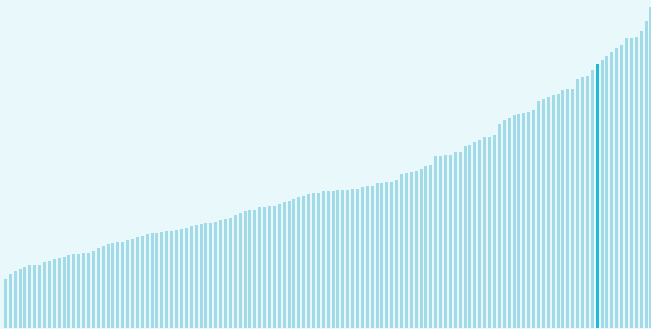




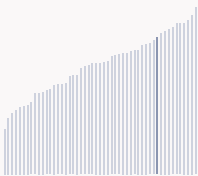
## France ranking in the Global Innovation Index 2024

France ranks **12th** among the 133 economies featured in the GII 2024.

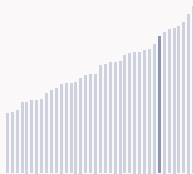
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



France ranks **11th** among the 51 high-income group economies.



France ranks **8th** among the 39 economies in Europe.



### > France GII Ranking (2020-2024)

The table shows the rankings of France 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 France in the GII 2024 is between ranks 11 and 13.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	12th	16th	12th
2021	11th	17th	10th
2022	12th	13th	11th
2023	11th	17th	11th
2024	12th	17th	10th

France performs better in innovation outputs than innovation inputs in 2024.

This year France ranks **17th** in innovation inputs. This position is the same as last year.

France ranks **10th** in innovation outputs. This position is higher than last year.

France has 3 clusters 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 France, how rapidly is technology being embraced and what are the resulting societal impacts.



For France, 7 indicators have improved in the short-term and 5 indicators have worsened.

### Science and innovation investment

Scientific publications	R&D investments	Venture capital		International patent filings
		Deal numbers	Deal values	
▼ -6.3% 2022 - 2023	▲ 0.5% 2021 - 2022	▲ 2.2% 2022 - 2023	▼ -37.8% 2022 - 2023	▲ 2% 2022 - 2023
▲ 0.3% 2013 - 2023	▲ 0.8% 2012 - 2022	▲ 9.2% 2013 - 2023	▲ 20.6% 2013 - 2023	0% 2013 - 2023

### Technology adoption

Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 0.1% 2021 - 2022	▲ 1.3% 2021 - 2022	n/a	▲ 10.7% 2021 - 2022	▲ 49.5% 2022 - 2023
▲ 0.1% 2012 - 2022	▲ 2.7% 2012 - 2022		▲ 5.1% 2012 - 2022	▲ 55.9% 2013 - 2023
89.7 per 100 inhabitants in 2022	49.4 per 100 inhabitants in 2022	80 per 100 inhabitants in 2021		4.1 per 100 inhabitants in 2023

### Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▼ -0.3% 2022 - 2023	▼ -0.1% 2021 - 2022	▲ 2.6°C 2023
▲ 0.1% 2013 - 2023	0% 2012 - 2022	n/a
126,771 USD in 2023	82.2 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.



France is an innovation leader, ranking in the top 25 of the GII.

> Innovation overperformers relative to their economic development



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.



France produces more innovation outputs relative to its level of innovation investments.

↑ Output score





## Overview of France'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 France are those that rank above the GII (shown in blue) and the weakest are those that rank below.



\* Human capital and research, Knowledge and technology outputs

### Highest rankings

France ranks highest in Creative outputs (4th) and Market sophistication (10th).

### Lowest rankings

France ranks lowest in Institutions (29th), Infrastructure (19th) and Business sophistication (17th).

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



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

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



High-Income economies

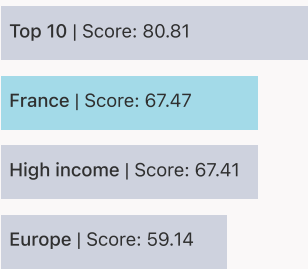
France performs above the high-income group average in all pillars.



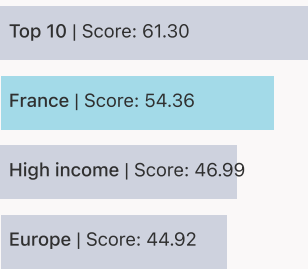
Europe

France performs above the regional average in all pillars.

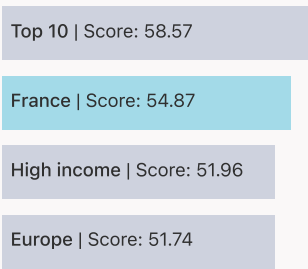
Institutions



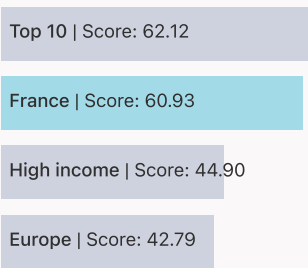
Human capital and research



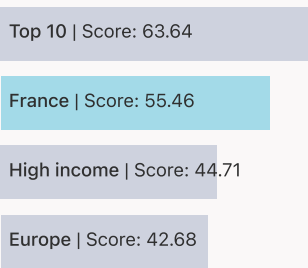
Infrastructure



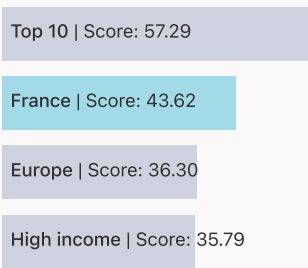
Market sophistication



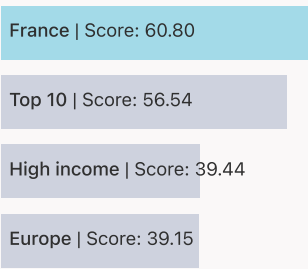
Business sophistication



Knowledge and technology outputs



Creative outputs





Innovation strengths and weaknesses in France

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



France’s main innovation strengths are **Firms offering formal training, % (rank 2)**, **Citable documents H-index (rank 5)** and **Intangible asset intensity, top 15, % (rank 5)**.

Strengths

Rank	Code	Indicator name
2	5.1.2	Firms offering formal training, %
5	6.1.5	Citable documents H-index
5	7.1.1	Intangible asset intensity, top 15, %
6	7.1.3	Global brand value, top 5,000, % GDP
6	2.3.4	QS university ranking, top 3*
7	7.1.4	Industrial designs by origin/bn PPP\$ GDP
8	6.2.3	Software spending, % GDP
9	2.3.3	Global corporate R&D investors, top 3, mn USD
10	4.3.3	Domestic market scale, bn PPP\$
10	4.3.2	Domestic industry diversification

Weaknesses

Rank	Code	Indicator name
115	6.2.1	Labor productivity growth, %
64	2.1.5	Pupil–teacher ratio, secondary
60	5.3.4	FDI net inflows, % GDP
56	3.3.3	ISO 14001 environment/bn PPP\$ GDP
51	6.1.3	Utility models by origin/bn PPP\$ GDP
50	6.3.4	ICT services exports, % total trade
47	6.3.5	ISO 9001 quality/bn PPP\$ GDP
45	3.2.3	Gross capital formation, % GDP
43	1.1.1	Operational stability for businesses*
41	2.2.2	Graduates in science and engineering, %
21	4.3.1	Applied tariff rate, weighted avg., %

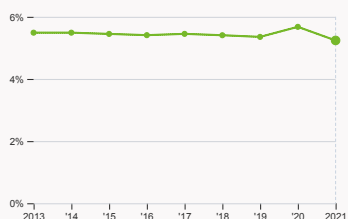




## France's innovation system

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

### > Innovation inputs in France



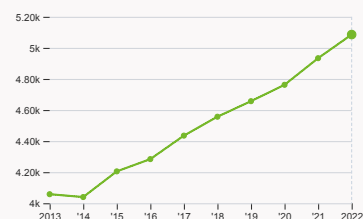
#### 2.1.1 Expenditure on education

was equal to 5.24 % GDP in 2021, down by 0.44 percentage points from the year prior – and equivalent to an indicator rank of 36.



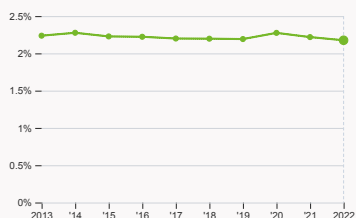
#### 2.2.2 Graduates in science and engineering

was equal to 25.55 % of total graduates in 2021, down by 0.34 percentage points from the year prior – and equivalent to an indicator rank of 41.



#### 2.3.1 Researchers

was equal to 5085.82 FTE per million population in 2022, up by 3.08% from the year prior – and equivalent to an indicator rank of 18.



#### 2.3.2 Gross expenditure on R&D

was equal to 2.18 % GDP in 2022, down by 0.04 percentage points from the year prior – and equivalent to an indicator rank of 16.



#### 2.3.4 QS university ranking

was equal to an average score of 79 for the top three universities in 2023, up by 2.73% from the year prior – and equivalent to an indicator rank of 6.



#### 4.2.4 VC received, value

was equal to 7.93 million USD in 2023, down by 37.76% from the year prior – and equivalent to an indicator rank of 17.

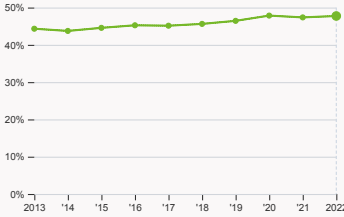


# Global Innovation Index 2024



### 4.3.2 Domestic industry diversification

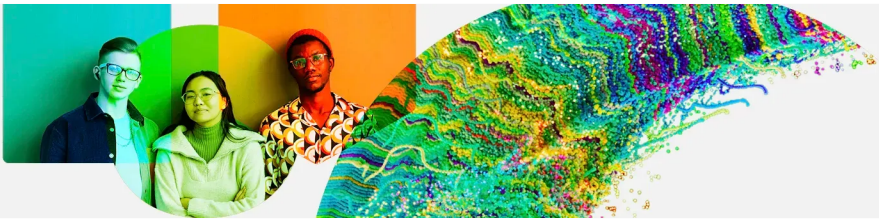
was equal to an index score of 0.08 in 2021, down by 3.51% from the year prior – and equivalent to an indicator rank of 10.



### 5.1.1 Knowledge-intensive employment

was equal to 47.74 % in 2022, up by 0.38 percentage points from the year prior – and equivalent to an indicator rank of 14.

# Global Innovation Index 2024

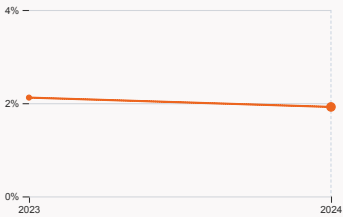


## > Innovation outputs in France



### 6.1.1 Patents by origin

was equal to 24.3 thousand patents in 2022, up by 1.08% from the year prior – and equivalent to an indicator rank of 13.



### 6.2.2 Unicorn valuation

was equal to 1.92 % GDP in 2024, down by 0.2 percentage points from the year prior – and equivalent to an indicator rank of 19.



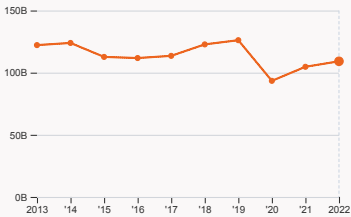
### 6.2.4 High-tech manufacturing

was equal to 46.17 % of total manufacturing output in 2021, down by 0.7 percentage points from the year prior – and equivalent to an indicator rank of 14.



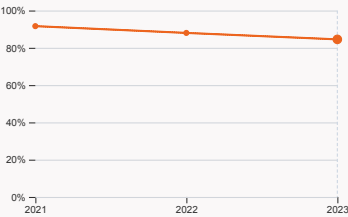
### 6.3.2 Production and export complexity

was equal to a score of 1.34 in 2021, up by 1.52% from the year prior – and equivalent to an indicator rank of 17.



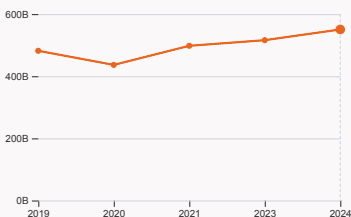
### 6.3.3 High-tech exports

was equal to 109.16 billion USD in 2022, up by 4.23% from the year prior – and equivalent to an indicator rank of 18.



### 7.1.1 Intangible asset intensity

was equal to 84.53 % for the top 15 companies in 2023, down by 3.46 percentage points from the year prior – and equivalent to an indicator rank of 5.



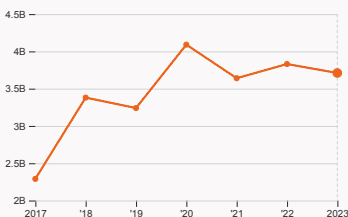
### 7.1.3 Global brand value

was equal to 550.45 billion USD for the brands in the top 5,000 in 2024, up by 6.68% from the year prior – and equivalent to an indicator rank of 6.



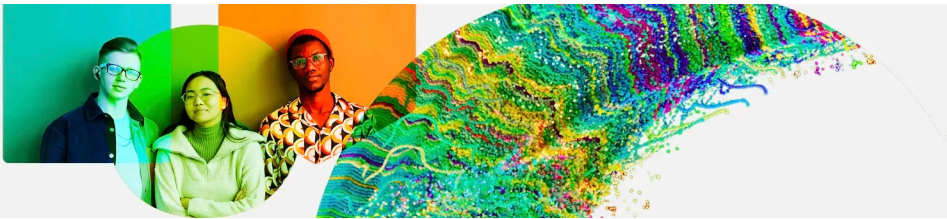
### 7.2.2 National feature films

was equal to 208 films in 2022, down by 21.51% from the year prior – and equivalent to an indicator rank of 29.



### 7.3.3 Mobile app creation

was equal to 3.71 billion global downloads of mobile apps in 2023, down by 3.13% from the year prior – and equivalent to an indicator rank of 18.



France's innovation top performers

2.3.3 Global corporate R&D investors from France

Rank	Firm	Industry	R&D	R&D Growth	R&D Intensity
			[mn EUR]	[%]	[%]
29	SANOFI	Pharmaceuticals & Biotechnology	6,705	18	16
100	RENAULT	Automobiles & Parts	2,259	-4	5
108	FORVIA	Automobiles & Parts	2,078	72	8
123	SCHNEIDER	Electronic & Electrical Equipment	1,845	20	5

Source: European Commission's Joint Research Centre (<https://iri.jrc.ec.europa.eu/scoreboard/2022-eu-industrial-rd-investment-scoreboard>).  
Note: European Commission's Joint Research Centre ranks the top 2,500 firms by R&D investment annually.

2.3.4 QS university ranking of France's top universities

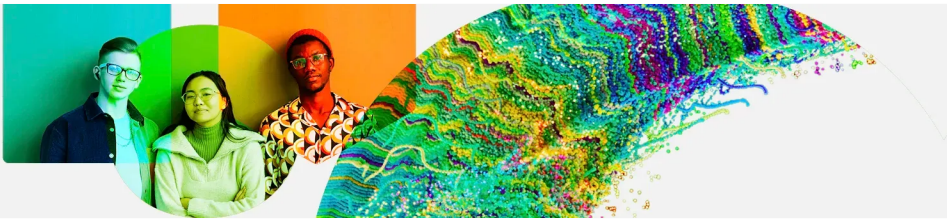
Rank	University	Score
24	UNIVERSITE PSL (PARIS SCIENCES & LETTRES)	85.80
38	INSTITUT POLYTECHNIQUE DE PARIS	79.50
59	SORBONNE UNIVERSITY	71.70

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".

6.2.2 Top Unicorn Companies in France

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	DOCTOLIB	Healthcare & Life Sciences	Paris	6
2	BACK MARKET	Consumer & Retail	Paris	6
3	CONTENTSQUARE	Enterprise Tech	Paris	6

Source: CBInsights, Tracker – The Complete List of Unicorn Companies: <https://www.cbinsights.com/research-unicorn-companies>



7.1.1 Top 15 intangible-asset intensive companies in France

Rank	Firm	Intensity, %
1	LVMH MOET HENNESSY - LOUIS VUITTON, SOCIETE EUROPEENNE	91.25
2	L'OREAL S.A.	92.32
3	SANOFI	83.88

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 France with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	LOUIS VUITTON	Apparel	32,235.4
2	CHANEL	Apparel	26,067.9
3	ORANGE	Telecoms	20,276.5

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

# Global Innovation Index 2024



## France

GII 2024 rank

12

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
10	17	High	EUR	66.4	3,868.6	58,765.1

Score / Value Rank

Score / Value Rank

### Institutions

	67.5	29	◇
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<b>1.1 Institutional environment</b>	71.2	33	◇
1.1.1 Operational stability for businesses*	68	43	○ ◇
1.1.2 Government effectiveness*	74.4	26	◇
<b>1.2 Regulatory environment</b>	75.4	23	
1.2.1 Regulatory quality*	73.1	25	
1.2.2 Rule of law*	77.8	22	
<b>1.3 Business environment</b>	55.8	43	
1.3.1 Policy stability for doing business†	59.4	44	◇
1.3.2 Entrepreneurship policies and culture†	52.2	23	

### Human capital and research

	54.4	16	
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<b>2.1 Education</b>	60.7	34	
2.1.1 Expenditure on education, % GDP	🕒 5.2	36	
2.1.2 Government funding/pupil, secondary, % GDP/cap	26.5	14	
2.1.3 School life expectancy, years	16.1	36	
2.1.4 PISA scales in reading, maths and science	478.3	26	
2.1.5 Pupil–teacher ratio, secondary	🕒 13.4	64	○
<b>2.2 Tertiary education</b>	40.8	38	
2.2.1 Tertiary enrolment, % gross	70.8	43	
2.2.2 Graduates in science and engineering, %	25.6	41	○
2.2.3 Tertiary inbound mobility, %	9.1	30	
<b>2.3 Research and development (R&amp;D)</b>	61.6	13	
2.3.1 Researchers, FTE/mn pop.	5,085.8	18	
2.3.2 Gross expenditure on R&D, % GDP	2.2	16	
2.3.3 Global corporate R&D investors, top 3, mn USD	79.4	9	● ◆
2.3.4 QS university ranking, top 3*	80	6	● ◆

### Infrastructure

	54.9	19	
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<b>3.1 Information and communication technologies (ICTs)</b>	84.5	30	
3.1.1 ICT access*	95.7	44	
3.1.2 ICT use*	84.9	32	
3.1.3 Government's online service*	86.4	20	
3.1.4 E-participation*	70.9	37	
<b>3.2 General infrastructure</b>	47.9	20	
3.2.1 Electricity output, GWh/mn pop.	6,861.3	27	
3.2.2 Logistics performance*	81.8	13	
3.2.3 Gross capital formation, % GDP	25.6	45	○
<b>3.3 Ecological sustainability</b>	32.3	36	
3.3.1 GDP/unit of energy use	13.9	36	
3.3.2 Low-carbon energy use, %	44.5	16	
3.3.3 ISO 14001 environment/bn PPP\$ GDP	1.8	56	○

### Market sophistication

	60.9	10	● ◆
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<b>4.1 Credit</b>	57.5	14	
4.1.1 Finance for startups and scaleups†	71.2	14	
4.1.2 Domestic credit to private sector, % GDP	120	16	
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
<b>4.2 Investment</b>	37.4	20	
4.2.1 Market capitalization, % GDP	🕒 92.7	21	
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP	0.3	24	
4.2.3 VC recipients, deals/bn PPP\$ GDP	0.2	14	
4.2.4 VC received, value, % GDP	0.004	17	
<b>4.3 Trade, diversification and market scale</b>	87.9	7	● ◆
4.3.1 Applied tariff rate, weighted avg., %	1.1	21	○
4.3.2 Domestic industry diversification	96.3	10	● ◆
4.3.3 Domestic market scale, bn PPP\$	3,868.6	10	● ◆

### Business sophistication

	55.5	17	
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<b>5.1 Knowledge workers</b>	70.5	9	● ◆
5.1.1 Knowledge-intensive employment, %	47.7	14	
5.1.2 Firms offering formal training, %	🕒 67.9	2	● ◆
5.1.3 GERD performed by business, % GDP	1.4	17	
5.1.4 GERD financed by business, %	55.4	20	
5.1.5 Females employed w/advanced degrees, %	25.8	16	
<b>5.2 Innovation linkages</b>	48.4	23	◇
5.2.1 Public Research–Industry co-publications, %	4.6	15	
5.2.2 University–industry R&D collaboration†	60.6	35	◇
5.2.3 State of cluster development†	75.4	26	
5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP	0.05	25	
5.2.5 Patent families/bn PPP\$ GDP	2.9	14	
<b>5.3 Knowledge absorption</b>	47.5	15	
5.3.1 Intellectual property payments, % total trade	1.5	23	
5.3.2 High-tech imports, % total trade	9.9	40	
5.3.3 ICT services imports, % total trade	3	13	
5.3.4 FDI net inflows, % GDP	2.6	60	○
5.3.5 Research talent, % in businesses	61.7	10	

### Knowledge and technology outputs

	43.6	16	
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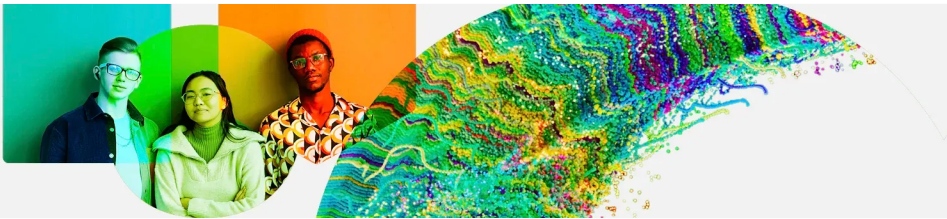
<b>6.1 Knowledge creation</b>	42	20	
6.1.1 Patents by origin/bn PPP\$ GDP	6.6	13	
6.1.2 PCT patents by origin/bn PPP\$ GDP	2	16	
6.1.3 Utility models by origin/bn PPP\$ GDP	0.1	51	○
6.1.4 Scientific and technical articles/bn PPP\$ GDP	17.4	40	◇
6.1.5 Citable documents H-index	78	5	● ◆
<b>6.2 Knowledge impact</b>	48.5	15	
6.2.1 Labor productivity growth, %	-0.8	115	○ ◇
6.2.2 Unicorn valuation, % GDP	1.9	19	
6.2.3 Software spending, % GDP	0.6	8	● ◆
6.2.4 High-tech manufacturing, %	46.2	14	
<b>6.3 Knowledge diffusion</b>	40.4	26	
6.3.1 Intellectual property receipts, % total trade	1.6	15	
6.3.2 Production and export complexity	76.7	17	
6.3.3 High-tech exports, % total trade	10.4	18	
6.3.4 ICT services exports, % total trade	2.4	50	○
6.3.5 ISO 9001 quality/bn PPP\$ GDP	5.9	47	○

### Creative outputs

	60.8	4	● ◆
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<b>7.1 Intangible assets</b>	80	3	● ◆
7.1.1 Intangible asset intensity, top 15, %	84.5	5	● ◆
7.1.2 Trademarks by origin/bn PPP\$ GDP	79.2	13	◆
7.1.3 Global brand value, top 5,000, % GDP	17.3	6	● ◆
7.1.4 Industrial designs by origin/bn PPP\$ GDP	10	7	● ◆
<b>7.2 Creative goods and services</b>	31.2	34	
7.2.1 Cultural and creative services exports, % total trade	1.2	21	
7.2.2 National feature films/mn pop. 15–69	4.7	29	
7.2.3 Entertainment and media market/th pop. 15–69	43.6	19	
7.2.4 Creative goods exports, % total trade	1.5	32	
<b>7.3 Online creativity</b>	51.9	26	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	29.9	24	
7.3.2 GitHub commits/mn pop. 15–69	50.5	21	◇
7.3.3 Mobile app creation/bn PPP\$ GDP	75.4	18	

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 France.



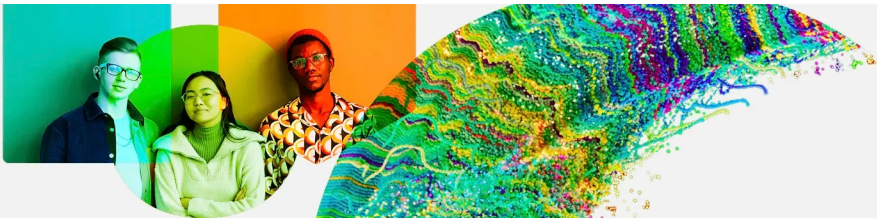
France has missing data for one indicator and outdated data for four indicators.

Missing data for France

Code	Indicator name	Economy Year	Model Year	Source
4.1.3	Loans from microfinance institutions, % GDP	n/a	2022	International Monetary Fund, Financial Access Survey (FAS)

Outdated data for France

Code	Indicator name	Economy Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2021	2022	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2019	2022	UNESCO Institute for Statistics
4.2.1	Market capitalization, % GDP	2018	2022	World Federation of Exchanges; World Bank
5.1.2	Firms offering formal training, %	2021	2023	World Bank Enterprise Surveys



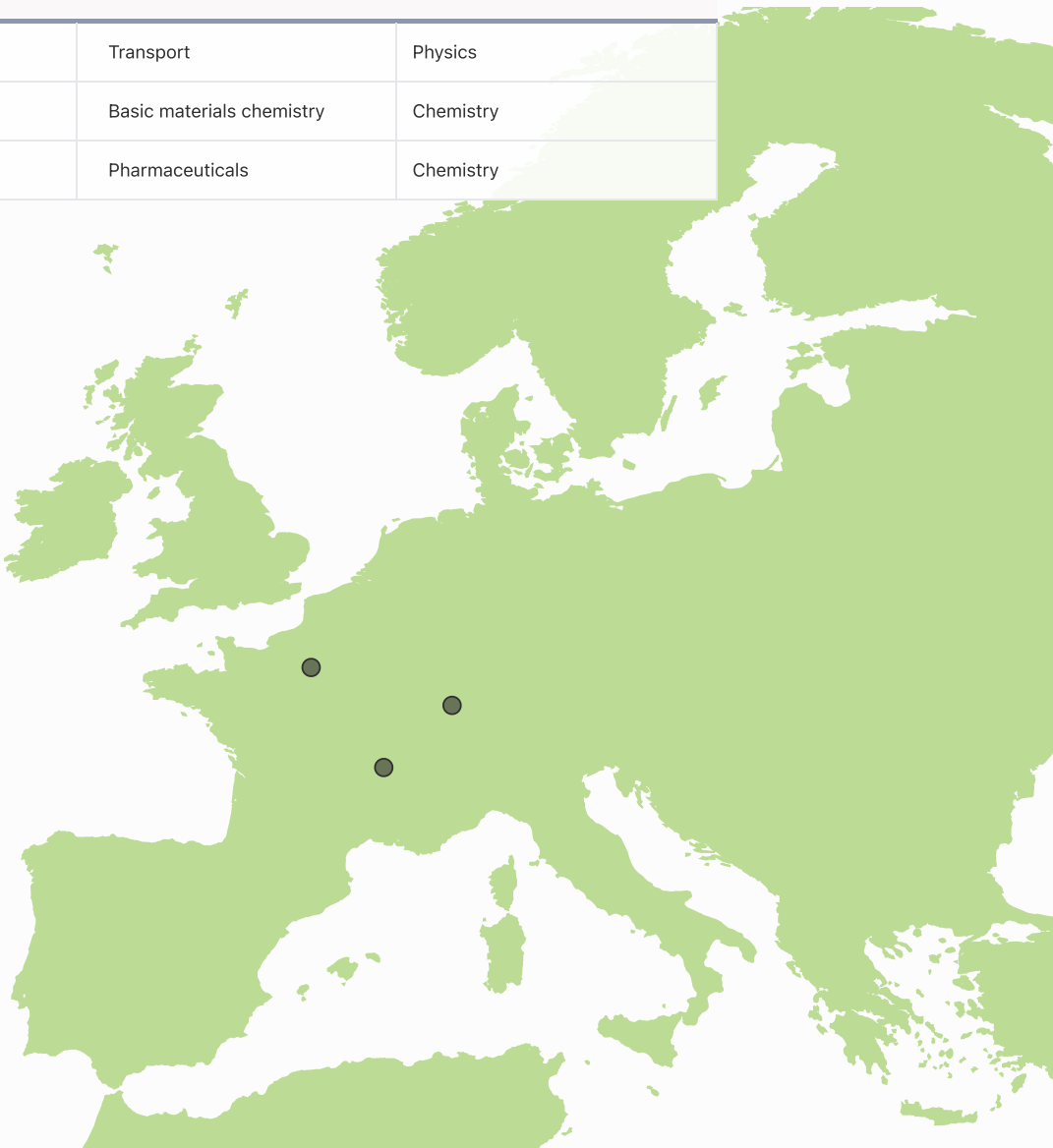
Top science and technology clusters in France



France has 3 clusters in the top 100 S&T clusters of the Global Innovation Index, the same number as in 2023.

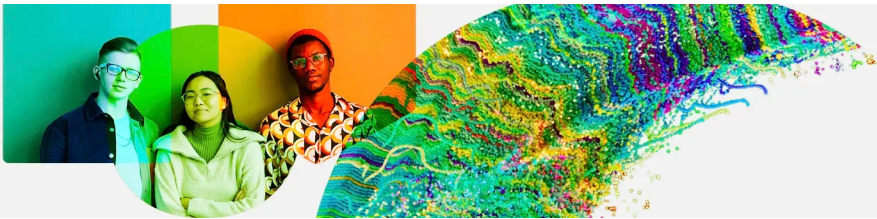
The table and map below give an overview of the top science and technology clusters in France.

Rank	Cluster name	Top patent field	Top academic subject
12	<a href="#">Paris</a>	Transport	Physics
92	<a href="#">Lyon</a>	Basic materials chemistry	Chemistry
96	<a href="#">Basel</a>	Pharmaceuticals	Chemistry



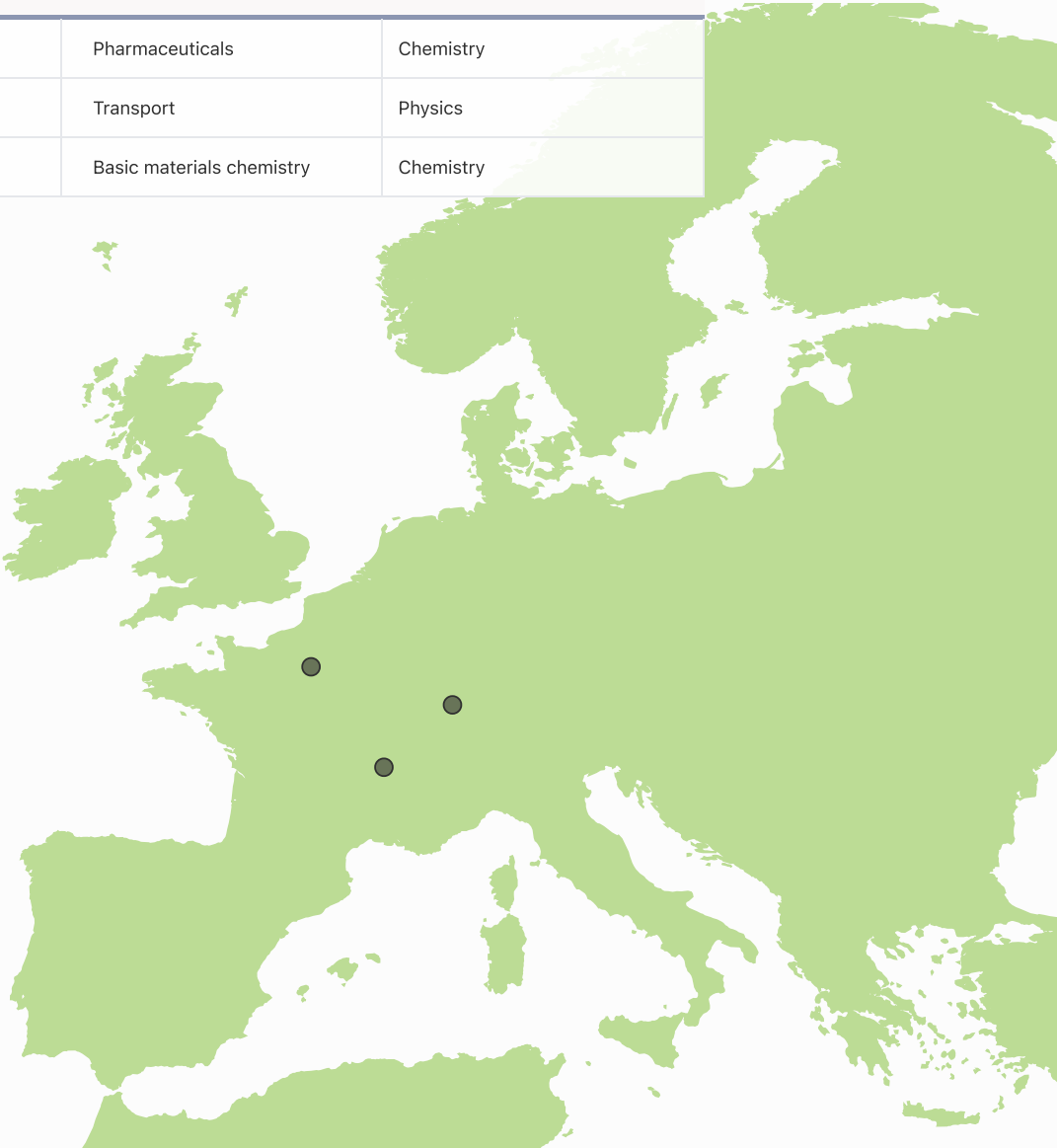


# Global Innovation Index 2024



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

Rank	Cluster name	Top patent field	Top academic subject
19	<a href="#">Basel</a>	Pharmaceuticals	Chemistry
36	<a href="#">Paris</a>	Transport	Physics
42	<a href="#">Lyon</a>	Basic materials chemistry	Chemistry

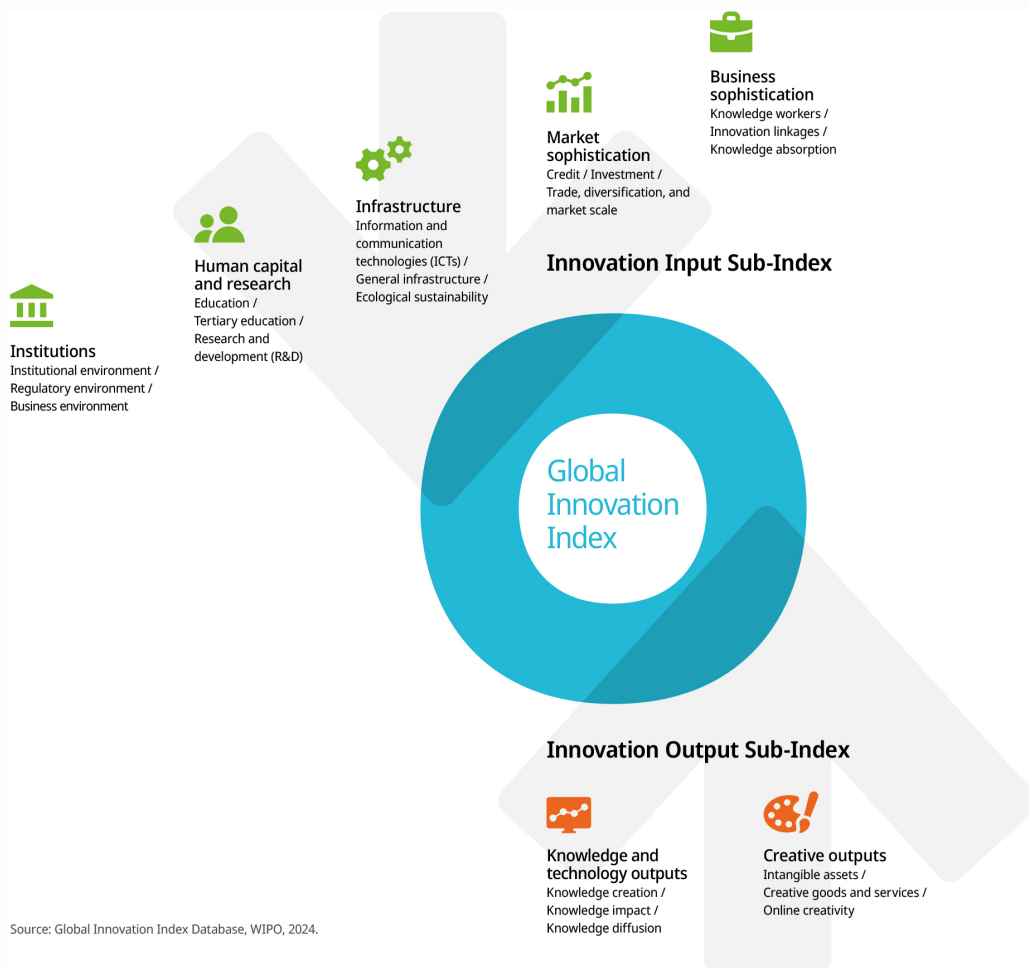


# Global Innovation Index 2024



## 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.