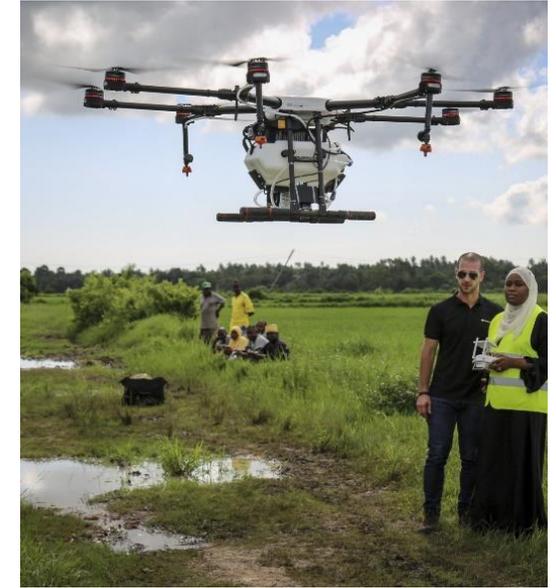
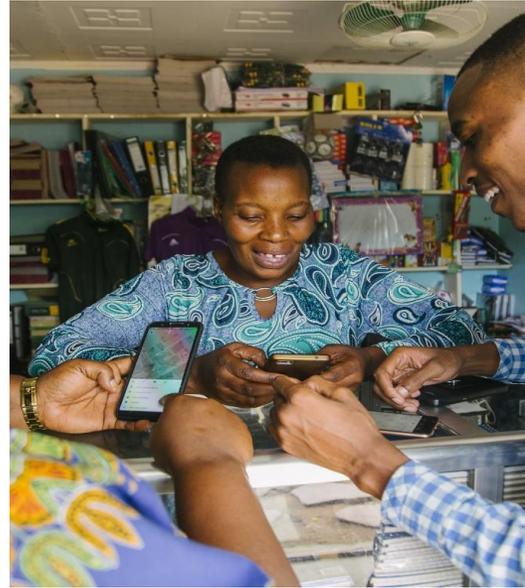




Overview Presentation

Data and Digital Government for DRR and Building Resilience

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Presentation Outline

1. Digital Government for DRR and Resilience
2. Bridging the Digital Divide to Ensure Digital Inclusion
3. Innovative Cases on Digital Government for DRR and Resilience
4. Conclusion and Policy Recommendations



1.
Digital Government for DRR
and Resilience

1. Digital Government for DRR and Resilience

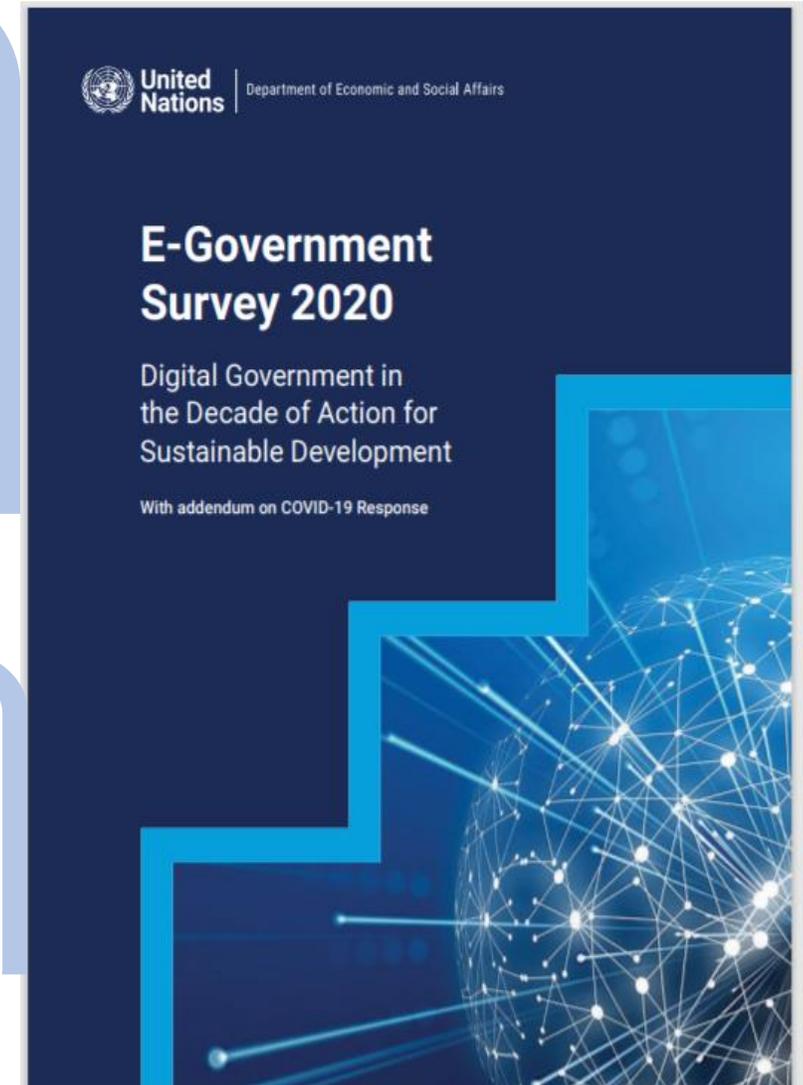
“**digital government**” and “**e-government**” are used interchangeably, as there is still no formal distinction made between the terms among academics, policymakers and practitioners.

Digital government is not an end; it is a means to improving public service delivery, increasing people’s engagement, enhancing transparency, accountability and inclusion, and ultimately making life better for all.

-- *UN E-Government Survey, 2020*

Digital government/“E-government can thus be defined as the use of ICTs to more effectively and efficiently deliver government services to citizens and businesses. It is the application of ICT in government operations, achieving public ends by digital means.”

-- *UN E-Government Survey, 2018*



1. Digital Government for DRR and Resilience

■ The Role of Digital Government for DRR and Resilience

Digital Government has emerged as a powerful tool for DRR and building Resilience.

Digital Government improves:

- Delivery of essential public services esp. for DRR
- Citizen engagement and Inclusion in decision making
- Information sharing
- Communication, efficient leadership & collaboration
- Resilience and sustainability
- Effective data management and risk governance
- Transparency, accountability, & trust in government
- New forms of partnerships with citizens



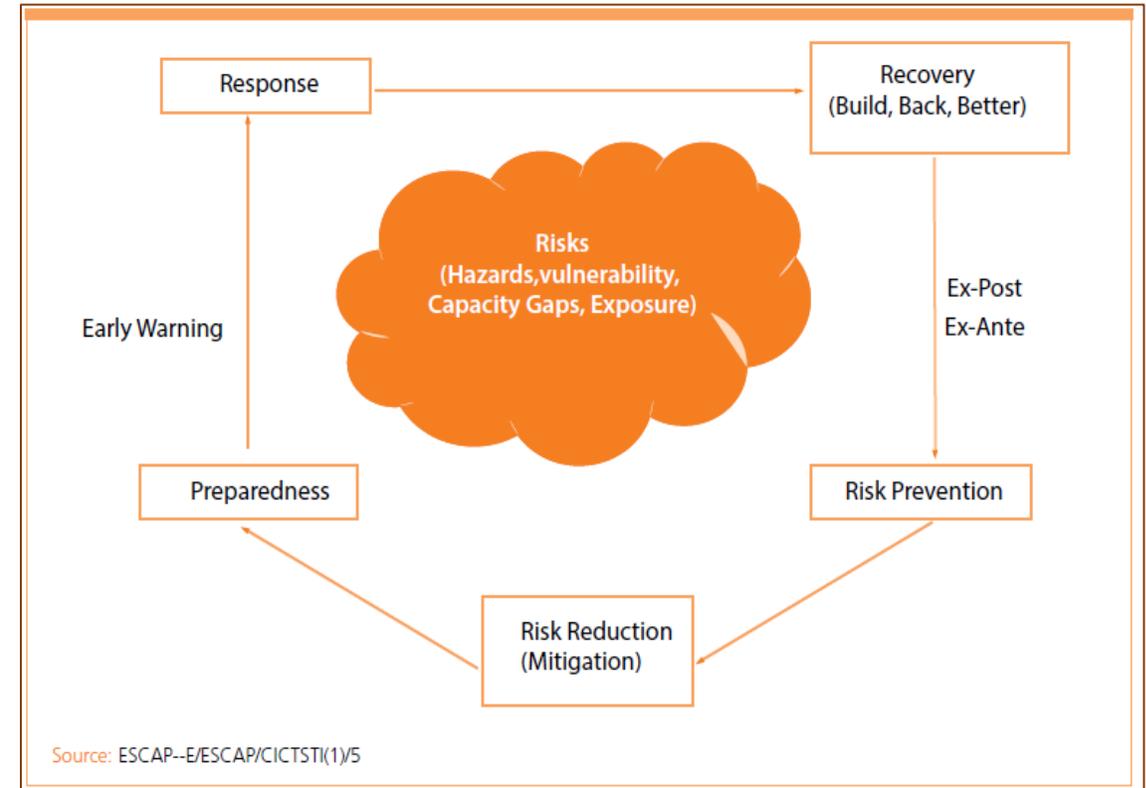
1. Digital Government for DRR and Resilience

■ The Role of Digital Government for DRR and Resilience

■ Digital government and ICTs services helps:

- ensure disaster response across the **phases of DRR**
- provide baseline understanding and evolution of emergencies
- provide data for predicting disasters and early warning systems esp. mobile phones
- provide insights on disaster response systems through real-time mobile phone data

Disaster Management Cycle



Source: https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf

Refer to Toolkit: Module 1.2

1. Digital Government for DRR and Resilience

■ Digital Government can Enhance E-Resilience

E-resilience:

- is ICT contributions to resilience, particularly at the community level.
- the use of ICTs during all **phases of DRM**
 - ***prevention, reduction, preparedness, response and recovery***
 - towards reducing risk and impact and maintaining the gains on sustainable development, including through e-government.

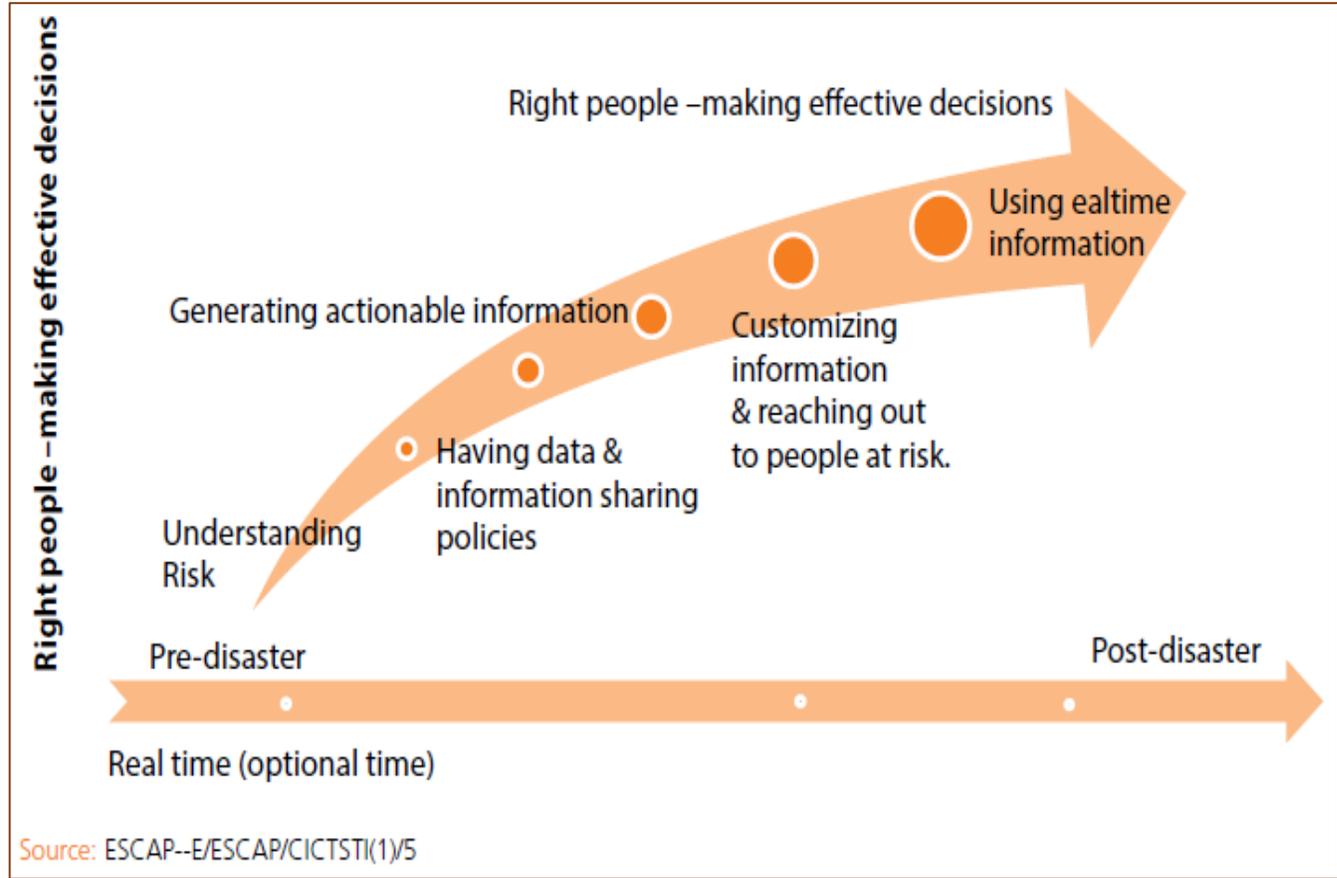
E-resilience entails **two main dimensions**:

- ICTs for disaster risk prevention, risk reduction and preparedness
- disaster response and recovery, rapid restoration of ICT infrastructure and services.

Refer to Toolkit: Module 1.2

1. Digital Government for DRR and Resilience

E-Resilience Guiding Principles



Refer to Toolkit: Module 1.2

Source: https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf

1. Digital Government for DRR and Resilience

■ ICTs in All Disaster Risk Management (DRM) Phases

Mission Area	Description	Core Capabilities	
Preparedness	The capabilities necessary to secure the country against acts of terrorism and manmade or natural disasters	<ul style="list-style-type: none"> • Planning • Public Information and Warning • Operational Coordination • Access Control and Identity Verification 	<ul style="list-style-type: none"> • Cybersecurity • Intelligence and Information Sharing • Physical Protective Measures • Supply Chain Integrity and Security
Mitigation and Prevention	The capabilities necessary to reduce risk and loss of life and property by lessening the impact of disasters.	<ul style="list-style-type: none"> • Planning • Public Information and Warning • Operational Coordination • Community Resilience 	<ul style="list-style-type: none"> • Long-term Vulnerability Reduction • Risk and Disaster Resilience Assessment • Threats and Hazards Identification • Integrated Risk Governance
Response	The capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred	<ul style="list-style-type: none"> • Environmental Response/Health and Safety • Fatality Management Services • Fire Management and Suppression • Infrastructure Systems • Logistics and Supply Chain Management • Mass Care Services 	<ul style="list-style-type: none"> • Mass Search and Rescue Operations • On-scene Security, Protection, and Law Enforcement • Operational Communications • Public Health, Healthcare, and Emergency Medical Services • Situational Assessment
Recovery	The capabilities necessary to assist communities affected by an incident to recover effectively	<ul style="list-style-type: none"> • Planning • Public Information and Warning • Operational Coordination • Economic Recovery 	<ul style="list-style-type: none"> • Health and Social Services • Housing • Infrastructure Systems • Natural and Cultural Resources



2.

**Bridging the Digital Divide to
Ensure Digital Inclusion for
DRR and Resilience**

2. Bridging the Digital Divide

“The development and evolution of new technologies may widen the digital divide between cities. Digital divides arise from broad socioeconomic inequalities, and at the root of both are economic and social disparities between countries, groups and individuals that impact their ability to access and use ICT.1.”

-- UN E-Government Survey, 2020

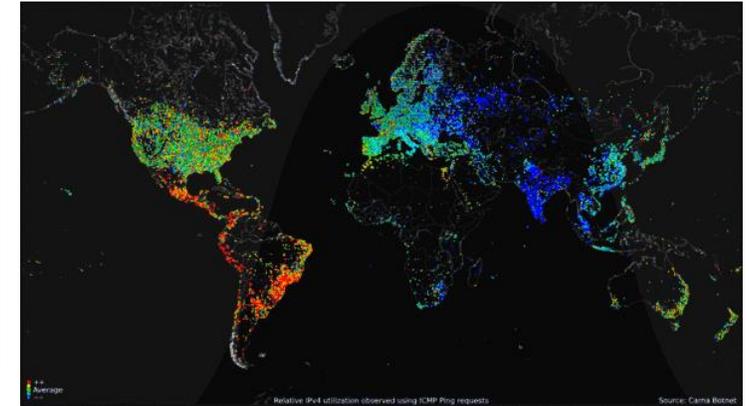


Image: Map of internet use across a 24-hour period as measured by the 2012 Internet Census.

Digital Divide Refers to Gaps between:

- Regions
- Countries
- Urban and Rural Areas
- Educated and Uneducated
- Skilled and Unskilled
- Young and Old
- Rich and Poor
- Privileged and Unprivileged

Digital Divide is a term that is used to describe the gap that exists between different groups of people, different countries, or different world regions, in the access that each has to modern information and communications technology.

- The first step in bridging digital divide is by addressing inequalities

To bridge the digital divide, Governments can make Internet access more affordable, provide multiple channels to access services, and deliver user-friendly online content.

-- UN E-Government Survey, 2020

Many cities and towns in low-income countries need to address these challenges:

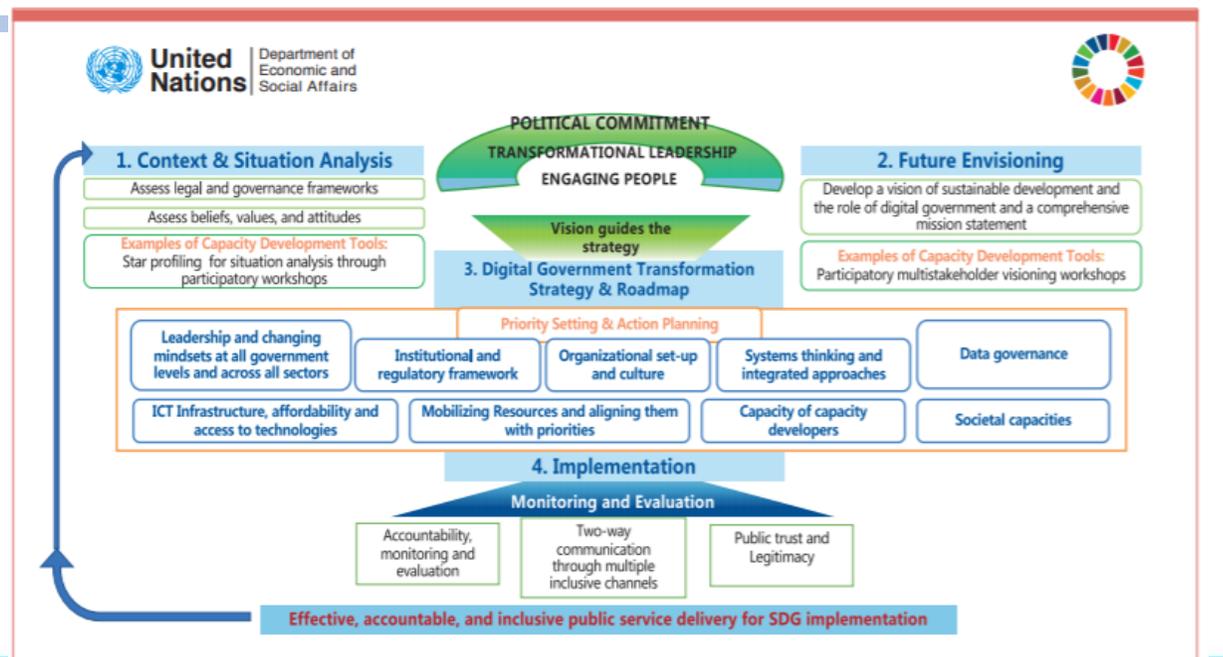
- limited resources
- weak ICT infrastructure and
- insufficient skills capacity and are unable to take full advantage of emerging technologies

2. Bridging the Digital Divide

■ Bridging the Digital Divide Requires Developing Digital Capacities

- Digital technologies helps to innovatively *operate, share information, make decisions, deliver services, engage and partner* with people.
- However, many countries still **lack the capacity** to effectively leverage digital technologies.
- The UN Sustainable Development Group defines **Capacity Devevelopment** as *“the process whereby people, organizations and society as a whole unleash, strengthen, create, adapt, and maintain capacity over time”*

Holistic Approach to Digital Government Transformation and Capacity Development



Refer to Toolkit: Module 1.2 and 3.2

[https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20\(Full%20Report\).pdf](https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2020-Survey/2020%20UN%20E-Government%20Survey%20(Full%20Report).pdf)



3. Innovative Cases on Digital Government for DRR and Resilience



3. Innovative Case on Digital Government for DRR and Resilience

Case Study 1: FINDER

Problem: Victims trapped under debris must be identified and rescued quickly

Need: Information confirming the presence and location of victims

Obstacle: Detecting humans through debris is difficult, and no system can locate victims in any condition or scenario

Solution: Radar systems able to detect a human heartbeat through mixed or solid concrete



Image: The Finding Individuals for Disaster and Emergency Response (FINDER) system being used in Nepal to assist in rescue efforts after the April 25, 2015, earthquake.

Image Source: NASA, 2015.

Refer to Toolkit: Module 2.1

Case Study 2: Malawi Drone Corridor

Problem: Poor capacity to harness drone delivery capabilities in underdeveloped areas

Need: Drone research and development

Obstacle: Lack of permissions, policies, and area to test drone use

Solution: Designated test bed to enable relevant stakeholders to discover new and innovative uses of UAV deliveries



Image: People observe a UAV involved in the Drone Corridor program.
Image UNICEF, 2018. <https://uni.cf/2BBkOXM>.

Refer to Toolkit: Module 2.1

3. Innovative Case on Digital Government for DRR and Resilience

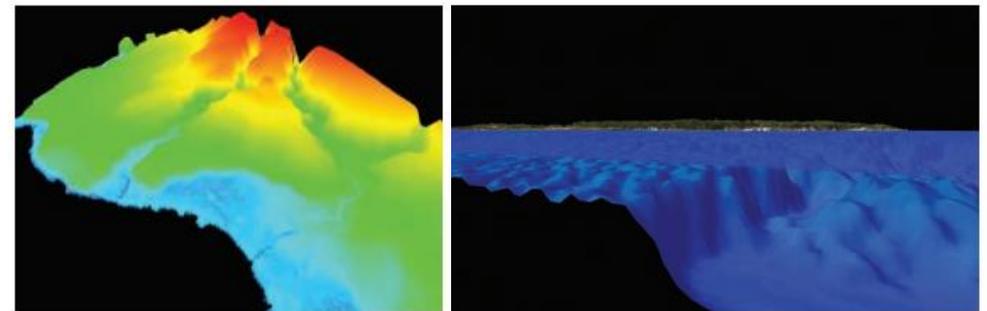
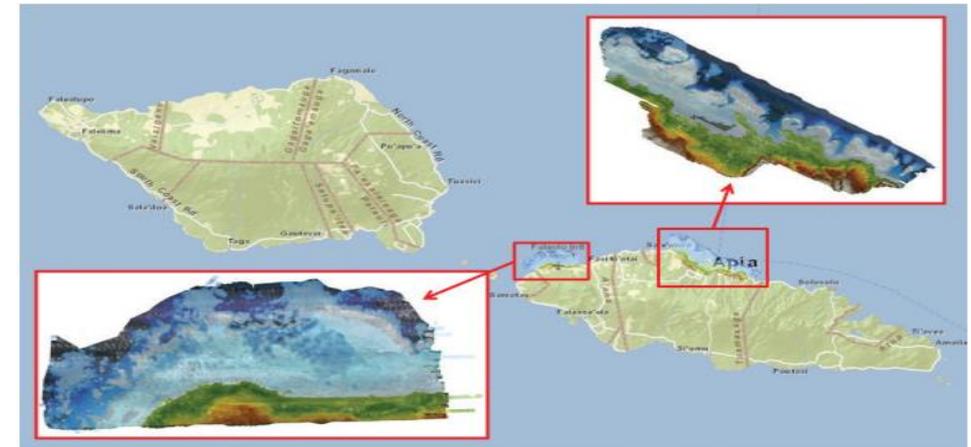
Case Study 3: Samoa LiDAR Mapping

Problem: Low lying coastal communities are at high risk from storm surge and tsunami, exacerbated by sea-level rise

Need: Accurate elevation data to guide planning efforts

Obstacle: Ground-based surveys have moderate accuracy and do not provide complete coverage; also may be outdated

Solution: Aircraft-produced LiDAR scans of topography and bathymetry around populated low-lying areas.



Top: Map showing extent of LiDAR capture in Samoa and digital elevation models (DEM) of the two areas captured; Bottom Left: A 3D digital elevation model of the area surrounding Apia, with red indicating highest elevation; Bottom Right: A 3D perspective of the seafloor off the coast of Upola. Images Source: Australian AID, 2013.

4. Conclusion and Policy Recommendations

- **Digital government** is not an end; it is a means to improving public service delivery, increasing people's engagement, enhancing transparency, accountability and inclusion, and ultimately making life better for all.
- **Digital government** has played a central role in addressing the crisis, becoming an essential element of communication, leadership and collaboration between policymakers and society
- Achieving Sustainable Development Goals (SDGs) are vital in making resilient societies.
- ICTs are deeply interconnected with the SDGs as the use of ICTs in government and private institutions can hasten the process of achieving SDGs.
- **Digital government** emerges as a powerful tool to achieve the SDGs.
- It is important to anchor the development of digital government to citizen-centered governance.
- Since **digital government** is a journey and not a final destination, the continuous monitoring and evaluation of digital services is essential.



Thank you