UNITED NATIONS

INFORMATION &
eGOVERNMENT AUTHORITY

UNITED NATIONS
EGOVERNMENT SURVEY

REGIONAL eGOVERNMENT EXPERTS WORKSHOP 2021

9th JUNE 2021
KINGDOM OF BAHRAIN

INTERMID
ACHIEVING EXCELLENCE

Disclaimer: The information expressed in this report are those gathered during the "REGE21 Workshop".

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ACKNOWLEDGMENTS

The REGE21 Report would not have been possible without the participation and assistance of so many people whose names may not all be enumerated. Their contributions are sincerely appreciated and gratefully acknowledged.

However, the Information & eGovernment Authority would like to express its deep appreciation and indebtedness to all speakers particularly to the following:

Keynote Speaker His Excellency Mr. Vincenzo Aquaro, Chief, Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), United Nations Department of Economic and Social Affairs (UNDESA), United States.

Gulf Cooperation Council and Arab Regional eGovernment Leaders: H.E. Ms. Haya Al Wadani, Director General of the Central Agency for Information Technology (CAIT), State of Kuwait; Dr. Ammar Alhusaini, Deputy Director-General, Central Agency for Information Technology (CAIT), the State of Kuwait; Eng. Abdulaziz Al Kharusi, Director General of eServices eGovernment Services, Ministry of Transport, Communications and Information Technology, Sultanate of Oman; Eng. Abdulrahman Al Mutiri, Vice President of Strategy and Digital Standers at the Digital Government Authority, Kingdom of Saudi Arabia; Ms. Mashael Ali Al-Hammadi, Acting Assistant Undersecretary of Government Information Technology, Ministry of Transport and Communications, State of Qatar; Mr. Abdelaziz Alzarooni; Team Leader, Cybersecurity Capacity & Business Development aeCERT-TDRA, United Arab Emirates; Mr. Mohamed Faisal Nebri, Head of the Strategy, Development Cooperation and Communication Department, Moroccan Digital Development Agency (ADD), Kingdom of Morocco; with the participation of The Arab Republic of Egypt and Hashemite Kingdom of Jordan.

United Nations and International Experts: Dr. Theresa A. Pardo, Associate Vice President for Research, Senior Fellow, Center for Technology in Government, (CTG UAlbany); Affiliate Faculty Information Science, Doctoral Program, College of Emergency Preparedness; Homeland Security and Cybersecurity; University of Albany, United States; Dr. David Eaves, Professor and lecturer in Public Policy, Harvard Kennedy School, United States; Mr. Morten Meyerhoff Nielsen, United Nations University Operating Unit for Policy-Driven Electronic Governance (UNU-GOV), Denmark; Ms. Yolanda Martinez, Digital Government and Development Expert, Mexico; Mr. Deniz Susar, Governance and Public Administration Officer, Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), United Nations Department of Economic and Social Affairs (UNDESA) and Dr. Nibal Idlebi, Chief of Innovation Section, UN-Economic and Social Commission for Western Asia (ESCWA).

Facilitators: Mr. Richard Kerby, CEO, Richard Kerby LLC, United States and Mr. Abdulla Al Hamed, Managing Partner, INTERMID.

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ACRONYMS

ESCWA	Economic and Social Commission for Western Asia
4G	Fourth Generation
5G	Fifth Generation
AI	Artificial Intelligence
AR	Augmented Reality
CP	Content Provision
DPIDG	Division for Public Institutions and Digital Government
EGDI	eGovernment Development Index
EP	eParticipation
GCC	Gulf Cooperation Council
GCR	Global Competitiveness Report
HCI	Human Capital Index
ICT	Information and Communication Technology
iGA	Information & eGovernment Authority
IoT	Internet of Things
ITU	International Telecommunication Union
KPIs	Key Performance Indicators
LOSI	Local Online Service Index
MENA	Middle East and North Africa
MSQ	Member State Questionnaire
MTCIT	Ministry of Transportation, Communications & Information Technology
OGDI	Open Government Data Index
OSI	Online Service Index
REGE	Regional eGovernment Experts
SDGs	Sustainable Development Goals
SMEs	Small and Medium-sized Enterprises
SP	Service Provision
TII	Telecommunication Infrastructure Index
UNDESA	United Nations Department of Economic and Social Affairs
UNU-GOV	United Nations University Operating Unit for Policy-Driven Electronic Governance
VR	Virtual Reality

EXECUTIVE SUMMARY

The world has seen rapid strides in digital government and its effective use by citizens in their day to day lives. With smart devices, social media platforms, artificial intelligence, data analytics, and other emerging technologies, governments and service providers have been compelled to proactively adapt their services and service delivery methods by using new sophisticated delivery channels.

In their continuing efforts to provide knowledge, leadership and accountability in digital governments in the UN Member States, the United Nations' UN e-Government Survey has been an effective tool, knowledge base and reliable benchmark. The United Nations has regularly held large regional meetings to obtain inputs, feedback, and recommendations from Member States. The Gulf Cooperative Council (GCC) countries have a unique perspective on digital government, based on their culture, priorities and economic status.

As a result, the Regional eGovernment Experts (ReGE) Workshop was created to engage the GCC countries and encourage them to provide their inputs and feedback to the United Nations in a more intimate environment.

The second REGE21 was hosted by the Information & eGovernment Authority (iGA) of the Kingdom of Bahrain, under the patronage of its Chief Executive, His Excellency Mr. Mohammed Al Qaed.

This year, REGE21 was expanded beyond the GCC inviting several digital leaders namely: The Arab Republic of Egypt, the Hashemite Kingdom of Jordan and the Kingdom of Morocco.

REGE21 also had a number of key international experts on digital government from UN institutions. Academic, private sector and international consultants and government members participating fully, providing their unique take on digital government trends, the future of digital government and the future of the UN e-Government Survey.

The Arab digital governments highlighted to the participates their respective achievements, which include new strategies, policies and plans of action, new telecommunication infrastructure development and initiatives to strengthen service delivery and digital content during the current and past years.

The international experts provided individual views on the crucial and challenging issues that affected digital government and their solutions on how to meet these challenges, namely: access to affordable Internet, the digital gap between developed and developing countries, digital infrastructure, human capital, the UN methodology of the e-Government Development Index (EGDI),

open governments, open government data, the use of emerging technologies in service delivery and the preparedness of governments in facing pandemics and disasters.

The plenary session hosted a number of private sector entities and other participants to make their views known to the group. The Issues discussed included the importance of digital IDs, knowing your customer, the public and private sector collaboration between the public and private sector, and the private sector's role with in government activities.

The following topics were discussed:

- As a result of COVID-19, the need to keep governments up and running as effectively as possible is critical. Therefore, the exigency for continuity plans to handle future pandemics and disasters is much needed.
- Revisiting the weights given to the three sub-indices, namely the Human Capital Index (HCI), The Telecommunications Infrastructure Index (TII) and the Online Service Index (OSI) that make up the e-Government Development Index.
- The role that the Sustainable Development Goals (SDGs) will play in the 2022 UN e-Government Survey and future surveys until 2030.
- The new emergence of the Local Online Service Index (LOSI) looks at digital government from a local municipality point of view.
- The importance of data analytics in government decision-making.
- The skillsets required by public servants in the new digital government era.
- The importance of emerging technologies, such as artificial intelligence, augmented reality, drones, robotics, data algorithms, digital IDs, and social platforms.
- The migration of government services from a silo approach to a collaborative approach.
- The need for citizen engagement and citizen empowerment to make governments more effective.
- Governments should implement a robust cybersecurity strategy to protect it from unwelcome hackers.
- REGE21 resulted with a set of recommendations from the workshop participants to the United Nations Department of Economic and Social Affairs (UNDESA) which should be taken up in the upcoming 2022 UN e-Government Survey.

Recommendations for the 2022 e-Government Survey

LOSI to include one city for each UN Member State and the scores should be integrated into the OSI, similar to e-participation and open government data. It will still maintain its own index, similar to e-participation and open government data.

- OSI to receive a higher weight than Human Capital Index.
- Human Capital Index to increase the number of indicators.
- The full questionnaire to be published in the methodology section of the report.
- The use of emerging technologies such as: Artificial Intelligence (AI), drones, data analytics, 3D printing, gamification and Internet of Things (IoT) should be given greater importance.
- The Member State Questionnaire (MSQ) should indicate if a new sector will be assessed in the upcoming survey by requesting that URL.
- New e-services should be added to the survey to give it a fresher look.
- Governments should have a Sustainable Development Goal (SDG) webpage to show their respective progress in meeting the SDG challenges that they set for themselves.
- Open Data should be given more importance in terms of usage of data, quality of data, amount of data and data segmentation.
- Assess collaboration between federal/central and local government.
- Affordability should be added to the Telecommunication Infrastructure Index (TII).
- The survey should include and assess more regional cross-border initiatives such as the e-gate integration in the GCC.

Closing Session

His Excellency, Mr. Al Qaed thanked everyone for participating in REGE21. He especially thanked the Keynote Speaker, the GCC and Arab countries, the international experts, and the UNDESA for their support in making REGE21 a successful event. He looks forward to being part of REGE23.

PURPOSE OF THE WORKSHOP

The workshop aims to better understand the purpose of the report and provide inputs from countries that will be evaluated under the UN Methodology. REGE21 will focus on identifying ways to improve the e-Government Development indicators and how member states can effectively utilize them.

KEY OBJECTIVES

1. To explore issues, new opportunities, and challenges related to the e-Government development indicators.
2. To learn from best practices and experiences.
3. To share knowledge from experts in the e-Government and ICT fields.
4. To ensure that countries are using the UN indices to advance and enhance their service delivery and ensure that no one is left behind.
5. To use such indices in their development strategy at a national level and embrace them in their Key Performance Indicators (KPIs).

STRUCTURE

1. A series of presentations by UN officials and e-Government experts, to be followed by Round Table discussions on topics aligned with the UN e-Government Development Index Indicators rankings and the impact on the Arab region.
2. Suggestions for improving the survey.
3. Plenary sessions in which the method of computation, inputs, and parameters will be carefully examined.
4. The final session will summarize all observations, suggestions and recommendations and will later be submitted to the United Nations Department of Economic and Social Affairs (UNDESA).

GREETINGS

MS. LULWA EBRAHIM

Director of Communications and Marketing
Information & eGovernment Authority (iGA)
Kingdom of Bahrain

I would like to welcome His Excellency Mr. Mohammed Al Qaed, Chief Executive of Information & eGovernment Authority (iGA); His Excellency Mr. Vincenzo Aquaro, Chief, Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), United Nations Department of Economic and Social Affairs (UNDESA); our regional digital government leaders from the Gulf Cooperation Council (GCC) and Arab countries; our distinguished experts, speakers, and participants in the Regional eGovernment Experts (REGE21) Workshop which is being hosted this year by the Information & eGovernment (iGA) of the Kingdom of Bahrain.

I extend my sincerest gratitude to all of you for taking the time to join us in this important event and wish you all a highly fruitful and productive REGE21 Workshop.

INTRODUCTION

Facilitator:

MR. RICHARD KERBY

CEO, Richard Kerby LLC, United States

On behalf of the Information & eGovernment Authority and the organizers, I would like to welcome all of you to this year's edition of the United Nation eGovernment Survey's "Regional eGovernment Experts Workshop (REGE 21). Thank you for taking time out from your busy schedules to join us in this much anticipated workshop. Before I call on the distinguished host of the REGE21 Workshop, I would like to set the scene for REGE 21.

The REGE Workshop is a biennial event that gathers experts from around the world. It allows selected participating Arab countries to engage UNDESA and provides it with specific digital transformation issues facing the Arab world today. It will focus on identifying ways to improve the eGovernment Development Survey.

OPENING ADDRESS

Distinguished guests, friends, ladies, and gentlemen. It is my great pleasure to welcome Mr. Vincenzo Aquaro, Chief, Digital Government Branch, (UNDESA), an eminent and globally recognized personality who possesses deep knowledge and experience in digital government and the Chief Editor of the e-Government Survey Reports.

Regional Digital Government Leaders: Your Excellencies Ms. Haya Al Wadani from Kuwait; Eng. Abdulaziz Al Kharusi from Oman; Eng. Abdulrahman Al Mutiri from Saudi Arabia; Ms. Mashael Ali Al-Hammadi from Qatar; Mr. Abdelaziz Alzarooni, from the United Arab Emirates (UAE); Mr. Mohamed Faiçal Nebri, from Morocco and our distinguished participants from Jordan and Egypt who have shown strong commitment to digital government and steering the digital perspectives aligned to their respective national visions, to strengthen the economy and improve the quality of life of their constituents.

Eminent digital experts Messrs. Morten Meyerhoff Nielsen and Deniz Susar, Ms. Yolanda Martinez, Dr. David Eaves, Dr. Theresa Pardo, and Dr. Nibal Idlebi, will enlighten us with the latest global trends in the field of digital government and its impact on the Sustaining Development Goals (SDGs). They will recommend ways to improve the eGovernment Indicators.

I would like to specifically thank the UNDESA for its efforts in publishing the UN

eGovernment Survey Reports, in supporting the spread of ICT deployment and encouraging participation and collaboration in improving digital interventions and achieving the SDGs.

Bahrain, like other countries in the GCC and Arab region, has a long-standing association with UNDESA regarding the eGovernment Survey. Bahrain had organized the “Global e-Government Experts Workshop” in 2012 and hosted study tours for developing countries to benefit from the Kingdom’s innovative eGovernment practices.

The region looks forward to the UN eGovernment Survey as it is the most well-known and accepted global index of its kind. The information provided in the survey report reflects the status of digital governments in different countries and paves the way for the future direction of digital government. The countries in the

region take the report seriously, setting ICT directions and embedding the findings in national digital strategies and associated KPIs.

Each country in the region has various standout digital initiatives that can be considered role models to learn from and replicate. It is a matter of pride to mention that the countries in the region are pioneers in the effective use of digital technologies such as cloud data, Artificial Intelligence, and cybersecurity for the betterment of people's lives.

The digital investments made by the countries in the region have not only had a significant impact on the lives of their constituents but also facilitated government efforts to diversify the economy and boost the productivity of the nation.

I would like to specify the notable digital achievements that the countries in the region made in steering technological innovations such as cloud computing, 5G services, Artificial Intelligence, data mining, technology entrepreneurship, etc., that accelerated the diversification of the economy.

Those are a few examples of the many initiatives launched in the region, which also include improving Internet access, bridging digital divide campaigns, strengthening digital platforms to address challenges related the COVID-19 pandemic, and providing clear and up-to-date information to local public authorities and health workers.

Bahrain, like other countries in the region, has reinforced its commitment to possessing a strong ICT infrastructure and digital transformation process, especially during this pandemic. Due to investments in digital infrastructure and a focus on electronic services and payment, Bahrain is in a better position to maintain continuity of business and government services.

This is why I think that the UN Report should consider the work that has been done, initiatives related to COVID-19 and the way technologies were able to support the fight against the pandemic.

While it is understood that the UN eGovernment Survey Report has a global outlook, countries do not want to miss out on its regional focus as well as key digital interventions that pave the way towards digital government.

As the report is much-sought-after by countries, we look forward to the recommendations, best practices and solutions to some of the challenges pertaining to the region's advancement and digital interventions, especially those related to data protection, cybersecurity, and procurement and usage of emerging technologies. Digital interventions widely seen in the region such as cloud promotion, utilization of emerging technologies, etc., should be given adequate importance.

Also, is it the right time to continue granting equal weightage to all the sub-indicators of the eGovernment Development Index? Does this reflect the actual digital government developments witnessed in the region

or worldwide? Will it be beneficial for the countries if the future eGovernment Report is more transparent by including detailed evaluation questions in full?

It is against this backdrop that REGE21 has been organized in order to discuss regional concerns and challenges and put forward recommendations for improving government indicators that could reflect regional considerations.

REGE21 marked another important step towards strengthening the UN eGovernment Survey and reflecting the aspirations and initiatives of the countries in the region.

H.E. MR. MOHAMMED AL QAED

Chief Executive

Information & eGovernment Authority

Kingdom of Bahrain

KEYNOTE SPEAKER

EGOVERNMENT MEASUREMENT AND THE INTERNATIONAL INDICATORS – PERSPECTIVE ON INDICATORS

Keynote Speaker Mr. Vincenzo Aquaro began his speech by stating that the aim of the REGE21 workshop was to understand the purpose of the UN eGovernment Survey and to provide inputs and recommendations for possible ways to improve the eGovernment Methodology.

The eGovernment Survey is one of the major publications of the United Nations Department of Economic and Social Affairs (UNDESA) issued every two (2) years and that the upcoming 2022 Report will be the 12th Edition.

The report will present a ranking based on the UN eGovernment Development Index (EGDI). The EGDI is organized into four main groups: Very High (VH) EGDI, High EGDI, Middle EGDI and Low EGDI, as noted in Figure 2.1 below:

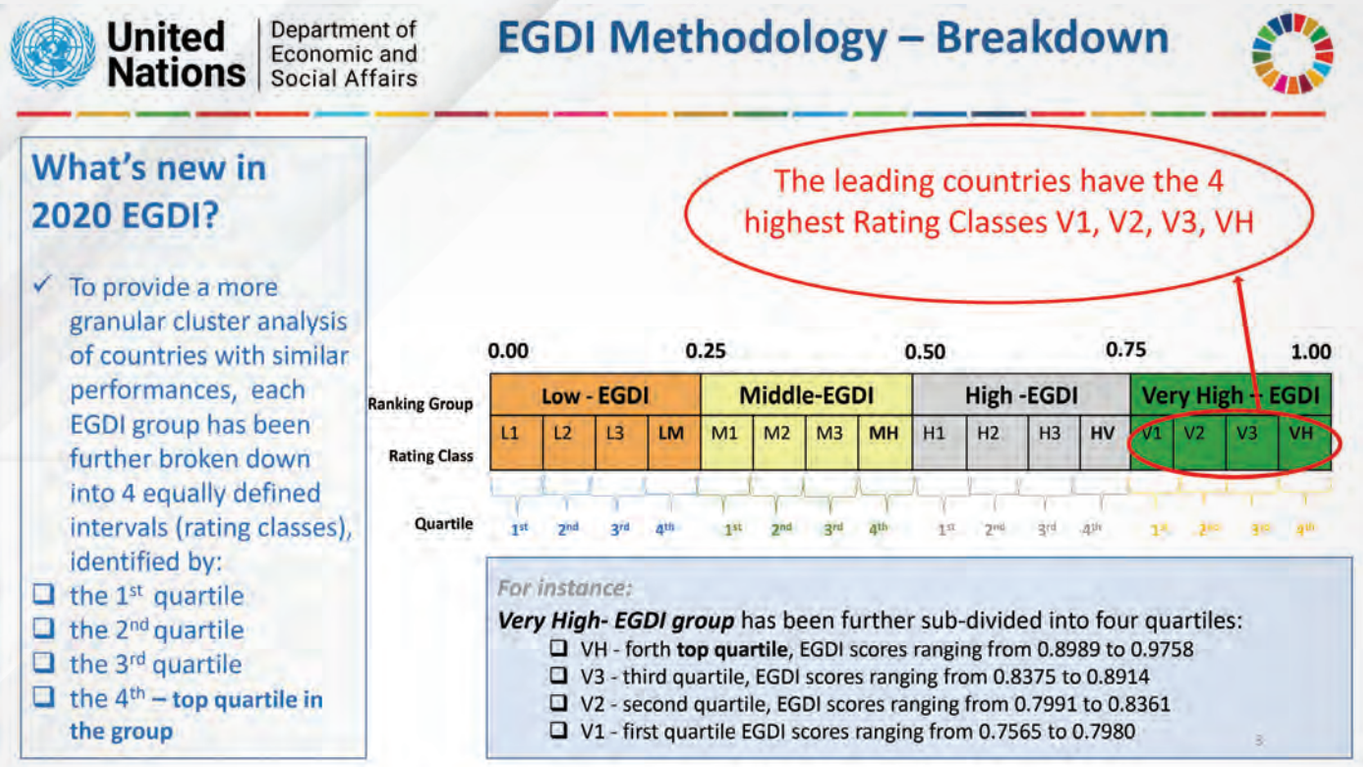


Figure 2.1 EGDI Methodology – Breakdown

Mr. Aquaro then showed a slide about Global eGovernment Development at a Glance, as shown in Figure 2.2

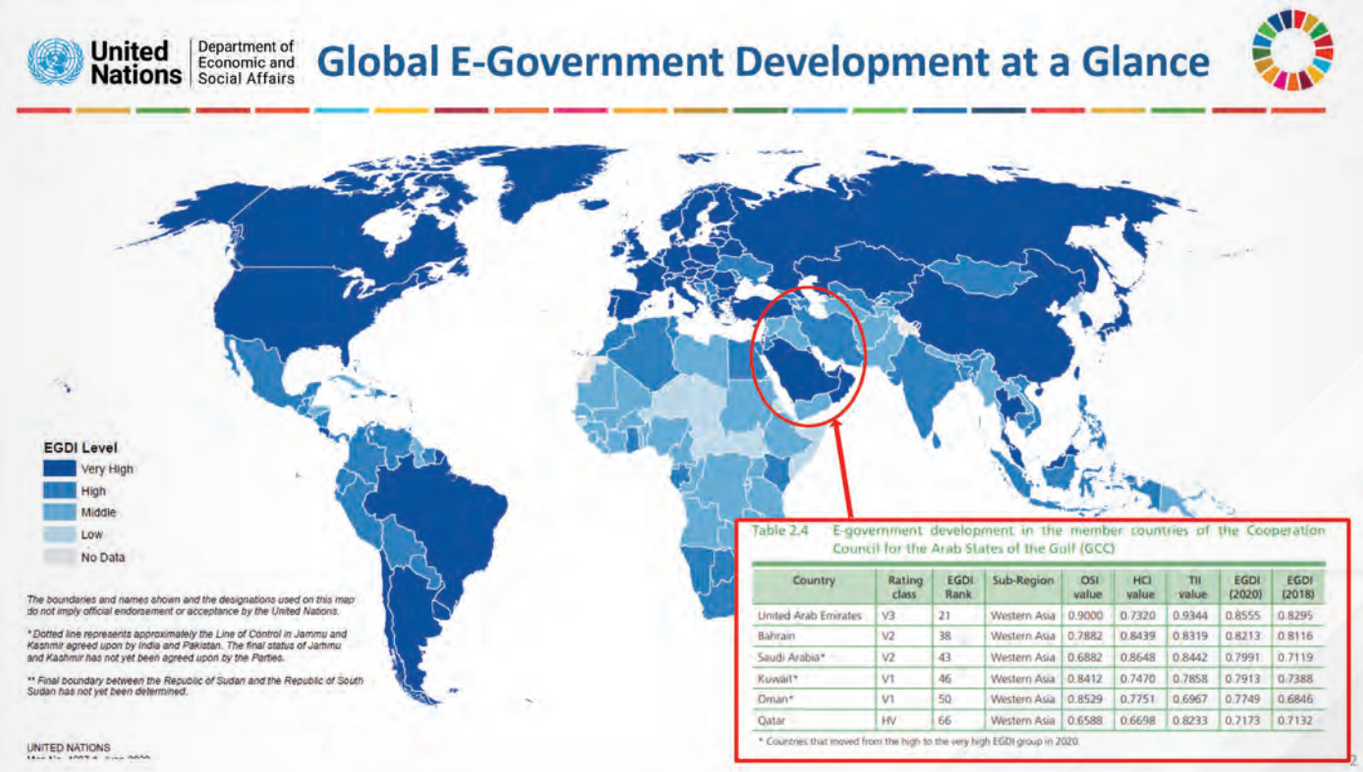


Figure 2.2 Global eGovernment Development at a Glance

The map in the presentation showed the geographical distribution of the four (4) EGDI groups in 2020. The darker blue shade represented the Higher EGDI group. Based on the map, Europe remained the leader in eGovernment development worldwide. But

for the first time, Asia, as a whole, was the second region in terms of regionally High EGDI, followed by America's Oceania and Africa. And as part of the Asian region, the member countries of the Gulf Cooperation Council, for the Arabic States performed very high in their eGovernment development. At a glance, the 2020 Survey reflected a further improvement in global trends in eGovernment development and the transitioning of many countries from lower to higher EGDI groups.

While these movements denoted significant improvements in the level of eGovernment development around the world, the color code of the map showed that the world is still divided into two (2) blocks with 46%--about 50% of the countries in the world lagging behind. Despite the significant progress made in all the countries, still, Oceania and Africa were regional EGDI averages and remained below the global average.

The EGDI is based on three (3) equal-weighted sub-indices, namely: Online Service Index (OSI), Telecommunication Infrastructure Index (TII), and the Human Capital Index (HCI), which will measure the level of education and works as a proxy of digital leadership of each country. Since the first edition, the methodological framework has remained consistent across the survey period while its sub-components and building blocks have been constantly improved to reflect the new trends in digital government, as well as new indicators of service provision, telecommunication, and human capital.

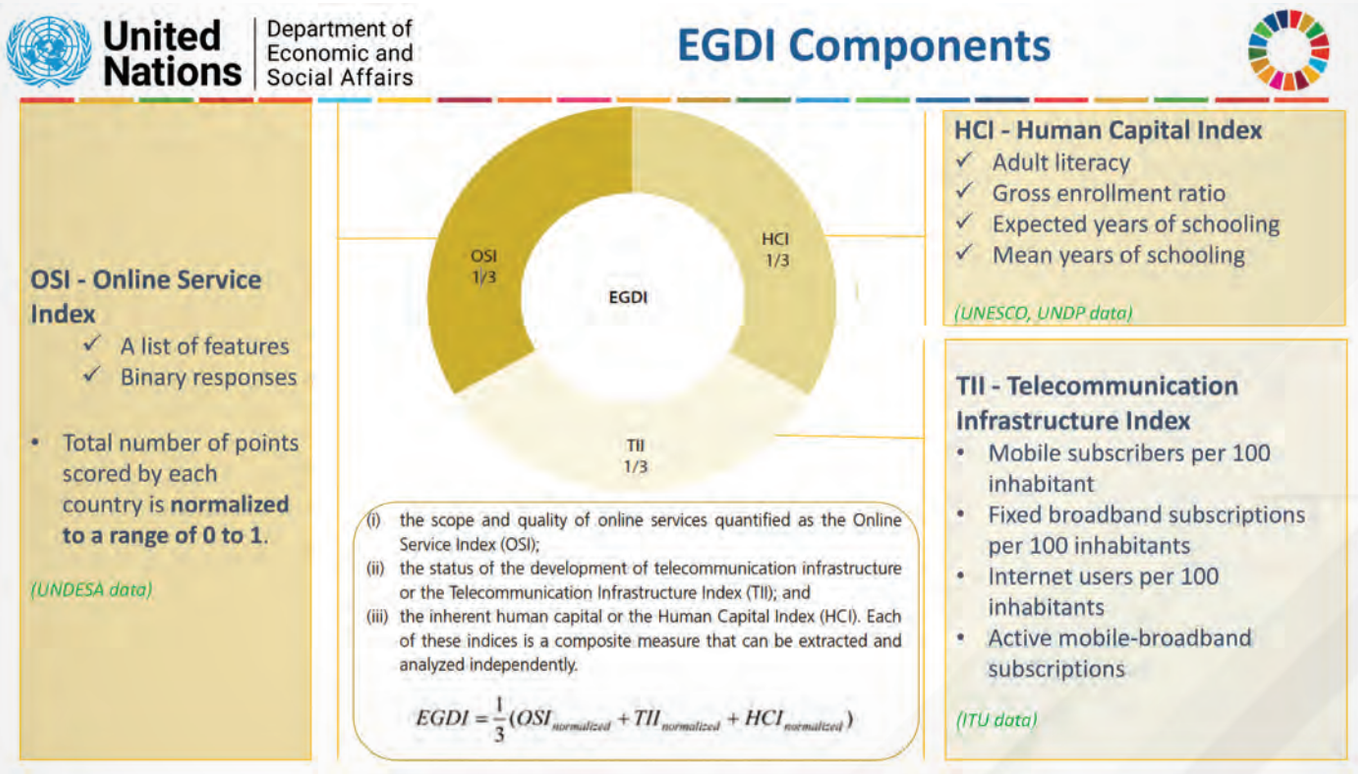


Figure 2.3 EGDI Components

The improvement process "takes into account the lessons learned from the previous editions, the inputs and feedback received by member states, the recommendations from external evaluation, the outcomes of the expert group meetings, and the last technological and policy development." In 2020, a limited number of changes were introduced. The Telecommunication Infrastructure Index (TII) was calculated with four (4) components instead of five (5) due to the drop of fixed telephone subscriptions. The Online Service question reviewed the existing question, and UNDESA added a new sector related to the "Justice System."

In the 2020 Edition, to gain better insight into countries with a comparable level of performance provided a more granular cluster analysis of countries with similar performances. Each of the four (4) EGDI groups were further divided into four (4) definite intervals identified by the 1st, 2nd, 3rd, and 4th quartile. Each interval presents the rating class. The same rating class means the same level of digital development. As part of the 2020 survey process, eGovernment development was also assessed for 100 municipalities to a four (4) category frame. The Local Online Service questionnaire was also reviewed and, in part, aligned with the OSI questionnaire.

The preparatory process of the 2022 edition has been started and included a number of activities such as research and analytical work to be conducted by the digital government team, including the participation of international task forces, working group, pilot projects, and ad hoc partnerships; expert group meetings, a collection of relevant data and information on national eGovernment to a member state questionnaire sent to all countries. At this point, those countries who have not submitted their questionnaire yet, to "please do it." An international call for completion of the Member State Questionnaire (MSQ) is open to all countries and, last but not the least, international and regional consultative meetings for a comprehensive member state engagement.

The main reason to organize the REGE21 was to collect additional inputs from the outstanding panel of delegates from the Arabic region and from international experts who were invited to the workshop. The first recommendation was to align the two (2): Online Service Index (OSI) and the Local Online Service Index (LOSI). Therefore, UNDESA is now developing the new OSI methodological framework structured in five (5) categories (you can refer to the slide) –four (4) of them inspired by the LOSI. These are:

1. Technology – also covering the accessibility and affordability components

2. Content Provision

3. Service Provision

4. Participation or eParticipation (EP)

And the fifth (5th) new category not in the LOSI is the "Institutional Framework."

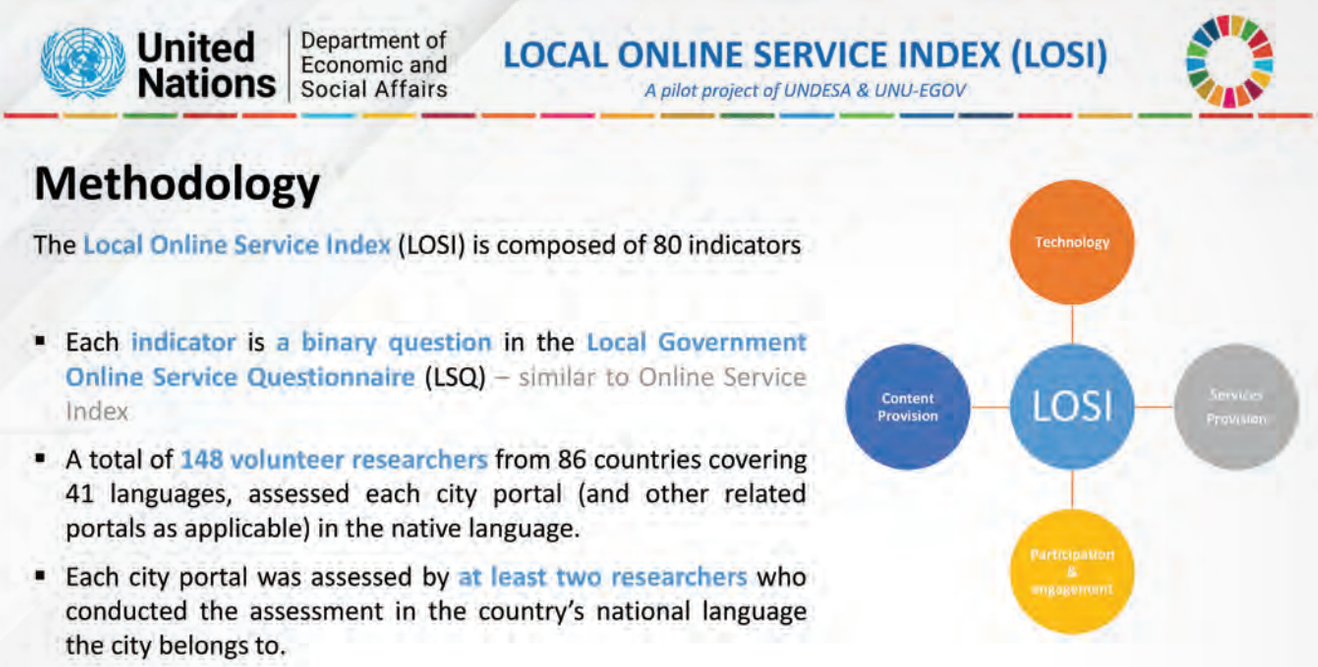


Figure 2.4 Local Online Service Index Methodology

UNDESA will also strengthen the link with the SDGs. In reviewing the OSI questionnaire, UNDESA will also add more questions on service provisions, including new life events, and they will introduce for each service a 4-level score range as follows: 0, 1, 2, 3; 0- if there is no service; 1 –if it is only based on content provision; 2 – if you can submit or upload a form or request and 3 – if all services can be processed online.

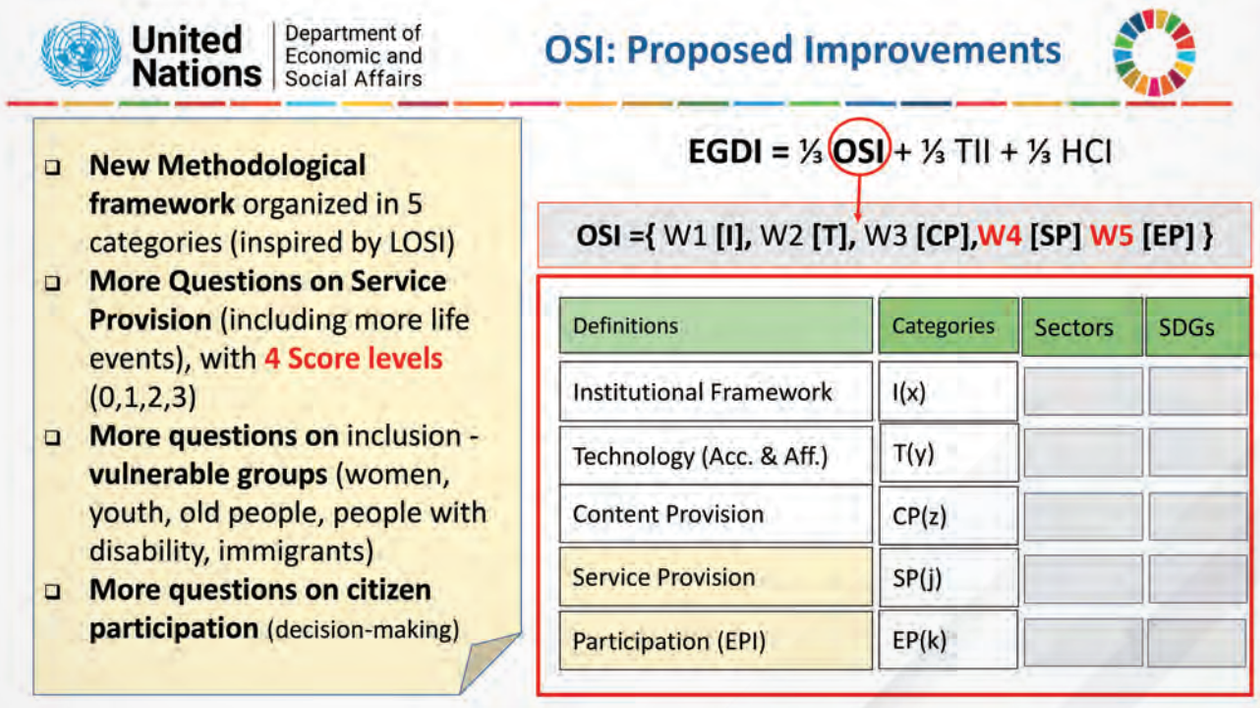


Figure 2.5 OSI Proposed Improvements

More questions would also be added to strengthen the "Leaving No One Behind Concept," that would include the components of dedicated services for all the vulnerable groups: women, youth, senior citizens, people with disabilities, and immigrants. Also, more dedicated questions will be added to measure eParticipation, looking more specifically at the empowerment of the citizens and on the decisionmaking level.

UNDESA also received other interesting suggestions and proposals, but many of them were not immediately implemented in the "2022 Survey" and that they are going to test them through an ad hoc pilot initiative and the results will be presented in the annex of the 2022 edition of the survey. UNDESA would also:

Continue to test the use of AI algorithm to use complex network analysis to create new and effective groups of detected development similarities among the UN member states using the World Development Indicators data set from World Bank.

Use more than 300 indicators to identify groups of countries with similarities. This analysis will be used to better compare the EGDI among the countries with a comparable level of development.

Use the new TII technology.

For the selected countries that have the capacity to collect those indicators, UNDESA will utilize those indicators, simulate possible EGDI ranking and test the use of new Human Capital Index (HCI) indicators to try to capture digital literacy.

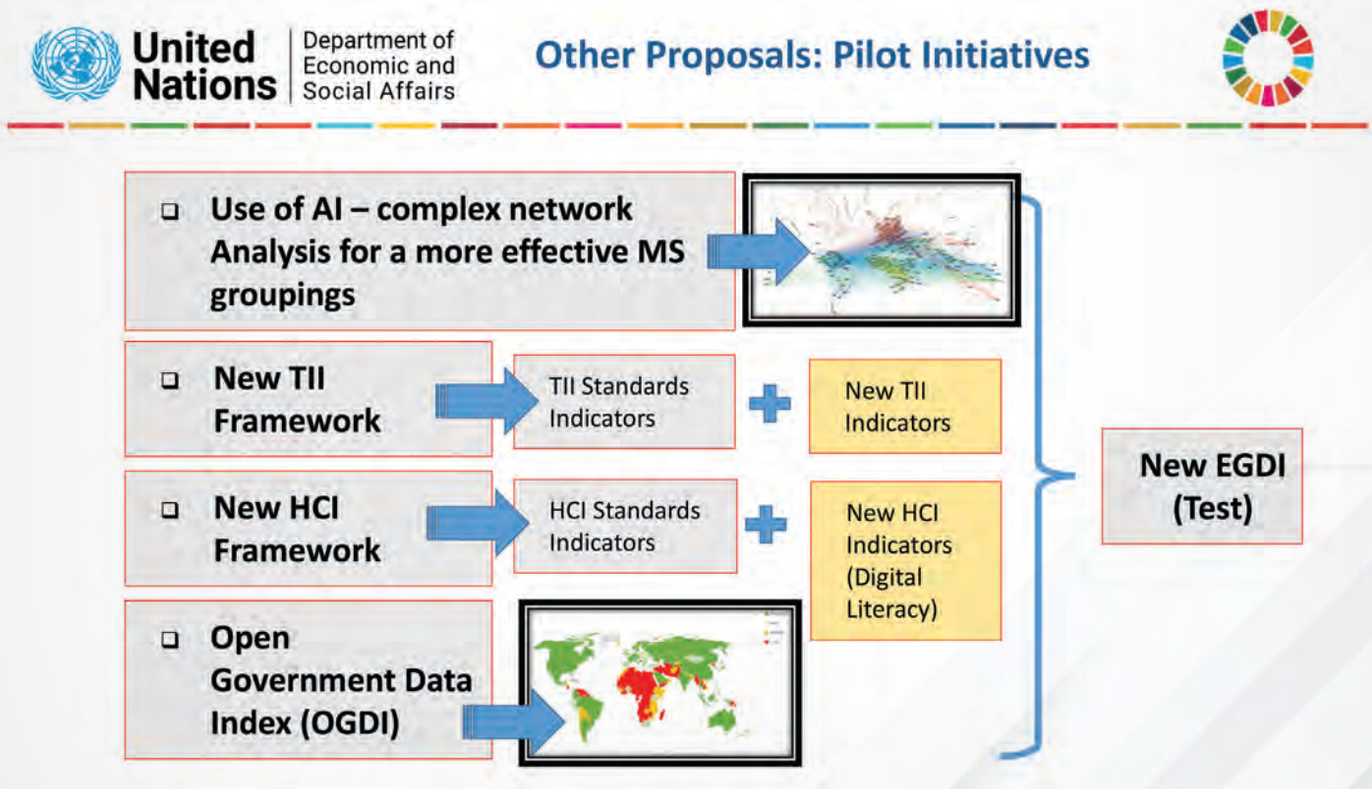


Figure 2.6 Other Proposals: Pilot Initiatives

UNDESA will continue with these kinds of experimentations, sharing the results to create a common, and "start pushing for all member states to begin adopting, utilizing and collecting the indicators that really represent now the digital transformation" including developing and testing of Open Government Data Index (OGDI).

For the past 20 years, the UN eGovernment Survey has become an invaluable asset to policymakers and practitioners—in the region and around the world—pursuing digital government. To continue to support member states in their digital journeys, it is crucial for UNDESA to continue to rely on rigorous and transparent updated methodologies to capture new trends for digital transformation and also to bridge the digital divide and to assure that "no one is left behind" within and among the countries.

Mr. Aquaro ended his speech by thanking His Excellency Mr. Mohammed Al Qaed, Chief Executive of Information & eGovernment Authority (iGA), Kingdom of Bahrain, for hosting the "REGE21 Workshop" and for inviting UNDESA to participate in the workshop and added that UNDESA would have to rely on countries to help them enhance the quality of the survey, so that everyone's voice matters.

"We are here to listen to you," he concluded.

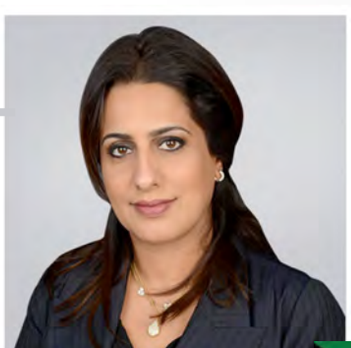
MR. VINCENZO AQUARO

Chief, Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG) United Nations Department of Economic and Social Affairs (UNDESA), United States

ACHIEVEMENTS AND MILESTONES BY REGIONAL EGOVERNMENT LEADERS SESSION

Presenters:

State of Kuwait



H.E. MS. HAYA AL WADANI

Director General of the Central Agency for Information Technology (CAIT), State of Kuwait

with

DR. AMMAR ALHUSAINI

Deputy Director-General, Central Agency for Information Technology (CAIT), the State of Kuwait

Dr. Ammar Alhusaini made a presentation on behalf of H.E. Ms. Haya Al Wadani.
He discussed briefly Kuwait's recent eGovernment activities and projects. He summarized the major and recent digital transformations and projects from different angles. He also mentioned high-level projects from an organizational aspect.

Organizational Aspect

The Ministry of State for Telecommunications and Information Technology Affairs– According to Dr. Alhussaini, for the first time, "we have a ministry specifically for Information Technology (IT). So we have all IT related entities now supervised by one minister. This is an essential step. The Council of Ministers just launched official steps to establish the National Cyber Security Center, another addition to the Kuwait government's digital transformation ecosystem.

As for Policies and Regulations, recently, Data Classification had been approved by the Central Agency for Information Technology (CAIT) and Data Privacy, policy, and cloud computing within a regulatory framework for Cloud Computing. This is very important because Cloud Computing is a significant enabler for digital transformation.

In Kuwait, one of the pillars of digital transformation, especially for the government, is shared government services to better utilize resources and investments.

The State of Kuwait has many projects related to shared government services:

1. Phase 2 of "Kuwait Information Network (KIN)"

2. "Paperless Government Project"

3. National Data Center

4. Cloud Center of Excellence

Kuwait is starting a new expansion of the Kuwait Information Network (KIN) for a more secure and private network connecting all government entities.

Also, Kuwait has the Paperless Government Project and is continuing this project by connecting all government entities. As highlighted in the session since 2017, all government entities have been collaborating in a paperless environment. Kuwait needs to expand this to cover the internal correspondence management system within each entity.

Kuwait is also establishing the National Data Center where most of the government entities, such as the medium and small entities, will use a centralized national data center as well as the Cloud Center of Excellence, especially at the beginning.

For Skills and Capacity Building, which is an essential aspect of digital transformation, Kuwait is finalizing the National Framework for Information Technology (IT) skills. All efforts and initiatives for training will be in this framework.

They were using certification-based training and invested heavily in this last year. This process would be continued because many government employees are getting international certification, which can be an excellent Key Performance Indicator (KPI) for their targeted accomplishments.

Finally, Dr. Alhusaini discussed the essential application portals that the government of Kuwait is launching for the citizens. They are as follows:

1. Kuwait Mobile ID

2. The Unified Government App –Sahel

3. Meta Platform

The Kuwait Mobile ID or the "National Digital ID" is the digital ID and the "authenticator" for all government applications and can be used now in Kuwait. You can use this ID in every transaction and almost all applications are connected with this digital ID.

Soon the government of Kuwait will launch the "Unified Government App" called "Sahel" where all government services will be presented to citizens through one channel. This application is called "Sahel", which means "Easy" in Arabic. Hopefully, it will provide a very "easy user experience" for all

the citizens and residents.

There is also the Meta Platform, the centralized appointment scheduling for all government entities. This has been launched as part of the plan to "return after COVID and to make sure that health guidelines will be properly observed." Some of the main applications that the government has taken to fight COVID include:

1. Shlonik – An application used to manage home quarantines;
2. Immunity Application – An application being used now to track vaccinations and Polymerase Chain Reaction (PCR).
3. Kuwait Mosafer platform – is now used to manage travel between Kuwait and other countries.

These are the most recent digital transformation and eGovernment projects from the Kuwait government through different government entities.

Sultanate of Oman

ENG. ABDULAZIZ AL KHARUSI

Director General of eServices eGovernment Services, Ministry of Transport, Communications and Information Technology (MTCIT), Sultanate of Oman

"Achieving National Development Priorities through Digital Transformation"

Eng. Abdulaziz Al Kharusi gave a presentation about "Achieving National Development Priorities through Digital Transformation" for the Sultanate of Oman. His presentation discussed the main Strategic Pillars and Oman's achievements and future plans for the next five years. The key Strategic Pillars for Oman to advance in the next five years are:

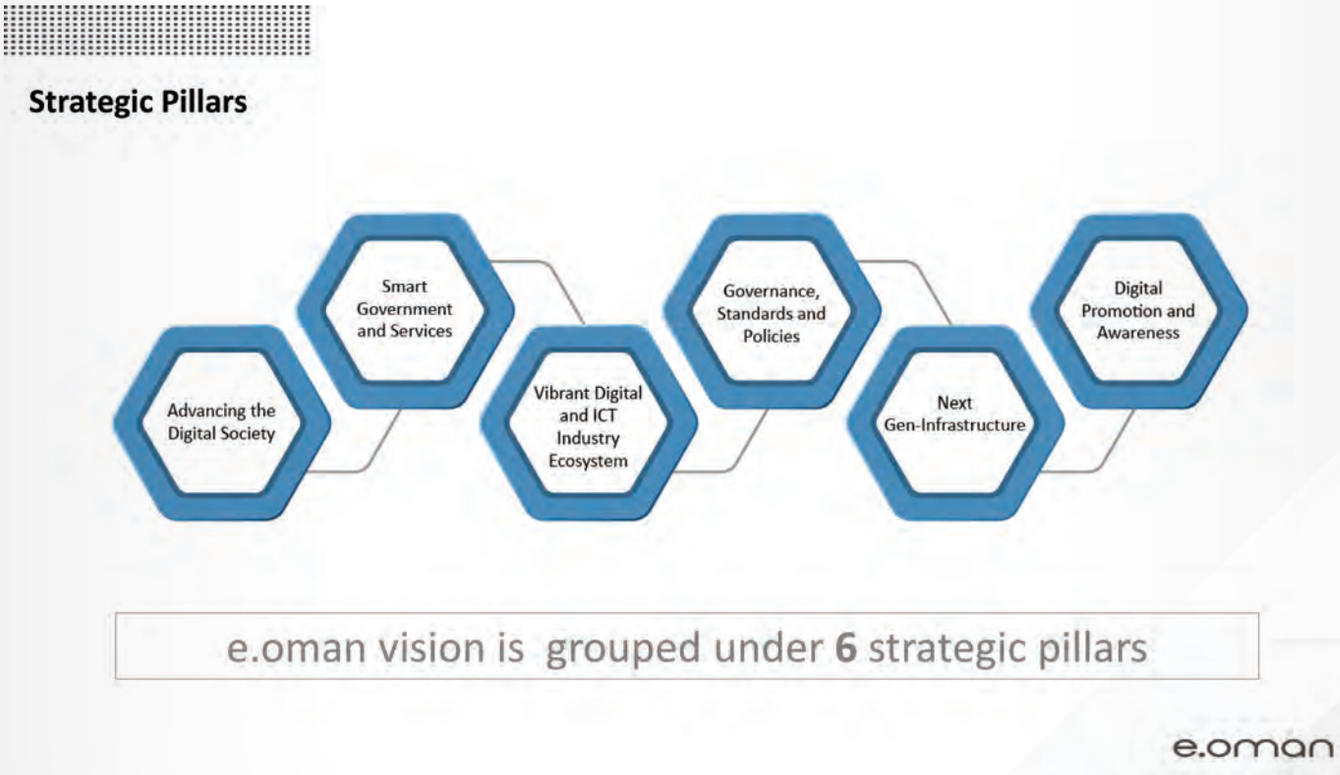


Figure 3.1 Strategic Pillars

A. Advancing the Digital Society

B. Smart Government and Services – includes 2,763 services and 74 government entities; 84% transactional, 13% interactive and 03% informative; manual 20% and Semi and fully automated 80%. Eng. Al Kharusi stated that Oman's target for the next five years is to

wholly automated all services, including the manual (20%) services.

i. Highlights – Online Successful Transactions:

a) Daily Average (Mobile SIM Card) 8,391 transactions –Total (2013-2020) 3,7 million (Transactions via SIM Card)

b) Daily Average (ID Card) 32,200 transactions – Total (2013-2020) 23,321 million (Transactions via ID Card)

c) Other Achievements:

- Improved UN Ranking and has moved to Very High eGovernment Development Index (EGDI) – ranked 50th globally.
- 70+ Monitoring dashboards implemented at various entities to enable
- Data-driven decision making.
- 14+ large scale digital transformation projects at various stages aiming to offer high standard citizen-centric and business-centric services.

C. Vibrant Digital and ICT Industry Ecosystem – Oman has the following: Sas (Arabic word that refers to any solid foundation) Center for Entrepreneurship (76 incubated companies incubated since inception and +500 Omanis employed; Sas Center for Mobile Apps Development (+1,400 Omanis trained in Mobile Apps Development and Sas Center for 4th Industrial Revolution (+600 Omanis trained in virtual reality and 3D programs.

D. Governance, Standards, and Policies

E. Next Gen-Infrastructure:

1. Oman Government Network connects 1254 sites of 77 government entities.

2. National Data Center hosts 40 entities.

3. Digital Certification
   a) 24 million through ID Card
   b) 199 thousand through SIM Card
   c) 102 integrated system

4. Launching a set of national digital projects that support the improvement of the business environment and contribute to strengthening the national economy.

   a) Omanuna Portal

   - Oman's gateway to government eServices
   - A single-entry point to government services, at any time, from anywhere.
   - The portal is hosted by the Ministry of Transport, Communication, and IT.

b) InvestEasy – Business Portal (launched five years ago)

- InvestEasy is a comprehensive suite of e-services designed to provide the business community with a single-window to interact with the government, starting from establishing a new company, licensing activities, and ending with submitting annual reports.
- The initiative is based on the government's national plan of e-Transformation, and the whole execution is wholly based on the whole of the Government model.

F. Digital Promotion and Awareness

Technology and Communications combatting COVID-19 pandemic – The efforts made during the past years towards Sultanate infrastructure and capacity building readiness played a significant role in fighting the effects of the COVID-19 pandemic.

1. Technological Innovation Committee – The committee is headed by the Minister of Transport, Communication and Information Technology (MTCIT).

a) Key Responsibilities:

- Identify priorities and requirements to ensure diversity of initiatives and avoid overlapping.
- Granting funding approvals for the projects and providing them with the necessary support along with strengthening the partnership between the government and private sectors.
- To promote quarantine and social distancing measures and find a unified mechanism to enhance social solidarity.
- To find the best mechanism to improve the competitive advantage of the innovative national technologies, ensuring their continuation in local markets.

2. Business Community

a) Remote Work

- Ensuring business continuity in government entities
- Promoting government readiness and preparing for disaster and emergency situations

b) eLearning

- Ministry of Education Portal
- Sultan Qaboos University Online Study
- Omani online platforms with several learning programs for school, students, specialists, and children

Digital Transformation – Future Plans

Figure 3.2 Oman Vision 2040

1. Oman Vision 2040
2. Strategies in Place
    a) National ICT & 4 IR Strategy
    b) National Innovation Strategy
    c) National Data Strategy
    d) National Satellite Strategy

For Oman's future plans, they are very much aligned with the "Oman 2040 Vision." Oman is now in the process of developing the government digital transformation executive plan 2021-2025 with the aim of contributing to achieving the priorities of Oman 2040 Vision.

He concluded his presentation by thanking His Excellency Mr. Mohammed Al Qaed, Chief Executive of Information & eGovernment Authority of the Kingdom of Bahrain, on behalf of the Minister of Transport, Communication and Information Technology (MTCIT) and the Undersecretary of Communication and Information Technology (IT) of the Sultanate of Oman.

He added that Oman's future plan is to focus more on the top 50 government agencies that are providing more than 80% of services and that they have identified almost 28 sectors that are part of the Oman 2040 Vision. The plan is to rely more on advanced technology such as Blockchain/Distributed Ledgers, smart platforms, 5G, Augmented Reality/Virtual Reality (AR/VR), Smart Cities, Machine Learning, Internet of things (IoT), and Artificial Intelligence (AI).

Kingdom of Saudi Arabia

ENG. ABDULRAHMAN AL MUTAIRI

Vice President of Strategy and Digital Standers at the Digital Government Authority Kingdom of Saudi Arabia

Eng. Abdulrahman Al Mutairi began his speech by saying, “In Saudi Arabia, we anchor our strategy on the quality of life. We make sure that our digital strategy has a direct impact on the quality of life for the citizens. We are focusing more on Vision 2030, and digitalization is the center in every single plan we have in the country.”

This was being enabled by a structured approach and investment strategy as follows:

1. Beneficiaries centric government
2. Smart Public Administration
3. Digitally Capable Ecosystem
4. Sustainable Investment & Operations

Over the last 15 years, the Kingdom has made significant investments into the Digital Transformation of its government and the development of the required capabilities by defining and executing against concrete Action Plans.

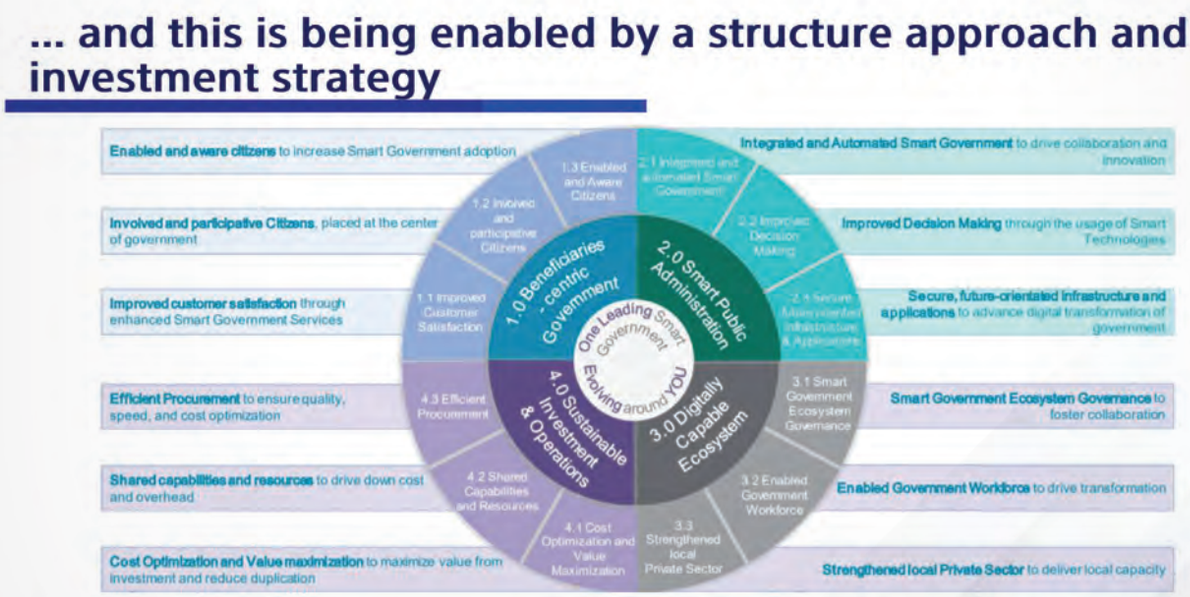


Figure 3.3 Structure Approach and Investment Strategy

Saudi Arabia has made a number of achievements across the entire KSA government as follows:

1. Madrasati – eLearning delivery and management platform
2. Etimad – Government e-Procurement Platform

Figure 3.4 Achievements across the entire KSA Government

Saudi Arabia's digital capabilities had helped them to be more resilient during the COVID-19 pandemic:

1. Leading the nation with the highest number of initiatives during the first months of the pandemic (Quick Government Response and Management)
2. Variety of actions and focus areas
    a. Information Sharing
    b. eParticipation
    c. eHealth
    d. eBusiness
    e. Working and Learning from Home
    f. Digital Policy and Partnerships)
3. Hackathons and competitions to support innovation during pandemic (Hope Hackathon and COVID-19 Saudi Hackathon)
4. Specialized applications and portals (Tawakkalna (COVID-19 KSA) Application and the www.covid19.my.gov.sa portal)

He concluded his presentation by saying that the Kingdom of Saudi Arabia has been recognized globally in multiple ways for their digital transformation vision, investments, and efforts:

Figure 3.5 KSA's Global Recognition

I. Rank 1 – Saudi Arabia is leading the Fifth Generation (5G) countries in terms of network coverage and speed across the globe.

II. Rank 1 – Saudi Arabia is most notable in Doing Business 2020.

III. Rank 1 – Saudi Arabia has won first award by the International Telecommunication Union (ITU) in 2020, for its Women Empowerment Program in Technology.

IV. Rank 22 – Saudi Arabia ranks 1st in the Arab world, 22 globally in Global Artificial Intelligence (AI) Index.

V. Rank 7 – Saudi Arabia ranked 7th globally in the average Mobile Internet speeds.

VI. Rank 1 – Saudi Arabia has been ranked first among 140 nations and G20 countries for its digital competitiveness as it invests heavily in the technology sector.

VII. Rank 9 – Saudi Arabia has made progress in the Global Competitiveness Report (GCR) for the year 2020, as it ranked among the top 10 countries in Digital Skills.

VIII. Rank 43 – Saudi Arabia moved up 9 places in UN eGovernment Development Index (EGDI) in 2020. Kingdom jumped directly into V2 rating class, enhancing its eGovernment services, as well as moving from High to Very High EGDI group.

He thanked the Kingdom of Bahrain for hosting what he described as an "amazing event."

State of Qatar

MS. MASHAEL ALI AL-HAMMADI

Acting Assistant Undersecretary of Government Information Technology, Ministry of Transport and Communications State of Qatar

Ms. Mashael Ali Al-Hammadi started her presentation by saying that it was a great opportunity for Qatar to participate in the workshop to show what the country has done so far with regard to the digital government in Qatar, especially in relation to the last report that had been issued from UNDESA.

She noted that 2020 was a challenging year for everyone due to the COVID-19 pandemic. However, it gave Qatar a "big push" for the ICT Sector, which played a major role during that time. So since last year, Qatar has accomplished its 2020 Strategy and has completed the full program and all the projects under this strategy.

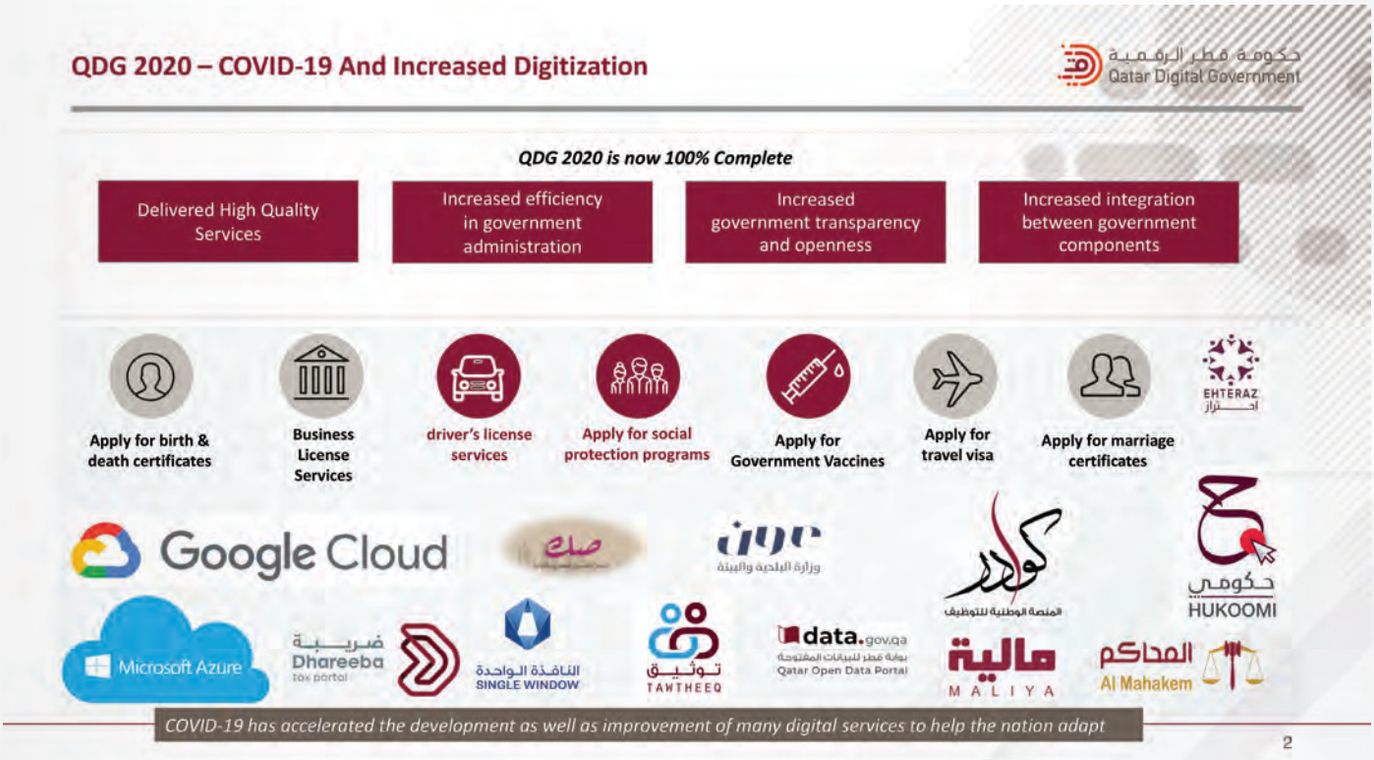


Figure 3.6 Qatar Digital Government (QDG) 2020-COVID-19 and Increased Digitization

Qatar made sure that they had delivered it in "high-quality service, increased efficiency, and increased government transparency and openness, as well as increased integration between government components." During the pandemic, a lot of eServices were pushed and published by Qatar, especially in the Health Sector—they have the "Vaccination Portal" and the "Virtual Consultation Portal," even the eServices enabled citizens to apply for birth and death certificates and other services were available that time.

Also, on the business side, business license services were fully automated and available for citizens, as well as driver's license services. The national address services were also published; application for social protection programs was also launched last year. Court services were enhanced last year, and most of the cases were digitalized. "The Virtual Court" was also launched last year along with the Tax Portal and Open Data Portal. All these achievements were launched and published last year.

Qatar is now working on the "Cloud Solution" and they now have an agreement with the Google Cloud and that the Azure Data Center will be hosted in Qatar as well, along with many other services.

Qatar's achievements on the global scope are as follows:

1. 1- The 1st Globally in Digital Access Rights Index
2. 2- The 2nd among Arabic countries in the Government Services Maturity Index
3. 10- among the first countries to adopt information and communication technology – Global Competitiveness.

Qatar has also joined all of the UN workshops and webinars and fully participated in them.

Figure 3.7 QDG Achievements

Qatar is making sure that all of their projects and initiatives are aligned with the SDGs. Internally, they have come up with the “Digital Government Award” just to encourage the government to provide maximum quality and better-quality services, eServices, to the citizens.

Currently, Qatar is working on a new strategy, the 2026 Strategy, which will mainly focus on adopting new technology and focusing on big data analysis and AI as well.

Ms. Al-Hammadi ended her presentation by thanking the Kingdom of Bahrain and His Excellency Mr. Mohammed Al Qaed for inviting Qatar to the REGE21 Workshop.

United Arab Emirates

MR. ABDELAZIZ ALZAROONI

Team Leader, Cybersecurity Capacity & Business Development aeCERT-TDRA, United Arab Emirates

Mr. Abdelaziz Alzarooni started his speech by saying that during the last decade, the United Arab Emirates (UAE) had built an ecosystem that enabled digital transformation initiatives starting with more government initiatives, the Federal Digital Network, the UAE Digital Identity and the digital signature, in addition to national strategies that embrace new technologies like the National Strategies for AI, Blockchain, 4th Industrial Revolution, among others. But with the situation of the COVID-19 pandemic, a new structure of the UAE government was announced that focused merely on fostering new and emerging technologies to make sure that the UAE was ready for and leading the post COVID era.

Mr. Alzarooni mentioned a quote from H. H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, regarding the restructuring of the government last year that was published on the Twitter account of His Highness stating that the goal is “Creating one digital window for the government and a comprehensive and complete digital transformation while converting 100% of the government services to a unified digital platform within two years.” So this is the focus—to have one digital platform where all the services are there and provide all services actively to the citizens.

In order to achieve that, some restructuring in the government had happened; a Minister of State for Digital Economy, Artificial Intelligence, and Remote Work Application was appointed. Some appointments like the Head of Digital Government and the Head of Cybersecurity for the UAE government were made to enable the next transition of the government.

Figure 3.8 Strategy & Regulations

In addition, a revamping of the Digital Government was being implemented, with the launching of the Digital Government Roadmap 2021-2025 last year and many others supporting digital policies such as:

1. Digital Customer and Digital Government Service Policy
2. Unified Digital Platform Policy
3. Digital Government Enablers Guideline
4. API-First Guideline

With all these regulations and strategies in place, UAE is building on the enablers that they have established with three new main enablers:

- Digital Trust Platform – which enables all the transactions in the government to use and benefit from the Blockchain Technology.
- National CRM – which will be one place for all companies and interactions between the customers and the government.
- Unified Digital Platform - where all the services and smart ads of the government will be unified under one app that provides all the government services proactively.

Figure 3.9 Digital Government Enablers and Designing the Next 50 Years

Mr. Alzarooni ended his presentation by thanking His Excellency Mr. Mohammed Al Qaed and UNDESA for hosting the workshop. Lastly, he mentioned what he described as “the biggest project that the UAE Government is working on which is the “Designing the Next 50 Years” strategy for the UAE through a major public eParticipation project where the government is “listening to all the citizens to design the next 50 years of the UAE. All of the citizens and residents are welcome to join this platform and participate with their ideas. The next 50 years’ strategy road map and initiatives will be built upon this participation that sums up in general what happened in the last two years in the UAE.”

Kingdom of Morocco

MR. MOHAMED FAIÇAL NEBRI

Head of the Strategy, Development Cooperation and Communication Department Moroccan Digital Development Agency (ADD), Kingdom of Morocco

Mr. Mohamed Faiçal Nebri started his speech by discussing what they have been doing in Morocco in terms of digital government.

During the last decade, Morocco had adopted multiple National Strategies and programs for digital development. The last one was in 2020. Indeed, the Moroccan Digital Government Agency, issued guidelines for digital development for 2025 with provisions for digital transformation in Morocco in order to provide positive socio-economic impacts. This National Strategy has permitted great progress for Morocco on structuring projects like several online eGovernment services, improving the competitiveness and productivity of small and medium-sized companies, the development of telecommunications infrastructure. In order to face the COVID pandemic, Morocco has put in place a set of quarantine prevention and precautionary measures aimed at better managing the health, economic and social repercussions of this crisis.

In these exceptional circumstances, digital has proven to be an essential means of ensuring the continuity of services provided and has established itself strongly as a capital technological solution capable of sustaining public and private services. Moreover, he said they could confirm that this year has been a “favorable year” for the digital development of Morocco. As for the eGovernment, Morocco has accelerated the implementation of what they called the “shared digital solution,” allowing the materialization of certain procedures on the one hand, and support of Moroccan administration, and the adoption of remote work. On the other hand, reduction in the physical exchange of documents and administrative papers. This includes the following solutions: digital office order, electronic signature, etc.

In terms of business creation, digital has gained valuable points in the Doing Business Ranking of the World Bank since the Kingdom has gained 7th place, and later to make it to the 53rd place in the world.

Indeed, the Moroccan Ministry of Interior has set up the Regional Center of Investment

Platform, which digitalized the investor journey by offering multiple services, such as information, making appointments, monitoring investments, etc. In terms of the health sector, Morocco has also initiated a set of initiatives like the implementation of the Morocco COVID Exposure Notification Application and the establishment of the official portal, of the vaccination campaign in Morocco, which is on the website of the Ministry of Health, and is updated daily.

In the sector of Education, the Ministry of National Education has implemented a lot of measures to guarantee the continuity of Learning Schools, like the digital platform that helps students study remotely. All these incentives were accomplished at the same time through the evolution of the regulatory framework.

Mr. Nebri concluded his presentation by expressing his deep gratitude to the Information & eGovernment Authority of the Kingdom of Bahrain for inviting Morocco to participate in REGE21 Workshop.

GLOBAL EGOVERNMENT TRENDS AND CASE STUDIES SESSION

Presenters:

DR. THERESA A. PARDO

Associate Vice President for Research, Senior Fellow, Center for Technology in Government (CTG UAlbany); Affiliate, Faculty Information Science Doctoral Program College of Emergency Preparedness Homeland Security and Cybersecurity, University of Albany, United States

Dr. Theresa A. Pardo started her presentation by saying that she was honored to be part of one of the recent eGovernment Expert Workshop and making some contributions to this presentation. She was also “very happy to see the updates from Mr. Aquaro regarding the new improvements and at the same time excited to see some or many of the comments from that Experts Workshop already reflected on the 2020 Plan.”

Then, Dr. Pardo discussed the following:

I. Inputs to improve the 2022 UN eGovernment Survey:

A. Services

i. Availability versus source (National, State/Province, local, web, mobile)

ii. Access to and use of services as a proxy for quality

B. Context-specific (stage-specific?)

i. Different countries are at different stages

a) Change of address not important in China

C. Users are different

i. Businesses still use PCs

ii. Citizens use mobile

D. Enabler-focused assessments

i. Theories of Change

II. A Theory of Change and Enablers

A. A theory of change is an explanation about "how and why the program will work (Weiss, C.H. 1995)

B. A theory of change pre-specifies how some activities will lead to the desired organizational changes and identifies the contextual conditions to do so (Rogers, P.J. and Weiss, C.H. 2007)

C. An enabler is a race that triggers "development towards the better" (Becker, J. et al., 2009)

III. Enabler-Based Models

A. Enabler-based models help decision-makers understand better which actions, resources, and capabilities are more important in moving an organization from one stage to another.

B. Metaphorically, an enabler can be thought of as a maturing agent that helps organizations improve critical capabilities needed to drive performance.

C. Some of the enablers discussed in the literature of digital government are management, institutions, governance networks and collaboration, and technologies.

Lastly, Dr. Pardo discussed the Seven Dimensions of the Digital Government Maturity Model Framework:

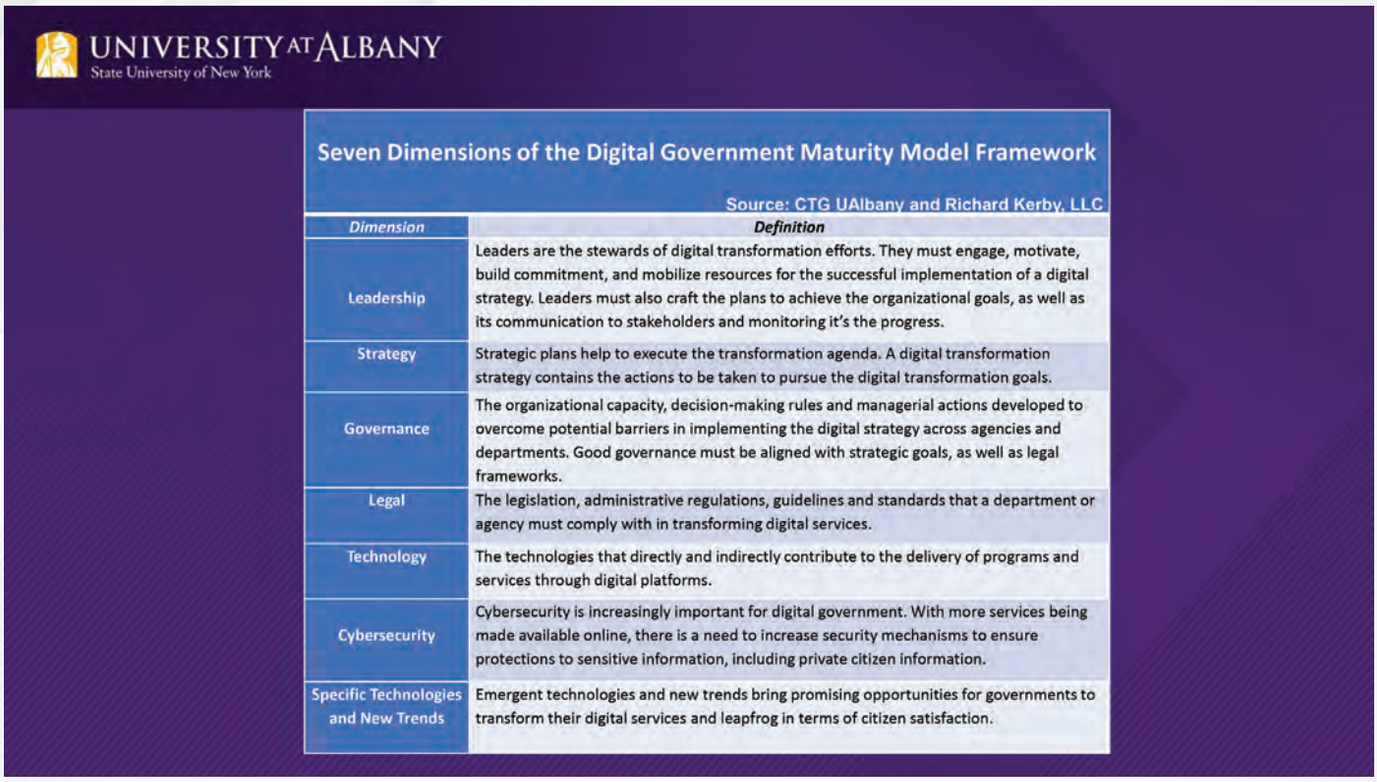


Figure 4. 1 Seven Dimensions of the Digital Government Maturity Model Framework

Seven Dimensions of the Digital Government Maturity Model Framework (Source: CTG UAlbany and Richard Kerby, LLC)

At the end of her presentation, Dr. Pardo thanked the Information & eGovernment Authority (iGA) of Bahrain and, in particular, His Excellency Mohammed Al Qaed and expressed her sincere gratitude for giving her the opportunity to participate in the REGE21 Workshop. She also thanked Mr. Vincenzo Aquaro "for his leadership" in this regard.

DR. DAVID EAVES

Professor and lecturer in Public Policy, Harvard Kennedy School, United States

Dr. David Eaves made a few quick remarks on what he thought were "some North Stars."

He said that over the past years, he had been working with faculty around the world to devise a curriculum to teach the minimum viable knowledge that Public Administrators need to have in order to be effective as public leaders. And if one would go to the website "TeachingPublicService.Digital" that would take him or her to an open-source curriculum that is being adopted by a number of governments.

He stressed that he really wanted to brief the participants in the workshop about what are some of the North Stars that have been emerging, how governments are thinking about digital transformation efforts and how about the impact on what the funding strategy should be.

Dr. Eaves said one of the key things that they were seeing was "traditionally governments' IT have been organized in a kind of vertical silos where the services, the websites, the back-end offerings, where the data is stored all reside within a single ministry and actually often reside in a single service –one system that is doing all the work for provisioning of a passport and what we definitely see emerging, particularly one of the leaders in eGovernment space is actually a separation of that.

There is a "BIG SHIFT" towards breaking apart the data that has been collected, the shared components that are being reused, that could be reused across governments, from the actual services that are being delivered to the citizens from the front end, be that from the websites or from a mobile.

The model below (Figure 4.2) indicates how one could think of a simple version of government, but actually, services rely on a whole bunch of shared infrastructure of which there might be unorthodox sources of data that are being collected just once, rather than by each ministry over and over again, that are being leveraged across all of the government.

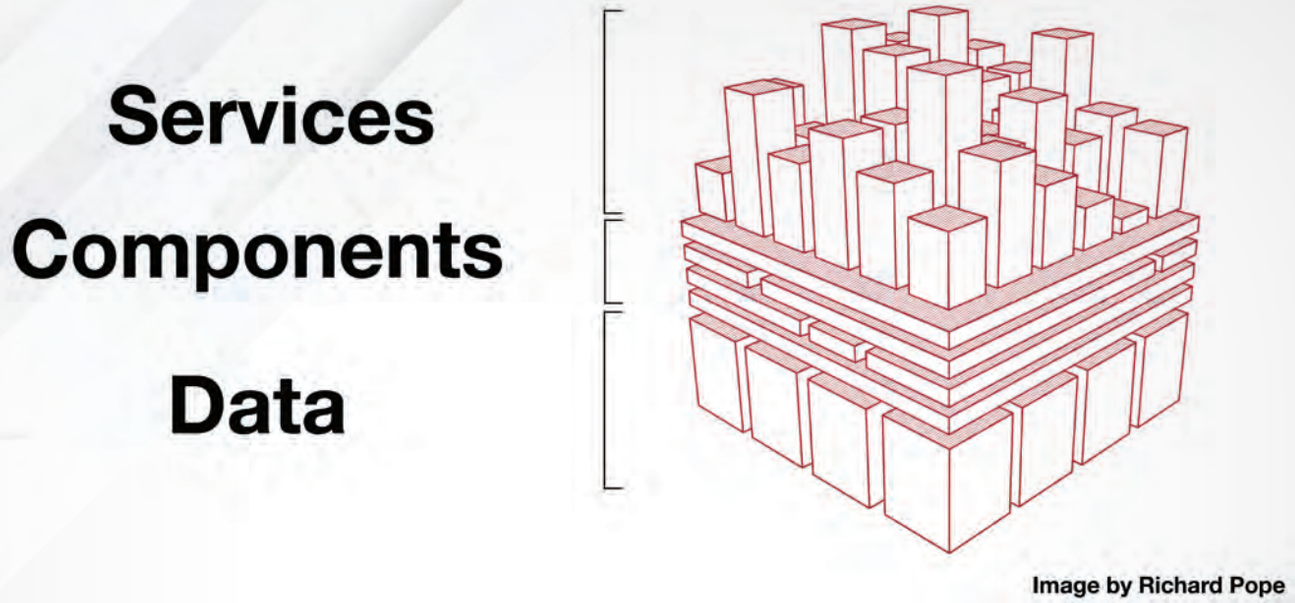


Figure 4.2 Services Components Data

For instance, if one would think about it, it would allow having data that "is the core of the operations of service provision, a stable interface layer, that allows one to connect to that data with service that you can now alter much quicker because they are no longer vertically integrated so you can change the website, you can now update services, and it doesn't necessarily change the way we collect data or the way we charge people for taxes or distribute money into their bank accounts. This is like figuring out this platform approach is absolutely critical for governments, and that's been happening in the private sector" (see Figure 4.3).

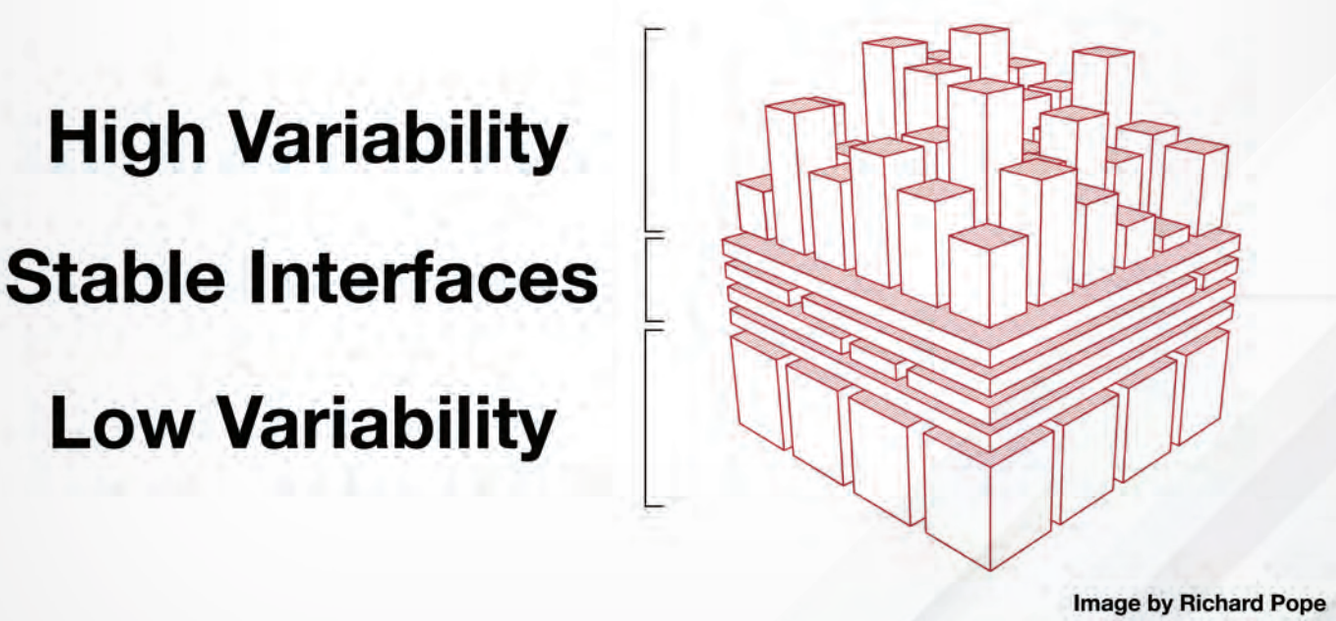


Figure 4.3 High Variability, Stable Interfaces, and Low Variability

He also discussed the following high deliverable services briefly:

1. Get a passport
2. Pay Taxes
3. Find a job
4. Hire a temporary Worker
5. Apply for Employer Insurance
6. Apply for a Student Loan

He added that we might want these very stable components of "how you give money to the government or how the government gives money to you; how do you sign in to service; we want to have those universally available across the entire enterprise." And that has already started.

He noted that it was wonderful to hear the Kuwaiti government to talk about its "Digital ID." This was exactly the kind of core infrastructure that everyone would want to have: to have single sign-on access to every single service across the government and that the "Digital ID" can be used as well as a form of data so that we can have information about our tombstone, our name, where we live, etc., that you do not have to collect repeatedly and you can simply share with another adjacent ministry who provide those various services.

This is the cornerstone for any new effective digital government effort that we are now seeing around the world.

He gave examples of data that are normally collected, such as the following:

1. Digital ID
2. Vehicle Registry
3. Benefits Eligibility Criteria
4. Tax History
5. Healthcare Records.

He posed the question: "What is the single source of truth for these various forms of data that the government can draw on for any service provisioning, not storing it vertically integrated to a single service it offers?"

According to Mr. Eaves, for him, this is the "Big North Star."

And interestingly, from a funding perspective, one might want to think of this as a funded domestically or whether they are doing it for externally.

He also discussed "How Countries Are Digitizing" and gave examples of the different strategies:

1. "Come in High" – What is done here is the focus is on making the website very usable and using that leverage and go and try to figure out how to re-frame the components and create an ID, then ultimately try to figure out how to sort out the data.

2. "Come in Low" – which is first to organize the source of data, create a single source of truth, and then force all the ministries on top of those to then create flexibility on the website and that is the real secret to the X-Road (see Figure 4.4) that they manage to organize all these data and then share it in a secure way.

Figure 4.4 X-Road Land

Land and Expand – Which is where you come in and actually deliver a single service effectively, but you create shared components and use the data as a "source of truth" and expand it to adjacent services.

Shared Components –is where you can come in the middle and just build shared components like what countries Bangladesh and India are doing – they are building their own portals; they are building out a shared identity platform, and they are using that to force all the website on the shared platform to create a common service and using that to try and figure out what are the databases that they can make as single sources of truth.

Lastly, Dr. Eaves mentioned about "Emergent APIs" that he viewed as "some different strategy" that could be followed but that he could not discuss it because he was worried about people just throwing money to digitize service without thinking about the National Strategy that one could have but instead, we would just end up with a whole bunch of new vertically isolated silos that happened to be digital and not a coherent government strategy.

He concluded his presentation by thanking the organizers for giving him an opportunity to speak in the REGE21 Workshop and all the participants for their time and said he hoped that the discussion was "fun and interesting."

IMPACT OF THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) ON THE UN EGOVERNMENT SURVEY BY UN/INTERNATIONAL EXPERTS SESSION

Presenters:

MR. MORTEN MEYERHOFF NIELSEN

United Nations University Operating Unit for Policy-Driven Electronic Governance (UNU-GOV), Denmark

Mr. Morten Meyerhoff Nielsen started his presentation by saying that it was a great opportunity to be able to contribute to the REGE21 Workshop.

He shared with the participants that before he received an invitation to participate in the workshop, he was speaking to Mr. Richard Kerby about "Digital Inclusion" and also about "the current lockdown-the pandemic cemented a number of existing divides but also accelerated the number of pandemic trends.

He then discussed the following key points:

I. Inclusion is more than availability, it is about access, affordability, the traditional and new skills, supporting environment, and not least use (3.5-4 billion still not with reliable Internet or actual users, 2 billion without reliable electricity to power their devices, 2 billion not financially included, I billion without legally valid identities more so without eIDs).

II. Global initiatives are supply orientated (focus on theoretical assessment of technology, traditional skills, and service availability).

III. Data segmentation is required (geography, age, gender, income, and

educational attainment level, etc.) but often just national (e.g., rarely on age, of 10 initiatives and their 310 indicators, only 7 are on users mainly gender).

IV. EDGI Focus on classical tech and educational availability plus importantly on the supply of online service offers especially targeting different segments and increasingly the local level (capital cities). Value contribution, particularly on OSI, LOSI, and EPI but usage a key challenge.

V. Perhaps pilot related to: Open data encouraged for the usage of gov service offers? A new collaborative approach to data collection, with e.g., Telco's or affordability index, or others?

Mr. Nielsen concluded his presentation by thanking the organizers, all the Gulf Cooperation Council (GCC) and Middle East and North Africa (MENA) representatives and colleagues globally.

MS. YOLANDA MARTINEZ

Digital Government and Development Expert, Mexico

Ms. Martinez began her presentation by sharing her recommendations and suggestions for the measurement methodology for the upcoming 2022 Edition and restructured her recommendations on five main areas:

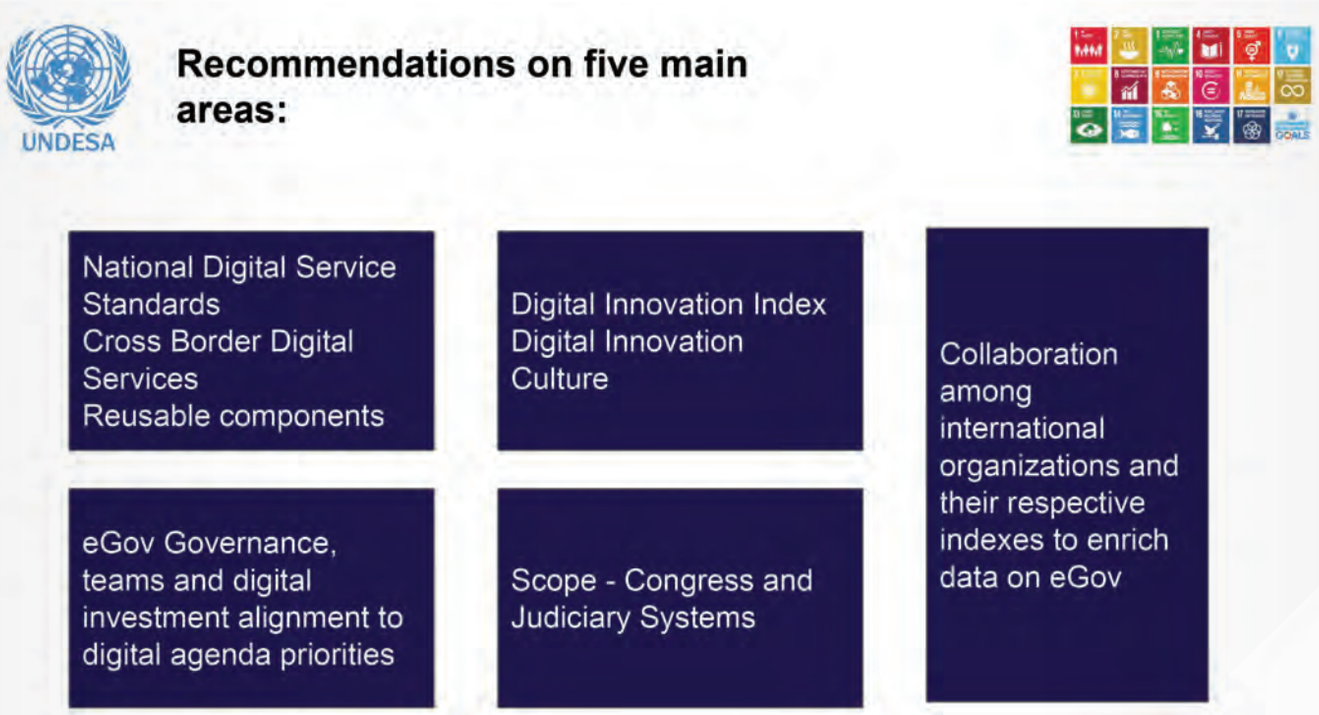


Figure 5.1 Recommendations on Five Main Areas

Ms. Martinez said that first, she would like to recognize the value of eGovernment indicators at the local level since the pilot took place in the 2018 Edition.

When there is no alignment in the procedures, they represented complexity for the citizens and enterprises because they have to deal with different criteria for the user or company identification, different electronic signature standards, redundant requirements to access government services, a situation that definitely affects investments and competitiveness at the local and national levels.

This generated not only “discomfort” but actual “mistrust” in public institutions, given a negative service experience among users. She suggested complementing these measurement exercises at the local level by including questions about how national and central government authorities fostered collaboration with local government authorities to define local government standards that are applied at the national level, create an approach common to all levels of government.

However, this collaboration for national digital service standards was a tremendous challenge. She gave the example of Mexico that required regional agreement among 32 states and more than 2,000 municipalities of local government, like opening up a business and getting certificates online. The technological challenge demands data standards among 32 states and independence in income among states.

Likewise, including questions like using common reusable components that facilitate standardization and digitization of government services and skills is also of relevance as well as the building of common services like Digital ID, signature notification standards, electronic payments, etc.

It would be interesting to see in the survey cross-border digital service standards: how governments are really collaborating to build a reusable thing or item that works among countries and regions that really foster the digital economy and electronic commerce.

The second recommendation is regarding government models and institutional frameworks. It would be a lot of value to know-how the government set up and institutional arrangements within the countries that are participating in the survey, especially what are the policies for aligning digital investments to

digital agenda priorities, etc. Sharing this government structure and how digital teams are set up in the different countries participating in the survey will be of great value.

The third recommendation is gathering data on how eGovernment are encouraging and boosting initiatives to promote digital innovation, cultural exchange, and relationships among all governments, not only in digital areas. Some countries have been launching digital innovation or creating digital networks among the digital ecosystem; thus, having more access to this type of practice will be very useful.

The fourth recommendation is expanding the scope of the index to gather the best practices on Congress and judicial systems. They share the same challenges, not only from the Executive Branch but as a whole of government approach so having this information about state powers is important.

The fifth recommendation is to encourage more and strong collaboration among international organizations to include more variables from other indexes that could complement how eGovernment

measurement is moving ahead.

Ms. Martinez concluded her presentation by thanking His Excellency Mr. Mohammed Al Qaed and all the UNDESA Team for the invitation to participate in the Regional eGovernment Experts Workshop 21 and said that she was “very happy” to participate in the REGE21 Workshop and to collaborate in pilot measurements in the near future.

UN EGOVERNMENT SURVEY MAJOR FINDINGS LOCAL LEVEL EGOVERNMENT SESSION

MR. DENIZ SUSAR

Governance and Public Administration Officer Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), United Nations Department of Economic and Social Affairs (UNDESA)

Mr. Deniz Susar started his presentation by saying that he was pleased with the way the workshop was progressing, and noted that a few speakers before him had mentioned the importance of Local eGovernment. He briefly discussed what the Local eGovernment is and its benefits, as shown in Figure 6.1

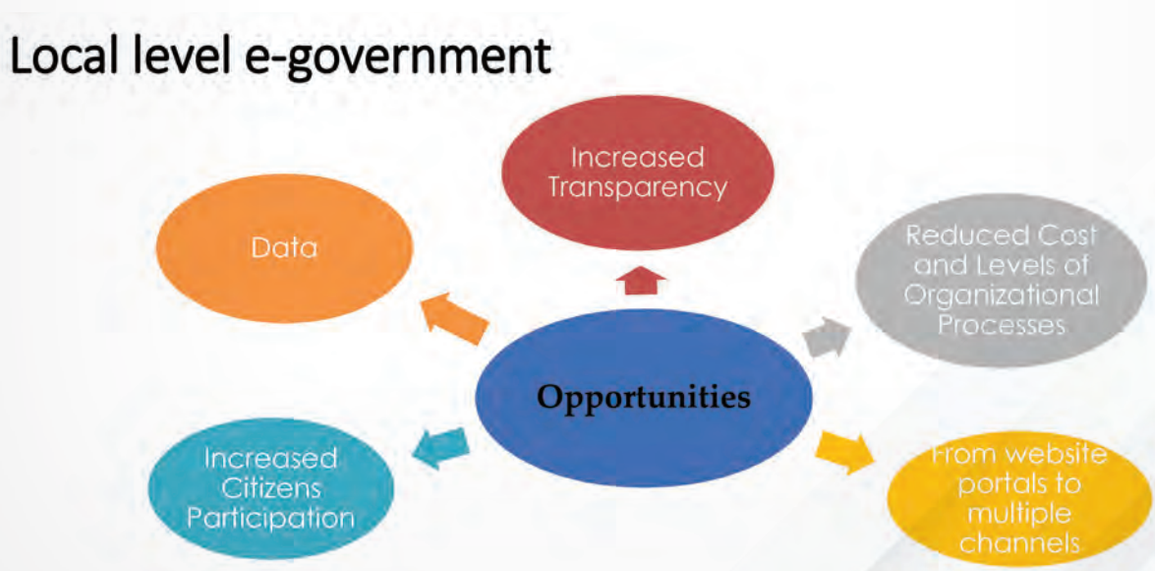


Figure 6.1 Local Level eGovernment and its benefits

He also discussed the following:

Local Online Service Index (LOSI)

1. Municipalities are closer to people more than the national/federal government as it deals with daily activities of citizens.

2. Assessment initiatives specifically designed toward assessing eGovernment development at the local level (assessment of municipality portals) still seem to be at an early stage.

3. Help cities to truly measure their progress, what they have achieved, and where they stand now against a set of clearly defined criteria.

4. Shape-wide agrees ward considers LOSI as a common and acceptable base ground that allows accurate international comparisons among cities as well as easing the process of cities' comparability over time.

5. A motivation for cities to improve their profile and to further develop online public services and also a healthy competition among cities themselves.

LOSI ONLINE SERVICE INDEX (LOSI)

Methodology

The LOSI is composed of 80 indicators.

1. Each indicator is a binary question in the Local Government Online Service Questionnaire (LSQ) – similar to Online Service Index

2. A total of 148 volunteer researchers from 86 countries covering, 41 languages, assessed each city portal (and other related portals as applicable) in the native language.

3. Each city portal was assessed by at least two researchers who conducted the assessment in the country's national language the city belongs to.

In 2020, UNDESA had 80 indicators, but now, they had reviewed the Methodology and the feature, and they increased it to 87 indicators now. They will do the same assessment for the National Portal, with at least two researchers assessing the ministry portal. In 2022, UNDESA will cover all the member states.

He noted that he had seen misinformation—UNDESA is not looking at capital cities—but they are looking at the largest city in each country. In 2020, UNDESA was able to look at 100 cåities, and 86 of them had portals (14% did not have any portal) (see Figure 6.2).

Figure 6.2 Survey results of Cities with Portals

He also showed slides of Top Performers with regard to LOSI (See Figures 6.3 & 6.4)

Top performers

CITY	LOSI Score	LOSI	LOSI Rank	LOSI Level	Country	Region
Madrid	77	0.9625	1	Very High LOSI	Spain	Europe
New York	73	0.9125	2	Very High LOSI	United States of America	Americas
Tallinn	69	0.8625	3	Very High LOSI	Estonia	Europe
Paris	68	0.85	4	Very High LOSI	France	Europe
Stockholm	68	0.85	4	Very High LOSI	Sweden	Europe
Moscow	65	0.8125	6	Very High LOSI	Russian Federation	Europe
Bogota	64	0.8	7	Very High LOSI	Colombia	Americas
Buenos Aires	64	0.8	7	Very High LOSI	Argentina	Americas
Berlin	62	0.775	9	Very High LOSI	Germany	Europe
Seoul	62	0.775	9	Very High LOSI	Republic of Korea	Asia
Shanghai	62	0.775	9	Very High LOSI	China	Asia
Istanbul	61	0.7625	12	Very High LOSI	Turkey	Asia

Figure 6.3 Top Performers in LOSI

Cities from the region

Dubai	Asia	0.725	16	High	LOSI	United Arab Emirates	Asia
Riyadh	Asia	0.4875	31	Middle	LOSI	Saudi Araba	Asia
Tunis	Africa	0.4125	40	Middle	LOSI	Tunisia	Africa
Amman	Asia	0.3875	47	Middle	LOSI	Jordan	Asia
Cairo	Africa	0.35	50	Middle	LOSI	Egypt	Africa
Casablanca	Africa	0.3	54	Middle	LOSI	Morocco	Africa
Algiers	Africa	0.2875	56	Middle	LOSI	Algeria	Africa
Baghdad	Asia	0.175	72	Low	LOSI	Iraq	Asia
Damascus	Asia	0.1375	77	Low	LOSI	Syrian Arab Republic	Asia

Figure 6.4 Cities from the Region

If you look at the region, you will see the high-ranking cities, but Manama was not yet included because UNDESA did not have the resources to assess it but according to Mr. Susar, UNDESA will include it in the 2022 survey. He added that UNDESA also looked at Smart Cities and seen many innovations from the cities they assessed such as shown in Figures 6.5, 6.6 and 6.7.

Mr. Susar concluded his presentation by thanking His Excellency Mr. Mohammed Al Qaed, Chief Executive of Information & eGovernment Authority, for hosting and organizing the REGE21 Workshop. He also thanked UNDESA and the moderators of the workshop.

Box 4.2 Dubai: Rammas chatbot

The Dubai Electricity and Water Authority (DEWA) is the first government organization in the emirate to use AI for direct, real-time interaction with customers. In 2017, DEWA launched Rammas, an online chatbot that can communicate with customers and respond to their queries in both Arabic and English. This initiative aims to reduce the number of visitors to DEWA offices by 80 per cent and to further encourage the use of smart channels to support the Smart Dubai initiative. It also supports the efforts of DEWA to enhance the use of AI in alignment with its vision to become an innovative—and more sustainably operated—world-class utility.

Available through the DEWA smart application, Rammas acts as a virtual employee that is available around the clock. "Rammas responds to customers instantly while continuing to learn and understand their needs based on their enquiries. Rammas … analyses these enquiries based on available data and information and takes action to accurately answer and streamline transactions with ease".

Sources: Dubai Electricity and Water Authority website (https://www.dewa.gov.ae/en/about-us/dewa-digital-journey/rammas); the Rammas chatbot is available at https://www.dewa.gov.ae/en/rammas.

Figure 6.5 Box 4.2 Dubai: Rammas Chatbot

Box 4.3 Amman: e-tenders platform

In 2019, the Greater Amman Municipality launched an updated e-tenders platform that lists all local and international procurement opportunities and bid applications for municipal projects/ contracts. The platform aims to manage and control the procedures governing tenders with full transparency and to provide bidders with fair and equal opportunities.

All municipal tenders are now submitted electronically and are broadcast during opening sessions and archiving sessions of the Tendering and Procurement Directorate. All information regarding the tenders is published on the website, including announcements and annexes, results of opening tenders, results of prior tenders, technical qualifications of bidders, and appointment decisions. Bidders or their representatives are allowed to attend the public bid opening sessions held by the Directorate.

Sources: Greater Amman Municipality (http://www.gamtenders.gov.jo/).

Figure 6.6 Box 4.3 Amman: e-tenders Platform

Box 4.4 Casablanca: Casa Store

In 2018, the city of Casablanca launched the Casa Store portal, a mobile and web application store that incorporates mobile applications and websites relating to the city of Casablanca. This platform is designed to promote interaction and participation and actively facilitates the engagement of residents in the development of their city.

People have access to a wide range of information and services through the portal; for example, they can pay taxes (income tax, business tax and VAT), obtain real-time information (including the latest updates) from the website of the Ministry of Justice of Morocco, browse the open data portal of the city of Casablanca, and apply for government vacancies.

The Casa Store can be accessed by three types of users: visitors, Casa Store users, and developers. Visitors are not required to sign in; however, their activities are limited to searching and viewing the content of the applications. Casa Store users, who are generally local residents, can participate in various activities within the platform and evaluate the content. The third type of users are the developers, who enjoy the same access as the Casa Store users and can also suggest new applications and upload them to the platform.

Sources: Ville de Casablanca (http://www.casastore.ma).

Figure 6.7. Box 4.4 Casablanca: Casa Store

Conclusion

1. The 2020 findings reinforced the previous findings of the LOSI 2018 that the performance of city/local government portals did not usually match that of its country.

2. The average LOSI for all the cities assessed in the current study is 0.43 that the majority of the city portals have a long way to implement various features.

3. Cities belonging to low-income level countries also rank low in this pilot assessment.

4. The content provision criterion is the highest addressed by the city portals as the majority of cities have satisfied most of the content provision indicators that cities are focusing on offering adequate content and improving the usability of their websites with less concentration on providing e-services and boosting citizen participation.

5. The service provision criterion scored the lowest as more than half the cities studied had implemented only 21 per cent of the service criterion's 25 indicators.

a. Even for simple services such as providing an email account to contact government officials, it is noted that the majority of cities lacked this feature.

6. The majority of the city portals assessed do not meet various technology standards and guidelines, such as Web Content Accessibility Guidelines (WCAG1.0) and World Wide Web Consortium (W3C).

a. However, it is noted that nearly all city portals are accessible through mobile devices, which confirms the recent spread of mobile technologies and city portals' adoption of such.

7. The majority of city portals assessed depend heavily on various social media networks to connect with the general public.

a. Very few portals offer online participation mechanisms and tools such as e-polls, eforums, chats, blogs, and e-petition to support decision-making in local government.

8. The findings call for the establishment of a shared vision of local eGovernment projects, which should involve all the relevant stakeholders including people, the private sector, governments, non-government organizations, and international organizations.

9. Local eGovernment development needs to be people-driven instead of technology-driven.

a. Most importantly, local eGovernment initiatives, particularly new technologies, must be designed to benefit everyone and leave no one behind, especially women, people with disabilities, refugees, visitors, and those in the low-income brackets.

10. Small and Medium Enterprises (SMEs) should be incentivized to support innovation for local eGovernment projects and make them critical partners in developing and delivering smart city projects.

11. There is also a need to support more collaboration among cities, especially in the area of new technologies usually labeled as smart city initiatives.

a. Collaboration is needed to reap benefits and share lessons learned from cities that have successfully implemented similar projects with those that are still finding the right solutions to address their own challenges.

DR. NIBAL IDLEBI

Chief of Innovation Section UN-Economic and Social Commission for Western Asia (ESCWA)

Dr. Nibal Idlebi started her presentation by expressing her satisfaction about how the workshop and the discussion about the Gulf Cooperation Council (GCC) was going well and how she particularly appreciated the talks regarding the GCC.

Dr. Idlebi said that she would like to shed light about the Arab region, not necessarily the GCC, since the latter had shown excellent and the best practices in the region. GCC is leading not only in eGovernment development but in other factors as well.

She discussed the "Challenges in the Arab region" as follows:

Challenges in the Arab region:

1. ICT infrastructure: broadband penetration, affordability and main gaps affecting inclusiveness: gender gap, rural versus urban connectivity, regional connectivity

a. ICT skills among citizen and government employees

b. Security and privacy

c. Online government services: spread, usage, and citizen-centric

d. Open data

2. Proposals for enhancing the Methodology of eGovernment survey

Infrastructure is one of the major challenges in many countries especially in the Arab region because these countries have lost their infrastructure due to war or during war in the past years. Another challenge facing the Arab region is "Broadband Penetration," specifically in terms of the 4G, which is still lagging behind. In the Arab region, the average rate is about 62% while the world average is 87%.

Aside from infrastructure, affordability is another big issue in the Arab region. She expressed her satisfaction to see that the Telecommunication Infrastructure Index (TII) in the new Methodology has captured affordability.

In addition, she stated that we have witnessed in the Arab region disparity rural and urban areas in terms of infrastructure spread and this affects for sure the eGovernment services and all the services related to citizens. There is disparity between male and female (gender gap) as both of them do not have the same access rate to the Internet in the Arab region today.

In some countries, not the GCC necessarily the disparity is increasing rather than decreasing in terms of gender accessibility when it comes to the Internet.

Another important aspect that she discussed was “Cybersecurity.” Among the services in the Arab region and almost all countries, there are still the issues of Cybersecurity, Privacy Issue and Personal Data Protection Law.

The Arab countries have made a lot of progress especially GCC in terms of legislation and its enforcement. ESCWA believes that more efforts need to be done at the software and eGovernment services development in order to protect eServices and data, especially nowadays with the emerging trends and new technologies such as AI, Big Data and the Internet of Things (IoT) that generate a lot of data.

However, there are still a lot to do to ensure personal data protection as well as privacy. In terms of capacity building, some of the member countries mentioned that Information and Communications Technology (ICT) capability needs to be enhanced for citizens, as well as for government employees because with the advance of technology, the government employee should be up-to-date with the use of new technology especially nowadays like the Open Data.

On the other hand, Open Data is now widely spread in many Arab countries, and many of them have Open Data Portal. In the eGovernment Development Index (EGDI), they have noticed that many countries in the Arab region are having a good ranking. In this regard, she suggested to include some aspects related to Open Data, related to data such as its usage and impact on Open Data.

Dr. Idlebi concluded her presentation by thanking the Information & eGovernment Authority (iGA) especially its Chief Executive His Excellency Mr. Mohammed Al Qaed for inviting the Economic and Social Commission for Western Asia (ESCWA) in the workshop. She also thanked UNDESA “for all their efforts in the UN eGovernment Survey.”

ALL WORKSHOP PARTICIPANTS ROUNDTABLE DISCUSSION AND WRAP UP SESSION- UN EGOVERNMENT SURVEY FINDINGS

The Roundtable Discussion revolved around milestones, challenges and provocative prophecies in the coming years for countries around the world with regard to the digital government transformation journey. Three points were put on the table for discussion as follows for all participants:

1. How easy is it for citizens to interact digitally with their government, and how much the pandemic accelerated the transformation?
2. How can countries move higher at the digital ranking indices?
3. What are the cultural challenges that need to be addressed to develop an engaging digital user experience?

FEEDBACK FROM THE PLENARY SESSIONS

No.	Name and Details	Points raised during the Plenary Session
1	**Mr. Richard Mikhael, Idemia**	• All the countries in the virtual workshop have launched their eGovernment Initiatives few years back and have one common factor which is reliable data bases using biometrics. • Biometrics is the most secure form for identifying people. • When citizens and residents wanted to use eGovernment Services there was a challenge of creating confidence, sharing personal data on the net. • The use of Biometrics would help people to be more confident in sharing their information. • There are different approaches in implementing eGovernment and Idemia has provided different ways of implementing it and helping, including biometrics and eGovernment Digital ID whether it is systembased, document-based or device-based.
2	**Mr. Mohammed Sear, EY, Dubai**	• Reflected on how resilient the region is from his own perspective as someone who came from outside the region. • How one finds the whole infrastructure and service delivery in reality from the citizen's point of view or perspective • Identification and other components that have been built in the last 10 to 15 years in the region, the infrastructure layers had made it more resilient to deal with Covid-19 • The shift that is taking place in the region and other places is moving away from technology led first approach to experience led first approach. • Introduction of life or event moments or life experience are driving governments to want to give to the citizens and then enable it through technology. The region is embracing it well. • Clarification on life events, life moments as they can be interpreted in different ways • Cultural challenge and how he looked at culture
3	**Mr. Morten Meyerhoff Nielsen** UNU-EGOV, Denmark	• Mentioned multiple strategies in the GCC and Mena Report that reflects different handles and about cross government. • Looking from the outcome of user's experience rather than from internal business process • Breaking down the silos like what Mr. David Eaves had mentioned earlier. • About looking at web accessibility and design standards as a common frame and it does not matter how fast the ships of the government sail as long as they are going in the same direction.

		• The key challenge is not the strategy on paper but the actual implementation of it. We see that all governments are challenged by that, no matter how advanced and how long they have been using technology. • Research they just finished with UNESCO on the impact on children and youth of digital transformation of services
4	**Mr. Vincenzo Aquaro** Chief, Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), United Nations Department of Economic and Social Affairs (UNDESA), United States	• Reinforced what Mr. Mohammed Sear had said regarding life experience and on service provision. • What is needed for the users and what is the user's perspective. We need to integrate 6-7 different agencies or ministries – if the services are available online and can be fully processed online or through mobile. • We always say it is not about the ranking in the survey. We are trying to move away from the rankings and move on to countries that are more similar in terms of digital development. • It is more effective if countries can exchange experience and can take advantage of their similarities and even co-produce and use the services together. • Reinforced what Ms. Yolanda Martinez had said about the importance of cross-border collaboration because we need to work as much as possible in a partnership with different groups of countries, grouping based on similarities but also geographical and political.
5	**Eng. Abdulrahman Al Mutairi** Vice President of Strategy and Digital Standers in the Digital Government Authority, Kingdom of Saudi Arabia	• Talked about Citizen-centric services • The requirements and expectations of the citizens are always changing • When you design services, you need to have a shorter period of time to take opinion, etc. • Before Covid-19, the expectations of the citizens were different Can see that Institution framework and strategy are playing a great role, as well as energy and passion in improving the value of technology • We need to make sure that the proper and standard processes can provide effective services in the near future
6	**Ms. Yolanda Martinez** Digital Government and Development Expert, Mexico	• How to gather skills to start working on all these testing- to reach out to different types of technologies or incorporate different types of technologies just like the voice recognition that implies technical expertise • Gave example of Hackathons to gather expertise from high level companies to help one design the new generation of digital services

7	**H.E. Mr. Mohammed Al Qaed** Chief Executive of Information & eGovernment Authority (iGA) Kingdom of Bahrain (Closing Remarks)	• Reinforced the statements of Mr. Vincenzo Aquaro that the report is "not a tool for measurement" but is a "tool for development" • REGE Workshop is about countries helping each other and sharing experiences to one another • This is why GCC collaborate with one another and has a committee with a strategy, as well as many services are there; sharing experiences and the best practices • GCC jumped up in the report not because of the ranking but because of sharing experiences with one another • When countries work together, it is for the betterment of the region • Trends and achievements – it is not to show off but to give the directions the countries are going in order to be considered in the report • The GCC is doing many good things so it is good to listen to and learn from their experiences • Usage is very important but it is not always about technology • Importance of reusability and sharing experiences and common services • Data structure is very important and how the data is organized, source of truth and whether the data are properly structured to provide the best government services • Taking the government into the level of being more responsive to the citizens without a lot of complaints and to provide equality of service • LOSI is a kind of index that is good to have but what would happen to countries that are so small, similar to Bahrain? Is it going to have a negative effect on the survey? Are we going to consider that in the survey?

SUMMARY OF THE ROUNDTABLE DISCUSSION:

Moderator:

MR. ABDULLA AL HAMED

Managing Partner, INTERMID

Mr. Abdulla Al Hamed summarized all the inputs provided by the participants in the Roundtable discussions to answer the three questions:

1. **How easy is it for citizens to interact digitally with their government and how much the pandemic accelerated the transformation?**

Participants in the Roundtable Discussion were in unison that services and interaction with the local government have become more accessible to the citizens in the present pandemic times due to the digital government transformation that provides a more efficient and direct link between the government and its people. It is the government's responsibility to address the concerns affecting people's daily lives. Now it is easier for citizens to file documents, get a passport, and apply for licenses, etc., online, which saves time, money and effort for both sides.

As a result of COVID-19, governments in the region and worldwide have no choice but to keep up with the eGovernment developments to address the needs of their citizens in the fastest, most efficient and practical way. The GCC and Arab regions have always been among the top digital cities/countries in the world. They have made tremendous strides in digital transformation in the last 10 to 15 years, with the infrastructure layers strongly adopted and implemented made them more resilient to deal with Covid-19. The critical challenge is not the strategy on paper but the actual implementation of it. All governments are challenged by that, no matter how

advanced and how long they have been using technology.

2. **How can countries move higher at the digital ranking indices?**

The general consensus is that it is not about the ranking in the survey. It is crucial to move away from the rankings and move on to countries that are more similar in terms of digital development. It is more effective if countries could exchange experience and take advantage of their similarities and even co-produce and use the services together. Emphasis is placed on the importance of cross-border collaboration because there is an urgent need to work as much as possible in a partnership with different groups of countries, grouping based on similarities but also geographical and political. For example, the Gulf Cooperation Council (GCC) jumped up in the report not because of the ranking but because of sharing experiences with one another. When countries work together, it is for the betterment of the region.

3. **What are the cultural challenges that need to be addressed to develop an engaging digital user experience?**

The collective view is that it is crucial to gather skills to start working and reach out to different types of technologies or incorporate different kinds of technologies, just like the voice recognition that implies technical expertise, in order to provide an engaging digital user experience. The GCC and the Arab regions have accomplished a lot in terms of digital transformation, so it is good to listen to them and learn from their experiences. Usage is significant, but it is not always about technology. The importance of reusability and sharing experiences and standard services are given emphasis. The data structure is critical and how the data is organized, being the source of truth and whether the data are appropriately structured to provide the best government services and engaging user experience. Taking the government to the level of being more responsive to the citizens without any complaints and providing equality of service. The requirements and expectations of the citizens are constantly changing. Before Covid-19, the expectations of the citizens were different. In the current pandemic situation, we can see that Institution framework and strategy and energy and passion in improving the value of technology are playing a great role in providing effective services to the citizens and addressing the cultural challenges more efficiently and systematically.

RECOMMENDATIONS FOR THE 2022 EGOVERNMENT SURVEY

REGE21 was an online workshop aimed to better understand the purpose of the UN eGovernment Survey and also allowed some Arabic countries the opportunity to provide inputs, feedback, and recommendations to the United Nations. REGE21 focused on identifying ways to improve the UN eGovernment Survey's methodology, e-services, digital indicators, and how to effectively utilize them in the future by all member states. The following are the recommendations based on the outcome of the REGE21 Workshop for the 2022 eGovernment Survey:

- Local Online Service Index (LOSI) to include one city for each UN Member State and the scores should be integrated into the Online Service Index (OSI), similar to e-participation and open government data. It will still maintain its own index, similar to e-participation and open government data.
- OSI to receive a high weight than Human Capital Index (HCI).
- HCI to increase the number of indicators.
- The full questionnaire to be published in the methodology section of the report.
- The use of emerging technologies, such as: artificial intelligence, drones, data analytics, 3D printing, gamification, and the Internet of Things (IoT) should be given greater importance.
- The Member State Questionnaire (MSQ) should indicate if a new sector will be assessed in the upcoming survey by requesting that URL.
- New e-services should be added to the survey to give it a fresher look.
- Governments should have a Sustainable Development Goal (SDG) webpage to show their respective progress in meeting the SDG challenges that they set for themselves.
- Open Data should be given more importance in terms of usage of data, quality of data, amount of data, and data segmentation.
- Assess collaboration between federal/ central and local government.
- Affordability should be added to the Telecommunications Infrastructure Index.
- The survey should include and assess more regional cross-border initiatives, such as the integration of e-gate in the GCC.

APPENDICES

A. About the Speakers

B. Workshop Sessions

APPENDIX A

ABOUT THE SPEAKERS

UNITED NATIONS & INTERNATIONAL EXPERTS

H.E. MR.VINCENZO AQUARO

Mr. Vincenzo Aquaro is currently the Chief of the Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), of the United Nations Department of Economic and Social Affairs (UNDESA) in the United States.

He has more than 25 years of experience in Information and Communications Technology (ICT) and has been working with the private sector and international organizations for many years.

His expertise includes Artificial Intelligence (AI), Digital Government, ICT for sustainable development and innovation, Technical Cooperation, International Relations, Management, and Policy Analysis. He holds a Master Degree (Laurea Magistrale) in Electronic Engineering from the University of Bari, Italy.

Since 2014, Mr. Aquaro has been the Chief Editor of the United Nations Flagship publication “EGovernment Survey” and Coordinator of the UN eGovernment Survey task force.

DR. THERESA A. PARDO

Theresa A. Pardo, PhD is Associate Vice President for Research; Senior Fellow, Center Technology in Government (CTG UAlbany); Affiliate Faculty Information Science Doctoral Program College of Emergency Preparedness Homeland Security and Cybersecurity at the University of Albany in the United States.

Under her leadership, CTG UAlbany, an applied research institute, works with multi-sector and multi-disciplinary teams from the U.S. and worldwide to carry out applied research and problem-solving projects focused on digital transformation, service innovation and value creation in the public sector.

Dr. Pardo is a recipient of the Digital Government Society's Distinguished Service Award, the University at Albany's Distinguished Alumni Award, the University at Albany's Excellence in Teaching Award, and the Rockefeller College Distinguished Service Award. She holds a Ph.D. in Information Science from the University at Albany, SUNY.

DR. DAVID EAVES

Dr. David Eaves is a Professor and Lecturer at the Harvard Kennedy School Cambridge in Massachusetts, United States.

His specialties include Negotiation, Relationship Management, Scope Management, Conflict Management, Strategy, Public Policy, Future of Government and Policy Development, Open Government, Open Data, Foreign Policy, Open Source Community Management and Leadership.

He is a Lecturer and Research Fellow in the Science, Technology and Public Policy Program (STPP) at the Belfer Center for Science and International Affairs at the Kennedy School of Government at Harvard University.

He is also an Adjunct Lecturer in Public Policy at the Kennedy School and teaches Technology, Policy and Government, leading technology and government. An expert in collaboration, technology, strategy and public policy, Dr. Eaves is regularly invited to speak to organizations and companies.

MR. MORTEN MEYERHOFF NIELSEN

Mr. Morten Meyerhoff Nielsen is an EGOV Advisor at Operating Unit on Policy-Driven Electronic Governance at UNU-EGOV, from Denmark. His focus includes ICT facilitated administrative burden reduction, public service delivery, online usability and personalization, public service delivery ecosystems and one-stop-portal design and usability tests.

His other work includes development and evaluation (Armenia, Albania, Faroe Islands, Dubai, Georgia, Indonesia, Latvia, MENA region), institutional frameworks and performance management (Armenia, Albania, Faroe Islands, Latvia, Oman, Uganda). Other expertise in data reuse, eID management and PKI infrastructure and personalization of eServices (Armenia, Denmark, Faroe Islands, Latvia, US, Saudi Arabia).

His areas of expertise include Project management and coordination, presentation skills; Evaluation of ICT projects and online services, analysis and comparative eGovernment; Performance management, key performance indicators and tools; Citizen portal functionality and structure/architecture; User-friendly and personalized service provision online; eInclusion/eParticipation and participatory design; Web2.0/social media use in public administrations; Open data and reuse of content, functionalities and components; ICT and interoperability among others.

Mr. Nielsen regularly conducts executive and university course training on eGovernment issues, the digital transformation of service production and delivery, disruptive technologies, innovation, smart nations, cities and communities and social media related issues in Europe, the Middle East and beyond.

MS. YOLANDA MARTINEZ

Ms. Yolanda Martinez is a Digital Government and Development Expert, passionate about public sector innovation, digital inclusion, govtech, the convergence of emerging technologies for social good, girls and women in tech. She is currently based in M xico but works globally. She has extensive experience in digital development, digital government, open data, and digital skills.

Ms. Martinez led multiple interdisciplinary teams for digital service design and delivery at the local, federal and international levels. She is a senior digital transformation advisor/consultant for public, private, and international organizations.

Ms. Martinez worked closely with the United Nations Development Program (UNDP) policy makers to develop an e-business model to support sustainable community businesses in countries located in the Equatorial belt. She also collaborated with the UNDP policy makers to develop a Toolkit (strategy guidelines, index of knowledge management databases, impact calculation templates) for UNDP support to South-South Cooperation (SSC). Created an internal website to publish the toolkit for review.

She was also involved in institutional capacity assessment, strategy design, and performance measurement in South-South Cooperation initiatives; gathered qualitative and quantitative data to analyze SSC trends and planned UNDP Policy Positions.

MR. DENIZ SUSAR

Mr. Deniz Susar is a Governance and Public Administration Officer at the Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), of the United Nations Department of Economic and Social Affairs (UNDESA).

Mr. Susar's main work areas include digital government and preparation of the biannual UNDESA flagship publication 'United Nations EGovernment Survey.'

He also supports the Internet Governance Forum (IGF). His research areas include e-government, open government, citizen engagement, internet governance, artificial intelligence and other frontier technologies and open government data.

Mr. Susar holds a Master Degree in International Political Economy and Development from Fordham University, New York, United States and a Computer Engineering degree from the Bosphorus University of Istanbul, Turkey.

DR. NIBAL IDLEBI

Dr. Nibal Idlebi is the Chief of the Innovation Section at the United Nations-Economic and Social Commission for Western Asia (UNESCWA). She is working on innovation policy, strategies and ecosystem for building a knowledge-based economy; and promoting innovation in the public and private sectors to enhance productivity and improve competitiveness.

Dr. Idlebi is also working on policy and strategies for fostering emerging technologies and innovation in sustainable development. Additionally, she is very active in innovation and entrepreneurship, focusing on the ecosystem and creating job opportunities, especially for youth and women in the Arab region.

Based on her experience in the digital government domain, Dr. Idlebi is currently working on open government and innovation in the public sector. Since 2017, she is leading an initiative in the Arab region on "Fostering Open and Innovative Government in the Arab region".

Dr. Idlebi is supervising the preparation of substantive reports, the organization of expert group meetings and workshops to harness technology and innovation to realise the 2030 Development Agenda and the World Summit of Information Society (WSIS+10) in the Arab region. She also represents ESCWA in regional and international conferences related to STI for sustainable development.

GULF COOPERATION COUNCIL (GCC) & ARAB EGOVERNMENT LEADERS

H.E. MS. HAYA AL WADANI

H.E. Ms. Haya Al Wadani is the Director-General of the Central Agency for Information Technology (CAIT) in the State of Kuwait.

She holds a Master's degree in Accounting and Finance from the University of Applied Sciences in the Kingdom of Bahrain in 2012 and a Bachelor's degree in Business Administration from Kuwait University in Kuwait in 1994.

Ms. Al Wadani's responsibilities as Director-General in CAIT include managing the agency's administrative, financial and technical affairs and submitting an annual general report on the agency's work.

She is also responsible for determining the competencies of his deputies; coordination of all work of information technology plans among government agencies; development and management of methodologies, standards and patterns necessary for information technology systems, devices and services; establishment and management of the official electronic portal of the state; training of public technical human cadres in the field and technology industry in the country and development of their capabilities in this field; public awareness of information technology and its uses at all segments of society, studying and expressing an opinion on the technical and financial needs necessary for information technology projects in government agencies in coordination with other concerned parties.

ENG. ABDULAZIZ AL KHARUSI

Eng. Abdulaziz Al Kharusi is the Director-General of the Digital Transformation & Sectors Enablement at the Ministry of Transport, Communication & Information Technology in the Sultanate of Oman.

Eng. Al Kharusi has held many leadership positions in the public and private sectors during the past 29 years. He also spent 16 years in the Telecom sector (Omantel and Oman Mobile).

He also worked in the Information Technology sector during the past 13 years and held several leadership positions, as follows: Director-General, eServices, Ministry of Communication & Information Technology; Director-General, Information & Awareness Information Technology Authority; Director-General, Contracts & Procurement Information Technology Authority; and Director, Investment & Sourcing Information Technology Authority.

Eng. Al Kharusi holds a Master's degree in Management and Bachelor's degree in Telecommunication systems.

ENG. ABDULRAHMAN AL MUTAIRI

Eng. Abdulrahman Al Mutairi is currently the Vice President of Strategy and Digital Standers at the newly established Digital Government Authority in the Kingdom of Saudi Arabia. For the last three years, he holds the same position within Yesser–E-Government program. He leads the creation of a new authority with a powerful mandate to empower the digital government sector. He is the lead strategist in the newly formed digital government strategy, a five-year plan to empower and establish solid and robust digital government practices nationwide.

Eng. Almutairi is a significant contributor in creating the national transform program and Vision 2030, working in different Vision2030 priorities agenda with leading government agencies. He holds the Deputy Minister of Social Development position and helps restructure four main goals for social development goals related to Vision2030. His extensive experience in ecosystem design and implementation had help major sector transformation and reformation endeavors.

Eng. Almutairi holds a bachelor's degree in Engineering from King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. He is also a certified Project Management Professional (PMP) from the Project Management Institute (PMI). He has also held a Certification of Management Excellence (CME) from Harvard Business School and attended many executive education courses with leading business schools across the globe.

MS. MASHAEL ALI AL-HAMMADI

Ms. Mashael Ali Al-Hammadi is the Acting Assistant Undersecretary of Government Information Technology, Ministry of Transport and Communications in the State of Qatar.

Through 20 years of hard work in the field of Information Technology and e-government, Ms. Al-Hammadi was distinguished by a high level and comprehensive knowledge of information technology strategies, business, local culture, technical trends and change in the organizational structure.

Ms. Al-Hammadi graduated from the Qatar Leadership Program in 2015 and HEC- CTO Program in 2019. She holds a Master degree in Executive Business Administration and a Bachelor's degree in Computer Science from the Arab Academy for Science, Technology and Maritime Studies, and currently affiliated with a PhD.

During her career, she held various leadership positions in information technology departments in various government agencies and accomplished several strategic projects in the country, including Ministry of Civil Service and Housing, Ministry of Labor and Social Affairs, and Ministry of Economy and Trade.

She has participated as an active Board member QNBN, and in several high level committees, such as the e-government steering committee, in addition to membership of a number of other internal committees tat the level of ministries in which she worked.

MR. ABDELAZIZ ALZAROONI

Mr. Abdelaziz Alzarooni is a Team Leader for Digital Awareness in the UAE Telecommunications and Digital Government Regulatory Authority.

He leads national programs for awareness and capability building in Cybersecurity, Child Online Protection, as well as Digital Transformation.

Mr. Alzarooni is the chair of the council working group on Child Online Protection and Vice-Chair of the ITU-D Study Group 2 within ITU.

MR. MOHAMED FAÏÇAL NEBRI

Mr. Mohamed Faiçal Nebri is an IT engineer. He is a graduate of the ohammadia School of Engineers in Morocco. He holds a specialized Master's degree in Information Systems Management from Ecole Centrale Paris. He has 12 years of professional experience in strategy & management consulting, Project/Program management, change management and other related areas.

Mr. Nebri has piloted several major transformation projects, both in the public and private sectors in France and Morocco.

In March 2019, Mr. Nebri joined the Moroccan Digital Development Agency (ADD) as Head of the Strategy, Development, Cooperation and Communication Department.

FACILITATOR:

MR. RICHARD KERBY

Mr. Richard Kerby is the CEO of Richard Kerby LLC, a consulting Firm focusing on supporting Governors in their Digital Transformation journey. The firm has worked in Bahrain, Kazakhstan, Saudi Arabia and the United Arab Emirates. The firm has also conducted the first two Nation-wide Hackathons using the government's open data portal.

Mr. Kerby was the Senior Inter-Regional Adviser on e-Government in UNDESA with over 25 years of experience in the ICT for Development and e-Government fields. He has advised numerous governments on developing policy strategy in all regions of the world. He provides policy advises and carry out technical cooperation missions to Governments on issues connected with e-government development, focusing on e-government environment readiness assessment; identifying e-government applications; benchmarking and measuring progress in e-government development (advocacy and awareness) and establishing networks of support.

He was an instrumental part of the team that produced the 2008, 2010, 2012, 2014 and 2016 UN e-government survey by providing substantive support in the development of the questionnaire that was used to assess government web sites and portals and drafting several chapters for the UN e-Government surveys. He has prepared detailed analysis of regional and global trends on e-government, e-governance and knowledge management.

Provided policy advise and carry out technical cooperation missions to Governments on issues connected with e-government development, focusing on e-government and e-governance environment readiness assessment; identifying e-government applications; benchmarking and measuring progress in e-government development (advocacy and awareness) and establishing networks of support in over 60 emerging and developing countries. These advisory missions led to several of projects in Africa, Asia and the Gulf Region.

MODERATOR:

MR. ABDULLA AL HAMED

Managing Partner at INTERMID (May 2016 – Present), Board Member of I-HARBOUR (December 2017 - Present) Chief & Executive Director, in INVESTATE Group (May 2007 – December 2017) with a focus on establishing distinctive positions in core markets in the region, as well as locally.

Over twenty years of professional experience in various fields including: Strategic Planning, Business Development, Project and Product Management, ICT, Islamic Finance and CLDP expert. A proven track record that includes establishing and leading the e-Commerce directorate at the Ministry of Industry & Commerce; Member of the negotiation team for the US-Bahrain Free Trade agreement, and handled responsibilities of the e-business consultancy at Gulf Finance House (GFH). In addition to working with Arab Banking Corporation (ABC) and Batelco.

Holds a Master's Degree in Business Administration (MBA) from the United Kingdom, Master of Applied Business Research (SBS-Zurich), and Level 4 Directive Communication Psychology Certified Corporate Trainer in the areas of dynamic speaking, human drive and motivation and curriculum development; IACT Certified Trainer, Certified International Property Specialist CIPS, Leadership in Energy and Environmental Design -LEED-GA and Founding and Board Member of Bahrain Internet Society.

A member of UN Expert Group - New York- for the Year 2012 – 2014 eGovernment Survey in order to enhance efficiency, effectiveness, transparency, accountability, access to public services and citizen participation at all levels of development across all 193 United Nations Member States.

Received recognition for helping in developing the Road Map for the Commerce and Industry Sector in the Kingdom of Bahrain (2002-2006) and participated in setting Bahrain ICT National Strategy (Bahrain eGovernment Programme) 2007 and 2010.

WORKSHOP SESSIONS

UNITED NATIONS EGOVERNMENT SURVEY

REGIONAL eGOVERNMENT EXPERTS WORKSHOP 2021

9th OF JUNE 2021
KINGDOM OF BAHRAIN

SESSION 1 Opening Address

H.E. Mr. Mohammed Al Qaed

Chief Executive of Information & eGovernment Authority (iGA), Kingdom of Bahrain

SESSION 2 eGovernment Measurement and the International Indicators - Perspective on Indicators

Mr. Vincenzo Aquaro
Chief, Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), United Nations Department of Economic and Social Affairs (UNDESA), United States

SESSION 3 Achievements and Milestones by Regional eGovernment Leaders

H.E. Ms. Haya Al Wadani
Director General of the Central Agency for Information Technology (CAIT)
State of Kuwait

Ms. Mashael Ali Al-Hammadi
Acting Assistant Undersecretary of Gov. Information Technology, Ministry of Transport and Communications
State of Qatar

Eng. Abdulaziz Al Kharusi
Director General of e-Services e-Government Services, Ministry of the Transport, Communications and Information Technology, Sultanate vof Oman

Mr. Abdelaziz Alzarooni
Team Leader Cybersecurity Capacity & Business Development at aeCERT – TDRA, United Arab Emirates

Eng. Abdulrahman Al Mutiri
Vice President of Strategy and Digital Standers in the Digital Government Authority, Kingdom of Saudi Arabia

Mr. Mohamed Faïçal Nebri
Head of the Strategy, Development, Cooperation and Communication Department, Moroccan Digital Development Agency (ADD), Morocco

With the participation of :

- **Arab Republic of Egypt**
- **Hashemite Kingdom of Jordan**

SESSION 4 Global eGovernment Trends and Case Studies

Dr. Theresa A. Pardo
Associate Vice President for Research, Senior Fellow, Center for Technology in Government (CTG UAlbany); Affiliate Faculty, Information Science Doctoral Program, College of Emergency Preparedness, Homeland Security and Cybersecurity, University of Albany, United States

Dr. David Eaves
Professor, and Lecturer in Public Policy,
Harvard Kennedy School
United States

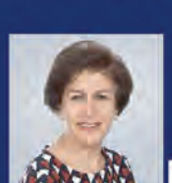
SESSION 5 Impact of the SDGs on the UN eGovernment Survey, by UN/International expert

Mr. Morten Meyerhoff Nielsen
United Nations University
Operating Unit for Policy-Driven Electronic Governance (UNU-EGOV),
Denmark

Ms. Yolanda Martinez
Digital Government and Development Expert, Mexico

SESSION 6 UN eGovernment Survey Major Findings

Mr. Deniz Susar
Governance and Public Administration Officer, Digital Government Branch, Division for Public Institutions and Digital Government (DPIDG), United Nations Department of Economic and Social Affairs (UNDESA)



Dr. Nibal Idlebi
Chief of Innovation Section, ESCWA

SETTING THE SCENE Facilitator :

Mr. Richard Kerby
CEO, Richard Kerby LLC,
United States

SESSION 7 Roundtable Discussion and Wrap up Session UN eGovernment Survey findings (All participants).

Mr. Abdulla Al Hamed
Managing Partner, INTERMID

UNITED NATIONS

INFORMATION &
eGOVERNMENT AUTHORITY

UNITED NATIONS
EGOVERNMENT SURVEY

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INTERMID
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