

**Short Note on Country-wise Readiness for
Frontier Technologies Index 2021**

- Compiled

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Frontier Technologies are redefining the World

A few developing countries are outperforming in adopting new technologies such as blockchain, robotics, 5G or artificial intelligence (AI). However, most are still trailing behind and risk missing out if they don't build the required skills, a UN report has warned.

The United Nations Conference Trade and Development (UNCTAD) Technology and Innovation Report assesses the progress of 158 countries in using so-called frontier technologies, such as nanotechnology, the internet of things, drones, or 3D printing, and taking into account their physical investment in those fields, human capital and technological effort.

The economies most ready for these rapidly changing technologies are in Northern America and Europe, while those least ready are in sub-Saharan Africa and other developing regions. The report stresses the importance of catching these technological waves.

Isabelle Durant, acting UNCTAD Secretary-General, said:

“It is key that developing countries do not miss the wave of frontier technologies, otherwise it will further deepen inequalities. Hence, societies and productive sectors need to be well prepared and build the required skills.”

As the developing technologies represent a \$350bn market today that could grow to \$3.2 trillion by 2025, the acceleration is real. But so is their potential in being transformative for the better, the report says.

The situation around the world:

Although some developing countries overperform on frontier technologies, most are behind Northern America and Europe, according to the report's “Country-wise Readiness for Frontier Technologies Index (Table 1 – Next Page)”, which scores countries based on measures including technology deployment, skills, research and development (R&D), industry activity and access to finance.

Many of the major producers are located in the United States, as the country is home to important cloud computing companies. Despite the fact that only a few countries currently produce frontier technologies, all countries need to prepare for them, the report continues, as they are redefining the world, especially in a post-pandemic future.

<https://genevasolutions.news/science-tech/frontier-technologies-are-redefining-the-world>

Table 1: Readiness for Frontier Technologies Index 2021

S. No.	Country	Total Rank		
1	United States of America	1		High
2	Switzerland	2	0.97	High
3	United Kingdom	3	0.96	High
4	Sweden	4	0.96	High
5	Singapore	5	0.95	High
6	Netherlands	6	0.95	High
7	Korea, Republic of	7	0.93	High
8	Ireland	8	0.92	High
9	Germany	9	0.92	High
10	Denmark	10	0.92	High
11	Belgium	11	0.9	High
12	Australia	12	0.9	High
13	France	13	0.89	High
14	Canada	14	0.89	High
15	China, Hong Kong SAR	15	0.88	High
16	Luxembourg	16	0.87	High
17	Finland	17	0.87	High
18	Japan	18	0.87	High
19	Norway	19	0.86	High
20	Israel	20	0.84	High
21	Spain	21	0.83	High
22	Austria	22	0.79	High
23	New Zealand	23	0.79	High
24	Italy	24	0.76	High
25	China	25	0.76	High
26	Czechia	26	0.75	High
27	Russian Federation	27	0.75	High
28	Poland	28	0.73	High
29	Estonia	29	0.72	High
30	Iceland	30	0.71	High
31	Malaysia	31	0.71	High
32	Portugal	32	0.71	High
33	Slovenia	33	0.69	High
34	Cyprus	34	0.69	High

S. No.	Country	Total Rank		
35	Malta	35	0.69	High
36	Slovakia	36	0.69	High
37	Hungary	37	0.67	High
38	Greece	38	0.66	High
39	Lithuania	39	0.65	High
40	Latvia	40	0.65	High
41	Brazil	41	0.65	Upper-middle
42	United Arab Emirates	42	0.63	Upper-middle
43	India	43	0.62	Upper-middle
44	Philippines	44	0.6	Upper-middle
45	Romania	45	0.6	Upper-middle
46	Thailand	46	0.59	Upper-middle
47	Serbia	47	0.59	Upper-middle
48	Barbados	48	0.58	Upper-middle
49	Chile	49	0.57	Upper-middle
50	Saudi Arabia	50	0.57	Upper-middle
51	Bulgaria	51	0.57	Upper-middle
52	Croatia	52	0.56	Upper-middle
53	Ukraine	53	0.56	Upper-middle
54	South Africa	54	0.55	Upper-middle
55	Turkey	55	0.55	Upper-middle
56	Bahrain	56	0.54	Upper-middle
57	Mexico	57	0.54	Upper-middle
58	Kuwait	58	0.53	Upper-middle
59	Belarus	59	0.53	Upper-middle
60	Tunisia	60	0.51	Upper-middle
61	Costa Rica	61	0.51	Upper-middle
62	Kazakhstan	62	0.5	Upper-middle
63	Lebanon	63	0.5	Upper-middle
64	Jordan	64	0.5	Upper-middle
65	Argentina	65	0.49	Upper-middle
66	Viet Nam	66	0.49	Upper-middle
67	Panama	67	0.49	Upper-middle
68	Uruguay	68	0.47	Upper-middle
69	Brunei Darussalam	69	0.47	Upper-middle
70	Montenegro	70	0.47	Upper-middle

S. No.	Country	Total Rank		
71	Iran (Islamic Republic of)	71	0.46	Upper-middle
72	Qatar	72	0.46	Upper-middle
73	North Macedonia	73	0.46	Upper-middle
74	Oman	74	0.45	Upper-middle
75	Trinidad and Tobago	75	0.45	Upper-middle
76	Morocco	76	0.45	Upper-middle
77	Mauritius	77	0.45	Upper-middle
78	Colombia	78	0.44	Upper-middle
79	Georgia	79	0.44	Upper-middle
80	Bosnia and Herzegovina	80	0.43	Lower-middle
81	Republic of Moldova	81	0.41	Lower-middle
82	Indonesia	82	0.4	Lower-middle
83	Armenia	83	0.39	Lower-middle
84	Bahamas	84	0.39	Lower-middle
85	Albania	85	0.38	Lower-middle
86	Sri Lanka	86	0.38	Lower-middle
87	Egypt	87	0.38	Lower-middle
88	Fiji	88	0.37	Lower-middle
89	Peru	89	0.36	Lower-middle
90	Ecuador	90	0.34	Lower-middle
91	Namibia	91	0.34	Lower-middle
92	Suriname	92	0.34	Lower-middle
93	Saint Lucia	93	0.34	Lower-middle
94	Gabon	94	0.33	Lower-middle
95	Dominican Republic	95	0.33	Lower-middle
96	Jamaica	96	0.32	Lower-middle
97	Belize	97	0.32	Lower-middle
98	Algeria	98	0.31	Lower-middle
99	Venezuela (Bolivarian Rep. of)	99	0.3	Lower-middle
100	Azerbaijan	100	0.3	Lower-middle
101	Cabo Verde	101	0.29	Lower-middle
102	Paraguay	102	0.29	Lower-middle
103	Ghana	103	0.28	Lower-middle
104	Guatemala	104	0.28	Lower-middle
105	Kenya	105	0.28	Lower-middle
106	El Salvador	106	0.27	Lower-middle

S. No.	Country	Total Rank		
107	Eswatini	107	0.27	Lower-middle
108	Guyana	108	0.27	Lower-middle
109	Nepal	109	0.26	Lower-middle
110	Mongolia	110	0.26	Lower-middle
111	Botswana	111	0.26	Lower-middle
112	Bangladesh	112	0.26	Lower-middle
113	Cambodia	113	0.26	Lower-middle
114	Maldives	114	0.25	Lower-middle
115	Kyrgyzstan	115	0.25	Lower-middle
116	Bolivia	116	0.24	Lower-middle
117	Libya	117	0.24	Lower-middle
118	Senegal	118	0.24	Lower-middle
119	Papua New Guinea	119	0.23	Low
120	Saint Vincent and the Grenadines	120	0.22	Low
121	Myanmar	121	0.22	Low
122	Honduras	122	0.2	Low
123	Pakistan	123	0.2	Low
124	Nigeria	124	0.2	Low
125	Nicaragua	125	0.19	Low
126	Iraq	126	0.19	Low
127	Lao Peoples Dem. Rep.	127	0.19	Low
128	Uganda	128	0.18	Low
129	Togo	129	0.17	Low
130	Madagascar	130	0.16	Low
131	Cote d'Ivoire	131	0.16	Low
132	Cameroon	132	0.15	Low
133	Rwanda	133	0.15	Low
134	Zambia	134	0.15	Low
135	Congo	135	0.13	Low
136	Zimbabwe	136	0.13	Low
137	Malawi	137	0.12	Low
138	United Republic of Tanzania	138	0.12	Low
139	Benin	139	0.12	Low
140	Sao Tome and Principe	140	0.12	Low
141	Mali	141	0.11	Low
142	Comoros	142	0.1	Low

S. No.	Country	Total Rank		
143	Tajikistan	143	0.1	Low
144	Timor-Leste	144	0.09	Low
145	Burundi	145	0.08	Low
146	Djibouti	146	0.07	Low
147	Mauritania	147	0.07	Low
148	Burkina Faso	148	0.06	Low
149	Mozambique	149	0.06	Low
150	Ethiopia	150	0.05	Low
151	Sierra Leone	151	0.05	Low
152	Afghanistan	152	0.05	Low
153	Guinea	153	0.05	Low
154	Haiti	154	0.04	Low
155	Sudan	155	0.04	Low
156	Yemen	156	3	Low
157	Gambia	157	0	Low
158	Dem. Rep. of the Congo	158	0	Low
Average Score			0.44	

Note: India and its neighbouring countries Index is shown in yellow.

Source: UNCTAD