

**The Netherlands** is a **Strong Innovator**. Over time, performance relative to the EU has decreased, in particular due to a relatively strong decrease in 2021.



■ Relative to EU in base year • Relative to EU in same year

**Structural differences** with the EU are shown in the table below including, compared to the EIS 2020, new information on different types of (innovating) enterprises (Innovation profiles) and environmental indicators.

	NL	EU
Performance and structure of the economy		
GDP per capita (PPS)	39,800	
Average annual GDP growth (%)	-1.7	-2.5
Employment share Manufacturing (NACE C) (%)	10.1	16.5
of which High and Medium high-tech (%)	31.1	37.9
Employment share Services (NACE G-N) (%)	46.7	41.2
of which Knowledge-intensive services (%)	40.9	35.1
Turnover share SMEs (%)	47.1	36.5
Turnover share large enterprises (%)	37.4	45.7
Foreign-controlled enterprises – share of value added (%)	14.7	11.8
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	0.7	1.0
Total Entrepreneurial Activity (TEA) (%)	10.9	6.7
FDI net inflows (% GDP)	-0.4	2.0
Top R&D spending enterprises per 10 million population	29.9	16.2
Buyer sophistication (1 to 7 best)	4.5	3.7
Innovation profiles		
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
Governance and policy framework		
Ease of starting a business (0 to 100 best)	76.1	76.5
Basic school entrepreneurial education and training	3.4	2.0
Govt. procurement of advanced tech. products	4.0	3.5
Rule of law (-2.5 to 2.5 best)	1.8	1.1
Climate change indicators		
Circular material use rate	29.1	11.7
Greenhouse gas emissions intensity of energy consumption	95.4	86.6
Eco-Innovation Index	110.0	100.0
Demography		
Population size	17.3	446.7
Average annual population growth (%)	0.7	0.1
Population density	504.1	108.8

The Netherlands' strengths are in *Attractive research systems*, *Linkages* and *Use of information technologies*. The top-3 indicators include Foreign doctorate students, Public-private co-publications, and International scientific co-publications.

The performance decrease in 2021 is the result of reduced performance on Sales of innovative products, Product innovators, Employment in innovative enterprises, PCT patent applications, and Government support for business R&D.

The Netherlands is showing above average scores on the Climate change related indicators.

Netherlands		Relative to	Relativ	e to FII	
2021   2014   2021   2018   2021   2014   2021   2014   2021   2014   2021   2014   2021   2021   2025	Netherlands				
SUMMARY INNOVATION INDEX         125.1         125.3         138.5           Human resources         141.2         135.4         149.7           Doctorate graduates         87.0         77.0         77.0           Population with tertiary education         162.2         169.4         209.1           Lifelong learning         187.9         188.9         206.7           Attractive research systems         176.0         184.5         198.1           International scientific co-publications         158.7         168.3         156.0           Most cited publications         158.7         168.3         156.0           Foreign doctorate students         235.5         246.8         280.9           Bigitalisation         148.6         152.6         205.5           Broadband penetration         123.4         122.5         187.1           People with above basic overall digital skills         186.4         188.9         227.8           Finance and support         110.0         118.2         131.0           R&D expenditures in the public sector         94.5         115.8         91.2           Venture capital expenditures         137.5         108.6         231.2           Firm investments         59.8	Netilerlands		!		
Human resources	CIIMMARY INNOVATION INDEY		i		
Doctorate graduates					
Population with tertiary education   1622   1694   2091     Lifelong learning   1879   188.9   206.7     Attractive research systems   176.0   184.5   198.1     International scientific co-publications   158.7   168.3   156.0     Most cited publications   158.7   168.3   156.0     Foreign doctorate students   236.5   246.8   280.9     Digitalisation   148.6   152.6   205.5     Broadband penetration   123.4   122.5   187.1     People with above basic overall digital skills   186.4   188.9   227.8     Finance and support   110.0   118.2   131.0     R&D expenditures in the public sector   94.5   115.8   91.2     Venture capital expenditures   137.5   108.6   231.2     Government support for business R&D   99.5   128.2   115.1     Firm investments   69.8   67.1   84.3     R&D expenditure in the business sector   100.0   81.1   111.0     Non-R&D Innovation expenditures   13.4   18.9   15.2     Innovation expenditures   134   18.9   15.2     Innovation expenditures   145.0   126.1   167.5     Enterprises providing ICT training   126.7   86.7   126.7     Employed ICT specialists   160.7   171.4   214.3     Innovators   94.3   124.5   129.1     Product innovators (SMEs)   90.6   160.6   127.9     Business process innovators (SMEs)   97.8   92.6   130.1     Linkages   150.5   194.6   203.0     Innovative SMEs collaborating with others   119.3   174.9   174.8     Public-private co-publications   161.3   150.5   140.0     Independent applications   161.3   150.5   140.0     Trademark applications   114.1   107.3   119.7     Design applications   119.6   125.4   121.8     Employment impacts   119.6   125.4   121.8     Employment in knowledge-intensive activities   147.6   152.0   161.3     Employment in innovative enterprises   97.2   106.5   93.8     Sales impacts   94.8   94.3   96.5     Medium and high tech goods exports   84.6   68.5   92.7     Knowledge-intensive services exports   125.9   127.2   133.3     Sales of innovative products   66.7   89.0   58.0     Employment in knowledge-intensive activities   166.7   8					
Lifelong learning         1879         1889         2067           Attractive research systems         1760         184.5         198.1           International scientific co-publications         1544         162.1         202.5           Most cited publications         158.7         168.3         155.0           Proreign doctorate students         236.5         246.8         280.9           Digitalisation         148.6         152.6         205.5           Broadband penetration         123.4         122.5         187.1           People with above basic overall digital skills         186.4         188.9         227.8           Finance and support         110.0         118.2         131.0           R&D expenditures in the public sector         94.5         115.8         91.2           Venture capital expenditures         137.5         1086         231.5           Firm investments         69.8         67.1         84.3           R&D expenditure in the business sector         100.0         81.1         111.0           Non-R&D Innovation expenditures         13.4         18.9         15.2           Innovation expenditures per employee         86.7         91.7         114.5           Use of information technologie					
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Innovation expenditures per employee   86.7   91.7   114.5	R&D expenditure in the business sector		81.1		
Use of information technologies         145.0         126.1         167.5           Enterprises providing ICT training         126.7         86.7         126.7           Employed ICT specialists         160.7         171.4         214.3           Innovators         94.3         124.5         129.1           Product innovators (SMEs)         90.6         160.6         127.9           Business process innovators (SMEs)         97.8         92.6         130.1           Linkages         150.5         194.6         203.0           Innovative SMEs collaborating with others         119.3         174.9         174.8           Public-private co-publications         208.2         206.2         233.5           Job-to-job mobility of HRST         139.3         200.0         200.0           Intellectual assets         135.5         110.5         117.4           PCT patent applications         161.3         150.5         140.0           Trademark applications         114.1         107.3         119.7           Design applications         139.0         78.4         95.3           Employment in knowledge-intensive activities         147.6         152.0         161.3           Employment in innovative enterprises	Non-R&D Innovation expenditures	13.4	18.9	15.2	
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Linkages         150.5         194.6         203.0           Innovative SMEs collaborating with others         119.3         174.9         174.8           Public-private co-publications         208.2         206.2         233.5           Job-to-job mobility of HRST         139.3         200.0         200.0           Intellectual assets         135.5         110.5         117.4           PCT patent applications         161.3         150.5         140.0           Trademark applications         114.1         107.3         119.7           Design applications         139.0         78.4         95.3           Employment impacts         119.6         125.4         121.8           Employment in knowledge-intensive activities         147.6         152.0         161.3           Employment in innovative enterprises         97.2         106.5         93.8           Sales impacts         94.8         94.3         96.5           Medium and high tech goods exports         84.6         68.5         92.7           Knowledge-intensive services exports         125.9         127.2         133.3           Sales of innovative products         66.7         89.0         58.0           Environmental sustainability         12	Product innovators (SMEs)	90.6	160.6	127.9	
Innovative SMEs collaborating with others   119.3   174.9   174.8	Business process innovators (SMEs)	97.8	92.6	130.1	
Public-private co-publications       208.2       206.2       233.5         Job-to-job mobility of HRST       139.3       200.0       200.0         Intellectual assets       135.5       110.5       117.4         PCT patent applications       161.3       150.5       140.0         Trademark applications       114.1       107.3       119.7         Design applications       139.0       78.4       95.3         Employment impacts       119.6       125.4       121.8         Employment in knowledge-intensive activities       147.6       152.0       161.3         Employment in innovative enterprises       97.2       106.5       93.8         Sales impacts       94.8       94.3       96.5         Medium and high tech goods exports       84.6       68.5       92.7         Knowledge-intensive services exports       125.9       127.2       133.3         Sales of innovative products       66.7       89.0       58.0         Environmental sustainability       124.8       124.7       129.9         Resource productivity       196.1       233.2       290.4         Air emissions by fine particulate matter       108.9       108.9       115.8	Linkages	150.5	194.6	203.0	
Job-to-job mobility of HRST         139.3         200.0         200.0           Intellectual assets         135.5         110.5         117.4           PCT patent applications         161.3         150.5         140.0           Trademark applications         114.1         107.3         119.7           Design applications         139.0         78.4         95.3           Employment impacts         119.6         125.4         121.8           Employment in knowledge-intensive activities         147.6         152.0         161.3           Employment in innovative enterprises         97.2         106.5         93.8           Sales impacts         94.8         94.3         96.5           Medium and high tech goods exports         84.6         68.5         92.7           Knowledge-intensive services exports         125.9         127.2         133.3           Sales of innovative products         66.7         89.0         58.0           Environmental sustainability         124.8         124.7         129.9           Resource productivity         196.1         233.2         290.4           Air emissions by fine particulate matter         108.9         108.9         115.8	Innovative SMEs collaborating with others	119.3	174.9	174.8	
Intellectual assets         135.5         110.5         117.4           PCT patent applications         161.3         150.5         140.0           Trademark applications         114.1         107.3         119.7           Design applications         139.0         78.4         95.3           Employment impacts         119.6         125.4         121.8           Employment in knowledge-intensive activities         147.6         152.0         161.3           Employment in innovative enterprises         97.2         106.5         93.8           Sales impacts         94.8         94.3         96.5           Medium and high tech goods exports         84.6         68.5         92.7           Knowledge-intensive services exports         125.9         127.2         133.3           Sales of innovative products         66.7         89.0         58.0           Environmental sustainability         124.8         124.7         129.9           Resource productivity         196.1         233.2         290.4           Air emissions by fine particulate matter         108.9         108.9         115.8	Public-private co-publications	208.2	206.2	233.5	
PCT patent applications       161.3       150.5       140.0         Trademark applications       114.1       107.3       119.7         Design applications       139.0       78.4       95.3         Employment impacts       119.6       125.4       121.8         Employment in knowledge-intensive activities       147.6       152.0       161.3         Employment in innovative enterprises       97.2       106.5       93.8         Sales impacts       94.8       94.3       96.5         Medium and high tech goods exports       84.6       68.5       92.7         Knowledge-intensive services exports       125.9       127.2       133.3         Sales of innovative products       66.7       89.0       58.0         Environmental sustainability       124.8       124.7       129.9         Resource productivity       196.1       233.2       290.4         Air emissions by fine particulate matter       108.9       108.9       115.8	Job-to-job mobility of HRST	139.3	200.0	200.0	
Trademark applications       114.1       107.3       119.7         Design applications       139.0       78.4       95.3         Employment impacts       119.6       125.4       121.8         Employment in knowledge-intensive activities       147.6       152.0       161.3         Employment in innovative enterprises       97.2       106.5       93.8         Sales impacts       94.8       94.3       96.5         Medium and high tech goods exports       84.6       68.5       92.7         Knowledge-intensive services exports       125.9       127.2       133.3         Sales of innovative products       66.7       89.0       58.0         Environmental sustainability       124.8       124.7       129.9         Resource productivity       196.1       233.2       290.4         Air emissions by fine particulate matter       108.9       108.9       115.8	Intellectual assets	135.5	110.5	117.4	
Design applications         139.0         78.4         95.3           Employment impacts         119.6         125.4         121.8           Employment in knowledge-intensive activities         147.6         152.0         161.3           Employment in innovative enterprises         97.2         106.5         93.8           Sales impacts         94.8         94.3         96.5           Medium and high tech goods exports         84.6         68.5         92.7           Knowledge-intensive services exports         125.9         127.2         133.3           Sales of innovative products         66.7         89.0         58.0           Environmental sustainability         124.8         124.7         129.9           Resource productivity         196.1         233.2         290.4           Air emissions by fine particulate matter         108.9         108.9         115.8	PCT patent applications	161.3	150.5	140.0	
Employment impacts         119.6         125.4         121.8           Employment in knowledge-intensive activities         147.6         152.0         161.3           Employment in innovative enterprises         97.2         106.5         93.8           Sales impacts         94.8         94.3         96.5           Medium and high tech goods exports         84.6         68.5         92.7           Knowledge-intensive services exports         125.9         127.2         133.3           Sales of innovative products         66.7         89.0         58.0           Environmental sustainability         124.8         124.7         129.9           Resource productivity         196.1         233.2         290.4           Air emissions by fine particulate matter         108.9         108.9         115.8	Trademark applications	114.1	107.3	119.7	
Employment in knowledge-intensive activities       147.6       152.0       161.3         Employment in innovative enterprises       97.2       106.5       93.8         Sales impacts       94.8       94.3       96.5         Medium and high tech goods exports       84.6       68.5       92.7         Knowledge-intensive services exports       125.9       127.2       133.3         Sales of innovative products       66.7       89.0       58.0         Environmental sustainability       124.8       124.7       129.9         Resource productivity       196.1       233.2       290.4         Air emissions by fine particulate matter       108.9       108.9       115.8	Design applications	139.0	78.4	95.3	
Employment in innovative enterprises       97.2       106.5       93.8         Sales impacts       94.8       94.3       96.5         Medium and high tech goods exports       84.6       68.5       92.7         Knowledge-intensive services exports       125.9       127.2       133.3         Sales of innovative products       66.7       89.0       58.0         Environmental sustainability       124.8       124.7       129.9         Resource productivity       196.1       233.2       290.4         Air emissions by fine particulate matter       108.9       108.9       115.8	Employment impacts	119.6	125.4	121.8	
Sales impacts         94.8         94.3         96.5           Medium and high tech goods exports         84.6         68.5         92.7           Knowledge-intensive services exports         125.9         127.2         133.3           Sales of innovative products         66.7         89.0         58.0           Environmental sustainability         124.8         124.7         129.9           Resource productivity         196.1         233.2         290.4           Air emissions by fine particulate matter         108.9         108.9         115.8	Employment in knowledge-intensive activities	147.6	152.0	161.3	
Medium and high tech goods exports       84.6       68.5       92.7         Knowledge-intensive services exports       125.9       127.2       133.3         Sales of innovative products       66.7       89.0       58.0         Environmental sustainability       124.8       124.7       129.9         Resource productivity       196.1       233.2       290.4         Air emissions by fine particulate matter       108.9       108.9       115.8	Employment in innovative enterprises	97.2	106.5	93.8	
Knowledge-intensive services exports125.9127.2133.3Sales of innovative products66.789.058.0Environmental sustainability124.8124.7129.9Resource productivity196.1233.2290.4Air emissions by fine particulate matter108.9108.9115.8	Sales impacts	94.8	94.3	96.5	
Sales of innovative products66.789.058.0Environmental sustainability124.8124.7129.9Resource productivity196.1233.2290.4Air emissions by fine particulate matter108.9108.9115.8	Medium and high tech goods exports	84.6	68.5	92.7	
Environmental sustainability124.8124.7129.9Resource productivity196.1233.2290.4Air emissions by fine particulate matter108.9108.9115.8	Knowledge-intensive services exports	125.9	127.2	133.3	
Resource productivity 196.1 233.2 290.4  Air emissions by fine particulate matter 108.9 108.9 115.8	Sales of innovative products	66.7	89.0	58.0	
Air emissions by fine particulate matter 108.9 108.9 115.8	Environmental sustainability	124.8	124.7	129.9	
	Resource productivity	196.1	233.2	290.4	
Environment-related technologies 70.2 80.7 52.7	Air emissions by fine particulate matter	108.9	108.9	115.8	
	Environment-related technologies	70.2	80.7	52.7	

The colours show normalised performance in 2021 relative to that of the EU in 2021: dark green: above 125%; 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.