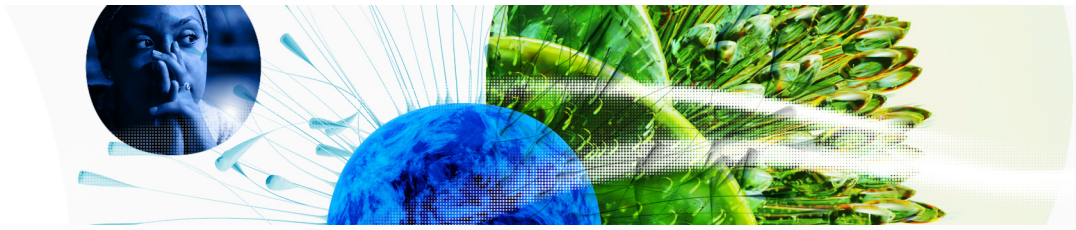
Global Innovation Index 2023



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**.

Iceland ranking in the Global Innovation Index 2023

> Iceland ranks 20th among the 132 economies featured in the GII 2023.

> Iceland ranks 19th among the 50 high-income group economies.

> Iceland ranks 12th among the 39 economies in Europe.

> Iceland GII Ranking (2020-2023)

The table shows the rankings of Iceland 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 Iceland in the GII 2023 is between ranks 19 and 21.

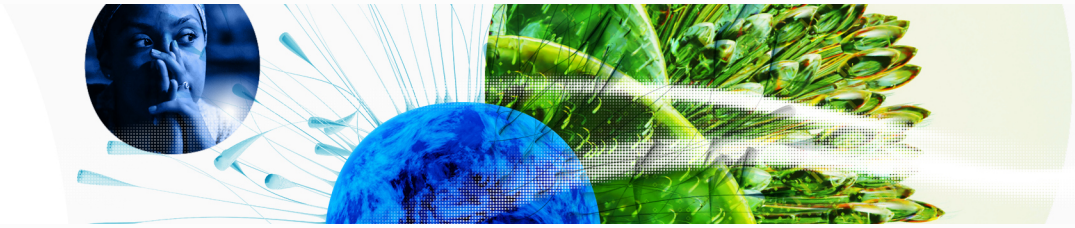
	GII Position	Innovation Inputs	Innovation Outputs
2020	21st	23rd	19th
2021	17th	20th	16th
2022	20th	24th	17th
2023	20th	20th	25th

Iceland performs worse in innovation outputs than innovation inputs in 2023.

This year **Iceland ranks 20th in innovation inputs.** This position is higher than last year.

Iceland ranks 25th in innovation outputs. This position is lower than last year.

Global Innovation Index 2023

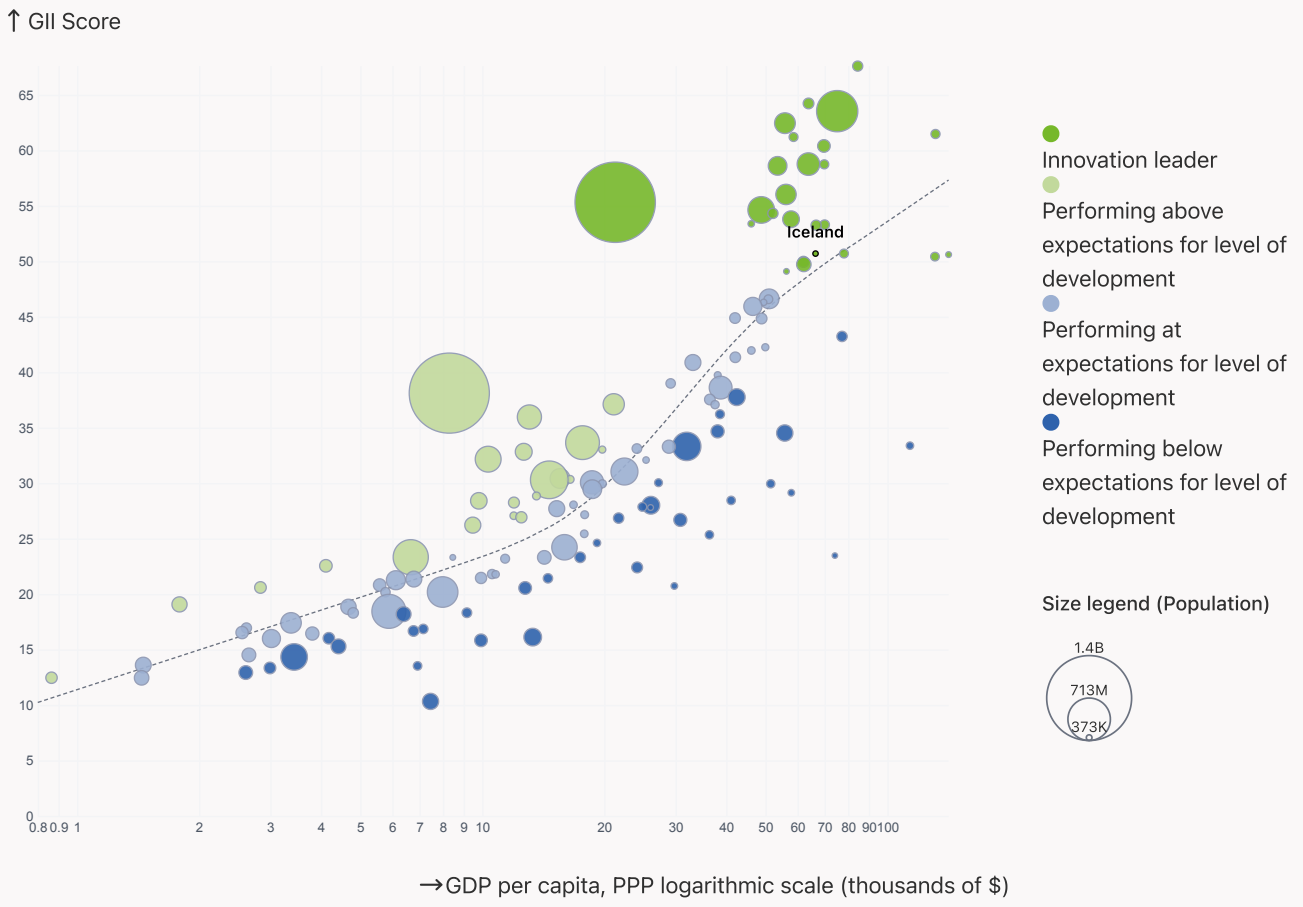


→ Expected vs. observed innovation performance

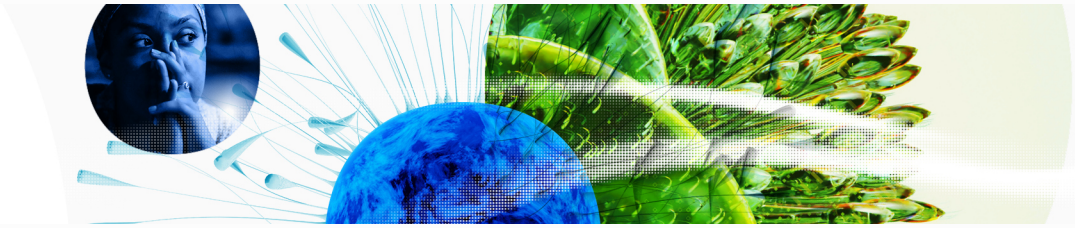
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected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

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

> Innovation overperformers relative to their economic development



Global Innovation Index 2023

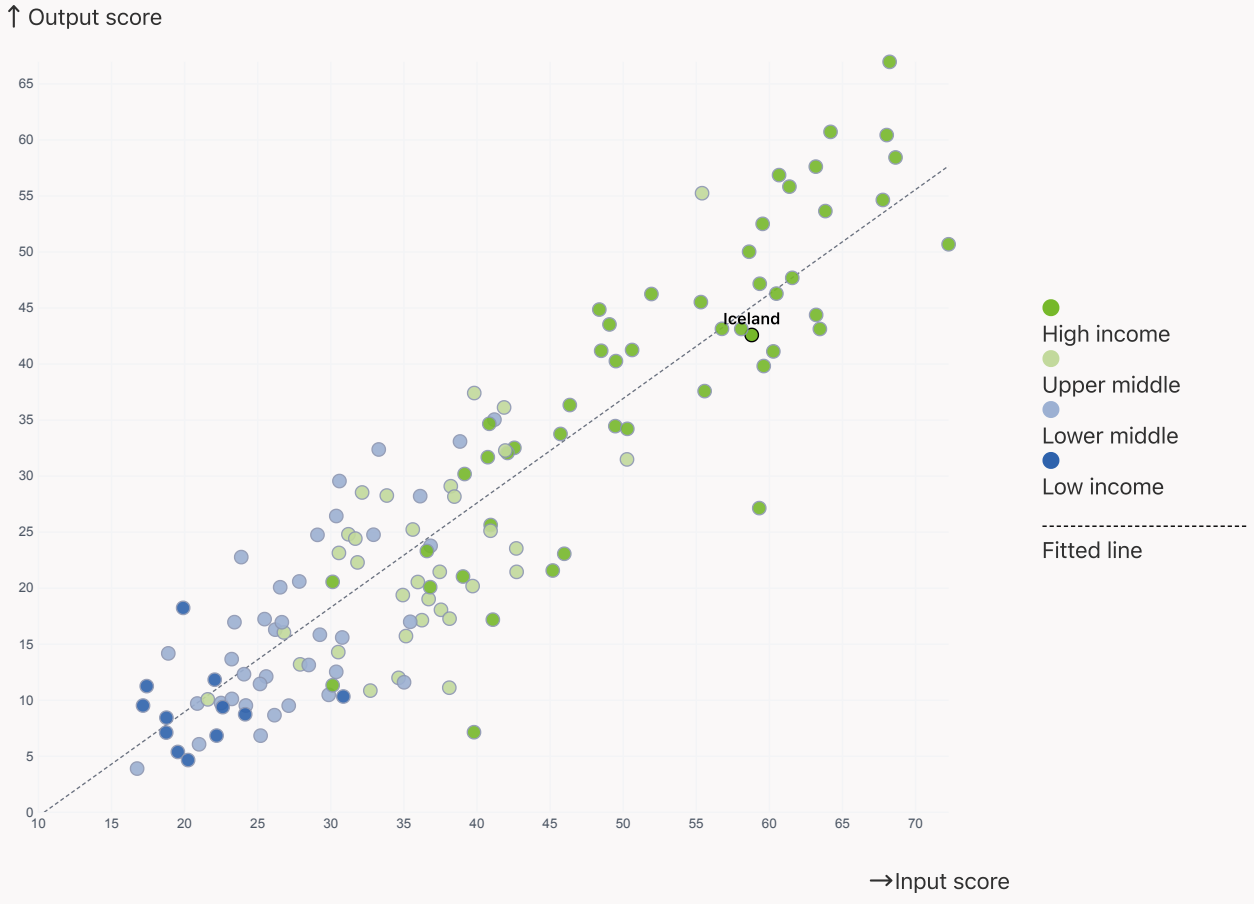


→ Effectively translating innovation investments into innovation outputs

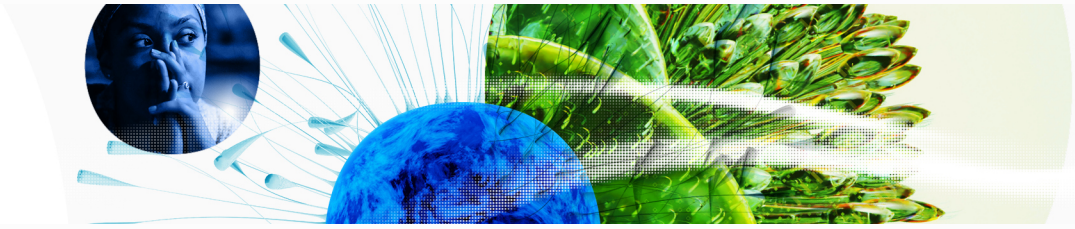
The chart below shows the relationship between innovation inputs and innovation outputs. Economies above the line are effectively translating costly innovation investments into more and higher-quality outputs.

> Iceland produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

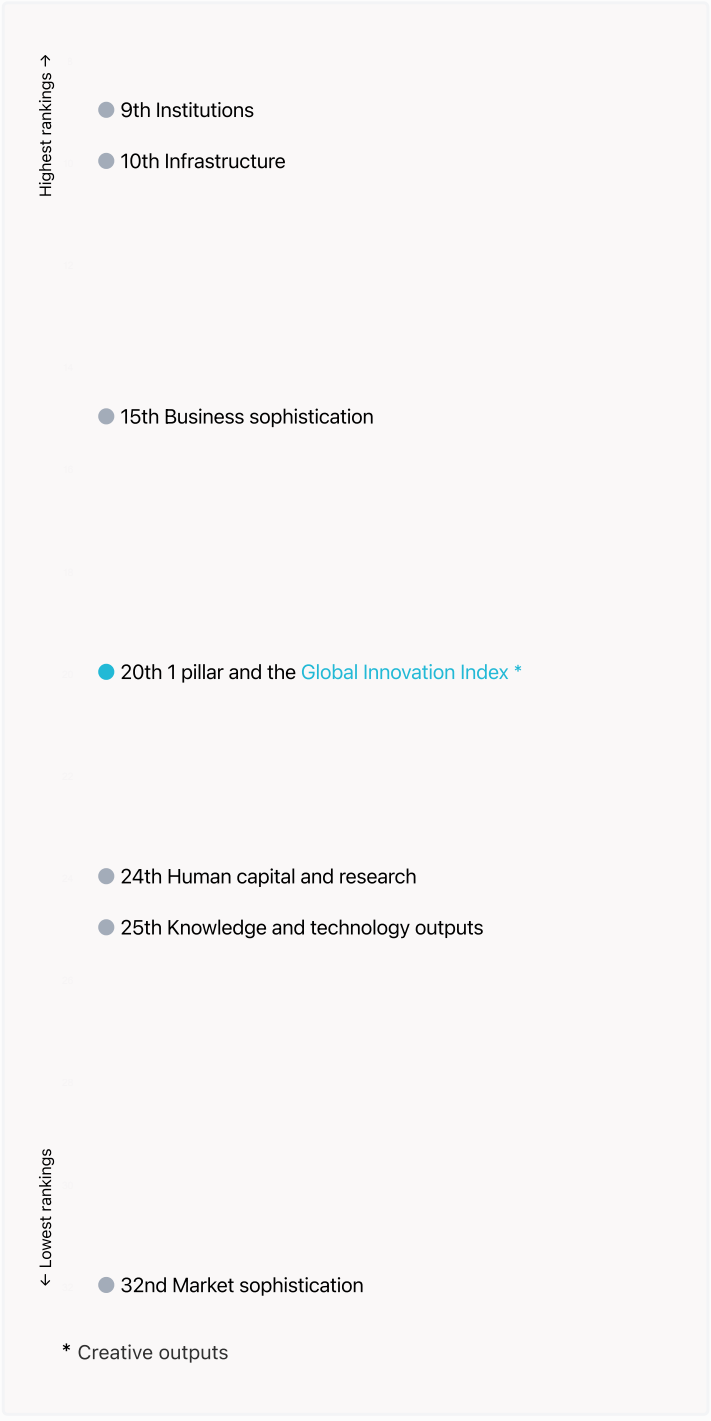


Global Innovation Index 2023



→ Overview of Iceland's rankings in the seven areas of the GII in 2023

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



> Highest rankings

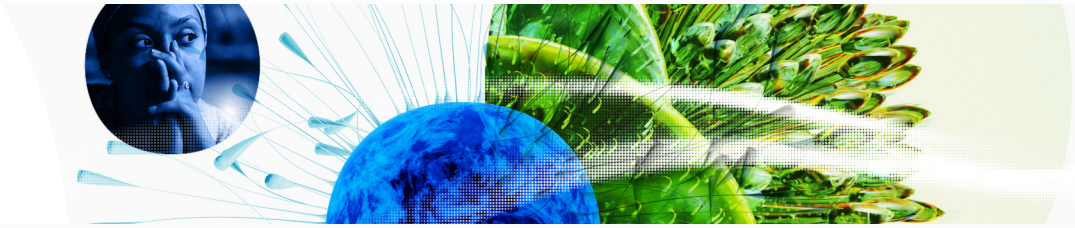
Iceland ranks highest in Institutions (9th), Infrastructure (10th), Business sophistication (15th) and Creative outputs (20th).

> Lowest rankings

Iceland ranks lowest in Market sophistication (32nd), Knowledge and technology outputs (25th) and Human capital and research (24th).

The full WIPO Intellectual Property Statistics profile for Iceland can be found on this link.

Global Innovation Index 2023



→ Benchmark of Iceland against other country groupings for each of the seven areas of the GII Index

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

> High-Income economies

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

> Europe

Iceland performs above the regional average in all the pillars.

Knowledge and technology outputs

- Top 10 | Score: 58.96
- Iceland | Score: 39.19
- Europe | Score: 38.80
- High income | Score: 38.62

Creative outputs

- Top 10 | 56.09
- Iceland | 45.88
- High income | 40.27
- Europe | 39.87

Business sophistication

- Top 10 | 64.39
- Iceland | 57.00
- High income | 46.38
- Europe | 44.61

Market sophistication

- Top 10 | 61.93
- Iceland | 46.48
- High income | 46.42
- Europe | 43.65

Human capital and research

- Top 10 | 60.28
- Iceland | 48.98
- High income | 46.30
- Europe | 44.05

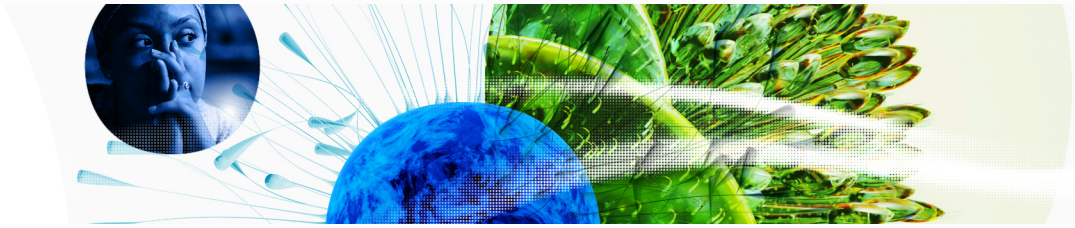
Infrastructure

- Top 10 | 62.83
- Iceland | 60.81
- High income | 55.85
- Europe | 54.69

Institutions

- Iceland | 80.91
- Top 10 | 79.85
- High income | 68.16
- Europe | 61.69

Global Innovation Index 2023



→ Innovation strengths and weaknesses in Iceland

The table below gives an overview of the indicator strengths and weaknesses of Iceland in the GII 2023.

> Iceland's main innovation strengths are **Electricity output, GWh/mn pop.** (rank 1), **National feature films/mn pop. 15-69** (rank 1) and **Generic top-level domains (TLDs)/th pop. 15-69** (rank 1).

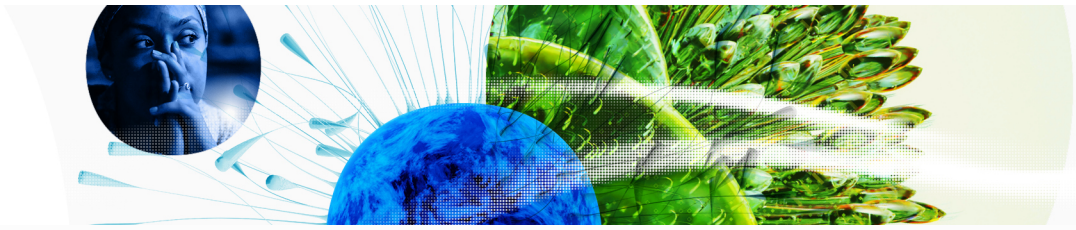
Strengths

Rank	Code	Indicator name
1	3.2.1	Electricity output, GWh/mn pop.
1	7.2.2	National feature films/mn pop. 15-69
1	7.3.1	Generic top-level domains (TLDs)/th pop. 15-69
1	6.3.1	Intellectual property receipts, % total trade
1	6.1.4	Scientific and technical articles/bn PPP$ GDP
1	4.2.3	VC recipients, deals/bn PPP$ GDP
3	5.2.3	GERD financed by abroad, % GDP
4	1.1.1	Operational stability for businesses
5	7.3.2	Country-code TLDs/th pop. 15-69
5	3.1.2	ICT use
5	2.1.3	School life expectancy, years
6	5.1.1	Knowledge-intensive employment, %

Weaknesses

Rank	Code	Indicator name
128	4.3.3	Domestic market scale, bn PPP$
128	5.3.4	FDI net inflows, % GDP
125	3.3.1	GDP/unit of energy use
97	7.1.4	Industrial designs by origin/bn PPP$ GDP
91	4.3.2	Domestic industry diversification
87	2.2.2	Graduates in science and engineering, %
80	6.2.4	High-tech manufacturing, %
71	2.3.4	QS university ranking, top 3
59	4.1.3	Loans from microfinance institutions, % GDP
48	6.2.2	Unicorn valuation, % GDP

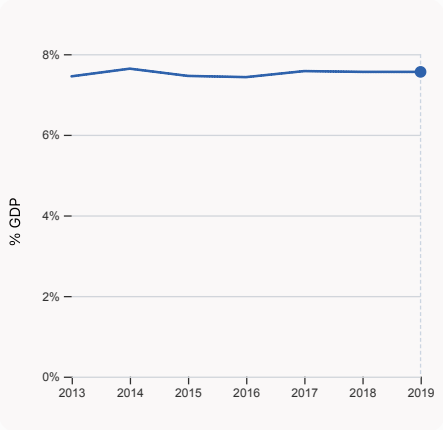
Global Innovation Index 2023



→ Iceland's innovation system

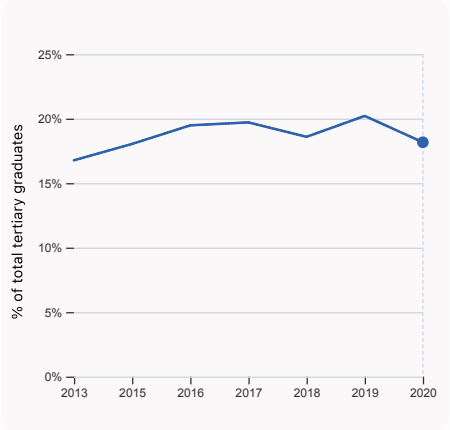
As far as practicable, the plots below present unscaled indicator data.

> Innovation inputs in Iceland



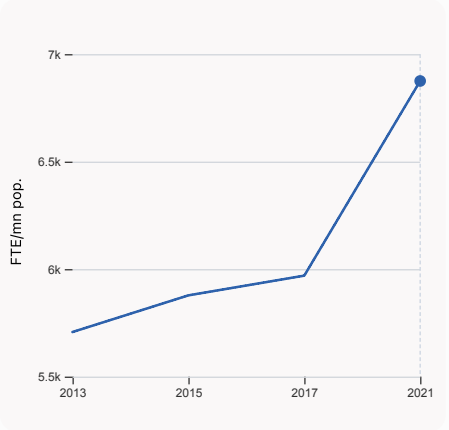
2.1.1 Expenditure on education, % GDP

was equal to 7.56% GDP in 2019, with no change from the year prior – and equivalent to an indicator rank of 6.



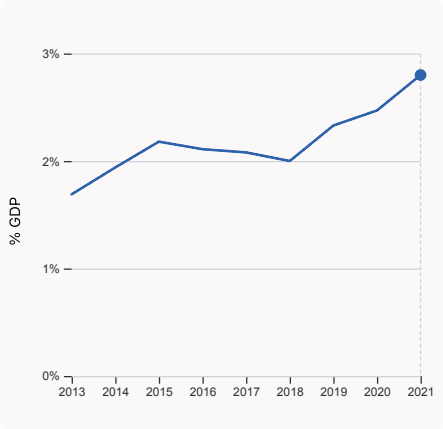
2.2.2 Graduates in science and engineering, %

was equal to 18.17% of total tertiary graduates in 2020, down by 2.04 percentage points from the year prior – and equivalent to an indicator rank of 87.



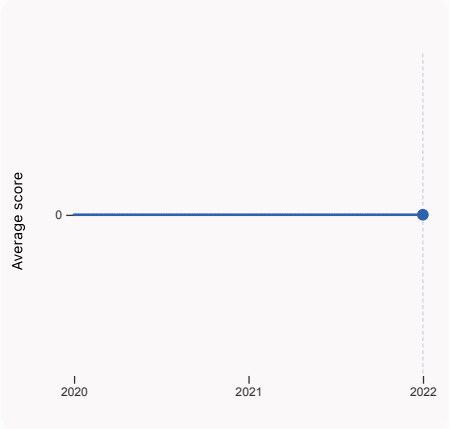
2.3.1 Researchers, FTE/mn pop.

was equal to 6,875.17 FTE/mn pop. in 2021, up by 15.17% from the year prior – and equivalent to an indicator rank of 7.



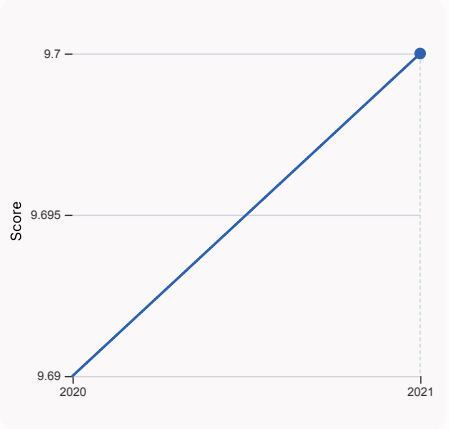
2.3.2 Gross expenditure on R&D, % GDP

was equal to 2.8% GDP in 2021, up by 0.33 percentage points from the year prior – and equivalent to an indicator rank of 13.



2.3.4 QS university ranking, top 3

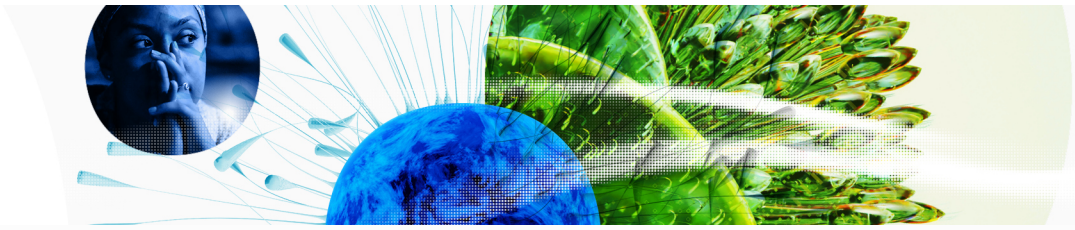
was equal to an average score of 0 for the top 3 universities in 2022, equivalent to an indicator rank of 71.

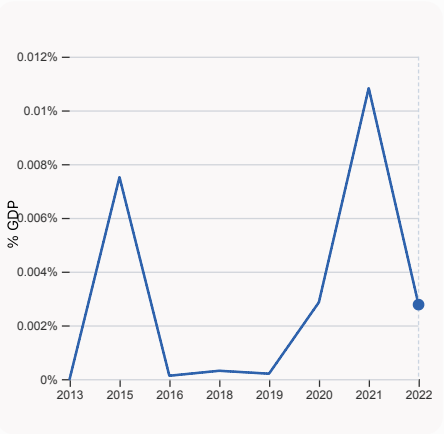


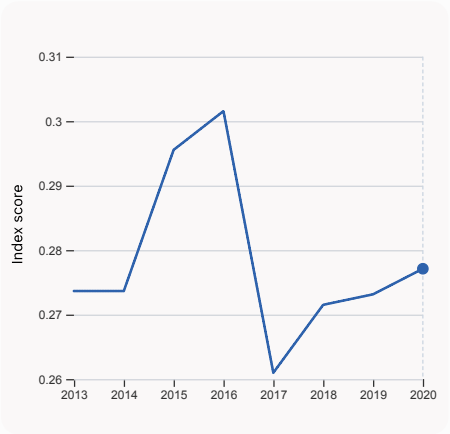
3.1.1 ICT access

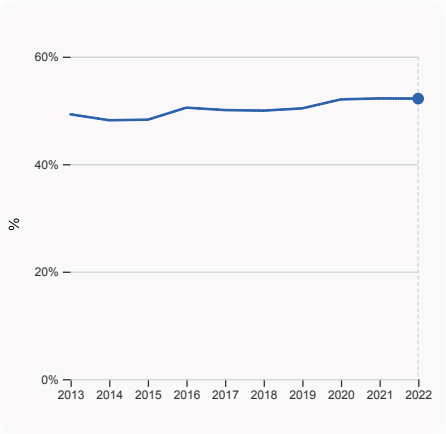
was equal to a score of 9.7 in 2021, up by 0.1% from the year prior – and equivalent to an indicator rank of 8.

Global Innovation Index 2023









4.2.4 VC received, value, % GDP

was equal to 0.00277% GDP in 2022, down by 0.0081 percentage points from the year prior – and equivalent to an indicator rank of 11.

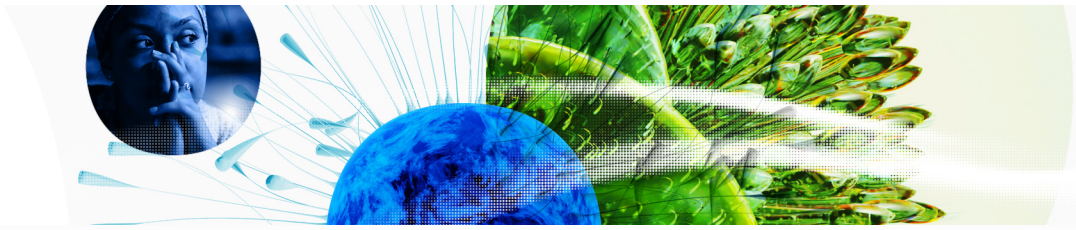
4.3.2 Domestic industry diversification

was equal to an index score of 0.277 in 2020, up by 1.45% from the year prior – and equivalent to an indicator rank of 91.

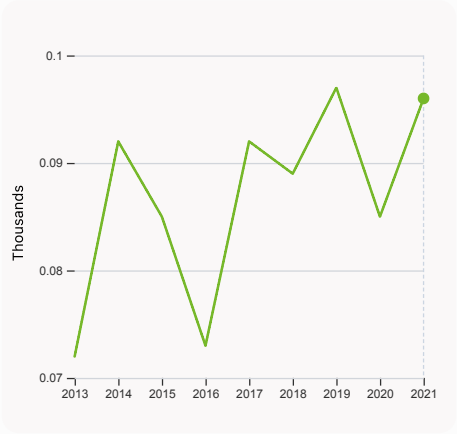
5.1.1 Knowledge-intensive employment, %

was equal to 52.19% in 2022, down by 0.04 percentage points from the year prior – and equivalent to an indicator rank of 6.

Global Innovation Index 2023

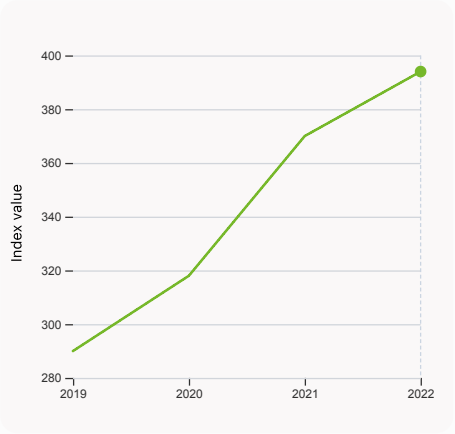


> Innovation outputs in Iceland



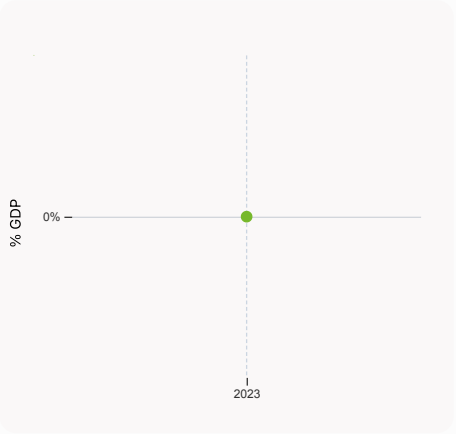
6.1.1 Patents by origin

was equal to 0.096 Thousands in 2021, up by 12.94% from the year prior – and equivalent to an indicator rank of 20.



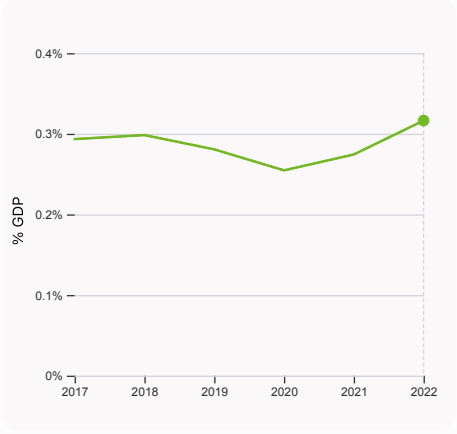
6.1.5 Citable documents H-index

was equal to an index value of 394 in 2022, up by 6.49% from the year prior – and equivalent to an indicator rank of 43.



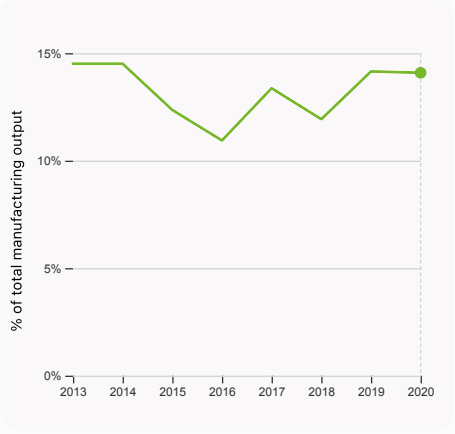
6.2.2 Unicorn valuation, % GDP

was equal to 0 % GDP in 2023 – and equivalent to an indicator rank of 48.



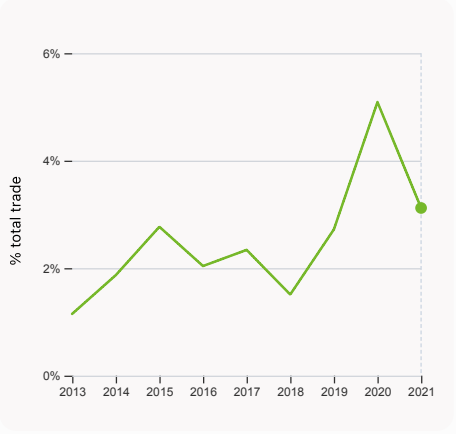
6.2.3 Software spending, % GDP

was equal to 0.316% GDP in 2022, up by 0.042 percentage points from the year prior – and equivalent to an indicator rank of 39.



6.2.4 High-tech manufacturing, %

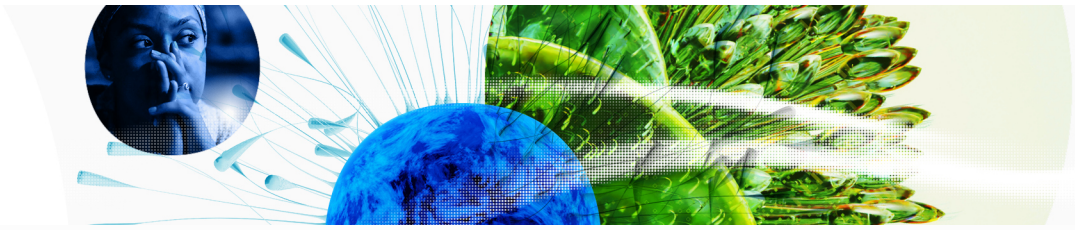
was equal to 14.09% of total manufacturing output in 2020, down by 0.06 percentage points from the year prior – and equivalent to an indicator rank of 80.

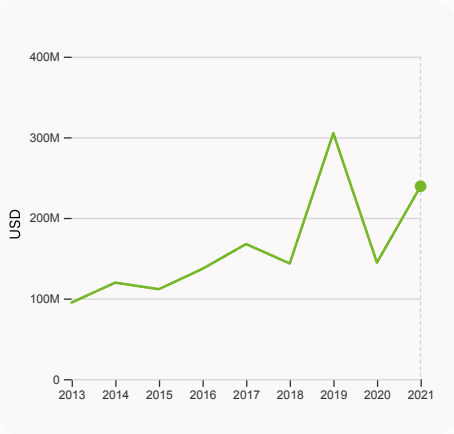


6.3.1 Intellectual property receipts, % total trade

was equal to 3.12% total trade in 2021, down by 1.97 percentage points from the year prior – and equivalent to an indicator rank of 1.

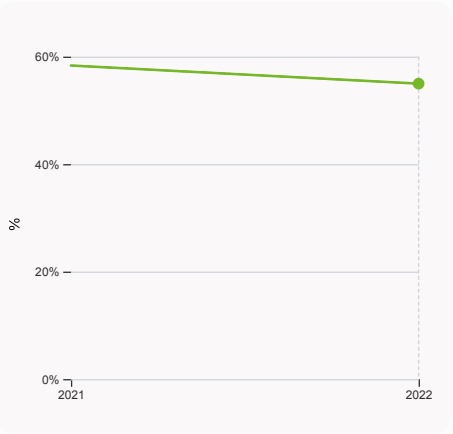
Global Innovation Index 2023





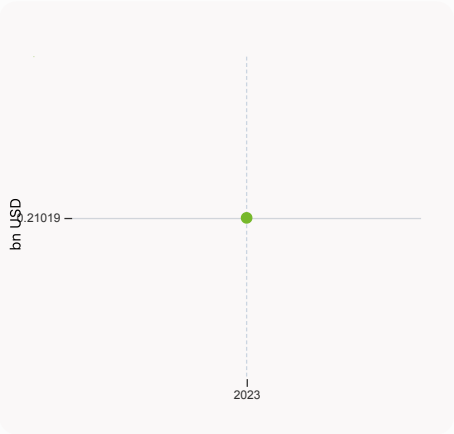
6.3.3 High-tech exports

was equal to 239,162,318 USD in 2021, up by 65.43% from the year prior – and equivalent to an indicator rank of 52.



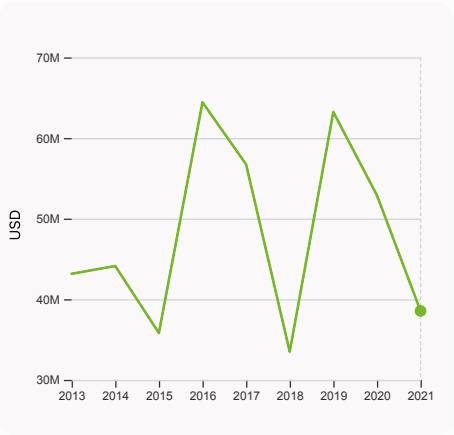
7.1.1 Intangible asset intensity, top 15, %

was equal to 54.98% in 2022, down by 3.37 percentage points from the year prior – and equivalent to an indicator rank of 43.



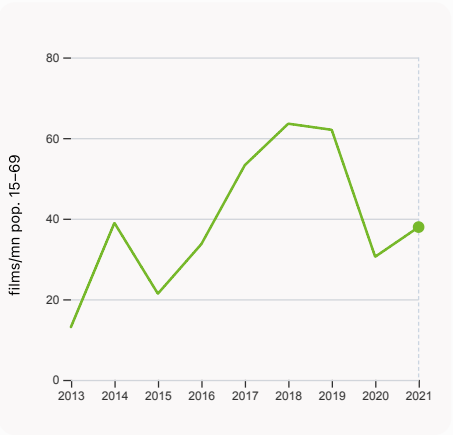
7.1.3 Global brand value, top 5,000

was equal to 0.21 bn USD in 2023 – and equivalent to an indicator rank of 59.



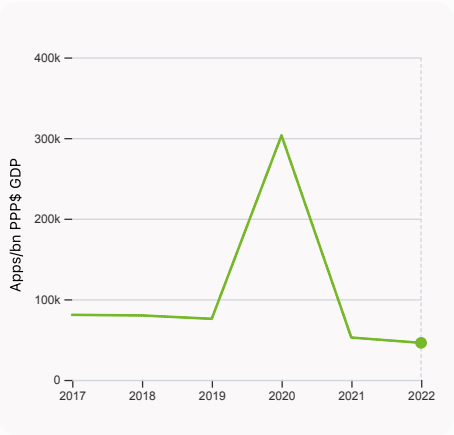
7.2.1 Cultural and creative services exports

was equal to 38,552,000 USD in 2021, down by 27.12% from the year prior – and equivalent to an indicator rank of 62.



7.2.2 National feature films/mn pop. 15-69

was equal to 37.91 films/mn pop. 15–69 in 2021, up by 24.092% from the year prior – and equivalent to an indicator rank of 1.



7.3.4 Mobile app creation/bn PPP$ GDP

was equal to 45,937.12 Apps/bn PPP$ GDP in 2022, down by 12.53% from the year prior – and equivalent to an indicator rank of 83.

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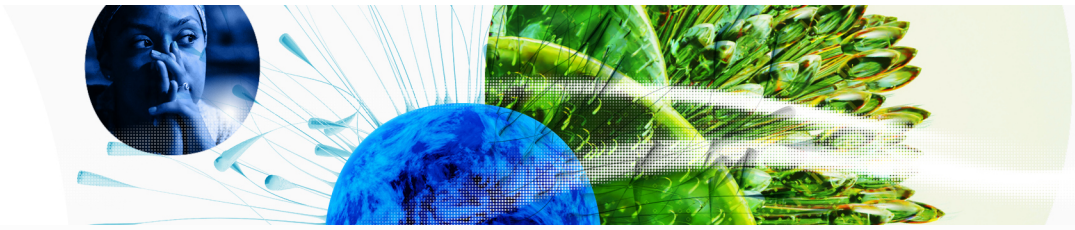


→ Iceland's innovation top performers

> 7.1.1 Top 15 intangible-asset intensive companies in Iceland

Rank	Firm	Intensity, %
1	MAREL HF	79.93
2	OSSUR HF	86.78
3	SILDARVINNSLAN HF	86.17

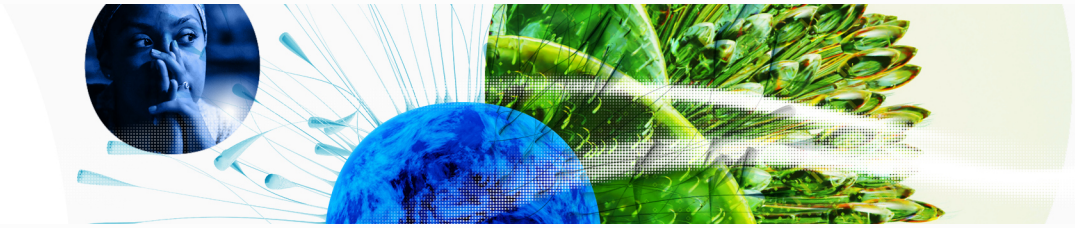
Source: Brand Finance (https://brandirectory.com/reports/gift-2022).
Note: Brand Finance only provides within economy ranks.

> 7.1.3 Top 5,000 companies in Iceland with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	ICELANDAIR	Airlines	210.2

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

Global Innovation Index 2023



Iceland

GII 2023 rank **20**

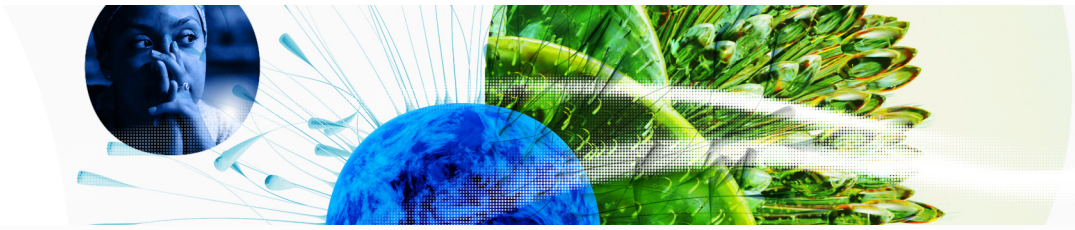
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
25	20	High	EUR	0.4	24.9	66,467.0

	Score / Value	Rank	
Institutions	**80.9**	**9**	
1.1 Institutional environment	**84.4**	5	
1.1.1 Operational stability for businesses*	86.8	4	●
1.1.2 Government effectiveness*	82.0	9	
1.2 Regulatory environment	**88.3**	**13**	
1.2.1 Regulatory quality*	81.9	16	
1.2.2 Rule of law*	91.1	9	
1.2.3 Cost of redundancy dismissal	13.0	41	
1.3 Business environment	**70.0**	**23**	
1.3.1 Policies for doing business†	70.0	26	
1.3.2 Entrepreneurship policies and culture†	n/a	n/a	
Human capital and research	**49.0**	**24**	
2.1 Education	**70.5**	5	
2.1.1 Expenditure on education, % GDP	7.6	6	
2.1.2 Government funding/pupil, secondary, % GDP/cap	22.3	39	
2.1.3 School life expectancy, years	19.4	5	●
2.1.4 PISA scales in reading, maths and science	481.4	30	
2.1.5 Pupil-teacher ratio, secondary	9.3	22	
2.2 Tertiary education	**34.6**	**49**	
2.2.1 Tertiary enrolment, % gross	84.3	19	
2.2.2 Graduates in science and engineering, %	18.2	87	○ ◇
2.2.3 Tertiary inbound mobility, %	8.5	30	
2.3 Research and development (R&D)	**41.9**	**25**	◇
2.3.1 Researchers, FTE/mn pop.	6,875.2	7	
2.3.2 Gross expenditure on R&D, % GDP	2.8	13	
2.3.3 Global corporate R&D investors, top 3, mn US$	45.9	36	◇
2.3.4 QS university ranking, top 3*	0.0	71	○ ◇
Infrastructure	**60.8**	**10**	
3.1 Information and communication technologies (ICTs)	**90.1**	**13**	
3.1.1 ICT access*	95.7	8	
3.1.2 ICT use*	98.1	5	●
3.1.3 Government's online service*	87.5	16	
3.1.4 E-participation*	79.1	17	
3.2 General infrastructure	**62.0**	**6**	
3.2.1 Electricity output, GWh/mn pop.	52,600.5	1	●
3.2.2 Logistics performance*	68.2	25	◇
3.2.3 Gross capital formation, % GDP	22.7	75	
3.3 Ecological sustainability	**30.4**	**52**	◇
3.3.1 GDP/unit of energy use	3.2	125	○ ◇
3.3.2 Environmental performance*	74.4	10	
3.3.3 ISO 14001 environment/bn PPP$ GDP	1.8	52	
Market sophistication	**46.5**	**32**	◇
4.1 Credit	**18.6**	**95**	◇
4.1.1 Finance for startups and scaleups†	n/a	n/a	
4.1.2 Domestic credit to private sector, % GDP	100.0	31	
4.1.3 Loans from microfinance institutions, % GDP	0.0	59	○
4.2 Investment	**66.4**	**6**	
4.2.1 Market capitalization, % GDP	n/a	n/a	
4.2.2 Venture capital (VC) investors, deals/bn PPP$ GDP	0.6	10	
4.2.3 VC recipients, deals/bn PPP$ GDP	0.4	1	●
4.2.4 VC received, value, % GDP	0.0	11	
4.3 Trade, diversification, and market scale	**54.4**	**79**	◇
4.3.1 Applied tariff rate, weighted avg., %	1.5	50	
4.3.2 Domestic industry diversification	72.6	91	○ ◇
4.3.3 Domestic market scale, bn PPP$	24.9	128	○

	Score / Value	Rank	
Business sophistication	**57.0**	**15**	
5.1 Knowledge workers	**63.5**	**16**	
5.1.1 Knowledge-intensive employment, %	52.2	6	●
5.1.2 Firms offering formal training, %	n/a	n/a	
5.1.3 GERD performed by business, % GDP	2.0	12	
5.1.4 GERD financed by business, %	38.6	44	◇
5.1.5 Females employed w/advanced degrees, %	26.5	14	
5.2 Innovation linkages	**57.6**	**14**	
5.2.1 University-industry R&D collaboration†	63.7	30	
5.2.2 State of cluster development†	45.5	55	◇
5.2.3 GERD financed by abroad, % GDP	0.6	3	●
5.2.4 Joint venture/strategic alliance deals/bn PPP$ GDP	0.1	19	
5.2.5 Patent families/bn PPP$ GDP	2.3	17	
5.3 Knowledge absorption	**49.9**	**20**	
5.3.1 Intellectual property payments, % total trade	0.9	44	
5.3.2 High-tech imports, % total trade	9.5	43	
5.3.3 ICT services imports, % total trade	4.0	8	
5.3.4 FDI net inflows, % GDP	-2.0	128	○
5.3.5 Research talent, % in businesses	53.1	22	
Knowledge and technology outputs	**39.2**	**25**	
6.1 Knowledge creation	**49.9**	**14**	
6.1.1 Patents by origin/bn PPP$ GDP	4.3	20	
6.1.2 PCT patents by origin/bn PPP$ GDP	1.6	18	
6.1.3 Utility models by origin/bn PPP$ GDP	n/a	n/a	
6.1.4 Scientific and technical articles/bn PPP$ GDP	n/a	n/a	
6.1.5 Citable documents H-index	19.5	43	◇
6.2 Knowledge impact	**24.0**	**80**	◇
6.2.1 Labor productivity growth, %	0.6	76	
6.2.2 Unicorn valuation, % GDP	0.0	48	○ ◇
6.2.3 Software spending, % GDP	0.3	39	
6.2.4 High-tech manufacturing, %	14.1	80	○ ◇
6.3 Knowledge diffusion	**43.6**	**26**	
6.3.1 Intellectual property receipts, % total trade	3.6	1	●
6.3.2 Production and export complexity	n/a	n/a	
6.3.3 High-tech exports, % total trade	2.4	52	◇
6.3.4 ICT services exports, % total trade	3.9	28	
6.3.5 ISO 9001 quality/bn PPP$ GDP	4.8	54	
Creative outputs	**45.9**	**20**	
7.1 Intangible assets	**33.4**	**58**	◇
7.1.1 Intangible asset intensity, top 15, %	55.0	43	◇
7.1.2 Trademarks by origin/bn PPP$ GDP	64.2	32	
7.1.3 Global brand value, top 5,000	0.7	59	◇
7.1.4 Industrial designs by origin/bn PPP$ GDP	0.3	97	○ ◇
7.2 Creative goods and services	**36.6**	**18**	
7.2.1 Cultural and creative services exports, % total trade	0.4	62	
7.2.2 National feature films/mn pop. 15-69	37.9	1	●
7.2.3 Entertainment and media market/th pop. 15-69	n/a	n/a	
7.2.4 Creative goods exports, % total trade	0.2	81	
7.3 Online creativity	**80.0**	**3**	
7.3.1 Generic top-level domains (TLDs)/th pop. 15-69	100.0	1	●
7.3.2 Country-code TLDs/th pop. 15-69	96.3	5	●
7.3.3 GitHub commits/mn pop. 15-69	64.2	10	
7.3.4 Mobile app creation/bn PPP$ GDP	59.5	83	◇

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question, ◔ indicates that the economy's data are older than the base year; see appendices for details, including the year of the data, at https://www.wipo.int/gii-ranking. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

Global Innovation Index 2023



→ Data availability

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

> Iceland has missing data for seven indicators and outdated data for two indicators.

> Missing data for Iceland

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture	n/a	2022	Global Entrepreneurship Monitor
4.1.1	Finance for startups and scaleups	n/a	2022	Global Entrepreneurship Monitor
4.2.1	Market capitalization, % GDP	n/a	2020	World Federation of Exchanges; World Bank
5.1.2	Firms offering formal training, %	n/a	2019	World Bank Enterprise Surveys
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	2021	World Intellectual Property Organization; International Monetary Fund
6.3.2	Production and export complexity	n/a	2020	Harvard University, Growth Lab
7.2.3	Entertainment and media market/th pop. 15-69	n/a	2022	PwC, GEMO; United Nations, World Population Prospects; International Monetary Fund

> Outdated data for Iceland

Code	Indicator name	Economy Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2019	2021	UNESCO Institute for Statistics
4.3.1	Applied tariff rate, weighted avg., %	2019	2020	World Bank

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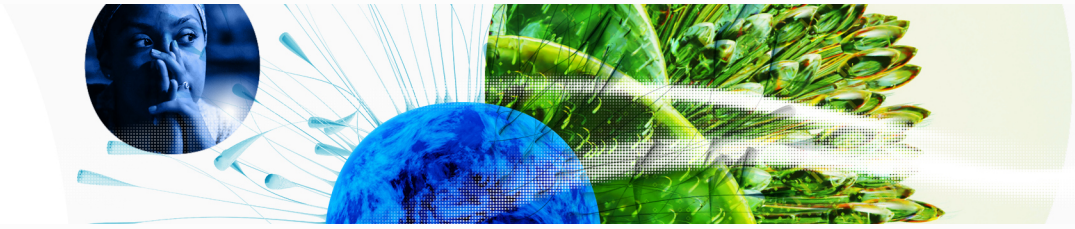

About the Global Innovation Index

- 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.

Source: Global Innovation Index Database, WIPO, 2023.

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.