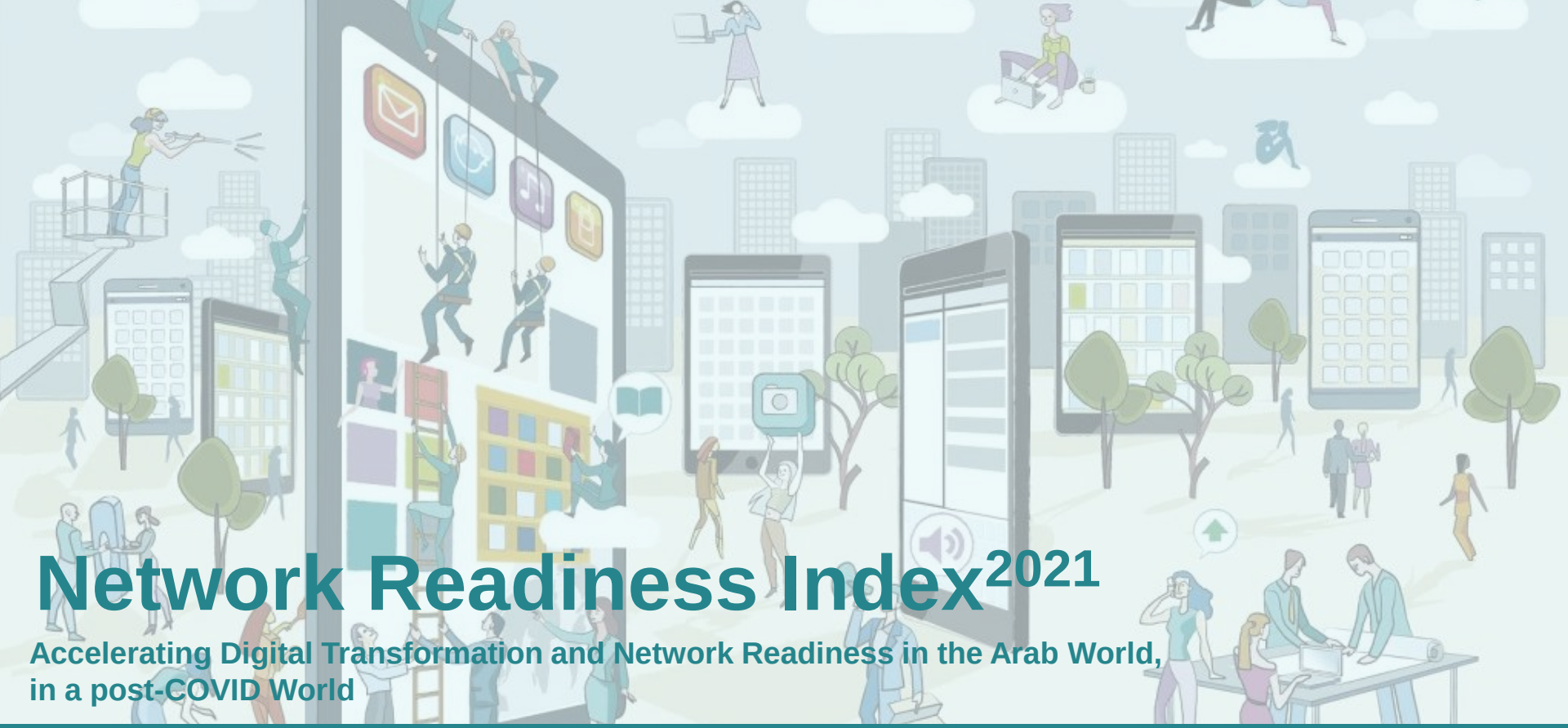


Network Readiness Index 2021

Accelerating Digital Transformation and Network Readiness in the Arab World, in a post-COVID World

Alya Nokkari, Economic Researcher
Union of Arab Chambers
2022

Definition

The NRI reflects how technology and people need to be integrated within an effective governance structure in order to have the right impact on our economy, society and the environment.

NRI Timeline Story

2002

Launched

The NRI was first published in 2002 and provided a holistic framework for assessing the multi-faceted impact of ICT on society and the development of nations.

2016

Continued

Until 2016, the NRI was part of the **Global Information Technology Report** (GITR) published by the World Economic Forum, Cornell University and INSEAD. And referred to as ***Technology Readiness***

2019

Modified

In 2019, the NRI was reviewed by Soumitra Dutta & Bruno Lanvin, under the auspices of Portulans Institute to include 4 pillars: Technology, People, Governance, and Impact.

2021

Present

2021 NRI framework continues to provide a simple yet holistic view of how economies can leverage the power of digital technologies while building sustainable and inclusive futures.

NRI Index (2021), 4 Pillars

01 Technology

Access, Content, Future Technology

02 People

Individuals, Businesses, Governments

03 Governance

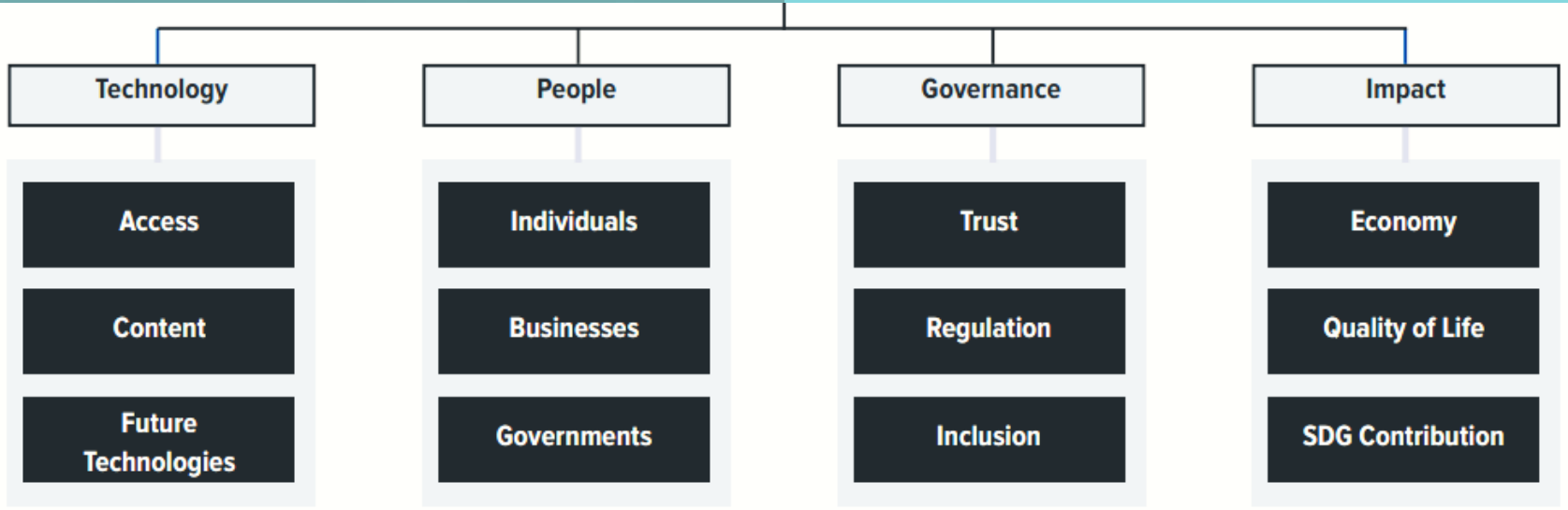
Trust, Regulation, Inclusion

04 Impact

Economy, Quality of Life, SDG Contribution

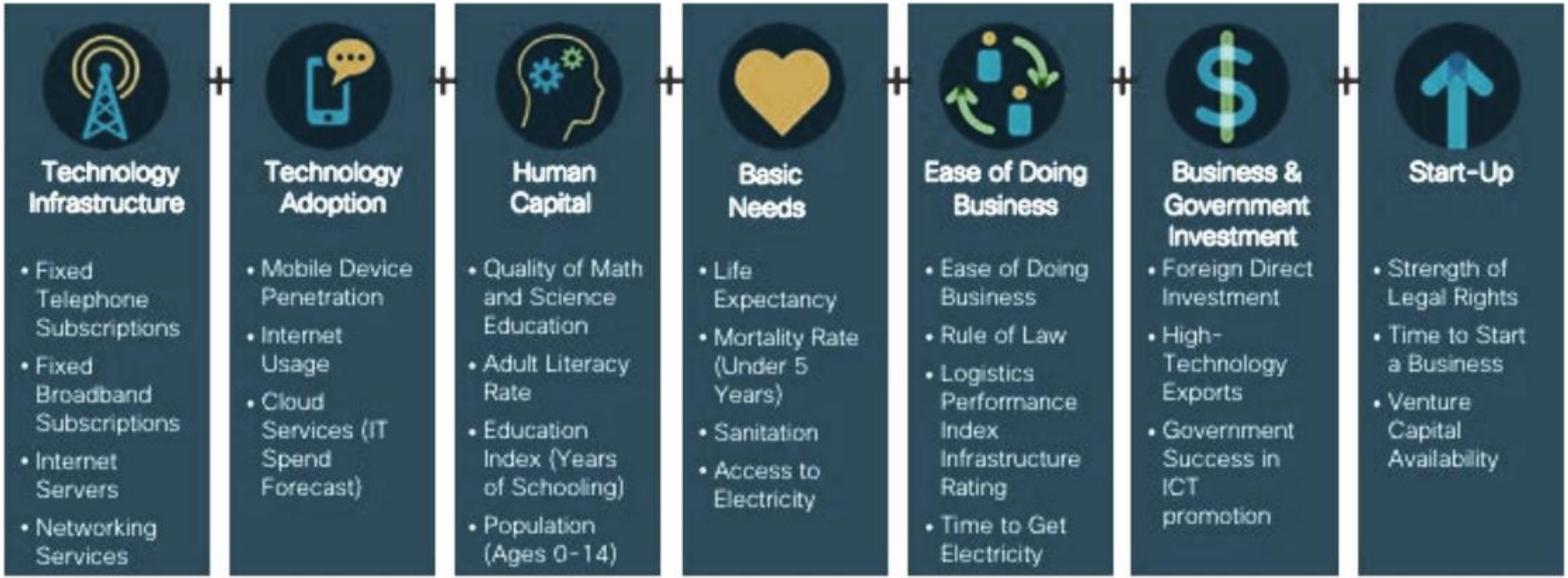
NRI 2021 MODEL

The collective future will require a harmonious integration of **people** and **technology**. Technology will continue to evolve and become more intelligent with the spread of technological innovations. People and technology will increasingly interact as collaborators and partners in most parts of society and business. To ensure the effectiveness of this integration, appropriate **governance** mechanisms will have to be implemented to address issues related to trust, security, and inclusion. The ultimate objective is for technology to have a positive **impact** on the economy and Quality of Life, helping to achieve the SDGs.



Calculating a Country's Score

How It Adds Up – Criteria for the Components



= A Country's Digital Readiness Score

TECHNOLOGY

First Pillar

Top Arab

UAE

Score 61.83

Rank 28th

Top Global

US

Score 87.81

Rank 1st

Technology is at the heart of the network economy. This pillar, therefore, seeks to assess the level of technology that is a sine qua non for a country's participation in the global economy.

Access

The fundamental level of ICT in countries, including on issues of communications infrastructure and affordability.

Content

The type of digital technology produced in countries, and the content/applications that can be deployed locally.

Future Technologies

The extent to which countries are prepared for the future of the network economy and new technology trends such as AI and Internet of Things (IoT).

TECHNOLOGY

First Pillar Sub-Indices

Technology is at the heart of the network economy. This pillar, therefore, seeks to assess the level of technology that is a sine qua non for a country's participation in the global economy.

Access

- ✓ Mobile tariffs.
- ✓ Handset prices.
- ✓ Internet access.
- ✓ SMS/population 15-69.
- ✓ 3G Mobile Network Coverage.
- ✓ International Internet bandwidth.
- ✓ Internet access in schools.

Content

- ✓ GitHub commits.
- ✓ Wikipedia Edits.
- ✓ Internet domain registrations.
- ✓ Mobile apps development.
- ✓ AI scientific publications.

Future Technologies

- ✓ Adoption of emerging technologies.
- ✓ Investment in emerging technologies.
- ✓ Robot density.
- ✓ Computer software spending.

PEOPLE

Second Pillar

Top Arab
UAE
Score
62.98
Rank
25th

Top Global
KR
Score
80.63
Rank
1st

The availability and level of technology in a country is only of interest insofar as its population and organizations have the access, resources, and skills to use it productively. This pillar is therefore concerned with the application of ICT by people at three levels of analysis:

Individuals

How individuals use technology and how they leverage their skills to participate in the network economy.

Businesses

How businesses use ICT and participate in the network economy.

Governments

How governments use and invest in ICT for the benefit of the general population

PEOPLE

Second Pillar

Sub-Indices

The availability and level of technology in a country is only of interest insofar as its population and organizations have the access, resources, and skills to use it productively. This pillar is therefore concerned with the application of ICT by people at three levels of analysis:

Individuals

- ✓ Active mobile-broadband subscriptions.
- ✓ ICT skills.
- ✓ Use of virtual social networks.
- ✓ Tertiary enrollment.
- ✓ Adult literacy rate.

Businesses

- ✓ Firms with website.
- ✓ GERD financed by business enterprise
- ✓ Professionals.
- ✓ Technicians & associate professionals.
- ✓ Annual investment in telecommunication services.
- ✓ GERD performed by business enterprise.

Governments

- ✓ Government online services.
- ✓ Publication and use of open data.
- ✓ Government promotion of investment in emerging technologies.
- ✓ R&D expenditure by governments and higher education.

GOVERNANCE

Third Pillar

Top Arab

QAT

Score 70.60

Rank 36th

Top Global

NO

Score 90.88

Rank 1st

A country's network readiness does not take place in a vacuum and is a function of the national context within which people operate. Thus, this pillar seeks to capture how conducive the national environment is for a country's participation in the network economy, based on issues of trust, regulation, and inclusion.

Trust

How safe individuals and firms are in the context of the network economy, as reflected by an environment conducive to trust and the trusting behavior of the population.

Regulation

The extent to which the government promotes participation in the network economy through regulation.

Inclusion

The digital divides within countries where governance can address issues such as inequality based on gender, disabilities, and socioeconomic Status.

GOVERNANCE

Third Pillar

Sub-Indices

A country's network readiness does not take place in a vacuum and is a function of the national context within which people operate. Thus, this pillar seeks to capture how conducive the national environment is for a country's participation in the network economy, based on issues of trust, regulation, and inclusion.

Trust

- ✓ Secure Internet servers.
- ✓ Cybersecurity.
- ✓ Online access to financial account.
- ✓ Internet shopping.

Regulation

- ✓ Regulatory quality.
- ✓ ICT Regulatory Environment.
- ✓ Legal framework's adaptability to emerging technologies.
- ✓ E-commerce legislation.
- ✓ Privacy protection by law content.

Inclusion

- ✓ E-participation.
- ✓ Socio-economic gap in use of digital payments.
- ✓ Availability of local online content.
- ✓ Gender gap in Internet use.
- ✓ Rural gap in use of digital payments.

IMPACT

Fourth Pillar

Top Arab

KW

Score
64.10

Rank
37th

Top Global

SG

Score
84.77

Rank
1st

Ultimately, readiness in the network economy is a means to improve the growth and well-being of society and the economy. This pillar, therefore, seeks to assess the economic, social, and human impact of participation in the network economy.

Economy

The economic impact of participating in the network economy.

Quality of Life

The social impact of participating in the network economy.

SDG Contribution

The impact of participating in the network economy in the context of the SDGs, the goals agreed upon by the UN for a better and more sustainable future for all. The focus is on goals where ICT has an important role to play, including such indicators as health, education, and environment.

IMPACT

Fourth Pillar

Sub-Indices

Ultimately, readiness in the network economy is a means to improve the growth and well-being of society and the economy. This pillar, therefore, seeks to assess the economic, social, and human impact of participation in the network economy.

Economy

- ✓ Medium & high-tech industry.
- ✓ High-tech exports.
- ✓ PCT patent applications.
- ✓ Growth rate of GDP per person.
- ✓ Prevalence of gig economy.
- ✓ ICT services exports.

Quality of Life

- ✓ Happiness.
- ✓ Freedom to make life choices.
- ✓ Income inequality.
- ✓ Healthy life expectancy at birth.

SDG Contribution

- ✓ SDG 3: Good health & well-being.
- ✓ SDG 4: Quality Education.
- ✓ Females employed with advanced degrees.
- ✓ SDG 7: Affordable & Clean Energy.
- ✓ SDG 11: Sustainable cities & communities.

Top NRI Performers 2021, Worldwide

NRI Index, Top 10

- Compared to previous years, the ranking of the top 10 performers in the NRI 2021 experienced some significant shifts in its composition. While the countries within the top 10 remain the same, specific countries made notable movements within the upper group. In particular, the Netherlands climbed three spots in 2021 to take the top position from Sweden, which has held the number one position since 2019. The United States also shifted, increasing four rankings to earn a place among the top five for the first time in the 2019-2021 period. With Singapore falling out of the top five, Europe leads with eight top ten countries, while Singapore and the United States represent the only economies located in Asia and the Pacific and the Americas, respectively.

- The top 10 performers all demonstrate solid performance metrics across the highest number of dimensions of the NRI. They all rank as the top 20 countries on each of the four primary pillars (Technology, People, Governance, Impact) and on at least two-thirds of the twelve sub-pillars.

Country	NRI Rank (out of 130)	NRI Score	4 Pillars							
			Techonology		People		Governance		Impact	
			Rank	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*
Netherlands	1	82.06	3	81.74	7	75.18	2	90.23	3	81.10
Sweden	2	81.57	4	80.38	4	76.48	5	88.10	2	81.31
Denmark	3	81.24	7	76.76	2	79.53	3	90.13	7	78.52
United States	4	81.09	1	87.81	5	75.65	7	87.26	16	73.64
Finland	5	80.47	10	75.13	3	76.51	4	89.71	5	80.54
Switzerland	6	80.20	2	82.96	12	72.81	11	84.84	6	80.19
Singapore	7	80.01	8	75.80	9	74.75	12	84.74	1	84.77
Germany	8	78.95	5	80.03	8	75.12	13	84.22	10	76.41
Norway	9	78.49	13	71.88	6	75.27	1	90.88	11	75.94
United Kingdom	10	76.60	6	76.78	16	69.44	14	83.64	9	76.52

Top NRI Performers 2021, Worldwide

NRI by Pillar, Top 3

Top 3 Performers in Each Pillar

Technology

2020	2021
1. ~~Switzerland~~	1. United States
2. ~~Sweden~~	2. Switzerland
3. Netherlands	3. Netherlands

People

2020	2021
1. ~~Denmark~~	**1.** Korea
2. ~~Korea~~	**2.** Denmark
3. Finland	**3.** Finland

Governance

2020	2021
1. Norway	**1.** Norway
2. ~~Denmark~~	**2.** Netherlands
3. ~~Netherlands~~	**3.** Denmark

Impact

2020	2021
1. Singapore	**1.** Singapore
2. ~~Switzerland~~	**2.** Sweden
3. ~~Sweden~~	**3.** Netherlands


Arab Region
Main Findings

Top NRI Performers 2021, Arab World

NRI Index

- In the Arab Region, the top 3 countries performing the highest in 2021 in terms of NRI remain the same as the previous year with minor changes; United Arab Emirates (34th) is still taking the lead, who is, however, followed by Saudi Arabia (40th) who moved ahead Qatar (42nd).
- In terms of global ranking, UAE and Qatar fell 4 places behind, while Saudi moved one rank ahead.
- UAE ranks first in terms of Technology use and People. Qatar scores the highest in terms of Governance. While unexpectedly, Kuwait aims the highest in terms of Impact, outranking last year's top leaders, like UAE, Qatar, Bahrain and Oman.

Country	NRI Index		4 Pillars							
	NRI Rank (out of 130)	NRI Score	Techonology		People		Governance		Impact	
			Rank	*Score*	*Rank*	*Score*	*Rank*	*Score*	*Rank*	*Score*
UAE	34	63.92	**28**	**61.83**	**25**	**62.98**	39	68.56	41	62.32
Saudi Arabia	40	60.23	30	59.73	27	61.73	43	64.87	66	54.60
Qatar	42	57.83	35	56.91	69	46.94	**36**	**70.60**	57	56.88
Oman	48	56.38	60	46.40	62	49.97	41	68.32	46	60.83
Bahrain	51	56.09	47	50.82	66	48.58	46	63.93	45	61.05
Kuwait	55	54.61	59	47.04	55	51.36	63	55.93	**37**	**64.10**
Jordan	72	48.14	78	40.24	63	49.22	76	52.07	81	51.02
Egypt	77	47.56	72	42.49	75	45.54	90	46.86	62	55.36
Morocco	81	46.06	69	43.06	88	41.54	97	44.84	64	54.80
Tunisia	87	44.33	81	39.24	76	45.46	98	44.15	88	48.48
Lebanon	93	42.16	76	41.57	60	50.40	115	35.51	107	41.15
Algeria	100	38.93	90	36.88	89	40.61	118	35.20	101	43.02

Top NRI Performers 2021, Arab World

NRI by Pillar, Top 3

Top 3 Performers in Each Pillar

Technology

2020	2021
1. UAE	1. UAE
2. ~~Qatar~~	2. Saudi
3. ~~Bahrain~~	3. Qatar

People

2020	2021
1. UAE	**1.** UAE
2. Saudi	**2.** Saudi
3. Kuwait	**3.** Kuwait

Governance

2020	2021
1. ~~Oman~~	**1.** Qatar
2. UAE	**2.** UAE
3. ~~Qatar~~	**3.** Oman

Impact

2020	2021
1. ~~Qatar~~	**1.** Kuwait
2. UAE	**2.** UAE
3. Bahrain	**3.** Bahrain

Arab Ranking in the TECHNOLOGY Pillar

Country	1st Pillar: Technology		Sub-Pillars: Access		Content		Future Technologies	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
UAE	28	61.83	27	82.70	50	41.31	15	61.48
Saudi Arabia	30	59.73	17	87.26	56	38.10	22	53.83
Qatar	35	56.91	32	80.25	62	36.32	21	54.15
Bahrain	47	50.82	49	71.35	77	33.45	27	47.66
Kuwait	59	47.04	56	68.38	76	33.53	44	39.21
Oman	60	46.40	48	72.46	85	29.70	51	37.05
Morocco	69	43.06	65	65.95	81	32.10	71	31.12
Egypt	72	42.49	66	65.94	71	34.36	89	27.15
Lebanon	76	41.57	72	62.28	70	34.38	82	28.06
Jordan	78	40.24	105	44.42	67	35.46	42	40.85
Tunisia	81	39.24	86	54.48	80	32.22	72	31.01
Algeria	90	36.88	81	57.34	93	26.14	88	27.16

Technology

Sub-Pillars

- Saudi Arabia is one of highest-ranked countries in terms of Access (17th) to ICTs, followed by UAE (27th) then Qatar (32nd), which both rank first in terms of 3G Mobile coverage. In comparison, Jordan (107th) fell down drastically in this category mainly because of weak scores performance in Mobile Tariffs, followed by Tunisia (86th), Algeria (81st) and Lebanon (72nd).

- UAE (50th), Saudi Arabia (56th) and Qatar (62nd) score the highest among their Arab partners in terms of Digital Content, although their ranks worldwide are disappointing, as they are weighed down by moderate involvement in digital participation and creation of Content.

- In terms of Future Technologies, UAE (15th), Qatar (21st) and Saudi (22nd) show high scores, placing them on top positions.

		UAE		Saudi Arabia		Qatar		Oman		Bahrain		Kuwait		Jordan		Egypt		Morocco		Tunisia		Lebanon		Algeria	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Access	Mobile Tariffs	25	79.12	30	78.15	**18**	**81.99**	55	65.15	73	56.08	66	58.68	109	37.23	**14**	**84.99**	90	46.10	61	61.29	111	34.71	85	49.10
	Handset prices	**15**	**83.70**	84	44.59	**1**	**100.00**	40	67.93	29	73.29	**22**	**77.55**	86	42.79	77	47.11	68	52.07	101	35.54	67	52.20	108	32.86
	Households with Internet access	**1**	**100.00**	**4**	**99.70**	**13**	**95.19**	**14**	**94.58**	**3**	**99.87**	5	99.60	94	37.34	70	73.08	46	84.65	90	51.44	48	84.49	68	74.47
	SMS sent by population 15-69	100	70.64	**6**	**88.60**	-	-	84	74.10	117	63.83	107	68.62	68	75.98	44	79.07	43	79.28	49	78.42	93	72.21	38	80.46
	Population covered by at least a 3G Mobile Network	**1**	**100.00**	50	99.77	**1**	**100.00**	46	99.84	**1**	**100.00**	**1**	**100.00**	36	99.95	47	99.79	60	99.73	51	99.73	43	99.90	60	99.73
	International Internet bandwidth	**12**	**45.45**	**1**	**100.00**	43	4.35	38	5.61	30	6.35	36	5.82	41	4.90	**14**	**29.96**	**18**	**20.86**	31	6.28	49	2.60	28	7.44
	Internet access in schools	**1**	**100.00**	**1**	**100.00**	**1**	**100.00**	**1**	**100.00**	**1**	**100.00**	-	-	57	12.74	42	47.58	34	78.96	41	48.66	31	89.88	-	-
Content	GitHub commits	56	5.12	106	0.50	81	1.94	118	0.11	95	1.00	89	1.40	91	1.32	93	1.07	103	0.69	78	2.18	58	4.34	112	0.31
	Wikipedia edits	72	45.89	67	49.32	74	45.21	86	37.79	58	55.06	73	45.71	75	44.90	77	44.40	99	29.24	100	28.50	79	43.59	103	27.64
	Internet domain registrations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mobile apps development	31	89.32	70	73.47	47	81.79	69	73.82	48	81.78	55	79.91	66	75.65	96	62.59	87	67.10	74	71.89	52	80.54	118	45.03
	AI scientific publications	49	54.86	21	65.35	56	48.92	75	35.75	86	26.84	74	36.39	51	53.15	**26**	**63.21**	31	62.16	43	56.25	69	40.40	39	57.45
Future Technology	Adoption of emerging technologies	17	78.00	23	72.31	35	62.68	44	57.47	30	65.71	76	42.95	59	49.03	48	54.92	90	37.16	102	29.39	79	40.87	65	47.15
	Investment in emerging techonologies	**11**	**79.57**	30	61.52	**17**	**71.18**	43	50.01	-	-	57	42.57	46	49.20	74	37.05	82	34.94	80	35.63	62	40.91	85	33.92
	Robot density	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	0.02	-	-	-	-	-	-	-	-
	Computer software spending	40	26.89	37	27.65	32	28.59	100	3.68	30	29.61	**26**	**32.11**	42	24.33	72	16.61	57	21.27	35	28.00	105	2.40	119	0.43

Arab Ranking in the PEOPLE Pillar

Country	2nd Pillar: People		Sub-Pillars: Individuals		Businesses		Governments	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
UAE	25	62.98	32	71.95	32	55.69	25	61.29
Saudi Arabia	27	61.73	24	73.48	34	54.84	32	56.88
Kuwait	55	51.36	10	77.92	79	34.24	70	41.92
Lebanon	60	50.4	12	76.58	44	49.87	110	24.75
Oman	62	49.97	63	63.09	82	33.81	38	53.03
Jordan	63	49.22	57	64.01	37	52.74	95	30.91
Bahrain	66	48.58	25	72.97	97	29.46	67	43.31
Qatar	69	46.94	56	64.30	103	28.36	47	48.17
Egypt	75	45.54	80	58.24	85	33.11	60	45.28
Tunisia	76	45.46	92	53.97	71	35.80	56	46.61
Morocco	88	41.54	86	55.44	87	32.65	86	36.53
Algeria	89	40.61	88	55.17	106	26.66	76	40.00

People

Sub-Pillars

- Kuwait (10th) is outstandingly leading when it comes to ICT usage and skills among individuals, and reaches a top 10 global rank, mainly due to its extraordinarily high use of virtual social media networks. It is closely followed by Saudi (24th) and UAE (32nd) in the Arab Region, which both drive their exceptional performance in the People (27th and 25th respectively) pillar.

- UAE (32nd), Saudi Arabia (34th) and Jordan (37th) rank among the top 3 performers in the Arab World when it comes to ICT usage and skills in Businesses, due to great investment in telecommunication services, white surprisingly Qatar (106th) has the worst-performing score in this category.

- UAE (25th), Saudi (32nd) and Oman (38th) show relatively good results in terms of ICT usage and skills among Government, at the expense of Lebanon (110th) who score really low in this sub-pillar due to poor Government online services and publication and use of open data.

		UAE		Saudi Arabia		Qatar		Oman		Bahrain		Kuwait		Jordan		Egypt		Morocco		Tunisia		Lebanon		Algeria	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Individuals	Active mobile broadband subscriptions	35	80.27	25	83.27	94	70.93	80	73.25	106	67.37	78	73.30	72	74.58	**17**	**85.53**	32	81.35	59	75.84	86	72.13	**26**	**83.08**
	ICT skills	39	51.72	27	61.25	43	46.40	47	39.42	**16**	**74.61**	**8**	**83.17**	-	-	**22**	**69.58**	45	44.34	49	30.31	-	-	57	24.38
	Use of virtual social media networks	**1**	**100.00**	28	79.52	**2**	**99.79**	**24**	**80.46**	**7**	**87.53**	**2**	**99.79**	77	61.02	94	46.36	80	58.73	59	68.81	71	63.93	83	55.82
	Tertiary enrollment	59	36.46	28	49.34	96	12.76	72	27.90	52	38.59	53	38.36	80	22.70	75	26.81	76	26.56	81	21.84	-	-	58	36.47
	Adult literacy rate	57	91.31	45	94.02	55	91.62	42	94.43	33	96.77	40	94.96	**27**	**97.75**	90	62.91	88	66.23	79	73.04	47	93.68	75	76.09
Businesses	Firms with website	-	-	-	-	-	-	-	-	-	-	-	-	**25**	**78.22**	65	48.83	60	53.11	45	65.73	48	62.49	-	-
	GERD financed by business enterprise	**5**	**91.89**	-	-	76	11.40	55	39.30	64	26.89	94	1.13	-	-	86	4.81	59	37.00	66	23.40	-	-	82	8.29
	Professionals	48	37.29	60	27.85	74	21.47	92	17.27	87	17.86	67	24.87	37	41.20	59	28.15	123	3.53	95	15.73	44	38.07	70	23.59
	Technicians & associate professionals	46	47.61	40	49.70	71	28.82	67	31.57	75	26.16	66	31.82	102	16.53	63	32.92	96	18.27	65	32.19	87	20.79	88	19.84
	Annual investment in telecommunication services	28	83.74	**16**	**86.98**	56	78.83	51	79.49	72	76.08	55	79.13	80	75.01	31	83.42	54	79.22	78	75.14	60	78.13	43	80.87
	GERD performed by business enterprise	29	17.93	-	-	68	1.27	65	1.42	80	0.33	-	-	-	-	77	0.50	51	4.74	58	2.62	-	-	76	0.69
Gov.	Government online services	15	89.70	69	67.88	74	64.85	**24**	**84.84**	45	78.18	31	83.64	117	33.94	91	55.76	96	50.91	80	61.21	112	40.00	123	25.46
	Publication and use of open data	60	25.96	75	18.43	73	19.03	-	-	74	18.68	-	-	86	12.33	83	13.65	78	16.63	52	31.98	97	5.56	-	-
	Government promotion of investment in emerging technologies	**3**	**84.65**	**4**	**84.32**	**18**	**70.31**	**23**	**62.25**	**17**	**71.17**	61	38.63	47	46.46	43	47.89	78	33.34	50	44.91	92	28.69	41	48.75
	R&D expenditures by governments & higher education	41	44.83	-	-	48	38.48	87	11.99	100	5.22	104	3.50	-	-	**16**	**63.81**	39	45.26	35	48.36	-	-	37	45.78

Arab Ranking in the GOVERNANCE Pillar

Country	3rd Pillar: Governance		Sub-Pillars: Trust		Regulation		Inclusion	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Qatar	36	70.6	27	71.42	49	69.49	42	70.90
UAE	39	68.56	30	69.66	80	59.42	28	76.59
Oman	41	68.32	29	69.73	85	58.34	27	76.88
Saudi Arabia	43	64.87	47	53.95	60	65.15	32	75.50
Bahrain	46	63.93	56	49.30	58	66.11	30	76.38
Kuwait	63	55.93	64	45.66	78	60.52	67	61.60
Jordan	76	52.07	91	31.98	76	61.71	63	62.53
Egypt	90	46.86	88	33.00	95	54.32	83	53.24
Morocco	97	44.84	83	34.06	64	64.59	118	35.86
Tunisia	98	44.15	73	37.14	96	53.95	107	41.36
Lebanon	115	35.51	106	26.11	121	38.19	106	42.24
Algeria	118	35.2	117	17.84	116	42.03	102	45.72

Governance

Sub-Pillars

- In terms of trust within the Governance pillar, Qatar (27th), Oman (29th) and UAE (30th) score the highest in the Arab Region, featuring in the top tercile globally, due to strong cybersecurity systems and secured e-commerce platforms. However the gap with the rest of the Arab countries is relatively wide, namely with Lebanon (106th) and Algeria (117th), scoring at the very last globally, due to high corruption and mistrust in online access and content.

- Regulation within the Arab World is the weakest sub-pillar, with UAE (80th) and Oman (80th) ranking in the third-quarter globally, however they are still doing well in terms of ICT regulations and framework's adaptability to new technologies.

- When it comes to Inclusion, Oman (27th), UAE (28th) and Bahrain (30th) are in pole positions, where local online content is available for almost everyone, thus scoring the highest among their other Arab partners.

		UAE		Saudi Arabia		Qatar		Oman		Bahrain		Kuwait		Jordan		Egypt		Morocco		Tunisia		Lebanon		Algeria	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Trust	Secure Internet servers	61	57.84	88	43.35	73	48.43	87	43.49	77	47.64	75	48.09	96	39.17	113	30.15	72	48.55	81	46.23	84	44.64	112	30.85
	Cybersecurity	**8**	**98.03**	**2**	**99.53**	34	94.40	**28**	**95.97**	67	77.47	72	74.63	76	70.45	30	95.40	58	82.10	53	85.99	106	29.22	103	32.79
	Online access to financial account	23	59.16	43	40.98	-	-	-	-	45	40.00	54	34.02	108	9.24	118	3.38	117	3.56	102	10.37	97	12.96	116	4.16
	Internet shopping	21	63.63	43	31.95	-	-	-	-	42	32.09	50	25.89	76	9.08	109	3.09	115	2.04	87	5.96	63	17.64	102	3.56
Regulation	Regulatory quality	36	67.80	74	39.27	40	59.63	56	49.09	50	54.34	66	42.89	67	42.07	118	18.58	85	35.36	99	29.21	97	29.53	127	5.62
	ICT regulatory environment	74	80.00	**14**	**94.12**	101	66.67	61	83.92	54	85.69	88	71.76	**14**	**94.12**	39	87.65	39	87.65	92	70.78	129	18.43	110	62.35
	Legal framework's adaptability to emerging technologies	**13**	**75.04**	**12**	**77.22**	**22**	**65.84**	**30**	**61.39**	**25**	**64.62**	71	38.64	46	49.14	55	45.87	90	28.78	85	30.45	77	33.80	53	46.28
	E-commerce legislation	112	50.00	112	50.00	**1**	**100.00**	76	75.00	**1**	**100.00**	**1**	**100.00**	76	75.00	76	75.00	**1**	**100.00**	76	75.00	76	75.00	112	50.00
	Privacy protection by law content	125	24.26	-	-	92	55.29	126	22.31	123	25.90	99	49.30	101	48.25	109	44.51	55	71.14	73	64.28	119	34.17	107	45.90
Inclusion	E-participation	**16**	**93.83**	64	70.37	75	64.20	38	82.71	50	76.54	**18**	**90.13**	117	30.86	95	49.38	95	49.38	71	67.90	117	30.86	128	12.35
	Socioeconomic gap in use of digital payments	30	82.98	42	74.85	-	-	-	-	47	72.64	45	73.60	82	44.82	111	24.19	116	15.49	113	21.35	117	14.97	75	51.82
	Availability of local online content	20	85.87	**10**	**91.10**	29	81.91	41	74.51	**13**	**88.80**	47	68.48	42	74.42	34	78.50	69	59.97	84	51.50	82	51.76	93	47.78
	Gender gap in Internet use	26	67.90	**17**	**69.62**	31	66.60	**5**	**73.43**	**22**	**68.65**	**24**	**68.28**	-	-	57	61.03	75	54.46	86	38.62	-	-	89	26.67
	Rural gap in use of digital payments	96	52.36	48	71.56	-	-	-	-	30	75.26	120	7.53	**1**	**100.00**	91	53.11	121	0.00	113	27.44	50	71.37	**3**	**89.99**

Arab Ranking in the IMPACT Pillar

Country	4th Pillar: Impact		Sub-Pillars: Economy		Quality of Life		SDG Contribution	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Kuwait	37	64.1	58	39.45	33	77.46	33	75.38
UAE	41	62.32	56	40.73	20	83.79	62	62.43
Bahrain	45	61.05	74	34.10	32	77.64	36	71.41
Oman	46	60.83	85	31.64	26	79.45	37	71.39
Qatar	57	56.88	63	37.68	29	79.20	92	53.75
Egypt	62	55.36	53	43.00	91	59.87	60	63.20
Morocco	64	54.8	47	44.09	95	59.10	69	61.21
Saudi Arabia	66	54.6	49	43.36	41	74.84	106	45.61
Jordan	81	51.02	70	35.14	87	60.69	84	57.22
Tunisia	88	48.48	84	31.90	93	59.36	90	54.20
Algeria	101	43.02	103	24.91	106	50.42	93	53.72
Lebanon	107	41.15	115	19.37	113	46.14	82	57.94

Impact

Sub-Pillars

- In terms of Impact on the Economy (57th), the rankings of the Arab countries are quiet disappointing, with Kuwait featuring in the 1st position (58th) and Lebanon at the very last (107th). High tech-exports in both UAE (111th) and Saudi Arabia (115th) are very low thus draining their ranking levels down, and making them stand at the very last position, right before Algeria (125th).

- On the other side, when it comes to the Quality of Life, most Arab countries are doing very well globally, with UAE (20th), Oman (26th) and Qatar (29th) ranking in the top 20; closely followed by Bahrain (32nd), Kuwait (33rd) and Saudi Arabia (41st) making it to the top 40. The main factors are, freedom, happiness and income equality. However, Lebanon (106th) and Algeria (113th) are falling far behind as those criterias are not met.

- The Impact pillar is however impeded by dismal SDG contribution in the Arab region, with Saudi Arabia (106th), Algeria (93rd) and Qatar (92nd) featuring in the very last positions, which suggests that sustainability and green energies are among the pressing issues that should be at the top countries' agenda.

		UAE		Saudi Arabia		Qatar		Oman		Bahrain		Kuwait		Jordan		Egypt		Morocco		Tunisia		Lebanon		Algeria	
		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Economy	Medium & high-tech manufacturing	45	32.33	33	44.97	35	43.80	65	20.40	85	10.05	51	29.13	55	26.72	56	26.27	**29**	**48.95**	50	29.66	-	-	100	2.24
	High-tech exports	111	3.40	115	2.92	91	7.98	74	15.93	89	8.90	98	6.40	63	23.81	85	10.79	55	30.42	39	43.31	108	3.79	125	0.49
	PCT patent applications	60	38.68	32	59.67	67	33.40	68	32.77	84	19.00	72	29.07	50	43.99	77	22.07	56	40.65	80	21.00	-	-	82	19.67
	Growth rate of GDP per person engaged	78	54.10	99	47.37	107	43.94	94	49.10	68	58.05	84	52.62	77	54.40	**7**	**85.68**	60	59.84	91	51.03	117	0.00	74	55.39
	Prevalence of gig economy	**10**	**83.82**	**4**	**90.33**	**13**	**74.83**	**29**	**65.07**	**24**	**66.86**	45	55.93	38	60.24	**6**	**89.46**	65	41.75	106	23.30	67	40.34	32	62.63
	ICT services exports	57	32.07	89	14.91	78	22.16	110	6.59	31	41.73	**6**	**63.53**	126	1.70	72	23.75	**28**	**42.94**	75	23.10	51	33.33	103	9.05
Quality of Life	Happiness	29	69.74	23	71.88	33	67.97	**19**	**78.09**	41	63.71	49	62.30	119	19.75	109	27.75	101	34.74	105	33.22	120	18.28	103	33.51
	Freedom to make life choices	**10**	**96.20**	37	86.38	**19**	**93.18**	**23**	**91.82**	**9**	**96.72**	46	83.51	83	68.47	87	66.95	73	75.33	116	49.70	126	12.28	127	1.79
	Income inequality	**5**	**96.35**	-	-	-	-	-	-	-	-	-	-	44	76.30	**26**	**82.03**	74	61.2	34	78.65	28	81.25	10	92.19
	Healthy life expectancy at birth	66	72.86	84	66.24	51	76.44	79	68.45	68	72.47	**29**	**86.58**	45	78.25	91	62.73	87	65.13	54	75.87	67	72.76	59	74.19
SDG contribution	SDG 3: Good Health & Well-Being	39	78.69	53	75.41	77	65.57	71	67.21	34	80.33	39	78.69	39	78.69	77	65.57	67	68.85	67	68.85	60	73.77	30	81.97
	SDG 4: Quality Education	46	40.56	69	21.27	58	32.41	-	-	-	-	-	-	56	33.44	-	-	73	13.8	72	15.23	71	17.44	75	11.28
	Females employed with advanced degrees	76	28.31	91	17.99	94	14.50	-	-	-	-	-	-	81	24.71	90	18.87	-	-	74	28.84	50	48.26	77	26.48
	SDG 7: Affordable and Clean Energy	72	75.56	90	67.57	96	64.62	105	60.62	122	38.90	88	68.85	78	73.16	47	81.23	**25**	**86.02**	49	81.15	75	73.24	55	78.99
	SDG 11: Sustainable Cities and Communities	43	89.03	127	45.81	33	91.66	51	86.34	**23**	**95.00**	73	78.60	82	76.10	48	87.13	81	76.16	80	76.91	79	76.99	92	69.87

Conclusion and Way Forward

The group of Arab States shows a large dispersion of overall scores in the NRI, ranging from UAE in 34th position to Algeria in 100th, despite the region being represented by only 12 countries in the index.
The results can, in effect, be broken down further into Middle East and Northern Africa, where most of the former countries (oil-rich economies) clearly outperform the oil-importing countries and least developed economies. The lagging behind Arab countries need to focus on improving their NRI through better appropriate regulations involving all stakeholders and building the necessary infrastructure in addition to better governance and inclusion.

The regional leader, United Arab Emirates, is the only Arab State ranked in the top quartile, which was also better equipped to cope with shocks like Covid-19, along with its neighboring countries like Saudi Arabia, Qatar and Oman which belong to the group of high-income countries. Their tangible contribution to bridge the gap with the rest of the Arab World, by building better inclusion and stronger collaboration, will not only assist the other Arab countries, but will be reflected also on their own positions regionally and globally.

GCC countries need however to improve the Impact of their network economy, where much could be done to raise SDG Contribution (UAE, 62nd; Qatar, 92nd; Saudi, 106th), mainly in terms of sustainability and green energies.

Thank you

Refer to the Excel annexes for more details