



Welcome to the fourth and final module of the course which will be focused on digital government and tools and strategies for government leadership to pursue the digital transformation journey.

Part 1 Digital Government

Digital government to:

- Improve access to and delivery of public services and information
- Enhance transparency, openness of, and engagement with the administration
- Increase productivity of businesses, citizens, and employees
- Improve efficiency in the design and delivery of government services, and
- Contribute to broader government economic and social outcomes.



Source: researchgate.net

Part 1 Digital Government and Data

Effective government is a cornerstone of poverty reduction and inclusive growth. Digital government, as a key pillar of digital transformation, supports the achievement of a number of Sustainable Development Goals and brings many economic and social benefits. Here we will use the terms digital government and e-government interchangeably.

As early as 2009, the World Bank’s Primer on E-Government already pointed to the potential for digital government to:

- Improve access to and delivery of public services and information
- Enhance transparency, openness of, and engagement with the administration
- Increase productivity of businesses, citizens, and employees
- Improve efficiency in the design and delivery of government services
- Contribute to broader government economic and social outcomes

Key Concepts for Digital Government

Digital Government

- Digital Administration
- Digital Data
- Digital Services
- Digital Participation

Open Government Data Digital Identity

- Identity
- Credentials
- Digital identification system
- Data in public registries
- High-value data sets

Smart Cities/Smart Islands



In the first part of this Module we discuss digital government, Open Government Data, Digital Identity and Smart Cities/Smart Islands. First a few key concepts under Digital Government can be further divided into:

- Digital administration, which is the use and application of information technologies in public administration to streamline and integrate workflows and processes
- Digital data, which is the use and application of ICT to effectively manage data and information
- Digital government services, which is the use of ICT to enhance public service delivery
- Digital Participation, which is the use of ICT to expand communication channels for engagement and empowerment of people

Digital Administration

To improve efficiency, need for a whole-of-government approach to eliminate siloes between ministries and their data, processes and systems

Shift to create interoperability between systems, may be costly, time consuming and require legislative and bureaucratic changes



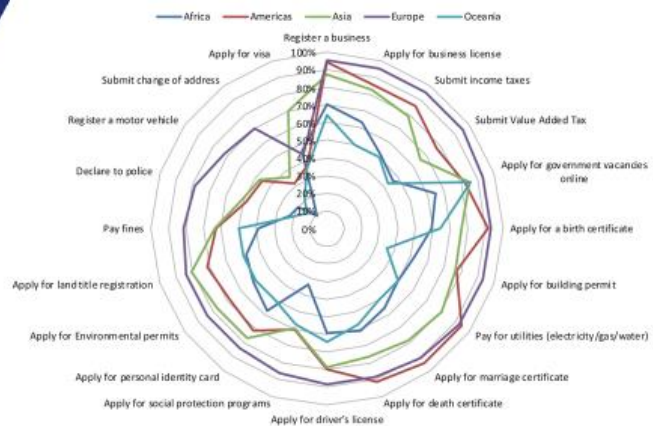
Digital administration allows government agencies to enhance their efficiency. For years, efforts to digitalise government administration have mirrored the vertical silos of the government organisation and often that of donors. Each sectoral ministry or agency automated their own data, processes and systems, independently from the others. There is increasing recognition of the need for a whole-of-government approach, and the creation of interoperability between systems. The principal challenges to the digital transformation of government administration are the complexity and cost of the operation, including legislative changes, and civil servants’ resistance to change.

Digital Public Services in SIDS

Digital public services allow governments to offer better services to citizens and businesses, as well as promote transparency and accountability within the public sector.

Only 12 out of the 38 SIDS are among the world’s top 100 nations on the UN E-Governance Index

Key challenges for digital public services are lack of access to infrastructure, digital skills or digital identity to be able to use them

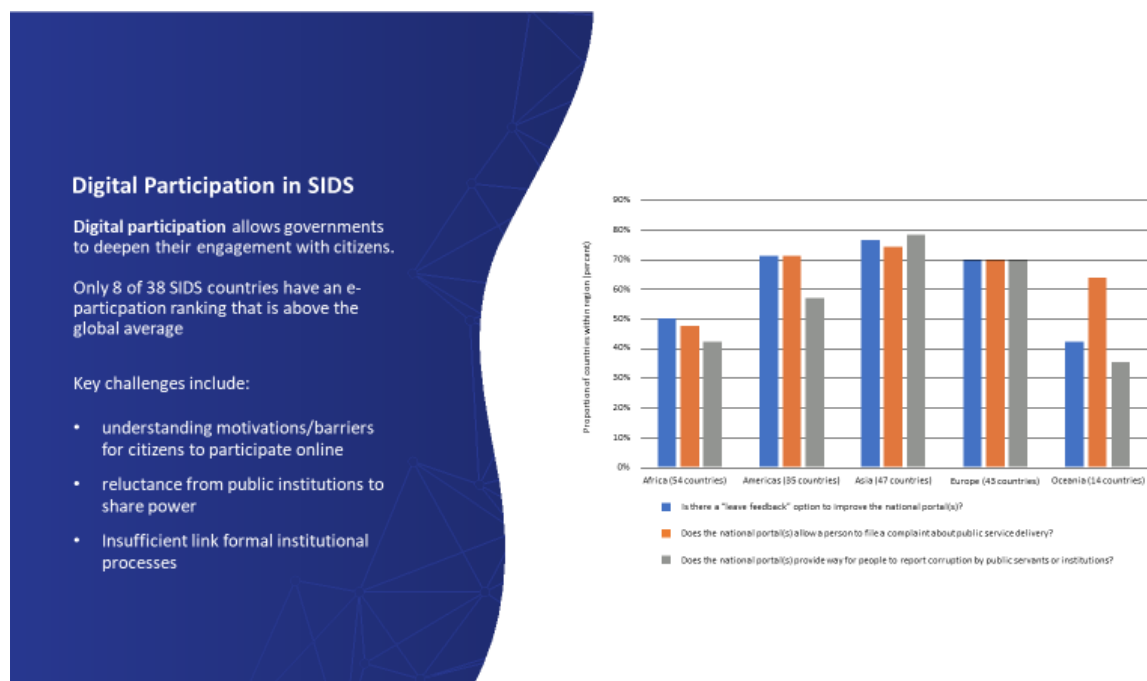


Digital public services allow governments to offer better services to citizens and businesses, as well as promote transparency and accountability within the public sector. In the Pacific, for instance, digital platforms are being used to deliver public services to residents in several countries. Governments have set up online business registries in Tonga, Samoa and Vanuatu, online taxation services in Fiji and the

Solomon Islands, an online passport application system in Papua New Guinea, online references to legislation in Tuvalu, and online birth and death registration throughout the Pacific subregions. SIDS are making considerable progress in the E-Governance and services delivery however they still tend to rank still low within this space. As we saw in the first module, only 12 out of the 38 SIDS are among the world’s top 100 nations on the UN E-Governance Index and only 1 out of the 12 is from the Pacific, Fiji at 90th. This graphic on the right shows the proliferation of digital government services in different regions of the world.

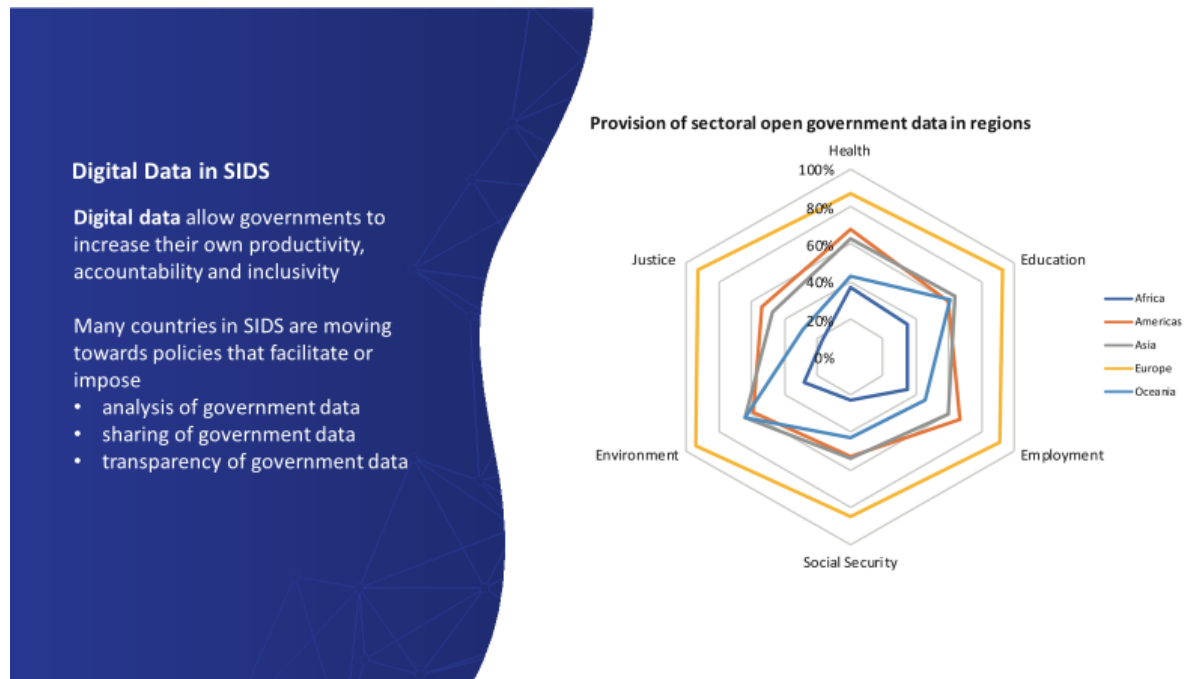
A key challenge for digital public services is the fact that users need access to infrastructure, digital skills and often also digital identity to be able to use them. Another challenge is making sure the services are adapted to the needs of users, and sufficiently secure for them to trust that they are safe. The delivery of quality digital public services is not just matter of digitizing existing operations. It is an opportunity to re-evaluate the business processes behind the services, to explore the potential to streamline services, to drive greater efficiency and cost-savings, with the citizen end-user as the focus. Governments can reduce costs and reduce administrative burdens on staff and citizens by offering services on shared infrastructure, with core citizen data shared across ministries, avoiding duplication and errors. Climate resilience is another clear benefit. For SIDS countries, the digitalization of public services can also be an important factor in business continuity of the government when natural disasters hit.

Bangladesh’s A2I offers a good example of a citizen-centred transformation of digital public services, delivering on the target that citizens should not travel more than 4km to have access to over 150 services at digital centres, saving billions of hours of people’s time across the economy.



Digital participation allows governments to deepen their engagement with citizens. Citizens’ participation is a key pillar for a healthy democracy. UN DESA’s E-Participation Index measures progress in the area of e-information, e-consultation and e-decision-making, and only 8 of 38 SIDS countries have an e-participation ranking that is above the global average. Despite the multiplication

of platforms for e-participation, in many cases uptake remains low. Key challenges include understanding the motivations for citizens to participate online, the reluctance from public institutions to share agenda-setting and decision-making power, and linking e-participation initiatives with formal institutional processes for people to see their impact. Caribbean SIDS are more likely than SIDS in Oceania to have digital implementation plans that make specific reference to e-participation, digital inclusion or public engagement. You can see a few examples of the measures of e-participation in the graphic and how this varies across regions.



Digital data allow governments to increase productivity and improve decision-making across all development priorities. Many SIDS face significant data gaps and underinvestment in statistics offices to support robust and precise data-driven decision making. The SAMOA pathway highlights the necessity for SIDS to upgrade national statistical systems and mainstreaming data collection and analysis tools and capacity.

Data have become a key strategic asset for the creation of both private and social value. This data is also valuable across all stakeholders, and the movement towards more Open Government Data allows academics, the private sector and civil society to make innovative use of high value public data sets such as geospatial, earth observation and environmental data, household survey data, and more. There is a rich ecosystem of public datasets with coverage of the SIDS from global sources such the World Bank and the UN, however one challenge is that the scarcity of data leads to many SIDS being omitted from published indices lists.

Satellite imagery offers a rich data source with countless applications for SIDS for mapping land use, coastal erosion, humanitarian aid, maritime monitoring, and many more. Spatial data tools allow SIDS to visualize and comprehend their complex and interconnected set of challenges. Analysis tools can extract insights from geospatial data including correlation between datasets and identification of high-risk areas within countries. UNDP offers two integrated digital assessments tools, the Household

and Building Damage Assessment, and the Socio-economic Impact Assessment to support rapid and in-depth assessments in the aftermath of crises.

Digital Identification

Digital ID schemes enable countries to leapfrog the building of traditional paper-based ID systems.

Digital Identification schemes facilitate digital government services as well as the provision of private sector online services, a cross-cutting foundation for successful digital transformation



Hundreds of millions of people around the world still live without valid proof of who they are, including up to 166 million children who do not have a birth certificate. Almost half the world's countries don't have universal birth and death registration. Digital ID schemes enable countries to rapid address these challenges and to leapfrog the building of traditional paper-based ID systems.

Digital Identification schemes facilitate digital government services as well as the provision of private sector online services and are considered a cross-cutting foundation for successful digital transformation. The World Bank defines digital identity as a set of electronically captured and stored attributes and/or credentials that uniquely identify a person.

Many countries have a range of functional identification schemes, e.g. for elections, tax, social protection. To guarantee identity-for-all, governments can either harmonise existing functional systems or create a universal foundational scheme. Some SIDS countries have decided to replace their fragmented functional schemes with a fully digital foundational system, and Samoa is on the path towards a comprehensive digital ID system. Given the complexity, cost and time needed to set up a foundational digital identity system, the challenge is to prevent wasted investment in redundant and conflicting functional systems. The World Bank's ID4 Development practitioner's guide offers practical guidance for implementation.

Cybersecurity and Data Privacy

Cybersecurity: The protection of digital assets from harmful events such as human and technical errors, unauthorised internal users and malicious external individuals or organisations

Data Privacy: The right of individuals to choose who has access to their personal data and how it is processed



The increased interconnection of systems and devices has been accompanied by increased exposure to cybercrime. Cyber attacks cost billions of dollars, including direct damage, post-attack disruption to the normal course of business and reputational loss to companies and organizations. The indirect costs of cybercrime include low public confidence in online security, which makes people hesitate to use the internet and make electronic transactions. Cybersecurity is the protection of digital assets from harmful events such as human and technical errors, unauthorised internal users and malicious external individuals or organisations. It is fundamental for preserving countries' economic growth and national security. The expansion of cyberspace is also creating ever greater concerns about breaches to the privacy of personal data. The sharing or sale of personal data without consent can also cause significant harm to individuals. Data privacy protection is crucial for the safety and wellbeing of citizens.

Governments have a leading role for enhancing cybersecurity and protecting data privacy in the interest of maintaining the nation's security and ensuring inclusive economic growth. ITU offers a free online course and reference guide to assist governments to develop an effective National Cybersecurity Strategy. It is available in the course materials and includes advice on governance of the strategy, risk management approach, procedures for incident response and crisis management, protection of critical infrastructure and services, and plans for capacity building and raising awareness. One of the biggest challenges to passing and implementing cybersecurity strategies, policies, laws and regulation is a lack of awareness among governments, businesses and individual citizens. SIDS countries are among the lowest in the world in cybersecurity protection.



Smart Cities and Smart Islands

A national digital transformation strategy:

- **Health:** deploy telemedicine for rural access
- **Education:** access to distance learning
- **Agriculture:** support productive farming
- **Early warning and response:** ICT systems improve risk monitoring and alerts
- **Tourism and Blue Economy:** support access to e-commerce to support livelihoods.

Smart Cities are local governments that harness and leverage cutting-edge technologies to accelerate sustainable development. Given the small population and territorial size of SIDS, governments can draw inspiration and lessons from smart city approaches and networks. The ‘Smart Islands’ is an innovative approach to deliver connectivity along with an integrated suite of scalable and sustainable services to island communities that leverages interoperability, multi-functionality and reuse of ICT infrastructure. The Smart Islands approach can improve the provision of digital services across key sectors such as:

- **Health**, where the deployment of telemedicine allows patients to receive preventive care, and improve access to diagnosis, while also reducing the cost to the healthcare system.
- In **education**, the access to open and distance learning opportunities will enable capacity building for teachers, students and administrators, and provide more equitable access to quality literacy, lifelong learning and skills programmes.
- Digital **agriculture** services can support efficient and productive farming capabilities, making rural communities more resilient from both the economic and nutritional point of view.
- ICT systems can support **hazard risk monitoring**, alert, and provide post-alert guidance and information, for instance, to prevent potential damage due to hurricanes.
- In the **tourism and blue economy sectors** e-commerce and e-marketing can improve income opportunities and support livelihoods.

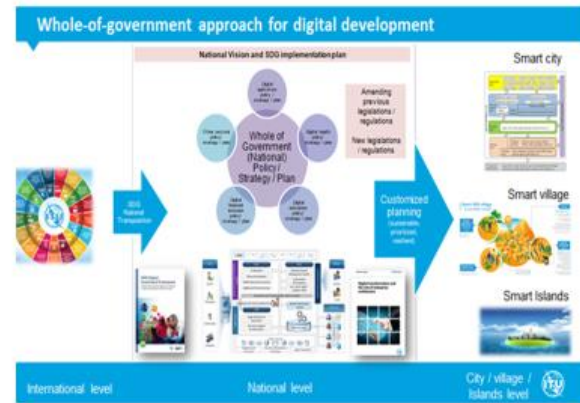
In short, this integrated approach to digital development has an impact across multiple SDGs.

Part 2 Guidance and Tools for Digital Transformation Strategies

Part 2 How to Develop a Digital Transformation Strategy?

A national digital transformation strategy:

- Builds upon international goals and national development strategies
- Starts with a Digital Assessment
- Uses participatory approach to engage whole-of-government and broad range of stakeholders, including citizens
- Identifies the policies, laws and regulation to be put in place or reformed
- Identifies long-term investment and monitoring and review process



Political commitment to digital transformation can be translated into action through a national digital transformation strategy or master plan. To ensure buy-in and implementation, it is important to take a whole-of-government and participatory approach throughout the strategy development cycle.

A national digital transformation strategy builds upon international goals, such as the Sustainable Development Goals and national development strategies. The strategy should identify the policies, laws and regulation that need to be put in place or reformed, including those on privacy, cybersecurity, access to information, transparency, digital government, intellectual property, open government data, national security, interoperability.

Digital transformation requires a significant and long-term investment, and a large part of the budget involves user research, workflow re-engineering, capacity building and change management. To this, one needs to add the costs of changes to the legal framework, the ongoing expenses of governance and coordination, and monitoring and evaluation for the purpose of constant improvement.

Steps to develop or improve an Inclusive Digital Transformation Strategy

Steps to develop Digital Transformation Strategy

1. Conduct a Readiness Assessment
2. Identify Priorities through multi-stakeholder dialogue
3. Craft the strategy



The Pathways for Prosperity Commission, in its Digital Economy Toolkit, proposes a three-step process to develop a digital transformation agenda:

The first step is the readiness assessment. Ideally, a readiness assessment is conducted by a group of representatives from all different ministries, together with key representatives from the private sector and civil society. In this module we will present the technical diagnostic tools from UNCDF and UNDP that provide this assessment around the digital transformation pillars.

The second step is the identification of priorities. By definition, a strategy is not inclusive unless priorities are set through multi-stakeholder dialogue. It is important to invite a broad set of leaders and experts from the private sector, civil society, development actors and all relevant areas of government at the table. Dialogue can first of all be used to build consensus on a vision for the digital economy in terms of citizens' access to and usage of digital services, particularly for vulnerable groups. Dialogue also serves to jointly analyse the country's strengths, weaknesses, opportunities and threats. A recognition of the interactions, interdependencies and overlaps creates buy-in for joint investments and coordination of effort. Analysis of a country's similarities and differences with other countries in the region and on the continent helps to identify unique competitive advantages that may be exploited.

The third step is the crafting of a strategy. Based on an analysis from the readiness assessment and the shared conclusions from dialogue, governments need to draft the National Inclusive Digital Transformation Strategy document. The format of the strategy document depends on its function and it is important to build in flexibility from the outset as new opportunities could be identified as technology progresses.

Tools to Support to Digital Transformation Assessments

How to establish a situational analysis and PRIORITIZE policies for Digital Transformation?



Digital Assessment Tools

- UNDP Digital Readiness Assessment
- UNCDF Inclusive Digital Economy Scorecard
- Provide template for measuring and tracking level of digital development, inclusiveness of a country's digital ecosystem
- Generate scores and visuals for quick assessment
- Analysis of constraints support policy decisions and prioritization



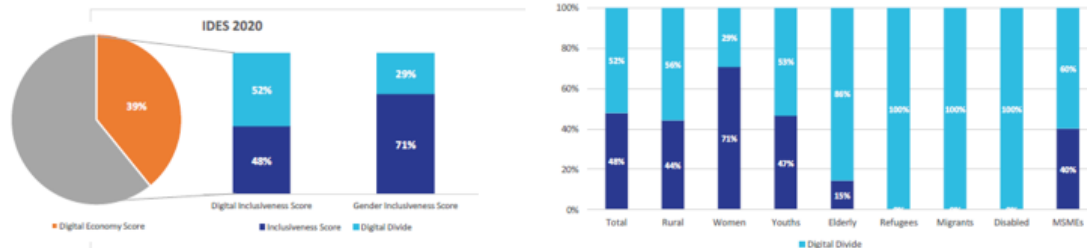
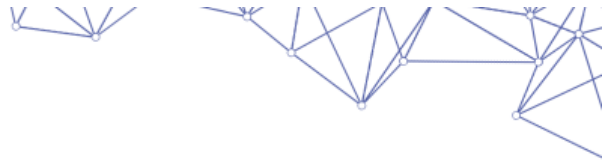
We have seen that SIDS governments can promote digital transformation through a large number of policy measures in a wide range of areas. Given that resources and capacities are limited, it is necessary to prioritise some measures over others. To help governments set priorities, the United Nations Capital Development Fund (UNCDF) has developed the Inclusive Digital Economy Scorecard and United Nations Development Programme (UNDP) has developed the UNDP Digital Readiness Assessment.

The objective of these tools is to support governments in conducting a situational analysis.

- Firstly, they provide a template for measuring and tracking the level of digital development as well as the inclusiveness of a country's digital economy.
- Secondly, data collected with the tool generate a set of scores, together with a set of visuals. These allow governments and other stakeholders to identify key government and market constraints hindering the development of an inclusive digital economy and digital transformation.
- Thirdly, an analysis of those constraints can help them make the necessary choices among all possible policy measures and set priorities.

Priorities can be formalised in a national inclusive digital transformation strategy. By updating the tool every year, governments can track progress against their strategy's targets, and where necessary adapt the strategy. In other words, the tool allows governments to put into practice evidence-based policy making.

Sample Analysis UNCDF Inclusive Digital Economy Scorecard



Here you see an example of the output of the inclusive digital economy score card. It shows that, in this sample country:

- The digital economy score is 39%. This means that this country still has quite some way to go to reach the maximum score of 100%.
- The overall digital inclusiveness score is 48%. This means that on average, the digital economy is approximately 48% inclusive of rural people, women, youth, the elderly, refugees, migrants, the disabled and MSMEs. At 52%, the digital divide is considerable.
- The gender inclusiveness score is 71%. This score is a sub-score of the overall digital inclusiveness score. It shows that the digital economy is approximately 71% inclusive of women. This means that the government and stakeholders give more consideration to women than to other segments. The gender digital divide of 29% shows that women are less excluded than other marginalised groups.

In the second visual on the right which is also generated by the inclusive digital economy scorecard the chart indicates the level of inclusion in, and the level of exclusion from, the digital economy across different vulnerable groups.

Quite a number of SIDS countries have conducted, or are currently conducting an assessment, of their level of digital transformation. Different organisations have developed diagnostic frameworks for conducting an assessment of the level of digital transformation. Some countries have participated in more than one diagnostic, to give them a full picture of their digital landscape, some provided at little or no cost to the government.

Factors of Failure in Digital Transformation

Important reasons why attempts at digital transformation have failed include:

- Lack of leadership from local governments
- Siloed strategies and investments
- Lack of participation and representation
- Lack of focus on harmonisation and interoperability
- Lack of user consultation and involvement

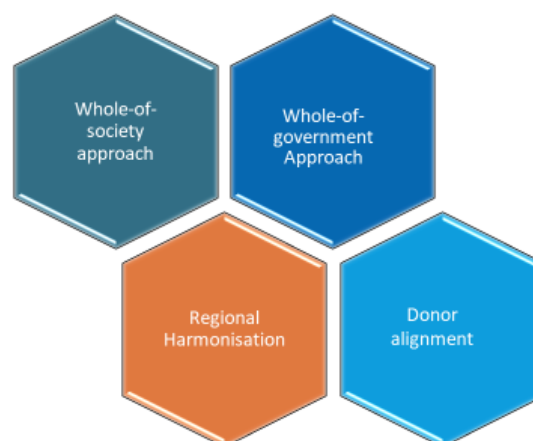


As we approach the end of the course, we would like to offer additional guidance for success in pursuing the digital transformation journey. First, we must be clear that gains from digital technology are not inevitable. In fact, despite significant investments, many technology-based programmes have failed. Important reasons for failure include a lack of leadership from national governments, siloed and uncoordinated strategies and investment, a lack of representation and participation of stakeholders, a lack of focus on harmonisation and interoperability, and a lack of user consultation and involvement in the design of services.

Factors of Success in Digital Transformation

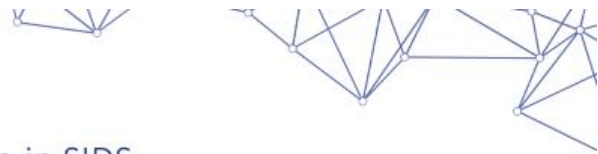
Factors for Success:

1. A whole-of-government approach to weigh the tradeoffs and ensure coherence
2. A whole-of-society approach builds ownership and mitigate risks and build accountability;
3. Regional harmonisation around policies, platforms and peer learning
4. Alignment of cross-sector digital transformation investments of global development actors, specifically donors, with national and regional strategies.



According to the Digital Impact Alliance which has analysed the efforts of multiple development actors promoting inclusive digital transformation with the goal of achieving the SDGs, four factors are particularly important for success:

1. A whole-of-government approach sets governments up to weigh the tradeoffs and ensure coherence across a range of digital transformation policy objectives.
2. A whole-of-society approach builds ownership and can help inclusive design, mitigate risks and establish sustainable accountability.
3. Regional harmonisation around shared policies, platforms and peer learning accelerates country growth by strengthening negotiating power and economies of scale.
4. Cross-sector digital transformation investments of global development actors, specifically donors, should be aligned with national and regional strategies.



Digital Transformation Strategies in SIDS

Most SIDS countries have an ICT strategy or plan that covers the technology sector

Only a smaller number of SIDS countries have a comprehensive digital transformation strategy

Several have digital transformation programmes underway

Find additional support from UNCDF and UNDP

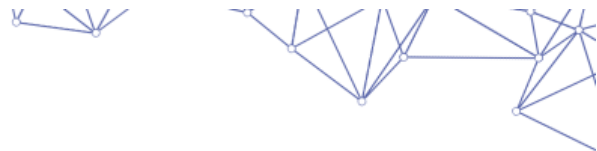


The purpose of a national digital transformation strategy is to make sure technology does result in economic growth, and that this growth is inclusive of vulnerable groups. While most SIDS countries have an ICT strategy or plan that covers the technology sector, only a smaller number of SIDS countries have a comprehensive digital transformation strategy that covers the entire economy. A number of recent initiatives offer opportunities for SIDS countries to speed up the development of an inclusive digital transformation strategy. These include the UNCDF's Leaving No-One Behind in the Digital Era Strategy and the expansion of technical and advisory support from UNCDF and the UNDP SIDS team and Singapore Centre.

Initiatives to Support Digital Transformation Journey

- UN Public Administration Network (UNPAN) SDG16 Knowledge Hub
- Open Government Partnership (OGP)
- World Bank Identification for Development (ID4D) initiative
- UN United for Smart Sustainable Cities (U4SSC) initiative
- International Telecommunications Union (ITU-T) initiatives on Smart Sustainable Cities/Smart Islands

In addition, governments that wish to accelerate their digital transformation can build on a number of international initiatives. These include the UN Public Administration Network's SDG16 Knowledge Hub, the Open Government Partnership, the World Bank's Identification for Development initiative, the UN's United for Smart Sustainable Cities initiative and the International Telecommunications Union's Standardisation Sector initiatives. You will find links to these and more in the course materials.



Course Overview

Module 1 Introduction to the Inclusive Digital Transformation Journey

Module 2 Regulation and Infrastructure

Part 1 Inclusive Digital Infrastructure

Part 2 Regulation: Inclusive Enabling Policy and Regulatory Environment

Module 3 Business and People

Part 1 Business: Fostering Inclusive Local Digital Innovation

Part 2 People: Inclusive Digital Skills

Module 4 Digital Government and Tools to Support to Digital Transformation Strategies

That brings us to the end of this course. We covered the 5 pillars of the digital transformation journey: Infrastructure, Regulation, Business, People and Government and discussed strategies and tools to support governments in developing inclusive digital transformation strategies. Please allow us to take this opportunity to thank you very much for engaging actively in the subject matter.

You are strongly encouraged to apply what you learned in your daily work, in hopes that each SIDS country will develop or update a full-blown digital transformation strategy, to take full advantage of technology advancements to accelerate progress on the Sustainable Development Goals and the SAMOA Pathway.