United Nations | Department of Economic and Social Affairs

New Approaches to E-Government for SDG Implementation

Capacity Building Workshop

15 – 16 March 2022

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D-8 Organization for Economic Cooperation

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WORKSHOP REPORT

United Nations | Department of Economic and Social Affairs

The Department of Economic and Social Affairs of the United Nations Secretariat is a vital interface between global policies in the economic, social, and environmental spheres and national action. The Department works in three main interlinked areas: (i) it compiles, generates and analyses a wide range of economic, social and environmental data and information on which States Members of the United Nations draw to review common problems and to take stock of policy options; (ii) it facilitates the negotiations of Member States in many intergovernmental bodies on joint course of action to address ongoing or emerging global challenges; and (iii) it advises interested Governments on the ways and means of translating policy frameworks developed in United Nations conferences and summits into programs at the country level and, through technical assistance, helps build national

D-8 Organization for Economic Cooperation

D-8, also known as Developing-8, is an organization for development cooperation among the following eight countries: Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan and Turkey. Its objective is to improve member states' position in the global economy, diversify and create new opportunities in trade relations, enhance participation in decision-making at international level, and improve standards of living. D-8 is a global arrangement rather than a regional one, as the composition of its members reflects.

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BACKGROUND

Since 2001, the United Nations E-Government Survey has tracked developments in E-Government in all Member States. The most recent United Nations E-Government Survey which launched in 2020 showed that many more countries and municipalities are pursuing digital government strategies, some of which are radically different from those guiding earlier E-Government initiatives. Some of the new approaches include the delivery of E-Government as a platform, the integration of online and offline multichannel delivery, the agile development of digital services, the expansion of e-participation and partnerships, the adoption of data-centric approaches, the strengthening of digital capacities to deliver people-centric services, and the innovative use of new technologies such as artificial intelligence (AI) and blockchain, especially in the development of smart cities.

The **United Nations E-Government Survey** presents a systematic assessment of the use of ICT to transform and reform the public sector by enhancing efficiency, effectiveness, transparency, accountability, access to public services and citizen participation in 193 Member States. The latest edition is available here.

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Looking at the performance of D-8 members in the 2020 UN E-Government Survey according to their E-Government Development Index (EGDI), it is noted that all eight countries perform relatively well: Malaysia and Turkey classified in the "Very High" EGDI group; Indonesia, Islamic Republic of Iran, Egypt and Bangladesh classified in the "High" EGDI group; and Nigeria and Pakistan are in the "Middle" EGDI group. However, the E-Government divide between the eight countries is wide since they are ranked within a large range indicating unequal levels of development among them (see Table 1).

Country	Region	Sub-Region	EGDI Group	Score	Global Rank
Malaysia	Asia	South-Eastern Asia	Very High	0.7892	47
Turkey	Asia	Western Asia	Very High	0.7718	53
Indonesia	Asia	South-Eastern Asia	High	0.6612	88
Iran (Islamic Republic of)	Asia	Southern Asia	High	0.6593	89
Egypt	Africa	Northern Africa	High	0.5527	111
Bangladesh	Asia	Southern Asia	High	0.5189	119
Nigeria	Africa	Western Africa	Middle	0.4406	141
Pakistan	Asia	Southern Asia	Middle	0.4183	153

Table 1 **D-8 Members in the United Nations E-Government Survey 2020.**

Since 2018, the United Nations E-Government Survey also examines the E-Government development at local levels with the Local Online Service Index (LOSI), namely in the most populous city in a country as a proxy. Two editions of the LOSI study showed some commonalities in local E-Government development around the world. Despite desirable results, local government websites need to address some detailed problems in technology and content provisions. Moreover, noticeable shortcomings in service provisions and municipal participation illustrates the room for improvement in these areas.

Analyzing the performance of most populous cities in the D-8 members according to their LOSI shows that there are wider gaps between the cities included in the study. While Istanbul (Turkey), and Kuala Lumpur (Malaysia) did relatively well compared to other cities, overall local E-Government development performance is behind the national portals (see Table 2).

Country	City	LOSI Group	Score	Global Rank
Turkey	**Istanbul**	Very High	0.7625	12
Malaysia	**Kuala Lumpur**	High	0.5125	29
Nigeria	**Lagos**	Middle	0.4	42
Indonesia	**Jakarta**	Middle	0.3875	47
Egypt	**Cairo**	Middle	0.35	50
Pakistan	**Karachi**	Low	0.2125	66
Bangladesh	**Dhaka**	Low	0.15	75
Islamic Republic of Iran	**Tehran**	Low	0.15	75

Table 2 **Local E-Government development in the D-8 Members' most populous cities in 2020.**

There may be many reasons for different E-Government development levels between countries and their cities. Digital divides or technology barriers are pervasive challenges. The lack of connectivity remains a critical issue for vulnerable groups, especially those with limited incomes. Digital literacy is also a major barrier to effective use of online services and engaging in government processes. The COVID-19 pandemic has not only accelerated the pace of digital transformation but has also amplified the vulnerabilities of countries and those being left behind. While some countries have made significant achievement and improvement in using Internet and relevant online technologies, others face economic decline and broadening technological gaps, and would be further left behind further if no actions are being taken.

While there are challenges, there are also opportunities. The United Nations E-Government Survey serves as a benchmarking and development tool for countries to learn from each other, identify areas of strength and challenges in E-Government and shape their policies and strategies in this area. In addition, it serves as a resource for capacity building rooted in its holistic view of E-Government that incorporates three important dimensions: the adequacy of telecommunication infrastructure, the ability of human resources to promote and use ICTs, and the availability of online services and content. With the addition of the local E-Government component, the capacity building efforts could further reach to local government officials.

OBJECTIVE

The United Nations Department of Economic and Social Affairs (UN DESA), through its Division for Public Institutions and Digital Government (DPIDG), in collaboration with the D-8 Organization for Economic Cooperation, organized a capacity building Workshop on new approaches to E-Government for SDG implementation. The objective of the Workshop is to raise awareness on innovative approaches in E-Government policies and implementation strategies and increase participants' capacities on how to use them for the achievement of the Sustainable Development Goals.

Innovation and continuous transformation in the area of ICTs are indeed critical for improving efficiency and effectiveness of public sector interventions and achieving the SDGs.

SETTING THE SCENE

Opening Remarks

In the opening remarks, the objectives of the Workshop were demonstrated and the unequal E-Government development in D-8 Members was identified. There was a call for multi-stakeholder collaborations, seizing the presented opportunities for innovation, and overcoming challenges posed to E-Government development.

COVID-19 was further recognized as a challenge since it compounded threats to progress raised by conflict and climate change in the implementation of the Sustainable Development Goals. While accelerating digital transformation, the pandemic also amplified the vulnerabilities of countries and people that are left behind. Therefore, a holistic and people-centred development in digital government transformation was emphasized. It was also mentioned that while some countries have made significant achievements and improvements in using the Internet and online technologies, others face economic decline and broadening technological gaps, and would be further left behind if no actions were taken. It was underlined that digital divides and technology barriers are pervasive challenges. In addition, the lack of connectivity remains a critical issue for vulnerable groups, especially those with limited incomes. Digital literacy is also a major barrier to the effective use of online services and engaging in government processes. Finally, participants were expected to learn from each other's experience and cooperate for mutual benefits.

Global and Regional Trends and Insights from the 2020 UN E-Government Survey

In the opening presentation, global and regional trends and insights from the UN E-Government Survey 2020 were presented as an introduction to the Workshop. The presentation briefed D-8 Delegations on E-Government development, as measured by the E-Government Development Index (EGDI), its subindices and the provision of online services on the local level.

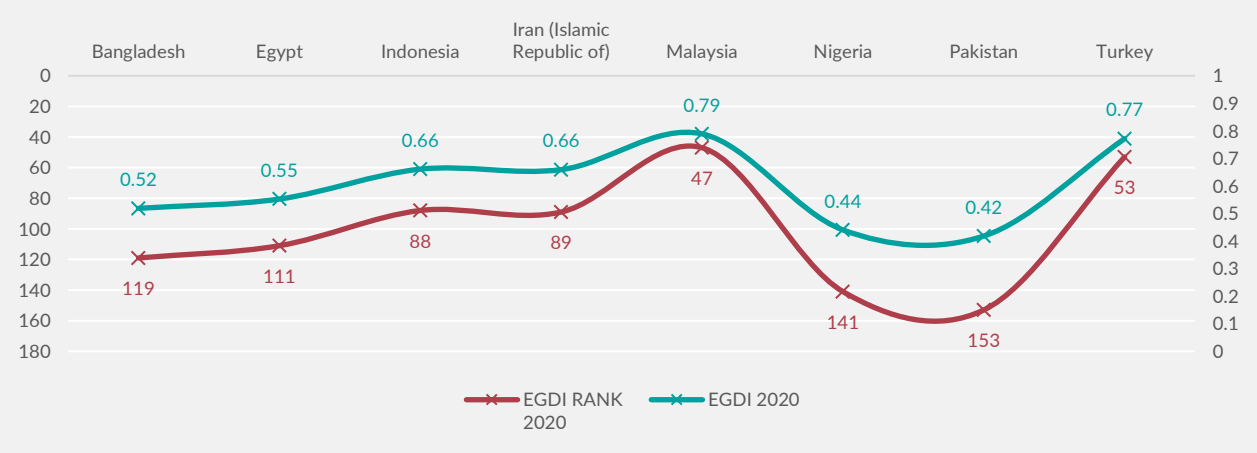


Figure 1 **EGDI Performance and Ranks for D-8 Members.**

Concerning **EGDI performance**, D-8 Members' average score is better than the global average. For 2020, average D-8 EGDI was 0.6015, while the global average only just lags behind at 0.5988. In addition, two of the D-8 Members are in the "Very High" EGDI group: Malaysia and Turkey. Four countries are in the "High EGDI" group: Bangladesh, Egypt, Indonesia and Islamic Republic of Iran. Two countries are in "Medium EGDI" group: Nigeria and Pakistan – see Figure 1.

When comparing to 2018, in 2020 four countries went up to a higher EGDI group: Bangladesh, Egypt, Malaysia and Turkey. Bangladesh and Egypt moved up to "High EGDI" group in 2020. Malaysia and Turkey moved up to "Very High EGDI" group in 2020 – see Figure 2.

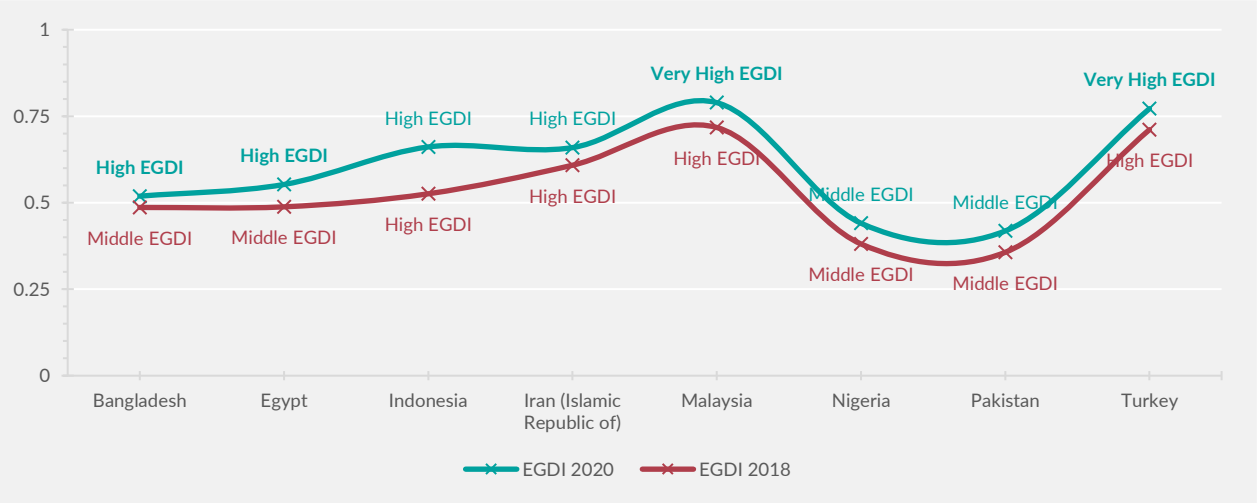


Figure 2 **EGDI Level Trends for D-8 Members.**

E-Participation was also mentioned in the presentation as one of the subindices of the E-Government Development Index. Concerning 2020 **performance in the E-Participation Index (EPI)**, Figure 3 visualizes trends for each D-8 Member. Indonesia made a substantial improvement in terms of EPI, while Bangladesh had a significant decline in 2020. Nigeria and Pakistan showed slight improvements. Malaysia and Turkey are the leading D-8 countries in terms of EPI2020 scores which is in line with their EGDI2020 scores.

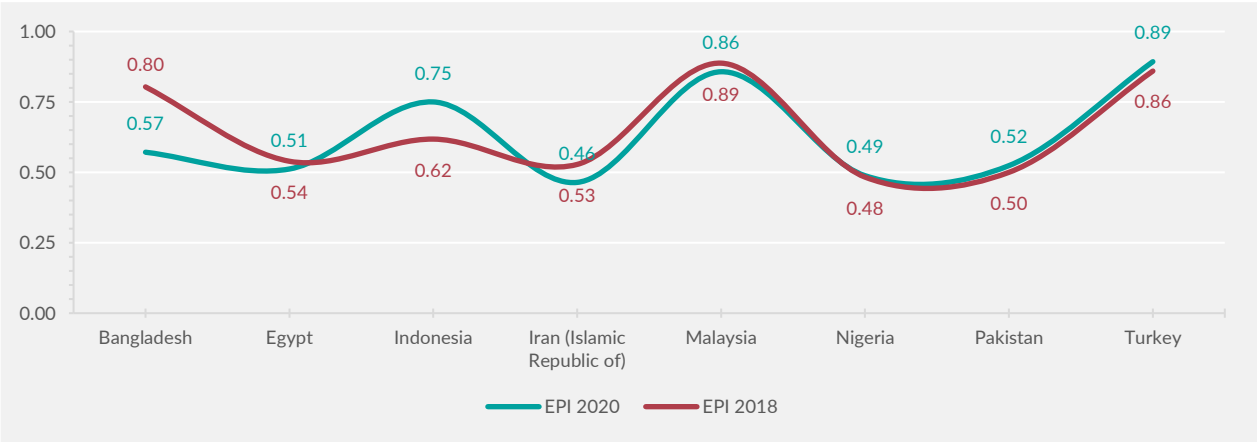


Figure 3 **EPI Trends for D-8 Members.**

Local Online Service Index (LOSI) performance was also presented through the following results. Only one city is in the "Very High LOSI" group in 2020: Istanbul. Only one city is in "High LOSI" group in 2020: Kuala Lumpur. three cities are in "Medium LOSI" group in 2020: Cairo, Jakarta and Lagos. Three cities are in "Low LOSI" in 2020: Dhaka, Tehran and Karachi. The LOSI2020 average across D-8 Members was 0.3656, well below the world average of 0.43. These findings are also visualized in Figure 4.

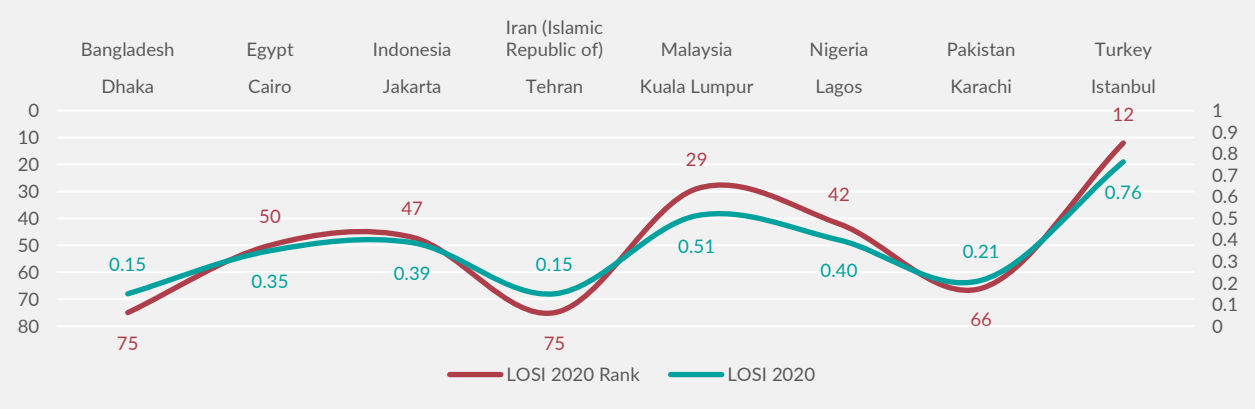


Figure 4 **LOSI Performance and Ranks for D-8 Members.**

Online Service Index (OSI) is the subindex of EGDI that represents the scope and quality of online services on national level. In this regard, it is suitable to compare LOSI scores with OSI scores, which is the local level equivalent of OSI, in Figure 5. OSI2020 scores for D-8 countries are always higher compared to LOSI2020 scores of their cities, showing online services are more developed and mature on the national (country) level compared to the local (city) level. The gap between the two indices is the biggest in the Bangladesh-Dhaka pair, and the smallest in the Turkey-Istanbul

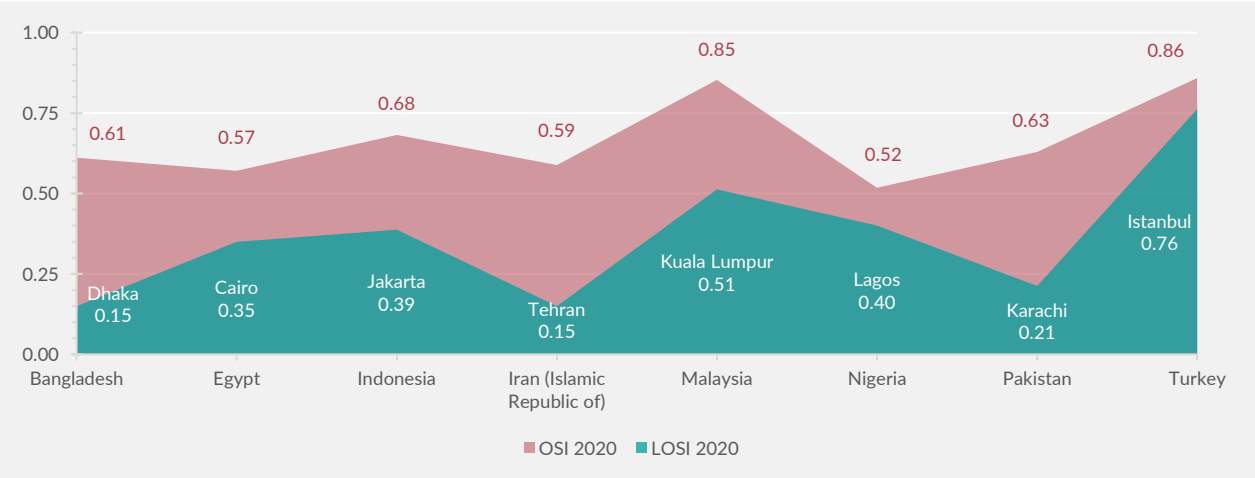


Figure 5 **OSI2020 and LOSI2020 comparison of D-8 Members country/city pairs.**

pair.

COUNTRY PRESENTATIONS

The Members of the D-8 Organization for Economic Cooperation were invited to present ongoing advances in their respective national E-Government development along the structure of the following three guiding questions:

- What are some of the challenges you face in digital government in your country at national/local levels?
- What opportunities do you see?
- What kind of assistance/help do you need?

Bangladesh

In 2008, the Journey to Digital Bangladesh started with Perspective Plan 2010-2021. This plan was then followed by Vision 2041 to achieve a developed, prosperous, and knowledge-based country for an innovation economy. Other frameworks for digital transformation include the Sustainable Development Goals, as well as the three editions of ICT Policy in 2009, 2015 and 2018 to achieve the objectives of Digital Bangladesh in all sectors, and finally strategies surrounding Emerging Technologies such as Blockchain, AI, IoT and Cybersecurity. Bangladesh's digital transformation is based on four pillars, each with multiple initiatives: E-Governance, Human Resource Development, Connectivity and Infrastructure, and ICT Industry Promotion.

I. Challenges

Bangladesh's challenges are considered on both the national and the local level. Nationally, the following ten challenges were identified: (1) Access to digital devices and connectivity for online classes in rural areas; (2) Whereas Internet coverage is sufficient, Internet speed is considered too low; (3) Lack of skilled manpower in the IT sector; (4) Unavailability of real time data; (5) Gender divide in digital access to public services; (6) Lack of timely project implementation; (7) Lack of digital literacy; (8) Online land management and registration; (9) Budgetary constraints; (10) Increased vulnerability of those furthest left behind through COVID-19.

On the local level, challenges include: (1) Lack of interagency coordination; (2) Inefficiency in resource and revenue mobilization; (3) Lack of ICT-skilled Human Resources; (4) Unwillingness of adopting change management in terms of using new technology; (5) Distinctive mindset in simplifying e-services for citizens.

II. Opportunities

Bangladesh also holds many opportunities for further E-Government development. First, it has a large population at working age which can all be upskilled to work in different areas. As such, during Class 6 to 12, there is a compulsory ICT subject to enhance digital literacy from a young age. Annually, there are also about twenty thousand ICT and STEM graduates. Moreover, Bangladesh has an enabling environment to implement and stimulate innovations, through established ICT

infrastructure (e.g. through many high tech parks) and appropriate ICT-related laws, policies and strategies to ensure cyber security and appropriate use of ICT. Finally, Bangladesh is one of the global leaders in housing freelancers and has a booming online business environment.

III. Required support

Bangladesh has requested assistance through the following ways: (1) Development of its Human Resources through training and support for ICT professionals and academic collaboration with its universities; (2) Technology transfers to explore investment opportunities and enhance both bilateral and multilateral cooperation; (3) Stimulating foreign investment through its high-tech parks and other industrial parks; (4) Support in establishing smart cities.

Egypt

Digital Transformation in Egypt is enabled by a broad legislative framework, including the Egyptian Constitution and related laws, Egypt Vision 2030, the Sustainable Development Goals (especially SDG16) and the Africa Agenda 2063. In addition, a strong emphasis was put on competence, sustainable development, social justice, transparency, good governance, and combating corruption.

I. Challenges

Through the National Program for Economic Restructuring Reforms, Egypt aims to develop the country's ICT infrastructure, bridge the digital divide, promote innovative technology for digital connectivity, and increase the ICT-sector's share in GDP from 3.5% to 5%. However, Egypt's challenges were identified as the following: (1) Lacking Human Resources; (2) A multi-stage paper registration cycle causes inconsistency of citizens' basic data; (3) Wide scope of work; (4) Lacking communication infrastructure in villages and remote areas hampering data exchange; (5) Lacking digital literacy and an increased digital divide; (6) Fragmented base of stakeholders; (7) Resistance to change to the new automated system; (8) Risk of cybersecurity.

II. Opportunities

Egypt's main opportunities lie in its integrated perception of developing government services, as can be viewed in Figure 6. Egypt's Government Gateway is the engine behind exchanging data across government agencies, data portals and centres and applications to integrate with government outlets and smart platforms. This contributes to the transformation of financial inclusion.

The establishment of a National Spatial Data Infrastructure (NSDI) is one of Egypt's main opportunities for development, as well as for unifying and sharing spatial data - completely relying on modern spatial technologies in satellite imagery, aerial photography, mapping and reporting. This is used for, among others, effective resource management, project monitoring, land use management, planning, national investment programmes and special perspectives for security, agriculture, etc. Other opportunities lie in the established Localities Services, New Urban Services, governmental services vans, eHealth governmental services, an interactive communication system

connecting citizens and the governmental services providers through SMS messages using mobile phones in collaboration with UNICEF, and citizens ratings of governmental services.

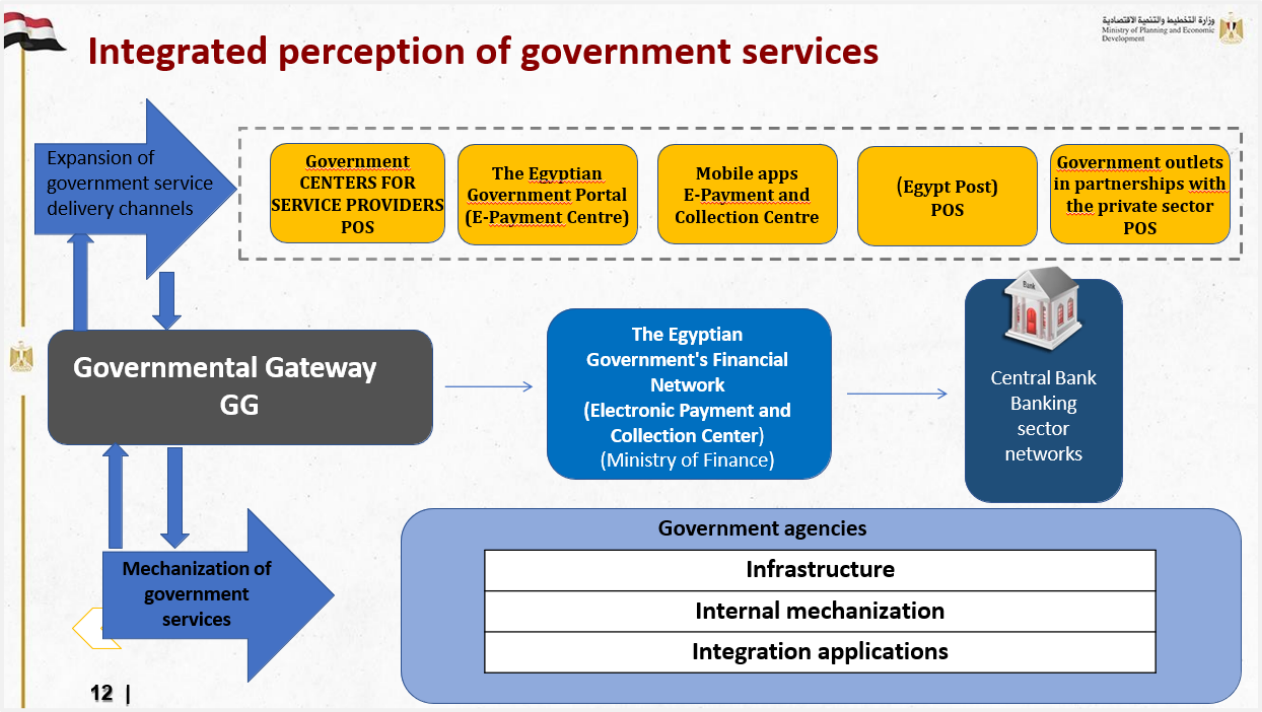


Figure 6 **Egypt's Integrated Perception of Government Services.**

III. Required support

Egypt has requested further support in capacity building, technology deployment and handover, and the adoption and sharing of Open Standards.

Indonesia

The Sustainable Development Goals are the main instrument for Indonesia's Vision 2045. The SDGs provide the guiding lines for six Great Strategies for Indonesia's Economic Transformation and form a foundation for Advanced Indonesia.

I. Challenges

Based on its national ICT Development Index for 2020, Indonesia has identified the digital divide at provincial level as a major challenge - especially with a high gap in eastern and midwestern parts of the country (e.g., the province of Papua scores well below Indonesia's national average in the index).

Offering a snapshot of Indonesia's challenges, the country's delegation motivated the urgency of the acceleration of its digital transformation. Indonesia's challenges range from topics ranging from ICT Infrastructure (a lack of connectivity, inefficiency in data centres and apps, the remaining use of broadcasting analogue TV for communication), over ICT Utilization (lacking Internet coverage

and/or quality in education, health, MSMEs and social assistance), to various supporting aspects such as large threats to cybersecurity, lacking digital literacy, a small digital workforce, and a lacking ICT industry.

II. Opportunities

One of Indonesia's main opportunities lies in its large population, of which most have access to mobile connections and the Internet. Moreover, many citizens are active social media users and the vast majority own either a mobile phone and/or a computer. This leaves the Indonesian citizens as important actors in the country's digital transformation.

Strategy 4 of Indonesia's Vision 2045 on Digital Transformation focuses on digital infrastructure, digital utilization, and the strengthening of digital enablers. In addition, Indonesia's President issued five Presidential Directives on the Development of Digital Transformation focused on digital infrastructure; digital transformation in strategic sectors such as government, education, health, broadcasting, etc.; integration of the national data centres; preparing Human Resources needs for digital talent; and the development of regulations and funding schemes for digital transformation. Another enabler and opportunity for Indonesia's transformation is its E-Government Policy in National Midterm Development Plan 2020 - 2024. However, one of the main issues is both the overlap and fragmentation of different duties and functions between central government institutions complicate inter-agency coordination.

Finally, to accelerate Indonesian digital transformation, the Indonesian Government adopted the Implementation Plan of Electronic-Based Government Systems (see Figure 7). This plan will enable the mapping of indicators to see which are left behind, enhance digital literacy of public officials for evidence-based policy making and the usage of new technologies such as AI, big data and enhance the development of smart cities. In addition, COVID-19 has emerged as a major enabler for accelerating technology use and digital government transformation. Within this context, regulations, business processes and institutional arrangements regarding the national digital

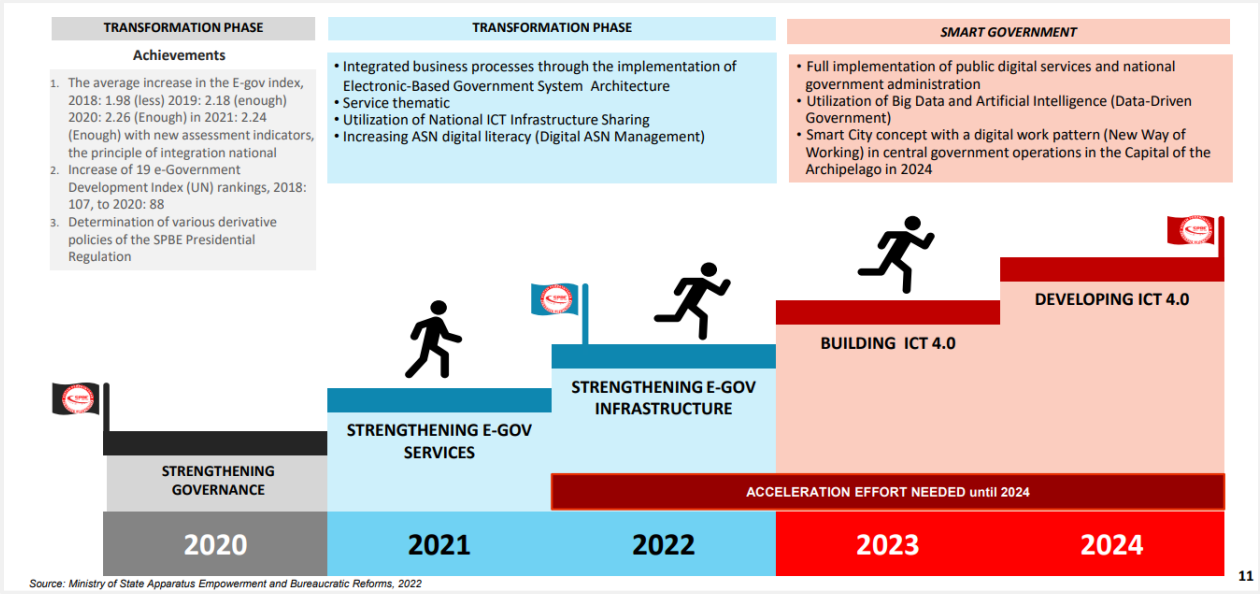


Figure 7 **Indonesia's Implementation Plan of Electronic-Based Government Systems.**

ecosystem need to serve to consolidate and orchestrate digital resources to achieve national targets. Indonesia also acknowledges the need for further collaboration between the public and private sectors, between countries, and with development partners to integrate the eGovernment in every sector of public services.

Malaysia

Malaysia mainly develops its digital governance through MyDigital and 4IR National Strategies to empower people and business while ensuring balanced, responsible, and sustainable growth. There are also phased IT policies and initiatives in place to guarantee its digitalization.

I. Challenges

As Malaysia develops long-term national strategies and initiatives towards digital transformation, it realizes that it is confronted with an unbalanced supply and demand of digitalization experts. The country also acknowledges that upskilling and reskilling are crucial to keep up with new and emerging job challenges to nurture a future-ready workforce. Hence, Malaysia proposes to cultivate digital thinking first and increase the adoption of digital technology across the public sector. In order to achieve this goal, Malaysia also plans to create a Digital Academy to enhance the digital skill set of civil servants and citizens.

Another challenge identified by Malaysia is that the availability of existing digital infrastructure is not comprehensive in terms of coverage and in the use emerging technologies. To solve the issue, the country will upgrade and expand the availability of digital infrastructure to support the digitalization of the public sector and improve the efficiency of service delivery.

II. Opportunities

Malaysia discovers many opportunities in its digital transformation process. It (1) features rich services with multifunctionality and capability, (2) harnesses emerging technology, (3) consolidates communication services and digital collaboration, (4) increases data and information security, and (5) enhances data sharing in the public sector. Moreover, (6) the country sets a clear vision for the future, (7) clarifies the leadership of digital government, (8) paints the picture of the future for the whole of government, and (9) fosters collaboration, coordination, and data sharing.

III. Required support

Malaysia is mainly in need of capacities aimed at strengthening collaboration between agencies and engagement in capacity building in terms of skills and talents.

Nigeria

Nigeria's digital transformation framework consists of myriad policies, namely the Nigerian E-Government Master Plan, the National Digital Economy Policy and Strategy (2020-2030), National Broadband Plan (2020-2025), National Identity Management Commission Act, etc. Each piece focuses on diverse aspects to enhance the overall quality, efficiency and transparency of public services while also taking advantage of the many opportunities that digital technologies provide.

I. Challenges

Nigeria is aware that it has an inadequate power supply, limited citizen's access to E-Government Services, increasing cost of running key infrastructures, and therefore leading to high service delivery costs. In addition, there is a low level of acceptance of digital government, especially within governmental actors. Meanwhile, it suffers from budgetary constraints for digital/E-Government projects and programmes, and little to no publicity on digital government drive. Moreover, it is recognized that Nigeria's technology infrastructure needs to be strengthened and made resilient with failsafe processes, procedures, and infrastructure in place to handle attacks and reduce system downtimes.

People-centred challenges are also identified among others like a large digital divide characterized by a low rate of digital literacy in rural areas, the imbalance of poverty and high internet subscription costs, and a lacking telecommunication infrastructure penetration. Finally, other issues are acknowledged such as privacy and security concerns, and infrastructure vandalization and theft.

II. Opportunities

One of Nigeria's largest assets is its population which is increasingly in depth educated in ICT across the age spectrum in the country – enabling limitless opportunities for further digital development of the country. This is part of new technology eco-systems enabling the creation of new jobs, as well as research and development. Within this context, there is a huge share in the population for youth, which share enthusiasm to adopt new technology trends. Moreover, Nigeria experiences high levels of political will and is therefore making efforts to enhance local production of alternative power solutions so the average citizen can afford to expand its digital assets. Moreover, an E-Government Training Center is available for building capacity of public servants at the national level.

III. Required support

The delegation of Nigeria has indicated it would require support in the following areas: (1) Capacity building in hardware and software development, cybersecurity, process automation and data science; (2) Capacity building programs and sensitization for Government officials especially in the area of awareness creation on eGovernment and digital literacy skills; (3) Capacity building programs for citizens in the rural areas on digital literacy and skills; (4) Support on the promotion of the production of indigenous ICT access devices for public servants and the educational sector; (5) Strategic IT investments and digital jobs creation.

Turkey

The digital transition of Turkey (Digital Türkiye) entailed a fast, transparent and efficient mode of government. Important steps were taken towards bringing the coordination of E-Government, Big Data, AI, and cybersecurity under the same roof, while also paying close attention to the SDGs.

As a part of its Digital Türkiye's Architecture (see Figure 8), Turkey's Digital Transformation Office has delivered E-Government as a Platform through the adoption of a single platform with uninterrupted access to service provision, along the principles of user-centricity, an integrated service approach, data and information security, etc. The country has also made efforts in agile experiences through the E-Pulse health infrastructure, an education platform and now over 6.400 digital government services used by more than 58 million users.

Another important step in Turkey's digital transformation is its National Data Dictionary, which ensures data standardization in a national data model, preventing repetitive data and ensuring terminology harmonization. There is also a respective data dictionary for each institution.

Within the scope of strengthening digital capacities to deliver people-centric services, e-Participation and stakeholders' partnerships were also expanded through high-level meetings with all public institutions, detailed reporting and monitoring, the effective use of administrative and technical capacity and exchanging experiences. Moreover, citizen satisfaction, user-centricity, inclusive service modelling and services for disadvantaged people were taken into account. Finally, these services and innovations are being made available to citizens through the E-Government Gateway, authorizing access in many different ways – excluding a Digital ID, which is currently still a work in progress as a new authentication service.

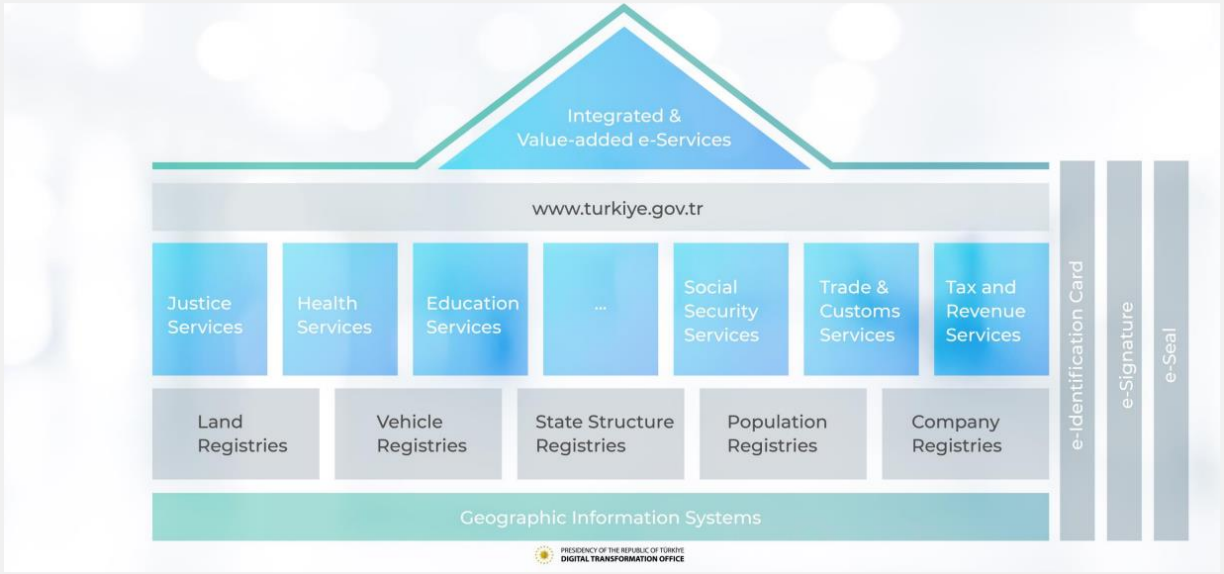


Figure 8 **Turkey's "Digital Türkiye" architecture.**

I. Challenges

While concrete success has been achieved in Turkey, challenges remained. Along the way, the country identified that obstacles in terms of (1) technological adaptation, (2) high costs, (3) regional differences , (4) digital literacy, and (5) awareness of digital platforms at the local level.

II. Opportunities

With the above being said, there are tremendous opportunities in Turkey's ambitions. The country has (1) rebounded quickly taking advantage of post-pandemic opportunities, (2) well-established monitoring and reporting systems, (3) widespread broadband connectivity, (4) experiences popular use of mobile applications and social media among its citizens, and (5) enjoys low costs.

III. Required support

Turkey has requested support in (1) achieving international validity, (2) amendments on legislation, (3) capacity of administrative and technical staff, (4) data governance, and (5) digital awareness.

Islamic Republic of Iran

I. Foundations of Islamic Republic of Iran's E-Government

Islamic Republic of Iran's digital government transformation is built on the foundational E-Government Frameworks, consisting of a legal, architecture and data framework. While Islamic Republic of Iran's legal framework is built upon the development of regulations, policies and strategies by the Supreme Council of Cyberspace and Parliament, their approval is based in the Government Cabinet and the Information Technology Executive Council. However, emphasis was put on the E-Government Interoperability Workgroup which is essential for interaction and data sharing across government agencies. Islamic Republic of Iran's E-Government Architecture is based on four pillars – Framework and Methodology, Sectoral Reference Models, Deployment and Promotion, and National Reference Models. Finally, its Data Framework shows the development of the country's E-Government, built on fundamental structures, databases or the information entities authentication system, a multitude of clusters of services, and citizens communication portals.

In addition, Islamic Republic of Iran's E-Government is built upon multiple generations. Here, the first and second generations are characterized by the electronification of methods of service delivery and requesting processes, interactivity in the electronic exchange of inquiries, and the process of identifying audits and accrediting individuals in government on electronic systems. In the smart government generation, Islamic Republic of Iran establishes data-based governance and maximizes interoperability of all national executive organs, that is through AI, data and data mining; without physical or electronic intervention; and being comprehensive, integrated, high quality, easy and cheap, and available anywhere and anytime. Currently implemented projects include E-Procurement, NIX/GSB, MGOV, EBox, E-Health, E-Signature, etc.

II. Islamic Republic of Iran's E-Health

Islamic Republic of Iran has recently implemented a scenario of providing E-Health services. Starting at the elimination of the renewal of booklets, the electronic prescriptions, an electronic dispenser and eliminating or reducing the use of booklets, and finally through the creation of a cycle of completing electronic health record information and deleting paper files and reducing face-to-face visits. E-Health Service Delivery Routes were established to provide online health services (such as telemedicine, online insurance, etc.), reduce public visits and reduce the use of paper documents, and railing the main part of health (electronic health records, online prescriptions,

electronic document handling). Good progress has been made here, with high progress rates across the board.

III. Evaluating Islamic Republic of Iran's E-Government Status and Services

In the last half a decade, Islamic Republic of Iran's E-Government has experienced a significant increase in the number of provided services, server organizations and client organizations. Moreover, annual NIX (National Information Exchange Centre) transactions have increased fast - indicating more information-sharing and centralized transactions between government organizations. Figure 9 shows the model and pillars the country has utilized in its evaluation of its E-Government. Finally, over eight annual rounds of evaluation, the coverage of the number of organizations, services and sub-services have all increased significantly.

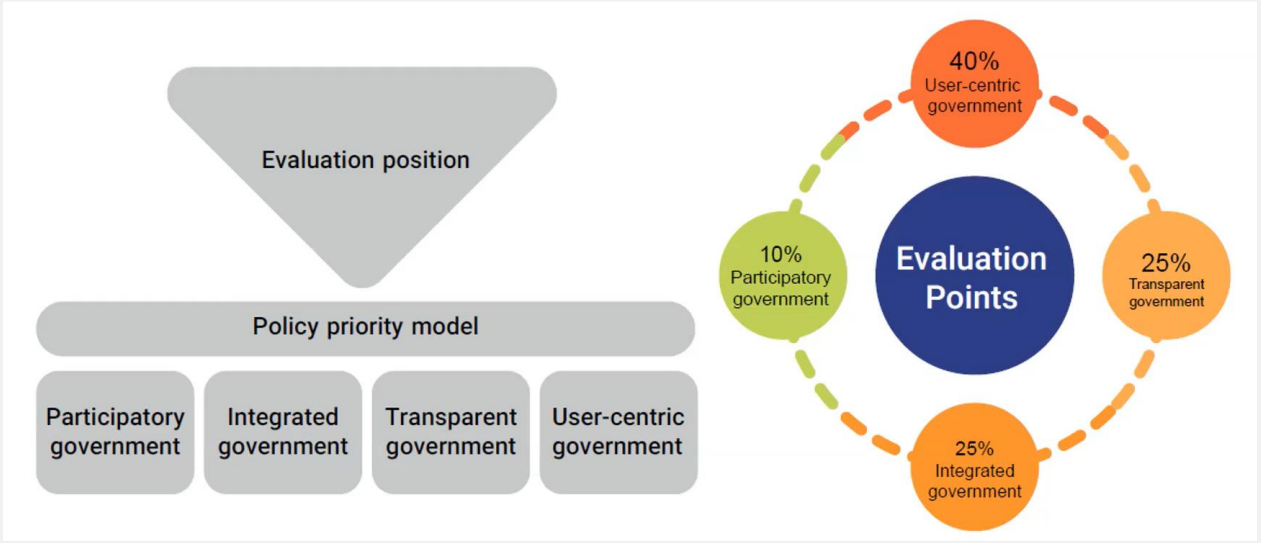


Figure 9 **Islamic Republic of Iran's E-Government Services Evaluation Model.**

IV. Challenges

Islamic Republic of Iran identified different challenges in the development of its E-Government, listed as the following: (1) Technology resistance; (2) Lack of a single policy; (3) Lack of unique command and management; (4) Weakness in coordination and synergy; (5) Conflict of interest and revenue; (6) Problems in the macro structure of the country's executive system and weak integration; (7) Challenge of holding government agencies accountable; (8) Person-centred actions; (9) Sanctions; (10) Multiplicity of trustees and ambiguity in the role of government organizations; (11) Conflict of laws; (12) Multiplicity, parallelism and overlap of rules; (13) Weaknesses in the integrated definition of E-Government.

THE WAY FORWARD

Curriculum on Governance for the SDGs

After countries made clear which support they require in their E-Government development, the Curriculum on Governance for the SDGs was presented by UNDESA. This capacity building curriculum aims to promote critical understanding of sustainable development issues, enhance governance capacity, strengthen awareness of the active role of public officials in achieving the SDGs. Effective, accountable, and inclusive public institutions are considered to play a critical role at all levels for the achievement of the SDGs, however public sector transformations and reforms remain major challenges for many countries. The Curriculum, as Figure 10 shows, is closely aligned with the Principles of Effective Governance for Sustainable Development: Effectiveness, Accountability and Inclusiveness.

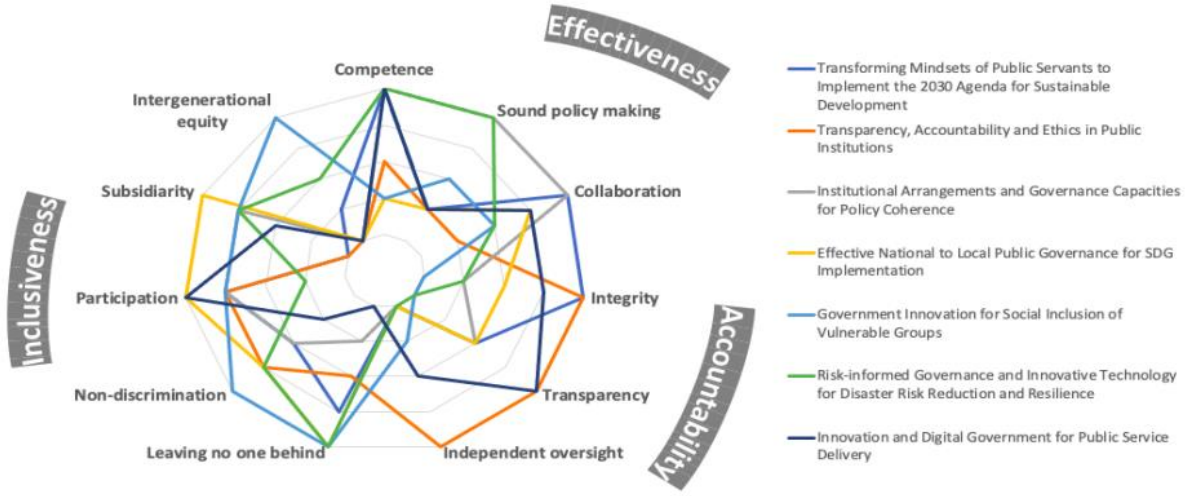


Figure 10 **Capacity Development along Principles of Effective Governance for Sustainable Development.**

The Curriculum on Governance is a comprehensive set of Training of Trainers Capacity Development Toolkits, which contain ready-to-use and customizable training material on key governance dimensions needed to advance the implementation of the SDGs. It was also underlined that the Curriculum provides methodologies and approaches to advance knowledge and assist governments in developing capacities at the individual, organizational, and institutional/societal level, to drive the transformational change needed to implement the 2030 Agenda.

The Training of Trainers Capacity Development Toolkits are structured around modules that include readings, self-assessment situation analysis, application of theories learned to concrete issues and challenges, priority setting exercises, cooperative and experiential learning through case studies, action planning, and other activities that can assist countries in advancing governance transformation for sustainable development.

The Curriculum is composed of the following:

- A set of Training of Trainers Capacity Development Toolkits for 5-day or 3-day face to face capacity development Workshops
- Online Courses on key governance issues to implement the SDGs
- Facilitated Online Training and Capacity Development Workshops
- Customized Online and Offline Capacity Development Workshops upon request of Member States
- Offering a Certificate of Attendance upon successful completion
- Global Community of Practice on key governance issues
- Hosted on UNPAN for networking and online exchange of knowledge

The Curriculum covers the following topics.[1,2]

- Changing Mindsets in Public Institutions to Implement the 2030 Agenda for Sustainable Development
- Transparency, Accountability and Ethics in Public Institutions
- Institutional Arrangements and Governance Capacities for Policy Coherence
- Effective National to Local Public Governance for SDGs Implementation
- Government Innovation for Social Inclusion of Vulnerable Groups
- Risk Informed Governance and Innovative Technology for Disaster Risk Reduction and Resilience
- Innovation and Digital Governance for Public Service Delivery
- E-Government for Women's Empowerment

This presentation was concluded through the following video on the Curriculum on Governance for the SDGs. Finally, it was stated that UN DESA stands ready to provide capacity development support based on countries' needs.

[1] The full Curriculum on Governance for the SDGs can be found here.
[2] In particular, the toolkit for Innovation and Digital Government for Public Service Delivery can be found more in detail here.

CONCLUSIONS AND NEXT STEPS

Coming to an end of the "Capacity Building Workshop on New Approaches to E-Government for SDG Implementation," it was acknowledged that D-8 Members gave insightful presentations and had engaging interactions. Gratitude was expressed toward both participants for their time, efforts and active participation, as well as to the D-8 Secretariat and the D-8 Ambassador H.E. Isiaka Abdulqadir Imam for supporting this event and for helping UN DESA and the D-8 to connect. Concluding the session, a recap was provided of the challenges, opportunities and areas of assistance in which UN DESA/DPIDG can collaborate with D-8 Members.

Challenges

Challenges included, though are not limited to the following. Generally, there is a lack of access to and affordability of digital technologies which implies inadequate digital infrastructure and the unavailability of broadband and new technologies. Moreover, there is an unbalance of supply and demand in digital expertise with a lack of skills in the supply side (public officials) and a lack of digital literacy in the demand side (citizens). Other generally present challenges include budgetary constraints for E-Government, challenges related to cyber security, resistance to change and technology, etc.

Some specific cases were also highlighted, like the unavailability of real-time data and a lack of disaggregated data for vulnerable groups, challenges surrounding online land management and registration, change resistance in the sense of a general unwillingness to adopt new technology, a lack of interagency coordination and communication, an inadequate power supply, and finally a lack of publicity on digital government drive to the extent that citizens are most unaware of E-Government services – especially at local level.

Opportunities

The COVID-19 pandemic has caused a surge of new technologies being adopted by all D-8 Members. In addition, it was emphasized that access to Internet rates and device ownership are increasing across countries and that social media is actively being used by citizens. Mr. Juwang Zhu told participants he found it a collective responsibility to turn these content consumers into content producers, be it in media, education, app development and so on as this would provide endless opportunities. Moreover, D-8 countries generally have a significant youth population at working age that could be mobilized in ICT related industries. There is also an opportunity in ICT related laws, regulations, policies and strategies including cyber security and data protection related laws to create an enabling environment for people to make use of ICT.

A final opportunity lies in an enhanced cooperation across all levels both internally, across different agencies in the respective countries and between D-8 Member States and UN DESA/DPIDG. In this vein, it was reiterated multiple times that these Workshops form an opportunity for both

Member States to learn from each other, as well as for UN DESA to gain knowledge on how it can assist them.

Areas of assistance

This Workshop served as a very important platform to share diverse country practices, challenges, and innovative cases on the use and implementation of ICT policies and strategies. Some of the most frequent areas of assistance and required support include (1) capacity development of public officials in digital government in terms of digital skills and talent. Further, support was requested in (2) enhancing collaboration between government agencies, as well as in (3) establishing smart cities. In addition, assistance was deemed necessary in (4) the adoption and sharing of open standards, and (5) the promotion of the production of indigenous ICT access devices for public servants and the educational sector. Finally, D-8 Members require support in (6) technology transfers by exploring investment opportunities and bi- and multilateral cooperation, and in foreign investment in high-tech and other industrial parks. These areas of assistance are summarized in Figure 11.

Digital Skills and Adoption	Capacity Development of public officials in digital government skills
	Enhancing collaboration between government agencies
	Promotion of production of indigenous ICT access for public officials and the educational sector
(Emerging) Technology and Standards	Technology transfers by exploring investment and cooperation opportunities
	Adoption and sharing of open standards
	Establishment of smart cities

Figure 11 **Summary of the D-8's areas of required support.**

Next steps

The Workshop has served as a very important platform to share diverse country practices, challenges, and innovative cases on the use and implementation of ICT policies and strategies. In light of the above mentioned areas of assistance, UN DESA and the D-8 will organize a three-day Capacity Development training workshop in October 2022.

ANNEXES

Agenda of the Workshop

15 March

SESSION ONE

15 March 2022 0600 – 0900 hrs. (EST)

TIME (EDT)	
6AM – 7AM New York 1PM – 2PM Istanbul	**Welcome and Opening Remarks** **Ambassador Mr. Isiaka Abdulqadir Imam** Secretary-General of the D-8 Organization for Economic Cooperation (7 min) **Mr. Juwang Zhu** Director, Division for Public Institutions and Digital Government , United Nations Department of Economic and Social Affairs, UN DESA (7 min) **Setting the Scene by Mr. Vincenzo Aquaro** Chief, Digital Government Branch, UN DESA/DPIDG A view of global E-Government and D-8 (20 min) **Moderator: Ms. Stefania Senese** Programme Management Officer, UN DESA/DPIDG **Open Discussion (25 min)**
7AM – 8AM New York 2PM – 4PM Istanbul	**Session 2: Country Presentations** **Guiding questions:** ▷ What are some of the challenges you face in digital government in your country at national/local levels? ▷ What are the opportunities do you see? ▷ What kind of assistance/help do you need? **Moderator: Mr. Deniz Susar** Governance and Public Administration Officer, UN DESA/DPIDG

Each country will have 30 min slot: 10 min presentation, 5 min intervention by peer reviewer country, 15 min open discussion.

- Bangladesh
- Egypt
- Indonesia
- Iran (Islamic Republic of)

Open Discussion and Q&A

16 March

SESSION TWO

16 March 2022 0600 – 0900 hrs. (EST)

6AM – 7AM New York

1PM – 2PM Istanbul

Session 3: Country Presentations (Continued)

Moderator: Ms. Rasha Hamdy
Director II Economy, Implementation and External Relations, D-8 Organization for Economic Cooperation

- Malaysia
- Nigeria
- Pakistan
- Turkey

Open Discussion and Q&A

7AM – 8AM New York

2PM – 4PM Istanbul

The Way Forward

Moderator: Mr. Wai Min Kwok
Senior Governance and Public Administration Officer, UN DESA/DPIDG (5 min)

Ms. Stefania Senese
Programme Management Officer, Programme Management and Capacity Development Unit – The Curriculum on Governance for the SDGs (15 min)

Roundtable Discussion Challenges and Opportunities of New Approaches to eGovernment for SDG Implementation (30 min)

Conclusion and Ending Remarks
Mr. Juwang Zhu and Ms. Rasha Hamdy

List of Participants

MEMBER STATE ATTENDEES

D-8 MEMBER	PARTICIPANT	FUNCTION AND INSTITUTE
D-8	Ambassador Isiaka Abdulqadir Imam	Secretary-General at Developing Eight Organization for Economic Cooperation
D-8	Ms. Rasha Hamdy	Director II Economy, Implementation and External Relations at Developing Eight Organization for Economic Cooperation
Bangladesh	Ms. Nahid Sultana Mallik	Joint Secretary at Information and Communication Technology Division
Bangladesh	Mr. Md. Khairul Amin	Additional Secretary at Information and Communication Technology Division
Bangladesh	Mr. Monirul Islam	Joint Secretary (SDG Affairs) at Information and Communication Technology Division
Egypt	Mr. Megahed Hassan	Geodata and Geoinformatics Expert at Ministry of Planning and Economic Development
Indonesia	Ms. Indriana Nugraheni	Manager for Justice and Governance Pillar, SDGs at National Secretariat, Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia
Indonesia	Ms. Rizkya Delasari	Planner at Directorate of State Apparatus, Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia
Indonesia	Mr. Adif Rachmat Nugraha	Public Policy Analyst at National Secretariat, Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia
Indonesia	Ms. Maharani Wibowo	Deputy Director of State Apparatus at National Secretariat, Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia
Indonesia	Ms. Shofi Khamidati	Planner at National Secretariat, Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia
Indonesia	Ms. Prahesti Pandanwangi	Director of State Apparatus at National Secretariat, Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia
Indonesia	Ms. Anggita Sulisetiasih	Assistant Manager for Justice and Governance Pillar, SDGs at National Secretariat, Ministry of National Development Planning/National Development Planning Agency of the Republic of Indonesia
Indonesia	Mr. Theodorus Agustinus Hasiholan	Public Policy Expert at Open Government Indonesia
Islamic Republic of Iran	Ms. Shahla Osouli	General Director of Monitoring and Supervision of E-Gov Implementation at Information Technology Organization of Islamic Republic of Iran
Malaysia	Ms. Noorainee binti Mahmood	Deputy Director at ICT Strategic And Architecture Development Division
Malaysia	Mrs. Faridah Binti Ibrahim	Deputy Director at Digital Government Division
Malaysia	Mrs. Nur Farhana Binti Ahmad Hasri	Assistant Director at Management Consulting Division 2
Nigeria	Mr. Joseph Akinbode	Senior Computer Analyst at Federal Ministry of Communications and Digital Economy

	Nigeria	Mr. Níyì Adelami	System Analyst at Federal Ministry of Communications and Digital Economy
	Nigeria	Ms. Zainab Saka	Senior Programme Analyst at Federal Ministry of Communications and Digital Economy
	Nigeria	Prof. Suleiman Mohammed	Director at E-Government Center // DG's Office of the National Information Technology Development Agency (NITDA)
	Nigeria	Mr. Kola Obisesan	System Analyst at Federal Ministry of Communications and Digital Economy
	Nigeria	Ms. Damola Sogunro	Assistant Chief Programme Analyst at Federal Ministry of Communications and Digital Economy
	Nigeria	Mr. Abdulrahman Iliya Barau	Principal System Analyst at Federal Ministry of Communications and Digital Economy
	Nigeria	Mr. Mukhtar M. Sadiq	Technical Assistant at Federal Ministry of Communications and Digital Economy
	Turkey	Dr. Uğur Karagöz	Expert at Department of Digital Expertise, Monitoring and Assessment
	Turkey	Mr. Meftun Harmankaya	Unit Manager at Department of Digital Expertise, Monitoring and Assessment
	Turkey	Mr. Vural Çelik	Unit Manager at Department of Digital Expertise, Monitoring and Assessment
	Turkey	Mr. Filiz Özkan Aldemir	Analyst at Department of Digital Expertise, Monitoring and Assessment
	Turkey	Ms. Atilla Aydin	Unit Manager at Department of Digital Transformation Coordination
	Turkey	Ms. Aylin Bilen	Analyst at Department of International Relations

UN DESA

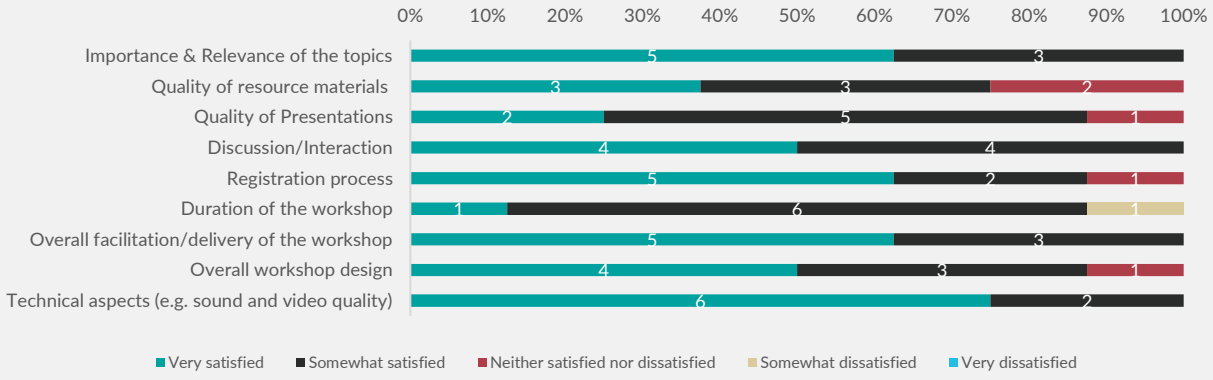
UN DESA participants included:

Juwang Zhu, Vincenzo Aquaro, Wai Min Kwok, Stefania Senese, Deniz Susar, Yusuf Eren Ekrem, Jonas Meuleman, Jieying Cai, Muyao Lyu, Xiaofan Liu

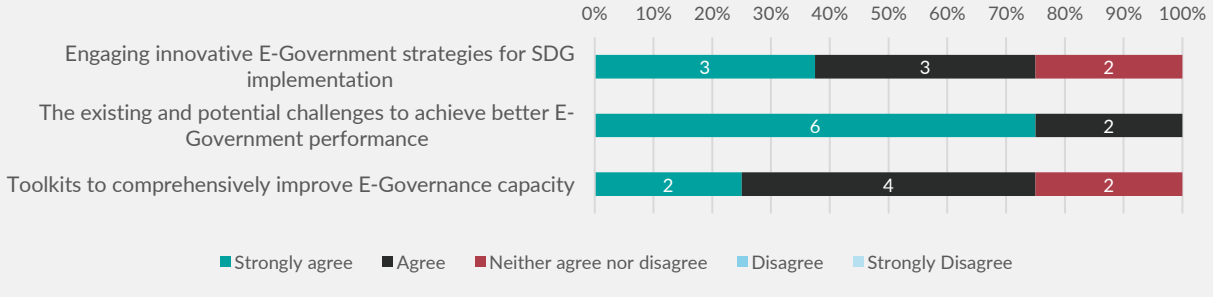
Workshop Evaluation

Participants in the Workshop were invited to fill out an evaluation survey designed to collect participants' feedback, to better understand Member States' needs and to improve the future designs of UN DESA work. Facts and figures from this evaluation exercise are reported below.

The overall quality of the Workshop was generally perceived as satisfactory. The importance and relevance of the discussed topics, the registration process, the overall delivery of the Workshop and the Workshop's technicalities scored best in this evaluation exercise.



Participants have indicated that they generally had the most increase in understanding the existing and potential challenges to achieve better E-Government performance.



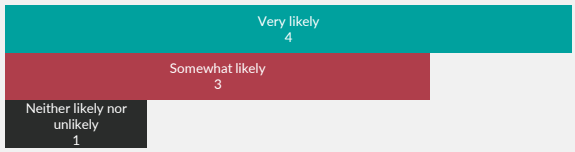
Considering the overall quality of the Workshop, satisfaction levels were relatively high among respondents.

4 respondents found the Workshop's overall quality 'very satisfactory,' and 4 respondents found it 'somewhat satisfactory.'

When asked what they liked most and least about the Workshop, multiple answers were received. As such, the knowledge sharing and interactivity between countries on regional developments was stated to be very insightful and resourceful. It was also stated that the Workshop's peer-review between countries was a good aspect. Improvements were however suggested in dividing E-Government topics for more detailed information sharing. For the future, more collaborative events were suggested to establish continuity in these capacity building efforts.

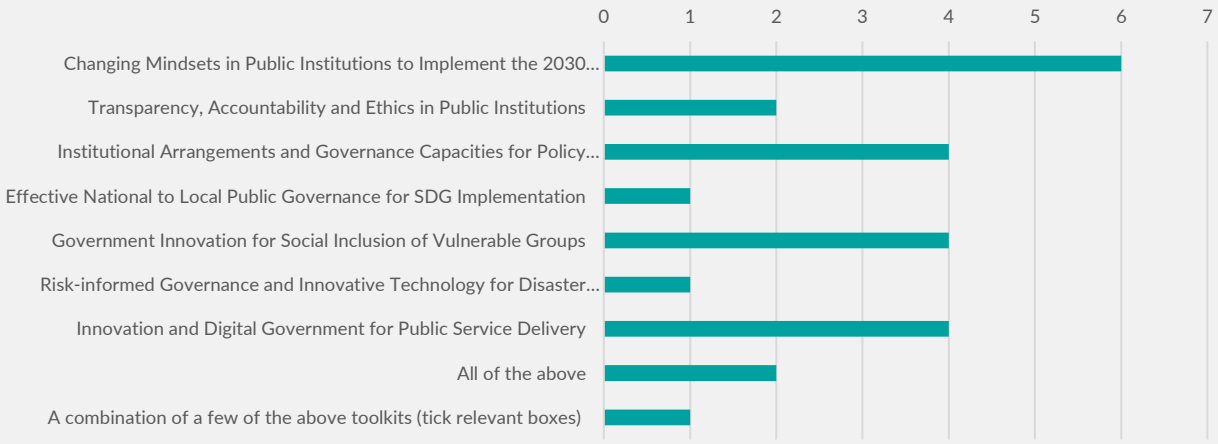
Respondents were asked about the probability to apply learned lessons from the Workshop.

4 respondents indicated this 'very likely,' 3 indicated this to be 'somewhat likely' and 1 respondent indicated 'neither likely nor unlikely.'



Respondents were also asked what follow-up actions they would take to implement the acquired knowledge. Answers ranged from reviewing, sharing and analysing information of participant countries with colleagues to generate new ideas and/or devise an action plan to implement learned lessons and making a report of this Workshop. Others indicated they could have dedicated sessions for countries to follow-up on the Workshop, would need extra specific information from other countries, or they would be in contact with UN DESA.

Respondents were mostly eager to receive further capacity development support in Changing Mindsets in Public Institutions to Implement the 2030 Agenda for Sustainable Development, followed by Institutional Arrangements and Governance Capacities for Policy Coherence, Government Innovation for Social Inclusion of Vulnerable Groups and Innovation and Digital Government for Public Service Delivery.



Respondents also made suggestions on what they would like to acquire more information. These included: (1) how digital transformation can be used in decision support systems in public administration and what kind of collaborations can be made; (2) Digital transformation; (3) E-Government Applications; (4) Data management, data sharing, data space establishment, big data and data ethics efforts in countries; (5) Single sign-on technologies; (6) calendar event, e-mail, newsletter and research.