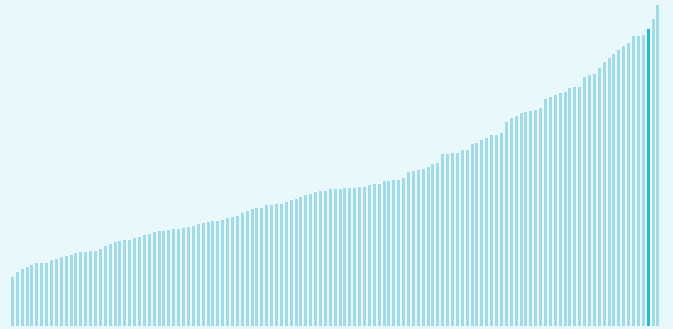


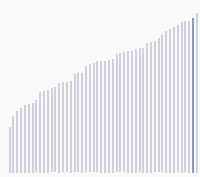
United States of America ranking in the Global Innovation Index 2024

United States of America ranks **3rd** 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.



United States of America ranks **3rd** among the 51 high-income group economies.



United States of America ranks **1st** among the 2 economies in Northern America.



> United States of America GII Ranking (2020-2024)

The table shows the rankings of United States of America 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 United States of America in the GII 2024 is between ranks 2 and 5.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	3rd	4th	5th
2021	3rd	3rd	4th
2022	2nd	2nd	5th
2023	3rd	2nd	4th
2024	3rd	4th	5th

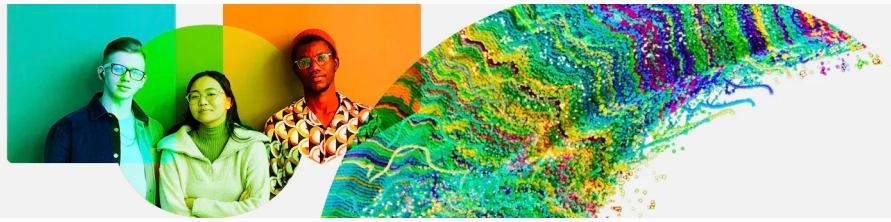
United States of America performs worse in innovation outputs than innovation inputs in 2024.

This year United States of America ranks 4th in innovation inputs. This position is lower than last year.

United States of America ranks 5th in innovation outputs. This position is lower than last year.

United States of America has 20 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 United States of America, how rapidly is technology being embraced and what are the resulting societal impacts.



For United States of America, 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	
▼ -8% 2022 - 2023	▲ 4.8% 2021 - 2022	▼ -7.1% 2022 - 2023	▼ -39.6% 2022 - 2023	▼ -5.3% 2022 - 2023
▲ 0.4% 2013 - 2023	▲ 5.3% 2012 - 2022	▲ 3.9% 2013 - 2023	▲ 9.4% 2013 - 2023	▼ -0.3% 2013 - 2023

Technology adoption

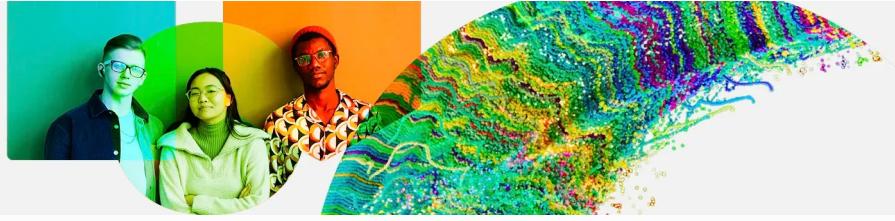
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
0% 2021 - 2022	▲ 1.2% 2021 - 2022	▲ 3.3% 2021 - 2022	▲ 6.8% 2021 - 2022	▲ 59.5% 2022 - 2023
0% 2012 - 2022	▲ 2.6% 2012 - 2022		▲ 6.7% 2012 - 2022	▲ 39.5% 2013 - 2023
97 per 100 inhabitants in 2022	37.8 per 100 inhabitants in 2022	97.1 per 100 inhabitants in 2022		2.1 per 100 inhabitants in 2023

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 1% 2022 - 2023	▲ 1.4% 2021 - 2022	▲ 1.2°C 2023
▲ 1.2% 2013 - 2023	▼ -0.2% 2012 - 2022	n/a
168,599 USD in 2023	77.4 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.

Global Innovation Index 2024



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.



United States of America is an innovation leader, ranking in the top 25 of the GII.

> Innovation overperformers relative to their economic development





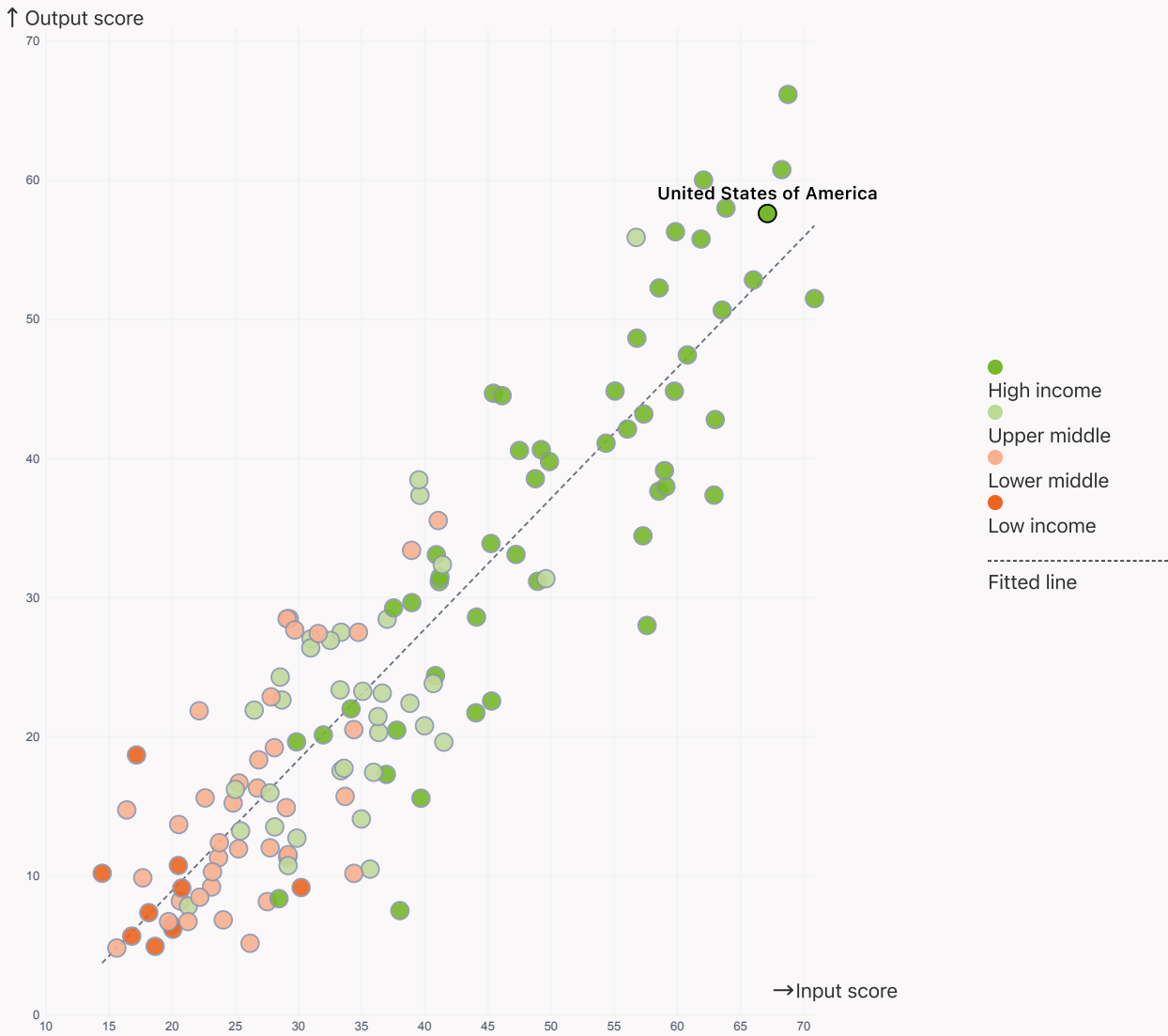
Effectively translating innovation investments into innovation outputs

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.

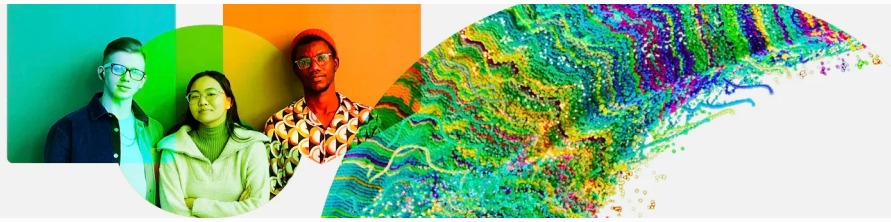


United States of America produces more innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

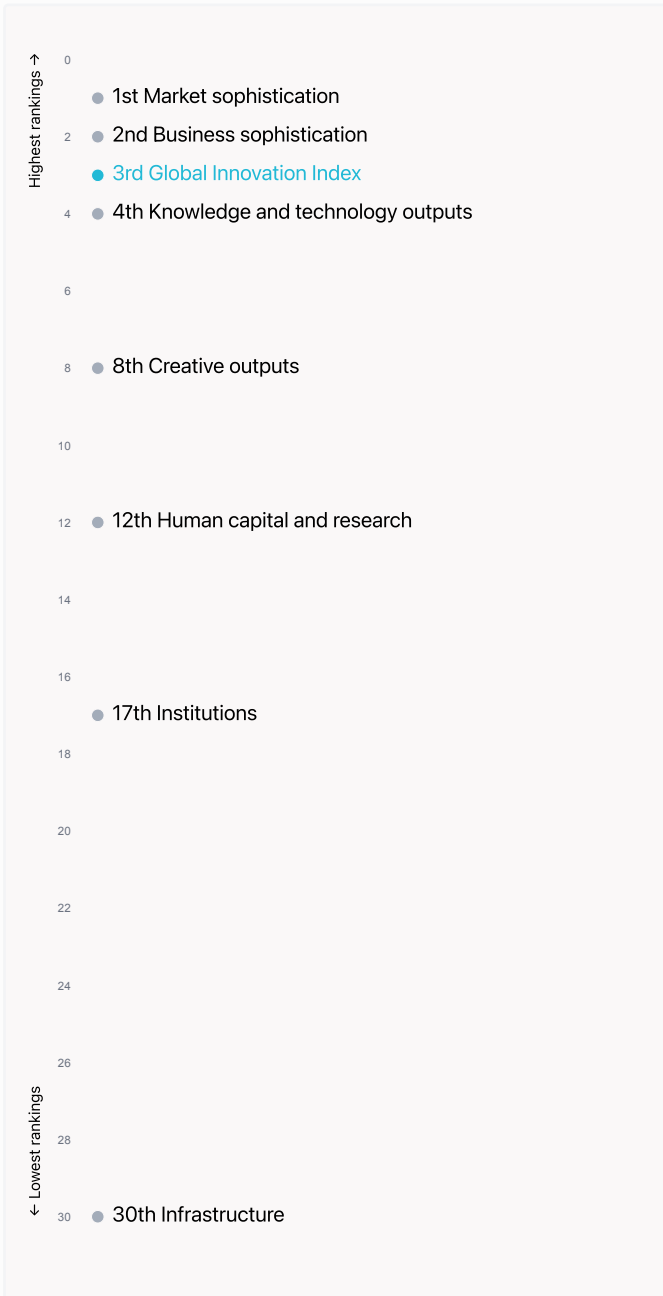


Global Innovation Index 2024



Overview of United States of America'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 United States of America are those that rank above the GII (shown in blue) and the weakest are those that rank below.



Highest rankings




United States of America ranks highest in Market sophistication (1st) and Business sophistication (2nd).

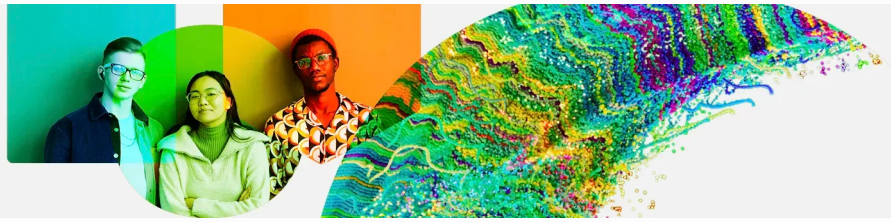
Lowest rankings



United States of America ranks lowest in Infrastructure (30th), Institutions (17th) and Human capital and research (12th).

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

Global Innovation Index 2024



Benchmark of United States of America against other economy groupings for each of the seven areas of the GII Index

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



High-Income economies

United States of America performs above the high-income group average in all pillars.



Northern America

United States of America performs above the regional average in Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.

Institutions

Top 10 | Score: 80.81

Northern America | Score: 76.51

United States | Score: 74.88

High income | Score: 67.41

Human capital and research

Top 10 | Score: 61.30

Northern America | Score: 57.52

United States | Score: 56.68

High income | Score: 46.99

Infrastructure

Top 10 | Score: 58.57

Northern America | Score: 53.52

United States | Score: 52.31

High income | Score: 51.96

Market sophistication

United States | Score: 81.53

Northern America | Score: 74.38

Top 10 | Score: 62.12

High income | Score: 44.90

Business sophistication

United States | Score: 70.59

Northern America | Score: 63.72

Top 10 | Score: 63.64

High income | Score: 44.71

Knowledge and technology outputs

United States | Score: 60.20

Top 10 | Score: 57.29

Northern America | Score: 50.79

High income | Score: 35.79

Creative outputs

Top 10 | Score: 56.54

United States | Score: 54.92

Northern America | Score: 49.52

High income | Score: 39.44



Innovation strengths and weaknesses in United States of America

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



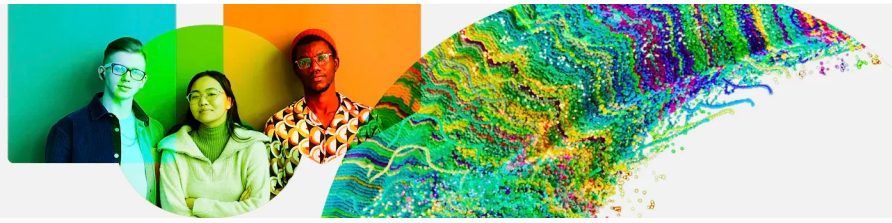
United States of America's main innovation strengths are **Citable documents H-index (rank 1)**, **Software spending, % GDP (rank 1)** and **Intangible asset intensity, top 15, % (rank 1)**.

Strengths

Weaknesses

Rank	Code	Indicator name	Rank	Code	Indicator name
1	6.1.5	Citable documents H-index	119	3.3.3	ISO 14001 environment/bn PPP\$ GDP
1	6.2.3	Software spending, % GDP	110	6.3.5	ISO 9001 quality/bn PPP\$ GDP
1	7.1.1	Intangible asset intensity, top 15, %	93	3.2.3	Gross capital formation, % GDP
1	4.3.3	Domestic market scale, bn PPP\$	91	7.1.2	Trademarks by origin/bn PPP\$ GDP
1	7.2.3	Entertainment and media market/th pop. 15–69	90	5.3.4	FDI net inflows, % GDP
1	6.3.1	Intellectual property receipts, % total trade	75	2.2.2	Graduates in science and engineering, %
1	2.3.4	QS university ranking, top 3*	73	3.3.1	GDP/unit of energy use
1	2.3.3	Global corporate R&D investors, top 3, mn USD	71	2.1.5	Pupil–teacher ratio, secondary
1	6.2.2	Unicorn valuation, % GDP	66	3.3.2	Low-carbon energy use, %
2	7.1.3	Global brand value, top 5,000, % GDP	65	7.1.4	Industrial designs by origin/bn PPP\$ GDP
2	4.1.2	Domestic credit to private sector, % GDP			
2	5.3.5	Research talent, % in businesses			
3	5.1.3	GERD performed by business, % GDP			
3	5.2.1	Public Research–Industry co-publications, %			
3	2.3.2	Gross expenditure on R&D, % GDP			
3	5.2.3	State of cluster development†			
3	5.2.2	University–industry R&D collaboration†			

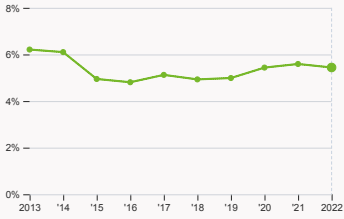
Global Innovation Index 2024



United States of America's innovation system

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

> Innovation inputs in United States of America



2.1.1 Expenditure on education

was equal to 5.44 % GDP in 2022, down by 0.15 percentage points from the year prior – and equivalent to an indicator rank of 30.



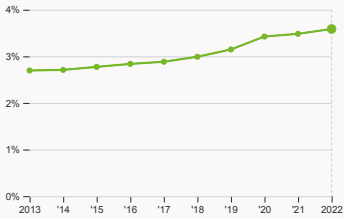
2.2.2 Graduates in science and engineering

was equal to 20.07 % of total graduates in 2021, up by 0.01 percentage points from the year prior – and equivalent to an indicator rank of 75.



2.3.1 Researchers

was equal to 4932.31 FTE per million population in 2021, up by 8.09% from the year prior – and equivalent to an indicator rank of 20.



2.3.2 Gross expenditure on R&D

was equal to 3.59 % GDP in 2022, up by 0.1 percentage points from the year prior – and equivalent to an indicator rank of 3.



2.3.4 QS university ranking

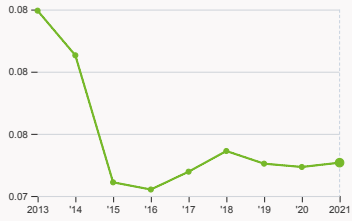
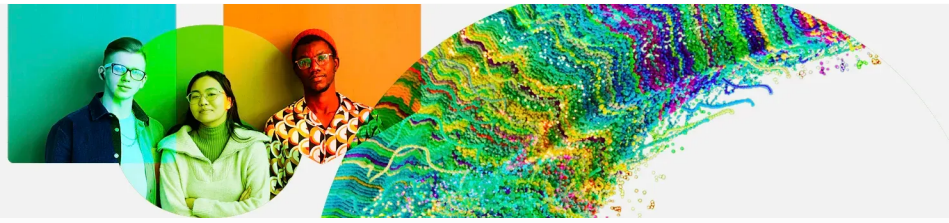
was equal to an average score of 98.8 for the top three universities in 2023, up by 0.1% from the year prior – and equivalent to an indicator rank of 1.



4.2.4 VC received, value

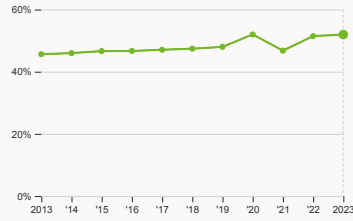
was equal to 110.5 million USD in 2023, down by 39.62% from the year prior – and equivalent to an indicator rank of 5.

Global Innovation Index 2024



4.3.2 Domestic industry diversification

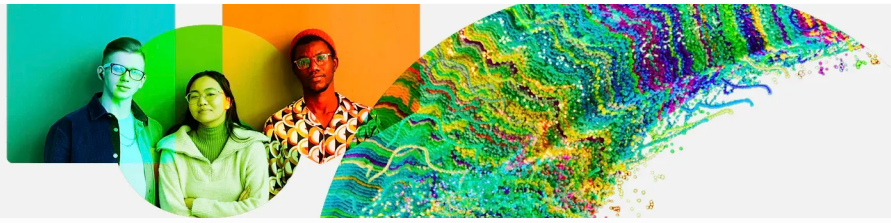
was equal to an index score of 0.08 in 2021, up by 0.18% from the year prior – and equivalent to an indicator rank of 7.



5.1.1 Knowledge-intensive employment

was equal to 51.96 % in 2023, up by 0.5 percentage points from the year prior – and equivalent to an indicator rank of 8.

Global Innovation Index 2024

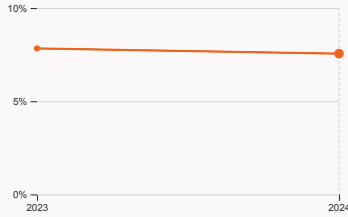


› Innovation outputs in United States of America



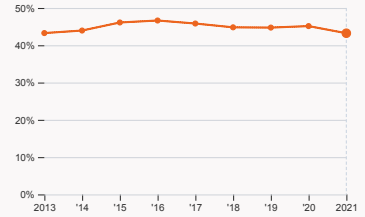
6.1.1 Patents by origin

was equal to 252.32 thousand patents in 2022, down by 3.78% from the year prior – and equivalent to an indicator rank of 8.



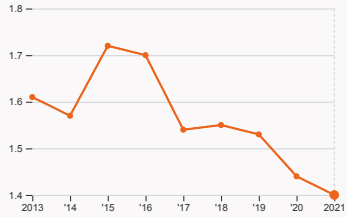
6.2.2 Unicorn valuation

was equal to 7.55 % GDP in 2024, down by 0.28 percentage points from the year prior – and equivalent to an indicator rank of 1.



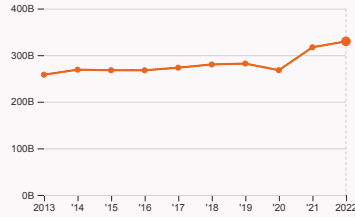
6.2.4 High-tech manufacturing

was equal to 43.23 % of total manufacturing output in 2021, down by 1.91 percentage points from the year prior – and equivalent to an indicator rank of 22.



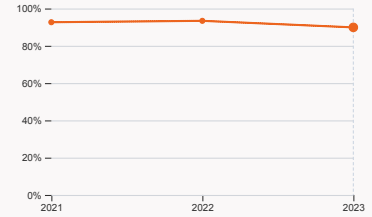
6.3.2 Production and export complexity

was equal to a score of 1.4 in 2021, down by 2.78% from the year prior – and equivalent to an indicator rank of 14.



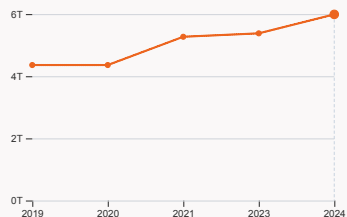
6.3.3 High-tech exports

was equal to 329.59 billion USD in 2022, up by 4.02% from the year prior – and equivalent to an indicator rank of 20.



7.1.1 Intangible asset intensity

was equal to 89.89 % for the top 15 companies in 2023, down by 3.51 percentage points from the year prior – and equivalent to an indicator rank of 1.



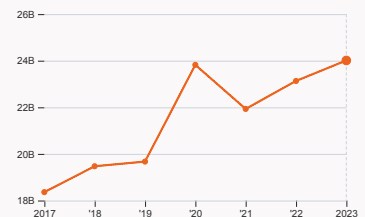
7.1.3 Global brand value

was equal to 5.99 trillion USD for the brands in the top 5,000 in 2024, up by 11.34% from the year prior – and equivalent to an indicator rank of 2.



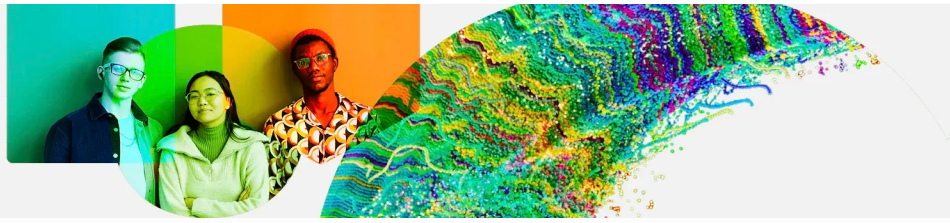
7.2.2 National feature films

was equal to 834 films in 2022, down by 11.56% from the year prior – and equivalent to an indicator rank of 40.



7.3.3 Mobile app creation

was equal to 24.01 billion global downloads of mobile apps in 2023, up by 3.8% from the year prior – and equivalent to an indicator rank of 22.



United States of America's innovation top performers

2.3.3 Global corporate R&D investors from United States of America

Rank	Firm	Industry	R&D	R&D Growth	R&D Intensity
			[mn EUR]	[%]	[%]
1	ALPHABET	Software & Computer Services	37,034	25	14
2	META	Software & Computer Services	31,520	36	29
3	MICROSOFT	Software & Computer Services	25,497	11	13
4	APPLE	Technology Hardware & Equipment	24,612	20	7

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 United States of America's top universities

Rank	University	Score
1	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)	100.00
4	HARVARD UNIVERSITY	98.30
5	STANFORD UNIVERSITY	98.10

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 United States of America

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	SPACE X	Industrials	Hawthorne	150
2	OPENAI	Enterprise Tech	San Francisco	80
3	STRIPE	Financial Services	San Francisco	65

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 United States of America

Rank	Firm	Intensity, %
1	APPLE INC.	96.13
2	MICROSOFT CORPORATION	95.10
3	ALPHABET INC.	82.06

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 United States of America with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	APPLE	Electronics	516,581.5
2	MICROSOFT	Internet & Software	340,441.7
3	GOOGLE	Media	333,441.3

Source: Brand Finance (<https://brandirectory.com>).

Note: Rank corresponds to within economy ranks.



United States of America

GII 2024 rank

3

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
5	4	High	NAC	343.0	26,949.6	80,412.4
			Score / Value Rank			
Institutions			74.9 17	Business sophistication 70.6 2 ●◆		
1.1 Institutional environment			78.4 21	5.1 Knowledge workers 81.8 2 ●◆		
1.1.1 Operational stability for businesses*			80 23	5.1.1 Knowledge-intensive employment, % 52 8		
1.1.2 Government effectiveness*			76.8 22	5.1.2 Firms offering formal training, % n/a n/a		
1.2 Regulatory environment			81.2 20	5.1.3 GERD performed by business, % GDP 2.8 3 ●◆		
1.2.1 Regulatory quality*			79.3 18	5.1.4 GERD financed by business, % 70 6 ◆		
1.2.2 Rule of law*			83.2 19	5.1.5 Females employed w/advanced degrees, % 28.1 9		
1.3 Business environment			65 25	5.2 Innovation linkages 77.1 2 ●◆		
1.3.1 Policy stability for doing business*			75 17	5.2.1 Public Research-Industry co-publications, % 7.9 3 ●◆		
1.3.2 Entrepreneurship policies and culture*			55.1 20	5.2.2 University-industry R&D collaboration+ 91.3 3 ●◆		
Human capital and research			56.7 12	5.2.3 State of cluster development+ 97.5 3 ●◆		
2.1 Education			59.5 40	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP 0.2 6 ◆		
2.1.1 Expenditure on education, % GDP 5.4 30				5.2.5 Patent families/bn PPP\$ GDP 3.4 13		
2.1.2 Government funding/pupil, secondary, % GDP/cap 22.6 35				5.3 Knowledge absorption 52.8 7		
2.1.3 School life expectancy, years 15.9 39				5.3.1 Intellectual property payments, % total trade 1.6 17		
2.1.4 PISA scales in reading, maths and science 489.4 17				5.3.2 High-tech imports, % total trade 19.4 10 ◆		
2.1.5 Pupil-teacher ratio, secondary 14.5 71 ○◇				5.3.3 ICT services imports, % total trade 1.5 47		
2.2 Tertiary education			33.2 67 ○◇	5.3.4 FDI net inflows, % GDP 1.4 90 ○		
2.2.1 Tertiary enrolment, % gross 79.4 23				5.3.5 Research talent, % in businesses 81.3 2 ●◆		
2.2.2 Graduates in science and engineering, % 20.1 75 ○				Knowledge and technology outputs 60.2 4 ◆		
2.2.3 Tertiary inbound mobility, % 4.9 51				6.1 Knowledge creation 56.9 10		
2.3 Research and development (R&D)			77.3 2 ●◆	6.1.1 Patents by origin/bn PPP\$ GDP 9.9 8		
2.3.1 Researchers, FTE/mn pop. 4,932.3 20				6.1.2 PCT patents by origin/bn PPP\$ GDP 2.1 15		
2.3.2 Gross expenditure on R&D, % GDP 3.6 3 ●◆				6.1.3 Utility models by origin/bn PPP\$ GDP - -		
2.3.3 Global corporate R&D investors, top 3, mn USD 100 1 ●◆				6.1.4 Scientific and technical articles/bn PPP\$ GDP 12.6 56 ◇		
2.3.4 QS university ranking, top 3* 100 1 ●◆				6.1.5 Citable documents H-index 100 1 ●◆		
Infrastructure			52.3 30	6.2 Knowledge impact 77.1 1 ●◆		
3.1 Information and communication technologies (ICTs)			93.3 9	6.2.1 Labor productivity growth, % 1.5 40		
3.1.1 ICT access* 97.9 30				6.2.2 Unicorn valuation, % GDP 7.6 1 ●◆		
3.1.2 ICT use* 92.4 9 ◆				6.2.3 Software spending, % GDP 1 1 ●◆		
3.1.3 Government's online service* 92.3 9				6.2.4 High-tech manufacturing, % 43.2 22		
3.1.4 E-participation* 90.7 10				6.3 Knowledge diffusion 46.6 16		
3.2 General infrastructure			49.9 17	6.3.1 Intellectual property receipts, % total trade 4.2 1 ●◆		
3.2.1 Electricity output, GWh/mn pop. 13,427.7 9				6.3.2 Production and export complexity 78.4 14		
3.2.2 Logistics performance* 77.3 16				6.3.3 High-tech exports, % total trade 9.4 20		
3.2.3 Gross capital formation, % GDP 21.1 93 ○				6.3.4 ICT services exports, % total trade 1.9 58		
3.3 Ecological sustainability			13.7 98 ○◇	6.3.5 ISO 9001 quality/bn PPP\$ GDP 1.2 110 ○◇		
3.3.1 GDP/unit of energy use 9.8 73 ○				Creative outputs 54.9 8		
3.3.2 Low-carbon energy use, % 17.3 66 ○				7.1 Intangible assets 52.3 18		
3.3.3 ISO 14001 environment/bn PPP\$ GDP 0.2 119 ○◇				7.1.1 Intangible asset intensity, top 15, % 89.9 1 ●◆		
Market sophistication			81.5 1 ●◆	7.1.2 Trademarks by origin/bn PPP\$ GDP 19.4 91 ○◇		
4.1 Credit			78.7 3 ●◆	7.1.3 Global brand value, top 5,000, % GDP 21.4 2 ●◆		
4.1.1 Finance for startups and scaleups+ 76 11				7.1.4 Industrial designs by origin/bn PPP\$ GDP 0.8 65 ○		
4.1.2 Domestic credit to private sector, % GDP 216.3 2 ●◆				7.2 Creative goods and services 49.1 8 ◆		
4.1.3 Loans from microfinance institutions, % GDP n/a n/a				7.2.1 Cultural and creative services exports, % total trade 1.5 17		
4.2 Investment			69.9 5 ◆	7.2.2 National feature films/mn pop. 15-69 3.5 40		
4.2.1 Market capitalization, % GDP 188 6 ◆				7.2.3 Entertainment and media market/th pop. 15-69 100 1 ●◆		
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP 0.4 17				7.2.4 Creative goods exports, % total trade 2.6 23		
4.2.3 VC recipients, deals/bn PPP\$ GDP 0.3 7 ◆				7.3 Online creativity 65.9 10		
4.2.4 VC received, value, % GDP 0.008 5 ◆				7.3.1 Top-level domains (TLDs)/th pop. 15-69 58.4 8		
4.3 Trade, diversification and market scale			95.9 1 ●◆	7.3.2 GitHub commits/mn pop. 15-69 64.5 14		
4.3.1 Applied tariff rate, weighted avg., % 1.2 51				7.3.3 Mobile app creation/bn PPP\$ GDP 74.8 22		
4.3.2 Domestic industry diversification 97.6 7						
4.3.3 Domestic market scale, bn PPP\$ 26,949.6 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 United States of America.



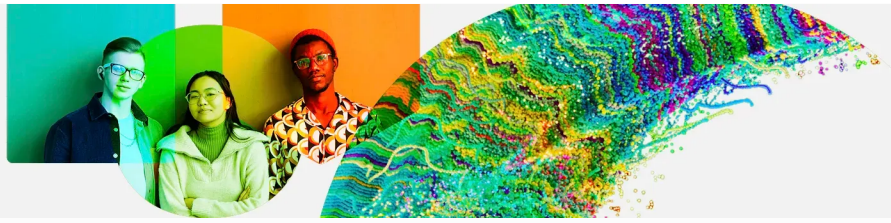
United States of America has missing data for three indicators and outdated data for three indicators.

Missing data for United States of America

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)
5.1.2	Firms offering formal training, %	n/a	2023	World Bank Enterprise Surveys
6.1.3	Utility models by origin/bn PPP\$ GDP	n/a	2022	World Intellectual Property Organization; International Monetary Fund

Outdated data for United States of America

Code	Indicator name	Economy Year	Model Year	Source
2.3.1	Researchers, FTE/mn pop.	2021	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT
4.1.2	Domestic credit to private sector, % GDP	2021	2022	International Monetary Fund; World Bank and OECD GDP estimates.
5.3.5	Research talent, % in businesses	2021	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT



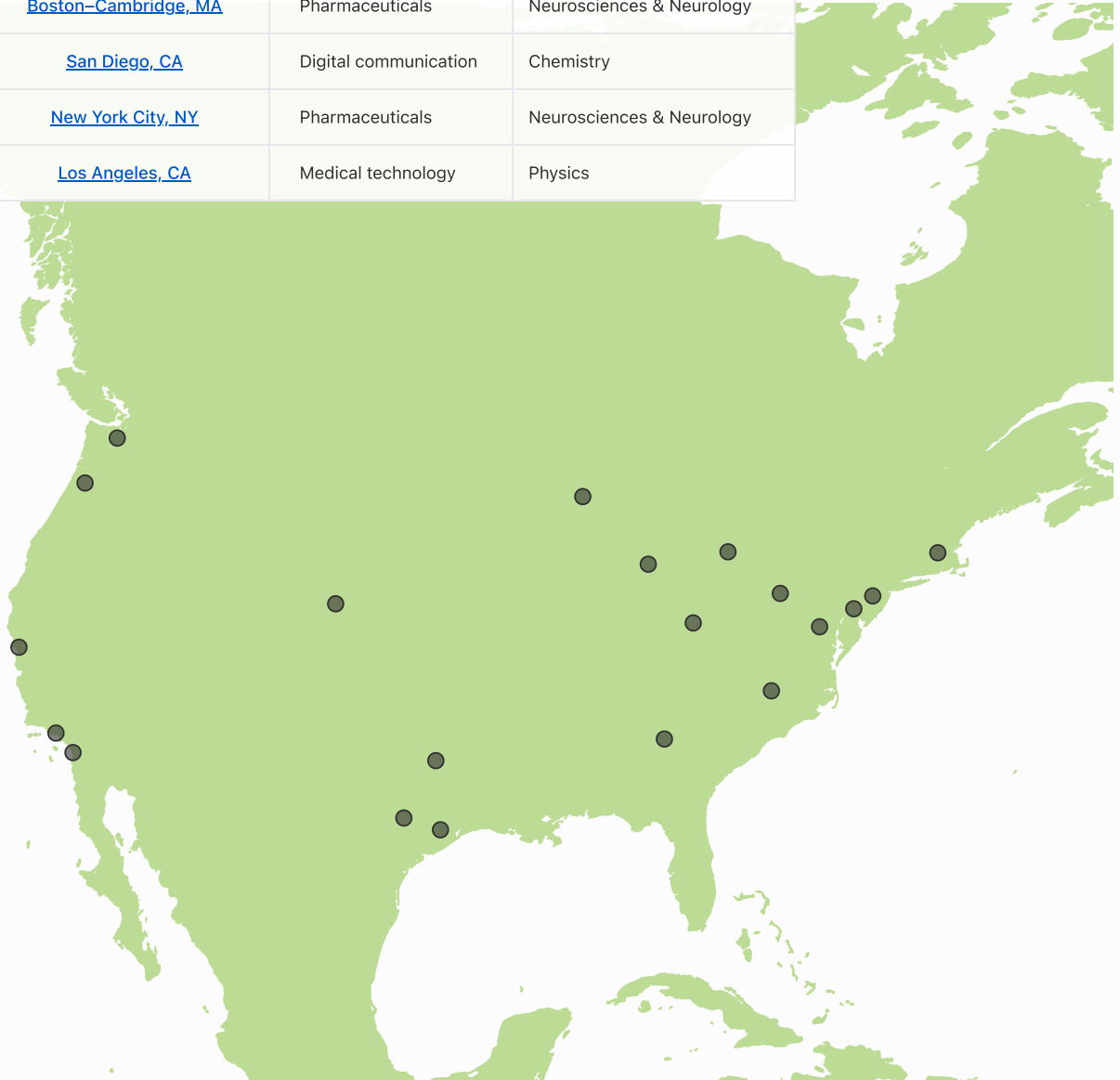
Top science and technology clusters in United States of America



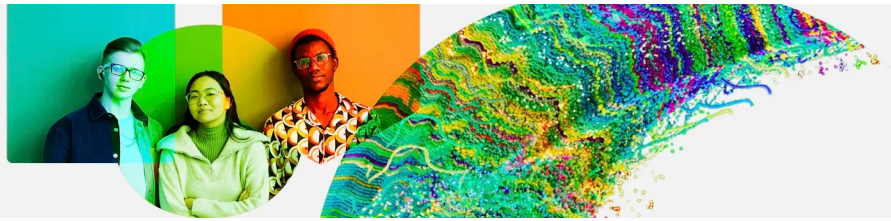
United States of America has 20 clusters in the top 100 S&T clusters of the Global Innovation Index, 1 less than in 2023.

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

Rank	Cluster name	Top patent field	Top academic subject
6	San Jose–San Francisco, CA	Computer technology	Physics
8	Boston–Cambridge, MA	Pharmaceuticals	Neurosciences & Neurology
10	San Diego, CA	Digital communication	Chemistry
11	New York City, NY	Pharmaceuticals	Neurosciences & Neurology
16	Los Angeles, CA	Medical technology	Physics



Global Innovation Index 2024

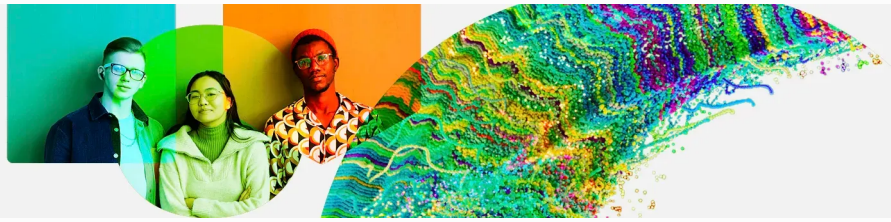


The table and map below give an overview of the top science and technology clusters by intensity in United States of America.

Rank	Cluster name	Top patent field	Top academic subject
2	San Jose–San Francisco, CA	Computer technology	Physics
5	Boston–Cambridge, MA	Pharmaceuticals	Neurosciences & Neurology
6	San Diego, CA	Digital communication	Chemistry
8	Ann Arbor, MI	Pharmaceuticals	Engineering
9	Seattle, WA	Computer technology	Neurosciences & Neurology

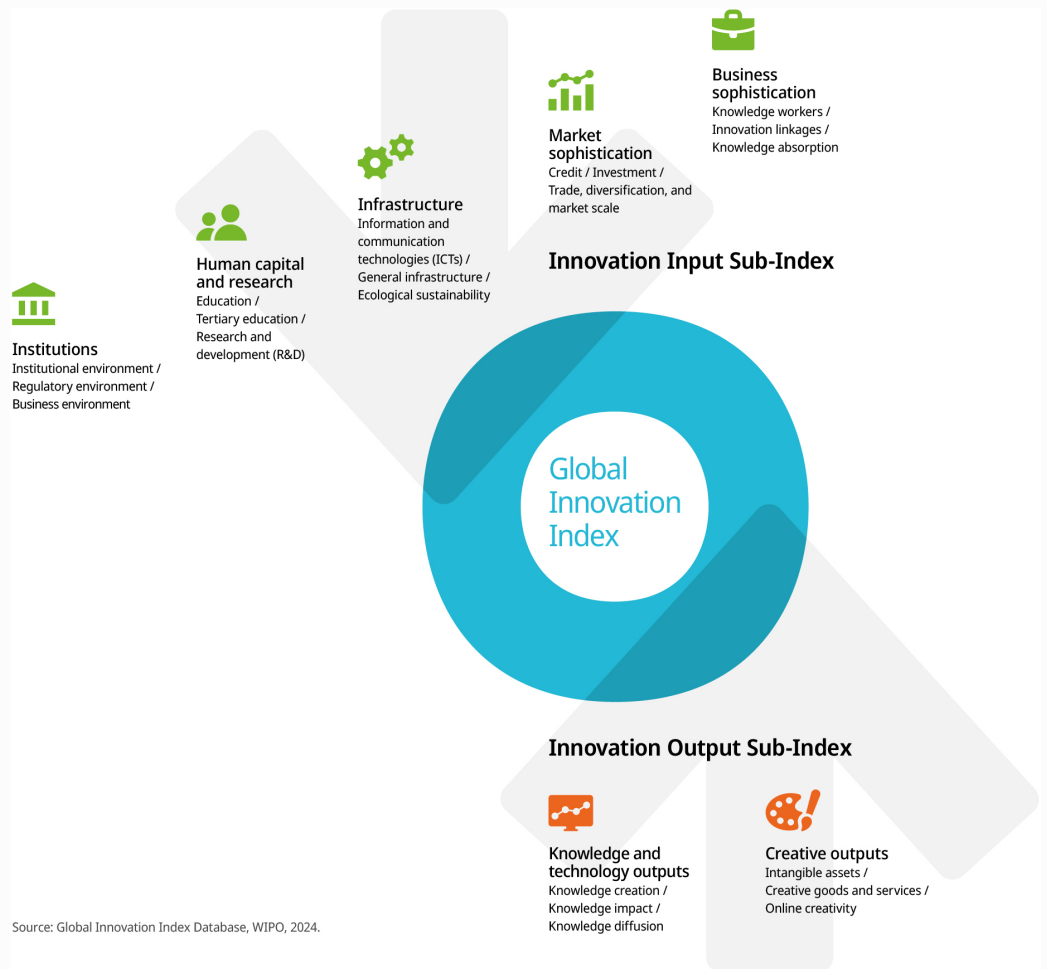


Global Innovation Index 2024



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.