

Table SINV-12

International patent families granted in IT methods for management, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	757	894	935	907	1,222	1,736	1,926	1,995	2,516	3,584	3,882	3,761	5,018	5,851	7,092	8,019	8,399	7,127	9,398	10,661	11,360	13,528	18,236
North America	na	319	397	455	393	474	641	665	640	676	713	924	1,009	1,793	1,756	2,113	2,646	2,531	1,752	1,731	2,225	2,331	3,504	3,255
Canada	High	6	8	10	8	12	16	19	19	18	24	39	44	56	59	66	97	98	88	91	107	93	131	117
Mexico	Upper middle	0	0	1	0	0	1	1	1	0	1	1	0	1	3	3	1	1	1	2	3	3	11	2
United States	High	314	389	444	386	461	624	644	619	657	689	884	965	1,737	1,694	2,044	2,549	2,432	1,662	1,638	2,115	2,235	3,362	3,135
Central America and Caribbean	na	1	0	0	0	0	0	1	1	0	0	0	0	1	2	1	1	1	0	1	1	2	2	2
Puerto Rico	High	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South America	na	0	0	1	0	1	1	2	2	0	1	1	6	2	6	3	6	8	6	8	7	9	13	26
Argentina	Upper middle	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	1	1	2	3	1	2	2
Brazil	Upper middle	0	0	1	0	0	1	2	2	0	0	1	5	2	5	2	4	6	5	6	5	8	9	20
Europe	na	60	71	106	125	164	232	232	236	232	236	288	300	352	341	409	463	486	441	501	683	705	788	711
EU-27 + UK ^a	na	47	61	93	109	143	203	206	198	188	207	247	251	316	293	362	413	422	392	439	587	598	636	580
United Kingdom	High	10	12	15	12	21	45	56	41	36	39	39	46	62	61	73	98	90	89	73	81	89	116	110
EU-27 ^b	na	36	49	78	96	123	157	150	157	152	168	208	205	254	232	289	315	332	304	365	506	509	520	470
Austria	High	1	1	1	0	2	1	2	1	2	4	1	3	4	4	4	3	5	2	6	10	6	12	8
Belgium	High	0	1	0	2	2	0	0	2	2	3	5	2	4	3	6	6	9	18	37	37	40	36	27
Denmark	High	0	1	0	0	2	1	2	2	1	2	2	2	2	1	4	5	4	3	2	5	4	6	2
Finland	High	0	1	4	4	7	9	24	12	12	8	12	13	11	18	14	15	19	25	17	17	10	18	15
France	High	11	12	16	26	27	48	36	42	27	37	41	40	49	44	57	46	58	66	70	79	108	92	102
Germany	High	9	11	17	18	25	39	35	49	46	40	57	59	87	73	109	129	102	79	98	85	96	121	128
Hungary	High	0	0	0	0	1	0	0	2	0	0	3	1	0	2	2	0	2	1	0	1	1	3	2
Ireland	High	3	1	1	3	0	1	2	3	1	3	4	4	9	7	13	14	22	18	21	24	19	32	39
Italy	High	2	3	15	7	8	4	10	4	14	21	23	17	20	18	11	16	10	12	14	134	116	88	54
Netherlands	High	2	11	14	22	36	36	24	23	27	27	30	20	20	22	22	25	30	30	35	46	42	31	23
Spain	High	1	2	1	3	2	2	1	4	6	6	9	10	14	14	13	16	29	21	25	22	21	17	7
Sweden	High	5	4	8	7	9	13	10	8	8	5	11	13	20	10	13	20	22	12	16	18	18	19	29
Other Europe	na	13	10	14	16	21	29	26	38	43	29	41	48	36	48	46	50	65	49	62	97	107	152	131
Other Europe-2020 ^b	na	23	22	28	29	42	75	81	79	79	68	80	95	98	109	119	148	155	137	135	177	196	268	240
Belarus	Upper middle	0	0	0	1	0	0	0	0	0	0	1	1	0	1	2	1	0	0	1	0	0	1	1
Moldova	Lower middle	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	1
Norway	High	1	1	0	1	3	4	1	3	3	1	2	2	3	5	4	4	3	3	3	1	6	6	7
Russia	Upper middle	9	8	11	12	13	14	15	25	29	16	25	22	14	18	24	23	28	25	37	69	78	106	81
Switzerland	High	2	2	2	2	4	10	6	8	12	9	11	14	15	22	12	17	28	18	16	21	18	31	34

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Ukraine	Lower middle	1	0	0	0	1	0	4	2	0	2	1	8	1	1	2	3	2	1	2	2	2	5	2
Asia	na	361	407	339	347	502	663	791	998	1,435	2,454	2,457	2,254	2,650	3,545	4,365	4,711	5,166	4,715	6,938	7,502	8,096	8,955	14,010
China	Upper middle	0	1	1	2	3	11	6	8	19	39	49	93	115	148	230	249	344	598	1,474	1,985	2,462	2,723	6,764
India	Lower middle	0	0	0	0	1	2	4	8	5	4	7	13	19	23	47	71	73	79	94	119	136	201	244
Japan	High	319	339	287	280	344	435	513	647	752	1,098	1,110	1,396	1,489	1,836	2,167	2,443	2,445	1,711	2,179	2,289	2,452	2,552	2,934
Malaysia	Upper middle	0	0	0	0	0	0	0	0	2	0	0	1	4	3	2	3	8	4	3	10	5	4	1
Singapore	High	0	1	0	1	5	6	7	3	4	4	5	2	4	6	5	8	9	12	10	11	11	14	15
South Korea	High	39	62	50	57	129	180	229	300	622	1,262	1,239	692	959	1,454	1,798	1,803	2,059	1,967	2,746	2,739	2,604	2,952	3,730
Taiwan	High	3	4	1	6	21	27	32	30	30	46	48	56	55	71	107	131	224	341	428	343	419	501	309
Middle East	na	1	2	4	3	5	9	15	9	8	9	10	17	19	26	32	36	37	44	36	47	48	85	64
Israel	High	1	2	4	2	4	9	14	8	7	8	8	14	17	23	29	33	32	39	33	42	43	76	57
Africa	na	2	2	0	2	2	3	4	6	7	4	15	25	39	19	19	26	20	12	11	13	5	16	11
South Africa	Upper middle	2	2	0	1	2	3	3	6	7	4	13	24	34	18	17	22	13	11	7	10	2	10	6
Australia and Oceania	na	14	15	29	37	74	186	216	102	158	168	187	146	162	156	151	128	148	153	170	181	163	164	158
Australia	High	13	13	27	36	72	181	214	98	155	162	183	138	155	147	144	123	141	147	165	176	159	156	154
New Zealand	High	1	1	2	2	2	4	2	4	3	6	4	8	7	8	6	5	7	7	4	5	4	8	4
Unclassified	na	0	0	0	0	0	0	0	0	0	0	0	4	1	1	1	3	2	3	2	1	0	2	1

na = not applicable, metric not calculated at this level.

EU = European Union; IT = information technology; UK = United Kingdom.

^a The United Kingdom was a part of the EU for data purposes from 1973 to 2019.^b Beginning in 2020, the United Kingdom was no longer a member of the EU.**Note(s):**

International Patent Documentation (INPADOC) patent families across all patent offices covered in the Worldwide Patent Statistical Database (PATSTAT) are counted according to the year of the first granted patent in the patent family. Patent families are allocated according to patent inventorship information found on the priority patent of the INPADOC patent families. To account for missing ownership information in PATSTAT for some offices, a method designed by de Rassenfosse et al. (2013) is used to fill missing information on priority patents using information in successive filings within the families. Priority patents not indexed in PATSTAT are replaced by the next utility patent(s) in the families according to filing dates. Patent families are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. China includes Hong Kong. Data were extracted in June 2021. Because of data coverage issues for some patent offices in PATSTAT, statistics for some countries may be underestimated partially for some years or across the whole trend. Countries with identified issues include India (missing data) and South Africa (no data for 2018). For Italy, because of data gaps regarding information on granted patents, patent applications are used instead, which slightly overestimates Italy's output and creates a small shift in year for which its output is accounted. As patent authorities become more involved with the European Patent Organisation, these gaps should disappear in the future, strengthening the robustness of statistics for these countries.

Source(s):

National Center for Science and Engineering Statistics; Science-Metrix; PATSTAT, accessed October 2021.