

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.

	EE	EU
Performance and structure of the economy		
GDP per capita (PPS)	25,200	30,800
Average annual GDP growth (%)	0.6	-2.5
Employment share Manufacturing (NACE C) (%)	18.2	16.5
of which High and Medium high-tech (%)	22.7	37.9
Employment share Services (NACE G-N) (%)	40.7	41.2
of which Knowledge-intensive services (%)	32.9	35.1
Turnover share SMEs (%)	47.1	36.5
Turnover share large enterprises (%)	20.5	45.7
Foreign-controlled enterprises – share of value added (%)	13.3	11.8
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	1.1	1.0
Total Entrepreneurial Activity (TEA) (%)	19.4	6.7
FDI net inflows (% GDP)	5.6	2.0
Top R&D spending enterprises per 10 million population	0.0	16.2
Buyer sophistication (1 to 7 best)	3.7	3.7
Innovation profiles		
In-house product innovators with market novelties	13.2	10.7
In-house product innovators without market novelties	26.7	12.3
In-house business process innovators	13.1	11.0
Innovators that do not develop innovations themselves	13.1	11.6
Innovation active non-innovators	4.7	3.3
Non-innovators with potential to innovate	12.3	19.9
Non-innovators without disposition to innovate	16.9	31.3
Governance and policy framework		
Ease of starting a business (0 to 100 best)	80.7	76.5
Basic school entrepreneurial education and training	3.0	2.0
Govt. procurement of advanced tech. products	3.7	3.5
Rule of law (-2.5 to 2.5 best)	1.3	1.1
Climate change indicators		
Circular material use rate	13.8	11.7
Greenhouse gas emissions intensity of energy consumption	94.6	86.6
Eco-Innovation Index	73.0	100.0
Demography		
Population size	1.3	446.7
Average annual population growth (%)	0.4	0.1
Population density	30.4	108.8

Estonia's strengths are in *Linkages, Innovators* and *Intellectual assets.* The top-3 indicators include Trademark applications., Innovative SMEs collaborating with others, and Non-R&D innovation expenditures.

The very strong performance improvements since 2018 are almost entirely due to improved performance on the indicators using innovation survey data, in particular for Product innovators (an almost fivefold increase from 10.2% to 48.9%) and Business process innovators (an almost triple increase from 18.0% to 52.5%).

Estonia has an above average share of In-house product innovators without market novelties and is showing close to average scores on the Climate change related indicators.

Estonia   EU 2021 nl   2014 rot 2011     SUMMARY INNOVATION INDEX   114.0   92.9   128.3     Human resources   128.8   109.6   136.4     Doctorate graduates   87.0   77.0   77.0     Population with tertiary education   121.8   138.8   157.0     Lifelong learning   194.9   132.2   21.4.4     Attractive research systems   104.6   76.8   177.8     Most cited publications   89.8   72.7   88.3     Foreign doctorate students   92.2   44.5   109.5     Digitalisation   102.5   119.4   141.8     Broadband penetration   86.0   89.4   150.5     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Covernment support for business Sector   57.4   91.3   63.8     Non-R&D Innovation expenditures   194.2   168.1   22.07     Innovators perioditure in the business sector   57.4   91.3		Relative to Relative to EU			
SUMMARY INNOVATION INDEX   114.0   92.9   128.3     Human resources   128.8   109.6   136.4     Doctorate graduates   87.0   77.0   77.0     Population with tertiary education   121.8   138.8   157.0     Lifelong learning   194.9   132.2   21.44     Attractive research systems   104.6   76.8   117.8     International scientific co-publications   131.8   108.9   172.8     Most cited publications   92.2   44.5   109.5     Digitalisation   102.5   119.4   141.8     Broadband penetration   86.0   89.4   130.4     People with above basic overall digital skills   127.3   150.6   155.5     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Venture capital expenditures   194.2   168.1   20.7     Innovation expenditures   194.2   168.1   20.7     Innovation expenditures   194.2	Estonia	EU 2021 in		2014 in	
Human resources   128.8   109.6   136.4     Doctorate graduates   87.0   77.0   77.0     Population with tertiary education   121.8   138.8   157.0     Lifelong learning   194.9   132.2   214.4     Attractive research systems   104.6   76.8   117.8     International scientific co-publications   131.8   108.9   1.72.8     Most cited publications   89.8   7.2.7   88.3     Foreign doctorate students   92.2   44.5   109.5     Digitalisation   102.5   119.4   141.8     Broadband penetration   86.0   89.4   130.4     People with above basic overall digital skills   127.3   155.6   155.6     Finance and support   92.0   103.3   109.7   82.0   98.2   92.0   133.5   25.39   60.0   113.5   25.39   60.0   113.5   25.39   60.0   113.5   25.39   60.0   113.5   25.39   60.0   113.5   25.9   60.0   80.0 </th <th></th> <th colspan="2">2021</th> <th colspan="2">2014 2021</th>		2021		2014 2021	
Doctorate graduates   87.0   77.0     Population with tertiary education   121.8   138.8   157.0     Lifelong learning   194.9   132.2   214.4     Attractive research systems   104.6   76.8   117.8     International scientific co-publications   131.8   108.9   172.8     Most cited publications   89.8   72.7   88.3     Foreign doctorate students   92.2   44.5   109.5     Digitalisation   102.5   119.4   141.8     Broadband penetration   86.0   89.4   130.4     People with above basic overall digital skills   127.3   155.6   155.6     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Venture capital expenditures   151.0   113.5   253.9     Government support for business R&D   20.8   69.3   24.1     Firm investments   95.5   110.6   113.5     Non-R&D Innovation expenditures per employee   83.0 <th>SUMMARY INNOVATION INDEX</th> <th>114.0</th> <th></th> <th>92.9</th> <th>128.3</th>	SUMMARY INNOVATION INDEX	114.0		92.9	128.3
Population with tertiary education   121.8   138.8   157.0     Lifelong learning   194.9   132.2   214.4     Attractive research systems   104.6   76.8   117.8     International scientific co-publications   131.8   108.9   172.8     Most cited publications   92.2   44.5   109.5     Digitalisation   102.5   119.4   141.8     Broadband penetration   86.0   89.4   130.4     People with above basic overall digital skills   127.3   155.6   155.6     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Government support for business R&D   20.8   69.3   24.1     Firm investments   95.5   110.6   115.5     R&D expenditure in the business sector   57.4   91.3   63.8     Non-R&D Innovation expenditures   194.2   168.1   20.7     Innovator scientific tervining   80.0   60.0   80.0     Entprises providing ICT	Human resources	128.8		109.6	136.4
Lifelong learning19491322214.4Attractive research systems104.676.8117.8International scientific co-publications131.8108.9172.8Most cited publications89.872.788.3Foreign doctorate students92.244.5109.5Digitalisation102.5119.4141.8Broadband penetration86.089.4130.4People with above basic overall digital skills127.3155.6155.6Finance and support92.0103.3109.7R&D expenditures in the public sector101.8122.898.2Venture capital expenditures151.0113.5253.9Government support for business R&D20.869.324.1Firm investments95.5110.6115.3R&D expenditure in the business sector57.491.363.8Non-R&D Innovation expenditures194.2168.1220.7Innovation expenditures194.2168.1220.7Innovators (SMEs)159.186.2217.7Product innovators (SMEs)159.186.2217.7Innovators159.186.2217.7Product innovators (SMEs)169.381.4238.8Business process innovators (SMEs)154.0119.8172.7Job-to-job mobility of HRST151.8117.9117.9Intellectual assets131.6100.414.0Public-private co-publications154.0131.6196.9 <td>Doctorate graduates</td> <td>87.0</td> <td></td> <td>77.0</td> <td>77.0</td>	Doctorate graduates	87.0		77.0	77.0
Attractive research systems   104.6   76.8   117.8     International scientific co-publications   131.8   108.9   172.8     Most cited publications   89.8   72.7   88.3     Foreign doctorate students   92.2   44.5   109.5     Digitalisation   102.5   119.4   141.8     Broadband penetration   86.0   89.4   130.4     People with above basic overall digital skills   127.3   155.5   155.6     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Venture capital expenditures   151.0   113.5   253.9     Government support for business R&D   20.8   63.3   24.1     Firm investments   95.5   110.6   115.3     R&D expenditures per employee   83.0   83.0   20.0     Innovation expenditures per employee   159.1   86.2   21.7     Product innovators (SMEs)   169.3   81.4   238.8     Business process innovators (SM	Population with tertiary education	121.8		138.8	157.0
International scientific co-publications 131.8 108.9 172.8   Most cited publications 89.8 72.7 88.3   Foreign doctorate students 92.2 44.5 1095   Digitalisation 102.5 119.4 141.8   Broadband penetration 86.0 89.4 130.4   People with above basic overall digital skills 127.3 155.6 155.6   Finance and support 92.0 103.3 109.7   R&D expenditures in the public sector 101.8 122.8 98.2   Venture capital expenditures 151.0 113.5 253.9   Government support for business R&D 20.8 69.3 24.1   Firm investments 95.5 110.6 115.3   R&D expenditure in the business sector 57.4 91.3 63.8   Non-R&D Innovation expenditures 194.2 168.1 220.7   Innovator expenditures per employee 83.0 83.8 109.5   Innovators (SMEs) 159.1 86.2 217.7   Product innovators (SMEs) 169.3 81.4 238.8   Business process	Lifelong learning	194.9		132.2	214.4
Most cited publications   89.8   72.7   88.3     Foreign doctorate students   92.2   44.5   109.5     Digitalisation   102.5   119.4   141.8     Broadband penetration   86.0   89.4   130.4     People with above basic overall digital skills   127.3   155.6   155.6     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Venture capital expenditures   151.0   113.5   25.5     Government support for business R&D   20.8   69.3   24.1     Firm investments   95.5   110.6   115.3     R&D expenditure in the business sector   57.4   91.3   63.8     Non-R&D Innovation expenditures   194.2   168.1   220.7     Innovation expenditures per employee   83.0   83.8   109.5     Innovators (SMEs)   149.7   91.5   154.4     Product innovators (SMEs)   149.7   90.5   199.2     Linkages   177.5	Attractive research systems	104.6		76.8	117.8
Foreign doctorate students 92.2 44.5 109.5   Digitalisation 102.5 119.4 141.8   Broadband penetration 86.0 89.4 130.4   People with above basic overall digital skills 127.3 155.6 155.6   Finance and support 92.0 103.3 109.7   R&D expenditures in the public sector 101.8 122.8 98.2   Venture capital expenditures 151.0 113.5 253.9   Government support for business R&D 20.8 69.3 24.1   Firm investments 95.5 110.6 115.3   R&D expenditure in the business sector 57.4 91.3 63.8   Non-R&D Innovation expenditures 194.2 166.1 20.7   Innovation expenditures per employee 83.0 80.0 80.0   Employed ICT specialists 175.0 128.6 233.3   Innovators (SMEs) 169.3 81.4 238.8   Business process innovators (SMEs) 149.7 90.5 199.2   Linkages 177.3 140.0 241.7   Product innovatiors (SMEs)	International scientific co-publications	131.8		108.9	172.8
Digitalisation102.5119.4144.8Broadband penetration86.089.4130.4People with above basic overall digital skills127.3155.6155.6Finance and support92.0103.3109.7R&D expenditures in the public sector101.8122.898.2Venture capital expenditures151.0113.5253.9Government support for business R&D20.869.324.1Firm investments95.5110.6115.3R&D expenditure in the business sector57.491.363.8Non-R&D Innovation expenditures194.2168.1220.7Innovation expenditures per employee83.083.8109.5Use of information technologies131.191.9151.4Enterprises providing ICT training80.060.080.0Employed ICT specialists175.0128.6233.3Innovators159.186.2217.7Product innovators (SMEs)149.790.5199.2Linkages179.3140.0241.7Innovative SMEs collaborating with others237.4192.3347.8Public-private co-publications135.598.129.2Job-to-job mobility of HRST131.6100.4140.0PCT patent applications135.598.192.8Employment in knowledge-intensive activities103.770.7113.3Employment in knowledge-intensive activities103.770.7113.3Employment in	Most cited publications	89.8		72.7	88.3
Broadband penetration   86.0   89.4   130.4     People with above basic overall digital skills   127.3   155.6   155.6     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Venture capital expenditures   151.0   113.5   253.9     Government support for business R&D   20.8   69.3   24.1     Firm investments   95.5   110.6   115.3     R&D expenditure in the business sector   57.4   91.3   63.8     Non-R&D Innovation expenditures   194.2   168.1   220.7     Innovation expenditures per employee   83.0   83.8   109.5     Use of information technologies   131.1   91.9   151.4     Enterprises providing ICT training   80.0   60.0   80.0     Employed ICT specialists   175.0   128.6   233.3     Innovators (SMEs)   169.3   81.4   238.8     Business process innovators (SMEs)   149.7   90.5   199.2     Linka	Foreign doctorate students	92.2		44.5	109.5
People with above basic overall digital skills   127.3   155.6   155.6     Finance and support   92.0   103.3   109.7     R&D expenditures in the public sector   101.8   122.8   98.2     Venture capital expenditures   151.0   113.5   253.9     Government support for business R&D   20.8   69.3   24.1     Firm investments   95.5   110.6   115.3     R&D expenditure in the business sector   57.4   91.3   63.8     Non-R&D Innovation expenditures   194.2   168.1   220.7     Innovation expenditures per employee   83.0   83.8   109.5     Use of information technologies   131.1   91.9   151.4     Enterprises providing ICT training   80.0   60.0   80.0     Employed ICT specialists   175.0   128.6   233.3     Innovators (SMEs)   169.3   81.4   238.8     Business process innovators (SMEs)   149.7   90.5   199.2     Linkages   179.3   140.0   241.7     Public-private c	Digitalisation	102.5		119.4	141.8
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R&D expenditures in the public sector101.8122.898.2Venture capital expenditures151.0113.5253.9Government support for business R&D20.869.324.1Firm investments95.5110.6115.3R&D expenditure in the business sector57.491.363.8Non-R&D Innovation expenditures194.2168.1220.7Innovation expenditures per employee83.083.8109.5Use of information technologies131.191.9151.4Enterprises providing ICT training80.060.080.0Employed ICT specialists175.0128.6233.3Innovators159.186.2217.7Product innovators (SMEs)169.381.4238.8Business process innovators (SMEs)149.790.5199.2Linkages179.3140.0241.7Innovative SMEs collaborating with others237.4192.3347.8Public-private co-publications154.0119.8172.7Job-to-job mobility of HRST151.8117.9217.9Intellectual assets131.6100.4140.0PCT patent applications187.6131.6196.9Design applications135.598.192.8Employment in knowledge-intensive activities103.770.7113.3Employment in knowledge-intensive activities103.770.7113.3Employment in innovative enterprises182.993.1176.6Sa	People with above basic overall digital skills	127.3		155.6	155.6
Venture capital expenditures 151.0 113.5 253.9   Government support for business R&D 20.8 69.3 24.1   Firm investments 95.5 110.6 115.3   R&D expenditure in the business sector 57.4 91.3 63.8   Non-R&D Innovation expenditures 194.2 168.1 220.7   Innovation expenditures per employee 83.0 83.8 109.5   Use of information technologies 131.1 91.9 151.4   Enterprises providing ICT training 80.0 60.0 80.0   Employed ICT specialists 175.0 128.6 233.3   Innovators 159.1 86.2 217.7   Product innovators (SMEs) 169.3 81.4 238.8   Business process innovators (SMEs) 149.7 90.5 199.2   Linkages 179.3 140.0 241.7   Innovative SMEs collaborating with others 237.4 192.3 347.8   Public-private co-publications 154.0 119.8 172.7   Job-to-job mobility of HRST 151.8 100.4 144.0   PCT patent appl	Finance and support	92.0		103.3	109.7
Government support for business R&D20.869.324.1Firm investments95.5110.6115.3R&D expenditure in the business sector57.491.363.8Non-R&D Innovation expenditures194.2168.1220.7Innovation expenditures per employee83.083.8109.5Use of information technologies131.191.9151.4Enterprises providing ICT training80.060.080.0Employed ICT specialists175.0128.6233.3Innovators159.186.2217.7Product innovators (SMEs)169.381.4238.8Business process innovators (SMEs)149.790.5199.2Linkages179.3140.0241.7Innovative SMEs collaborating with others237.4192.3347.8Public-private co-publications154.0119.8172.7Job-to-job mobility of HRST151.8117.9217.9Intellectual assets131.6100.4140.0PCT patent applications135.598.192.8Employment in knowledge-intensive activities103.770.7113.3Employment in innovative enterprises182.993.1176.6Sales inpacts60.670.366.473.3Medium and high tech goods exports60.660.473.1Sales of innovative products115.354.5100.3Environmental sustainability66.166.166.8Aresource productivity	R&D expenditures in the public sector	101.8		122.8	98.2
Firm investments 95.5 110.6 115.3   R&D expenditure in the business sector 57.4 91.3 63.8   Non-R&D Innovation expenditures 194.2 168.1 220.7   Innovation expenditures per employee 83.0 83.8 109.5   Use of information technologies 131.1 91.9 151.4   Enterprises providing ICT training 80.0 60.0 80.0   Employed ICT specialists 175.0 128.6 233.3   Innovators 159.1 86.2 217.7   Product innovators (SMEs) 169.3 81.4 238.8   Business process innovators (SMEs) 149.7 90.5 199.2   Linkages 179.3 140.0 241.7   Innovative SMEs collaborating with others 237.4 192.3 347.8   Public-private co-publications 154.0 119.8 172.7   Job-to-job mobility of HRST 151.8 117.9 217.9   Intellectual assets 131.6 100.4 114.0   PCT patent applications 132.5 98.1 92.8   Employment in knowledge-intensive a	Venture capital expenditures	151.0		113.5	253.9
R&D expenditure in the business sector57.491.363.8Non-R&D Innovation expenditures194.2168.1220.7Innovation expenditures per employee83.083.8109.5Use of information technologies131.191.9151.4Enterprises providing ICT training80.060.080.0Employed ICT specialists175.0128.6233.3Innovators159.186.2217.7Product innovators (SMEs)169.381.4238.8Business process innovators (SMEs)149.790.5199.2Linkages177.3140.0241.7Innovative SMEs collaborating with others237.4192.3347.8Public-private co-publications154.0119.8172.7Job-to-job mobility of HRST151.8117.9217.9Intellectual assets131.6100.4114.0PCT patent applications52.568.245.6Trademark applications135.598.192.8Employment in knowledge-intensive activities103.770.7113.3Employment in innovative enterprises182.993.1176.6Sales of innovative products115.354.5100.3Anowledge-intensive services exports60.670.366.4Knowledge-intensive services exports69.060.473.1Sales of innovative products115.354.5100.3Environmental sustainability66.161.368.8Resource pr	Government support for business R&D	20.8		69.3	24.1
Non-R&D Innovation expenditures   194.2   168.1   220.7     Innovation expenditures per employee   83.0   83.8   109.5     Use of information technologies   131.1   91.9   151.4     Enterprises providing ICT training   80.0   60.0   80.0     Employed ICT specialists   175.0   128.6   233.3     Innovators   159.1   86.2   217.7     Product innovators (SMEs)   169.3   81.4   238.8     Business process innovators (SMEs)   149.7   90.5   199.2     Linkages   179.3   140.0   241.7     Innovative SMEs collaborating with others   237.4   192.3   347.8     Public-private co-publications   154.0   119.8   172.7     Job-to-job mobility of HRST   151.8   117.9   217.9     Intellectual assets   131.6   100.4   114.0     PCT patent applications   52.5   682   45.6     Trademark applications   135.5   98.1   92.8     Employment in knowledge-intensive activities	Firm investments	95.5		110.6	115.3
Innovation expenditures per employee83.083.8109.5Use of information technologies131.191.9151.4Enterprises providing ICT training80.060.080.0Employed ICT specialists175.0128.6233.3Innovators159.186.2217.7Product innovators (SMEs)169.381.4238.8Business process innovators (SMEs)149.790.5199.2Linkages179.3140.0241.7Innovative SMEs collaborating with others237.4192.3347.8Public-private co-publications154.0119.8172.7Job-to-job mobility of HRST151.8117.9217.9Intellectual assets131.6100.4114.0PCT patent applications52.568.245.6Trademark applications135.598.192.8Employment in knowledge-intensive activities103.770.7113.3Employment in innovative enterprises182.993.1176.6Sales impacts76.962.478.3Medium and high tech goods exports60.670.366.4Knowledge-intensive services exports69.060.473.1Sales of innovative products115.354.5100.3Environmental sustainability66.161.368.8Resource productivity17.26325.5Air emissions by fine particulate matter33.20.035.4	R&D expenditure in the business sector	57.4		91.3	63.8
Use of information technologies   131.1   91.9   151.4     Enterprises providing ICT training   80.0   60.0   80.0     Employed ICT specialists   175.0   128.6   233.3     Innovators   159.1   86.2   217.7     Product innovators (SMEs)   169.3   81.4   238.8     Business process innovators (SMEs)   149.7   90.5   199.2     Linkages   179.3   140.0   241.7     Innovative SMEs collaborating with others   237.4   192.3   347.8     Public-private co-publications   154.0   119.8   172.7     Job-to-job mobility of HRST   151.8   117.9   217.9     Intellectual assets   131.6   100.4   114.0     PCT patent applications   52.5   68.2   45.6     Trademark applications   135.5   98.1   92.8     Employment inpacts   147.6   83.8   150.4     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4	Non-R&D Innovation expenditures	194.2		168.1	220.7
Enterprises providing ICT training   80.0   60.0   80.0     Employed ICT specialists   175.0   128.6   233.3     Innovators   159.1   86.2   217.7     Product innovators (SMEs)   149.7   90.5   199.2     Linkages   179.3   140.0   241.7     Innovative SMEs collaborating with others   237.4   192.3   347.8     Public-private co-publications   154.0   119.8   172.7     Job-to-job mobility of HRST   151.8   117.9   217.9     Intellectual assets   131.6   100.4   114.0     PCT patent applications   52.5   68.2   45.6     Trademark applications   135.5   98.1   92.8     Employment inpacts   147.6   83.8   150.4     Employment in innovative enterprises   187.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4	Innovation expenditures per employee	83.0		83.8	109.5
Employed ICT specialists 175.0 1286 233.3   Innovators 159.1 86.2 217.7   Product innovators (SMEs) 169.3 81.4 238.8   Business process innovators (SMEs) 149.7 90.5 199.2   Linkages 179.3 140.0 241.7   Innovative SMEs collaborating with others 237.4 192.3 347.8   Public-private co-publications 154.0 119.8 172.7   Job-to-job mobility of HRST 151.8 117.9 217.9   Intellectual assets 131.6 100.4 114.0   PCT patent applications 52.5 68.2 45.6   Trademark applications 135.5 98.1 92.8   Employment inpacts 147.6 83.8 150.4   Employment in innovative enterprises 182.9 93.1 176.6   Sales impacts 76.9 62.4 78.3   Medium and high tech goods exports 60.6 70.3 66.4   Knowledge-intensive services exports 69.0 60.4 73.1   Sales of innovative products 115.3 54	Use of information technologies	131.1		91.9	151.4
Innovators   159.1   86.2   217.7     Product innovators (SMEs)   169.3   81.4   238.8     Business process innovators (SMEs)   149.7   90.5   199.2     Linkages   179.3   140.0   241.7     Innovative SMEs collaborating with others   237.4   192.3   347.8     Public-private co-publications   154.0   119.8   177.7     Job-to-job mobility of HRST   151.8   117.9   217.9     Intellectual assets   131.6   100.4   114.00     PCT patent applications   52.5   68.2   45.6     Trademark applications   135.5   98.1   92.8     Employment impacts   147.6   83.8   150.4     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5 </td <td>Enterprises providing ICT training</td> <td>80.0</td> <td></td> <td>60.0</td> <td>80.0</td>	Enterprises providing ICT training	80.0		60.0	80.0
Product innovators (SMEs) 169.3 81.4 238.8   Business process innovators (SMEs) 149.7 90.5 199.2   Linkages 179.3 140.0 241.7   Innovative SMEs collaborating with others 237.4 192.3 347.8   Public-private co-publications 154.0 119.8 172.7   Job-to-job mobility of HRST 151.8 110.4 114.00   PCT patent applications 52.5 68.2 45.6   Trademark applications 135.5 98.1 92.8   Employment impacts 103.7 70.7 113.3   Employment in knowledge-intensive activities 103.7 70.7 113.3   Employment in innovative enterprises 182.9 93.1 176.6   Sales impacts 76.9 62.4 78.3   Medium and high tech goods exports 60.6 70.3 66.4   Knowledge-intensive services exports 69.0 60.4 73.1   Sales of innovative products 115.3 54.5 100.3   Environmental sustainability 66.1 61.3 68.8   Resource productivity<	Employed ICT specialists	175.0		128.6	233.3
Business process innovators (SMEs)   149.7   90.5   199.2     Linkages   179.3   140.0   241.7     Innovative SMEs collaborating with others   237.4   192.3   347.8     Public-private co-publications   154.0   119.8   177.7     Job-to-job mobility of HRST   151.8   117.9   217.9     Intellectual assets   131.6   100.4   114.0     PCT patent applications   52.5   68.2   45.6     Trademark applications   135.5   98.1   92.8     Employment impacts   147.6   83.8   150.4     Employment in innovative enterprises   103.7   70.7   113.3     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   6	Innovators	159.1		86.2	217.7
Linkages   179.3   140.0   241.7     Innovative SMEs collaborating with others   237.4   192.3   347.8     Public-private co-publications   154.0   119.8   177.7     Job-to-job mobility of HRST   151.8   117.9   217.9     Intellectual assets   131.6   100.4   114.0     PCT patent applications   52.5   68.2   45.6     Trademark applications   135.5   98.1   92.8     Employment impacts   103.7   70.7   113.3     Employment in knowledge-intensive activities   103.7   70.7   113.3     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2 <td>Product innovators (SMEs)</td> <td>169.3</td> <td></td> <td>81.4</td> <td>238.8</td>	Product innovators (SMEs)	169.3		81.4	238.8
Innovative SMEs collaborating with others   237.4   192.3   347.8     Public-private co-publications   154.0   119.8   172.7     Job-to-job mobility of HRST   151.8   117.9   217.9     Intellectual assets   131.6   100.4   114.0     PCT patent applications   52.5   68.2   45.6     Trademark applications   135.5   98.1   92.8     Employment impacts   147.6   83.8   150.4     Employment in knowledge-intensive activities   103.7   70.7   113.3     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   63.2   25.5     Air emissions by fine particulate mat	Business process innovators (SMEs)	149.7		90.5	199.2
Public-private co-publications 154.0 119.8 172.7   Job-to-job mobility of HRST 151.8 117.9 217.9   Intellectual assets 131.6 100.4 114.0   PCT patent applications 52.5 68.2 45.6   Trademark applications 135.5 98.1 92.8   Employment impacts 147.6 83.8 150.4   Employment in knowledge-intensive activities 103.7 70.7 113.3   Employment in innovative enterprises 182.9 93.1 176.6   Sales impacts 76.9 62.4 78.3   Medium and high tech goods exports 60.6 70.3 66.4   Knowledge-intensive services exports 69.0 60.4 73.1   Sales of innovative products 115.3 54.5 100.3   Environmental sustainability 66.1 61.3 68.8   Resource productivity 17.2 63.2 25.5   Air emissions by fine particulate matter 33.2 0.0 35.4	Linkages	179.3		140.0	241.7
Job-to-job mobility of HRST 151.8 117.9 217.9   Intellectual assets 131.6 100.4 114.0   PCT patent applications 52.5 68.2 45.6   Trademark applications 187.6 131.6 196.9   Design applications 135.5 98.1 92.8   Employment impacts 147.6 83.8 150.4   Employment in knowledge-intensive activities 103.7 70.7 113.3   Employment in innovative enterprises 182.9 93.1 176.6   Sales impacts 76.9 62.4 78.3   Medium and high tech goods exports 60.6 70.3 66.4   Knowledge-intensive services exports 69.0 60.4 73.1   Sales of innovative products 115.3 54.5 100.3   Environmental sustainability 66.1 61.3 68.8   Resource productivity 17.2 63.2 25.5   Air emissions by fine particulate matter 33.2 0.0 35.4	Innovative SMEs collaborating with others	237.4		192.3	347.8
Intellectual assets   131.6   100.4   114.0     PCT patent applications   52.5   68.2   45.6     Trademark applications   187.6   131.6   196.9     Design applications   135.5   98.1   92.8     Employment impacts   147.6   83.8   150.4     Employment in knowledge-intensive activities   103.7   70.7   113.3     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   6.3   25.5     Air emissions by fine particulate matter   33.2   0.0   35.4	Public-private co-publications	154.0		119.8	172.7
PCT patent applications 52.5 68.2 45.6   Trademark applications 187.6 131.6 196.9   Design applications 135.5 98.1 92.8   Employment impacts 147.6 83.8 150.4   Employment in knowledge-intensive activities 103.7 70.7 113.3   Employment in innovative enterprises 182.9 93.1 176.6   Sales impacts 76.9 62.4 78.3   Medium and high tech goods exports 60.6 70.3 66.4   Knowledge-intensive services exports 69.0 60.4 73.1   Sales of innovative products 115.3 54.5 100.3   Environmental sustainability 66.1 61.3 68.8   Resource productivity 17.2 6.3 25.5   Air emissions by fine particulate matter 33.2 0.0 35.4	Job-to-job mobility of HRST	151.8		117.9	217.9
Trademark applications 187.6 131.6 196.9   Design applications 135.5 98.1 92.8   Employment impacts 147.6 83.8 150.4   Employment in knowledge-intensive activities 103.7 70.7 113.3   Employment in innovative enterprises 182.9 93.1 176.6   Sales impacts 76.9 62.4 78.3   Medium and high tech goods exports 60.6 70.3 66.4   Knowledge-intensive services exports 69.0 60.4 73.1   Sales of innovative products 115.3 54.5 100.3   Environmental sustainability 66.1 61.3 68.8   Resource productivity 17.2 6.3 25.5   Air emissions by fine particulate matter 33.2 0.0 35.4	Intellectual assets	131.6		100.4	114.0
Design applications   135.5   98.1   92.8     Employment impacts   147.6   83.8   150.4     Employment in knowledge-intensive activities   103.7   70.7   113.3     Employment in knowledge-intensive activities   103.7   70.7   113.3     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   6.3   25.5     Air emissions by fine particulate matter   33.2   0.0   35.4	PCT patent applications	52.5		68.2	45.6
Employment impacts   147.6   83.8   150.4     Employment in knowledge-intensive activities   103.7   70.7   113.3     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   6.3   25.5     Air emissions by fine particulate matter   33.2   0.0   35.4	Trademark applications	187.6		131.6	196.9
Employment in knowledge-intensive activities   103.7   70.7   113.3     Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   6.3   25.5     Air emissions by fine particulate matter   33.2   0.0   35.4	Design applications	135.5		98.1	92.8
Employment in innovative enterprises   182.9   93.1   176.6     Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   6.3   25.5     Air emissions by fine particulate matter   33.2   0.0   35.4	Employment impacts	147.6		83.8	150.4
Sales impacts   76.9   62.4   78.3     Medium and high tech goods exports   60.6   70.3   66.4     Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   6.3   25.5     Air emissions by fine particulate matter   33.2   0.0   35.4	Employment in knowledge-intensive activities	103.7		70.7	113.3
Medium and high tech goods exports60.670.366.4Knowledge-intensive services exports69.060.473.1Sales of innovative products115.354.5100.3Environmental sustainability66.161.368.8Resource productivity17.26.325.5Air emissions by fine particulate matter33.20.035.4	Employment in innovative enterprises	182.9		93.1	176.6
Knowledge-intensive services exports   69.0   60.4   73.1     Sales of innovative products   115.3   54.5   100.3     Environmental sustainability   66.1   61.3   68.8     Resource productivity   17.2   6.3   25.5     Air emissions by fine particulate matter   33.2   0.0   35.4	Sales impacts	76.9		62.4	78.3
Sales of innovative products115.354.5100.3Environmental sustainability66.161.368.8Resource productivity17.26.325.5Air emissions by fine particulate matter33.20.035.4	Medium and high tech goods exports	60.6		70.3	66.4
Environmental sustainability66.161.368.8Resource productivity17.26.325.5Air emissions by fine particulate matter33.20.035.4		69.0		60.4	
Resource productivity17.26.325.5Air emissions by fine particulate matter33.20.035.4	Sales of innovative products	115.3		54.5	100.3
Air emissions by fine particulate matter 33.2 0.0 35.4	Environmental sustainability	66.1		61.3	68.8
	Resource productivity	17.2		6.3	25.5
Environment-related technologies 182.8 172.3 137.3	Air emissions by fine particulate matter	33.2		0.0	35.4
	Environment-related technologies	182.8		172.3	137.3

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.