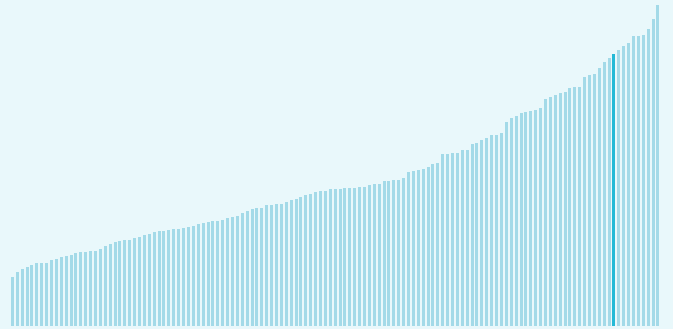


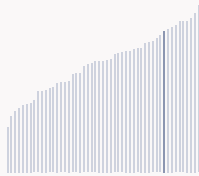
Denmark ranking in the Global Innovation Index 2024

Denmark ranks **10th** among the 133 economies featured in the GII 2024.

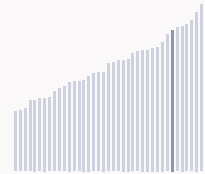
The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.



Denmark ranks **10th** among the 51 high-income group economies.



Denmark ranks **7th** among the 39 economies in Europe.



> Denmark GII Ranking (2020-2024)

The table shows the rankings of Denmark 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 Denmark in the GII 2024 is between ranks 10 and 11.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	6th	5th	9th
2021	9th	5th	11th
2022	10th	8th	10th
2023	9th	7th	10th
2024	10th	7th	12th

Denmark performs worse in innovation outputs than innovation inputs in 2024.

This year Denmark ranks 7th in innovation inputs. This position is the same as last year.

Denmark ranks 12th in innovation outputs. This position is lower than last year.

Denmark 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 Denmark, how rapidly is technology being embraced and what are the resulting societal impacts.



For Denmark, 8 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	
▼ -2.3% 2022 - 2023	▲ 7.5% 2021 - 2022	▲ 33.3% 2022 - 2023	▼ -3.2% 2022 - 2023	▲ 2.5% 2022 - 2023
▲ 3.7% 2013 - 2023	▲ 1.8% 2012 - 2022	▲ 15.2% 2013 - 2023	▲ 22.2% 2013 - 2023	▲ 2% 2013 - 2023

Technology adoption

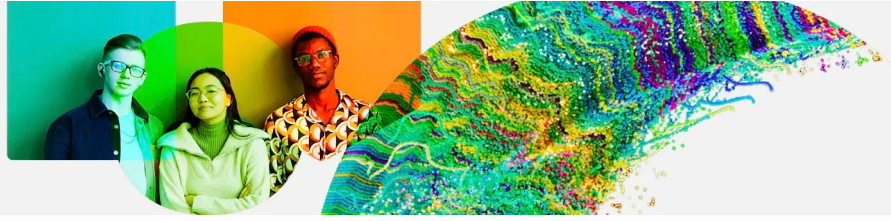
Safe sanitation	Connectivity		Robots	Electric vehicles
	Fixed broadband	5G		
▲ 0.1% 2021 - 2022	0% 2021 - 2022	▲ 1% 2021 - 2022	▲ 12.5% 2021 - 2022	▲ 47.6% 2022 - 2023
▲ 0.3% 2012 - 2022	▲ 1.5% 2012 - 2022		▲ 6.7% 2012 - 2022	▲ 70.3% 2013 - 2023
98.8 per 100 inhabitants in 2022	45 per 100 inhabitants in 2022	100 per 100 inhabitants in 2022		11 per 100 inhabitants in 2023

Socioeconomic impact

Labor productivity	Life expectancy	Temperature change
▲ 1.4% 2022 - 2023	▼ -0.1% 2021 - 2022	▲ 1.9°C 2023
▲ 1% 2013 - 2023	▲ 0.2% 2012 - 2022	n/a
137,530 USD in 2023	81.3 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

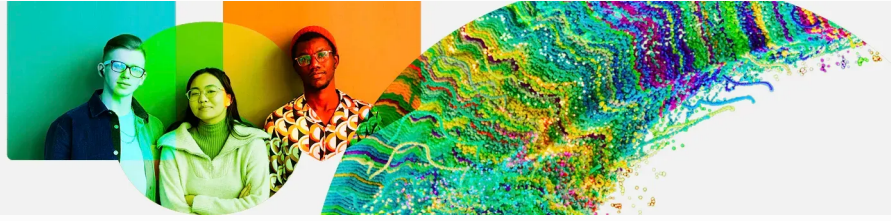
The bubble chart below shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The trend line gives an indication of the expected innovation performance according to income level. Economies appearing above the trend line are performing better than expected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



Denmark 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.

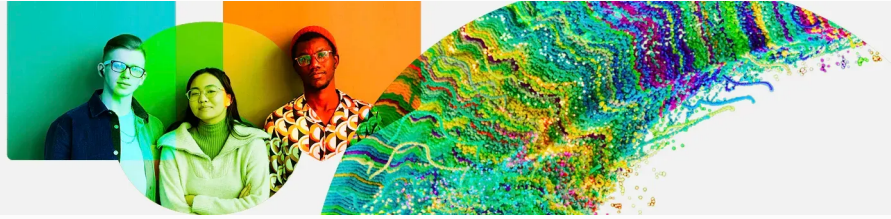


Denmark produces more innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

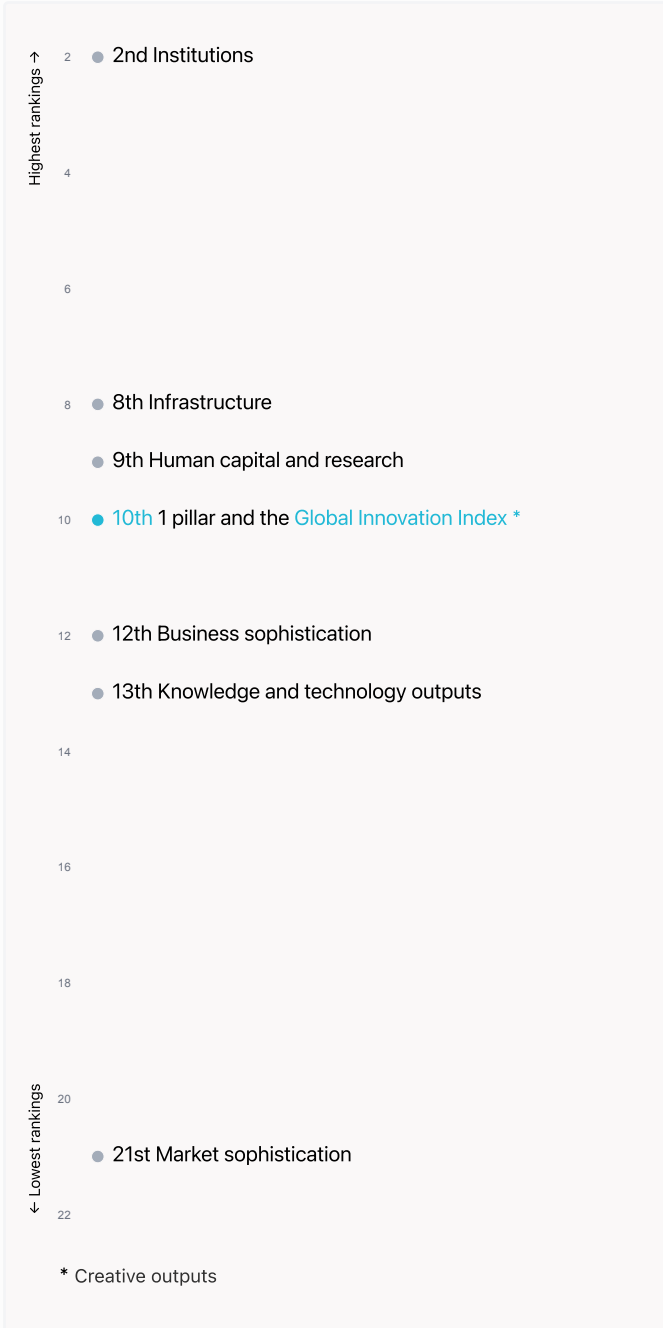


Global Innovation Index 2024



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



Highest rankings



Denmark ranks highest in Institutions (2nd), Infrastructure (8th), Human capital and research (9th) and Creative outputs (10th).

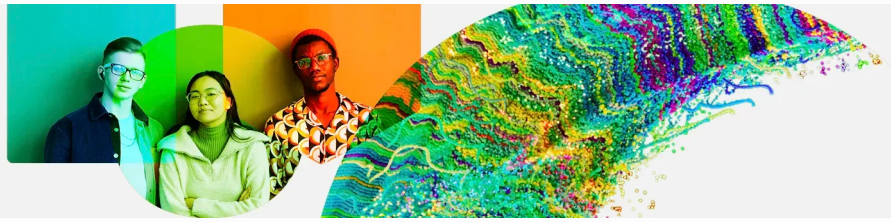
Lowest rankings



Denmark ranks lowest in Market sophistication (21st), Knowledge and technology outputs (13th) and Business sophistication (12th).

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

Global Innovation Index 2024



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

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



High-Income economies

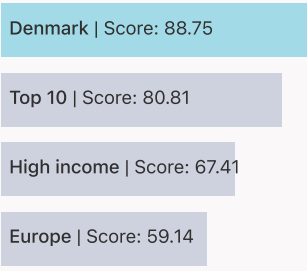
Denmark performs above the high-income group average in all pillars.



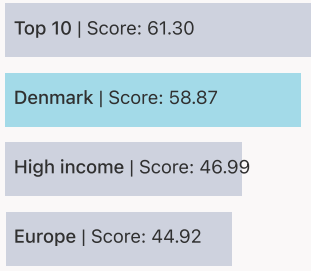
Europe

Denmark performs above the regional average in all pillars.

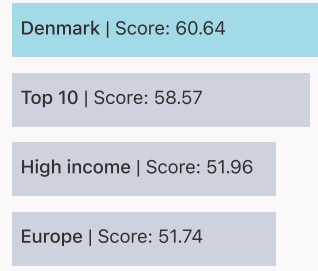
Institutions



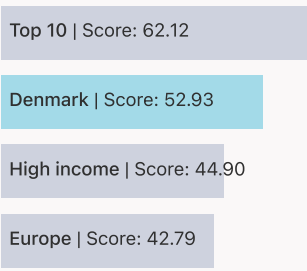
Human capital and research



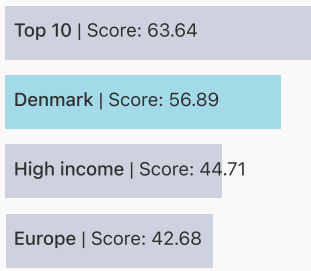
Infrastructure



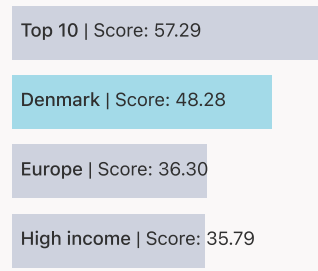
Market sophistication



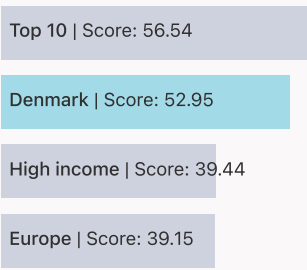
Business sophistication



Knowledge and technology outputs



Creative outputs





Innovation strengths and weaknesses in Denmark

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



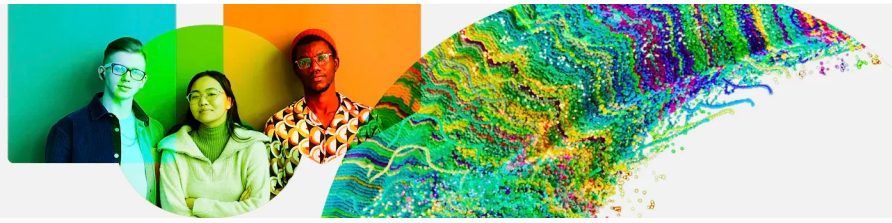
Denmark's main innovation strengths are **ICT access*** (rank 1), **Rule of law*** (rank 2) and **Scientific and technical articles/bn PPP\$ GDP** (rank 2).

Strengths

Weaknesses

Rank	Code	Indicator name	Rank	Code	Indicator name
1	3.1.1	ICT access*	92	5.3.2	High-tech imports, % total trade
2	1.2.2	Rule of law*	78	7.1.2	Trademarks by origin/bn PPP\$ GDP
2	6.1.4	Scientific and technical articles/bn PPP\$ GDP	76	6.2.1	Labor productivity growth, %
3	7.1.1	Intangible asset intensity, top 15, %	69	3.2.3	Gross capital formation, % GDP
3	1.1.2	Government effectiveness*	52	2.2.2	Graduates in science and engineering, %
3	3.2.2	Logistics performance*	51	4.3.3	Domestic market scale, bn PPP\$
3	2.3.1	Researchers, FTE/mn pop.	50	6.1.3	Utility models by origin/bn PPP\$ GDP
4	3.1.3	Government's online service*	48	5.3.1	Intellectual property payments, % total trade
4	1.2.1	Regulatory quality*	48	6.3.5	ISO 9001 quality/bn PPP\$ GDP
6	5.3.3	ICT services imports, % total trade	42	4.3.2	Domestic industry diversification
6	1.1.1	Operational stability for businesses*			
6	7.3.1	Top-level domains (TLDs)/th pop. 15–69			

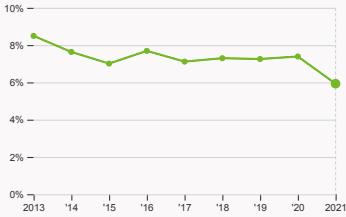
Global Innovation Index 2024



Denmark's innovation system

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

> Innovation inputs in Denmark



2.1.1 Expenditure on education

was equal to 5.93 % GDP in 2021, down by 1.46 percentage points from the year prior – and equivalent to an indicator rank of 17.



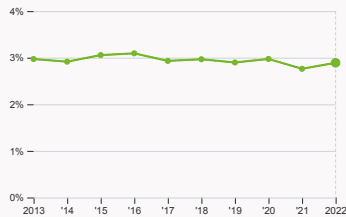
2.2.2 Graduates in science and engineering

was equal to 23.99 % of total graduates in 2021, up by 0.99 percentage points from the year prior – and equivalent to an indicator rank of 52.



2.3.1 Researchers

was equal to 8735.63 FTE per million population in 2022, up by 13.33% from the year prior – and equivalent to an indicator rank of 3.



2.3.2 Gross expenditure on R&D

was equal to 2.89 % GDP in 2022, up by 0.13 percentage points from the year prior – and equivalent to an indicator rank of 12.



2.3.4 QS university ranking

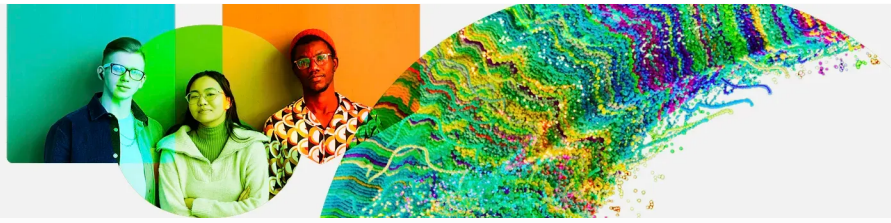
was equal to an average score of 55.67 for the top three universities in 2023, down by 2.16% from the year prior – and equivalent to an indicator rank of 17.



4.2.4 VC received, value

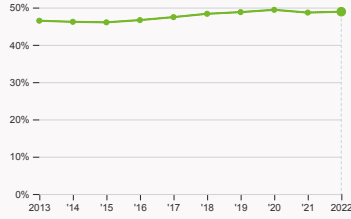
was equal to 1.07 million USD in 2023, down by 2.73% from the year prior – and equivalent to an indicator rank of 20.

Global Innovation Index 2024



4.3.2 Domestic industry diversification

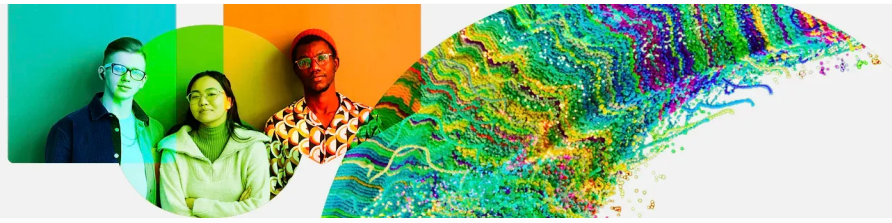
was equal to an index score of 0.12 in 2021, down by 3.83% from the year prior – and equivalent to an indicator rank of 42.



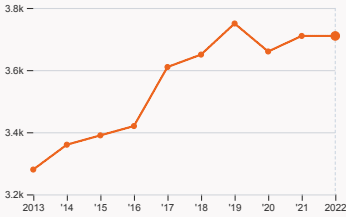
5.1.1 Knowledge-intensive employment

was equal to 48.89 % in 2022, up by 0.23 percentage points from the year prior – and equivalent to an indicator rank of 13.

Global Innovation Index 2024

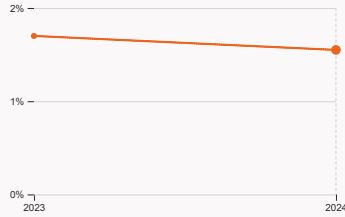


➤ Innovation outputs in Denmark



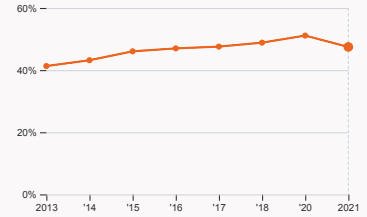
6.1.1 Patents by origin

was equal to 3.71 thousand patents in 2022 with no change from the year prior – and equivalent to an indicator rank of 10.



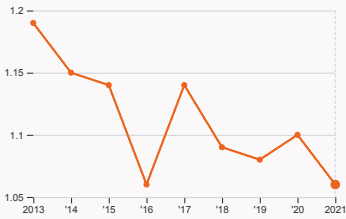
6.2.2 Unicorn valuation

was equal to 1.55 % GDP in 2024, down by 0.15 percentage points from the year prior – and equivalent to an indicator rank of 24.



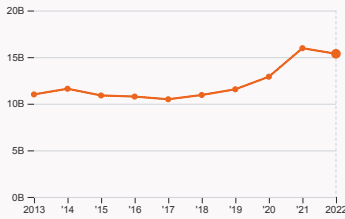
6.2.4 High-tech manufacturing

was equal to 47.46 % of total manufacturing output in 2021, down by 3.66 percentage points from the year prior – and equivalent to an indicator rank of 12.



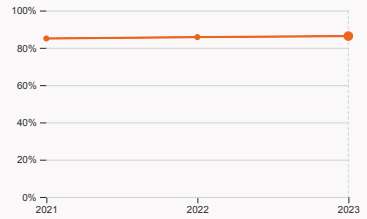
6.3.2 Production and export complexity

was equal to a score of 1.06 in 2021, down by 3.64% from the year prior – and equivalent to an indicator rank of 24.



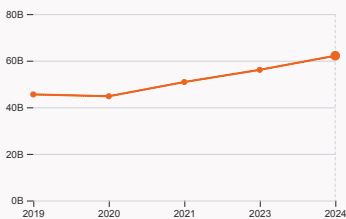
6.3.3 High-tech exports

was equal to 15.36 billion USD in 2022, down by 3.76% from the year prior – and equivalent to an indicator rank of 35.



7.1.1 Intangible asset intensity

was equal to 86.29 % for the top 15 companies in 2023, up by 0.56 percentage points from the year prior – and equivalent to an indicator rank of 3.



7.1.3 Global brand value

was equal to 62.12 billion USD for the brands in the top 5,000 in 2024, up by 10.77% from the year prior – and equivalent to an indicator rank of 9.



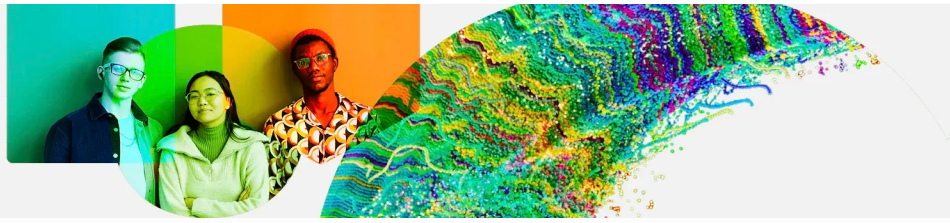
7.2.2 National feature films

was equal to 19 films in 2022, down by 17.39% from the year prior – and equivalent to an indicator rank of 28.



7.3.3 Mobile app creation

was equal to 409.7 million global downloads of mobile apps in 2023, down by 8.72% from the year prior – and equivalent to an indicator rank of 17.



Denmark's innovation top performers

2.3.3 Global corporate R&D investors from Denmark

Rank	Firm	Industry	R&D	R&D Growth	R&D Intensity
			[mn EUR]	[%]	[%]
65	NOVO NORDISK	Pharmaceuticals & Biotechnology	2,926	34	12
359	GENMAB	Pharmaceuticals & Biotechnology	588	36	30
380	DANSKE BANK	Banks	550	-12	9
397	VESTAS WIND SYSTEMS	Alternative Energy	514	16	4

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 Denmark's top universities

Rank	University	Score
107	UNIVERSITY OF COPENHAGEN	58.80
121	TECHNICAL UNIVERSITY OF DENMARK	56.20
143	AARHUS UNIVERSITY	52.00

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 Denmark

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	PLEO	Enterprise Tech	Copenhagen	5
2	LUNAR	Financial Services	Aarhus	2

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 Denmark

Rank	Firm	Intensity, %
1	NOVO NORDISK A/S	98.52
2	DSV A/S	92.39
3	COLOPLAST A/S	94.49

Source: Brand Finance (<https://brandirectory.com/reports/gift-2022>).

Note: Brand Finance only provides within economy ranks.

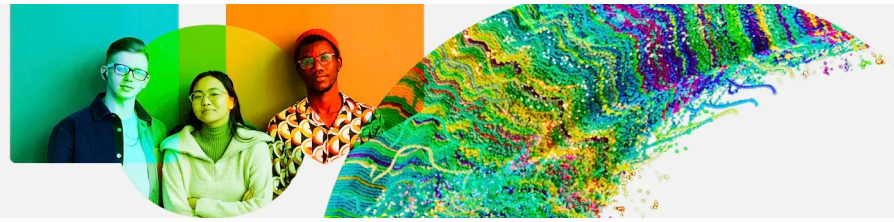
7.1.3 Top 5,000 companies in Denmark with highest global brand value

Rank	Brand	Industry	Brand Value, mn USD
1	LEGO	Toys	7,925.8
2	NOVO NORDISK	Pharma	5,088.1
3	MAERSK	Logistics	4,803.3

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

Note: Rank corresponds to within economy ranks.

Global Innovation Index 2024



Denmark

GII 2024 rank

10

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP\$ (bn)	GDP per capita, PPP\$
12	7	High	EUR	5.9	441.8	74,957.7
			Score / Value Rank			
Institutions			88.7 2	Business sophistication		
1.1 Institutional environment			92.7 3	5.1 Knowledge workers		
1.1.1 Operational stability for businesses*			89.3 6	5.1.1 Knowledge-intensive employment, %		
1.1.2 Government effectiveness*			96 3	5.1.2 Firms offering formal training, %		
1.2 Regulatory environment			94.3 2	5.1.3 GERD performed by business, % GDP		
1.2.1 Regulatory quality*			90.2 4	5.1.4 GERD financed by business, %		
1.2.2 Rule of law*			98.3 2	5.1.5 Females employed w/advanced degrees, %		
1.3 Business environment			79.3 [6]	5.2 Innovation linkages		
1.3.1 Policy stability for doing business*			79.3 9	5.2.1 Public Research-Industry co-publications, %		
1.3.2 Entrepreneurship policies and culture*			n/a n/a	5.2.2 University-industry R&D collaboration†		
Human capital and research			58.9 9	5.2.3 State of cluster development†		
2.1 Education			68 9	5.2.4 Joint venture/strategic alliance deals/bn PPP\$ GDP		
2.1.1 Expenditure on education, % GDP			5.9 17	5.2.5 Patent families/bn PPP\$ GDP		
2.1.2 Government funding/pupil, secondary, % GDP/cap			24.4 23	5.3 Knowledge absorption		
2.1.3 School life expectancy, years			18.7 11	5.3.1 Intellectual property payments, % total trade		
2.1.4 PISA scales in reading, maths and science			490.6 16	5.3.2 High-tech imports, % total trade		
2.1.5 Pupil-teacher ratio, secondary			10.2 35	5.3.3 ICT services imports, % total trade		
2.2 Tertiary education			43.1 29	5.3.4 FDI net inflows, % GDP		
2.2.1 Tertiary enrolment, % gross			84.6 17	5.3.5 Research talent, % in businesses		
2.2.2 Graduates in science and engineering, %			24 52	Knowledge and technology outputs		
2.2.3 Tertiary inbound mobility, %			10.1 26	6.1 Knowledge creation		
2.3 Research and development (R&D)			65.5 9	6.1.1 Patents by origin/bn PPP\$ GDP		
2.3.1 Researchers, FTE/mn pop.			8,735.6 3	6.1.2 PCT patents by origin/bn PPP\$ GDP		
2.3.2 Gross expenditure on R&D, % GDP			2.9 12	6.1.3 Utility models by origin/bn PPP\$ GDP		
2.3.3 Global corporate R&D investors, top 3, mn USD			69.8 13	6.1.4 Scientific and technical articles/bn PPP\$ GDP		
2.3.4 QS university ranking, top 3*			56.3 17	6.1.5 Citable documents H-index		
Infrastructure			60.6 8	6.2 Knowledge impact		
3.1 Information and communication technologies (ICTs)			94.6 7	6.2.1 Labor productivity growth, %		
3.1.1 ICT access*			100 1	6.2.2 Unicorn valuation, % GDP		
3.1.2 ICT use*			92.4 10	6.2.3 Software spending, % GDP		
3.1.3 Government's online service*			97.8 4	6.2.4 High-tech manufacturing, %		
3.1.4 E-participation*			88.4 12	6.3 Knowledge diffusion		
3.2 General infrastructure			47.5 22	6.3.1 Intellectual property receipts, % total trade		
3.2.1 Electricity output, GWh/mn pop.			5,922.8 37	6.3.2 Production and export complexity		
3.2.2 Logistics performance*			90.9 3	6.3.3 High-tech exports, % total trade		
3.2.3 Gross capital formation, % GDP			23.5 69	6.3.4 ICT services exports, % total trade		
3.3 Ecological sustainability			39.8 18	6.3.5 ISO 9001 quality/bn PPP\$ GDP		
3.3.1 GDP/unit of energy use			21.1 8	Creative outputs		
3.3.2 Low-carbon energy use, %			41.5 19	7.1 Intangible assets		
3.3.3 ISO 14001 environment/bn PPP\$ GDP			2.7 37	7.1.1 Intangible asset intensity, top 15, %		
Market sophistication			52.9 21	7.1.2 Trademarks by origin/bn PPP\$ GDP		
4.1 Credit			52.9 [21]	7.1.3 Global brand value, top 5,000, % GDP		
4.1.1 Finance for startups and scaleups†			n/a n/a	7.1.4 Industrial designs by origin/bn PPP\$ GDP		
4.1.2 Domestic credit to private sector, % GDP			143.4 10	7.2 Creative goods and services		
4.1.3 Loans from microfinance institutions, % GDP			n/a n/a	7.2.1 Cultural and creative services exports, % total trade		
4.2 Investment			42.9 15	7.2.2 National feature films/mn pop. 15-69		
4.2.1 Market capitalization, % GDP			n/a n/a	7.2.3 Entertainment and media market/th pop. 15-69		
4.2.2 Venture capital (VC) investors, deals/bn PPP\$ GDP			0.4 15	7.2.4 Creative goods exports, % total trade		
4.2.3 VC recipients, deals/bn PPP\$ GDP			0.2 11	7.3 Online creativity		
4.2.4 VC received, value, % GDP			0.003 20	7.3.1 Top-level domains (TLDs)/th pop. 15-69		
4.3 Trade, diversification and market scale			63 37	7.3.2 GitHub commits/mn pop. 15-69		
4.3.1 Applied tariff rate, weighted avg., %			1.1 21	7.3.3 Mobile app creation/bn PPP\$ GDP		
4.3.2 Domestic industry diversification			89.3 42			
4.3.3 Domestic market scale, bn PPP\$			441.8 51			

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 Denmark.



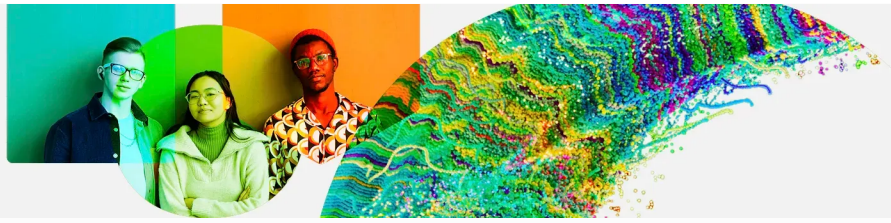
Denmark has missing data for four indicators and outdated data for three indicators.

Missing data for Denmark

Code	Indicator name	Economy Year	Model Year	Source
1.3.2	Entrepreneurship policies and culture ⁺	n/a	2023	Global Entrepreneurship Monitor
4.1.1	Finance for startups and scaleups ⁺	n/a	2023	Global Entrepreneurship Monitor
4.1.3	Loans from microfinance institutions, % GDP	n/a	2022	International Monetary Fund, Financial Access Survey (FAS)
4.2.1	Market capitalization, % GDP	n/a	2022	World Federation of Exchanges; World Bank

Outdated data for Denmark

Code	Indicator name	Economy Year	Model Year	Source
2.1.1	Expenditure on education, % GDP	2021	2022	UNESCO Institute for Statistics
5.1.2	Firms offering formal training, %	2020	2023	World Bank Enterprise Surveys
5.1.4	GERD financed by business, %	2019	2021	UNESCO Institute for Statistics; Eurostat; OECD; RICYT



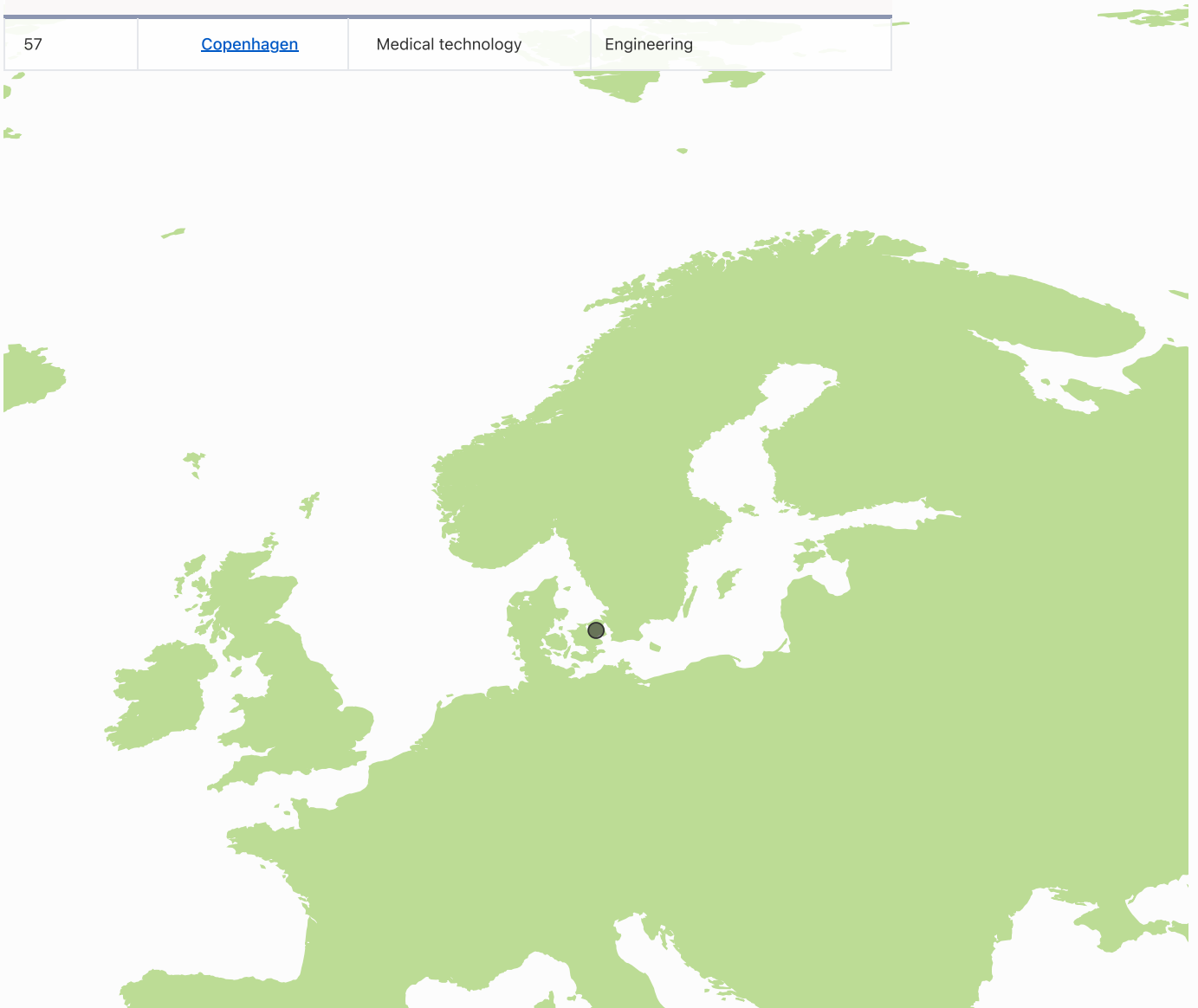
Top science and technology clusters in Denmark



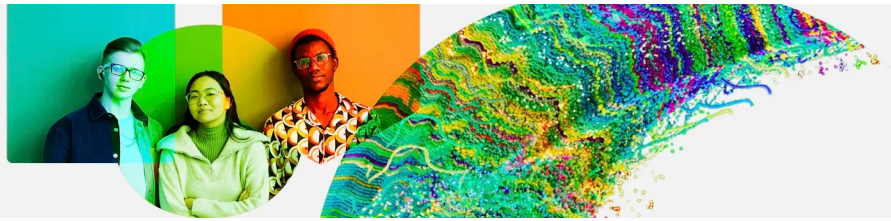
Denmark has 1 cluster in the top 100 S&T clusters of the Global Innovation Index, the same number as in 2023.

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

Rank	Cluster name	Top patent field	Top academic subject
57	Copenhagen	Medical technology	Engineering

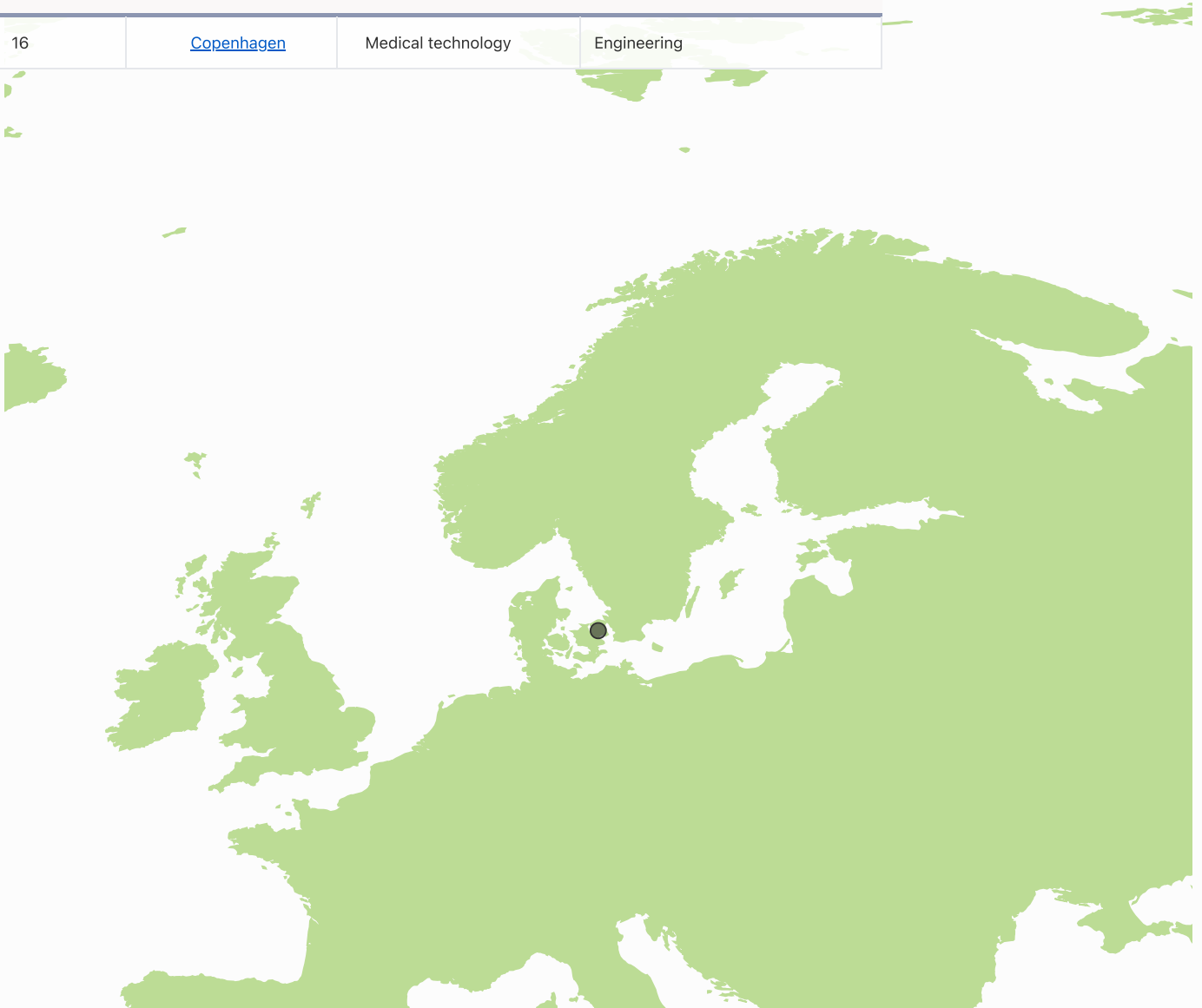


Global Innovation Index 2024



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

Rank	Cluster name	Top patent field	Top academic subject
16	Copenhagen	Medical technology	Engineering

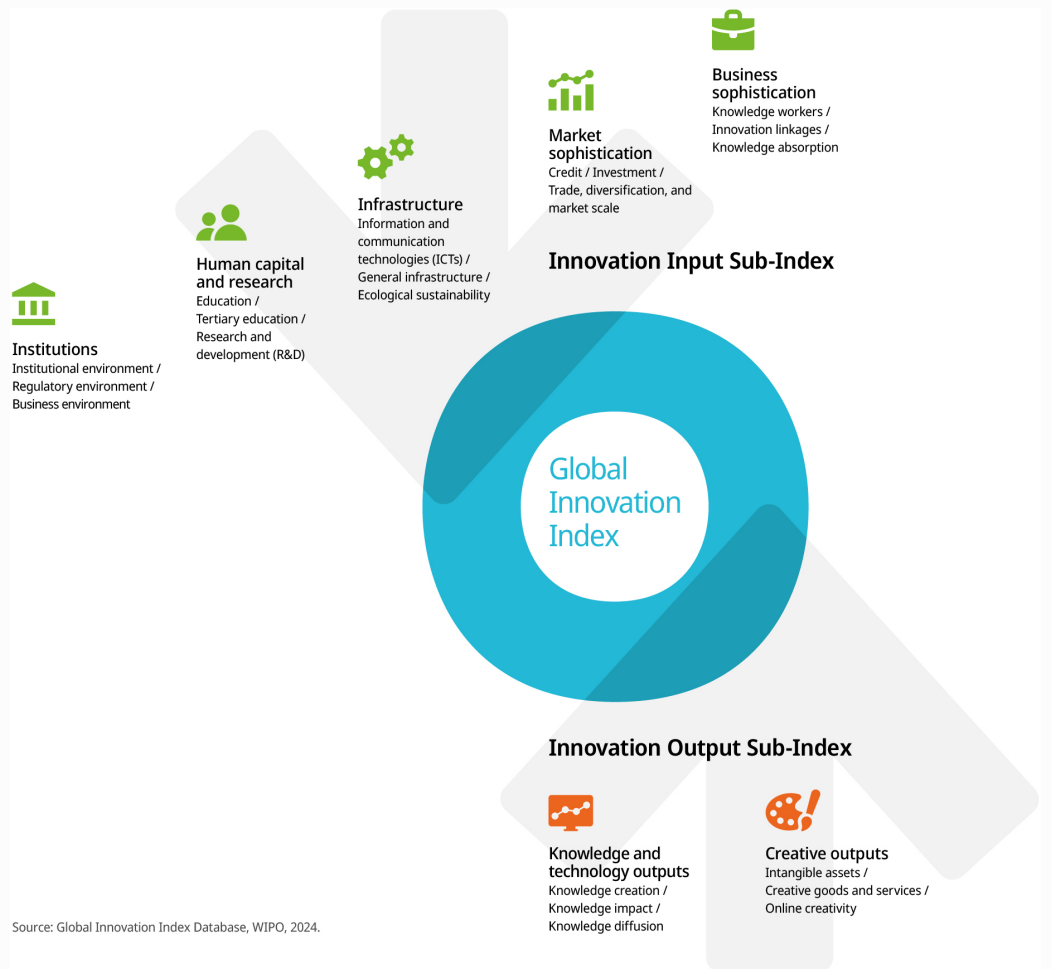


Global Innovation Index 2024



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.