Global Innovation Index 2025

Belgium ranking in the Global Innovation Index 2025

Belgium ranks 21st among the 139 economies featured in the GII 2025.

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.

Belgium ranks 20th among the 54 High-income group economies.

Belgium ranks 13th among the 39 economies in Europe.

Belgium GII Ranking (2020-2025)

The table shows the rankings of Belgium over the past six 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 Belgium in the GII 2025 is between ranks 20 and 24.

Year	GII Position	Innovation Inputs	Innovation Outputs
2020	22nd	21st	25th
2021	22nd	21st	26th
2022	26th	26th	24th
2023	23rd	23rd	22nd
2024	24th	26th	22nd
2025	21st	23rd	23rd

Belgium performs the same in innovation outputs as in innovation inputs in 2025.

This year **Belgium ranks 23rd in innovation inputs.** This position is higher than last year.

Belgium ranks 23rd in innovation outputs. This position is lower than last year.

Belgium has 1 cluster in the world's top innovation clusters of the Global Innovation Index.

Global Innovation Index 2025

> Global Innovation Tracker

The Global Innovation Tracker 2025 shows what is the current state of innovation in Belgium, how rapidly is technology being embraced and what are the resulting societal impacts.

For Belgium, 8 indicators have improved in the short-term and 3 indicators have worsened.

Science and innovation investment

	Scientific publications	R&D investments	Venture capital deal numbers	International patent filings
Short term	▲ 2.8 % 2023 - 2024	▲ 2.2 % 2022 - 2023	▼ -9.9 % 2023 - 2024	▼ -2.4 % 2023 - 2024
Long term (annual growth)	▲ 2.2 % 2014 - 2024	▲ 5.4 % 2013 - 2023	▼ -12.2 % 2020 - 2024	▲ 0.9 % 2014 - 2024

Technology adoption

	Safe sanitation	Connectivity		Robots	Electric vehicles
		Fixed broadband	5G		
Short term	0% 2023 - 2024	▲ 0.9% 2022 - 2023	▲ 193.9% 2022 - 2023	▲ 5.3% 2022 - 2023	▲ 42.6% 2023 - 2024
Long term (annual growth)	▲ 1.2% 2014 - 2024	▲ 2.9% 2013 - 2023	n/a	▲ 4.8% 2013 - 2023	▲ 68.2% 2014 - 2024
Penetration	94.9 per 100 inhabitants in 2024	43.7 per 100 inhabitants in 2023	87 per 100 inhabitants in 2023	n/a	11 per 100 cars in 2024

Socioeconomic impact

	Labor productivity	Life expectancy	Temperature change
Short term	▲ 0.5 % 2023 - 2024	▲ 1.2 % 2022 - 2023	+ 2.6 °C 2024
Long term (annual growth)	▲ 0.4 % 2014 - 2024	▲ 0.2 % 2013 - 2023	+ 2.4 °C 2014
Level	156,540.3 USD in 2024	82.1 years in 2023	n/a

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 countries. from 1951–1980. Figures are rounded.

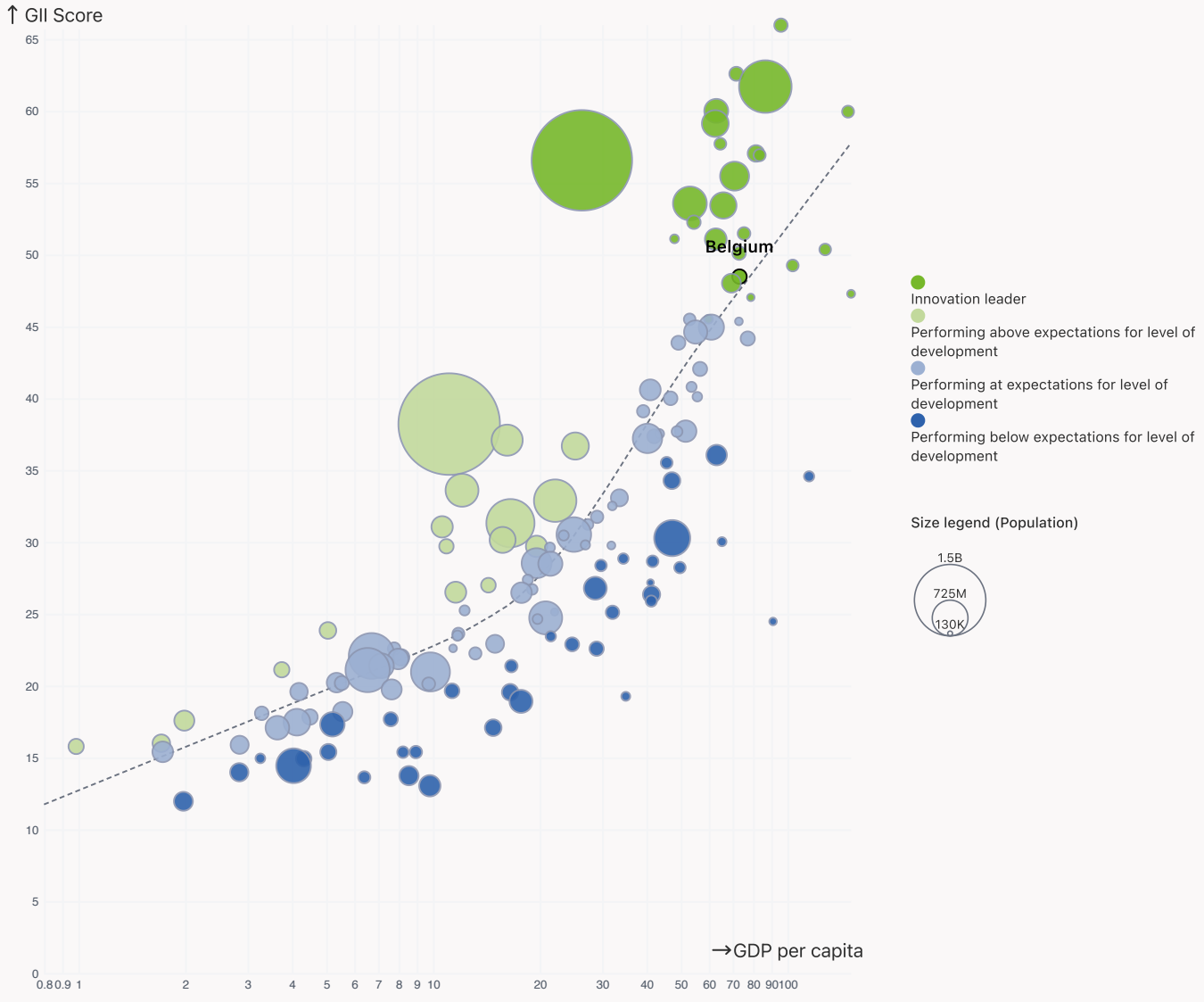
Global Innovation Index 2025

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.

Belgium is an Innovation leader, ranking in the top 25 of the GII.

> Innovation overperformers relative to their economic development



Global Innovation Index 2025

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.

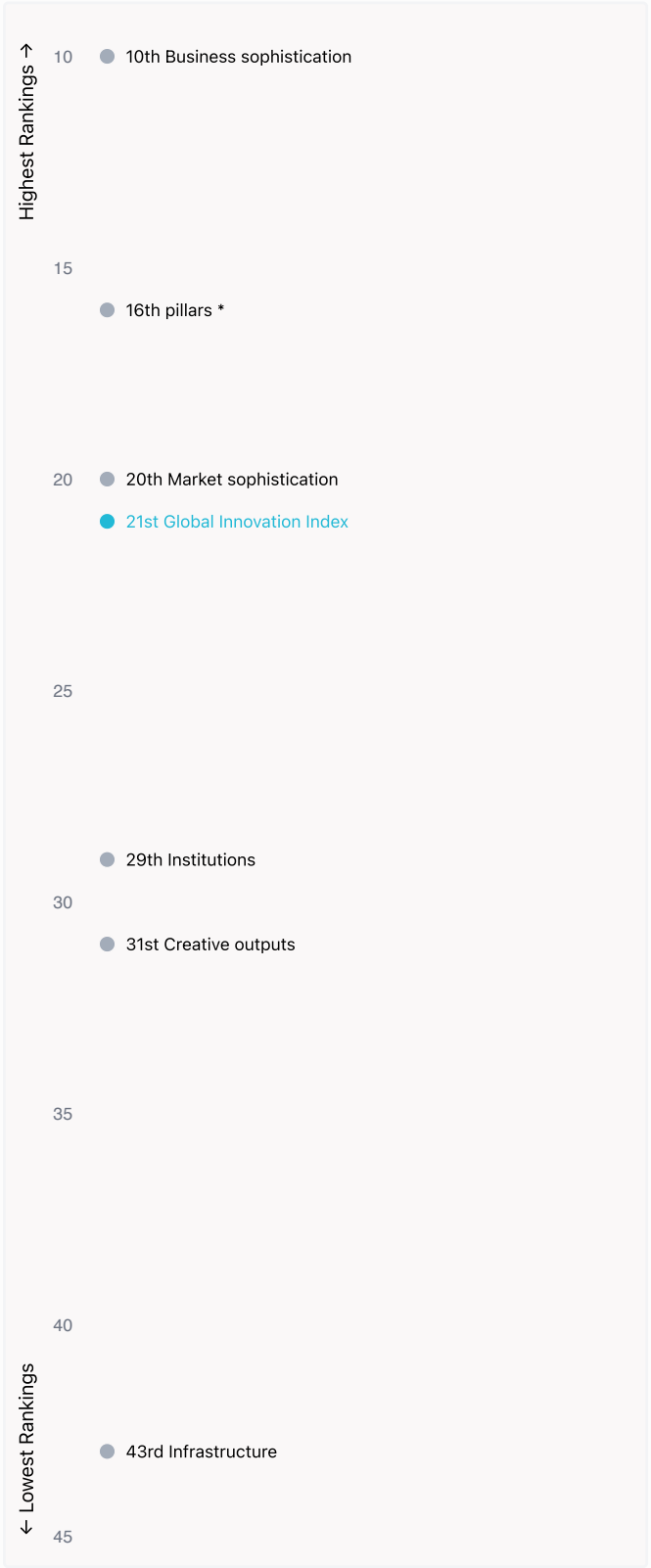
Belgium produces less innovation outputs relative to its level of innovation investments.

> Relationship between innovation inputs and outputs

Global Innovation Index 2025

Overview of Belgium's rankings in the seven areas of the GII in 2025

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



Highest Rankings

Belgium ranks highest in Business sophistication (10th), Human capital and research, Knowledge and technology outputs (16th) and Market sophistication (20th).

Lowest Rankings

Belgium ranks lowest in Infrastructure (43rd), Creative outputs (31st) and Institutions (29th).

* Human capital and research, Knowledge and technology outputs

The full WIPO Intellectual Property Statistics profile for Belgium can be found on https://www.wipo.int/edocs/statistics-country-profile/en/be.pdf

Global Innovation Index 2025

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

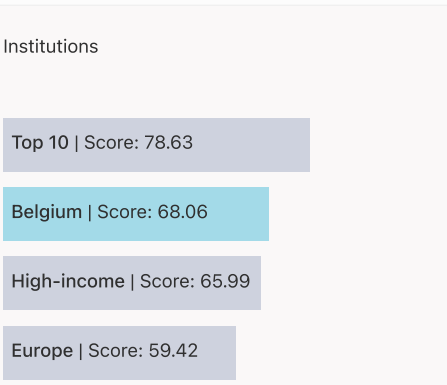
The charts shows the relative position of Belgium (blue bar) against other economy groupings (grey bars)

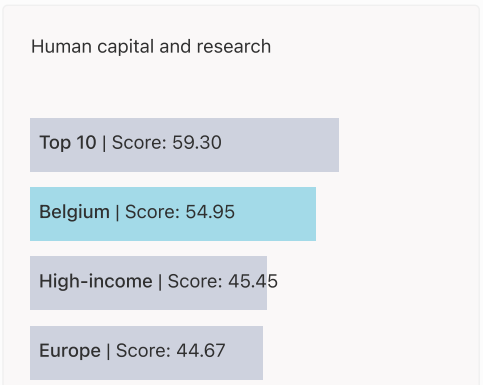
High-income economies

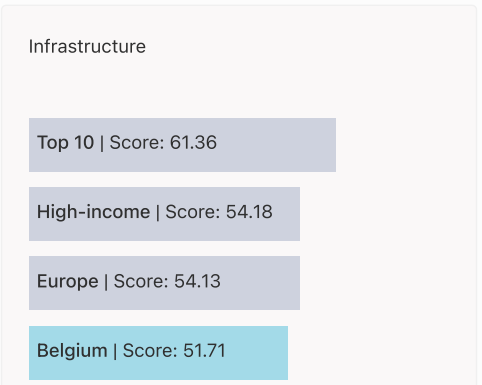
Belgium performs above the High-income group average in Institutions, Human capital and research, Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.

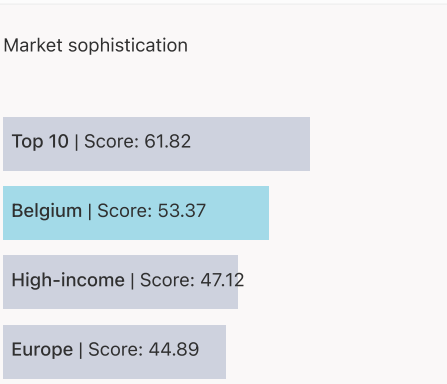
Europe

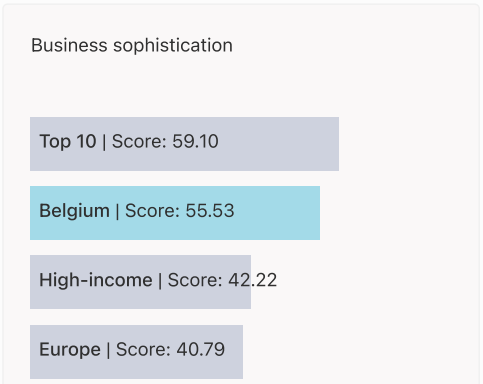
Belgium performs above the regional average in Institutions, Human capital and research, Market sophistication, Business sophistication, Knowledge and technology outputs, Creative outputs.

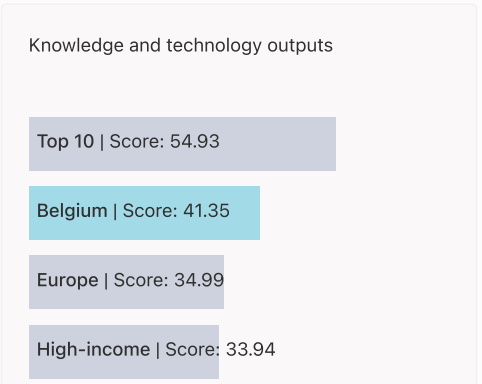


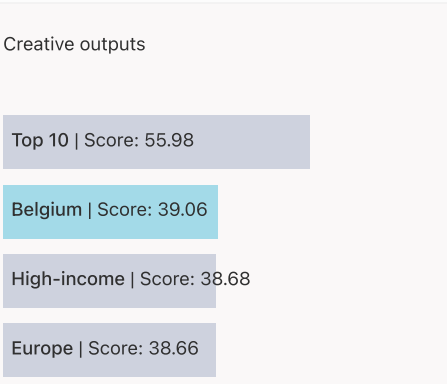












Global Innovation Index 2025

Innovation strengths and weaknesses in Belgium

The table below gives an overview of the indicator strengths and weaknesses of Belgium in the GII 2025.

Belgium's best-ranked innovation strengths are **GERD performed by business, % GDP** (rank 6), **Gross expenditure on R&D, % GDP** (rank 6) and **GERD financed by business, %** (rank 7).

Strengths

Rank	Code	Indicator name
6	5.1.4	GERD performed by business, % GDP
6	2.3.2	Gross expenditure on R&D, % GDP
7	5.1.5	GERD financed by business, %
7	2.3.1	Researchers, FTE/mn pop.
7	2.1.3	School life expectancy, years
11	5.1.1	Knowledge-intensive employment, %
13	2.1.1	Expenditure on education, % GDP
14	6.1.5	Citable documents H-index
14	5.3.3	ICT services imports, % total trade

Weaknesses

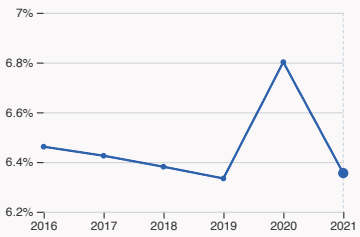
Rank	Code	Indicator name
104	5.1.3	Youth demographic dividend, %
91	2.2.2	Graduates in science and engineering, %
80	7.1.2	Trademarks by origin/bn PPP$ GDP
79	7.3.3	Mobile app creation/bn PPP$ GDP
78	6.2.1	Labor productivity growth, %
70	5.3.4	FDI net inflows, % GDP
70	3.1.3	Government's online service*
67	6.3.5	ISO 9001 quality/bn PPP$ GDP
64	3.1.2	ICT use*
39	7.1.1	Intangible asset intensity, top 15, %

Global Innovation Index 2025

Belgium's innovation system

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

Innovation inputs in Belgium

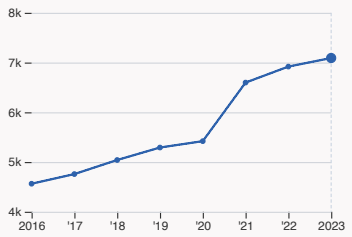


2.1.1 Expenditure on education

was equal to 6.36 % GDP in 2021, down by 0.45 percentage points from the year prior – and equivalent to an indicator rank of 13.

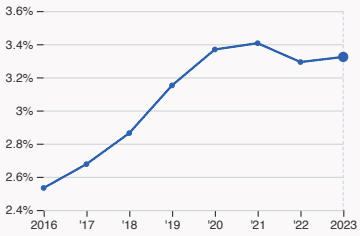
2.2.2 Graduates in science and engineering

was equal to 18.81 % of total graduates in 2022, up by 0.2 percentage points from the year prior – and equivalent to an indicator rank of 91.



2.3.1 Researchers

was equal to 7091.5 FTE per million population in 2023, up by 2.49% from the year prior – and equivalent to an indicator rank of 7.

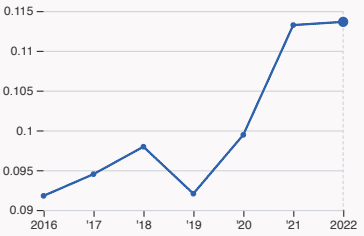


2.3.2 Gross expenditure on R&D

was equal to 3.32 % GDP in 2023, up by 0.03 percentage points from the year prior – and equivalent to an indicator rank of 6.

2.3.4 QS university ranking

was equal to an average score of 55.47 for the top three universities in 2024, down by 1.12% from the year prior – and equivalent to an indicator rank of 18.



4.3.2 Domestic industry diversification

was equal to an index score of 0.11 in 2022, up by 0.36% from the year prior – and equivalent to an indicator rank of 38.

5.1.1 Knowledge-intensive employment

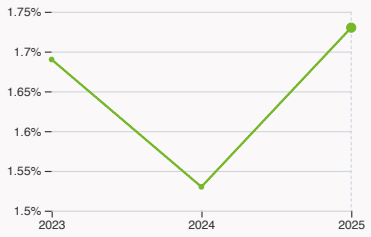
was equal to 50.4 % in 2024, up by 2.09 percentage points from the year prior – and equivalent to an indicator rank of 11.

Global Innovation Index 2025

Innovation outputs in Belgium

6.1.1 Patents by origin

was equal to 3.31 thousand patents in 2023, up by 0.91% from the year prior – and equivalent to an indicator rank of 17.

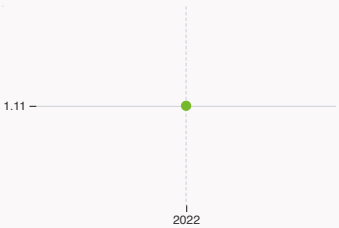


6.2.2 Unicorn valuation

was equal to 1.73 % GDP in 2025, up by 0.2 percentage points from the year prior – and equivalent to an indicator rank of 25.

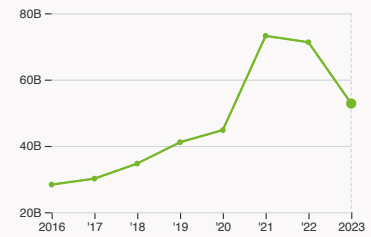
6.2.4 High-tech manufacturing

was equal to 138.81 high-tech manufacturing output in billion USD in 2022, up by 0.18% from the year prior – and equivalent to an indicator rank of 25.



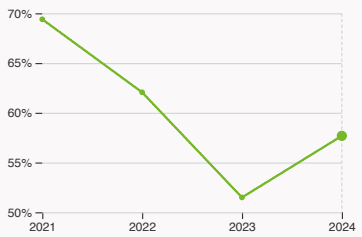
6.3.2 Production and export complexity

was equal to a score of 1.11 in 2022 – and equivalent to an indicator rank of 24.



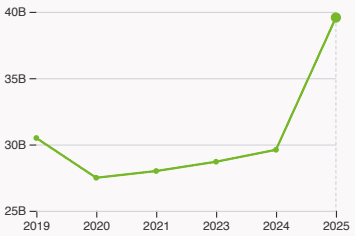
6.3.3 High-tech exports

was equal to 52.8 billion USD in 2023, down by 25.93% from the year prior – and equivalent to an indicator rank of 20.



7.1.1 Intangible asset intensity, top 15

was equal to 57.68 % for the top 15 companies in 2024, up by 6.19 percentage points from the year prior – and equivalent to an indicator rank of 39.



7.1.3 Global brand value, top 5,000

was equal to 39.57 billion USD for the brands in the top 5,000 in 2025, up by 33.68% from the year prior – and equivalent to an indicator rank of 30.

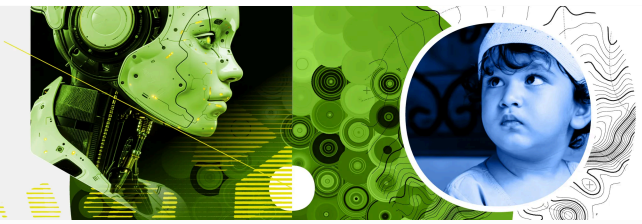
7.2.2 National feature films

was equal to 32 films in 2023, down by 20% from the year prior – and equivalent to an indicator rank of 38.

7.3.3 Mobile app creation

was equal to 68.82 million global downloads of mobile apps in 2024, down by 15.74% from the year prior – and equivalent to an indicator rank of 79.

Global Innovation Index 2025



Belgium's innovation top performers

Disclaimer: This section contains only the top performers per country. For the complete list, please visit the GII Innovation Ecosystems and Data Explorer website.

2.3.3 Global corporate R&D investors from Belgium

Rank	Firm	Industry	R&D [mn EUR]	R&D Growth [%]	R&D Intensity [%]
1	UCB	Pharmaceuticals & Biotechnology	1,543	2	32
2	SOLVAY	Chemicals	436	34	4
3	UMICORE	Industrial Metals & Mining	281	-11	2
4	KBC	Banks	271	3	3

Source: WIPO, based on European Commission's Joint Research Centre (https://iri.jrc.ec.europa.eu/scoreboard/2024-eu-industrial-rd-investment-scoreboard) and Orbis database (https://www.moodys.com/web/en/us/capabilities/company-reference-data/orbis.html).
Note: Data is based on the 2024 EU Industrial R&D Investment Scoreboard from the European Commission's Joint Research Centre, which ranks the top 2,000 firms by R&D investment annually. For countries not represented in the Scoreboard, companies from Orbis with R&D expenditure above USD 50 million were identified and used to complement the dataset.

2.3.4 QS university ranking of Belgium's top universities

Rank	University	Score
63	KU LEUVEN	70.30
169	GHENT UNIVERSITY	50.10
203	UNIVERSITE CATHOLIQUE DE LOUVAIN (UCLOUVAIN)	46.00

Source: QS Quacquarelli Symonds Ltd (https://www.topuniversities.com/university-rankings/world-university-rankings/2024).
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'.

5.2.3 University industry and international engagement, top 5 universities

Rank	University	Score
1	KU LEUVEN	90.30
2	UNIVERSITE CATHOLIQUE DE LOUVAIN	88.30
3	UNIVERSITY OF ANTWERP	86.90

Source: Times Higher Education (THE), World University Rankings 2025.
Note: Rank corresponds to within economy ranks. The score is calculated as the average of the International Outlook score (encompassing international staff, students, and co-authorship) and the industry score (reflecting industry income and patent citations). The 2025 ranking corresponds to data from the academic year that ended in 2022.

6.2.2 Top Unicorn Companies in Belgium

Rank	Unicorn Company	Industry	City	Valuation, bn USD
1	ODOO	Enterprise Tech	Louvain-la-Neuve	5
2	COLLIBRA	Enterprise Tech	Brussels	5
3	DELIVERECT	Consumer & Retail	Ghent	1

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 Belgium

Rank	Firm	Intensity, %
1	ANHEUSER-BUSCH INBEV SA/NV	96.44
2	UCB SA	93.27
3	D'IETEREN GROUP SA	80.61

Source: Brand Finance (https://brandirectory.com/reports/gift-2024).
Note: Brand Finance only provides within economy ranks.

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

Rank	Brand	Industry	Brand Value, mn USD
1	KBC	Banking	7,352.6
2	BDO GLOBAL	Commercial Services	6,288.3
3	STELLA ARTOIS	Beers	3,234.8

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

Belgium

GII 2025 rank **21**

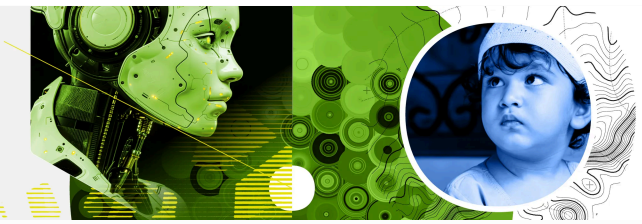
Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
23	23	High	Europe	11.7	863.8	73,221.6

	Score / Value	Rank	
Institutions	**68.1**	**29**	
1.1 Institutional environment	**69.9**	**31**	◇
1.1.1 Operational stability for businesses*	71.3	42	
1.1.2 Government effectiveness*	68.5	30	◇
1.2 Regulatory environment	**78.7**	**22**	
1.2.1 Regulatory quality*	73.7	24	
1.2.2 Rule of law*	83.7	20	
1.3 Business environment	**55.6**	**49**	
1.3.1 Policy stability for doing business†	60.9	44	
1.3.2 Entrepreneurship policies and culture†	50.2	29	
Human capital and research	**54.9**	**16**	
2.1 Education	**70**	**7**	
2.1.1 Expenditure on education, % GDP	6.4	13	●
2.1.2 Government funding/pupil, secondary, % GDP/cap	24.3	22	
2.1.3 School life expectancy, years	19	7	●
2.1.4 PISA scales in reading, maths and science	486.3	20	
2.1.5 Pupil–teacher ratio, secondary	8.4	14	
2.2 Tertiary education	**34.6**	**50**	
2.2.1 Tertiary enrolment, % gross	83.6	18	
2.2.2 Graduates in science and engineering, %	18.8	91	○ ◇
2.2.3 Tertiary inbound mobility, %	10.1	27	
2.3 Research and development (R&D)	**60.3**	**15**	
2.3.1 Researchers, FTE/mn pop.	7,091.5	7	●
2.3.2 Gross expenditure on R&D, % GDP	3.3	6	●
2.3.3 Global corporate R&D investors, top 3, mn USD	63.9	20	
2.3.4 QS university ranking, top 3*	56.8	18	
Infrastructure	**51.7**	**43**	◇
3.1 Information and communication technologies (ICTs)	**80.1**	**57**	◇
3.1.1 ICT access*	95	45	
3.1.2 ICT use*	78.8	64	○ ◇
3.1.3 Government's online service*	66.6	70	○ ◇
3.2 General infrastructure	**52.5**	**17**	
3.2.1 Electricity output, GWh/mn pop.	6,904.8	26	
3.2.2 Logistics performance*	86.4	7	
3.2.3 Gross capital formation, % GDP	25.7	42	
3.3 Ecological sustainability	**22.5**	**60**	
3.3.1 GDP/unit of energy use	12.5	51	
3.3.2 Low-carbon energy use, %	24.2	53	
3.3.3 ISO 14001 environment/bn PPP$ GDP	1.4	59	
Market sophistication	**53.4**	**20**	
4.1 Credit	**57.5**	**17**	
4.1.1 Finance for startups and scaleups†	89.3	5	
4.1.2 Domestic credit to private sector, % GDP	70	41	
4.1.3 Loans from microfinance institutions, % GDP	n/a	n/a	
4.2 Investment	**21.2**	**31**	◇
4.2.1 Market capitalization, % GDP	75.4	25	
4.2.2 Venture capital (VC) received, deal count/bn PPP$ GDP	0.3	25	
4.2.3 Late-stage VC deal count, % global VC	0.3	18	
4.2.4 VC investors, deal count/bn PPP$ GDP	0.6	23	
4.2.5 VC investor co-participation/bn PPP$ GDP	0.3	26	
4.3 Trade, diversification and market scale	**81.4**	**24**	
4.3.1 Applied tariff rate, weighted avg., %	1.3	24	
4.3.2 Domestic industry diversification	90.3	38	
4.3.3 Domestic market scale, bn PPP$	863.8	35	

	Score / Value	Rank	
Business sophistication	**55.5**	**10**	
5.1 Knowledge workers	**64.9**	**6**	
5.1.1 Knowledge-intensive employment, %	50.4	11	●
5.1.2 Females employed w/advanced degrees, %	27.6	14	
5.1.3 Youth demographic dividend, %	27.4	104	○
5.1.4 GERD performed by business, % GDP	2.5	6	●
5.1.5 GERD financed by business, %	64.4	7	●
5.2 Innovation linkages	**58.9**	**18**	
5.2.1 Public research–industry co-publications, %	4.6	17	
5.2.2 University–industry R&D collaboration†	62.6	18	
5.2.3 University industry & international engagement, top 5*	85.8	14	
5.2.4 State of cluster development†	70.2	32	
5.2.5 Patent families/bn PPP$ GDP	2.2	16	
5.3 Knowledge absorption	**42.9**	**19**	
5.3.1 Intellectual property payments, % total trade	0.7	57	
5.3.2 High-tech imports, % total trade	11.6	28	
5.3.3 ICT services imports, % total trade	3.3	14	●
5.3.4 FDI net inflows, % GDP	2.5	70	○
5.3.5 Research talent, % in businesses	62.5	11	
Knowledge and technology outputs	**41.4**	**16**	
6.1 Knowledge creation	**47**	**15**	
6.1.1 Patents by origin/bn PPP$ GDP	4	17	
6.1.2 PCT patents by inventor origin/bn PPP$ GDP	1.5	16	
6.1.3 Utility models by origin/bn PPP$ GDP	-	-	
6.1.4 Scientific and technical articles/bn PPP$ GDP	26.1	22	
6.1.5 Citable documents H-index	54.2	14	●
6.2 Knowledge impact	**42.1**	**22**	
6.2.1 Labor productivity growth, %	0.6	78	○
6.2.2 Unicorn valuation, % GDP	1.7	25	
6.2.3 Software spending, % GDP	0.5	18	
6.2.4 High-tech manufacturing	38.3	25	
6.3 Knowledge diffusion	**34.9**	**33**	
6.3.1 Intellectual property receipts, % total trade	0.8	22	
6.3.2 Production and export complexity	73.6	24	
6.3.3 High-tech exports, % total trade	9.8	20	
6.3.4 ICT services exports, % total trade	3.7	35	
6.3.5 ISO 9001 quality/bn PPP$ GDP	3.6	67	○
Creative outputs	**39.1**	**31**	◇
7.1 Intangible assets	**36.3**	**46**	◇
7.1.1 Intangible asset intensity, top 15, %	57.7	39	○
7.1.2 Trademarks by origin/bn PPP$ GDP	23.7	80	○
7.1.3 Global brand value, top 5,000, % GDP	5.7	30	
7.1.4 Industrial designs by origin/bn PPP$ GDP	1.5	44	
7.2 Creative goods and services	**25.3**	**45**	◇
7.2.1 Cultural and creative services exports, % total trade	1.2	22	
7.2.2 National feature films/mn pop. 15–69	3.9	38	
7.2.3 Entertainment and media market/th pop. 15–69	45.1	17	
7.2.4 Creative goods exports, % total trade	0.8	47	
7.3 Online creativity	**58.4**	**25**	
7.3.1 Top-level domains (TLDs)/th pop. 15–69	47.2	19	
7.3.2 GitHub commits/mn pop. 15–69	66.1	14	
7.3.3 Mobile app creation/bn PPP$ GDP	61.9	79	○ ◇

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 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.

Global Innovation Index 2025



Data Availability

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

Belgium has missing data for two indicators and outdated data for nine indicators.

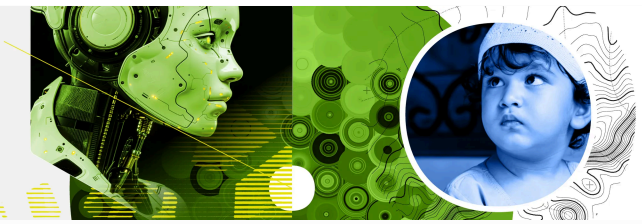
Missing data for Belgium

Code	Indicator name	Economy year	Model year	Source
4.1.3	Loans from microfinance institutions, % GDP	n/a	2023	International Monetary Fund, Financial Access Survey (FAS)
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	2023	World Intellectual Property Organization; International Monetary Fund

Outdated data for Belgium

Code	Indicator name	Economy year	Model year	Source
1.3.2	Entrepreneurship policies and culture†	2015	2024	Global Entrepreneurship Monitor
2.1.1	Expenditure on education, % GDP	2021	2023	UNESCO Institute for Statistics
2.1.3	School life expectancy, years	2022	2023	UNESCO Institute for Statistics
2.1.5	Pupil–teacher ratio, secondary	2022	2023	UNESCO Institute for Statistics
2.2.1	Tertiary enrolment, % gross	2022	2023	UNESCO Institute for Statistics
2.2.3	Tertiary inbound mobility, %	2022	2023	UNESCO Institute for Statistics
4.1.1	Finance for startups and scaleups†	2015	2024	Global Entrepreneurship Monitor
4.2.1	Market capitalization, % GDP	2018	2022	World Federation of Exchanges; World Bank
5.1.5	GERD financed by business, %	2021	2022	UNESCO Institute for Statistics; Eurostat; OECD; RICYT

Global Innovation Index 2025



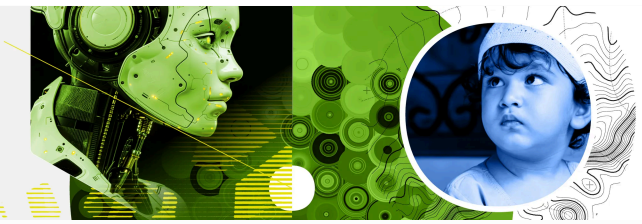
Top innovation clusters in Belgium

Belgium has 1 cluster in the world's top innovation clusters of the Global Innovation Index

The table and map below give an overview of the top innovation clusters in Belgium.

Rank	Cluster name	Top patent field	Top academic subject
55	Brussels–Antwerp	Pharmaceuticals	Engineering

Global Innovation Index 2025



The table and map below give an overview by intensity of the top innovation clusters in Belgium.

Rank	Cluster name	Top patent field	Top academic subject
60	Brussels–Antwerp	Pharmaceuticals	Engineering

Global Innovation Index 2025

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 140 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.