, the highest-performing region had an RII score relative to EU27 in 2018 9.6 times higher than the lowest-scoring region²⁰. By 2025, this ratio of RII score relative to EU27 in 2018 has declined to 6.9²¹. Finally, a study on the RIS 2000-2022 time series estimates also provides some evidence that the lowest performing regions are slowly catching up to top performers (see Box 2).

Box 2: Summary of study on RIS long term trends (2000-2022)

The Regional Innovation Scoreboard is a valuable tool for informing policy actions and supporting policymakers in designing and implementing innovation-friendly policies to address current challenges. Although each new RIS edition includes a back-calculation of the RII and its underlying indicators for an eight-year period, using RIS results for the Impact assessment of R&I policies and measures remains challenging. This is because the economic impacts of such policies often take longer than eight years to become apparent. Therefore, for a more accurate evaluation of progress at the regional level in the EU, it is important to examine long-term trends and their underlying indicators. A separate study²² has addressed this need by constructing a consistent dataset for the RII

¹⁸ This excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta).

¹⁹ Cyprus, Estonia, and Malta increased their RII more than the EU average.

²⁰ Zürich (CH04): 166.15, Sud-Vest Oltenia (RO41): 17.31.

²¹ Stockholm (SE11): 174.97, Sud-Vest Oltenia (RO41): 25.53.

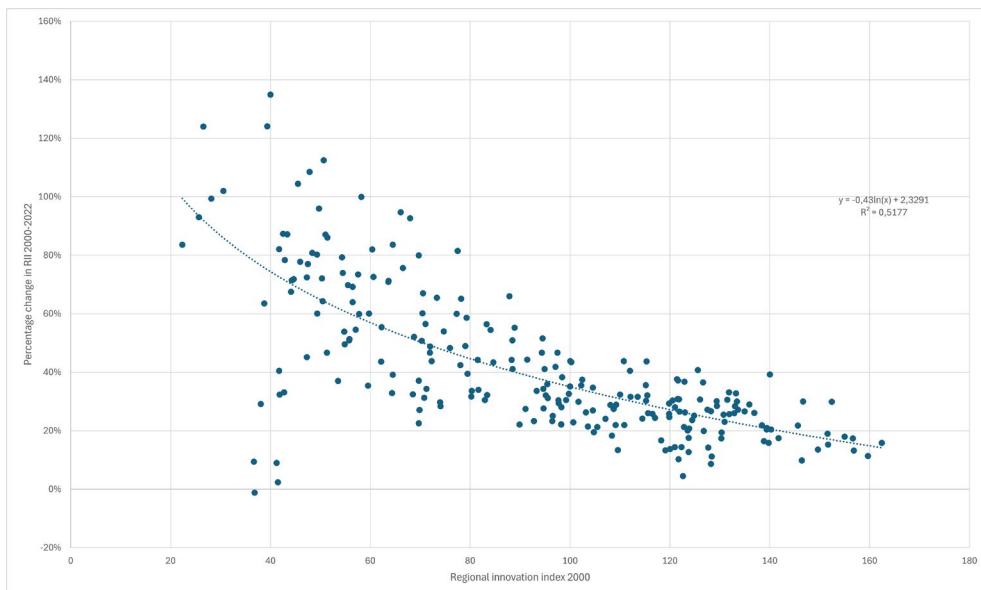
²² Calculation of consistent 2000-2022 time series data for the Regional Innovation Index (RII) and the individual indicators in the Regional Innovation Scoreboard (RIS), Expert report for DG Research and Innovation prepared by Hugo Hollanders (Maastricht University).

and the 21 indicators included in the RIS 2023, covering an extended period from 2000 to 2022. Missing data have been estimated using different techniques as explained in detail in the study.

The study shows that the 2000-2022 RII scores based on the time series estimates are highly correlated with those in the eight-year period covered in the RIS 2023. This confirms the robustness of the methodology used.

The time series suggests that several European regions with lower innovation performance in 2000 have experienced relatively faster growth between 2000 and 2022, catching up to those in a higher innovation performance group (Figure 5).

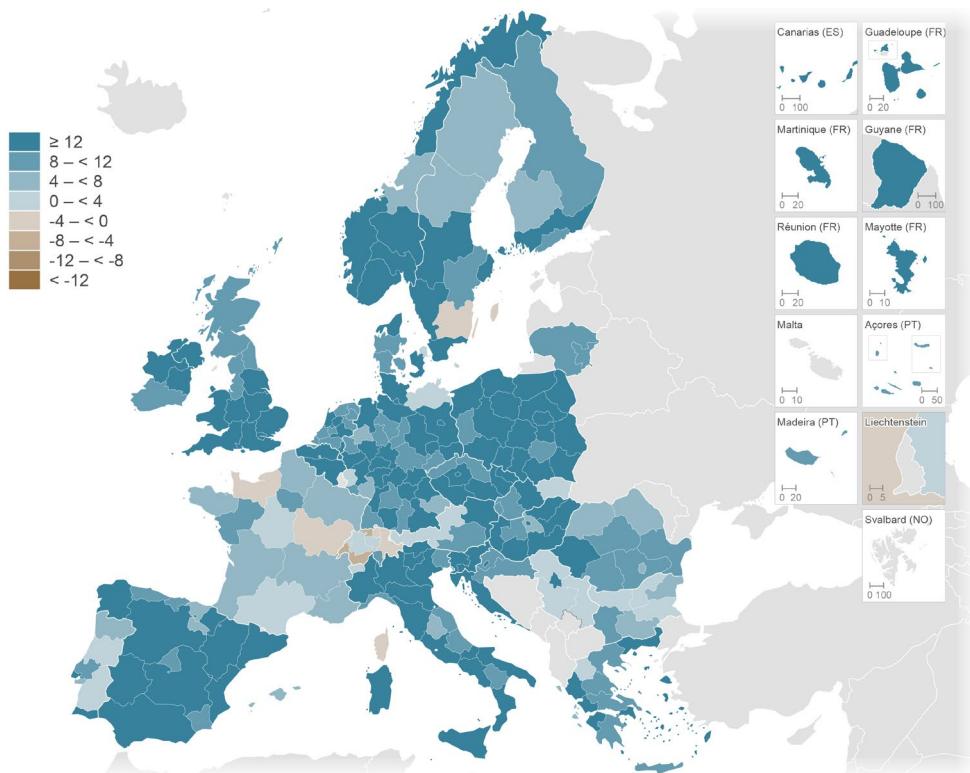
Figure 5: Convergence in 2000-2022 regional innovation performance



Source: Calculation of consistent 2000-2022 time series data for the Regional Innovation Index (RII) and the individual indicators in the Regional Innovation Scoreboard (RIS), Expert report for DG Research and Innovation prepared by Hugo Hollanders (Maastricht University).

Detailed data on the RII performance trends is presented in Annex 5. Long-term trends (2018-2025) are also visualised in a map in Figure 6.

Figure 6: Innovation performance change 2018-2025



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

This map uses the NUTS 2024 classification for all countries except the United Kingdom (UK). As the UK is no longer part of the NUTS system, the map applies the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics.

The map excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta).

While looking at the **long-term (2018-2025) performance trend per performance group** (see Table 6), we can see that, overall, 97% of all regions improved. In terms of Innovation Leader regions, a slightly lower share experienced improvement. This suggests a degree of stagnation among the most advanced regions, while in other performance groups, almost all regions are improving their performance.

Table 6: Long-term (2018-2025) performance change over time by regional performance group

CATEGORY	ALL REGIONS	INNOVATION LEADERS	STRONG INNOVATORS	MODERATE INNOVATORS	EMERGING INNOVATORS
Performance increase 2018-2025	233 (97%)	34 (89%)	68 (99%)	72 (97%)	59 (98%)
Performance decrease 2018-2025	8 (3%)	4 (11%)	1 (1%)	2 (3%)	1 (2%)
Total regions	241	38	69	74	60
Performance between 2018-2025 increased more than EU27 average	110 (46%)	17 (45%)	35 (51%)	37 (50%)	21 (35%)
Performance between 2018-2025 increased less than EU27 average	131 (54%)	21 (55%)	34 (49%)	37 (50%)	39 (65%)

Note: The table excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta).

With respect to the short-term (2023-2025), Emerging Innovator regions show a slightly lower share of regions with performance increases compared to the other three groups (see Table 7). However, when considering the pace of growth relative to the EU27 average, Innovation Leader regions witnessed growth that is below that of the EU average. This pattern of stagnation is also evident when looking at longer-term trends from 2018 to 2025.

Table 7: Short-term (2023–2025) performance change over time by regional performance group

Category	All Regions	Innovation Leaders	Strong Innovators	Moderate Innovators	Emerging Innovators
Performance increase 2023–2025	159 (66%)	20 (53%)	50 (72%)	51 (69%)	38 (63%)
Performance decrease 2023–2025	82 (34%)	18 (47%)	19 (28%)	23 (31%)	22 (37%)
Total regions	241	38	69	74	60
Performance between 2023–2025 increased more than EU27 average	159 (66%)	20 (53%)	50 (72%)	51 (69%)	38 (63%)
Performance between 2023–2025 increased less than EU27 average	82 (34%)	18 (47%)	19 (28%)	23 (31%)	22 (37%)

Note: The table excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta).

Performance increases over time are driven by certain indicators. Table 8 summarises the average increase for each indicator across all regions compared to their own performance in 2018 (column two of the table)²³. The table also shows the percentage shares of all regions for which performance increased or decreased (columns three and four of the table). Overall performance changes have been driven most by those indicators for which average performance has increased strongest (by 50% or more, in descending order):

- *Broadband penetration*,
- *SMEs introducing business process innovations*,
- *International scientific co-publications*,
- *Air emissions by fine particulates*,

²³ The average change is calculated as the percentage change in re-scaled indicator value between 2018 and 2025 for each region and then averaging it for all regions.

- *Scientific publications among the top 10% most cited.*

Only for *Design applications* (-5%), *PCT patent applications* (-9%), and *Non-R&D innovation expenditures* (-13%) average performance has decreased over time. For *PCT patent applications* small part of the decrease could be related to patent applications often having a publication lag. For PCT patents, there is typically an 18-month delay between the filing and publication of applications (the delay could be slightly longer)²⁴. RIS 2025 use REGPAT data recent update of May 2025 that considers the data until Autumn 2024. Thus, there might be some patent applications submitted very late in 2022 that were not published at the data cut-off time for the last REGPAT update. However, this number should not be large and should not have a significant impact on the indicator.

It must be noted that the average percentage shares do not distinguish between regions that had low indicator values in 2018 and those that had high values. For example, a region an indicator increased from 0.8 to 0.9 records a 12.5% increase. In contrast, a region improving from 0.1 to 0.2 records a 100% increase, even though the absolute change is the same.

It is therefore useful to include additional information on the shares of regions for which performance increased or decreased. **Performance increased for more than 70% of the regions for:**

- *International scientific co-publications,*
- *Air emissions by fine particulates,*
- *Public-private co-publications,*
- *Labour productivity,*
- *Broadband penetration,*
- *Innovative SMEs collaborating with others,*
- *SMEs introducing business process innovations.*

The results suggest that innovation performance has increased most due to increasing performance in indicators measuring scientific outputs, collaboration of innovative SMEs, business process innovations, resource and labour productivity, and broadband penetration.

²⁴ 24 World Intellectual Property Organization. PCT Applicant's Guide – International Phase. Accessed July 7, 2025, <https://www.wipo.int/pct/en/appguide/>

Table 8: Average increase for each indicator across all regions

INDICATOR	AVERAGE CHANGE IN PERFORMANCE RELATIVE TO OWN PERFORMANCE SINCE 2018	PERCENTAGE SHARE OF REGIONS FOR WHICH PERFORMANCE INCREASED	PERCENTAGE SHARE OF REGIONS FOR WHICH PERFORMANCE DECREASED
Population with tertiary education	14%	65%	29%
Population involved in lifelong learning	37%	57%	9%
International scientific co-publications	113%	97%	0%
Scientific publications among the top 10% most cited	55%	47%	53%
Broadband penetration	225%	74%	6%
R&D expenditure in the public sector	9%	53%	32%
R&D expenditure in the business sector	17%	68%	19%
Non-R&D innovation expenditures	-13%	29%	66%
Innovation expenditures per person employed	4%	50%	39%
Employed ICT specialists	17%	67%	28%
SMEs introducing product innovations	29%	64%	33%
SMEs introducing business process innovations	116%	71%	26%
Innovative SMEs collaborating with others	44%	73%	23%
Public-private co-publications	23%	94%	4%
PCT patent applications	-9%	26%	72%
Trademark applications	15%	46%	53%
Design applications	-5%	28%	71%
Sales of new-to-market and new-to-firm innovations	31%	51%	45%

INDICATOR	AVERAGE CHANGE IN PERFORMANCE RELATIVE TO OWN PERFORMANCE SINCE 2018	PERCENTAGE SHARE OF REGIONS FOR WHICH PERFORMANCE INCREASED	PERCENTAGE SHARE OF REGIONS FOR WHICH PERFORMANCE DECREASED
Employment in innovative enterprises	8%	35%	57%
Exports of medium and high technology products	4%	48%	52%
Air emissions by fine particulates	107%	97%	2%
Labour productivity	10%	75%	22%

Notes: (1) The table excludes countries for which statistical regions at NUTS 1 and NUTS 2 do not exist (Cyprus, Estonia, Latvia, Luxembourg and Malta). (2) The average change is calculated as the percentage change in re-scaled indicator value between 2018 and 2025 for each region and then averaging it for all regions²⁵. (3) Shares of performance increases and decreases may not sum to 100%, as regions with no change are excluded from both. (4) Cloud computing in enterprises is not included in the table as the indicator does not have time series and is available only for 2023. Thus, there can be no change in this indicator.

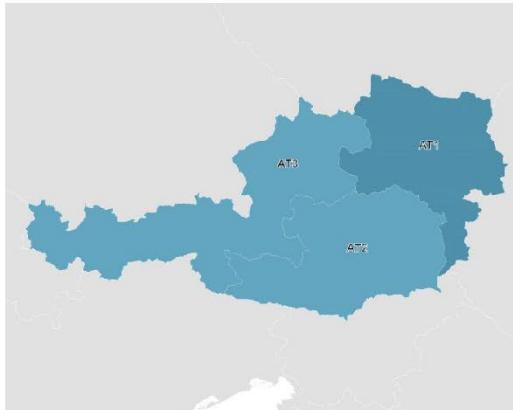
2.6 Regional performance differences within countries

This section summarises the performance of the regions within each country separately. For each country, a map with the regions and their performance sub-groups is presented. In addition, for every country a table is included that shows the following information for each region and the country as a whole: RII relative to EU performance in 2025, performance sub-group, region rank among all RIS regions (including Cyprus, Estonia, Latvia, Luxembourg, and Malta), performance change calculated as the difference between the performance in 2025 and 2018 both relative to that of the EU in 2018, and performance change calculated as the difference between the performance in 2025 and 2023 both relative to that of the EU in 2018. NUTS codes and region names for the regions that include the country's capital city are highlighted in bold. More details about each country's regions can be found in the regional country profiles.

²⁵ First increase is calculated for each region as: $(Y_{2025} - Y_{2018}) / Y_{2018} * 100$, where Y is indicator normalised score. Then, average of all regions for the indicator is calculated.



AUSTRIA



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Austria	114	Strong	-	8.2	-3.7
Ostösterreich (AT1)	119.6	Strong+	49	14	-3.1
Südösterreich (AT2)	110.4	Strong	73	9	-3.6
Westösterreich (AT3)	110.3	Strong	74	3.5	-2.5

Austria is a Strong innovator with three regions covered in the RIS. **Ostösterreich (AT1)** is the most innovative region, classified as a Strong innovator+. **Südösterreich (AT2)** and **Westösterreich (AT3)** are Strong innovators.

Innovation performance in all three regions increased from 2018 to 2025, most significantly in the capital region (**Ostösterreich (AT1)**), with smaller improvements in **Westösterreich (AT3)**. However, from 2023 to 2025, the performance of all three regions decreased.



BELGIUM



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Belgium	122.6	Strong	-	11.7	-0.4
Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	128	Leader-	30	7.9	3.2
Vlaams Gewest (BE2)	127.9	Leader-	31	12.2	-1.1
Région wallonne (BE3)	108.7	Strong	78	12.3	-0.8

Belgium is a Strong innovator with three regions covered in the RIS. **Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)**, the capital region, and **Vlaams Gewest (BE2)** are the most innovative regions and are classified as Innovation leaders-. **Région wallonne (BE3)** is classified as a Strong Innovator.

Innovation performance in all three regions increased from 2018 to 2025. However, from 2023 to 2025, the performance of **Vlaams Gewest (BE2)** and **Région wallonne (BE3)** slightly decreased.



BULGARIA



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Cartography: Eurostat - IMAGE

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Bulgaria	45.8	Emerging	-	6.3	0.7
Severozapaden (BG01)	27.8	Emerging-	244	0	-4.3
Severen tsentralen (BG02)	35.1	Emerging-	238	2.7	-3.7
Severoiztochen (BG03)	39.9	Emerging	234	7.6	3
Yugoiztochen (BG04)	30.5	Emerging-	241	3.9	-4.1
Yugozapaden (BG05)	58.7	Emerging+	210	8.7	1.4
Yuzhen tsentralen (BG06)	40.6	Emerging	233	4.7	0.9

Bulgaria is an Emerging innovator with six regions covered in RIS. **Yugozapaden (BG05)**, the capital region, is the most innovative and is classified as an Emerging innovator+. Two regions are classified as Emerging innovators, and the remaining three are Emerging innovators-.

Innovation performance increased from 2018 to 2025 across five regions, the most in **Yugozapaden (BG05)** and **Severoiztochen (BG03)**, whereas innovation in **Severozapaden (BG01)** slowed. From 2023 to 2025, the performance increased for three regions and declined for three regions.



CROATIA



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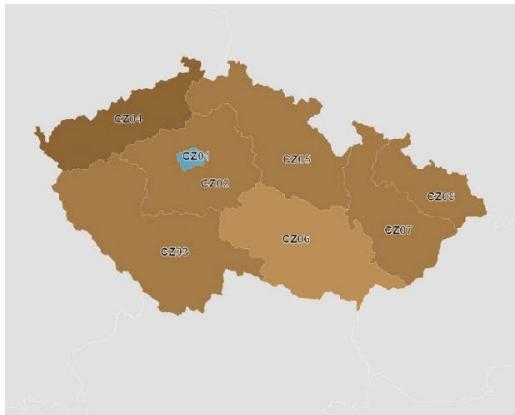
Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Croatia	71.6	Moderate	-	19.4	1.1 ²⁶
Panonska Hrvatska (HR02)	51.9	Emerging	227	8.5	-0.2
Jadranska Hrvatska (HR03)	56.5	Emerging+	216	12.4	-6.1
Grad Zagreb (HR05)	94.6	Moderate+	126	22.2	-8.6
Sjeverna Hrvatska (HR06)	59.5	Emerging+	204	9.9	-4.7

Croatia is a Moderate innovator with four regions covered in RIS. The capital region of **Grad Zagreb (HR05)** well outperforms other regions and is classified as a Moderate innovator+. **Sjeverna Hrvatska (HR06)** and **Jadranska Hrvatska (HR03)** are Emerging innovators+, and **Panonska Hrvatska (HR02)** is an Emerging innovator.

Innovation performance in all four regions increased from 2018 to 2025. However, from 2023 to 2025, the performance of all regions decreased, most strongly in the top three performing regions.

²⁶ While each region registered a decline between 2023 and 2025, the national-level performance increased. Although this may appear counter-intuitive, it results from the method used to calculate performance change. The national score is not derived as an average of regional scores. Instead, it is calculated independently using national-level data, meaning that regional contributions to the national result are not equal. Moreover, for some indicators, certain HR regions were treated as positive outliers. This limited their impact on the regional composite scores, even though the corresponding national values (which have not reached threshold to be an outlier) fully contributed to the national score. As a result, strong national-level improvements in these indicators were reflected in the country-level index, but only partially in regional-level indexes.

 CZECHIA



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Czechia	80.6	Moderate	-	16.3	-8.3
Praha (CZ01)	110.1	Strong	75	21.9	-11.5
Střední Čechy (CZ02)	73.8	Moderate-	169	13.1	-10.2
Jihozápad (CZ03)	73	Moderate-	173	18.4	-4.4
Severozápad (CZ04)	56.1	Emerging+	218	8.1	-6.9
Severovýchod (CZ05)	71.6	Moderate-	179	9.3	-10.4
Jihovýchod (CZ06)	89.1	Moderate	139	20.8	-6
Střední Morava (CZ07)	73.8	Moderate-	168	14.4	-11.2
Moravskoslezsko (CZ08)	73.6	Moderate-	172	16.1	-8.8

Czechia is a Moderate innovator with eight regions. *Praha (CZ01)*, the capital regions, is a Strong innovator, outperforming all other regions. *Severozápad (CZ04)* is a Moderate innovator+ and *Jihovýchod (CZ06)* is a Moderate innovator. The remaining five regions are Moderate innovators-.

Innovation performance improved across all regions from 2018 to 2025, with the largest increase in the capital region of *Praha* (CZ01) and *Jihovýchod* (CZ06). Despite this, from 2023 to 2025, the performance of all regions declined, and most heavily in *Praha* (CZ01), *Střední Čechy* (CZ02), *Severovýchod* (CZ05), and *Střední Morava* (CZ07).

 DENMARK



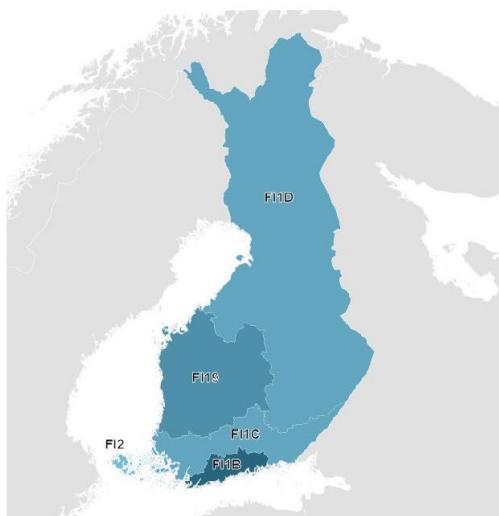
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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Denmark	135	Leader	-	12.3	-4.1
Hovedstaden (DK01)	147	Leader+	2	0.8	-9.9
Sjælland (DK02)	107	Strong-	89	13.3	0.2
Syddanmark (DK03)	113	Strong	69	11.8	-4.6
Midtjylland (DK04)	135.6	Leader	15	10.6	-7.3
Nordjylland (DK05)	125.8	Leader-	37	16.3	7.2

Denmark is an Innovation leader consisting of five regions. *Hovedstaden* (*DK01*), the capital region, is the most innovative region, is classified as an Innovation leader+, and is ranked second among all RIS regions. *Midtjylland* (*DK04*) is an Innovation leader, *Nordjylland* (*DK05*) an Innovation leader-, *Syddanmark* (*DK03*) as a Strong innovator, and *Sjælland* (*DK02*) as a Strong innovator.

Innovation performance across all regions increased from 2018 to 2025, most strongly for *Nordjylland* (*DK05*), and only very slightly for *Hovedstaden* (*DK01*). From 2023 to 2025 the performance of all but one region (*Sjælland* (*DK02*)) declined, decreasing the most in the capital.



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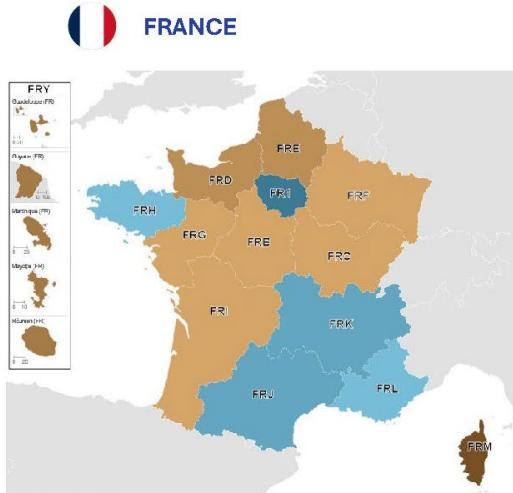
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Cartography: Eurostat - IMAGE

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Finland	125.3	Leader	-	8.9	-5.3
Länsi-Suomi (FI19)	119	Strong+	52	7.1	-2
Helsinki-Uusimaa (FI1B)	140.8	Leader	8	9.9	-6.7
Etelä-Suomi (FI1C)	116.5	Strong	59	15	-0.9
Pohjois- ja Itä-Suomi (FI1D)	114.1	Strong	68	9.2	-6.3
Åland (FI2)	101.1	Strong-	108	15.5	6.6

Finland is an Innovation leader- with five regions covered in RIS. *Helsinki-Uusimaa (FI1B)*, the capital region, is the strongest performer, classified as an Innovation leader. *Länsi-Suomi (FI19)* is classified as a Strong Innovator+. *Etelä-Suomi (FI1C)* and *Pohjois- ja Itä-Suomi (FI1D)* are classified as Strong Innovators, while the region of *Åland (FI2)* is a Strong innovator-.

Innovation performance in all five regions increased from 2018 to 2025, most in *Etelä-Suomi (FI1C)* and *Åland (FI2)*. However, from 2023 to 2025 the performance of all regions, with the exception of *Åland (FI2)*, decreased.



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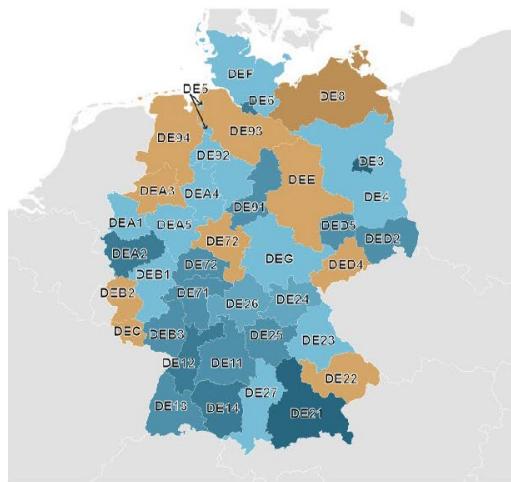
France is a Strong innovator and consists of 14 regions. *Ile-de-France (FR1)*, the capital region, is the most innovative region, classified as an innovation leader-. Two regions are Strong innovators, two are Strong innovators-, five are Moderate innovators+, two are Moderate innovators, one is a Moderate innovator- (*RUP FR — Régions Ultrapériphériques Françaises (FRY)*), and one is an Emerging innovator (*Corse (FRM)*).

Innovation performance in most regions increased from 2018 to 2025 but decreased slightly in three regions: *Bourgogne-Franche-Comté (FRC)*, *Normandie (FRD)*, and *Corse (FRM)*. However, from 2023 to 2025 the performance of all but one region (*Corse (FRM)*) improved.

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
France	108.6	Strong	-	7.4	3.8
Ile-de-France (FR1)	133.2	Leader-	18	11.3	4.7
Centre — Val de Loire (FRB)	91.1	Moderate+	133	3.4	2.6
Bourgogne-Franche-Comté (FRC)	90.7	Moderate+	134	-1.3	0.5
Normandie (FRD)	81.5	Moderate	155	-2.7	2.9
Hauts-de-France (FRE)	87.9	Moderate	142	4.9	5.1
Grand Est (FRF)	96.3	Moderate+	123	4.4	4.1
Pays de la Loire (FRG)	99.2	Moderate+	113	8.8	4
Bretagne (FRH)	105.6	Strong-	96	7.7	2.1
Nouvelle-Aquitaine (FRI)	97.1	Moderate+	118	4.8	3.1
Occitanie (FRJ)	114.4	Strong	67	0.9	6
Auvergne-Rhône-Alpes (FRK)	115	Strong	64	4.7	3.7
Provence-Alpes-Côte d'Azur (FRL)	107.1	Strong-	86	7.2	2.9
Corse (FRM)	52.1	Emerging	226	-3.3	-3.3
RUP FR — Régions Ultrapériphériques Françaises (FRY)	71.3	Moderate-	181	14.5	4.6



GERMANY



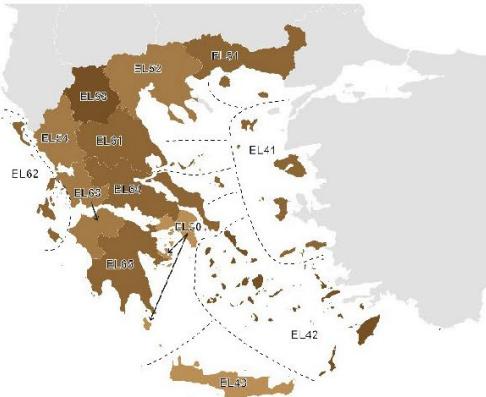
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Germany is a Strong innovator with 38 regions covered in RIS. *Oberbayern (DE21)* is the most innovative region, closely followed by *Berlin (DE3)*, the capital region, which are classified as Innovation leaders. In the other regions, four are Innovation leaders-, seven are Strong innovators+, four are Strong innovators, 11 are Strong innovators-, nine are Moderate innovators+, and one (*Mecklenburg-Vorpommern (DE8)*) is a Moderate innovator.

Innovation performance in all regions increased from 2018 to 2025, most strongly in *Oberbayern (DE21)* and *Koblenz (DEB1)*. However, from 2023 to 2025 performance decreased in six regions, most notably in *Bremen (DE5)*.

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Germany	111	Strong	-	8.7	-2.5
Stuttgart (DE11)	118.1	Strong+	54	11.5	1.9
Karlsruhe (DE12)	133	Leader-	19	12.2	-0.5
Freiburg (DE13)	118.6	Strong+	53	11.1	1.1
Tübingen (DE14)	125.4	Leader-	38	15.1	3.9
Oberbayern (DE21)	143.1	Leader	5	22.8	2.1
Niederbayern (DE22)	91.4	Moderate+	132	4.9	0.6
Oberpfalz (DE23)	107	Strong-	87	16.8	0.4
Oberfranken (DE24)	109.6	Strong	76	13.7	1.4
Mittelfranken (DE25)	123	Strong+	42	13.2	1.3
Unterfranken (DE26)	111.6	Strong	71	12.9	3.8
Schwaben (DE27)	105	Strong-	99	9.1	2.5
Berlin (DE3)	139	Leader	12	16.1	1.9
Brandenburg (DE4)	103.5	Strong-	103	14.2	0.5
Bremen (DE5)	105.3	Strong-	98	7.8	-2.9
Hamburg (DE6)	129.2	Leader-	27	19.9	2.1
Darmstadt (DE71)	120.3	Strong+	45	15.2	3.7
Gießen (DE72)	116.4	Strong	60	12.7	3.3
Kassel (DE73)	96.6	Moderate+	120	13.4	-0.2
Mecklenburg-Vorpommern (DE8)	86.8	Moderate	145	0.3	2.6
Braunschweig (DE91)	117.9	Strong+	55	8.9	1.4
Hannover (DE92)	105.7	Strong-	94	10.3	2.1
Lüneburg (DE93)	98.4	Moderate+	115	19.7	2
Weser-Ems (DE94)	93.4	Moderate+	128	15.1	1.7
Düsseldorf (DEA1)	106	Strong-	92	10.9	-0.5
Köln (DEA2)	127.1	Leader-	33	19.9	0.8
Münster (DEA3)	97.2	Moderate+	117	4.7	0.8
Detmold (DEA4)	107.6	Strong-	85	10.5	-0.3
Arnsberg (DEA5)	107.8	Strong-	82	15.3	0.9
Koblenz (DEB1)	105.4	Strong-	97	22	0.5
Trier (DEB2)	93.2	Moderate+	129	2.8	-1.5
Rheinhessen-Pfalz (DEB3)	117.9	Strong+	56	7.7	1.6
Saarland (DEC)	99.6	Moderate+	111	10.6	3.1
Dresden (DED2)	120.2	Strong+	46	16.3	2.1
Chemnitz (DED4)	97.6	Moderate+	116	11.9	1.8
Leipzig (DED5)	116.4	Strong	61	12.1	1.2
Sachsen-Anhalt (DEE)	93.1	Moderate+	130	12.4	4.4
Schleswig-Holstein (DEF)	104.6	Strong-	101	14.6	1.3
Thüringen (DEG)	105.7	Strong-	95	11.4	3.7



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Greece	75.8	Moderate	-	15.3	-0.4
Attiki (EL30)	85.1	Moderate	149	15.9	0.4
Vorelo Aigaio (EL41)	63.1	Emerging+	195	15.7	15.5
Notio Aigaio (EL42)	50.2	Emerging	228	17.6	1.4
Kriti (EL43)	87.6	Moderate	143	9.2	13
Anatoliki Makedonia					
Thraki (EL51)	66.6	Emerging+	190	21.1	4.7
Kentriki Makedonia (EL52)	75.3	Moderate-	166	11.1	-2.5
Dytiki Makedonia (EL53)	53.5	Emerging	222	2.5	-12.7
Ipeiros (EL54)	72.4	Moderate-	177	23.8	-5.8
Thessalia (EL61)	68.1	Emerging+	189	10	-1.9
Ionia Nisia (EL62)	55.4	Emerging+	220	5.4	3.7
Dytiki Elláda (EL63)	73.8	Moderate-	170	14	0.4
Stereia Elláda (EL64)	61.4	Emerging+	199	10.1	-5.9
Peloponnisos (EL65)	60.4	Emerging+	201	8.8	-6.3

Greece is a Moderate innovator and consists of 13 regions. The highest performing regions are *Kriti* (*EL43*) and *Attiki* (*EL30*), the capital region, both Moderate innovators, followed by *Dytiki Elláda* (*EL63*), *Kentriki Makedonia* (*EL52*) and *Ipeiros* (*EL54*), classified as Moderate innovators-. Six regions are Emerging innovators+, and two are Emerging innovators: *Notio Aigaio* (*EL42*) and *Dytiki Makedonia* (*EL53*).

Innovation performance increased in all regions from 2018 to 2025, most strongly in *Ipeiros (EL54)*. In six regions, innovation performance decreased from 2023 to 2025, most strongly in *Dytiki Makedonia (EL53)*.

The logo for Hungary, featuring a circular emblem with horizontal stripes of red, white, and green, followed by the word "HUNGARY" in blue capital letters.



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Hungary	69.5	Emerging	-	16.2	5.6
Budapest (HU11)	99.5	Moderate+	112	20.1	10.4
Pest (HU12)	66.6	Emerging+	191	6.9	4.1
Közép-Dunántúl (HU21)	57	Emerging+	213	10.3	4.1
Nyugat-Dunántúl (HU22)	56.2	Emerging+	217	12.7	3.6
Dél-Dunántúl (HU23)	59.5	Emerging+	203	18	5
Észak-Magyarország (HU31)	53.1	Emerging	223	12.9	-0.9
Észak-Alföld (HU32)	55.6	Emerging+	219	15.4	2.3
Dél-Alföld (HU33)	61.5	Emerging+	198	17.4	4.2

Hungary is an Emerging innovator made up of eight regions. The capital region of *Budapest (HU11)* is the most innovative, classified as a Moderate innovator+. All remaining regions are Emerging innovators+, except of Észak-Magyarország (HU31) which is classified as Emerging innovator.

Innovation performance in all three regions increased from 2018 to 2025, most notably in *Budapest (HU11)*, and *Dél-Alföld (HU33)*. From 2023 to 2025 the performance of *Észak-Magyarország (HU31)* slightly decreased.


IRELAND


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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Ireland	123.1	Strong	-	13.3	6.6
Northern and Western (IE04)	123.7	Strong+	41	26.7	16.3
Southern (IE05)	115.5	Strong	63	11.2	9.7
Eastern and Midland (IE06)	128.7	Leader-	28	14	4.9

Ireland is a Strong innovator with three regions covered in RIS. *Eastern and Midland (IE06)*, the capital region, is the most innovative regions, classified as an Innovation leader-. *Northern and Western (IE04)* and *Southern (IE05)* regions are Strong innovators+ and Strong innovators, respectively.

Innovation performance in all three regions increased from 2018 to 2025, most strongly in *Northern and Western (IE04)*. Between 2023 and 2025, innovation performance also increased across all regions, although at a lower rate in *Eastern and Midland (IE06)*.



ITALY



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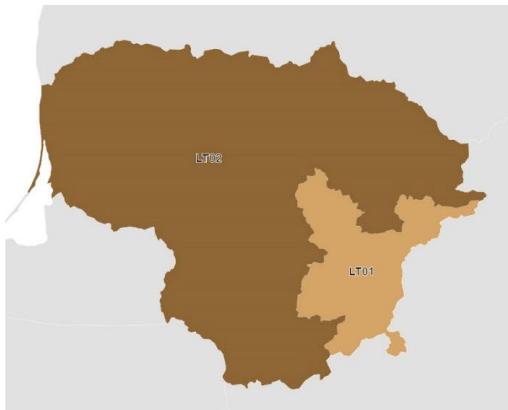
Italy is a Moderate innovator and consists of 21 regions. The strongest regions are *Provincia Autonoma di Trento* (ITH2), *Emilia-Romagna* (ITH5), and *Friuli-Venezia Giulia* (ITH4), classified as Strong innovators-. Six regions are Moderate innovators+, including the capital region *Lazio* (ITH4). Five regions are Moderate innovators and Moderate innovators-, and one regions, *Valle d'Aosta/Vallée d'Aoste* (ITC2), is an Emerging innovator+.

Innovation performance in all regions improved from 2018 to 2025, with the largest increase seen in *Campania* (ITF3). Five regions saw a fairly large decline in innovation performance from 2023 to 2025, while *Veneto* (ITH3) only decreased slightly in this time.

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Italy	93	Moderate	-	15.4	4.9
Piemonte (ITC1)	94.4	Moderate+	127	18.2	3.2
Valle d'Aosta/Vallée d'Aoste (ITC2)	69	Emerging+	187	0.5	-8.4
Liguria (ITC3)	86.2	Moderate	147	12	-3.5
Lombardia (ITC4)	98.7	Moderate+	114	15.3	6.3
Provincia Autonoma di Bolzano/Bozen (ITH1)	92.1	Moderate+	131	14.1	0
Provincia Autonoma di Trento (ITH2)	106.1	Strong-	91	17.9	4.7
Veneto (ITH3)	95.1	Moderate+	124	13	-0.5
Friuli-Venezia Giulia (ITH4)	100.5	Strong-	109	10.7	1
Emilia-Romagna (ITH5)	102.5	Strong-	106	14.4	5.5
Toscana (IT1)	96.3	Moderate+	122	14.3	3.8
Umbria (IT12)	89.7	Moderate	138	7.8	-5.8
Marche (IT13)	89	Moderate	140	11.4	-8.1
Lazio (IT14)	96.3	Moderate+	121	15.3	0.4
Abruzzo (ITF1)	81.2	Moderate	156	9.6	-7
Molise (ITF2)	76	Moderate-	164	12.3	2.8
Campania (ITF3)	87.2	Moderate	144	22.8	8
Puglia (ITF4)	80.2	Moderate	159	18	5
Basilicata (ITF5)	73	Moderate-	174	10.6	1.1
Calabria (ITF6)	75.9	Moderate-	165	19.2	1.9
Sicilia (ITG1)	73.7	Moderate-	171	12.9	6.8
Sardegna (ITG2)	77.5	Moderate-	162	18.5	5.4



LITHUANIA



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NETHERLANDS



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Lithuania	81	Moderate	-	17.4 ²⁷	-0.2
Sostinės regionas (LT01)	96.6	Moderate+	119	11.9	-0.6
Vidurio ir vakarų Lietuvos regionas (LT02)	66	Emerging+	192	11.7	-1.6

Lithuania consists of two regions. *Sostinės regionas (LT01)*, the capital region centered around Vilnius, is the most innovative and is classified as a Moderate Innovator+. *Vidurio ir vakarų Lietuvos regionas (LT02)* is classified as an Emerging Innovator+.

Innovation performance in both regions improved gradually from 2018 to 2025. However, from 2023 to 2025 the growth in both regions slightly decreased.

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Netherlands	129.1	Leader	-	11	-2.9
Groningen (NL11)	126.6	Leader-	35	11.1	-0.1
Friesland (NL) (NL12)	103.2	Strong-	105	8.9	-0.4
Drenthe (NL13)	108.4	Strong	79	9.4	3.8
Overijssel (NL21)	119.2	Strong+	50	8.6	-3.2
Gelderland (NL22)	130.4	Leader-	24	14.9	0.4
Flevoland (NL23)	119.1	Strong+	51	16.4	-0.8
Noord-Holland (NL32)	139.4	Leader	11	12.6	-1.6
Zeeland (NL34)	107	Strong-	88	9.8	-0.9
Utrecht (NL35)	136.2	Leader	13	9.8	-2.2
Zuid-Holland (NL36)	129.9	Leader-	25	10.2	-3.5
Noord-Brabant (NL41)	129.9	Leader-	26	11.8	-2.9
Limburg (NL) (NL42)	127.4	Leader-	32	13.6	-0.3

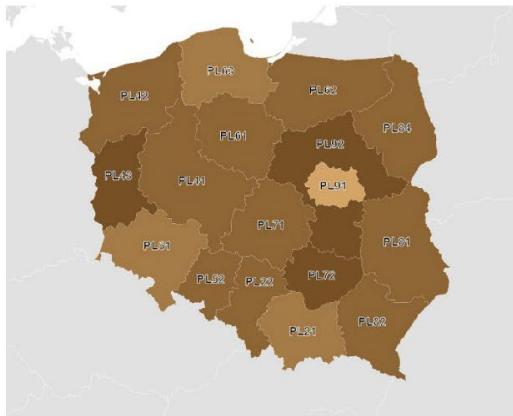
The Netherlands is an Innovation leader with 12 regions. *Noord-Holland (NL32)*, the capital region, and *Utrecht (NL35)* are the most innovative regions and are classified as Innovation leaders. A further five regions are classified as Innovation leaders-. Two regions are Strong innovators+ and Strong innovators-, and one region (*Drenthe (NL13)*) is a Strong innovator-.

Innovation performance in all 12 regions increased from 2018 to 2025, most strongly in *Flevoland (NL23)*. However, from 2023 to 2025, the performance of 10 regions decreased. The remaining two regions, *Drenthe (NL13)* and *Gelderland (NL22)* increased in this time.

²⁷ Between 2018 and 2025, the performance change at the national level in Lithuania exceeds that observed in any of its individual regions. While this may seem counter-intuitive, this outcome is due to the method used to calculate performance change. The national score is not an average of all the regions. Instead, it is calculated independently, and the influence of each region is not equal. For example, a large or high-performing region can have a stronger effect on the national score. If such a region improves significantly, it can raise the national score more than the average of regional improvements would suggest.



POLAND



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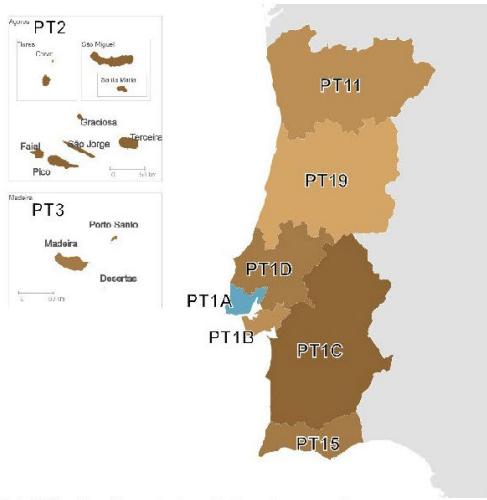
Poland is an Emerging innovator and consists of 17 regions. Outperforming all other regions as a Moderate innovator+ is the capital region the capital region, *Warszawski stoleczny* (PL91). Three regions are Moderate innovators-, 11 are Emerging innovators+, and two are Emerging innovators.

Innovation performance in all regions increased from 2018 to 2025, with the largest improvement seen in *Warmińsko-mazurskie* (PL62). From 2023 to 2025, only four of the regions decreased: *Małopolskie* (PL21), *Łódzkie* (PL71), *Świętokrzyskie* (PL72), and *Podlaskie* (PL84).

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Poland	65.9	Emerging	-	18	3.8
Małopolskie (PL21)	75.2	Moderate-	167	14.9	-2.2
Śląskie (PL22)	63.2	Emerging+	194	21.5	7.7
Wielkopolskie (PL41)	61.9	Emerging+	197	19.9	5.2
Zachodniopomorskie (PL42)	58.9	Emerging+	208	21.5	7.6
Lubuskie (PL43)	50.1	Emerging	229	8.1	2.1
Dolnośląskie (PL51)	71.1	Moderate-	183	21.1	5.1
Opolskie (PL52)	59.4	Emerging+	205	21.1	6.9
Kujawsko-pomorskie (PL61)	59	Emerging+	207	17.8	1.9
Warmińsko-mazurskie (PL62)	60.2	Emerging+	202	25.8	2.8
Pomorskie (PL63)	72.5	Moderate-	176	21.8	7.2
Łódzkie (PL71)	58.1	Emerging+	212	14	-0.7
Świętokrzyskie (PL72)	48.4	Emerging+	231	8.4	-1.6
Lubelskie (PL81)	61.1	Emerging+	200	18.7	1.2
Podkarpackie (PL82)	65.5	Emerging+	193	13.2	7.7
Podlaskie (PL84)	58.9	Emerging+	209	19.7	-2.6
Warszawski stoleczny (PL91)	90.2	Moderate+	135	17	0.8
Mazowiecki regionalny (PL92)	45.1	Emerging	232	12	3.4



PORTUGAL



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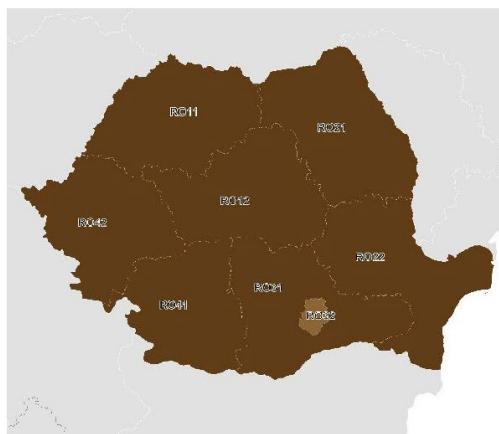
Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Portugal	90.7	Moderate	-	9	2.8
Norte (PT11)	88.8	Moderate	141	6.5	1.5
Algarve (PT15)	72.1	Moderate-	178	12.4	4.3
Centro (PT) (PT19)	90.1	Moderate+	137	1	0.4
Grande Lisboa (PT1A)	109.6	Strong	77	18.7	5.1
Península de Setúbal (PT1B)	82.3	Moderate	154	5.8	-9.8
Alentejo (PT1C)	69.1	Emerging+	186	2.5	-4
Oeste e Vale do Tejo (PT1D)	79.3	Moderate-	161	8.2	3.6
Região Autónoma dos Açores (PT2)	62.2	Emerging+	196	11.3	-1.2
Região Autónoma da Madeira (PT3)	71.4	Moderate-	180	11.9	0.3

Portugal is a Moderate innovator and consists of nine regions. *Grande Lisboa (PT1A)*, the capital region, is the most innovative region. *Centro (PT) (PT19)* is a Moderate innovator+. *Norte (PT11)*, and *Península de Setúbal (PT1B)* are considered Moderate innovators, while *Algarve (PT15)*, *Oeste e Vale do Tejo (PT1D)*, and *Região Autónoma da Madeira (PT3)* are considered Moderate innovators-. *Região Autónoma dos Açores (PT2)* and *Alentejo (PT1C)* are both considered Emerging innovators+.

Innovation performance in all nine regions increased from 2018 to 2025, most notably in the capital region. However, from 2023 to 2025, the performance of *Península de Setúbal (PT1B)*, *Alentejo (PT1C)* and *Região Autónoma dos Açores (PT2)* decreased.



ROMANIA



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Romania	37.7	Emerging	-	8.2	4.5
Nord-Vest (RO11)	36.8	Emerging-	236	4.9	4.3
Centru (RO12)	33.6	Emerging-	240	10.3	7.2
Nord-Est (RO21)	28.8	Emerging-	242	5.2	2.6
Sud-Est (RO22)	25.7	Emerging-	245	8.5	7.2
Sud-Muntenia (RO31)	28	Emerging-	243	8.4	6.1
Bucureşti-Ilfov (RO32)	59	Emerging+	206	7.3	2.7
Sud-Vest Oltenia (RO41)	22.7	Emerging-	246	8.2	2
Vest (RO42)	34.6	Emerging-	239	13.6	7.7

Romania is an Emerging innovator and consists of eight regions. *Bucureşti-Ilfov (RO32)*, the capital region, is considered an Emerging Innovator+. All seven other regions are considered Emerging Innovators-.

Innovation performance in all eight regions increased from 2018 to 2025, most strongly in *Vest (RO42)*. Similarly, from 2023 to 2025, all eight regions increased their performance.



SLOVAKIA



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Slovakia	62.6	Emerging	-	8.3	0.4
Bratislavský kraj (SK01)	90.2	Moderate+	136	10.2	1.6
Západné Slovensko (SK02)	56.9	Emerging+	214	10.8	3
Stredné Slovensko (SK03)	58.5	Emerging+	211	12.1	0.9
Východné Slovensko (SK04)	54.6	Emerging+	221	3.7	-4.7

Slovakia is an Emerging innovator and consists of four regions. *Bratislavský kraj (SK01)*, the capital region, is considered a Moderate innovator+. *Stredné Slovensko (SK03)*, *Západné Slovensko (SK02)* and *Východné Slovensko (SK04)* are all Emerging innovators+.

Innovation performance in all four regions increased from 2018 to 2025, most strongly in *Bratislavský kraj (SK01)*, *Stredné Slovensko (SK03)* and *Západné Slovensko (SK02)* slightly slowed. From 2023 to 2025 the performance of *Východné Slovensko (SK04)* decreased.



SLOVENIA



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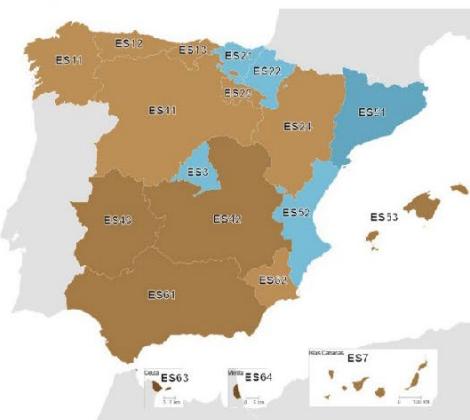
Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Slovenia	94.7	Moderate	-	16.8	4.1
Vzhodna Slovenija (SI03)	79.9	Moderate-	160	12.6	-0.5
Zahodna Slovenija (SI04)	108.2	Strong-	80	19	7

Slovenia a Moderate innovator+ and consists of two regions. *Zahodna Slovenija (SI04)*, the capital region, is the most innovative region as a Strong innovator-. *Vzhodna Slovenija (SI03)* is considered a Moderate innovator-.

Innovation performance in both regions increased from 2018 to 2025. From 2023 to 2025, *Vzhodna Slovenija (SI03)* slightly decreased, while *Zahodna Slovenija (SI04)* increased.



SPAIN



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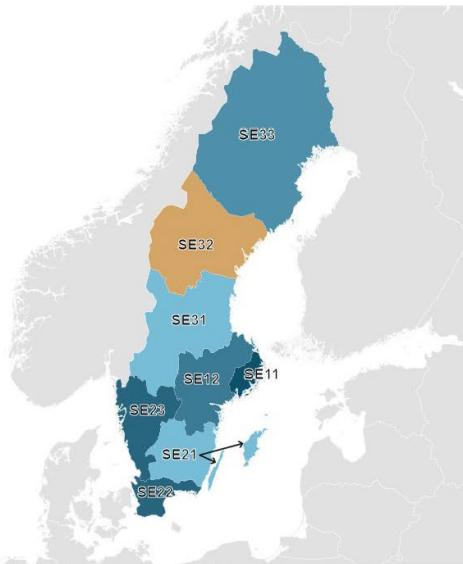
Spain is a Moderate innovator with 19 regions. *Catalunya/Cataluña* (ES51) is a Strong innovator, and the best performing region. Four regions are Strong innovators-, including the capital region of *Comunidad de Madrid* (ES3). A further seven regions are Moderate innovators, five are Moderate innovators-, and two are Emerging innovators.

Innovation performance in all regions improved from 2018 to 2025, most strongly in *Castilla y León* (ES41). From 2023 to 2025 the performance of four regions slightly decreased.

Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Spain	92.7	Moderate	-	13.9	2.6
Galicia (ES11)	86.7	Moderate	146	17.9	6.7
Principado de Asturias (ES12)	80.7	Moderate	158	9.9	2.8
Cantabria (ES13)	83.5	Moderate	152	8.1	6
País Vasco (ES21)	108.1	Strong-	81	7.5	-0.7
Comunidad Foral de Navarra (ES22)	103.3	Strong-	104	13	3.8
La Rioja (ES23)	83.4	Moderate	153	5.1	-1.7
Aragón (ES24)	85.5	Moderate	148	12.8	0.1
Comunidad de Madrid (ES3)	106.1	Strong-	90	10.9	-1.2
Castilla y León (ES41)	84.8	Moderate	150	20.3	6.4
Castilla-La Mancha (ES42)	71.1	Moderate-	182	15.9	4
Extremadura (ES43)	70.6	Moderate-	185	17.9	4.7
Catalunya/Cataluña (ES51)	110.7	Strong	72	16.1	4.6
Comunitat Valenciana (ES52)	101.2	Strong-	107	17.4	5.1
Illes Balears (ES53)	72.7	Moderate-	175	7.4	-1.7
Andalucía (ES61)	76.4	Moderate-	163	14.9	2.3
Región de Murcia (ES62)	80.8	Moderate	157	9.7	2.7
Ciudad de Ceuta (ES63)	52.9	Emerging	224	17.8	9.4
Ciudad de Melilla (ES64)	52.2	Emerging	225	7.8	0.7
Canarias (ES7)	70.8	Moderate-	184	17.7	7.1



SWEDEN



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Sweden	138.1	Leader	-	12.9	1.5
Stockholm (SE11)	155.4	Leader+	1	14.4	6.5
Östra Mellansverige (SE12)	132.9	Leader-	20	8.5	1.2
Småland med öarna (SE21)	107.7	Strong-	84	-2.1	-1.5
Sydsverige (SE22)	140.1	Leader	10	13.7	1.3
Västsverige (SE23)	140.3	Leader	9	16.6	-1.3
Norra Mellansverige (SE31)	105.8	Strong-	93	16.1	7
Mellersta Norrland (SE32)	99.6	Moderate+	110	5.2	-2.1
Övre Norrland (SE33)	122.9	Strong+	43	5.7	0.2

Sweden is an Innovation leader and consists of eight regions. Stockholm (SE11), the capital region, outperforms other regions and is classified as an Innovation leader+. Sydsverige (SE22) and Västsverige (SE23) are Innovation leaders, and Östra Mellansverige (SE12) is an Innovation leader-. Övre Norrland (SE33) is a Strong innovator+, while Norra Mellansverige (SE31) and Småland med öarna (SE21) are Strong innovators-. The only region which is a Moderate innovator+ is Mellersta Norrland (SE32).

Innovation performance in seven of the eight regions increased from 2018 to 2025. Småland med öarna (SE21) is the only region whose performance decreased. From 2023 to 2025, the performance of Småland med öarna (SE21), Västsverige (SE23) and Mellersta Norrland (SE32) decreased, while it increased for the rest of the regions.


NORWAY


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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Norway	121.6	Strong	-	13	-0.5 ²⁸
Innlandet (NO02)	104.2	Strong-	102	12.8	3.6
Trøndelag/Trøöndelag (NO06)	130.7	Leader-	23	7.9	1.7
Nord-Norge (NO07)	115.5	Strong	62	13.6	0.7
Oslo og Viken (NO08)	135.8	Leader	14	13.4	0.5
Agder og Sør-Østlandet (NO09)	112.2	Strong	70	14.7	3
Vestlandet (NO0A)	119.9	Strong+	47	13.7	1.9

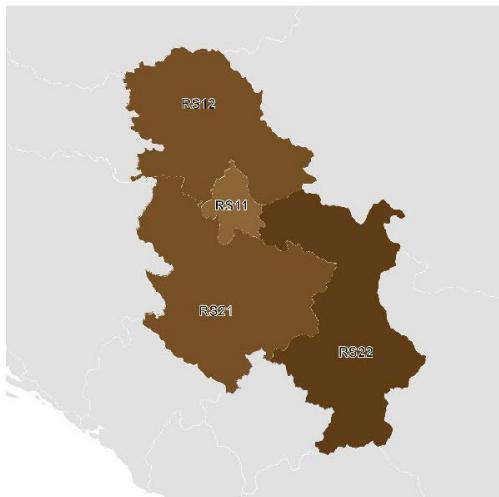
Norway is a Strong innovator and consists of six regions. *Oslo og Viken (NO08)* is classified as an Innovation leader, and *Trøndelag/Trøöndelag (NO06)* is an Innovation leader-. *Vestlandet (NO0A)* is considered a Strong+ innovator, *Nord-Norge (NO07)* and *Agder og Sør-Østlandet (NO09)* as Strong innovators, and *Innlandet (NO02)* is classified as a Strong innovator-.

Innovation performance in all six regions increased from 2018 to 2025 and from 2023 to 2025.

²⁸ While each region registered an improvement between 2023 and 2025, the national-level performance declined. Although this may appear counter-intuitive, it results from the method used to calculate performance change. The national score is not derived as an average of regional scores. Instead, it is calculated independently using aggregated data, meaning the influence of each region on the national result is not equal. Larger or higher-performing regions have a proportionally stronger effect on the national score. If such a region improves only marginally, while smaller regions improve more, the overall national score may still decline. In this case, the modest improvements observed across most regions were not sufficient to offset the limited progress in larger regions. In this case, the modest improvements observed across most regions were not sufficient to offset the limited progress in larger regions. In addition, data availability may differ between country and regional levels. For example, the indicator *R&D expenditure in the public sector* has data for Norway available for 2021, while data for Norway's regions is only available up to 2020. In 2021, national-level data showed a decline, which affected the national index. However, this drop was not reflected at the regional level, as regional data for 2021 was not available and the 2020 figures were imputed.



SERBIA



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Serbia	51.5	Emerging	-	10.2	4.3
City of Belgrade (RS11)	69	Emerging+	188	14.6	7.8
Autonomous Province of Vojvodina (RS12)	49.8	Emerging	230	3.7	2.3
Region Šumadija i Zapadne Srbije (RS21)	38.5	Emerging	235	2.1	2
Region Južne i Istočne Srbije (RS22)	36.6	Emerging-	237	2.9	-2.4

Serbia is an Emerging innovator and consists of four regions. *City of Belgrade (RS11)*, the capital region, is classified as an Emerging Innovator+. The remaining regions are all classified as Emerging innovators, except of *Region Južne i Istočne Srbije (RS22)* that is Emerging innovator-.

Innovation performance in *City of Belgrade (RS11)*, especially increased from 2018 to 2025, while all other regions slightly increased. From 2023 to 2025, the performance of three of the four regions increased, with *Region Južne i Istočne Srbije (RS22)* declining.



SWITZERLAND



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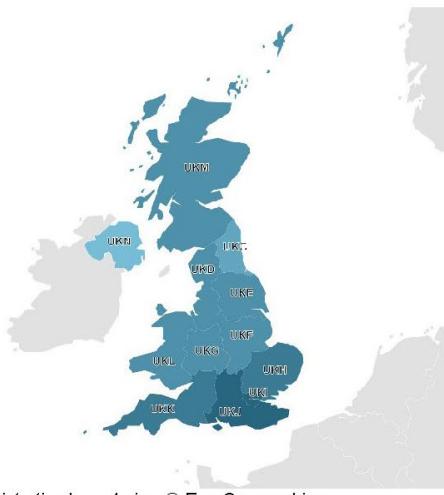
Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
Switzerland	139.8	Leader	-	-1.7	-2.6
Région lémanique (CH01)	128.3	Leader-	29	-5.3	-1.4
Espace Mittelland (CH02)	126.1	Leader-	36	3.8	1.2
Nordwestschweiz (CH03)	134.6	Leader-	16	-5.1	-2.2
Zürich (CH04)	144.4	Leader	4	-3.6	-0.2
Ostschweiz (CH05)	131.5	Leader-	21	-1.8	-1.4
Zentralschweiz (CH06)	126.8	Leader-	34	3.1	-0.1
Ticino (CH07)	142.1	Leader	6	10.2	2.2

Switzerland is an Innovation leader and consists of seven regions. Two of the regions are Innovation leaders, while the remaining five are Innovation leaders-.

Innovation performance in three increased from 2018 to 2025, most strongly in *Ticino (CH07)*. The performance of the five other regions decreased. From 2023 to 2025, the performance of five regions slightly decreased, while the capital region, *Espace Mittelland (CH02)*, and *Ticino (CH07)* increased slightly.



UNITED KINGDOM



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Region	RII	Group	Region rank	Change 2018-2025	Change 2023-2025
United Kingdom	125.5	Leader	-	12.2	1.7
North East (England) (UKC)	114.6	Strong	65	12	3.9
North West (England) (UKD)	117.1	Strong+	58	9.8	1.5
Yorkshire and The Humber (UKE)	119.6	Strong+	48	16.3	0.7
East Midlands (England) (UKF)	124.4	Strong+	40	14	2.3
West Midlands (England) (UKG)	125	Strong+	39	16.5	2.1
East (England) (UKH)	134.4	Leader-	17	20.3	2.2
London (UKI)	144.7	Leader	3	19.3	2
South East (England) (UKJ)	141.2	Leader	7	16.3	1.9
South West (England) (UKK)	131.2	Leader-	22	15.2	3.2
Wales (UKL)	117.8	Strong+	57	12.7	2.3
Scotland (UKM)	121.8	Strong+	44	9.4	3.4
Northern Ireland (UKN)	107.7	Strong-	83	16.6	3.1

The UK is classified as an Innovation leader and consists of 12 regions. *London (UKI)*, the capital region, and *South East (England) (UKJ)* are the most innovative regions and are classified as Innovation leaders. Two regions are classified as Innovation leaders-, and a further six are considered as Strong innovators+. *North East (England) (UKC)* is a Strong innovator and *Northern Ireland (UKN)* is a Strong innovator-.

Innovation performance in all 12 regions increased from 2018 to 2025, most strongly in the *East (England) (UKH)* and *London (UKI)*. Similarly, from 2023 to 2025, the performance of all regions increased.

3. PERFORMANCE PER INDICATOR

This chapter analyses performance per RIS indicator²⁹. On the following pages, for each of the indicators used in the RIS 2025, regional performance is shown in a map. To ensure sufficient variation in the maps for performance per indicator, regions are classified into 12 performance groups of equal size per indicator³⁰. In addition, for each indicator, two tables are included. The first table shows the variation in performance between regions in each country, and the second table shows the 40 best-performing regions in Europe. Cyprus, Estonia, Latvia, Luxembourg and Malta are excluded from the analysis, tables, and maps in this chapter as these countries are covered in the EIS 2025.

The distribution of relative performance scores varies considerably across individual indicators. This variation arises from the fact that individual indicators in RIS have a more skewed distribution compared to RII. Most relative to EU scores per indicator are not symmetrically distributed. For instance, over 100 regions perform above 125% of the EU average on *International scientific co-publications*. Regional performance is also more positively skewed in indicators measuring *Public-private co-publications*, *SMEs introducing product innovations* and *Cloud computing in enterprises* (see Table 9).

On the contrary, more than 100 regions perform below 70% of the EU average on *PCT patent, Trademark and Design applications*, *R&D expenditure in the public and business sectors*, *Employed ICT specialists*, and *Sales of new-to-market and new-to-firm innovations*. These indicators reflect structural challenges faced by many regions in sustaining investment, talent, and innovation infrastructure. For these indicators, the skewed distribution highlights that while a few regions achieve outstanding performance, a significant number of regions are still lagging.

Some indicators, such as *Broadband penetration*, *Non-R&D innovation expenditures*, and *Exports of medium and high technology products*, show a more balanced distribution, with a large number of regions falling within the 100–125% and 70–100% performance groups.

²⁹ Differences in the size of regions may affect the outcomes of certain indicators, in particular those based on CIS data, and may lead to increased year-on-year variability.

³⁰ A total of 241 regions are included in the analysis, which naturally divides into 11 groups of 20 regions and a final group of 21 regions. This structure serves as the baseline when complete data is available for all regions. However, adjustments are made in the following scenarios:

- **Tied Values at Group Thresholds:** If multiple regions share the same performance value at a group boundary (e.g. ranks 20 and 21), all tied regions are assigned to the higher group. To maintain the total number of regions, the subsequent group is reduced in size accordingly. This ensures that identical values are not split arbitrarily across groups.
- **Incomplete Data Coverage:** When data for a specific indicator is missing for some regions, grouping is performed only on the subset of regions with available data. In such cases, groups are recalculated to remain as evenly sized as possible across 12 performance groups. If the total number of regions with data is not divisible by 12, the top-performing groups are assigned the smaller group size, while the remaining regions are distributed to the lower groups. For example, for indicators 2.2.2 and 2.2.3, where data is available for 234 regions, the top six groups contain 19 regions each, and the bottom six contain 20 regions each.

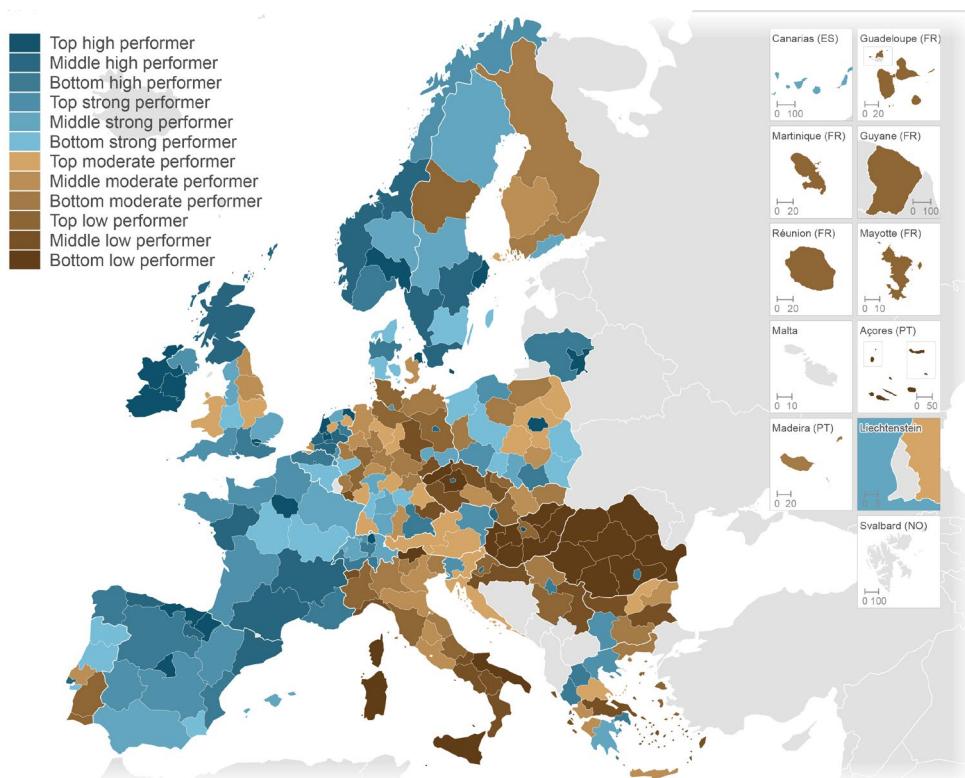
Table 9: Number of regions in different performance groups per indicator

	PERFORMANCE ABOVE 125% OF EU	PERFORMANCE BETWEEN 100% AND 125% OF EU	PERFORMANCE BETWEEN 70% AND 100% OF EU	PERFORMANCE BELOW 70% OF EU
Regional Innovation Index	38	69	74	60
Population with tertiary education	54	41	60	86
Population involved in lifelong learning	60	44	60	77
International scientific co-publications	101	25	33	82
Scientific publications among the top 10% most cited	71	40	62	68
Broadband penetration	35	92	87	27
R&D expenditure in the public sector	52	23	56	110
R&D expenditure in the business sector	22	26	84	109
Non-R&D innovation expenditures	64	52	78	40
Innovation expenditures per person employed	28	48	81	77
Cloud computing in enterprises	79	51	31	61
Employed ICT specialists	44	23	59	115
SMEs introducing product innovations	89	38	48	66
SMEs introducing business process innovations	65	67	43	66
Innovative SMEs collaborating with others	77	40	51	73
Public-private co-publications	97	36	56	52
PCT patent applications	40	24	55	122
Trademark applications	35	28	62	116
Design applications	30	35	63	113
Sales of new-to-market and new-to-firm innovations	59	25	46	111

	PERFORMANCE ABOVE 125% OF EU	PERFORMANCE BETWEEN 100% AND 125% OF EU	PERFORMANCE BETWEEN 70% AND 100% OF EU	PERFORMANCE BELOW 70% OF EU
Employment in innovative enterprises	49	72	46	74
Exports of medium and high technology products	59	18	82	71
Air emissions by fine particulates	62	76	53	38
Labour productivity	74	39	32	84

Note: The number of regions per indicator does not always add up to 241 as there are some regions which do not have data for some indicators.

Population with tertiary education



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

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Population with tertiary education

The map above displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to EU performance score (third column), are listed on the right. Most of the regions with the highest relative to EU score

are capital city regions, including Sostines regionas (LT01) in Lithuania (best performing region), Warszawski stoleczny (PL91) in Poland, Île de France (FR1) in France, London (UKI) in the UK, Stockholm (SE11) in Sweden, Oslo og Viken (NO08) in Norway, and Hovedstaden (DK01) in Denmark. Other regions with the highest relative to EU score are from Spain, Ireland, the Netherlands and Switzerland.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 1.9 times better than the lowest. This ratio is particularly high (above three) in France, Romania, Czechia and Hungary.

Overall, 96 regions perform above the EU average, while 145 fall below it. All regions in Ireland, Lithuania, Norway, and Switzerland exceed the EU average. In contrast, all Italian regions fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	1.9	96	145				
AT	1.3	1	2	IT	1.6	0	21
BE	1.4	2	1	LT	1.4	2	0
BG	1.6	1	5	NL	1.8	9	3
CZ	3.0	1	7	PL	2.1	4	13
DE	1.9	6	32	PT	2.4	1	8
DK	1.8	2	3	RO	3.3	1	7
EL	2.0	5	8	SE	2.0	6	2
ES	1.6	17	2	SI	1.2	1	1
FI	1.3	1	3	SK	1.8	1	3
FR	3.3	10	4	NO	1.4	6	0
HR	2.2	1	3	CH	1.4	7	0
HU	3.0	1	7	RS	1.7	1	3
IE	1.1	3	0	UK	1.9	6	6

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of persons aged 25-34 with some form of post-secondary education.

Denominator: Total population aged between 25 and 34 years.

Rationale: This is a general indicator of the supply of advanced skills. It is not limited to science and technical fields, because the adoption of innovations in many areas, including the service sectors, depends on a wide range of skills.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

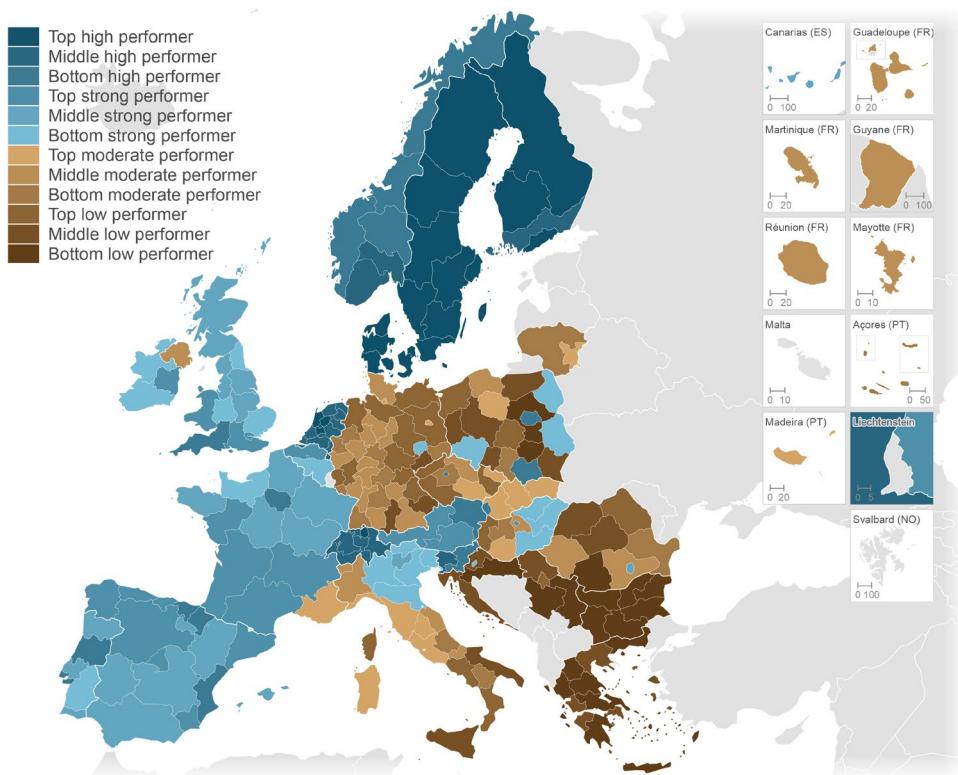
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
	European Union (EU)	100	44.1
1	Sostinės regionas (LT01)	171.1	71.2
2	Warszawski stoleczny (PL91)	171.1	68.6
3	Ile-de-France (FR1)	171.1	68.5
4	London (UK1)	171.1*	67.9*
5	País Vasco (ES21)	171.1	67.8
6	Eastern and Midland (IE06)	171.1	67.7
7	Utrecht (NL35)	171.1	66.2
8	Stockholm (SE11)	171.1	64.8
9	Oslo og Viken (NO08)	171.1	63.4
9	Southern (IE05)	171.1	63.4
9	Zürich (CH04)	171.1	63.4
9	Hovedstaden (DK01)	171.1	62.8
13	Budapest (HU11)	168.1	62.0
13	Noord-Holland (NL32)	168.1	62.0
15	Cantabria (ES13)	167.7	61.9

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
16	Comunidad Foral de Navarra (ES22)	162.0	60.4
16	Groningen (NL11)	162.0	60.4
18	Northern and Western (IE04)	160.8	60.1
19	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	159.3	59.7
20	Comunidad de Madrid (ES3)	155.1	58.6
21	Bratislavský kraj (SK01)	154.8	58.5
22	Principado de Asturias (ES12)	152.9	58.0
23	La Rioja (ES23)	151.7	57.7
24	Catalunya/Cataluña (ES51)	151.0	57.5
25	Scotland (UKM)	150.2*	57.3*
26	Praha (CZ01)	149.8	57.2
27	Grad Zagreb (HR05)	148.3	56.8
28	Vestlandet (NO0A)	145.2	56.0
29	Västsverige (SE23)	144.5	55.8
30	Pays de la Loire (FRG)	144.1	55.7
31	Trøndelag/Trööndelag (NO06)	141.1	54.9
32	Noord-Brabant (NL41)	140.7	54.8
33	Auvergne-Rhône-Alpes (FRK)	139.5	54.5
34	Occitanie (FRJ)	139.2	54.4
35	Zuid-Holland (NL36)	138.4	54.2
36	Gelderland (NL22)	138.0	54.1
37	Berlin (DE3)	137.6	54.0
38	Sydsverige (SE22)	136.5	53.7
39	Grande Lisboa (PT1A)	134.2	53.1
39	Östra Mellansverige (SE12)	134.2	53.1

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

* Data imputed from a different year (2019)

Population involved in lifelong learning



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Population involved in lifelong learning

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to EU performance score (third column), are listed on the right. Half of the regions with the highest relative to EU score (8/15) are from Sweden (with top performing region Stockholm (SE11)), while the remaining half regions with the highest relative to EU score are in Denmark (four regions), the Netherlands (two) and Finland (one).

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 2.0 times better than the lowest. This ratio is particularly high (above three) in Romania and Greece.

Overall, 105 regions perform above the EU average, while 136 fall below it. All regions in Austria, Denmark, Spain, Finland, the Netherlands, Sweden, Slovenia, Norway and Switzerland exceed the EU average. In contrast, all Bulgarian, German, Greek, Croatian, Lithuanian and Serbian regions fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	2.0	105	136				
AT	1.3	3	0	IT	2.3	2	19
BE	1.4	2	1	LT	1.2	0	2
BG	2.0	0	6	NL	1.3	12	0
CZ	2.3	1	7	PL	4.7	2	15
DE	2.1	0	38	PT	2.1	7	2
DK	1.3	5	0	RO	4.1	1	7
EL	3.5	0	13	SE	1.2	8	0
ES	1.5	19	0	SI	1.2	2	0
FI	1.3	5	0	SK	1.9	1	3
FR	2.3	11	3	NO	1.2	6	0
HR	2.8	0	4	CH	1.2	7	0
HU	2.1	1	7	RS	2.1	0	4
IE	1.3	1	2	UK	1.6	9	3

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of persons in private households aged between 25 and 64 years who have participated in the four weeks preceding the interview, in any education or training, whether or not relevant to the respondent's current or possible future job.

Denominator: Total population aged between 25 and 64 years.

Rationale: Lifelong learning encompasses all purposeful learning activity, whether formal, nonformal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. The intention or aim to learn is the critical point that distinguishes these activities from non-learning activities, such as cultural or sporting activities.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

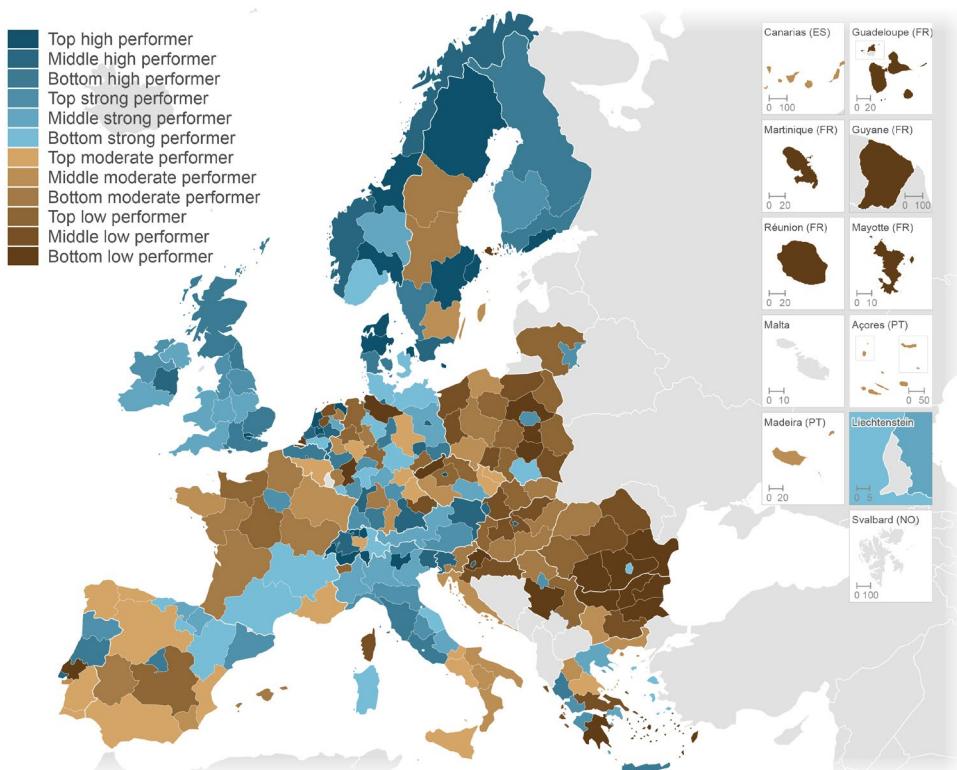
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
	European Union (EU)	100	13.5
1	Stockholm (SE11)	220.2	40.3
2	Västsverige (SE23)	220.2	38.0
3	Sydsverige (SE22)	220.2	37.6
4	Östra Mellansverige (SE12)	220.2	36.7
5	Småland med öarna (SE21)	220.2	35.6
6	Hovedstaden (DK01)	220.2	35.5
7	Norra Mellansverige (SE31)	220.2	34.4
8	Övre Norrland (SE33)	220.2	34.1
9	Mellersta Norrland (SE32)	220.2	33.1
10	Helsinki-Uusimaa (FI1B)	220.2	31.6
11	Midtjylland (DK04)	220.2	30.3
12	Utrecht (NL35)	220.2	29.3
13	Flevoland (NL23)	220.2	29.1

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
14	Sjælland (DK02)	220.2	28.5
15	Syddanmark (DK03)	220.2	28.4
16	Noord-Holland (NL32)	219.4	28.3
16	Zürich (CH04)	219.4	28.3
18	Nordjylland (DK05)	218.5	28.2
19	Pohjois- ja Itä-Suomi (FI1D)	217.7	28.1
20	Länsi-Suomi (FI19)	215.3	27.8
21	Etelä-Suomi (FI1C)	213.7	27.6
22	Région lémanique (CH01)	211.3	27.3
22	Zuid-Holland (NL36)	211.3	27.3
24	Groningen (NL11)	210.5	27.2
25	Espace Mittelland (CH02)	206.5	26.7
26	Ticino (CH07)	204.0	26.4
27	Gelderland (NL22)	201.6	26.1
28	Nordwestschweiz (CH03)	195.2	25.3
29	Drenthe (NL13)	192.7	25.0
29	Overijssel (NL21)	192.7	25.0
29	Zahodna Slovenija (SI04)	192.7	25.0
32	Zentralschweiz (CH06)	189.5	24.6
34	Noord-Brabant (NL41)	187.1	24.3
34	Ostschweiz (CH05)	187.1	24.3
34	Zeeland (NL34)	187.1	24.3
36	Friesland (NL) (NL12)	185.5	24.1
37	Åland (FI2)	183.1	23.8
38	Limburg (NL) (NL42)	180.6	23.5
39	Agder og Sør-Østlandet (NO09)	178.2	23.2
40	Oslo og Viken (NO08)	173.4	22.6

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

International scientific co-publications



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International scientific co-publications

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to EU performance score (third column), are listed on the right. The regions sharing first place are scattered throughout Europe, including regions in 18 countries. According to the indicator values, the top-performing regions are Groningen (NL11), Zürich (CH04), and Trøndelag (N006), each recording over 8,000 *International scientific co-publications* per million population.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 12.4 times better than the lowest. This reflects the presence of research institutes in certain regions. This ratio is particularly high (above 30) in Czechia and the Netherlands.

Overall, 126 regions perform above the EU average, while 115 fall below it. All regions in Austria, Belgium, Denmark, Ireland, Norway and the UK exceed the EU average. In contrast, all Bulgarian regions perform below the EU average.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	12.4	126	115				
AT	1.9	3	0	IT	7.2	16	5
BE	4.2	3	0	LT	3.1	1	1
BG	11.1	0	6	NL	33.8	8	4
CZ	36.4	2	6	PL	25.2	2	15
DE	17.0	22	16	PT	13.2	3	6
DK	4.3	5	0	RO	15.5	1	7
EL	26.2	7	6	SE	6.8	5	3
ES	16.5	8	11	SI	5.1	1	1
FI	29.2	4	1	SK	7.3	1	3

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
FR	10.1	4	10	NO	5.2	6	0
HR	13.4	1	3	CH	6.4	6	1
HU	11.4	1	7	RS	7.7	1	3
IE	1.8	3	0	UK	2.6	12	0

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of scientific publications with at least one co-author based abroad.

Denominator: Total population.

Rationale: *International scientific co-publications* are a proxy for the quality of scientific research as collaboration increases scientific productivity.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the indicator values in the last column.

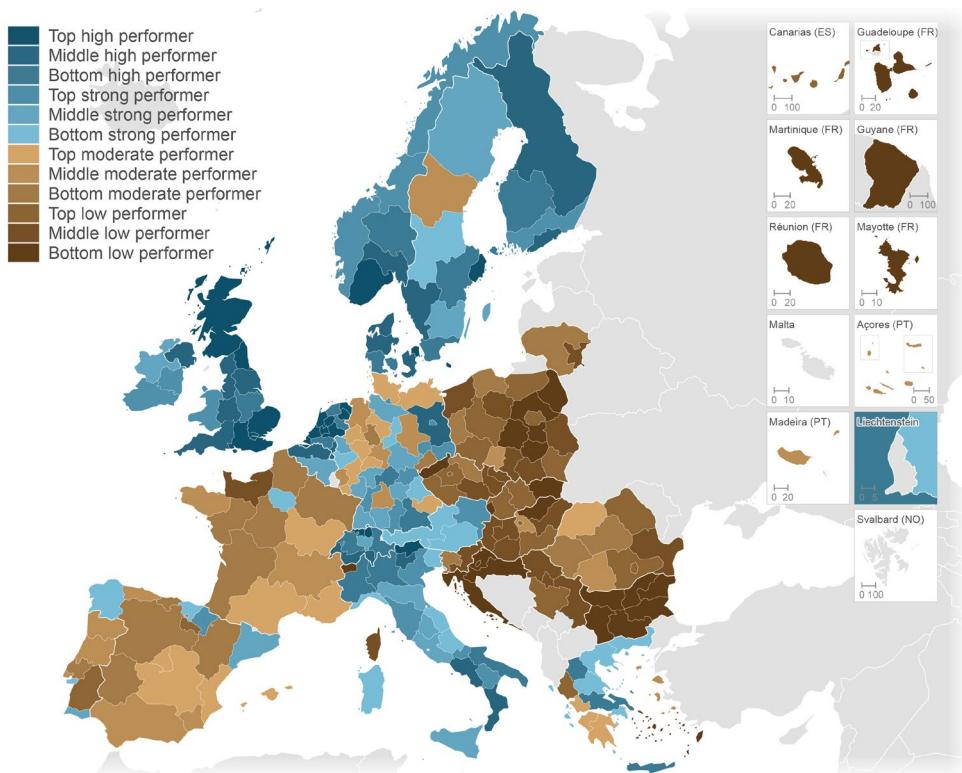
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
	European Union (EU)	100	1351.9
1	Groningen (NL11)	335.1	8630.6
2	Zürich (CH04)	335.1	8613.5
3	Trøndelag/Trööndelage (NO06)	335.1	8240.9
4	Région lémanique (CH01)	335.1	7884.8

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
5	Hovedstaden (DK01)	335.1	6590.6
6	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	335.1	5851.1
7	Praha (CZ01)	335.1	5765.0
8	Nordwestschweiz (CH03)	335.1	5729.5
9	Övre Norrland (SE33)	335.1	5472.2
10	Utrecht (NL35)	335.1	5165.5
11	Stockholm (SE11)	335.1	5134.8
12	Östra Mellansverige (SE12)	335.1	4820.2
13	Helsinki-Uusimaa (FI1B)	335.1	4772.8
14	Nordjylland (DK05)	335.1	4705.5
15	Midtjylland (DK04)	335.1	4674.6
16	London (UKI)	335.1	4574.9
17	Oslo og Viken (NO08)	326.4	4348.6
18	Provincia Autonoma di Trento (ITH2)	325.5	4336.3
19	Ticino (CH07)	322.9	4302.2
20	Noord-Holland (NL32)	298.9	3983.9
21	Nord-Norge (NO07)	296.1	3946.7
22	Zahodna Slovenija (SI04)	293.2	3908.1
23	Grad Zagreb (HR05)	284.0	3787.0
24	Karlsruhe (DE12)	280.1	3735.0
25	Zuid-Holland (NL36)	276.1	3682.4
26	Limburg (NL) (NL42)	270.4	3607.3
27	Hamburg (DE6)	269.7	3598.0
28	Espace Mittelland (CH02)	268.1	3575.8
29	Grande Lisboa (PT1A)	267.7	3571.0
30	Gelderland (NL22)	266.2	3551.3
31	Sydsverige (SE22)	261.2	3484.7
32	Berlin (DE3)	259.2	3458.4
33	Bratislavský kraj (SK01)	257.6	3437.7
34	Leipzig (DED5)	257.3	3433.4
35	Friuli-Venezia Giulia (ITH4)	255.7	3412.8

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
36	Oberbayern (DE21)	251.4	3354.8
37	Ostösterreich (AT1)	247.5	3303.5
38	Eastern and Midland (IE06)	246.5	3290.4
39	Budapest (HU11)	246.3	3287.8
40	Vestlandet (NO0A)	246.2	3287.0

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

Scientific publications among the top 10% most cited



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Scientific publications among the top 10% most cited

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. The regions sharing first place are Zeeland (NL34) and Flevoland (NL23) in the Netherlands and Ciudad de Ceuta (ES63) in Spain.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 2.0 times better than the lowest. This ratio is particularly high (9.3) in Bulgaria.

Overall, 111 regions perform above the EU average, while 130 fall below it. All regions in Belgium, Denmark, Finland, Ireland, the Netherlands, Norway, Switzerland and the UK exceed the EU average. In contrast, all Bulgarian, Czech, Croatian, Hungarian, Lithuanian, Polish, Romanian, Slovakian, Slovenian and Serbian regions perform below the EU average.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	2.0	111	130				
AT	1.3	1	2	IT	3.4	19	2
BE	1.3	3	0	LT	1.2	0	2
BG	9.3	0	6	NL	2.2	12	0
CZ	1.7	0	8	PL	2.8	0	17
DE	1.8	20	18	PT	1.7	1	8
DK	1.1	5	0	RO	1.5	0	8
EL	2.8	5	8	SE	1.8	7	1
ES	2.9	4	15	SI	1.4	0	2
FI	1.1	5	0	SK	1.4	0	4
FR	2.2	1	13	NO	1.2	6	0
HR	1.3	0	4	CH	1.5	7	0
HU	1.7	0	8	RS	1.2	0	4
IE	1.1	3	0	UK	1.4	12	0

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of scientific publications among the top-10% most cited publications worldwide.

Denominator: Total number of scientific publications.

Rationale: The indicator is a measure for the quality of the research system as highly cited publications are assumed to be of higher quality. There could be a bias towards small or English-speaking countries given the coverage of Scopus' publication data.

No data: none

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

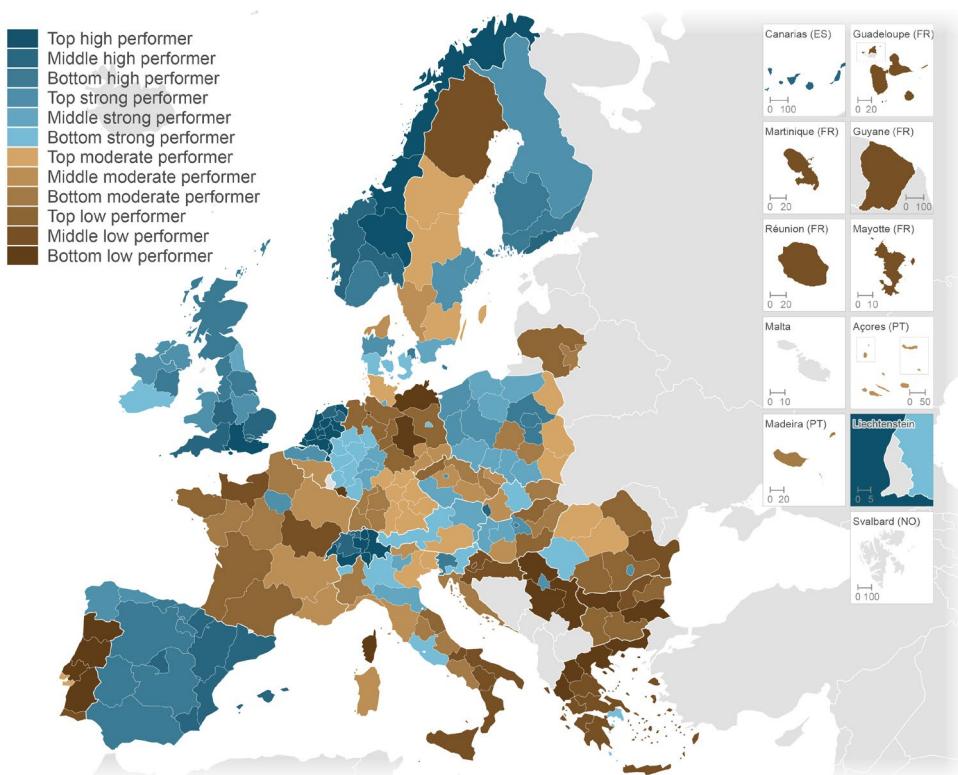
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	9.6
1	Zeeland (NL34)	189.1	27.0
2	Flevoland (NL23)	189.1	19.5
3	Ciudad de Ceuta (ES63)	189.1	18.0
4	Noord-Holland (NL32)	187.9	16.4
5	East (England) (UKH)	185.6	16.2
6	London (UKI)	176.8	15.5
7	Groningen (NL11)	175.4	15.4
8	Utrecht (NL35)	174.1	15.3
9	Zürich (CH04)	173.8	15.3
10	Gelderland (NL22)	168.1	14.8
11	South East (England) (UKJ)	166.8	14.7
12	Drenthe (NL13)	164.3	14.5
13	Stockholm (SE11)	163.2	14.5
14	Zuid-Holland (NL36)	159.4	14.2

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
15	Provincia Autonoma di Bolzano/Bozen (ITH1)	159.3	14.2
16	Hovedstaden (DK01)	155.6	13.9
17	North East (England) (UKC)	154.9	13.8
18	Nordwestschweiz (CH03)	154.8	13.8
19	Scotland (UKM)	151.8	13.6
20	Agder og Sør-Østlandet (NO09)	151.7	13.6
21	South West (England) (UKK)	151.6	13.6
22	Northern Ireland (UKN)	149.8	13.4
23	Région lémanique (CH01)	149.6	13.4
24	Nordjylland (DK05)	148.6	13.3
25	Midtjylland (DK04)	148.0	13.3
26	Ticino (CH07)	147.5	13.3
27	Provincia Autonoma di Trento (ITH2)	146.9	13.2
28	Sjælland (DK02)	146.3	13.2
29	Västsverige (SE23)	145.9	13.1
30	Oslo og Viken (NO08)	145.2	13.1
31	Limburg (NL) (NL42)	144.5	13.0
32	Campania (ITF3)	143.7	13.0
33	Calabria (ITF6)	143.6	13.0
34	North West (England) (UKD)	143.4	12.9
35	Helsinki-Uusimaa (FI1B)	141.4	12.8
36	Brandenburg (DE4)	141.4	12.8
37	Vlaams Gewest (BE2)	139.7	12.7
38	West Midlands (England) (UKG)	139.3	12.6
39	Pohjois- ja Itä-Suomi (FI1D)	139.0	12.6
40	Yorkshire and The Humber (UKE)	137.3	12.5

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

Broadband penetration



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Broadband penetration

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. The two regions sharing first place are Innlandet (NO02) in Norway and Zeeland (NL34) in the Netherlands.

As shown in the table below, regional performance within each country is equally distributed, with top regions performing on average 1.1 times better than the lowest, resulting in no large differences between the regions. The reason for this small difference is that broadband access is relatively high across all regions, with the lowest regional value still at 73.5%.

Overall, 127 regions perform above the EU average, while 114 fall below it. All regions in Spain, Finland, Ireland, the Netherlands, Slovenia, Norway, Switzerland and the UK exceed the EU average. In contrast, all Bulgarian, Croatian, Lithuanian and Portuguese regions perform below the EU average.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	1.1	127	114				
AT	1.0	2	1	IT	1.1	6	15
BE	1.1	2	1	LT	1.0	0	2
BG	1.2	0	6	NL	1.0	12	0
CZ	1.1	2	6	PL	1.1	15	2
DE	1.2	14	24	PT	1.1	0	9
DK	1.1	4	1	RO	1.1	2	6
EL	1.1	1	12	SE	1.1	5	3
ES	1.1	19	0	SI	1.1	2	0
FI	1.1	5	0	SK	1.1	2	2
FR	1.3	1	13	NO	1.0	6	0
HR	1.1	0	4	CH	1.0	7	0
HU	1.1	4	4	RS	1.2	1	3
IE	1.1	3	0	UK	1.1	12	0

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Households with broadband access.

Denominator: Total number of households.

Rationale: The indicator serves as a regional proxy for High-speed internet access in the EIS. It provides a measure of digitalisation at the household level.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

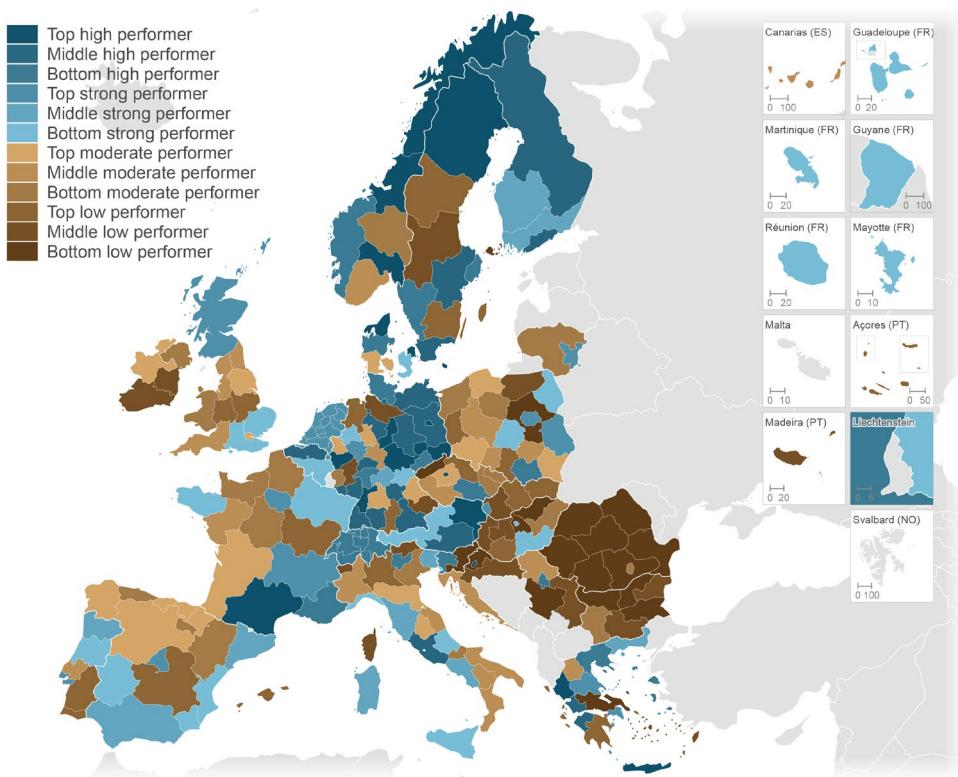
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2021)
	European Union (EU27)	100	90.2
1	Innlandet (NO02)	139.2	100.0
1	Zeeland (NL34)	139.2	100.0
3	Trøndelag/Trööndelage (NO06)	138.6	99.9
4	Nord-Norge (NO07)	137.3	99.5
5	Zürich (CH04)	137.2	99.5
6	Overijssel (NL21)	136.7	99.4
7	Utrecht (NL35)	134.9	98.9
8	Gelderland (NL22)	134.1	98.7
9	Ticino (CH07)	133.8	98.7
10	Région lémanique (CH01)	133.8	98.7
11	Ciudad de Melilla (ES64)	133.7	98.6
12	Groningen (NL11)	133.5	98.6
12	South East (England) (UKJ)	133.5*	98.6*
14	Noord-Brabant (NL41)	133.2	98.5
14	Noord-Holland (NL32)	133.2	98.5
16	Zuid-Holland (NL36)	132.7	98.4

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2021)
17	Ostschweiz (CH05)	132.3	98.3
18	Flevoland (NL23)	132.1	98.2
19	Limburg (NL) (NL42)	131.7	98.1
20	Zentralschweiz (CH06)	130.6	97.9
21	Helsinki-Uusimaa (FI1B)	130.5	97.8
22	West Midlands (England) (UKG)	130.3*	97.8*
23	London (UKI)	130.3*	97.8*
24	Comunidad de Madrid (ES3)	129.3	97.5
25	Drenthe (NL13)	129.2	97.5
26	Illes Balears (ES53)	128.3	97.3
27	East (England) (UKH)	127.7*	97.1*
28	Espace Mittelland (CH02)	127.5	97.1
29	Región de Murcia (ES62)	126.9	96.9
30	Friesland (NL) (NL12)	126.8	96.9
31	Catalunya/Cataluña (ES51)	126.7	96.9
32	Oslo og Viken (NO08)	126.5*	96.8*
33	Comunitat Valenciana (ES52)	126.5	96.8
34	Nordwestschweiz (CH03)	126.1	96.7
35	Canarias (ES7)	126.0	96.7
36	Aragón (ES24)	124.4	96.3
37	Comunidad Foral de Navarra (ES22)	123.9	96.2
38	Bratislavský kraj (SK01)	123.7	96.1
39	South West (England) (UKK)	123.3*	96.0*
40	Vestlandet (NO0A)	121.9*	95.7*

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

** Data imputed from a different year (2019 for UK regions, 2020 for Norway regions)*

R&D expenditure in the public sector



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R&D expenditure in the public sector

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Half of them are in Germany, with Dresden (DED2) being the top-performing region based on the indicator value. The remaining 20 regions are scattered between 11 countries.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 7.9 times better than the lowest. This ratio is particularly high (above 20) in Czechia and Finland.

Overall, 88 regions perform above the EU average, while 153 fall below it. All regions in the Netherlands and Switzerland exceed the EU average. In contrast, all Bulgarian, Hungarian, Irish and Romanian regions perform below the EU average.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	7.9	88	153				
AT	2.3	2	1	IT	7.0	2	19
BE	1.7	2	1	LT	1.8	1	1
BG	19.5	0	6	NL	1.0	12	0
CZ	23.3	2	6	PL	14.3	3	14
DE	14.5	24	14	PT	3.3	2	7
DK	3.1	3	2	RO	14.3	0	8
EL	10.7	7	6	SE	6.2	5	3
ES	2.8	1	18	SI	6.7	1	1
FI	21.4	2	3	SK	4.8	1	3
FR	5.8	4	10	NO	5.2	4	2

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
HR	13.4	1	3	CH	1.0	7	0
HU	9.4	0	8	RS	7.3	1	3
IE	3.2	0	3	UK	2.4	1	11

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: All R&D expenditures in the government sector (GOVERD) and the higher education sector (HERD).

Denominator: Regional Gross Domestic Product.

Rationale: R&D expenditure represents one of the major drivers of economic growth in a knowledge-based economy. Trends in the R&D expenditure indicator provide key indications of the future competitiveness and wealth of a region. R&D spending is essential for making the transition to a knowledge-based economy as well as for improving production technologies and stimulating growth.

Note: For all regions in CH and NL regional data are not available, therefore, data from the country level have been used.

No data: none

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

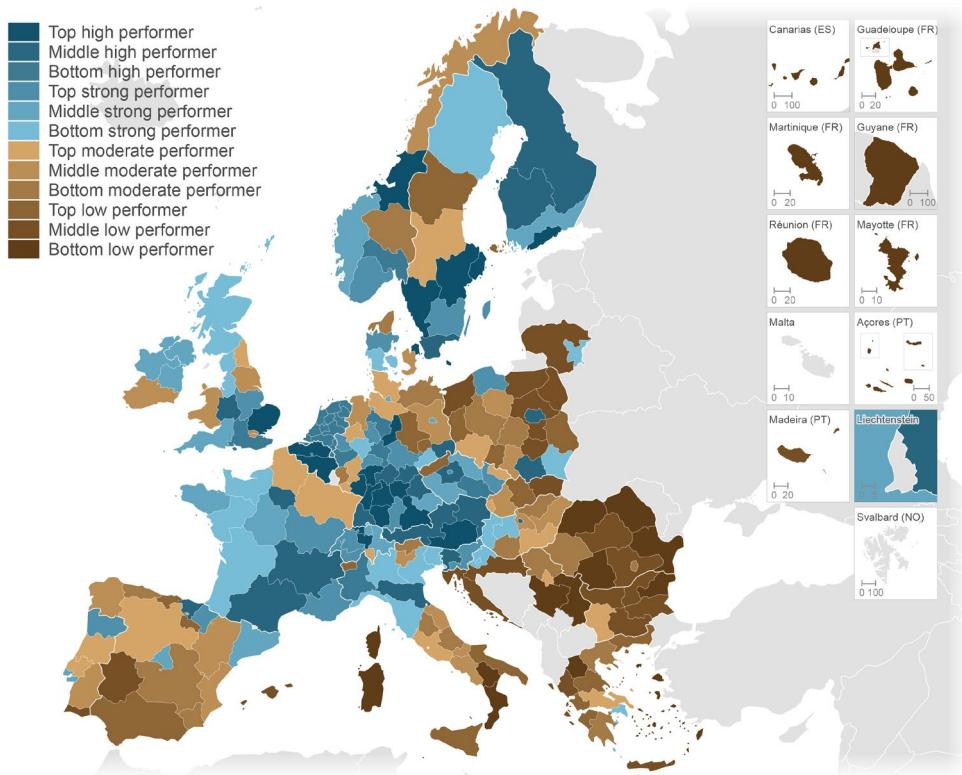
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2021)
	European Union (EU)	100	0.8

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2021)
1	Dresden (DED2)	198.6	2.3
2	Trøndelag/Trööndelage (NO06)	198.6	2.2
3	Berlin (DE3)	198.6	2.2
4	Bremen (DE5)	198.6	2.2
5	Braunschweig (DE91)	198.6	2.0
6	Köln (DEA2)	198.6	1.8
7	Leipzig (DED5)	198.6	1.8
8	Karlsruhe (DE12)	198.6	1.7
9	Kriti (EL43)	198.6	1.6
10	Övre Norrland (SE33)	198.6	1.6
11	Nordjylland (DK05)	198.6	1.5
12	Occitanie (FRJ)	198.6	1.5
13	Hovedstaden (DK01)	198.6	1.5
14	Praha (CZ01)	189.0	1.4
15	Thüringen (DEG)	186.3	1.4
16	Ipeiros (EL54)	183.6	1.4
17	Ostösterreich (AT1)	182.2	1.4
18	Grad Zagreb (HR05)	180.8	1.3
18	Nord-Norge (NO07)	180.8	1.3
20	Oslo og Viken (NO08)	178.1	1.3
21	Mecklenburg-Vorpommern (DE8)	175.3	1.3
22	Gießen (DE72)	174.0	1.3
22	Östra Mellansverige (SE12)	174.0	1.3
24	Brandenburg (DE4)	161.6	1.2
25	Lazio (ITI4)	160.3	1.2
26	Sachsen-Anhalt (DEE)	157.5	1.2
27	Sydsverige (SE22)	156.2	1.2
28	Oberbayern (DE21)	153.4	1.1
29	Saarland (DEC)	152.1	1.1
30	Dytiki Elláda (EL63)	150.7	1.1
31	Tübingen (DE14)	149.3	1.1
32	Freiburg (DE13)	145.2	1.1

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2021)
33	Helsinki-Uusimaa (FI1B)	143.8	1.1
33	Rheinhessen-Pfalz (DEB3)	143.8	1.1
35	Hannover (DE92)	139.7	1.0
35	Südösterreich (AT2)	139.7	1.0
37	Hamburg (DE6)	138.4	1.0
38	Pohjois- ja Itä-Suomi (FI1D)	134.2	1.0
39	Mittelfranken (DE25)	131.5	1.0
40	Vlaams Gewest (BE2)	130.1	1.0

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

R&D expenditure in the business sector



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R&D expenditure in the business sector

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Regions from 15 different countries are among the top 40, with Stuttgart (DE11) in Germany being the first in the list based on the indicator value.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 14.3 times better than the lowest. This ratio is particularly high (above 20) in Greece, Romania, France, Serbia and Portugal.

Overall, 49 regions perform above the EU average, while 192 fall below it. All regions in Austria and Belgium exceed the EU average. In contrast, all Bulgarian, Greek, Croatian, Irish, Lithuanian, Dutch, Portuguese, Romanian, Slovak and Serbian regions perform below the EU average.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	14.3	49	192				
AT	2.1	3	0	IT	16.5	2	19
BE	1.9	3	0	LT	3.4	0	2
BG	5.2	0	6	NL	1.0	0	12
CZ	5.5	2	6	PL	8.6	2	15
DE	15.8	16	22	PT	20.5	0	9
DK	7.2	1	4	RO	54.0	0	8
EL	102.0	0	13	SE	10.8	4	4
ES	13.9	1	18	SI	1.2	1	1
FI	8.0	3	2	SK	2.5	0	4
FR	34.7	3	11	NO	5.2	2	4
HR	5.9	0	4	CH	7.5	2	5
HU	4.2	1	7	RS	26.3	0	4
IE	1.9	0	3	UK	4.9	3	9

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: All R&D expenditures in the business sector (BERD).

Denominator: Regional Gross Domestic Product.

Rationale: The indicator captures the formal creation of new knowledge within firms. It is particularly important in the science-based sector (pharmaceuticals, chemicals and some areas of electronics), where most new knowledge is created in or near R&D laboratories.

Note: For all regions in NL regional data are not available, therefore, data from the country level have been used.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

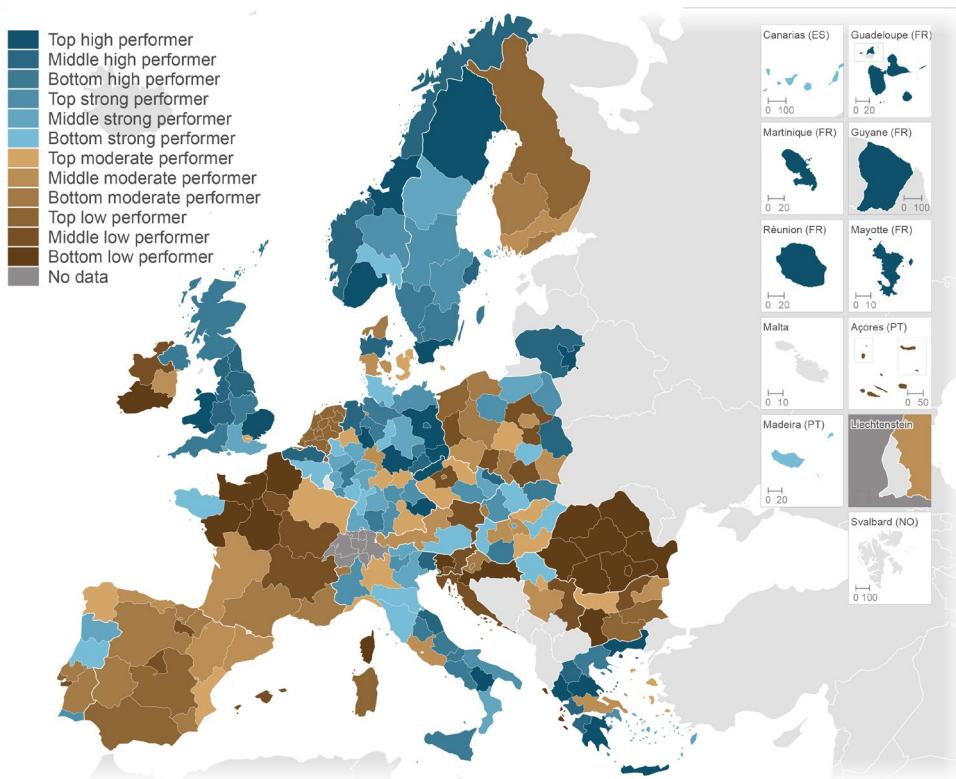
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2021)
	European Union (EU)	100	1.5
1	Stuttgart (DE11)	141.2	6.3
2	Nordwestschweiz (CH03)	141.2*	6.1*
3	Västsverige (SE23)	141.2	4.4
4	Tübingen (DE14)	141.2	4.4
5	Braunschweig (DE91)	141.2	4.1
6	Karlsruhe (DE12)	141.2	3.7
7	Südösterreich (AT2)	141.2	3.5
8	Oberbayern (DE21)	141.2	3.3
9	Rheinhessen-Pfalz (DEB3)	141.2	3.2
10	Hovedstaden (DK01)	141.2*	3.1*
11	Région wallonne (BE3)	141.2	3.1
12	East (England) (UKH)*	137.1	2.8

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2021)
13	Mittelfranken (DE25)	134.6	2.7
14	Vlaams Gewest (BE2)	134.3	2.7
15	Helsinki-Uusimaa (FI1B)	133.8	2.7
16	Stockholm (SE11)	133.1	2.6
17	Trøndelag/Trøndelag (NO06)	133.1*	2.6*
18	Darmstadt (DE71)	130.2	2.5
19	Zentralschweiz (CH06)	128.9*	2.5*
20	Östra Mellansverige (SE12)	126.0	2.4
21	Unterfranken (DE26)	125.7	2.3
22	Westösterreich (AT3)	125.5	2.3
23	Dresden (DED2)	124.4	2.3
24	Oberpfalz (DE23)	121.4	2.2
25	Budapest (HU11)	120.8	2.2
26	Sydsverige (SE22)	118.8	2.1
27	Auvergne-Rhône-Alpes (FRK)	118.5	2.1
28	Occitanie (FRJ)	118.3	2.1
29	Länsi-Suomi (FI19)	116.8	2.0
30	Freiburg (DE13)	116.0	2.0
31	Ile-de-France (FR1)	115.4	2.0
32	Oberfranken (DE24)	113.9	1.9
33	Warszawski stoleczny (PL91)	113.0	1.9
34	País Vasco (ES21)	110.3	1.8
35	Pohjois- ja Itä-Suomi (FI1D)	109.7	1.8
36	Střední Čechy (CZ02)	109.0	1.8
37	West Midlands (England) (UKG)*	108.1	1.7
38	Zahodna Slovenija (SI04)	107.2	1.7
39	Emilia-Romagna (ITH5)	105.6	1.7
40	Małopolskie (PL21)	105.6	1.7

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

*Data imputed from a different year (CH regions -2017; DK01 – 2019, NO regions – 2020, UK regions – 2018).

Non-R&D innovation expenditures



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Data for this indicator are available for 234 regions. As a result, the top six groups contain 19 regions each, while the bottom six groups contain 20 regions each.

Non-R&D innovation expenditures

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Wales (UKL), based on the indicator value, is the best-performing region, followed by Régions ultrapériphériques françaises (FRY). The other top-40 regions are spread between 12 countries, including nine in Germany, seven regions in Greece, five in the UK, and four in Norway.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 11.5 times better than the lowest. This ratio is particularly high (above 40) in the UK, France and Romania.

Overall, 116 regions perform above the EU average, while 118 fall below it. All regions in Belgium, Lithuania, Sweden and Norway exceed the EU average. In contrast, all Bulgarian, Croatian, Irish, Dutch and Slovenian regions fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	11.5	116	118				
AT	2.4	1	2	IT	4.9	17	4
BE	2.1	3	0	LT	1.3	2	0
BG	2.6	0	6	NL	1.0	0	12
CZ	6.8	4	4	PL	5.4	5	12
DE	4.5	33	5	PT	3.7	4	5
DK	4.2	1	4	RO	44.2	0	8
EL	29.7	10	3	SE	2.4	8	0
ES	2.8	1	18	SI	1.9	0	2
FI	2.6	1	4	SK	2.6	3	1
FR	65.1	2	12	NO	2.4	6	0
HR	2.0	0	4	CH	-	-	-
HU	2.3	4	4	RS	2.4	1	3
IE	2.4	0	3	UK	84.7	10	2

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Sum of total innovation expenditure for SMEs, excluding intramural and extramural R&D expenditures.

Denominator: Total turnover of SMEs.

Rationale: Several of the components of innovation expenditure, such as investment in equipment and machinery and the acquisition of patents and licenses, measure the diffusion of new production technology and ideas

Note: For all regions in NL regional data are not available, therefore, data from the country level have been used.

No data: All CH regions.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

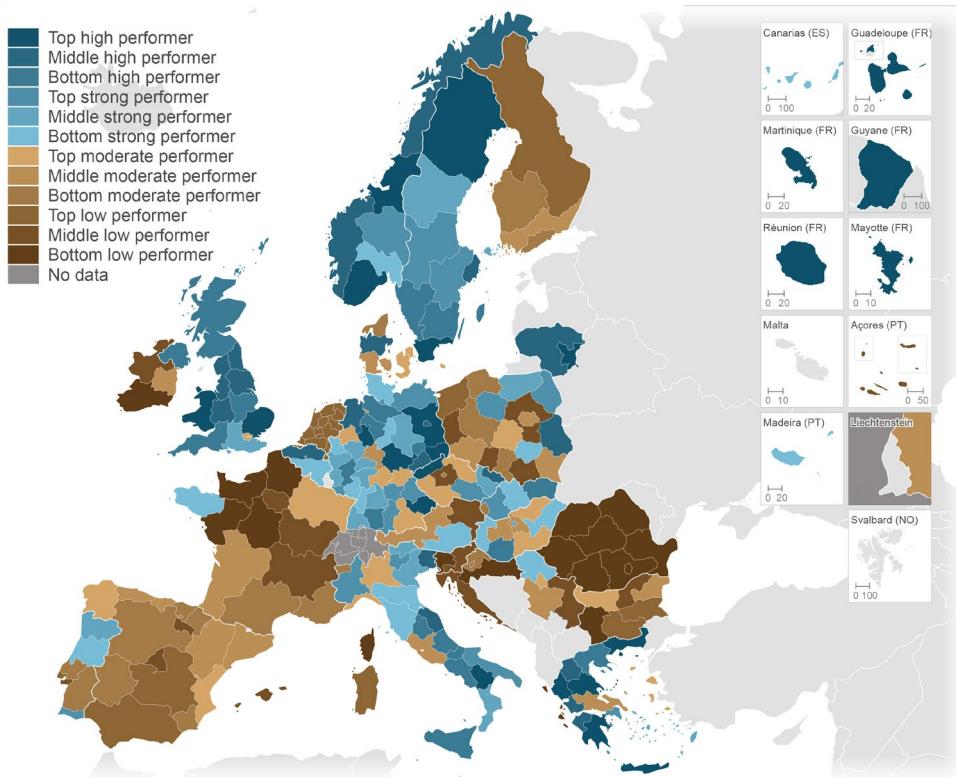
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	0.4
1	Wales (UKL)	277.2*	c
2	RUP FR — Régions Ultrapériphériques Françaises (FRY)	277.2*	c
3	Kriti (EL43)	240.3	2.4
4	Thessalia (EL61)	196.9	1.6
5	Peloponnisos (EL65)	183.4	1.4
6	Detmold (DEA4)	181.6*	c
7	Ipeiros (EL54)	173.6	1.3
8	Övre Norrland (SE33)	172.9	1.3
9	Thüringen (DEG)	170.9*	c
10	Agder og Sør-Østlandet (NO09)	167.6*	c
11	Sostinės regionas (LT01)	165.9	1.2

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
12	Dresden (DED2)	163.5*	c
13	Trøndelag/Trööndelage (NO06)	162.5*	c
14	Anatoliki Makedonia Thraki (EL51)	161.6	1.1
15	Severozápad (CZ04)	161.4	1.1
16	Niederbayern (DE22)	161.3*	c
17	Brandenburg (DE4)	160.2*	c
18	Basilicata (ITF5)	160.0*	c
19	Sydsverige (SE22)	159.7	1.1
20	Friuli-Venezia Giulia (ITH4)	159.1*	c
21	Chemnitz (DED4)	158.4*	c
22	Berlin (DE3)	156.3*	c
23	Midtjylland (DK04)	155.1*	c
24	Dytiki Elláda (EL63)	151.3	1.0
25	Nord-Norge (NO07)	146.4*	c
26	Dytiki Makedonia (EL53)	146.2	0.9
27	Vlaams Gewest (BE2)	146.1	0.9
28	Stockholm (SE11)	144.8	0.9
29	Weser-Ems (DE94)	144.6*	c
30	Lubelskie (PL81)	144.4*	c
31	Yorkshire and The Humber (UKE)	144.1*	c
32	North East (England) (UKC)*	144.0*	c
33	Vestlandet (NO0A)	143.9*	c
34	Vidurio ir vakarų Lietuvos regionas (LT02)	143.4	0.9
35	Moravskoslezsko (CZ08)	142.5	0.9
36	West Midlands (England) (UKG)	141.8*	c
37	Marche (ITI3)	139.8*	c
38	North West (England) (UKD)	139.7*	c
39	Lüneburg (DE93)	139.6*	c
40	Västsverige (SE23)	139.4	0.8

*Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.
c= confidential.*

**Data imputed from a different year.*

Innovation expenditures per person employed



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Data for this indicator are available for 234 regions. As a result, the top six groups contain 19 regions each, while the bottom six groups contain 20 regions each.

Innovation expenditures per person employed

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Performance is scattered across nine countries represented in the top 40 best performing regions. Based on indicator value, Régions Ultrapériméphériques Françaises (FRY) is in first place. All regions from the UK and Denmark are included in the top-40; as regional data are not available for all regions in these countries, missing data have been imputed with the national indicator value.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 22.2 times better than the lowest. This ratio is particularly high (above 50) in Romania and Croatia.

Overall, 76 regions perform above the EU average, while 158 fall below it. All regions in Belgium, Denmark, Finland, Ireland and Norway exceed the EU average. In contrast, all regions in Bulgaria, Lithuania, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia and Serbia fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	22.2	76	158				
AT	1.8	2	1	IT	5.3	2	19
BE	1.4	3	0	LT	2.3	0	2
BG	2.4	0	6	NL	1.0	0	12
CZ	2.8	1	7	PL	6.0	0	17
DE	1.9	13	25	PT	8.3	0	9
DK	1.0	5	0	RO	371.4	0	8
EL	28.6	3	10	SE	5.0	6	2
ES	4.7	1	18	SI	2.3	0	2
FI	2.3	5	0	SK	1.5	0	4
FR	36.5	12	2	NO	2.3	6	0
HR	56.8	1	3	CH	-	-	-
HU	4.3	1	7	RS	3.2	0	4
IE	1.8	3	0	UK	1.0	12	0

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Ratio is very high in Romania as the highest scoring region value is 742.5, while the lowest scoring region value is 2.0.

Definition of indicator

Numerator: Innovation expenditure by SMEs

Denominator: Total employment in innovative SMEs.

Rationale: The indicator measures the monetary input directly related to innovation activities.

Note: For all regions in DK, NL, CH regional data are not available, therefore, data from the country level have been used.

No data: All CH regions.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

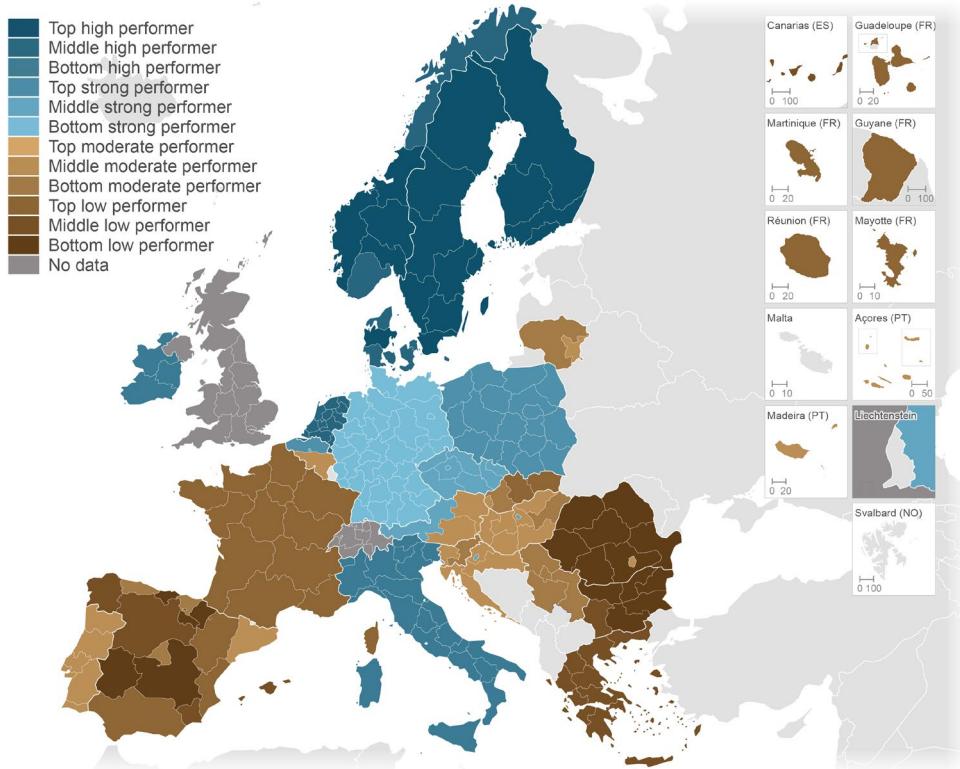
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	4234.9
1	RUP FR — Régions Ultrapériphériques Françaises (FRY)	176.5*	c
2	Sjeverna Hrvatska (HR06)	176.5	27719.6
3	Bretagne (FRH)	176.5*	c
4	Région wallonne (BE3)	176.5	20909.7
5	Ile-de-France (FR1)	176.5*	c
6	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	176.5	16648.4
7	Vlaams Gewest (BE2)	176.5	14740.7
8	Eastern and Midland (IE06)	176.5	14589.4
9	Southern (IE05)	176.5	14519.8
10	Stockholm (SE11)	175.8	13085.0
11	Provence-Alpes-Côte d'Azur (FRL)	172.4*	c
12	Sydsverige (SE22)	169.3	12137.1

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
13	Oslo og Viken (NO08)	165.6*	c
14	Occitanie (FRJ)	163.1*	c
15	Åland (FI2)	161.4	11035.5
16	Helsinki-Uusimaa (FI1B)	158.3	10614.3
17	Grand Est (FRF)	155.3*	c
18	Auvergne-Rhône-Alpes (FRK)	154.1*	c
19	Nouvelle-Aquitaine (FRI)	146.3*	c
20	Trøndelag/Trööndelage (NO06)	144.9*	c
21	Västsverige (SE23)	141.3	8449.8
22	Northern and Western (IE04)	138.3	8104.3
23	Agder og Sør-Østlandet (NO09)	137.6*	c
24	Vestlandet (NO0A)	131.5*	c
25	Pohjois- ja Itä-Suomi (FI1D)	131.3	7302.7
26	Bourgogne-Franche-Comté (FRC)	131.3*	c
27	Innlandet (NO02)	129.8*	c
28	Hauts-de-France (FRE)	126.2*	c
29	Hovedstaden (DK01)	124.6**	c
29	Midtjylland (DK04)	124.6**	c
29	Nordjylland (DK05)	124.6**	c
29	Sjælland (DK02)	124.6**	c
29	Syddanmark (DK03)	124.6**	c
34	East Midlands (England) (UKF)	124.3**	c
34	East (England) (UKH)	124.3**	c
34	London (UKI)	124.3**	c
34	North East (England) (UKC)	124.3**	c
34	North West (England) (UKD)	124.3**	c
34	Northern Ireland (UKN)	124.3**	c
34	Scotland (UKM)	124.3**	c
34	South East (England) (UKJ)	124.3**	c
34	South West (England) (UKK)	124.3**	c
34	Wales (UKL)	124.3**	c
34	West Midlands (England) (UKG)	124.3**	c
34	Yorkshire and The Humber (UKE)	124.3**	c

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

c= confidential. * Data imputed from a different year. ** Data imputed from a higher-level NUTS region.

Cloud computing in enterprises



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

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Data for this indicator are available for 222 regions. As a result, the top six groups contain 18 regions each, while the bottom six groups contain 19 regions each.

The top moderate group is absent, as all German regions have identical values (data was imputed from the national level) that span through both the bottom strong and top moderate groups. Since identical values cannot be split across two groups, all DE regions are placed in the bottom strong group. As a result, the top moderate group is skipped entirely in the visual.

Cloud computing in enterprises

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. The first place is shared across all five regions in Finland. All regions from Finland, Sweden, the Netherlands, Ireland and Italy are included in the top-40; as regional data are not available for all regions in these countries, missing data have been imputed with the national indicator value. The table also includes all regions from Norway and Denmark.

As shown in the table below, regional disparities within countries are evident in a small number of countries, with top regions performing on average 1.9 times better than the lowest. This ratio is particularly high (above 10) in Romania. For many countries this ratio is one, since no regional data for them was available and values were imputed from national level data.

Overall, 130 regions perform above the EU average, while 92 fall below it. All regions in Czechia, Germany, Denmark, Finland, Ireland, Italy, the Netherlands, Poland, Sweden and Norway exceed the EU average. In contrast, all regions in Bulgaria, Greece, Spain, France, Portugal, Romania, Slovenia, Slovakia and Serbia fall below it.

	RATIO BEST/ WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/ WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	1.9	130	92				
AT	1.1	2	1	IT	1.0	21	0
BE	1.4	2	1	LT	1.3	1	1
BG	2.9	0	6	NL	1.0	12	0
CZ	1.0	8	0	PL	1.0	17	0
DE	1.0	38	0	PT	1.0	0	9
DK	1.1	5	0	RO	12.1	0	8
EL	1.0	0	13	SE	1.0	8	0
ES	6.6	0	19	SI	1.2	0	2

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
FI	1.0	5	0	SK	1.6	0	4
FR	1.0	0	14	NO	1.1	6	0
HR	1.3	1	3	CH	-	-	-
HU	1.5	1	7	RS	1.0	0	4
IE	1.0	3	0	UK	-	-	-

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of enterprises that buy cloud computing services used over the internet.

Denominator: Total number of enterprises.

Rationale: The uptake of cloud computing services signals the extent to which businesses integrate digital tools, which can influence innovation.

Note: For all regions in CZ, DE, IE, EL, FR, IT, NL, PL, PT, FI, SE regional data are not available, therefore, data from the country level have been used.

No data: All CH and UK regions.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2023)
	European Union (EU)	100	45.32
1	Åland (FI2)	194.0**	78.3**
1	Etelä-Suomi (FI1C)	194.0**	78.3**
1	Helsinki-Uusimaa (FI1B)	194.0**	78.3**

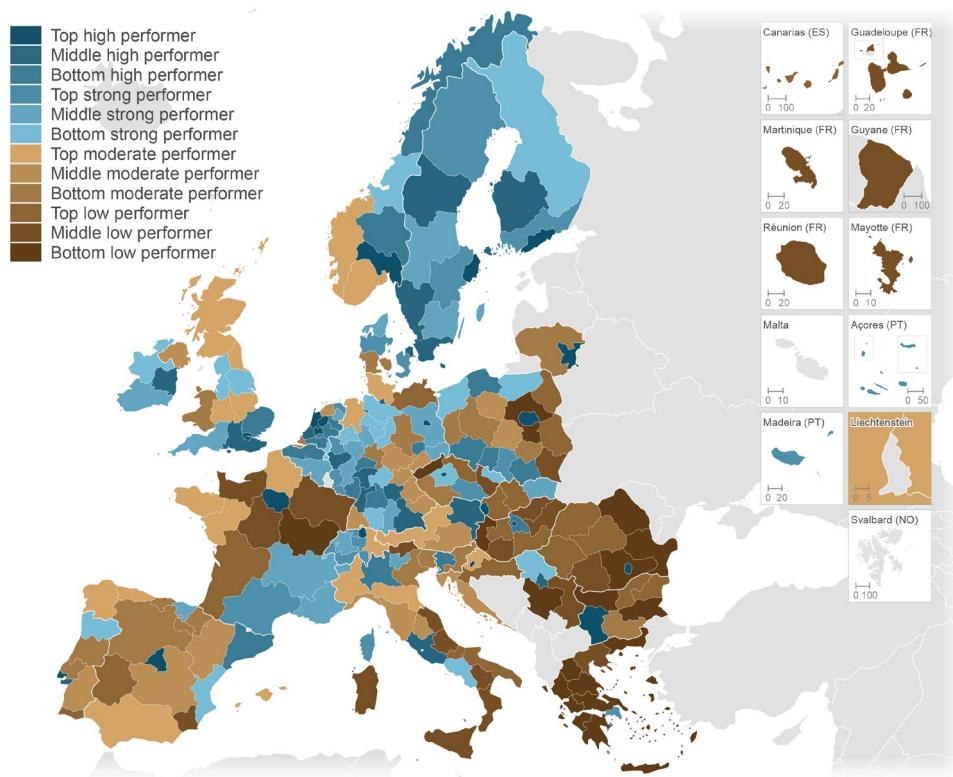
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2023)
1	Länsi-Suomi (FI19)	194.0**	78.3**
1	Pohjois- ja Itä-Suomi (FI1D)	194.0**	78.3**
6	Oslo og Viken (NO08)	180.0	73.4
7	Innlandet (NO02)	175.9	72.0
8	Trøndelag/Trööndelage (NO06)	175.5	71.8
9	Mellersta Norrland (SE32)	175.0**	71.6**
9	Norra Mellansverige (SE31)	175.0**	71.6**
9	Östra Mellansverige (SE12)	175.0**	71.6**
9	Övre Norrland (SE33)	175.0**	71.6**
9	Småland med öarna (SE21)	175.0**	71.6**
9	Stockholm (SE11)	175.0**	71.6**
9	Sydsverige (SE22)	175.0**	71.6**
9	Västsverige (SE23)	175.0**	71.6**
17	Midtjylland (DK04)	173.9	71.2
17	Vestlandet (NO0A)	173.7	71.2
19	Syddanmark (DK03)	168.6	69.4
20	Agder og Sør-Østlandet (NO09)	167.9	69.2
21	Nordjylland (DK05)	165.1	68.1
22	Hovedstaden (DK01)	164.8	68.0
23	Sjælland (DK02)	164.3	67.9
24	Nord-Norge (NO07)	156.7	65.2
25	Drenthe (NL13)	153.8**	64.2**
26	Flevoland (NL23)	153.8**	64.2**
26	Friesland (NL) (NL12)	153.8**	64.2**
26	Gelderland (NL22)	153.8**	64.2**
26	Groningen (NL11)	153.8**	64.2**
26	Limburg (NL) (NL42)	153.8**	64.2**
26	Noord-Brabant (NL41)	153.8**	64.2**
26	Noord-Holland (NL32)	153.8**	64.2**
26	Overijssel (NL21)	153.8**	64.2**
26	Utrecht (NL35)	153.8**	64.2**
26	Zeeland (NL34)	153.8**	64.2**
26	Zuid-Holland (NL36)	153.8**	64.2**

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2023)
26	Eastern and Midland (IE06)	150.7**	63.1**
38	Northern and Western (IE04)	150.7**	63.1**
38	Southern (IE05)	150.7**	63.1**
40	All Italian regions**	145.8**	61.4**

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

*** Data imputed from a higher-level NUTS region.*

Employed ICT specialists



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Employed ICT specialists

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. High performance is widely distributed across Europe, with 24 countries represented among the top 40 regions. Based on the indicator value, Stockholm (SE11) is the best performing region, followed by Bratislavský kraj (SK01) and Praha (CZ01).

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 4.9 times better than the lowest. This ratio is particularly high (above 9) in Romania and Poland.

Overall, 67 regions perform above the EU average, while 174 fall below it. There is no country where all regions exceed the EU average. Greece is the only country where all regions perform below the EU average.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	4.9	67	174				
AT	2.3	1	2	IT	5.2	2	19
BE	1.8	2	1	LT	4.0	1	1
BG	7.1	1	5	NL	3.8	7	5
CZ	8.6	1	7	PL	9.2	5	12
DE	4.1	14	24	PT	4.5	4	5
DK	3.1	2	3	RO	10.4	1	7
EL	7.1	0	13	SE	3.6	5	3
ES	4.4	2	17	SI	2.1	1	1
FI	3.0	3	2	SK	6.0	1	3
FR	7.3	1	13	NO	2.6	3	3
HR	4.8	1	3	CH	2.7	2	5
HU	7.7	2	6	RS	6.4	1	3
IE	2.1	1	2	UK	3.5	3	9

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Rate between the share of employment in the information and communication sector (NACE J) in the region and the country.

Denominator: Share of ICT specialists in total employment.

Rationale: Regional proxy to measuring employment in the industries most implicated in the digital transformation in proportion to total employment allowing to estimate the size of the digital economy in a country. ICT skills are particularly important for innovation in an increasingly digital economy.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

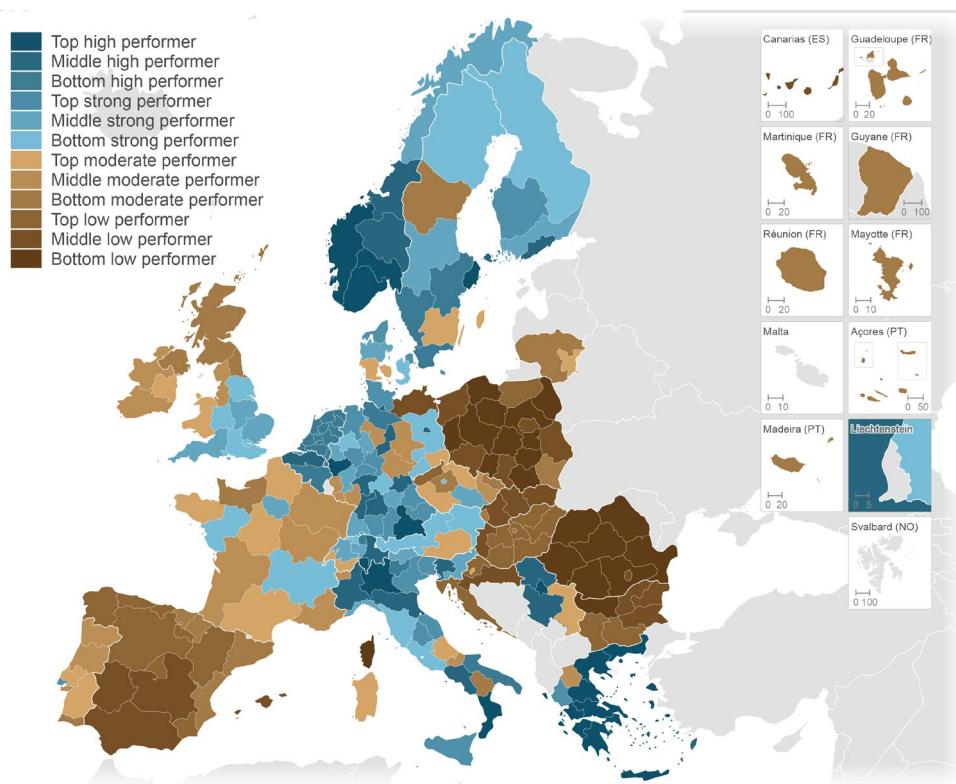
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
	European Union (EU)	100	5.0
1	Stockholm (SE11)	195.7	15.7
2	Bratislavský kraj (SK01)	195.7	13.7
3	Praha (CZ01)	195.7	12.9
4	Helsinki-Uusimaa (FI1B)	195.7	12.5
5	Budapest (HU11)	195.7	11.4
6	Warszawski stoleczny (PL91)	195.7	11.3
7	Grad Zagreb (HR05)	195.7	11.3
8	Sostinės regionas (LT01)	195.7	10.7
9	Grande Lisboa (PT1A)	195.7	10.7
10	Ile-de-France (FR1)	195.7	10.6
11	Utrecht (NL35)	195.7	10.4
12	London (UKI)	195.7	10.3
13	Zürich (CH04)	195.7	10.2

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
14	Berlin (DE3)	195.7	10.2
15	Noord-Holland (NL32)	195.7	10.2
16	Yugozapaden (BG41)	195.7	9.5
17	Flevoland (NL23)	195.3	9.3
18	Comunidad de Madrid (ES3)	192.0	9.1
19	Bucureşti-Ilfov (RO32)	190.6	9.1
20	Oslo og Viken (NO08)	189.6	9.0
21	Hovedstaden (DK01)	185.7	8.8
22	Oberbayern (DE21)	182.9	8.7
23	Lazio (ITI4)	177.9	8.5
24	Hamburg (DE6)	177.3	8.5
25	City of Belgrade (RS11)	177.1	8.5
26	Eastern and Midland (IE06)	173.9	8.3
27	South East (England) (UKJ)	171.7	8.2
28	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	164.3	7.9
29	Åland (FI2)	162.5*	7.8*
30	Karlsruhe (DE12)	161.4	7.7
31	Península de Setúbal (PT1B)	159.3	7.7
32	Ostösterreich (AT1)	156.4	7.5
33	Västsverige (SE23)	155.9	7.5
34	Köln (DEA2)	155.5	7.5
35	Sydsverige (SE22)	155.3	7.5
36	Zuid-Holland (NL36)	146.1	7.1
37	Mellersta Norrland (SE32)	143.9	7.0
38	Länsi-Suomi (FI19)	139.8	6.8
39	Mittelfranken (DE25)	137.1	6.7
40	Darmstadt (DE71)	135.6	6.6

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

** Data imputed from a different year.*

SMEs introducing product innovations



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SMEs introducing product innovations

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. The top-performing regions are largely concentrated in Greece (11 regions), Germany (nine regions), and Italy and Norway (five regions each). Voreio Aigaio (EL41) ranks as the best-performing region overall, followed by Ionia Nisia (EL62) and Kriti (EL43).

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 2.5 times better than the lowest. This ratio is particularly high (above 10) in Spain and Romania.

Overall, 127 regions perform above the EU average, while 114 fall below it. All regions in Belgium, Denmark, Finland, the Netherlands, Slovenia, Norway, Switzerland and Serbia exceed the EU average. In contrast, all regions in Bulgaria, Spain, Hungary, Ireland, Lithuania, Poland Romania and Slovakia fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	2.5	127	114				
AT	1.1	2	1	IT	2.3	18	3
BE	1.1	3	0	LT	1.3	0	2
BG	1.6	0	6	NL	1.0	12	0
CZ	1.8	2	6	PL	4.3	0	17
DE	3.6	30	8	PT	1.8	1	8
DK	1.3	5	0	RO	8.2	0	8
EL	2.7	12	1	SE	2.1	6	2
ES	10.8	0	19	SI	1.2	2	0
FI	1.4	5	0	SK	1.5	0	4
FR	4.1	3	11	NO	1.5	6	0
HR	2.0	1	3	CH	1.7	7	0
HU	1.5	0	8	RS	1.7	4	0
IE	1.0	0	3	UK	2	8	4

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of SMEs who introduced at least one product innovation.

Denominator: Total number of SMEs.

Rationale: Product innovation is a key ingredient to innovation as they can create new markets and improve competitiveness. Higher shares of product innovators reflect a higher level of innovation activities.

Note: For all regions in NL regional data are not available, therefore, data from the country level have been used.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	26.4
1	Voreio Aigaio (EL41)	198.6	67.4
2	Ionia Nisia (EL62)	198.6	65.4
3	Kriti (EL43)	198.6	61.2
4	Oslo og Viken (NO08)	198.6*	c
5	Peloponnisos (EL65)	198.6	49.4
6	Sterea Elláda (EL64)	194.8	47.4
7	Calabria (ITF6)	193.8	47.1
8	Attiki (EL30)	191.5	46.6
9	Oberbayern (DE21)	187.6*	c
10	Ticino (CH07)	186.6*	c
11	Dytiki Elláda (EL63)	185.3	45.3
12	Anatoliki Makedonia Thraki (EL51)	182.0	44.5

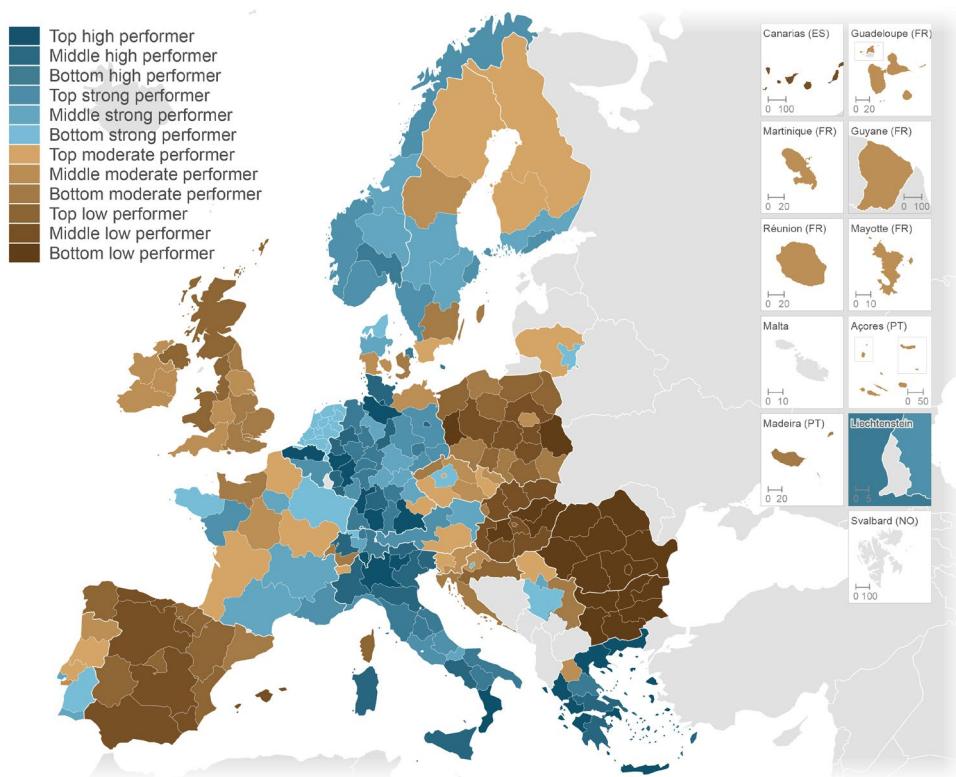
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
13	Stockholm (SE11)	181.3	44.4
14	City of Belgrade (RS11)	181.2	44.4
15	Thessalia (EL61)	176.0	43.2
16	Kentriki Makedonia (EL52)	173.7	42.7
17	Vestlandet (NO0A)	172.4*	c
18	Köln (DEA2)	169.7*	c
19	Agder og Sør-Østlandet (NO09)	168.0*	c
20	Lombardia (ITC4)	164.1	40.6
21	Piemonte (ITC1)	163.9	40.5
22	Ostschweiz (CH05)	162.4*	c
23	Region Šumadije i Zapadne Srbije (RS21)	159.6	39.6
24	Braunschweig (DE91)	158.0*	c
25	Zahodna Slovenija (SI04)	156.1	38.8
26	Trøndelag/Trööndelage (NO06)	153.7*	c
27	Innlandet (NO02)	152.7*	c
28	Vlaams Gewest (BE2)	151.9	37.9
29	Emilia-Romagna (ITH5)	151.7	37.9
30	Notio Aigaio (EL42)	151.4	37.8
31	Autonomous Province of Vojvodina (RS12)	148.9	37.2
32	Darmstadt (DE71)	148.7*	c
33	Karlsruhe (DE12)	148.7*	c
34	Helsinki-Uusimaa (FI1B)	148.6	37.2
35	Stuttgart (DE11)	148.1*	c
36	Berlin (DE3)	147.6*	c
37	Hamburg (DE6)	147.2*	c
38	Oberfranken (DE24)	147.1*	c
39	Åland (FI2)	146.6	36.7
40	Campania (ITF3)	145.5	36.5

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

c = confidential.

* Data imputed from a different year (2020).

SMEs introducing business process innovations



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This map uses the NUTS 2024 classification for all countries except the United Kingdom (UK). As the UK is no longer part of the NUTS system, the map applies the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics.

SMEs introducing business process innovations

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. The top-performing regions are largely concentrated in Greece (11 regions), Germany (15 regions), and Italy (11 regions). Kriti (EL43) ranks as the best-performing region overall, followed by Voreio Aigaio (EL41) and Ionia Nisia (EL62).

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 2.3 times better than the lowest. This ratio is particularly high (16.4) in Romania and Spain (7.8).

Overall, 132 regions perform above the EU average, while 109 fall below it. All regions in Austria, Belgium, Finland, Italy, the Netherlands and Norway exceed the EU average. In contrast, all regions in Bulgaria, Spain, Hungary, Ireland, Poland, Romania, Slovakia and the UK fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	2.3	132	109				
AT	1.2	3	0	IT	1.5	21	0
BE	1.5	3	0	LT	1.1	1	1
BG	1.3	0	6	NL	1.0	12	0
CZ	1.4	1	7	PL	2.4	0	17
DE	1.9	37	1	PT	1.4	5	4
DK	1.5	3	2	RO	16.4	0	8
EL	2.0	12	1	SE	1.4	4	4
ES	7.8	0	19	SI	1.2	1	1
FI	1.2	5	0	SK	1.4	0	4
FR	1.7	8	6	NO	1.2	6	0
HR	1.6	1	3	CH	1.8	6	1
HU	1.6	0	8	RS	1.4	3	1
IE	1.0	0	3	UK	1.4	0	12

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of SMEs who introduced at least one business process innovation.

Denominator: Total number of SMEs.

Rationale: Many firms innovate not by improving new products but by improving their business processes. Business process innovations include process, marketing and organisational innovations.

Note: For all regions in NL regional data are not available, therefore, data from the country level have been used.

No data: none

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

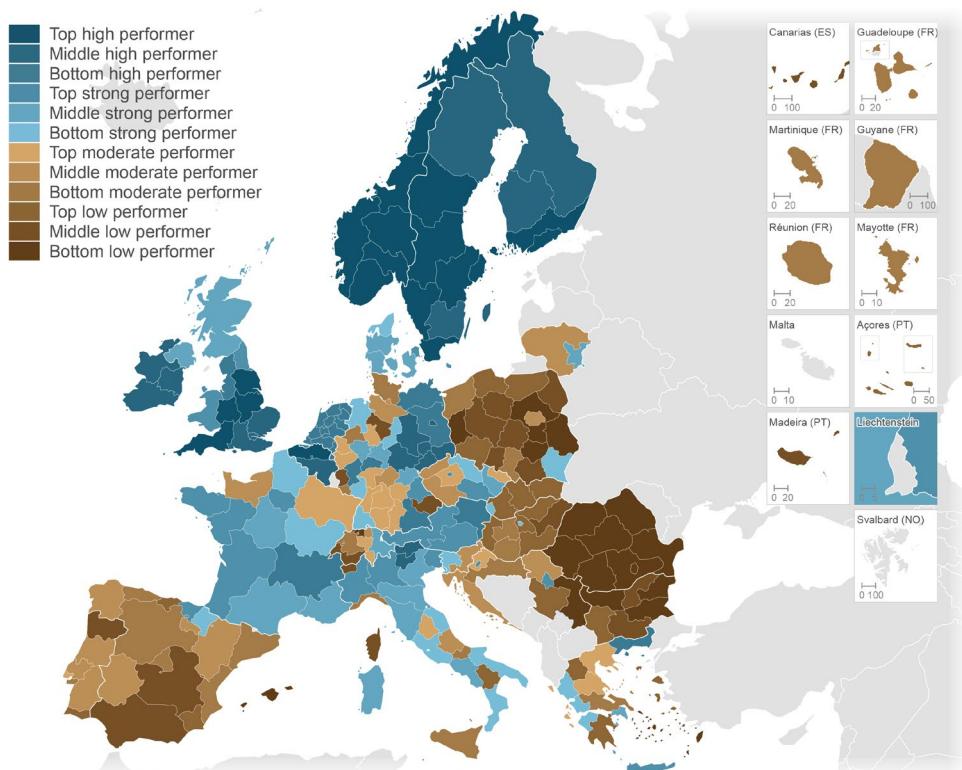
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	41.6
1	Kriti (EL43)	177.2	75.9
2	Voreio Aigaio (EL41)	177.2	75.8
3	Ionia Nisia (EL62)	177.2	72.0
4	Koblenz (DEB1)	177.2*	c
5	Vlaams Gewest (BE2)	177.2	66.6
6	Calabria (ITF6)	173.7	65.2
7	Hamburg (DE6)	173.4*	c
8	Anatoliki Makedonia Thraki (EL51)	170.1	64.0
9	Oberbayern (DE21)	168.0*	c
10	Lüneburg (DE93)	167.7*	c
11	Ticino (CH07)	165.5*	c
12	Dytiki Elláda (EL63)	164.1	62.1

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
13	Attiki (EL30)	162.3	61.5
14	Ipeiros (EL54)	162.0	61.4
15	Kentriki Makedonia (EL52)	161.1	61.2
16	Lombardia (ITC4)	158.5	60.3
17	Karlsruhe (DE12)	156.6*	c
18	Provincia Autonoma di Trento (ITH2)	155.6	59.4
19	Tübingen (DE14)	154.5*	c
20	Köln (DEA2)	153.8*	c
21	Trier (DEB2)	151.9*	c
22	Friuli-Venezia Giulia (ITH4)	151.9	58.2
23	Stuttgart (DE11)	151.9*	c
24	Berlin (DE3)	151.0*	c
25	Braunschweig (DE91)	149.7*	c
26	Veneto (ITH3)	149.5	57.4
27	Provincia Autonoma di Bolzano/Bozen (ITH1)	149.4	57.4
28	Düsseldorf (DEA1)	148.3*	c
29	Campania (ITF3)	148.1	57.0
30	Münster (DEA3)	147.9*	c
31	Emilia-Romagna (ITH5)	147.4	56.8
32	Notio Aigaio (EL42)	145.4	56.1
33	Piemonte (ITC1)	145.1	56.0
34	Sterea Elláda (EL64)	144.8	55.9
35	Espace Mittelland (CHO2)	144.7*	c
36	Sicilia (ITG1)	144.5	55.8
37	Saarland (DEC)	143.9*	c
38	Sardegna (ITG2)	143.5	55.5
39	Peloponnisos (EL65)	142.8	55.3
40	Schleswig-Holstein (DEF)	142.6*	c

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.
 c = confidential.

* Data imputed from a different year (2020).

Innovative SMEs collaborating with others



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Innovative SMEs collaborating with others

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. The top-performing regions are largely concentrated in Sweden (all eight regions), Norway (all six regions), the UK (seven regions) and Finland (all five regions). Trøndelag/Trøöndelage (N006) ranks as the best-performing region overall, based on the indicator value.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 4.5 times better than the lowest. This ratio is particularly high (43.1) in Romania.

Overall, 117 regions perform above the EU average, while 124 fall below it. All regions in Austria, Belgium, Denmark, Finland, Ireland, the Netherlands, Sweden, Norway and the UK exceed the EU average. In contrast, all regions in Bulgaria, Portugal and Romania fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	4.5	117	124				
AT	1.1	3	0	IT	3.6	14	7
BE	1.2	3	0	LT	1.4	1	1
BG	2.1	0	6	NL	1.0	12	0
CZ	1.5	4	4	PL	5.1	1	16
DE	5.5	18	20	PT	2.1	0	9
DK	1.2	5	0	RO	43.1	0	8
EL	10.0	5	8	SE	1.4	8	0
ES	8.3	2	17	SI	1.3	1	1
FI	1.3	5	0	SK	1.9	1	3
FR	4.3	9	5	NO	1.2	6	0
HR	2.1	1	3	CH	3.3	1	6
HU	1.9	1	7	RS	6.8	1	3
IE	1.1	3	0	UK	1.9	12	0

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of SMEs with innovation co-operation activities (i.e. that have had any co-operation agreements on innovation activities with other enterprises or institutions).

Denominator: Total number of SMEs.

Rationale: This indicator measures the degree to which SMEs are involved in innovation co-operation. Complex innovations often depend on enterprises' ability to draw on diverse sources of information and knowledge, or to collaborate on the development of an innovation. This indicator measures the flow of knowledge between public research institutions and enterprises, and between enterprises and other enterprises. The indicator is limited to SMEs, because almost all large firms are involved in innovation co-operation.

Note: For all regions in NL regional data are not available, therefore, data from the country level have been used.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	12.4
1	Trøndelag/Trøöndelage (NO06)	216.5*	c
2	Vestlandet (NO0A)	216.5*	c
3	Agder og Sør-Østlandet (NO09)	216.5*	c
4	Stockholm (SE11)	216.5	32.9
5	Innlandet (NO02)	216.5*	c
6	Västsverige (SE23)	216.5	32.1
7	Sydsverige (SE22)	216.5	31.9
8	Oslo og Viken (NO08)	216.5*	c
9	Åland (FI2)	216.5	29.1
10	Östra Mellansverige (SE12)	216.5	28.9
11	Nord-Norge (NO07)	216.5*	c

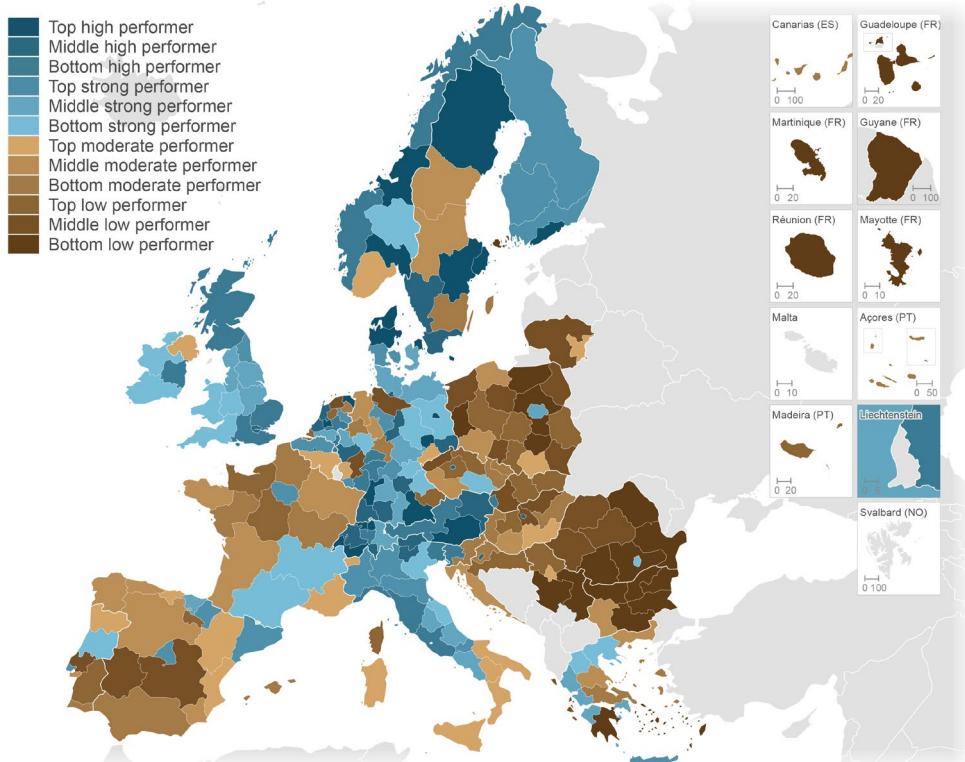
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
12	Mellersta Norrland (SE32)	216.5	28.0
13	Vlaams Gewest (BE2)	216.5	28.0
14	Norra Mellansverige (SE31)	216.5	27.3
15	Helsinki-Uusimaa (FI1B)	216.5	26.9
16	Yorkshire and The Humber (UKE)	214.1*	c
17	Etelä-Suomi (FI1C)	213.0	26.5
18	South West (England) (UKK)	211.7*	c
19	East Midlands (England) (UKF)	210.7*	c
20	West Midlands (England) (UKG)	207.3*	c
21	Småland med öarna (SE21)	201.6	25.1
22	Provincia Autonoma di Trento (ITH2)	199.0	24.7
23	Chemnitz (DED4)	197.6*	c
24	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	197.2	24.5
25	Leipzig (DED5)	194.2*	c
26	East (England) (UKH)	193.4*	c
27	Northern and Western (IE04)	191.2	23.8
28	Dresden (DED2)	190.7*	c
29	Övre Norrland (SE33)	190.0	23.6
30	Pohjois- ja Itä-Suomi (FI1D)	189.8	23.6
31	Région wallonne (BE3)	189.8	23.6
32	Thüringen (DEG)	187.4*	c
33	Länsi-Suomi (FI19)	185.3	23.0
34	Berlin (DE3)	181.8*	c
35	South East (England) (UKJ)	177.7*	c
36	Sachsen-Anhalt (DEE)	169.5*	c
37	Southern (IE05)	169.4	21.1
38	Eastern and Midland (IE06)	167.2	20.8
39	Provincia Autonoma di Bolzano/Bozen (ITH1)	163.6	20.3
40	London (UKI)	158.3*	c

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

c = confidential.

* Data imputed from a different year (2020).

Public-private co-publications



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Public-private co-publications

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Although regions from 14 countries are in the table, the top-performing regions are largely concentrated in Germany (11 regions), Switzerland (five regions), and Sweden (five regions). Trøndelag/ Trööndelage (N006) ranks as the best-performing region overall, based on the indicator value.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 9.9 times better than the lowest. This ratio is particularly high (above 20) in Greece and Poland.

Overall, 133 regions perform above the EU average, while 108 fall below it. All regions in Austria, Denmark, Ireland, Norway, Switzerland and the UK exceed the EU average. In contrast, all regions in Bulgaria fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	9.9	133	108				
AT	1.8	3	0	IT	4.0	18	3
BE	4.3	2	1	LT	3.9	1	1
BG	17.0	0	6	NL	18.5	8	4
CZ	12.6	2	6	PL	23.5	1	16
DE	13.4	31	7	PT	6.6	3	6
DK	4.5	5	0	RO	19.2	1	7
EL	28.4	6	7	SE	6.6	5	3
ES	18.8	5	14	SI	3.9	1	1
FI	2.1	4	1	SK	6.6	1	3
FR	12.5	4	10	NO	11.3	6	0
HR	7.2	1	3	CH	4.8	7	0
HU	10.9	2	6	RS	10.5	1	3
IE	1.6	3	0	UK	3.3	12	0

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of public-private co-authored research publications.

Denominator: Total population.

Rationale: This indicator captures public-private research linkages and active collaboration activities between business sector researchers and public sector researchers resulting in academic publications.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

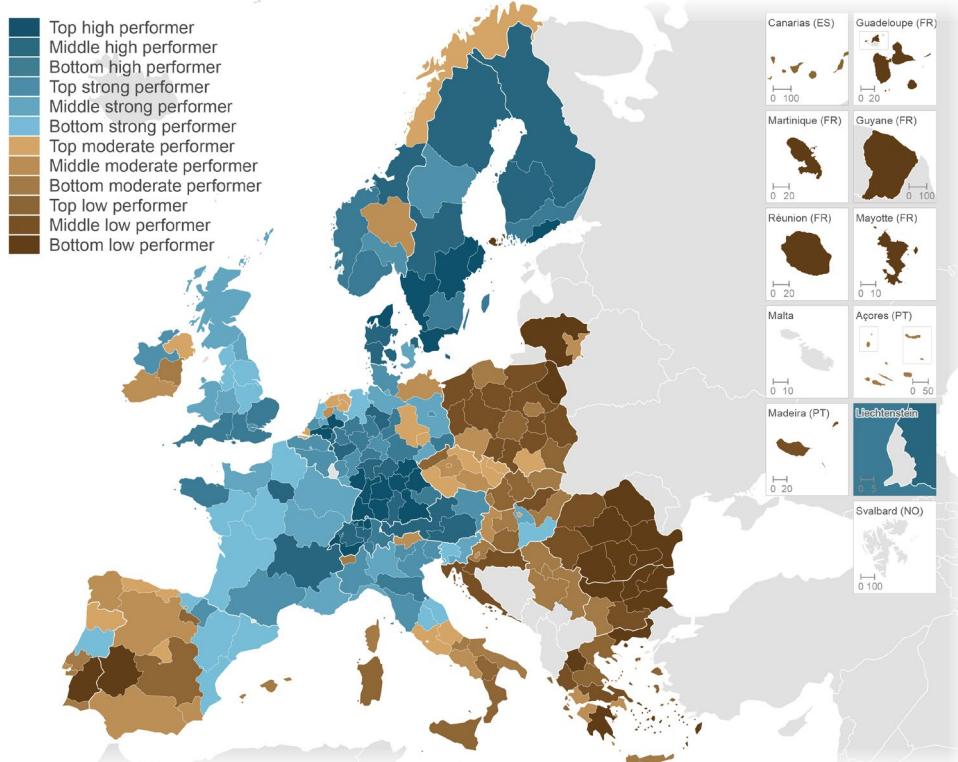
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
	European Union (EU)	100	225.4
1	Trøndelag/Trööndelage (NO06)	205.4	2629.6
2	Nordwestschweiz (CH03)	205.4	1842.1
3	Hovedstaden (DK01)	205.4	1609.6
4	Zürich (CH04)	205.4	1605.7
5	Groningen (NL11)	205.4	1285.4
6	Région lémanique (CH01)	205.4	1274.7
7	Utrecht (NL35)	205.4	984.2
8	Nordjylland (DK05)	205.4	950.9
9	Oberbayern (DE21)	203.8	935.9
10	Leipzig (DED5)	202.7	925.7
11	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	201.5	915.1
12	Berlin (DE3)	201.0	910.3
13	Midtjylland (DK04)	200.9	910.2
14	Stockholm (SE11)	200.7	908.0
15	Helsinki-Uusimaa (FI1B)	200.4	904.8

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
16	Karlsruhe (DE12)	198.3	885.9
17	Östra Mellansverige (SE12)	196.0	865.5
18	Övre Norrland (SE33)	193.7	846.0
19	Südösterreich (AT2)	193.3	842.6
20	Oslo og Viken (NO08)	192.0	830.7
21	Provincia Autonoma di Trento (ITH2)	191.8	829.1
22	Västsverige (SE23)	191.2	823.9
23	Hamburg (DE6)	190.1	814.4
24	Praha (CZ01)	189.5	809.5
25	London (UKI)	187.4	791.7
26	Ticino (CH07)	185.4	774.3
27	Grad Zagreb (HR05)	184.7	769.3
28	Braunschweig (DE91)	180.1	731.5
29	Provincia Autonoma di Bolzano/Bozen (ITH1)	180.1	731.1
30	Tübingen (DE14)	178.9	721.3
31	Mittelfranken (DE25)	178.1	715.2
32	Noord-Holland (NL32)	177.7	711.6
33	Zuid-Holland (NL36)	175.9	697.6
34	Budapest (HU11)	175.7	695.6
35	Dresden (DED2)	173.6	679.0
36	Espace Mittelland (CH02)	171.3	661.3
37	Sydsverige (SE22)	170.0	651.4
38	Ostösterreich (AT1)	168.1	637.2
39	Köln (DEA2)	167.1	629.3
40	Freiburg (DE13)	165.6	617.9

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

PCT patent applications



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PCT patent applications

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Noord-Brabant (NL41) ranks as the best-performing region overall, based on the indicator value. Other top-40 regions are scattered throughout nine countries, largely concentrated in Germany (14 regions), Sweden (six regions) and Switzerland (five regions).

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 14.1 times better than the lowest. This ratio is particularly high (above 30) in Finland, Bulgaria and France.

Overall, 64 regions perform above the EU average, while 117 fall below it. All regions in Sweden and Switzerland exceed the EU average. In contrast, all regions in Bulgaria, Czechia, Greece, Spain, Croatia, Hungary, Ireland, Lithuania, Poland, Portugal, Romania, Slovenia, Slovakia and Serbia fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	14.1	64	117				
AT	1.8	2	1	IT	10.2	2	19
BE	2.2	1	2	LT	4.0	0	2
BG	60.2	0	6	NL	17.1	3	9
CZ	4.4	0	8	PL	5.5	0	17
DE	11.9	24	14	PT	10.5	0	9
DK	4.4	4	1	RO	25.5	0	8
EL	26.6	0	13	SE	3.6	8	0
ES	19.2	0	19	SI	1.2	0	2
FI	93.7	4	1	SK	1.6	0	4
FR	33.8	3	11	NO	6.1	3	3
HR	3.3	0	4	CH	2.7	7	0
HU	7.8	0	8	RS	1.0	0	4
IE	3.9	0	3	UK	3.7	3	9

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of patent applications filed under the Patent Cooperation Treaty, by year of filing.

Denominator: Gross Domestic Product in Purchasing Power Standard.

Rationale: The capacity of firms to develop new products determines their competitive advantage. One indicator of the rate of new product innovation is the number of patent applications.

Note: For all regions in RS regional data are not available, therefore, data from the country level have been used.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

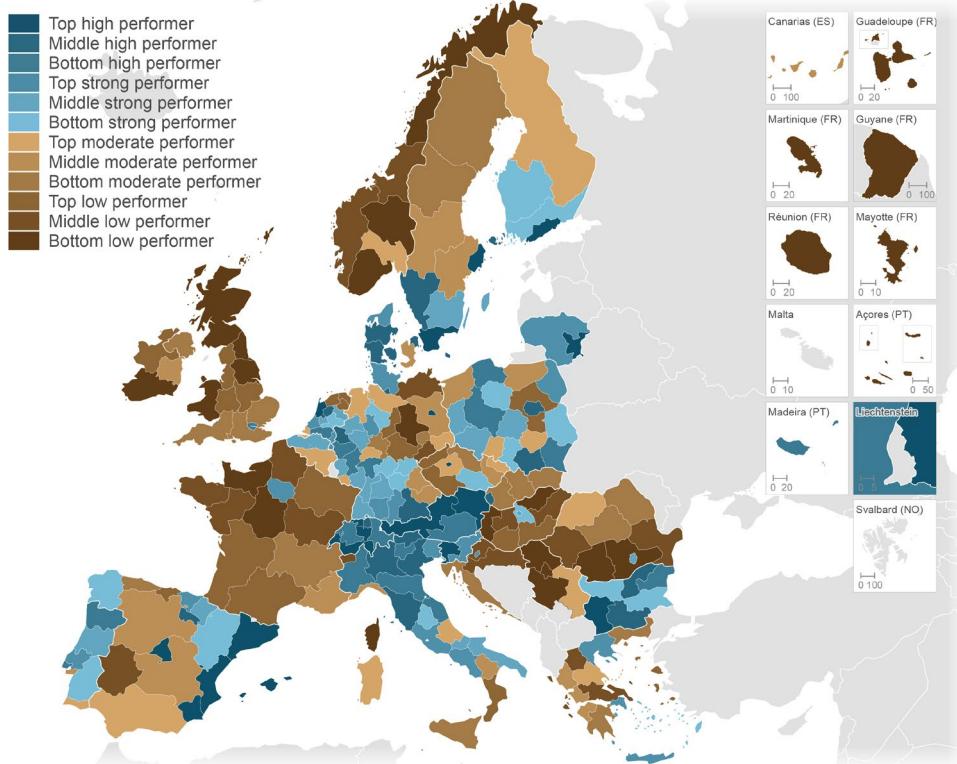
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	2.9
1	Noord-Brabant (NL41)	166.8	14.2
2	Sydsverige (SE22)	166.8	11.2
3	Nordwestschweiz (CH03)	166.8	10.3
4	Stuttgart (DE11)	166.8	10.2
5	Oberbayern (DE21)	166.8	10.1
6	Helsinki-Uusimaa (FI1B)	166.8	9.8
7	Nordjylland (DK05)	166.8	9.7
8	Stockholm (SE11)	166.8	8.9
9	Tübingen (DE14)	166.8	8.2
10	Mittelfranken (DE25)	166.7	8.1
11	Rheinhessen-Pfalz (DEB3)	166.2	8.1
12	Östra Mellansverige (SE12)	160.9	7.6
13	Région lémanique (CH01)	160.9	7.6
14	Freiburg (DE13)	160.6	7.6

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
15	Oberpfalz (DE23)	160.0	7.5
16	Västsverige (SE23)	157.7	7.3
17	Karlsruhe (DE12)	156.4	7.2
18	Oberfranken (DE24)	153.8	6.9
19	Zürich (CH04)	146.3	6.3
20	Gelderland (NL22)	145.5	6.2
21	Midtjylland (DK04)	143.4	6.0
22	Hannover (DE92)	141.9	5.9
23	Pohjois- ja Itä-Suomi (FI1D)	141.8	5.9
24	Zentralschweiz (CH06)	139.5	5.7
25	Hovedstaden (DK01)	138.2	5.6
26	Unterfranken (DE26)	138.1	5.6
27	Länsi-Suomi (FI19)	133.7	5.2
28	Schwaben (DE27)	133.4	5.2
29	Limburg (NL) (NL42)	133.3	5.2
30	Auvergne-Rhône-Alpes (FRK)	132.6	5.2
31	Espace Mittelland (CH02)	131.9	5.1
32	Syddanmark (DK03)	131.2	5.0
33	Övre Norrland (SE33)	130.1	5.0
34	Westösterreich (AT3)	129.9	4.9
35	Südösterreich (AT2)	129.7	4.9
36	Norra Mellansverige (SE31)	129.5	4.9
37	Darmstadt (DE71)	129.0	4.9
38	Trøndelag/Trööndelage (NO06)	128.4	4.8
39	Köln (DEA2)	127.7	4.8
40	Île-de-France (FR1)	127.1	4.7

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

Trademark applications



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Trademark applications

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Zentralschweiz (CH06) ranks as the best-performing region overall, based on the indicator value. Other top-40 regions are scattered throughout 14 countries, concentrated in Spain (six regions), Switzerland (five regions), Germany and Italy (four regions each).

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 4.4 times better than the lowest. This ratio is particularly high (23.2) in Serbia.

Overall, 63 regions perform above the EU average, while 178 fall below it. All regions in Austria, Slovenia and Switzerland exceed the EU average. In contrast, all regions in France, Hungary, Ireland, Romania, Norway and Serbia fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	4.4	63	178				
AT	1.5	3	0	IT	3.4	8	13
BE	1.5	1	2	LT	2.8	1	1
BG	2.4	4	2	NL	3.4	3	9
CZ	3.8	1	7	PL	3.2	5	12
DE	8.7	7	31	PT	3.7	3	6
DK	2.2	3	2	RO	3.7	0	8
EL	3.2	1	12	SE	3.6	3	5
ES	5.3	6	13	SI	1.6	2	0
FI	2.4	2	3	SK	2.6	1	3
FR	8.2	0	14	NO	6.2	0	6
HR	2.8	1	3	CH	3.2	7	0
HU	3.5	0	8	RS	23.2	0	4
IE	2.4	0	3	UK	4.8	1	11

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of trademark applications at EUIPO.

Denominator: Gross Domestic Product in Purchasing Power Standard.

Rationale: Trademarks are an important innovation indicator, especially for the service sector. The Community trademark gives its proprietor a uniform right applicable in all Member States of the EU through a single procedure which simplifies trademark policies at European level. It fulfils the three essential functions of a trademark: it identifies the origin of goods and services, guarantees consistent quality through evidence of the company's commitment vis-à-vis the consumer, and is a form of communication, a basis for publicity and advertising.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

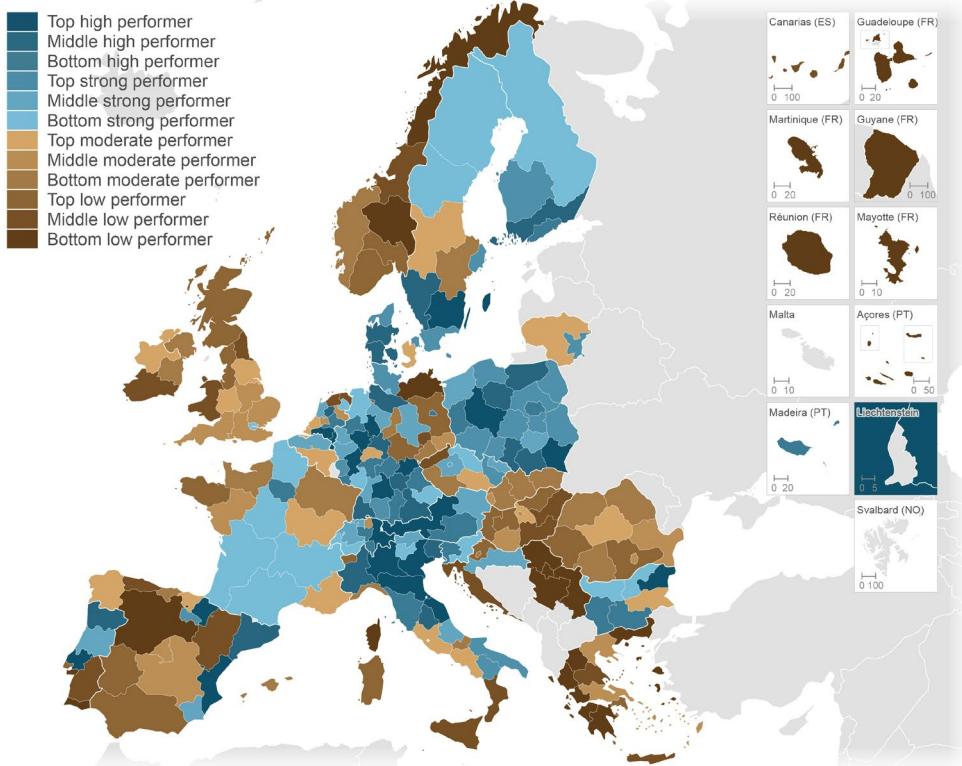
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2023)
	European Union (EU)	100	6.1
1	Zentralschweiz (CH06)	199.1	21.1
2	Sostinės regionas (LT01)	199.1	16.0
3	Stockholm (SE11)	199.1	12.0
4	Yugozapaden (BG41)	193.2	11.6
5	Ticino (CH07)	192.9	11.6
6	Berlin (DE3)	184.7	11.1
7	Catalunya/Cataluña (ES51)	173.7	10.5
8	Westösterreich (AT3)	171.1	10.3
9	Comunitat Valenciana (ES52)	169.2	10.2
10	Helsinki-Uusimaa (FI1B)	168.4	10.2
11	Ostösterreich (AT1)	163.7	9.9
12	Noord-Holland (NL32)	161.7	9.8

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2023)
13	Zahodna Slovenija (SI04)	161.4	9.8
14	Illes Balears (ES53)	159.6	9.7
15	Praha (CZ01)	156.1	9.4
16	Région lémanique (CH01)	149.8	9.1
17	Sydsverige (SE22)	149.6	9.1
18	Región de Murcia (ES62)	149.6	9.1
19	Nordwestschweiz (CH03)	148.7	9.0
20	Comunidad de Madrid (ES3)	145.4	8.8
21	Midtjylland (DK04)	145.1	8.8
22	Warszawski stoleczny (PL91)	144.9	8.8
23	Severen tsentralen (BG32)	141.4	8.6
24	Västsverige (SE23)	139.5	8.5
25	Bratislavský kraj (SK01)	139.4	8.5
26	Małopolskie (PL21)	137.9	8.4
27	Hamburg (DE6)	137.5	8.3
28	Åland (FI2)	136.5	8.3
29	Hovedstaden (DK01)	134.1	8.1
30	Oberbayern (DE21)	133.3	8.1
31	Veneto (ITH3)	132.7	8.1
32	Lombardia (ITC4)	132.3	8.0
33	La Rioja (ES23)	130.2	7.9
34	Düsseldorf (DEA1)	129.3	7.9
35	Yuzhen tsentralen (BG42)	128.7	7.8
36	Zürich (CH04)	125.0	7.6
37	Provincia Autonoma di Bolzano/Bozen (ITH1)	124.5	7.6
38	Toscana (ITI1)	121.7	7.4
39	Flevoland (NL23)	119.5	7.3
40	Syddanmark (DK03)	119.2	7.3

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

Design applications



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Design applications

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Severoiztochen (BG33) ranks as the best-performing region overall, based on the indicator value. Other top-40 regions are scattered throughout 11 countries, concentrated in Germany (ten regions), Italy (seven regions) and Poland (six regions).

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 16.7 times better than the lowest. This ratio is particularly high (above 60) in Portugal and France.

Overall, 65 regions perform above the EU average, while 176 fall below it. There is no region where all regions exceed EU average. In contrast, all regions in Belgium, Czechia, Greece, Croatia, Hungary, Ireland, Lithuania, Romania, Slovakia, Norway, Serbia and the UK fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	16.7	65	176				
AT	3.2	2	1	IT	34.1	10	11
BE	2.2	0	3	LT	1.9	0	2
BG	14.9	3	3	NL	33.0	4	8
CZ	5.9	0	8	PL	4.6	9	8
DE	47.5	17	21	PT	102.6	3	6
DK	3.9	2	3	RO	2.4	0	8
EL	13.0	0	13	SE	10.1	2	6
ES	45.6	4	15	SI	1.9	1	1
FI	2.7	4	1	SK	1.7	0	4
FR	60.9	1	13	NO	5.4	0	6
HR	5.0	0	4	CH	12.5	3	4
HU	4.5	0	8	RS	4.5	0	4
IE	3.5	0	3	UK	5.8	0	12

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of designs applied for at EUIPO.

Denominator: Gross Domestic Product in Purchasing Power Standard.

Rationale: A design is the outward appearance of a product or part of it resulting from the lines, contours, colours, shape, texture, materials and/or its ornamentation. A product can be any industrial or handicraft item including packaging, graphic symbols and typographic typefaces but excluding computer programs. It also includes products that are composed of multiple components, which may be disassembled and reassembled. Community design protection is directly enforceable in each Member State, and it provides both the option of an unregistered and a registered Community design right for one area encompassing all Member States.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

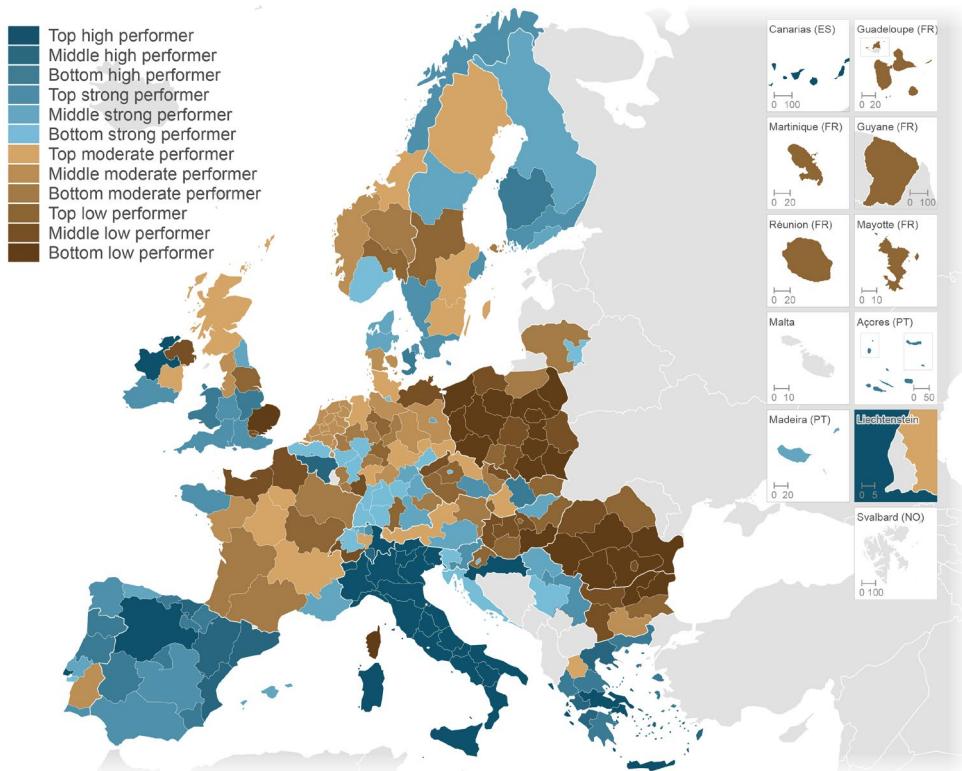
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2023)
	European Union (EU)	100	3.2
1	Severoiztochen (BG33)	178.1	21.0
2	Ostschweiz (CH05)	178.1	15.4
3	Marche (IT13)	178.1	13.1
4	Emilia-Romagna (ITH5)	178.1	11.7
5	Wielkopolskie (PL41)	178.1	10.9
6	Noord-Brabant (NL41)	177.9	10.3
7	Veneto (ITH3)	174.2	9.9
8	Oeste e Vale do Tejo (PT1D)	173.5	9.8
9	Detmold (DEA4)	172.0	9.6
10	Comunitat Valenciana (ES52)	169.0	9.3
11	Småland med öarna (SE21)	167.2	9.1

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2023)
12	Westösterreich (AT3)	163.2	8.7
13	Arnsberg (DEA5)	158.8	8.2
14	Lombardia (ITC4)	154.2	7.7
15	Stuttgart (DE11)	153.4	7.6
16	Podkarpacie (PL82)	148.0	7.1
17	Oberfranken (DE24)	143.0	6.6
18	Koblenz (DEB1)	142.4	6.6
19	Comunidad Foral de Navarra (ES22)	141.6	6.5
20	Limburg (NL) (NL42)	140.4	6.4
21	Midtjylland (DK04)	138.3	6.2
22	Warmińsko-mazurskie (PL62)	136.0	6.0
23	Lüneburg (DE93)	135.8	6.0
24	Mittelfranken (DE25)	135.2	5.9
25	Friuli-Venezia Giulia (ITH4)	133.9	5.8
26	Małopolskie (PL21)	132.8	5.7
27	Åland (FI2)	129.6	5.5
28	Kassel (DE73)	128.5	5.4
29	Oberbayern (DE21)	126.4	5.2
30	Umbria (ITI2)	125.3	5.1
31	Flevoland (NL23)	124.9	5.1
32	Catalunya/Cataluña (ES51)	120.5	4.7
33	Śląskie (PL22)	120.3	4.7
34	Syddanmark (DK03)	119.7	4.7
35	Västsverige (SE23)	119.1	4.6
36	Freiburg (DE13)	118.6	4.6
37	Norte (PT11)	118.0	4.5
38	Kujawsko-pomorskie (PL61)	117.8	4.5
39	Piemonte (ITC1)	114.8	4.3
40	Etelä-Suomi (FI1C)	114.5	4.3

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

Sales of new-to-market and new-to-firm innovations



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The top high group is significantly larger, because all Italian regions share the same value (imputed from the national level). This uniformity inflates the size of the top high group and, consequently, causes the middle high group to appear unusually small.

Sales of new-to-market and new-to-firm innovations

The map on the previous page displays the geographical distribution of the 12 performance groups.

The top 40 best performing regions, based on their relative to EU performance score (third column), are shown on the right. Panonska Hrvatska (HR02) ranks as the best-performing region overall, based on the indicator value, followed by Northern and Western (IE04) and Grande Lisboa (PT1A). Other top-40 regions are scattered throughout eight countries. All 21 regions from Italy are included in the top-40; as regional data for this country are not available for all regions, missing data have been imputed with the national indicator value.

As shown in the table below, regional disparities within countries are evident, with top regions performing on average 4.1 times better than the lowest. This ratio is particularly high (above eight) in France, Croatia, Poland, Romania and the UK.

Overall, 84 regions perform above the EU average, while 157 fall below it. All regions in Italy exceeds EU average. In contrast, all regions in Bulgaria, Hungary, Lithuania, the Netherlands, Poland and Romania fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	4.1	84	157				
AT	1.7	1	2	IT	1.0	21	0
BE	2.0	2	1	LT	1.4	0	2
BG	3.2	0	6	NL	1.0	0	12
CZ	3.7	1	7	PL	8.7	0	17
DE	3.7	1	37	PT	3.9	5	4
DK	2.2	3	2	RO	8.6	0	8
EL	3.1	12	1	SE	2.4	4	4
ES	4.3	15	4	SI	1.2	1	1
FI	2.2	2	3	SK	3.2	1	3
FR	9.4	1	13	NO	2.5	1	5
HR	8.8	1	3	CH	6.9	3	4
HU	3.8	0	8	RS	1.4	2	2
IE	4.3	2	1	UK	10.8	5	7

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Sum of total turnover of new or significantly improved products for SMEs.

Denominator: Total turnover for SMEs.

Rationale: This indicator measures the turnover of new or significantly improved products and includes both products which are only new to the firm and products which are also new to the market. The indicator thus captures both the creation of state-of-the-art technologies (new to market products) and the diffusion of these technologies (new to firm products).

Note: For all regions in IT and NL regional data are not available, therefore, data from the country level have been used.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	8.7
1	Panonska Hrvatska (HR02)	204.0	33.9
2	Northern and Western (IE04)	204.0	25.4
3	Grande Lisboa (PT1A)	204.0	22.4
4	Ostschweiz (CH05)	204.0*	c
5	Castilla y León (ES41)	204.0	18.0
6	Kriti (EL43)	204.0	17.8
7	Stereia Elláda (EL64)	199.7	17.3
8	Attiki (EL30)	192.7	16.7
9	Canarias (ES7)	189.7	16.5
10	Ionia Nisia (EL62)	186.5	16.2
11	Abruzzo (ITF1)	178.5**	c
11	Basilicata (ITF5)	178.5**	c
11	Calabria (ITF6)	178.5**	c

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
11	Campania (ITF3)	178.5**	c
11	Emilia-Romagna (ITH5)	178.5**	c
11	Friuli-Venezia Giulia (ITH4)	178.5**	c
11	Lazio (ITI4)	178.5**	c
11	Liguria (ITC3)	178.5**	c
11	Lombardia (ITC4)	178.5**	c
11	Marche (ITI3)	178.5**	c
11	Molise (ITF2)	178.5**	c
11	Piemonte (ITC1)	178.5**	c
11	Provincia Autonoma di Bolzano/Bozen (ITH1)	178.5**	c
11	Provincia Autonoma di Trento (ITH2)	178.5**	c
11	Puglia (ITF4)	178.5**	c
11	Sardegna (ITG2)	178.5**	c
11	Sicilia (ITG1)	178.5**	c
11	Toscana (ITI1)	178.5**	c
11	Umbria (ITI2)	178.5**	c
11	Valle d'Aosta/Vallée d'Aoste (ITC2)	178.5**	c
11	Veneto (ITH3)	178.5**	c
32	Kentriki Makedonia (EL52)	175.5	15.2
33	Région wallonne (BE3)	174.3	15.1
34	Notio Aigaio (EL42)	170.0	14.7
35	Catalunya/Cataluña (ES51)	169.5	14.7
36	País Vasco (ES21)	168.6	14.6
37	Dytiki Elláda (EL63)	165.1	14.3
38	Aragón (ES24)	163.7	14.2
39	Ticino (CH07)	163.0*	c
40	Comunitat Valenciana (ES52)	162.3	14.1

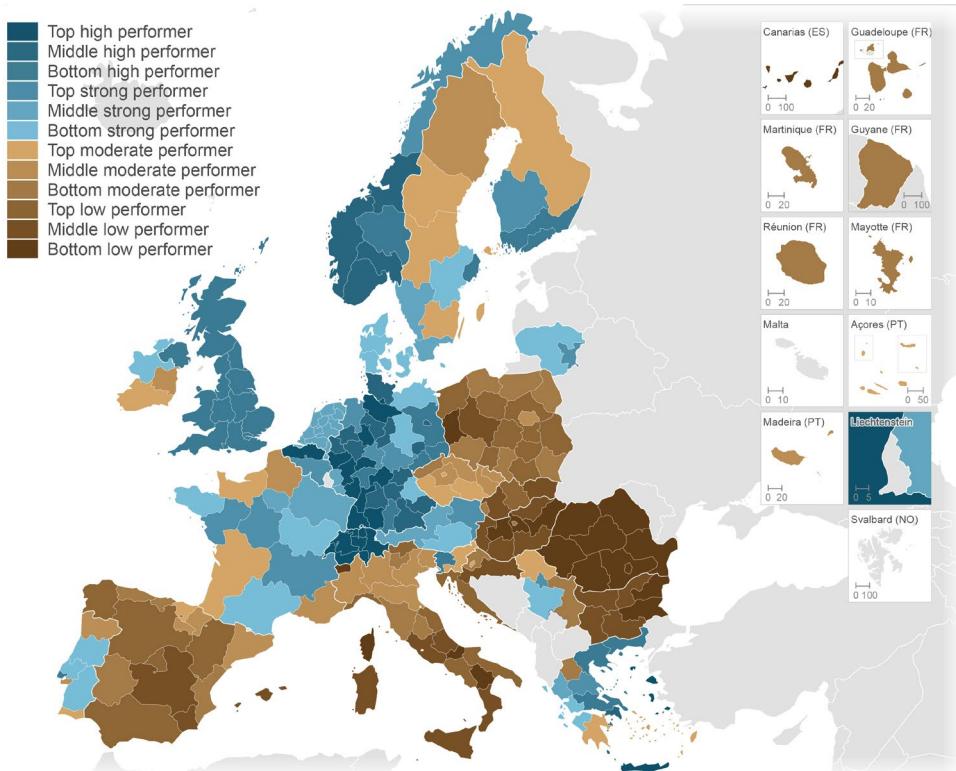
Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

c = confidential.

* Data imputed from a different year (2020).

** Data imputed from a higher-level NUTS region.

Employment in innovative enterprises



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Employment in innovative enterprises

The map on the previous page displays the geographical distribution of the 12 performance groups.

The top 40 best performing regions, based on their relative to EU performance score (third column), are shown on the right. Hamburg (DE6) ranks as the best-performing region overall, based on the indicator value. Other top-40 regions are scattered throughout only five countries - Germany (25 regions), Switzerland (seven) and Norway (four), Greece (three) and Belgium (one).

As shown in the table below, regional disparities within countries are evident only in some countries, with top regions performing on average 1.6 times better than the lowest. This ratio is particularly high (above three) in France and Romania.

Overall, 121 regions perform above the EU average, while 120 fall below it. All regions in Austria, Belgium, Germany, Denmark, Lithuania, the Netherlands, Norway, Switzerland and the UK exceed the EU average. In contrast, all regions in Bulgaria, Czechia, Spain, Croatia, Hungary, Italy, Poland and Romania and Slovakia fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	1.6	121	120				
AT	1.1	3	0	IT	1.9	0	21
BE	1.2	3	0	LT	1.0	2	0
BG	1.3	0	6	NL	1.0	12	0
CZ	1.3	0	8	PL	1.8	0	17
DE	1.5	38	0	PT	1.3	4	5
DK	1.0	5	0	RO	7.6	0	8
EL	1.8	10	3	SE	1.4	4	4
ES	1.8	0	19	SI	1.2	1	1
FI	1.2	3	2	SK	1.3	0	4
FR	3.0	8	6	NO	1.2	6	0
HR	1.5	0	4	CH	1.0	7	0
HU	1.4	0	8	RS	1.4	2	2
IE	1.2	1	2	UK	1.0	12	0

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Number of employed persons in innovative SMEs.

Denominator: Total employment in SMEs.

Rationale: Innovation in enterprises has a profound impact on the employability of workers. Firm innovation proves to be specifically important during a time of economic recession. Although high-skilled employees are less affected by a recession than low-skilled employees, a notable positive effect is observed for low-skilled employees in innovative firms as well.

Note: For all regions in DK, NL, CH, UK regional data are not available, therefore, data from the country level have been used.

No data: none.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

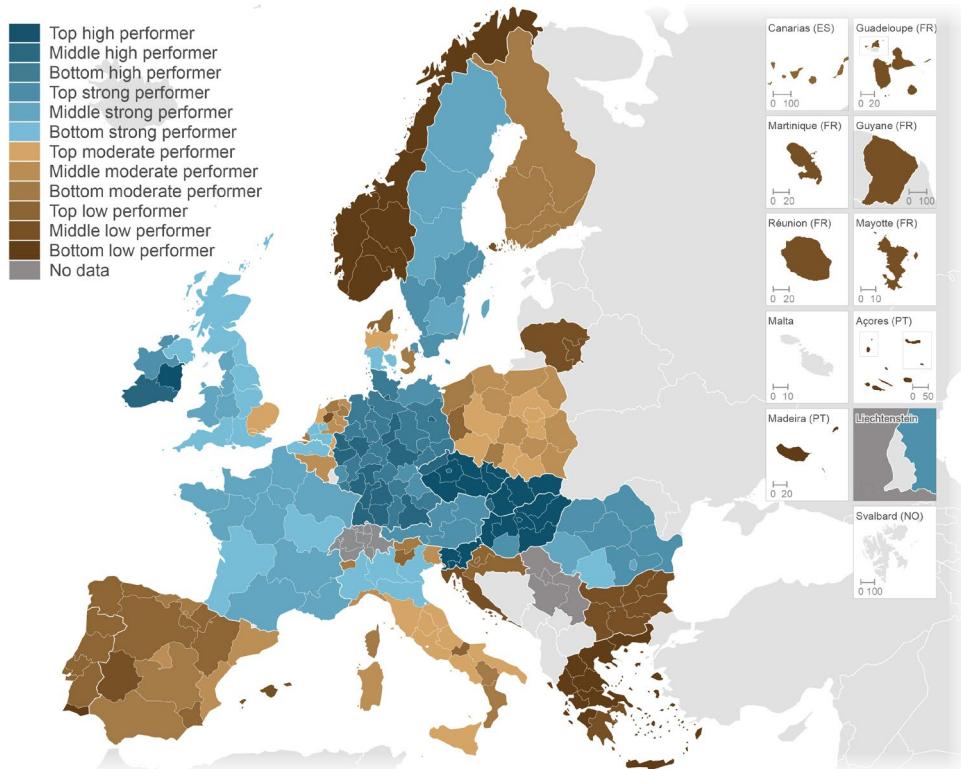
NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE
	European Union (EU)	100	57.9
1	Hamburg (DE6)	189.3*	c
2	Koblenz (DEB1)	181.4*	c
3	Lüneburg (DE93)	175.9*	c
4	Gießen (DE72)	170.3*	c
5	Köln (DEA2)	169.6*	c
6	Karlsruhe (DE12)	169.1*	c
7	Unterfranken (DE26)	162.7*	c
8	Vlaams Gewest (BE2)	160.9	80.2
9	Voreio Aigaio (EL41)	160.0	79.8
10	Tübingen (DE14)	159.3*	c
11	Kriti (EL43)	157.2	78.8
12	Rheinhessen-Pfalz (DEB3)	156.3*	c

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE
13	Freiburg (DE13)	154.7*	c
14	Detmold (DEA4)	153.8*	c
15	Espace Mittelland (CH02)	153.8**	c
15	Nordwestschweiz (CH03)	153.8**	c
15	Ostschweiz (CH05)	153.8**	c
15	Région lémanique (CH01)	153.8**	c
15	Ticino (CH07)	153.8**	c
15	Zentralschweiz (CH06)	153.8**	c
15	Zürich (CH04)	153.8**	c
22	Oberbayern (DE21)	152.3*	c
23	Schleswig-Holstein (DEF)	151.3*	c
24	Stuttgart (DE11)	151.2*	c
25	Bremen (DE5)	147.4*	c
26	Niederbayern (DE22)	145.7*	c
27	Arnsberg (DEA5)	144.4*	c
28	Trøndelag/Trööndelage (NO06)	144.3*	c
29	Leipzig (DED5)	143.6*	c
30	Agder og Sør-Østlandet (NO09)	143.0*	c
31	Oslo og Viken (NO08)	142.9*	c
32	Münster (DEA3)	142.5*	c
33	Mittelfranken (DE25)	136.4*	c
34	Braunschweig (DE91)	135.8*	c
35	Vestlandet (NO0A)	135.2*	c
36	Oberfranken (DE24)	134.3*	c
37	Attiki (EL30)	134.2	70.4
38	Düsseldorf (DEA1)	133.9*	c
39	Berlin (DE3)	132.9*	c
40	Hannover (DE92)	132.8*	c

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

c = confidential * Data imputed from a different year (2020). ** Data imputed from a higher-level NUTS region.

Exports of medium and high technology products



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Data for this indicator are available for 230 regions. As a result, the top 10 groups contain 19 regions each, while the bottom two groups contain 20 regions each.

Exports of medium and high technology products

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Budapest (HU11) ranks as the best-performing region overall, based on the indicator value. Other top-40 regions are scattered throughout only six countries - Germany (17 regions), Czechia (eight), Hungary (seven), Slovakia (four), Slovenia (two) and Ireland (two).

As shown in the table below, regional performance within each country is equally distributed, with top regions performing on average 1.2. times better than the lowest, resulting in no large differences between the regions.

Overall, 77 regions perform above the EU average, while 153 fall below it. All regions in Austria, Czechia, Germany, Hungary, Ireland, Slovenia and Slovakia exceeds EU average. In contrast, all regions in Belgium, Bulgaria, Greece, Spain, Finland, Croatia, Italy, Lithuania, the Netherlands, Portugal, Norway and the UK fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	1.2	77	153				
AT	1.0	3	0	IT	1.2	0	21
BE	1.1	0	3	LT	1.0	0	2
BG	1.1	0	6	NL	1.4	0	12
CZ	1.0	8	0	PL	1.2	0	17
DE	1.1	38	0	PT	1.9	0	9
DK	1.4	1	4	RO	1.2	5	3
EL	2.1	0	13	SE	1.1	4	4
ES	1.5	0	19	SI	1.0	2	0
FI	1.3	0	5	SK	1.1	4	0
FR	1.5	1	13	NO	1.1	0	6
HR	1.0	0	4	CH	-	-	-
HU	1.2	8	0	RS	-	-	-
IE	1.2	3	0	UK	1.1	0	12

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Value of medium and high tech exports.

Denominator: Value of total product exports.

Rationale: The indicator measures the technological competitiveness of the region, i.e. the ability to commercialise the results of research and development (R&D) and innovation. It uses FIGARO 2017 regional data to calculate ratio between region export share in medium and high tech products. Approximate region values for upcoming years using this ratio and country level export data are calculated.

No data: All CH and RS regions.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

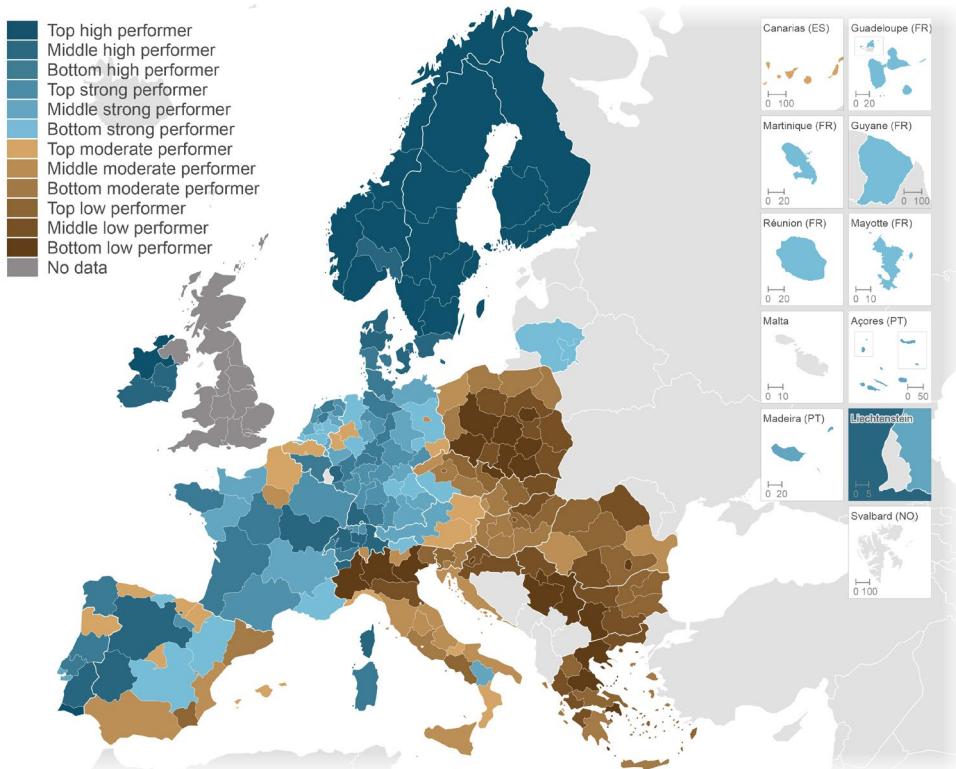
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
	European Union (EU)	100	0.6
1	Budapest (HU11)	145.8	0.72
2	Közép-Dunántúl (HU21)	144.3	0.72
3	Nyugat-Dunántúl (HU22)	143.7	0.71
4	Észak-Magyarország (HU31)	141.9	0.71
5	Zahodna Slovenija (SI04)	141.2	0.71
6	Eastern and Midland (IE06)	140.6	0.70
7	Východné Slovensko (SK04)	139.9	0.70
8	Střední Čechy (CZ02)	139.3	0.70
9	Vzhodna Slovenija (SI03)	139.2	0.70
10	Észak-Alföld (HU32)	139.1	0.70
11	Západné Slovensko (SK02)	138.9	0.70
12	Severovýchod (CZ05)	138.7	0.70
13	Pest (HU12)	138.2	0.70
14	Jihozápad (CZ03)	137.7	0.69
15	Jihovýchod (CZ06)	137.6	0.69

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
16	Střední Morava (CZ07)	137.1	0.69
17	Moravskoslezsko (CZ08)	136.8	0.69
18	Stredné Slovensko (SK03)	136.3	0.69
19	Dél-Alföld (HU33)	135.7	0.69
20	Southern (IE05)	133.1	0.68
21	Severozápad (CZ04)	132.9	0.68
22	Stuttgart (DE11)	131.0	0.67
23	Oberbayern (DE21)	130.9	0.67
24	Praha (CZ01)	130.9	0.67
25	Köln (DEA2)	130.7	0.67
26	Darmstadt (DE71)	130.5	0.67
27	Arnsberg (DEA5)	130.3	0.67
28	Karlsruhe (DE12)	130.3	0.67
29	Düsseldorf (DEA1)	130.2	0.67
30	Berlin (DE3)	130.1	0.67
31	Tübingen (DE14)	130.1	0.67
32	Bratislavský kraj (SK01)	129.8	0.67
33	Braunschweig (DE91)	129.8	0.67
34	Hamburg (DE6)	129.8	0.67
35	Rheinhessen-Pfalz (DEB3)	129.8	0.67
36	Bremen (DE5)	129.7	0.67
37	Freiburg (DE13)	129.6	0.67
38	Thüringen (DEG)	129.5	0.67
39	Detmold (DEA4)	129.5	0.67
40	Münster (DEA3)	129.4	0.67

Note: Indicator value is the same for many regions due to rounding.

Air emissions by fine particulates



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

This map uses the NUTS 2024 classification for all countries except the United Kingdom (UK). As the UK is no longer part of the NUTS system, the map applies the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics.

Data for this indicator are available for 229 regions. As a result, the top 11 groups contain 19 regions each, while the bottom group (Bottom low performer) contains 20 regions each.

Air emissions by fine particulates

The map on the previous page displays the geographical distribution of the 12 performance groups.

The top 40 best performing regions, based on their relative to EU performance score (third column), are shown on the right. Northern European regions stand out for strong performance, with the top 10 exclusively comprising regions from Finland, Norway, and Sweden. The top 40 includes regions from 11 countries, including Sweden (all eight regions), Norway (six), Finland (five), Denmark (four) and Germany (four). High scores on this particular indicator are partly influenced by low population density across large geographic areas.

As shown in the table below, minor regional disparities within countries are evident, with top regions performing on average 1.5 times better than the lowest.

Overall, 138 regions perform above the EU average, while 91 fall below it. All regions in Austria, Belgium, Denmark, Finland, France, Ireland, Lithuania, the Netherlands, Portugal, Sweden and Norway exceed the EU average. In contrast, all regions in Bulgaria, Greece, Croatia, Hungary, Poland, Romania, Slovakia, Slovenia and Serbia fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	1.5	138	91				
AT	1.2	3	0	IT	2.6	9	12
BE	1.3	3	0	LT	1.0	2	0
BG	1.3	0	6	NL	1.2	12	0
CZ	1.8	1	7	PL	1.7	0	17
DE	1.6	37	1	PT	1.9	9	0
DK	1.3	5	0	RO	1.5	0	8
EL	1.4	0	13	SE	2.2	8	0
ES	1.8	15	4	SI	1.1	0	2
FI	1.6	5	0	SK	1.3	0	4
FR	1.4	14	0	NO	2.3	6	0
HR	1.5	0	4	CH	1.5	6	1
HU	1.3	0	8	RS	1.3	0	4
IE	1.2	3	0	UK	-	-	-

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: Sum of air pollutant (PM2.5) concentration for each spatial unit.

Denominator: Total population across all spatial units.

Rationale: This indicator reflects the average concentration of fine particulate matter (PM2.5) that people are exposed to, providing a population-weighted measure of air pollution's potential impact on human health.

No data: All UK regions.

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

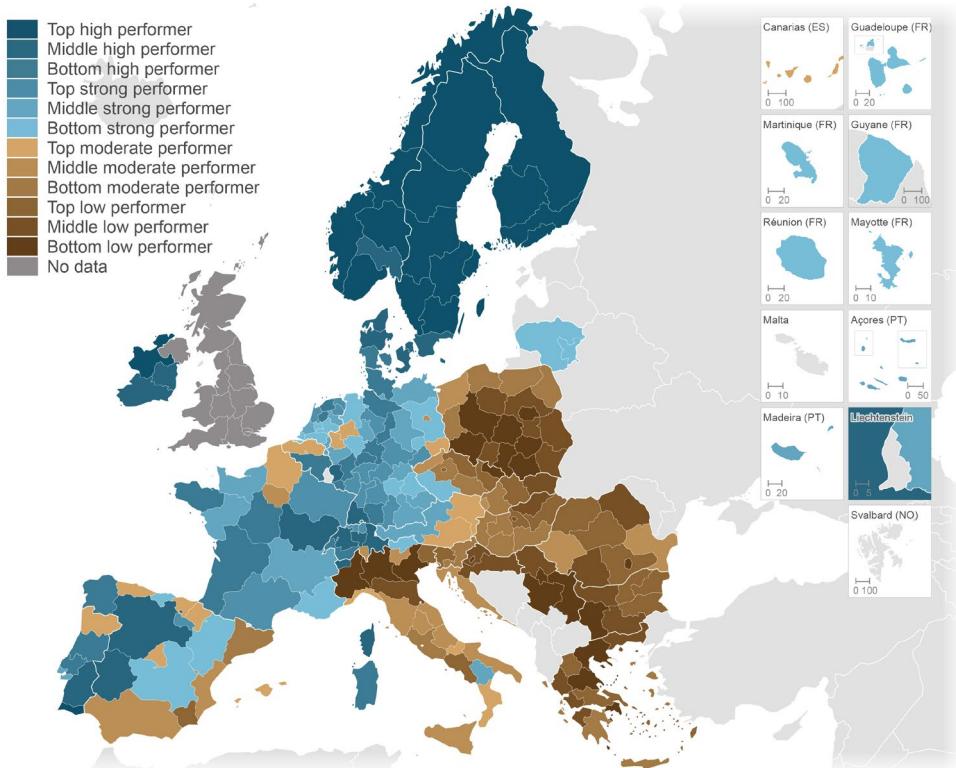
Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
	European Union (EU)	100	11.4
1	Nord-Norge (NO07)	180.0	3.0
2	Åland (FI2)	178.1	3.2
2	Mellersta Norrland (SE32)	178.1	3.2
2	Övre Norrland (SE33)	178.1	3.2
5	Pohjois- ja Itä-Suomi (FI1D)	175.2	3.5
6	Trøndelag/Trööndelage (NO06)	172.4	3.8
7	Länsi-Suomi (FI19)	171.4	3.9
7	Norra Mellansverige (SE31)	171.4	3.9
9	Innlandet (NO02)	170.5	4.0
10	Östra Mellansverige (SE12)	164.8	4.6
10	Stockholm (SE11)	164.8	4.6
12	Etelä-Suomi (FI1C)	163.8	4.7
13	Vestlandet (NO0A)	162.9	4.8
14	Helsinki-Uusimaa (FI1B)	159.0	5.2
15	Algarve (PT15)	154.3	5.7
16	Småland med öarna (SE21)	153.3	5.8
17	Agder og Sør-Østlandet (NO09)	152.4	5.9

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2022)
18	Northern and Western (IE04)	149.5	6.2
19	Västsverige (SE23)	147.6	6.4
20	Nordjylland (DK05)	145.7	6.6
21	Oslo og Viken (NO08)	143.8	6.8
22	Sydsverige (SE22)	141.0	7.1
22	Trier (DEB2)	141.0	7.1
24	Eastern and Midland (IE06)	140.0	7.2
25	Alentejo (PT1C)	139.0	7.3
25	Southern (IE05)	139.0	7.3
27	Midtjylland (DK04)	137.1	7.5
28	Extremadura (ES43)	136.2	7.6
29	Bourgogne-Franche-Comté (FRC)	135.2	7.7
29	Corse (FRM)	135.2	7.7
29	Sjælland (DK02)	135.2	7.7
32	Castilla y León (ES41)	134.3	7.8
32	Ostschweiz (CH05)	134.3	7.8
32	Valle d'Aosta/Vallée d'Aoste (ITC2)	134.3	7.8
35	Freiburg (DE13)	133.3	7.9
35	Hovedstaden (DK01)	133.3	7.9
37	Espace Mittelland (CH02)	131.4	8.1
37	Zentralschweiz (CH06)	131.4	8.1
39	Koblenz (DEB1)	130.5	8.2
39	Sardegna (ITG2)	130.5	8.2
39	Schleswig-Holstein (DEF)	130.5	8.2

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

Labour productivity



Notes: Administrative boundaries: © EuroGeographics © OpenStreetMapCartography. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union.

This map uses the NUTS 2024 classification for all countries except the United Kingdom (UK). As the UK is no longer part of the NUTS system, the map applies the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics.

Data for this indicator are available for 229 regions. As a result, the top 11 groups contain 19 regions each, while the bottom group (Bottom low performer) contains 20 regions each.

Labour productivity

The map on the previous page displays the geographical distribution of the 12 performance groups.

The 40 top-performing regions, based on their relative to the EU performance score (third column), are listed on the right. Ticino (CH07) ranks as the best-performing region overall, based on the indicator value. Other top-40 regions are scattered throughout 10 countries, largely concentrated in Germany (seven regions), Switzerland (seven), Norway (six), Sweden (six) and Denmark (five).

As shown in the table below, minor regional disparities within countries are evident, with top regions performing on average 1.7 times better than the lowest.

Overall, 113 regions perform above the EU average, while 116 fall below it. All regions in Austria, Belgium, Germany, Denmark, Finland, Ireland, the Netherlands, Sweden, Norway, and Switzerland exceeds EU average. In contrast, all regions in Bulgaria, Czechia, Greece, Croatia, Hungary, Lithuania, Poland, Romania, Slovenia, Slovakia, and Serbia fall below it.

	RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE		RATIO BEST/WORST REGION	ABOVE EU AVERAGE	BELOW EU AVERAGE
All	1.7	113	116				
AT	1.1	3	0	IT	1.7	9	12
BE	1.4	3	0	LT	1.6	0	2
BG	2.3	0	6	NL	1.4	12	0
CZ	1.8	0	8	PL	2.3	0	17
DE	1.6	38	0	PT	1.4	0	9
DK	1.4	5	0	RO	3.3	0	8
EL	1.8	0	13	SE	1.5	8	0
ES	1.5	1	18	SI	1.2	0	2
FI	1.2	5	0	SK	1.6	0	4
FR	2.0	13	1	NO	1.3	6	0
HR	1.4	0	4	CH	1.5	7	0
HU	1.3	0	8	RS	2.2	0	4
IE	2.2	3	0	UK	-	-	-

Note: The ratio between the best and worst region within each country is calculated using the raw indicator values for the most recent available year. The 'All' row presents the average of these ratios across all countries.

Definition of indicator

Numerator: GDP in constant prices

Denominator: Hours worked

Rationale: *Labour productivity* per hour worked can serve as an impact indicator. By measuring the real economic output generated per hour of work, it captures the broader effects of technological advancements, digitalisation, and process improvements on productivity.

No data: All UK regions

Top 40 regions

The relative to EU score in the third column shows the country score in the indicator indexed to the EU in 2025. It is calculated by dividing the country's score by the EU27 average score and multiplying the result by 100.

Regions are ranked based on the real indicator values in the last column.

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
	European Union (EU)	100	40.3
1	Ticino (CH07)	214.6*	114.1*
2	Southern (IE05)	214.6	105.9
3	Eastern and Midland (IE06)	214.6	104.7
4	Zürich (CH04)	214.6*	96.5*
5	Région lémanique (CH01)	214.6*	95.7*
6	Nordwestschweiz (CH03)	214.6*	93.3*
7	Hovedstaden (DK01)	214.6	88.1
8	Zentralschweiz (CH06)	214.6*	83.0*
9	Espace Mittelland (CH02)	212.2*	80.8*
10	Oslo og Viken (NO08)	210.7	80.2
11	Ostschweiz (CH05)	203.8*	77.7*
12	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (BE1)	195.0	74.5
13	Stockholm (SE11)	190.9	73.1
14	Ile-de-France (FR1)	187.6	71.9

NO	REGION	RELATIVE TO EU SCORE	INDICATOR VALUE (2024)
15	Vestlandet (N00A)	186.7	71.6
16	Syddanmark (DK03)	183.9	70.5
17	Sjælland (DK02)	180.0	69.2
18	Oberbayern (DE21)	178.3	68.5
19	Trøndelag/Trööndelage (N006)	177.7	68.3
20	Agder og Sør-Østlandet (N009)	176.2	67.8
21	Midtjylland (DK04)	173.1	66.7
22	Nord-Norge (N007)	170.7	65.8
23	Hamburg (DE6)	170.5	65.7
24	Noord-Holland (NL32)	168.2	64.9
25	Nordjylland (DK05)	166.1	64.1
26	Innlandet (N002)	164.2	63.4
27	Stuttgart (DE11)	163.1	63.0
28	Darmstadt (DE71)	160.2	62.0
29	Braunschweig (DE91)	157.7	61.1
30	Övre Norrland (SE33)	153.4	59.6
31	Utrecht (NL35)	152.7	59.3
32	Vlaams Gewest (BE2)	151.4	58.8
33	Helsinki-Uusimaa (FI1B)	151.2	58.8
34	Västsverige (SE23)	149.5	58.1
35	Groningen (NL11)	148.9	57.9
36	Sydsverige (SE22)	146.2	57.0
37	Karlsruhe (DE12)	146.0	56.9
38	Östra Mellansverige (SE12)	144.6	56.4
39	Rheinhessen-Pfalz (DEB3)	143.9	56.1
40	Mellersta Norrland (SE32)	142.9	55.8

Note: several regions share first place based on their relative to EU score due to replacing statistical outliers.

* Data imputed from a different year (2023).

4. RIS METHODOLOGY

This chapter presents the methodology used to deliver the RIS. It presents the data availability and sources, the process and methodology used to calculate indicator scores and the RII, and information about the contextual analysis of the impact of structural differences between regions. More details about this are provided in the RIS Methodology Report.

4.1 Data sources and availability

The RIS uses the most recent statistics from Eurostat and other internationally recognised sources, such as the OECD, available at the time of analysis. In addition, for several indicators, regional data were calculated by Science Metrix and Fraunhofer ISI using bibliometric data and raw data from the European Union Intellectual Property Offices (EUIPO). The cut-off date for this RIS edition is the end of May 2025. More details about data availability per indicator are provided in the RIS Methodology report.

The data relates to the actual performance in 2024 for seven indicators, 2023 for three indicators, 2022 for 10 indicators, and 2021 for three indicators (these are the most recent years for which data are available).

It must be stressed that comparisons with results from the RIS 2023 report or other RIS editions are not possible, not even for the same years in both reports. Results for the same year are different due to several reasons:

- The set of indicators used in different editions of the RIS varies. Consequently, the RII, which is calculated based on these indicators, is not directly comparable across editions.
- By adding new data at the end of the time series for each indicator and removing data at the start of the time series, the highest and lowest data scores used for calculating normalised scores across all countries and all years for an indicator can change, directly impacting these normalised scores.
- Timeliness refers to the year for which the most recent data are available. This impacts the most recent year used for the indicators in RIS 2025. For the RIS 2025, three indicators have been updated with three additional years, 10 indicators with two additional years, and six indicators with one additional year compared to their availability in 2023³¹.
- Breaks in series for indicators in individual regions impact the values used for years before the break (see more details in Chapter 4.2 below).

³¹ Numbers of indicators do not add up to 23 as new indicators were introduced during the revision process in late 2024 and early 2025. These indicators were not part of RIS 2023 edition.

Consequently, one should only use the results for all years in this report to compare performance over time.

4.2 Methodology for calculating indicator scores and Regional Innovation Index

The overall performance of each regional innovation system is summarised by a composite indicator, the RII. The methodology used for calculating the RII is briefly outlined below. More details on the steps presented below can be found in the Methodology report.

The data collection and calculation process for the RIS has been automated for the 2025 release following the approach used in the EIS. The approach is summarised in Figure 7 below.

The construction of the regional index for 2025 has been performed using the COINr package³² adapted and extended to the RIS. COINr is an open-source R package recently developed by the European Commission's Competence Centre for Composite Indicators and Scoreboards³³, and implements international guidelines and best practices in composite indicator construction³⁴. It allows highly detailed and flexible construction and analysis of composite indicators, including imputation, normalisation, outlier treatment and sensitivity analysis.

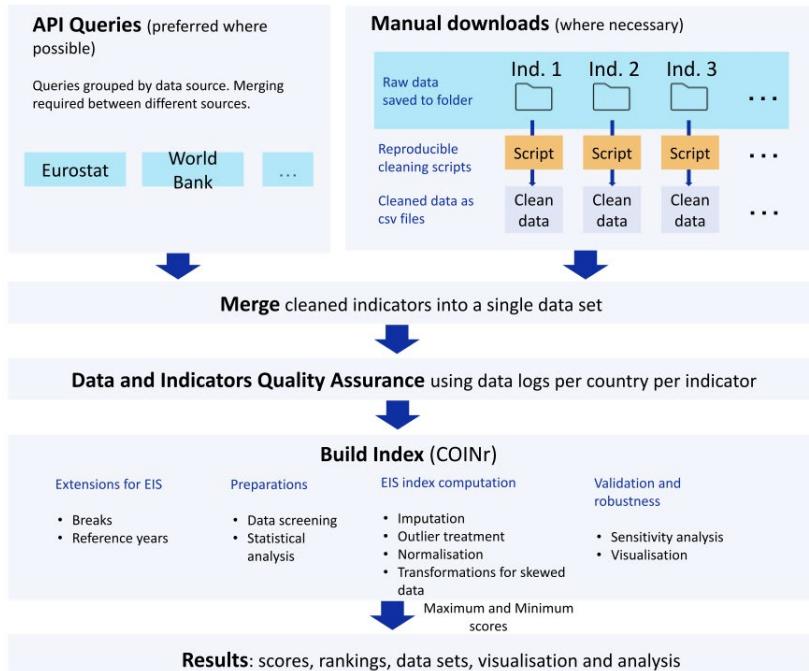
This approach provides a highly replicable and easy to follow data pipeline which feeds into the COINr package and automatically provides the main outputs of the RIS. Since the data collection, processing and outputs are largely based on code (using the R software), all code is packaged together and hosted on GitHub, which also facilitates the auditing process.

32 See: <https://bluefoxr.github.io/COINr/>

33 See: <https://composite-indicators.jrc.ec.europa.eu/>

34 Nardo M, Saisana M, Saltelli A, Tarantola S, Hoffmann A, Giovannini E. Handbook on Constructing Composite Indicators: Methodology and User Guide. Paris (France): OECD publishing; 2008. JRC47008. <https://publications.jrc.ec.europa.eu/repository/handle/JRC47008>

Figure 7: RIS automation process



Step 1: Data collection and indicator calculation

Where possible (for 12 indicators), the data was collected using API queries, more specifically, the Eurostat R package³⁵. This allows for higher replicability and an easy to follow data pipeline and minimises the possibility of human error. However, for the rest of the indicators, API query was not available, and the data was downloaded manually. For all indicators, data cleaning and indicator calculations were done using R.

Step 2: Imputing data for regions impacted by revisions in NUTS

For this edition of the RIS, the NUTS 2024 classification is used³⁶. However, for some indicators, data are only available according to earlier versions of the NUTS classification. As a result, certain indicators in this edition of the RIS still use NUTS 2021 or NUTS 2016 classifications. In such cases, values for NUTS 2024 regions were calculated using a special correspondence developed for RIS (see Table 10). This correspondence is relevant for three regions in Croatia, three regions in Norway, two regions in the Netherlands, and five regions in Portugal.

35 See: <https://cran.r-project.org/web/packages/eurostat/index.html>

36 After 2024 update, the UK is no longer part of the NUTS system. Thus, this report uses the NUTS 2021 version for the UK, which corresponds to the International Territorial Levels (ITLs) currently used by the UK Office for National Statistics. More information on the NUTS2024 revision can be found here: <https://ec.europa.eu/eurostat/web/nuts> <https://ec.europa.eu/eurostat/web/nuts>

Table 10: Correspondence used to impute data for regions impacted by revisions in the NUTS classification

IMPACTED NUTS2024 REGIONS	CORRESPONDENCE	RATIONALE
HRO2 Panonska Hrvatska	HRO2 = HR04	
HRO5 Grad Zagreb	HRO5 = HR04	
HRO6 Sjeverna Hrvatska	HRO6 = HR04	One region was split into three new regions, thus the values of this one region are used for the newly created regions.
NO08 Oslo og Viken	NO08 = (NO01+NO03)/2	New region made of multiple previous regions, thus the average of the old regions to form new region is used.
NO09 Agder og Sør-Østlandet	NO09 = (NO03+NO04)/2	
NO0A Vestlandet	NO0A = (NO04+NO05)/2	
NL35 Utrecht	NL35 = (NL31+NL33)/2	Boundary changed forming a new region (NL35) of NL31 and part of NL33. The average of the old regions to form new region is used.
NL36 Zuid-Holland	NL36 = NL33	Boundary changed forming NL36 of large part of NL33. Thus, value of the old region used to form a new region.
PT19 Centro (PT)	PT19 = PT16	Boundary changed forming PT19 of large part of PT16. Thus, value of the old region used to form a new region.
PT1A Grande Lisboa	PT1A = PT17	Boundary changed forming PT1C of large part of PT18. Thus, value of the old region used to form a new region.
PT1B Península de Setúbal	PT1B = PT17	Boundary changed forming PT1D by taking parts of two regions (PT16 and PT18). The average of the old regions used to form new region.
PT1C Alentejo	PT1C = PT18	One region was split into two new regions, thus the value of this one region is used for the newly created regions.
PT1D Oeste e Vale do Tejo	PT1D = (PT16+PT18)/2	

Step 3: Setting reference years

For each indicator, a reference year is identified based on data availability for all regions for which data availability is at least 75%. For most indicators, this reference year will be lagging one or two years behind the year to which the RIS refers (see Annex 2). However, exceptions were made to CIS indicators, since regional CIS2022 data did not pass the 75%

threshold due to regional data not being available for Germany, Denmark, France, the Netherlands, Norway, Switzerland, and the UK. In addition, an exception was made for the indicator *Cloud computing in enterprises* where data was not available at the regional level for Czechia, Germany, Ireland, Greece, France, Italy, Netherlands, Poland, Portugal, Finland, Sweden and thus data availability did not pass the 75% threshold. Data for the most recent years available (2023) were used for this indicator.

Step 4: Treating data breaks

Breaks in the data series in at least one country region are reported for seven indicators³⁷. To ensure data comparability across years, all data prior to a break in the time series are removed. For example, if a break occurs for a region in 2023, all data for that region before 2023 are deleted. As a result, the time series for that region will contain only data from 2023 onwards.

There was a break in the time series of regional CIS data in 2022 for Italy and Sweden, caused by a change in the statistical unit from the legal unit to the enterprise. The change is a result of Commission Implementing Regulation (EU) 2022/1092 of 30 June 2022, aiming to harmonise data collection methods. This change is considered an improvement, as it leads to more accurate data. While Italy and Sweden explicitly reported this break, similar changes were introduced in other countries as well, though not all of them flagged it as a break in the time series. Moreover, some countries had already implemented this shift in earlier CIS editions. Taking all of this into account, and following consultations with Eurostat, it was decided to disregard this break in the time series in the analysis.

Step 5: Imputing for missing values

Imputation for missing values is implemented following these rules in the order shown below:

- If data for a year in between the start and end of the time series are not available, missing values are replaced with the value from the previous year.
- If data are not available at the end of the time series, missing values are replaced with the value from the previous year.
- If data are not available at the beginning of the time series, missing values are replaced with the next available year.
- If there are no regional data for any of the previous nor the following year, the missing values are replaced by the higher-level NUTS aggregate.

³⁷ Population with tertiary education, Population involved in lifelong learning, Broadband penetration, R&D expenditure in the business sector, Cloud computing in enterprises, R&D expenditure in the public sector, Employed ICT specialists.

Step 6: Identifying and replacing outliers

Positive outliers are identified as those region scores which are higher than the mean across all regions plus twice the standard deviation. Negative outliers are identified as those region scores which are smaller than the mean across all regions minus twice the standard deviation. These outliers are replaced by the respective maximum and minimum values observed over all the years and all regions.

Step 7: Transforming data if data are highly skewed

Most of the indicators are fractional indicators with values between 0% and 100%. Some indicators are unbound indicators, where values are not limited to an upper threshold. These indicators can be highly volatile and can have skewed data distributions (where most regions show low performance levels, and a few regions show exceptionally high levels of performance). For these indicators where the degree of skewness across the full eight-year period is above one, data have been transformed using a square root transformation. For the following indicators, data have been transformed: *R&D expenditure in the business sector, Non-R&D innovation expenditures, Innovation expenditures per person employed, Public-private co-publications, PCT patent applications, Design applications*. A square root transformation uses the square root of the indicator value instead of the original value.

Step 8: Determining Maximum and Minimum scores

The Maximum score is the highest score found for the eight-year period within all regions, excluding positive outliers. Similarly, the Minimum score is the lowest score found for the eight-year period within all countries, excluding negative outliers.

Step 9: Calculating re-scaled scores

Re-scaled scores of the region scores (after correcting for outliers and a possible transformation of the data) for all years are calculated by first subtracting the Minimum score and then dividing by the difference between the Maximum and Minimum score. The maximum re-scaled score is thus equal to 1, and the minimum re-scaled score is equal to 0. For positive and negative outliers, the re-scaled score is equal to 1 or 0, respectively.

Step 10: Calculating composite innovation indexes

For each year, a composite RII is calculated as the unweighted average of the re-scaled scores for all indicators, where all indicators receive the same weight (1/23 if data are available for all 23 indicators).

The RIS uses data for fewer indicators than EIS, 23 compared to 32 in the EIS. Moreover, the definitions of several indicators differ between the two, and regional data for some

indicators are less up to date than the national-level data used in the EIS. Consequently, the country-level values of the RII and the Summary Innovation Index (SII) vary. To align the country-level results across both reports, an EIS-RIS alignment score is applied to the RII, ensuring that the RII and SII values are the same across both reports. Only corrected values of RII are presented across all RIS deliverables.

Step 11: Calculating relative to EU performance scores

Performance scores relative to the EU are then calculated as the RII of the respective region divided by the RII of the EU, multiplied by 100. The same approach is used to calculate re-scaled indicator scores relative to the EU.

Relative performance scores are calculated for the full eight-year period compared to the performance of the EU in 2018 and for the latest year, and also to that of the EU in 2025. For the definition of the performance groups, only the performance scores relative to the EU in 2025 have been used.

4.3 Structural indicators

The RIS uses a set of contextual (structural) indicators to help users understand the structural differences between regions, which can explain variations in performance across the innovation indicators used in the main measurement framework. These structural indicators are provided in the regional profiles and the online tool.

The following sections discuss the relevance of these structural aspects to provide a better understanding of the differences between regions in the performance of individual indicators.

Full definitions of all structural indicators are provided in the RIS 2025 Methodology Report. The list of structural indicators, the years for which average performance has been calculated, and data sources used are shown in Table 11.

Table 11: Structural indicators used in the RIS

INDICATOR	YEARS USED IN CALCULATIONS	SOURCE
Employment share in Agriculture & Mining (A-B)	2022-2024	Eurostat
Employment share in Manufacturing (C)	2022-2024	Eurostat
Employment share in Utilities & Construction (D-F)	2022-2024	Eurostat
Employment share in Services (G-N)	2022-2024	Eurostat
Employment share in Public administration (O-U)	2022-2024	Eurostat
Average number of employed persons per enterprise	2021-2022	Eurostat
GDP per capita (PPS)	2023	Eurostat
GDP per capita growth (PPS)	2019-2023	Eurostat
Population density	2023	Eurostat
Urbanisation	2024	Eurostat
Population size (000s)	2024	Eurostat

The employment share across different sectors reflects the structural characteristics of a region's economy, providing insight into its sectoral composition and development trajectory. For example, a higher share in manufacturing (C), particularly in high tech manufacturing, and in services (G-N), particularly knowledge-intensive services, may positively influence regional performance on innovation indicators such as *R&D expenditure in the business sector*, *PCT patent applications*, and the prevalence of innovative enterprises. Conversely, regions with a high concentration of public sector employment (O-U) often reflect structural tendencies such as a strong presence of government institutions or a reliance on public services. This can be associated with lower levels of private sector innovation activity, which in turn may impact outcomes on some indicators used in the RIS.

Average number of employed persons per enterprise provides insight into the structural composition of the business landscape, indicating whether a region is dominated by micro-enterprises, SMEs, or larger firms. Regions with larger average firm sizes may benefit from greater internal capacity for R&D and innovation activities, while those with smaller enterprises may demonstrate high entrepreneurial activity but face resource limitations that can impact innovation outcomes.

Nominal Gross Domestic Product per capita is a measure for interpreting real income differences between regions. Higher income can increase the demand for new innovative goods and services.

GDP per capita growth (PPS) measures economic growth. In economies that grow faster, increasing demand may provide more favourable conditions for enterprises to sell their goods and services.

Population density is measured by inhabitants per km². Densely populated areas are often more innovative due to easier knowledge diffusion, concentration of government and educational services, better training opportunities, and higher shares of highly educated workers.

Degree of urbanisation captures the spatial distribution of the population across different settlement types within a region. This indicator could help to explain regional disparities in innovation performance. Urban and intermediate areas typically offer more favourable enabling conditions for innovation, such as better access to infrastructure, skilled labour, research institutions, and innovation networks. In contrast, rural regions may face structural limitations in these areas.

Population size is measured by the population in the region on 1 January 2024. A larger population size can stimulate regional markets, creating greater demand for goods and services. This may enhance the business environment and support the scale-up of innovative activities, particularly in growing urban regions.

ANNEXES

Annex 1 : A comparison of the indicators included in the European Innovation Scoreboard and the Regional Innovation Scoreboard

Categories and dimensions	Indicator in EIS	Indicator in RIS
Framework Conditions		
<i>Human resources</i>	1.1.1 New doctorate graduates	No regional data
	1.1.2 Population with tertiary education	Identical
	1.1.3 Population involved in lifelong learning	Identical
<i>Attractive research systems</i>	1.2.1 International scientific co-publications	Identical
	1.2.2 Scientific publications among the top 10% most cited	Identical
	1.2.3 Foreign doctorate students as a % of all doctorate students	No regional data
<i>Digitalisation</i>	1.3.1 High-speed internet access	<i>Broadband penetration as a proxy</i>
	1.3.2 Individuals with above basic overall digital skills	No regional data
Investments		
<i>Finance and support</i>	2.1.1 R&D expenditure in the public sector	Identical
	2.1.2 Venture capital expenditures	No regional data
	2.1.3 Direct and indirect government support of business R&D	No regional data
<i>Firm investments</i>	2.2.1 R&D expenditure in the business sector	Identical
	2.2.2 Non-R&D innovation expenditures	Same indicator but data only for enterprises with 10-249 employees, inclusive
	2.2.3 Innovation expenditures per person employed	Same indicator but data only for enterprises with 10-249 employees, inclusive
<i>Investments in information technologies</i>	2.3.1 Cloud computing in enterprises	Identical
	2.3.2 Employed ICT specialists	Proxy using country-level data and share of employment in information and communication
Innovation activities		
<i>Innovators</i>	3.1.1 SMEs introducing product innovations	Identical
	3.1.2 SMEs introducing business process innovations	Identical
<i>Linkages</i>	3.2.1 Innovative SMEs collaborating with others	Identical
	3.2.2 Public-private co-publications	Identical
	3.2.3 Job-to-job mobility of HRST	No regional data
<i>Intellectual assets</i>	3.3.1 PCT patent applications	Identical
	3.3.2 Trademark applications	Identical
	3.3.3 Design applications	Identical
Impacts		
<i>Sales and employment impacts</i>	4.1.1 Sales of new-to-market and new-to-firm innovations	Same indicator but data only for enterprises with 10-249 employees, inclusive
	4.1.2 Employment in innovative enterprises	Identical
<i>Trade impacts</i>	4.2.1 Exports of medium and high technology products	Proxy using EIS indicator data and FIGARO regional dataset ³⁷
	4.2.2 Knowledge-intensive services exports	No regional data
	4.2.3 High tech imports from partners outside of the EU27	No regional data
<i>Resource and labour productivity</i>	4.3.1 Resource productivity	No regional data
	4.3.2 Production-based CO2 productivity	Air emissions by fine particulates as a proxy
	4.3.3 Labour productivity	Identical

³⁷ Lopez Alvarez, Jorge; Galiano Bastarrica, Luis Antonio; Rueda-Cantuche, José Manuel (2017): FIGARO-REG 2017 10 sectors. European Commission, Joint Research Centre (JRC) [Dataset] PID: <http://data.europa.eu/89h/dff29c8d-b85b-41fa-9cb7-7289c7524937>

Annex 2: Indicators their sources and rationale

Indicator	Numerator	Numerator source	Denominator	Denominator Source	Most recent year for which data are available	Rationale
1.1.2 Population with tertiary education	Number of persons in age class with some form of post-secondary education	Eurostat [edat_lfse_04]	Population between and including 25 and 34 years	Eurostat [edat_lfse_04]	2024	This is a general indicator of the supply of advanced skills. It is not limited to science and technical fields, because the adoption of innovations in many areas, including the service sectors, depends on a wide range of skills.
1.1.3 Population involved in lifelong learning	Number of persons in private households aged between 25 and 64 years who have participated in the four weeks preceding the interview, in any education or training, whether or not relevant to the respondent's current or possible future job	Eurostat [trng_lfse_04]	Total population aged between 25 and 64 years	Eurostat [trng_lfse_04]	2024	Lifelong learning encompasses all purposeful learning activity, whether formal, nonformal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. The intention or aim to learn is the critical point that distinguishes these activities from non-learning activities, such as cultural or sporting activities.
1.2.1 International scientific co-publications	Number of scientific publications with at least one co-author based abroad	Scopus, Data calculated by Science Metrix	Total population	Eurostat [demo_r_d2jan]	2024	International scientific co-publications are a proxy for the quality of scientific research as collaboration increases scientific productivity.
1.2.2 Scientific publications among the top 10% most cited	Number of scientific publications among the top-10% most cited publications worldwide	Scopus, Data calculated by Science Metrix	Total number of scientific publications	Scopus, Data calculated by Science Metrix	2022	The indicator is a measure for the quality of the research system as highly cited publications are assumed to be of higher quality. There could be a bias towards small or English-speaking countries given the coverage of Scopus' publication data.
1.3.1 Broadband penetration	Households with broadband access	Eurostat [isoc_r_broad_h]	Total number of households	Eurostat [isoc_r_broad_h]	2021	The indicator serves as a regional proxy for <i>High-speed internet access</i> in the EIS. It provides a measure of digitalisation at the household level.
2.1.1 R&D expenditure in the public sector	All R&D expenditures in the government sector (GOVERD) and	Eurostat [rd_e_gerdreg]	Regional Gross Domestic Product	Eurostat [rd_e_gerdreg]	2021	R&D expenditure represents one of the major drivers of economic growth in a knowledge-based economy. Trends in the

Indicator	Numerator	Numerator source	Denominator	Denominator Source	Most recent year for which data are available	Rationale
	the higher education sector (HERD)					R&D expenditure indicator provide key indications of the future competitiveness and wealth of a region. R&D spending is essential for making the transition to a knowledge-based economy as well as for improving production technologies and stimulating growth.
2.2.1 R&D expenditure in the business sector	All R&D expenditures in the business sector (BERD)	Eurostat [rd_e_gerdreg]	Regional Gross Domestic Product	Eurostat [rd_e_gerdreg]	2021	The indicator captures the formal creation of new knowledge within firms. It is particularly important in the science-based sector (pharmaceuticals, chemicals and some areas of electronics), where most new knowledge is created in or near R&D laboratories.
2.2.2 Non-R&D innovation expenditures	Sum of total innovation expenditure for SMEs, excluding intramural and extramural R&D expenditures	Eurostat CIS 2022* [inn_cis13_exp_r]	Total turnover of SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	2022	Several of the components of innovation expenditure, such as investment in equipment and machinery and the acquisition of patents and licenses, measure the diffusion of new production technology and ideas.
2.2.3 Innovation expenditures per person employed	Innovation expenditure by SMEs	Eurostat CIS 2022* [inn_cis13_exp_r]	Total employment in innovative SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	2022	The indicator measures the monetary input directly related to innovation.
2.3.1 Cloud computing in enterprises	Number of enterprises that buy cloud computing services used over the internet	Eurostat [isoc_r_cicce_usen2]	Total number of enterprises	Eurostat [isoc_r_cicce_usen2]	2023	The uptake of cloud computing services signals the extent to which businesses integrate digital tools, which can influence innovation.
2.3.2 Employed ICT specialists	Rate between the share of employment in the information and communication sector (NACE J) in the region and the country	Eurostat [lfst_r_lfe2en2]	Share of ICT specialists in total employment	Eurostat [isoc_sks_itspt]	2024	Regional proxy for measuring the “employment in the industries most implicated in the digital transformation” in proportion to the total employment allowing to estimate the size of the digital economy in a country.
3.1.1 SMEs introducing	Number of SMEs who introduced at least one product innovation	Eurostat CIS 2022* [inn_cis13_bas_r]	Total number of SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	2022	Product innovation is a key ingredient to innovation as they can create new markets

Indicator	Numerator	Numerator source	Denominator	Denominator Source	Most recent year for which data are available	Rationale
<i>product innovations</i>						and improve competitiveness. Higher shares of product innovators reflect a higher level of innovation activities.
3.1.2 SMEs introducing business process innovations	Number of SMEs who introduced at least one business process innovation	Eurostat CIS 2022* [inn_cis13_bas_r]	Total number of SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	2022	Many firms innovate not by improving new products but by improving their business processes. Business process innovations include process, marketing and organisational innovations.
3.2.1 Innovative SMEs collaborating with others	Number of SMEs with innovation co-operation activities (i.e. that have had any co-operation agreements on innovation activities with other enterprises or institutions)	Eurostat CIS 2022* [inn_cis13_bas_r]	Total number of SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	2022	This indicator measures the degree to which SMEs are involved in innovation co-operation. Complex innovations often depend on enterprises' ability to draw on diverse sources of information and knowledge, or to collaborate on the development of an innovation. This indicator measures the flow of knowledge between public research institutions and enterprises, and between enterprises and other enterprises.
3.2.2 Public-private co-publications	Number of public-private co-authored research publications	Scopus. calculated by Science Metrix	Total population	Eurostat [demo_r_d2jan]	2024	This indicator captures public-private research linkages and active collaboration activities between business sector researchers and public sector researchers resulting in academic publications.
3.3.1 PCT patent applications	Number of patent applications filed under the Patent Cooperation Treaty, by year of filing	OECD, REGPAT	Gross Domestic Product in Purchasing Power Standard	Eurostat [nama_10r_2gd], OECD	2022	The capacity of firms to develop new products determines their competitive advantage. One indicator of the rate of new product innovation is the number of patent applications
3.3.2 Trademark applications	Number of trademark applications at EUIPO	European Union Intellectual Property Office (EUIPO). Data provided by Fraunhofer-ISI	Gross Domestic Product in Purchasing Power Standard	Eurostat [nama_10r_2gd], OECD	2023	Trademarks are an important innovation indicator, especially for the service sector. The Community trademark gives its proprietor a uniform right applicable in all Member States of the EU through a single

Indicator	Numerator	Numerator source	Denominator	Denominator Source	Most recent year for which data are available	Rationale
						procedure which simplifies trademark policies at European level.
3.3.3 Design applications	Number of designs applied for at EUIPO	European Union Intellectual Property Office (EUIPO). Data provided by Fraunhofer-ISI	Gross Domestic Product in Purchasing Power Standard	Eurostat [nama_10r_2gd], OECD	2023	A design is the outward appearance of a product or part of it resulting from the lines, contours, colours, shape, texture, materials and/or its ornamentation. A product can be any industrial or handicraft item including packaging, graphic symbols and typographic typefaces but excluding computer programs. It also includes products that are composed of multiple components, which may be disassembled and reassembled.
4.1.1 Sales of new-to-market and new-to-firm innovations	Sum of total turnover of new or significantly improved products for SMEs	Eurostat CIS 2022* [inn_cis13_prodt_r]	Total turnover for SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	2022	This indicator measures the turnover of new or significantly improved products and includes both products which are only new to the firm and products which are also new to the market. The indicator thus captures both the creation of state-of-the-art technologies (new to market products) and the diffusion of these technologies (new to firm products).
4.1.2 Employment in innovative enterprises	Number of employed persons in innovative SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	Total employment in SMEs	Eurostat CIS 2022* [inn_cis13_bas_r]	2022	Innovation in enterprises has a profound impact on the employability of workers. Firm innovation proves to be specifically important during a time of economic recession. Although high-skilled employees are less affected by a recession than low-skilled employees, a notable positive effect is observed for low-skilled employees in innovative firms as well.

Indicator	Numerator	Numerator source	Denominator	Denominator Source	Most recent year for which data are available	Rationale
4.2.1 Exports of medium and high technology products	Value of medium and high-tech exports	Regional: FIGARO 2017 regional data ³⁸ Country: Eurostat, UNComtrade	Value of total product exports	Regional: FIGARO 2017 regional data ³⁹ Country: Eurostat, UNComtrade	2024	The indicator measures the technological competitiveness of the region, i.e. the ability to commercialise the results of research and development (R&D) and innovation. It uses FIGARO 2017 regional data to calculate ratio between region export share in medium and high tech products. Approximate region values for upcoming years using this ratio and country level export data are calculated.
4.3.2 Air emissions by fine particulates	Sum of air pollutant (PM2.5) concentration for each spatial	European Environmental Agency	Total population across all spatial units	European Environmental Agency	2022	This indicator reflects the average concentration of fine particulate matter (PM2.5) that people are exposed to, providing a population-weighted measure of air pollution's potential impact on human health.
4.3.3 Labour productivity	GDP in constant prices	Annual Regional Database of the European Commission (ARDECO)	Hours worked	Annual Regional Database of the European Commission (ARDECO)	2024	Labour productivity per hour worked can serve as an impact indicator. By measuring the real economic output generated per hour of work, it captures the broader effects of technological advancements, digitalisation, and process improvements on productivity.

Note: * - Data prior to CIS 2022 was obtained from National Statistics Office. The special request agreement with Eurostat and the NSOs providing regional data includes a rule that the contractor must delete the confidential regional data once the RIS report is published. Thus, data for previous CIS additions separately for numerator and denominator is not available.

38 Lopez Alvarez, Jorge; Galiano Bastarrica, Luis Antonio; Rueda-Cantuche, José Manuel (2017): FIGARO-REG 2017 10 sectors. European Commission, Joint Research Centre (JRC) [Dataset] PID: <http://data.europa.eu/89h/dff29c8d-b85b-41fa-9cb7-7289c7324937>

40 Lopez Alvarez, Jorge; Galiano Bastarrica, Luis Antonio; Rueda-Cantuche, José Manuel (2017): FIGARO-REG 2017 10 sectors. European Commission, Joint Research Centre (JRC) [Dataset] PID: <http://data.europa.eu/89h/dff29c8d-b85b-41fa-9cb7-7289c7324937>

Annex 3: Regional innovation performance groupsAnnex 4: RIS normalised indicator

Region code	Region	2025 performance relative to EU in 2025	Performance sub-group	2018 performance relative to EU in 2018	2025 performance relative to EU in 2018	Performance change 2018–2025
EU27	European Union	100		100	112.6	12.6
AT	Austria					
AT1	Ostösterreich	119.6	Strong Innovator +	120.7	134.6	14
AT2	Südösterreich	110.4	Strong Innovator	115.3	124.3	9
AT3	Westösterreich	110.3	Strong Innovator	120.7	124.2	3.5
BE	Belgium					
BE1	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	128	Innovation leader -	136.2	144.1	7.9
BE2	Vlaams Gewest	127.9	Innovation leader -	131.8	144.1	12.2
BE3	Région wallonne	108.7	Strong Innovator	110.1	122.4	12.3
BG	Bulgaria					
BG31	Severozapaden	27.8	Emerging Innovator -	31.2	31.2	0
BG32	Severen tsentralen	35.1	Emerging Innovator -	36.8	39.5	2.7
BG33	Severoiztochen	39.9	Emerging Innovator	37.4	44.9	7.6
BG34	Yugoiztochen	30.5	Emerging Innovator -	30.4	34.3	3.9
BG41	Yugozapaden	58.7	Emerging Innovator +	57.3	66.1	8.7
BG42	Yuzhent tsentralen	40.6	Emerging Innovator	41.1	45.7	4.7
CZ	Czechia					
CZ01	Praha	110.1	Strong Innovator	102	124	21.9
CZ02	Střední Čechy	73.8	Moderate Innovator -	70	83.1	13.1
CZ03	Jihozápad	73	Moderate Innovator -	63.8	82.2	18.4
CZ04	Severozápad	56.1	Emerging Innovator +	55	63.1	8.1
CZ05	Severovýchod	71.6	Moderate Innovator -	71.3	80.6	9.3
CZ06	Jihovýchod	89.1	Moderate Innovator	79.5	100.4	20.8
CZ07	Střední Morava	73.8	Moderate Innovator -	68.8	83.1	14.4
CZ08	Moravskoslezsko	73.6	Moderate Innovator -	66.8	82.9	16.1
DE	Germany					
DE11	Stuttgart	118.1	Strong Innovator +	121.5	133	11.5
DE12	Karlsruhe	133	Innovation leader -	137.6	149.7	12.2
DE13	Freiburg	118.6	Strong Innovator +	122.4	133.5	11.1
DE14	Tübingen	125.4	Innovation leader -	126.1	141.2	15.1
DE21	Oberbayern	143.1	Innovation leader	138.4	161.1	22.8
DE22	Niederbayern	91.4	Moderate Innovator +	98	102.9	4.9
DE23	Oberpfalz	107	Strong Innovator -	103.7	120.5	16.8
DE24	Oberfranken	109.6	Strong Innovator	109.7	123.4	13.7
DE25	Mittelfranken	123	Strong Innovator +	125.3	138.5	13.2
DE26	Unterfranken	111.6	Strong Innovator	112.8	125.7	12.9
DE27	Schwaben	105	Strong Innovator -	109.1	118.2	9.1
DE3	Berlin	139	Innovation leader	140.3	156.5	16.1
DE4	Brandenburg	103.5	Strong Innovator -	102.3	116.5	14.2
DE5	Bremen	105.3	Strong Innovator -	110.7	118.6	7.8
DE6	Hamburg	129.2	Innovation leader -	125.5	145.4	19.9

Region code	Region	2025 performance relative to EU in 2025	Performance sub-group	2018 performance relative to EU in 2018	2025 performance relative to EU in 2018	Performance change 2018–2025
DE71	Darmstadt	120.3	Strong Innovator +	120.2	135.5	15.2
DE72	Gießen	116.4	Strong Innovator	118.3	131	12.7
DE73	Kassel	96.6	Moderate Innovator +	95.4	108.7	13.4
DE8	Mecklenburg-Vorpommern	86.8	Moderate Innovator	97.5	97.7	0.3
DE91	Braunschweig	117.9	Strong Innovator +	123.9	132.8	8.9
DE92	Hannover	105.7	Strong Innovator -	108.7	119	10.3
DE93	Lüneburg	98.4	Moderate Innovator +	91	110.7	19.7
DE94	Weser-Ems	93.4	Moderate Innovator +	90.1	105.2	15.1
DEA1	Düsseldorf	106	Strong Innovator -	108.5	119.4	10.9
DEA2	Köln	127.1	Innovation leader -	123.2	143.1	19.9
DEA3	Münster	97.2	Moderate Innovator +	104.7	109.4	4.7
DEA4	Detmold	107.6	Strong Innovator -	110.6	121.2	10.5
DEA5	Arnsberg	107.8	Strong Innovator -	106.1	121.4	15.3
DEB1	Koblenz	105.4	Strong Innovator -	96.7	118.7	22
DEB2	Trier	93.2	Moderate Innovator +	102.2	105	2.8
DEB3	Rheinhessen-Pfalz	117.9	Strong Innovator +	125	132.7	7.7
DEC	Saarland	99.6	Moderate Innovator +	101.5	112.1	10.6
DED2	Dresden	120.2	Strong Innovator +	119.1	135.4	16.3
DED4	Chemnitz	97.6	Moderate Innovator +	98	109.9	11.9
DED5	Leipzig	116.4	Strong Innovator	118.9	131	12.1
DEE	Sachsen-Anhalt	93.1	Moderate Innovator +	92.5	104.8	12.4
DEF	Schleswig-Holstein	104.6	Strong Innovator -	103.2	117.8	14.6
DEG	Thüringen	105.7	Strong Innovator -	107.6	119	11.4
DK	Denmark					
DK01	Hovedstaden	147	Innovation leader +	164.7	165.5	0.8
DK02	Sjælland	107	Strong Innovator -	107.2	120.4	13.3
DK03	Syddanmark	113	Strong Innovator	115.4	127.2	11.8
DK04	Midtjylland	135.6	Innovation leader	142	152.6	10.6
DK05	Nordjylland	125.8	Innovation leader -	125.3	141.7	16.3
EL	Greece					
EL30	Attiki	85.1	Moderate Innovator	79.9	95.8	15.9
EL41	Voreio Aigaio	63.1	Emerging Innovator +	55.4	71.1	15.7
EL42	Notio Aigaio	50.2	Emerging Innovator	39	56.6	17.6
EL43	Kriti	87.6	Moderate Innovator	89.5	98.7	9.2
EL51	Anatoliki Makedonia Thraki	66.6	Emerging Innovator +	53.9	75	21.1
EL52	Kentriki Makedonia	75.3	Moderate Innovator -	73.6	84.8	11.1
EL53	Dytiki Makedonia	53.5	Emerging Innovator	57.7	60.3	2.5
EL54	Ipeiros	72.4	Moderate Innovator -	57.7	81.5	23.8
EL61	Thessalia	68.1	Emerging Innovator +	66.6	76.6	10
EL62	Ionia Nisia	55.4	Emerging Innovator +	56.9	62.3	5.4
EL63	Dytiki Elláda	73.8	Moderate Innovator -	69.2	83.1	14
EL64	Stereia Elláda	61.4	Emerging Innovator +	59	69.1	10.1

Region code	Region	2025 performance relative to EU in 2025	Performance sub-group	2018 performance relative to EU in 2018	2025 performance relative to EU in 2018	Performance change 2018–2025
EL65	Peloponnisos	60.4	Emerging Innovator +	59.2	68	8.8
ES	Spain					
ES11	Galicia	86.7	Moderate Innovator	79.7	97.6	17.9
ES12	Principado de Asturias	80.7	Moderate Innovator	81	90.9	9.9
ES13	Cantabria	83.5	Moderate Innovator	85.9	94	8.1
ES21	País Vasco	108.1	Strong Innovator -	114.1	121.7	7.5
ES22	Comunidad Foral de Navarra	103.3	Strong Innovator -	103.4	116.3	13
ES23	La Rioja	83.4	Moderate Innovator	88.8	93.9	5.1
ES24	Aragón	85.5	Moderate Innovator	83.5	96.2	12.8
ES3	Comunidad de Madrid	106.1	Strong Innovator -	108.6	119.5	10.9
ES41	Castilla y León	84.8	Moderate Innovator	75.1	95.5	20.3
ES42	Castilla-La Mancha	71.1	Moderate Innovator -	64.2	80.1	15.9
ES43	Extremadura	70.6	Moderate Innovator -	61.6	79.5	17.9
ES51	Catalunya/Cataluña	110.7	Strong Innovator	108.6	124.7	16.1
ES52	Comunitat Valenciana	101.2	Strong Innovator -	96.6	114	17.4
ES53	Illes Balears	72.7	Moderate Innovator -	74.4	81.8	7.4
ES61	Andalucía	76.4	Moderate Innovator -	71.1	86	14.9
ES62	Región de Murcia	80.8	Moderate Innovator	81.3	91	9.7
ES63	Ciudad de Ceuta	52.9	Emerging Innovator	41.7	59.6	17.8
ES64	Ciudad de Melilla	52.2	Emerging Innovator	50.9	58.7	7.8
ES7	Canarias	70.8	Moderate Innovator -	61.9	79.7	17.7
FI	Finland					
FI19	Länsi-Suomi	119	Strong Innovator +	126.8	133.9	7.1
FI1B	Helsinki-Uusimaa	140.8	Innovation leader	148.6	158.5	9.9
FI1C	Etelä-Suomi	116.5	Strong Innovator	116.1	131.2	15
FI1D	Pohjois- ja Itä-Suomi	114.1	Strong Innovator	119.3	128.5	9.2
FI2	Åland	101.1	Strong Innovator -	98.4	113.8	15.5
FR	France					
FR1	Ile-de-France	133.2	Innovation leader -	138.7	150	11.3
FRB	Centre — Val de Loire	91.1	Moderate Innovator +	99.2	102.6	3.4
FRC	Bourgogne-Franche-Comté	90.7	Moderate Innovator +	103.4	102.2	-1.3
FRD	Normandie	81.5	Moderate Innovator	94.4	91.7	-2.7
FRE	Hauts-de-France	87.9	Moderate Innovator	94	98.9	4.9
FRF	Grand Est	96.3	Moderate Innovator +	104	108.4	4.4
FRG	Pays de la Loire	99.2	Moderate Innovator +	102.9	111.7	8.8
FRH	Bretagne	105.6	Strong Innovator -	111.2	118.9	7.7
FRI	Nouvelle-Aquitaine	97.1	Moderate Innovator +	104.5	109.3	4.8
FRJ	Occitanie	114.4	Strong Innovator	127.9	128.8	0.9
FRK	Auvergne-Rhône-Alpes	115	Strong Innovator	124.8	129.5	4.7
FRL	Provence-Alpes-Côte d'Azur	107.1	Strong Innovator -	113.4	120.6	7.2
FRM	Corse	52.1	Emerging Innovator	61.9	58.6	-3.3

Region code	Region	2025 performance relative to EU in 2025	Performance sub-group	2018 performance relative to EU in 2018	2025 performance relative to EU in 2018	Performance change 2018–2025
FRY	RUP FR — Régions Ultrapériphériques Françaises	71.3	Moderate Innovator -	65.8	80.3	14.5
HR	Croatia					
HR02	Panonska Hrvatska	51.9	Emerging Innovator	50	58.4	8.5
HR03	Jadranska Hrvatska	56.5	Emerging Innovator +	51.3	63.7	12.4
HR05	Grad Zagreb	94.6	Moderate Innovator +	84.3	106.5	22.2
HR06	Sjeverna Hrvatska	59.5	Emerging Innovator +	57	66.9	9.9
HU	Hungary					
HU11	Budapest	99.5	Moderate Innovator +	91.9	112	20.1
HU12	Pest	66.6	Emerging Innovator +	68.1	75	6.9
HU21	Közép-Dunántúl	57	Emerging Innovator +	53.9	64.2	10.3
HU22	Nyugat-Dunántúl	56.2	Emerging Innovator +	50.6	63.3	12.7
HU23	Dél-Dunántúl	59.5	Emerging Innovator +	48.9	67	18
HU31	Észak-Magyarország	53.1	Emerging Innovator	46.9	59.8	12.9
HU32	Észak-Alföld	55.6	Emerging Innovator +	47.2	62.6	15.4
HU33	Dél-Alföld	61.5	Emerging Innovator +	51.9	69.2	17.4
IE	Ireland					
IE04	Northern and Western	123.7	Strong Innovator +	112.6	139.2	26.7
IE05	Southern	115.5	Strong Innovator	118.8	130	11.2
IE06	Eastern and Midland	128.7	Innovation leader -	130.9	144.9	14
IT	Italy					
ITC1	Piemonte	94.4	Moderate Innovator +	88.1	106.3	18.2
ITC2	Valle d'Aosta/Vallée d'Aoste	69	Emerging Innovator +	77.2	77.7	0.5
ITC3	Liguria	86.2	Moderate Innovator	85.1	97	12
ITC4	Lombardia	98.7	Moderate Innovator +	95.9	111.2	15.3
ITF1	Abruzzo	81.2	Moderate Innovator	81.9	91.4	9.6
ITF2	Molise	76	Moderate Innovator -	73.3	85.6	12.3
ITF3	Campania	87.2	Moderate Innovator	75.4	98.2	22.8
ITF4	Puglia	80.2	Moderate Innovator	72.3	90.3	18
ITF5	Basilicata	73	Moderate Innovator -	71.6	82.1	10.6
ITF6	Calabria	75.9	Moderate Innovator -	66.3	85.4	19.2
ITG1	Sicilia	73.7	Moderate Innovator -	70.1	83	12.9
ITG2	Sardegna	77.5	Moderate Innovator -	68.8	87.3	18.5
ITH1	Provincia Autonoma di Bolzano/Bozen	92.1	Moderate Innovator +	89.6	103.7	14.1
ITH2	Provincia Autonoma di Trento	106.1	Strong Innovator -	101.6	119.5	17.9
ITH3	Veneto	95.1	Moderate Innovator +	94.1	107.1	13
ITH4	Friuli-Venezia Giulia	100.5	Strong Innovator -	102.5	113.1	10.7
ITH5	Emilia-Romagna	102.5	Strong Innovator -	101	115.4	14.4
ITI1	Toscana	96.3	Moderate Innovator +	94.1	108.4	14.3
ITI2	Umbria	89.7	Moderate Innovator	93.2	101	7.8
ITI3	Marche	89	Moderate Innovator	88.8	100.2	11.4
ITI4	Lazio	96.3	Moderate Innovator +	93.1	108.4	15.3

Region code	Region	2025 performance relative to EU in 2025	Performance sub-group	2018 performance relative to EU in 2018	2025 performance relative to EU in 2018	Performance change 2018–2025
LT	Lithuania					
LT01	Sostinės regionas	96.6	Moderate Innovator +	96.8	108.7	11.9
LT02	Vidurio ir vakarų Lietuvos regionas	66	Emerging Innovator +	62.6	74.4	11.7
NL	Netherlands					
NL11	Groningen	126.6	Innovation leader -	131.4	142.5	11.1
NL12	Friesland (NL)	103.2	Strong Innovator -	107.3	116.2	8.9
NL13	Drenthe	108.4	Strong Innovator	112.7	122.1	9.4
NL21	Overijssel	119.2	Strong Innovator +	125.6	134.2	8.6
NL22	Gelderland	130.4	Innovation leader -	131.9	146.8	14.9
NL23	Flevoland	119.1	Strong Innovator +	117.7	134.1	16.4
NL32	Noord-Holland	139.4	Innovation leader	144.3	156.9	12.6
NL34	Zeeland	107	Strong Innovator -	110.6	120.5	9.8
NL35	Utrecht	136.2	Innovation leader	143.7	153.4	9.8
NL36	Zuid-Holland	129.9	Innovation leader -	136	146.3	10.2
NL41	Noord-Brabant	129.9	Innovation leader -	134.4	146.2	11.8
NL42	Limburg (NL)	127.4	Innovation leader -	129.9	143.4	13.6
PL	Poland					
PL21	Małopolskie	75.2	Moderate Innovator -	69.8	84.7	14.9
PL22	Śląskie	63.2	Emerging Innovator +	49.6	71.1	21.5
PL41	Wielkopolskie	61.9	Emerging Innovator +	49.8	69.7	19.9
PL42	Zachodniopomorskie	58.9	Emerging Innovator +	44.8	66.3	21.5
PL43	Lubuskie	50.1	Emerging Innovator	48.3	56.4	8.1
PL51	Dolnośląskie	71.1	Moderate Innovator -	59	80	21.1
PL52	Opolskie	59.4	Emerging Innovator +	45.8	66.9	21.1
PL61	Kujawsko-pomorskie	59	Emerging Innovator +	48.6	66.4	17.8
PL62	Warmińsko-mazurskie	60.2	Emerging Innovator +	42	67.8	25.8
PL63	Pomorskie	72.5	Moderate Innovator -	59.9	81.6	21.8
PL71	Łódzkie	58.1	Emerging Innovator +	51.4	65.4	14
PL72	Świętokrzyskie	48.4	Emerging Innovator	46.1	54.5	8.4
PL81	Lubelskie	61.1	Emerging Innovator +	50.1	68.8	18.7
PL82	Podkarpackie	65.5	Emerging Innovator +	60.5	73.8	13.2
PL84	Podlaskie	58.9	Emerging Innovator +	46.6	66.3	19.7
PL91	Warszawski stołeczny	90.2	Moderate Innovator +	84.6	101.6	17
PL92	Mazowiecki regionalny	45.1	Emerging Innovator	38.8	50.8	12
PT	Portugal					
PT11	Norte	88.8	Moderate Innovator	93.5	100	6.5
PT15	Algarve	72.1	Moderate Innovator -	68.7	81.1	12.4
PT19	Centro (PT)	90.1	Moderate Innovator +	100.4	101.4	1
PT1A	Grande Lisboa	109.6	Strong Innovator	104.7	123.4	18.7
PT1B	Península de Setúbal	82.3	Moderate Innovator	86.8	92.7	5.8
PT1C	Alentejo	69.1	Emerging Innovator +	75.4	77.8	2.5
PT1D	Oeste e Vale do Tejo	79.3	Moderate Innovator -	81	89.2	8.2

Region code	Region	2025 performance relative to EU in 2025	Performance sub-group	2018 performance relative to EU in 2018	2025 performance relative to EU in 2018	Performance change 2018–2025
PT2	Região Autónoma dos Açores	62.2	Emerging Innovator +	58.7	70	11.3
PT3	Região Autónoma da Madeira	71.4	Moderate Innovator -	68.4	80.4	11.9
RO	Romania					
RO11	Nord-Vest	36.8	Emerging Innovator -	36.5	41.4	4.9
RO12	Centru	33.6	Emerging Innovator -	27.5	37.9	10.3
RO21	Nord-Est	28.8	Emerging Innovator -	27.2	32.4	5.2
RO22	Sud-Est	25.7	Emerging Innovator -	20.5	28.9	8.5
RO31	Sud-Muntenia	28	Emerging Innovator -	23	31.5	8.4
RO32	Bucureşti-Ilfov	59	Emerging Innovator +	59.2	66.5	7.3
RO41	Sud-Vest Oltenia	22.7	Emerging Innovator -	17.3	25.5	8.2
RO42	Vest	34.6	Emerging Innovator -	25.4	39	13.6
SE	Sweden					
SE11	Stockholm	155.4	Innovation leader +	160.6	175	14.4
SE12	Östra Mellansverige	132.9	Innovation leader -	141.1	149.7	8.5
SE21	Småland med öarna	107.7	Strong Innovator -	123.3	121.2	-2.1
SE22	Sydsverige	140.1	Innovation leader	144	157.7	13.7
SE23	Västsverige	140.3	Innovation leader	141.4	157.9	16.6
SE31	Norra Mellansverige	105.8	Strong Innovator -	103.1	119.2	16.1
SE32	Mellersta Norrland	99.6	Moderate Innovator +	107	112.2	5.2
SE33	Övre Norrland	122.9	Strong Innovator +	132.7	138.4	5.7
SI	Slovenia					
SI03	Vzhodna Slovenija	79.9	Moderate Innovator -	77.3	89.9	12.6
SI04	Zahodna Slovenija	108.2	Strong Innovator -	102.9	121.9	19
SK	Slovakia					
SK01	Bratislavský kraj	90.2	Moderate Innovator +	91.4	101.5	10.2
SK02	Západné Slovensko	56.9	Emerging Innovator +	53.3	64.1	10.8
SK03	Stredné Slovensko	58.5	Emerging Innovator +	53.7	65.8	12.1
SK04	Východné Slovensko	54.6	Emerging Innovator +	57.8	61.5	3.7
NO	Norway					
NO02	Innlandet	104.2	Strong Innovator -	104.5	117.3	12.8
NO06	Trøndelag/Trøöndelag	130.7	Innovation leader -	139.3	147.2	7.9
NO07	Nord-Norge	115.5	Strong Innovator	116.5	130.1	13.6
NO08	Oslo og Viken	135.8	Innovation leader	139.5	152.8	13.4
NO09	Agder og Sør-Østlandet	112.2	Strong Innovator	111.6	126.3	14.7
NO0A	Vestlandet	119.9	Strong Innovator +	121.2	135	13.7
CH	Switzerland					
CH01	Région Lémanique	128.3	Innovation leader -	149.8	144.4	-5.3
CH02	Espace Mittelland	126.1	Innovation leader -	138.2	142	3.8
CH03	Nordwestschweiz	134.6	Innovation leader -	156.7	151.5	-5.1
CH04	Zürich	144.4	Innovation leader	166.2	162.6	-3.6
CH05	Ostschweiz	131.5	Innovation leader -	149.8	148	-1.8
CH06	Zentralschweiz	126.8	Innovation leader -	139.7	142.7	3.1

Region code	Region	2025 performance relative to EU in 2025	Performance sub-group	2018 performance relative to EU in 2018	2025 performance relative to EU in 2018	Performance change 2018–2025
CH07	Ticino	142.1	Innovation leader	149.9	160	10.2
RS	Serbia					
RS11	City of Belgrade	69	Emerging Innovator +	63.1	77.7	14.6
RS12	Autonomous Province of Vojvodina	49.8	Emerging Innovator	52.4	56.1	3.7
RS21	Region Šumadije i Zapadne Srbije	38.5	Emerging Innovator	41.2	43.3	2.1
RS22	Region Južne i Istočne Srbije	36.6	Emerging Innovator -	38.3	41.2	2.9
UK	United Kingdom					
UKC	North East (England)	114.6	Strong Innovator	117.1	129.1	12
UKD	North West (England)	117.1	Strong Innovator +	122.1	131.9	9.8
UKE	Yorkshire and The Humber	119.6	Strong Innovator +	118.5	134.7	16.3
UKF	East Midlands (England)	124.4	Strong Innovator +	126.1	140.1	14
UKG	West Midlands (England)	125	Strong Innovator +	124.3	140.7	16.5
UKH	East (England)	134.4	Innovation leader -	131.1	151.3	20.3
UKI	London	144.7	Innovation leader	143.6	162.9	19.3
UKJ	South East (England)	141.2	Innovation leader	142.7	159	16.3
UKK	South West (England)	131.2	Innovation leader -	132.5	147.7	15.2
UKL	Wales	117.8	Strong Innovator +	119.9	132.6	12.7
UKM	Scotland	121.8	Strong Innovator +	127.7	137.2	9.4
UKN	Northern Ireland	107.7	Strong Innovator -	104.6	121.3	16.6

Annex 4: RIS normalised indicator scores

This annex provides RIS indicator scores for the most recent year (2025).

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific co-publications	1.2.2 Scientific publications among the top 10% most cited	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.3.2 Air emissions by fine particulates	4.3.3 Labour productivity	
AT	Austria																							
AT1	Ostösterreich	0.702	0.681	0.738	0.675	0.760	0.917	0.748	0.241	0.694	0.540	0.799	0.531	0.655	0.699	0.819	0.585	0.822	0.511	0.296	0.630	0.715	0.597	0.641
AT2	Südösterreich	0.518	0.560	0.526	0.507	0.701	0.703	1.000	0.373	0.633	0.495	0.315	0.491	0.567	0.636	0.941	0.777	0.581	0.585	0.496	0.562	0.718	0.586	0.577
AT3	Westösterreich	0.469	0.535	0.387	0.514	0.742	0.386	0.889	0.300	0.520	0.542	0.375	0.566	0.709	0.654	0.712	0.779	0.860	0.916	0.338	0.609	0.713	0.665	0.657
BE	Belgium																							
BE1	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	0.931	0.601	1.000	0.599	0.799	0.559	0.739	0.449	1.000	0.642	0.840	0.697	0.621	0.911	0.981	0.421	0.560	0.345	0.644	0.659	0.543	0.581	0.909
BE2	Vlaams Gewest	0.769	0.535	0.585	0.739	0.808	0.655	0.951	0.527	1.000	0.671	0.617	0.765	1.000	1.000	0.680	0.624	0.428	0.507	0.426	0.850	0.604	0.576	0.705
BE3	Région wallonne	0.567	0.418	0.306	0.554	0.692	0.372	1.000	0.364	1.000	0.430	0.448	0.721	0.691	0.876	0.474	0.598	0.367	0.368	0.855	0.641	0.539	0.707	0.624
BG	Bulgaria																							
BG31	Severozapaden	0.276	0.040	0.016	0.000	0.239	0.055	0.285	0.352	0.222	0.000	0.113	0.142	0.091	0.133	0.105	0.032	0.390	0.456	0.175	0.177	0.212	0.356	0.026
BG32	Severen tsentralen	0.491	0.000	0.032	0.042	0.502	0.000	0.308	0.251	0.212	0.000	0.202	0.216	0.108	0.180	0.104	0.091	0.710	0.454	0.104	0.180	0.286	0.408	0.039
BG33	Severozitochen	0.442	0.029	0.049	0.096	0.576	0.097	0.225	0.305	0.211	0.055	0.223	0.178	0.077	0.140	0.211	0.130	0.596	1.000	0.099	0.111	0.248	0.440	0.062
BG34	Yugoiztochen	0.282	0.037	0.018	0.000	0.475	0.041	0.260	0.256	0.196	0.005	0.093	0.172	0.092	0.155	0.173	0.111	0.419	0.371	0.209	0.165	0.246	0.450	0.054
BG41	Yugozapaden	0.707	0.033	0.245	0.082	0.605	0.255	0.514	0.217	0.273	0.216	1.000	0.277	0.148	0.283	0.429	0.247	0.970	0.634	0.204	0.197	0.294	0.272	0.134
BG42	Yuzhen tsentralen	0.364	0.015	0.061	0.180	0.584	0.110	0.303	0.253	0.176	0.039	0.243	0.231	0.114	0.181	0.231	0.185	0.647	0.610	0.316	0.217	0.248	0.351	0.040
CZ	Czechia																							
CZ01	Praha	0.876	0.623	1.000	0.267	0.832	0.952	0.691	0.275	0.528	0.542	1.000	0.549	0.544	0.584	0.923	0.312	0.764	0.498	0.419	0.463	0.889	0.408	0.323
CZ02	Střední Čechy	0.156	0.315	0.140	0.299	0.693	0.345	0.772	0.223	0.407	0.542	0.380	0.413	0.596	0.433	0.359	0.319	0.333	0.510	0.225	0.433	0.947	0.508	0.230
CZ03	Jihozápad	0.253	0.267	0.247	0.312	0.777	0.290	0.619	0.351	0.418	0.542	0.262	0.483	0.543	0.379	0.454	0.338	0.194	0.289	0.237	0.467	0.936	0.623	0.188
CZ04	Severozápad	0.029	0.253	0.029	0.169	0.599	0.028	0.329	0.582	0.494	0.542	0.112	0.292	0.398	0.398	0.260	0.198	0.225	0.222	0.180	0.332	0.903	0.545	0.156
CZ05	Severovýchod	0.244	0.319	0.147	0.394	0.636	0.193	0.605	0.342	0.369	0.542	0.234	0.485	0.467	0.508	0.352	0.413	0.285	0.428	0.351	0.399	0.942	0.445	0.186
CZ06	Jihovýchod	0.458	0.363	0.396	0.236	0.659	0.648	0.727	0.453	0.469	0.542	0.482	0.609	0.517	0.584	0.588	0.313	0.397	0.398	0.582	0.499	0.935	0.508	0.201
CZ07	Střední Morava	0.282	0.267	0.265	0.234	0.654	0.248	0.635	0.407	0.520	0.542	0.158	0.475	0.533	0.520	0.392	0.351	0.287	0.540	0.300	0.461	0.932	0.398	0.179
CZ08	Moravskoslezsko	0.287	0.396	0.279	0.233	0.678	0.255	0.511	0.514	0.620	0.542	0.379	0.418	0.513	0.442	0.381	0.343	0.346	0.479	0.159	0.434	0.930	0.230	0.183
DE	Germany																							
DE11	Stuttgart	0.587	0.300	0.170	0.422	0.652	0.331	1.000	0.429	0.561	0.540	0.584	0.746	0.857	0.446	0.631	1.000	0.442	0.861	0.379	0.799	0.890	0.681	0.760
DE12	Karlsruhe	0.558	0.333	0.836	0.675	0.652	1.000	1.000	0.367	0.584	0.540	0.825	0.748	0.884	0.450	0.965	0.938	0.448	0.513	0.375	0.894	0.885	0.686	0.680
DE13	Freiburg	0.476	0.311	0.448	0.606	0.652	0.731	0.821	0.412	0.579	0.540	0.330	0.650	0.795	0.484	0.806	0.963	0.451	0.666	0.360	0.817	0.881	0.733	0.608

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific co-publications	1.2.2 Scientific publications among the top 10% most cited	1.3.1 Broadband penetration	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.2.2 Air emissions by fine particulates	4.3.3 Labour productivity
DE14	Tübingen	0.633	0.330	0.608	0.591	0.652	0.752	1.000	0.464	0.577	0.540	0.428	0.662	0.871	0.443	0.871	1.000	0.495	0.553	0.358	0.842	0.884	0.717	0.665
DE21	Oberbayern	0.767	0.341	0.750	0.669	0.704	0.772	1.000	0.354	0.549	0.540	0.935	0.944	0.948	0.693	0.952	1.000	0.670	0.710	0.487	0.805	0.889	0.670	0.831
DE22	Niederbayern	0.267	0.176	0.077	0.496	0.704	0.110	0.627	0.582	0.492	0.540	0.298	0.663	0.574	0.210	0.333	0.747	0.310	0.435	0.292	0.770	0.858	0.654	0.664
DE23	Oberpfalz	0.520	0.220	0.260	0.524	0.704	0.359	0.860	0.433	0.482	0.540	0.295	0.662	0.643	0.591	0.591	0.959	0.298	0.622	0.449	0.591	0.848	0.649	0.840
DE24	Oberfranken	0.380	0.242	0.264	0.682	0.704	0.379	0.807	0.362	0.484	0.540	0.330	0.741	0.662	0.517	0.572	0.922	0.398	0.803	0.450	0.710	0.850	0.654	0.598
DE25	Mittelfranken	0.551	0.319	0.509	0.595	0.704	0.662	0.953	0.448	0.534	0.540	0.701	0.647	0.740	0.454	0.867	1.000	0.418	0.759	0.372	0.721	0.876	0.618	0.658
DE26	Unterfranken	0.480	0.300	0.417	0.692	0.704	0.476	0.891	0.351	0.500	0.540	0.402	0.557	0.660	0.384	0.709	0.828	0.418	0.627	0.310	0.860	0.862	0.691	0.631
DE27	Schwaben	0.464	0.201	0.251	0.630	0.704	0.172	0.646	0.446	0.504	0.540	0.460	0.670	0.802	0.420	0.620	0.800	0.481	0.595	0.231	0.680	0.878	0.691	0.617
DE3	Berlin	0.804	0.385	0.773	0.662	0.744	1.000	0.630	0.564	0.645	0.540	1.000	0.743	0.852	0.840	0.978	0.621	0.927	0.576	0.499	0.702	0.884	0.545	0.636
DE4	Brandenburg	0.302	0.227	0.414	0.748	0.572	0.814	0.432	0.578	0.600	0.540	0.436	0.563	0.696	0.692	0.580	0.504	0.314	0.261	0.319	0.653	0.873	0.618	0.586
DE5	Bremen	0.338	0.381	0.580	0.493	0.347	1.000	0.605	0.307	0.517	0.540	0.579	0.622	0.697	0.466	0.795	0.433	0.397	0.239	0.270	0.779	0.881	0.634	0.638
DE6	Hamburg	0.667	0.377	0.805	0.632	0.776	0.697	0.632	0.446	0.562	0.540	0.906	0.741	0.978	0.374	0.925	0.473	0.690	0.414	0.404	1.000	0.882	0.665	0.794
DE71	Darmstadt	0.582	0.326	0.356	0.586	0.760	0.586	0.922	0.399	0.602	0.540	0.693	0.748	0.804	0.439	0.728	0.773	0.532	0.594	0.348	0.699	0.887	0.675	0.746
DE72	Gießen	0.433	0.341	0.558	0.462	0.760	0.876	0.696	0.422	0.572	0.540	0.542	0.665	0.740	0.713	0.759	0.669	0.351	0.399	0.270	0.900	0.859	0.712	0.601
DE73	Kassel	0.336	0.311	0.109	0.418	0.760	0.297	0.708	0.329	0.526	0.540	0.275	0.660	0.737	0.516	0.387	0.551	0.249	0.721	0.264	0.630	0.864	0.712	0.599
DE8	Mecklenburg-Vorpommern	0.347	0.227	0.344	0.469	0.428	0.883	0.403	0.462	0.617	0.540	0.223	0.191	0.461	0.702	0.651	0.324	0.173	0.140	0.134	0.564	0.852	0.670	0.531
DE91	Braunschweig	0.500	0.319	0.656	0.544	0.621	1.000	1.000	0.377	0.540	0.540	0.426	0.795	0.845	0.458	0.877	0.719	0.228	0.273	0.294	0.717	0.882	0.696	0.735
DE92	Hannover	0.500	0.341	0.336	0.502	0.621	0.703	0.713	0.465	0.534	0.540	0.420	0.423	0.655	0.229	0.709	0.851	0.390	0.519	0.264	0.702	0.875	0.686	0.610
DE93	Lüneburg	0.307	0.267	0.051	0.590	0.621	0.097	0.491	0.504	0.493	0.540	0.396	0.722	0.946	0.411	0.271	0.509	0.360	0.762	0.323	0.930	0.853	0.702	0.566
DE94	Weser-Ems	0.436	0.275	0.121	0.431	0.621	0.241	0.473	0.522	0.493	0.540	0.347	0.684	0.744	0.461	0.439	0.427	0.348	0.440	0.345	0.632	0.875	0.649	0.583
DEA1	Düsseldorf	0.344	0.278	0.241	0.568	0.742	0.359	0.691	0.385	0.527	0.540	0.516	0.621	0.837	0.417	0.602	0.660	0.649	0.519	0.279	0.708	0.885	0.607	0.648
DEA2	Köln	0.576	0.344	0.598	0.537	0.742	1.000	0.713	0.405	0.562	0.540	0.795	0.854	0.868	0.454	0.814	0.766	0.561	0.480	0.407	0.896	0.888	0.670	0.663
DEA3	Münster	0.409	0.297	0.130	0.474	0.742	0.421	0.477	0.331	0.502	0.540	0.384	0.561	0.835	0.341	0.368	0.635	0.435	0.613	0.271	0.753	0.879	0.597	0.577
DEA4	Detmold	0.342	0.330	0.161	0.353	0.742	0.352	0.681	0.655	0.538	0.540	0.433	0.621	0.791	0.412	0.454	0.723	0.500	0.966	0.287	0.813	0.880	0.660	0.581
DEA5	Arnsberg	0.289	0.319	0.269	0.457	0.742	0.552	0.588	0.426	0.534	0.540	0.463	0.657	0.725	0.519	0.557	0.649	0.438	0.892	0.357	0.763	0.886	0.639	0.576
DEB1	Koblenz	0.333	0.253	0.043	0.503	0.748	0.131	0.480	0.498	0.528	0.540	0.464	0.643	1.000	0.698	0.297	0.529	0.554	0.800	0.406	0.959	0.866	0.717	0.565
DEB2	Trier	0.336	0.264	0.157	0.417	0.748	0.262	0.424	0.429	0.483	0.540	0.517	0.451	0.857	0.167	0.502	0.556	0.438	0.536	0.269	0.608	0.828	0.775	0.537
DEB3	Rheinhessen-Pfalz	0.493	0.352	0.460	0.594	0.748	0.724	1.000	0.372	0.557	0.540	0.602	0.436	0.696	0.501	0.787	0.997	0.439	0.471	0.206	0.826	0.882	0.681	0.670
DEC	Saarland	0.282	0.297	0.350	0.474	0.464	0.766	0.530	0.455	0.515	0.540	0.486	0.430	0.812	0.300	0.674	0.520	0.349	0.590	0.267	0.608	0.877	0.702	0.570
DED2	Dresden	0.582	0.278	0.670	0.612	0.689	1.000	0.881	0.590	0.636	0.540	0.453	0.492	0.722	0.881	0.845	0.724	0.328	0.343	0.350	0.694	0.873	0.602	0.530
DED4	Chemnitz	0.229	0.205	0.142	0.374	0.689	0.607	0.585	0.571	0.611	0.540	0.326	0.571	0.684	0.913	0.492	0.484	0.176	0.291	0.419	0.666	0.874	0.681	0.490
DED5	Leipzig	0.584	0.421	0.768	0.627	0.689	1.000	0.368	0.495	0.595	0.540	0.648	0.541	0.733	0.897	0.987	0.377	0.265	0.342	0.758	0.863	0.639	0.544	
DEE	Sachsen-Anhalt	0.278	0.220	0.274	0.432	0.407	0.793	0.377	0.431	0.625	0.540	0.255	0.453	0.697	0.783	0.576	0.405	0.092	0.497	0.314	0.554	0.876	0.665	0.540
DEF	Schleswig-Holstein	0.329	0.341	0.316	0.496	0.725	0.579	0.521	0.398	0.549	0.540	0.332	0.676	0.805	0.342	0.618	0.566	0.494	0.525	0.346	0.800	0.865	0.717	0.574

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific co-publications	1.2.2 Scientific publications among the top 10% most cited	1.3.1 Broadband penetration	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.2.2 Air emissions by fine particulates	4.3.3 Labour productivity	
DEG	Thüringen	0.351	0.245	0.325	0.566	0.608	0.938	0.681	0.617	0.655	0.540	0.301	0.462	0.647	0.866	0.628	0.631	0.214	0.236	0.357	0.638	0.880	0.691	0.506	
DK	Denmark																								
DK01	Hovedstaden	1.000	1.000	1.000	0.823	0.841	1.000	1.000	0.342	0.706	0.849	0.949	0.677	0.741	0.558	1.000	0.829	0.674	0.550	0.507	0.550	0.729	0.733	1.000	
DK02	Sjælland	0.402	1.000	0.343	0.774	0.749	0.407	0.473	0.360	0.706	0.847	0.514	0.524	0.429	0.516	0.612	0.520	0.318	0.391	0.691	0.550	0.463	0.743	0.839	
DK03	Syddanmark	0.540	1.000	0.564	0.712	0.726	0.331	0.573	0.307	0.706	0.869	0.263	0.510	0.500	0.536	0.673	0.787	0.599	0.672	0.309	0.550	0.623	0.707	0.857	
DK04	Midijylland	0.744	1.000	1.000	0.783	0.810	0.641	0.686	0.560	0.706	0.896	0.488	0.645	0.668	0.562	0.978	0.860	0.729	0.776	0.461	0.550	0.588	0.754	0.807	
DK05	Nordjylland	0.540	0.993	1.000	0.786	0.696	1.000	0.382	0.273	0.706	0.851	0.438	0.672	0.615	0.490	1.000	1.000	0.499	0.526	0.494	0.550	0.407	0.801	0.774	
EL	Greece																								
EL30	Attiki	0.753	0.136	0.399	0.516	0.734	0.510	0.588	0.452	0.611	0.196	0.502	0.964	0.916	0.519	0.613	0.312	0.489	0.261	0.945	0.709	0.115	0.225	0.273	
EL41	Voreio Aigaio	0.302	0.179	0.370	0.410	0.497	0.621	0.175	0.331	0.354	0.196	0.043	1.000	1.000	0.274	0.396	0.202	0.211	0.000	0.695	0.845	0.000	0.467	0.126	
EL42	Notio Aigaio	0.198	0.110	0.019	0.170	0.497	0.166	0.058	0.426	0.481	0.196	0.043	0.762	0.820	0.071	0.127	0.116	0.391	0.354	0.833	0.469	0.000	0.455	0.170	
EL43	Kriti	0.451	0.095	0.581	0.699	0.497	1.000	0.297	0.867	0.683	0.196	0.070	1.000	1.000	0.571	0.675	0.274	0.507	0.189	1.000	0.830	0.000	0.466	0.144	
	Anatoliki Makedonia																								
EL51	Thraki	0.387	0.110	0.233	0.536	0.460	0.448	0.373	0.583	0.453	0.196	0.077	0.916	0.960	0.708	0.428	0.103	0.241	0.098	0.733	0.654	0.000	0.361	0.138	
EL52	Kentriki Makedonia	0.696	0.161	0.392	0.547	0.460	0.579	0.420	0.464	0.460	0.196	0.122	0.874	0.909	0.432	0.585	0.243	0.497	0.325	0.860	0.674	0.033	0.293	0.170	
EL53	Dytiki Makedonia	0.742	0.092	0.236	0.701	0.460	0.303	0.193	0.527	0.391	0.196	0.096	0.471	0.518	0.259	0.550	0.062	0.150	0.133	0.325	0.335	0.000	0.450	0.195	
EL54	Ipeiros	0.753	0.048	0.662	0.308	0.460	0.924	0.279	0.626	0.499	0.196	0.084	0.678	0.914	0.483	0.627	0.189	0.295	0.132	0.728	0.605	0.000	0.366	0.129	
EL61	Thessalia	0.516	0.099	0.301	0.527	0.482	0.552	0.349	0.710	0.543	0.196	0.025	0.886	0.733	0.437	0.433	0.212	0.319	0.179	0.765	0.625	0.065	0.272	0.155	
EL62	Ionia Nisia	0.196	0.022	0.079	0.505	0.482	0.234	0.297	0.159	0.128	0.196	0.027	1.000	1.000	0.451	0.251	0.216	0.149	0.102	0.914	0.581	0.000	0.497	0.155	
EL63	Dytiki Ellada	0.404	0.172	0.504	0.472	0.482	0.759	0.349	0.546	0.638	0.196	0.097	0.933	0.926	0.489	0.615	0.322	0.299	0.114	0.809	0.593	0.000	0.335	0.135	
EL64	Sterea Ellada	0.191	0.029	0.074	0.698	0.482	0.090	0.477	0.327	0.349	0.196	0.020	0.981	0.817	0.310	0.379	0.187	0.165	0.354	0.979	0.683	0.069	0.424	0.195	
EL65	Peloponnisos	0.618	0.048	0.048	0.495	0.482	0.172	0.382	0.662	0.495	0.196	0.026	1.000	0.806	0.277	0.222	0.105	0.265	0.123	0.625	0.504	0.116	0.497	0.165	
ES	Spain																								
ES11	Galicia	0.782	0.531	0.287	0.508	0.804	0.359	0.436	0.344	0.394	0.197	0.374	0.294	0.304	0.389	0.443	0.318	0.379	0.393	0.599	0.307	0.441	0.712	0.394	
ES12	Principado de Asturias	0.893	0.557	0.278	0.425	0.837	0.269	0.395	0.323	0.446	0.301	0.343	0.260	0.231	0.335	0.462	0.350	0.240	0.166	0.459	0.318	0.425	0.576	0.407	
ES13	Cantabria	0.980	0.549	0.377	0.385	0.857	0.359	0.373	0.317	0.382	0.132	0.249	0.297	0.243	0.268	0.522	0.377	0.219	0.286	0.612	0.313	0.468	0.639	0.412	
ES21	País Vasco	1.000	0.634	0.408	0.537	0.872	0.345	0.781	0.288	0.623	0.299	0.471	0.402	0.356	0.656	0.630	0.438	0.467	0.362	0.827	0.475	0.469	0.602	0.503	
ES22	Comunidad Foral de Navarra	0.947	0.626	0.421	0.631	0.891	0.338	0.651	0.283	0.448	0.148	0.246	0.328	0.331	0.473	0.655	0.579	0.445	0.795	0.740	0.412	0.436	0.613	0.464	
ES23	La Rioja	0.887	0.491	0.325	0.298	0.855	0.283	0.329	0.221	0.329	0.148	0.238	0.237	0.241	0.404	0.346	0.229	0.654	0.565	0.637	0.394	0.381	0.691	0.424	
ES24	Aragón	0.664	0.520	0.314	0.370	0.894	0.283	0.447	0.321	0.420	0.277	0.284	0.321	0.305	0.347	0.480	0.418	0.377	0.200	0.803	0.301	0.442	0.623	0.433	
ES3	Comunidad de Madrid	0.907	0.549	0.576	0.447	0.929	0.538	0.619	0.238	0.481	0.372	0.981	0.263	0.255	0.311	0.689	0.389	0.731	0.344	0.756	0.280	0.512	0.597	0.459	
ES41	Castilla y León	0.778	0.542	0.272	0.394	0.874	0.359	0.534	0.287	0.408	0.168	0.238	0.317	0.215	0.318	0.433	0.312	0.298	0.141	1.000	0.282	0.438	0.738	0.398	
ES42	Castilla-La Mancha	0.669	0.484	0.123	0.492	0.840	0.186	0.416	0.261	0.288	0.057	0.296	0.224	0.222	0.241	0.276	0.220	0.296	0.353	0.564	0.202	0.458	0.628	0.396	
ES43	Extremadura	0.660	0.502	0.153	0.349	0.843	0.372	0.267	0.275	0.337	0.134	0.200	0.187	0.286	0.401	0.301	0.132	0.169	0.231	0.656	0.331	0.249	0.749	0.348	
ES51	Catalunya/Cataluña	0.882	0.546	0.510	0.601	0.910	0.462	0.608	0.320	0.474	0.458	0.597	0.343	0.390	0.342	0.660	0.467	0.872	0.676	0.831	0.407	0.496	0.461	0.438	

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific co-publications	1.2.2 Scientific publications among the top 10% most cited	1.3.1 Broadband penetration	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.3.2 Air emissions by fine particulates	4.3.3 Labour productivity	
ES52	Comunitat Valenciana	0.744	0.667	0.304	0.471	0.909	0.421	0.440	0.353	0.420	0.266	0.394	0.342	0.312	0.322	0.467	0.460	0.850	0.949	0.796	0.324	0.505	0.565	0.375	
ES53	Illes Balears	0.587	0.524	0.172	0.473	0.922	0.186	0.247	0.229	0.297	0.201	0.340	0.166	0.174	0.092	0.387	0.262	0.802	0.287	0.489	0.172	0.317	0.592	0.450	
ES61	Andalucía	0.627	0.495	0.271	0.407	0.841	0.462	0.354	0.266	0.343	0.228	0.357	0.218	0.243	0.249	0.384	0.330	0.368	0.257	0.523	0.231	0.453	0.539	0.354	
ES62	Región de Murcia	0.529	0.549	0.249	0.418	0.912	0.386	0.416	0.276	0.320	0.192	0.175	0.263	0.241	0.296	0.429	0.315	0.752	0.483	0.718	0.213	0.408	0.429	0.341	
ES63	Ciudad de Ceuta	0.667	0.722	0.029	1.000	0.785	0.446	0.000	0.000	0.000	0.155	0.326	0.000	0.000	0.000	0.159	0.000	0.152	0.152	0.237	0.000	0.220	0.686	0.354	
ES64	Ciudad de Melilla	0.538	0.531	0.072	0.341	0.960	0.448	0.000	0.252	0.000	0.000	0.326	0.049	0.062	0.079	0.192	0.184	0.304	0.163	0.437	0.000	0.264	0.497	0.308	
ES7	Canarias	0.611	0.473	0.213	0.311	0.905	0.290	0.216	0.367	0.344	0.177	0.203	0.187	0.225	0.190	0.386	0.241	0.299	0.174	0.930	0.131	0.366	0.576	0.340	
FI Finland																									
FI19	Länsi-Suomi	0.456	0.978	0.562	0.705	0.875	0.469	0.827	0.292	0.605	1.000	0.714	0.670	0.577	0.856	0.691	0.802	0.407	0.563	0.618	0.619	0.478	0.942	0.614	
FI1B	Helsinki-Uusimaa	0.598	1.000	1.000	0.748	0.938	0.724	0.948	0.272	0.897	1.000	1.000	0.748	0.671	1.000	0.975	1.000	0.846	0.584	0.459	0.662	0.482	0.874	0.705	
FI1C	Etelä-Suomi	0.373	0.971	0.659	0.676	0.842	0.483	0.624	0.321	0.651	1.000	0.479	0.638	0.645	0.984	0.691	0.661	0.397	0.643	0.601	0.689	0.475	0.901	0.597	
FI1D	Pohjois-ja Itä-Suomi	0.360	0.989	0.669	0.735	0.805	0.676	0.777	0.263	0.744	1.000	0.414	0.519	0.570	0.876	0.674	0.850	0.345	0.442	0.478	0.520	0.454	0.963	0.573	
FI2	Åland	0.473	0.832	0.030	0.720	0.870	0.021	0.334	0.422	0.914	1.000	0.830	0.738	0.679	1.000	0.000	0.113	0.686	0.727	0.283	0.508	0.266	0.979	0.593	
FR France																									
FR1	Île-de-France	1.000	0.590	0.517	0.532	0.833	0.510	0.817	0.233	1.000	0.243	1.000	0.598	0.651	0.682	0.672	0.762	0.502	0.610	0.335	0.605	0.680	0.565	0.874	
FRB	Centre — Val de Loire	0.547	0.495	0.138	0.407	0.638	0.248	0.616	0.206	0.626	0.243	0.182	0.478	0.500	0.563	0.344	0.459	0.089	0.441	0.354	0.642	0.651	0.696	0.570	
FRC	Bourgogne-Franche-Comté	0.536	0.469	0.174	0.462	0.537	0.241	0.676	0.219	0.744	0.243	0.106	0.433	0.577	0.490	0.378	0.494	0.191	0.377	0.250	0.588	0.599	0.743	0.563	
FRD	Normandie	0.702	0.458	0.145	0.267	0.565	0.248	0.591	0.146	0.541	0.243	0.134	0.391	0.454	0.407	0.318	0.482	0.100	0.290	0.197	0.486	0.628	0.670	0.597	
FRE	Hauts-de-France	0.644	0.469	0.173	0.346	0.629	0.262	0.471	0.155	0.715	0.243	0.350	0.475	0.519	0.457	0.372	0.462	0.168	0.426	0.153	0.460	0.634	0.607	0.577	
FRF	Grand Est	0.622	0.480	0.241	0.375	0.657	0.441	0.487	0.350	0.880	0.243	0.188	0.454	0.636	0.450	0.407	0.510	0.216	0.292	0.273	0.613	0.624	0.681	0.585	
FRG	Pays de la Loire	0.842	0.564	0.173	0.377	0.650	0.290	0.546	0.191	0.684	0.243	0.351	0.583	0.678	0.680	0.400	0.446	0.162	0.333	0.321	0.628	0.654	0.670	0.570	
FRH	Bretagne	0.704	0.524	0.246	0.417	0.607	0.428	0.605	0.391	1.000	0.243	0.352	0.502	0.620	0.591	0.445	0.665	0.191	0.224	0.503	0.597	0.653	0.712	0.523	
FRI	Nouvelle-Aquitaine	0.678	0.553	0.196	0.403	0.613	0.345	0.564	0.325	0.829	0.243	0.235	0.459	0.557	0.577	0.424	0.469	0.222	0.414	0.297	0.520	0.618	0.707	0.546	
FRJ	Occitanie	0.813	0.560	0.359	0.464	0.579	1.000	0.838	0.296	0.924	0.243	0.480	0.480	0.643	0.556	0.539	0.578	0.214	0.449	0.274	0.566	0.657	0.675	0.539	
FRK	Auvergne-Rhône-Alpes	0.816	0.542	0.338	0.424	0.658	0.538	0.840	0.231	0.873	0.243	0.451	0.567	0.649	0.723	0.550	0.795	0.262	0.437	0.326	0.621	0.653	0.654	0.602	
FRL	Provence-Alpes-Côte d'Azur	0.713	0.385	0.307	0.449	0.668	0.628	0.640	0.296	0.977	0.243	0.459	0.461	0.671	0.536	0.499	0.507	0.297	0.396	0.459	0.458	0.663	0.618	0.578	
FRM	Corse	0.073	0.231	0.076	0.216	0.285	0.166	0.193	0.193	0.436	0.243	0.488	0.069	0.323	0.168	0.312	0.253	0.146	0.122	0.054	0.010	0.480	0.743	0.507	
RUP FR — Régions Ultrapériphériques Françaises																									
FRY	Panonska Hrvatska	0.304	0.330	0.045	0.176	0.528	0.434	0.143	1.000	1.000	0.243	0.166	0.367	0.479	0.330	0.190	0.137	0.047	0.078	0.216	0.337	0.324	0.649	0.408	
HR Croatia																									
HR02	Jadranska Hrvatska	0.191	0.121	0.101	0.149	0.522	0.152	0.247	0.200	0.192	0.499	0.211	0.208	0.347	0.312	0.335	0.167	0.170	0.475	1.000	0.217	0.335	0.356	0.128	
HR03	Grad Zagreb	0.867	0.414	0.847	0.172	0.522	0.910	0.555	0.282	0.503	0.616	1.000	0.517	0.630	0.655	0.899	0.300	0.505	0.312	0.370	0.479	0.335	0.204	0.199	

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific co-publications	1.2.2 Scientific publications among the top 10% most cited	1.3.1 Broadband penetration	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.2.2 Air emissions by fine particulates	4.3.3 Labour productivity	
HR06	Sjeverna Hrvatska	0.316	0.139	0.057	0.108	0.522	0.055	0.599	0.282	1.000	0.452	0.356	0.259	0.518	0.434	0.363	0.248	0.185	0.239	0.217	0.381	0.335	0.366	0.170	
HU	Hungary																								
HU11	Budapest	0.982	0.527	0.735	0.317	0.874	0.393	0.856	0.404	0.574	0.653	1.000	0.397	0.290	0.477	0.855	0.409	0.423	0.316	0.208	0.320	0.990	0.356	0.204	
HU12	Pest	0.309	0.355	0.059	0.421	0.817	0.034	0.432	0.324	0.322	0.495	0.603	0.296	0.189	0.294	0.299	0.479	0.415	0.355	0.206	0.150	0.939	0.424	0.197	
HU21	Közép-Dunántúl	0.167	0.300	0.075	0.254	0.773	0.124	0.595	0.312	0.280	0.467	0.237	0.231	0.125	0.313	0.337	0.274	0.165	0.232	0.186	0.149	0.981	0.471	0.150	
HU22	Nyugat-Dunántúl	0.144	0.231	0.139	0.226	0.767	0.124	0.561	0.375	0.315	0.407	0.109	0.224	0.187	0.271	0.366	0.287	0.111	0.248	0.207	0.178	0.976	0.471	0.169	
HU23	Dél-Dunántúl	0.102	0.370	0.168	0.257	0.685	0.228	0.416	0.474	0.372	0.453	0.147	0.301	0.188	0.343	0.432	0.208	0.199	0.327	0.240	0.187	0.777	0.492	0.148	
HU31	Észak-Magyarország	0.064	0.410	0.083	0.195	0.605	0.069	0.424	0.343	0.277	0.406	0.191	0.265	0.161	0.286	0.259	0.171	0.132	0.244	0.464	0.213	0.964	0.330	0.150	
HU32	Észak-Alföld	0.098	0.399	0.182	0.244	0.657	0.255	0.440	0.394	0.306	0.394	0.187	0.231	0.143	0.255	0.378	0.252	0.163	0.168	0.243	0.141	0.945	0.398	0.149	
HU33	Dél-Alföld	0.104	0.436	0.189	0.282	0.619	0.441	0.494	0.360	0.298	0.429	0.215	0.258	0.176	0.279	0.493	0.436	0.196	0.196	0.122	0.174	0.922	0.462	0.152	
IE	Ireland																								
IE04	Northern and Western	0.940	0.440	0.461	0.607	0.796	0.366	0.632	0.227	0.784	0.777	0.387	0.463	0.506	0.883	0.585	0.563	0.235	0.405	1.000	0.572	0.754	0.822	0.580	
IE05	Southern	1.000	0.436	0.400	0.683	0.735	0.103	0.458	0.195	1.000	0.777	0.432	0.474	0.486	0.782	0.555	0.286	0.113	0.218	0.549	0.519	0.905	0.764	1.000	
IE06	Eastern and Midland	1.000	0.557	0.736	0.677	0.863	0.131	0.605	0.300	1.000	0.777	0.869	0.477	0.512	0.772	0.711	0.264	0.297	0.268	0.633	0.432	0.955	0.770	1.000	
IT	Italy																								
ITC1	Piemonte	0.293	0.330	0.382	0.691	0.656	0.290	0.736	0.439	0.471	0.752	0.351	0.825	0.818	0.572	0.660	0.551	0.539	0.645	0.445	0.595	0.241	0.462		
ITC2	Valle d'Aosta/Vallée d'Aoste	0.282	0.359	0.129	0.151	0.729	0.103	0.339	0.281	0.478	0.752	0.476	0.471	0.591	0.256	0.472	0.247	0.183	0.258	0.875	0.095	0.443	0.738	0.518	
ITC3	Liguria	0.260	0.363	0.519	0.547	0.680	0.441	0.564	0.341	0.445	0.752	0.300	0.625	0.719	0.315	0.754	0.512	0.297	0.286	0.875	0.292	0.536	0.607	0.489	
ITC4	Lombardia	0.387	0.399	0.425	0.683	0.732	0.186	0.570	0.362	0.520	0.752	0.555	0.826	0.894	0.644	0.685	0.522	0.664	0.866	0.875	0.411	0.597	0.068	0.572	
ITF1	Abruzzo	0.327	0.289	0.423	0.547	0.635	0.393	0.428	0.488	0.374	0.752	0.174	0.507	0.690	0.400	0.614	0.410	0.361	0.472	0.875	0.174	0.565	0.550	0.408	
ITF2	Molise	0.216	0.319	0.298	0.627	0.545	0.255	0.432	0.475	0.503	0.752	0.202	0.456	0.646	0.306	0.693	0.261	0.423	0.307	0.875	0.158	0.400	0.613	0.384	
ITF3	Campania	0.211	0.223	0.313	0.760	0.632	0.462	0.458	0.462	0.466	0.752	0.422	0.733	0.835	0.568	0.596	0.336	0.477	0.398	0.875	0.309	0.567	0.429	0.375	
ITF4	Puglia	0.147	0.216	0.248	0.703	0.511	0.290	0.368	0.444	0.492	0.752	0.222	0.704	0.781	0.491	0.505	0.261	0.431	0.568	0.875	0.243	0.585	0.545	0.341	
ITF5	Basilicata	0.267	0.293	0.250	0.654	0.568	0.290	0.184	0.577	0.277	0.752	0.179	0.375	0.733	0.283	0.472	0.210	0.312	0.573	0.875	0.089	0.493	0.670	0.377	
ITF6	Calabria	0.193	0.223	0.221	0.759	0.530	0.297	0.210	0.399	0.385	0.752	0.159	0.976	0.980	0.497	0.465	0.209	0.205	0.193	0.875	0.197	0.463	0.607	0.342	
ITG1	Sicilia	0.120	0.190	0.267	0.602	0.524	0.372	0.339	0.488	0.449	0.752	0.162	0.692	0.815	0.308	0.502	0.228	0.248	0.195	0.875	0.181	0.585	0.571	0.393	
ITG2	Sardegna	0.173	0.363	0.318	0.544	0.670	0.476	0.193	0.261	0.470	0.752	0.193	0.506	0.809	0.568	0.531	0.231	0.364	0.237	0.875	0.209	0.529	0.717	0.376	
ITH1	Provincia Autonoma di Bolzano/Bozen	0.160	0.403	0.442	0.843	0.682	0.138	0.403	0.424	0.557	0.752	0.126	0.587	0.843	0.755	0.877	0.324	0.625	0.488	0.875	0.306	0.482	0.623	0.596	
ITH2	Provincia Autonoma di Trento	0.340	0.491	0.971	0.777	0.762	0.579	0.458	0.450	0.502	0.752	0.436	0.707	0.878	0.919	0.934	0.538	0.509	0.450	0.875	0.362	0.440	0.524	0.530	
ITH3	Veneto	0.411	0.414	0.397	0.611	0.706	0.269	0.537	0.428	0.517	0.752	0.262	0.692	0.844	0.571	0.591	0.538	0.667	0.978	0.875	0.439	0.596	0.147	0.472	
ITH4	Friuli-Venezia Giulia	0.387	0.429	0.763	0.512	0.720	0.497	0.555	0.574	0.504	0.752	0.259	0.656	0.857	0.684	0.743	0.605	0.458	0.752	0.875	0.398	0.562	0.419	0.473	
ITH5	Emilia-Romagna	0.424	0.458	0.518	0.575	0.782	0.331	0.748	0.381	0.601	0.752	0.339	0.764	0.832	0.544	0.706	0.668	0.551	1.000	0.875	0.435	0.597	0.319	0.496	
ITI1	Toscana	0.320	0.385	0.573	0.626	0.699	0.448	0.543	0.372	0.634	0.752	0.328	0.573	0.781	0.550	0.753	0.536	0.611	0.620	0.875	0.326	0.587	0.513	0.458	

Region Code	Region	1.1.2 Population involved in tertiary education		1.1.3 Population involved in lifelong learning		1.2.1 International scientific co-publications		1.2.2 Scientific publications among the top 10% most cited		1.3.1 Broadband penetration		2.1.1 R&D expenditure in the public sector		2.2.1 R&D expenditure in the business sector		2.2.3 Innovation expenditures per person employed		2.3.1 Cloud computing in enterprises		2.3.2 Employed ICT specialists		3.1.1 SMEs introducing new innovations		3.1.2 SMEs introducing business process innovations		3.2.1 Innovative SMEs collaborating with others		3.2.2 Public-private co-publications		3.3.1 PCT patent applications		3.3.2 Trademark applications		3.3.3 Design applications		4.1.1 Sales of new-to-market and new-to-firm innovations		4.1.2 Employment in innovative enterprises		4.2.1 Exports of medium and high technology products		4.3.1 Air emissions by firms		4.3.3 Labour productivity	
ITI2	Umbria	0.418	0.388	0.445	0.564	0.634	0.359	0.386	0.466	0.505	0.752	0.321	0.676	0.728	0.436	0.646	0.448	0.407	0.703	0.875	0.317	0.574	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39									
ITI3	Marche	0.344	0.330	0.318	0.541	0.616	0.303	0.432	0.505	0.455	0.752	0.165	0.665	0.740	0.500	0.543	0.428	0.581	1.000	0.875	0.312	0.573	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
ITI4	Lazio	0.429	0.374	0.594	0.585	0.746	0.807	0.501	0.307	0.522	0.752	0.909	0.572	0.688	0.489	0.745	0.354	0.465	0.382	0.875	0.226	0.578	0.461	0.51	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
LT		Lithuania																																											
LT01	Sostinės regionas	1.000	0.370	0.448	0.249	0.639	0.503	0.555	0.599	0.534	0.516	1.000	0.494	0.627	0.517	0.495	0.297	1.000	0.549	0.409	0.636	0.286	0.623	0.24	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
LT02	Vidurio ir vakarų Lietuvos regionas	0.749	0.293	0.140	0.320	0.579	0.276	0.303	0.517	0.349	0.350	0.245	0.367	0.563	0.372	0.251	0.149	0.462	0.400	0.287	0.598	0.272	0.634	0.13	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL		Netherlands																																											
NL11	Groningen	0.947	0.956	1.000	0.927	0.958	0.503	0.704	0.254	0.560	0.793	0.479	0.715	0.593	0.688	1.000	0.414	0.233	0.174	0.308	0.605	0.539	0.675	0.65	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL12	Friuli-venetia Giulia	0.587	0.842	0.075	0.720	0.911	0.503	0.704	0.254	0.560	0.793	0.327	0.715	0.593	0.688	0.270	0.344	0.231	0.204	0.308	0.605	0.487	0.707	0.57	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL13	Drenthe	0.500	0.875	0.157	0.869	0.928	0.503	0.704	0.254	0.560	0.793	0.433	0.715	0.593	0.688	0.382	0.407	0.226	0.420	0.308	0.605	0.460	0.675	0.55	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL21	Overijssel	0.740	0.875	0.442	0.701	0.982	0.503	0.704	0.254	0.560	0.793	0.642	0.715	0.593	0.688	0.665	0.510	0.448	0.343	0.308	0.605	0.547	0.660	0.58	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL22	Gelderland	0.807	0.916	0.794	0.869	0.964	0.503	0.704	0.254	0.560	0.793	0.592	0.715	0.593	0.688	0.806	0.873	0.384	0.622	0.308	0.605	0.559	0.644	0.55	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL23	Flevoland	0.487	1.000	0.061	1.000	0.949	0.503	0.704	0.254	0.560	0.793	0.988	0.715	0.593	0.688	0.348	0.319	0.600	0.701	0.308	0.605	0.319	0.656	0.55	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL32	Noord-Holland	0.982	0.996	0.892	0.994	0.957	0.503	0.704	0.254	0.560	0.793	1.000	0.715	0.593	0.688	0.865	0.458	0.812	0.496	0.308	0.605	0.564	0.686	0.78	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL34	Zeeland	0.429	0.850	0.051	1.000	1.000	0.503	0.704	0.254	0.560	0.793	0.258	0.715	0.593	0.688	0.315	0.409	0.331	0.373	0.308	0.605	0.475	0.628	0.60	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL35	Utrecht	1.000	1.000	1.000	0.921	0.969	0.503	0.704	0.254	0.560	0.793	1.000	0.715	0.593	0.688	1.000	0.503	0.425	0.338	0.308	0.605	0.649	0.71	0.65	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL36	Zuid-Holland	0.809	0.960	0.824	0.843	0.954	0.503	0.704	0.254	0.560	0.793	0.747	0.715	0.593	0.688	0.857	0.597	0.473	0.391	0.308	0.605	0.618	0.660	0.65	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL41	Noord-Brabant	0.822	0.850	0.332	0.724	0.957	0.503	0.704	0.254	0.560	0.793	0.609	0.715	0.593	0.688	0.653	1.000	0.538	0.999	0.308	0.605	0.620	0.618	0.65	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
NL42	Limburg (NL)	0.640	0.821	0.807	0.764	0.946	0.503	0.704	0.254	0.560	0.793	0.430	0.715	0.593	0.688	0.781	0.799	0.491	0.788	0.308	0.605	0.574	0.665	0.58	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL		Poland																																											
PL21	Małopolskie	0.742	0.575	0.317	0.258	0.765	0.579	0.748	0.223	0.370	0.668	0.662	0.085	0.281	0.202	0.479	0.346	0.693	0.746	0.000	0.276	0.577	0.147	0.14	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL22	Śląskie	0.580	0.308	0.150	0.213	0.765	0.221	0.455	0.268	0.269	0.668	0.506	0.171	0.404	0.341	0.341	0.178	0.394	0.676	0.128	0.393	0.580	0.084	0.18	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL41	Wielkopolskie	0.569	0.198	0.162	0.309	0.783	0.317	0.382	0.278	0.271	0.668	0.263	0.102	0.210	0.182	0.341	0.185	0.575	1.000	0.110	0.206	0.580	0.277	0.16	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL42	Zachodniopomorskie	0.538	0.231	0.099	0.236	0.783	0.255	0.297	0.257	0.371	0.668	0.392	0.151	0.321	0.346	0.298	0.150	0.309	0.518	0.121	0.292	0.451	0.518	0.13	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL43	Łódzkie	0.336	0.147	0.057	0.356	0.783	0.234	0.354	0.226	0.230	0.668	0.284	0.106	0.102	0.090	0.185	0.172	0.439	0.585	0.084	0.439	0.497	0.555	0.087	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL51	Đelnośląskie	0.687	0.425	0.224	0.267	0.782	0.345	0.534	0.328	0.394	0.668	0.684	0.165	0.391	0.262	0.423	0.292	0.432	0.558	0.000	0.387	0.590	0.293	0.16	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL52	Opolskie	0.560	0.165	0.105	0.425	0.782	0.324	0.379	0.241	0.209	0.668	0.558	0.137	0.268	0.206	0.288	0.169	0.349	0.550	0.252	0.300	0.483	0.298	0.132	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL61	Kujawsko-pomorskie	0.371	0.370	0.120	0.239	0.756	0.248	0.466	0.451	0.264	0.668	0.325	0.135	0.276	0.240	0.297	0.151	0.408	0.661	0.000	0.266	0.552	0.356	0.12	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL62	Warmińsko-mazurskie	0.364	0.201	0.072	0.278	0.756	0.159	0.285	0.242	0.284	0.668	0.392	0.242	0.267	0.281	0.224	0.161	0.301	0.764	0.296	0.374	0.514	0.487	0.10	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL63	Pomorskie	0.704	0.348	0.213	0.330	0.756	0.359	0.661	0.286	0.347	0.668	0.576	0.146	0.412	0.284	0.405	0.247	0.565	0.539	0.132	0.385	0.538	0.466	0.15	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL71	Łódzkie	0.482	0.220	0.150	0.205	0.657	0.434	0.403	0.346	0.311	0.668	0.293	0.124	0.200	0.215	0.330	0.196	0.448	0.572	0.144	0.287	0.550	0.236	0.15	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL72	Świętokrzyskie	0.467	0.106	0.048	0.066	0.657	0.317	0.273	0.396	0.212	0.668	0.249	0.132	0.212	0.124	0.208	0.151	0.341	0.480	0.078	0.274	0.508	0.283	0.11	0.555	0.38	0.524	0.39	0.524	0.39	0.524	0.39	0.524	0.39											
PL81	Lubelskie	0.549	0.399																																										

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific co-publications	1.2.2 Scientific publications among the top 10% most cited	1.3.1 Broadband penetration	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.3.2 Air emissions by fine particulates	4.3.3 Labour productivity
PL84	Podlaskie	0.478	0.410	0.125	0.209	0.723	0.372	0.319	0.433	0.333	0.668	0.234	0.065	0.356	0.182	0.283	0.148	0.480	0.522	0.000	0.315	0.495	0.471	0.110
PL91	Warszawski Stołeczny	1.000	0.593	0.520	0.268	0.839	0.545	0.800	0.306	0.370	0.668	1.000	0.190	0.477	0.392	0.635	0.269	0.728	0.577	0.105	0.402	0.573	0.257	0.311
PL92	Mazowiecki regionalny	0.471	0.095	0.014	0.163	0.839	0.028	0.314	0.243	0.161	0.668	0.081	0.000	0.244	0.150	0.131	0.190	0.216	0.524	0.034	0.232	0.575	0.362	0.170
PT Portugal																								
PT11	Norte	0.571	0.495	0.442	0.406	0.467	0.469	0.646	0.401	0.335	0.400	0.411	0.465	0.495	0.249	0.519	0.407	0.573	0.662	0.720	0.452	0.412	0.581	0.199
PT15	Algarve	0.313	0.491	0.284	0.586	0.555	0.172	0.247	0.461	0.357	0.400	0.214	0.406	0.642	0.298	0.398	0.259	0.331	0.141	0.507	0.508	0.101	0.848	0.225
PT19	Centro (PT)	0.547	0.590	0.617	0.446	0.452	0.407	0.524	0.387	0.359	0.400	0.263	0.474	0.593	0.408	0.532	0.451	0.433	0.504	0.635	0.563	0.401	0.712	0.216
PT1A	Grande Lisboa	0.784	0.685	0.799	0.408	0.717	0.538	0.605	0.255	0.503	0.400	1.000	0.692	0.663	0.438	0.692	0.288	0.568	0.251	1.000	0.658	0.395	0.665	0.293
PT1B	Península de Setúbal	0.556	0.608	0.242	0.525	0.717	0.538	0.605	0.240	0.258	0.400	0.814	0.450	0.504	0.302	0.414	0.273	0.309	0.096	0.428	0.417	0.395	0.665	0.231
PT1C	Alentejo	0.320	0.465	0.279	0.296	0.397	0.186	0.443	0.267	0.278	0.400	0.303	0.478	0.606	0.351	0.343	0.139	0.387	0.171	0.323	0.575	0.392	0.764	0.222
PT1D	Oeste e Vale do Tejo	0.407	0.502	0.055	0.383	0.425	0.297	0.485	0.292	0.306	0.400	0.269	0.496	0.569	0.390	0.270	0.265	0.501	0.974	0.457	0.559	0.397	0.712	0.207
PT2	Região Autónoma dos Açores	0.100	0.308	0.259	0.439	0.662	0.207	0.143	0.247	0.174	0.400	0.534	0.369	0.507	0.291	0.362	0.271	0.143	0.000	0.726	0.527	0.016	0.660	0.200
PT3	Região Autónoma da Madeira	0.389	0.366	0.203	0.422	0.631	0.152	0.267	0.363	0.313	0.400	0.534	0.354	0.437	0.210	0.356	0.188	0.530	0.627	0.479	0.431	0.083	0.660	0.265
RO Romania																								
RO11	Nord-Vest	0.136	0.209	0.172	0.452	0.701	0.083	0.184	0.106	0.169	0.107	0.207	0.066	0.000	0.046	0.293	0.149	0.326	0.308	0.183	0.000	0.746	0.403	0.098
RO12	Centru	0.016	0.165	0.101	0.371	0.701	0.014	0.324	0.093	0.051	0.105	0.199	0.075	0.000	0.037	0.250	0.139	0.281	0.362	0.109	0.000	0.806	0.393	0.113
RO21	Nord-Est	0.044	0.260	0.065	0.279	0.623	0.076	0.193	0.029	0.051	0.056	0.098	0.001	0.000	0.018	0.194	0.080	0.281	0.300	0.239	0.000	0.704	0.387	0.047
RO22	Sud-Est	0.000	0.293	0.027	0.247	0.549	0.048	0.058	0.125	0.111	0.000	0.040	0.000	0.000	0.016	0.122	0.080	0.188	0.343	0.028	0.000	0.697	0.524	0.099
RO31	Sud-Muntenia	0.000	0.348	0.016	0.295	0.591	0.007	0.279	0.193	0.119	0.000	0.060	0.000	0.000	0.012	0.136	0.117	0.133	0.232	0.053	0.000	0.808	0.403	0.109
RO32	Bucureşti-IIfov	0.709	0.520	0.338	0.299	0.821	0.283	0.428	0.114	0.237	0.453	0.974	0.199	0.000	0.098	0.534	0.144	0.444	0.332	0.207	0.000	0.632	0.215	0.281
RO41	Sud-Vest Olténia	0.000	0.095	0.032	0.419	0.595	0.055	0.082	0.000	0.012	0.000	0.125	0.000	0.000	0.002	0.180	0.030	0.109	0.304	0.075	0.000	0.622	0.340	0.092
RO42	Vest	0.051	0.359	0.108	0.404	0.727	0.076	0.428	0.065	0.096	0.013	0.229	0.000	0.000	0.035	0.281	0.152	0.172	0.232	0.092	0.000	0.671	0.524	0.127
SE Sweden																								
SE11	Stockholm	1.000	1.000	1.000	0.863	0.812	0.641	0.942	0.522	0.996	0.902	1.000	0.913	0.707	1.000	0.977	1.000	1.000	0.553	0.599	0.650	0.685	0.906	0.890
SE12	Östra Mellansverige	0.784	1.000	1.000	0.709	0.810	0.876	0.893	0.451	0.662	0.902	0.538	0.721	0.669	1.000	0.954	0.965	0.314	0.295	0.343	0.582	0.683	0.906	0.674
SE21	Småland med Örland	0.553	1.000	0.238	0.588	0.721	0.200	0.671	0.473	0.510	0.902	0.468	0.491	0.451	0.931	0.380	0.643	0.453	0.939	0.339	0.474	0.677	0.843	0.607
SE22	Sydsverige	0.798	1.000	0.779	0.708	0.750	0.786	0.842	0.576	0.958	0.902	0.794	0.729	0.548	1.000	0.828	1.000	0.752	0.537	0.590	0.612	0.684	0.775	0.681
SE23	Västsverige	0.844	1.000	0.699	0.771	0.681	0.607	1.000	0.503	0.800	0.902	0.797	0.721	0.673	1.000	0.931	0.946	0.700	0.668	0.600	0.610	0.693	0.812	0.697
SE31	Norra Mellansverige	0.613	1.000	0.199	0.536	0.707	0.166	0.517	0.456	0.638	0.902	0.434	0.630	0.646	1.000	0.457	0.777	0.297	0.404	0.254	0.488	0.678	0.942	0.581
SE32	Mellersta Norrland	0.331	1.000	0.176	0.415	0.723	0.186	0.373	0.400	0.446	0.902	0.735	0.395	0.476	1.000	0.424	0.620	0.278	0.407	0.500	0.483	0.627	0.979	0.666
SE33	Övre Norrland	0.620	1.000	1.000	0.586	0.508	1.000	0.555	0.624	0.682	0.902	0.507	0.565	0.521	0.878	0.943	0.780	0.271	0.415	0.355	0.403	0.662	0.979	0.715
SI Slovenia																								
SI03	Vzhodna Slovenija	0.491	0.744	0.167	0.240	0.744	0.076	0.684	0.223	0.343	0.381	0.261	0.641	0.463	0.388	0.399	0.473	0.503	0.437	0.501	0.527	0.946	0.471	0.274
SI04	Zahodna Slovenija	0.642	0.875	0.875	0.378	0.864	0.586	0.759	0.161	0.522	0.495	0.612	0.786	0.590	0.509	0.786	0.439	0.811	0.597	0.410	0.660	0.960	0.403	0.343

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific publications	1.2.2 Scientific publications among the top 10% most cited	1.3.1 Broadband penetration	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.3.2 Air emissions by fine particulates	4.3.3 Labour productivity						
SK Slovakia																														
SK01	Braňlavský kraj	0.904	0.722	0.769	0.169	0.889	0.545	0.491	0.292	0.363	0.501	1.000	0.344	0.208	0.213	0.226	0.299	0.283	0.243	0.264	0.269	0.356	0.209	0.944	0.461	0.242				
SK02	Západné Slovensko	0.331	0.388	0.101	0.280	0.695	0.103	0.455	0.459	0.366	0.344	0.208	0.234	0.349	0.390	0.295	0.286	0.203	0.230	0.244	0.275	0.314	0.218	0.279	0.263	0.673	0.228	0.926	0.398	0.215
SK03	Stredné Slovensko	0.416	0.363	0.146	0.283	0.727	0.234	0.349	0.390	0.295	0.286	0.203	0.230	0.349	0.390	0.295	0.286	0.203	0.230	0.244	0.275	0.314	0.218	0.279	0.263	0.673	0.228	0.926	0.398	0.215
SK04	Východné Slovensko	0.358	0.396	0.181	0.170	0.628	0.172	0.314	0.467	0.303	0.252	0.448	0.201	0.197	0.263	0.325	0.250	0.262	0.295	0.209	0.205	0.951	0.351	0.236						
NO Norway																														
NO02	Innlandet	0.600	0.696	0.427	0.705	1.000	0.283	0.412	0.431	0.735	0.907	0.568	0.769	0.647	1.000	0.589	0.311	0.130	0.123	0.300	0.685	0.000	0.937	0.765						
NO06	Trendelag/Troindelag	0.824	0.784	1.000	0.669	0.996	1.000	0.542	0.586	0.821	0.905	0.395	0.774	0.657	1.000	1.000	0.770	0.165	0.161	0.349	0.762	0.000	0.948	0.828						
NO07	Nord-Norge	0.642	0.722	0.883	0.681	0.987	0.910	0.443	0.528	0.619	0.808	0.568	0.646	0.687	1.000	0.789	0.397	0.043	0.125	0.553	0.623	0.000	0.990	0.796						
NO08	Oslo og Viken	1.000	0.788	0.974	0.768	0.909	0.897	0.732	0.394	0.938	0.928	0.969	1.000	0.804	1.000	0.935	0.596	0.349	0.234	0.225	0.755	0.000	0.791	0.982						
NO09	Agder og Sør-Østlandet	0.724	0.810	0.351	0.802	0.853	0.303	0.654	0.605	0.779	0.866	0.365	0.846	0.724	1.000	0.494	0.667	0.141	0.226	0.399	0.755	0.000	0.838	0.821						
NO0A	Vestlandet	0.849	0.784	0.735	0.677	0.876	0.634	0.616	0.519	0.745	0.895	0.335	0.868	0.694	1.000	0.789	0.710	0.183	0.285	0.308	0.714	0.000	0.895	0.870						
CH Switzerland																														
CH01	Région lémanique	0.733	0.960	1.000	0.791	0.961	0.648	0.699	N/A	N/A	N/A	0.502	0.506	0.440	0.199	1.000	0.965	0.752	0.467	0.160	0.813	N/A	0.696	1.000						
CH02	Espace Mittelland	0.624	0.938	0.800	0.705	0.916	0.648	0.699	N/A	N/A	N/A	0.456	0.599	0.816	0.305	0.834	0.791	0.580	0.500	0.365	0.813	N/A	0.723	0.989						
CH03	Nordwestschweiz	0.671	0.886	1.000	0.819	0.906	0.648	1.000	N/A	N/A	N/A	0.518	0.525	0.603	0.167	1.000	1.000	0.747	0.479	0.488	0.813	N/A	0.675	1.000						
CH04	Zürich	1.000	0.996	1.000	0.919	0.986	0.648	0.624	N/A	N/A	N/A	1.000	0.729	0.786	0.396	1.000	0.877	0.628	0.345	0.536	0.813	N/A	0.675	1.000						
CH05	Ostschweiz	0.604	0.850	0.322	0.709	0.951	0.648	0.619	N/A	N/A	N/A	0.373	0.817	0.792	0.545	0.637	0.705	0.548	1.000	1.000	0.813	N/A	0.738	0.950						
CH06	Zentralschweiz	0.709	0.861	0.297	0.550	0.938	0.648	0.913	N/A	N/A	N/A	0.483	0.626	0.665	0.422	0.718	0.837	1.000	0.599	0.339	0.813	N/A	0.723	1.000						
CH07	Ticino	0.760	0.927	0.964	0.780	0.962	0.648	0.524	N/A	N/A	N/A	0.509	0.939	0.934	0.441	0.902	0.689	0.969	0.630	0.799	0.813	N/A	0.539	1.000						
RS Serbia																														
RS11	City of Belgrade	0.729	0.253	0.467	0.216	0.796	0.641	0.517	0.329	0.258	0.393	0.905	0.912	0.649	0.581	0.524	0.243	0.011	0.100	0.562	0.645	N/A	0.052	0.103						
RS12	Autonomous Province of Voivodina	0.344	0.176	0.171	0.223	0.361	0.297	0.395	0.385	0.252	0.393	0.432	0.750	0.569	0.411	0.320	0.243	0.000	0.059	0.441	0.518	N/A	0.330	0.072						
RS21	Region Šumadija i Zapadna Srbija	0.329	0.089	0.055	0.298	0.402	0.076	0.101	0.326	0.189	0.393	0.091	0.804	0.606	0.270	0.162	0.243	0.009	0.000	0.409	0.558	N/A	0.079	0.019						
RS22	Region Južne i Istočne Srbije	0.267	0.114	0.107	0.233	0.301	0.097	0.116	0.248	0.145	0.393	0.191	0.505	0.415	0.087	0.235	0.243	0.351	0.126	0.534	0.384	N/A	0.115	0.039						
UK United Kingdom																														
UKC	North East (England)	0.407	0.451	0.626	0.819	0.753	0.324	0.494	0.520	0.704	N/A	0.369	0.388	0.418	0.579	0.669	0.526	0.116	0.186	0.475	0.646	0.615	N/A	N/A						
UKD	North West (England)	0.611	0.473	0.490	0.759	0.846	0.297	0.579	0.504	0.704	N/A	0.428	0.467	0.356	0.688	0.620	0.435	0.196	0.263	0.317	0.646	0.625	N/A	N/A						
UKE	Yorkshire and The Humber	0.456	0.495	0.471	0.726	0.848	0.345	0.473	0.520	0.704	N/A	0.388	0.559	0.483	0.989	0.624	0.432	0.143	0.376	0.229	0.646	0.620	N/A	N/A						
UKF	East Midlands (England)	0.493	0.502	0.441	0.722	0.795	0.228	0.701	0.479	0.704	N/A	0.340	0.593	0.408	0.973	0.607	0.445	0.214	0.352	0.698	0.646	0.603	N/A	N/A						
UKG	West Midlands (England)	0.560	0.451	0.406	0.737	0.937	0.221	0.766	0.512	0.704	N/A	0.363	0.519	0.459	0.958	0.542	0.489	0.196	0.374	0.524	0.646	0.631	N/A	N/A						

Region Code	Region	1.1.2 Population with tertiary education	1.1.3 Population involved in lifelong learning	1.2.1 International scientific publications	1.2.2 Scientific publications among the top 10% most cited	1.3.1 Broadband penetration	2.1.1 R&D expenditure in the public sector	2.2.1 R&D expenditure in the business sector	2.2.2 Non-R&D innovation expenditures	2.2.3 Innovation expenditures per person employed	2.3.1 Cloud computing in enterprises	2.3.2 Employed ICT specialists	3.1.1 SMEs introducing product innovations	3.1.2 SMEs introducing business process innovations	3.2.1 Innovative SMEs collaborating with others	3.2.2 Public-private co-publications	3.3.1 PCT patent applications	3.3.2 Trademark applications	3.3.3 Design applications	4.1.1 Sales of new-to-market and new-to-firm innovations	4.1.2 Employment in innovative enterprises	4.2.1 Exports of medium and high technology products	4.3.2 Air emissions by fine particulates	4.3.3 Labour productivity
UKH	East (England)	0.578	0.454	0.575	0.982	0.918	0.434	0.971	0.211	0.704	N/A	0.627	0.629	0.397	0.893	0.781	0.739	0.282	0.342	0.064	0.646	0.593	N/A	N/A
UKI	London	1.000	0.546	1.000	0.935	0.936	0.345	0.440	0.332	0.704	N/A	1.000	0.519	0.363	0.731	0.912	0.567	0.537	0.447	0.198	0.646	0.568	N/A	N/A
UKJ	South East (England)	0.709	0.538	0.650	0.882	0.959	0.414	0.741	0.429	0.704	N/A	0.877	0.565	0.377	0.821	0.732	0.661	0.245	0.331	0.531	0.646	0.609	N/A	N/A
UKK	South West (England)	0.636	0.586	0.433	0.802	0.886	0.303	0.616	0.500	0.704	N/A	0.437	0.596	0.459	0.978	0.593	0.624	0.268	0.322	0.558	0.646	0.596	N/A	N/A
UKL	Wales	0.520	0.535	0.392	0.670	0.795	0.262	0.447	1.000	0.704	N/A	0.276	0.507	0.312	0.660	0.550	0.490	0.098	0.203	0.672	0.646	0.623	N/A	N/A
UKM	Scotland	0.878	0.498	0.734	0.803	0.838	0.552	0.537	0.479	0.704	N/A	0.332	0.415	0.288	0.519	0.722	0.473	0.127	0.229	0.337	0.646	0.604	N/A	N/A
UKN	Northern Ireland	0.673	0.359	0.389	0.793	0.827	0.255	0.613	0.488	0.704	N/A	0.332	0.369	0.305	0.526	0.501	0.384	0.277	0.264	0.161	0.646	0.607	N/A	N/A

Annex 5: Data on the RII performance trends

Region		RII in 2018 indexed to EU in 2018	RII in 2023 indexed to EU in 2018	RII in 2025 indexed to EU in 2018	Performance change 2018-2025	Performance change 2023-2025
AT1	Ostösterreich	120.7	137.8	134.6	14.0	-3.1
AT2	Südösterreich	115.3	128.0	124.3	9.0	-3.6
AT3	Westösterreich	120.7	126.7	124.2	3.5	-2.5
BE1	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	136.2	140.9	144.1	7.9	3.2
BE2	Vlaams Gewest	131.8	145.1	144.1	12.2	-1.1
BE3	Région wallonne	110.1	123.2	122.4	12.3	-0.8
BG31	Severozapaden	31.2	35.5	31.2	0.0	-4.3
BG32	Severen tsentralen	36.8	43.1	39.5	2.7	-3.7
BG33	Severoiztochen	37.4	41.9	44.9	7.6	3.0
BG34	Yugoiztochen	30.4	38.4	34.3	3.9	-4.1
BG41	Yugozapaden	57.3	64.7	66.1	8.7	1.4
BG42	Yuzhen tsentralen	41.1	44.8	45.7	4.7	0.9
CZ01	Praha	102.0	135.4	124.0	21.9	-11.5
CZ02	Střední Čechy	70.0	93.4	83.1	13.1	-10.2
CZ03	Jihozápad	63.8	86.5	82.2	18.4	-4.4
CZ04	Severozápad	55.0	70.0	63.1	8.1	-6.9
CZ05	Severovýchod	71.3	91.0	80.6	9.3	-10.4
CZ06	Jihovýchod	79.5	106.3	100.4	20.8	-6.0
CZ07	Střední Morava	68.8	94.4	83.1	14.4	-11.2
CZ08	Moravskoslezsko	66.8	91.7	82.9	16.1	-8.8
DE11	Stuttgart	121.5	131.1	133.0	11.5	1.9
DE12	Karlsruhe	137.6	150.3	149.7	12.2	-0.5
DE13	Freiburg	122.4	132.5	133.5	11.1	1.1
DE14	Tübingen	126.1	137.4	141.2	15.1	3.9
DE21	Oberbayern	138.4	159.0	161.1	22.8	2.1
DE22	Niederbayern	98.0	102.3	102.9	4.9	0.6
DE23	Oberpfalz	103.7	120.1	120.5	16.8	0.4
DE24	Oberfranken	109.7	122.0	123.4	13.7	1.4
DE25	Mittelfranken	125.3	137.2	138.5	13.2	1.3
DE26	Unterfranken	112.8	121.9	125.7	12.9	3.8
DE27	Schwaben	109.1	115.7	118.2	9.1	2.5
DE3	Berlin	140.3	154.6	156.5	16.1	1.9
DE4	Brandenburg	102.3	116.0	116.5	14.2	0.5
DE5	Bremen	110.7	121.5	118.6	7.8	-2.9
DE6	Hamburg	125.5	143.3	145.4	19.9	2.1
DE71	Darmstadt	120.2	131.8	135.5	15.2	3.7
DE72	Gießen	118.3	127.8	131.0	12.7	3.3
DE73	Kassel	95.4	108.9	108.7	13.4	-0.2
DE8	Mecklenburg-Vorpommern	97.5	95.2	97.7	0.3	2.6
DE91	Braunschweig	123.9	131.4	132.8	8.9	1.4
DE92	Hannover	108.7	116.9	119.0	10.3	2.1
DE93	Lüneburg	91.0	108.7	110.7	19.7	2.0
DE94	Weser-Ems	90.1	103.5	105.2	15.1	1.7
DEA1	Düsseldorf	108.5	119.9	119.4	10.9	-0.5
DEA2	Köln	123.2	142.3	143.1	19.9	0.8
DEA3	Münster	104.7	108.6	109.4	4.7	0.8
DEA4	Detmold	110.6	121.5	121.2	10.5	-0.3
DEA5	Arnsberg	106.1	120.5	121.4	15.3	0.9
DEB1	Koblenz	96.7	118.2	118.7	22.0	0.5
DEB2	Trier	102.2	106.4	105.0	2.8	-1.5
DEB3	Rheinhessen-Pfalz	125.0	131.1	132.7	7.7	1.6
DEC	Saarland	101.5	109.0	112.1	10.6	3.1
DED2	Dresden	119.1	133.3	135.4	16.3	2.1

Region		RII in 2018 indexed to EU in 2018	RII in 2023 indexed to EU in 2018	RII in 2025 indexed to EU in 2018	Performance change 2018-2025	Performance change 2023-2025
DED4	Chemnitz	98.0	108.1	109.9	11.9	1.8
DED5	Leipzig	118.9	129.9	131.0	12.1	1.2
DEE	Sachsen-Anhalt	92.5	100.4	104.8	12.4	4.4
DEF	Schleswig-Holstein	103.2	116.5	117.8	14.6	1.3
DEG	Thüringen	107.6	115.3	119.0	11.4	3.7
DK01	Hovedstaden	164.7	175.3	165.5	0.8	-9.9
DK02	Sjælland	107.2	120.3	120.4	13.3	0.2
DK03	Syddanmark	115.4	131.8	127.2	11.8	-4.6
DK04	Midtjylland	142.0	160.0	152.6	10.6	-7.3
DK05	Nordjylland	125.3	148.8	141.7	16.3	-7.2
EL30	Attiki	79.9	95.4	95.8	15.9	0.4
EL41	Voreia Aigaio	55.4	55.6	71.1	15.7	15.5
EL42	Notio Aigaio	39.0	55.2	56.6	17.6	1.4
EL43	Kriti	89.5	85.7	98.7	9.2	13.0
EL51	Anatoliki Makedonia Thraki	53.9	70.3	75.0	21.1	4.7
EL52	Kentriki Makedonia	73.6	87.2	84.8	11.1	-2.5
EL53	Dytiki Makedonia	57.7	73.0	60.3	2.5	-12.7
EL54	Ipeiros	57.7	87.3	81.5	23.8	-5.8
EL61	Thessalia	66.6	78.5	76.6	10.0	-1.9
EL62	Ionia Nisia	56.9	58.7	62.3	5.4	3.7
EL63	Dytiki Elláda	69.2	82.8	83.1	14.0	0.4
EL64	Sterea Elláda	59.0	75.0	69.1	10.1	-5.9
EL65	Peloponisos	59.2	74.3	68.0	8.8	-6.3
ES11	Galicia	79.7	90.9	97.6	17.9	6.7
ES12	Principado de Asturias	81.0	88.1	90.9	9.9	2.8
ES13	Cantabria	85.9	88.0	94.0	8.1	6.0
ES21	Pais Vasco	114.1	122.3	121.7	7.5	-0.7
ES22	Comunidad Foral de Navarra	103.4	112.6	116.3	13.0	3.8
ES23	La Rioja	88.8	95.6	93.9	5.1	-1.7
ES24	Aragón	83.5	96.2	96.2	12.8	0.1
ES3	Comunidad de Madrid	108.6	120.7	119.5	10.9	-1.2
ES41	Castilla y León	75.1	89.1	95.5	20.3	6.4
ES42	Castilla-La Mancha	64.2	76.2	80.1	15.9	4.0
ES43	Extremadura	61.6	74.8	79.5	17.9	4.7
ES51	Catalunya/Cataluña	108.6	120.1	124.7	16.1	4.6
ES52	Comunitat Valenciana	96.6	108.8	114.0	17.4	5.1
ES53	Illes Balears	74.4	83.5	81.8	7.4	-1.7
ES61	Andalucía	71.1	83.7	86.0	14.9	2.3
ES62	Región de Murcia	81.3	88.4	91.0	9.7	2.7
ES63	Ciudad de Ceuta	41.7	50.1	59.6	17.8	9.4
ES64	Ciudad de Melilla	50.9	58.0	58.7	7.8	0.7
ES7	Canarias	61.9	72.5	79.7	17.7	7.1
FI19	Länsi-Suomi	126.8	135.9	133.9	7.1	-2.0
FI1B	Helsinki-Uusimaa	148.6	165.2	158.5	9.9	-6.7
FI1C	Etelä-Suomi	116.1	132.1	131.2	15.0	-0.9
FI1D	Pohjois- ja Itä-Suomi	119.3	134.8	128.5	9.2	-6.3
FI2	Åland	98.4	107.2	113.8	15.5	6.6
FR1	Île-de-France	138.7	145.3	150.0	11.3	4.7
FRB	Centre — Val de Loire	99.2	100.0	102.6	3.4	2.6
FRC	Bourgogne-Franche-Comté	103.4	101.7	102.2	-1.3	0.5
FRD	Normandie	94.4	88.8	91.7	-2.7	2.9
FRE	Hauts-de-France	94.0	93.8	98.9	4.9	5.1
FRF	Grand Est	104.0	104.3	108.4	4.4	4.1
FRG	Pays de la Loire	102.9	107.7	111.7	8.8	4.0
FRH	Bretagne	111.2	116.8	118.9	7.7	2.1
FRI	Nouvelle-Aquitaine	104.5	106.1	109.3	4.8	3.1

Region		RII in 2018 indexed to EU in 2018	RII in 2023 indexed to EU in 2018	RII in 2025 indexed to EU in 2018	Performance change 2018-2025	Performance change 2023-2025
FRY	RUP FR — Régions Ultrapériphériques Françaises	65.8	75.7	80.3	14.5	4.6
FRJ	Occitanie	127.9	122.9	128.8	0.9	6.0
FRK	Auvergne-Rhône-Alpes	124.8	125.8	129.5	4.7	3.7
FRL	Provence-Alpes-Côte d'Azur	113.4	117.6	120.6	7.2	2.9
FRM	Corse	61.9	61.9	58.6	-3.3	-3.3
HR02	Panonska Hrvatska	50.0	58.6	58.4	8.5	-0.2
HR03	Jadranska Hrvatska	51.3	69.8	63.7	12.4	-6.1
HR05	Grad Zagreb	84.3	115.1	106.5	22.2	-8.6
HR06	Sjeverna Hrvatska	57.0	71.7	66.9	9.9	-4.7
HU11	Budapest	91.9	101.7	112.0	20.1	10.4
HU12	Pest	68.1	70.9	75.0	6.9	4.1
HU21	Közép-Dunántúl	53.9	60.1	64.2	10.3	4.1
HU22	Nyugat-Dunántúl	50.6	59.6	63.3	12.7	3.6
HU23	Dél-Dunántúl	48.9	62.0	67.0	18.0	5.0
HU31	Észak-Magyarország	46.9	60.7	59.8	12.9	-0.9
HU32	Észak-Alföld	47.2	60.3	62.6	15.4	2.3
HU33	Dél-Alföld	51.9	65.1	69.2	17.4	4.2
IE04	Northern and Western	112.6	123.0	139.2	26.7	16.3
IE05	Southern	118.8	120.3	130.0	11.2	9.7
IE06	Eastern and Midland	130.9	140.0	144.9	14.0	4.9
ITC1	Piemonte	88.1	103.1	106.3	18.2	3.2
ITC2	Valle d'Aosta/Vallée d'Aoste	77.2	86.1	77.7	0.5	-8.4
ITC3	Liguria	85.1	100.5	97.0	12.0	-3.5
ITC4	Lombardia	95.9	104.8	111.2	15.3	6.3
ITF1	Abruzzo	81.9	98.4	91.4	9.6	-7.0
ITF2	Molise	73.3	82.8	85.6	12.3	2.8
ITF3	Campania	75.4	90.2	98.2	22.8	8.0
ITF4	Puglia	72.3	85.3	90.3	18.0	5.0
ITF5	Basilicata	71.6	81.1	82.1	10.6	1.1
ITF6	Calabria	66.3	83.6	85.4	19.2	1.9
ITG1	Sicilia	70.1	76.2	83.0	12.9	6.8
ITG2	Sardegna	68.8	81.9	87.3	18.5	5.4
ITH1	Provincia Autonoma di Bolzano/Bozen	89.6	103.7	103.7	14.1	0.0
ITH2	Provincia Autonoma di Trento	101.6	114.8	119.5	17.9	4.7
ITH3	Veneto	94.1	107.6	107.1	13.0	-0.5
ITH4	Friuli-Venezia Giulia	102.5	112.2	113.1	10.7	1.0
ITH5	Emilia-Romagna	101.0	109.8	115.4	14.4	5.5
ITI1	Toscana	94.1	104.6	108.4	14.3	3.8
ITI2	Umbria	93.2	106.8	101.0	7.8	-5.8
ITI3	Marche	88.8	108.3	100.2	11.4	-8.1
ITI4	Lazio	93.1	108.0	108.4	15.3	0.4
LT01	Sostinės regionas	96.8	109.3	108.7	11.9	-0.6
LT02	Vidurio ir vakarų Lietuvos regionas	62.6	76.0	74.4	11.7	-1.6
NL11	Groningen	131.4	142.6	142.5	11.1	-0.1
NL12	Friesland (NL)	107.3	116.6	116.2	8.9	-0.4
NL13	Drenthe	112.7	118.3	122.1	9.4	3.8
NL21	Overijssel	125.6	137.3	134.2	8.6	-3.2
NL22	Gelderland	131.9	146.4	146.8	14.9	0.4
NL23	Flevoland	117.7	134.9	134.1	16.4	-0.8
NL32	Noord-Holland	144.3	158.5	156.9	12.6	-1.6
NL34	Zeeland	110.6	121.3	120.5	9.8	-0.9
NL35	Utrecht	143.7	155.6	153.4	9.8	-2.2
NL36	Zuid-Holland	136.0	149.7	146.3	10.2	-3.5
NL41	Noord-Brabant	134.4	149.1	146.2	11.8	-2.9

Region	RII in 2018 indexed to EU in 2018	RII in 2023 indexed to EU in 2018	RII in 2025 indexed to EU in 2018	Performance change 2018-2025	Performance change 2023-2025
NL42 Limburg (NL)	129.9	143.8	143.4	13.6	-0.3
PL21 Małopolskie	69.8	86.9	84.7	14.9	-2.2
PL22 Śląskie	49.6	63.4	71.1	21.5	7.7
PL41 Wielkopolskie	49.8	64.5	69.7	19.9	5.2
PL42 Zachodniopomorskie	44.8	58.7	66.3	21.5	7.6
PL43 Lubuskie	48.3	54.3	56.4	8.1	2.1
PL51 Dolnośląskie	59.0	74.9	80.0	21.1	5.1
PL52 Opolskie	45.8	60.0	66.9	21.1	6.9
PL61 Kujawsko-pomorskie	48.6	64.5	66.4	17.8	1.9
PL62 Warmińsko-mazurskie	42.0	65.0	67.8	25.8	2.8
PL63 Pomorskie	59.9	74.4	81.6	21.8	7.2
PL71 Łódzkie	51.4	66.0	65.4	14.0	-0.7
PL72 Świętokrzyskie	46.1	56.2	54.5	8.4	-1.6
PL81 Lubelskie	50.1	67.6	68.8	18.7	1.2
PL82 Podkarpackie	60.5	66.0	73.8	13.2	7.7
PL84 Podlaskie	46.6	68.9	66.3	19.7	-2.6
PL91 Warszawski stoleczny	84.6	100.8	101.6	17.0	0.8
PL92 Mazowiecki regionalny	38.8	47.4	50.8	12.0	3.4
PT11 Norte	93.5	98.5	100.0	6.5	1.5
PT15 Algarve	68.7	76.8	81.1	12.4	4.3
PT19 Centro (PT)	100.4	101.0	101.4	1.0	0.4
PT1A Grande Lisboa	104.7	118.3	123.4	18.7	5.1
PT1B Península de Setúbal	86.8	102.4	92.7	5.8	-9.8
PT1C Alentejo	75.4	81.9	77.8	2.5	-4.0
PT1D Oeste e Vale do Tejo	81.0	85.7	89.2	8.2	3.6
PT2 Região Autónoma dos Açores	58.7	71.2	70.0	11.3	-1.2
PT3 Região Autónoma da Madeira	68.4	80.0	80.4	11.9	0.3
RO11 Nord-Vest	36.5	37.1	41.4	4.9	4.3
RO12 Centru	27.5	30.6	37.9	10.3	7.2
RO21 Nord-Est	27.2	29.8	32.4	5.2	2.6
RO22 Sud-Est	20.5	21.7	28.9	8.5	7.2
RO31 Sud-Muntenia	23.0	25.3	31.5	8.4	6.1
RO32 București-Ilfov	59.2	63.8	66.5	7.3	2.7
RO41 Sud-Vest Oltenia	17.3	23.5	25.5	8.2	2.0
RO42 Vest	25.4	31.3	39.0	13.6	7.7
SE11 Stockholm	160.6	168.5	175.0	14.4	6.5
SE12 Östra Mellansverige	141.1	148.5	149.7	8.5	1.2
SE21 Småland med öarna	123.3	122.7	121.2	-2.1	-1.5
SE22 Sydsverige	144.0	156.4	157.7	13.7	1.3
SE23 Västsverige	141.4	159.3	157.9	16.6	-1.3
SE31 Norra Mellansverige	103.1	112.2	119.2	16.1	7.0
SE32 Mellersta Norrland	107.0	114.3	112.2	5.2	-2.1
SE33 Övre Norrland	132.7	138.2	138.4	5.7	0.2
SI03 Vzhodna Slovenija	77.3	90.4	89.9	12.6	-0.5
SI04 Zahodna Slovenija	102.9	114.8	121.9	19.0	7.0
SK01 Bratislavský kraj	91.4	99.9	101.5	10.2	1.6
SK02 Západné Slovensko	53.3	61.0	64.1	10.8	3.0
SK03 Stredné Slovensko	53.7	64.9	65.8	12.1	0.9
SK04 Východné Slovensko	57.8	66.2	61.5	3.7	-4.7
NO02 Innlandet	104.5	113.7	117.3	12.8	3.6
NO06 Trøndelag/Trøöndelage	139.3	145.5	147.2	7.9	1.7
NO07 Nord-Norge	116.5	129.4	130.1	13.6	0.7
NO08 Oslo og Viken	139.5	152.4	152.8	13.4	0.5
NO09 Agder og Sør-Østlandet	111.6	123.3	126.3	14.7	3.0
NO0A Vestlandet	121.2	133.1	135.0	13.7	1.9
CH01 Région lémanique	149.8	145.9	144.4	-5.3	-1.4
CH02 Espace Mittelland	138.2	140.8	142.0	3.8	1.2

Region		RII in 2018 indexed to EU in 2018	RII in 2023 indexed to EU in 2018	RII in 2025 indexed to EU in 2018	Performance change 2018-2025	Performance change 2023-2025
CH03	Nordwestschweiz	156.7	153.7	151.5	-5.1	-2.2
CH04	Zürich	166.2	162.7	162.6	-3.6	-0.2
CH05	Ostschweiz	149.8	149.5	148.0	-1.8	-1.4
CH06	Zentralschweiz	139.7	142.8	142.7	3.1	-0.1
CH07	Ticino	149.9	157.8	160.0	10.2	2.2
RS11	City of Belgrade	63.1	69.8	77.7	14.6	7.8
RS12	Autonomous Province of Vojvodina	52.4	53.8	56.1	3.7	2.3
RS21	Region Šumadije i Zapadne Srbije	41.2	41.3	43.3	2.1	2.0
RS22	Region Južne i Istočne Srbije	38.3	43.6	41.2	2.9	-2.4
UKC	North East (England)	117.1	125.2	129.1	12.0	3.9
UKD	North West (England)	122.1	130.4	131.9	9.8	1.5
UKE	Yorkshire and The Humber	118.5	134.0	134.7	16.3	0.7
UKF	East Midlands (England)	126.1	137.7	140.1	14.0	2.3
UKG	West Midlands (England)	124.3	138.6	140.7	16.5	2.1
UKH	East (England)	131.1	149.1	151.3	20.3	2.2
UKI	London	143.6	160.9	162.9	19.3	2.0
UKJ	South East (England)	142.7	157.1	159.0	16.3	1.9
UKK	South West (England)	132.5	144.6	147.7	15.2	3.2
UKL	Wales	119.9	130.3	132.6	12.7	2.3
UKM	Scotland	127.7	133.8	137.2	9.4	3.4
UKN	Northern Ireland	104.6	118.1	121.3	16.6	3.1

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This study provides the results of the 2025 edition of the Regional Innovation Scoreboard (RIS). The 11th edition of the RIS offers a comparative assessment of the research and innovation performance of 241 regions in 22 EU Member States, Norway, Serbia, Switzerland, and the United Kingdom. Five countries (Cyprus, Estonia, Latvia, Luxembourg, and Malta) are included in the RIS only at the country level. The RIS is a regional extension of the European Innovation Scoreboard (EIS) and it is based on 23 out of the 32 EIS indicators.

Studies and reports

