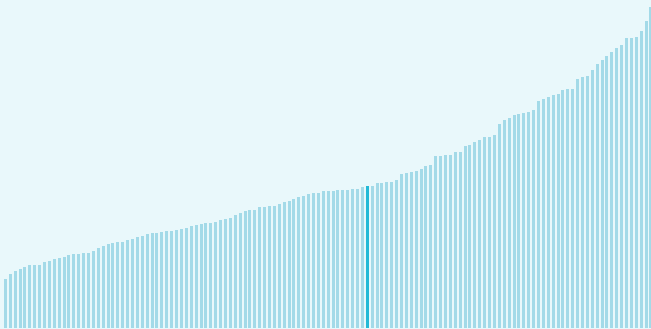




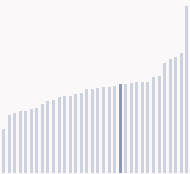
Russian Federation ranking in the Global Innovation Index 2024

Russian Federation ranks **59th** among the 133 economies featured in the GII 2024.

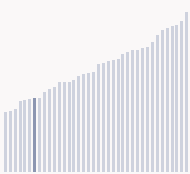
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Russian Federation ranks **13th** among the 34 upper-middle-income group economies.



Russian Federation ranks **33rd** among the 39 economies in Europe.



➤ Russian Federation GII Ranking (2020-2024)

The table shows the rankings of Russian Federation over the past four years. Data availability and changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Russian Federation in the GII 2024 is between ranks 53 and 69.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	47th	42nd	58th
2021	45th	43rd	52nd
2022	47th	46th	50th
2023	51st	58th	53rd
2024	59th	76th	56th

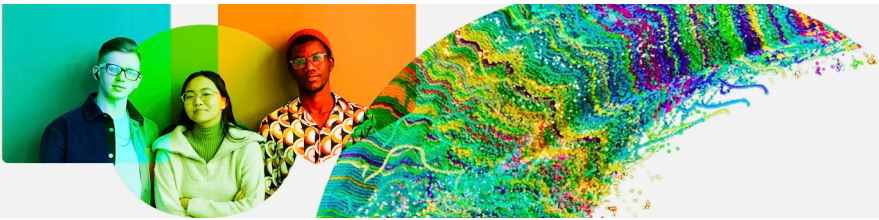
Russian Federation performs better in innovation outputs than innovation inputs in 2024.

This year Russian Federation ranks 76th in innovation inputs. This position is lower than last year.

Russian Federation ranks 56th in innovation outputs. This position is lower than last year.

Russian Federation has 1 cluster in the top 100 S&T clusters of the Global Innovation Index.

# Global Innovation Index 2024



## > Global Innovation Tracker

The Global Innovation Tracker 2024 shows what is the current state of innovation in Russian Federation, how rapidly is technology being embraced and what are the resulting societal impacts.



For Russian Federation, 6 indicators have improved in the short-term and 4 indicators have worsened.

### Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -8.3% 2022 - 2023	▼ -4.7% 2021 - 2022	▲ 37.5% 2022 - 2023	n/a	▼ -10.3% 2022 - 2023
▲ 3.1% 2013 - 2023	▼ -0.1% 2012 - 2022	▼ -15.5% 2013 - 2023	▲ 5.8% 2013 - 2023	▼ -5.4% 2013 - 2023

### Technology adoption

Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 0.2% 2021 - 2022	▲ 3.9% 2021 - 2022	n/a	▲ 3.7% 2021 - 2022	n/a
▲ 0.4% 2012 - 2022	▲ 5.5% 2012 - 2022		▲ 16.9% 2012 - 2022	n/a
61.2 per 100 inhabitants in 2022	24.8 per 100 inhabitants in 2022	n/a		n/a

### Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 0.6% 2022 - 2023	▲ 3.8% 2021 - 2022	▲ 2.5°C 2023
▲ 0.8% 2013 - 2023	▲ 0.3% 2012 - 2022	n/a
68,207 USD in 2023	72.5 years in 2022	

Notes: Not all indicators of the Global Innovation Tracker are used to calculate the Global Innovation Index. Long-term annual growth refers to the compound annual growth rate (CAGR) over the indicated period. For each variable, a one-year growth rate is set for the short run, and ten-year CAGR is set for the long run; time windows might differ when gaps exist in data availability. The end period corresponds to the most recent available observation, which may differ among countries. Temperature change is an exception: it indicates the change in degrees Celsius with respect to the average temperature in the country from 1951–1980. Figures are rounded.



Expected vs. observed innovation performance

The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected and those below are performing below expectations.



Relative to GDP, Russian Federation's performance is below expectations for its level of development.

> Innovation overperformers relative to their economic development





## Effectively translating innovation investments into innovation outputs

The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.



Russian Federation produces more innovation outputs relative to its level of innovation investments.

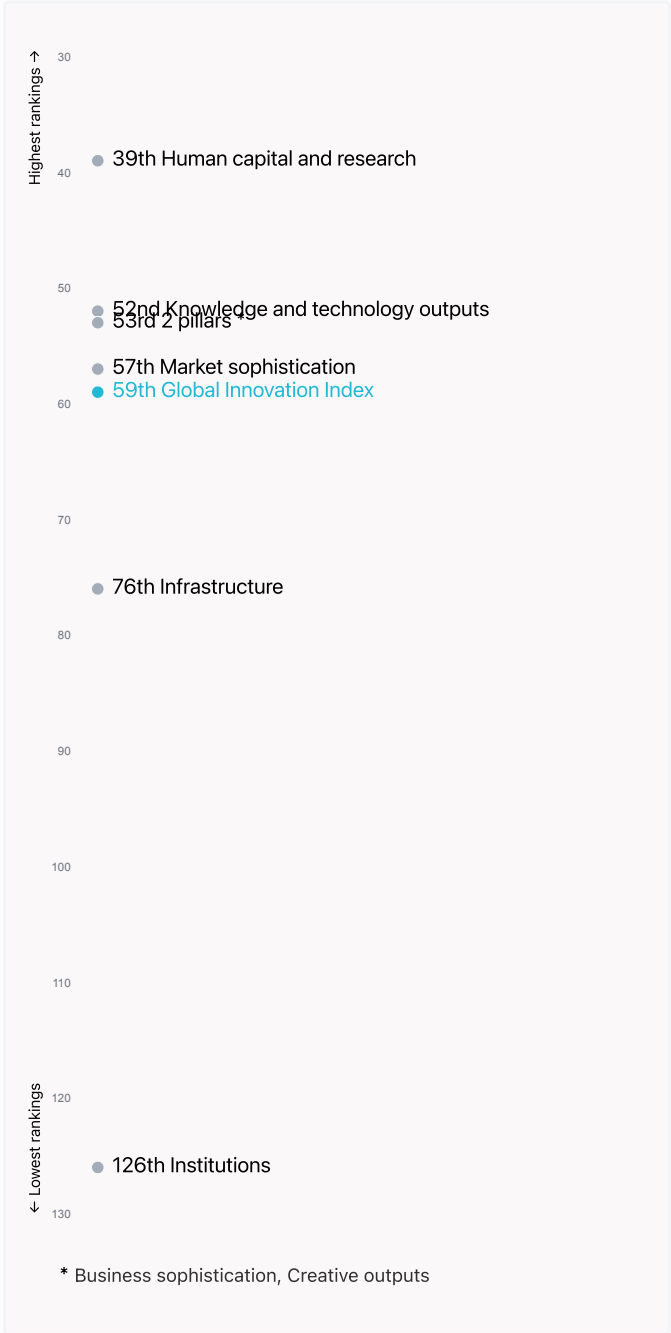
### > Relationship between innovation inputs and outputs





## Overview of Russian Federation’s rankings in the seven areas of the GII in 2024

The chart shows the ranking for each of the seven areas that the GII comprises. The strongest areas for Russian Federation are those that rank above the GII (shown in blue) and the weakest are those that rank below.



### Highest rankings



Russian Federation ranks highest in Human capital and research (39th), Knowledge and technology outputs (52nd) and Business sophistication, Creative outputs (53rd).

### Lowest rankings



Russian Federation ranks lowest in Institutions (126th), Infrastructure (76th) and Market sophistication (57th).

The full WIPO Intellectual Property Statistics profile for Russian Federation can be found on [this link](#).



Benchmark of Russian Federation against other economy groupings for each of the seven areas of the GII Index

The charts shows the relative position of Russian Federation (blue bar) against other economy groupings (grey bars), for each of the seven areas of the GII Index.



Upper-Middle-Income economies

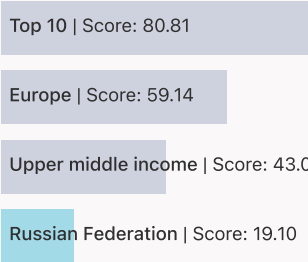
Russian Federation performs above the upper-middle-income group average in Human capital and research, Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.



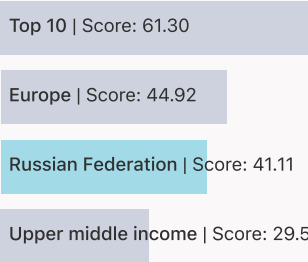
Europe

Russian Federation performs below the regional average in all pillars.

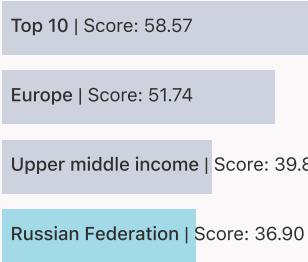
Institutions



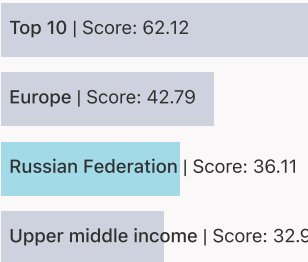
Human capital and research



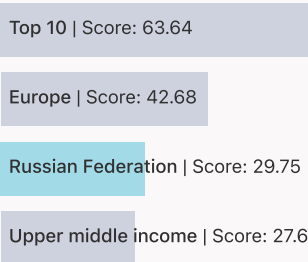
Infrastructure



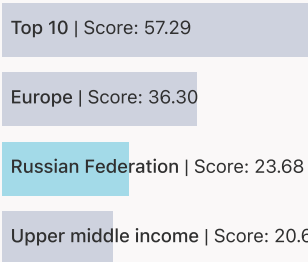
Market sophistication



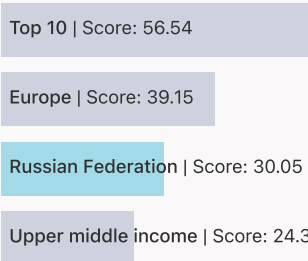
Business sophistication



Knowledge and technology outputs



Creative outputs







Innovation strengths and weaknesses in Russian Federation

The table below gives an overview of the indicator strengths and weaknesses of Russian Federation in the GII 2024.



Russian Federation’s main innovation strengths are **Domestic market scale, bn PPP\$** (rank 1), **Utility models by origin/bn PPP\$ GDP** (rank 8) and **Pupil–teacher ratio, secondary** (rank 9).

Strengths

Rank	Code	Indicator name
1	4.3.3	Domestic market scale, bn PPP\$
8	6.1.3	Utility models by origin/bn PPP\$ GDP
9	2.1.5	Pupil–teacher ratio, secondary
14	7.1.2	Trademarks by origin/bn PPP\$ GDP
15	2.2.2	Graduates in science and engineering, %
19	6.1.1	Patents by origin/bn PPP\$ GDP
22	5.3.1	Intellectual property payments, % total trade
22	5.1.1	Knowledge-intensive employment, %
25	6.1.5	Citable documents H-index
29	2.3.4	QS university ranking, top 3*

Weaknesses

Rank	Code	Indicator name
131	1.1.1	Operational stability for businesses*
126	1.2.1	Regulatory quality*
126	1.2.2	Rule of law*
122	3.3.3	ISO 14001 environment/bn PPP\$ GDP
121	3.3.1	GDP/unit of energy use
116	5.3.4	FDI net inflows, % GDP
116	6.3.5	ISO 9001 quality/bn PPP\$ GDP
109	4.2.3	VC recipients, deals/bn PPP\$ GDP
93	5.1.2	Firms offering formal training, %
49	6.2.2	Unicorn valuation, % GDP
41	2.3.3	Global corporate R&D investors, top 3, mn USD



Russian Federation's innovation system

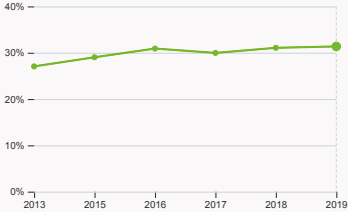
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Russian Federation



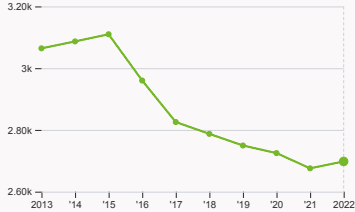
2.1.1 Expenditure on education

was equal to 3.7 % GDP in 2020, up by 0.19 percentage points from the year prior – and equivalent to an indicator rank of 84.



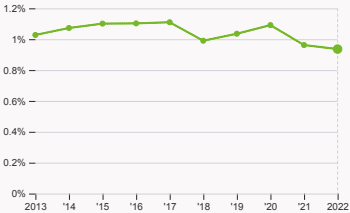
2.2.2 Graduates in science and engineering

was equal to 31.36 % of total graduates in 2019, up by 0.3 percentage points from the year prior – and equivalent to an indicator rank of 15.



2.3.1 Researchers

was equal to 2697.89 FTE per million population in 2022, up by 0.83% from the year prior – and equivalent to an indicator rank of 34.



2.3.2 Gross expenditure on R&D

was equal to 0.94 % GDP in 2022, down by 0.03 percentage points from the year prior – and equivalent to an indicator rank of 44.



2.3.4 QS university ranking

was equal to an average score of 42.93 for the top three universities in 2023, down by 11.17% from the year prior – and equivalent to an indicator rank of 29.



4.2.4 VC received, value

was equal to 918.91 thousand USD in 2023, up by 5847.64% from the year prior – and equivalent to an indicator rank of 74.

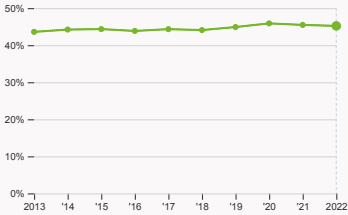


# Global Innovation Index 2024



### 4.3.2 Domestic industry diversification

was equal to an index score of 0.1 in 2021, up by 6.88% from the year prior – and equivalent to an indicator rank of 29.



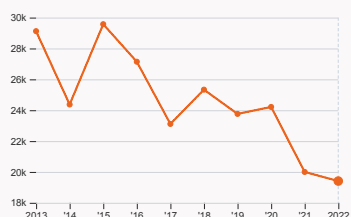
### 5.1.1 Knowledge-intensive employment

was equal to 45.21 % in 2022, down by 0.27 percentage points from the year prior – and equivalent to an indicator rank of 22.

# Global Innovation Index 2024

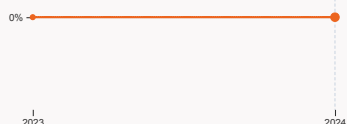


## ➤ Innovation outputs in Russian Federation



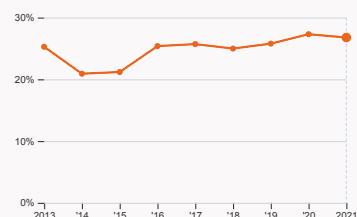
### 6.1.1 Patents by origin

was equal to 19.41 thousand patents in 2022, down by 2.95% from the year prior – and equivalent to an indicator rank of 19.



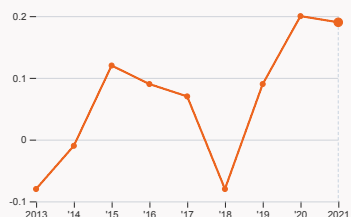
### 6.2.2 Unicorn valuation

was equal to 0 % GDP in 2024 with no change from the year prior – and equivalent to an indicator rank of 49.



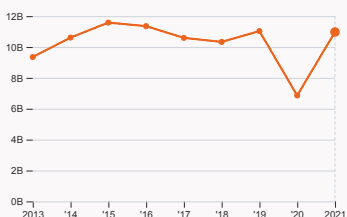
### 6.2.4 High-tech manufacturing

was equal to 26.77 % of total manufacturing output in 2021, down by 0.53 percentage points from the year prior – and equivalent to an indicator rank of 46.



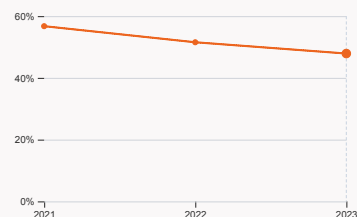
### 6.3.2 Production and export complexity

was equal to a score of 0.19 in 2021, down by 5% from the year prior – and equivalent to an indicator rank of 53.



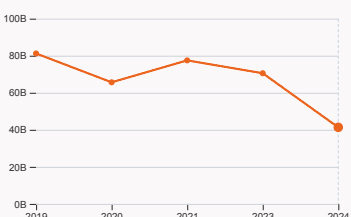
### 6.3.3 High-tech exports

was equal to 10.97 billion USD in 2021, up by 59.91% from the year prior – and equivalent to an indicator rank of 56.



### 7.1.1 Intangible asset intensity

was equal to 47.88 % for the top 15 companies in 2023, down by 3.65 percentage points from the year prior – and equivalent to an indicator rank of 50.



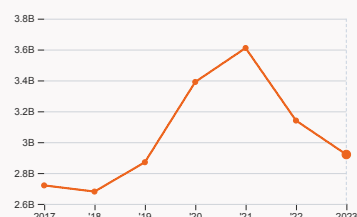
### 7.1.3 Global brand value

was equal to 41.35 billion USD for the brands in the top 5,000 in 2024, down by 41.38% from the year prior – and equivalent to an indicator rank of 45.



### 7.2.2 National feature films

was equal to 145 films in 2022, down by 3.33% from the year prior – and equivalent to an indicator rank of 64.



### 7.3.3 Mobile app creation

was equal to 2.92 billion global downloads of mobile apps in 2023, down by 7.006% from the year prior – and equivalent to an indicator rank of 32.



Russian Federation's innovation top performers

2.3.4 QS university ranking of Russian Federation’s top universities

Rank	University	Score
87	LOMONOSOV MOSCOW STATE UNIVERSITY	62.20
315	SAINT PETERSBURG STATE UNIVERSITY	33.40
319	BAUMAN MOSCOW STATE TECHNICAL UNIVERSITY	33.20

Source: QS Quacquarelli Symonds Ltd (<https://www.topuniversities.com/university-rankings/world-university-rankings/2023>).  
Note: QS Quacquarelli Symonds Ltd annually assesses over 1,200 universities across the globe and scores them between [0,100].  
Ranks can represent a single value "x", a tie "x=" or a range "x-y".

7.1.1 Top 15 intangible-asset intensive companies in Russian Federation

Rank	Firm	Intensity, %
1	PUBLIC JOINT STOCK COMPANY MINING AND METALLURGICAL COMPANY NORILSK NICKEL	62.23
2	PUBLIC JOINT-STOCK COMPANY PHOSAGRO	64.24
3	PUBLIC JOINT STOCK COMPANY POLYUS	47.89

Source: Brand Finance (<https://brandirectory.com/reports/gift-2022>).  
Note: Brand Finance only provides within economy ranks.

7.1.3 Top 5,000 companies in Russian Federation with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	SBER	Banking	4,373.1
2	GAZPROM	Oil & Gas	3,563
3	LUKOIL	Oil & Gas	2,807.3

Source: Brand Finance (<https://brandirectory.com>).  
Note: Rank corresponds to within economy ranks.

# Global Innovation Index 2024



## Russian Federation

GII 2024 rank

59

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
56	76	Upper middle	EUR	145.8	5,056.5	35,309.6
		Score / Value Rank		Score / Value Rank		
Institutions		19.1	126	Business sophistication		
1.1 Institutional environment		19.6	128	5.1 Knowledge workers		
1.1.1 Operational stability for businesses*		13.3	131	5.1.1 Knowledge-intensive employment, %		
1.1.2 Government effectiveness*		25.8	110	5.1.2 Firms offering formal training, %		
1.2 Regulatory environment		10.7	127	5.1.3 GERD performed by business, % GDP		
1.2.1 Regulatory quality*		11.8	126	5.1.4 GERD financed by business, %		
1.2.2 Rule of law*		9.6	126	5.1.5 Females employed w/advanced degrees, %		
1.3 Business environment		27	107	5.2 Innovation linkages		
1.3.1 Policy stability for doing business*		37.9	94	5.2.1 Public Research-Industry co-publications, %		
1.3.2 Entrepreneurship policies and culture*		16.2	70	5.2.2 University-industry R&D collaboration*		
Human capital and research		41.1	39	5.2.3 State of cluster development*		
2.1 Education		58.7	44	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP		
2.1.1 Expenditure on education, % GDP		3.7	84	5.2.5 Patent families/bn PPP\$ GDP		
2.1.2 Government funding/pupil, secondary, % GDP/cap		n/a	n/a	5.3 Knowledge absorption		
2.1.3 School life expectancy, years		13.4	75	5.3.1 Intellectual property payments, % total trade		
2.1.4 PISA scales in reading, maths and science		481.3	24	5.3.2 High-tech imports, % total trade		
2.1.5 Pupil-teacher ratio, secondary		8	9	5.3.3 ICT services imports, % total trade		
2.2 Tertiary education		43.2	28	5.3.4 FDI net inflows, % GDP		
2.2.1 Tertiary enrolment, % gross		56.6	61	5.3.5 Research talent, % in businesses		
2.2.2 Graduates in science and engineering, %		31.4	15	Knowledge and technology outputs		
2.2.3 Tertiary inbound mobility, %		8.5	32	6.1 Knowledge creation		
2.3 Research and development (R&D)		21.5	43	6.1.1 Patents by origin/bn PPP\$ GDP		
2.3.1 Researchers, FTE/mn pop.		2,697.9	34	6.1.2 PCT patents by origin/bn PPP\$ GDP		
2.3.2 Gross expenditure on R&D, % GDP		0.9	44	6.1.3 Utility models by origin/bn PPP\$ GDP		
2.3.3 Global corporate R&D investors, top 3, mn USD		0	41	6.1.4 Scientific and technical articles/bn PPP\$ GDP		
2.3.4 QS university ranking, top 3*		43.5	29	6.1.5 Citable documents H-index		
Infrastructure		36.9	76	6.2 Knowledge impact		
3.1 Information and communication technologies (ICTs)		77.4	48	6.2.1 Labor productivity growth, %		
3.1.1 ICT access*		93.2	54	6.2.2 Unicorn valuation, % GDP		
3.1.2 ICT use*		86.1	28	6.2.3 Software spending, % GDP		
3.1.3 Government's online service*		70.9	61	6.2.4 High-tech manufacturing, %		
3.1.4 E-participation*		59.3	57	6.3 Knowledge diffusion		
3.2 General infrastructure		25.4	85	6.3.1 Intellectual property receipts, % total trade		
3.2.1 Electricity output, GWh/mn pop.		n/a	n/a	6.3.2 Production and export complexity		
3.2.2 Logistics performance*		22.7	82	6.3.3 High-tech exports, % total trade		
3.2.3 Gross capital formation, % GDP		23	76	6.3.4 ICT services exports, % total trade		
3.3 Ecological sustainability		7.9	116	6.3.5 ISO 9001 quality/bn PPP\$ GDP		
3.3.1 GDP/unit of energy use		4.7	121	Creative outputs		
3.3.2 Low-carbon energy use, %		13.6	78	7.1 Intangible assets		
3.3.3 ISO 14001 environment/bn PPP\$ GDP		0.2	122	7.1.1 Intangible asset intensity, top 15, %		
Market sophistication		36.1	57	7.1.2 Trademarks by origin/bn PPP\$ GDP		
4.1 Credit		17.4	91	7.1.3 Global brand value, top 5,000, % GDP		
4.1.1 Finance for startups and scaleups*		30.6	67	7.1.4 Industrial designs by origin/bn PPP\$ GDP		
4.1.2 Domestic credit to private sector, % GDP		54.4	58	7.2 Creative goods and services		
4.1.3 Loans from microfinance institutions, % GDP		0.3	48	7.2.1 Cultural and creative services exports, % total trade		
4.2 Investment		4.4	88	7.2.2 National feature films/mn pop. 15-69		
4.2.1 Market capitalization, % GDP		38.7	41	7.2.3 Entertainment and media market/th pop. 15-69		
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP		0.02	85	7.2.4 Creative goods exports, % total trade		
4.2.3 VC recipients, deals/bn PPP\$ GDP		0.002	109	7.3 Online creativity		
4.2.4 VC received, value, % GDP		0.0003	74	7.3.1 Top-level domains (TLDs)/th pop. 15-69		
4.3 Trade, diversification and market scale		86.6	8	7.3.2 GitHub commits/mn pop. 15-69		
4.3.1 Applied tariff rate, weighted avg., %		4	91	7.3.3 Mobile app creation/bn PPP\$ GDP		
4.3.2 Domestic industry diversification		91.6	29			
4.3.3 Domestic market scale, bn PPP\$		5,056.5	1			

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; \* an index; † a survey question, ⌚ that the economy's data is outdated. Square brackets [ ] indicate the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level; n/a represents missing values; a dash - indicates an indicator which is not relevant to this economy and thus not considered for DMC thresholds.



Data availability

The following tables list indicators that are either missing or outdated for Russian Federation.



Russian Federation has missing data for three indicators and outdated data for eighteen indicators.

Missing data for Russian Federation

Code	Indicator name	Economy Year	Model Year	Source
2.1.2	Government funding/pupil, secondary, % GDP/cap	n/a	2020	UNESCO Institute for Statistics
3.2.1	Electricity output, GWh/mn pop.	n/a	2022	International Energy Agency
7.2.3	Entertainment and media market/th pop. 15–69	n/a	2023	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

Outdated data for Russian Federation

Code	Indicator name	Economy Year	Model Year	Source
1.3.1	Policy stability for doing business <sup>†</sup>	2021	2023	World Economic Forum, Executive Opinion Survey (EOS)
1.3.2	Entrepreneurship policies and culture <sup>†</sup>	2021	2023	Global Entrepreneurship Monitor
2.1.1	Expenditure on education, % GDP	2020	2022	UNESCO Institute for Statistics
2.1.4	PISA scales in reading, maths and science	2018	2022	OECD, PISA
2.2.2	Graduates in science and engineering, %	2019	2021	UNESCO Institute for Statistics; Eurostat; OECD
4.1.1	Finance for startups and scaleups <sup>†</sup>	2021	2023	Global Entrepreneurship Monitor
4.1.2	Domestic credit to private sector, % GDP	2021	2022	International Monetary Fund; World Bank and OECD GDP estimates.
4.1.3	Loans from microfinance institutions, % GDP	2020	2022	International Monetary Fund, Financial Access Survey (FAS)
5.1.2	Firms offering formal training, %	2019	2023	World Bank Enterprise Surveys
5.1.3	GERD performed by business, % GDP	2020	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

# Global Innovation Index 2024



Code	Indicator name	Economy Year	Model Year	Source
5.1.4	GERD financed by business, %	2020	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
5.1.5	Females employed w/advanced degrees, %	2022	2023	International Labour Organization
5.2.2	University-industry R&D collaboration <sup>†</sup>	2021	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.2.3	State of cluster development <sup>†</sup>	2021	2023	World Economic Forum, Executive Opinion Survey (EOS)
5.3.2	High-tech imports, % total trade	2021	2022	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development
5.3.5	Research talent, % in businesses	2020	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
6.3.3	High-tech exports, % total trade	2021	2022	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development; Trade Data Monitor.
7.2.4	Creative goods exports, % total trade	2021	2022	United Nations Comtrade Database; World Trade Organization and United Nations Conference on Trade and Development





Top science and technology clusters in Russian Federation



Russian Federation has 1 cluster in the top 100 S&T clusters of the Global Innovation Index, the same number as in 2023.

The table and map below give an overview of the top science and technology clusters in Russian Federation.

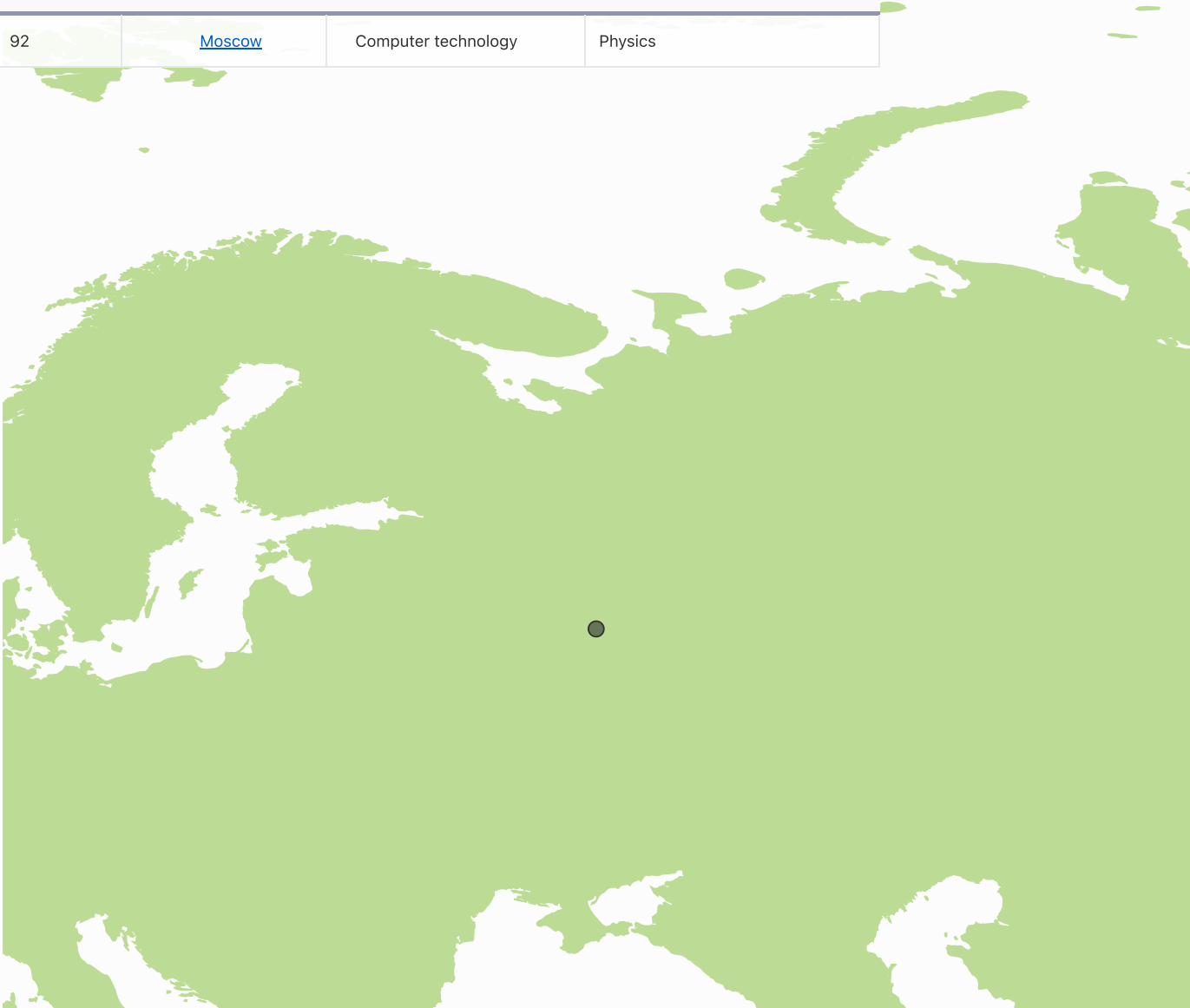
Rank	Cluster name	Top patent field	Top academic subject
31	<a href="#">Moscow</a>	Computer technology	Physics





The table and map below give an overview of the top science and technology clusters by intensity in Russian Federation.

Rank	Cluster name	Top patent field	Top academic subject
92	<a href="#">Moscow</a>	Computer technology	Physics

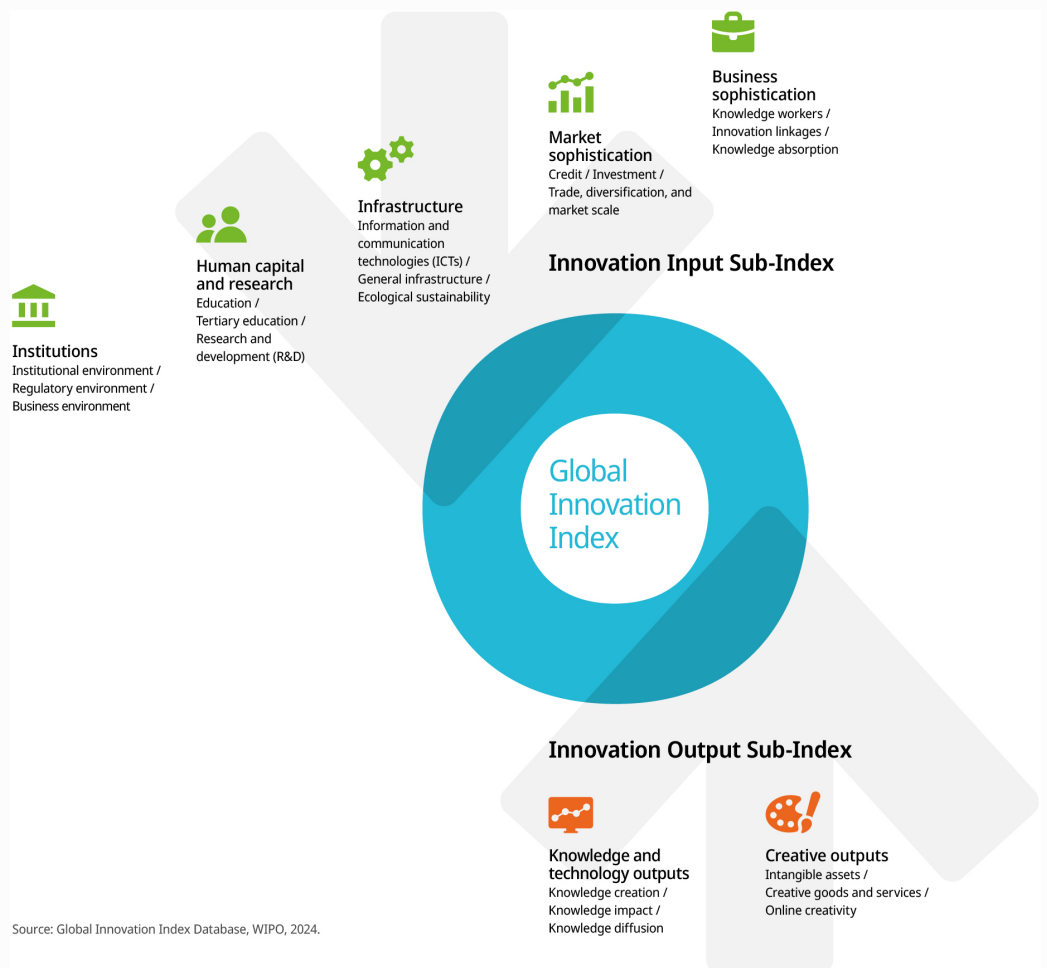


# Global Innovation Index 2024



## About the Global Innovation Index

- The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations.
- Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 130 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a “tool for action” for economies that incorporate the GII into their innovation agendas.



The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include institutions, human capital and research, infrastructure, credit, investment, linkages; the creation, absorption and diffusion of knowledge; and creative outputs.

The GII has two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index, and seven pillars, each consisting of three sub-pillars.