?

Population (2015)
https://statistics.sl

?

people per sq km
Population Density (2021)
Source: data.un

?

Youth labor force participation
https://statistics.sl

?

Population
Source: macrotrends

?

Year when Freetown was founded

?

Contribution of agriculture to Sierra Leone (Gross Value Added)
Source: data.un

?

deaths per 1,000
Under-five mortality rate
Source: data.unicef

?

Number of chimpanzee in Sierra Leone

?

Percentage of population who are Muslims

?

Percentage of population who are Christians

7,092,113
Population (2015)
https://statistics.sl

112.8
people per sq km
Population Density (2021)
Source: data.un

55.7%
Youth labor force participation
https://statistics.sl

1,348,000
Population
Source: macrotrends

1972
Year when Freetown was founded

59.9%
Contribution of agriculture to Sierra Leone (Gross Value Added)
Source: data.un

100.8
deaths per 1,000
Under-five mortality rate
Source: data.unicef

5,500
Number of chimpanzee in Sierra Leone

77%
Percentage of population who are Muslims

22%
Percentage of population who are Christians

Source: UN Data; statistic.sl

UN E-GOVERNMENT SURVEY

Since 2001, the **UN E-Government Survey** has presented a systematic assessment of the use and potential of information and communication technologies (ICTs) to **transform the public sector by enhancing effectiveness, inclusiveness, accountability**, access to public services and public participation, and at all levels of development.

The E-Government Survey is informed by over **two decades of longitudinal research, with a ranking of countries** based on the United Nations E-Government Development Index (EGDI), a combination of primary data (collected and owned by the UN DESA) and secondary data from other UN agencies (ITU, UNESCO and UNDP).
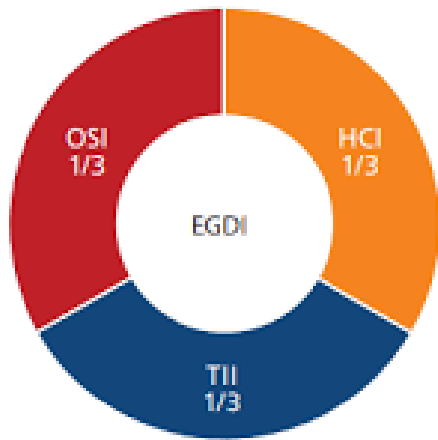
Recent editions:

2020 **Digital Government in the Decade of Action** for Sustainable Development *Chapter 6: Towards Data-Centric E-Government*

2022 The **Future of Digital Government**
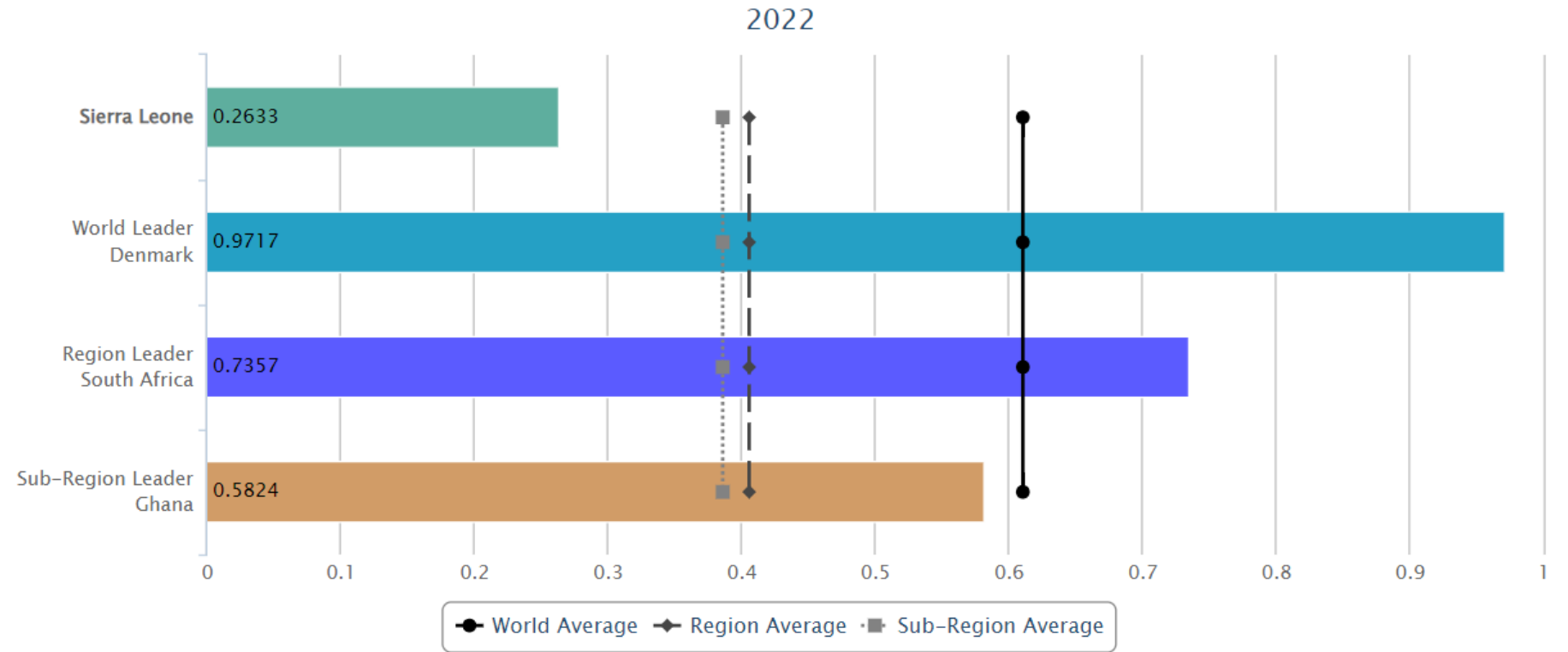
2024 TO BE LAUNCHED IN OCTOBER 2024

Sierra Leone

E-Government Development Index (EGDI)


E-Government Development Index

2022

E-Government Development Index	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Sierra Leone (Rank)	185	174	174	186	186	186	177	178	167	161	167
Sierra Leone (Value)	0.26330	0.29310	0.27170	0.15942	0.13286	0.15568	0.16973	0.14630	0.16390	0.17202	0.12626

Source: UN E-Government Survey, 2022

Sierra Leone's E-Government Development Index (EGDI)
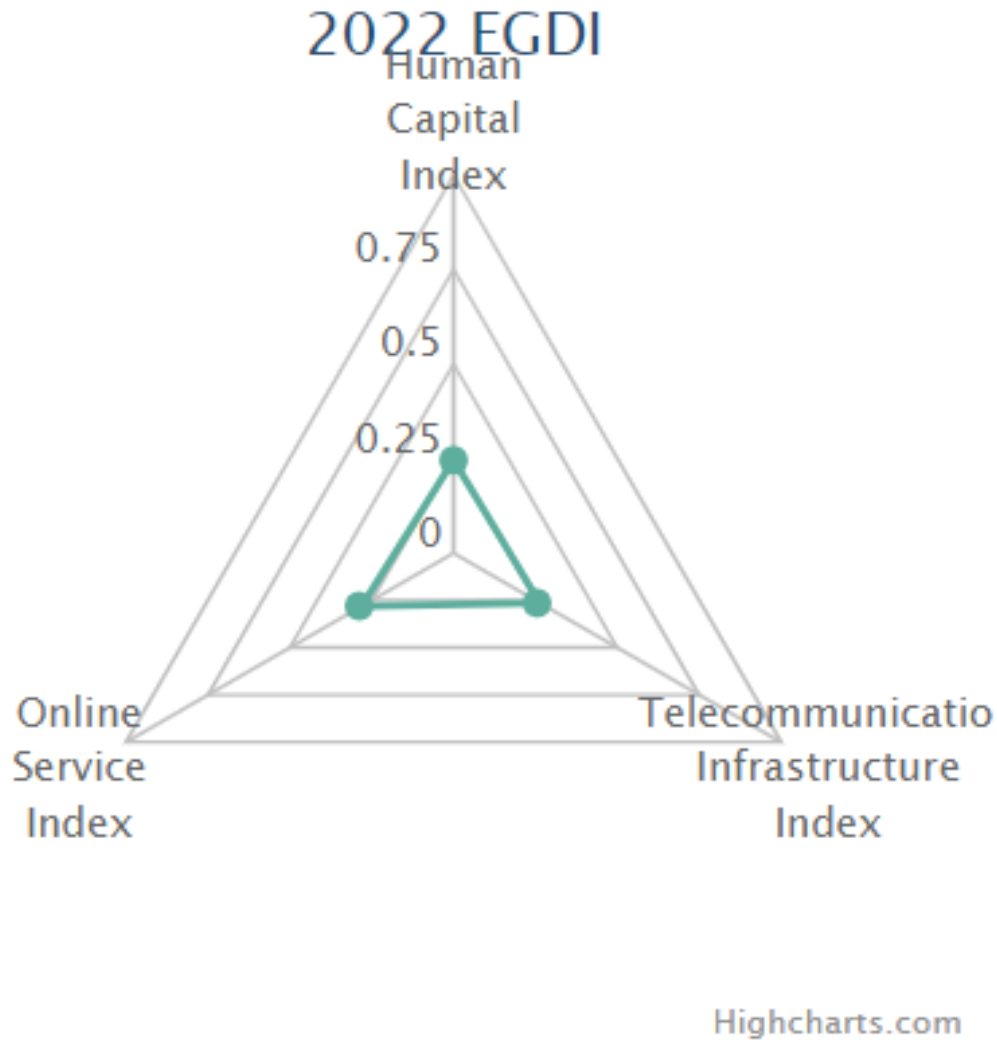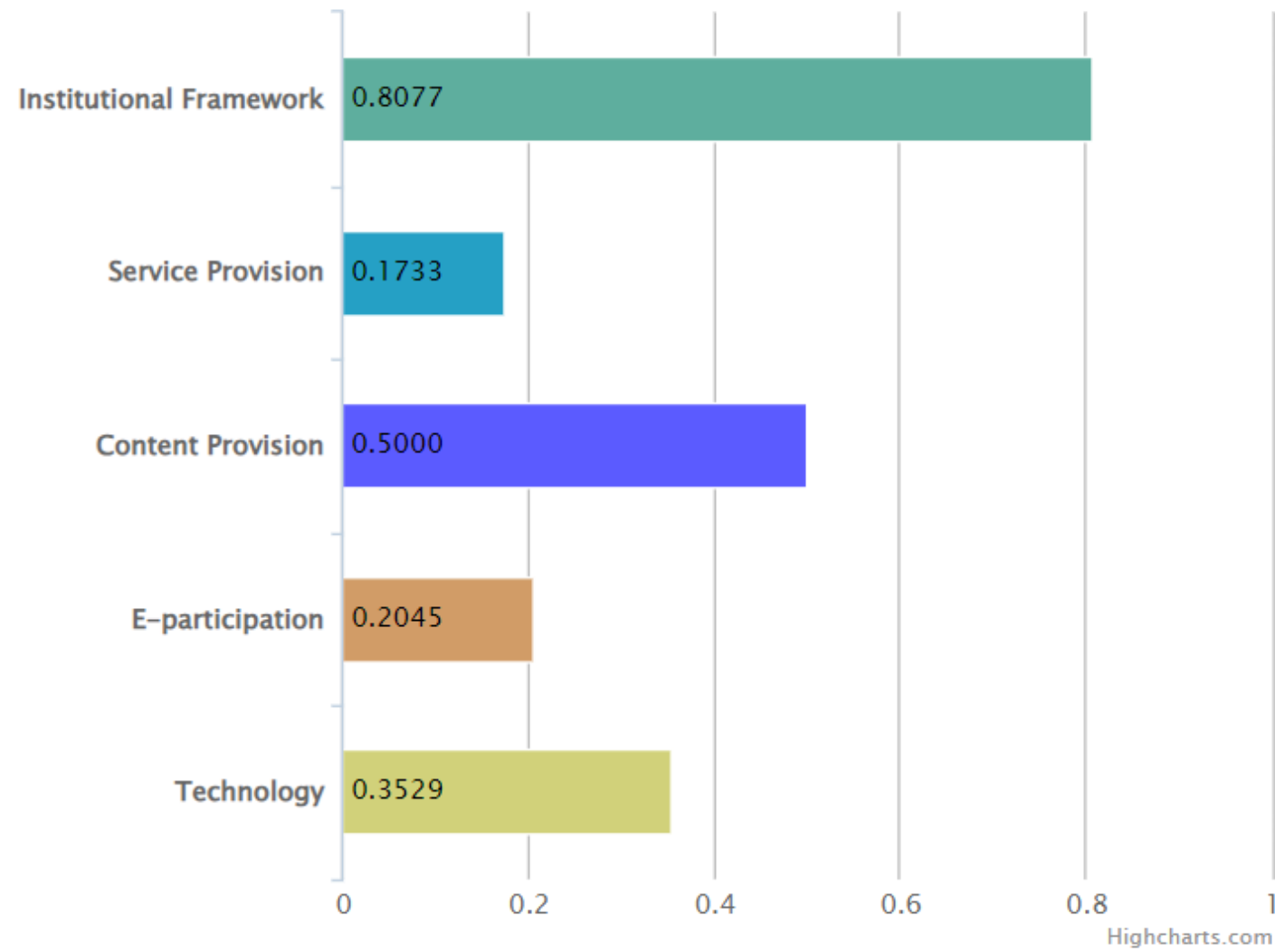
2022 EGDI

E-Government (2022 EGDI: 0.2633)	
2022 Rank	185
Group	MEGDI
Rating Class	M1
2020 Rank	174
Change	+11

E-Participation (2022 EPART: 0.2045)	
2022 Rank	157
2020 Rank	134
Change	+23

Sierra Leone's **E-Government Development Index (EGDI) was 185th in 2022 (out of 193 countries)**
In E-Participation, Sierra Leone was **ranked 157th globally**.

2022 OSI

Legend: World Average — Region Average — Sub-Region Average

Institutional Framework	0.8077
Service Provision	0.1733
Content Provision	0.5000
E-participation	0.2045
Technology	0.3529

Radar chart axes: Institutional Framework, Service Provision, Content Provision, E-participation, Technology (scale 0 to 0.75)
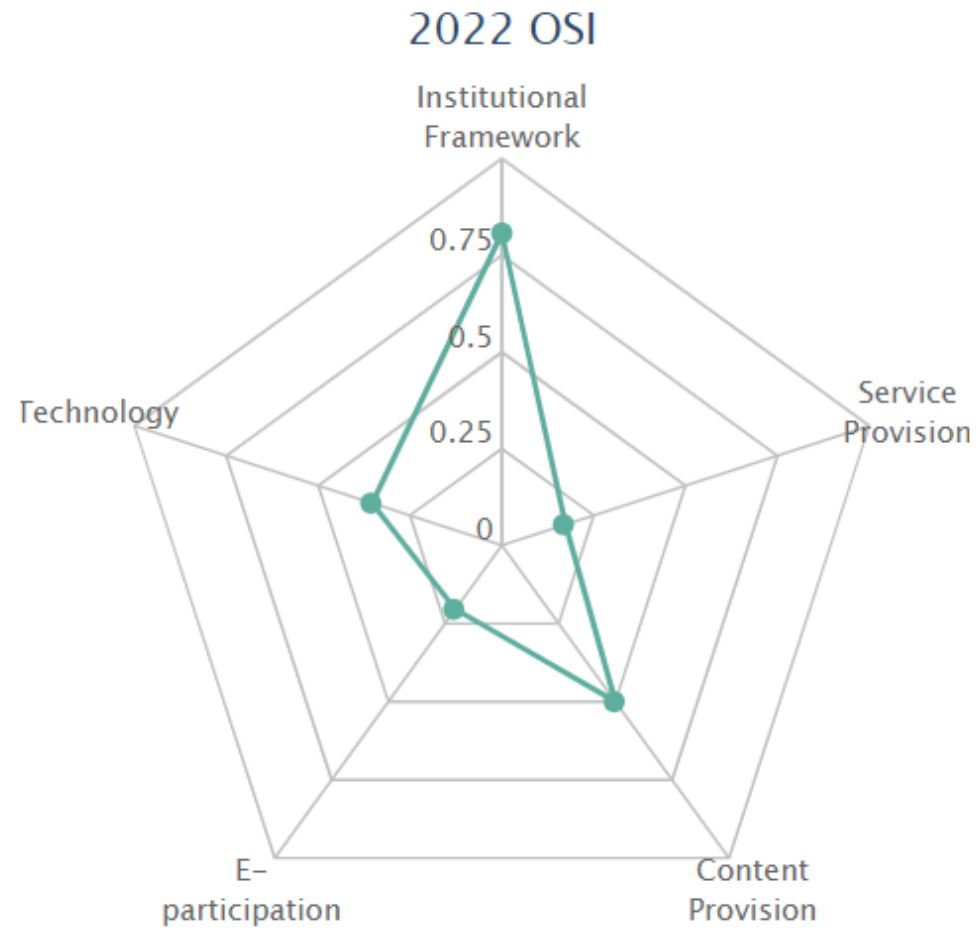
Online Service Index	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Sierra Leone (Value)	0.28010	0.30590	0.34720	0.11594	0.04724	0.16993	0.00317	0.05685	0.09615	0.10038	0.04366

2022 TII

Radar chart axes: Internet users, Fixed-broadband subscriptions, Active mobile-broadband subscriptions, Mobile-cellular subscriptions

Legend: World Average, Region Average, Sub-Region Average

	Value
Internet users	18.0000
Fixed-broadband subscriptions	0.0000
Active mobile-broadband subscriptions	19.8800
Mobile-cellular subscriptions	86.3000
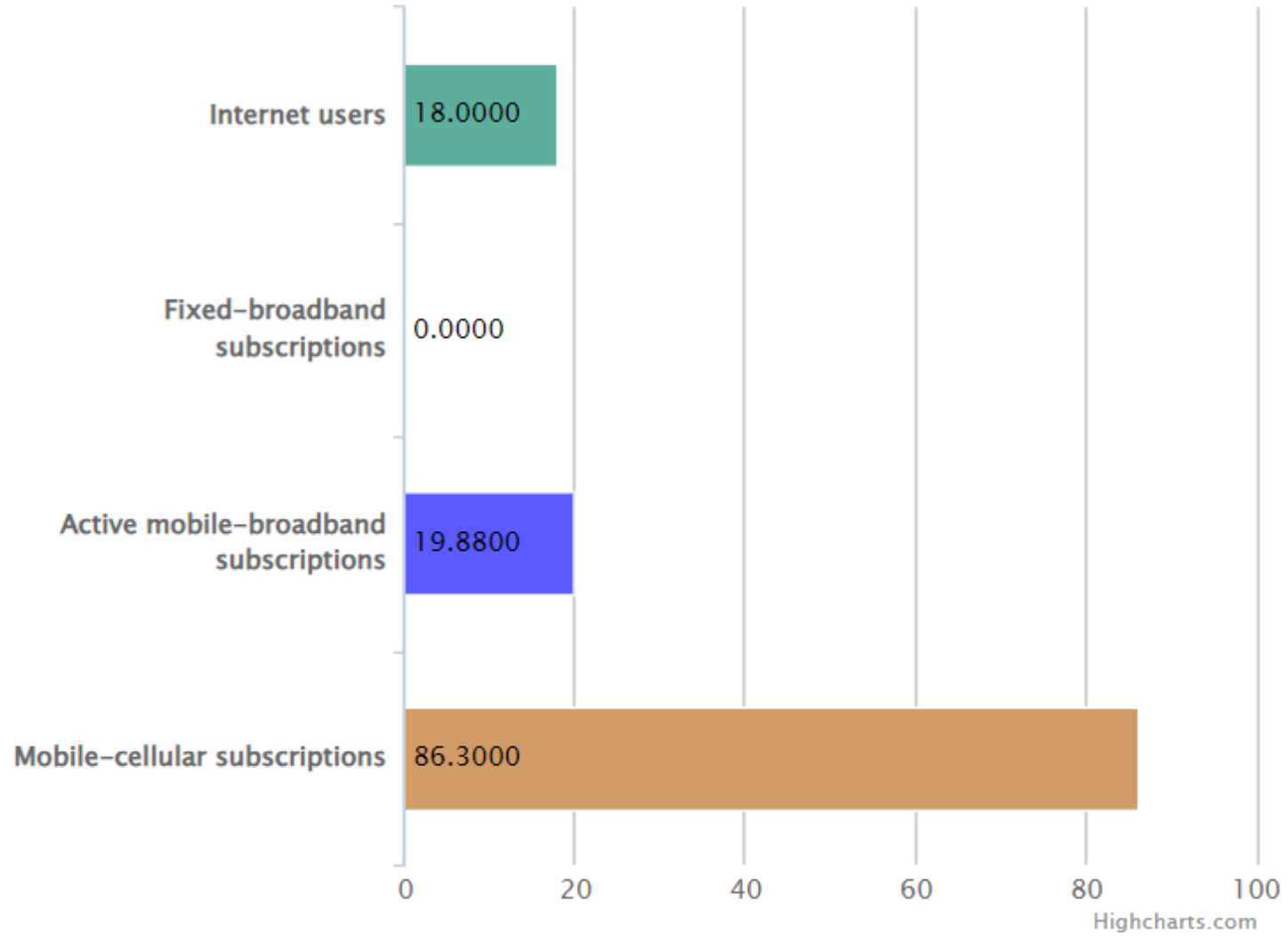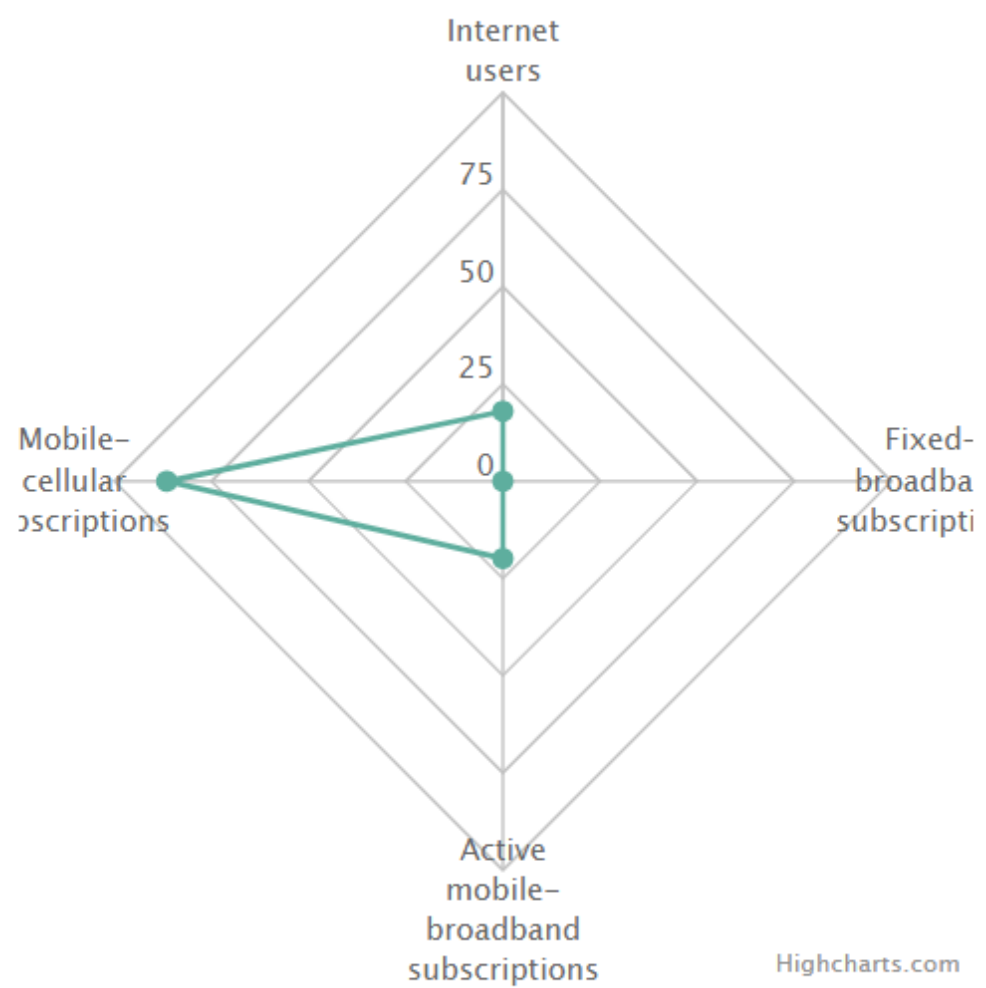
Telecommunication Infrastructure Index	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Sierra Leone (Value)	0.26390	0.25900	0.15970	0.12163	0.08211	0.03948	0.01792	0.00377	0.00557	0.00567	0.00513

Human Capital Index

2022

| | World Average | Region Average | Sub-Region Average |

Sierra Leone	0.2459
World Leader Australia	1.0000
Region Leader Seychelles	0.7758
Sub-Region Leader Cabo Verde	0.6507

Highcharts.com

| Adult literacy | 43.2100 |
| Gross enrollment ratio | 41.1500 |

Highcharts.com

| Expected years of schooling | 6.3500 |
| Mean years of schooling | 3.7000 |

Highcharts.com
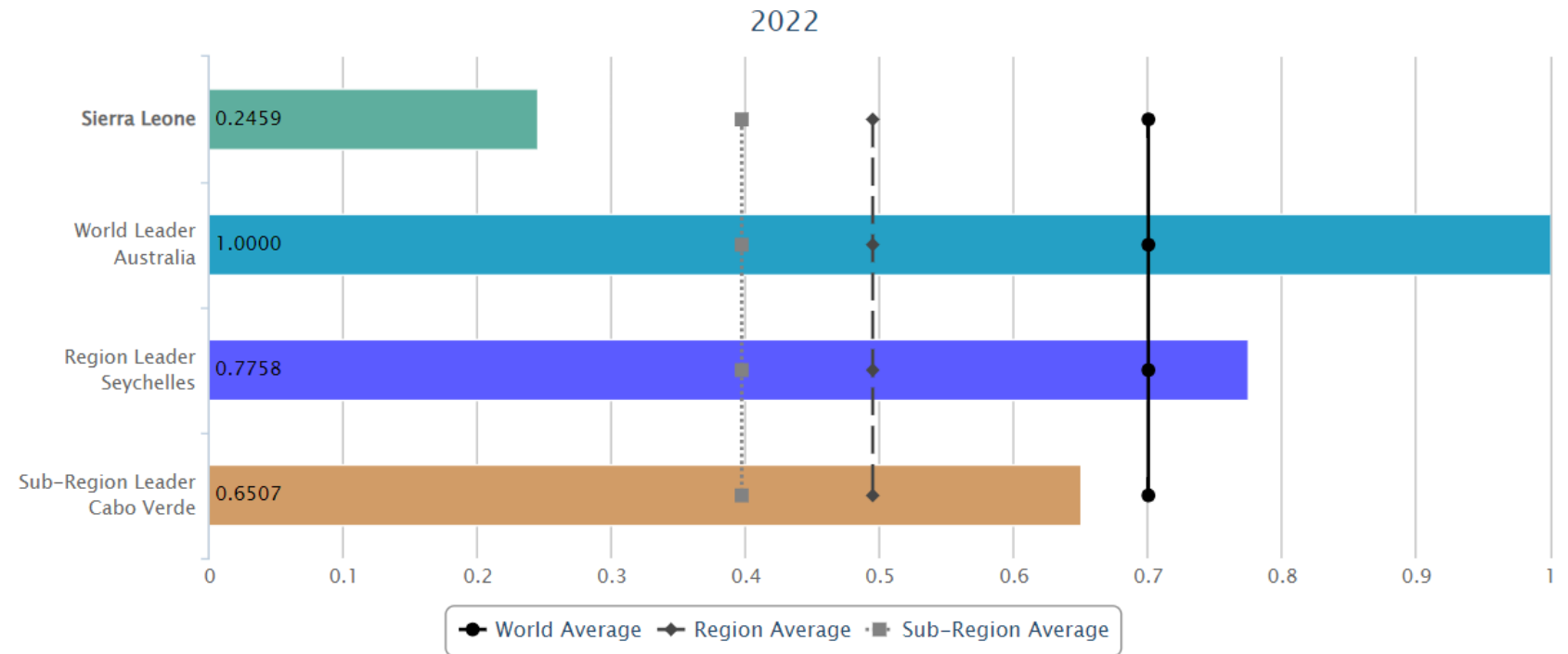
Human Capital Index	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Sierra Leone (Value)	0.24590	0.31440	0.30810	0.24068	0.26920	0.25764	0.49316	0.38098	0.39000	0.41000	0.33000

Source: UN E-Government Survey, 2022

The future of digital government is not digital but hybrid-digital

- **Nexus** of digital government, digital economy, digital society and sustainable development

- Changing institutional dimension of government, from silos to **whole-of-government, whole-of-society, and integrated strategies** covering multiple sectors, multilevel (across local jurisdictions) and multistakeholder (with private sector, academia and civil society)

- Role of data and digital government in **responding to crisis and emergencies** such as pandemics and conflict, supporting a responsive and resilient government

- Central role of **data, AI and other emerging technologies** in driving anticipatory, predictive and responsive services

- Need for a **national data governance framework** in supporting to digital government strategy

Why data? Why data governance?

Data grows rapidly, and will reach **2,142 zettabytes in 2035** (Note: One zetta is a "1" followed by 21 zeroes)
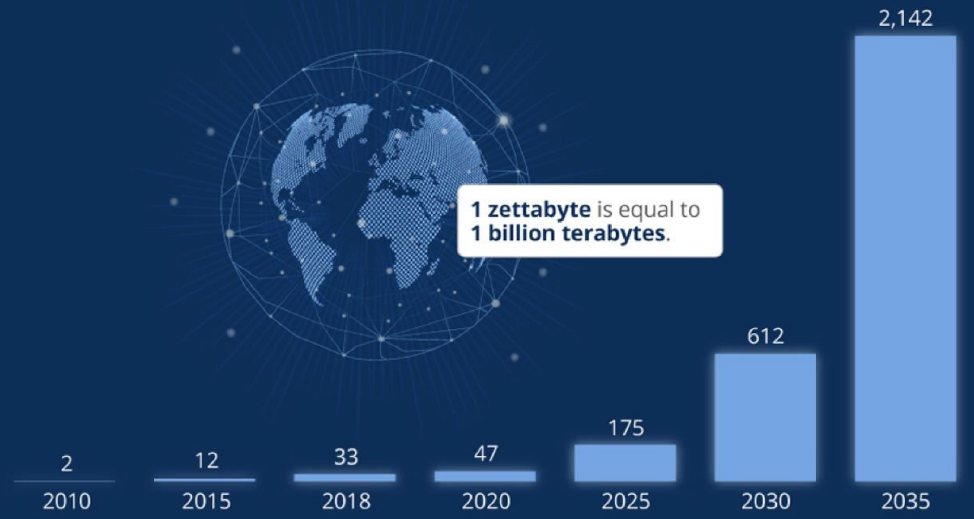
Close to 50 per cent will be stored in the public cloud

- **Data governance precedes digital governance**

- **Data governance precedes AI governance, and governance of any other new/emerging technologies**

- National data governance precedes global data/AI governance

Global Data Creation is About to Explode

Follow our workshop

1 zettabyte is equal to 1 billion terabytes.

2	12	33	47	175	612	2,142
2010	2015	2018	2020	2025	2030	2035

Actual and forecast amount of data created worldwide 2010-2035 (in zettabytes)

#NationalDataGovernance   #DataGovernanceFramework   #EGovernmentSurvey
#SDGs   #GlobalGoals   #SmartBangladesh2041

Data on SDGs, Data for SDGs

- **Data on SDGs:** Data can help ensure that plans to achieve the SDGs are evidence-based, and that their outcomes are measurable. Data can help assess the SDGs in three main ways namely: a facilitator of standards, a tool for accountability and an evidence base for impact assessment.

- **Data for SDGs:** data can help achieve the SDGs by providing critical information on available resources, government operations, public services, and population demographics. These insights can inform national priorities and help determine the most effective path for action on national issues.

- **Impact assessment:** Data can reveal inequalities and disparities in income, wealth and access to government services and provide a basis for assessing progress over time.

Required types of disaggregation by SDG indicators (on individuals)
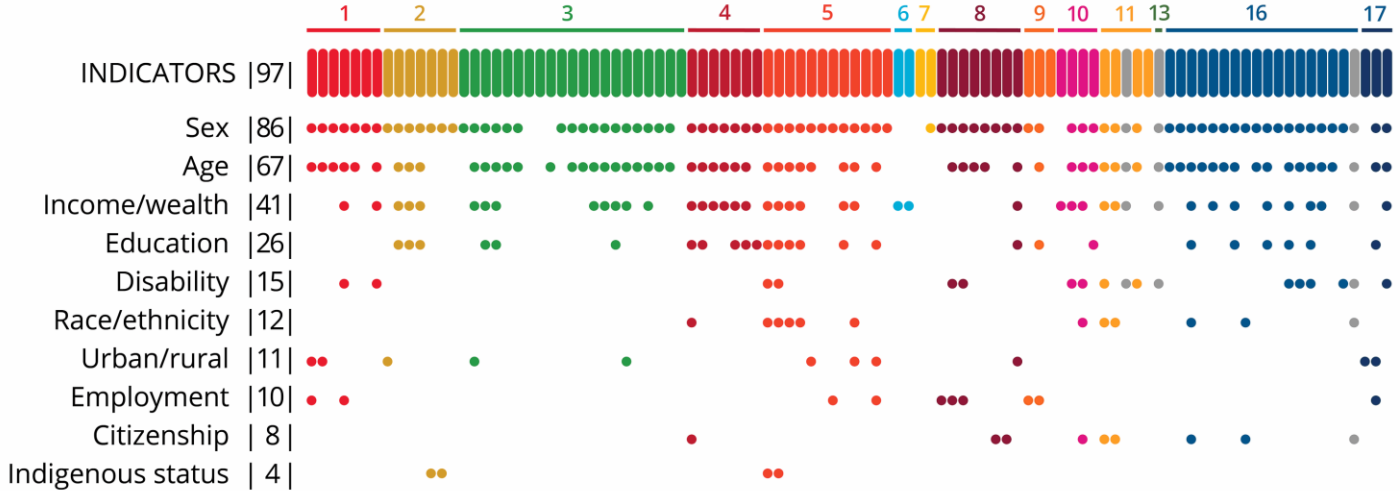
Data based on calculations by Open Data Watch.
Repeated indicators appear in gray but are not included in totals.

SDG indicators requiring data on individuals and families.

Global Digital Data Trends

- Optimizing the use of data will **increase the productivity, accountability and inclusivity of public institutions**, in line with the principles embodied in Goal 16 of the 2030 Agenda.

- A data-centric government will also help **build trustworthiness and public trust.**

- **Many benefits around government data have yet to be realized**.
  The greatest obstacles to progress include a general lack of understanding of data and data science, low political priority and the absence of data leadership, resource constraints, and concerns about data quality, security and privacy.

- **Harvesting public value from data requires a long-term vision and approach.**
  This involves mastering the economics and politics of data governance and management and effectively navigating the evolving data security and privacy landscape. As data governance encompasses much more than technical functions, Governments must employ **a holistic, whole-of-government, whole-of-society approach in developing an integrated data governance framework supported by policies, institutions, people and processes.**

United Nations Peace and Development Fund (UN PDF)

Project:
Developing **institutional capacities for digital data governance and cooperation** to advance progress toward the **Sustainable Development Goals**

Objective:
Enhancing the institutional and individual capacities of government officials and stakeholders in target countries, for digital data management, data governance and data cooperation to achieve mutual benefit, win-win outcomes and common development.

United Nations | Department of Economic and Social Affairs

Project countries

Asia Pacific

Bangladesh
Bhutan
Cambodia
Lao PDR
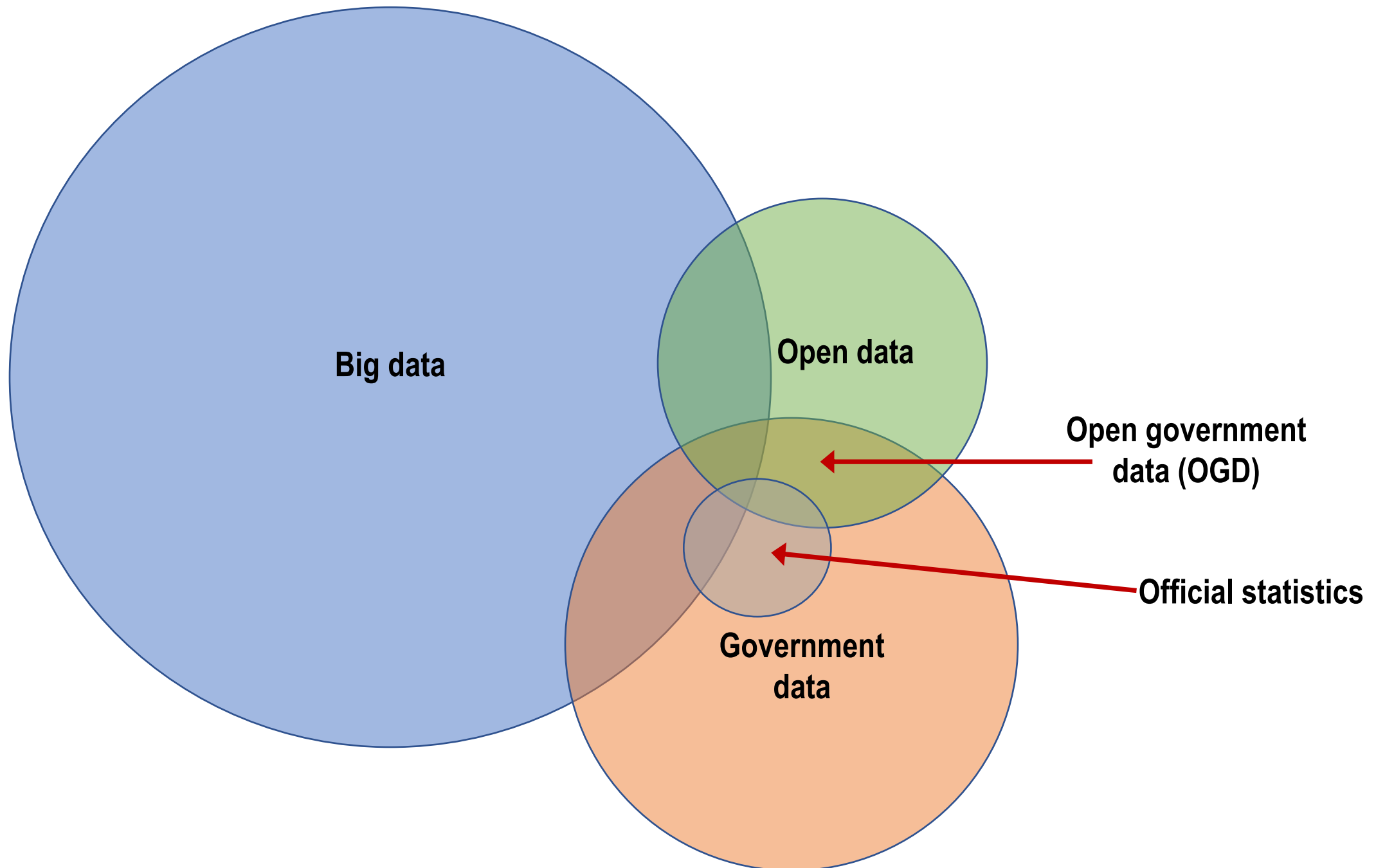Samoa
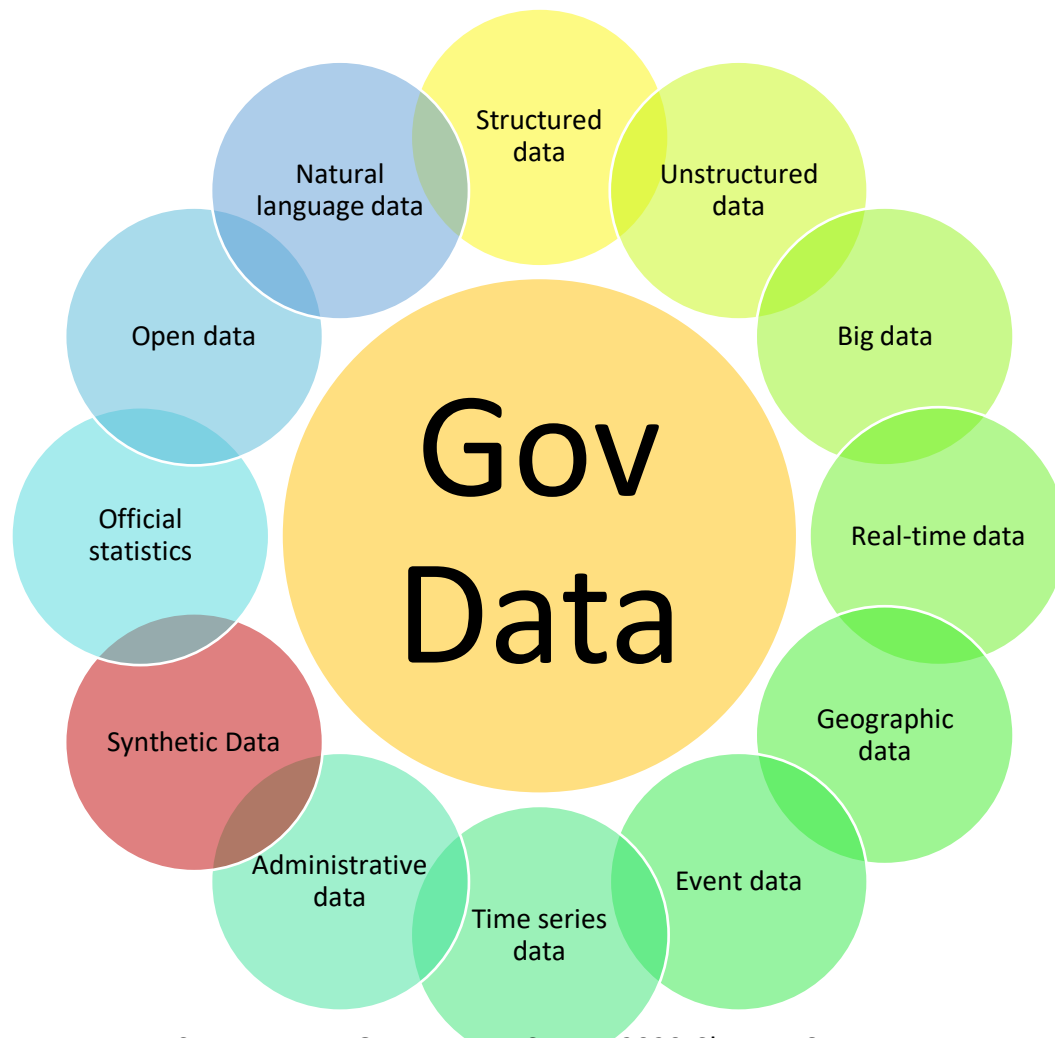Vanuatu
** Mongolia

Africa

Ethiopia
Rwanda
Sierra Leone
*Tanzania
*Gambia

Data scarcity → Data abundance → Full, dis-aggregated data

Historical data → High availability data → Real-time data

Data silos → Data platforms → Digital Ecosystem

Big data

Open data

Open government
data (OGD)

Official statistics
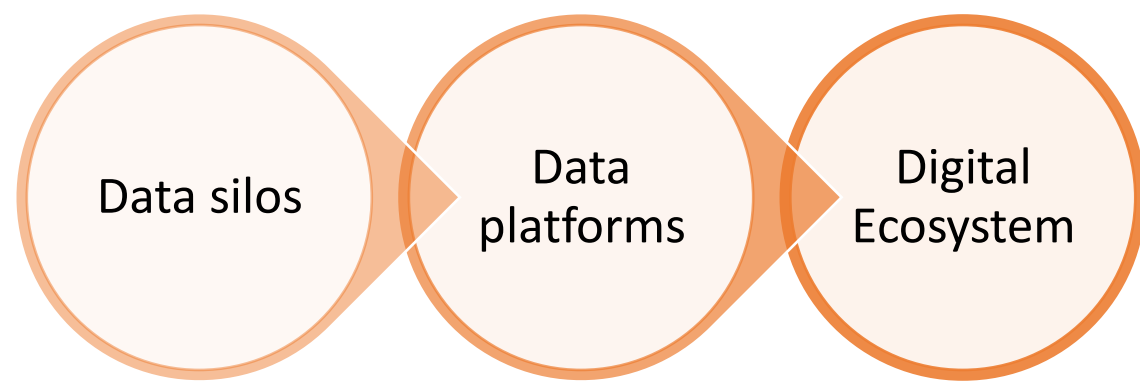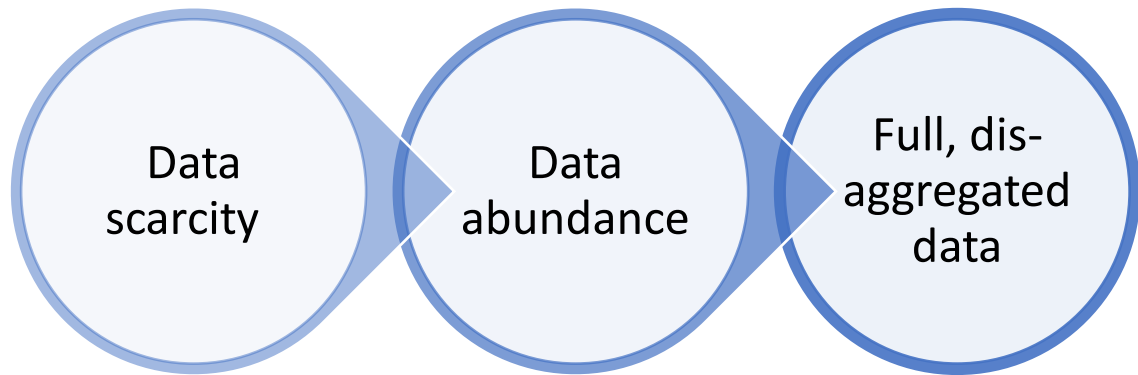
Government
data

Source: Adapted from UN E-Government Survey 2020 Chapter 6

Types of Government Data

Source: UN E-Government Survey 2020 Chapter 6

Data type	Description
Public data	Includes all data that are available in the public domain, including those created by governments, academia, civil society and the private sector.
Government data	A subset of public data "recorded and documented in any manner and on any medium and obtained or created upon performance of public duties provided by law or legislation issued on the basis thereof.
Census and survey data	Data collected through observation of a given population or universe, including demographic data and other survey data on items such as housing, land use, agriculture and business.
Administrative data	Data collected by government agencies on their operations such as data on public service transactions in sectors such as health, justice and education; administrative registers of persons and legal entities and the records of ministries, departments and specialized agencies, including tax returns, social services records and customs data.
Open Data	Information that is open in terms of access, redistribution, reuse, absence of technological restriction, attribution, integrity, no discrimination.
Open Government Data	Data open to and available in the public domain in various (including machine-readable) formats and normally licensed for all to access, use, modify and share. Essentially, all OGD are government data, but not all government data are OGD, see figure 1.
Big data	Describe the exponential growth and availability of data, both structured and unstructured and is defined by 3 V's: Volume, Velocity and Variety. Big data analytics can be used for deeper and more complex tasks such as social media sentiment analysis.
Data Science	The study of the generalized extraction of knowledge from data by employing machine learning, predictive and prescriptive methodologies, thereby creating direct value on an experimental and ad-hoc basis.
Geospatial data	Data and information that have an implicit or explicit association with a geographical location
Real-time data	Constant streams of live data delivered immediately after collection. Such data show the actions of Governments and/or people almost instantaneously and are usually deployed with the expectation of a rapid response such as the monitoring and analysis of Twitter feeds to understand the movements (or migration) of particular populations within a country in order to anticipate and plan for e-service needs at the subnational level.

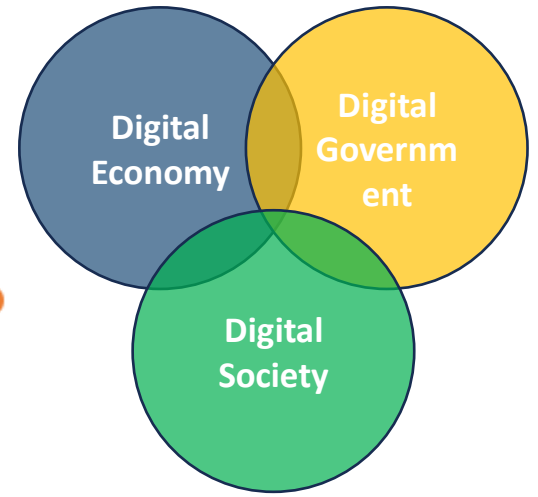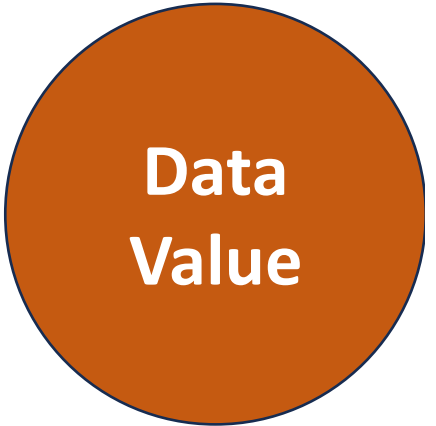# What is the difference between data management and data governance?
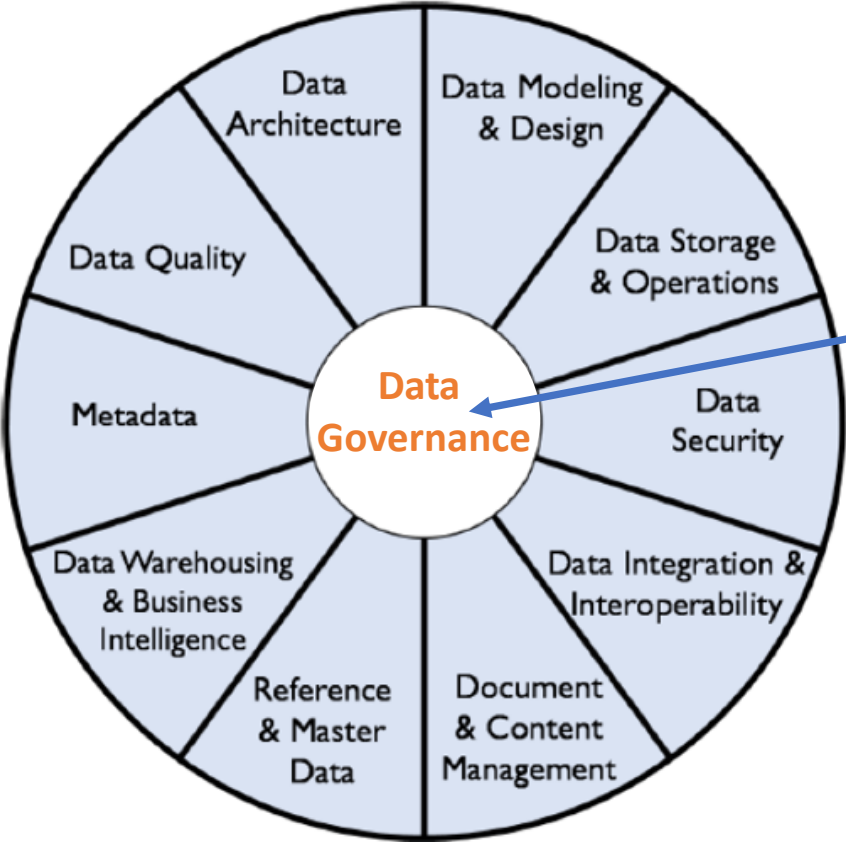
Data governance framework defines the **policies (rules), institutions, processes, roles and responsibilities (people),** related to the management of data, including data collection, analysis, use, sharing and disposal of data, in order to **manage data as a critical asset**.

Source: Adapted from DAMA-DMBOK2 Data Management Framework

DIKW Pyramid
Data → Information → Knowledge → Wisdom

Wisdom
(applied knowledge)

Knowledge
(organised information)

Information
(linked elements)

Data
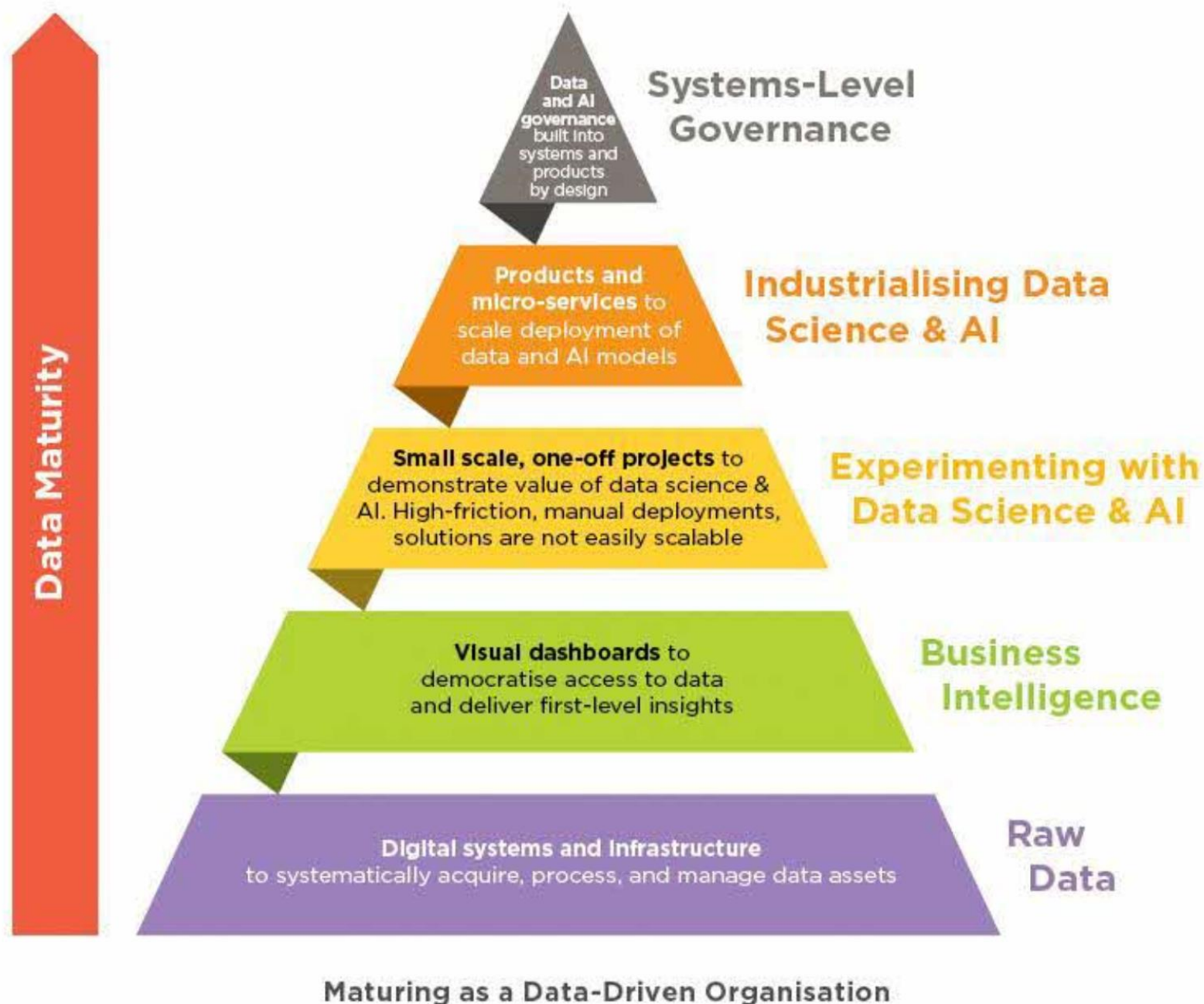(abstracted elements)
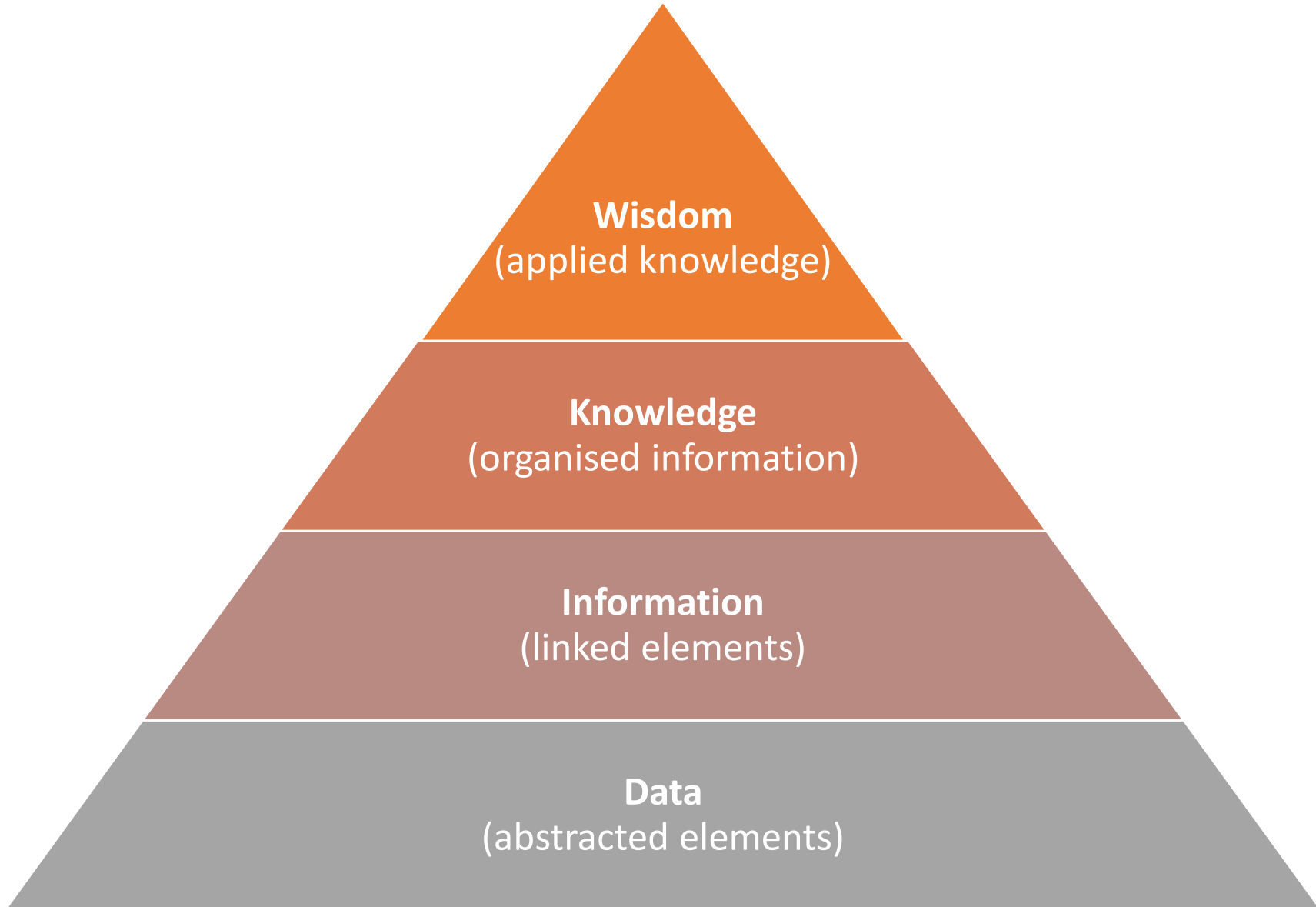
Data in Digital Government and Digital Transformation
Sources → Aggregation → Exploration → Analytics → Policymaking

Policymaking
Decision Making
(data-centric)

Data Analytics
(machine learning;
algorithms and modelling)

Data Exploration
(open data portals; data visualization;
hackathons)

Data Aggregation
(preprocessing; datawarehouse; data lakes; data sharing;
linked data; interoperability; data exchange)

Data Sources
(small and big data; conventional and new data;
informational, transactional, operational)

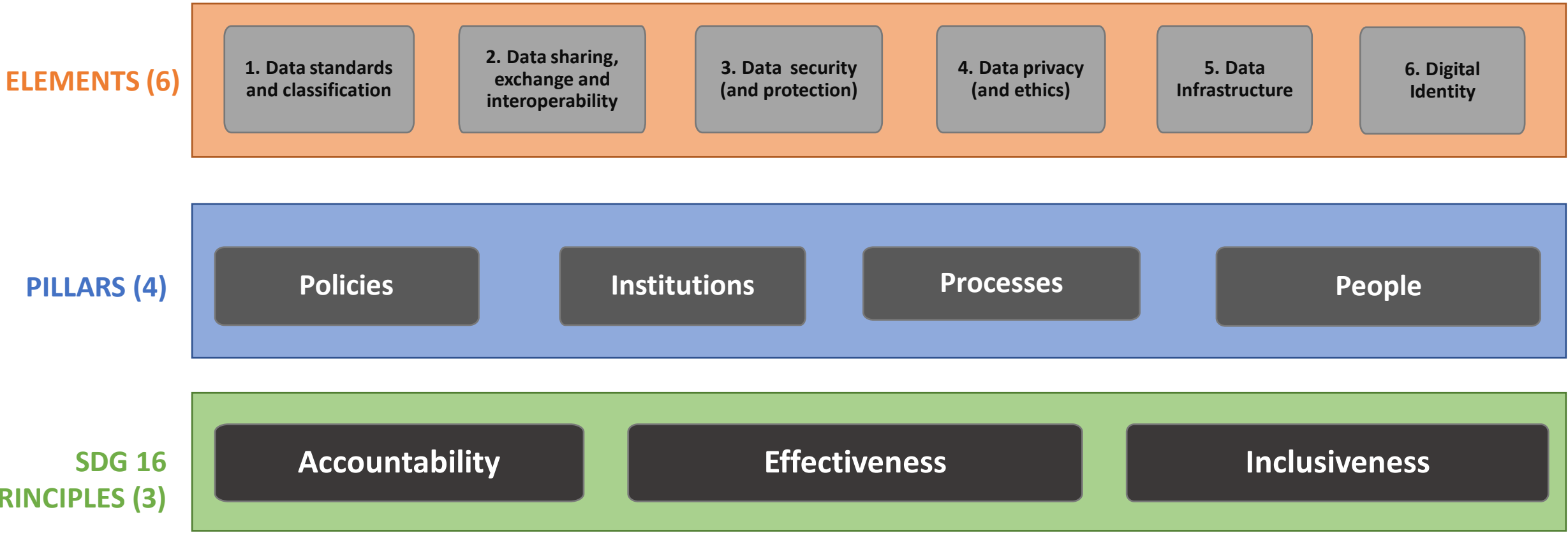(Source: 2020 UN E-Government Survey; chapter 6)

(Source: Singapore's Smart Nation & Digital Government Office)

UN DESA's Data Governance Approach

- Supporting the achievement of the Sustainable Development Goals (SDGs)
- From **whole-of-government to whole-of-society**
- Based on **three (3) SDG principles, four (4) pillars** and **six (6) elements**
- Emphasis on **policies, institutions, processes and people**
- Across **different levels (multilevel governance)**
- Building **data literacy**, at institutional and individual levels

UN DESA' s National Data Governance Framework

ELEMENTS (6)

| 1. Data standards and classification | 2. Data sharing, exchange and interoperability | 3. Data security (and protection) | 4. Data privacy (and ethics) | 5. Data Infrastructure | 6. Digital Identity |

PILLARS (4)

| Policies | Institutions | Processes | People |

SDG 16 PRINCIPLES (3)

| Accountability | Effectiveness | Inclusiveness |

P1 Policies

• Policies on "**single-source-of-truth**", "**data-once only**" or "**once-only principle**" ensure that individual users and businesses provide data to public administration only once, while public bodies exchange this data with a single authoritative source when requested and in compliance with the relevant regulations.

While evidence-based policymaking is not new and is widely supported by academic research, it is still uncommon to find a national policy or strategy supporting this approach.

In 2016, the United States Commission on Evidence-Based Policymaking was created to explore ways in which the Government could make better use of its data to inform future government decisions. The Commission spent a year and a half in deliberations and fact-finding and in September 2017 issued a report in which priority was assigned to expanding access to data, ensuring privacy, and strengthening the capacity of the Government to generate and utilize evidence to evaluate budgetary spending on programmes affecting health, education and economic well-being.

The Foundations for Evidence-Based Policymaking Act (the Evidence Act) received congressional approval in 2017 and 2018 and was signed into law by the President in January 2019 to facilitate the implementation of a number of the Commission's recommendations. Shortly thereafter, the Federal Data Strategy was issued by the White House Office of Management and Budget (OMB) as a second implementation mechanism, identifying data as a strategic asset and outlining the principles and practices to which federal agencies would have to adhere in the execution of the Act. The OMB published multiple guidance documents to help agencies address some of the Commission's recommendations; included in the documents were provisions for designating evaluation officers, appointing chief data officers, identifying statistical experts, developing "learning agendas", and incorporating new actions into annual budget and performance plans. For agencies that already have data strategies in place, such as the Department of Health and Human Services, the Evidence Act constitutes an additional mandate to strengthen capacity for using data for evidence-building purposes.

The Evidence Act establishes new expectations for open data, data inventories, and data management. It also reinforces the longstanding Confidential Information Protection and Statistical Efficiency Act, a strong privacy and confidentially law that compels the Government to take all necessary steps to protect data when confidentiality has been promised. A national secure data service (recommended by the Commission but not yet established) is expected to improve data access and will also strengthen privacy protection.

Sources: United States, Foundations for Evidence-Based Policymaking Act of 2018, H.R. 4174 - 115th Congress (2017-2018), available at https://www.congress.gov/bill/115th-congress/house-bill/4174; see also J. Heckman, "Federal Data Strategy to impact all feds, not just 'data plans for data wonks'", *Federal News Network* (2020), available at https://strategy.data.gov/; and Data Coalition (2020), available at https://www.datacoalition.org/two-years-of-progress-on-evidence-based-policymaking-in-the-united-states/.

P2 Institutions

Institutions or intstitutional arrangement to support data governance are essential for the implementation of the national data strategy and the data governance framework. Often required within this context is an institutional review that could transform the way agencies in all sectors and at all levels effectively cooperate and deploy government data as a strategic asset.
Source: UN E-government Survey, chapter 6

Examples:

1. National Data Advisory Council (Australia)
2. National Data Governance Committee (Ethiopia)
3. National Data Bureau (China)
4. Smart Nation and Digital Government Office; Government Data Architecture (Singapore)

P3 People

Roles and responsibilities in national/sectoral data governance, and data leadership/stewardship
Source: UN E-government Survey, chapter 6

Examples:

1. **Chief Data Officers:** individuals with leadership role in data governance and data strategies

2. **Data stewards:** individuals or teams within data-holding organizations who are empowered to proactively initiate, facilitate and coordinate data collaboratives toward the public interest.

3. Others: **Data Bureau, Data Leads, Data Officers, Data Focal Points**

Data roles and data literacy

| Roles (non-exclusive)	Description	Required skillsets
Policymakers and decision-makers	Ministers, Secretaries, Directory General, or any other senior officials with decision-making roles.	Understand and interpret data for insights and decision-making
Data Stewards	Data leadership functions that include: 1. Chief Data Stewards / Officers (national and/or-subnational) 2. Chief Digital Strategy Officer 3. Chief Information Officer 4. Chief Government Technology Officer 5. Chief Evaluation Officer 6. Chief Innovation Officer	Leadership skills (both technical and policy) to provide data oversights, policy and technical frameworks for data governance and the data ecosystem
Policy analysts	Those with analytical skills, especially with domain expertise of specific sectors (e.g. health, education); assist in policy analysis in supporting public policymaking	Sectoral domain knowledge; data analytical skills; using use BI (business intelligence) and self-service analytics tools
Public Officers (administrators)	Majority of public sector employees	Use of data for daily operations or reporting; to be able to benefit from data visualisations, charts, etc.
Data scientists	Technically trained specialists in data analytics and data science; "power users"	Specific skills in Python and other data tools, data services and infrastructure; includes AI, blockchains, big data specialists, etc.

P4 Processes

1. Data is not only an **input**; but also **output** of e-government

2. Data is used in **both front- and back-office** of e-government

3. **Some data are used; many are not,** including those generated through e-services (administrative)

4. Some data are not used **optimally**; some data are also **misused**

5. While there is a **lack of data**, there is also **data and information overload**

6. Government's quadrupole role: **producer, consumer, regulator, and platform provider (enabler)**

(Source: 2020 UN E-Government Survey; chapter 6)

P4 Processes

From data silos to data platforms, to data ecosystems
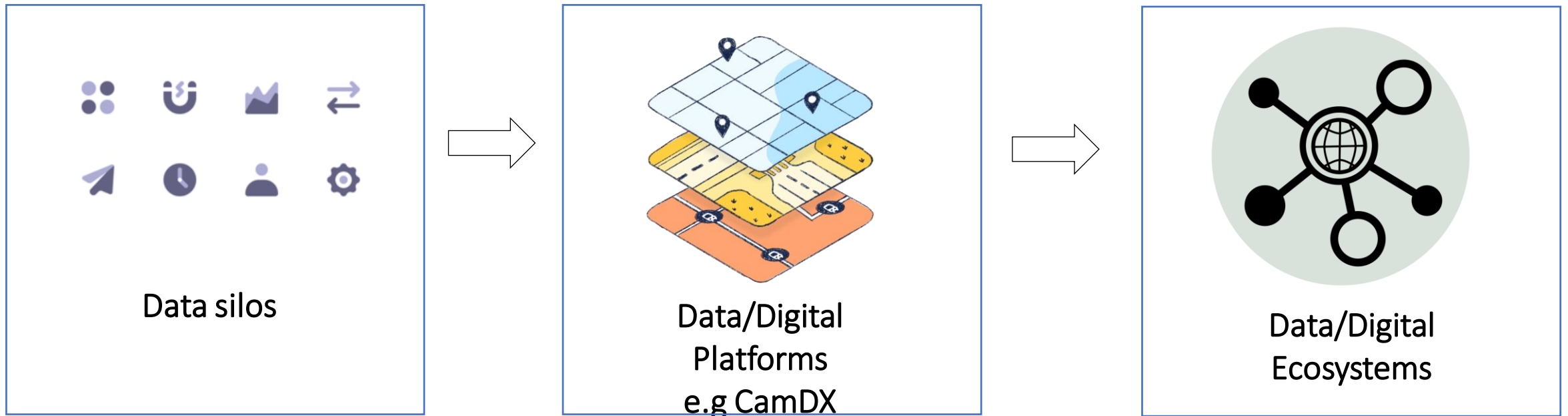
Data silos

Data/Digital
Platforms
e.g CamDX

Data/Digital
Ecosystems

Instructions

Go to

www.menti.com

Enter the code

5141 5245

Or use QR code

شكرا

谢谢

Thank You

Merci

Спасибо

Gracias

United Nations | Department of Economic and Social Affairs