BELGIUM

European patent applications[1]
Belgium in comparison with other countries

Origin	2020	2021	% change 2021 vs. 2020	Share of total applications in 2021
BELGIUM	2.406	2.485	3,3%	1,3%
EPO states[2]	81.531	83.775	2,8%	44%
All countries	180.417	188.600	4,5%	

European patent applications[1]
Development in the number of applications from Belgium over the last 10 years

	2012	2013	2013/2012	2014
BELGIUM	1.886	1.882	-0,2%	1.927
Total applications	148.562	148.027	-0,4%	152.703

	2014/2013	2015	2015/2014	2016
BELGIUM	2,4%	2.041	5,9%	2.211
Total applications	3,2%	160.004	4,8%	159.087

	2016/2015	2017	2017/2016	2018
BELGIUM	8,3%	2.152	-2,7%	2.348
Total applications	-0,6%	166.594	4,7%	174.481

	2018/2017	2019	2019/2018	2020
BELGIUM	9,1%	2.422	3,2%	2.406
Total applications	4,7%	181.532	4,0%	180.417

	2020/2019	2021	2021/2020	Share of total applications in 2021
BELGIUM	-0,7%	2.485	3,3%	1,3%
Total applications	-0,6%	188.600	4,5%	

European patent grants[3]
Development in the number of patents granted to applicants from Belgium over the last 10 years

	2012	2013	2013/2012	2014
BELGIUM	743	736	-0,9%	723
Total patents granted	65.655	66.712	1,6%	64.613

	2014/2013	2015	2015/2014	2016
BELGIUM	-1,8%	873	20,7%	1.114
Total patents granted	-3,1%	68.419	5,9%	95.940

	2016/2015	2017	2017/2016	2018
BELGIUM	27,6%	1.215	9,1%	1.373
Total patents granted	40,2%	105.635	10,1%	127.625

	2018/2017	2019	2019/2018	2020
BELGIUM	13,0%	1.389	1,2%	1.380
Total patents granted	20,8%	137.784	8,0%	133.715

	2020/2019	2021	2021/2020	Share of total patent grants in 2021
BELGIUM	-0,6%	1.153	-16,4%	1,1%
Total patents granted	**-3,0%**	**108.799**	**-18,6%**	

European patent applications[1]
Top technology fields[4] - Belgium

	TECHNOLOGY FIELD	2020	2021	2021/2020
1	Pharmaceuticals	166	223	34,3%
2	Biotechnology	219	175	-20,1%
3	Medical technology	182	171	-6,0%
4	Other special machines	153	168	9,8%
5	Materials, metallurgy	87	132	51,7%
6	Transport	103	130	26,2%
7	Civil engineering	106	120	13,2%
8	Electrical machinery, apparatus, energy	108	116	7,4%
9	Organic fine chemistry	114	99	-13,2%
10	Measurement	113	95	-15,9%
11	Basic materials chemistry	93	93	0,0%
12	Computer technology	84	81	-3,6%
13	Chemical engineering	82	77	-6,1%
14	Semiconductors	54	68	25,9%
15	Optics	60	68	13,3%

European patent applications[1]
Ranking according to number of applications per mio inhabitants

Rank	Country[5]	Applications 2021	Population[6] (mio. inhabitants)	Applications per mio. inhabitants
1	Switzerland	8.442	8,715	968,6
2	Sweden	4.954	10,160	487,6
3	Denmark	2.642	5,813	454,5
4	Netherlands	6.581	17,173	383,2
5	Finland	2.111	5,548	380,5
6	Germany	25.969	83,900	309,5
7	Austria	2.317	9,043	256,2
8	Belgium	2.485	11,632	213,6
9	Israel	1.717	8,790	195,3
10	Ireland	956	4,983	191,9
11	Korea, Republic of	9.394	51,305	183,1
12	Japan	21.681	126,051	172,0
13	France	10.537	65,426	161,1
14	United States	46.533	332,915	139,8
15	Singapore	711	5,897	120,6
16	Norway	640	5,466	117,1
17	United Kingdom	5.627	68,207	82,5
18	Italy	4.919	60,367	81,5
19	Chinese Taipei	1.472	23,855	61,7
20	Slovenia	116	2,079	55,8
21	Canada	2.083	38,068	54,7
22	Estonia	69	1,325	52,1
23	New Zealand	226	4,861	46,5
24	Spain	1.954	46,745	41,8
25	Australia	1.019	25,788	39,5
26	Cyprus	44	1,216	36,2
27	Portugal	286	10,168	28,1
28	Puerto Rico	78	2,828	27,6
29	Lithuania	73	2,690	27,1
30	Hong Kong SAR (China)	180	7,553	23,8

European patent applications[1]
Top Belgian applicants[7]

	COMPANY	2021
1	SOLVAY SA	276
2	IMEC VZW	140
3	UMICORE NV	93
4	K.U. LEUVEN	90
5	ZF CV SYSTEMS EUROPE BV	85
6	UNIVERSITEIT GENT	66
7	AGFA-GEVAERT N.V.	65
8	MELEXIS NV	48
9	VIB VZW	44
10	UNIVERSITEIT ANTWERPEN	43

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] EPO states: the 38 member states of the European Patent Organisation, which includes the 27 states of the EU.

[3] The analysis is based on published patents granted by the EPO.

[4] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
https://www.wipo.int/ipstats/en/statistics/patents/xls/ipc_technology.xlsx

[5] The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

[6] Source of population figures: United Nations, Department of Economic and Social Affairs, Population Division.

[7] This is the ranking of the main consolidated applicants at the EPO in 2021 (first-named applicant principle). It is based on European patent applications filed with the EPO, which include direct European applications and international (PCT) applications that entered the European phase during the reporting period. Applications by identifiable subsidiaries, not necessarily located in the same country, are allocated to the consolidated applicants. The countries refer to the country of residence of the headquarters.

European patent applications[1]

Rank	Country[2]	2020	2021	% change 2021/2020
1	United States	44.250	46.533	5,2%
2	Germany	25.882	25.969	0,3%
3	Japan	21.954	21.681	-1,2%
4	China, People's Republic of	13.436	16.665	24,0%
5	France	10.614	10.537	-0,7%
6	Korea, Republic of	9.084	9.394	3,4%
7	Switzerland	8.125	8.442	3,9%
8	Netherlands	6.386	6.581	3,1%
9	United Kingdom	5.698	5.627	-1,2%
10	Sweden	4.422	4.954	12,0%
11	Italy	4.619	4.919	6,5%
12	Denmark	2.420	2.642	9,2%
13	Belgium	2.406	2.485	3,3%
14	Austria	2.306	2.317	0,5%
15	Finland	1.899	2.111	11,2%
16	Canada	1.759	2.083	18,4%
17	Spain	1.794	1.954	8,9%
18	Israel	1.683	1.717	2,0%
19	Chinese Taipei	1.367	1.472	7,7%
20	Australia	966	1.019	5,5%
21	Ireland	980	956	-2,4%
22	India	701	817	16,5%
23	Turkey	605	732	21,0%
24	Singapore	607	711	17,1%
25	Norway	652	640	-1,8%
26	Poland	478	539	12,8%
27	Liechtenstein	439	494	12,5%
28	Luxembourg	402	430	7,0%
29	Saudi Arabia	494	377	-23,7%
30	Cayman Islands	453	295	-34,9%
31	Barbados	258	293	13,6%
32	Portugal	251	286	13,9%
33	Russian Federation	269	272	1,1%
34	New Zealand	196	226	15,3%
35	Czech Republic	206	203	-1,5%
36	Greece	135	198	46,7%
37	Brazil	160	181	13,1%
38	Hong Kong SAR (China)	152	180	18,4%
39	Hungary	109	118	8,3%
40	Slovenia	165	116	-29,7%
41	Thailand	64	98	53,1%
42	South Africa	91	86	-5,5%
43	Puerto Rico	315	78	-75,2%
44	Lithuania	50	73	46,0%
45	Antigua and Barbuda	98	71	-27,6%
46	Estonia	57	69	21,1%
47	United Arab Emirates	72	65	-9,7%
48	Iceland	41	62	51,2%
49	Mexico	52	62	19,2%
50	Malta	63	51	-19,0%

Source: EPO.
Status: 1.2.2022.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle).

In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

European patent applications[1]

Belgium

Region[2]	2021	Share of total applications[3]	2020	Share of total applications[3]	% change 2021/2020
Bruxellles-Capitale	379	15,3%	341	14,2%	11,1%
Vlaanderen	1.613	65,0%	1.580	65,9%	2,1%
Wallonie	491	19,8%	478	19,9%	2,7%
Unclassified	2		7		
Total	2.485		2.406		3,3%

Source: EPO.
Status: 1.2.2022.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The geographic origin of an application accords with the region of residence of the first applicant listed on the application form (first-named applicant principle).

[3] Shares are calculated on the basis of classified applications.

EPO statistics

European patent applications[1] 2012 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	144
	Audio-visual technology	0	23
	Telecommunications	0	12
	Digital communication	0	19
	Basic communication processes	0	11
	Computer technology	0	33
	IT methods for management	0	4
	Semiconductors	0	32
Instruments	Optics	0	16
	Measurement	0	97
	Analysis of biological materials	0	17
	Control	0	55
	Medical technology	0	92
Chemistry	Organic fine chemistry	0	17
	Biotechnology	0	53
	Pharmaceuticals	0	59
	Macromolecular chemistry, polymers	0	132
	Food chemistry	0	9
	Basic materials chemistry	0	26
	Materials, metallurgy	0	65
	Surface technology, coating	0	34
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	43
	Environmental technology	0	28
Mechanical engineering	Handling	0	78
	Machine tools	0	93
	Engines, pumps, turbines	0	53
	Textile and paper machines	0	50
	Other special machines	0	89
	Thermal processes and apparatus	0	56
	Mechanical elements	0	59
	Transport	0	102
Other fields	Furniture, games	0	80
	Other consumer goods	0	48
	Civil engineering	0	143
Unclassified		0	2

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	73	2
	Audio-visual technology	17	0
	Telecommunications	17	0
	Digital communication	18	1
	Basic communication processes	14	1
	Computer technology	63	1
	IT methods for management	14	0

	Semiconductors	79	0
Instruments	Optics	31	0
	Measurement	77	1
	Analysis of biological materials	22	0
	Control	16	0
	Medical technology	72	0
Chemistry	Organic fine chemistry	126	1
	Biotechnology	142	1
	Pharmaceuticals	73	0
	Macromolecular chemistry, polymers	104	0
	Food chemistry	29	0
	Basic materials chemistry	59	0
	Materials, metallurgy	52	0
	Surface technology, coating	38	0
	Micro-structural and nano-technology	5	0
	Chemical engineering	56	0
	Environmental technology	24	1
Mechanical engineering	Handling	42	1
	Machine tools	26	0
	Engines, pumps, turbines	29	1
	Textile and paper machines	32	0
	Other special machines	123	0
	Thermal processes and apparatus	54	0
	Mechanical elements	16	1
	Transport	46	0
Other fields	Furniture, games	51	0
	Other consumer goods	168	0
	Civil engineering	75	0
Unclassified		3	1

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	560	3
	Audio-visual technology	94	0
	Telecommunications	61	0
	Digital communication	113	2
	Basic communication processes	41	0
	Computer technology	141	0
	IT methods for management	46	0
	Semiconductors	74	0
Instruments	Optics	69	2
	Measurement	529	0
	Analysis of biological materials	127	0
	Control	117	4
	Medical technology	527	3
Chemistry	Organic fine chemistry	523	0
	Biotechnology	296	2
	Pharmaceuticals	351	9
	Macromolecular chemistry, polymers	133	0
	Food chemistry	199	0
	Basic materials chemistry	194	3

	Materials, metallurgy	105	3
	Surface technology, coating	105	0
	Micro-structural and nano-technology	14	0
	Chemical engineering	176	8
	Environmental technology	88	3
Mechanical engineering	Handling	409	1
	Machine tools	126	0
	Engines, pumps, turbines	263	3
	Textile and paper machines	140	0
	Other special machines	167	0
	Thermal processes and apparatus	94	1
	Mechanical elements	90	0
	Transport	124	6
Other fields	Furniture, games	211	0
	Other consumer goods	232	0
	Civil engineering	181	0
Unclassified		26	3

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	1	2044
	Audio-visual technology	1	331
	Telecommunications	2	252
	Digital communication	3	434
	Basic communication processes	0	122
	Computer technology	0	692
	IT methods for management	2	124
	Semiconductors	1	445
Instruments	Optics	0	304
	Measurement	6	1293
	Analysis of biological materials	2	240
	Control	5	489
	Medical technology	4	1432
Chemistry	Organic fine chemistry	10	1388
	Biotechnology	2	747
	Pharmaceuticals	4	1175
	Macromolecular chemistry, polymers	3	831
	Food chemistry	1	142
	Basic materials chemistry	5	996
	Materials, metallurgy	6	523
	Surface technology, coating	2	514
	Micro-structural and nano-technology	0	31
	Chemical engineering	3	833
	Environmental technology	1	400
Mechanical engineering	Handling	6	929
	Machine tools	5	1056
	Engines, pumps, turbines	7	1487
	Textile and paper machines	9	423
	Other special machines	7	1129
	Thermal processes and apparatus	5	680
	Mechanical elements	7	1307

	Transport	13	1954
Other fields	Furniture, games	3	624
	Other consumer goods	6	664
	Civil engineering	7	1129
Unclassified		1	85

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	90	2
	Audio-visual technology	90	0
	Telecommunications	19	1
	Digital communication	14	2
	Basic communication processes	2	0
	Computer technology	20	6
	IT methods for management	6	0
	Semiconductors	8	0
Instruments	Optics	18	2
	Measurement	68	3
	Analysis of biological materials	20	2
	Control	20	1
	Medical technology	158	1
Chemistry	Organic fine chemistry	31	1
	Biotechnology	207	5
	Pharmaceuticals	124	2
	Macromolecular chemistry, polymers	7	0
	Food chemistry	63	0
	Basic materials chemistry	44	1
	Materials, metallurgy	23	1
	Surface technology, coating	6	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	43	1
	Environmental technology	22	0
Mechanical engineering	Handling	58	3
	Machine tools	6	0
	Engines, pumps, turbines	130	0
	Textile and paper machines	16	0
	Other special machines	58	1
	Thermal processes and apparatus	26	0
	Mechanical elements	27	1
	Transport	32	0
Other fields	Furniture, games	24	1
	Other consumer goods	10	0
	Civil engineering	108	3
Unclassified		7	1

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	69	84
	Audio-visual technology	13	48
	Telecommunications	25	80
	Digital communication	47	426
	Basic communication processes	3	8

	Computer technology	46	217
	IT methods for management	11	28
	Semiconductors	4	13
Instruments	Optics	10	10
	Measurement	47	66
	Analysis of biological materials	27	8
	Control	25	17
	Medical technology	72	44
Chemistry	Organic fine chemistry	112	4
	Biotechnology	94	21
	Pharmaceuticals	145	11
	Macromolecular chemistry, polymers	16	11
	Food chemistry	33	8
	Basic materials chemistry	33	35
	Materials, metallurgy	38	46
	Surface technology, coating	11	36
	Micro-structural and nano-technology	0	5
	Chemical engineering	26	55
	Environmental technology	24	47
Mechanical engineering	Handling	75	131
	Machine tools	27	31
	Engines, pumps, turbines	98	27
	Textile and paper machines	18	107
	Other special machines	51	38
	Thermal processes and apparatus	48	27
	Mechanical elements	31	13
	Transport	103	52
Other fields	Furniture, games	39	11
	Other consumer goods	39	16
	Civil engineering	63	70
Unclassified		21	0

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	557	262
	Audio-visual technology	334	115
	Telecommunications	375	101
	Digital communication	939	181
	Basic communication processes	95	24
	Computer technology	594	220
	IT methods for management	75	45
	Semiconductors	214	57
Instruments	Optics	170	78
	Measurement	497	289
	Analysis of biological materials	112	71
	Control	115	72
	Medical technology	377	331
Chemistry	Organic fine chemistry	455	276
	Biotechnology	424	195
	Pharmaceuticals	394	196

	Macromolecular chemistry, polymers	144	55
	Food chemistry	66	66
	Basic materials chemistry	191	155
	Materials, metallurgy	203	67
	Surface technology, coating	125	62
	Micro-structural and nano-technology	20	2
	Chemical engineering	227	142
	Environmental technology	167	70
Mechanical engineering	Handling	189	121
	Machine tools	156	64
	Engines, pumps, turbines	299	291
	Textile and paper machines	56	44
	Other special machines	312	135
	Thermal processes and apparatus	132	56
	Mechanical elements	259	149
	Transport	833	215
Other fields	Furniture, games	183	128
	Other consumer goods	204	136
	Civil engineering	375	238
Unclassified		29	7

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	4	1
	Audio-visual technology	1	0
	Telecommunications	1	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	2	0
	IT methods for management	0	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	2	1
	Analysis of biological materials	2	1
	Control	3	0
	Medical technology	4	0
Chemistry	Organic fine chemistry	3	2
	Biotechnology	3	1
	Pharmaceuticals	7	2
	Macromolecular chemistry, polymers	0	0
	Food chemistry	3	0
	Basic materials chemistry	6	1
	Materials, metallurgy	0	0
	Surface technology, coating	6	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	1	0
	Environmental technology	1	2
Mechanical engineering	Handling	1	1
	Machine tools	5	0
	Engines, pumps, turbines	2	2
	Textile and paper machines	2	1

	Other special machines	4	1
	Thermal processes and apparatus	1	0
	Mechanical elements	0	1
	Transport	3	0
Other fields	Furniture, games	0	1
	Other consumer goods	1	0
	Civil engineering	10	1
Unclassified		1	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	1	27
	Audio-visual technology	0	17
	Telecommunications	2	23
	Digital communication	1	50
	Basic communication processes	1	2
	Computer technology	2	57
	IT methods for management	2	17
	Semiconductors	0	8
Instruments	Optics	3	6
	Measurement	2	30
	Analysis of biological materials	0	4
	Control	1	15
	Medical technology	7	96
Chemistry	Organic fine chemistry	14	40
	Biotechnology	4	26
	Pharmaceuticals	14	49
	Macromolecular chemistry, polymers	1	6
	Food chemistry	3	4
	Basic materials chemistry	0	5
	Materials, metallurgy	1	9
	Surface technology, coating	0	3
	Micro-structural and nano-technology	0	0
	Chemical engineering	1	13
	Environmental technology	2	10
Mechanical engineering	Handling	8	10
	Machine tools	1	0
	Engines, pumps, turbines	6	8
	Textile and paper machines	2	14
	Other special machines	2	15
	Thermal processes and apparatus	6	4
	Mechanical elements	2	2
	Transport	2	3
Other fields	Furniture, games	7	9
	Other consumer goods	2	4
	Civil engineering	5	22
Unclassified		0	1

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	0	188
	Audio-visual technology	0	33

	Telecommunications	0	30
	Digital communication	0	27
	Basic communication processes	0	10
	Computer technology	0	45
	IT methods for management	1	20
	Semiconductors	0	38
Instruments	Optics	0	33
	Measurement	3	118
	Analysis of biological materials	0	24
	Control	0	51
	Medical technology	16	198
Chemistry	Organic fine chemistry	8	124
	Biotechnology	6	66
	Pharmaceuticals	3	112
	Macromolecular chemistry, polymers	0	109
	Food chemistry	1	38
	Basic materials chemistry	1	52
	Materials, metallurgy	0	51
	Surface technology, coating	0	67
	Micro-structural and nano-technology	0	2
	Chemical engineering	1	90
	Environmental technology	0	61
Mechanical engineering	Handling	1	357
	Machine tools	0	182
	Engines, pumps, turbines	0	154
	Textile and paper machines	0	117
	Other special machines	5	207
	Thermal processes and apparatus	0	160
	Mechanical elements	0	126
	Transport	1	238
Other fields	Furniture, games	0	196
	Other consumer goods	2	149
	Civil engineering	1	249
Unclassified		0	22

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	7	1
	Audio-visual technology	1	0
	Telecommunications	1	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	2	1
	IT methods for management	0	0
	Semiconductors	2	1
Instruments	Optics	3	1
	Measurement	10	0
	Analysis of biological materials	0	0
	Control	2	0
	Medical technology	13	1
Chemistry	Organic fine chemistry	2	0

	Biotechnology	4	3
	Pharmaceuticals	6	1
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	0	0
	Materials, metallurgy	8	2
	Surface technology, coating	6	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0
	Environmental technology	10	0
Mechanical engineering	Handling	3	2
	Machine tools	53	0
	Engines, pumps, turbines	6	0
	Textile and paper machines	1	1
	Other special machines	1	0
	Thermal processes and apparatus	4	1
	Mechanical elements	17	0
	Transport	16	0
Other fields	Furniture, games	2	1
	Other consumer goods	2	0
	Civil engineering	15	2
Unclassified		0	1

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	21	3
	Audio-visual technology	4	0
	Telecommunications	33	0
	Digital communication	21	0
	Basic communication processes	1	0
	Computer technology	20	0
	IT methods for management	4	0
	Semiconductors	17	0
Instruments	Optics	6	2
	Measurement	5	1
	Analysis of biological materials	0	1
	Control	1	0
	Medical technology	24	0
Chemistry	Organic fine chemistry	12	7
	Biotechnology	5	1
	Pharmaceuticals	18	1
	Macromolecular chemistry, polymers	10	1
	Food chemistry	6	0
	Basic materials chemistry	5	1
	Materials, metallurgy	24	2
	Surface technology, coating	11	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	7	3
	Environmental technology	9	0
Mechanical engineering	Handling	10	0
	Machine tools	3	0

	Engines, pumps, turbines	58	0
	Textile and paper machines	3	0
	Other special machines	37	2
	Thermal processes and apparatus	7	0
	Mechanical elements	3	0
	Transport	20	0
Other fields	Furniture, games	2	0
	Other consumer goods	19	0
	Civil engineering	20	0
Unclassified		3	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	0	0
	IT methods for management	0	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	1	0
Chemistry	Organic fine chemistry	1	0
	Biotechnology	1	0
	Pharmaceuticals	6	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	1	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	1	0
	Machine tools	0	0
	Engines, pumps, turbines	0	0
	Textile and paper machines	0	0
	Other special machines	1	0
	Thermal processes and apparatus	0	0
	Mechanical elements	0	0
	Transport	2	0
Other fields	Furniture, games	2	0
	Other consumer goods	2	0
	Civil engineering	1	0
Unclassified		0	5

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	1	340
	Audio-visual technology	0	102
	Telecommunications	0	92
	Digital communication	0	175
	Basic communication processes	0	62
	Computer technology	0	276
	IT methods for management	0	26
	Semiconductors	0	138
Instruments	Optics	0	147
	Measurement	3	305
	Analysis of biological materials	0	43
	Control	0	45
	Medical technology	2	450
Chemistry	Organic fine chemistry	1	268
	Biotechnology	1	258
	Pharmaceuticals	4	152
	Macromolecular chemistry, polymers	0	179
	Food chemistry	0	247
	Basic materials chemistry	0	285
	Materials, metallurgy	0	83
	Surface technology, coating	0	76
	Micro-structural and nano-technology	0	2
	Chemical engineering	0	122
	Environmental technology	1	68
Mechanical engineering	Handling	2	128
	Machine tools	2	53
	Engines, pumps, turbines	0	48
	Textile and paper machines	1	67
	Other special machines	0	256
	Thermal processes and apparatus	0	52
	Mechanical elements	0	61
	Transport	0	109
Other fields	Furniture, games	1	117
	Other consumer goods	3	48
	Civil engineering	2	171
Unclassified		0	16

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	17	11
	Audio-visual technology	6	10
	Telecommunications	7	5
	Digital communication	4	5
	Basic communication processes	2	0
	Computer technology	20	10
	IT methods for management	4	3
	Semiconductors	5	1
Instruments	Optics	7	3

	Measurement	38	15
	Analysis of biological materials	6	0
	Control	8	1
	Medical technology	27	26
Chemistry	Organic fine chemistry	14	13
	Biotechnology	21	10
	Pharmaceuticals	33	7
	Macromolecular chemistry, polymers	0	10
	Food chemistry	12	7
	Basic materials chemistry	17	21
	Materials, metallurgy	13	13
	Surface technology, coating	5	2
	Micro-structural and nano-technology	3	1
	Chemical engineering	19	17
	Environmental technology	17	14
Mechanical engineering	Handling	17	8
	Machine tools	10	27
	Engines, pumps, turbines	24	13
	Textile and paper machines	1	8
	Other special machines	22	13
	Thermal processes and apparatus	5	8
	Mechanical elements	29	6
	Transport	45	13
Other fields	Furniture, games	12	12
	Other consumer goods	7	10
	Civil engineering	78	51
Unclassified		0	9

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	2	1
	Audio-visual technology	0	1
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	2	3
	IT methods for management	0	0
	Semiconductors	2	0
Instruments	Optics	1	0
	Measurement	3	1
	Analysis of biological materials	1	0
	Control	0	0
	Medical technology	3	1
Chemistry	Organic fine chemistry	2	0
	Biotechnology	3	3
	Pharmaceuticals	4	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	1	2
	Basic materials chemistry	2	7
	Materials, metallurgy	4	0
	Surface technology, coating	1	1

	Micro-structural and nano-technology	0	0
	Chemical engineering	5	0
	Environmental technology	1	2
Mechanical engineering	Handling	4	0
	Machine tools	0	0
	Engines, pumps, turbines	4	1
	Textile and paper machines	1	0
	Other special machines	7	2
	Thermal processes and apparatus	1	0
	Mechanical elements	0	1
	Transport	3	2
Other fields	Furniture, games	6	0
	Other consumer goods	3	3
	Civil engineering	10	1
Unclassified		0	3

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	1	85
	Audio-visual technology	0	86
	Telecommunications	0	236
	Digital communication	2	839
	Basic communication processes	0	33
	Computer technology	0	182
	IT methods for management	0	31
	Semiconductors	0	17
Instruments	Optics	0	33
	Measurement	0	124
	Analysis of biological materials	0	27
	Control	0	48
	Medical technology	0	247
Chemistry	Organic fine chemistry	0	43
	Biotechnology	0	67
	Pharmaceuticals	0	70
	Macromolecular chemistry, polymers	0	7
	Food chemistry	0	11
	Basic materials chemistry	0	22
	Materials, metallurgy	0	44
	Surface technology, coating	0	25
	Micro-structural and nano-technology	0	5
	Chemical engineering	0	120
	Environmental technology	0	62
Mechanical engineering	Handling	0	72
	Machine tools	0	103
	Engines, pumps, turbines	0	80
	Textile and paper machines	0	27
	Other special machines	0	98
	Thermal processes and apparatus	1	53
	Mechanical elements	0	164
	Transport	0	263
Other fields	Furniture, games	0	58

	Other consumer goods	0	26
	Civil engineering	1	106
Unclassified		0	4

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	9	2
	Audio-visual technology	0	0
	Telecommunications	0	3
	Digital communication	0	0
	Basic communication processes	1	0
	Computer technology	2	1
	IT methods for management	1	2
	Semiconductors	0	0
Instruments	Optics	1	0
	Measurement	7	2
	Analysis of biological materials	0	0
	Control	3	2
	Medical technology	8	1
Chemistry	Organic fine chemistry	32	0
	Biotechnology	7	1
	Pharmaceuticals	8	1
	Macromolecular chemistry, polymers	0	0
	Food chemistry	1	1
	Basic materials chemistry	0	1
	Materials, metallurgy	2	0
	Surface technology, coating	1	1
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0
	Environmental technology	1	0
Mechanical engineering	Handling	0	0
	Machine tools	2	0
	Engines, pumps, turbines	1	4
	Textile and paper machines	0	1
	Other special machines	0	0
	Thermal processes and apparatus	3	0
	Mechanical elements	2	2
	Transport	2	1
Other fields	Furniture, games	1	2
	Other consumer goods	2	0
	Civil engineering	8	7
Unclassified		1	0

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	15
	Audio-visual technology	0	16
	Telecommunications	0	5
	Digital communication	0	5
	Basic communication processes	0	3
	Computer technology	0	10
	IT methods for management	0	0

	Semiconductors	0	2
Instruments	Optics	0	1
	Measurement	0	5
	Analysis of biological materials	0	2
	Control	0	5
	Medical technology	2	26
Chemistry	Organic fine chemistry	0	9
	Biotechnology	0	0
	Pharmaceuticals	1	80
	Macromolecular chemistry, polymers	0	2
	Food chemistry	1	4
	Basic materials chemistry	0	2
	Materials, metallurgy	0	7
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	7
	Environmental technology	0	2
Mechanical engineering	Handling	1	8
	Machine tools	2	3
	Engines, pumps, turbines	0	6
	Textile and paper machines	0	5
	Other special machines	0	7
	Thermal processes and apparatus	0	28
	Mechanical elements	1	10
	Transport	0	14
Other fields	Furniture, games	0	30
	Other consumer goods	0	68
	Civil engineering	0	10
Unclassified		0	0

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	25	74
	Audio-visual technology	17	97
	Telecommunications	7	199
	Digital communication	12	466
	Basic communication processes	0	18
	Computer technology	45	381
	IT methods for management	17	68
	Semiconductors	2	25
Instruments	Optics	8	31
	Measurement	34	108
	Analysis of biological materials	11	10
	Control	12	19
	Medical technology	112	126
Chemistry	Organic fine chemistry	15	56
	Biotechnology	73	56
	Pharmaceuticals	64	144
	Macromolecular chemistry, polymers	9	26
	Food chemistry	14	23
	Basic materials chemistry	21	16

	Materials, metallurgy	12	24
	Surface technology, coating	11	19
	Micro-structural and nano-technology	0	2
	Chemical engineering	31	38
	Environmental technology	22	30
Mechanical engineering	Handling	27	24
	Machine tools	21	19
	Engines, pumps, turbines	13	56
	Textile and paper machines	1	7
	Other special machines	24	58
	Thermal processes and apparatus	9	20
	Mechanical elements	21	35
	Transport	40	54
Other fields	Furniture, games	33	24
	Other consumer goods	21	25
	Civil engineering	70	45
Unclassified		1	4

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	161	37
	Audio-visual technology	117	18
	Telecommunications	392	23
	Digital communication	1447	35
	Basic communication processes	38	6
	Computer technology	275	89
	IT methods for management	25	10
	Semiconductors	47	6
Instruments	Optics	74	15
	Measurement	78	55
	Analysis of biological materials	0	14
	Control	33	14
	Medical technology	56	268
Chemistry	Organic fine chemistry	100	38
	Biotechnology	59	69
	Pharmaceuticals	113	100
	Macromolecular chemistry, polymers	35	6
	Food chemistry	7	11
	Basic materials chemistry	51	21
	Materials, metallurgy	97	16
	Surface technology, coating	21	8
	Micro-structural and nano-technology	7	1
	Chemical engineering	48	19
	Environmental technology	26	14
Mechanical engineering	Handling	33	16
	Machine tools	24	39
	Engines, pumps, turbines	48	14
	Textile and paper machines	27	12
	Other special machines	28	24
	Thermal processes and apparatus	36	19
	Mechanical elements	25	5

	Transport	69	20
Other fields	Furniture, games	59	19
	Other consumer goods	46	15
	Civil engineering	41	17
Unclassified		8	3

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	2327	614
	Audio-visual technology	1084	508
	Telecommunications	659	520
	Digital communication	1135	771
	Basic communication processes	180	43
	Computer technology	1329	576
	IT methods for management	131	62
	Semiconductors	857	339
Instruments	Optics	1244	263
	Measurement	1010	117
	Analysis of biological materials	117	23
	Control	237	54
	Medical technology	1076	166
Chemistry	Organic fine chemistry	709	79
	Biotechnology	466	93
	Pharmaceuticals	405	118
	Macromolecular chemistry, polymers	693	92
	Food chemistry	146	25
	Basic materials chemistry	607	55
	Materials, metallurgy	711	78
	Surface technology, coating	511	60
	Micro-structural and nano-technology	45	16
	Chemical engineering	402	77
	Environmental technology	372	40
Mechanical engineering	Handling	413	32
	Machine tools	632	52
	Engines, pumps, turbines	961	64
	Textile and paper machines	587	25
	Other special machines	507	52
	Thermal processes and apparatus	366	130
	Mechanical elements	521	43
	Transport	1436	130
Other fields	Furniture, games	165	110
	Other consumer goods	262	249
	Civil engineering	162	45
Unclassified		25	0

Field of technology		Chinese Talpei	United States
Electrical engineering	Electrical machinery, apparatus, energy	162	1619
	Audio-visual technology	67	810
	Telecommunications	61	830
	Digital communication	139	2348

	Basic communication processes	10	288
	Computer technology	193	2782
	IT methods for management	8	646
	Semiconductors	70	707
Instruments	Optics	26	736
	Measurement	34	1502
	Analysis of biological materials	5	378
	Control	10	557
	Medical technology	52	4220
Chemistry	Organic fine chemistry	21	1771
	Biotechnology	20	1897
	Pharmaceuticals	32	1959
	Macromolecular chemistry, polymers	8	798
	Food chemistry	2	350
	Basic materials chemistry	11	1195
	Materials, metallurgy	7	564
	Surface technology, coating	12	486
	Micro-structural and nano-technology	1	74
	Chemical engineering	9	836
	Environmental technology	4	392
Mechanical engineering	Handling	15	677
	Machine tools	33	581
	Engines, pumps, turbines	21	1537
	Textile and paper machines	5	401
	Other special machines	11	780
	Thermal processes and apparatus	18	328
	Mechanical elements	41	642
	Transport	69	885
Other fields	Furniture, games	41	478
	Other consumer goods	34	511
	Civil engineering	19	676
Unclassified		2	27

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	97	9744
	Audio-visual technology	68	4129
	Telecommunications	42	4116
	Digital communication	72	9753

	Basic communication processes	21	1040
	Computer technology	199	8537
	IT methods for management	58	1491
	Semiconductors	30	3241
Instruments	Optics	27	3381
	Measurement	45	6631
	Analysis of biological materials	18	1335
	Control	35	2092
	Medical technology	155	10497
Chemistry	Organic fine chemistry	259	6587
	Biotechnology	126	5539
	Pharmaceuticals	244	6301
	Macromolecular chemistry, polymers	65	3493
	Food chemistry	51	1587
	Basic materials chemistry	98	4246
	Materials, metallurgy	55	2959
	Surface technology, coating	24	2290
	Micro-structural and nano-technology	2	238
	Chemical engineering	119	3602
	Environmental technology	30	2068
Mechanical engineering	Handling	42	3956
	Machine tools	24	3461
	Engines, pumps, turbines	58	5877
	Textile and paper machines	23	2235
	Other special machines	78	4352
	Thermal processes and apparatus	26	2465
	Mechanical elements	45	3765
	Transport	80	7000
Other fields	Furniture, games	35	2778
	Other consumer goods	35	3072
	Civil engineering	68	4306
Unclassified		76	398

Source: EPO.
Status: 27.1.2020.

EPO statistics

European patent applications[1] 2013 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	192
	Audio-visual technology	0	35
	Telecommunications	0	13
	Digital communication	0	21
	Basic communication processes	0	8
	Computer technology	0	33
	IT methods for management	0	10
	Semiconductors	0	56
Instruments	Optics	0	29
	Measurement	0	82
	Analysis of biological materials	0	19
	Control	0	49
	Medical technology	0	88
Chemistry	Organic fine chemistry	0	13
	Biotechnology	0	52
	Pharmaceuticals	0	54
	Macromolecular chemistry, polymers	0	99
	Food chemistry	0	7
	Basic materials chemistry	0	29
	Materials, metallurgy	0	79
	Surface technology, coating	0	36
	Micro-structural and nano-technology	0	3
	Chemical engineering	0	49
	Environmental technology	0	41
Mechanical engineering	Handling	0	81
	Machine tools	0	114
	Engines, pumps, turbines	0	61
	Textile and paper machines	0	33
	Other special machines	0	99
	Thermal processes and apparatus	0	55
	Mechanical elements	0	51
	Transport	0	103
Other fields	Furniture, games	0	96
	Other consumer goods	0	52
	Civil engineering	0	148
Unclassified		0	3

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	68	2
	Audio-visual technology	34	0
	Telecommunications	20	0
	Digital communication	24	1
	Basic communication processes	11	0
	Computer technology	51	0
	IT methods for management	18	0

	Semiconductors	84	0
Instruments	Optics	41	0
	Measurement	71	1
	Analysis of biological materials	35	0
	Control	14	0
	Medical technology	87	0
Chemistry	Organic fine chemistry	134	0
	Biotechnology	133	1
	Pharmaceuticals	103	1
	Macromolecular chemistry, polymers	69	0
	Food chemistry	30	1
	Basic materials chemistry	51	0
	Materials, metallurgy	76	0
	Surface technology, coating	45	0
	Micro-structural and nano-technology	3	0
	Chemical engineering	53	1
	Environmental technology	49	0
Mechanical engineering	Handling	51	2
	Machine tools	24	0
	Engines, pumps, turbines	37	1
	Textile and paper machines	51	3
	Other special machines	150	1
	Thermal processes and apparatus	19	3
	Mechanical elements	17	0
	Transport	60	1
Other fields	Furniture, games	37	0
	Other consumer goods	39	1
	Civil engineering	85	3
Unclassified		8	0

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	515	2
	Audio-visual technology	96	2
	Telecommunications	71	0
	Digital communication	106	0
	Basic communication processes	51	0
	Computer technology	161	0
	IT methods for management	41	0
	Semiconductors	80	1
Instruments	Optics	67	0
	Measurement	610	1
	Analysis of biological materials	100	0
	Control	106	0
	Medical technology	518	1
Chemistry	Organic fine chemistry	536	0
	Biotechnology	291	2
	Pharmaceuticals	369	7
	Macromolecular chemistry, polymers	123	0
	Food chemistry	261	0
	Basic materials chemistry	159	0

	Materials, metallurgy	113	1
	Surface technology, coating	92	1
	Micro-structural and nano-technology	7	0
	Chemical engineering	192	4
	Environmental technology	81	5
Mechanical engineering	Handling	355	4
	Machine tools	142	0
	Engines, pumps, turbines	241	3
	Textile and paper machines	113	0
	Other special machines	154	0
	Thermal processes and apparatus	126	1
	Mechanical elements	93	0
	Transport	141	2
Other fields	Furniture, games	178	1
	Other consumer goods	253	0
	Civil engineering	181	1
Unclassified		19	2

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	6	2119
	Audio-visual technology	1	332
	Telecommunications	3	230
	Digital communication	1	445
	Basic communication processes	0	100
	Computer technology	4	724
	IT methods for management	2	125
	Semiconductors	0	427
Instruments	Optics	1	276
	Measurement	5	1220
	Analysis of biological materials	0	207
	Control	4	493
	Medical technology	2	1474
Chemistry	Organic fine chemistry	9	1368
	Biotechnology	3	698
	Pharmaceuticals	8	671
	Macromolecular chemistry, polymers	4	816
	Food chemistry	1	148
	Basic materials chemistry	4	999
	Materials, metallurgy	5	512
	Surface technology, coating	3	492
	Micro-structural and nano-technology	0	27
	Chemical engineering	2	867
	Environmental technology	6	361
Mechanical engineering	Handling	8	888
	Machine tools	8	1065
	Engines, pumps, turbines	8	1528
	Textile and paper machines	11	402
	Other special machines	4	1026
	Thermal processes and apparatus	7	594
	Mechanical elements	5	1208

	Transport	11	2221
Other fields	Furniture, games	2	532
	Other consumer goods	3	650
	Civil engineering	8	1142
Unclassified		2	123

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	86	4
	Audio-visual technology	115	1
	Telecommunications	27	0
	Digital communication	13	3
	Basic communication processes	3	0
	Computer technology	24	2
	IT methods for management	4	0
	Semiconductors	9	0
Instruments	Optics	16	0
	Measurement	73	4
	Analysis of biological materials	20	2
	Control	17	2
	Medical technology	204	2
Chemistry	Organic fine chemistry	50	0
	Biotechnology	231	1
	Pharmaceuticals	122	0
	Macromolecular chemistry, polymers	14	1
	Food chemistry	93	0
	Basic materials chemistry	57	3
	Materials, metallurgy	16	2
	Surface technology, coating	12	0
	Micro-structural and nano-technology	2	0
	Chemical engineering	57	3
	Environmental technology	25	1
Mechanical engineering	Handling	59	1
	Machine tools	17	3
	Engines, pumps, turbines	153	0
	Textile and paper machines	22	2
	Other special machines	91	0
	Thermal processes and apparatus	52	0
	Mechanical elements	43	0
	Transport	19	2
Other fields	Furniture, games	37	0
	Other consumer goods	13	0
	Civil engineering	133	2
Unclassified		13	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	67	72
	Audio-visual technology	12	81
	Telecommunications	30	72
	Digital communication	91	443
	Basic communication processes	1	14

	Computer technology	40	211
	IT methods for management	12	36
	Semiconductors	9	15
Instruments	Optics	14	4
	Measurement	36	72
	Analysis of biological materials	26	7
	Control	16	12
	Medical technology	74	62
Chemistry	Organic fine chemistry	101	9
	Biotechnology	98	35
	Pharmaceuticals	121	12
	Macromolecular chemistry, polymers	17	23
	Food chemistry	21	6
	Basic materials chemistry	36	33
	Materials, metallurgy	40	24
	Surface technology, coating	19	17
	Micro-structural and nano-technology	3	5
	Chemical engineering	19	46
	Environmental technology	15	32
Mechanical engineering	Handling	71	150
	Machine tools	28	39
	Engines, pumps, turbines	74	43
	Textile and paper machines	22	75
	Other special machines	80	40
	Thermal processes and apparatus	49	29
	Mechanical elements	28	27
	Transport	88	55
Other fields	Furniture, games	38	19
	Other consumer goods	24	5
	Civil engineering	61	68
Unclassified		23	1

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	574	290
	Audio-visual technology	265	82
	Telecommunications	339	104
	Digital communication	886	198
	Basic communication processes	74	23
	Computer technology	680	202
	IT methods for management	88	49
	Semiconductors	204	64
Instruments	Optics	218	71
	Measurement	509	278
	Analysis of biological materials	143	68
	Control	140	80
	Medical technology	437	267
Chemistry	Organic fine chemistry	415	282
	Biotechnology	395	180
	Pharmaceuticals	354	191

	Macromolecular chemistry, polymers	157	36
	Food chemistry	77	66
	Basic materials chemistry	209	201
	Materials, metallurgy	180	61
	Surface technology, coating	117	54
	Micro-structural and nano-technology	19	5
	Chemical engineering	227	140
	Environmental technology	165	68
Mechanical engineering	Handling	194	111
	Machine tools	141	62
	Engines, pumps, turbines	319	194
	Textile and paper machines	80	55
	Other special machines	356	129
	Thermal processes and apparatus	139	75
	Mechanical elements	274	142
	Transport	720	253
Other fields	Furniture, games	196	138
	Other consumer goods	181	135
	Civil engineering	343	220
Unclassified		20	13

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	4	1
	Audio-visual technology	0	0
	Telecommunications	4	0
	Digital communication	2	0
	Basic communication processes	0	0
	Computer technology	1	0
	IT methods for management	0	0
	Semiconductors	1	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	7	0
Chemistry	Organic fine chemistry	3	0
	Biotechnology	0	1
	Pharmaceuticals	5	2
	Macromolecular chemistry, polymers	1	0
	Food chemistry	3	0
	Basic materials chemistry	2	1
	Materials, metallurgy	0	1
	Surface technology, coating	4	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	1	0
Mechanical engineering	Handling	1	0
	Machine tools	2	0
	Engines, pumps, turbines	0	0
	Textile and paper machines	1	0

	Other special machines	5	1
	Thermal processes and apparatus	5	0
	Mechanical elements	1	0
	Transport	1	0
Other fields	Furniture, games	2	0
	Other consumer goods	1	2
	Civil engineering	5	1
Unclassified		6	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	3	15
	Audio-visual technology	2	14
	Telecommunications	1	11
	Digital communication	1	62
	Basic communication processes	1	2
	Computer technology	5	48
	IT methods for management	0	26
	Semiconductors	0	5
Instruments	Optics	2	4
	Measurement	1	19
	Analysis of biological materials	1	7
	Control	4	15
	Medical technology	5	85
Chemistry	Organic fine chemistry	9	47
	Biotechnology	3	16
	Pharmaceuticals	12	41
	Macromolecular chemistry, polymers	1	2
	Food chemistry	3	12
	Basic materials chemistry	3	6
	Materials, metallurgy	1	9
	Surface technology, coating	0	5
	Micro-structural and nano-technology	1	0
	Chemical engineering	1	12
	Environmental technology	0	6
Mechanical engineering	Handling	3	6
	Machine tools	0	8
	Engines, pumps, turbines	2	7
	Textile and paper machines	1	8
	Other special machines	11	13
	Thermal processes and apparatus	5	10
	Mechanical elements	3	2
	Transport	5	5
Other fields	Furniture, games	3	15
	Other consumer goods	2	3
	Civil engineering	7	18
Unclassified		1	2

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	1	173
	Audio-visual technology	0	26

	Telecommunications	0	28
	Digital communication	0	30
	Basic communication processes	0	9
	Computer technology	0	50
	IT methods for management	0	10
	Semiconductors	0	25
Instruments	Optics	0	26
	Measurement	0	119
	Analysis of biological materials	1	27
	Control	1	61
	Medical technology	14	188
Chemistry	Organic fine chemistry	4	142
	Biotechnology	5	73
	Pharmaceuticals	2	135
	Macromolecular chemistry, polymers	0	107
	Food chemistry	1	61
	Basic materials chemistry	0	50
	Materials, metallurgy	0	76
	Surface technology, coating	0	64
	Micro-structural and nano-technology	0	4
	Chemical engineering	0	106
	Environmental technology	0	49
Mechanical engineering	Handling	0	316
	Machine tools	0	166
	Engines, pumps, turbines	1	136
	Textile and paper machines	0	79
	Other special machines	4	244
	Thermal processes and apparatus	0	133
	Mechanical elements	0	157
	Transport	0	222
Other fields	Furniture, games	1	195
	Other consumer goods	3	169
	Civil engineering	0	229
Unclassified		0	21

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	12	2
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	0	0
	IT methods for management	0	0
	Semiconductors	4	0
Instruments	Optics	0	2
	Measurement	5	0
	Analysis of biological materials	0	0
	Control	3	0
	Medical technology	12	2
Chemistry	Organic fine chemistry	1	0

	Biotechnology	3	3
	Pharmaceuticals	10	2
	Macromolecular chemistry, polymers	3	0
	Food chemistry	1	2
	Basic materials chemistry	6	0
	Materials, metallurgy	15	0
	Surface technology, coating	3	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	1
	Environmental technology	2	0
Mechanical engineering	Handling	0	0
	Machine tools	82	0
	Engines, pumps, turbines	5	1
	Textile and paper machines	0	0
	Other special machines	7	3
	Thermal processes and apparatus	7	1
	Mechanical elements	34	0
	Transport	24	0
Other fields	Furniture, games	1	0
	Other consumer goods	0	0
	Civil engineering	10	3
Unclassified		0	0

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	32	2
	Audio-visual technology	11	1
	Telecommunications	16	2
	Digital communication	16	0
	Basic communication processes	1	0
	Computer technology	15	0
	IT methods for management	4	0
	Semiconductors	3	2
Instruments	Optics	3	3
	Measurement	5	6
	Analysis of biological materials	0	0
	Control	5	2
	Medical technology	37	1
Chemistry	Organic fine chemistry	11	8
	Biotechnology	13	12
	Pharmaceuticals	16	5
	Macromolecular chemistry, polymers	7	1
	Food chemistry	8	0
	Basic materials chemistry	6	6
	Materials, metallurgy	14	9
	Surface technology, coating	15	3
	Micro-structural and nano-technology	0	0
	Chemical engineering	6	0
	Environmental technology	4	0
Mechanical engineering	Handling	10	3
	Machine tools	6	3

	Engines, pumps, turbines	41	3
	Textile and paper machines	4	1
	Other special machines	46	1
	Thermal processes and apparatus	6	0
	Mechanical elements	4	0
	Transport	19	1
Other fields	Furniture, games	8	1
	Other consumer goods	19	1
	Civil engineering	17	2
Unclassified		1	1

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	1	0
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	1	0
Chemistry	Organic fine chemistry	2	0
	Biotechnology	0	0
	Pharmaceuticals	3	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	1	0
	Basic materials chemistry	1	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	0	0
	Machine tools	0	0
	Engines, pumps, turbines	3	0
	Textile and paper machines	0	0
	Other special machines	0	1
	Thermal processes and apparatus	1	0
	Mechanical elements	2	0
	Transport	2	0
Other fields	Furniture, games	0	0
	Other consumer goods	0	0
	Civil engineering	4	0
Unclassified		0	4

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	0	461
	Audio-visual technology	1	120
	Telecommunications	0	94
	Digital communication	0	177
	Basic communication processes	0	64
	Computer technology	0	333
	IT methods for management	0	42
	Semiconductors	0	145
Instruments	Optics	1	159
	Measurement	4	329
	Analysis of biological materials	0	41
	Control	0	58
	Medical technology	0	613
Chemistry	Organic fine chemistry	2	264
	Biotechnology	2	477
	Pharmaceuticals	2	179
	Macromolecular chemistry, polymers	0	207
	Food chemistry	0	241
	Basic materials chemistry	1	296
	Materials, metallurgy	0	74
	Surface technology, coating	2	60
	Micro-structural and nano-technology	0	3
	Chemical engineering	1	169
	Environmental technology	0	113
Mechanical engineering	Handling	4	115
	Machine tools	4	46
	Engines, pumps, turbines	0	39
	Textile and paper machines	5	96
	Other special machines	0	211
	Thermal processes and apparatus	0	54
	Mechanical elements	0	58
	Transport	2	114
Other fields	Furniture, games	1	140
	Other consumer goods	6	91
	Civil engineering	5	148
Unclassified		0	21

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	15	10
	Audio-visual technology	5	8
	Telecommunications	7	5
	Digital communication	8	12
	Basic communication processes	5	2
	Computer technology	17	17
	IT methods for management	3	4
	Semiconductors	3	2
Instruments	Optics	2	2

	Measurement	41	19
	Analysis of biological materials	4	2
	Control	14	8
	Medical technology	16	8
Chemistry	Organic fine chemistry	8	14
	Biotechnology	19	20
	Pharmaceuticals	28	7
	Macromolecular chemistry, polymers	6	8
	Food chemistry	11	8
	Basic materials chemistry	17	9
	Materials, metallurgy	15	16
	Surface technology, coating	2	5
	Micro-structural and nano-technology	0	0
	Chemical engineering	15	8
	Environmental technology	12	5
Mechanical engineering	Handling	15	8
	Machine tools	7	11
	Engines, pumps, turbines	20	8
	Textile and paper machines	1	1
	Other special machines	22	25
	Thermal processes and apparatus	5	18
	Mechanical elements	24	21
	Transport	27	15
Other fields	Furniture, games	22	12
	Other consumer goods	4	16
	Civil engineering	89	23
Unclassified		0	15

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	2	1
	Audio-visual technology	0	0
	Telecommunications	1	0
	Digital communication	4	0
	Basic communication processes	0	0
	Computer technology	4	2
	IT methods for management	1	1
	Semiconductors	2	1
Instruments	Optics	1	0
	Measurement	3	3
	Analysis of biological materials	1	0
	Control	3	1
	Medical technology	8	2
Chemistry	Organic fine chemistry	2	0
	Biotechnology	3	1
	Pharmaceuticals	4	2
	Macromolecular chemistry, polymers	0	0
	Food chemistry	4	0
	Basic materials chemistry	5	1
	Materials, metallurgy	2	5
	Surface technology, coating	2	1

	Micro-structural and nano-technology	0	0
	Chemical engineering	6	2
	Environmental technology	0	0
Mechanical engineering	Handling	4	1
	Machine tools	3	1
	Engines, pumps, turbines	1	1
	Textile and paper machines	1	2
	Other special machines	3	1
	Thermal processes and apparatus	1	2
	Mechanical elements	1	0
	Transport	6	0
Other fields	Furniture, games	3	0
	Other consumer goods	0	0
	Civil engineering	14	0
Unclassified		0	2

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	3	93
	Audio-visual technology	0	79
	Telecommunications	1	218
	Digital communication	0	835
	Basic communication processes	0	32
	Computer technology	0	185
	IT methods for management	0	26
	Semiconductors	0	18
Instruments	Optics	0	19
	Measurement	0	123
	Analysis of biological materials	0	22
	Control	0	59
	Medical technology	0	195
Chemistry	Organic fine chemistry	0	48
	Biotechnology	0	61
	Pharmaceuticals	0	70
	Macromolecular chemistry, polymers	0	12
	Food chemistry	0	18
	Basic materials chemistry	0	37
	Materials, metallurgy	0	59
	Surface technology, coating	0	21
	Micro-structural and nano-technology	0	4
	Chemical engineering	0	86
	Environmental technology	0	78
Mechanical engineering	Handling	0	66
	Machine tools	0	111
	Engines, pumps, turbines	1	94
	Textile and paper machines	1	24
	Other special machines	1	99
	Thermal processes and apparatus	2	86
	Mechanical elements	0	199
	Transport	0	244
Other fields	Furniture, games	0	74

	Other consumer goods	0	103
	Civil engineering	1	174
Unclassified		1	2

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	10	1
	Audio-visual technology	0	0
	Telecommunications	1	0
	Digital communication	0	0
	Basic communication processes	1	0
	Computer technology	0	2
	IT methods for management	0	4
	Semiconductors	0	0
Instruments	Optics	5	0
	Measurement	6	1
	Analysis of biological materials	2	0
	Control	1	1
	Medical technology	9	2
Chemistry	Organic fine chemistry	23	1
	Biotechnology	6	2
	Pharmaceuticals	16	0
	Macromolecular chemistry, polymers	1	1
	Food chemistry	3	1
	Basic materials chemistry	2	3
	Materials, metallurgy	3	0
	Surface technology, coating	1	1
	Micro-structural and nano-technology	0	0
	Chemical engineering	3	0
	Environmental technology	3	2
Mechanical engineering	Handling	4	1
	Machine tools	3	1
	Engines, pumps, turbines	2	1
	Textile and paper machines	1	0
	Other special machines	2	1
	Thermal processes and apparatus	7	1
	Mechanical elements	4	1
	Transport	1	0
Other fields	Furniture, games	3	0
	Other consumer goods	6	0
	Civil engineering	6	0
Unclassified		0	1

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	14
	Audio-visual technology	0	6
	Telecommunications	0	2
	Digital communication	0	5
	Basic communication processes	0	1
	Computer technology	0	5
	IT methods for management	0	0

	Semiconductors	0	4
Instruments	Optics	0	1
	Measurement	0	3
	Analysis of biological materials	0	3
	Control	0	2
	Medical technology	0	27
Chemistry	Organic fine chemistry	0	11
	Biotechnology	0	3
	Pharmaceuticals	1	73
	Macromolecular chemistry, polymers	0	1
	Food chemistry	1	2
	Basic materials chemistry	0	4
	Materials, metallurgy	0	9
	Surface technology, coating	0	4
	Micro-structural and nano-technology	0	1
	Chemical engineering	0	2
	Environmental technology	0	1
Mechanical engineering	Handling	2	5
	Machine tools	1	9
	Engines, pumps, turbines	0	12
	Textile and paper machines	0	6
	Other special machines	0	3
	Thermal processes and apparatus	0	27
	Mechanical elements	0	13
	Transport	0	10
Other fields	Furniture, games	0	28
	Other consumer goods	0	61
	Civil engineering	0	17
Unclassified		0	2

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	34	56
	Audio-visual technology	10	91
	Telecommunications	9	125
	Digital communication	13	288
	Basic communication processes	2	7
	Computer technology	26	233
	IT methods for management	16	38
	Semiconductors	5	14
Instruments	Optics	3	22
	Measurement	19	91
	Analysis of biological materials	9	5
	Control	9	16
	Medical technology	128	123
Chemistry	Organic fine chemistry	23	35
	Biotechnology	58	59
	Pharmaceuticals	64	101
	Macromolecular chemistry, polymers	3	23
	Food chemistry	10	16
	Basic materials chemistry	19	21

	Materials, metallurgy	22	20
	Surface technology, coating	6	14
	Micro-structural and nano-technology	1	0
	Chemical engineering	26	43
	Environmental technology	13	26
Mechanical engineering	Handling	31	27
	Machine tools	12	19
	Engines, pumps, turbines	17	55
	Textile and paper machines	2	10
	Other special machines	24	48
	Thermal processes and apparatus	17	19
	Mechanical elements	20	41
	Transport	34	50
Other fields	Furniture, games	38	25
	Other consumer goods	16	28
	Civil engineering	74	75
Unclassified		0	1

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	236	28
	Audio-visual technology	147	26
	Telecommunications	302	22
	Digital communication	1318	45
	Basic communication processes	46	4
	Computer technology	348	67
	IT methods for management	29	8
	Semiconductors	110	10
Instruments	Optics	143	21
	Measurement	96	49
	Analysis of biological materials	6	14
	Control	30	18
	Medical technology	79	288
Chemistry	Organic fine chemistry	119	30
	Biotechnology	84	69
	Pharmaceuticals	114	77
	Macromolecular chemistry, polymers	50	8
	Food chemistry	14	9
	Basic materials chemistry	72	21
	Materials, metallurgy	80	6
	Surface technology, coating	33	6
	Micro-structural and nano-technology	5	1
	Chemical engineering	42	15
	Environmental technology	27	18
Mechanical engineering	Handling	28	10
	Machine tools	51	30
	Engines, pumps, turbines	46	10
	Textile and paper machines	22	18
	Other special machines	31	30
	Thermal processes and apparatus	35	14
	Mechanical elements	39	14

	Transport	78	12
Other fields	Furniture, games	100	14
	Other consumer goods	53	18
	Civil engineering	60	17
Unclassified		2	0

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	2431	672
	Audio-visual technology	809	555
	Telecommunications	587	434
	Digital communication	1126	786
	Basic communication processes	147	29
	Computer technology	1366	873
	IT methods for management	155	123
	Semiconductors	838	304
Instruments	Optics	1180	287
	Measurement	1043	158
	Analysis of biological materials	94	18
	Control	286	49
	Medical technology	1102	229
Chemistry	Organic fine chemistry	633	109
	Biotechnology	403	94
	Pharmaceuticals	382	120
	Macromolecular chemistry, polymers	727	93
	Food chemistry	138	15
	Basic materials chemistry	599	74
	Materials, metallurgy	779	100
	Surface technology, coating	409	81
	Micro-structural and nano-technology	34	9
	Chemical engineering	378	88
	Environmental technology	308	40
Mechanical engineering	Handling	405	42
	Machine tools	562	40
	Engines, pumps, turbines	1018	91
	Textile and paper machines	533	36
	Other special machines	529	59
	Thermal processes and apparatus	399	136
	Mechanical elements	608	50
	Transport	1765	132
Other fields	Furniture, games	140	96
	Other consumer goods	277	265
	Civil engineering	203	31
Unclassified		12	15

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	116	1596
	Audio-visual technology	78	854
	Telecommunications	65	761
	Digital communication	158	2179

	Basic communication processes	5	247
	Computer technology	180	3067
	IT methods for management	14	708
	Semiconductors	60	667
Instruments	Optics	49	636
	Measurement	26	1572
	Analysis of biological materials	5	359
	Control	13	476
	Medical technology	47	4178
Chemistry	Organic fine chemistry	12	1502
	Biotechnology	14	1532
	Pharmaceuticals	24	1815
	Macromolecular chemistry, polymers	5	815
	Food chemistry	3	341
	Basic materials chemistry	6	1127
	Materials, metallurgy	5	474
	Surface technology, coating	16	545
	Micro-structural and nano-technology	0	69
	Chemical engineering	13	817
	Environmental technology	5	381
Mechanical engineering	Handling	11	657
	Machine tools	44	585
	Engines, pumps, turbines	14	1148
	Textile and paper machines	13	434
	Other special machines	21	818
	Thermal processes and apparatus	12	310
	Mechanical elements	37	600
	Transport	71	866
Other fields	Furniture, games	41	528
	Other consumer goods	28	526
	Civil engineering	23	767
Unclassified		2	54

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	115	10136
	Audio-visual technology	76	3975
	Telecommunications	49	3654
	Digital communication	90	9387

	Basic communication processes	22	912
	Computer technology	191	9168
	IT methods for management	85	1683
	Semiconductors	29	3201
Instruments	Optics	24	3332
	Measurement	74	6777
	Analysis of biological materials	19	1267
	Control	25	2093
	Medical technology	149	10771
Chemistry	Organic fine chemistry	231	6211
	Biotechnology	117	5273
	Pharmaceuticals	242	5567
	Macromolecular chemistry, polymers	114	3555
	Food chemistry	44	1682
	Basic materials chemistry	114	4290
	Materials, metallurgy	63	2966
	Surface technology, coating	39	2230
	Micro-structural and nano-technology	2	208
	Chemical engineering	97	3597
	Environmental technology	52	1995
Mechanical engineering	Handling	50	3800
	Machine tools	25	3475
	Engines, pumps, turbines	56	5495
	Textile and paper machines	20	2189
	Other special machines	95	4489
	Thermal processes and apparatus	20	2482
	Mechanical elements	42	3863
	Transport	63	7445
Other fields	Furniture, games	63	2828
	Other consumer goods	34	3088
	Civil engineering	74	4492
Unclassified		58	451

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2014 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	203
	Audio-visual technology	0	29
	Telecommunications	0	17
	Digital communication	0	17
	Basic communication processes	0	9
	Computer technology	0	44
	IT methods for management	0	9
	Semiconductors	0	47
Instruments	Optics	0	17
	Measurement	0	77
	Analysis of biological materials	0	17
	Control	0	51
	Medical technology	0	63
Chemistry	Organic fine chemistry	0	27
	Biotechnology	0	82
	Pharmaceuticals	0	47
	Macromolecular chemistry, polymers	0	120
	Food chemistry	0	7
	Basic materials chemistry	0	30
	Materials, metallurgy	0	92
	Surface technology, coating	0	35
	Micro-structural and nano-technology	0	2
	Chemical engineering	0	36
	Environmental technology	0	31
Mechanical engineering	Handling	0	75
	Machine tools	0	105
	Engines, pumps, turbines	0	47
	Textile and paper machines	0	24
	Other special machines	0	115
	Thermal processes and apparatus	0	64
	Mechanical elements	0	38
	Transport	1	105
Other fields	Furniture, games	1	82
	Other consumer goods	0	48
	Civil engineering	1	149
Unclassified		0	3

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	73	1
	Audio-visual technology	28	0
	Telecommunications	11	0
	Digital communication	20	0
	Basic communication processes	10	0
	Computer technology	52	4
	IT methods for management	7	0

	Semiconductors	94	0
Instruments	Optics	57	0
	Measurement	77	1
	Analysis of biological materials	24	0
	Control	16	2
	Medical technology	142	2
Chemistry	Organic fine chemistry	120	0
	Biotechnology	121	0
	Pharmaceuticals	87	0
	Macromolecular chemistry, polymers	78	0
	Food chemistry	33	0
	Basic materials chemistry	55	0
	Materials, metallurgy	83	0
	Surface technology, coating	43	2
	Micro-structural and nano-technology	4	0
	Chemical engineering	56	2
	Environmental technology	33	0
Mechanical engineering	Handling	73	0
	Machine tools	35	4
	Engines, pumps, turbines	32	2
	Textile and paper machines	50	7
	Other special machines	133	2
	Thermal processes and apparatus	27	1
	Mechanical elements	24	0
	Transport	57	0
Other fields	Furniture, games	26	2
	Other consumer goods	45	0
	Civil engineering	97	1
Unclassified		4	1

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	516	2
	Audio-visual technology	64	0
	Telecommunications	47	0
	Digital communication	89	4
	Basic communication processes	25	0
	Computer technology	117	3
	IT methods for management	47	1
	Semiconductors	66	0
Instruments	Optics	54	2
	Measurement	676	0
	Analysis of biological materials	101	0
	Control	132	1
	Medical technology	441	3
Chemistry	Organic fine chemistry	555	0
	Biotechnology	377	0
	Pharmaceuticals	391	9
	Macromolecular chemistry, polymers	140	1
	Food chemistry	237	0

	Basic materials chemistry	168	0
	Materials, metallurgy	108	2
	Surface technology, coating	96	1
	Micro-structural and nano-technology	15	0
	Chemical engineering	195	0
	Environmental technology	104	2
Mechanical engineering	Handling	443	0
	Machine tools	110	0
	Engines, pumps, turbines	267	0
	Textile and paper machines	124	1
	Other special machines	181	1
	Thermal processes and apparatus	97	0
	Mechanical elements	122	1
	Transport	131	6
Other fields	Furniture, games	216	0
	Other consumer goods	304	3
	Civil engineering	129	1
Unclassified		25	0

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	6	2.075
	Audio-visual technology	0	305
	Telecommunications	1	198
	Digital communication	2	467
	Basic communication processes	0	106
	Computer technology	2	691
	IT methods for management	0	137
	Semiconductors	0	368
Instruments	Optics	2	275
	Measurement	19	1326
	Analysis of biological materials	1	214
	Control	3	529
	Medical technology	5	1351
Chemistry	Organic fine chemistry	7	1459
	Biotechnology	2	683
	Pharmaceuticals	3	555
	Macromolecular chemistry, polymers	4	807
	Food chemistry	2	115
	Basic materials chemistry	5	925
	Materials, metallurgy	7	504
	Surface technology, coating	3	469
	Micro-structural and nano-technology	1	24
	Chemical engineering	3	779
	Environmental technology	2	413
Mechanical engineering	Handling	6	872
	Machine tools	8	958
	Engines, pumps, turbines	6	1477
	Textile and paper machines	5	422
	Other special machines	7	1069

	Thermal processes and apparatus	11	561
	Mechanical elements	8	1225
	Transport	13	2016
Other fields	Furniture, games	5	459
	Other consumer goods	5	584
	Civil engineering	11	1142
Unclassified		2	73

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	86	1
	Audio-visual technology	110	0
	Telecommunications	22	1
	Digital communication	13	1
	Basic communication processes	9	0
	Computer technology	30	4
	IT methods for management	5	4
	Semiconductors	14	0
Instruments	Optics	23	2
	Measurement	75	1
	Analysis of biological materials	11	2
	Control	13	3
	Medical technology	231	3
Chemistry	Organic fine chemistry	47	0
	Biotechnology	254	3
	Pharmaceuticals	133	0
	Macromolecular chemistry, polymers	11	0
	Food chemistry	74	0
	Basic materials chemistry	81	0
	Materials, metallurgy	21	0
	Surface technology, coating	16	0
	Micro-structural and nano-technology	4	0
	Chemical engineering	58	1
	Environmental technology	34	0
Mechanical engineering	Handling	52	0
	Machine tools	10	1
	Engines, pumps, turbines	118	0
	Textile and paper machines	30	0
	Other special machines	80	4
	Thermal processes and apparatus	63	0
	Mechanical elements	42	0
	Transport	29	1
Other fields	Furniture, games	30	1
	Other consumer goods	21	0
	Civil engineering	126	5
Unclassified		7	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	61	97
	Audio-visual technology	9	88

	Telecommunications	26	80
	Digital communication	44	571
	Basic communication processes	1	13
	Computer technology	35	257
	IT methods for management	13	39
	Semiconductors	11	16
Instruments	Optics	10	11
	Measurement	32	83
	Analysis of biological materials	27	10
	Control	23	25
	Medical technology	90	54
Chemistry	Organic fine chemistry	72	14
	Biotechnology	94	27
	Pharmaceuticals	132	14
	Macromolecular chemistry, polymers	16	23
	Food chemistry	29	19
	Basic materials chemistry	33	37
	Materials, metallurgy	44	31
	Surface technology, coating	23	32
	Micro-structural and nano-technology	1	7
	Chemical engineering	26	58
	Environmental technology	16	26
Mechanical engineering	Handling	62	128
	Machine tools	49	28
	Engines, pumps, turbines	66	52
	Textile and paper machines	19	49
	Other special machines	76	41
	Thermal processes and apparatus	39	42
	Mechanical elements	26	27
	Transport	107	60
Other fields	Furniture, games	37	27
	Other consumer goods	35	11
	Civil engineering	73	80
Unclassified		14	5

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	652	337
	Audio-visual technology	308	70
	Telecommunications	319	97
	Digital communication	1011	242
	Basic communication processes	71	29
	Computer technology	778	198
	IT methods for management	133	68
	Semiconductors	219	45
Instruments	Optics	207	87
	Measurement	565	306
	Analysis of biological materials	129	58
	Control	140	90

	Medical technology	468	278
Chemistry	Organic fine chemistry	433	268
	Biotechnology	480	191
	Pharmaceuticals	350	185
	Macromolecular chemistry, polymers	151	52
	Food chemistry	82	74
	Basic materials chemistry	166	195
	Materials, metallurgy	224	80
	Surface technology, coating	152	64
	Micro-structural and nano-technology	22	5
	Chemical engineering	204	137
	Environmental technology	127	85
Mechanical engineering	Handling	197	105
	Machine tools	131	48
	Engines, pumps, turbines	369	230
	Textile and paper machines	73	40
	Other special machines	324	150
	Thermal processes and apparatus	179	62
	Mechanical elements	267	136
	Transport	894	260
Other fields	Furniture, games	167	127
	Other consumer goods	206	134
	Civil engineering	399	222
Unclassified		17	9

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	4	2
	Audio-visual technology	0	0
	Telecommunications	3	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	2	0
	IT methods for management	2	0
	Semiconductors	2	0
Instruments	Optics	0	0
	Measurement	1	0
	Analysis of biological materials	1	0
	Control	1	0
	Medical technology	5	0
Chemistry	Organic fine chemistry	2	0
	Biotechnology	2	0
	Pharmaceuticals	14	1
	Macromolecular chemistry, polymers	0	0
	Food chemistry	2	0
	Basic materials chemistry	2	0
	Materials, metallurgy	1	0
	Surface technology, coating	1	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0

	Environmental technology	1	2
Mechanical engineering	Handling	7	0
	Machine tools	4	0
	Engines, pumps, turbines	3	1
	Textile and paper machines	1	0
	Other special machines	2	2
	Thermal processes and apparatus	3	0
	Mechanical elements	2	0
	Transport	2	1
Other fields	Furniture, games	5	0
	Other consumer goods	2	0
	Civil engineering	6	3
Unclassified		10	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	2	15
	Audio-visual technology	2	19
	Telecommunications	1	9
	Digital communication	2	30
	Basic communication processes	0	0
	Computer technology	9	47
	IT methods for management	0	18
	Semiconductors	0	3
Instruments	Optics	2	11
	Measurement	8	19
	Analysis of biological materials	3	14
	Control	1	22
	Medical technology	10	123
Chemistry	Organic fine chemistry	7	40
	Biotechnology	7	40
	Pharmaceuticals	13	59
	Macromolecular chemistry, polymers	0	2
	Food chemistry	1	10
	Basic materials chemistry	7	8
	Materials, metallurgy	2	5
	Surface technology, coating	1	5
	Micro-structural and nano-technology	0	1
	Chemical engineering	3	9
	Environmental technology	4	13
Mechanical engineering	Handling	1	6
	Machine tools	0	5
	Engines, pumps, turbines	4	9
	Textile and paper machines	1	2
	Other special machines	6	13
	Thermal processes and apparatus	3	9
	Mechanical elements	3	10
	Transport	3	11
Other fields	Furniture, games	1	11
	Other consumer goods	2	6

	Civil engineering	2	18
Unclassified		3	0

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	0	161
	Audio-visual technology	0	42
	Telecommunications	0	27
	Digital communication	0	22
	Basic communication processes	0	4
	Computer technology	0	33
	IT methods for management	1	26
	Semiconductors	0	23
Instruments	Optics	0	34
	Measurement	2	95
	Analysis of biological materials	0	19
	Control	0	58
	Medical technology	24	205
Chemistry	Organic fine chemistry	3	138
	Biotechnology	1	59
	Pharmaceuticals	1	113
	Macromolecular chemistry, polymers	0	123
	Food chemistry	1	60
	Basic materials chemistry	0	47
	Materials, metallurgy	0	50
	Surface technology, coating	0	66
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	107
	Environmental technology	0	53
Mechanical engineering	Handling	1	287
	Machine tools	0	177
	Engines, pumps, turbines	0	156
	Textile and paper machines	0	97
	Other special machines	4	225
	Thermal processes and apparatus	0	105
	Mechanical elements	0	169
	Transport	1	256
Other fields	Furniture, games	1	203
	Other consumer goods	2	142
	Civil engineering	0	247
Unclassified		0	20

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	11	1
	Audio-visual technology	0	0
	Telecommunications	1	0
	Digital communication	4	1
	Basic communication processes	0	0
	Computer technology	2	0
	IT methods for management	1	0

	Semiconductors	1	0
Instruments	Optics	3	3
	Measurement	8	0
	Analysis of biological materials	0	0
	Control	1	0
	Medical technology	22	0
Chemistry	Organic fine chemistry	2	1
	Biotechnology	2	4
	Pharmaceuticals	15	0
	Macromolecular chemistry, polymers	8	0
	Food chemistry	0	1
	Basic materials chemistry	11	2
	Materials, metallurgy	13	2
	Surface technology, coating	3	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	1	2
Mechanical engineering	Handling	2	0
	Machine tools	80	0
	Engines, pumps, turbines	12	0
	Textile and paper machines	0	0
	Other special machines	16	5
	Thermal processes and apparatus	0	0
	Mechanical elements	24	0
	Transport	22	0
Other fields	Furniture, games	2	0
	Other consumer goods	0	0
	Civil engineering	10	2
Unclassified		1	0

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	29	0
	Audio-visual technology	11	1
	Telecommunications	18	0
	Digital communication	18	1
	Basic communication processes	3	1
	Computer technology	21	1
	IT methods for management	9	0
	Semiconductors	3	0
Instruments	Optics	7	0
	Measurement	4	0
	Analysis of biological materials	1	0
	Control	4	0
	Medical technology	28	0
Chemistry	Organic fine chemistry	16	0
	Biotechnology	8	0
	Pharmaceuticals	20	0
	Macromolecular chemistry, polymers	7	0
	Food chemistry	3	1

	Basic materials chemistry	5	0
	Materials, metallurgy	24	0
	Surface technology, coating	9	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	6	0
	Environmental technology	7	0
Mechanical engineering	Handling	8	0
	Machine tools	8	2
	Engines, pumps, turbines	30	0
	Textile and paper machines	6	0
	Other special machines	36	0
	Thermal processes and apparatus	3	0
	Mechanical elements	35	0
	Transport	21	1
Other fields	Furniture, games	7	0
	Other consumer goods	21	0
	Civil engineering	16	0
Unclassified		2	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	1	0
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	0	0
Chemistry	Organic fine chemistry	0	0
	Biotechnology	1	0
	Pharmaceuticals	9	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	0	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	2	0
Mechanical engineering	Handling	1	0
	Machine tools	0	0
	Engines, pumps, turbines	1	0

	Textile and paper machines	0	0
	Other special machines	1	0
	Thermal processes and apparatus	0	0
	Mechanical elements	0	0
	Transport	2	1
Other fields	Furniture, games	0	0
	Other consumer goods	0	0
	Civil engineering	2	0
Unclassified		0	4

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	3	626
	Audio-visual technology	0	118
	Telecommunications	0	91
	Digital communication	1	227
	Basic communication processes	1	47
	Computer technology	0	375
	IT methods for management	0	32
	Semiconductors	0	191
Instruments	Optics	0	285
	Measurement	5	341
	Analysis of biological materials	0	53
	Control	2	59
	Medical technology	12	727
Chemistry	Organic fine chemistry	0	239
	Biotechnology	0	752
	Pharmaceuticals	7	146
	Macromolecular chemistry, polymers	0	259
	Food chemistry	0	243
	Basic materials chemistry	1	345
	Materials, metallurgy	1	61
	Surface technology, coating	1	55
	Micro-structural and nano-technology	0	3
	Chemical engineering	0	159
	Environmental technology	0	127
Mechanical engineering	Handling	2	134
	Machine tools	3	70
	Engines, pumps, turbines	0	50
	Textile and paper machines	5	110
	Other special machines	3	227
	Thermal processes and apparatus	0	61
	Mechanical elements	0	69
	Transport	1	123
Other fields	Furniture, games	1	128
	Other consumer goods	8	103
	Civil engineering	5	216
Unclassified		0	22

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	19	22
	Audio-visual technology	9	11
	Telecommunications	2	6
	Digital communication	13	6
	Basic communication processes	1	1
	Computer technology	19	27
	IT methods for management	1	9
	Semiconductors	2	2
Instruments	Optics	4	2
	Measurement	51	22
	Analysis of biological materials	9	2
	Control	15	16
	Medical technology	25	29
Chemistry	Organic fine chemistry	10	21
	Biotechnology	14	14
	Pharmaceuticals	29	9
	Macromolecular chemistry, polymers	5	6
	Food chemistry	11	3
	Basic materials chemistry	15	15
	Materials, metallurgy	10	14
	Surface technology, coating	7	9
	Micro-structural and nano-technology	0	0
	Chemical engineering	18	11
	Environmental technology	11	8
Mechanical engineering	Handling	14	8
	Machine tools	6	15
	Engines, pumps, turbines	15	9
	Textile and paper machines	1	2
	Other special machines	21	22
	Thermal processes and apparatus	5	23
	Mechanical elements	15	11
	Transport	19	19
Other fields	Furniture, games	17	9
	Other consumer goods	7	17
	Civil engineering	107	29
Unclassified		2	53

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	3	2
	Audio-visual technology	1	0
	Telecommunications	2	0
	Digital communication	3	1
	Basic communication processes	0	0
	Computer technology	5	0
	IT methods for management	5	1
	Semiconductors	0	0
Instruments	Optics	1	1
	Measurement	6	3

	Analysis of biological materials	2	0
	Control	1	1
	Medical technology	3	1
Chemistry	Organic fine chemistry	2	0
	Biotechnology	10	0
	Pharmaceuticals	11	2
	Macromolecular chemistry, polymers	1	0
	Food chemistry	2	1
	Basic materials chemistry	4	0
	Materials, metallurgy	0	2
	Surface technology, coating	1	2
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	1
	Environmental technology	1	1
Mechanical engineering	Handling	4	0
	Machine tools	4	0
	Engines, pumps, turbines	2	4
	Textile and paper machines	2	0
	Other special machines	3	0
	Thermal processes and apparatus	3	1
	Mechanical elements	3	0
	Transport	4	0
Other fields	Furniture, games	7	0
	Other consumer goods	6	0
	Civil engineering	9	2
Unclassified		0	2

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	1	102
	Audio-visual technology	0	113
	Telecommunications	0	245
	Digital communication	0	1010
	Basic communication processes	0	36
	Computer technology	1	172
	IT methods for management	0	51
	Semiconductors	0	13
Instruments	Optics	0	14
	Measurement	0	158
	Analysis of biological materials	0	18
	Control	0	48
	Medical technology	0	185
Chemistry	Organic fine chemistry	0	31
	Biotechnology	0	56
	Pharmaceuticals	0	67
	Macromolecular chemistry, polymers	0	4
	Food chemistry	0	11
	Basic materials chemistry	0	15
	Materials, metallurgy	0	76
	Surface technology, coating	0	30

	Micro-structural and nano-technology	0	4
	Chemical engineering	0	77
	Environmental technology	0	55
Mechanical engineering	Handling	1	70
	Machine tools	0	122
	Engines, pumps, turbines	1	98
	Textile and paper machines	1	37
	Other special machines	0	138
	Thermal processes and apparatus	1	71
	Mechanical elements	0	203
	Transport	0	263
Other fields	Furniture, games	1	76
	Other consumer goods	0	73
	Civil engineering	0	127
Unclassified		4	4

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	13	1
	Audio-visual technology	1	1
	Telecommunications	5	0
	Digital communication	0	2
	Basic communication processes	5	0
	Computer technology	3	1
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	1
	Measurement	3	0
	Analysis of biological materials	1	0
	Control	1	1
	Medical technology	7	0
Chemistry	Organic fine chemistry	20	0
	Biotechnology	7	2
	Pharmaceuticals	5	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	2	1
	Basic materials chemistry	2	1
	Materials, metallurgy	3	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0
	Environmental technology	2	0
Mechanical engineering	Handling	4	4
	Machine tools	4	0
	Engines, pumps, turbines	1	0
	Textile and paper machines	1	0
	Other special machines	1	3
	Thermal processes and apparatus	3	1
	Mechanical elements	2	1
	Transport	4	5

Other fields	Furniture, games	4	0
	Other consumer goods	4	0
	Civil engineering	14	1
Unclassified		0	0

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	24
	Audio-visual technology	0	4
	Telecommunications	0	1
	Digital communication	0	7
	Basic communication processes	0	3
	Computer technology	0	12
	IT methods for management	0	0
	Semiconductors	0	4
Instruments	Optics	0	0
	Measurement	0	2
	Analysis of biological materials	0	0
	Control	0	6
	Medical technology	1	19
Chemistry	Organic fine chemistry	0	5
	Biotechnology	0	3
	Pharmaceuticals	0	65
	Macromolecular chemistry, polymers	0	4
	Food chemistry	0	5
	Basic materials chemistry	0	13
	Materials, metallurgy	0	6
	Surface technology, coating	0	4
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	2
	Environmental technology	0	0
Mechanical engineering	Handling	1	8
	Machine tools	2	5
	Engines, pumps, turbines	0	9
	Textile and paper machines	0	8
	Other special machines	0	16
	Thermal processes and apparatus	0	22
	Mechanical elements	0	6
	Transport	0	23
Other fields	Furniture, games	0	36
	Other consumer goods	0	55
	Civil engineering	1	26
Unclassified		0	0

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	29	49
	Audio-visual technology	10	54
	Telecommunications	17	71
	Digital communication	11	184
	Basic communication processes	0	7

	Computer technology	31	147
	IT methods for management	23	50
	Semiconductors	4	14
Instruments	Optics	11	37
	Measurement	22	72
	Analysis of biological materials	6	11
	Control	13	20
	Medical technology	132	112
Chemistry	Organic fine chemistry	16	49
	Biotechnology	53	72
	Pharmaceuticals	58	105
	Macromolecular chemistry, polymers	9	39
	Food chemistry	15	14
	Basic materials chemistry	21	44
	Materials, metallurgy	15	32
	Surface technology, coating	9	26
	Micro-structural and nano-technology	0	4
	Chemical engineering	24	49
	Environmental technology	14	26
Mechanical engineering	Handling	21	19
	Machine tools	19	23
	Engines, pumps, turbines	22	65
	Textile and paper machines	3	12
	Other special machines	41	62
	Thermal processes and apparatus	10	18
	Mechanical elements	10	30
	Transport	26	62
Other fields	Furniture, games	27	37
	Other consumer goods	18	31
	Civil engineering	47	59
Unclassified		1	2

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	250	35
	Audio-visual technology	169	20
	Telecommunications	375	24
	Digital communication	1423	35
	Basic communication processes	40	3
	Computer technology	512	54
	IT methods for management	64	17
	Semiconductors	92	11
Instruments	Optics	127	17
	Measurement	134	43
	Analysis of biological materials	12	8
	Control	35	10
	Medical technology	113	285
Chemistry	Organic fine chemistry	173	21
	Biotechnology	57	59
	Pharmaceuticals	119	110

	Macromolecular chemistry, polymers	49	9
	Food chemistry	15	11
	Basic materials chemistry	57	22
	Materials, metallurgy	58	4
	Surface technology, coating	26	5
	Micro-structural and nano-technology	7	3
	Chemical engineering	63	19
	Environmental technology	28	7
Mechanical engineering	Handling	43	16
	Machine tools	47	36
	Engines, pumps, turbines	50	11
	Textile and paper machines	26	22
	Other special machines	55	33
	Thermal processes and apparatus	43	6
	Mechanical elements	46	12
	Transport	123	17
Other fields	Furniture, games	98	14
	Other consumer goods	98	20
	Civil engineering	47	26
Unclassified		6	3

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	2.198	793
	Audio-visual technology	735	443
	Telecommunications	543	320
	Digital communication	1089	809
	Basic communication processes	128	65
	Computer technology	1404	803
	IT methods for management	217	116
	Semiconductors	770	310
Instruments	Optics	1071	257
	Measurement	1040	134
	Analysis of biological materials	78	25
	Control	241	51
	Medical technology	1182	223
Chemistry	Organic fine chemistry	580	98
	Biotechnology	367	110
	Pharmaceuticals	309	132
	Macromolecular chemistry, polymers	713	81
	Food chemistry	154	17
	Basic materials chemistry	562	73
	Materials, metallurgy	827	102
	Surface technology, coating	481	60
	Micro-structural and nano-technology	56	12
	Chemical engineering	433	97
	Environmental technology	331	30
Mechanical engineering	Handling	396	29
	Machine tools	579	32
	Engines, pumps, turbines	946	103

	Textile and paper machines	558	31
	Other special machines	575	71
	Thermal processes and apparatus	442	154
	Mechanical elements	626	23
	Transport	1876	139
Other fields	Furniture, games	125	103
	Other consumer goods	270	263
	Civil engineering	194	47
Unclassified		22	10

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	119	1.639
	Audio-visual technology	80	935
	Telecommunications	39	858
	Digital communication	140	2747
	Basic communication processes	16	310
	Computer technology	93	3570
	IT methods for management	18	856
	Semiconductors	52	574
Instruments	Optics	58	800
	Measurement	30	1597
	Analysis of biological materials	1	342
	Control	8	585
	Medical technology	58	4405
Chemistry	Organic fine chemistry	19	1552
	Biotechnology	17	1610
	Pharmaceuticals	28	1815
	Macromolecular chemistry, polymers	6	877
	Food chemistry	4	338
	Basic materials chemistry	4	1231
	Materials, metallurgy	4	541
	Surface technology, coating	6	539
	Micro-structural and nano-technology	1	84
	Chemical engineering	18	917
	Environmental technology	2	372
Mechanical engineering	Handling	14	629
	Machine tools	48	543
	Engines, pumps, turbines	21	1044
	Textile and paper machines	14	457
	Other special machines	16	864
	Thermal processes and apparatus	17	311
	Mechanical elements	23	602
	Transport	56	1091
Other fields	Furniture, games	55	548
	Other consumer goods	13	621
	Civil engineering	19	836
Unclassified		2	28

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	131	10394
	Audio-visual technology	88	3878
	Telecommunications	49	3526
	Digital communication	129	10396
	Basic communication processes	37	981
	Computer technology	224	9784
	IT methods for management	79	2061
	Semiconductors	44	2995
Instruments	Optics	19	3512
	Measurement	116	7154
	Analysis of biological materials	36	1236
	Control	40	2268
	Medical technology	156	11223
Chemistry	Organic fine chemistry	232	6279
	Biotechnology	109	5750
	Pharmaceuticals	200	5368
	Macromolecular chemistry, polymers	67	3672
	Food chemistry	44	1642
	Basic materials chemistry	141	4343
	Materials, metallurgy	60	3109
	Surface technology, coating	40	2322
	Micro-structural and nano-technology	7	267
	Chemical engineering	92	3666
	Environmental technology	35	2008
Mechanical engineering	Handling	39	3782
	Machine tools	31	3352
	Engines, pumps, turbines	71	5404
	Textile and paper machines	11	2252
	Other special machines	91	4735
	Thermal processes and apparatus	38	2499
	Mechanical elements	39	3880
	Transport	61	7913
Other fields	Furniture, games	51	2747
	Other consumer goods	41	3219
	Civil engineering	110	4664
Unclassified		61	422

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2015 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	227
	Audio-visual technology	0	39
	Telecommunications	0	14
	Digital communication	0	13
	Basic communication processes	0	6
	Computer technology	0	32
	IT methods for management	0	10
	Semiconductors	0	33
Instruments	Optics	0	26
	Measurement	0	75
	Analysis of biological materials	0	14
	Control	0	63
	Medical technology	0	100
Chemistry	Organic fine chemistry	0	19
	Biotechnology	0	57
	Pharmaceuticals	0	54
	Macromolecular chemistry, polymers	0	98
	Food chemistry	0	9
	Basic materials chemistry	0	35
	Materials, metallurgy	0	58
	Surface technology, coating	0	30
	Micro-structural and nano-technology	0	3
	Chemical engineering	0	36
	Environmental technology	0	34
Mechanical engineering	Handling	0	79
	Machine tools	0	89
	Engines, pumps, turbines	0	50
	Textile and paper machines	0	44
	Other special machines	0	123
	Thermal processes and apparatus	0	55
	Mechanical elements	0	73
	Transport	0	116
Other fields	Furniture, games	0	85
	Other consumer goods	0	52
	Civil engineering	0	138
Unclassified		0	0

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	107	2
	Audio-visual technology	21	0
	Telecommunications	18	1
	Digital communication	18	1
	Basic communication processes	16	0
	Computer technology	64	6
	IT methods for management	11	1

	Semiconductors	87	0
Instruments	Optics	45	0
	Measurement	90	0
	Analysis of biological materials	31	0
	Control	9	0
	Medical technology	101	1
Chemistry	Organic fine chemistry	114	0
	Biotechnology	115	0
	Pharmaceuticals	127	2
	Macromolecular chemistry, polymers	54	0
	Food chemistry	26	1
	Basic materials chemistry	67	0
	Materials, metallurgy	90	2
	Surface technology, coating	32	0
	Micro-structural and nano-technology	5	0
	Chemical engineering	50	0
	Environmental technology	45	0
Mechanical engineering	Handling	50	3
	Machine tools	28	1
	Engines, pumps, turbines	24	2
	Textile and paper machines	59	2
	Other special machines	194	1
	Thermal processes and apparatus	26	1
	Mechanical elements	24	0
	Transport	77	0
Other fields	Furniture, games	31	1
	Other consumer goods	63	1
	Civil engineering	117	3
Unclassified		5	1

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	513	1
	Audio-visual technology	55	0
	Telecommunications	43	1
	Digital communication	90	3
	Basic communication processes	25	0
	Computer technology	135	2
	IT methods for management	44	1
	Semiconductors	70	0
Instruments	Optics	79	1
	Measurement	645	1
	Analysis of biological materials	95	0
	Control	140	1
	Medical technology	540	2
Chemistry	Organic fine chemistry	556	1
	Biotechnology	385	3
	Pharmaceuticals	373	7
	Macromolecular chemistry, polymers	166	1
	Food chemistry	214	0

	Basic materials chemistry	201	0
	Materials, metallurgy	153	0
	Surface technology, coating	113	1
	Micro-structural and nano-technology	12	0
	Chemical engineering	188	0
	Environmental technology	73	0
Mechanical engineering	Handling	453	1
	Machine tools	125	0
	Engines, pumps, turbines	231	0
	Textile and paper machines	125	0
	Other special machines	164	0
	Thermal processes and apparatus	83	0
	Mechanical elements	103	0
	Transport	118	7
Other fields	Furniture, games	256	0
	Other consumer goods	369	2
	Civil engineering	174	3
Unclassified		7	0

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	8	1.817
	Audio-visual technology	2	308
	Telecommunications	2	216
	Digital communication	2	465
	Basic communication processes	0	112
	Computer technology	1	687
	IT methods for management	1	129
	Semiconductors	1	252
Instruments	Optics	4	272
	Measurement	12	1337
	Analysis of biological materials	1	198
	Control	4	535
	Medical technology	15	1429
Chemistry	Organic fine chemistry	11	1274
	Biotechnology	7	658
	Pharmaceuticals	9	508
	Macromolecular chemistry, polymers	2	741
	Food chemistry	4	154
	Basic materials chemistry	5	969
	Materials, metallurgy	5	521
	Surface technology, coating	1	447
	Micro-structural and nano-technology	0	26
	Chemical engineering	7	765
	Environmental technology	2	338
Mechanical engineering	Handling	3	857
	Machine tools	10	961
	Engines, pumps, turbines	7	1443
	Textile and paper machines	12	351
	Other special machines	10	1122

	Thermal processes and apparatus	16	578
	Mechanical elements	4	1202
	Transport	20	1891
Other fields	Furniture, games	6	505
	Other consumer goods	6	586
	Civil engineering	13	1087
Unclassified		0	66

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	67	2
	Audio-visual technology	122	1
	Telecommunications	12	0
	Digital communication	18	1
	Basic communication processes	6	0
	Computer technology	29	0
	IT methods for management	8	0
	Semiconductors	10	0
Instruments	Optics	16	0
	Measurement	64	3
	Analysis of biological materials	9	0
	Control	15	2
	Medical technology	227	4
Chemistry	Organic fine chemistry	62	0
	Biotechnology	213	2
	Pharmaceuticals	110	2
	Macromolecular chemistry, polymers	13	0
	Food chemistry	78	0
	Basic materials chemistry	79	1
	Materials, metallurgy	22	0
	Surface technology, coating	23	1
	Micro-structural and nano-technology	1	0
	Chemical engineering	54	1
	Environmental technology	17	2
Mechanical engineering	Handling	43	3
	Machine tools	14	0
	Engines, pumps, turbines	126	1
	Textile and paper machines	26	0
	Other special machines	97	0
	Thermal processes and apparatus	38	1
	Mechanical elements	53	0
	Transport	30	2
Other fields	Furniture, games	34	1
	Other consumer goods	24	0
	Civil engineering	146	2
Unclassified		14	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	50	105
	Audio-visual technology	18	74

	Telecommunications	24	81
	Digital communication	40	388
	Basic communication processes	2	24
	Computer technology	40	201
	IT methods for management	12	34
	Semiconductors	16	35
Instruments	Optics	16	31
	Measurement	49	88
	Analysis of biological materials	29	11
	Control	26	21
	Medical technology	95	68
Chemistry	Organic fine chemistry	95	16
	Biotechnology	105	24
	Pharmaceuticals	121	17
	Macromolecular chemistry, polymers	20	23
	Food chemistry	20	13
	Basic materials chemistry	47	40
	Materials, metallurgy	44	29
	Surface technology, coating	9	30
	Micro-structural and nano-technology	2	3
	Chemical engineering	33	59
	Environmental technology	20	44
Mechanical engineering	Handling	98	158
	Machine tools	34	21
	Engines, pumps, turbines	43	48
	Textile and paper machines	18	52
	Other special machines	67	50
	Thermal processes and apparatus	38	35
	Mechanical elements	29	18
	Transport	112	37
Other fields	Furniture, games	38	27
	Other consumer goods	30	15
	Civil engineering	69	72
Unclassified		9	1

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	623	266
	Audio-visual technology	341	55
	Telecommunications	303	115
	Digital communication	727	244
	Basic communication processes	67	8
	Computer technology	823	265
	IT methods for management	130	69
	Semiconductors	232	47
Instruments	Optics	228	82
	Measurement	589	288
	Analysis of biological materials	121	81
	Control	136	117

	Medical technology	481	277
Chemistry	Organic fine chemistry	489	285
	Biotechnology	438	177
	Pharmaceuticals	427	188
	Macromolecular chemistry, polymers	171	28
	Food chemistry	78	56
	Basic materials chemistry	199	163
	Materials, metallurgy	242	76
	Surface technology, coating	157	55
	Micro-structural and nano-technology	15	3
	Chemical engineering	249	145
	Environmental technology	181	76
Mechanical engineering	Handling	214	148
	Machine tools	128	79
	Engines, pumps, turbines	323	275
	Textile and paper machines	83	51
	Other special machines	395	157
	Thermal processes and apparatus	180	87
	Mechanical elements	323	167
	Transport	892	338
Other fields	Furniture, games	175	159
	Other consumer goods	174	186
	Civil engineering	406	231
Unclassified		20	7

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	4	0
	Audio-visual technology	2	0
	Telecommunications	1	0
	Digital communication	0	0
	Basic communication processes	2	0
	Computer technology	0	1
	IT methods for management	0	0
	Semiconductors	1	0
Instruments	Optics	1	0
	Measurement	1	0
	Analysis of biological materials	0	0
	Control	1	0
	Medical technology	6	1
Chemistry	Organic fine chemistry	4	0
	Biotechnology	2	0
	Pharmaceuticals	15	0
	Macromolecular chemistry, polymers	1	0
	Food chemistry	1	1
	Basic materials chemistry	1	0
	Materials, metallurgy	0	0
	Surface technology, coating	1	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	1	0

	Environmental technology	4	1
Mechanical engineering	Handling	2	3
	Machine tools	9	0
	Engines, pumps, turbines	1	1
	Textile and paper machines	1	0
	Other special machines	9	0
	Thermal processes and apparatus	6	0
	Mechanical elements	1	0
	Transport	2	0
Other fields	Furniture, games	0	0
	Other consumer goods	0	0
	Civil engineering	5	1
Unclassified		6	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	3	16
	Audio-visual technology	6	6
	Telecommunications	0	13
	Digital communication	2	36
	Basic communication processes	0	7
	Computer technology	4	52
	IT methods for management	3	18
	Semiconductors	0	7
Instruments	Optics	3	9
	Measurement	4	19
	Analysis of biological materials	0	9
	Control	1	18
	Medical technology	4	107
Chemistry	Organic fine chemistry	6	51
	Biotechnology	7	36
	Pharmaceuticals	12	55
	Macromolecular chemistry, polymers	2	6
	Food chemistry	3	9
	Basic materials chemistry	2	8
	Materials, metallurgy	2	8
	Surface technology, coating	1	4
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	19
	Environmental technology	2	6
Mechanical engineering	Handling	0	8
	Machine tools	1	1
	Engines, pumps, turbines	4	6
	Textile and paper machines	0	6
	Other special machines	5	19
	Thermal processes and apparatus	3	6
	Mechanical elements	1	2
	Transport	3	13
Other fields	Furniture, games	3	15
	Other consumer goods	3	5

	Civil engineering	5	14
Unclassified		0	0

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	1	173
	Audio-visual technology	0	30
	Telecommunications	0	23
	Digital communication	0	34
	Basic communication processes	0	15
	Computer technology	0	57
	IT methods for management	5	33
	Semiconductors	0	27
Instruments	Optics	0	38
	Measurement	1	139
	Analysis of biological materials	0	20
	Control	0	64
	Medical technology	22	232
Chemistry	Organic fine chemistry	1	109
	Biotechnology	3	74
	Pharmaceuticals	1	175
	Macromolecular chemistry, polymers	0	119
	Food chemistry	0	50
	Basic materials chemistry	1	72
	Materials, metallurgy	0	63
	Surface technology, coating	0	65
	Micro-structural and nano-technology	0	3
	Chemical engineering	0	117
	Environmental technology	1	56
Mechanical engineering	Handling	2	286
	Machine tools	0	166
	Engines, pumps, turbines	0	162
	Textile and paper machines	0	87
	Other special machines	3	242
	Thermal processes and apparatus	0	123
	Mechanical elements	0	156
	Transport	1	242
Other fields	Furniture, games	0	215
	Other consumer goods	3	200
	Civil engineering	0	286
Unclassified		0	33

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	19	2
	Audio-visual technology	0	0
	Telecommunications	0	1
	Digital communication	3	1
	Basic communication processes	0	0
	Computer technology	12	1
	IT methods for management	1	0

	Semiconductors	3	0
Instruments	Optics	1	4
	Measurement	22	2
	Analysis of biological materials	0	1
	Control	0	1
	Medical technology	26	2
Chemistry	Organic fine chemistry	0	1
	Biotechnology	1	5
	Pharmaceuticals	13	0
	Macromolecular chemistry, polymers	10	2
	Food chemistry	1	0
	Basic materials chemistry	7	2
	Materials, metallurgy	16	1
	Surface technology, coating	9	0
	Micro-structural and nano-technology	1	0
	Chemical engineering	4	0
	Environmental technology	2	2
Mechanical engineering	Handling	6	0
	Machine tools	127	4
	Engines, pumps, turbines	6	1
	Textile and paper machines	2	0
	Other special machines	13	1
	Thermal processes and apparatus	1	0
	Mechanical elements	29	0
	Transport	16	1
Other fields	Furniture, games	1	1
	Other consumer goods	3	0
	Civil engineering	16	1
Unclassified		0	2

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	26	0
	Audio-visual technology	6	0
	Telecommunications	17	0
	Digital communication	13	0
	Basic communication processes	0	2
	Computer technology	11	3
	IT methods for management	7	0
	Semiconductors	0	0
Instruments	Optics	18	0
	Measurement	6	2
	Analysis of biological materials	1	0
	Control	4	0
	Medical technology	41	0
Chemistry	Organic fine chemistry	14	1
	Biotechnology	16	5
	Pharmaceuticals	26	5
	Macromolecular chemistry, polymers	11	0
	Food chemistry	3	1

	Basic materials chemistry	4	3
	Materials, metallurgy	18	1
	Surface technology, coating	17	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	1	0
	Environmental technology	4	0
Mechanical engineering	Handling	11	0
	Machine tools	9	1
	Engines, pumps, turbines	29	1
	Textile and paper machines	11	0
	Other special machines	28	1
	Thermal processes and apparatus	12	0
	Mechanical elements	6	1
	Transport	17	2
Other fields	Furniture, games	7	0
	Other consumer goods	17	0
	Civil engineering	14	1
Unclassified		0	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	0	0
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	2	0
Chemistry	Organic fine chemistry	0	0
	Biotechnology	2	0
	Pharmaceuticals	13	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	0	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	1	0
Mechanical engineering	Handling	0	0
	Machine tools	0	0
	Engines, pumps, turbines	1	0

	Textile and paper machines	0	0
	Other special machines	0	0
	Thermal processes and apparatus	0	0
	Mechanical elements	2	0
	Transport	3	0
Other fields	Furniture, games	1	0
	Other consumer goods	2	0
	Civil engineering	1	0
Unclassified		0	5

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	1	614
	Audio-visual technology	0	139
	Telecommunications	0	120
	Digital communication	1	206
	Basic communication processes	0	67
	Computer technology	3	394
	IT methods for management	0	34
	Semiconductors	0	160
Instruments	Optics	0	289
	Measurement	6	375
	Analysis of biological materials	0	48
	Control	6	67
	Medical technology	35	779
Chemistry	Organic fine chemistry	10	290
	Biotechnology	2	613
	Pharmaceuticals	1	159
	Macromolecular chemistry, polymers	2	273
	Food chemistry	0	275
	Basic materials chemistry	1	381
	Materials, metallurgy	0	45
	Surface technology, coating	5	76
	Micro-structural and nano-technology	0	5
	Chemical engineering	2	172
	Environmental technology	0	122
Mechanical engineering	Handling	1	155
	Machine tools	2	38
	Engines, pumps, turbines	1	60
	Textile and paper machines	4	135
	Other special machines	2	278
	Thermal processes and apparatus	0	63
	Mechanical elements	0	75
	Transport	1	141
Other fields	Furniture, games	2	158
	Other consumer goods	3	127
	Civil engineering	3	193
Unclassified		0	21

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	12	28
	Audio-visual technology	9	7
	Telecommunications	4	8
	Digital communication	9	4
	Basic communication processes	0	6
	Computer technology	24	28
	IT methods for management	7	4
	Semiconductors	3	3
Instruments	Optics	6	6
	Measurement	45	38
	Analysis of biological materials	5	1
	Control	2	6
	Medical technology	21	30
Chemistry	Organic fine chemistry	13	38
	Biotechnology	15	20
	Pharmaceuticals	21	29
	Macromolecular chemistry, polymers	5	12
	Food chemistry	11	9
	Basic materials chemistry	23	28
	Materials, metallurgy	5	23
	Surface technology, coating	3	12
	Micro-structural and nano-technology	1	0
	Chemical engineering	19	11
	Environmental technology	13	16
Mechanical engineering	Handling	18	20
	Machine tools	4	13
	Engines, pumps, turbines	21	10
	Textile and paper machines	0	14
	Other special machines	24	21
	Thermal processes and apparatus	4	16
	Mechanical elements	25	9
	Transport	35	20
Other fields	Furniture, games	17	6
	Other consumer goods	2	20
	Civil engineering	84	35
Unclassified		0	15

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	2	1
	Audio-visual technology	1	0
	Telecommunications	5	0
	Digital communication	5	1
	Basic communication processes	0	0
	Computer technology	7	3
	IT methods for management	2	1
	Semiconductors	2	0
Instruments	Optics	4	0
	Measurement	8	2

	Analysis of biological materials	2	0
	Control	5	0
	Medical technology	17	2
Chemistry	Organic fine chemistry	2	0
	Biotechnology	8	0
	Pharmaceuticals	9	0
	Macromolecular chemistry, polymers	1	0
	Food chemistry	1	2
	Basic materials chemistry	1	2
	Materials, metallurgy	3	0
	Surface technology, coating	7	1
	Micro-structural and nano-technology	0	0
	Chemical engineering	4	0
	Environmental technology	3	0
Mechanical engineering	Handling	0	2
	Machine tools	1	0
	Engines, pumps, turbines	3	1
	Textile and paper machines	3	0
	Other special machines	4	0
	Thermal processes and apparatus	4	2
	Mechanical elements	2	1
	Transport	2	0
Other fields	Furniture, games	9	0
	Other consumer goods	4	0
	Civil engineering	9	3
Unclassified		1	6

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	0	89
	Audio-visual technology	0	71
	Telecommunications	0	217
	Digital communication	0	1003
	Basic communication processes	0	35
	Computer technology	1	133
	IT methods for management	0	35
	Semiconductors	0	17
Instruments	Optics	0	20
	Measurement	0	163
	Analysis of biological materials	0	24
	Control	0	73
	Medical technology	2	213
Chemistry	Organic fine chemistry	0	33
	Biotechnology	0	55
	Pharmaceuticals	0	57
	Macromolecular chemistry, polymers	0	8
	Food chemistry	0	8
	Basic materials chemistry	0	21
	Materials, metallurgy	0	64
	Surface technology, coating	0	30

	Micro-structural and nano-technology	0	1
	Chemical engineering	0	78
	Environmental technology	0	52
Mechanical engineering	Handling	0	62
	Machine tools	0	105
	Engines, pumps, turbines	0	112
	Textile and paper machines	0	33
	Other special machines	1	123
	Thermal processes and apparatus	0	101
	Mechanical elements	0	171
	Transport	0	347
Other fields	Furniture, games	0	79
	Other consumer goods	0	92
	Civil engineering	0	111
Unclassified		0	3

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	10	1
	Audio-visual technology	0	0
	Telecommunications	0	2
	Digital communication	1	0
	Basic communication processes	0	0
	Computer technology	2	0
	IT methods for management	0	0
	Semiconductors	1	1
Instruments	Optics	2	3
	Measurement	7	1
	Analysis of biological materials	1	0
	Control	0	0
	Medical technology	8	3
Chemistry	Organic fine chemistry	15	0
	Biotechnology	3	1
	Pharmaceuticals	2	0
	Macromolecular chemistry, polymers	2	0
	Food chemistry	0	1
	Basic materials chemistry	2	3
	Materials, metallurgy	1	2
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	1
	Environmental technology	6	2
Mechanical engineering	Handling	10	1
	Machine tools	4	3
	Engines, pumps, turbines	2	2
	Textile and paper machines	3	0
	Other special machines	3	4
	Thermal processes and apparatus	8	0
	Mechanical elements	2	3
	Transport	2	5

Other fields	Furniture, games	5	2
	Other consumer goods	5	1
	Civil engineering	8	4
Unclassified		1	1

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	22
	Audio-visual technology	0	8
	Telecommunications	0	5
	Digital communication	0	4
	Basic communication processes	0	4
	Computer technology	0	16
	IT methods for management	0	1
	Semiconductors	0	4
Instruments	Optics	0	1
	Measurement	0	12
	Analysis of biological materials	0	1
	Control	0	5
	Medical technology	0	25
Chemistry	Organic fine chemistry	0	16
	Biotechnology	0	2
	Pharmaceuticals	0	48
	Macromolecular chemistry, polymers	0	4
	Food chemistry	0	9
	Basic materials chemistry	0	5
	Materials, metallurgy	0	6
	Surface technology, coating	0	2
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	8
	Environmental technology	0	3
Mechanical engineering	Handling	0	8
	Machine tools	0	2
	Engines, pumps, turbines	0	17
	Textile and paper machines	0	18
	Other special machines	0	11
	Thermal processes and apparatus	0	29
	Mechanical elements	0	15
	Transport	0	19
Other fields	Furniture, games	1	36
	Other consumer goods	2	63
	Civil engineering	0	16
Unclassified		0	2

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	20	39
	Audio-visual technology	15	38
	Telecommunications	21	48
	Digital communication	13	190
	Basic communication processes	4	6

	Computer technology	24	117
	IT methods for management	21	33
	Semiconductors	1	7
Instruments	Optics	12	21
	Measurement	25	96
	Analysis of biological materials	7	18
	Control	9	17
	Medical technology	115	139
Chemistry	Organic fine chemistry	20	39
	Biotechnology	51	67
	Pharmaceuticals	74	99
	Macromolecular chemistry, polymers	9	20
	Food chemistry	14	26
	Basic materials chemistry	24	31
	Materials, metallurgy	12	27
	Surface technology, coating	20	24
	Micro-structural and nano-technology	2	3
	Chemical engineering	29	48
	Environmental technology	11	24
Mechanical engineering	Handling	23	25
	Machine tools	8	31
	Engines, pumps, turbines	22	73
	Textile and paper machines	3	8
	Other special machines	38	59
	Thermal processes and apparatus	14	22
	Mechanical elements	11	32
	Transport	37	73
Other fields	Furniture, games	34	24
	Other consumer goods	14	23
	Civil engineering	60	80
Unclassified		1	5

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	274	30
	Audio-visual technology	236	11
	Telecommunications	502	28
	Digital communication	1967	54
	Basic communication processes	57	2
	Computer technology	719	63
	IT methods for management	79	20
	Semiconductors	70	9
Instruments	Optics	138	23
	Measurement	165	55
	Analysis of biological materials	7	9
	Control	62	15
	Medical technology	147	307
Chemistry	Organic fine chemistry	123	20
	Biotechnology	74	48
	Pharmaceuticals	128	116

	Macromolecular chemistry, polymers	27	4
	Food chemistry	8	9
	Basic materials chemistry	54	18
	Materials, metallurgy	71	11
	Surface technology, coating	45	8
	Micro-structural and nano-technology	5	3
	Chemical engineering	56	24
	Environmental technology	17	9
Mechanical engineering	Handling	47	17
	Machine tools	44	35
	Engines, pumps, turbines	41	6
	Textile and paper machines	35	15
	Other special machines	69	44
	Thermal processes and apparatus	42	10
	Mechanical elements	63	12
	Transport	105	23
Other fields	Furniture, games	94	12
	Other consumer goods	109	18
	Civil engineering	48	15
Unclassified		0	0

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	1.939	669
	Audio-visual technology	647	568
	Telecommunications	493	354
	Digital communication	1144	913
	Basic communication processes	140	33
	Computer technology	1202	784
	IT methods for management	189	123
	Semiconductors	631	319
Instruments	Optics	1010	281
	Measurement	1031	151
	Analysis of biological materials	95	20
	Control	273	58
	Medical technology	1197	216
Chemistry	Organic fine chemistry	586	115
	Biotechnology	360	92
	Pharmaceuticals	374	150
	Macromolecular chemistry, polymers	714	117
	Food chemistry	140	22
	Basic materials chemistry	660	94
	Materials, metallurgy	752	98
	Surface technology, coating	531	63
	Micro-structural and nano-technology	20	2
	Chemical engineering	449	99
	Environmental technology	362	35
Mechanical engineering	Handling	355	30
	Machine tools	635	40
	Engines, pumps, turbines	929	88

	Textile and paper machines	558	26
	Other special machines	577	58
	Thermal processes and apparatus	421	167
	Mechanical elements	568	41
	Transport	1826	162
Other fields	Furniture, games	148	111
	Other consumer goods	223	243
	Civil engineering	208	53
Unclassified		34	12

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	115	1.749
	Audio-visual technology	116	1037
	Telecommunications	59	924
	Digital communication	170	3100
	Basic communication processes	32	325
	Computer technology	110	4087
	IT methods for management	16	915
	Semiconductors	61	568
Instruments	Optics	35	737
	Measurement	22	2003
	Analysis of biological materials	1	388
	Control	15	683
	Medical technology	72	5188
Chemistry	Organic fine chemistry	12	1792
	Biotechnology	21	1812
	Pharmaceuticals	47	2257
	Macromolecular chemistry, polymers	5	871
	Food chemistry	3	422
	Basic materials chemistry	5	1525
	Materials, metallurgy	6	711
	Surface technology, coating	10	648
	Micro-structural and nano-technology	0	73
	Chemical engineering	15	971
	Environmental technology	5	371
Mechanical engineering	Handling	8	764
	Machine tools	34	672
	Engines, pumps, turbines	33	2064
	Textile and paper machines	15	435
	Other special machines	34	1015
	Thermal processes and apparatus	10	299
	Mechanical elements	30	742
	Transport	59	1239
Other fields	Furniture, games	48	560
	Other consumer goods	17	656
	Civil engineering	20	960
Unclassified		3	34

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	147	9.794
	Audio-visual technology	56	4045
	Telecommunications	41	3716
	Digital communication	117	11001
	Basic communication processes	21	1024
	Computer technology	216	10359
	IT methods for management	62	2060
	Semiconductors	44	2722
Instruments	Optics	36	3498
	Measurement	97	7739
	Analysis of biological materials	21	1269
	Control	38	2492
	Medical technology	232	12531
Chemistry	Organic fine chemistry	214	6447
	Biotechnology	145	5724
	Pharmaceuticals	224	6055
	Macromolecular chemistry, polymers	83	3625
	Food chemistry	28	1710
	Basic materials chemistry	88	4872
	Materials, metallurgy	66	3254
	Surface technology, coating	28	2509
	Micro-structural and nano-technology	2	191
	Chemical engineering	108	3827
	Environmental technology	25	1987
Mechanical engineering	Handling	44	4018
	Machine tools	28	3507
	Engines, pumps, turbines	64	6334
	Textile and paper machines	14	2249
	Other special machines	86	5152
	Thermal processes and apparatus	46	2547
	Mechanical elements	39	4035
	Transport	72	8108
Other fields	Furniture, games	62	2969
	Other consumer goods	55	3418
	Civil engineering	101	4816
Unclassified		85	400

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2016 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	199
	Audio-visual technology	0	43
	Telecommunications	0	13
	Digital communication	0	36
	Basic communication processes	0	9
	Computer technology	0	54
	IT methods for management	0	10
	Semiconductors	0	50
Instruments	Optics	0	27
	Measurement	0	91
	Analysis of biological materials	0	17
	Control	0	39
	Medical technology	0	94
Chemistry	Organic fine chemistry	0	19
	Biotechnology	0	51
	Pharmaceuticals	0	53
	Macromolecular chemistry, polymers	0	116
	Food chemistry	0	8
	Basic materials chemistry	0	32
	Materials, metallurgy	0	57
	Surface technology, coating	0	43
	Micro-structural and nano-technology	0	2
	Chemical engineering	0	61
	Environmental technology	0	31
Mechanical engineering	Handling	0	79
	Machine tools	0	96
	Engines, pumps, turbines	1	23
	Textile and paper machines	0	38
	Other special machines	0	122
	Thermal processes and apparatus	0	44
	Mechanical elements	0	71
	Transport	0	112
Other fields	Furniture, games	0	112
	Other consumer goods	0	41
	Civil engineering	1	126
Unclassified		0	5

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	91	6
	Audio-visual technology	36	0
	Telecommunications	10	1
	Digital communication	33	2
	Basic communication processes	6	0
	Computer technology	76	1
	IT methods for management	25	0

	Semiconductors	79	0
Instruments	Optics	64	0
	Measurement	102	0
	Analysis of biological materials	31	0
	Control	19	1
	Medical technology	113	1
Chemistry	Organic fine chemistry	150	0
	Biotechnology	152	0
	Pharmaceuticals	124	1
	Macromolecular chemistry, polymers	54	0
	Food chemistry	51	0
	Basic materials chemistry	69	0
	Materials, metallurgy	101	1
	Surface technology, coating	48	0
	Micro-structural and nano-technology	5	0
	Chemical engineering	65	0
	Environmental technology	37	0
Mechanical engineering	Handling	44	0
	Machine tools	22	1
	Engines, pumps, turbines	47	2
	Textile and paper machines	59	1
	Other special machines	202	1
	Thermal processes and apparatus	26	0
	Mechanical elements	26	0
	Transport	63	0
Other fields	Furniture, games	33	0
	Other consumer goods	39	0
	Civil engineering	99	1
Unclassified		10	0

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	500	2
	Audio-visual technology	73	0
	Telecommunications	28	1
	Digital communication	132	2
	Basic communication processes	25	0
	Computer technology	197	5
	IT methods for management	56	2
	Semiconductors	71	0
Instruments	Optics	72	0
	Measurement	678	0
	Analysis of biological materials	67	1
	Control	130	0
	Medical technology	614	3
Chemistry	Organic fine chemistry	517	1
	Biotechnology	395	1
	Pharmaceuticals	432	5
	Macromolecular chemistry, polymers	149	0
	Food chemistry	252	0

	Basic materials chemistry	167	0
	Materials, metallurgy	121	1
	Surface technology, coating	103	2
	Micro-structural and nano-technology	15	0
	Chemical engineering	177	1
	Environmental technology	65	0
Mechanical engineering	Handling	525	5
	Machine tools	138	0
	Engines, pumps, turbines	139	0
	Textile and paper machines	140	0
	Other special machines	217	0
	Thermal processes and apparatus	81	0
	Mechanical elements	111	0
	Transport	153	1
Other fields	Furniture, games	187	2
	Other consumer goods	357	1
	Civil engineering	208	0
Unclassified		10	0

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	9	1851
	Audio-visual technology	1	262
	Telecommunications	2	232
	Digital communication	0	521
	Basic communication processes	0	94
	Computer technology	5	734
	IT methods for management	0	145
	Semiconductors	0	271
Instruments	Optics	4	302
	Measurement	8	1383
	Analysis of biological materials	3	232
	Control	0	529
	Medical technology	17	1295
Chemistry	Organic fine chemistry	14	1322
	Biotechnology	11	675
	Pharmaceuticals	10	534
	Macromolecular chemistry, polymers	4	785
	Food chemistry	1	127
	Basic materials chemistry	5	1011
	Materials, metallurgy	10	557
	Surface technology, coating	4	444
	Micro-structural and nano-technology	0	15
	Chemical engineering	5	799
	Environmental technology	1	349
Mechanical engineering	Handling	4	860
	Machine tools	9	967
	Engines, pumps, turbines	8	1280
	Textile and paper machines	7	425
	Other special machines	4	1187

	Thermal processes and apparatus	7	521
	Mechanical elements	6	1151
	Transport	13	1952
Other fields	Furniture, games	1	494
	Other consumer goods	6	521
	Civil engineering	9	1039
Unclassified		1	66

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	74	0
	Audio-visual technology	137	0
	Telecommunications	15	0
	Digital communication	19	2
	Basic communication processes	4	0
	Computer technology	49	6
	IT methods for management	7	5
	Semiconductors	6	0
Instruments	Optics	12	0
	Measurement	73	0
	Analysis of biological materials	11	0
	Control	20	4
	Medical technology	197	4
Chemistry	Organic fine chemistry	41	0
	Biotechnology	227	2
	Pharmaceuticals	135	1
	Macromolecular chemistry, polymers	8	0
	Food chemistry	78	1
	Basic materials chemistry	62	0
	Materials, metallurgy	15	1
	Surface technology, coating	12	1
	Micro-structural and nano-technology	1	0
	Chemical engineering	64	2
	Environmental technology	27	1
Mechanical engineering	Handling	54	0
	Machine tools	4	0
	Engines, pumps, turbines	129	1
	Textile and paper machines	15	1
	Other special machines	100	2
	Thermal processes and apparatus	27	0
	Mechanical elements	51	0
	Transport	24	1
Other fields	Furniture, games	27	2
	Other consumer goods	7	3
	Civil engineering	107	3
Unclassified		16	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	78	72
	Audio-visual technology	19	74

	Telecommunications	23	69
	Digital communication	31	348
	Basic communication processes	0	20
	Computer technology	39	153
	IT methods for management	13	22
	Semiconductors	5	26
Instruments	Optics	18	21
	Measurement	53	52
	Analysis of biological materials	32	8
	Control	32	16
	Medical technology	86	85
Chemistry	Organic fine chemistry	91	13
	Biotechnology	99	36
	Pharmaceuticals	117	20
	Macromolecular chemistry, polymers	16	17
	Food chemistry	27	17
	Basic materials chemistry	47	33
	Materials, metallurgy	49	41
	Surface technology, coating	18	26
	Micro-structural and nano-technology	0	5
	Chemical engineering	43	51
	Environmental technology	22	36
Mechanical engineering	Handling	90	136
	Machine tools	36	26
	Engines, pumps, turbines	47	37
	Textile and paper machines	15	51
	Other special machines	69	51
	Thermal processes and apparatus	30	32
	Mechanical elements	31	24
	Transport	122	55
Other fields	Furniture, games	38	29
	Other consumer goods	31	12
	Civil engineering	96	80
Unclassified		11	2

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	674	275
	Audio-visual technology	296	70
	Telecommunications	248	101
	Digital communication	608	263
	Basic communication processes	73	13
	Computer technology	645	319
	IT methods for management	89	66
	Semiconductors	193	43
Instruments	Optics	229	80
	Measurement	608	316
	Analysis of biological materials	117	76
	Control	167	89

	Medical technology	484	344
Chemistry	Organic fine chemistry	416	279
	Biotechnology	472	221
	Pharmaceuticals	433	201
	Macromolecular chemistry, polymers	177	45
	Food chemistry	71	49
	Basic materials chemistry	205	199
	Materials, metallurgy	236	99
	Surface technology, coating	145	64
	Micro-structural and nano-technology	18	3
	Chemical engineering	249	149
	Environmental technology	136	84
Mechanical engineering	Handling	228	103
	Machine tools	134	59
	Engines, pumps, turbines	390	231
	Textile and paper machines	83	42
	Other special machines	373	164
	Thermal processes and apparatus	169	68
	Mechanical elements	336	169
	Transport	1026	352
Other fields	Furniture, games	144	142
	Other consumer goods	209	194
	Civil engineering	377	196
Unclassified		26	7

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	0	2
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	1
	Basic communication processes	0	0
	Computer technology	2	4
	IT methods for management	0	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	1
	Analysis of biological materials	0	1
	Control	1	1
	Medical technology	4	1
Chemistry	Organic fine chemistry	3	1
	Biotechnology	1	0
	Pharmaceuticals	14	0
	Macromolecular chemistry, polymers	1	0
	Food chemistry	2	1
	Basic materials chemistry	1	0
	Materials, metallurgy	0	0
	Surface technology, coating	5	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	3	0

	Environmental technology	0	1
Mechanical engineering	Handling	2	0
	Machine tools	11	0
	Engines, pumps, turbines	3	0
	Textile and paper machines	0	1
	Other special machines	4	0
	Thermal processes and apparatus	0	0
	Mechanical elements	3	0
	Transport	4	0
Other fields	Furniture, games	2	1
	Other consumer goods	0	0
	Civil engineering	5	0
Unclassified		4	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	2	44
	Audio-visual technology	4	17
	Telecommunications	0	18
	Digital communication	2	35
	Basic communication processes	0	1
	Computer technology	4	60
	IT methods for management	1	37
	Semiconductors	0	2
Instruments	Optics	2	4
	Measurement	6	24
	Analysis of biological materials	1	17
	Control	1	16
	Medical technology	8	132
Chemistry	Organic fine chemistry	9	49
	Biotechnology	7	35
	Pharmaceuticals	10	55
	Macromolecular chemistry, polymers	3	2
	Food chemistry	1	10
	Basic materials chemistry	3	8
	Materials, metallurgy	0	2
	Surface technology, coating	0	8
	Micro-structural and nano-technology	0	0
	Chemical engineering	5	21
	Environmental technology	1	7
Mechanical engineering	Handling	4	11
	Machine tools	0	5
	Engines, pumps, turbines	3	15
	Textile and paper machines	1	6
	Other special machines	8	15
	Thermal processes and apparatus	0	8
	Mechanical elements	2	10
	Transport	4	15
Other fields	Furniture, games	6	6
	Other consumer goods	0	14

	Civil engineering	5	13
Unclassified		4	5

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	0	183
	Audio-visual technology	0	30
	Telecommunications	0	23
	Digital communication	0	39
	Basic communication processes	0	14
	Computer technology	2	45
	IT methods for management	0	20
	Semiconductors	0	30
Instruments	Optics	0	39
	Measurement	1	137
	Analysis of biological materials	2	23
	Control	0	52
	Medical technology	16	253
Chemistry	Organic fine chemistry	1	124
	Biotechnology	1	68
	Pharmaceuticals	2	124
	Macromolecular chemistry, polymers	0	113
	Food chemistry	1	64
	Basic materials chemistry	0	58
	Materials, metallurgy	0	48
	Surface technology, coating	0	57
	Micro-structural and nano-technology	0	7
	Chemical engineering	1	125
	Environmental technology	0	56
Mechanical engineering	Handling	0	325
	Machine tools	1	177
	Engines, pumps, turbines	0	206
	Textile and paper machines	1	99
	Other special machines	7	264
	Thermal processes and apparatus	0	152
	Mechanical elements	0	189
	Transport	2	324
Other fields	Furniture, games	0	217
	Other consumer goods	1	190
	Civil engineering	0	237
Unclassified		0	42

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	19	0
	Audio-visual technology	0	0
	Telecommunications	0	1
	Digital communication	1	0
	Basic communication processes	0	0
	Computer technology	1	0
	IT methods for management	0	0

	Semiconductors	1	0
Instruments	Optics	3	1
	Measurement	10	0
	Analysis of biological materials	0	0
	Control	2	2
	Medical technology	17	2
Chemistry	Organic fine chemistry	1	0
	Biotechnology	4	10
	Pharmaceuticals	12	0
	Macromolecular chemistry, polymers	5	1
	Food chemistry	0	1
	Basic materials chemistry	9	4
	Materials, metallurgy	7	0
	Surface technology, coating	7	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	5	0
Mechanical engineering	Handling	3	0
	Machine tools	124	0
	Engines, pumps, turbines	19	0
	Textile and paper machines	0	0
	Other special machines	16	1
	Thermal processes and apparatus	1	1
	Mechanical elements	54	0
	Transport	28	0
Other fields	Furniture, games	3	1
	Other consumer goods	1	0
	Civil engineering	20	0
Unclassified		1	1

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	23	0
	Audio-visual technology	5	1
	Telecommunications	14	0
	Digital communication	11	0
	Basic communication processes	2	0
	Computer technology	10	0
	IT methods for management	2	0
	Semiconductors	2	1
Instruments	Optics	9	1
	Measurement	10	0
	Analysis of biological materials	5	0
	Control	3	0
	Medical technology	56	0
Chemistry	Organic fine chemistry	9	2
	Biotechnology	9	1
	Pharmaceuticals	25	1
	Macromolecular chemistry, polymers	11	0
	Food chemistry	6	0

	Basic materials chemistry	10	0
	Materials, metallurgy	27	0
	Surface technology, coating	15	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	6	0
	Environmental technology	9	0
Mechanical engineering	Handling	11	0
	Machine tools	21	0
	Engines, pumps, turbines	57	1
	Textile and paper machines	7	0
	Other special machines	25	1
	Thermal processes and apparatus	4	0
	Mechanical elements	14	0
	Transport	86	2
Other fields	Furniture, games	5	0
	Other consumer goods	12	0
	Civil engineering	25	0
Unclassified		10	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	0	0
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	1	0
Chemistry	Organic fine chemistry	1	0
	Biotechnology	3	0
	Pharmaceuticals	12	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	1	0
	Basic materials chemistry	3	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	2	0
	Machine tools	0	0
	Engines, pumps, turbines	1	0

	Textile and paper machines	0	0
	Other special machines	1	0
	Thermal processes and apparatus	0	0
	Mechanical elements	2	0
	Transport	2	0
Other fields	Furniture, games	0	0
	Other consumer goods	0	1
	Civil engineering	3	0
Unclassified		0	4

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	0	626
	Audio-visual technology	0	133
	Telecommunications	0	125
	Digital communication	0	208
	Basic communication processes	0	54
	Computer technology	1	454
	IT methods for management	0	38
	Semiconductors	0	144
Instruments	Optics	0	308
	Measurement	6	426
	Analysis of biological materials	0	47
	Control	2	50
	Medical technology	33	867
Chemistry	Organic fine chemistry	4	267
	Biotechnology	1	249
	Pharmaceuticals	4	173
	Macromolecular chemistry, polymers	0	288
	Food chemistry	0	249
	Basic materials chemistry	1	304
	Materials, metallurgy	1	60
	Surface technology, coating	6	68
	Micro-structural and nano-technology	0	5
	Chemical engineering	0	174
	Environmental technology	0	97
Mechanical engineering	Handling	1	156
	Machine tools	4	70
	Engines, pumps, turbines	0	40
	Textile and paper machines	2	159
	Other special machines	0	306
	Thermal processes and apparatus	0	71
	Mechanical elements	0	61
	Transport	0	133
Other fields	Furniture, games	3	138
	Other consumer goods	3	121
	Civil engineering	1	184
Unclassified		1	7

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	11	14
	Audio-visual technology	3	2
	Telecommunications	2	3
	Digital communication	10	5
	Basic communication processes	2	1
	Computer technology	24	17
	IT methods for management	4	6
	Semiconductors	5	2
Instruments	Optics	4	4
	Measurement	59	10
	Analysis of biological materials	4	4
	Control	11	6
	Medical technology	23	22
Chemistry	Organic fine chemistry	7	22
	Biotechnology	13	13
	Pharmaceuticals	46	20
	Macromolecular chemistry, polymers	5	7
	Food chemistry	6	6
	Basic materials chemistry	22	9
	Materials, metallurgy	15	21
	Surface technology, coating	2	8
	Micro-structural and nano-technology	0	0
	Chemical engineering	18	9
	Environmental technology	16	9
Mechanical engineering	Handling	22	11
	Machine tools	5	8
	Engines, pumps, turbines	14	9
	Textile and paper machines	1	6
	Other special machines	30	17
	Thermal processes and apparatus	7	10
	Mechanical elements	12	8
	Transport	29	32
Other fields	Furniture, games	14	2
	Other consumer goods	7	18
	Civil engineering	70	37
Unclassified		0	15

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	8	2
	Audio-visual technology	2	0
	Telecommunications	3	0
	Digital communication	6	1
	Basic communication processes	0	0
	Computer technology	7	0
	IT methods for management	1	0
	Semiconductors	1	0
Instruments	Optics	0	0
	Measurement	8	1

	Analysis of biological materials	1	0
	Control	3	1
	Medical technology	6	3
Chemistry	Organic fine chemistry	9	0
	Biotechnology	9	0
	Pharmaceuticals	12	1
	Macromolecular chemistry, polymers	2	0
	Food chemistry	2	0
	Basic materials chemistry	4	0
	Materials, metallurgy	2	3
	Surface technology, coating	0	1
	Micro-structural and nano-technology	0	0
	Chemical engineering	8	1
	Environmental technology	0	1
Mechanical engineering	Handling	9	2
	Machine tools	2	1
	Engines, pumps, turbines	3	2
	Textile and paper machines	3	0
	Other special machines	4	4
	Thermal processes and apparatus	5	2
	Mechanical elements	0	2
	Transport	8	0
Other fields	Furniture, games	10	1
	Other consumer goods	8	0
	Civil engineering	11	2
Unclassified		0	0

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	0	105
	Audio-visual technology	0	76
	Telecommunications	0	172
	Digital communication	0	916
	Basic communication processes	0	37
	Computer technology	0	156
	IT methods for management	0	25
	Semiconductors	0	12
Instruments	Optics	0	20
	Measurement	0	124
	Analysis of biological materials	0	15
	Control	0	69
	Medical technology	0	204
Chemistry	Organic fine chemistry	0	42
	Biotechnology	0	76
	Pharmaceuticals	0	56
	Macromolecular chemistry, polymers	0	7
	Food chemistry	0	14
	Basic materials chemistry	0	18
	Materials, metallurgy	0	64
	Surface technology, coating	0	30

	Micro-structural and nano-technology	0	5
	Chemical engineering	0	101
	Environmental technology	0	40
Mechanical engineering	Handling	0	89
	Machine tools	0	115
	Engines, pumps, turbines	0	82
	Textile and paper machines	0	23
	Other special machines	0	103
	Thermal processes and apparatus	0	85
	Mechanical elements	0	93
	Transport	1	294
Other fields	Furniture, games	0	65
	Other consumer goods	0	98
	Civil engineering	0	115
Unclassified		0	1

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	9	1
	Audio-visual technology	1	1
	Telecommunications	0	0
	Digital communication	0	1
	Basic communication processes	1	0
	Computer technology	4	0
	IT methods for management	2	1
	Semiconductors	0	0
Instruments	Optics	1	0
	Measurement	3	3
	Analysis of biological materials	1	2
	Control	0	0
	Medical technology	8	0
Chemistry	Organic fine chemistry	14	2
	Biotechnology	4	0
	Pharmaceuticals	5	0
	Macromolecular chemistry, polymers	2	0
	Food chemistry	1	0
	Basic materials chemistry	3	0
	Materials, metallurgy	3	3
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	9	1
	Environmental technology	3	1
Mechanical engineering	Handling	7	4
	Machine tools	1	2
	Engines, pumps, turbines	3	2
	Textile and paper machines	0	0
	Other special machines	5	6
	Thermal processes and apparatus	5	2
	Mechanical elements	2	0
	Transport	2	7

Other fields	Furniture, games	3	1
	Other consumer goods	6	1
	Civil engineering	5	2
Unclassified		0	1

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	1	34
	Audio-visual technology	0	8
	Telecommunications	0	6
	Digital communication	0	16
	Basic communication processes	0	2
	Computer technology	1	23
	IT methods for management	0	4
	Semiconductors	0	2
Instruments	Optics	0	2
	Measurement	0	10
	Analysis of biological materials	0	2
	Control	0	7
	Medical technology	0	23
Chemistry	Organic fine chemistry	0	5
	Biotechnology	0	3
	Pharmaceuticals	0	23
	Macromolecular chemistry, polymers	0	5
	Food chemistry	0	3
	Basic materials chemistry	0	14
	Materials, metallurgy	0	4
	Surface technology, coating	0	4
	Micro-structural and nano-technology	0	1
	Chemical engineering	1	8
	Environmental technology	1	1
Mechanical engineering	Handling	2	11
	Machine tools	1	7
	Engines, pumps, turbines	0	18
	Textile and paper machines	0	13
	Other special machines	0	12
	Thermal processes and apparatus	1	42
	Mechanical elements	0	11
	Transport	0	40
Other fields	Furniture, games	0	34
	Other consumer goods	1	97
	Civil engineering	1	21
Unclassified		0	7

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	18	57
	Audio-visual technology	8	35
	Telecommunications	9	29
	Digital communication	15	123
	Basic communication processes	1	4

	Computer technology	34	110
	IT methods for management	24	33
	Semiconductors	6	6
Instruments	Optics	4	34
	Measurement	18	60
	Analysis of biological materials	7	8
	Control	10	33
	Medical technology	125	145
Chemistry	Organic fine chemistry	14	39
	Biotechnology	51	76
	Pharmaceuticals	64	119
	Macromolecular chemistry, polymers	2	15
	Food chemistry	13	6
	Basic materials chemistry	24	38
	Materials, metallurgy	11	25
	Surface technology, coating	13	27
	Micro-structural and nano-technology	1	4
	Chemical engineering	22	46
	Environmental technology	17	20
Mechanical engineering	Handling	14	26
	Machine tools	12	27
	Engines, pumps, turbines	12	77
	Textile and paper machines	4	7
	Other special machines	33	76
	Thermal processes and apparatus	8	9
	Mechanical elements	9	34
	Transport	30	95
Other fields	Furniture, games	39	35
	Other consumer goods	22	23
	Civil engineering	60	69
Unclassified		3	2

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	408	37
	Audio-visual technology	312	15
	Telecommunications	547	34
	Digital communication	2103	35
	Basic communication processes	64	1
	Computer technology	908	104
	IT methods for management	99	13
	Semiconductors	167	10
Instruments	Optics	187	26
	Measurement	149	69
	Analysis of biological materials	12	11
	Control	107	21
	Medical technology	174	334
Chemistry	Organic fine chemistry	143	14
	Biotechnology	101	59
	Pharmaceuticals	158	99

	Macromolecular chemistry, polymers	42	3
	Food chemistry	13	11
	Basic materials chemistry	54	24
	Materials, metallurgy	75	8
	Surface technology, coating	41	6
	Micro-structural and nano-technology	6	2
	Chemical engineering	83	35
	Environmental technology	44	3
Mechanical engineering	Handling	58	11
	Machine tools	58	30
	Engines, pumps, turbines	86	6
	Textile and paper machines	32	21
	Other special machines	74	61
	Thermal processes and apparatus	76	7
	Mechanical elements	71	13
	Transport	201	27
Other fields	Furniture, games	156	16
	Other consumer goods	191	25
	Civil engineering	90	21
Unclassified		2	3

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	1813	721
	Audio-visual technology	595	443
	Telecommunications	495	311
	Digital communication	1199	898
	Basic communication processes	131	30
	Computer technology	1237	852
	IT methods for management	250	120
	Semiconductors	480	313
Instruments	Optics	934	296
	Measurement	943	177
	Analysis of biological materials	113	20
	Control	321	79
	Medical technology	1176	279
Chemistry	Organic fine chemistry	575	142
	Biotechnology	369	119
	Pharmaceuticals	384	151
	Macromolecular chemistry, polymers	687	163
	Food chemistry	105	18
	Basic materials chemistry	550	74
	Materials, metallurgy	788	79
	Surface technology, coating	546	72
	Micro-structural and nano-technology	20	4
	Chemical engineering	387	116
	Environmental technology	296	54
Mechanical engineering	Handling	334	35
	Machine tools	613	45
	Engines, pumps, turbines	893	105

	Textile and paper machines	635	17
	Other special machines	638	76
	Thermal processes and apparatus	455	197
	Mechanical elements	622	36
	Transport	1775	169
Other fields	Furniture, games	173	122
	Other consumer goods	195	287
	Civil engineering	192	54
Unclassified		24	13

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	163	1598
	Audio-visual technology	112	991
	Telecommunications	62	879
	Digital communication	168	3028
	Basic communication processes	35	334
	Computer technology	107	4061
	IT methods for management	17	979
	Semiconductors	85	645
Instruments	Optics	31	683
	Measurement	31	1691
	Analysis of biological materials	8	354
	Control	20	605
	Medical technology	83	4653
Chemistry	Organic fine chemistry	20	1603
	Biotechnology	28	1680
	Pharmaceuticals	49	1962
	Macromolecular chemistry, polymers	12	761
	Food chemistry	1	290
	Basic materials chemistry	11	1171
	Materials, metallurgy	7	685
	Surface technology, coating	13	613
	Micro-structural and nano-technology	0	64
	Chemical engineering	17	842
	Environmental technology	5	299
Mechanical engineering	Handling	19	767
	Machine tools	25	695
	Engines, pumps, turbines	34	2186
	Textile and paper machines	11	449
	Other special machines	40	1105
	Thermal processes and apparatus	13	329
	Mechanical elements	26	739
	Transport	55	1231
Other fields	Furniture, games	63	563
	Other consumer goods	28	656
	Civil engineering	21	803
Unclassified		2	38

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	170	9900
	Audio-visual technology	72	3877
	Telecommunications	49	3525
	Digital communication	149	10967
	Basic communication processes	29	987
	Computer technology	261	10772
	IT methods for management	109	2226
	Semiconductors	26	2684
Instruments	Optics	49	3471
	Measurement	119	7460
	Analysis of biological materials	23	1276
	Control	42	2511
	Medical technology	397	12382
Chemistry	Organic fine chemistry	210	6195
	Biotechnology	145	5477
	Pharmaceuticals	202	5849
	Macromolecular chemistry, polymers	106	3614
	Food chemistry	35	1542
	Basic materials chemistry	139	4386
	Materials, metallurgy	69	3296
	Surface technology, coating	21	2473
	Micro-structural and nano-technology	3	186
	Chemical engineering	132	3837
	Environmental technology	36	1811
Mechanical engineering	Handling	56	4120
	Machine tools	33	3585
	Engines, pumps, turbines	78	6290
	Textile and paper machines	33	2408
	Other special machines	119	5543
	Thermal processes and apparatus	38	2533
	Mechanical elements	39	4028
	Transport	89	8559
Other fields	Furniture, games	76	2966
	Other consumer goods	66	3493
	Civil engineering	90	4499
Unclassified		15	359

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2017 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	215
	Audio-visual technology	0	66
	Telecommunications	0	16
	Digital communication	0	25
	Basic communication processes	0	22
	Computer technology	0	65
	IT methods for management	0	8
	Semiconductors	0	59
Instruments	Optics	0	36
	Measurement	0	105
	Analysis of biological materials	0	15
	Control	0	42
	Medical technology	0	91
Chemistry	Organic fine chemistry	0	23
	Biotechnology	0	70
	Pharmaceuticals	0	41
	Macromolecular chemistry, polymers	0	128
	Food chemistry	0	13
	Basic materials chemistry	0	33
	Materials, metallurgy	0	80
	Surface technology, coating	0	28
	Micro-structural and nano-technology	0	3
	Chemical engineering	0	35
	Environmental technology	0	18
Mechanical engineering	Handling	0	78
	Machine tools	0	99
	Engines, pumps, turbines	0	45
	Textile and paper machines	0	63
	Other special machines	0	112
	Thermal processes and apparatus	0	46
	Mechanical elements	0	57
	Transport	0	173
Other fields	Furniture, games	0	66
	Other consumer goods	0	57
	Civil engineering	0	173
Unclassified		0	3

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	96	5
	Audio-visual technology	34	0
	Telecommunications	22	0
	Digital communication	32	1
	Basic communication processes	10	0
	Computer technology	80	0
	IT methods for management	16	2

	Semiconductors	74	1
Instruments	Optics	92	0
	Measurement	93	1
	Analysis of biological materials	32	1
	Control	14	0
	Medical technology	147	3
Chemistry	Organic fine chemistry	125	0
	Biotechnology	144	1
	Pharmaceuticals	125	1
	Macromolecular chemistry, polymers	52	0
	Food chemistry	36	1
	Basic materials chemistry	63	0
	Materials, metallurgy	97	0
	Surface technology, coating	38	1
	Micro-structural and nano-technology	3	0
	Chemical engineering	61	0
	Environmental technology	39	2
Mechanical engineering	Handling	34	1
	Machine tools	27	2
	Engines, pumps, turbines	55	3
	Textile and paper machines	62	0
	Other special machines	158	1
	Thermal processes and apparatus	37	0
	Mechanical elements	32	3
	Transport	64	1
Other fields	Furniture, games	27	0
	Other consumer goods	34	1
	Civil engineering	93	0
Unclassified		4	0

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	492	4
	Audio-visual technology	47	0
	Telecommunications	29	0
	Digital communication	114	4
	Basic communication processes	33	0
	Computer technology	162	6
	IT methods for management	64	6
	Semiconductors	80	0
Instruments	Optics	71	0
	Measurement	689	1
	Analysis of biological materials	96	0
	Control	157	2
	Medical technology	605	1
Chemistry	Organic fine chemistry	473	0
	Biotechnology	427	4
	Pharmaceuticals	348	7
	Macromolecular chemistry, polymers	128	0
	Food chemistry	267	1

	Basic materials chemistry	186	1
	Materials, metallurgy	100	0
	Surface technology, coating	119	0
	Micro-structural and nano-technology	6	0
	Chemical engineering	190	0
	Environmental technology	67	1
Mechanical engineering	Handling	561	0
	Machine tools	129	0
	Engines, pumps, turbines	148	0
	Textile and paper machines	123	2
	Other special machines	206	3
	Thermal processes and apparatus	84	0
	Mechanical elements	136	0
	Transport	161	1
Other fields	Furniture, games	229	0
	Other consumer goods	414	3
	Civil engineering	195	2
Unclassified		18	0

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	12	1933
	Audio-visual technology	0	321
	Telecommunications	1	267
	Digital communication	1	617
	Basic communication processes	0	112
	Computer technology	3	856
	IT methods for management	0	167
	Semiconductors	0	311
Instruments	Optics	0	318
	Measurement	17	1445
	Analysis of biological materials	5	247
	Control	2	566
	Medical technology	15	1333
Chemistry	Organic fine chemistry	35	1296
	Biotechnology	9	674
	Pharmaceuticals	12	610
	Macromolecular chemistry, polymers	2	753
	Food chemistry	2	114
	Basic materials chemistry	3	971
	Materials, metallurgy	5	562
	Surface technology, coating	1	423
	Micro-structural and nano-technology	0	17
	Chemical engineering	6	757
	Environmental technology	6	350
Mechanical engineering	Handling	5	838
	Machine tools	5	1010
	Engines, pumps, turbines	2	1172
	Textile and paper machines	7	418
	Other special machines	6	1223

	Thermal processes and apparatus	8	469
	Mechanical elements	6	1145
	Transport	6	1866
Other fields	Furniture, games	4	548
	Other consumer goods	5	626
	Civil engineering	11	1078
Unclassified		4	126

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	74	3
	Audio-visual technology	133	1
	Telecommunications	15	0
	Digital communication	16	0
	Basic communication processes	15	0
	Computer technology	32	1
	IT methods for management	8	4
	Semiconductors	1	0
Instruments	Optics	10	0
	Measurement	88	2
	Analysis of biological materials	21	1
	Control	11	3
	Medical technology	231	3
Chemistry	Organic fine chemistry	59	0
	Biotechnology	283	2
	Pharmaceuticals	123	1
	Macromolecular chemistry, polymers	11	0
	Food chemistry	80	0
	Basic materials chemistry	68	1
	Materials, metallurgy	17	2
	Surface technology, coating	17	2
	Micro-structural and nano-technology	4	0
	Chemical engineering	58	3
	Environmental technology	39	0
Mechanical engineering	Handling	79	4
	Machine tools	12	0
	Engines, pumps, turbines	167	2
	Textile and paper machines	21	1
	Other special machines	96	3
	Thermal processes and apparatus	35	2
	Mechanical elements	47	1
	Transport	32	7
Other fields	Furniture, games	42	3
	Other consumer goods	17	1
	Civil engineering	115	1
Unclassified		12	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	122	63
	Audio-visual technology	15	60

	Telecommunications	18	96
	Digital communication	22	429
	Basic communication processes	4	17
	Computer technology	42	129
	IT methods for management	15	25
	Semiconductors	10	10
Instruments	Optics	14	32
	Measurement	57	64
	Analysis of biological materials	31	14
	Control	28	20
	Medical technology	116	80
Chemistry	Organic fine chemistry	138	15
	Biotechnology	106	29
	Pharmaceuticals	127	24
	Macromolecular chemistry, polymers	14	23
	Food chemistry	34	18
	Basic materials chemistry	42	27
	Materials, metallurgy	43	23
	Surface technology, coating	16	21
	Micro-structural and nano-technology	1	0
	Chemical engineering	42	61
	Environmental technology	23	28
Mechanical engineering	Handling	68	132
	Machine tools	38	33
	Engines, pumps, turbines	35	32
	Textile and paper machines	24	45
	Other special machines	77	37
	Thermal processes and apparatus	28	42
	Mechanical elements	31	19
	Transport	117	40
Other fields	Furniture, games	37	14
	Other consumer goods	22	13
	Civil engineering	105	76
Unclassified		9	6

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	698	261
	Audio-visual technology	271	88
	Telecommunications	191	116
	Digital communication	529	203
	Basic communication processes	50	21
	Computer technology	626	294
	IT methods for management	105	94
	Semiconductors	179	42
Instruments	Optics	233	78
	Measurement	548	322
	Analysis of biological materials	124	77
	Control	151	88

	Medical technology	607	374
Chemistry	Organic fine chemistry	444	310
	Biotechnology	514	269
	Pharmaceuticals	445	231
	Macromolecular chemistry, polymers	205	42
	Food chemistry	90	58
	Basic materials chemistry	230	196
	Materials, metallurgy	238	104
	Surface technology, coating	152	48
	Micro-structural and nano-technology	20	5
	Chemical engineering	262	145
	Environmental technology	147	80
Mechanical engineering	Handling	219	144
	Machine tools	141	79
	Engines, pumps, turbines	324	205
	Textile and paper machines	64	41
	Other special machines	450	137
	Thermal processes and apparatus	189	61
	Mechanical elements	349	254
	Transport	1043	317
Other fields	Furniture, games	136	129
	Other consumer goods	290	172
	Civil engineering	332	227
Unclassified		23	9

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	3	0
	Audio-visual technology	1	0
	Telecommunications	1	0
	Digital communication	4	0
	Basic communication processes	0	0
	Computer technology	2	0
	IT methods for management	0	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	1	0
	Medical technology	11	0
Chemistry	Organic fine chemistry	3	2
	Biotechnology	2	0
	Pharmaceuticals	15	1
	Macromolecular chemistry, polymers	0	0
	Food chemistry	2	0
	Basic materials chemistry	0	0
	Materials, metallurgy	2	0
	Surface technology, coating	10	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	2

	Environmental technology	2	1
Mechanical engineering	Handling	0	0
	Machine tools	24	0
	Engines, pumps, turbines	1	0
	Textile and paper machines	0	0
	Other special machines	5	0
	Thermal processes and apparatus	3	0
	Mechanical elements	0	0
	Transport	2	0
Other fields	Furniture, games	0	1
	Other consumer goods	3	2
	Civil engineering	3	0
Unclassified		2	1

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	7	46
	Audio-visual technology	3	16
	Telecommunications	0	8
	Digital communication	0	29
	Basic communication processes	0	3
	Computer technology	3	76
	IT methods for management	1	24
	Semiconductors	0	9
Instruments	Optics	1	10
	Measurement	3	33
	Analysis of biological materials	2	9
	Control	0	12
	Medical technology	9	97
Chemistry	Organic fine chemistry	9	34
	Biotechnology	4	41
	Pharmaceuticals	6	53
	Macromolecular chemistry, polymers	0	5
	Food chemistry	4	6
	Basic materials chemistry	1	16
	Materials, metallurgy	3	2
	Surface technology, coating	1	4
	Micro-structural and nano-technology	0	1
	Chemical engineering	2	16
	Environmental technology	1	4
Mechanical engineering	Handling	3	17
	Machine tools	1	2
	Engines, pumps, turbines	2	7
	Textile and paper machines	1	3
	Other special machines	8	21
	Thermal processes and apparatus	2	9
	Mechanical elements	4	4
	Transport	5	6
Other fields	Furniture, games	1	15
	Other consumer goods	0	9

	Civil engineering	4	13
Unclassified		4	0

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	0	176
	Audio-visual technology	0	25
	Telecommunications	0	28
	Digital communication	1	47
	Basic communication processes	0	8
	Computer technology	3	72
	IT methods for management	1	33
	Semiconductors	0	21
Instruments	Optics	0	55
	Measurement	2	178
	Analysis of biological materials	0	21
	Control	2	75
	Medical technology	25	277
Chemistry	Organic fine chemistry	0	119
	Biotechnology	0	75
	Pharmaceuticals	2	147
	Macromolecular chemistry, polymers	0	120
	Food chemistry	1	84
	Basic materials chemistry	0	63
	Materials, metallurgy	1	60
	Surface technology, coating	1	62
	Micro-structural and nano-technology	0	4
	Chemical engineering	3	99
	Environmental technology	1	66
Mechanical engineering	Handling	1	331
	Machine tools	0	181
	Engines, pumps, turbines	0	184
	Textile and paper machines	0	122
	Other special machines	8	264
	Thermal processes and apparatus	0	125
	Mechanical elements	0	201
	Transport	3	325
Other fields	Furniture, games	0	227
	Other consumer goods	0	162
	Civil engineering	1	276
Unclassified		0	47

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	24	0
	Audio-visual technology	0	0
	Telecommunications	1	1
	Digital communication	0	0
	Basic communication processes	1	0
	Computer technology	0	0
	IT methods for management	1	1

	Semiconductors	0	0
Instruments	Optics	1	1
	Measurement	15	1
	Analysis of biological materials	0	0
	Control	5	0
	Medical technology	18	2
Chemistry	Organic fine chemistry	1	1
	Biotechnology	0	6
	Pharmaceuticals	7	2
	Macromolecular chemistry, polymers	18	0
	Food chemistry	0	2
	Basic materials chemistry	8	1
	Materials, metallurgy	8	0
	Surface technology, coating	3	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	1	0
	Environmental technology	5	0
Mechanical engineering	Handling	1	1
	Machine tools	124	3
	Engines, pumps, turbines	21	0
	Textile and paper machines	1	0
	Other special machines	20	0
	Thermal processes and apparatus	4	1
	Mechanical elements	37	0
	Transport	26	1
Other fields	Furniture, games	6	0
	Other consumer goods	2	0
	Civil engineering	21	0
Unclassified		0	0

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	15	2
	Audio-visual technology	9	2
	Telecommunications	16	0
	Digital communication	13	0
	Basic communication processes	3	0
	Computer technology	12	0
	IT methods for management	3	0
	Semiconductors	3	0
Instruments	Optics	14	0
	Measurement	5	1
	Analysis of biological materials	1	0
	Control	0	0
	Medical technology	42	0
Chemistry	Organic fine chemistry	2	0
	Biotechnology	9	0
	Pharmaceuticals	19	0
	Macromolecular chemistry, polymers	5	0
	Food chemistry	8	0

	Basic materials chemistry	5	0
	Materials, metallurgy	32	1
	Surface technology, coating	22	1
	Micro-structural and nano-technology	2	0
	Chemical engineering	7	0
	Environmental technology	15	0
Mechanical engineering	Handling	11	2
	Machine tools	7	0
	Engines, pumps, turbines	80	0
	Textile and paper machines	10	0
	Other special machines	19	2
	Thermal processes and apparatus	10	1
	Mechanical elements	12	0
	Transport	62	0
Other fields	Furniture, games	2	1
	Other consumer goods	22	0
	Civil engineering	31	1
Unclassified		5	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	0	0
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	1	0
Chemistry	Organic fine chemistry	0	0
	Biotechnology	3	0
	Pharmaceuticals	14	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	0	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	0	0
	Machine tools	0	0
	Engines, pumps, turbines	0	0

	Textile and paper machines	0	0
	Other special machines	2	0
	Thermal processes and apparatus	0	0
	Mechanical elements	0	0
	Transport	3	0
Other fields	Furniture, games	2	0
	Other consumer goods	0	0
	Civil engineering	5	0
Unclassified		0	5

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	4	607
	Audio-visual technology	0	138
	Telecommunications	0	104
	Digital communication	1	219
	Basic communication processes	0	59
	Computer technology	3	451
	IT methods for management	4	40
	Semiconductors	0	159
Instruments	Optics	0	412
	Measurement	6	419
	Analysis of biological materials	0	45
	Control	4	75
	Medical technology	17	824
Chemistry	Organic fine chemistry	2	335
	Biotechnology	1	311
	Pharmaceuticals	3	189
	Macromolecular chemistry, polymers	1	283
	Food chemistry	0	220
	Basic materials chemistry	1	304
	Materials, metallurgy	1	54
	Surface technology, coating	3	77
	Micro-structural and nano-technology	0	8
	Chemical engineering	4	145
	Environmental technology	0	93
Mechanical engineering	Handling	1	141
	Machine tools	3	79
	Engines, pumps, turbines	2	48
	Textile and paper machines	0	132
	Other special machines	0	331
	Thermal processes and apparatus	0	80
	Mechanical elements	0	57
	Transport	0	119
Other fields	Furniture, games	1	120
	Other consumer goods	5	125
	Civil engineering	2	180
Unclassified		0	60

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	12	22
	Audio-visual technology	6	1
	Telecommunications	3	6
	Digital communication	4	7
	Basic communication processes	6	0
	Computer technology	22	10
	IT methods for management	4	5
	Semiconductors	4	2
Instruments	Optics	7	3
	Measurement	44	16
	Analysis of biological materials	11	5
	Control	7	5
	Medical technology	25	39
Chemistry	Organic fine chemistry	8	23
	Biotechnology	24	23
	Pharmaceuticals	40	20
	Macromolecular chemistry, polymers	5	8
	Food chemistry	16	7
	Basic materials chemistry	27	14
	Materials, metallurgy	9	10
	Surface technology, coating	5	6
	Micro-structural and nano-technology	0	0
	Chemical engineering	19	12
	Environmental technology	11	6
Mechanical engineering	Handling	16	10
	Machine tools	10	13
	Engines, pumps, turbines	10	12
	Textile and paper machines	3	3
	Other special machines	27	14
	Thermal processes and apparatus	3	26
	Mechanical elements	19	12
	Transport	31	35
Other fields	Furniture, games	13	6
	Other consumer goods	7	24
	Civil engineering	72	22
Unclassified		1	19

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	7	1
	Audio-visual technology	2	0
	Telecommunications	3	1
	Digital communication	4	0
	Basic communication processes	0	0
	Computer technology	8	1
	IT methods for management	1	0
	Semiconductors	1	0
Instruments	Optics	2	0
	Measurement	12	0

	Analysis of biological materials	2	0
	Control	4	2
	Medical technology	10	3
Chemistry	Organic fine chemistry	8	0
	Biotechnology	6	2
	Pharmaceuticals	7	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	2	1
	Basic materials chemistry	3	1
	Materials, metallurgy	4	0
	Surface technology, coating	5	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	3	4
	Environmental technology	2	0
Mechanical engineering	Handling	11	0
	Machine tools	2	0
	Engines, pumps, turbines	3	1
	Textile and paper machines	1	0
	Other special machines	8	1
	Thermal processes and apparatus	4	0
	Mechanical elements	5	6
	Transport	2	20
Other fields	Furniture, games	4	0
	Other consumer goods	2	3
	Civil engineering	11	4
Unclassified		1	1

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	0	92
	Audio-visual technology	0	82
	Telecommunications	0	193
	Digital communication	0	1188
	Basic communication processes	0	47
	Computer technology	0	155
	IT methods for management	0	21
	Semiconductors	0	17
Instruments	Optics	0	24
	Measurement	1	126
	Analysis of biological materials	0	15
	Control	0	68
	Medical technology	0	193
Chemistry	Organic fine chemistry	0	51
	Biotechnology	0	69
	Pharmaceuticals	0	96
	Macromolecular chemistry, polymers	0	15
	Food chemistry	0	16
	Basic materials chemistry	0	16
	Materials, metallurgy	0	55
	Surface technology, coating	0	29

	Micro-structural and nano-technology	0	1
	Chemical engineering	2	62
	Environmental technology	0	45
Mechanical engineering	Handling	3	68
	Machine tools	0	97
	Engines, pumps, turbines	0	82
	Textile and paper machines	0	33
	Other special machines	1	94
	Thermal processes and apparatus	0	93
	Mechanical elements	0	113
	Transport	1	251
Other fields	Furniture, games	0	66
	Other consumer goods	0	71
	Civil engineering	0	135
Unclassified		2	4

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	10	2
	Audio-visual technology	1	1
	Telecommunications	2	1
	Digital communication	1	0
	Basic communication processes	0	0
	Computer technology	1	0
	IT methods for management	0	1
	Semiconductors	0	0
Instruments	Optics	1	0
	Measurement	4	2
	Analysis of biological materials	1	0
	Control	2	0
	Medical technology	4	1
Chemistry	Organic fine chemistry	8	2
	Biotechnology	6	1
	Pharmaceuticals	12	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	1	1
	Basic materials chemistry	2	1
	Materials, metallurgy	4	1
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0
	Environmental technology	0	1
Mechanical engineering	Handling	0	1
	Machine tools	0	0
	Engines, pumps, turbines	2	1
	Textile and paper machines	0	0
	Other special machines	5	1
	Thermal processes and apparatus	4	2
	Mechanical elements	4	1
	Transport	8	13

Other fields	Furniture, games	0	3
	Other consumer goods	9	1
	Civil engineering	3	3
Unclassified		1	0

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	65
	Audio-visual technology	1	57
	Telecommunications	0	38
	Digital communication	0	41
	Basic communication processes	0	6
	Computer technology	0	84
	IT methods for management	0	11
	Semiconductors	0	9
Instruments	Optics	0	10
	Measurement	0	33
	Analysis of biological materials	0	0
	Control	0	12
	Medical technology	0	39
Chemistry	Organic fine chemistry	0	4
	Biotechnology	0	4
	Pharmaceuticals	0	46
	Macromolecular chemistry, polymers	0	4
	Food chemistry	0	8
	Basic materials chemistry	0	9
	Materials, metallurgy	0	13
	Surface technology, coating	0	9
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	9
	Environmental technology	0	7
Mechanical engineering	Handling	1	15
	Machine tools	0	4
	Engines, pumps, turbines	0	19
	Textile and paper machines	0	20
	Other special machines	0	19
	Thermal processes and apparatus	0	47
	Mechanical elements	0	13
	Transport	0	52
Other fields	Furniture, games	0	57
	Other consumer goods	0	106
	Civil engineering	0	37
Unclassified		0	4

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	34	51
	Audio-visual technology	11	21
	Telecommunications	9	32
	Digital communication	18	127
	Basic communication processes	2	0

	Computer technology	35	93
	IT methods for management	26	28
	Semiconductors	3	10
Instruments	Optics	13	30
	Measurement	36	72
	Analysis of biological materials	7	13
	Control	14	34
	Medical technology	141	147
Chemistry	Organic fine chemistry	24	34
	Biotechnology	43	74
	Pharmaceuticals	86	105
	Macromolecular chemistry, polymers	4	11
	Food chemistry	4	11
	Basic materials chemistry	26	34
	Materials, metallurgy	19	30
	Surface technology, coating	7	22
	Micro-structural and nano-technology	3	1
	Chemical engineering	17	37
	Environmental technology	8	30
Mechanical engineering	Handling	16	34
	Machine tools	10	17
	Engines, pumps, turbines	13	65
	Textile and paper machines	3	9
	Other special machines	34	55
	Thermal processes and apparatus	12	16
	Mechanical elements	18	37
	Transport	27	104
Other fields	Furniture, games	25	42
	Other consumer goods	25	24
	Civil engineering	64	56
Unclassified		4	7

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	620	31
	Audio-visual technology	402	20
	Telecommunications	600	33
	Digital communication	2173	63
	Basic communication processes	97	9
	Computer technology	1104	103
	IT methods for management	87	28
	Semiconductors	361	8
Instruments	Optics	295	30
	Measurement	233	75
	Analysis of biological materials	23	17
	Control	114	30
	Medical technology	231	389
Chemistry	Organic fine chemistry	218	22
	Biotechnology	114	55
	Pharmaceuticals	212	126

	Macromolecular chemistry, polymers	34	9
	Food chemistry	16	24
	Basic materials chemistry	68	24
	Materials, metallurgy	100	11
	Surface technology, coating	40	12
	Micro-structural and nano-technology	11	2
	Chemical engineering	82	23
	Environmental technology	55	11
Mechanical engineering	Handling	71	19
	Machine tools	82	23
	Engines, pumps, turbines	66	7
	Textile and paper machines	27	24
	Other special machines	93	43
	Thermal processes and apparatus	103	4
	Mechanical elements	99	10
	Transport	251	29
Other fields	Furniture, games	186	20
	Other consumer goods	276	17
	Civil engineering	82	33
Unclassified		15	4

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	1826	659
	Audio-visual technology	691	432
	Telecommunications	538	291
	Digital communication	1263	851
	Basic communication processes	104	33
	Computer technology	1235	631
	IT methods for management	272	90
	Semiconductors	565	349
Instruments	Optics	953	273
	Measurement	1014	142
	Analysis of biological materials	135	19
	Control	391	69
	Medical technology	1258	295
Chemistry	Organic fine chemistry	555	192
	Biotechnology	360	109
	Pharmaceuticals	454	170
	Macromolecular chemistry, polymers	679	194
	Food chemistry	114	29
	Basic materials chemistry	545	69
	Materials, metallurgy	867	127
	Surface technology, coating	612	51
	Micro-structural and nano-technology	19	2
	Chemical engineering	423	114
	Environmental technology	262	27
Mechanical engineering	Handling	373	44
	Machine tools	619	35
	Engines, pumps, turbines	795	142

	Textile and paper machines	752	27
	Other special machines	744	83
	Thermal processes and apparatus	411	144
	Mechanical elements	703	57
	Transport	1528	204
Other fields	Furniture, games	183	135
	Other consumer goods	251	315
	Civil engineering	210	37
Unclassified		70	16

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	119	1662
	Audio-visual technology	127	988
	Telecommunications	93	861
	Digital communication	209	3407
	Basic communication processes	35	329
	Computer technology	158	4500
	IT methods for management	16	998
	Semiconductors	73	607
Instruments	Optics	65	881
	Measurement	48	1898
	Analysis of biological materials	7	402
	Control	26	722
	Medical technology	60	4825
Chemistry	Organic fine chemistry	21	1677
	Biotechnology	31	1974
	Pharmaceuticals	63	2316
	Macromolecular chemistry, polymers	15	835
	Food chemistry	1	301
	Basic materials chemistry	7	1376
	Materials, metallurgy	5	581
	Surface technology, coating	7	587
	Micro-structural and nano-technology	0	43
	Chemical engineering	17	891
	Environmental technology	3	332
Mechanical engineering	Handling	9	901
	Machine tools	26	706
	Engines, pumps, turbines	43	1514
	Textile and paper machines	17	533
	Other special machines	72	1183
	Thermal processes and apparatus	9	312
	Mechanical elements	26	757
	Transport	82	1416
Other fields	Furniture, games	64	598
	Other consumer goods	27	693
	Civil engineering	40	739
Unclassified		1	118

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	164	10239
	Audio-visual technology	69	4142
	Telecommunications	53	3687
	Digital communication	190	11853
	Basic communication processes	13	1039
	Computer technology	290	11348
	IT methods for management	114	2325
	Semiconductors	15	2983
Instruments	Optics	48	4013
	Measurement	148	7999
	Analysis of biological materials	23	1422
	Control	68	2826
	Medical technology	545	13134
Chemistry	Organic fine chemistry	191	6464
	Biotechnology	134	6013
	Pharmaceuticals	228	6534
	Macromolecular chemistry, polymers	51	3654
	Food chemistry	26	1619
	Basic materials chemistry	96	4538
	Materials, metallurgy	54	3325
	Surface technology, coating	25	2467
	Micro-structural and nano-technology	4	160
	Chemical engineering	91	3707
	Environmental technology	44	1832
Mechanical engineering	Handling	54	4318
	Machine tools	45	3688
	Engines, pumps, turbines	74	5384
	Textile and paper machines	26	2618
	Other special machines	84	5750
	Thermal processes and apparatus	28	2454
	Mechanical elements	42	4317
	Transport	102	8536
Other fields	Furniture, games	69	3082
	Other consumer goods	58	3894
	Civil engineering	118	4611
Unclassified		13	619

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2018 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	251
	Audio-visual technology	0	62
	Telecommunications	0	13
	Digital communication	0	15
	Basic communication processes	0	18
	Computer technology	0	43
	IT methods for management	0	12
	Semiconductors	0	60
Instruments	Optics	0	26
	Measurement	0	107
	Analysis of biological materials	0	19
	Control	0	43
	Medical technology	0	91
Chemistry	Organic fine chemistry	0	19
	Biotechnology	0	81
	Pharmaceuticals	0	61
	Macromolecular chemistry, polymers	0	146
	Food chemistry	0	13
	Basic materials chemistry	0	39
	Materials, metallurgy	0	65
	Surface technology, coating	0	42
	Micro-structural and nano-technology	0	3
	Chemical engineering	0	43
	Environmental technology	0	24
Mechanical engineering	Handling	0	104
	Machine tools	0	104
	Engines, pumps, turbines	0	72
	Textile and paper machines	0	65
	Other special machines	0	132
	Thermal processes and apparatus	0	34
	Mechanical elements	0	52
	Transport	0	142
Other fields	Furniture, games	0	62
	Other consumer goods	0	54
	Civil engineering	0	157
Unclassified		0	7

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	110	5
	Audio-visual technology	41	0
	Telecommunications	20	0
	Digital communication	21	1
	Basic communication processes	14	0
	Computer technology	94	2
	IT methods for management	22	0

	Semiconductors	80	0
Instruments	Optics	63	0
	Measurement	101	5
	Analysis of biological materials	36	1
	Control	22	0
	Medical technology	121	2
Chemistry	Organic fine chemistry	97	0
	Biotechnology	164	1
	Pharmaceuticals	151	0
	Macromolecular chemistry, polymers	43	1
	Food chemistry	39	1
	Basic materials chemistry	96	0
	Materials, metallurgy	101	1
	Surface technology, coating	55	0
	Micro-structural and nano-technology	7	0
	Chemical engineering	67	1
	Environmental technology	37	0
Mechanical engineering	Handling	38	1
	Machine tools	36	0
	Engines, pumps, turbines	64	3
	Textile and paper machines	72	1
	Other special machines	180	1
	Thermal processes and apparatus	20	1
	Mechanical elements	49	0
	Transport	84	0
Other fields	Furniture, games	29	2
	Other consumer goods	34	0
	Civil engineering	128	1
Unclassified		12	0

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	569	4
	Audio-visual technology	66	0
	Telecommunications	41	1
	Digital communication	133	3
	Basic communication processes	25	0
	Computer technology	165	12
	IT methods for management	72	6
	Semiconductors	72	0
Instruments	Optics	78	0
	Measurement	757	1
	Analysis of biological materials	81	0
	Control	150	0
	Medical technology	761	3
Chemistry	Organic fine chemistry	474	1
	Biotechnology	473	1
	Pharmaceuticals	442	6
	Macromolecular chemistry, polymers	126	0
	Food chemistry	236	2

	Basic materials chemistry	170	0
	Materials, metallurgy	127	0
	Surface technology, coating	116	0
	Micro-structural and nano-technology	6	0
	Chemical engineering	204	1
	Environmental technology	81	2
Mechanical engineering	Handling	567	1
	Machine tools	148	0
	Engines, pumps, turbines	107	0
	Textile and paper machines	135	0
	Other special machines	204	1
	Thermal processes and apparatus	58	0
	Mechanical elements	141	0
	Transport	161	0
Other fields	Furniture, games	214	0
	Other consumer goods	557	3
	Civil engineering	209	1
Unclassified		35	0

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	22	1987
	Audio-visual technology	0	305
	Telecommunications	1	263
	Digital communication	5	659
	Basic communication processes	0	123
	Computer technology	6	993
	IT methods for management	2	220
	Semiconductors	0	290
Instruments	Optics	4	345
	Measurement	16	1659
	Analysis of biological materials	5	223
	Control	1	729
	Medical technology	17	1314
Chemistry	Organic fine chemistry	21	1101
	Biotechnology	5	771
	Pharmaceuticals	18	572
	Macromolecular chemistry, polymers	4	752
	Food chemistry	2	146
	Basic materials chemistry	5	1044
	Materials, metallurgy	5	588
	Surface technology, coating	1	441
	Micro-structural and nano-technology	0	18
	Chemical engineering	7	835
	Environmental technology	5	361
Mechanical engineering	Handling	4	1006
	Machine tools	10	925
	Engines, pumps, turbines	9	1104
	Textile and paper machines	10	403
	Other special machines	13	1304

	Thermal processes and apparatus	13	492
	Mechanical elements	6	1234
	Transport	8	2119
Other fields	Furniture, games	9	591
	Other consumer goods	1	551
	Civil engineering	12	1029
Unclassified		1	166

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	118	2
	Audio-visual technology	169	1
	Telecommunications	18	0
	Digital communication	11	2
	Basic communication processes	2	0
	Computer technology	28	4
	IT methods for management	10	5
	Semiconductors	5	0
Instruments	Optics	14	1
	Measurement	91	3
	Analysis of biological materials	18	0
	Control	29	9
	Medical technology	229	0
Chemistry	Organic fine chemistry	47	1
	Biotechnology	282	4
	Pharmaceuticals	179	0
	Macromolecular chemistry, polymers	19	0
	Food chemistry	96	0
	Basic materials chemistry	68	0
	Materials, metallurgy	33	0
	Surface technology, coating	20	1
	Micro-structural and nano-technology	1	0
	Chemical engineering	47	3
	Environmental technology	18	1
Mechanical engineering	Handling	58	2
	Machine tools	22	1
	Engines, pumps, turbines	289	0
	Textile and paper machines	16	0
	Other special machines	109	3
	Thermal processes and apparatus	55	0
	Mechanical elements	47	0
	Transport	29	1
Other fields	Furniture, games	27	3
	Other consumer goods	22	0
	Civil engineering	128	0
Unclassified		31	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	99	59
	Audio-visual technology	14	75

	Telecommunications	21	83
	Digital communication	32	347
	Basic communication processes	1	4
	Computer technology	46	121
	IT methods for management	26	28
	Semiconductors	10	7
Instruments	Optics	9	15
	Measurement	82	72
	Analysis of biological materials	34	7
	Control	30	18
	Medical technology	116	80
Chemistry	Organic fine chemistry	103	13
	Biotechnology	126	27
	Pharmaceuticals	161	16
	Macromolecular chemistry, polymers	22	29
	Food chemistry	30	15
	Basic materials chemistry	49	38
	Materials, metallurgy	45	18
	Surface technology, coating	23	33
	Micro-structural and nano-technology	2	1
	Chemical engineering	46	54
	Environmental technology	26	43
Mechanical engineering	Handling	73	128
	Machine tools	41	31
	Engines, pumps, turbines	35	39
	Textile and paper machines	29	59
	Other special machines	72	41
	Thermal processes and apparatus	40	30
	Mechanical elements	32	31
	Transport	118	46
Other fields	Furniture, games	39	17
	Other consumer goods	35	14
	Civil engineering	92	76
Unclassified		22	13

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	675	268
	Audio-visual technology	165	111
	Telecommunications	192	106
	Digital communication	493	224
	Basic communication processes	60	20
	Computer technology	605	375
	IT methods for management	89	86
	Semiconductors	207	51
Instruments	Optics	294	85
	Measurement	541	319
	Analysis of biological materials	149	69
	Control	158	86

	Medical technology	557	425
Chemistry	Organic fine chemistry	431	360
	Biotechnology	436	274
	Pharmaceuticals	482	268
	Macromolecular chemistry, polymers	210	54
	Food chemistry	73	47
	Basic materials chemistry	246	248
	Materials, metallurgy	261	102
	Surface technology, coating	197	55
	Micro-structural and nano-technology	16	4
	Chemical engineering	281	162
	Environmental technology	133	94
Mechanical engineering	Handling	204	147
	Machine tools	100	67
	Engines, pumps, turbines	322	241
	Textile and paper machines	69	65
	Other special machines	454	161
	Thermal processes and apparatus	174	68
	Mechanical elements	329	170
	Transport	1071	321
Other fields	Furniture, games	157	136
	Other consumer goods	220	230
	Civil engineering	362	250
Unclassified		55	12

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	1	0
	Audio-visual technology	0	0
	Telecommunications	2	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	2	0
	IT methods for management	2	1
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	1	0
	Analysis of biological materials	1	0
	Control	0	0
	Medical technology	7	0
Chemistry	Organic fine chemistry	4	3
	Biotechnology	3	1
	Pharmaceuticals	19	1
	Macromolecular chemistry, polymers	0	0
	Food chemistry	1	2
	Basic materials chemistry	1	0
	Materials, metallurgy	1	1
	Surface technology, coating	15	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	5	0

	Environmental technology	0	0
Mechanical engineering	Handling	0	0
	Machine tools	32	0
	Engines, pumps, turbines	0	0
	Textile and paper machines	2	1
	Other special machines	6	1
	Thermal processes and apparatus	3	0
	Mechanical elements	0	0
	Transport	0	1
Other fields	Furniture, games	1	0
	Other consumer goods	1	1
	Civil engineering	7	1
Unclassified		3	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	4	75
	Audio-visual technology	0	27
	Telecommunications	0	12
	Digital communication	0	38
	Basic communication processes	0	7
	Computer technology	6	87
	IT methods for management	2	29
	Semiconductors	0	11
Instruments	Optics	5	8
	Measurement	5	29
	Analysis of biological materials	4	7
	Control	1	13
	Medical technology	9	133
Chemistry	Organic fine chemistry	12	36
	Biotechnology	13	31
	Pharmaceuticals	3	78
	Macromolecular chemistry, polymers	0	4
	Food chemistry	3	10
	Basic materials chemistry	5	12
	Materials, metallurgy	2	2
	Surface technology, coating	1	5
	Micro-structural and nano-technology	0	4
	Chemical engineering	2	13
	Environmental technology	3	3
Mechanical engineering	Handling	1	8
	Machine tools	1	4
	Engines, pumps, turbines	1	30
	Textile and paper machines	0	10
	Other special machines	10	22
	Thermal processes and apparatus	2	7
	Mechanical elements	3	11
	Transport	3	22
Other fields	Furniture, games	2	7
	Other consumer goods	3	18

	Civil engineering	8	8
Unclassified		4	5

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	1	213
	Audio-visual technology	1	31
	Telecommunications	0	22
	Digital communication	0	57
	Basic communication processes	0	10
	Computer technology	1	62
	IT methods for management	0	33
	Semiconductors	0	35
Instruments	Optics	0	50
	Measurement	0	159
	Analysis of biological materials	0	18
	Control	1	70
	Medical technology	11	242
Chemistry	Organic fine chemistry	1	118
	Biotechnology	0	93
	Pharmaceuticals	0	163
	Macromolecular chemistry, polymers	0	132
	Food chemistry	1	62
	Basic materials chemistry	0	65
	Materials, metallurgy	0	62
	Surface technology, coating	0	59
	Micro-structural and nano-technology	0	1
	Chemical engineering	1	135
	Environmental technology	0	64
Mechanical engineering	Handling	1	320
	Machine tools	0	180
	Engines, pumps, turbines	0	163
	Textile and paper machines	0	142
	Other special machines	7	259
	Thermal processes and apparatus	0	124
	Mechanical elements	1	162
	Transport	1	397
Other fields	Furniture, games	0	233
	Other consumer goods	4	162
	Civil engineering	1	269
Unclassified		0	37

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	23	1
	Audio-visual technology	0	1
	Telecommunications	3	0
	Digital communication	1	0
	Basic communication processes	0	0
	Computer technology	1	3
	IT methods for management	0	0

	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	10	1
	Analysis of biological materials	1	1
	Control	3	0
	Medical technology	36	3
Chemistry	Organic fine chemistry	0	2
	Biotechnology	4	4
	Pharmaceuticals	12	3
	Macromolecular chemistry, polymers	10	0
	Food chemistry	1	0
	Basic materials chemistry	3	1
	Materials, metallurgy	25	0
	Surface technology, coating	10	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	1	1
	Environmental technology	8	2
Mechanical engineering	Handling	10	0
	Machine tools	128	2
	Engines, pumps, turbines	4	2
	Textile and paper machines	0	0
	Other special machines	13	2
	Thermal processes and apparatus	2	0
	Mechanical elements	45	0
	Transport	44	1
Other fields	Furniture, games	7	3
	Other consumer goods	3	1
	Civil engineering	21	2
Unclassified		3	1

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	14	0
	Audio-visual technology	4	0
	Telecommunications	14	0
	Digital communication	5	0
	Basic communication processes	1	0
	Computer technology	2	0
	IT methods for management	5	0
	Semiconductors	2	0
Instruments	Optics	15	0
	Measurement	9	0
	Analysis of biological materials	4	0
	Control	3	0
	Medical technology	40	1
Chemistry	Organic fine chemistry	11	1
	Biotechnology	13	0
	Pharmaceuticals	13	3
	Macromolecular chemistry, polymers	4	0
	Food chemistry	11	1

	Basic materials chemistry	12	1
	Materials, metallurgy	21	0
	Surface technology, coating	18	1
	Micro-structural and nano-technology	0	0
	Chemical engineering	11	1
	Environmental technology	6	1
Mechanical engineering	Handling	12	1
	Machine tools	10	0
	Engines, pumps, turbines	17	0
	Textile and paper machines	4	0
	Other special machines	20	0
	Thermal processes and apparatus	8	0
	Mechanical elements	19	0
	Transport	50	0
Other fields	Furniture, games	4	1
	Other consumer goods	24	0
	Civil engineering	14	1
Unclassified		11	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	4	0
	IT methods for management	0	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	0	0
Chemistry	Organic fine chemistry	0	0
	Biotechnology	2	0
	Pharmaceuticals	12	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	1	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	0	0
	Machine tools	0	0
	Engines, pumps, turbines	0	0

	Textile and paper machines	0	0
	Other special machines	1	0
	Thermal processes and apparatus	0	0
	Mechanical elements	0	0
	Transport	1	0
Other fields	Furniture, games	1	0
	Other consumer goods	1	0
	Civil engineering	1	0
Unclassified		0	5

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	2	561
	Audio-visual technology	0	117
	Telecommunications	0	106
	Digital communication	0	228
	Basic communication processes	0	47
	Computer technology	3	389
	IT methods for management	3	47
	Semiconductors	0	133
Instruments	Optics	0	396
	Measurement	2	403
	Analysis of biological materials	0	46
	Control	6	72
	Medical technology	4	824
Chemistry	Organic fine chemistry	1	333
	Biotechnology	0	385
	Pharmaceuticals	8	205
	Macromolecular chemistry, polymers	0	345
	Food chemistry	0	301
	Basic materials chemistry	3	312
	Materials, metallurgy	0	70
	Surface technology, coating	2	103
	Micro-structural and nano-technology	0	4
	Chemical engineering	2	141
	Environmental technology	1	97
Mechanical engineering	Handling	1	131
	Machine tools	2	74
	Engines, pumps, turbines	0	41
	Textile and paper machines	0	130
	Other special machines	0	346
	Thermal processes and apparatus	0	69
	Mechanical elements	0	69
	Transport	0	128
Other fields	Furniture, games	4	115
	Other consumer goods	7	116
	Civil engineering	0	178
Unclassified		0	80

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	16	15
	Audio-visual technology	4	7
	Telecommunications	3	3
	Digital communication	10	7
	Basic communication processes	1	1
	Computer technology	33	20
	IT methods for management	9	2
	Semiconductors	7	4
Instruments	Optics	5	6
	Measurement	49	17
	Analysis of biological materials	6	3
	Control	22	8
	Medical technology	21	29
Chemistry	Organic fine chemistry	7	31
	Biotechnology	25	27
	Pharmaceuticals	33	24
	Macromolecular chemistry, polymers	2	8
	Food chemistry	13	5
	Basic materials chemistry	21	23
	Materials, metallurgy	21	13
	Surface technology, coating	5	9
	Micro-structural and nano-technology	0	1
	Chemical engineering	33	16
	Environmental technology	19	12
Mechanical engineering	Handling	28	10
	Machine tools	11	11
	Engines, pumps, turbines	13	15
	Textile and paper machines	1	2
	Other special machines	35	19
	Thermal processes and apparatus	1	45
	Mechanical elements	33	11
	Transport	25	32
Other fields	Furniture, games	18	11
	Other consumer goods	4	12
	Civil engineering	74	38
Unclassified		2	22

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	4	2
	Audio-visual technology	3	1
	Telecommunications	4	0
	Digital communication	5	1
	Basic communication processes	1	0
	Computer technology	10	3
	IT methods for management	0	4
	Semiconductors	2	0
Instruments	Optics	3	1
	Measurement	11	4

	Analysis of biological materials	1	1
	Control	1	1
	Medical technology	12	3
Chemistry	Organic fine chemistry	11	0
	Biotechnology	7	0
	Pharmaceuticals	14	2
	Macromolecular chemistry, polymers	4	0
	Food chemistry	8	1
	Basic materials chemistry	5	2
	Materials, metallurgy	6	2
	Surface technology, coating	5	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	7	1
	Environmental technology	3	0
Mechanical engineering	Handling	8	1
	Machine tools	5	1
	Engines, pumps, turbines	3	1
	Textile and paper machines	5	1
	Other special machines	8	2
	Thermal processes and apparatus	10	2
	Mechanical elements	7	0
	Transport	14	4
Other fields	Furniture, games	12	4
	Other consumer goods	2	1
	Civil engineering	18	1
Unclassified		2	3

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	0	107
	Audio-visual technology	0	66
	Telecommunications	0	233
	Digital communication	0	1164
	Basic communication processes	0	33
	Computer technology	1	202
	IT methods for management	0	18
	Semiconductors	0	18
Instruments	Optics	0	22
	Measurement	1	122
	Analysis of biological materials	0	22
	Control	0	72
	Medical technology	1	201
Chemistry	Organic fine chemistry	0	56
	Biotechnology	0	93
	Pharmaceuticals	0	87
	Macromolecular chemistry, polymers	0	12
	Food chemistry	0	22
	Basic materials chemistry	0	19
	Materials, metallurgy	0	66
	Surface technology, coating	0	28

	Micro-structural and nano-technology	0	2
	Chemical engineering	0	85
	Environmental technology	0	56
Mechanical engineering	Handling	1	90
	Machine tools	0	90
	Engines, pumps, turbines	1	99
	Textile and paper machines	0	46
	Other special machines	0	104
	Thermal processes and apparatus	0	100
	Mechanical elements	0	103
	Transport	0	305
Other fields	Furniture, games	2	94
	Other consumer goods	2	74
	Civil engineering	0	123
Unclassified		0	21

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	13	2
	Audio-visual technology	1	1
	Telecommunications	3	4
	Digital communication	0	1
	Basic communication processes	1	0
	Computer technology	2	3
	IT methods for management	0	2
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	2	3
	Analysis of biological materials	1	2
	Control	0	1
	Medical technology	5	3
Chemistry	Organic fine chemistry	8	0
	Biotechnology	5	2
	Pharmaceuticals	4	1
	Macromolecular chemistry, polymers	1	0
	Food chemistry	1	1
	Basic materials chemistry	0	1
	Materials, metallurgy	3	1
	Surface technology, coating	3	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	1
	Environmental technology	4	0
Mechanical engineering	Handling	2	1
	Machine tools	0	1
	Engines, pumps, turbines	1	5
	Textile and paper machines	0	2
	Other special machines	4	0
	Thermal processes and apparatus	5	2
	Mechanical elements	5	2
	Transport	5	5

Other fields	Furniture, games	10	1
	Other consumer goods	7	1
	Civil engineering	4	1
Unclassified		0	1

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	36
	Audio-visual technology	0	17
	Telecommunications	0	8
	Digital communication	0	21
	Basic communication processes	0	1
	Computer technology	0	32
	IT methods for management	0	9
	Semiconductors	0	1
Instruments	Optics	0	7
	Measurement	0	22
	Analysis of biological materials	0	2
	Control	0	9
	Medical technology	2	27
Chemistry	Organic fine chemistry	0	6
	Biotechnology	0	3
	Pharmaceuticals	0	26
	Macromolecular chemistry, polymers	0	6
	Food chemistry	0	12
	Basic materials chemistry	0	11
	Materials, metallurgy	0	7
	Surface technology, coating	0	3
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	9
	Environmental technology	0	3
Mechanical engineering	Handling	1	8
	Machine tools	1	8
	Engines, pumps, turbines	0	12
	Textile and paper machines	0	33
	Other special machines	0	13
	Thermal processes and apparatus	0	34
	Mechanical elements	0	19
	Transport	0	60
Other fields	Furniture, games	1	38
	Other consumer goods	1	48
	Civil engineering	3	20
Unclassified		0	3

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	27	57
	Audio-visual technology	21	23
	Telecommunications	11	29
	Digital communication	15	139
	Basic communication processes	1	13

	Computer technology	35	128
	IT methods for management	44	39
	Semiconductors	3	10
Instruments	Optics	9	19
	Measurement	35	86
	Analysis of biological materials	15	6
	Control	12	26
	Medical technology	156	158
Chemistry	Organic fine chemistry	20	52
	Biotechnology	61	62
	Pharmaceuticals	86	127
	Macromolecular chemistry, polymers	8	14
	Food chemistry	27	8
	Basic materials chemistry	25	29
	Materials, metallurgy	21	30
	Surface technology, coating	11	22
	Micro-structural and nano-technology	2	2
	Chemical engineering	37	50
	Environmental technology	15	33
Mechanical engineering	Handling	14	29
	Machine tools	7	16
	Engines, pumps, turbines	14	68
	Textile and paper machines	3	5
	Other special machines	39	70
	Thermal processes and apparatus	5	17
	Mechanical elements	17	28
	Transport	34	90
Other fields	Furniture, games	40	33
	Other consumer goods	29	23
	Civil engineering	61	40
Unclassified		9	10

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	688	45
	Audio-visual technology	422	20
	Telecommunications	620	29
	Digital communication	2270	45
	Basic communication processes	95	6
	Computer technology	1142	99
	IT methods for management	131	28
	Semiconductors	271	8
Instruments	Optics	305	54
	Measurement	327	58
	Analysis of biological materials	23	6
	Control	138	25
	Medical technology	297	416
Chemistry	Organic fine chemistry	241	34
	Biotechnology	156	68
	Pharmaceuticals	289	128

	Macromolecular chemistry, polymers	64	8
	Food chemistry	11	26
	Basic materials chemistry	45	33
	Materials, metallurgy	92	11
	Surface technology, coating	83	7
	Micro-structural and nano-technology	4	2
	Chemical engineering	107	17
	Environmental technology	64	7
Mechanical engineering	Handling	65	11
	Machine tools	87	32
	Engines, pumps, turbines	125	4
	Textile and paper machines	42	23
	Other special machines	108	53
	Thermal processes and apparatus	112	7
	Mechanical elements	106	9
	Transport	299	36
Other fields	Furniture, games	194	15
	Other consumer goods	316	21
	Civil engineering	122	28
Unclassified		19	14

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	1906	809
	Audio-visual technology	703	412
	Telecommunications	546	358
	Digital communication	1346	904
	Basic communication processes	119	16
	Computer technology	1223	780
	IT methods for management	289	117
	Semiconductors	585	325
Instruments	Optics	956	225
	Measurement	1227	189
	Analysis of biological materials	173	23
	Control	463	81
	Medical technology	1172	342
Chemistry	Organic fine chemistry	498	247
	Biotechnology	440	159
	Pharmaceuticals	482	224
	Macromolecular chemistry, polymers	793	209
	Food chemistry	119	41
	Basic materials chemistry	580	89
	Materials, metallurgy	797	162
	Surface technology, coating	607	73
	Micro-structural and nano-technology	23	4
	Chemical engineering	454	98
	Environmental technology	218	41
Mechanical engineering	Handling	473	30
	Machine tools	599	56
	Engines, pumps, turbines	842	145

	Textile and paper machines	760	22
	Other special machines	746	123
	Thermal processes and apparatus	471	171
	Mechanical elements	680	49
	Transport	1508	219
Other fields	Furniture, games	196	174
	Other consumer goods	258	276
	Civil engineering	262	43
Unclassified		77	27

Field of technology		Chinese Talpei	United States
Electrical engineering	Electrical machinery, apparatus, energy	118	1572
	Audio-visual technology	111	1034
	Telecommunications	59	915
	Digital communication	225	3215
	Basic communication processes	35	271
	Computer technology	180	4284
	IT methods for management	26	945
	Semiconductors	80	650
Instruments	Optics	65	834
	Measurement	58	1953
	Analysis of biological materials	20	368
	Control	26	782
	Medical technology	96	5148
Chemistry	Organic fine chemistry	25	1593
	Biotechnology	24	2218
	Pharmaceuticals	77	2651
	Macromolecular chemistry, polymers	9	813
	Food chemistry	2	356
	Basic materials chemistry	7	1367
	Materials, metallurgy	5	672
	Surface technology, coating	15	639
	Micro-structural and nano-technology	0	49
	Chemical engineering	22	1029
	Environmental technology	6	388
Mechanical engineering	Handling	19	1031
	Machine tools	38	661
	Engines, pumps, turbines	49	1339
	Textile and paper machines	14	490
	Other special machines	79	1464
	Thermal processes and apparatus	15	392
	Mechanical elements	35	746
	Transport	69	1458
Other fields	Furniture, games	59	549
	Other consumer goods	47	881
	Civil engineering	24	791
Unclassified		17	241

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	187	10668
	Audio-visual technology	94	4130
	Telecommunications	38	3781
	Digital communication	210	11853
	Basic communication processes	15	941
	Computer technology	358	11589
	IT methods for management	147	2510
	Semiconductors	32	2959
Instruments	Optics	57	3976
	Measurement	174	8711
	Analysis of biological materials	26	1422
	Control	69	3180
	Medical technology	592	13707
Chemistry	Organic fine chemistry	180	6199
	Biotechnology	145	6689
	Pharmaceuticals	240	7371
	Macromolecular chemistry, polymers	69	3921
	Food chemistry	49	1795
	Basic materials chemistry	154	4830
	Materials, metallurgy	81	3520
	Surface technology, coating	39	2747
	Micro-structural and nano-technology	2	158
	Chemical engineering	116	4146
	Environmental technology	51	1930
Mechanical engineering	Handling	63	4703
	Machine tools	52	3594
	Engines, pumps, turbines	150	5429
	Textile and paper machines	40	2702
	Other special machines	115	6344
	Thermal processes and apparatus	25	2614
	Mechanical elements	37	4288
	Transport	128	9039
Other fields	Furniture, games	52	3167
	Other consumer goods	38	4103
	Civil engineering	116	4725
Unclassified		69	1040

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2019 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	291
	Audio-visual technology	0	49
	Telecommunications	0	23
	Digital communication	0	24
	Basic communication processes	0	23
	Computer technology	0	59
	IT methods for management	0	7
	Semiconductors	0	75
Instruments	Optics	0	35
	Measurement	0	100
	Analysis of biological materials	0	18
	Control	0	50
	Medical technology	1	105
Chemistry	Organic fine chemistry	0	26
	Biotechnology	0	65
	Pharmaceuticals	0	47
	Macromolecular chemistry, polymers	0	139
	Food chemistry	0	13
	Basic materials chemistry	0	37
	Materials, metallurgy	0	78
	Surface technology, coating	0	43
	Micro-structural and nano-technology	0	2
	Chemical engineering	0	38
	Environmental technology	0	22
Mechanical engineering	Handling	0	79
	Machine tools	0	122
	Engines, pumps, turbines	0	28
	Textile and paper machines	0	55
	Other special machines	0	163
	Thermal processes and apparatus	1	28
	Mechanical elements	0	53
	Transport	0	156
Other fields	Furniture, games	0	69
	Other consumer goods	0	63
	Civil engineering	0	154
Unclassified		0	7

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	96	4
	Audio-visual technology	18	0
	Telecommunications	27	0
	Digital communication	30	0
	Basic communication processes	10	1
	Computer technology	72	0
	IT methods for management	23	0

	Semiconductors	65	0
Instruments	Optics	60	0
	Measurement	117	3
	Analysis of biological materials	35	0
	Control	29	0
	Medical technology	127	0
Chemistry	Organic fine chemistry	111	0
	Biotechnology	197	0
	Pharmaceuticals	170	2
	Macromolecular chemistry, polymers	59	0
	Food chemistry	39	1
	Basic materials chemistry	99	0
	Materials, metallurgy	120	3
	Surface technology, coating	60	0
	Micro-structural and nano-technology	1	0
	Chemical engineering	57	0
	Environmental technology	32	0
Mechanical engineering	Handling	60	4
	Machine tools	27	1
	Engines, pumps, turbines	45	2
	Textile and paper machines	59	4
	Other special machines	211	1
	Thermal processes and apparatus	22	1
	Mechanical elements	56	0
	Transport	105	2
Other fields	Furniture, games	24	0
	Other consumer goods	22	2
	Civil engineering	112	3
Unclassified		25	1

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	511	4
	Audio-visual technology	78	0
	Telecommunications	33	0
	Digital communication	107	1
	Basic communication processes	29	1
	Computer technology	204	5
	IT methods for management	69	1
	Semiconductors	80	0
Instruments	Optics	86	3
	Measurement	824	2
	Analysis of biological materials	94	0
	Control	180	1
	Medical technology	778	4
Chemistry	Organic fine chemistry	450	1
	Biotechnology	456	3
	Pharmaceuticals	468	6
	Macromolecular chemistry, polymers	154	0
	Food chemistry	262	0

	Basic materials chemistry	230	2
	Materials, metallurgy	134	0
	Surface technology, coating	112	0
	Micro-structural and nano-technology	5	0
	Chemical engineering	237	0
	Environmental technology	59	1
Mechanical engineering	Handling	534	1
	Machine tools	139	1
	Engines, pumps, turbines	118	0
	Textile and paper machines	153	1
	Other special machines	226	0
	Thermal processes and apparatus	79	1
	Mechanical elements	139	0
	Transport	163	1
Other fields	Furniture, games	171	2
	Other consumer goods	624	1
	Civil engineering	201	1
Unclassified		79	4

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	12	2060
	Audio-visual technology	0	358
	Telecommunications	1	242
	Digital communication	5	749
	Basic communication processes	0	121
	Computer technology	3	1123
	IT methods for management	1	249
	Semiconductors	1	289
Instruments	Optics	5	399
	Measurement	7	1742
	Analysis of biological materials	0	215
	Control	7	727
	Medical technology	20	1278
Chemistry	Organic fine chemistry	19	1118
	Biotechnology	3	744
	Pharmaceuticals	24	584
	Macromolecular chemistry, polymers	3	781
	Food chemistry	2	135
	Basic materials chemistry	3	901
	Materials, metallurgy	2	594
	Surface technology, coating	1	481
	Micro-structural and nano-technology	0	30
	Chemical engineering	4	825
	Environmental technology	3	381
Mechanical engineering	Handling	2	931
	Machine tools	8	949
	Engines, pumps, turbines	8	1011
	Textile and paper machines	6	450
	Other special machines	9	1243

	Thermal processes and apparatus	7	427
	Mechanical elements	0	1119
	Transport	19	2112
Other fields	Furniture, games	2	599
	Other consumer goods	3	567
	Civil engineering	12	1023
Unclassified		1	205

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	108	0
	Audio-visual technology	147	1
	Telecommunications	9	0
	Digital communication	20	1
	Basic communication processes	4	0
	Computer technology	40	6
	IT methods for management	16	5
	Semiconductors	2	0
Instruments	Optics	10	0
	Measurement	89	5
	Analysis of biological materials	15	2
	Control	27	3
	Medical technology	209	5
Chemistry	Organic fine chemistry	70	0
	Biotechnology	280	2
	Pharmaceuticals	172	0
	Macromolecular chemistry, polymers	11	0
	Food chemistry	82	0
	Basic materials chemistry	74	0
	Materials, metallurgy	43	1
	Surface technology, coating	21	0
	Micro-structural and nano-technology	4	0
	Chemical engineering	54	2
	Environmental technology	33	1
Mechanical engineering	Handling	56	4
	Machine tools	14	0
	Engines, pumps, turbines	354	0
	Textile and paper machines	20	0
	Other special machines	117	1
	Thermal processes and apparatus	42	1
	Mechanical elements	63	0
	Transport	24	3
Other fields	Furniture, games	45	1
	Other consumer goods	11	1
	Civil engineering	105	3
Unclassified		24	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	139	53
	Audio-visual technology	18	70

	Telecommunications	22	101
	Digital communication	30	341
	Basic communication processes	2	14
	Computer technology	42	118
	IT methods for management	9	20
	Semiconductors	7	13
Instruments	Optics	18	19
	Measurement	65	80
	Analysis of biological materials	47	10
	Control	26	19
	Medical technology	126	89
Chemistry	Organic fine chemistry	88	10
	Biotechnology	118	18
	Pharmaceuticals	155	10
	Macromolecular chemistry, polymers	20	14
	Food chemistry	33	15
	Basic materials chemistry	50	48
	Materials, metallurgy	42	19
	Surface technology, coating	26	23
	Micro-structural and nano-technology	1	0
	Chemical engineering	47	44
	Environmental technology	22	28
Mechanical engineering	Handling	80	136
	Machine tools	43	33
	Engines, pumps, turbines	48	17
	Textile and paper machines	25	70
	Other special machines	96	52
	Thermal processes and apparatus	72	20
	Mechanical elements	29	20
	Transport	118	45
Other fields	Furniture, games	51	25
	Other consumer goods	37	8
	Civil engineering	100	92
Unclassified		33	11

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	655	304
	Audio-visual technology	187	70
	Telecommunications	194	101
	Digital communication	406	240
	Basic communication processes	53	19
	Computer technology	589	459
	IT methods for management	89	80
	Semiconductors	211	59
Instruments	Optics	231	99
	Measurement	593	301
	Analysis of biological materials	108	62
	Control	149	71

	Medical technology	576	429
Chemistry	Organic fine chemistry	441	276
	Biotechnology	500	288
	Pharmaceuticals	472	302
	Macromolecular chemistry, polymers	234	37
	Food chemistry	78	51
	Basic materials chemistry	245	196
	Materials, metallurgy	222	103
	Surface technology, coating	186	55
	Micro-structural and nano-technology	17	8
	Chemical engineering	301	195
	Environmental technology	106	108
Mechanical engineering	Handling	203	130
	Machine tools	106	80
	Engines, pumps, turbines	320	324
	Textile and paper machines	63	53
	Other special machines	368	175
	Thermal processes and apparatus	187	56
	Mechanical elements	343	174
	Transport	971	350
Other fields	Furniture, games	158	116
	Other consumer goods	232	496
	Civil engineering	336	237
Unclassified		103	25

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	2	1
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	3	0
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	4	3
	Analysis of biological materials	0	1
	Control	1	0
	Medical technology	10	1
Chemistry	Organic fine chemistry	4	4
	Biotechnology	2	0
	Pharmaceuticals	19	3
	Macromolecular chemistry, polymers	1	0
	Food chemistry	3	0
	Basic materials chemistry	3	0
	Materials, metallurgy	2	0
	Surface technology, coating	13	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	2

	Environmental technology	1	0
Mechanical engineering	Handling	5	0
	Machine tools	37	0
	Engines, pumps, turbines	3	1
	Textile and paper machines	2	0
	Other special machines	5	0
	Thermal processes and apparatus	0	0
	Mechanical elements	2	0
	Transport	2	1
Other fields	Furniture, games	1	0
	Other consumer goods	2	1
	Civil engineering	7	0
Unclassified		4	1

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	3	85
	Audio-visual technology	0	26
	Telecommunications	1	12
	Digital communication	0	35
	Basic communication processes	0	5
	Computer technology	2	97
	IT methods for management	0	30
	Semiconductors	0	5
Instruments	Optics	3	5
	Measurement	5	31
	Analysis of biological materials	1	11
	Control	2	23
	Medical technology	11	175
Chemistry	Organic fine chemistry	12	51
	Biotechnology	12	41
	Pharmaceuticals	2	69
	Macromolecular chemistry, polymers	1	5
	Food chemistry	0	6
	Basic materials chemistry	4	5
	Materials, metallurgy	3	4
	Surface technology, coating	0	4
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	15
	Environmental technology	2	6
Mechanical engineering	Handling	1	12
	Machine tools	1	3
	Engines, pumps, turbines	2	22
	Textile and paper machines	1	8
	Other special machines	5	16
	Thermal processes and apparatus	3	2
	Mechanical elements	3	18
	Transport	1	16
Other fields	Furniture, games	4	9
	Other consumer goods	0	5

	Civil engineering	9	15
Unclassified		3	10

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	0	231
	Audio-visual technology	1	26
	Telecommunications	0	30
	Digital communication	0	44
	Basic communication processes	0	18
	Computer technology	0	78
	IT methods for management	0	30
	Semiconductors	0	32
Instruments	Optics	0	42
	Measurement	2	173
	Analysis of biological materials	1	19
	Control	0	90
	Medical technology	18	268
Chemistry	Organic fine chemistry	0	113
	Biotechnology	0	71
	Pharmaceuticals	3	165
	Macromolecular chemistry, polymers	0	126
	Food chemistry	1	81
	Basic materials chemistry	1	57
	Materials, metallurgy	0	63
	Surface technology, coating	0	57
	Micro-structural and nano-technology	0	3
	Chemical engineering	5	112
	Environmental technology	2	70
Mechanical engineering	Handling	2	348
	Machine tools	0	203
	Engines, pumps, turbines	0	134
	Textile and paper machines	0	123
	Other special machines	7	314
	Thermal processes and apparatus	0	100
	Mechanical elements	1	195
	Transport	6	382
Other fields	Furniture, games	0	188
	Other consumer goods	0	166
	Civil engineering	0	269
Unclassified		0	48

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	25	2
	Audio-visual technology	1	0
	Telecommunications	1	1
	Digital communication	4	0
	Basic communication processes	0	0
	Computer technology	1	1
	IT methods for management	0	0

	Semiconductors	0	1
Instruments	Optics	2	4
	Measurement	20	1
	Analysis of biological materials	0	0
	Control	4	0
	Medical technology	22	2
Chemistry	Organic fine chemistry	0	1
	Biotechnology	0	2
	Pharmaceuticals	10	1
	Macromolecular chemistry, polymers	5	0
	Food chemistry	0	0
	Basic materials chemistry	9	0
	Materials, metallurgy	20	0
	Surface technology, coating	7	1
	Micro-structural and nano-technology	1	0
	Chemical engineering	2	0
	Environmental technology	5	1
Mechanical engineering	Handling	9	1
	Machine tools	119	1
	Engines, pumps, turbines	3	0
	Textile and paper machines	2	0
	Other special machines	23	0
	Thermal processes and apparatus	2	3
	Mechanical elements	40	0
	Transport	62	1
Other fields	Furniture, games	12	2
	Other consumer goods	7	0
	Civil engineering	19	2
Unclassified		0	1

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	17	5
	Audio-visual technology	7	0
	Telecommunications	11	0
	Digital communication	18	0
	Basic communication processes	0	0
	Computer technology	14	0
	IT methods for management	0	0
	Semiconductors	2	0
Instruments	Optics	4	0
	Measurement	14	0
	Analysis of biological materials	2	0
	Control	4	0
	Medical technology	41	0
Chemistry	Organic fine chemistry	13	3
	Biotechnology	22	1
	Pharmaceuticals	15	1
	Macromolecular chemistry, polymers	1	0
	Food chemistry	6	0

	Basic materials chemistry	2	2
	Materials, metallurgy	44	0
	Surface technology, coating	16	1
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0
	Environmental technology	2	0
Mechanical engineering	Handling	13	4
	Machine tools	21	0
	Engines, pumps, turbines	7	2
	Textile and paper machines	3	0
	Other special machines	24	0
	Thermal processes and apparatus	8	0
	Mechanical elements	5	0
	Transport	44	0
Other fields	Furniture, games	4	3
	Other consumer goods	8	0
	Civil engineering	14	0
Unclassified		7	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	0	0
	IT methods for management	0	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	3	0
Chemistry	Organic fine chemistry	0	0
	Biotechnology	2	0
	Pharmaceuticals	14	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	0	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	0	0
	Machine tools	0	0
	Engines, pumps, turbines	0	0

	Textile and paper machines	0	0
	Other special machines	1	1
	Thermal processes and apparatus	0	0
	Mechanical elements	0	0
	Transport	1	0
Other fields	Furniture, games	1	0
	Other consumer goods	3	0
	Civil engineering	0	0
Unclassified		0	4

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	10	597
	Audio-visual technology	0	97
	Telecommunications	0	109
	Digital communication	1	219
	Basic communication processes	0	58
	Computer technology	0	384
	IT methods for management	1	41
	Semiconductors	0	114
Instruments	Optics	0	398
	Measurement	4	428
	Analysis of biological materials	0	47
	Control	3	72
	Medical technology	10	781
Chemistry	Organic fine chemistry	2	328
	Biotechnology	0	300
	Pharmaceuticals	4	202
	Macromolecular chemistry, polymers	0	311
	Food chemistry	0	252
	Basic materials chemistry	4	285
	Materials, metallurgy	1	69
	Surface technology, coating	3	105
	Micro-structural and nano-technology	0	2
	Chemical engineering	0	166
	Environmental technology	0	75
Mechanical engineering	Handling	1	151
	Machine tools	3	73
	Engines, pumps, turbines	0	39
	Textile and paper machines	0	72
	Other special machines	0	349
	Thermal processes and apparatus	0	54
	Mechanical elements	1	74
	Transport	0	154
Other fields	Furniture, games	3	141
	Other consumer goods	6	101
	Civil engineering	1	163
Unclassified		0	131

Field of technology			Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy		33	11
	Audio-visual technology		6	3
	Telecommunications		14	2
	Digital communication		5	8
	Basic communication processes		10	4
	Computer technology		22	3
	IT methods for management		1	3
	Semiconductors		5	5
Instruments	Optics		5	2
	Measurement		54	21
	Analysis of biological materials		4	4
	Control		12	5
	Medical technology		30	46
Chemistry	Organic fine chemistry		14	25
	Biotechnology		26	6
	Pharmaceuticals		37	34
	Macromolecular chemistry, polymers		8	6
	Food chemistry		4	5
	Basic materials chemistry		33	11
	Materials, metallurgy		20	10
	Surface technology, coating		9	6
	Micro-structural and nano-technology		0	0
	Chemical engineering		25	10
	Environmental technology		14	7
Mechanical engineering	Handling		27	11
	Machine tools		16	3
	Engines, pumps, turbines		16	14
	Textile and paper machines		2	6
	Other special machines		49	29
	Thermal processes and apparatus		6	45
	Mechanical elements		22	5
	Transport		38	32
Other fields	Furniture, games		18	5
	Other consumer goods		2	28
	Civil engineering		58	35
Unclassified			1	13

Field of technology			Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy		11	3
	Audio-visual technology		2	0
	Telecommunications		5	0
	Digital communication		6	0
	Basic communication processes		1	0
	Computer technology		15	3
	IT methods for management		8	0
	Semiconductors		1	0
Instruments	Optics		1	0
	Measurement		12	2

	Analysis of biological materials	7	0
	Control	7	0
	Medical technology	22	4
Chemistry	Organic fine chemistry	9	0
	Biotechnology	14	0
	Pharmaceuticals	18	0
	Macromolecular chemistry, polymers	1	0
	Food chemistry	8	1
	Basic materials chemistry	6	0
	Materials, metallurgy	4	0
	Surface technology, coating	3	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	12	2
	Environmental technology	3	1
Mechanical engineering	Handling	15	1
	Machine tools	3	4
	Engines, pumps, turbines	2	3
	Textile and paper machines	8	2
	Other special machines	16	4
	Thermal processes and apparatus	10	0
	Mechanical elements	1	3
	Transport	9	2
Other fields	Furniture, games	18	2
	Other consumer goods	0	1
	Civil engineering	9	1
Unclassified		5	1

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	1	102
	Audio-visual technology	0	68
	Telecommunications	0	234
	Digital communication	0	1280
	Basic communication processes	0	51
	Computer technology	0	246
	IT methods for management	0	28
	Semiconductors	0	15
Instruments	Optics	0	34
	Measurement	1	169
	Analysis of biological materials	0	22
	Control	1	94
	Medical technology	0	203
Chemistry	Organic fine chemistry	0	44
	Biotechnology	0	86
	Pharmaceuticals	0	85
	Macromolecular chemistry, polymers	0	18
	Food chemistry	0	10
	Basic materials chemistry	0	23
	Materials, metallurgy	0	53
	Surface technology, coating	0	24

	Micro-structural and nano-technology	0	1
	Chemical engineering	0	106
	Environmental technology	0	64
Mechanical engineering	Handling	1	100
	Machine tools	0	124
	Engines, pumps, turbines	0	88
	Textile and paper machines	0	48
	Other special machines	2	114
	Thermal processes and apparatus	0	111
	Mechanical elements	0	84
	Transport	0	314
Other fields	Furniture, games	1	80
	Other consumer goods	1	84
	Civil engineering	0	161
Unclassified		1	27

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	13	2
	Audio-visual technology	1	0
	Telecommunications	1	0
	Digital communication	0	1
	Basic communication processes	0	0
	Computer technology	1	2
	IT methods for management	1	0
	Semiconductors	0	1
Instruments	Optics	1	0
	Measurement	5	4
	Analysis of biological materials	0	0
	Control	1	0
	Medical technology	9	1
Chemistry	Organic fine chemistry	7	2
	Biotechnology	8	2
	Pharmaceuticals	4	1
	Macromolecular chemistry, polymers	0	0
	Food chemistry	2	2
	Basic materials chemistry	3	1
	Materials, metallurgy	3	3
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0
	Environmental technology	4	1
Mechanical engineering	Handling	7	1
	Machine tools	4	2
	Engines, pumps, turbines	3	0
	Textile and paper machines	1	0
	Other special machines	4	2
	Thermal processes and apparatus	4	1
	Mechanical elements	5	3
	Transport	11	5

Other fields	Furniture, games	6	1
	Other consumer goods	2	0
	Civil engineering	8	4
Unclassified		1	0

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	19
	Audio-visual technology	0	10
	Telecommunications	0	4
	Digital communication	1	16
	Basic communication processes	0	2
	Computer technology	0	18
	IT methods for management	0	3
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	12
	Analysis of biological materials	0	1
	Control	0	2
	Medical technology	0	31
Chemistry	Organic fine chemistry	0	2
	Biotechnology	1	9
	Pharmaceuticals	0	23
	Macromolecular chemistry, polymers	0	4
	Food chemistry	0	11
	Basic materials chemistry	0	9
	Materials, metallurgy	0	8
	Surface technology, coating	1	2
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	3
	Environmental technology	0	0
Mechanical engineering	Handling	2	12
	Machine tools	2	7
	Engines, pumps, turbines	0	9
	Textile and paper machines	0	22
	Other special machines	0	25
	Thermal processes and apparatus	0	36
	Mechanical elements	0	21
	Transport	0	34
Other fields	Furniture, games	1	34
	Other consumer goods	0	55
	Civil engineering	0	26
Unclassified		0	1

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	32	85
	Audio-visual technology	12	41
	Telecommunications	11	26
	Digital communication	17	151
	Basic communication processes	3	8

	Computer technology	41	116
	IT methods for management	32	64
	Semiconductors	6	7
Instruments	Optics	12	20
	Measurement	46	98
	Analysis of biological materials	18	8
	Control	12	55
	Medical technology	157	145
Chemistry	Organic fine chemistry	21	28
	Biotechnology	47	70
	Pharmaceuticals	95	138
	Macromolecular chemistry, polymers	7	12
	Food chemistry	20	20
	Basic materials chemistry	28	30
	Materials, metallurgy	31	42
	Surface technology, coating	7	17
	Micro-structural and nano-technology	0	4
	Chemical engineering	40	55
	Environmental technology	19	17
Mechanical engineering	Handling	35	33
	Machine tools	10	17
	Engines, pumps, turbines	13	66
	Textile and paper machines	4	13
	Other special machines	44	82
	Thermal processes and apparatus	3	14
	Mechanical elements	11	41
	Transport	40	181
Other fields	Furniture, games	46	33
	Other consumer goods	23	31
	Civil engineering	51	58
Unclassified		3	15

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	890	43
	Audio-visual technology	582	22
	Telecommunications	774	11
	Digital communication	3599	51
	Basic communication processes	153	4
	Computer technology	1420	133
	IT methods for management	102	30
	Semiconductors	269	11
Instruments	Optics	312	41
	Measurement	365	100
	Analysis of biological materials	20	12
	Control	169	26
	Medical technology	308	466
Chemistry	Organic fine chemistry	269	27
	Biotechnology	207	72
	Pharmaceuticals	327	142

	Macromolecular chemistry, polymers	61	7
	Food chemistry	24	16
	Basic materials chemistry	78	22
	Materials, metallurgy	128	14
	Surface technology, coating	75	7
	Micro-structural and nano-technology	6	0
	Chemical engineering	113	26
	Environmental technology	59	16
Mechanical engineering	Handling	91	18
	Machine tools	111	35
	Engines, pumps, turbines	109	3
	Textile and paper machines	58	17
	Other special machines	133	53
	Thermal processes and apparatus	189	4
	Mechanical elements	151	6
	Transport	443	41
Other fields	Furniture, games	183	18
	Other consumer goods	320	17
	Civil engineering	106	17
Unclassified		23	17

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	1920	952
	Audio-visual technology	783	396
	Telecommunications	525	372
	Digital communication	1243	1199
	Basic communication processes	83	31
	Computer technology	1269	911
	IT methods for management	262	84
	Semiconductors	589	382
Instruments	Optics	1015	281
	Measurement	1150	196
	Analysis of biological materials	155	37
	Control	449	78
	Medical technology	999	299
Chemistry	Organic fine chemistry	538	202
	Biotechnology	462	203
	Pharmaceuticals	429	243
	Macromolecular chemistry, polymers	802	207
	Food chemistry	153	58
	Basic materials chemistry	568	114
	Materials, metallurgy	834	239
	Surface technology, coating	563	97
	Micro-structural and nano-technology	15	3
	Chemical engineering	418	109
	Environmental technology	204	30
Mechanical engineering	Handling	453	58
	Machine tools	567	62
	Engines, pumps, turbines	758	138

	Textile and paper machines	716	30
	Other special machines	773	145
	Thermal processes and apparatus	455	188
	Mechanical elements	576	47
	Transport	1561	238
Other fields	Furniture, games	179	171
	Other consumer goods	300	445
	Civil engineering	222	60
Unclassified		98	34

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	107	1673
	Audio-visual technology	129	995
	Telecommunications	62	1044
	Digital communication	171	3702
	Basic communication processes	40	298
	Computer technology	156	4776
	IT methods for management	14	986
	Semiconductors	83	622
Instruments	Optics	71	944
	Measurement	45	1968
	Analysis of biological materials	15	345
	Control	17	796
	Medical technology	86	5486
Chemistry	Organic fine chemistry	30	1472
	Biotechnology	31	2297
	Pharmaceuticals	69	2956
	Macromolecular chemistry, polymers	2	829
	Food chemistry	10	362
	Basic materials chemistry	9	1303
	Materials, metallurgy	8	798
	Surface technology, coating	12	548
	Micro-structural and nano-technology	0	41
	Chemical engineering	23	1059
	Environmental technology	9	416
Mechanical engineering	Handling	17	1052
	Machine tools	34	679
	Engines, pumps, turbines	31	1389
	Textile and paper machines	30	472
	Other special machines	39	1383
	Thermal processes and apparatus	26	441
	Mechanical elements	25	838
	Transport	75	1669
Other fields	Furniture, games	66	590
	Other consumer goods	22	838
	Civil engineering	25	788
Unclassified		9	322

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	185	11297
	Audio-visual technology	74	4278
	Telecommunications	44	4047
	Digital communication	253	13978
	Basic communication processes	33	1079
	Computer technology	427	12859
	IT methods for management	209	2499
	Semiconductors	32	2984
Instruments	Optics	67	4229
	Measurement	187	9048
	Analysis of biological materials	22	1358
	Control	52	3264
	Medical technology	554	13935
Chemistry	Organic fine chemistry	162	5993
	Biotechnology	146	6814
	Pharmaceuticals	276	7797
	Macromolecular chemistry, polymers	77	3943
	Food chemistry	41	1807
	Basic materials chemistry	208	4703
	Materials, metallurgy	77	3839
	Surface technology, coating	45	2631
	Micro-structural and nano-technology	3	147
	Chemical engineering	97	4210
	Environmental technology	31	1855
Mechanical engineering	Handling	59	4760
	Machine tools	47	3711
	Engines, pumps, turbines	119	5249
	Textile and paper machines	37	2636
	Other special machines	115	6419
	Thermal processes and apparatus	25	2674
	Mechanical elements	46	4220
	Transport	108	9540
Other fields	Furniture, games	83	3166
	Other consumer goods	42	4577
	Civil engineering	147	4654
Unclassified		34	1332

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2020 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	249
	Audio-visual technology	0	56
	Telecommunications	0	17
	Digital communication	0	15
	Basic communication processes	0	19
	Computer technology	0	50
	IT methods for management	0	13
	Semiconductors	0	64
Instruments	Optics	0	36
	Measurement	0	115
	Analysis of biological materials	0	9
	Control	0	40
	Medical technology	0	105
Chemistry	Organic fine chemistry	0	18
	Biotechnology	0	60
	Pharmaceuticals	0	84
	Macromolecular chemistry, polymers	0	145
	Food chemistry	0	18
	Basic materials chemistry	0	27
	Materials, metallurgy	0	79
	Surface technology, coating	0	56
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	45
	Environmental technology	0	25
Mechanical engineering	Handling	0	85
	Machine tools	0	107
	Engines, pumps, turbines	0	23
	Textile and paper machines	0	53
	Other special machines	0	138
	Thermal processes and apparatus	0	38
	Mechanical elements	0	58
	Transport	0	135
Other fields	Furniture, games	0	101
	Other consumer goods	0	58
	Civil engineering	0	162
Unclassified		0	3

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	108	5
	Audio-visual technology	35	0
	Telecommunications	28	0
	Digital communication	22	0
	Basic communication processes	9	3
	Computer technology	84	3
	IT methods for management	15	0

	Semiconductors	54	0
Instruments	Optics	60	0
	Measurement	113	0
	Analysis of biological materials	27	0
	Control	21	1
	Medical technology	182	6
Chemistry	Organic fine chemistry	114	0
	Biotechnology	219	3
	Pharmaceuticals	166	1
	Macromolecular chemistry, polymers	69	1
	Food chemistry	29	1
	Basic materials chemistry	93	1
	Materials, metallurgy	87	0
	Surface technology, coating	44	1
	Micro-structural and nano-technology	5	0
	Chemical engineering	82	1
	Environmental technology	25	0
Mechanical engineering	Handling	41	3
	Machine tools	38	2
	Engines, pumps, turbines	47	1
	Textile and paper machines	69	1
	Other special machines	153	3
	Thermal processes and apparatus	20	1
	Mechanical elements	61	3
	Transport	103	7
Other fields	Furniture, games	25	1
	Other consumer goods	42	0
	Civil engineering	106	2
Unclassified		10	3

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	532	6
	Audio-visual technology	88	0
	Telecommunications	33	1
	Digital communication	115	4
	Basic communication processes	32	0
	Computer technology	187	4
	IT methods for management	79	1
	Semiconductors	84	0
Instruments	Optics	83	1
	Measurement	697	1
	Analysis of biological materials	100	0
	Control	179	1
	Medical technology	723	12
Chemistry	Organic fine chemistry	458	2
	Biotechnology	504	8
	Pharmaceuticals	483	5
	Macromolecular chemistry, polymers	136	1
	Food chemistry	291	1

	Basic materials chemistry	226	2
	Materials, metallurgy	106	1
	Surface technology, coating	112	0
	Micro-structural and nano-technology	3	0
	Chemical engineering	190	0
	Environmental technology	68	1
Mechanical engineering	Handling	442	3
	Machine tools	135	1
	Engines, pumps, turbines	163	0
	Textile and paper machines	132	0
	Other special machines	225	1
	Thermal processes and apparatus	72	0
	Mechanical elements	110	1
	Transport	204	1
Other fields	Furniture, games	196	4
	Other consumer goods	736	1
	Civil engineering	195	1
Unclassified		6	0

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	18	2063
	Audio-visual technology	1	313
	Telecommunications	0	242
	Digital communication	1	721
	Basic communication processes	0	134
	Computer technology	3	1077
	IT methods for management	1	239
	Semiconductors	1	287
Instruments	Optics	4	392
	Measurement	12	1520
	Analysis of biological materials	2	231
	Control	3	735
	Medical technology	22	1319
Chemistry	Organic fine chemistry	13	1069
	Biotechnology	4	804
	Pharmaceuticals	15	649
	Macromolecular chemistry, polymers	0	808
	Food chemistry	1	160
	Basic materials chemistry	7	925
	Materials, metallurgy	8	610
	Surface technology, coating	2	465
	Micro-structural and nano-technology	1	15
	Chemical engineering	9	789
	Environmental technology	3	343
Mechanical engineering	Handling	4	889
	Machine tools	6	897
	Engines, pumps, turbines	4	771
	Textile and paper machines	8	397
	Other special machines	10	1251

	Thermal processes and apparatus	6	448
	Mechanical elements	5	1032
	Transport	11	2036
Other fields	Furniture, games	7	555
	Other consumer goods	3	545
	Civil engineering	11	1085
Unclassified		0	66

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	117	3
	Audio-visual technology	115	0
	Telecommunications	12	1
	Digital communication	15	1
	Basic communication processes	10	0
	Computer technology	45	5
	IT methods for management	11	10
	Semiconductors	2	0
Instruments	Optics	12	0
	Measurement	76	5
	Analysis of biological materials	28	0
	Control	33	8
	Medical technology	258	3
Chemistry	Organic fine chemistry	67	1
	Biotechnology	238	2
	Pharmaceuticals	224	0
	Macromolecular chemistry, polymers	19	0
	Food chemistry	99	0
	Basic materials chemistry	60	1
	Materials, metallurgy	43	0
	Surface technology, coating	30	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	57	1
	Environmental technology	30	0
Mechanical engineering	Handling	65	0
	Machine tools	19	0
	Engines, pumps, turbines	275	0
	Textile and paper machines	9	2
	Other special machines	99	1
	Thermal processes and apparatus	43	2
	Mechanical elements	54	0
	Transport	32	2
Other fields	Furniture, games	46	2
	Other consumer goods	25	2
	Civil engineering	145	5
Unclassified		7	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	135	52
	Audio-visual technology	17	73

	Telecommunications	14	120
	Digital communication	25	481
	Basic communication processes	4	17
	Computer technology	51	134
	IT methods for management	20	11
	Semiconductors	8	14
Instruments	Optics	23	43
	Measurement	66	88
	Analysis of biological materials	33	9
	Control	28	24
	Medical technology	125	79
Chemistry	Organic fine chemistry	100	13
	Biotechnology	113	27
	Pharmaceuticals	176	11
	Macromolecular chemistry, polymers	18	15
	Food chemistry	28	9
	Basic materials chemistry	58	41
	Materials, metallurgy	41	22
	Surface technology, coating	22	30
	Micro-structural and nano-technology	1	1
	Chemical engineering	41	37
	Environmental technology	21	29
Mechanical engineering	Handling	77	139
	Machine tools	36	25
	Engines, pumps, turbines	62	23
	Textile and paper machines	17	77
	Other special machines	63	43
	Thermal processes and apparatus	43	48
	Mechanical elements	35	27
	Transport	101	47
Other fields	Furniture, games	47	21
	Other consumer goods	42	15
	Civil engineering	81	51
Unclassified		22	3

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	629	275
	Audio-visual technology	216	83
	Telecommunications	129	86
	Digital communication	413	202
	Basic communication processes	47	24
	Computer technology	634	463
	IT methods for management	110	84
	Semiconductors	213	45
Instruments	Optics	261	127
	Measurement	519	298
	Analysis of biological materials	118	65
	Control	147	87

	Medical technology	741	475
Chemistry	Organic fine chemistry	417	286
	Biotechnology	498	329
	Pharmaceuticals	591	295
	Macromolecular chemistry, polymers	226	39
	Food chemistry	93	37
	Basic materials chemistry	251	202
	Materials, metallurgy	275	90
	Surface technology, coating	220	59
	Micro-structural and nano-technology	15	0
	Chemical engineering	261	158
	Environmental technology	138	67
Mechanical engineering	Handling	225	125
	Machine tools	117	75
	Engines, pumps, turbines	334	280
	Textile and paper machines	49	43
	Other special machines	438	172
	Thermal processes and apparatus	161	45
	Mechanical elements	354	146
	Transport	1005	247
Other fields	Furniture, games	145	126
	Other consumer goods	240	321
	Civil engineering	347	239
Unclassified		37	3

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	3	1
	Audio-visual technology	1	0
	Telecommunications	2	0
	Digital communication	2	0
	Basic communication processes	0	0
	Computer technology	6	2
	IT methods for management	2	1
	Semiconductors	0	0
Instruments	Optics	2	0
	Measurement	0	1
	Analysis of biological materials	0	0
	Control	2	3
	Medical technology	13	5
Chemistry	Organic fine chemistry	2	3
	Biotechnology	4	0
	Pharmaceuticals	15	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	1	0
	Basic materials chemistry	4	0
	Materials, metallurgy	1	0
	Surface technology, coating	10	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	0

	Environmental technology	0	0
Mechanical engineering	Handling	7	0
	Machine tools	33	1
	Engines, pumps, turbines	2	0
	Textile and paper machines	0	0
	Other special machines	7	1
	Thermal processes and apparatus	0	0
	Mechanical elements	1	2
	Transport	3	0
Other fields	Furniture, games	2	0
	Other consumer goods	3	2
	Civil engineering	4	1
Unclassified		1	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	7	74
	Audio-visual technology	3	23
	Telecommunications	1	11
	Digital communication	2	33
	Basic communication processes	0	22
	Computer technology	7	92
	IT methods for management	0	27
	Semiconductors	0	12
Instruments	Optics	3	4
	Measurement	3	42
	Analysis of biological materials	1	9
	Control	3	13
	Medical technology	10	205
Chemistry	Organic fine chemistry	9	48
	Biotechnology	7	47
	Pharmaceuticals	8	94
	Macromolecular chemistry, polymers	1	7
	Food chemistry	1	18
	Basic materials chemistry	6	9
	Materials, metallurgy	3	3
	Surface technology, coating	0	6
	Micro-structural and nano-technology	0	1
	Chemical engineering	1	18
	Environmental technology	4	8
Mechanical engineering	Handling	4	13
	Machine tools	1	3
	Engines, pumps, turbines	3	27
	Textile and paper machines	0	13
	Other special machines	4	23
	Thermal processes and apparatus	4	5
	Mechanical elements	0	12
	Transport	2	27
Other fields	Furniture, games	6	5
	Other consumer goods	2	7

	Civil engineering	3	17
Unclassified		0	2

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	0	221
	Audio-visual technology	0	27
	Telecommunications	0	24
	Digital communication	0	56
	Basic communication processes	0	15
	Computer technology	1	70
	IT methods for management	0	28
	Semiconductors	0	34
Instruments	Optics	0	63
	Measurement	2	179
	Analysis of biological materials	0	27
	Control	0	78
	Medical technology	18	293
Chemistry	Organic fine chemistry	1	125
	Biotechnology	1	105
	Pharmaceuticals	2	203
	Macromolecular chemistry, polymers	0	116
	Food chemistry	0	79
	Basic materials chemistry	1	64
	Materials, metallurgy	0	60
	Surface technology, coating	2	50
	Micro-structural and nano-technology	0	4
	Chemical engineering	1	136
	Environmental technology	1	75
Mechanical engineering	Handling	1	362
	Machine tools	0	196
	Engines, pumps, turbines	0	114
	Textile and paper machines	0	90
	Other special machines	5	314
	Thermal processes and apparatus	1	116
	Mechanical elements	1	192
	Transport	1	366
Other fields	Furniture, games	1	237
	Other consumer goods	1	188
	Civil engineering	0	272
Unclassified		0	40

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	41	1
	Audio-visual technology	1	0
	Telecommunications	0	1
	Digital communication	1	1
	Basic communication processes	5	0
	Computer technology	5	2
	IT methods for management	1	1

	Semiconductors	0	2
Instruments	Optics	0	7
	Measurement	14	2
	Analysis of biological materials	0	0
	Control	4	1
	Medical technology	25	6
Chemistry	Organic fine chemistry	2	3
	Biotechnology	5	3
	Pharmaceuticals	6	2
	Macromolecular chemistry, polymers	15	0
	Food chemistry	1	1
	Basic materials chemistry	7	0
	Materials, metallurgy	26	1
	Surface technology, coating	6	1
	Micro-structural and nano-technology	1	0
	Chemical engineering	1	2
	Environmental technology	3	1
Mechanical engineering	Handling	3	0
	Machine tools	119	0
	Engines, pumps, turbines	1	0
	Textile and paper machines	0	2
	Other special machines	12	4
	Thermal processes and apparatus	3	0
	Mechanical elements	33	0
	Transport	61	1
Other fields	Furniture, games	20	2
	Other consumer goods	1	1
	Civil engineering	16	1
Unclassified		0	1

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	16	3
	Audio-visual technology	3	1
	Telecommunications	8	0
	Digital communication	12	0
	Basic communication processes	0	0
	Computer technology	31	1
	IT methods for management	10	0
	Semiconductors	4	0
Instruments	Optics	3	2
	Measurement	8	1
	Analysis of biological materials	5	0
	Control	2	0
	Medical technology	42	0
Chemistry	Organic fine chemistry	5	1
	Biotechnology	9	2
	Pharmaceuticals	13	3
	Macromolecular chemistry, polymers	3	1
	Food chemistry	7	0

	Basic materials chemistry	7	1
	Materials, metallurgy	45	0
	Surface technology, coating	33	2
	Micro-structural and nano-technology	0	0
	Chemical engineering	5	3
	Environmental technology	3	1
Mechanical engineering	Handling	4	3
	Machine tools	23	0
	Engines, pumps, turbines	8	1
	Textile and paper machines	3	0
	Other special machines	16	0
	Thermal processes and apparatus	3	0
	Mechanical elements	5	0
	Transport	26	1
Other fields	Furniture, games	3	2
	Other consumer goods	12	0
	Civil engineering	23	1
Unclassified		2	0

Field of technology		Monaco	Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	0	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	1	0
	IT methods for management	1	0
	Semiconductors	0	0
Instruments	Optics	0	0
	Measurement	0	0
	Analysis of biological materials	0	0
	Control	0	0
	Medical technology	2	0
Chemistry	Organic fine chemistry	1	0
	Biotechnology	5	0
	Pharmaceuticals	7	0
	Macromolecular chemistry, polymers	0	0
	Food chemistry	2	0
	Basic materials chemistry	1	0
	Materials, metallurgy	0	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	4	0
	Machine tools	0	0
	Engines, pumps, turbines	0	0
	Textile and paper machines	0	0
	Other special machines	1	0

	Thermal processes and apparatus	0	0
	Mechanical elements	1	0
	Transport	5	0
Other fields	Furniture, games	0	0
	Other consumer goods	2	0
	Civil engineering	1	1
Unclassified		0	4

Field of technology		Malta	etherlands
Electrical engineering	Electrical machinery, apparatus, energy	3	578
	Audio-visual technology	1	124
	Telecommunications	2	111
	Digital communication	0	234
	Basic communication processes	0	43
	Computer technology	2	385
	IT methods for management	3	33
	Semiconductors	0	85
Instruments	Optics	0	325
	Measurement	4	366
	Analysis of biological materials	0	41
	Control	3	47
	Medical technology	7	853
Chemistry	Organic fine chemistry	1	327
	Biotechnology	1	266
	Pharmaceuticals	4	229
	Macromolecular chemistry, polymers	0	224
	Food chemistry	0	252
	Basic materials chemistry	3	293
	Materials, metallurgy	0	74
	Surface technology, coating	2	74
	Micro-structural and nano-technology	2	2
	Chemical engineering	3	126
	Environmental technology	1	65
Mechanical engineering	Handling	1	140
	Machine tools	3	65
	Engines, pumps, turbines	0	31
	Textile and paper machines	5	65
	Other special machines	3	306
	Thermal processes and apparatus	0	65
	Mechanical elements	0	52
	Transport	0	130
Other fields	Furniture, games	4	106
	Other consumer goods	4	134
	Civil engineering	1	121
Unclassified		0	14

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	21	19
	Audio-visual technology	9	1

	Telecommunications	7	2
	Digital communication	21	6
	Basic communication processes	4	2
	Computer technology	30	22
	IT methods for management	5	3
	Semiconductors	0	3
Instruments	Optics	6	4
	Measurement	43	18
	Analysis of biological materials	3	6
	Control	12	9
	Medical technology	26	38
Chemistry	Organic fine chemistry	4	16
	Biotechnology	25	22
	Pharmaceuticals	38	35
	Macromolecular chemistry, polymers	3	7
	Food chemistry	6	8
	Basic materials chemistry	36	13
	Materials, metallurgy	32	10
	Surface technology, coating	4	12
	Micro-structural and nano-technology	0	1
	Chemical engineering	24	6
	Environmental technology	13	6
Mechanical engineering	Handling	40	14
	Machine tools	13	7
	Engines, pumps, turbines	21	9
	Textile and paper machines	4	7
	Other special machines	36	19
	Thermal processes and apparatus	8	49
	Mechanical elements	20	8
	Transport	45	21
Other fields	Furniture, games	12	16
	Other consumer goods	9	23
	Civil engineering	72	24
Unclassified		0	12

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	5	1
	Audio-visual technology	2	0
	Telecommunications	1	0
	Digital communication	6	3
	Basic communication processes	1	0
	Computer technology	10	4
	IT methods for management	4	1
	Semiconductors	1	0
Instruments	Optics	5	1
	Measurement	15	2
	Analysis of biological materials	8	0
	Control	3	2
	Medical technology	30	3

Chemistry	Organic fine chemistry	7	0
	Biotechnology	17	0
	Pharmaceuticals	25	2
	Macromolecular chemistry, polymers	5	1
	Food chemistry	8	3
	Basic materials chemistry	6	2
	Materials, metallurgy	4	0
	Surface technology, coating	8	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	10	1
	Environmental technology	5	0
Mechanical engineering	Handling	6	0
	Machine tools	4	5
	Engines, pumps, turbines	1	5
	Textile and paper machines	0	0
	Other special machines	11	5
	Thermal processes and apparatus	4	0
	Mechanical elements	3	0
	Transport	7	3
Other fields	Furniture, games	7	6
	Other consumer goods	9	1
	Civil engineering	9	3
Unclassified		4	1

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	0	109
	Audio-visual technology	0	70
	Telecommunications	0	251
	Digital communication	0	1256
	Basic communication processes	0	57
	Computer technology	0	224
	IT methods for management	0	26
	Semiconductors	0	11
Instruments	Optics	0	27
	Measurement	0	167
	Analysis of biological materials	0	21
	Control	0	79
	Medical technology	0	272
Chemistry	Organic fine chemistry	0	52
	Biotechnology	1	90
	Pharmaceuticals	0	107
	Macromolecular chemistry, polymers	2	18
	Food chemistry	0	8
	Basic materials chemistry	0	21
	Materials, metallurgy	0	60
	Surface technology, coating	1	21
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	99
	Environmental technology	0	61

Mechanical engineering	Handling		1	73
	Machine tools		0	100
	Engines, pumps, turbines		0	97
	Textile and paper machines		0	44
	Other special machines		1	113
	Thermal processes and apparatus		0	98
	Mechanical elements		1	120
	Transport		0	359
Other fields	Furniture, games		0	58
	Other consumer goods		1	93
	Civil engineering		0	153
Unclassified			0	7

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	17	1
	Audio-visual technology	1	0
	Telecommunications	0	1
	Digital communication	0	0
	Basic communication processes	1	0
	Computer technology	1	1
	IT methods for management	0	0
	Semiconductors	0	1
Instruments	Optics	0	0
	Measurement	6	2
	Analysis of biological materials	0	1
	Control	6	0
	Medical technology	11	1
Chemistry	Organic fine chemistry	8	2
	Biotechnology	19	5
	Pharmaceuticals	9	1
	Macromolecular chemistry, polymers	0	1
	Food chemistry	1	1
	Basic materials chemistry	1	1
	Materials, metallurgy	6	2
	Surface technology, coating	2	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	11	1
	Environmental technology	4	2
Mechanical engineering	Handling	13	3
	Machine tools	5	3
	Engines, pumps, turbines	2	1
	Textile and paper machines	0	1
	Other special machines	5	4
	Thermal processes and apparatus	2	5
	Mechanical elements	2	5
	Transport	6	3
Other fields	Furniture, games	7	1
	Other consumer goods	6	1
	Civil engineering	10	3

Unclassified		3	0

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	18
	Audio-visual technology	0	9
	Telecommunications	0	6
	Digital communication	0	16
	Basic communication processes	0	4
	Computer technology	0	13
	IT methods for management	0	4
	Semiconductors	0	1
Instruments	Optics	0	4
	Measurement	0	13
	Analysis of biological materials	0	1
	Control	0	6
	Medical technology	0	37
Chemistry	Organic fine chemistry	0	7
	Biotechnology	0	3
	Pharmaceuticals	0	53
	Macromolecular chemistry, polymers	0	7
	Food chemistry	0	7
	Basic materials chemistry	0	3
	Materials, metallurgy	0	14
	Surface technology, coating	0	3
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	7
	Environmental technology	0	9
Mechanical engineering	Handling	0	13
	Machine tools	0	14
	Engines, pumps, turbines	0	21
	Textile and paper machines	0	14
	Other special machines	0	22
	Thermal processes and apparatus	0	62
	Mechanical elements	2	20
	Transport	0	44
Other fields	Furniture, games	0	56
	Other consumer goods	1	73
	Civil engineering	0	21
Unclassified		0	0

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	30	53
	Audio-visual technology	10	17
	Telecommunications	5	33
	Digital communication	10	138
	Basic communication processes	1	5
	Computer technology	35	138
	IT methods for management	25	45
	Semiconductors	7	4

Instruments	Optics	4	19
	Measurement	43	88
	Analysis of biological materials	15	13
	Control	9	39
	Medical technology	170	163
Chemistry	Organic fine chemistry	21	35
	Biotechnology	57	60
	Pharmaceuticals	112	122
	Macromolecular chemistry, polymers	8	20
	Food chemistry	23	10
	Basic materials chemistry	19	30
	Materials, metallurgy	26	44
	Surface technology, coating	7	25
	Micro-structural and nano-technology	0	1
	Chemical engineering	28	57
	Environmental technology	13	38
Mechanical engineering	Handling	43	37
	Machine tools	11	23
	Engines, pumps, turbines	10	87
	Textile and paper machines	4	7
	Other special machines	45	83
	Thermal processes and apparatus	14	16
	Mechanical elements	7	34
	Transport	40	163
Other fields	Furniture, games	30	25
	Other consumer goods	19	34
	Civil engineering	65	53
Unclassified		0	0

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	1077	46
	Audio-visual technology	720	8
	Telecommunications	776	23
	Digital communication	3604	81
	Basic communication processes	106	5
	Computer technology	1527	150
	IT methods for management	125	22
	Semiconductors	321	8
Instruments	Optics	364	51
	Measurement	425	93
	Analysis of biological materials	19	19
	Control	190	30
	Medical technology	435	509
Chemistry	Organic fine chemistry	353	27
	Biotechnology	295	68
	Pharmaceuticals	392	127
	Macromolecular chemistry, polymers	65	12
	Food chemistry	29	23
	Basic materials chemistry	84	38

	Materials, metallurgy	139	15
	Surface technology, coating	76	9
	Micro-structural and nano-technology	3	0
	Chemical engineering	137	25
	Environmental technology	56	17
Mechanical engineering	Handling	103	13
	Machine tools	98	41
	Engines, pumps, turbines	175	9
	Textile and paper machines	53	19
	Other special machines	129	69
	Thermal processes and apparatus	215	10
	Mechanical elements	142	16
	Transport	515	50
Other fields	Furniture, games	221	14
	Other consumer goods	334	20
	Civil engineering	130	16
Unclassified		3	0

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	1984	1164
	Audio-visual technology	760	459
	Telecommunications	455	418
	Digital communication	1399	1050
	Basic communication processes	109	39
	Computer technology	1364	1066
	IT methods for management	257	114
	Semiconductors	494	486
Instruments	Optics	917	309
	Measurement	1144	239
	Analysis of biological materials	112	30
	Control	472	77
	Medical technology	1059	366
Chemistry	Organic fine chemistry	518	249
	Biotechnology	479	232
	Pharmaceuticals	456	267
	Macromolecular chemistry, polymers	874	281
	Food chemistry	177	62
	Basic materials chemistry	587	125
	Materials, metallurgy	808	232
	Surface technology, coating	564	107
	Micro-structural and nano-technology	22	2
	Chemical engineering	402	133
	Environmental technology	191	42
Mechanical engineering	Handling	505	48
	Machine tools	587	77
	Engines, pumps, turbines	550	122
	Textile and paper machines	645	32
	Other special machines	810	111
	Thermal processes and apparatus	449	214

	Mechanical elements	517	65
	Transport	1520	188
Other fields	Furniture, games	163	208
	Other consumer goods	319	403
	Civil engineering	280	65
Unclassified		5	2

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	79	1443
	Audio-visual technology	86	982
	Telecommunications	38	1039
	Digital communication	124	3657
	Basic communication processes	28	298
	Computer technology	107	4902
	IT methods for management	6	880
	Semiconductors	122	689
Instruments	Optics	76	962
	Measurement	38	1894
	Analysis of biological materials	7	355
	Control	13	844
	Medical technology	120	5753
Chemistry	Organic fine chemistry	24	1461
	Biotechnology	29	2349
	Pharmaceuticals	79	3095
	Macromolecular chemistry, polymers	19	900
	Food chemistry	4	360
	Basic materials chemistry	10	1178
	Materials, metallurgy	4	692
	Surface technology, coating	21	481
	Micro-structural and nano-technology	0	32
	Chemical engineering	25	973
	Environmental technology	4	343
Mechanical engineering	Handling	15	793
	Machine tools	30	678
	Engines, pumps, turbines	10	983
	Textile and paper machines	19	545
	Other special machines	35	1334
	Thermal processes and apparatus	8	398
	Mechanical elements	42	606
	Transport	47	1298
Other fields	Furniture, games	50	613
	Other consumer goods	30	753
	Civil engineering	18	663
Unclassified		0	24

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	202	11409
	Audio-visual technology	73	4388

	Telecommunications	54	3952
	Digital communication	350	14077
	Basic communication processes	22	1066
	Computer technology	431	13370
	IT methods for management	190	2408
	Semiconductors	40	3097
Instruments	Optics	62	4262
	Measurement	244	8606
	Analysis of biological materials	25	1340
	Control	66	3320
	Medical technology	671	15193
Chemistry	Organic fine chemistry	159	6029
	Biotechnology	126	7141
	Pharmaceuticals	240	8446
	Macromolecular chemistry, polymers	57	4124
	Food chemistry	35	1894
	Basic materials chemistry	214	4658
	Materials, metallurgy	67	3730
	Surface technology, coating	33	2601
	Micro-structural and nano-technology	3	115
	Chemical engineering	122	4030
	Environmental technology	58	1774
Mechanical engineering	Handling	58	4418
	Machine tools	22	3620
	Engines, pumps, turbines	93	4366
	Textile and paper machines	43	2472
	Other special machines	91	6216
	Thermal processes and apparatus	26	2702
	Mechanical elements	38	3833
	Transport	130	8993
Other fields	Furniture, games	79	3230
	Other consumer goods	47	4563
	Civil engineering	202	4679
Unclassified		10	295

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international
(PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table
is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

EPO statistics

European patent applications[1] 2021 by field of technology[2]

Field of technology		Albania	Austria
Electrical engineering	Electrical machinery, apparatus, energy	0	325
	Audio-visual technology	0	42
	Telecommunications	0	21
	Digital communication	0	15
	Basic communication processes	0	11
	Computer technology	0	54
	IT methods for management	1	11
	Semiconductors	0	65
Instruments	Optics	0	45
	Measurement	0	82
	Analysis of biological materials	0	14
	Control	0	37
	Medical technology	0	80
Chemistry	Organic fine chemistry	0	13
	Biotechnology	0	68
	Pharmaceuticals	0	64
	Macromolecular chemistry, polymers	0	162
	Food chemistry	0	13
	Basic materials chemistry	0	39
	Materials, metallurgy	0	73
	Surface technology, coating	0	38
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	44
	Environmental technology	0	27
Mechanical engineering	Handling	0	101
	Machine tools	0	94
	Engines, pumps, turbines	1	32
	Textile and paper machines	0	61
	Other special machines	0	143
	Thermal processes and apparatus	0	41
	Mechanical elements	0	63
	Transport	0	138
Other fields	Furniture, games	0	69
	Other consumer goods	0	51
	Civil engineering	1	176
Unclassified		0	5

Field of technology		Belgium	Bulgaria
Electrical engineering	Electrical machinery, apparatus, energy	116	5
	Audio-visual technology	43	0
	Telecommunications	37	0
	Digital communication	22	1
	Basic communication processes	14	1
	Computer technology	81	2
	IT methods for management	13	1

	Semiconductors	68	0
Instruments	Optics	68	0
	Measurement	95	1
	Analysis of biological materials	26	0
	Control	25	3
	Medical technology	171	5
Chemistry	Organic fine chemistry	99	0
	Biotechnology	175	0
	Pharmaceuticals	223	3
	Macromolecular chemistry, polymers	66	0
	Food chemistry	39	2
	Basic materials chemistry	93	1
	Materials, metallurgy	132	0
	Surface technology, coating	48	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	77	0
	Environmental technology	30	0
Mechanical engineering	Handling	47	1
	Machine tools	38	0
	Engines, pumps, turbines	52	1
	Textile and paper machines	45	0
	Other special machines	168	6
	Thermal processes and apparatus	22	0
	Mechanical elements	36	0
	Transport	130	1
Other fields	Furniture, games	25	2
	Other consumer goods	28	0
	Civil engineering	120	4
Unclassified		13	0

Field of technology		Switzerland	Cyprus
Electrical engineering	Electrical machinery, apparatus, energy	552	2
	Audio-visual technology	101	1
	Telecommunications	34	0
	Digital communication	143	5
	Basic communication processes	35	0
	Computer technology	225	6
	IT methods for management	60	0
	Semiconductors	103	1
Instruments	Optics	74	0
	Measurement	744	1
	Analysis of biological materials	89	0
	Control	168	0
	Medical technology	857	2
Chemistry	Organic fine chemistry	489	2
	Biotechnology	390	3
	Pharmaceuticals	496	2
	Macromolecular chemistry, polymers	154	0
	Food chemistry	290	0

	Basic materials chemistry	249	0
	Materials, metallurgy	133	0
	Surface technology, coating	125	1
	Micro-structural and nano-technology	5	0
	Chemical engineering	178	0
	Environmental technology	53	1
Mechanical engineering	Handling	507	9
	Machine tools	137	1
	Engines, pumps, turbines	138	1
	Textile and paper machines	125	0
	Other special machines	237	0
	Thermal processes and apparatus	78	2
	Mechanical elements	125	0
	Transport	198	0
Other fields	Furniture, games	165	2
	Other consumer goods	759	1
	Civil engineering	209	1
Unclassified		17	0

Field of technology		Czech Republic	Germany
Electrical engineering	Electrical machinery, apparatus, energy	14	2103
	Audio-visual technology	2	330
	Telecommunications	1	242
	Digital communication	2	745
	Basic communication processes	1	110
	Computer technology	2	1209
	IT methods for management	2	276
	Semiconductors	2	313
Instruments	Optics	4	425
	Measurement	7	1562
	Analysis of biological materials	2	175
	Control	2	694
	Medical technology	18	1426
Chemistry	Organic fine chemistry	15	1073
	Biotechnology	6	758
	Pharmaceuticals	10	623
	Macromolecular chemistry, polymers	3	761
	Food chemistry	4	163
	Basic materials chemistry	6	849
	Materials, metallurgy	4	666
	Surface technology, coating	6	441
	Micro-structural and nano-technology	1	17
	Chemical engineering	7	774
	Environmental technology	8	307
Mechanical engineering	Handling	5	996
	Machine tools	2	927
	Engines, pumps, turbines	7	718
	Textile and paper machines	4	349
	Other special machines	11	1219

	Thermal processes and apparatus	12	520
	Mechanical elements	4	1039
	Transport	9	2020
Other fields	Furniture, games	1	594
	Other consumer goods	2	496
	Civil engineering	16	987
Unclassified		1	62

Field of technology		Denmark	Estonia
Electrical engineering	Electrical machinery, apparatus, energy	123	4
	Audio-visual technology	188	0
	Telecommunications	15	0
	Digital communication	15	0
	Basic communication processes	4	0
	Computer technology	63	9
	IT methods for management	14	7
	Semiconductors	2	0
Instruments	Optics	10	0
	Measurement	105	4
	Analysis of biological materials	15	3
	Control	31	6
	Medical technology	263	5
Chemistry	Organic fine chemistry	78	0
	Biotechnology	241	2
	Pharmaceuticals	195	1
	Macromolecular chemistry, polymers	14	0
	Food chemistry	104	0
	Basic materials chemistry	76	1
	Materials, metallurgy	46	0
	Surface technology, coating	37	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	55	2
	Environmental technology	14	0
Mechanical engineering	Handling	63	2
	Machine tools	22	1
	Engines, pumps, turbines	342	1
	Textile and paper machines	18	1
	Other special machines	151	10
	Thermal processes and apparatus	40	0
	Mechanical elements	44	0
	Transport	40	1
Other fields	Furniture, games	48	1
	Other consumer goods	27	1
	Civil engineering	130	7
Unclassified		9	0

Field of technology		Spain	Finland
Electrical engineering	Electrical machinery, apparatus, energy	165	50
	Audio-visual technology	16	75

	Telecommunications	12	147
	Digital communication	19	677
	Basic communication processes	2	31
	Computer technology	61	143
	IT methods for management	22	22
	Semiconductors	9	16
Instruments	Optics	31	29
	Measurement	63	83
	Analysis of biological materials	37	15
	Control	28	24
	Medical technology	147	64
Chemistry	Organic fine chemistry	85	11
	Biotechnology	141	29
	Pharmaceuticals	189	15
	Macromolecular chemistry, polymers	29	23
	Food chemistry	34	10
	Basic materials chemistry	58	61
	Materials, metallurgy	43	16
	Surface technology, coating	27	25
	Micro-structural and nano-technology	2	1
	Chemical engineering	42	63
	Environmental technology	25	30
Mechanical engineering	Handling	70	55
	Machine tools	31	32
	Engines, pumps, turbines	110	19
	Textile and paper machines	23	63
	Other special machines	72	68
	Thermal processes and apparatus	38	35
	Mechanical elements	33	17
	Transport	117	53
Other fields	Furniture, games	58	18
	Other consumer goods	39	10
	Civil engineering	66	78
Unclassified		10	3

Field of technology		France	United Kingdom
Electrical engineering	Electrical machinery, apparatus, energy	666	280
	Audio-visual technology	238	114
	Telecommunications	156	104
	Digital communication	368	145
	Basic communication processes	52	19
	Computer technology	669	462
	IT methods for management	80	60
	Semiconductors	212	70
Instruments	Optics	240	83
	Measurement	550	254
	Analysis of biological materials	106	57
	Control	115	95

	Medical technology	719	471
Chemistry	Organic fine chemistry	413	199
	Biotechnology	481	339
	Pharmaceuticals	482	330
	Macromolecular chemistry, polymers	195	45
	Food chemistry	105	25
	Basic materials chemistry	228	159
	Materials, metallurgy	298	89
	Surface technology, coating	213	52
	Micro-structural and nano-technology	16	5
	Chemical engineering	258	164
	Environmental technology	129	77
Mechanical engineering	Handling	235	114
	Machine tools	94	52
	Engines, pumps, turbines	392	206
	Textile and paper machines	47	51
	Other special machines	485	187
	Thermal processes and apparatus	150	63
	Mechanical elements	339	134
	Transport	1009	325
Other fields	Furniture, games	157	96
	Other consumer goods	264	499
	Civil engineering	340	198
Unclassified		36	4

Field of technology		Greece	Croatia
Electrical engineering	Electrical machinery, apparatus, energy	8	7
	Audio-visual technology	1	1
	Telecommunications	3	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	3	2
	IT methods for management	3	0
	Semiconductors	1	0
Instruments	Optics	4	0
	Measurement	3	2
	Analysis of biological materials	1	0
	Control	2	0
	Medical technology	20	3
Chemistry	Organic fine chemistry	15	2
	Biotechnology	3	0
	Pharmaceuticals	19	1
	Macromolecular chemistry, polymers	0	1
	Food chemistry	2	1
	Basic materials chemistry	4	0
	Materials, metallurgy	3	0
	Surface technology, coating	11	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	7	0

	Environmental technology	2	1
Mechanical engineering	Handling	5	0
	Machine tools	31	0
	Engines, pumps, turbines	2	0
	Textile and paper machines	2	1
	Other special machines	7	0
	Thermal processes and apparatus	5	0
	Mechanical elements	0	1
	Transport	9	2
Other fields	Furniture, games	2	1
	Other consumer goods	14	0
	Civil engineering	6	1
Unclassified		0	0

Field of technology		Hungary	Ireland
Electrical engineering	Electrical machinery, apparatus, energy	10	103
	Audio-visual technology	2	9
	Telecommunications	0	9
	Digital communication	1	18
	Basic communication processes	0	20
	Computer technology	5	77
	IT methods for management	0	23
	Semiconductors	1	8
Instruments	Optics	5	7
	Measurement	4	44
	Analysis of biological materials	2	12
	Control	2	16
	Medical technology	10	227
Chemistry	Organic fine chemistry	5	43
	Biotechnology	8	40
	Pharmaceuticals	10	96
	Macromolecular chemistry, polymers	0	4
	Food chemistry	3	10
	Basic materials chemistry	2	12
	Materials, metallurgy	2	8
	Surface technology, coating	3	2
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	19
	Environmental technology	2	7
Mechanical engineering	Handling	2	10
	Machine tools	0	5
	Engines, pumps, turbines	3	35
	Textile and paper machines	1	9
	Other special machines	7	23
	Thermal processes and apparatus	1	2
	Mechanical elements	4	17
	Transport	8	15
Other fields	Furniture, games	4	10
	Other consumer goods	4	4

	Civil engineering	4	10
Unclassified		1	2

Field of technology		Iceland	Italy
Electrical engineering	Electrical machinery, apparatus, energy	2	220
	Audio-visual technology	0	27
	Telecommunications	0	35
	Digital communication	0	40
	Basic communication processes	0	12
	Computer technology	1	96
	IT methods for management	2	47
	Semiconductors	0	51
Instruments	Optics	1	53
	Measurement	5	226
	Analysis of biological materials	0	26
	Control	0	71
	Medical technology	19	341
Chemistry	Organic fine chemistry	0	122
	Biotechnology	2	114
	Pharmaceuticals	2	192
	Macromolecular chemistry, polymers	2	102
	Food chemistry	0	66
	Basic materials chemistry	1	62
	Materials, metallurgy	0	72
	Surface technology, coating	1	90
	Micro-structural and nano-technology	0	8
	Chemical engineering	2	146
	Environmental technology	1	91
Mechanical engineering	Handling	1	399
	Machine tools	0	215
	Engines, pumps, turbines	1	121
	Textile and paper machines	1	114
	Other special machines	11	324
	Thermal processes and apparatus	0	121
	Mechanical elements	1	190
	Transport	3	400
Other fields	Furniture, games	0	210
	Other consumer goods	2	206
	Civil engineering	1	284
Unclassified		0	25

Field of technology		Liechtenstein	Lithuania
Electrical engineering	Electrical machinery, apparatus, energy	60	0
	Audio-visual technology	5	0
	Telecommunications	6	1
	Digital communication	4	4
	Basic communication processes	1	0
	Computer technology	3	5
	IT methods for management	0	1

	Semiconductors	0	2
Instruments	Optics	3	4
	Measurement	24	4
	Analysis of biological materials	0	1
	Control	6	0
	Medical technology	25	9
Chemistry	Organic fine chemistry	0	0
	Biotechnology	1	5
	Pharmaceuticals	11	4
	Macromolecular chemistry, polymers	16	1
	Food chemistry	2	1
	Basic materials chemistry	2	0
	Materials, metallurgy	33	2
	Surface technology, coating	12	0
	Micro-structural and nano-technology	0	1
	Chemical engineering	3	3
	Environmental technology	8	2
Mechanical engineering	Handling	18	0
	Machine tools	110	4
	Engines, pumps, turbines	2	0
	Textile and paper machines	1	0
	Other special machines	10	5
	Thermal processes and apparatus	2	0
	Mechanical elements	31	0
	Transport	64	5
Other fields	Furniture, games	11	0
	Other consumer goods	2	2
	Civil engineering	18	7
Unclassified		0	0

Field of technology		Luxembourg	Latvia
Electrical engineering	Electrical machinery, apparatus, energy	6	0
	Audio-visual technology	7	2
	Telecommunications	11	0
	Digital communication	12	0
	Basic communication processes	0	0
	Computer technology	13	0
	IT methods for management	4	0
	Semiconductors	0	0
Instruments	Optics	2	2
	Measurement	10	0
	Analysis of biological materials	2	0
	Control	5	0
	Medical technology	46	3
Chemistry	Organic fine chemistry	5	2
	Biotechnology	8	1
	Pharmaceuticals	13	1
	Macromolecular chemistry, polymers	8	0
	Food chemistry	12	0

	Basic materials chemistry	7	0
	Materials, metallurgy	44	0
	Surface technology, coating	31	1
	Micro-structural and nano-technology	0	0
	Chemical engineering	10	1
	Environmental technology	1	1
Mechanical engineering	Handling	7	1
	Machine tools	18	0
	Engines, pumps, turbines	10	4
	Textile and paper machines	15	1
	Other special machines	25	1
	Thermal processes and apparatus	7	0
	Mechanical elements	20	0
	Transport	16	0
Other fields	Furniture, games	4	1
	Other consumer goods	27	0
	Civil engineering	24	0
Unclassified		0	0

Field of technology		Monaco	North Macedonia
Electrical engineering	Electrical machinery, apparatus, energy	0	0
	Audio-visual technology	0	0
	Telecommunications	1	0
	Digital communication	0	0
	Basic communication processes	0	0
	Computer technology	1	0
	IT methods for management	5	0
	Semiconductors	0	1
Instruments	Optics	0	0
	Measurement	1	0
	Analysis of biological materials	1	0
	Control	0	0
	Medical technology	2	0
Chemistry	Organic fine chemistry	0	0
	Biotechnology	2	0
	Pharmaceuticals	4	2
	Macromolecular chemistry, polymers	0	0
	Food chemistry	0	0
	Basic materials chemistry	0	0
	Materials, metallurgy	1	0
	Surface technology, coating	0	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	0	0
	Environmental technology	0	0
Mechanical engineering	Handling	0	0
	Machine tools	0	0
	Engines, pumps, turbines	0	0

	Textile and paper machines	0	0
	Other special machines	0	1
	Thermal processes and apparatus	0	0
	Mechanical elements	0	0
	Transport	0	0
Other fields	Furniture, games	1	0
	Other consumer goods	4	1
	Civil engineering	0	0
Unclassified		0	0

Field of technology		Malta	Netherlands
Electrical engineering	Electrical machinery, apparatus, energy	0	564
	Audio-visual technology	0	72
	Telecommunications	0	141
	Digital communication	1	246
	Basic communication processes	0	61
	Computer technology	1	364
	IT methods for management	1	25
	Semiconductors	0	96
Instruments	Optics	0	312
	Measurement	4	349
	Analysis of biological materials	0	25
	Control	10	50
	Medical technology	11	884
Chemistry	Organic fine chemistry	0	338
	Biotechnology	0	237
	Pharmaceuticals	4	237
	Macromolecular chemistry, polymers	0	241
	Food chemistry	0	317
	Basic materials chemistry	2	406
	Materials, metallurgy	0	61
	Surface technology, coating	3	60
	Micro-structural and nano-technology	0	2
	Chemical engineering	0	137
	Environmental technology	1	80
Mechanical engineering	Handling	1	148
	Machine tools	2	78
	Engines, pumps, turbines	0	31
	Textile and paper machines	1	44
	Other special machines	1	305
	Thermal processes and apparatus	0	77
	Mechanical elements	0	51
	Transport	0	163
Other fields	Furniture, games	1	144
	Other consumer goods	6	94
	Civil engineering	1	124
Unclassified		0	17

Field of technology		Norway	Poland
Electrical engineering	Electrical machinery, apparatus, energy	19	14
	Audio-visual technology	6	6
	Telecommunications	5	3
	Digital communication	20	13
	Basic communication processes	1	1
	Computer technology	25	18
	IT methods for management	8	11
	Semiconductors	1	8
Instruments	Optics	7	5
	Measurement	57	23
	Analysis of biological materials	5	1
	Control	11	2
	Medical technology	32	65
Chemistry	Organic fine chemistry	7	15
	Biotechnology	21	9
	Pharmaceuticals	34	39
	Macromolecular chemistry, polymers	4	5
	Food chemistry	10	8
	Basic materials chemistry	18	9
	Materials, metallurgy	23	11
	Surface technology, coating	9	10
	Micro-structural and nano-technology	0	0
	Chemical engineering	18	16
	Environmental technology	14	3
Mechanical engineering	Handling	62	18
	Machine tools	10	13
	Engines, pumps, turbines	21	10
	Textile and paper machines	1	6
	Other special machines	43	33
	Thermal processes and apparatus	9	34
	Mechanical elements	24	23
	Transport	49	38
Other fields	Furniture, games	9	8
	Other consumer goods	6	14
	Civil engineering	51	30
Unclassified		0	17

Field of technology		Portugal	Romania
Electrical engineering	Electrical machinery, apparatus, energy	9	1
	Audio-visual technology	0	1
	Telecommunications	2	0
	Digital communication	5	0
	Basic communication processes	0	0
	Computer technology	32	3
	IT methods for management	8	0
	Semiconductors	2	0
Instruments	Optics	3	0
	Measurement	13	4

	Analysis of biological materials	2	0
	Control	3	2
	Medical technology	29	3
Chemistry	Organic fine chemistry	8	0
	Biotechnology	31	0
	Pharmaceuticals	13	0
	Macromolecular chemistry, polymers	7	0
	Food chemistry	10	0
	Basic materials chemistry	9	1
	Materials, metallurgy	6	0
	Surface technology, coating	3	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	3	0
	Environmental technology	8	0
Mechanical engineering	Handling	5	0
	Machine tools	3	2
	Engines, pumps, turbines	4	0
	Textile and paper machines	6	0
	Other special machines	8	3
	Thermal processes and apparatus	5	1
	Mechanical elements	2	1
	Transport	15	1
Other fields	Furniture, games	15	1
	Other consumer goods	2	1
	Civil engineering	9	5
Unclassified		6	0

Field of technology		Serbia	Sweden
Electrical engineering	Electrical machinery, apparatus, energy	0	140
	Audio-visual technology	1	97
	Telecommunications	0	277
	Digital communication	0	1446
	Basic communication processes	0	39
	Computer technology	1	224
	IT methods for management	0	32
	Semiconductors	0	22
Instruments	Optics	0	36
	Measurement	0	174
	Analysis of biological materials	0	22
	Control	0	110
	Medical technology	5	254
Chemistry	Organic fine chemistry	1	48
	Biotechnology	0	72
	Pharmaceuticals	1	133
	Macromolecular chemistry, polymers	0	8
	Food chemistry	1	23
	Basic materials chemistry	1	40
	Materials, metallurgy	0	63
	Surface technology, coating	0	39

	Micro-structural and nano-technology	0	3
	Chemical engineering	1	112
	Environmental technology	0	74
Mechanical engineering	Handling	1	69
	Machine tools	0	95
	Engines, pumps, turbines	1	106
	Textile and paper machines	0	82
	Other special machines	1	111
	Thermal processes and apparatus	1	88
	Mechanical elements	0	151
	Transport	1	477
Other fields	Furniture, games	2	52
	Other consumer goods	1	71
	Civil engineering	2	158
Unclassified		0	6

Field of technology		Slovenia	Slovakia
Electrical engineering	Electrical machinery, apparatus, energy	9	2
	Audio-visual technology	1	0
	Telecommunications	1	1
	Digital communication	1	0
	Basic communication processes	0	0
	Computer technology	1	4
	IT methods for management	0	1
	Semiconductors	1	0
Instruments	Optics	1	1
	Measurement	6	2
	Analysis of biological materials	0	3
	Control	0	0
	Medical technology	9	3
Chemistry	Organic fine chemistry	12	0
	Biotechnology	4	0
	Pharmaceuticals	12	1
	Macromolecular chemistry, polymers	0	1
	Food chemistry	1	0
	Basic materials chemistry	1	1
	Materials, metallurgy	3	3
	Surface technology, coating	1	0
	Micro-structural and nano-technology	0	0
	Chemical engineering	2	2
	Environmental technology	2	1
Mechanical engineering	Handling	9	0
	Machine tools	5	6
	Engines, pumps, turbines	0	1
	Textile and paper machines	0	0
	Other special machines	5	0
	Thermal processes and apparatus	3	2
	Mechanical elements	8	2
	Transport	6	1

Other fields	Furniture, games	2	2
	Other consumer goods	3	0
	Civil engineering	5	2
Unclassified		2	0

Field of technology		San Marino	Turkey
Electrical engineering	Electrical machinery, apparatus, energy	0	42
	Audio-visual technology	1	10
	Telecommunications	0	4
	Digital communication	0	18
	Basic communication processes	0	4
	Computer technology	0	16
	IT methods for management	0	6
	Semiconductors	0	4
Instruments	Optics	0	0
	Measurement	0	19
	Analysis of biological materials	0	5
	Control	0	14
	Medical technology	2	30
Chemistry	Organic fine chemistry	0	7
	Biotechnology	0	11
	Pharmaceuticals	0	53
	Macromolecular chemistry, polymers	0	8
	Food chemistry	0	14
	Basic materials chemistry	0	8
	Materials, metallurgy	0	15
	Surface technology, coating	0	9
	Micro-structural and nano-technology	0	0
	Chemical engineering	1	10
	Environmental technology	0	11
Mechanical engineering	Handling	3	14
	Machine tools	2	11
	Engines, pumps, turbines	0	15
	Textile and paper machines	0	25
	Other special machines	0	32
	Thermal processes and apparatus	1	63
	Mechanical elements	0	17
	Transport	0	29
Other fields	Furniture, games	0	74
	Other consumer goods	0	96
	Civil engineering	1	34
Unclassified		1	4

Field of technology		Australia	Canada
Electrical engineering	Electrical machinery, apparatus, energy	30	93
	Audio-visual technology	19	32
	Telecommunications	2	21
	Digital communication	13	127
	Basic communication processes	1	4

	Computer technology	60	170
	IT methods for management	36	68
	Semiconductors	4	9
Instruments	Optics	8	37
	Measurement	47	171
	Analysis of biological materials	12	10
	Control	13	40
	Medical technology	204	192
Chemistry	Organic fine chemistry	20	53
	Biotechnology	53	120
	Pharmaceuticals	84	144
	Macromolecular chemistry, polymers	3	33
	Food chemistry	21	16
	Basic materials chemistry	18	40
	Materials, metallurgy	30	43
	Surface technology, coating	13	22
	Micro-structural and nano-technology	2	3
	Chemical engineering	27	55
	Environmental technology	20	22
Mechanical engineering	Handling	29	45
	Machine tools	7	23
	Engines, pumps, turbines	11	91
	Textile and paper machines	3	6
	Other special machines	37	79
	Thermal processes and apparatus	14	17
	Mechanical elements	8	50
	Transport	37	131
Other fields	Furniture, games	47	25
	Other consumer goods	17	31
	Civil engineering	69	57
Unclassified		0	3

Field of technology		P.R. China	Israel
Electrical engineering	Electrical machinery, apparatus, energy	1366	63
	Audio-visual technology	1144	21
	Telecommunications	921	33
	Digital communication	4462	64
	Basic communication processes	128	2
	Computer technology	2240	152
	IT methods for management	139	17
	Semiconductors	468	13
Instruments	Optics	323	49
	Measurement	485	106
	Analysis of biological materials	43	16
	Control	208	33
	Medical technology	455	475
Chemistry	Organic fine chemistry	486	27
	Biotechnology	518	80
	Pharmaceuticals	328	162

	Macromolecular chemistry, polymers	93	5
	Food chemistry	36	26
	Basic materials chemistry	59	32
	Materials, metallurgy	151	16
	Surface technology, coating	65	6
	Micro-structural and nano-technology	3	6
	Chemical engineering	126	23
	Environmental technology	124	14
Mechanical engineering	Handling	124	22
	Machine tools	104	23
	Engines, pumps, turbines	160	7
	Textile and paper machines	51	29
	Other special machines	132	61
	Thermal processes and apparatus	195	7
	Mechanical elements	176	12
	Transport	494	49
Other fields	Furniture, games	295	18
	Other consumer goods	370	21
	Civil engineering	145	23
Unclassified		48	4

Field of technology		Japan	R. Korea
Electrical engineering	Electrical machinery, apparatus, energy	1830	1117
	Audio-visual technology	768	536
	Telecommunications	414	364
	Digital communication	1417	1138
	Basic communication processes	74	36
	Computer technology	1319	981
	IT methods for management	308	83
	Semiconductors	597	662
Instruments	Optics	804	238
	Measurement	1262	247
	Analysis of biological materials	121	32
	Control	543	56
	Medical technology	981	387
Chemistry	Organic fine chemistry	455	267
	Biotechnology	546	273
	Pharmaceuticals	580	297
	Macromolecular chemistry, polymers	892	253
	Food chemistry	181	39
	Basic materials chemistry	538	87
	Materials, metallurgy	861	210
	Surface technology, coating	597	129
	Micro-structural and nano-technology	21	5
	Chemical engineering	403	137
	Environmental technology	172	58
Mechanical engineering	Handling	498	75
	Machine tools	597	59
	Engines, pumps, turbines	417	126

	Textile and paper machines	612	34
	Other special machines	728	105
	Thermal processes and apparatus	404	172
	Mechanical elements	538	46
	Transport	1379	237
Other fields	Furniture, games	153	176
	Other consumer goods	360	654
	Civil engineering	299	59
Unclassified		12	19

Field of technology		Chinese Taipei	United States
Electrical engineering	Electrical machinery, apparatus, energy	125	1605
	Audio-visual technology	101	1309
	Telecommunications	36	962
	Digital communication	99	3743
	Basic communication processes	35	279
	Computer technology	125	5294
	IT methods for management	4	886
	Semiconductors	185	712
Instruments	Optics	97	1126
	Measurement	50	2002
	Analysis of biological materials	4	345
	Control	13	868
	Medical technology	94	5865
Chemistry	Organic fine chemistry	13	1351
	Biotechnology	32	2611
	Pharmaceuticals	80	3582
	Macromolecular chemistry, polymers	9	798
	Food chemistry	1	375
	Basic materials chemistry	4	1073
	Materials, metallurgy	11	633
	Surface technology, coating	28	490
	Micro-structural and nano-technology	3	39
	Chemical engineering	33	956
	Environmental technology	5	356
Mechanical engineering	Handling	16	862
	Machine tools	35	633
	Engines, pumps, turbines	17	1028
	Textile and paper machines	22	467
	Other special machines	30	1451
	Thermal processes and apparatus	12	373
	Mechanical elements	27	642
	Transport	49	1541
Other fields	Furniture, games	34	749
	Other consumer goods	21	852
	Civil engineering	13	641
Unclassified		9	34

Field of technology		Other countries	Total
Electrical engineering	Electrical machinery, apparatus, energy	204	12054
	Audio-visual technology	111	5440
	Telecommunications	70	4092
	Digital communication	351	15400
	Basic communication processes	10	988
	Computer technology	449	14671
	IT methods for management	151	2438
	Semiconductors	39	3748
Instruments	Optics	105	4242
	Measurement	272	9167
	Analysis of biological materials	30	1260
	Control	54	3360
	Medical technology	408	15321
Chemistry	Organic fine chemistry	144	5923
	Biotechnology	176	7611
	Pharmaceuticals	254	9026
	Macromolecular chemistry, polymers	87	4033
	Food chemistry	45	2010
	Basic materials chemistry	175	4432
	Materials, metallurgy	85	3890
	Surface technology, coating	38	2686
	Micro-structural and nano-technology	3	146
	Chemical engineering	107	4026
	Environmental technology	41	1823
Mechanical engineering	Handling	70	4719
	Machine tools	27	3549
	Engines, pumps, turbines	74	4318
	Textile and paper machines	38	2359
	Other special machines	114	6450
	Thermal processes and apparatus	24	2641
	Mechanical elements	49	3925
	Transport	139	9399
Other fields	Furniture, games	61	3348
	Other consumer goods	67	5130
	Civil engineering	182	4598
Unclassified		7	377

Source: EPO.
Status: 27.1.2020.

[1] European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

[2] The definition of the fields is based on the WIPO IPC technology concordance. The table is available at:
http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls.

The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

R&D personnel

in head counts	in full-time equivalents	
CP1	CP9	Total R&D personnel by function
CP2	CP10	Female R&D personnel by function
CP3	CP11	Total R&D personnel by level of education
CP4		Female r&D personnel by level of education
CP5	CP13	Researchers by level of education
CP6		Female researchers by level of education
	CP12	Total R&D personnel by field of science
P8		Total and female R&D personnel by field of science
	P19	Female R&D personnel by field of science
CP7	CP14	Researchers by field of science
CP8	CP15	Female researchers by field of science
	CP16 Nace 2	Total R&D personnel by economic activity (NACE 2)
	CP17 Nace 2	Researchers by economic activity (NACE 2)
P6 Nace 2		Total R&D personnel and researchers by economic activity (NACE 2)
	P21	Total R&D personnel and researchers by company's size class
P7 Nace 2		Total female R&D personnel and female researchers by economic activity (NACE 2)

R&D expenditure

in million euro	
CE1	Gross domestic expenditure for R&D (DERD) by source of funding
CE2	Gross domestic expenditure for R&D (DERD): funding from abroad and by type of funding organisation
CE3	Gross domestic expenditure for R&D (DERD) by type of cost
CE4.2	Total intramural expenditure for R&D by type of R&D
CE5	Gross domestic expenditure for R&D (DERD) by field of science
CE8.1 Nace 2	Business sector expenditure for R&D (BERD) by sector of main economic activity (NACE 2)
CE8.2 Nace 2	Business sector expenditure for R&D (BERD) by sector of product or group of products (ANBERD, NACE 2)
CE12	Business sector expenditure for R&D (BERD) by source of funding and company's size class

Total R&D personnel
by function

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers	40.853	23.837	10.064	6.952
Technicians and other personnel	33.434	22.385	7.246	3.803
Total business sector	**74.287**	**46.222**	**17.310**	**10.755**
Government sector				
Function				
Researchers	4.952	3.342	260	1.350
Technicians and other personnel	2.652	1.861	184	607
Total government sector	**7.604**	**5.203**	**444**	**1.957**
Higher education sector				
Function				
Researchers	32.472	19.232	6.837	6.403
Technicians and other personnel	13.917	7.430	4.126	2.361
Total higher education sector	**46.389**	**26.662**	**10.963**	**8.764**
Private non-profit sector				
Function				
Researchers	590	333	24	233
Technicians and other personnel	132	59		73
Total private non profit sector	**722**	**392**	**24**	**306**
National total				
Function				
Researchers	78.867	46.744	17.185	14.938
Technicians and other personnel	50.135	31.735	11.556	6.844
Total R&D personnel	**129.002**	**78.479**	**28.741**	**21.782**

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers				
Technicians and other personnel				
Total business sector				
Government sector				
Function				
Researchers	5.782	4.098	233	1.451
Technicians and other personnel	2.502	1.584	244	674

	all regions	Flemish region	Walloon region	Brussels Capital Region
Total government sector	**8.284**	**5.682**	**477**	**2.125**
Higher education sector				
Function				
Researchers	34.908	20.331	7.155	7.422
Technicians and other personnel	15.282	7.659	4.635	2.988
Total higher education sector	**50.190**	**27.990**	**11.790**	**10.410**
Private non-profit sector				
Function				
Researchers	1.229	345	27	857
Technicians and other personnel	1.499	70	0	1.429
Total private non profit sector	**2.728**	**415**	**27**	**2.286**
National total				
Function				
Researchers				
Technicians and other personnel				
Total R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers	49.837	31.063	10.018	8.756
Technicians and other personnel	36.726	27.208	5.224	4.294
Total business sector	**86.563**	**58.271**	**15.242**	**13.050**
Government sector				
Function				
Researchers	6.013	4.274	236	1.503
Technicians and other personnel	2.535	1.661	260	614
Total government sector	**8.548**	**5.935**	**496**	**2.117**
Higher education sector				
Function				
Researchers	34.623	20.687	7.093	6.843
Technicians and other personnel	15.538	7.873	4.631	3.034
Total higher education sector	**50.161**	**28.560**	**11.724**	**9.877**
Private non-profit sector				
Function				
Researchers	1.284	388	29	867
Technicians and other personnel	1.506	71	0	1.435
Total private non profit sector	**2.790**	**459**	**29**	**2.302**
National total				
Function				
Researchers	91.757	56.412	17.376	17.969
Technicians and other personnel	56.305	36.813	10.115	9.377
Total R&D personnel	**148.062**	**93.225**	**27.491**	**27.346**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy

Female R&D personnel
by function

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers	11.706	5.619	4.137	1.950
Technicians and other personnel	9.190	5.728	2.077	1.385
Total business sector	**20.896**	**11.347**	**6.214**	**3.335**
Government sector				
Function				
Researchers	1.811	1.115	91	605
Technicians and other personnel	1.217	835	79	303
Total government sector	**3.028**	**1.950**	**170**	**908**
Higher education sector				
Function				
Researchers	13.661	8.152	2.859	2.650
Technicians and other personnel	8.474	4.781	2.245	1.448
Total higher education sector	**22.135**	**12.933**	**5.104**	**4.098**
Private non-profit sector				
Function				
Researchers	287	139	10	138
Technicians and other personnel	71	18		53
Total private non profit sector	**358**	**157**	**10**	**191**
National total				
Function				
Researchers	27.465	15.025	7.097	5.343
Technicians and other personnel	18.952	11.362	4.401	3.189
Total R&D personnel	**46.417**	**26.387**	**11.498**	**8.532**

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers				
Technicians and other personnel				
Total business sector				
Government sector				
Function				
Researchers	2.069	1.310	100	659
Technicians and other personnel	1.286	839	88	359
Total government sector	**3.355**	**2.149**	**188**	**1.018**
Higher education sector				
Function				
Researchers	14.811	8.772	2.985	3.054
Technicians and other personnel	9.376	4.933	2.636	1.807
Total higher education sector	**24.187**	**13.705**	**5.621**	**4.861**
Private non-profit sector				
Function				
Researchers	597	135	10	452
Technicians and other personnel	745	22		723
Total private non profit sector	**1.342**	**157**	**10**	**1.175**
National total				
Function				
Researchers				
Technicians and other personnel				
Total R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers	12.460	7.294	2.774	2.392
Technicians and other personnel	9.991	7.000	1.558	1.433
Total business sector	**22.451**	**14.294**	**4.332**	**3.825**
Government sector				
Function				
Researchers	2.134	1.338	100	696
Technicians and other personnel	1.304	869	100	335
Total government sector	**3.438**	**2.207**	**200**	**1.031**
Higher education sector				
Function				
Researchers	14.704	8.917	2.975	2.812
Technicians and other personnel	9.585	5.098	2.639	1.848
Total higher education sector	**24.289**	**14.015**	**5.614**	**4.660**
Private non-profit sector				
Function				
Researchers	634	165	10	459
Technicians and other personnel	756	27		729
Total private non profit sector	**1.390**	**192**	**10**	**1.188**
National total				
Function				
Researchers	29.932	17.714	5.859	6.359
Technicians and other personnel	21.636	12.994	4.297	4.345
Total R&D personnel	**51.568**	**30.708**	**10.156**	**10.704**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department

Total R&D personnel
by level of education

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.936	4.830	2.410	696
Master of bachelor level (ISCED 5, 6, 7)	58.797	36.174	12.983	9.640
Other level (ISCED 4 and lower)	7.554	5.218	1.917	419
Total business sector	**74.287**	**46.222**	**17.310**	**10.755**
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.437	1.693	64	680
Master of bachelor level (ISCED 5, 6, 7)	4.294	2.851	329	1.114
Other level (ISCED 4 and lower)	873	659	51	163
Total government sector	**7.604**	**5.203**	**444**	**1.957**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	15.838	9.045	3.602	3.191
Master of bachelor level (ISCED 5, 6, 7)	27.887	16.748	5.991	5.148
Other level (ISCED 4 and lower)	2.664	869	1.370	425
Total higher education sector	**46.389**	**26.662**	**10.963**	**8.764**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	179	99	2	78
Master of bachelor level (ISCED 5, 6, 7)	493	275	22	196
Other level (ISCED 4 and lower)	50	18		32
Total private non profit sector	**722**	**392**	**24**	**306**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)	26.390	15.667	6.078	4.645
Master of bachelor level (ISCED 5, 6, 7)	91.471	56.048	19.325	16.098
Other level (ISCED 4 and lower)	11.141	6.764	3.338	1.039
Total R&D personnel	**129.002**	**78.479**	**28.741**	**21.782**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.726	1.865	84	777
Master of bachelor level (ISCED 5, 6, 7)	4.579	3.118	315	1.146
Other level (ISCED 4 and lower)	979	699	78	202
Total government sector	**8.284**	**5.682**	**477**	**2.125**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	17.005	9.596	3.707	3.702
Master of bachelor level (ISCED 5, 6, 7)	30.280	17.534	6.820	5.926
Other level (ISCED 4 and lower)	2.905	860	1.263	782
Total higher education sector	**50.190**	**27.990**	**11.790**	**10.410**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	213	109	2	102
Master of bachelor level (ISCED 5, 6, 7)	2.490	291	25	2.174
Other level (ISCED 4 and lower)	25	15		10
Total private non profit sector	**2.728**	**415**	**27**	**2.286**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	9.400	6.217	2.334	849
Master of bachelor level (ISCED 5, 6, 7)	69.537	46.575	11.594	11.368
Other level (ISCED 4 and lower)	7.626	5.479	1.314	833
Total business sector	**86.563**	**58.271**	**15.242**	**13.050**
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.893	2.019	86	788
Master of bachelor level (ISCED 5, 6, 7)	4.682	3.209	327	1.146
Other level (ISCED 4 and lower)	973	707	83	183
Total government sector	**8.548**	**5.935**	**496**	**2.117**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	16.816	9.661	3.692	3.463
Master of bachelor level (ISCED 5, 6, 7)	30.436	18.055	6.723	5.658
Other level (ISCED 4 and lower)	2.909	844	1.309	756
Total higher education sector	**50.161**	**28.560**	**11.724**	**9.877**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	233	122	4	107
Master of bachelor level (ISCED 5, 6, 7)	2.536	322	25	2.189
Other level (ISCED 4 and lower)	21	15		6
Total private non profit sector	**2.790**	**459**	**29**	**2.302**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)	29.342	18.019	6.116	5.207
Master of bachelor level (ISCED 5, 6, 7)	107.191	68.161	18.669	20.361
Other level (ISCED 4 and lower)	11.529	7.045	2.706	1.778
Total R&D personnel	**148.062**	**93.225**	**27.491**	**27.346**

Female R&D personnel
by level of education

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	831	554	17	260
Master of bachelor level (ISCED 5, 6, 7)	1.895	1.195	135	565
Other level (ISCED 4 and lower)	302	201	18	83
Total government sector	**3.028**	1.950	170	908
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	5.568	3.124	1.329	1.115
Master of bachelor level (ISCED 5, 6, 7)	15.118	9.329	3.060	2.729
Other level (ISCED 4 and lower)	1.449	480	715	254
Total higher education sector	**22.135**	12.933	5.104	4.098
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	84	30	2	52
Master of bachelor level (ISCED 5, 6, 7)	256	126	8	122
Other level (ISCED 4 and lower)	18	1		17
Total private non profit sector	**358**	157	10	191
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total female R&D personnel				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	936	597	29	310
Master of bachelor level (ISCED 5, 6, 7)	2.056	1.307	145	604
Other level (ISCED 4 and lower)	363	245	14	104
Total government sector	**3.355**	**2.149**	**188**	**1.018**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	6.129	3.405	1.384	1.340
Master of bachelor level (ISCED 5, 6, 7)	16.387	9.831	3.477	3.079
Other level (ISCED 4 and lower)	1.671	469	760	442
Total higher education sector	**24.187**	**13.705**	**5.621**	**4.861**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	107	42	2	63
Master of bachelor level (ISCED 5, 6, 7)	1.230	115	8	1.107
Other level (ISCED 4 and lower)	5			5
Total private non profit sector	**1.342**	**157**	**10**	**1.175**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total female R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	970	619	28	323
Master of bachelor level (ISCED 5, 6, 7)	2.097	1.334	154	609
Other level (ISCED 4 and lower)	371	254	18	99
Total government sector	**3.438**	**2.207**	**200**	**1.031**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	6.025	3.433	1.359	1.233
Master of bachelor level (ISCED 5, 6, 7)	16.591	10.115	3.473	3.003
Other level (ISCED 4 and lower)	1.673	467	782	424
Total higher education sector	**24.289**	**14.015**	**5.614**	**4.660**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	109	43	2	64
Master of bachelor level (ISCED 5, 6, 7)	1.276	149	8	1.119
Other level (ISCED 4 and lower)	5			5
Total private non profit sector	**1.390**	**192**	**10**	**1.188**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total female R&D personnel				

Researchers
by level of education

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.295	1.586	57	652
Master of bachelor level (ISCED 5, 6, 7)	2.578	1.712	170	696
Other level (ISCED 4 and lower)	79	44	33	2
Total government sector	**4.952**	3.342	260	1350
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	15.409	8.943	3.347	3119
Master of bachelor level (ISCED 5, 6, 7)	17.045	10.273	3.490	3282
Other level (ISCED 4 and lower)	18	16		2
Total higher education sector	**32.472**	19.232	6.837	6403
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	178	98	2	78
Master of bachelor level (ISCED 5, 6, 7)	412	235	22	155
Other level (ISCED 4 and lower)				
Total private non profit sector	**590**	333	24	233
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total researchers				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.571	1.748	82	741
Master of bachelor level (ISCED 5, 6, 7)	2.931	2.073	151	707
Other level (ISCED 4 and lower)	280	277		3
Total government sector	**5.782**	**4.098**	**233**	**1.451**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	16.495	9.487	3.395	3.613
Master of bachelor level (ISCED 5, 6, 7)	18.380	10.813	3.760	3.807
Other level (ISCED 4 and lower)	33	31		2
Total higher education sector	**34.908**	**20.331**	**7.155**	**7.422**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	202	107	2	93
Master of bachelor level (ISCED 5, 6, 7)	1.027	238	25	764
Other level (ISCED 4 and lower)				
Total private non profit sector	**1.229**	**345**	**27**	**857**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total researchers				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.663	1.822	83	758
Master of bachelor level (ISCED 5, 6, 7)	3.044	2.150	153	741
Other level (ISCED 4 and lower)	306	302		4
Total government sector	**6.013**	**4.274**	**236**	**1503**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	16.300	9.566	3.365	3369
Master of bachelor level (ISCED 5, 6, 7)	18.284	11.086	3.726	3472
Other level (ISCED 4 and lower)	39	35	2	2
Total higher education sector	**34.623**	**20.687**	**7.093**	**6843**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	223	121	4	98
Master of bachelor level (ISCED 5, 6, 7)	1.060	266	25	769
Other level (ISCED 4 and lower)	1	1		
Total private non profit sector	**1.284**	**388**	**29**	**867**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total researchers				

Female researchers
by level of education

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	773	505	16	252
Master of bachelor level (ISCED 5, 6, 7)	1.014	598	63	353
Other level (ISCED 4 and lower)	24	12	12	
Total government sector	**1.811**	1115	91	605
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	5.362	3072	1215	1075
Master of bachelor level (ISCED 5, 6, 7)	8.294	5076	1644	1574
Other level (ISCED 4 and lower)	5	3		2
Total higher education sector	**13.661**	8151	2859	2651
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	83	29	2	52
Master of bachelor level (ISCED 5, 6, 7)	204	110	8	86
Other level (ISCED 4 and lower)				
Total private non profit sector	**287**	139	10	138
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total female researchers				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	863	541	28	294
Master of bachelor level (ISCED 5, 6, 7)	1.157	721	72	364
Other level (ISCED 4 and lower)	49	48		1
Total government sector	**2.069**	**1.310**	**100**	**659**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	5.869	3.344	1.233	1.292
Master of bachelor level (ISCED 5, 6, 7)	8.927	5.414	1.752	1.761
Other level (ISCED 4 and lower)	15	14		1
Total higher education sector	**14.811**	**8.772**	**2.985**	**3.054**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	101	40	2	59
Master of bachelor level (ISCED 5, 6, 7)	496	95	8	393
Other level (ISCED 4 and lower)				
Total private non profit sector	**597**	**135**	**10**	**452**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total female researchers				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	856	524	27	305
Master of bachelor level (ISCED 5, 6, 7)	1.209	746	73	390
Other level (ISCED 4 and lower)	69	68		1
Total government sector	**2.134**	**1.338**	**100**	**696**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	5.763	3.375	1.205	1.183
Master of bachelor level (ISCED 5, 6, 7)	8.924	5.527	1.769	1.628
Other level (ISCED 4 and lower)	17	15	1	1
Total higher education sector	**14.704**	**8.917**	**2.975**	**2.812**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	104	42	2	60
Master of bachelor level (ISCED 5, 6, 7)	530	123	8	399
Other level (ISCED 4 and lower)				
Total private non profit sector	**634**	**165**	**10**	**459**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total female researchers				

Researchers
by field of science

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	1.455	917	3	535
Engineering and technology	2.024	1.961	45	18
Medical sciences	385	44	2	339
Agricultural sciences	504	301	140	63
Social sciences	225	25	54	146
Humanities	359	94	16	249
Total government sector	**4.952**	**3.342**	**260**	**1.350**
Higher education sector				
Field of science				
Natural sciences	6.890	3.995	1.645	1.250
Engineering and technology	6.216	3.450	1.457	1.309
Medical sciences	7.837	4.871	1.383	1.583
Agricultural sciences	2.167	1.381	560	226
Social sciences	6.038	3.791	997	1.250
Humanities	3.324	1.744	795	785
Total higher education sector	**32.472**	**19.232**	**6.837**	**6.403**
Private non-profit sector				
Field of science				
Natural sciences	93	80		13
Engineering and technology	86	56	24	6
Medical sciences	337	132		205
Agricultural sciences	13	12		1
Social sciences	19	17		2
Humanities	42	36		6
Total private non profit sector	**590**	**333**	**24**	**233**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total researchers				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	1.647	1.022	4	621
Engineering and technology	2.393	2.365	9	19
Medical sciences	453	47	9	397
Agricultural sciences	673	533	139	1
Social sciences	268	43	56	169
Humanities	348	88	16	244
	0			
Total government sector	**5.782**	**4.098**	**233**	**1.451**
Higher education sector				
Field of science				
Natural sciences	7.991	4.477	1.928	1.586
Engineering and technology	6.358	3.670	1.255	1.433
Medical sciences	8.320	5.095	1.451	1.774
Agricultural sciences	2.150	1.277	632	241
Social sciences	6.626	3.956	1.205	1.465
Humanities	3.463	1.856	684	923
Total higher education sector	**34.908**	**20.331**	**7.155**	**7.422**
Private non-profit sector				
Field of science				
Natural sciences	82	82		
Engineering and technology	101	74	27	
Medical sciences	911	93		818
Agricultural sciences	25	25		
Social sciences	90	51		39
Humanities	20	20		
	0			
Total private non profit sector	**1.229**	**345**	**27**	**857**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total researchers				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	1.653	1.005	4	644
Engineering and technology	2.598	2.568	9	21
Medical sciences	451	47	9	395
Agricultural sciences	661	521	139	1
Social sciences	276	46	59	171
Humanities	374	87	16	271
	0			
Total government sector	**6.013**	**4.274**	**236**	**1.503**
Higher education sector				
Field of science				
Natural sciences	7.727	4.266	1.970	1.491
Engineering and technology	6.691	3.973	1.347	1.371
Medical sciences	7.782	5.101	1.142	1.539
Agricultural sciences	2.536	1.605	693	238
Social sciences	6.499	3.864	1.258	1.377
Humanities	3.388	1.878	683	827
Total higher education sector	**34.623**	**20.687**	**7.093**	**6.843**
Private non-profit sector				
Field of science				
Natural sciences	85	85		
Engineering and technology	118	89	29	
Medical sciences	935	108		827
Agricultural sciences	23	23		
Social sciences	94	54		40
Humanities	29	29		
	0			
Total private non profit sector	**1.284**	**388**	**29**	**867**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total researchers				

Female researchers
by field of science

In head counts

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	491	325	0	166
Engineering and technology	541	524	15	2
Medical sciences	241	30	0	211
Agricultural sciences	244	165	42	37
Social sciences	95	13	27	55
Humanities	199	58	7	134
Total government sector	**1.811**	**1.115**	**91**	**605**
Higher education sector				
Field of science				
Natural sciences	2.525	1.252	906	367
Engineering and technology	1.360	773	293	294
Medical sciences	4.163	2.636	688	839
Agricultural sciences	831	694	44	93
Social sciences	3.115	1.975	493	647
Humanities	1.667	822	435	410
Total higher education sector	**13.661**	**8.152**	**2.859**	**2.650**
Private non-profit sector				
Field of science				
Natural sciences	25	17		8
Engineering and technology	31	19	10	2
Medical sciences	196	74		122
Agricultural sciences	4	4		
Social sciences	16	14		2
Humanities	15	11		4
Total private non profit sector	**287**	**139**	**10**	**138**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female researchers				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	566	371	1	194
Engineering and technology	585	577	4	4
Medical sciences	294	33	6	255
Agricultural sciences	308	253	55	0
Social sciences	126	24	28	74
Humanities	190	52	6	132
Total government sector	**2.069**	**1.310**	**100**	**659**
Higher education sector				
Field of science				
Natural sciences	2.534	1.431	650	453
Engineering and technology	1.482	857	289	336
Medical sciences	4.564	2.838	791	935
Agricultural sciences	1.052	668	292	92
Social sciences	3.470	2.093	623	754
Humanities	1.709	885	340	484
Total higher education sector	**14.811**	**8.772**	**2.985**	**3.054**
Private non-profit sector				
Field of science				
Natural sciences	17	17		
Engineering and technology	31	21	10	
Medical sciences	480	48		432
Agricultural sciences	8	8		
Social sciences	54	34		20
Humanities	7	7		
Total private non profit sector	**597**	**135**	**10**	**452**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female researchers				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	567	363	1	203
Engineering and technology	616	608	4	4
Medical sciences	293	33	6	254
Agricultural sciences	311	255	56	0
Social sciences	130	26	27	77
Humanities	217	53	6	158
Total government sector	**2.134**	**1.338**	**100**	**696**
Higher education sector				
Field of science				
Natural sciences	2.407	1.318	659	430
Engineering and technology	1.605	955	332	318
Medical sciences	4.327	2.876	627	824
Agricultural sciences	1.200	767	335	98
Social sciences	3.491	2.115	676	700
Humanities	1.674	886	346	442
Total higher education sector	**14.704**	**8.917**	**2.975**	**2.812**
Private non-profit sector				
Field of science				
Natural sciences	18	18		
Engineering and technology	44	34	10	
Medical sciences	500	61		439
Agricultural sciences	7	7		
Social sciences	56	36		20
Humanities	9	9		
Total private non profit sector	**634**	**165**	**10**	**459**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female researchers				

Total R&D personnel
by function

In full time equivalents

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers	29.358	17.663	7.512	4.184
Technicians and other personnel	20.748	14.014	4.795	1.939
Total business sector	**50.106**	**31.677**	**12.306**	**6.123**
Government sector				
Function				
Researchers	4.486	3.023	238	1.224
Technicians and other personnel	2.461	1.725	178	558
Total government sector	**6.946**	**4.748**	**416**	**1.782**
Higher education sector				
Function				
Researchers	19.705	11.455	4.199	4.051
Technicians and other personnel	5.356	2.648	1.690	1.018
Total higher education sector	**25.060**	**14.103**	**5.889**	**5.069**
Private non-profit sector				
Function				
Researchers	462	231	21	209
Technicians and other personnel	111	49		62
Total private non profit sector	**573**	**281**	**21**	**272**
National total				
Function				
Researchers	54.010	32.372	11.969	9.669
Technicians and other personnel	28.676	18.436	6.663	3.577
Total R&D personnel	**82.686**	**50.809**	**18.632**	**13.245**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers				
Technicians and other personnel				
Total business sector	**53.503**			
Government sector				
Function				
Researchers	5.283	3.776	208	1.299
Technicians and other personnel	2.247	1.419	214	614
Total government sector	**7.530**	**5.195**	**422**	**1.913**
Higher education sector				
Function				
Researchers	19.934	11.992	4.146	3.795
Technicians and other personnel	5.430	2.719	1.688	1.023
Total higher education sector	**25.363**	**14.712**	**5.834**	**4.818**
Private non-profit sector				
Function				
Researchers	951	225	23	703
Technicians and other personnel	1.247	57		1.190
Total private non profit sector	**2.198**	**282**	**23**	**1.893**
National total				
Function				
Researchers				
Technicians and other personnel				
Total R&D personnel	**88.594**			

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers	33.885	21.300	7.504	5.081
Technicians and other personnel	23.776	17.079	3.839	2.859
Total business sector	**57.661**	**38.379**	**11.343**	**7.939**
Government sector				
Function				
Researchers	5.490	3.929	211	1.350
Technicians and other personnel	2.280	1.489	230	561
Total government sector	**7.770**	**5.417**	**442**	**1.911**
Higher education sector				
Function				
Researchers	20.272	12.392	4.135	3.746
Technicians and other personnel	5.599	2.831	1.705	1.063
Total higher education sector	**25.872**	**15.223**	**5.840**	**4.809**
Private non-profit sector				
Function				
Researchers	971	246	21	703
Technicians and other personnel	1.250	56		1.194
Total private non profit sector	**2.221**	**302**	**21**	**1.898**
National total				
Function				
Researchers	60.619	37.867	11.871	10.880
Technicians and other personnel	32.906	21.454	5.775	5.677
Total R&D personnel	**93.524**	**59.321**	**17.646**	**16.557**

Female R&D personnel
by function

In full time equivalents

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers				
Technicians and other personnel				
Total business sector				
Government sector				
Function				
Researchers	1.634	1.023	77	534
Technicians and other personnel	1.092	745	77	270
Total government sector	**2.726**	**1.768**	**154**	**804**
Higher education sector				
Function				
Researchers	8.646	5.095	1.794	1.757
Technicians and other personnel	3.331	1.753	962	617
Total higher education sector	**11.977**	**6.847**	**2.756**	**2.374**
Private non-profit sector				
Function				
Researchers	223	93	7	122
Technicians and other personnel	58	13		44
Total private non profit sector	**280**	**106**	**7**	**167**
National total				
Function				
Researchers				
Technicians and other personnel				
Total female R&D personnel				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers				
Technicians and other personnel				
Total business sector				
Government sector				
Function				
Researchers	1.870	1.198	88	584
Technicians and other personnel	1.121	725	76	320
Total government sector	**2.991**	**1.923**	**164**	**904**
Higher education sector				
Function				
Researchers	8.786	5.374	1.781	1.632
Technicians and other personnel	3.356	1.801	943	612
Total higher education sector	**12.142**	**7.174**	**2.724**	**2.244**
Private non-profit sector				
Function				
Researchers	457	81	8	368
Technicians and other personnel	618	15		603
Total private non profit sector	**1.075**	**97**	**8**	**971**
National total				
Function				
Researchers				
Technicians and other personnel				
Total female R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Function				
Researchers				
Technicians and other personnel				
Total business sector				
Government sector				
Function				
Researchers	1.923	1.216	87	619
Technicians and other personnel	1.142	759	88	296
Total government sector	**3.065**	**1.975**	**175**	**915**
Higher education sector				
Function				
Researchers	8.899	5.549	1.755	1.595
Technicians and other personnel	3.496	1.890	960	646
Total higher education sector	**12.395**	**7.439**	**2.715**	**2.240**
Private non-profit sector				
Function				
Researchers	478	98	7	372
Technicians and other personnel	624	18		607
Total private non profit sector	**1.103**	**116**	**7**	**979**
National total				
Function				
Researchers				
Technicians and other personnel				
Total female R&D personnel				

Total R&D personnel
by level of education

In full time equivalent

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	6.343	3.715	2.118	510
Master of bachelor level (ISCED 5, 6, 7)	38.619	24.633	8.671	5.315
Other level (ISCED 4 and lower)	5.144	3.329	1.518	297
Total business sector	**50.106**	**31.677**	**12.306**	**6.123**
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.257	1.559	62	637
Master of bachelor level (ISCED 5, 6, 7)	3.885	2.582	311	992
Other level (ISCED 4 and lower)	804	607	44	153
Total government sector	**6.946**	**4.748**	**416**	**1.782**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.330	3.724	1.945	1.661
Master of bachelor level (ISCED 5, 6, 7)	16.669	9.953	3.466	3.250
Other level (ISCED 4 and lower)	1.061	426	478	157
Total higher education sector	**25.060**	**14.103**	**5.889**	**5.069**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	161	89	1	70
Master of bachelor level (ISCED 5, 6, 7)	369	174	20	176
Other level (ISCED 4 and lower)	43	17		26
Total private non profit sector	**573**	**281**	**21**	**272**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)	16.091	9.087	4.126	2.878
Master of bachelor level (ISCED 5, 6, 7)	59.542	37.342	12.467	9.733
Other level (ISCED 4 and lower)	7.053	4.379	2.040	633
Total R&D personnel	**82.686**	**50.809**	**18.632**	**13.245**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.504	1.708	79	718
Master of bachelor level (ISCED 5, 6, 7)	4.141	2.857	272	1.012
Other level (ISCED 4 and lower)	884	630	71	183
Total government sector	**7.530**	**5.195**	**422**	**1.913**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.565	4.012	1.882	1.671
Master of bachelor level (ISCED 5, 6, 7)	16.691	10.261	3.531	2.898
Other level (ISCED 4 and lower)	1.107	438	420	248
Total higher education sector	**25.363**	**14.712**	**5.834**	**4.818**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	185	97	1	86
Master of bachelor level (ISCED 5, 6, 7)	1.990	171	22	1.797
Other level (ISCED 4 and lower)	23	14		9
Total private non profit sector	**2.198**	**282**	**23**	**1.893**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.283	4.787	1.940	556
Master of bachelor level (ISCED 5, 6, 7)	45.548	30.304	8.409	6.834
Other level (ISCED 4 and lower)	4.830	3.287	994	549
Total business sector	**57.661**	**38.379**	**11.343**	**7.939**
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.667	1.856	81	730
Master of bachelor level (ISCED 5, 6, 7)	4.227	2.930	285	1.012
Other level (ISCED 4 and lower)	876	631	76	169
Total government sector	**7.770**	**5.417**	**442**	**1.911**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.640	4.099	1.874	1.667
Master of bachelor level (ISCED 5, 6, 7)	17.117	10.689	3.527	2.900
Other level (ISCED 4 and lower)	1.115	435	438	242
Total higher education sector	**25.872**	**15.223**	**5.840**	**4.809**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	189	100	2	87
Master of bachelor level (ISCED 5, 6, 7)	2.013	187	19	1.806
Other level (ISCED 4 and lower)	19	14		4
Total private non profit sector	**2.221**	**302**	**21**	**1.898**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)	17.781	10.844	3.897	3.040
Master of bachelor level (ISCED 5, 6, 7)	68.905	44.111	12.241	12.553
Other level (ISCED 4 and lower)	6.839	4.367	1.508	964
Total R&D personnel	**93.524**	**59.321**	**17.646**	**16.557**

Total R&D personnel
by field of science

In full time equivalents

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	2.128	1.381	4	744
Engineering and technology	2.673	2.610	40	23
Medical sciences	489	60	3	426
Agricultural sciences	926	512	290	124
Social sciences	239	37	61	141
Humanities	493	149	18	326
Total government sector	**6.946**	**4.748**	**416**	**1.782**
Higher education sector				
Field of science				
Natural sciences	5.291	2.921	1.389	981
Engineering and technology	4.705	2.510	1.173	1.022
Medical sciences	6.233	3.639	1.229	1.365
Agricultural sciences	1.807	1.009	624	174
Social sciences	4.609	2.767	891	952
Humanities	2.415	1.257	583	575
Total higher education sector	**25.060**	**14.103**	**5.889**	**5.069**
Private non-profit sector				
Field of science				
Natural sciences	88	77		11
Engineering and technology	83	56	21	6
Medical sciences	337	91		246
Agricultural sciences	17	16		1
Social sciences	17	15		2
Humanities	31	25		6
Total private non profit sector	**573**	**281**	**21**	**272**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total R&D personnel				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	2.389	1.587	4	798
Engineering and technology	2.822	2.758	43	21
Medical sciences	683	63	9	611
Agricultural sciences	884	588	296	1
Social sciences	283	63	57	162
Humanities	469	137	14	319
	0			
Total government sector	**7.530**	**5.195**	**422**	**1.913**
	0			
Higher education sector	0			
Field of science	0			
Natural sciences	5.791	3.231	1.541	1.019
Engineering and technology	4.488	2.619	963	907
Medical sciences	6.240	3.792	1.193	1.256
Agricultural sciences	1.699	916	634	150
Social sciences	4.737	2.843	996	899
Humanities	2.408	1.312	508	588
	0			
Total higher education sector	**25.363**	**14.712**	**5.834**	**4.818**
	0			
Private non-profit sector	0			
Field of science	0			
Natural sciences	82	82	0	0
Engineering and technology	89	66	23	0
Medical sciences	1.906	60	0	1.845
Agricultural sciences	22	22	0	0
Social sciences	81	33	0	48
Humanities	18	18	0	0
	0			
Total private non profit sector	**2.198**	**282**	**23**	**1.893**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	2.397	1.610	4	784
Engineering and technology	3.043	2.978	43	23
Medical sciences	683	63	9	611
Agricultural sciences	863	567	296	1
Social sciences	306	65	76	165
Humanities	477	136	14	327
Total government sector	**7.770**	**5.417**	**442**	**1.911**
Higher education sector				
Field of science				
Natural sciences	5.700	3.133	1.547	1.020
Engineering and technology	4.860	2.886	1.041	933
Medical sciences	6.058	3.846	1.008	1.205
Agricultural sciences	2.023	1.174	683	166
Social sciences	4.788	2.827	1.052	909
Humanities	2.443	1.356	510	576
Total higher education sector	**25.872**	**15.223**	**5.840**	**4.809**
Private non-profit sector				
Field of science				
Natural sciences	84	84	0	0
Engineering and technology	96	75	21	0
Medical sciences	1.918	68	0	1.850
Agricultural sciences	20	20	0	0
Social sciences	82	34	0	48
Humanities	21	21	0	0
Total private non profit sector	**2.221**	**302**	**21**	**1.898**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total R&D personnel				

Researchers
by level of education

In full time equivalents

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.129	1.457	55	617
Master of bachelor level (ISCED 5, 6, 7)	2.288	1.524	158	606
Other level (ISCED 4 and lower)	69	42	26	1
Total government sector	**4.486**	**3.023**	**238**	**1.224**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.182	3.684	1.873	1.625
Master of bachelor level (ISCED 5, 6, 7)	12.517	7.766	2.325	2.425
Other level (ISCED 4 and lower)	6	5		1
Total higher education sector	**19.705**	**11.455**	**4.199**	**4.051**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	160	89	1	70
Master of bachelor level (ISCED 5, 6, 7)	301	142	20	139
Other level (ISCED 4 and lower)				
Total private non profit sector	**462**	**231**	**21**	**209**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total researchers				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.360	1.600	77	684
Master of bachelor level (ISCED 5, 6, 7)	2.656	1.912	131	613
Other level (ISCED 4 and lower)	267	264		3
Total government sector	**5.283**	**3.776**	**208**	**1.299**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.397	3.963	1.801	1.633
Master of bachelor level (ISCED 5, 6, 7)	12.516	8.010	2.345	2.161
Other level (ISCED 4 and lower)	20	20		1
Total higher education sector	**19.934**	**11.992**	**4.146**	**3.795**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	175	95	1	79
Master of bachelor level (ISCED 5, 6, 7)	776	130	22	624
Other level (ISCED 4 and lower)				
Total private non profit sector	**951**	**225**	**23**	**703**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total researchers				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total business sector				
Government sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	2.449	1.668	78	703
Master of bachelor level (ISCED 5, 6, 7)	2.755	1.978	134	644
Other level (ISCED 4 and lower)	286	283		3
Total government sector	**5.490**	**3.929**	**211**	**1.350**
Higher education sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	7.462	4.051	1.786	1.625
Master of bachelor level (ISCED 5, 6, 7)	12.792	8.323	2.348	2.120
Other level (ISCED 4 and lower)	18	17	1	1
Total higher education sector	**20.272**	**12.392**	**4.135**	**3.746**
Private non-profit sector				
Level of education				
Doctoral or equivalent level (ISCED 8)	181	99	2	79
Master of bachelor level (ISCED 5, 6, 7)	790	146	19	624
Other level (ISCED 4 and lower)				
Total private non profit sector	**971**	**246**	**21**	**703**
National total				
Level of education				
Doctoral or equivalent level (ISCED 8)				
Master of bachelor level (ISCED 5, 6, 7)				
Other level (ISCED 4 and lower)				
Total researchers				

Researchers
by field of science

In full time equivalents

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	1.318	829	3	485
Engineering and technology	1.831	1.774	40	16
Medical sciences	350	40	2	307
Agricultural sciences	457	272	128	57
Social sciences	204	23	49	132
Humanities	327	85	16	226
Total government sector	**4.486**	**3.023**	**238**	**1.224**
Higher education sector				
Field of science				
Natural sciences	4.180	2.379	1.010	791
Engineering and technology	3.778	2.055	895	828
Medical sciences	4.752	2.901	849	1.001
Agricultural sciences	1.310	823	344	143
Social sciences	3.661	2.257	612	791
Humanities	2.024	1.039	489	497
Total higher education sector	**19.705**	**11.455**	**4.199**	**4.051**
Private non-profit sector				
Field of science				
Natural sciences	67	55		11
Engineering and technology	65	39	21	6
Medical sciences	276	91		185
Agricultural sciences	10	9		1
Social sciences	14	12		2
Humanities	30	25		5
Total private non profit sector	**462**	**231**	**21**	**209**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total researchers				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	1.502	942	4	556
Engineering and technology	2.205	2.180	8	17
Medical sciences	406	43	8	355
Agricultural sciences	616	491	125	1
Social sciences	240	40	50	151
Humanities	314	81	14	219
Total government sector	**5.283**	**3.776**	**208**	**1.299**
Higher education sector				
Field of science				
Natural sciences	4.568	2.641	1.117	811
Engineering and technology	3.625	2.165	727	733
Medical sciences	4.753	3.005	841	907
Agricultural sciences	1.243	754	366	123
Social sciences	3.781	2.333	698	749
Humanities	1.963	1.095	397	472
Total higher education sector	**19.934**	**11.992**	**4.146**	**3.795**
Private non-profit sector				
Field of science				
Natural sciences	54	54	0	0
Engineering and technology	71	48	23	0
Medical sciences	731	60	0	671
Agricultural sciences	16	16	0	0
Social sciences	66	33	0	32
Humanities	13	13	0	0
Total private non profit sector	**951**	**225**	**23**	**703**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total researchers				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	1.506	924	4	579
Engineering and technology	2.387	2.361	8	19
Medical sciences	406	43	8	355
Agricultural sciences	605	479	125	1
Social sciences	248	42	53	154
Humanities	338	80	14	243
Total government sector	**5.490**	**3.929**	**211**	**1.350**
Higher education sector				
Field of science				
Natural sciences	4.519	2.555	1.148	816
Engineering and technology	3.916	2.380	785	751
Medical sciences	4.563	3.055	666	843
Agricultural sciences	1.496	962	404	130
Social sciences	3.802	2.315	733	754
Humanities	1.976	1.125	398	453
Total higher education sector	**20.272**	**12.392**	**4.135**	**3.746**
Private non-profit sector				
Field of science				
Natural sciences	54	54	0	0
Engineering and technology	78	57	21	0
Medical sciences	739	68	0	671
Agricultural sciences	14	14	0	0
Social sciences	67	34	0	32
Humanities	19	19	0	0
Total private non profit sector	**971**	**246**	**21**	**703**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total researchers				

Female researchers
by field of science

In full time equivalents

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	445	298		146
Engineering and technology	496	480	13	3
Medical sciences	214	28		186
Agricultural sciences	219	151	35	33
Social sciences	83	12	23	48
Humanities	178	54	6	118
Total government sector	**1.634**	**1.023**	**77**	**534**
Higher education sector				
Field of science				
Natural sciences	1.395	782	369	244
Engineering and technology	875	483	197	195
Medical sciences	2.686	1.647	482	556
Agricultural sciences	652	434	156	62
Social sciences	1.996	1.235	333	429
Humanities	1.042	514	256	272
Total higher education sector	**8.646**	**5.095**	**1.794**	**1.757**
Private non-profit sector				
Field of science				
Natural sciences	19	12		7
Engineering and technology	21	12	7	2
Medical sciences	157	49		108
Agricultural sciences	3	3		
Social sciences	11	9		2
Humanities	12	8		4
Total private non profit sector	**223**	**93**	**7**	**122**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female researchers				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	512	339	1	172
Engineering and technology	534	527	4	3
Medical sciences	261	30	5	226
Agricultural sciences	279	231	48	0
Social sciences	112	22	25	66
Humanities	170	48	5	117
Total government sector	**1.870**	**1.198**	**88**	**584**
Higher education sector				
Field of science				
Natural sciences	1.506	877	388	242
Engineering and technology	877	525	172	180
Medical sciences	2.709	1.738	472	500
Agricultural sciences	633	409	174	49
Social sciences	2.057	1.282	372	403
Humanities	1.004	542	203	259
Total higher education sector	**8.786**	**5.374**	**1.781**	**1.632**
Private non-profit sector				
Field of science				
Natural sciences	10	10		
Engineering and technology	20	13	8	
Medical sciences	380	29		351
Agricultural sciences	5	5		
Social sciences	37	21		16
Humanities	4	4		
Total private non profit sector	**457**	**81**	**8**	**368**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female researchers				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total business sector				
Government sector				
Field of science				
Natural sciences	511	330	1	181
Engineering and technology	559	552	4	3
Medical sciences	261	30	5	226
Agricultural sciences	281	232	48	0
Social sciences	116	24	24	68
Humanities	194	48	5	140
Total government sector	**1.304**	**1.217**	**87**	
Higher education sector				
Field of science				
Natural sciences	1.453	821	389	244
Engineering and technology	970	594	196	180
Medical sciences	2.627	1.790	370	467
Agricultural sciences	731	477	198	56
Social sciences	2.112	1.316	399	397
Humanities	1.006	551	204	251
Total higher education sector	**8.899**	**5.549**	**1.755**	**1.595**
Private non-profit sector				
Field of science				
Natural sciences	11	11		
Engineering and technology	28	20	7	
Medical sciences	393	36		356
Agricultural sciences	4	4		
Social sciences	38	22		16
Humanities	6	6		
Total private non profit sector	**478**	**98**	**7**	**372**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female researchers				

Total R&D personnel
by economic activity (NACE 2)

In full time equivalents

NACE Rev. 2	Description	2017			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	10.014	5.155	4.682	176
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	6.909	5.487	1.196	226
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	12.895	8.144	2.888	1.862
20-21	chemicals/pharmaceutical	8.285	4.295	3.700	290
26-27	electronics	4.159	3.056	1.083	21
28-30 (excluding 30.1), 32.5	machinery/vehicles	4.269	3.292	886	91
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	15.454	8.117	6.408	929
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	14.073	10.615	2.338	1.120
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	2.669	1.867	756	47
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	11.662	7.375	1.964	2.323
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	6.231	3.686	840	1.705
10-33	industry	23.036	15.219	7.215	601
45-82	services	25.464	15.409	4.882	5.172

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

NACE Rev. 2	Description	2018			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	9.433	5.179	3.977	277
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	7.833	5.793	1.409	632
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	14.920	9.757	3.167	1.997
20-21	chemicals/pharmaceutical	8.130	4.276	3.142	712
26-27	electronics	4.158	3.071	981	105
28-30 (excluding 30.1), 32.5	machinery/vehicles	4.680	3.624	964	92
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	15.446	8.757	5.831	857
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	16.378	11.831	2.695	1.851
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	2.874	1.947	833	94
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	11.471	7.649	1.732	2.089
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	7.334	3.994	907	2.433
10-33	industry	23.571	15.653	6.712	1.205
45-82	services	28.272	17.507	4.990	5.775

NACE Rev. 2	Description	2019			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	9.530	5.339	3.901	290
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	6.956	5.462	1.008	486
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	17.652	12.159	3.322	2.170
20-21	chemicals/pharmaceutical	8.143	4.478	3.083	582
26-27	electronics	3.973	3.080	789	104
28-30 (excluding 30.1), 32.5	machinery/vehicles	4.155	3.243	821	91
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	16.011	9.327	5.832	852
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	17.515	13.428	2.315	1.772
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	2.724	1.970	660	94
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	12.670	8.906	1.613	2.151
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	8.742	4.748	923	3.071
10-33	industry	22.483	15.416	6.006	1.061
45-82	services	32.999	21.496	4.994	6.509

Researchers
by economic activity (NACE 2)

In full time equivalents

NACE Rev. 2	Omschrijving	2017			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	6.533	3.551	2.863	118
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	3.632	2.823	684	125
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	7.010	4.119	1.746	1.145
20-21	chemicals/pharmaceutical	5.128	2.676	2.284	167
26-27	electronics	2.653	2.059	579	16
28-30 (excluding 30.1), 32.5	machinery/vehicles	2.307	1.640	607	61
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	9.859	5.254	3.917	688
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	7.323	5.217	1.358	749
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	1.442	950	465	27
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	7.193	4.263	1.270	1.660
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	3.528	1.966	503	1.060
10-33	industry	13.497	8.720	4.367	410
45-82	services	14.960	8.346	3.016	3.598

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

NACE Rev. 2	Omschrijving	2018			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing				
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing				
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services				
20-21	chemicals/pharmaceutical				
26-27	electronics				
28-30 (excluding 30.1), 32.5	machinery/vehicles				
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries				
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries				
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries				
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries				
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries				
10-33	industry				
45-82	services				

NACE Rev. 2	Omschrijving	2019			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	6.443	3.697	2.622	124
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	3.876	3.038	560	278
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	9.426	5.739	2.265	1.422
20-21	chemicals/pharmaceutical	5.005	2.731	1.996	278
26-27	electronics	2.824	2.190	551	82
28-30 (excluding 30.1), 32.5	machinery/vehicles	2.392	1.813	536	43
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	10.435	5.906	3.977	552
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	9.007	6.488	1.397	1.122
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	1.635	1.188	427	20
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	7.912	5.183	1.113	1.616
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	4.895	2.535	589	1.771
10-33	industry	13.711	9.333	3.875	504
45-82	services	18.909	11.163	3.362	4.384

Total intramural expenditure for R&D
by source of funding

In million euro and current prices

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Funded by				
Business	7.194,904	4.372,315	1896,49	926,099
Government (directly)	281,145	162,878	102,508	15,759
Higher education	1,338	0,961	0,377	0
Private non profit	2,656	1,851	0,017	0,788
Abroad	853,567	696,834	91,766	64,967
Total BERD	**8.333,610**	**5.234,839**	**2091,158**	**1007,613**
Government sector				
Funded by				
Business	60,319	57,338		2,981
Government (directly)	587,217	411,820	36,144	139,253
Higher education	5,308	5,303	0,005	0,000
Private non profit	3,416	3,137	0,043	0,236
Abroad	457,903	440,729	0,081	17,093
Total GOVERD	**1.114,163**	**918,327**	**36,273**	**159,563**
Higher education sector				
Funded by				
Business	275,539	197,226	45,7	32,613
Government (directly)	1.017,418	588,849	221,53	207,039
Government - General university funds (GUF)	469,717	244,836	120,95	103,931
Subtotal government	1.487,135	833,685	342,48	310,970
Higher education	348,751	149,203	122,481	77,067
Private non profit	39,146	13,315	16,774	9,057
Abroad	203,259	102,667	55,076	45,516
Total HERD	**2.353,830**	**1.296,096**	**582,511**	**475,223**
Private non-profit sector				
Funded by				
Business	4,496	1,186		3,310
Government (directly)	12,793	5,416		7,377
Higher education				
Private non profit	15,674	4,859	0,128	10,687
Abroad	33,415	15,699		17,716
Total PNP	**66,378**	**27,160**	**0,128**	**39,090**
National total				
Funded by				
Business	7.535,258	4.628,065	1942,190	965,003
Government (directly)	1.898,573			
Government - General university funds (GUF)	469,717			
Subtotal government	2.368,290	1.413,799	481,132	473,359
Higher education	355,397	155,467	122,863	77,067
Private non profit	60,892	23,162	16,962	20,768
Abroad	1.548,144	1.255,929	146,923	145,292
Total domestic expenditure for R&D	**11.867,981**	**7.476,422**	**2710,07**	**1.681,489**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Funded by				
Business				
Government (directly)				
Higher education				
Private non profit				
Abroad				
Total BERD	**9.432,611**	**5.497,259**	**2.751,070**	**1.184,282**
Government sector				
Funded by				
Business	80,693	77,773	0,126	2,794
Government (directly)	617,085	424,488	30,669	161,928
Higher education	2,980	2,844	0,005	0,131
Private non profit	3,682	3,368	0,044	0,270
Abroad	502,336	482,542	1,850	17,944
Total GOVERD	**1.206,776**	**991,015**	**32,694**	**183,067**
Higher education sector				
Funded by				
Business	269,905	192,510	48,733	28,662
Government (directly)	1.002,100	598,819	214,480	188,801
Government - General university funds (GUF)	545,827	307,322	127,129	111,376
Subtotal government	1.547,927	906,141	341,609	300,177
Higher education	350,124	162,012	107,961	80,151
Private non profit	36,850	13,688	14,814	8,348
Abroad	218,718	114,169	59,267	45,282
Total HERD	**2.423,524**	**1.388,520**	**572,384**	**462,620**
Private non-profit sector				
Funded by				
Business	11,744	4,899	0,000	6,845
Government (directly)	10,034	4,754	0,000	5,280
Higher education	0,301	0,000	0,000	0,301
Private non profit	33,821	5,565	0,135	28,121
Abroad	39,448	14,188	0,000	25,260
Total PNP	**95,348**	**29,406**	**0,135**	**65,807**
National total				
Funded by				
Business				
Government (directly)				
Government - General university funds (GUF)				
Subtotal government				
Higher education				
Private non profit				
Abroad				
Total domestic expenditure for R&D	**13.158,259**	**7.906,200**	**3.356,283**	**1.895,776**

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Funded by				
Business	9.314,389	5.474,363	2.809,836	1.030,190
Government (directly)	409,188	245,129	136,592	27,467
Higher education	63,383	0,844	0,000	62,539
Private non profit	5,529	3,252	0,000	2,277
Abroad	1.350,955	980,342	196,512	174,101
Total BERD	**11.143,444**	**6.703,930**	**3.142,940**	**1.296,574**
Government sector				
Funded by				
Business	86,844	83,611	0,129	3,104
Government (directly)	657,445	458,072	31,232	168,141
Higher education	4,050	3,944	0,005	0,101
Private non profit	3,297	2,997	0,055	0,245
Abroad	577,745	556,269	1,888	19,588
Total GOVERD	**1.329,381**	**1.104,893**	**33,309**	**191,179**
Higher education sector				
Funded by				
Business	294,101	219,333	45,873	28,895
Government (directly)	1.037,088	636,158	223,146	177,784
Government - General university funds (GUF)	577,767	336,960	128,042	112,765
Subtotal government	1.614,855	973,118	351,188	290,549
Higher education	328,652	167,452	74,170	87,030
Private non profit	45,866	16,439	13,775	15,652
Abroad	240,037	128,550	62,975	48,512
Total HERD	**2.523,511**	**1.504,892**	**547,981**	**470,638**
Private non-profit sector				
Funded by				
Business	18,761	7,178	0,000	11,583
Government (directly)	10,759	6,083	0,000	4,676
Higher education	0,282	0,000	0,000	0,282
Private non profit	34,853	7,105	0,142	27,606
Abroad	48,907	16,393	0,000	32,514
Total PNP	**113,562**	**36,759**	**0,142**	**76,661**
National total				
Funded by				
Business	9.714,095	5.784,485	2.855,838	1.073,772
Government (directly)	2.114,480	1.345,442	390,970	378,068
Government - General university funds (GUF)	577,767	336,960	128,042	112,765
Subtotal government	2.692,247	1.682,402	519,012	490,833
Higher education	396,367	172,240	74,175	149,952
Private non profit	89,545	29,793	13,972	45,780
Abroad	2.217,644	1.681,554	261,375	274,715
Total domestic expenditure for R&D	**15.109,898**	**9.350,474**	**3.724,372**	**2.035,052**

Total intramural expenditure for R&D
funding from abroad
by type of funding organisation

In million euro and current prices

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of funding organisation				
Companies abroad	722,568	618,089	50,509	53,97
Companies within the group	662,084	566,274	45,532	50,278
Other companies	60,484	51,815	4,977	3,692
Government abroad	7,803	3,049	4,077	0,677
Higher education				
Private non profit	20,262	0,904	19,358	
European Commission	92,276	71,071	12,201	9,004
International organisations	9,871	2,934	5,621	1,316
Other	0,787	0,787		
Funding from abroad for BERD	**853,567**	**696,834**	**91,766**	**64,967**
Government secor				
Type of funding organisation				
Companies abroad	348,026	343,874		4,152
Government abroad	1,059	0,394		0,665
Higher education	2,090	2,090		
Private non profit	0,873	0,135	0,007	0,731
European Commission	99,924	91,459	0,041	8,424
International organisations	5,931	2,777	0,033	3,121
Other				
Funding from abroad for GOVERD	**457,903**	**440,729**	**0,081**	**17,093**
Higher education sector				
Type of funding organisation				
Companies abroad	14,122	6,447	5,565	2,11
Government abroad	2,422	2,007	0,084	0,331
Higher education	0,095	0,095		
Private non profit	5,332	3,552	0,855	0,925
European Commission	157,414	80,652	41,242	35,52
International organisations	23,874	9,914	7,33	6,63
Other				
Funding from abroad for HERD	**203,259**	**102,667**	**55,076**	**45,516**
Private non-profit sector				
Type of funding organisation				
Companies abroad	23,634	6,340		17,294
Government abroad	0,174	0,174		
Higher education	0,006	0,006		
Private non profit				
European Commission	7,869	7,447		0,422
International organisations	1,732	1,732		
Other				
Funding from abroad for PNP	**33,415**	**15,699**		**17,716**
National total				
Type of funding organisation				
Companies abroad	1.108,350	974,750	56,074	77,526
Government abroad	11,458	5,624	4,161	1,673
Higher education	2,191	2,191		
Private non profit	26,467	4,591	20,22	1,656
European Commission	357,483	250,629	53,484	53,37
International organisations	41,408	17,357	12,984	11,067
Other	0,787	0,787		
Total funding from abroad	**1.548,144**	**1255,929**	**146,923**	**145,292**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of funding organisation				
Companies abroad				
Companies within the group				
Other companies				
Government abroad				
Higher education				
Private non profit				
European Commission				
International organisations				
Other				
Funding from abroad for BERD				
Government secor				
Type of funding organisation				
Companies abroad	375,966	371,785	0,235	3,946
Government abroad	5,552	5,217	0,208	0,127
Higher education	2,202	2,202		
Private non profit	0,059	0,005	0,007	0,047
European Commission	108,654	97,718	1,348	9,588
International organisations	9,903	5,615	0,052	4,236
Other				
Funding from abroad for GOVERD	**502,336**	**482,542**	**1,850**	**17,944**
Higher education sector				
Type of funding organisation				
Companies abroad	14,845	6,800	6,115	1,930
Government abroad	2,133	1,924	0,138	0,071
Higher education	0,089	0,072	0,017	
Private non profit	3,554	0,921	0,954	1,679
European Commission	175,857	93,403	46,167	36,287
International organisations	22,240	11,049	5,876	5,315
Other				
Funding from abroad for HERD	**218,718**	**114,169**	**59,267**	**45,282**
Private non-profit sector				
Type of funding organisation				
Companies abroad	28,567	3,838		24,729
Government abroad	0,288	0,288		
Higher education	0,044	0,040		0,004
Private non profit	0,425	0,108		0,317
European Commission	8,680	8,473		0,207
International organisations	1,444	1,441		0,003
Other				
Funding from abroad for PNP	**39,448**	**14,188**		**25,260**
National total				
Type of funding organisation				
Companies abroad				
Government abroad				
Higher education				
Private non profit				
European Commission				
International organisations				
Other				
Total funding from abroad				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of funding organisation				
Companies abroad	1.214,844	889,049	166,839	158,956
Companies within the group	920,654	619,795	154,976	145,883
Other companies	294,190	269,254	11,863	13,073
Government abroad	3,065	2,980	0,085	
Higher education	1,895	0,457		1,438
Private non profit	0,803	0,803		
European Commission	127,322	84,773	28,842	13,707
International organisations	3,026	2,280	0,746	
Other				
Funding from abroad for BERD	**1.350,955**	**980,342**	**196,512**	**174,101**
Government secor				
Type of funding organisation				
Companies abroad	440,782	435,994	0,24	4,548
Government abroad	0,969	0,646	0,212	0,111
Higher education	3,450	3,450		
Private non profit	0,064	0,005	0,007	0,052
European Commission	124,943	112,849	1,376	10,718
International organisations	7,537	3,325	0,053	4,159
Other				
Funding from abroad for GOVERD	**577,745**	**556,269**	**1,888**	**19,588**
Higher education sector				
Type of funding organisation				
Companies abroad	14,820	7,285	5,612	1,923
Government abroad	2,133	1,953	0,11	0,07
Higher education	0,065	0,065		
Private non profit	2,851	0,891	0,96	1
European Commission	186,191	96,679	50,066	39,446
International organisations	33,977	21,677	6,227	6,073
Other				
Funding from abroad for HERD	**240,037**	**128,550**	**62,975**	**48,512**
Private non-profit sector				
Type of funding organisation				
Companies abroad	35,928	4,109		31,819
Government abroad	0,289	0,289		
Higher education	0,074	0,07		0,004
Private non profit	0,413	0,096		0,317
European Commission	10,713	10,342		0,371
International organisations	1,490	1,487		0,003
Other				
Funding from abroad for PNP	**48,907**	**16,393**		**32,514**
National total				
Type of funding organisation				
Companies abroad	1.706,374	1.336,437	172,691	197,246
Government abroad	6,456	5,868	0,407	0,181
Higher education	5,484	4,042		1,442
Private non profit	4,131	1,795	0,967	1,369
European Commission	449,169	304,643	80,284	64,242
International organisations	46,030	28,769	7,026	10,235
Other				
Total funding from abroad	**2.217,644**	**1681,554**	**261,375**	**274,715**

Total intramural expenditure for R&D
by type of cost

In million euro and current prices

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of cost				
Subtotal current costs	7.591,069	4703,039	1943,571	944,459
Personnel costs	4.316,836	2692,287	1091,714	532,836
Other current costs	3.274,233	2010,752	851,857	411,623
Subtotal investment costs	742,541	531,8	147,587	63,154
Land and buildings	117,283	92,062	22,216	3,005
Instruments and equipment	411,713	305,377	74,339	31,997
Software	88,047	46,837	24,877	16,333
Intellectual property	125,498	87,524	26,155	11,819
Total BERD	**8.333,610**	**5234,839**	**2091,158**	**1.007,613**
Government sector				
Type of cost				
Subtotal current costs	974,938	796,904	34,009	144,025
Personnel costs	579,500	439,36	28,452	111,688
Other current costs	395,438	357,544	5,557	32,337
Subtotal investment costs	139,225	121,423	2,264	15,538
Land and buildings	37,458	32,925	0,441	4,092
Instruments and equipment	95,033	87,687	1,740	5,606
Software	6,734	0,811	0,083	5,840
Intellectual property	0,000	0	0,000	0,000
Total GOVERD	**1.114,163**	**918,327**	**36,273**	**159,563**
Higher education sector				
Type of cost				
Subtotal current costs	2.230,093	1228,612	557,807	443,674
Personnel costs	1.583,812	841,309	431,077	311,426
Other current costs	646,281	387,303	126,730	132,248
Subtotal investment costs	123,737	67,483	24,704	31,549
Land and buildings	26,764	11,869	3,143	11,752
Instruments and equipment	94,863	54,444	21,533	18,886
Software	2,109	1,17	0,028	0,911
Intellectual property	0,000	0	0,000	0,000
Total HERD	**2.353,830**	**1296,095**	**582,511**	**475,223**
Private non-profit sector				
Type of cost				
Subtotal current costs	64,056	25,684	0,128	38,244
Personnel costs	39,520	17,124	0,075	22,321
Other current costs	24,536	8,56	0,053	15,923
Subtotal investment costs	2,322	1,476		0,846
Land and buildings	0,200	0,01		0,190
Instruments and equipment	1,957	1,356		0,601
Software	0,165	0,11		0,055
Intellectual property	0,000	0		0,000
Total PNP	**66,378**	**27,16**	**0,128**	**39,090**
National total				
Type of cost				
Subtotal current costs	10.860,156	6754,239	2535,515	1.570,402
Personnel costs	6.519,668	3990,08	1551,318	978,271
Other current costs	4.340,488	2764,159	984,197	592,131
Subtotal investment costs	1.007,825	722,182	174,555	111,087
Land and buildings	181,705	136,866	25,8	19,039
Instruments and equipment	603,566	448,864	97,612	57,090
Software	97,055	48,928	24,988	23,139
Intellectual property	125,498	87,524	26,155	11,819
Total R&D expenditure	**11.867,981**	**7476,421**	**2710,07**	**1.681,489**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of cost				
Subtotal current costs				
Personnel costs				
Other current costs				
Subtotal investment costs				
Land and buildings				
Instruments and equipment				
Software				
Intellectual property				
Total BERD				
Government sector				
Type of cost				
Subtotal current costs	1.078,701	873,317	31,203	174,181
Personnel costs	613,401	446,302	26,952	140,147
Other current costs	465,300	427,015	4,251	34,034
Subtotal investment costs	128,075	117,698	1,491	8,886
Land and buildings	35,433	31,824	0,006	3,603
Instruments and equipment	90,918	84,698	1,464	4,756
Software	1,724	1,176	0,021	0,527
Intellectual property	0,000			
Total GOVERD	**1.206,776**	**991,015**	**32,694**	**183,067**
Higher education sector				
Type of cost				
Subtotal current costs	2.265,652	1.288,269	546,223	431,160
Personnel costs	1.588,059	888,688	411,541	287,830
Other current costs	677,593	399,581	134,682	143,330
Subtotal investment costs	157,872	100,251	26,161	31,460
Land and buildings	20,485	6,864	3,346	10,275
Instruments and equipment	135,373	91,901	22,786	20,686
Software	2,014	1,486	0,029	0,499
Intellectual property	0,000			
Total HERD	**2.423,524**	**1.388,520**	**572,384**	**462,620**
Private non-profit sector				
Type of cost				
Subtotal current costs	92,698	27,733	0,135	64,830
Personnel costs	60,851	19,643	0,135	41,073
Other current costs	31,847	8,090	0,000	23,757
Subtotal investment costs	2,650	1,673	0,000	0,977
Land and buildings	1,783	0,954	0,000	0,829
Instruments and equipment	0,691	0,543	0,000	0,148
Software	0,176	0,176	0,000	0,000
Intellectual property	0,000			
Total PNP	**95,348**	**29,406**	**0,135**	**65,807**
National total				
Type of cost				
Subtotal current costs				
Personnel costs				
Other current costs				
Subtotal investment costs				
Land and buildings				
Instruments and equipment				
Software				
Intellectual property				
Total R&D expenditure				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of cost				
Subtotal current costs	9.984,907	5.976,153	2.817,575	1.177,710
Personnel costs	5.189,372	3.327,594	1.148,737	701,986
Other current costs	4.795,535	2.648,559	1.668,838	475,724
Subtotal investment costs	1.172,445	727,777	325,365	118,864
Land and buildings	209,730	135,517	35,729	38,454
Instruments and equipment	458,491	360,904	69,380	27,807
Software	237,989	174,834	11,224	51,922
Intellectual property	266,235	56,522	209,032	0,681
Total BERD	**11.157,352**	**6.703,930**	**3.142,940**	**1.296,574**
Government sector				
Type of cost				
Subtotal current costs	1.191,571	977,738	31,787	182,046
Personnel costs	673,998	499,596	27,454	146,948
Other current costs	517,573	478,142	4,333	35,098
Subtotal investment costs	137,810	127,155	1,522	9,133
Land and buildings	36,484	32,866	0,006	3,612
Instruments and equipment	99,415	93,026	1,494	4,895
Software	1,911	1,263	0,022	0,626
Intellectual property	0,000			
Total GOVERD	**1.329,381**	**1.104,893**	**33,309**	**191,179**
Higher education sector				
Type of cost				
Subtotal current costs	2.332,018	1.386,442	515,760	429,816
Personnel costs	1.590,490	916,212	386,711	287,567
Other current costs	741,528	470,230	129,049	142,249
Subtotal investment costs	191,493	118,450	32,221	40,822
Land and buildings	26,151	9,083	7,017	10,051
Instruments and equipment	162,798	108,112	25,174	29,512
Software	2,544	1,255	0,030	1,259
Intellectual property	0,000			
Total HERD	**2.523,511**	**1.504,892**	**547,981**	**470,638**
Private non-profit sector				
Type of cost				
Subtotal current costs	107,590	32,228	0,142	75,220
Personnel costs	71,643	21,592	0,142	49,909
Other current costs	35,947	10,636	0,000	25,311
Subtotal investment costs	5,972	4,531	0,000	1,441
Land and buildings	4,451	3,388	0,000	1,063
Instruments and equipment	1,130	1,038	0,000	0,092
Software	0,391	0,105	0,000	0,286
Intellectual property	0,000			
Total PNP	**113,562**	**36,759**	**0,142**	**76,661**
National total				
Type of cost				
Subtotal current costs	13.616,086	8.372,561	3.365,264	1.878,261
Personnel costs	7.525,503	4.764,994	1.563,044	1.197,465
Other current costs	6.090,583	3.607,567	1.802,220	680,796
Subtotal investment costs	1.507,720	977,913	359,108	170,699
Land and buildings	276,816	180,854	42,752	53,210
Instruments and equipment	721,834	563,080	96,048	62,706
Software	242,835	177,457	11,276	54,102
Intellectual property	266,235	56,522	209,032	0,681
Total R&D expenditure	**15.123,806**	**9.350,474**	**3.724,372**	**2.048,960**

Total intramural expenditure for R&D
by type of R&D

In million euro and current prices

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of R&D				
Basic research	499,667	293,477	198,755	7,435
Applied research	3.427,611	2187,304	857,771	382,536
Experimental development	4.406,332	2754,058	1034,632	617,642
Total BERD	**8.333,610**	**5234,839**	**2091,158**	**1.007,613**
Government sector				
Type of R&D				
Basic research	377,561	311,197	12,292	54,072
Applied research	497,287	409,879	16,190	71,218
Experimental development	239,315	197,251	7,791	34,273
Total GOVERD	**1.114,163**	**918,327**	**36,273**	**159,563**
Higher education sector				
Type of R&D				
Basic research	424,417	233,698	105,032	85,687
Applied research	1.481,450	815,735	366,620	299,095
Experimental development	447,963	246,663	110,859	90,441
Total HERD	**2.353,830**	**1296,096**	**582,511**	**475,223**
Private non-profit sector				
Type of R&D				
Basic research	2,323	0,951	0,004	1,368
Applied research	41,984	17,179	0,081	24,724
Experimental development	22,071	9,03	0,043	12,998
Total PNP	**66,378**	**27,16**	**0,128**	**39,090**
National total				
Type of R&D				
Basic research	1.303,968	839,323	316,083	148,562
Applied research	5.448,332	3430,097	1.240,662	777,573
Experimental development	5.115,681	3207,002	1.153,325	755,354
Total R&D expenditure	**11.867,981**	**7476,422**	**2.710,070**	**1.681,489**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of R&D				
Basic research				
Applied research				
Experimental development				
Total BERD	**9.432,611**			
Government sector				
Type of R&D				
Basic research	289,627	237,844	7,847	43,936
Applied research	699,929	574,788	18,962	106,179
Experimental development	217,220	178,383	5,885	32,952
Total GOVERD	**1.206,776**	**991,015**	**32,694**	**183,067**
Higher education sector				
Type of R&D				
Basic research	339,294	194,393	80,134	64,767
Applied research	1.672,232	958,079	394,945	319,208
Experimental development	411,998	236,048	97,305	78,645
Total HERD	**2.423,524**	**1.388,520**	**572,384**	**462,620**
Private non-profit sector				
Type of R&D				
Basic research	32,418	9,998	0,046	22,374
Applied research	29,558	9,116	0,042	20,400
Experimental development	33,372	10,292	0,047	23,033
Total PNP	**95,348**	**29,406**	**0,135**	**65,807**
National total				
Type of R&D				
Basic research				
Applied research				
Experimental development				
Total R&D expenditure	**13.158,259**			

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Type of R&D				
Basic research	1.225,063	726,678	453,508	44,877
Applied research	5.116,118	3.323,407	1.140,169	652,542
Experimental development	4.802,263	2.653,845	1.549,263	599,155
Total BERD	**11.143,444**	**6.703,930**	**3.142,940**	**1.296,574**
Government sector				
Type of R&D				
Basic research	319,051	265,174	7,994	45,883
Applied research	771,041	640,838	19,319	110,884
Experimental development	239,289	198,881	5,996	34,412
Total GOVERD	**1.329,381**	**1.104,893**	**33,309**	**191,179**
Higher education sector				
Type of R&D				
Basic research	353,291	210,685	76,717	65,889
Applied research	1.741,223	1.038,375	378,107	324,741
Experimental development	428,997	255,832	93,157	80,008
Total HERD	**2.523,511**	**1.504,892**	**547,981**	**470,638**
Private non-profit sector				
Type of R&D				
Basic research	38,612	12,499	0,048	26,065
Applied research	35,204	11,395	0,044	23,765
Experimental development	39,746	12,865	0,050	26,831
Total PNP	**113,562**	**36,759**	**0,142**	**76,661**
National total				
Type of R&D				
Basic research	1.936,017	1.215,036	538,267	182,714
Applied research	7.663,586	5.014,015	1.537,639	1.111,932
Experimental development	5.510,295	3.121,423	1.648,466	740,406
Total R&D expenditure	**15.109,898**	**9.350,474**	**3.724,372**	**2.035,052**

**Total intramural expenditure for R&D
by field of science**

In million euro and current prices

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social scinences				
Humanities				
Total BERD				
Government sector				
Field of science				
Natural sciences	197,771	116,448	2,364	78,959
Engineering and technology	733,619	727,922	0,000	5,697
Medical sciences	43,534	12,315	0,194	31,025
Agricultural sciences	83,843	47,906	25,722	10,215
Social scinences	31,497	5,883	7,116	18,498
Humanities	23,899	7,853	0,877	15,169
Total GOVERD	**1.114,163**	**918,327**	**36,273**	**159,563**
Higher education sector				
Field of science				
Natural sciences	469,371	219,219	158,948	91,204
Engineering and technology	460,167	218,896	131,384	109,887
Medical sciences	658,130	402,437	107,466	148,227
Agricultural sciences	211,400	128,058	73,059	10,283
Social scinences	374,958	220,186	78,572	76,200
Humanities	179,804	107,3	33,082	39,422
Total HERD	**2.353,830**	**1296,096**	**582,511**	**475,223**
Private non-profit sector				
Field of science				
Natural sciences	11,391	11,391		
Engineering and technology	11,083	10,955	0,128	
Medical sciences	39,396	0,624		38,772
Agricultural sciences	1,402	1,402		
Social scinences	1,413	1,413		
Humanities	1,693	1,375		0,318
Total PNPERD	**66,378**	**27,16**	**0,128**	**39,09**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social scinences				
Humanities				
Total GERD				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social scinences				
Humanities				
Total BERD				
Government sector				
Field of science				
Natural sciences	323,470	233,811	2,363	87,296
Engineering and technology	696,375	689,719	0,616	6,040
Medical sciences	57,481	4,936	0,312	52,233
Agricultural sciences	69,268	48,424	20,844	0,000
Social scinences	33,329	3,956	7,677	21,696
Humanities	26,853	10,169	0,882	15,802
Total GOVERD	**1.206,776**	**991,015**	**32,694**	**183,067**
Higher education sector				
Field of science				
Natural sciences	481,446	246,627	149,706	85,113
Engineering and technology	451,709	223,020	113,039	115,650
Medical sciences	690,922	404,275	142,342	144,305
Agricultural sciences	214,749	143,651	62,055	9,043
Social scinences	399,645	249,335	75,160	75,150
Humanities	185,053	121,612	30,082	33,359
Total HERD	**2.423,524**	**1.388,520**	**572,384**	**462,620**
Private non-profit sector				
Field of science				
Natural sciences	11,666	11,666		
Engineering and technology	9,877	9,742	0,135	
Medical sciences	65,675	0,988		64,687
Agricultural sciences	1,891	1,891		
Social scinences	4,804	3,684		1,120
Humanities	1,435	1,435		
Total PNPERD	**95,348**	**29,406**	**0,135**	**65,807**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social scinences				
Humanities				
Total GERD				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social scinences				
Humanities				
Total BERD				
Government sector				
Field of science				
Natural sciences	349,047	254,411	2,408	92,228
Engineering and technology	782,596	775,191	0,628	6,777
Medical sciences	58,586	4,97	0,339	53,277
Agricultural sciences	77,394	56,122	21,272	0,000
Social scinences	34,093	3,997	7,760	22,336
Humanities	27,665	10,202	0,902	16,561
Total GOVERD	**1.329,381**	**1104,893**	**33,309**	**191,179**
Higher education sector				
Field of science				
Natural sciences	490,239	265,826	142,076	82,337
Engineering and technology	460,778	236,555	111,138	113,085
Medical sciences	733,681	450,101	132,454	151,126
Agricultural sciences	220,426	152,728	58,631	9,067
Social scinences	421,295	264,908	73,726	82,661
Humanities	197,092	134,774	29,956	32,362
Total HERD	**2.523,511**	**1504,892**	**547,981**	**470,638**
Private non-profit sector				
Field of science				
Natural sciences	12,185	12,185		
Engineering and technology	15,576	15,434	0,142	
Medical sciences	76,426	0,885		75,541
Agricultural sciences	2,269	2,269		
Social scinences	5,311	4,191		1,120
Humanities	1,795	1,795		
Total PNPERD	**113,562**	**36,759**	**0,142**	**76,661**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social scinences				
Humanities				
Total GERD				

Total intramural expenditure for R&D
by sector of main economic activity (NACE 2)

In million euro and current prices

NACE Rev. 2	Description	2017			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	2.874,467	1.720,687	1.130,840	22,941
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	1.033,462	786,561	163,250	83,652
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	1.705,790	1.042,412	368,449	294,928
20-21	chemicals/pharmaceutical	2.579,100	1.529,722	952,600	96,778
26-27	electronics	644,584	518,550	123,662	2,372
28-30 (excluding 30.1), 32.5	machinery/vehicles	641,387	458,975	174,969	7,442
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	3.765,264	2.260,028	1.397,415	107,821
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	1.718,914	1.285,424	263,783	169,707
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	375,337	276,756	84,119	14,461
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	1.495,635	923,160	223,042	349,432
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	975,593	486,603	122,799	366,191
10-33	industry	4.660,205	3.068,048	1.424,753	167,404
45-82	services	3.498,816	2.040,778	647,684	810,353

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

NACE Rev. 2	Description	2018			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	3.210,930	1.480,520	1.666,840	63,570
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	1.091,610	801,570	225,720	64,320
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	2.134,787	1.467,967	387,718	279,102
20-21	chemicals/pharmaceutical	2.965,750	1.319,960	1.537,560	108,230
26-27	electronics	634,290	472,500	148,670	13,120
28-30 (excluding 30.1), 32.5	machinery/vehicles	657,440	489,620	161,270	6,550
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	4.288,987	2.210,417	1.935,698	142,872
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	1.936,400	1.425,640	342,500	168,260
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	434,490	284,480	131,910	18,100
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	1.648,800	1.057,460	237,450	353,890
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	1.123,930	519,260	103,510	501,160
10-33	industry	5.138,270	2.880,370	2.062,680	195,220
45-82	services	4.081,487	2.495,317	655,088	931,082

NACE Rev. 2	Description	2019			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	3.555,730	1.584,010	1.898,000	73,720
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	1.177,900	882,360	241,820	53,720
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	2.855,323	2.026,149	516,446	312,728
20-21	chemicals/pharmaceutical	3.234,850	1.367,200	1.758,480	109,170
26-27	electronics	731,290	556,930	162,200	12,160
28-30 (excluding 30.1), 32.5	machinery/vehicles	719,790	542,250	171,430	6,110
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	4.971,013	2.580,649	2.238,356	152,008
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	2.361,310	1.792,850	387,790	180,670
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	511,150	366,340	122,800	22,010
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	1.968,210	1.304,440	288,380	375,390
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	1.331,770	659,650	105,620	566,500
10-33	industry	5.683,680	3.182,900	2.305,560	195,220
45-82	services	5.145,773	3.313,999	800,516	1.031,258

Total intramural expenditure for R&D
by sector of product or group of products (ANBERD, NACE 2)

In million euro and current prices

NACE Rev. 2	Omschrijving	2017			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	3.388.808	2.117.661	1.209.733	61,414
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	1.495.176	1.200.140	225,710	69,326
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	906,854	528,910	126,254	251,689
20-21	chemicals/pharmaceutical	3.313.549	2.127.313	1.096.756	89,480
26-27	electronics	718,425	588,177	123,876	6,371
28-30 (excluding 30.1), 32.5	machinery/vehicles	809,153	602,310	171,954	34,890
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	3.425.496	2.117.913	1.225.443	82,141
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	2.221.823	1.721.736	323,300	176,787
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	434,724	318,397	106,993	9,334
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	1.332.995	660,217	332,771	340,007
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	825,441	392,500	81,117	351,824
10-33	industry	5.836.017	4.000.840	1.644.224	190,953
45-82	services	2.127.290	1.002.033	407,282	717,975

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

NACE Rev. 2	Omschrijving	2018			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	3.846.730	2.034.430	1.748.620	63,680
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	1.549.573	1.159.480	258,013	132,080
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	1.207.094	767,390	140,404	299,300
20-21	chemicals/pharmaceutical	3.814.883	2.039.690	1.652.753	122,440
26-27	electronics	723,630	555,610	151,010	17,010
28-30 (excluding 30.1), 32.5	machinery/vehicles	812,740	598,610	157,820	56,310
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	3.897.550	2.034.480	1.766.650	96,420
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	2.474.506	1.806.610	365,146	302,750
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	502,743	318,770	178,589	5,384
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	1.524.335	897,830	321,939	304,566
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	1.029.410	439,567	117,384	472,459
10-33	industry	6.476.729	3.932.829	2.289.758	254,142
45-82	services	2.526.705	1.289.331	400,103	837,271

NACE Rev. 2	Omschrijving	2019			
		all regions	Flemish region	Walloon region	Brussels Capital Region
21 + 26 + 30.3	high-tech manufacturing	4.435.620	2.340.830	2.035.660	59,130
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	1.720.791	1.295.990	264,371	160,430
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	1.603.676	1.028.250	205,726	369,700
20-21	chemicals/pharmaceutical	4.306.181	2.246.140	1.920.881	139,160
26-27	electronics	876,350	695,610	164,160	16,580
28-30 (excluding 30.1), 32.5	machinery/vehicles	926,180	695,080	167,280	63,820
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	4.490.530	2.341.190	2.061.900	87,440
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	2.993.731	2.199.620	399,881	394,230
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	599,760	420,422	173,429	5,909
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	1.804.216	1.124.769	376,477	302,970
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	1.251.260	617,927	130,070	503,263
10-33	industry	7.397.231	4.537.836	2.584.294	275,101
45-82	services	3.198.015	1.787.895	492,696	917,424

**Total intramural expenditure for R&D
by size class**

In million euro and current prices

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Total business sector				
Number of employees				
0	11,157	0,00	9,05	2,104
1-9	277,544	174,83	80,10	22,608
10-49	1.015,626	676,64	247,14	91,845
50-249	1.904,144	1.253,90	387,76	262,488
250-499	777,070	557,89	186,36	32,821
≥ 500	4.348,069	2.571,59	1.180,74	595,746
Total BERD	**8.333,610**	**5.234,84**	**2.091,16**	**1007,612**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Total business sector				
Number of employees				
0				
1-9				
10-49				
50-249				
250-499				
≥ 500				
Total BERD				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Total business sector				
Number of employees				
0	26,275	0,000	23,772	2,503
1-9	526,913	406,297	92,090	28,526
10-49	1.569,290	1.060,419	354,099	154,772
50-249	2.268,763	1.483,228	429,958	355,577
250-499	1.335,458	1.024,235	230,889	80,334
≥ 500	5.416,745	2.729,751	2.012,132	674,862
Total BERD	**11.143,444**	**6.703,930**	**3.142,940**	**1.296,574**

Total R&D personnel and researchers
by economic activity (NACE 2)

In head counts

NACE Rev. 2	Description	2017							
		Researchers	Total	Researchers	Total	Researchers	Total	Researchers	Total
		all regions		Flemish region		Walloon region		Brussels Capital Region	
21 + 26 + 30.3	high-tech manufacturing	7.453	11.614	4.009	5.855	3.280	5.501	164	258
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	4.536	8.977	3.401	6.821	946	1.804	189	352
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	9.708	19.230	5.460	11.683	2.380	4.139	1.869	3.408
20-21	chemicals/pharmaceutical	5.913	9.911	3.172	5.258	2.505	4.220	236	433
26-27	electronics	3.054	4.804	2.348	3.483	686	1.292	20	29
28-30 (excluding 30.1), 32.5	machinery/vehicles	2.917	5.556	1.891	3.935	929	1.473	97	148
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	11.382	18.126	5.916	9.214	4.558	7.662	908	1.250
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	10.090	20.655	6.910	15.001	2.018	3.743	1.163	1.911
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	2.108	4.009	1.394	2.815	672	1.120	42	74
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	11.146	19.391	6.355	11.947	1.887	3.182	2.904	4.262
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	6.109	12.070	3.245	7.208	930	1.604	1.935	3.258
10-33	industry	17.030	30.243	10.972	19.928	5.500	9.440	558	875
45-82	services	21.978	40.415	11.683	23.827	4.260	7.363	6.035	9.226

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

NACE Rev. 2	Description	2018							
		Researchers	Total	Researchers	Total	Researchers	Total	Researchers	Total
		all regions		Flemish region		Walloon region		Brussels Capital Region	
21 + 26 + 30.3	high-tech manufacturing								
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing								
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services								
20-21	chemicals/pharmaceutical								
26-27	electronics								
28-30 (excluding 30.1), 32.5	machinery/vehicles								
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries								
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries								
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries								
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries								
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries								
10-33	industry								
45-82	services								

NACE Rev. 2	Description	2019							
		Researchers	Total	Researchers	Total	Researchers	Total	Researchers	Total
		all regions		Flemish region		Walloon region		Brussels Capital Region	
21 + 26 + 30.3	high-tech manufacturing	7.503	11.110	4.290	6.166	3.075	4.613	138	331
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	5.014	9.213	3.901	7.138	797	1.540	316	535
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	12.759	24.180	7.721	16.776	2.886	4.205	2.153	3.198
20-21	chemicals/pharmaceutical	6.085	9.836	3.543	5.679	2.249	3.536	293	621
26-27	electronics	3.190	4.573	2.453	3.527	631	917	106	129
28-30 (excluding 30.1), 32.5	machinery/vehicles	3.069	5.501	2.195	4.097	819	1.288	55	116
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	12.134	18.571	6.805	10.679	4.648	6.875	681	1.017
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	12.587	24.831	8.974	18.996	1.981	3.336	1.632	2.498
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	2.475	4.314	1.883	3.314	566	887	26	113
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	12.406	21.228	8.268	15.389	1.738	2.583	2.400	3.256
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	10.236	17.620	5.133	9.893	1.085	1.561	4.018	6.166
10-33	industry	18.162	30.933	12.545	21.677	4.985	7.885	633	1.371
45-82	services	28.733	50.425	16.552	32.835	4.425	6.613	7.756	10.977

Total female R&D personnel and female researchers
by economic activity (NACE 2)

In head counts

NACE Rev. 2	Description	2017							
		Researchers	Total	Researchers	Total	Researchers	Total	Researchers	Total
		all regions		Flemish region		Walloon region		Brussels Capital Region	
21 + 26 + 30.3	high-tech manufacturing	2.622	4.370	1.144	1.875	1.420	2.389	58	106
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	901	1.612	511	1.016	313	451	77	145
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	2.916	5.315	1.394	2.866	962	1.370	560	1.079
20-21	chemicals/pharmaceutical	2.735	4.642	1.312	2.220	1.319	2.224	104	198
26-27	electronics	414	664	215	363	193	290	6	11
28-30 (excluding 30.1), 32.5	machinery/vehicles	362	635	128	308	209	285	25	42
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	4.337	7.222	2.077	3.517	1.971	3.258	289	447
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	2.067	3.864	955	2.206	712	939	401	719
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	475	830	257	493	207	314	11	23
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	3.036	5.374	1.527	3.183	770	1.013	738	1.178
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	1.790	3.603	801	1.945	477	690	512	968
10-33	industry	4.898	8.556	2.468	4.656	2.212	3.539	218	361
45-82	services	6.277	11.274	2.845	6.018	1.795	2.501	1.638	2.755

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

NACE Rev. 2	Description	2018							
		Researchers	Total	Researchers	Total	Researchers	Total	Researchers	Total
		all regions		Flemish region		Walloon region		Brussels Capital Region	
21 + 26 + 30.3	high-tech manufacturing								
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing								
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services								
20-21	chemicals/pharmaceutical								
26-27	electronics								
28-30 (excluding 30.1), 32.5	machinery/vehicles								
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries								
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries								
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries								
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries								
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries								
10-33	industry								
45-82	services								

NACE Rev. 2	Description	2019							
		Researchers	Total	Researchers	Total	Researchers	Total	Researchers	Total
		all regions		Flemish region		Walloon region		Brussels Capital Region	
21 + 26 + 30.3	high-tech manufacturing	2.521	4.123	1.261	2.094	1.199	1.890	61	139
20 + 25.4 + 27 + 28 + 29 + (30 - 30.1 - 30.3) + 32.5	medium-high-tech manufacturing	817	1.615	604	1.196	150	304	63	115
59 + 60 + 61 + 62 + 63 + 72	high-tech knowledge-intensive services	3.252	6.260	1.953	4.200	761	1.164	538	896
20-21	chemicals/pharmaceutical	2.589	4.323	1.467	2.499	1.037	1.642	85	182
26-27	electronics	387	680	218	414	156	249	13	17
28-30 (excluding 30.1), 32.5	machinery/vehicles	338	663	180	377	132	231	26	55
21 + 26 + 30.3 + 58.2 + 72	high R&D intense industries	4.457	7.399	2.522	4.338	1.758	2.726	177	335
20 + 25.4 + 27 + 28 + 29 + 30 (excl 30.1 en 30.3) + 32.5 + 62 + 63	medium high R&D intensive industries	1.942	4.232	1.269	3.062	330	605	343	565
22 + 23 + 24 + 30.1 + 32 (excl 32.5) + 33	medium R&D intensive industries	366	677	279	526	81	128	6	23
05-19 + 25 (excl 25.4) + 31 + 58.1 + 61 + 69-75 (excl. 72)	medium low R&D intensive industries	2.935	5.393	1.900	3.912	334	486	702	996
01-03, 35-39, 41-56, 59-60, 64-68, 77-82, 84-88, 90-99	low R&D intensive industries	2.760	4.750	1.324	2.457	272	388	1.164	1.906
10-33	industry	4.471	7.945	2.754	5.096	1.527	2.457	191	393
45-82	services	7.355	13.470	4.146	8.481	1.122	1.728	2.086	3.261

Total and female R&D personnel
by field of science

In head counts

	2017							
	Women	Total	Women	Total	Women	Total	Women	Total
	all regions		Flemish region		Walloon region		Brussels Capital Region	
Business sector								
Field of science								
Natural sciences								
Engineering and technology								
Medical sciences								
Agricultural sciences								
Social sciences								
Humanities								
Total business sector								
Government sector								
Field of science								
Natural sciences	927	2.332		1.512		3		817
Engineering and technology	897	2.934		2.864		45		25
Medical sciences	328	536		65		3		468
Agricultural sciences	453	1.005		561		308		136
Social sciences	118	260		39		67		154
Humanities	305	538		163		18		357
Total government sector	**3.028**	**7.605**		**5.204**		**444**		**1.957**
Higher education sector								
Field of science								
Natural sciences	4.259	9.776		5.515		2.570		1.691
Engineering and technology	2.640	8.623		4.727		2.137		1.759
Medical sciences	6.545	11.682		6.943		2.311		2.428
Agricultural sciences	1.523	3.442		1.903		1.242		297
Social sciences	4.812	8.521		5.221		1.677		1.623
Humanities	2.356	4.345		2.353		1.026		966
Total higher education sector	**22.135**	**46.389**		**26.662**		**10963**		**8764**
Private non-profit sector								
Field of science								
Natural sciences	25	119		106				13
Engineering and technology	38	108		78		24		6
Medical sciences	248	408		132				276
Agricultural sciences	12	21		20				1
Social sciences	19	22		20				2
Humanities	16	43		36				7
Total private non profit sector	**358**	**721**		**392**		**24**		**305**
National total								
Field of science								
Natural sciences								
Engineering and technology								
Medical sciences								
Agricultural sciences								
Social sciences								
Humanities								
Total R&D personnel								

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

2018

	Women	Total	Women	Total	Women	Total	Women	Total
	all regions		Flemish region		Walloon region		Brussels Capital Region	
Business sector								
Field of science								
Natural sciences								
Engineering and technology								
Medical sciences								
Agricultural sciences								
Social sciences								
Humanities								
Total business sector								
Government sector								
Field of science								
Natural sciences	1.048	2.627	748	1.735	1	5	299	887
Engineering and technology	924	3.089	901	3.017	17	48	6	24
Medical sciences	474	758	43	69	6	10	425	679
Agricultural sciences	455	977	330	643	125	333	0	1
Social sciences	155	314	38	69	33	65	84	180
Humanities	299	519	89	149	6	16	204	354
Total government sector	**3.355**	**8.284**	**2.149**	**5.682**	**188**	**477**	**1.018**	**2.125**
Higher education sector								
Field of science								
Natural sciences	4.404	10.129	2.419	6.146	1.220	3.114	765	869
Engineering and technology	2.664	6.953	1.566	4.982	533	1.946	565	25
Medical sciences	7.327	10.301	4.331	7.214	1.451	2.410	1.545	677
Agricultural sciences	1.747	3.024	984	1.742	621	1.281	142	1
Social sciences	5.410	7.605	3.095	5.409	1.216	2.013	1.099	183
Humanities	2.635	3.885	1.310	2.497	580	1.026	745	362
Total higher education sector	**24.187**	**41.897**	**13.705**	**27.990**	**5.621**	**11.790**	**4.861**	**2.117**
Private non-profit sector								
Field of science								
Natural sciences	26	2.217	26	121	0	0	0	2.096
Engineering and technology	35	2.041	25	98	10	27	0	1.916
Medical sciences	1.193	2.563	47	89	0	0	1.146	2.474
Agricultural sciences	15	372	15	32	0	0	0	340
Social sciences	63	1.916	34	49	0	0	29	1.867
Humanities	10	1.211	10	27	0	0	0	1.184
Total private non profit sector	**1.342**	**10.320**	**157**	**416**	**10**	**27**	**1.175**	**9.877**
National total								
Field of science								
Natural sciences								
Engineering and technology								
Medical sciences								
Agricultural sciences								
Social sciences								
Humanities								
Total R&D personnel								

2019

	Women	Total	Women	Total	Women	Total	Women	Total
	all regions		Flemish region		Walloon region		Brussels Capital Region	
Business sector								
Field of science								
Natural sciences								
Engineering and technology								
Medical sciences								
Agricultural sciences								
Social sciences								
Humanities								
Total business sector								
Government sector								
Field of science								
Natural sciences	1.057	2.637	761	1.763	1	5	295	869
Engineering and technology	980	3.335	957	3.262	17	48	6	25
Medical sciences	475	756	43	69	7	10	425	677
Agricultural sciences	441	954	317	621	124	332	0	1
Social sciences	173	339	40	71	45	85	88	183
Humanities	312	527	89	149	6	16	217	362
Total government sector	**3.438**	**8.548**	**2.207**	**5.935**	**200**	**496**	**1.031**	**2.117**
Higher education sector								
Field of science								
Natural sciences	4.215	11.079	2.270	5.878	1.204	3.105	741	2.096
Engineering and technology	2.928	9.419	1.745	5.414	621	2.089	562	1.916
Medical sciences	7.027	11.713	4.385	7.216	1.211	2.023	1.431	2.474
Agricultural sciences	2.011	3.913	1.165	2.203	686	1.370	160	340
Social sciences	5.480	9.284	3.123	5.304	1.305	2.113	1.052	1.867
Humanities	2.628	4.753	1.327	2.545	587	1.024	714	1.184
Total higher education sector	**24.289**	**50.161**	**14.015**	**28.560**	**5614**	**11724**	**4660**	**9877**
Private non-profit sector								
Field of science								
Natural sciences	30	127	30	127	0	0	0	0
Engineering and technology	51	143	41	114	10	29	0	0
Medical sciences	1.219	2.347	60	103	0	0	1159	2244
Agricultural sciences	14	31	14	31	0	0	0	0
Social sciences	65	110	36	52	0	0	29	58
Humanities	11	32	11	32	0	0	0	0
Total private non profit sector	**1.390**	**2.790**	192	**459**	**10**	**29**	1188	2302
National total								
Field of science								
Natural sciences								
Engineering and technology								
Medical sciences								
Agricultural sciences								
Social sciences								
Humanities								
Total R&D personnel								

Female R&D personnel
by field of science

In full time equivalents

	2017			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female R&D personnel in the business sector				
Government sector				
Field of science				
Natural sciences	833	591		242
Engineering and technology	814	796	13	5
Medical sciences	291	36	1	254
Agricultural sciences	409	237	101	71
Social sciences	105	20	32	54
Humanities	273	88	7	178
Total female R&D personnel in the government sector	**2.726**	**1768**	**154**	**804**
Higher education sector				
Field of science				
Natural sciences	2.074	1153	566	355
Engineering and technology	1.373	784	304	285
Medical sciences	3.627	2107	736	784
Agricultural sciences	928	557	291	80
Social sciences	2.663	1584	536	543
Humanities	1.312	663	322	327
Total female R&D personnel in the higher education sector	**11.977**	**6847**	**2756**	**2374**
Private non-profit sector				
Field of science				
Natural sciences	19	12		7
Engineering and technology	26	17	7	2
Medical sciences	200	49		151
Agricultural sciences	8	8		
Social sciences	14	12		2
Humanities	13	8		5
Total female R&D personnel in the private non profit sector sector	**280**	**106**	**7**	**167**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female R&D personnel				

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female R&D personnel in the business sector				
Government sector				
Field of science				
Natural sciences	937	670	1	266
Engineering and technology	826	806	15	5
Medical sciences	422	39	6	378
Agricultural sciences	403	295	108	
Social sciences	137	34	29	74
Humanities	266	80	5	181
Total female R&D personnel in the government sector	**2.991**	**1.923**	**164**	**904**
Higher education sector				
Field of science				
Natural sciences	2.211	1.267	591	353
Engineering and technology	1.339	820	258	261
Medical sciences	3.684	2.267	703	713
Agricultural sciences	881	515	301	65
Social sciences	2.717	1.620	589	508
Humanities	1.310	686	281	344
Total female R&D personnel in the higher education sector	**12.142**	**7.174**	**2.724**	**2.244**
Private non-profit sector				
Field of science				
Natural sciences	16	16		
Engineering and technology	23	16	8	
Medical sciences	976	29		947
Agricultural sciences	9	9		
Social sciences	45	21		24
Humanities	6	6		
Total female R&D personnel in the private non profit sector sector	**1.075**	**97**	**8**	**971**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female R&D personnel				

	2019			
	all regions	Flemish region	Walloon region	Brussels Capital Region
Business sector				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female R&D personnel in the business sector				
Government sector				
Field of science				
Natural sciences	943	681	1	261
Engineering and technology	877	857	15	5
Medical sciences	423	39	6	378
Agricultural sciences	392	283	108	
Social sciences	153	36	40	78
Humanities	277	80	5	192
Total female R&D personnel in the government sector	**3.065**	**1.975**	**175**	**915**
Higher education sector				
Field of science				
Natural sciences	2.144	1.206	582	356
Engineering and technology	1.497	926	300	271
Medical sciences	3.601	2.328	586	688
Agricultural sciences	1.027	618	332	77
Social sciences	2.794	1.658	631	506
Humanities	1.331	704	284	343
Total female R&D personnel in the higher education sector	**12.395**	**7.439**	**2.715**	**2.240**
Private non-profit sector				
Field of science				
Natural sciences	18	18		
Engineering and technology	32	25	7	
Medical sciences	992	36		955
Agricultural sciences	8	8		
Social sciences	45	22		24
Humanities	7	7		
Total female R&D personnel in the private non profit sector sector	**1.103**	**116**	**7**	**979**
National total				
Field of science				
Natural sciences				
Engineering and technology				
Medical sciences				
Agricultural sciences				
Social sciences				
Humanities				
Total female R&D personnel				

Total R&D personnel and researchers by size class
In full time equivalents

	2017							
	Onderzoekers	Totaal	Onderzoekers	Totaal	Onderzoekers	Totaal	Onderzoekers	Totaal
	all regions		Flemish region		Walloon region		Brussels Capital Region	
Business sector								
Size class								
0 employees	104	139			86	116	18	23
1-9 employees	1.999	3.074	1133	1788	713	1060	154	226
10-49 employees	6.259	10.130	3870	6603	1637	2420	751	1108
50-249 employees	7.289	13.274	4695	8860	1482	2720	1111	1693
250-499 employees	2.261	5.366	1465	3852	514	1119	282	394
500 en meer employees	11.447	18.122	6500	10574	3080	4870	1867	2678
Total researchers and R&D personnel in the business sector	**29.358**	**50.106**	**17663**	**31677**	**7512**	**12306**	**4184**	**6123**

Source: Commission for Federal Cooperation, Consultation group CFS/STAT; Federal Science Policy Department calculations

	2018							
	Onderzoekers	Totaal	Onderzoekers	Totaal	Onderzoekers	Totaal	Onderzoekers	Totaal
	all regions		Flemish region		Walloon region		Brussels Capital Region	
Business sector								
Size class								
0 employees		343						
1-9 employees		2.671						
10-49 employees		10.774						
50-249 employees		14.317						
250-499 employees		6.426						
500 en meer employees		18.972						
Total researchers and R&D personnel in the business sector		**53.503**						

	2019							
	Onderzoekers	Totaal	Onderzoekers	Totaal	Onderzoekers	Totaal	Onderzoekers	Totaal
	all regions		Flemish region		Walloon region		Brussels Capital Region	
Business sector								
Size class								
0 employees	125	167			117	158	8	10
1-9 employees	2.682	4.166	2010	3226	460	659	212	281
10-49 employees	6.700	11.890	4440	8384	1487	2314	772	1192
50-249 employees	8.355	15.051	5338	10315	1870	2863	1147	1874
250-499 employees	3.190	6.587	1809	4725	866	1223	514	639
500 en meer employees	12.833	19.799	7703	11729	2704	4126	2426	3945
Total researchers and R&D personnel in the business sector	**33.885**	**57.661**	**21300**	**38379**	**7504**	**11343**	**5081**	**7939**