United Nations | Department of Economic and Social Affairs

UN E-Government Development Index (EGDI)

More than 20 years of data – and a vision of the future

The Survey looks at how digital government can facilitate integrated policies and services across 193 UN Member States. It supports countries' efforts to provide effective, accountable and inclusive digital services to all, bridge the digital divide and leave no one behind.

Caribbean ICT Indicators Workshop

"Measuring The Digital Society For Digital Inclusion"

Trinidad and Tobago/Virtual Meeting

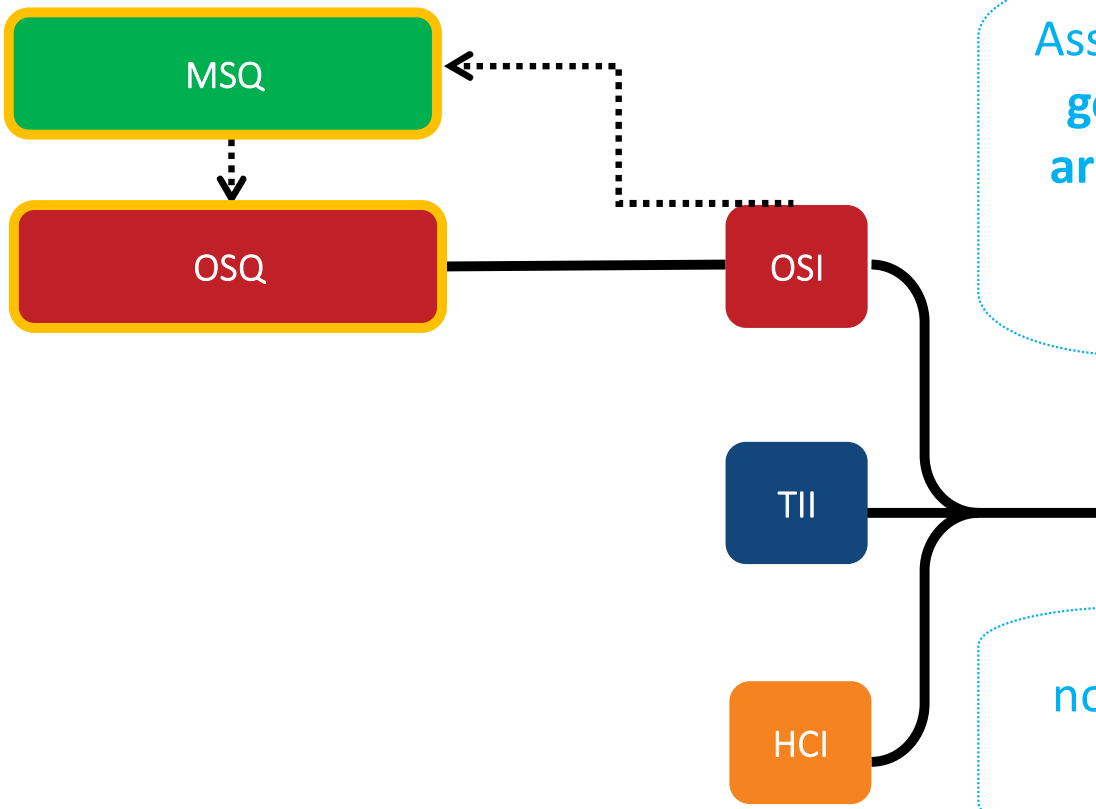
Ms. Arpine Korekyan
Governance and public Administration Officer
DPIDG-UNDESA

Date: 28 March 2023
New York, UNHQ

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

Methodology: EGDI

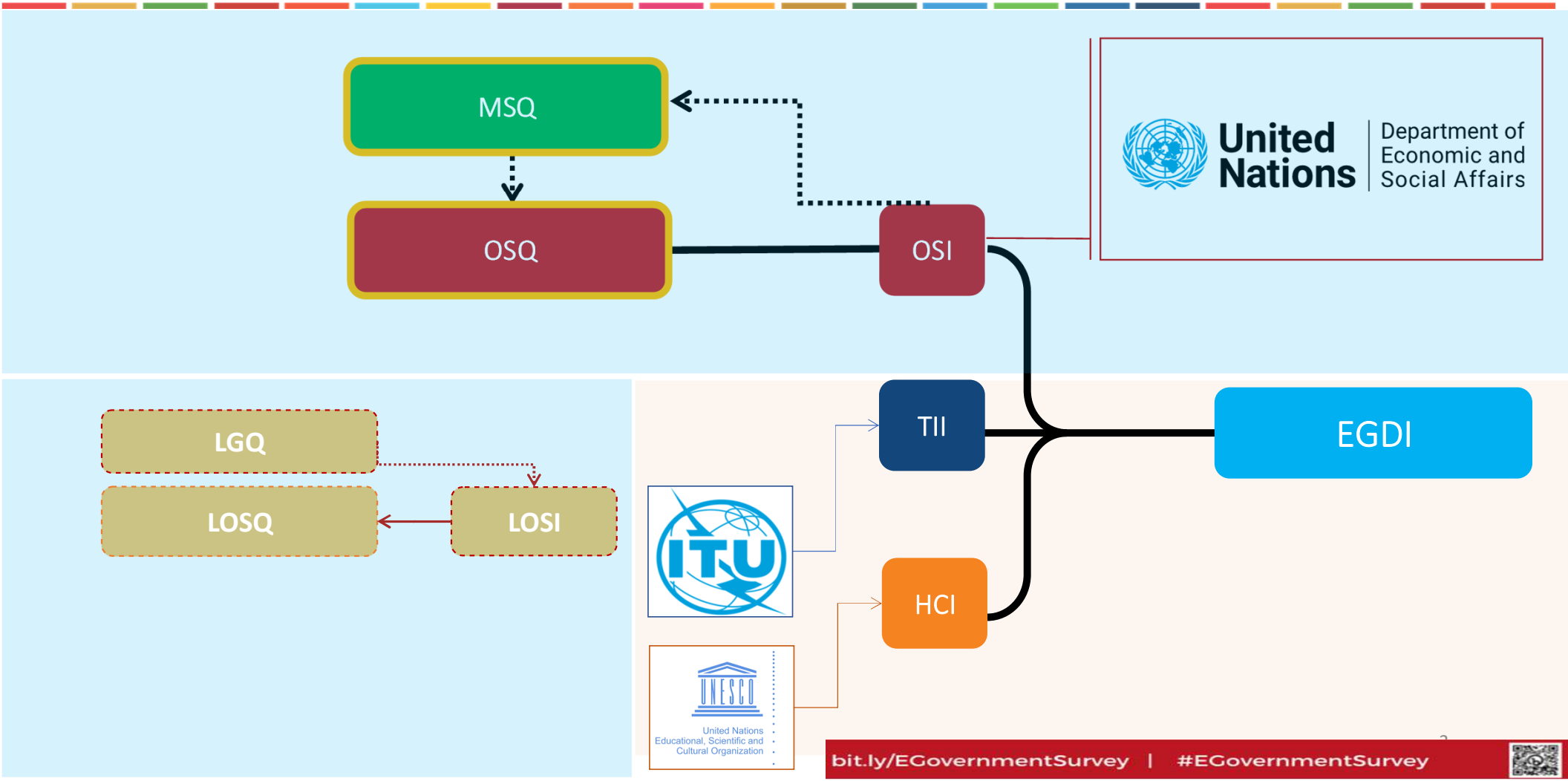


Assesses national websites and **how e-government policies and strategies are applied in general and in specific sectors for delivery of essential services.**

EGDI is the weighted average of normalized scores on **the three most important dimensions of e government**

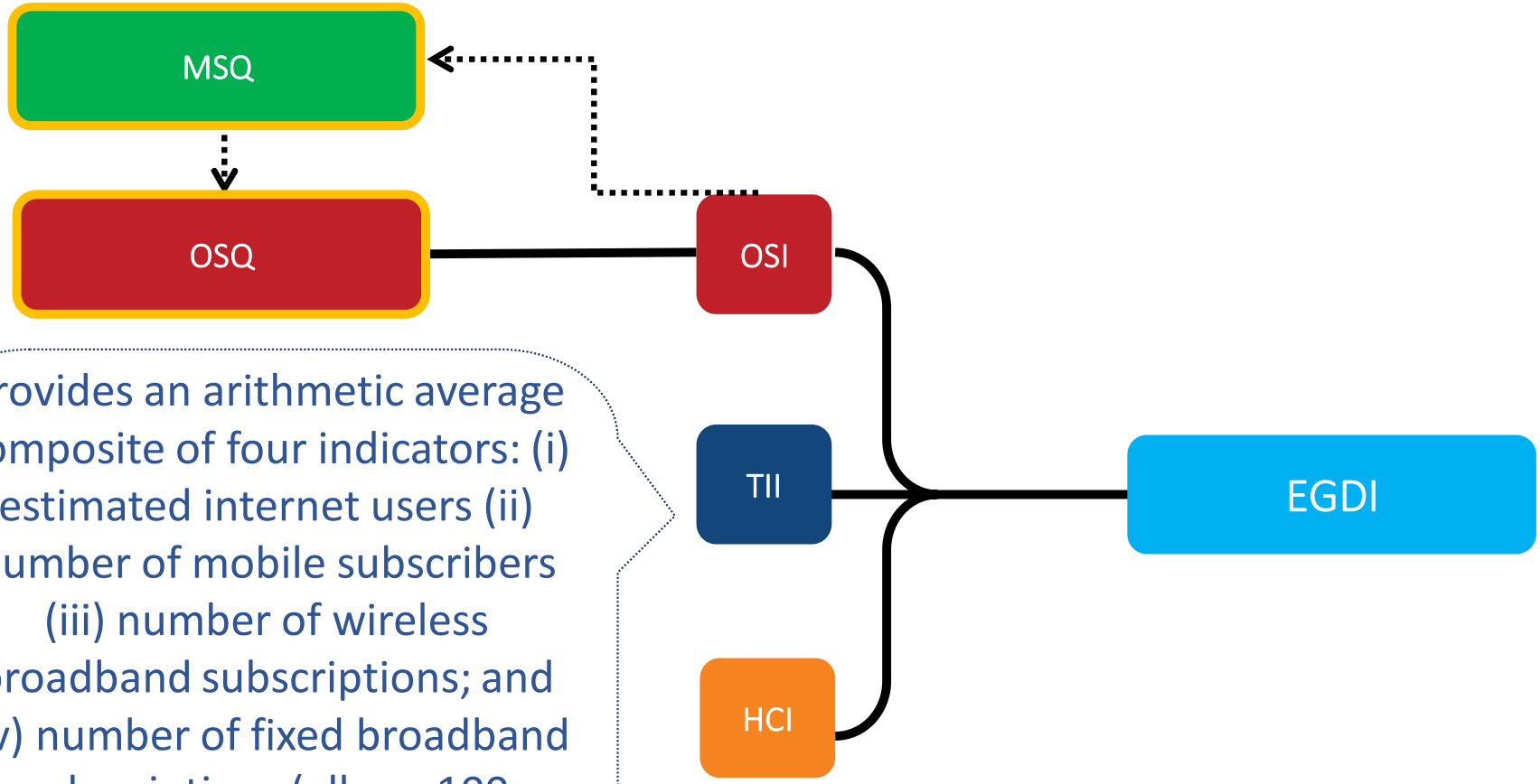
United Nations | Department of Economic and Social Affairs

Methodology: EGDI



United Nations | Department of Economic and Social Affairs

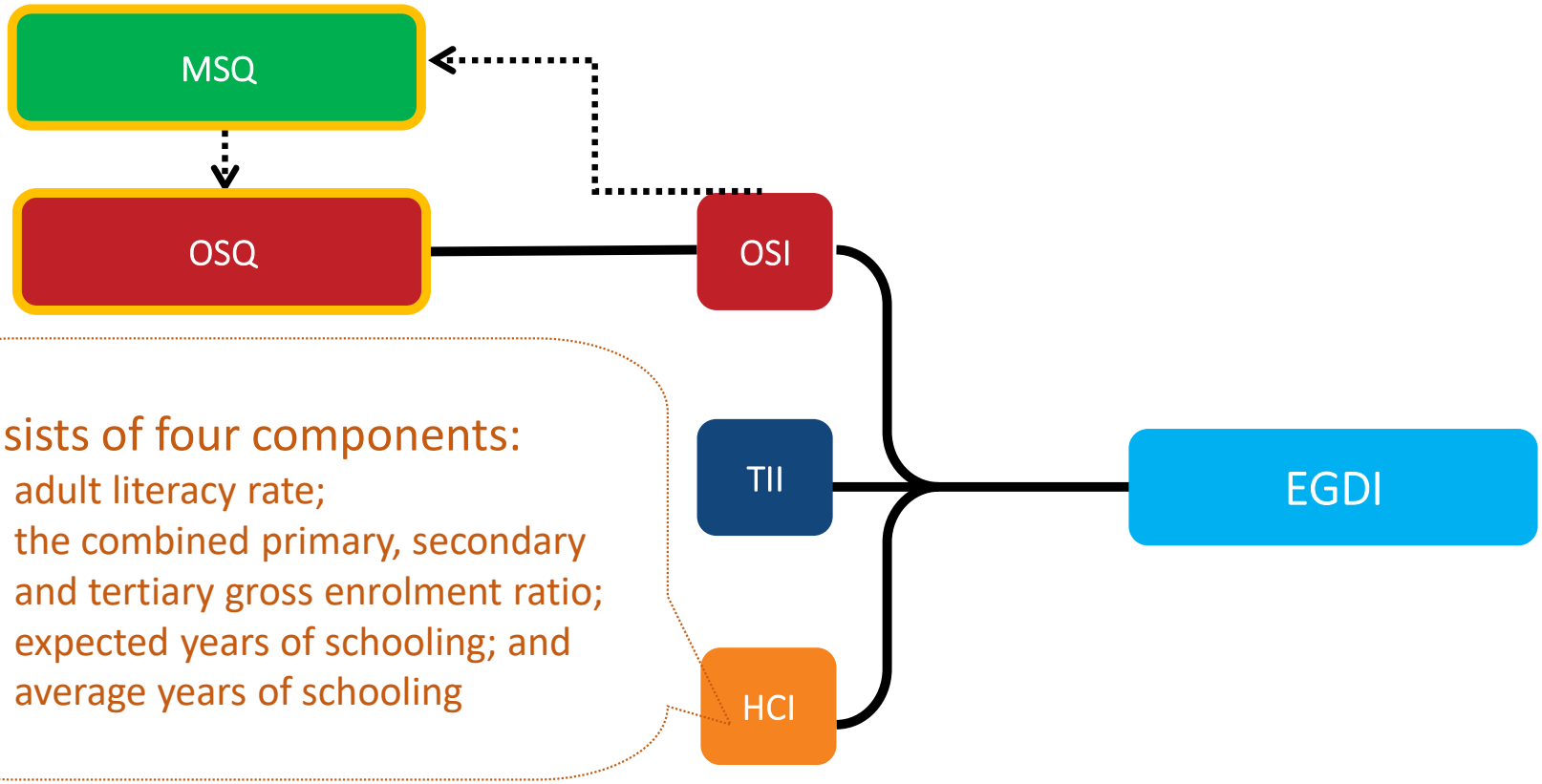
Methodology: EGDI



Provides an arithmetic average composite of four indicators: (i) estimated internet users (ii) number of mobile subscribers (iii) number of wireless broadband subscriptions; and (iv) number of fixed broadband subscriptions (all per 100 inhabitants).

United Nations | Department of Economic and Social Affairs

Methodology: EGDI



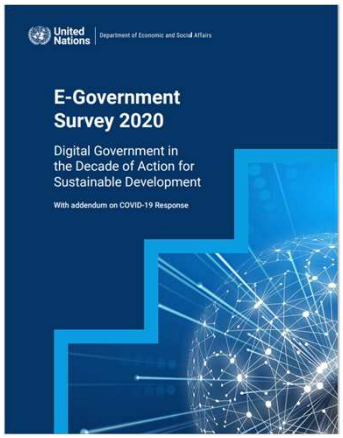
consists of four components:

(i) adult literacy rate;
(ii) the combined primary, secondary and tertiary gross enrolment ratio;
(iii) expected years of schooling; and
(iv) average years of schooling

United Nations | Department of Economic and Social Affairs

What Was Changed

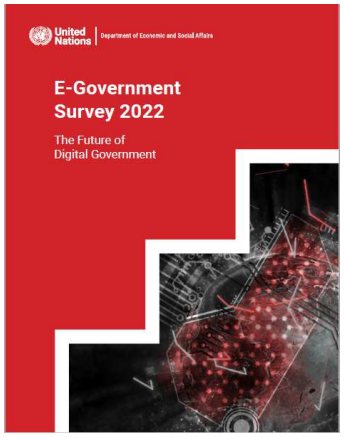
2020



To take into account learned, inputs and feedback received by different stakeholders, by EGM and by latest technological and policy development, a limited number of changes were introduced as the following:

- The Online Services Index (OSI) has been refined. The 2022 OSI has been calculated based on 180 questions (up from 148 in 2020)
- The E-Participation Index (EPI) methodology has been improved to better assess engagement
- The Member State Questionnaire (MSQ) was expanded
- The assessment of city portals has been expanded from 100 cities in 2020 to 193 in 2022
- The annexes have been extended with two pilot initiatives (Complex Network Analysis and the Open Government Data Index)

2022

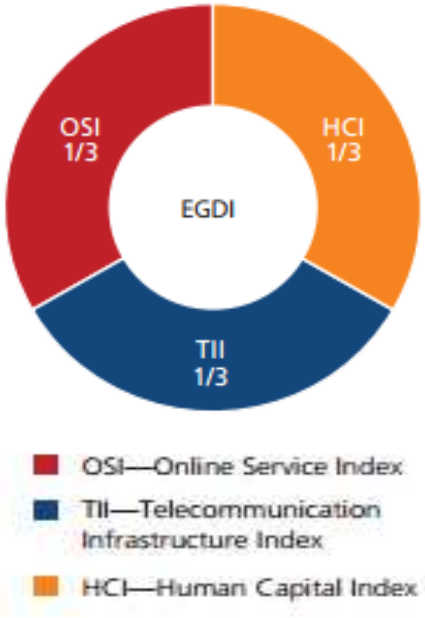


bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

OSI Methodology

- **New Methodological framework** organized in 5 categories (inspired by LOSI)
- New Category on **Institutional Framework**
- **More disagreggated Questions** (for better Data analysis)
- **More Questions on Service Provision** (including more life events) substription; 3 = Full Online Provision
- **More questions on Inclusion - vulnerable groups** (women, youth, old people, people with disability, immigrants)
- **More Questions on e-participation** (decision-making)



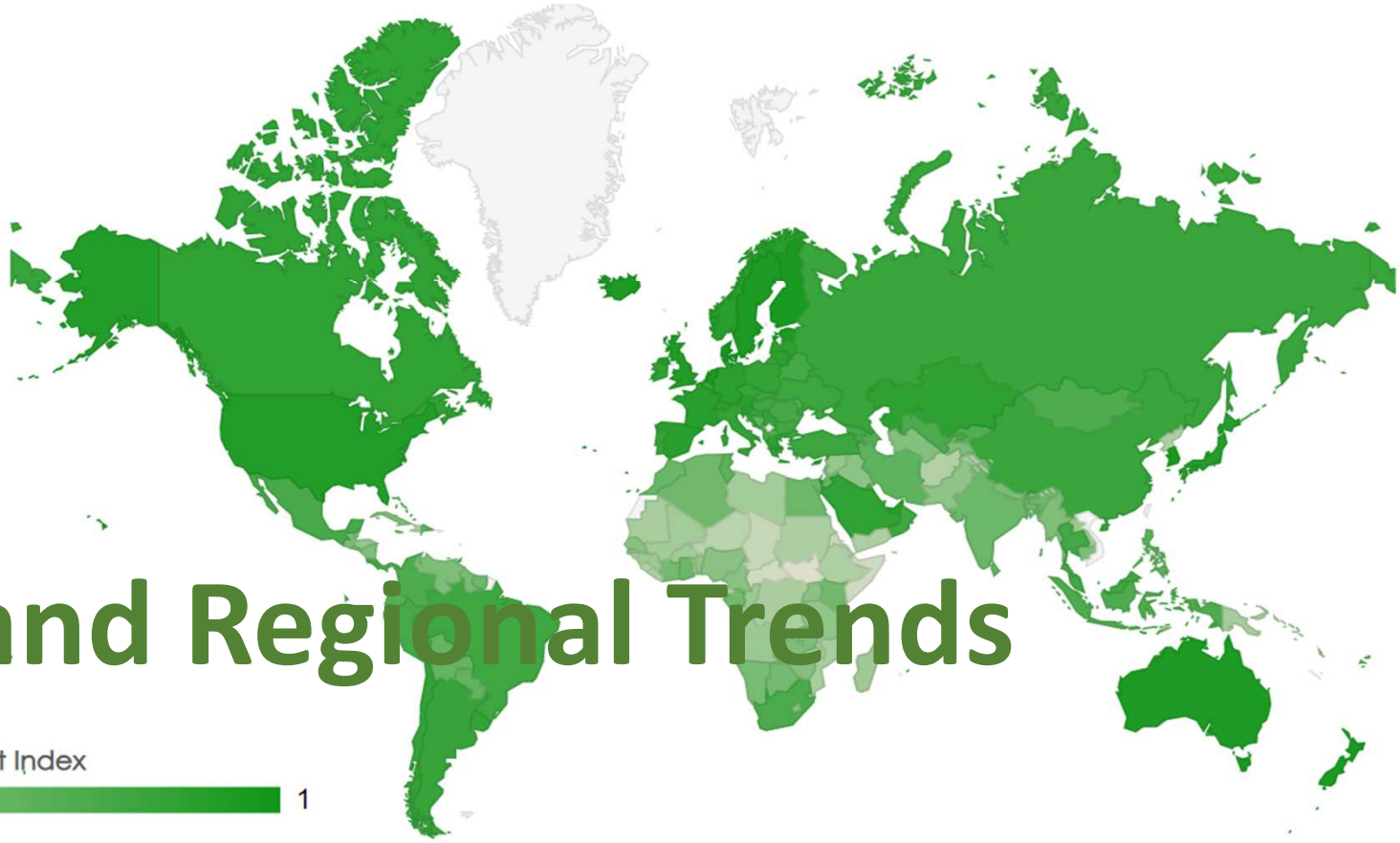
OSI: Categories	Weight
Institutional Framework	10%
Technical (Acc. & Aff.)	5%
Content Provision	5%
Service Provision	45%
Participation (EPI)	35%

OSI ={ 10% [IF], 5% [T], 5% [CP], 45% [SP] 35% [EP] }

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

E-Government Survey 2022



Global and Regional Trends

2022 E-Government Development Index

0 1

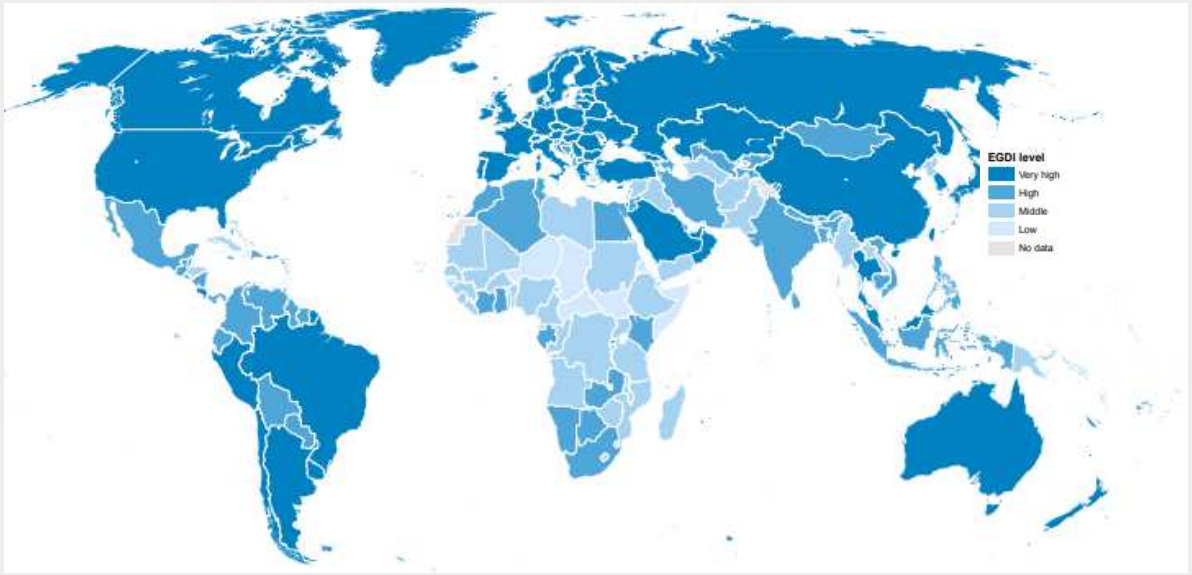
bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

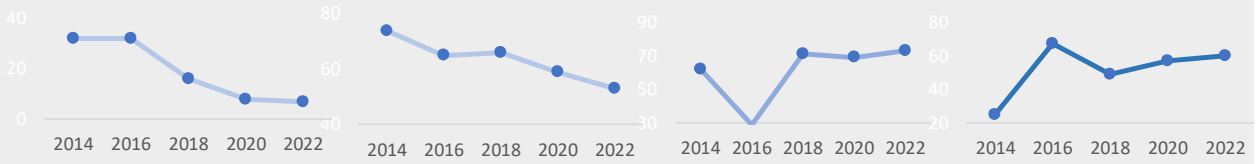
Global Trends at a glance, 2022

Key Messages:

- ✓ E-government development has improved between 2020 and 2022:
  - global average EGDI value rose from 0.5988 to 0.6102
- ✓ **133** UN Member States (70%) have **Very high (60)** and **High (73) EGDI** values
  - A 5% increase since 2020
- ✓ Only 7 countries have **Low-EGDI level**
  - all 7 are LDC/LLDC/SIDSs;
  - 6 in Africa, 1 in the Americas
- ✓ the trend for the last 8 years suggests increasing number of countries improving e-government development



Low EGDI	Middle EGDI	High EGDI	Very high EGDI
0.0 to 0.25	0.25 to .05	0.5 to 0.75	0.75 to 1.0
7 countries	53 countries	73 countries	60 countries



bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

Countries with Upward Movement

Key Findings:

14 countries moved to higher E-Government Development Index (EGDI) groups:

- 2 from the low to the middle group
- 8 from the middle to the high group
- 4 from the high to the very high group

The upward movement of countries between EGDI groups usually involves a shift from the top rating class of one EGDI group to the lowest rating class of the next highest group.

Upward movement between EGDI groups, 2022

Country	Region	Rating Class 2020	Rating Class 2022
Serbia	Europe	HV	V2
Ukraine	Europe	HV	V1
Peru	Americas	HV	V1
Georgia	Asia	HV	V1
Rwanda	Africa	MH	H1
Côte d'Ivoire	Africa	MH	H1
Lebanon	Asia	MH	H1
Guyana	Americas	MH	H1
Nepal	Asia	MH	H1
Tajikistan	Asia	MH	H1
Belize	Americas	MH	H1
Zambia	Africa	M3	H1
Democratic People's Republic of Korea	Asia	LM	M1
Guinea-Bissau	Africa	LM	M1

Source: 2022 United Nations E-Government Survey

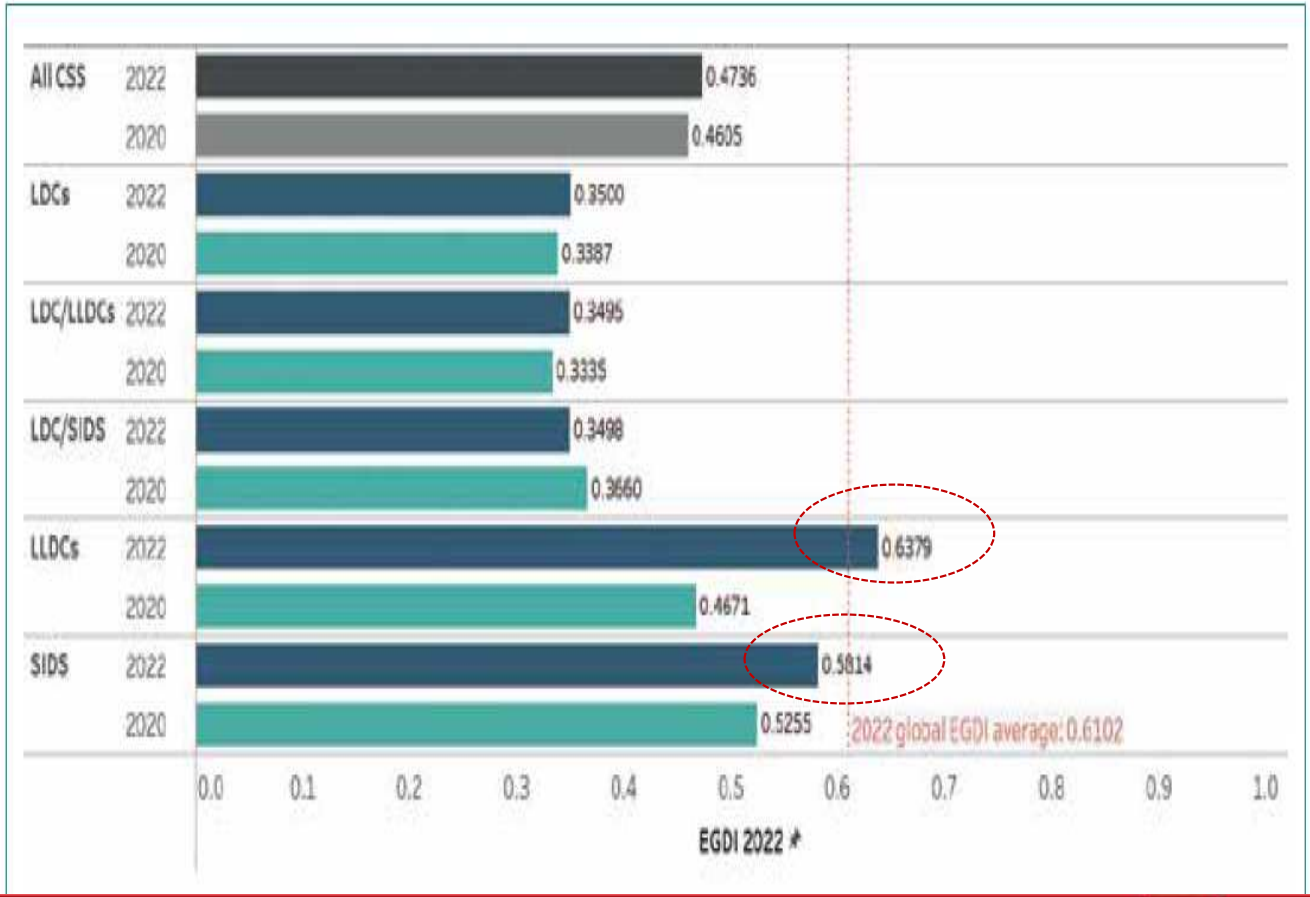
bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

Countries in Special Situation
(LDCs, LLDCs, SIDSs)

Key Findings

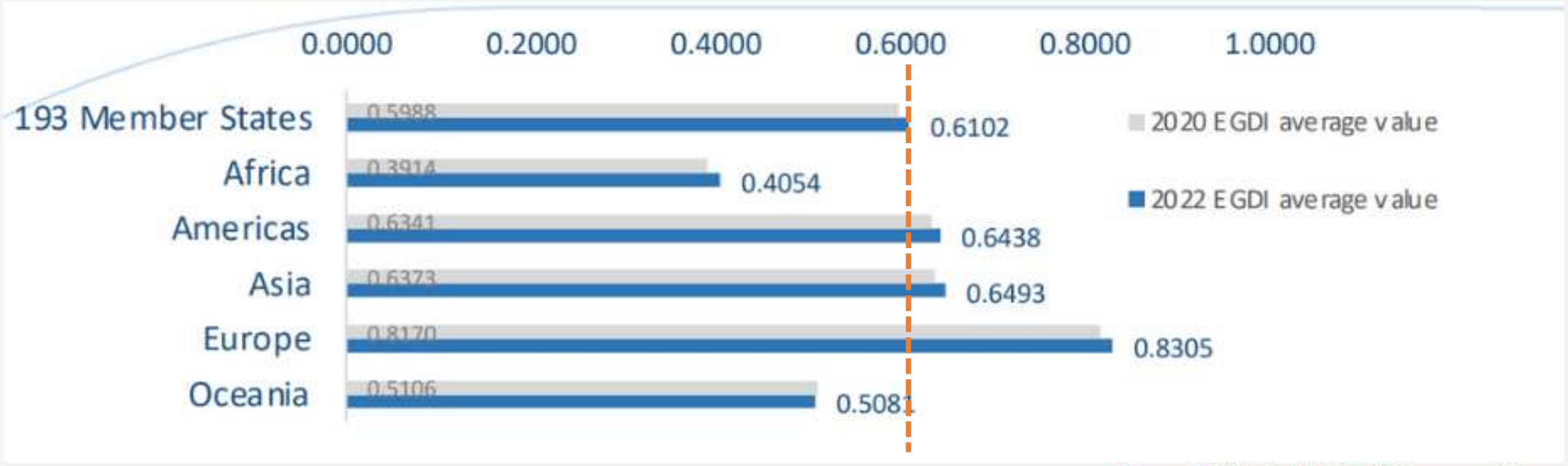
- The combined average **EGDI value for LDCs, LLDCs and SIDS rose by 3%** between 2020 and 2022 but remains well **below the world average**.
- LDCs have the lowest average EGDI value (0.35) among the three special groups.
- When LDCs are excluded from the analysis of LLDCs and SIDS, the average EGDI values for the latter two groups are higher for SIDS and for LLDCs.
- LLDCs comprise the only group among MS in special situations that has an average EGDI value above the global average.
- **LLDCs also have the highest averages for the EGDI subindices (TII, HCI and OSI), followed by SIDS**



bit.ly/EGovernmentSurvey | #EGovernmentSurvey

REGIONAL DIVIDES IN E-GOVERNMENT

Europe remains the **leader** in e-government development Index **(EGDI of 0.8305)**, followed by **Asia** (0.6493), **the Americas** (0.6438), **Oceania** (0.5081), and **Africa** (0.4054).



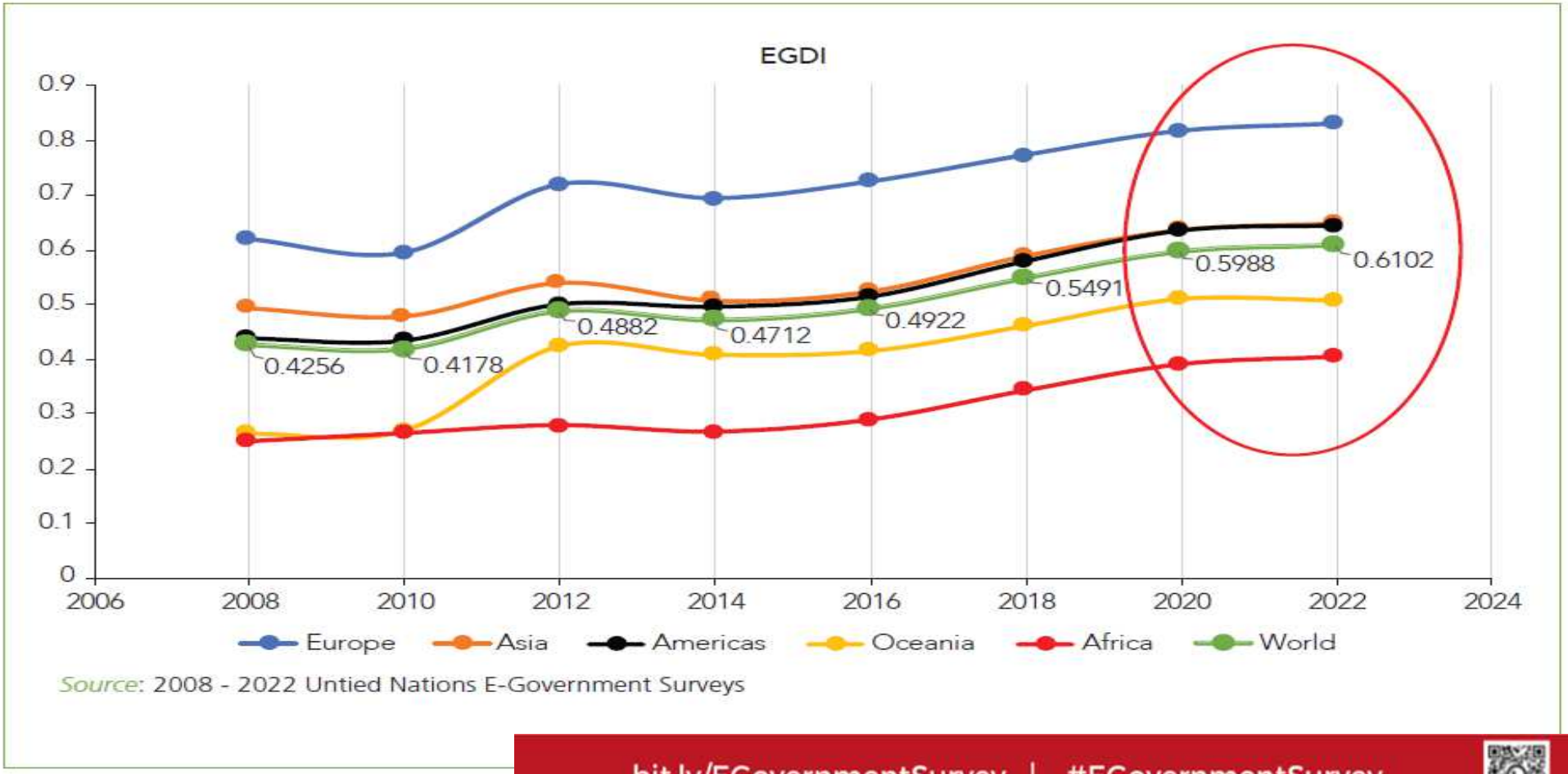
Source: 2022 United Nations E-Government Survey

United Nations | Department of Economic and Social Affairs

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

EGDI Series (2008-2022)



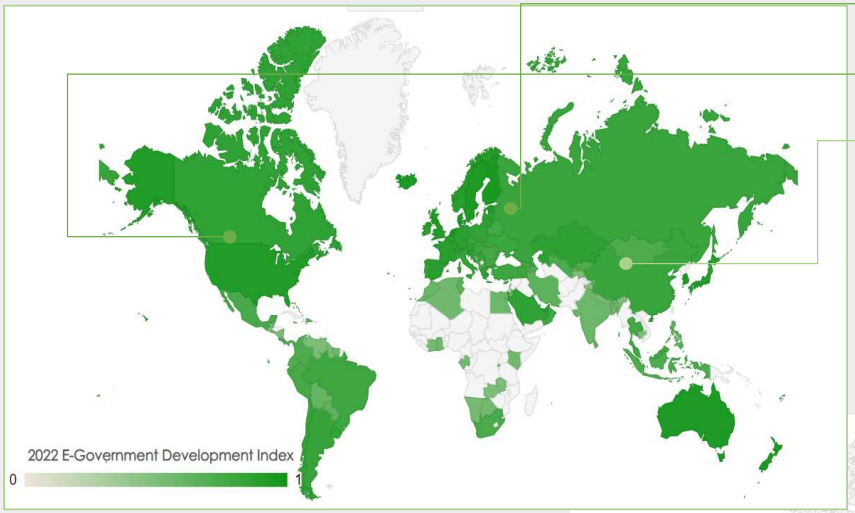
bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

EGDI sub-groups, 2022

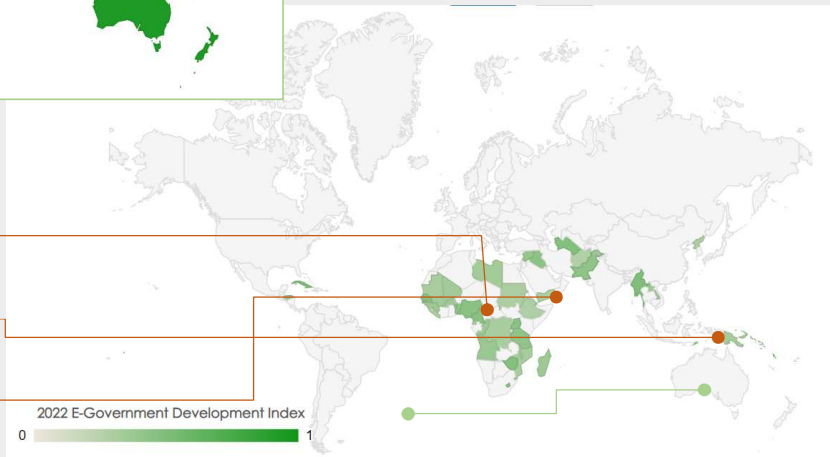
- **60 Countries are in the VH-EGDI**. These countries are equally distributed between the VH, V3, V2 and V1 rating classes.
- **73 countries are in the H-EGDI**
- Majority of **Very high and High EGDI** countries are **in Europe,** the **Americas** and **Asia**
- **60 Countries (53+7) are in the M-EGDI and L-EGDI**
- Majority of **Middle and Low EHDI** countries are in **Africa** and **Oceania**

Very high or High EGDI values



- **Europe**: **100%** of 43 countries
- **Americas**: **91%** of 35 countries
- **Asia**: **84%** of 47 countries

Middle and Low EGDI values



- **Africa: 70%** of 54 countries
- **Oceania**: **65%** of 14 countries
- **Asia**: **16 %** of 47 countries

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

GLOBAL DIGITAL DIVIDE

Despite investments in technology and the development gains achieved in many countries, the **digital divide persists.**

Using the global average E-Government Development Index (EGDI) value as a proxy for measuring the digital divide, the 2022 Survey indicates that about **45%** of the combined population of the United Nations Member States (**3.5 billion people**) still lag behind.

The path to digital inclusion and sustainable development remains fraught with obstacles and uncertainties, especially in **Africa** and among **Least Developed Countries (LDCs)** and **small island developing States (SIDS).**

Geographical distribution of countries with EGDI values above and below the global average EGDI value

Source: 2022 United Nations E-Government Survey;

United | Department of

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

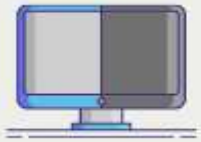
United Nations | Department of Economic and Social Affairs

Regional Digital Divide

Population Living with EGDI below World Average

important and growing digital divides remain between and within developed and developing countries in terms of the availability, affordability and use of information and communications technologies and access to broadband

In Africa, 95% of the population lags behind.



Source: 2022 United Nations E-Government Survey; United Nations population data

United Nations | Department of Economic and Social Affairs

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

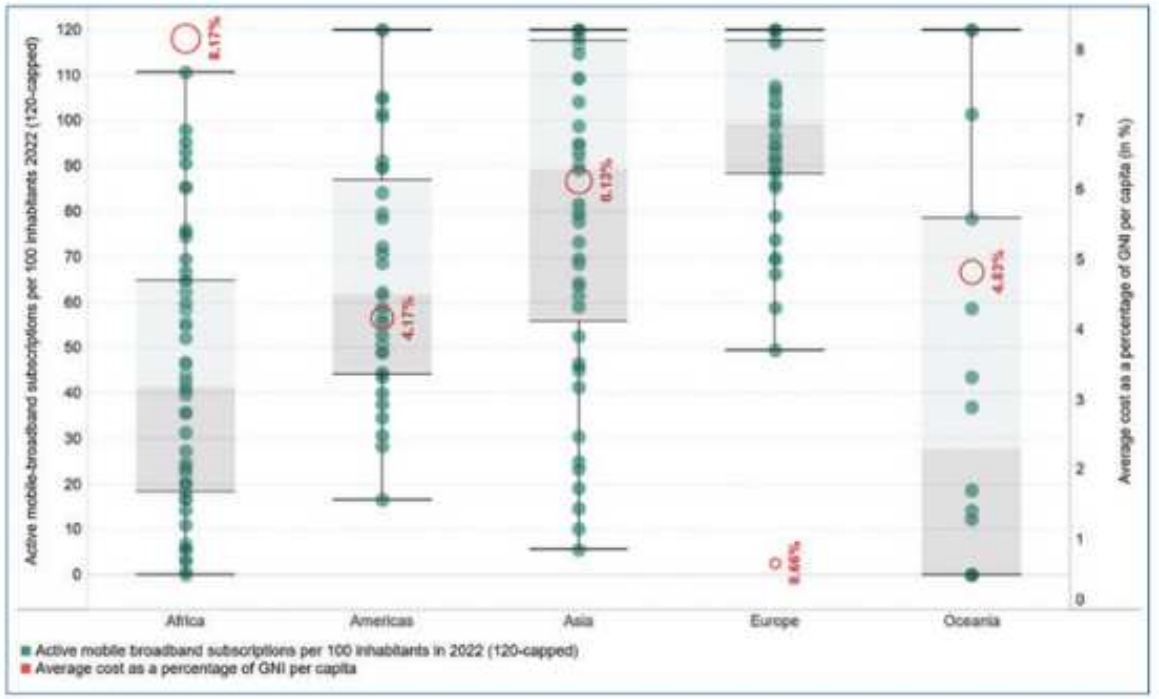
Digital Divides, 2022

Key Messages:

There has been an **increase** in fixed (wired) broadband subscriptions in all regions since 2020; the **48% jump** in Africa is noteworthy, though the subscription rate in this region remains the lowest by far at **2.7** subscriptions per 100 inhabitants.

The **cost of mobile broadband** subscriptions as a percentage of Gross National Income (GNI) Per capita remains **significantly higher in Africa** than in other parts of the world, contributing to the **digital divide.**

The cost of active mobile broadband subscriptions as a percentage of gross national income per capita, by region, 2022



Source: International Telecommunication Union, Statistics (2022), available at https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx.

United Nations | Department of Economic and Social Affairs

Leaving No One Behind

4. Leaving no one behind in the hybrid digital society

4.1 Introduction

The principle of leaving no one behind has its origins in the Latin phrase *nemo residee*, used in warfare to manifest the dependence of people's lives on their ability to function as a single entity—which meant never abandoning anyone injured or incapacitated on the battlefield. This military ethic has since influenced other fields of endeavour. It is no coincidence that the principle of leaving no one behind has emerged as the central axis of the 2030 Agenda for Sustainable Development, cutting across its 17 Sustainable Development Goals (SDGs). The common vision shared by all countries and stakeholders is that sustainable development is for all and that the Goals, indicators and targets will not be considered fulfilled unless they are met for every person on Earth. Sustainable development is therefore not possible if vulnerable segments of society are excluded and left behind.

While the principle of Goals being met only if they are met for everyone is well established in the rhetoric surrounding the SDGs, the reality remains far removed from the ideal, and what leaving no one behind means in practice is still unclear. The world continues to wrestle with translating the pledge of leaving no one behind into pragmatic policies and actions on the ground. An important first step is identifying gaps and areas of need. In the context of the present report, this means exploring the disconnect within the digital government ecosystem — the fact that most of the gains and advancements in e-government target and benefit the higher-income, more literate, and other advantaged segments of society, while efforts to meaningfully serve the lower-income and more vulnerable populations are often limited or futile.

4.1.1 Leaving no one behind is one of the 11 principles of effective governance for sustainable development

Leaving no one behind in the evolving hybrid digital society is a challenge for both developed and developing countries. Although social equity is a considered a priority among public administrators, challenges often arise in finding a balance between social equity, economy and efficiency.[1] For instance, the development objective behind the establishment of a personal identification system is inclusive in nature, but in cases where the approach is not well designed or where the legal framework is weak and fails to take into account factors such as cost and access, discriminatory practices can emerge that will have the greatest impact on the most vulnerable, including those living in poverty, women, older people, and persons with disabilities. Box 4.1 illustrates "leaving no one behind" as one of the 11 principles of effective governance for sustainable development, as endorsed by the United Nations Economic and Social Council.

Photo credit: pixabay.com

In the chapter:

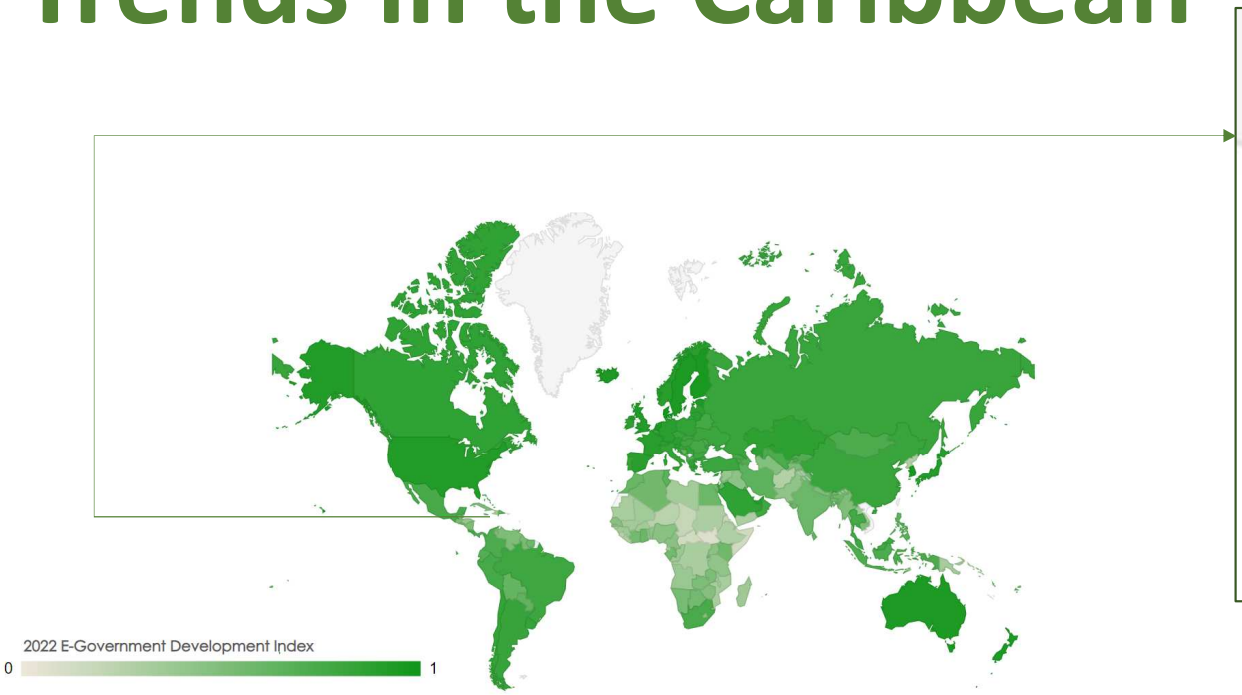
4.1 Introduction 113
4.1.1 Leaving no one behind is one of the 11 principles of effective governance for sustainable development 113
4.1.2 The new face of inequality is digital 114
4.1.3 The double-edged sword of e-government in leaving no one behind 115
4.2 Identifying those being left behind in e-government 117
4.2.1 Those living near or below the poverty line 117
4.2.2 Women and girls 118
4.2.3 Older persons 120
4.2.4 Persons with disabilities 121
4.2.5 Youth 122
4.2.6 Migrants and refugees 123
4.2.7 Other vulnerable populations 124
4.3 Barriers relating to access, affordability and ability (3As) 124
4.3.1 The dynamic shifts and multiplying effects of digital exclusion 124
4.3.2 Access 126
4.3.3 Affordability 130
4.3.4 Ability 133
4.4 The role data, design and delivery can play in ensuring no one is left behind 136
4.4.1 Data 138
4.4.2 Design 141
4.4.3 Delivery 149
4.5 Policy messages 152
4.5.1 Recognizing that the new face of inequality is digital 152
4.5.2 Identifying barriers linked to access, affordability and ability 152
4.5.3 The integrated roles of data, design and delivery in shaping inclusive e-government 153
4.5.4 "Leaving no one behind" as the guiding principle for e-government development 154
4.5.5 Leaving no country behind in e-government 156
4.6 Conclusion 156

Chapter 4

United Nations | Department of Economic and Social Affairs

E-Government Survey 2022

Trends in the Caribbean



bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

Trends in Caribbean region (16 countries)

Key Findings:

- Increased avg EGDI since 2020:
  - 2022 avg – 0.5868
  - 2020 avg – 0.5644

  [Still below the global avg EGDI value of 0.6102]
- Majority [14] have HEGDI values
  - 1 Middle-EGDI [Cuba]
  - 1 Low-EGDI [Haiti]
- 3 countries had upward movement from M to H EGDI
  - Jamaica, Saint Lucia, and Suriname

Country ↑	Group	Rating Class	Rank 2022	EGDI 2022	Rank Change
Antigua and Barbuda	HEGDI	H2	99	0.6113	-1
Bahamas	HEGDI	HV	66	0.7277	+7
Barbados	HEGDI	H3	79	0.7117	-17
Belize	HEGDI	H1	133	0.5005	+3
Cuba	MEGDI	MH	136	0.4945	+4
Dominica	HEGDI	H2	109	0.5789	-10
Dominican Republic	HEGDI	H3	92	0.6429	-10
Grenada	HEGDI	HV	66	0.7277	+36
Guyana	HEGDI	H1	123	0.5233	+6
Haiti	LEGDI	LM	187	0.2481	-7
Jamaica	HEGDI	H2	102	0.5906	+12
Saint Kitts and Nevis	HEGDI	H3	87	0.6775	+8
Saint Lucia	HEGDI	H2	114	0.5580	-2
Saint Vincent and the Grenadines	HEGDI	H2	107	0.5811	+2
Suriname	HEGDI	H2	108	0.5809	+14
Trinidad and Tobago	HEGDI	H3	93	0.6339	-12

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

Trends in Caribbean region (16 countries)

Key Findings:

Highest EGDI sub-indices values:

- OSI - 0.6214 [Bahamas]
- TII - 0.8293 [St. Kitts and Navis]
- HCI – 0.8977 [Grenada]
- EPI – 0.4545 [Dominican Republic]

❑ Digital divides persist:

- 7 counties – above EGDI global average
- 9 countries – below EGDI global average
- EDGI values range from 0.7277 [Bahamas, Grenada] to 0.2481 [Haiti]

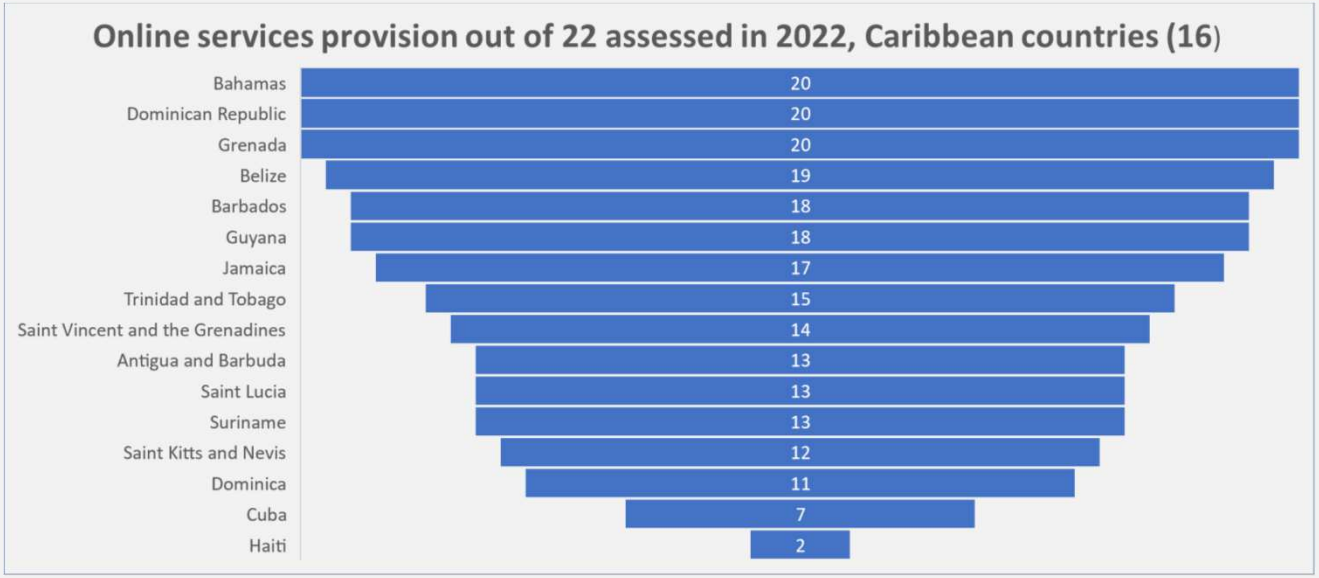
Country	EDGI Rank 2022	EGDI	EPI	OSI	HCI	TII
Bahamas	66	**0.7277**	0.3977	**0.6214**	0.7641	0.7976
Grenada	66	**0.7277**	0.2045	0.5507	**0.8977**	0.7348
Barbados	79	0.7117	0.3977	0.5388	0.8645	0.7318
Saint Kitts and Nevis	87	0.6775	0.2045	0.3307	0.8724	**0.8293**
Dominican Republic	92	0.6429	**0.4545**	0.6183	0.7539	0.5567
Trinidad and Tobago	93	0.6339	0.2386	0.4892	0.7409	0.6717
Antigua and Barbuda	99	0.6113	0.4205	0.4231	0.8128	0.5981
Jamaica	102	0.5906	0.2841	0.4914	0.7148	0.5658
Saint Vincent and the Grenadines	107	0.5811	0.3864	0.4526	0.7420	0.5486
Suriname	108	0.5809	0.2045	0.3418	0.6921	0.7089
Dominica	109	0.5789	0.0909	0.2954	0.6810	0.7604
Saint Lucia	114	0.5580	0.4091	0.4007	0.7049	0.5683
Guyana	123	0.5233	0.2159	0.4509	0.6546	0.4643
Belize	133	0.5005	0.2045	0.4425	0.6707	0.3882
Cuba	136	0.4945	0.1364	0.2789	0.8384	0.3663
Haiti	187	0.2481	0.1023	0.0865	0.3930	0.2646

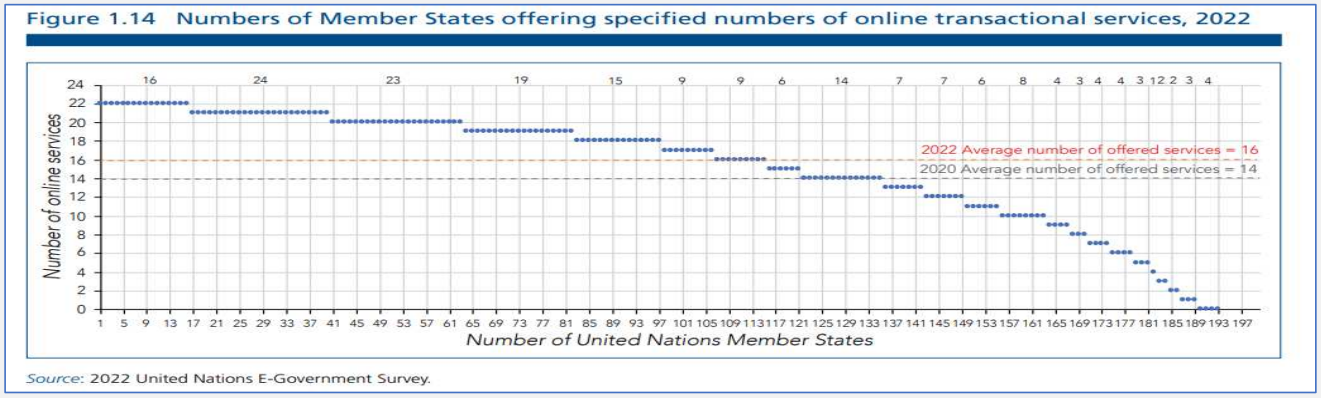
United Nations | Department of Economic and Social Affairs

Trends in Caribbean region (16 countries)

Key Findings:

- 7 countries offer more than 17 online service out of 22 assessed [global average is 16]
- 14 out of 16 countries offer more than 10 online services out of 22 assessed
- The most offered online services:
  - Paying for utilities
  - Registering life events [birth, death, marriage]
  - Registering business





United Nations | Department of Economic and Social Affairs

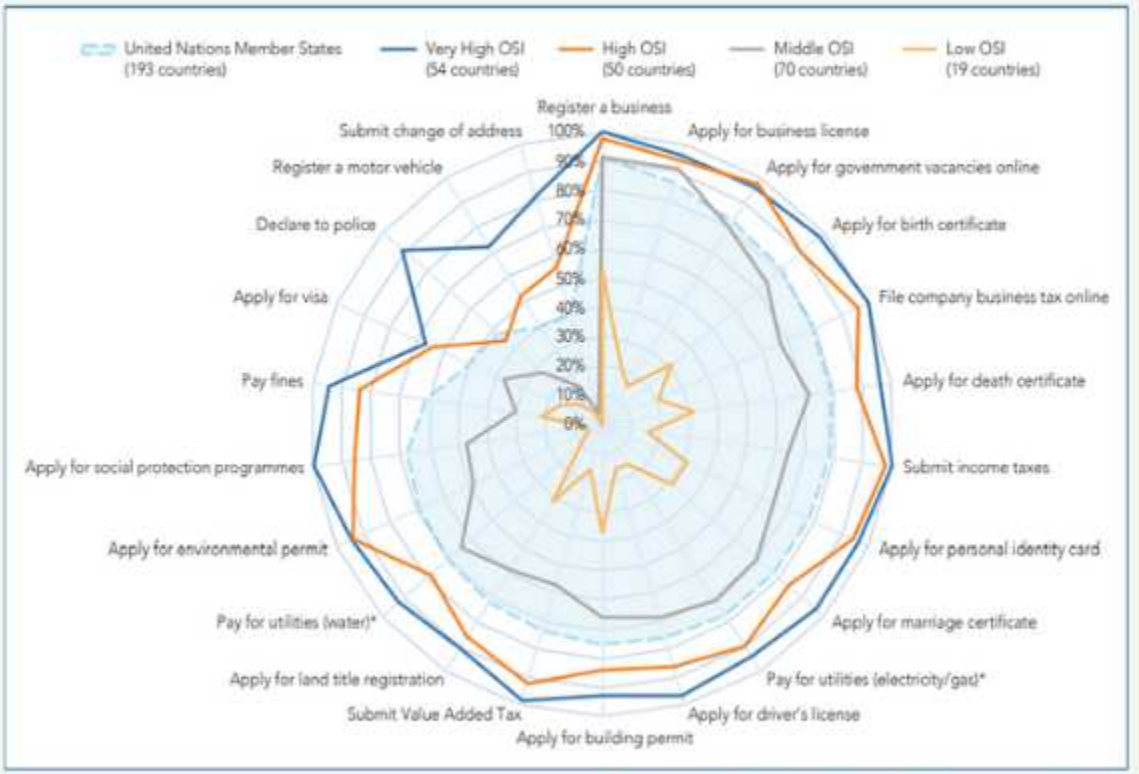
Countries offering online services, 2022

Key Messages:

A total of **22** **online services** have been assessed for the 2022 E-government Survey.

Globally, the most prevalent online transactional service is the **registration of a new business.**

The next most commonly offered online services include applying for government vacancies and business licenses, requesting birth, death, and marriage certificates, and paying utility bills.

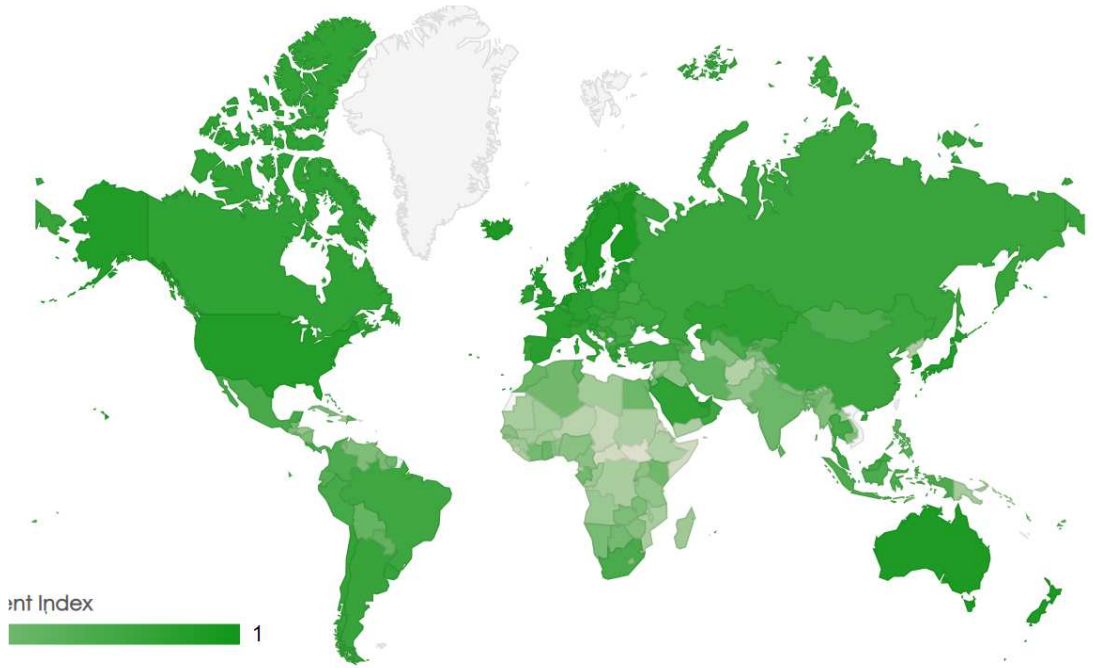


Source: 2022 United Nations E-Government Survey

United Nations | Department of Economic and Social Affairs

E-Government Survey 2022

Concluding remarks



bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

Digital Government is Hybrid

The New Face of Inequality is Digital

- **The future of digital government is not digital but hybrid.** The primary objective is not digital development but rather recognizing human agency and supporting human development through digitalization.
- **Digital divides are not static**; vulnerability is a dynamic and shifting state, and a list of risk factors is not always sufficient to identify those who need different ways to access and utilize services.
- There is **diversity and intersectionality for different vulnerable groups** (women and girls, older people, persons with disabilities, youth, migrants, refugees, minorities, and other marginalized groups).
- **An inclusive, integrated digital/analogue ecosystem is needed** to facilitate and sustain inclusive e-government development so that everyone benefits, and no one is left behind.
- **Inclusive design has not received sufficient attention.** The most notable progress in e-government has benefitted those groups that are easiest to reach, with many of the poorest and most vulnerable being left behind.

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

E-Government as an Equalizer for Inclusion

LNOB as an Operational Principle

- **LNOB should** guide policy development and implementation in e-government and the public sector.
- **Governments should adopt "inclusion by design", "inclusion by default" or "inclusion first" strategies,.**
- **Targeted,** localized **and contextual approaches** are key, as not all excluded groups are confronted with the same barriers.
- **A whole-of-government approach that integrates multilevel, multisectoral and multidisciplinary** strategies and partnerships is needed for the implementation of inclusive digital government.
- **Top-down and bottom-up approaches** should be combined to better understand and address the e-government needs of the most vulnerable.
- The global community can play a part in **"leaving no country behind in digital government",** through knowledge exchange, capacity building and partnerships.

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

The Future of Digital Government

Innovation Should Focus on Human Development

- ❑ Innovations and the broader digital transformation must aim to be truly inclusive.
- ❑ More MS are deploying cutting-edge technologies such as cloud computing, artificial intelligence and blockchain.
- ❑ Some have developed new methods for exploiting data-driven policy modelling tools and have created pilot initiatives and sandboxes to design, validate and scale up innovative solutions.
- ❑ New approaches are strengthening MS analytical and anticipatory capabilities and are shaping future development scenarios.
- ❑ MS are moving towards seamless, invisible government in which fully automated services are made accessible to anyone anytime from anywhere.
- ❑ Cognitive government, agile and adaptive government, and the development of predictive capabilities, can better anticipate and respond to the needs of all members of society

bit.ly/EGovernmentSurvey | #EGovernmentSurvey

United Nations | Department of Economic and Social Affairs

Thank You!