

**Table 4 Heatmap: GII 2022 rankings overall and by innovation pillar**

Country/economy	Overall GII	Institutions	Human capital and research	Infrastructure	Market sophistication	Business sophistication	Knowledge and technology outputs	Creative outputs
Switzerland	1	2	4	4	8	7	1	1
United States	2	13	9	19	1	3	3	12
Sweden	3	19	3	1	13	1	2	8
United Kingdom	4	24	6	8	5	22	8	3
Netherlands	5	4	14	14	18	10	5	10
Republic of Korea	6	31	1	13	21	9	10	4
Singapore	7	1	7	11	4	2	13	21
Germany	8	20	2	23	14	19	9	7
Finland	9	11	8	3	17	5	4	18
Denmark	10	9	10	5	15	15	12	14
China	11	42	20	25	12	12	6	11
France	12	18	15	17	10	17	15	6
Japan	13	21	21	12	9	8	11	19
Hong Kong, China	14	10	13	6	2	27	60	5
Canada	15	15	12	30	6	20	24	20
Israel	16	41	24	42	7	6	7	36
Austria	17	8	11	9	38	18	19	26
Estonia	18	12	34	10	3	25	21	24
Luxembourg	19	5	32	40	31	4	33	9
Iceland	20	14	29	22	41	14	22	13
Malta	21	28	42	27	33	16	32	2
Norway	22	3	19	2	28	21	25	30
Ireland	23	16	23	15	55	13	14	29
New Zealand	24	7	18	21	24	31	29	22
Australia	25	17	5	18	20	24	37	27
Belgium	26	29	16	37	45	11	18	32
Cyprus	27	36	39	28	29	23	20	17
Italy	28	58	28	26	35	33	16	16
Spain	29	38	26	16	30	32	27	28
Czech Republic	30	43	33	20	76	28	17	37
United Arab Emirates	31	6	17	7	23	26	59	45
Portugal	32	47	22	39	42	34	35	25
Slovenia	33	37	25	24	68	29	26	56
Hungary	34	48	37	35	67	30	23	46
Bulgaria	35	67	68	34	62	40	30	23
Malaysia	36	34	38	51	26	41	39	41
Türkiye	37	101	41	48	37	47	47	15
Poland	38	65	36	43	61	38	38	38
Lithuania	39	26	44	45	32	37	48	47
India	40	54	43	78	19	54	34	52
Latvia	41	35	48	52	65	36	44	42
Croatia	42	77	46	31	56	46	45	39
Thailand	43	78	71	54	27	43	43	49
Greece	44	69	31	46	64	55	46	54
Mauritius	45	22	66	70	16	96	82	31
Slovakia	46	68	59	41	70	45	28	70
Russian Federation	47	89	27	62	48	44	51	48
Viet Nam	48	51	80	71	43	50	52	35
Romania	49	75	74	33	63	51	31	57
Chile	50	39	57	47	46	57	54	55
Saudi Arabia	51	50	30	53	22	53	65	66
Qatar	52	25	56	29	47	73	69	59
Iran (Islamic Republic of)	53	131	54	75	11	115	50	33
Brazil	54	102	50	65	49	35	55	51
Serbia	55	53	52	38	83	65	42	76
Republic of Moldova	56	98	62	84	58	79	49	43
Ukraine	57	97	49	82	102	48	36	63
Mexico	58	93	58	63	54	76	58	50
Philippines	59	90	86	81	78	39	41	58
Montenegro	60	59	61	44	53	58	72	71
South Africa	61	81	81	77	39	63	56	64
Kuwait	62	86	55	36	73	101	68	60
Colombia	63	72	79	59	66	42	67	75
Uruguay	64	32	73	60	77	62	62	85
Peru	65	61	47	79	40	49	90	65
North Macedonia	66	88	75	49	34	59	57	93

■ 4<sup>th</sup> quartile (best performers, ranks 1<sup>st</sup> to 33<sup>rd</sup>) ■ 3<sup>rd</sup> quartile (ranks 34<sup>th</sup> to 66<sup>th</sup>) ■ 2<sup>nd</sup> quartile (ranks 67<sup>th</sup> to 99<sup>th</sup>) ■ 1<sup>st</sup> quartile (ranks 100<sup>th</sup> to 132<sup>nd</sup>)

Table 4 Continued

Country/economy	Overall GII	Institutions	Human capital and research	Infrastructure	Market sophistication	Business sophistication	Knowledge and technology outputs	Creative outputs
Morocco	67	85	83	89	74	94	64	44
Costa Rica	68	44	77	66	88	60	61	81
Argentina	69	96	69	64	95	52	77	53
Bosnia and Herzegovina	70	94	67	55	25	98	63	83
Mongolia	71	76	64	92	97	61	85	40
Bahrain	72	27	78	32	75	93	73	98
Tunisia	73	92	45	85	98	116	53	61
Georgia	74	30	70	83	72	64	75	86
Indonesia	75	71	90	68	36	92	78	72
Jamaica	76	56	84	99	110	67	89	34
Belarus	77	130	35	67	96	72	40	91
Jordan	78	45	76	100	52	75	76	78
Oman	79	57	40	56	71	97	94	80
Armenia	80	55	91	80	85	84	71	73
Panama	81	70	94	50	89	105	86	62
Uzbekistan	82	63	65	74	60	74	80	102
Kazakhstan	83	52	60	58	90	68	81	118
Albania	84	84	89	57	91	56	96	82
Sri Lanka	85	119	120	73	108	71	66	69
Botswana	86	40	51	88	112	70	88	100
Pakistan	87	118	113	114	100	81	70	67
Kenya	88	82	119	107	111	80	74	79
Egypt	89	111	97	93	86	103	79	84
Dominican Republic	90	80	108	69	84	83	93	88
Paraguay	91	115	100	76	82	86	105	74
Brunei Darussalam	92	23	53	61	101	66	127	125
Azerbaijan	93	46	87	90	80	77	117	105
Kyrgyzstan	94	113	63	86	51	107	92	121
Ghana	95	100	101	96	119	88	103	77
Namibia	96	49	72	106	81	108	113	113
Cambodia	97	87	99	103	44	117	101	104
Ecuador	98	121	98	72	103	85	102	96
Senegal	99	60	103	105	69	124	97	112
El Salvador	100	107	107	97	99	87	108	90
Trinidad and Tobago	101	66	88	87	123	102	87	117
Bangladesh	102	109	127	94	92	125	95	87
United Republic of Tanzania	103	74	126	104	79	112	114	94
Tajikistan	104	91	85	121	94	128	84	116
Rwanda	105	33	106	95	115	113	111	126
Madagascar	106	120	105	132	109	118	115	68
Zimbabwe	107	128	92	126	114	90	99	89
Nicaragua	108	124	110	111	50	82	121	103
Côte d'Ivoire	109	73	122	98	122	95	104	108
Guatemala	110	122	121	119	107	89	91	99
Nepal	111	117	123	108	59	91	119	101
Lao People's Democratic Republic	112	103	111	118	57	104	122	114
Honduras	113	125	96	101	104	78	110	120
Nigeria	114	112	109	112	126	69	123	97
Algeria	115	99	82	102	125	120	118	109
Myanmar	116	123	102	128	93	130	100	106
Ethiopia	117	110	131	123	113	122	83	115
Zambia	118	126	118	116	106	100	116	110
Uganda	119	62	129	109	127	126	106	123
Burkina Faso	120	105	104	115	118	123	112	127
Cameroon	121	104	116	113	132	99	98	124
Togo	122	108	117	117	105	129	126	111
Mozambique	123	129	114	91	120	121	120	107
Benin	124	64	115	110	117	114	129	132
Niger	125	79	130	129	116	106	109	131
Mali	126	114	128	125	124	110	107	122
Angola	127	116	125	122	121	131	130	92
Yemen	128	132	124	120	87	127	124	95
Mauritania	129	83	112	127	129	111	132	130
Burundi	130	106	95	130	130	119	128	128
Iraq	131	127	93	124	128	132	125	129
Guinea	132	95	132	131	131	109	131	119

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Source: Global Innovation Index Database, WIPO, 2022.