



European
Commission

European Innovation Scoreboard **2023** Country profile **Belgium**



Innovation

European Innovation Scoreboard 2023 – Country profile Belgium

European Commission

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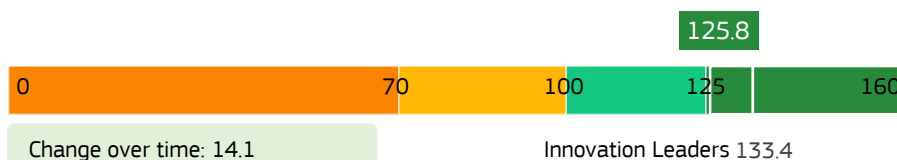
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The European Innovation Scoreboard report and annexes, and the indicators database are available at:

https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/european-innovation-scoreboard_en



Belgium

	Performance relative to EU in 2023	Performance change 2016- 2023	Performance change 2022- 2023
SUMMARY INNOVATION INDEX	125.8	14.1	-0.5
Human resources	124.8	6.1	1.2
Doctorate graduates	129.7	11.4	0.0
Population with tertiary education	154.3	3.0	3.0
Lifelong learning	84.3	1.1	1.1
Attractive research systems	155.6	-5.9	12.2
International scientific co-publications	180.4	59.1	-4.5
Most cited publications	123.4	-20.1	-2.9
Foreign doctorate students	189.7	-34.1	62.3
Digitalisation	111.6	-1.5	-1.8
Broadband penetration	120.4	-2.9	-3.5
People with above basic overall digital skills	99.5	0.0	0.0
Finance and support	123.6	38.4	-4.1
R&D expenditures in the public sector	101.6	11.3	-12.9
Venture capital expenditures	103.4	46.6	3.4
Government support for business R&D	176.0	67.1	0.0
Firm investments	132.0	35.0	-5.0
R&D expenditure in the business sector	153.5	46.2	0.0
Non-R&D Innovation expenditures	86.6	5.4	-15.8
Innovation expenditures per employee	148.3	50.9	0.0
Use of information technologies	147.3	2.8	1.2
Enterprises providing ICT training	160.9	5.7	2.5
Employed ICT specialists	133.3	0.0	0.0
Innovators	146.5	32.7	17.8
Product innovators (SMEs)	134.5	22.0	34.5
Business process innovators (SMEs)	157.0	44.0	0.0
Linkages	173.7	-2.5	-19.2
Innovative SMEs collaborating with others	223.6	-25.5	-25.5
Public-private co-publications	265.2	62.5	-10.0
Job-to-job mobility of HRST	93.8	-11.8	-17.6
Intellectual assets	86.9	-4.0	-3.2
PCT patent applications	96.1	-6.4	-2.2
Trademark applications	92.4	4.1	-5.2
Design applications	67.6	-7.3	-2.7
Employment impacts	150.0	15.3	9.2
Employment in knowledge-intensive activities	136.1	0.0	0.0
Employment in innovative enterprises	161.4	29.7	18.0
Sales impacts	102.6	24.2	-2.0
Medium and high-tech goods exports	78.5	5.3	-3.3
Knowledge-intensive services exports	122.7	14.4	2.3
Sales of innovative products	115.5	65.5	-5.1
Environmental sustainability	101.7	10.6	-3.5
Resource productivity	129.9	31.4	3.8
Air emissions by fine particulate matter	103.6	5.8	-0.1
Environment-related technologies	70.8	2.2	-12.5

The second column shows performance relative to that of the EU in 2023. Colours next to the column show matching colour codes: dark green: above 125% of the performance of the EU in 2023; light green: between 100% and 125%; light orange: between 70% and 100%; dark orange: below 70%. The next columns show performance change over time between 2016 and 2023 and between 2022 and 2023, with scores relative to those of the EU in 2016. Positive (negative) performance changes are shown in green (red).

BELGIUM is an **Innovation Leader** with performance at 125.8% of the EU average. Performance is below the average of the Innovation Leaders. Performance is increasing at a rate higher than that of the EU (8.5%-points). The country's performance lead over the EU is becoming larger.

Relative strengths

Public-private co-publications
Innovative SMEs collaborating with others
Foreign doctorate students
International scientific co-publications
Government support for business R&D

Relative weaknesses

Design applications
Environment-related technologies
Medium and high-tech goods exports
Lifelong learning
Non-R&D Innovation expenditures

Strong increases since 2016

Government support for business R&D
Sales of innovative products
Public-private co-publications

Strong decreases since 2016

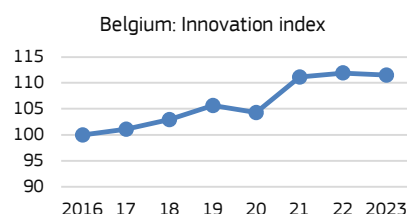
Foreign doctorate students
Innovative SMEs collaborating with others
Most cited publications

Strong increases since 2022

Foreign doctorate students
Product innovators
Employment in innovative enterprises

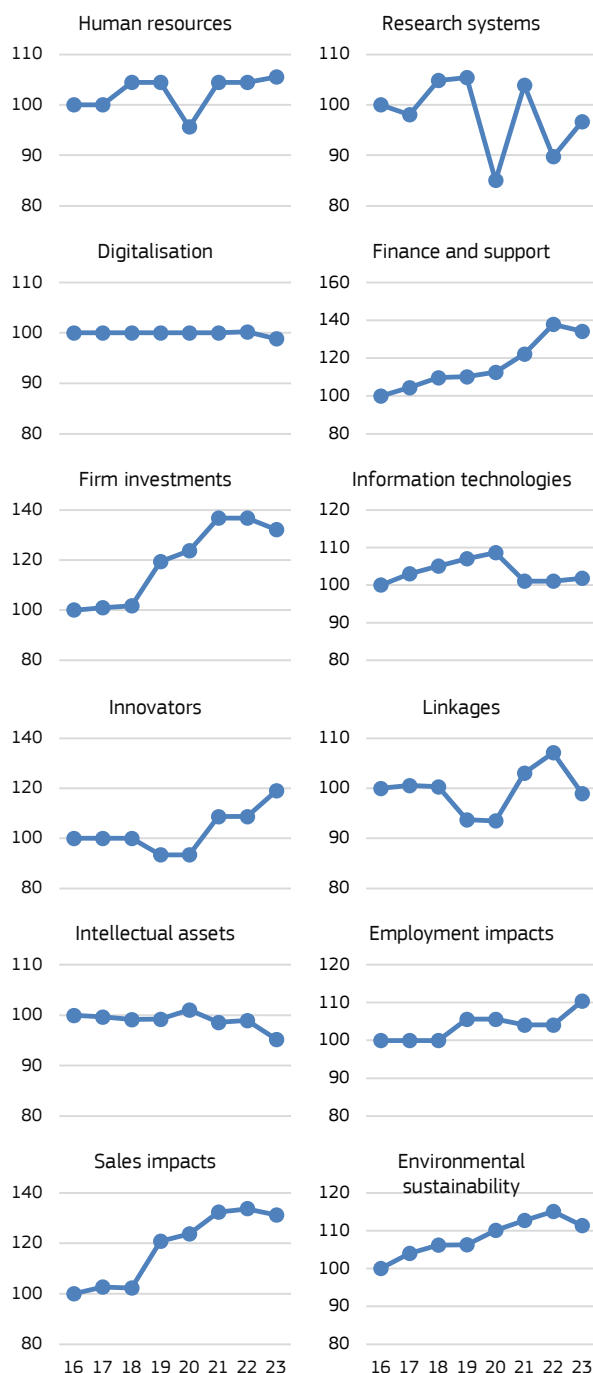
Strong decreases since 2022

Innovative SMEs collaborating with others
Job-to-job mobility of HRST
Non-R&D Innovation expenditures



The graph on the left shows the evolution of **innovation performance over time** against the performance of the country in 2016. Innovation performance increased between 2016 and 2019, decreased in 2020, accelerated between 2020 and 2021 and has remained stable since.

The graphs below show the evolution of innovation performance in the different **innovation dimensions** against the performance of the country in 2016. Improvement has been continuous in most dimensions. In Human resources there was a temporary decline in 2020, for Linkages there was a strong decline in 2019-2020 and a strong recovery in 2021. For Intellectual assets performance has decreased steadily over time.





Performance is measured relative to that of the country in 2016 (=100).

Structural differences with the EU are shown below:

- Belgium has higher per capita income but a slower growing economy. Both manufacturing and business services take up a smaller share of the economy, with SMEs accounting for a larger share of turnover.
- Top R&D spenders and buyer sophistication add positively to the innovation climate, FDI net inflows add negatively.
- Belgium has higher shares of In-house product innovators with market novelties and In-house business process innovators.
- Entrepreneurial training and government procurement are at par with the EU as drivers of research and innovation.
- Belgium shows a mixed performance on Climate change related indicators with an above average share of material resources coming from recycled waste materials but a below average score on environmental innovation.

	BE	EU
Performance and structure of the economy		
GDP per capita (PPS)	39,100	32,600
Average annual GDP growth (%)	3.9	4.4
Employment share Manufacturing (NACE C) (%)	12.0	16.4
of which High and Medium high-tech (%)	37.2	38.0
Employment share Services (NACE G-N) (%)	41.0	41.1
of which Knowledge-intensive services (%)	38.6	35.8
Turnover share SMEs (%)	35.8	34.1
Turnover share large enterprises (%)	39.3	49.6
Foreign-controlled enterprises – share of value added (%)	13.0	11.8
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	0.8	1.0
Total Entrepreneurial Activity (TEA) (%)	6.2	6.8
FDI net inflows (% GDP)	-1.5	2.1
Top R&D spending enterprises per 10 mln. population	29.8	20.3
Buyer sophistication (1 to 7 best)	4.4	3.7
Innovation profiles		
In-house product innovators with market novelties	24.1	12.2
In-house product innovators without market novelties	8.9	12.8
In-house business process innovators	26.0	16.5
Innovators that do not develop innovations themselves	8.0	6.5
Innovation active non-innovators	4.3	4.1
Non-innovators with potential to innovate	n/a	17.2
Non-innovators without disposition to innovate	n/a	30.7
Governance and policy framework		
Corruption Perceptions Index (0 to 100 best)	74.0	64.0
Basic school entrepreneurial education and training	3.3	3.3
Govt. procurement of advanced tech. products	3.5	3.5
Rule of law (-2.5 to 2.5 best)	1.4	1.0
Climate change indicators		
Circular material use rate	21.8	11.8
Greenhouse gas emissions intensity of energy consumption	85.4	82.8
Eco-Innovation Index	82.1	100.0
Demography		
Population size	11.6	447.1
Average annual population growth (%)	0.4	-0.1
Population density	375.4	108.8



This report provides the Country profile from the 2023 European Innovation Scoreboard for Belgium.

Studies and reports