

The ADB logo consists of the letters 'ADB' in a white, serif font, centered within a dark blue square. The background of the entire slide is a photograph of a young boy in a classroom, wearing a school uniform and holding a pen over a notebook. The scene is brightly lit, with sunlight streaming through windows in the background. In the top right corner, there is a graphic of a network of white circles connected by lines, with the text 'DIGITAL TECHNOLOGY FOR DEVELOPMENT' overlaid on it.

ADB

The logo features a stylized network of white circles connected by thin white lines, resembling a globe or a digital network. To the right of this graphic, the text 'DIGITAL TECHNOLOGY FOR DEVELOPMENT' is written in a white, sans-serif font, stacked in three lines.

DIGITAL  
TECHNOLOGY  
FOR DEVELOPMENT

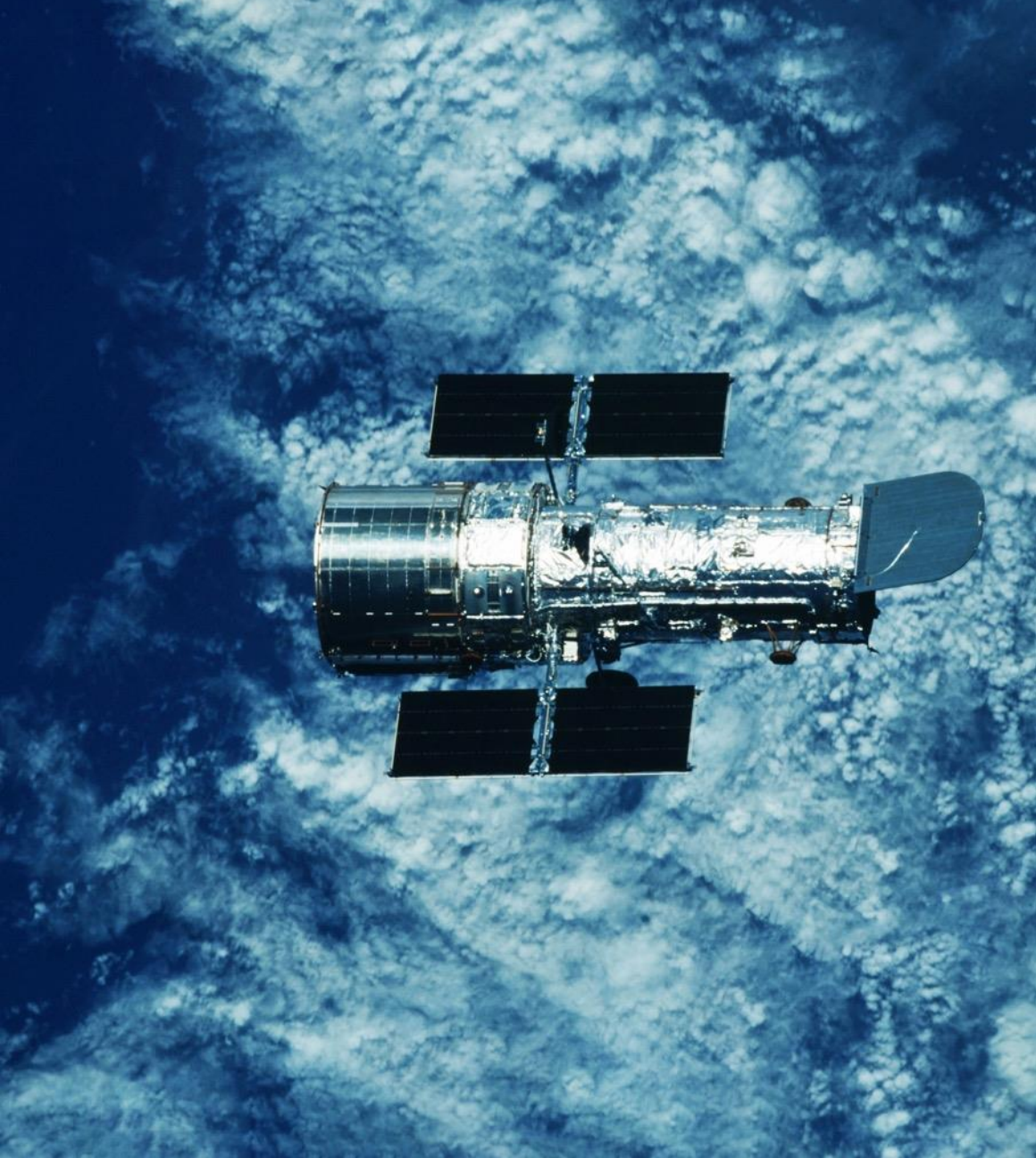
# Digital Technology for Development Overview

SUPPORTING INCLUSIVE DIGITAL  
TRANSFORMATION FOR ASIA AND THE PACIFIC

**Thomas Abell**

Director, ADB Digital Technology for  
Development Division





# OUTLINE

- Digital Trends and Opportunities
- ADB Digital Technology Portfolio
- ADB's Approach to Digital Development Programs
- Current Digital Areas of Focus

# Digital Development Trends

## CONTEXT

- Digital technologies are transforming global economies and societies at unprecedented speed
- Digital development has been significantly accelerated by the response to the COVID19 pandemic
- Digital transformation is no longer a choice but a necessity

## TRENDS that drive digital transformation

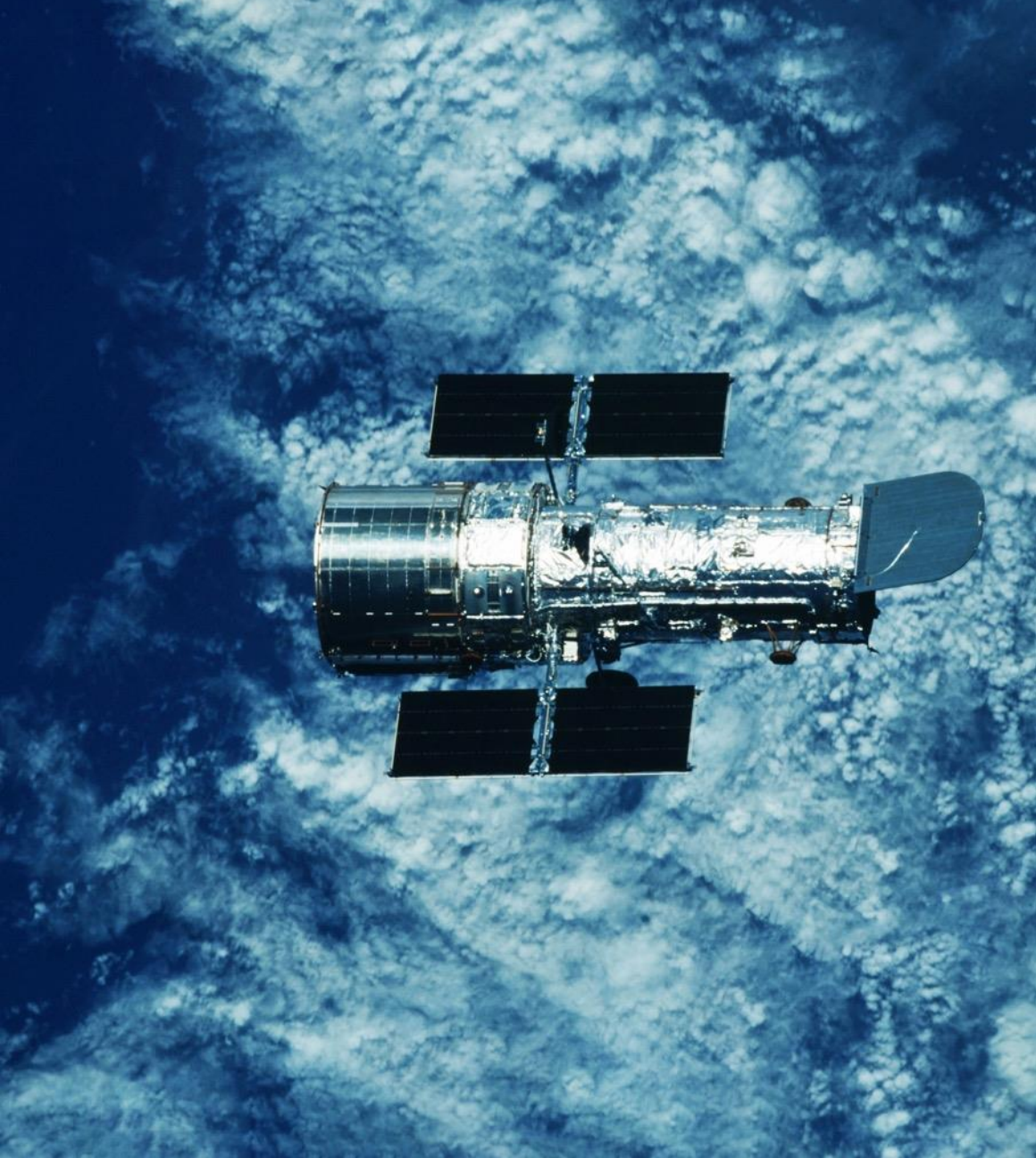
- Growing number of internet users & improvement in digital literacy
- Rising influence of digital platforms
- Increasing importance of data

# Digital Development Opportunities

- Most countries recognize **digital transformation as a key development strategy**
- Governments are adopting guidance or **governance frameworks** on the **ethical use of technologies**
- **Education and training** has a crucial role to play in fostering digital literacy and in upskilling the workforce
- Crucial to **foster digital entrepreneurship**, innovation, and a tech startup ecosystem
- ADB's long experience and deep cross-sectoral knowledge of countries and its strong track record as **advisor, convener and knowledge partner** make ADB uniquely placed to support DMCs
- Among potential digital investments, one of the top priorities is to have accessible, affordable and meaningful **broadband connectivity, to bridge the digital divide**
- To enable the flow of data, goods, and services, and generate investments, a comprehensive **regulatory framework**, and **effective policies** and implementation arrangements is key







# OUTLINE

- Digital Trends and Opportunities
- ADB Digital Technology Portfolio
- ADB's Approach to Digital Development Programs
- Current Digital Areas of Focus

# Digital Technology in Sectors and Thematic Areas

Digital Technology components have been **integrated** in ADB operations across the sector and thematic areas in line with Strategy 2030

## Education

Digital job skills;  
digital tools for  
teaching; education  
mgt info systems

## Health

Health  
management  
info systems;  
linked to  
national ID

## Social Dev

IT reforms for  
social protection  
programs

## Climate Change

Earth  
observation  
technology for  
early warning  
systems

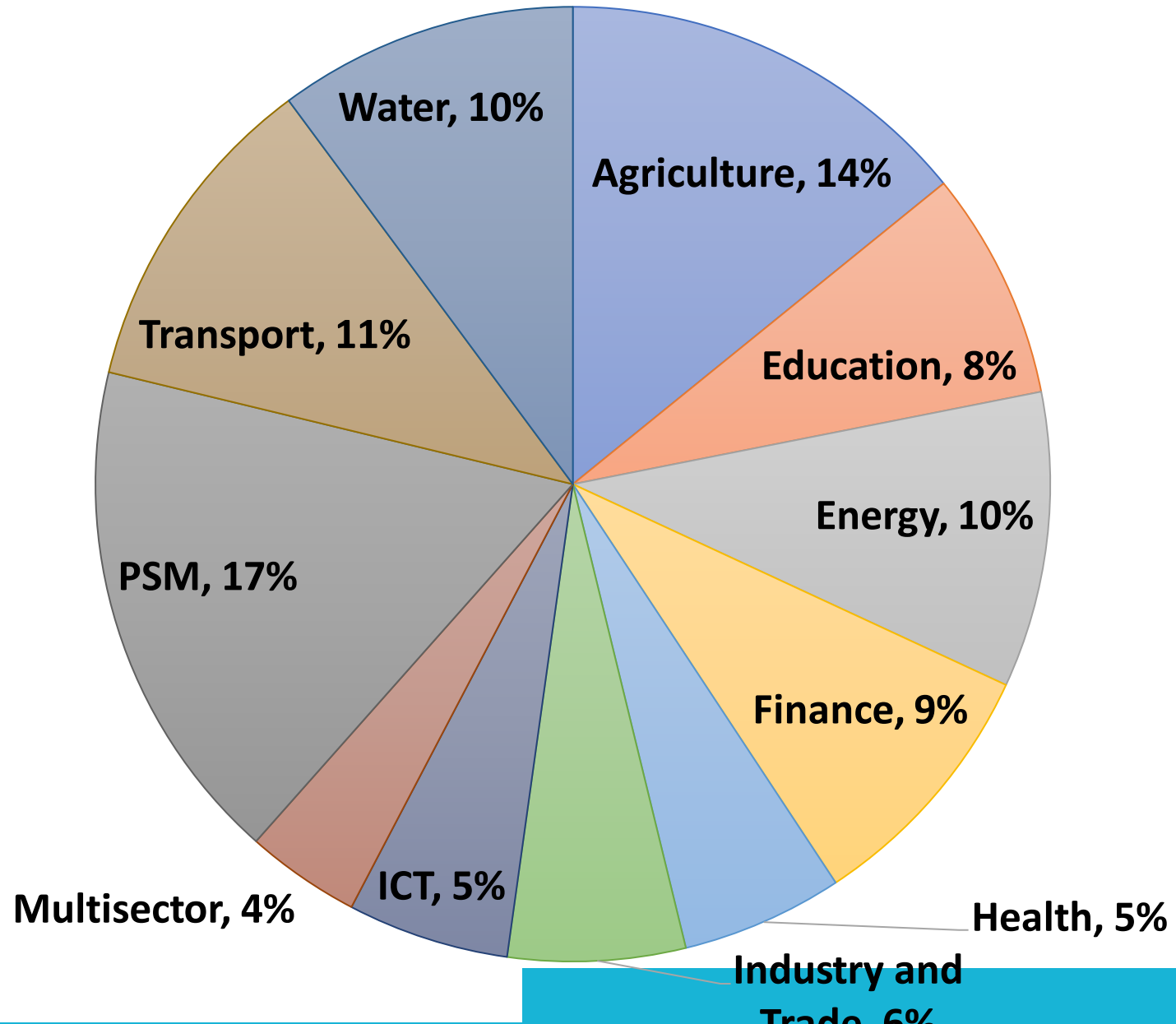
## Urban

Smart cities;  
shared  
infrastructure;  
digital asset  
management

## Public Sector Mgt

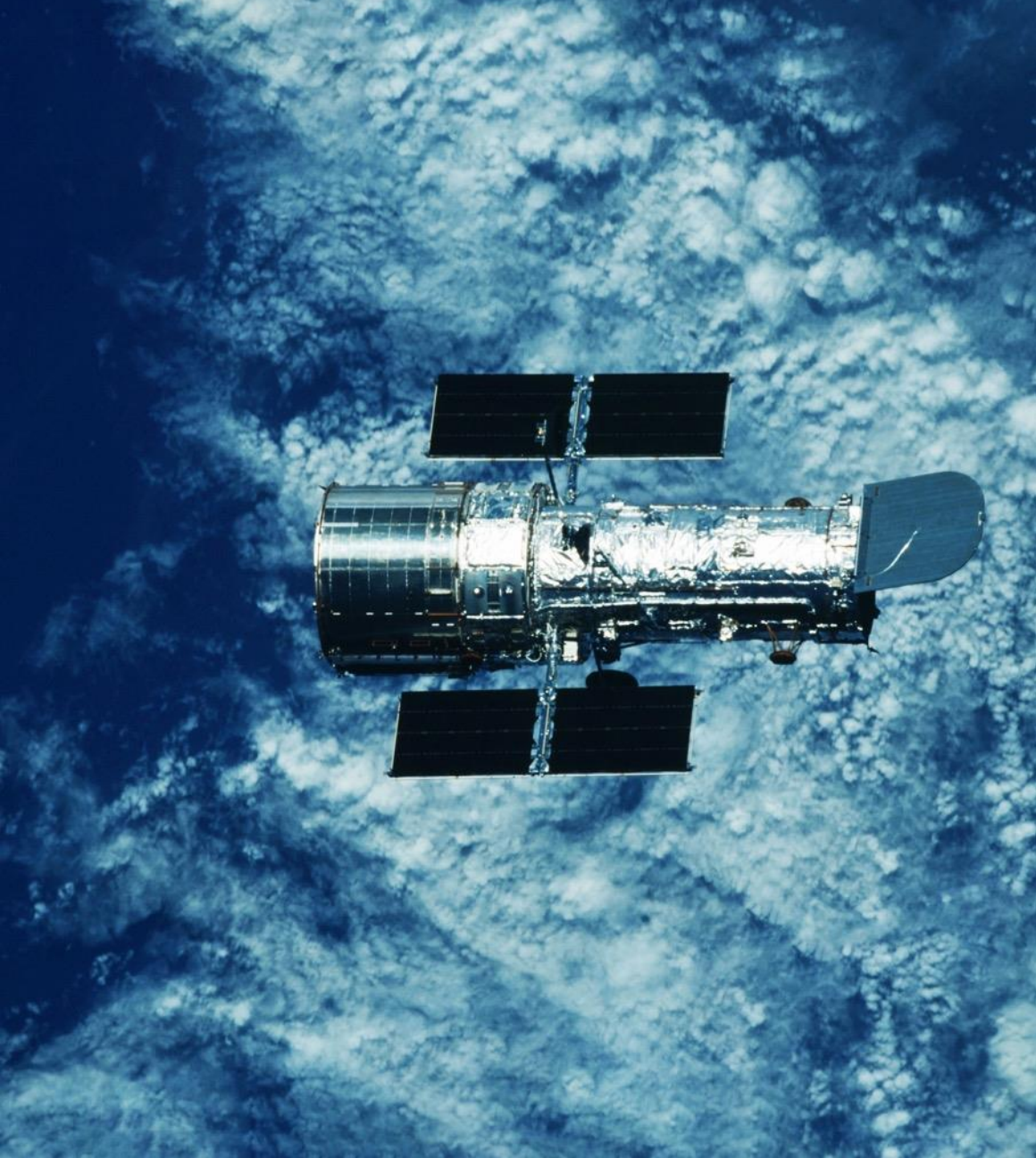
eGovernment  
portal; national  
single window;  
digital ID systems  
incorporating  
biometrics

# DT in ADB Operations



**749**  
Total Projects  
with DT Components  
(2010-2022 Approvals)





# OUTLINE

- Digital Trends and Opportunities
- ADB Digital Technology Portfolio
- ADB's Approach to Digital Development Programs
- Current Digital Areas of Focus



## ADB Digital Technology Operational Approaches



- Develop digital strategies in line with ADB Strategy 2030
- Undertake country-level readiness assessments to develop robust pipeline of digital interventions
- Develop country capacities to maximize the benefits of DT
- Promote and scale up innovative DT in ADB operations
- Promote knowledge sharing and utilize strategic knowledge partnerships
- Establish multi stakeholder groups to gain new insights

# Digital Technology in Strategy 2030: Guiding Principles

## 1. Digital Transformation

- Promote innovations using DT in partnership with the private sector
- Support pre-feasibility studies on DT projects
- Support pilot projects where the possibility of scaling up is high

## 3. Inclusive Digital Development

- Support equitable access to digital infrastructures and technologies
- Promote innovative technologies meeting the needs of underserved groups such as the poor, women, disabilities, etc.

## 2. Integrated Approach

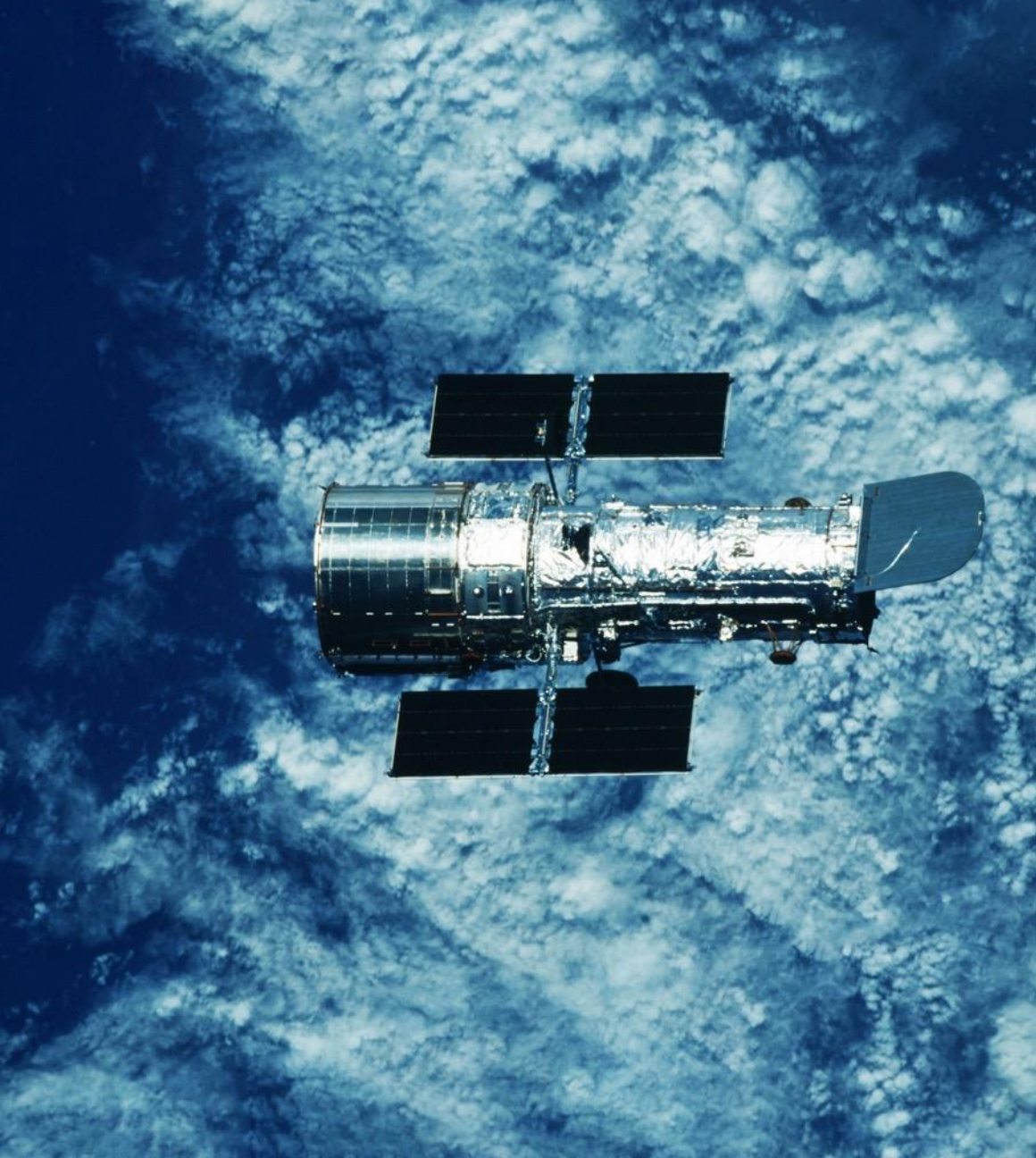
- Deliver integrated solutions through cross-sector/thematic collaboration (e.g. smart city, e-government)
- Support cross-cutting areas (e.g. internet, digital ID, digital payment,, cybersecurity, etc.)

## 4. Improve Digital Safeguards

- Support the management of privacy and security risks associated with digital technologies and platforms
- Promote responsible use of technologies and data

## Differentiated Approach Based on Country's Digital Readiness and Demands

- Conduct DT readiness assessments for DMCs
- Provide tailored support for DMCs based on DT readiness assessment
- Support developing digital strategies for DMCs in line with the Country Partnership Strategy



# OUTLINE

- Digital Trends and Opportunities
- ADB Digital Technology Portfolio
- ADB's Approach to Digital Development Programs
- Current Digital Areas of Focus
  - Connectivity, Digital Economy, Digital Risk, GIS, Earth Observation, eGovernment





# Connectivity/Digital Infrastructure

## Ongoing Activities

**TA on Expanding Digital Connectivity and Affordability to Address the Digital Divide** (implementation ongoing)

### Operational Support (OneADB)

- PAK (CWUW): Dig-once pre-feasibility for Karachi Red Line Rapid Bus Lane Project
- PHI (OPPP): New Clark City (NCC) ICT Corridor

**Knowledge Services:** Knowledge product + DMC Outreach

- Low Earth Orbit Satellite Constellations
- Last Mile Connectivity and Affordability Frontiers
- Co-Deployment/Sharing of Digital Infrastructure (WIP)

### Partnership Development

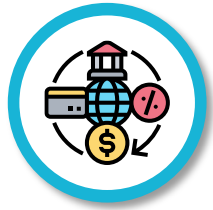
- Industry leaders from both public (e.g., ITU, GSMA) and private (e.g., telcos, StarLink, OneWeb, etc.)

## Planned Activities

**Technical Assistance on Digital Connectivity and Affordability to Address the Digital Divide**

1. **Demonstration of innovative solutions and business models for the last mile:** PHI Assessment of Satellite Connectivity, PARD, PSOD
2. **Enhancing strategy for connectivity investment:** promoting “dig-once” approach in ADB infrastructure investments, support for diagnostics and pre-feasibility studies
3. **Capacity building:** creating expert pool and internal/ external alliance, policy dialogues, and advisory support

\*\*One ADB approach through mapping of ADB projects with connectivity needs and initiating collaboration dialogue early



# Digital Economy / Startup Ecosystems

## Ongoing Support

### Technical Assistance

- AZE: Fostering local tech startups ecosystem development;
- CAREC Region: Supporting Startup Ecosystems;
- VIE: Expert Advice for National Digital Strategy, Study: Legal & Policy Frameworks for the Promotion of the Digital Economy (i.e., Electronic Transactions)

### Knowledge Management and ADB Community of Practice

- Facilitating knowledge exchange & partnerships with interested departments (ERCD, ITD (Sandbox), PSOD (Ventures) and RDs (SERD, CWRD / CAREC, etc.).

### Partnerships Development

- Support of relevant national, regional and intl. partners

## Planned Support

### Technical Assistance (OneADB)

- PAK: Digital Economy Development;
- MON: Digital Transformation.

### Support of ADB projects

- INO: Promoting Research & Innovation through Modern and Efficient Science & Tech Parks (*proposed*).

### Knowledge Sharing (OneADB)

- Contributing to the ADOU 2022 Theme Chapter: Entrepreneurship in the Digital Age;
- Creative Economy and Digital Skills Study, in partnership with Netflix
- Thematic workshop with DMC counterparts.



# Digital Technology Risk Assessment

## Working Group Activity

### Needs Assessment

- Assess common use cases and needs of ADB's operational departments;
- Research leading approaches and practices in other development partners.

### Design of Risk Assessment Approaches

- Design short-term (initial, light) and long-term (refined, comprehensive) approaches.

### Best Practice Study and Report

- Country-level Risk Assessment (pilot of approach and identification of info sources);
- Study of DT risk landscape and benchmarking of approaches and tools.

## Operational Support

### Short-term Approach

- Questionnaire for rapid assessment and triage (draft under review);
- Necessary tools and guidance material (to be developed).

### Long-term Approach (*tentative*)

- Rapid assessment to be linked to Safeguards;
- Building of expert roster for assessments;
- Resource materials to be developed on key technologies and associated risks and ethical concerns;
- Staff enablement and capacity development, stand-alone and integrated into the planned *DataxADB* initiative.





# Geospatial Information Systems (GIS)

## GIS Working Group Activity

### Knowledge Sharing on GIS

- Knowledge sharing and capacity development on GIS and its use cases

### Streamline ADB GIS Services

- Streamline the cartography service process
- Streamline the GIS archiving process throughout ADB project lifecycle

### Implement ADB GIS Development Plan

- Optimize GIS compliance rules, regulations and processes
- Improve GIS communication and outreach
- GIS use case development in Operation
- Institutionalize ADB GIS Support

With support from ITD on systems, technical advice and participation in GIS WG

## Operational Support

### Technical Support on National Spatial Data Infrastructure (NSDI) in DMCs

- Ongoing TA: Supporting the Establishment of NSDI in ARM.
- Planned TA for the Pre-Feasibility Study on Land Information System: TAJ, CAM, etc.

### Regional workshop on NSDI

- Place: Seoul, South Korea
- Date: 1<sup>st</sup> week of November 2022
- Format: In-person workshop, around 20 DMC officials together with ADB staff in Operations
- Topics: GIS technologies, NSDI, Land Information System (LIS)



# Earth Observation Technology

## Ongoing Support

**ARM: Supporting the Establishment of National Spatial Data Infrastructure**

**CAM: Sustainable Coastal and Marine Fisheries Project** – monitoring of coastal eutrophication

**INO: Emergency Assistance for Rehabilitation and Reconstruction** – stability maps and analytics for critical infrastructure

**INO: Flood Management and Coastal Protection in North Java Project** – flood management

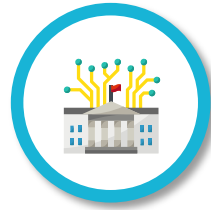
**NEP: Melamchi Water Supply Project** – early warning system; snow modelling

**REG: FCAS** – data science

## Planned Support

**MON: Sustainable Fodder Management** -

**PAK: Livable Cities Investment Project (proposed title of Developing Resilient Environments and Advancing Municipal Services [DREAMS] in Punjab)**



# eGovernment

## Ongoing Support

### 1. e-Government Infrastructure

- **TIM:** e-Government Development and Infrastructure Project (2023 approval)
- Transaction advisory services for PPP projects (New Clark City, National ID) in PHI
- ADB-Amazon Web Services study on Data Management in Government

### 2. e-Gov application and service

- **Decentralization Reform:**
  - ✓ **CAM:** Pre-Feasibility Study on standardized e-government for SNAs
- **Digital Social Protection System**
  - ✓ **ADB-GIZ joint technical assistance** on digital social protection projects (NAU, BAN, MON,..)
  - ✓ **PHI:** supporting IT Reform of 4Ps
  - ✓ **CAM:** supporting development of integrated social registry

## Planned Support

### 1. Scoping/pre-feasibility study

- **NEP:** Support digitalization of business registration, construction permit, asset management (Urban Development Project)
- **ARM:** Support scoping study on PPP for biometric passport and eID project in Armenia
- **MON:** Support KSTA on e-government and digital transformation

### 2. Pilot Project

- **CAM:** Pilot for the standardized e-government for SNAs
- **MLD:** Pilot for the National Single Window System using DLT technology.





# Artificial Intelligence and Data Analytics

## Ongoing Support

### 1. Technical Support

- **BAN:** Supporting the implementation of AI-powered educational applications for primary education
- **IND:** Enhancing India Industrial Land Bank (IILB) platform through data analytics capabilities
- **REG:** Leveling FCAS and SIDS landmark indicator via machine learning application

### 2. Knowledge Activities

- **Data x ADB Initiatives:** Empowering in-house competencies of AI and data analytics via series of training workshops
  - ✓ Singapore: Smart City; India: Agritech; Korea: Climate Data
- **ADB Blog Series:** Offering insights into key subjects that are closely tied to the realm of AI
  - ✓ Global AI Policy; AI's impact on skill demands

## Planned Support

### 1. Pilot Project

- **BAN:** Pilot for education solutions powered by Generative AI to enhance teacher's capabilities
  - ✓ Automated question generator; GPT-powered educational chatbot for teachers

### 2. Knowledge Activities

- **Data x ADB Initiatives:** Extend the training efforts to reinforce in-house capacity in AI and data analytics
- **Webinar Series:** Conduct webinars tackling pressing AI topics that demand staff attention
- **AI Capacity Building:** Establish AI training programme to enhance the AI capabilities of DMCs

THANK YOU