

Switzerland	Performance relative to EU in 2022	Performance change 2015-2022	Performance change 2021-2022
<b>SUMMARY INNOVATION INDEX</b>	<b>142.4</b>	<b>4.0</b>	<b>1.7</b>
<b>Human resources</b>	<b>204.7</b>	<b>4.8</b>	<b>0.0</b>
Doctorate graduates	218.7	11.4	0.0
Population with tertiary education	167.9	0.0	0.0
Lifelong learning	232.2	0.0	0.0
<b>Attractive research systems</b>	<b>226.7</b>	<b>1.9</b>	<b>-1.3</b>
International scientific co-publications	259.6	0.0	0.0
Most cited publications	152.5	-6.1	-2.5
Foreign doctorate students	326.6	21.0	0.0
<b>Digitalisation</b>	<b>115.5</b>	<b>0.0</b>	<b>0.0</b>
Broadband penetration	78.4	0.0	0.0
People with above basic overall digital skills	163.6	0.0	0.0
<b>Finance and support</b>	<b>87.0</b>	<b>27.2</b>	<b>-1.2</b>
R&D expenditures in the public sector	124.2	11.3	0.0
Venture capital expenditures	102.1	63.9	-10.6
Government support for business R&D	18.9	10.9	6.9
<b>Firm investments</b>	<b>134.6</b>	<b>4.5</b>	<b>0.0</b>
R&D expenditure in the business sector	140.5	4.7	0.0
Non-R&D Innovation expenditures	N/A	N/A	N/A
Innovation expenditures per employee	N/A	N/A	N/A
<b>Use of information technologies</b>	<b>139.1</b>	<b>0.0</b>	<b>0.0</b>
Enterprises providing ICT training	N/A	N/A	N/A
Employed ICT specialists	145.5	0.0	0.0
<b>Innovators</b>	<b>131.3</b>	<b>-13.7</b>	<b>0.0</b>
Product innovators (SMEs)	128.9	-40.6	0.0
Business process innovators (SMEs)	133.4	14.9	0.0
<b>Linkages</b>	<b>196.5</b>	<b>20.8</b>	<b>2.5</b>
Innovative SMEs collaborating with others	80.4	11.5	0.0
Public-private co-publications	471.5	26.4	0.0
Job-to-job mobility of HRST	170.8	26.5	5.9
<b>Intellectual assets</b>	<b>138.9</b>	<b>-4.5</b>	<b>-5.2</b>
PCT patent applications	141.5	-3.3	0.9
Trademark applications	124.2	-4.1	0.1
Design applications	150.8	-6.3	-16.3
<b>Employment impacts</b>	<b>168.1</b>	<b>-5.2</b>	<b>0.0</b>
Employment in knowledge-intensive activities	175.3	0.0	0.0
Employment in innovative enterprises	162.4	-10.1	0.0
<b>Sales impacts</b>	<b>112.5</b>	<b>7.4</b>	<b>17.6</b>
Medium and high-tech goods exports	132.3	44.9	38.1
Knowledge-intensive services exports	95.6	11.6	9.8
Sales of innovative products	109.6	-46.4	0.0
<b>Environmental sustainability</b>	<b>123.3</b>	<b>-2.2</b>	<b>0.6</b>
Resource productivity	193.7	7.4	0.0
Air emissions by fine particulate matter	127.6	4.8	0.4

The second column shows performance relative to that of the EU in 2022. Colours next to the column show matching colour codes: dark green: above 125% of the performance of the EU in 2022; light green: between 100% and 125%; yellow: between 70% and 100%; orange: below 70%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data. The next columns show performance change over time between 2015 and 2022 and between 2021 and 2022, with scores relative to those of the EU in 2015. Positive performance changes are shown in green, negative performance changes in red.

**SWITZERLAND** is an **Innovation Leader** with performance at 142.4% of the EU average. Performance is above the average of the Innovation Leaders (134.4%). Performance is increasing (4.0%-points) at a rate lower than that of the EU (9.9%-points). The country's performance lead over the EU is becoming smaller.

#### Relative strengths

- Public-private co-publications
- Foreign doctorate students
- International scientific co-publications
- Lifelong learning
- Doctorate graduates

#### Relative weaknesses

- Government support for business R&D
- Environment-related technologies
- Broadband penetration
- Innovative SMEs collaborating with others
- Knowledge-intensive services exports

#### Strong increases since 2015

- Venture capital expenditures
- Medium and high-tech goods exports
- Job-to-job mobility of HRST

#### Strong decreases since 2015

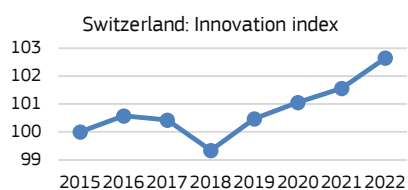
- Sales of innovative products
- Product innovators
- Environment-related technologies

#### Strong increases since 2021

- Medium and high-tech goods exports
- Knowledge-intensive services exports
- Government support for business R&D

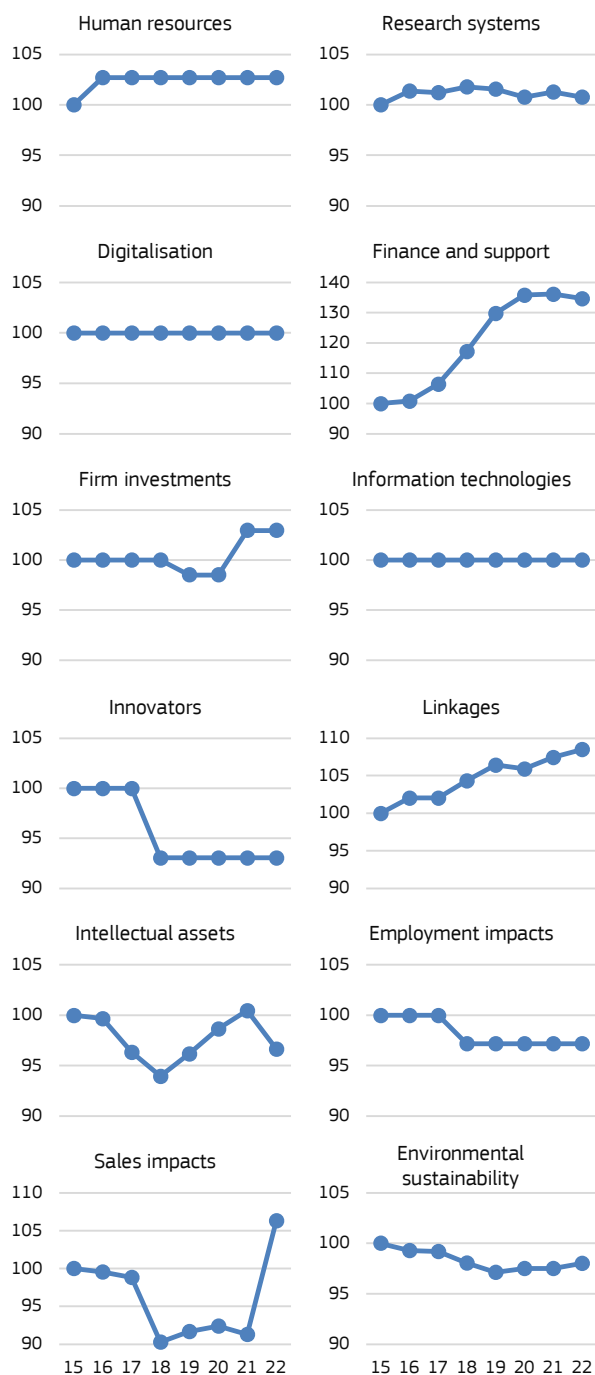
#### Strong decreases since 2021

- Design applications
- Venture capital expenditures
- Most cited publications



The graph on the left shows the evolution of **innovation performance over time** against the performance of the country in 2015. Innovation performance decreased slightly between 2015 and 2018 and increased annually from 2019 onwards, leading to an overall improvement of 3% between 2015 and 2022.

The graphs below show the evolution of innovation performance in the different **innovation dimensions** against the performance of the country in 2015. Performance increased strongest for Finance and support. Performance did almost not change for Research systems, Digitalisation, and Information technologies, and declined for Innovators, Intellectual assets, Employment impacts and Environmental sustainability.



Performance is measured relative to that of the country in 2015 (=100).

**Structural differences** with the EU are shown below:

- Switzerland has higher per capita income. Business services takes up a larger share of the economy, with SMEs accounting for a larger share of turnover.
- Enterprise births, entrepreneurial activity and top R&D spenders add positively to the innovation climate, FDI net inflows add negatively.
- Information on Innovation profiles is not available.
- Ease of starting a business is at par with the EU average, entrepreneurial training and government procurement are above the EU average as drivers of research and innovation.
- Information on Climate change related indicators is not available.

	CH	EU
<b>Performance and structure of the economy</b>		
GDP per capita (PPS)	48,200	31,200
Average annual GDP growth (%)	-0.2	-0.4
Employment share Manufacturing (NACE C) (%)	9.2	16.4
of which High and Medium high-tech (%)	40.8	38.0
Employment share Services (NACE G-N) (%)	44.6	41.1
of which Knowledge-intensive services (%)	41.1	35.8
Turnover share SMEs (%)	54.7	34.8
Turnover share large enterprises (%)	38.3	48.2
Foreign-controlled enterprises – share of value added (%)	n/a	11.7
<b>Business and entrepreneurship</b>		
Enterprise births (10+ employees) (%)	4.0	1.0
Total Entrepreneurial Activity (TEA) (%)	9.6	7.3
FDI net inflows (% GDP)	-18.3	1.0
Top R&D spending enterprises per 10 mln. population	67.5	18.3
Buyer sophistication (1 to 7 best)	5.0	3.7
<b>Innovation profiles</b>		
In-house product innovators with market novelties	n/a	10.7
In-house product innovators without market novelties	n/a	12.3
In-house business process innovators	n/a	11.0
Innovators that do not develop innovations themselves	n/a	11.6
Innovation active non-innovators	n/a	3.3
Non-innovators with potential to innovate	n/a	19.9
Non-innovators without disposition to innovate	n/a	31.3
<b>Governance and policy framework</b>		
Ease of starting a business (0 to 100 best)	76.6	76.5
Basic school entrepreneurial education and training	4.0	3.5
Govt. procurement of advanced tech. products	3.8	3.5
Rule of law (-2.5 to 2.5 best)	1.9	1.1
<b>Climate change indicators</b>		
Circular material use rate	n/a	12.2
Greenhouse gas emissions intensity of energy consumption	n/a	82.8
Eco-Innovation Index	n/a	100.0
<b>Demography</b>		
Population size	8.6	447.0
Average annual population growth (%)	0.7	0.1
Population density	213.6	108.8