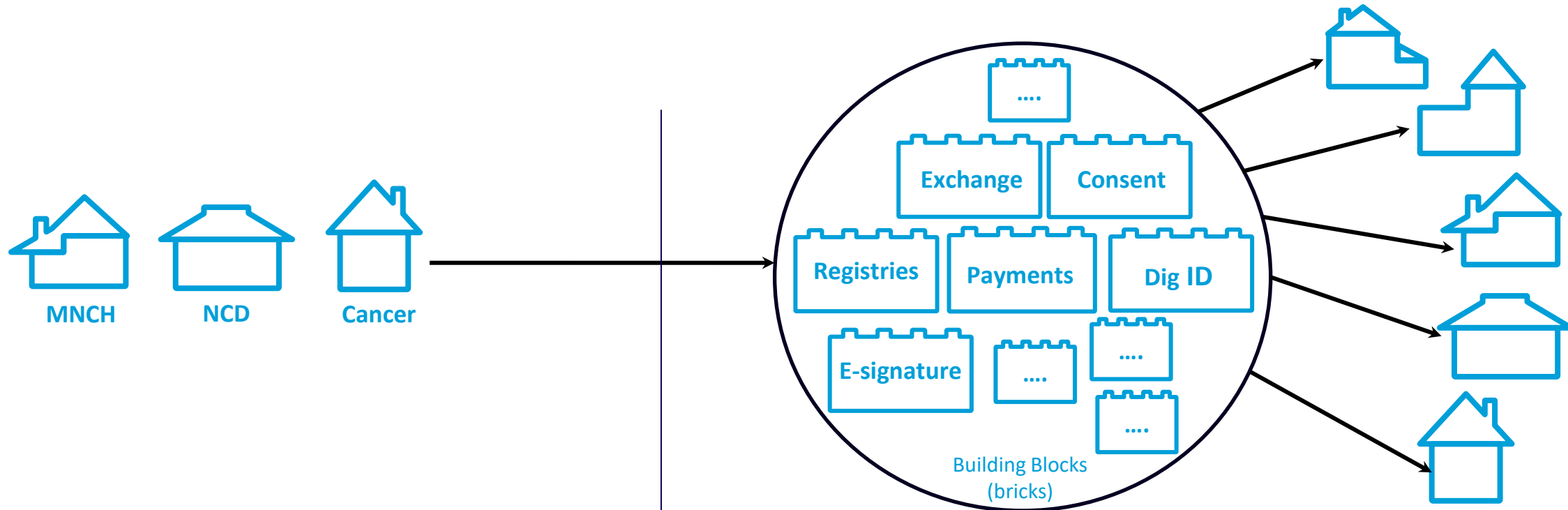


# What can we learn from Digital Government Services For Digital Health Transformation

Hani Eskandar  
Head, Digital Services Division  
Telecommunication Development Bureau  
International Telecommunication Union (ITU)



# Analogy: The elements to build a house



## Traditional solutions oriented approach

Siloed, frangemented, duplicative solutions

Be spoke, non-interoperable applications

Pain points focused

Privacy, data protection are not enforced nor standardized

High risks of vendor lock-in

High costs of development and Maintenance

## Platform/infrastructure oriented approach

Solutions built on top of a shared infrastructure and by re-using shared services

Solutions built using Standardized, reusable, interoperable Building Blocks

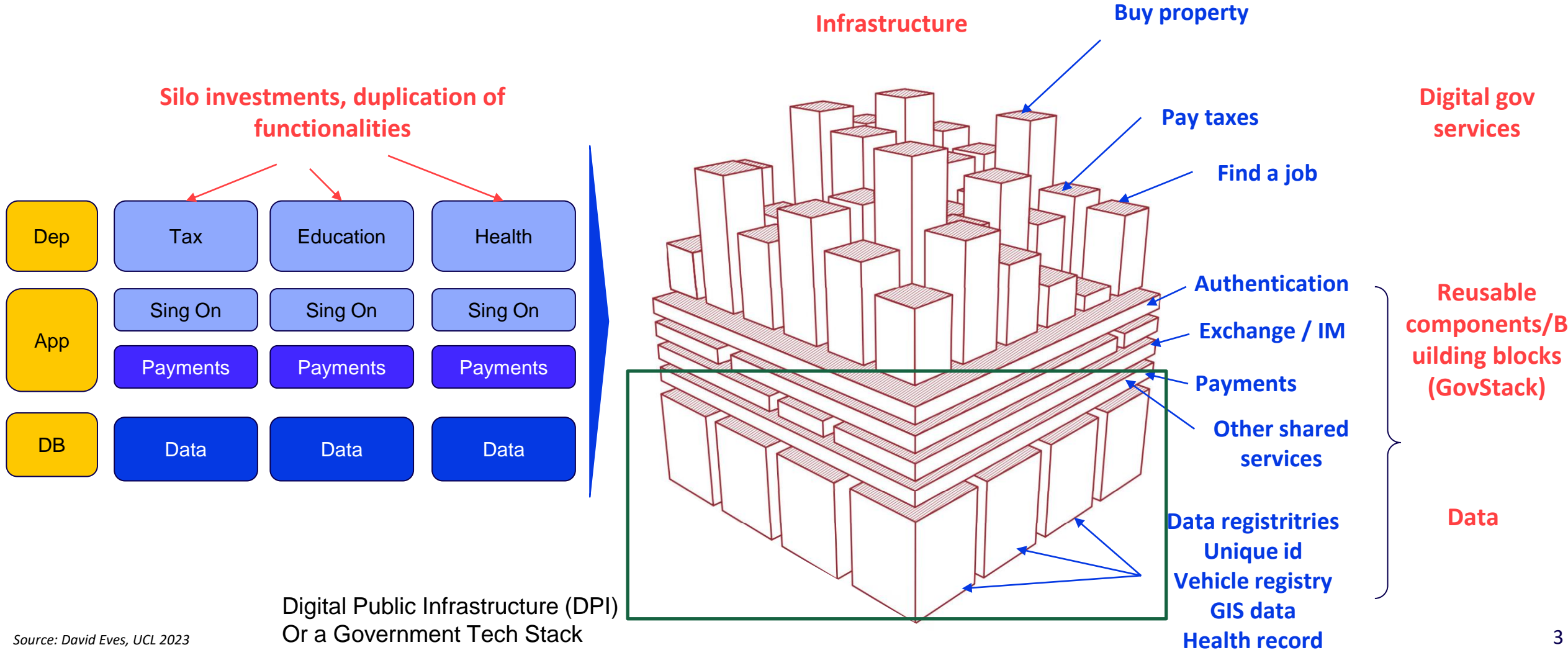
Consider User journeys

Privacy and data protection are « encoded » in the Builing Blocks

Standardized components can be replaced, ensure sovereignty

Develop once and use for all, possibly lower cost if open source

# From silo ICT investments to reusable software components to digitize governments services at scale



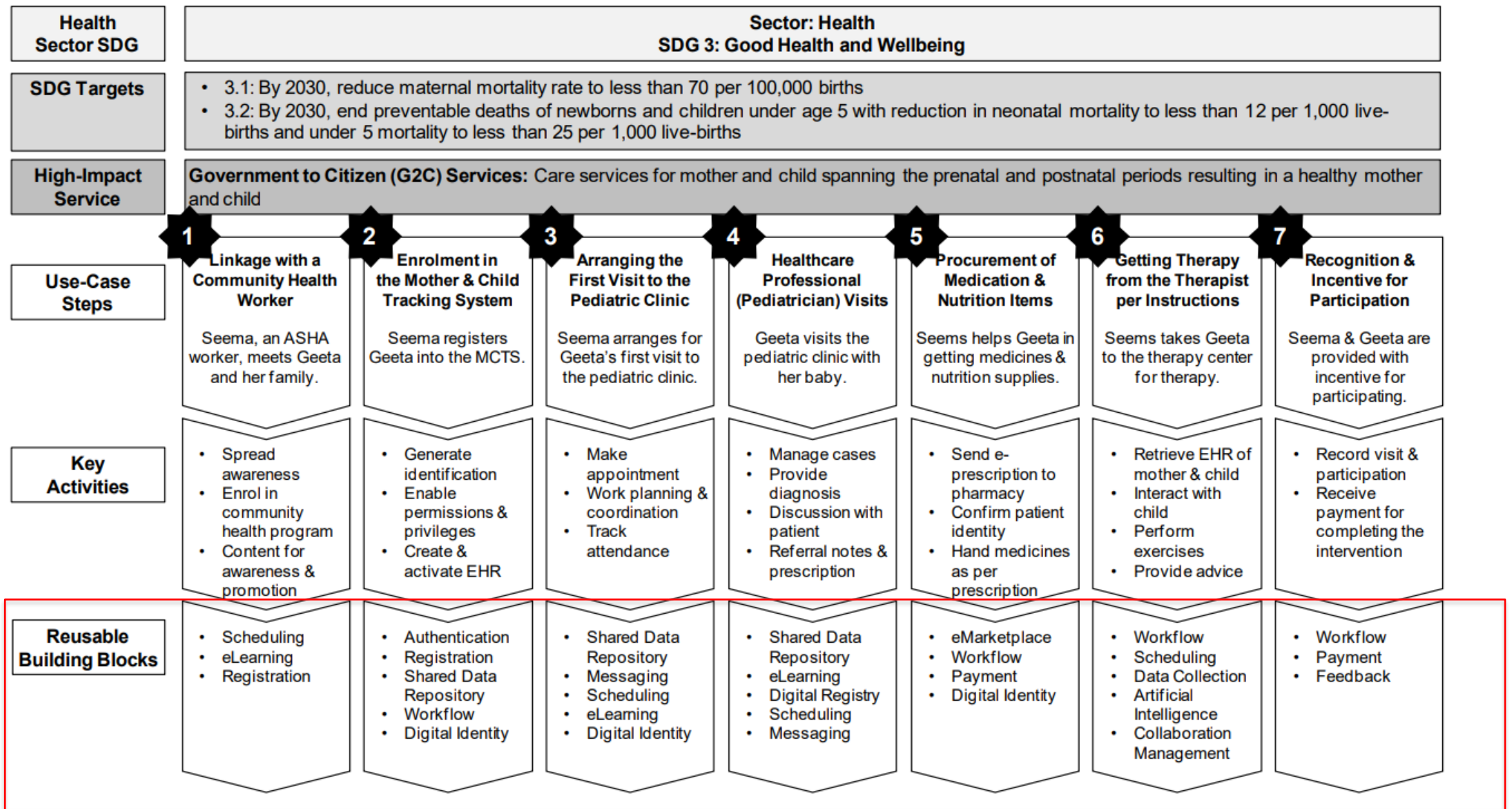
Source: David Eves, UCL 2023

# Architecture as an enabler for Digital Transformation

*Digital Transformation is fundamentally about changing the way government services are ideated, planned, designed and deployed so that they become*

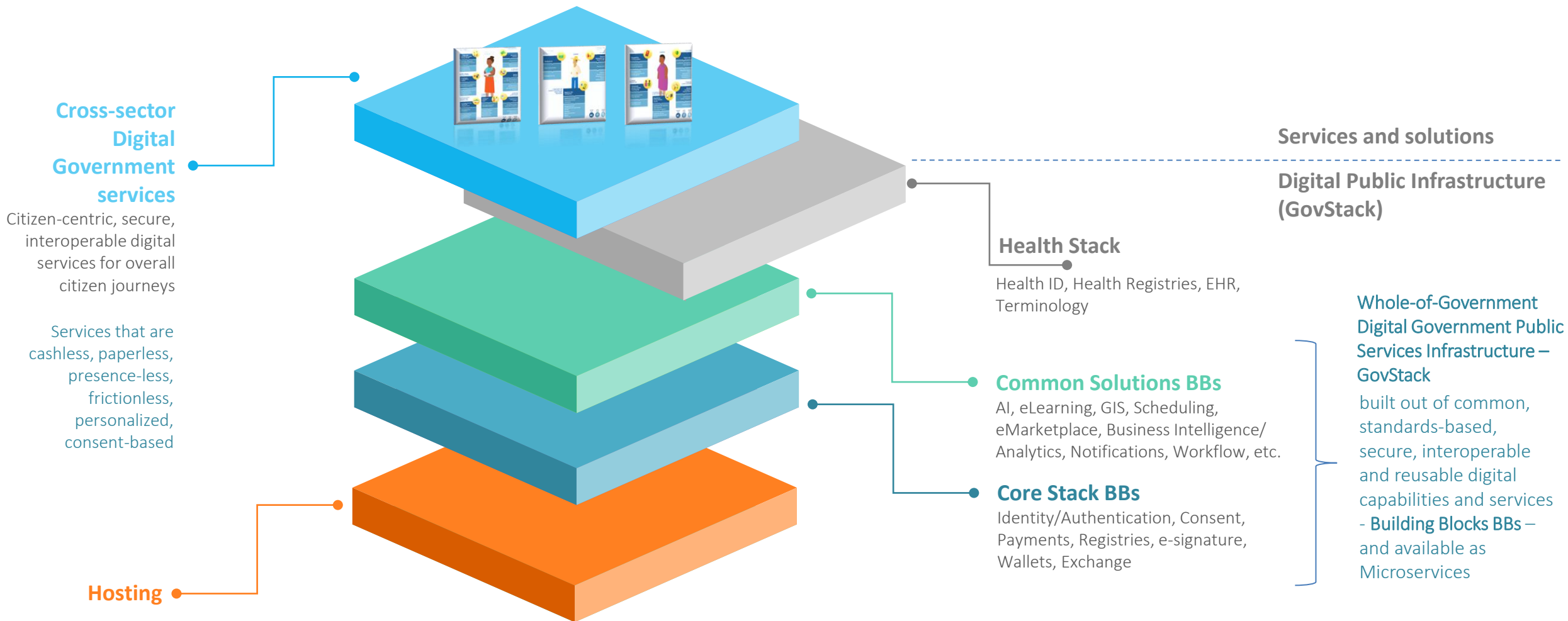
<i>Personalized, paperless, cashless, presence-less, consent-based</i>	<i>Frictionless, consider a holistic and integrated 360° view of citizen needs</i>	<i>Deliver on the overall end-to-end citizen experience or journey</i>
<b>Trust</b>	<b>Interoperability</b>	<b>Re-usability</b>
<b>Shared Services/digital infrastructure</b>		
Digital Identity, e-Signature, Digital Wallets, Consent, Payments	Exchange, Registries, Terminology	Shared platforms/solutions (e.g., AI, GIS, Notifications, eLearning, Content Management, Case Management, eMarketplace, Appointments, Workflow, Registration, etc.)

*Building Blocks to be built in waves to enable values for Citizens, Business, Governments  
Based on priority use cases*



**Figure 17: Illustrative Use of Building Blocks Aligned to SDG Target Indicators**

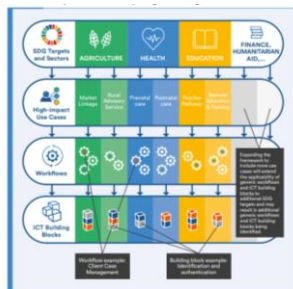
# A Whole-of-Government Digital Services Public Infrastructure or GovStack



A WoG Digital Government Services Infrastructure is a “platform of platforms” that can be used by any government agency, department across different sectors to build new government digital services without having to design, test and operate the underlying systems and infrastructure themselves.

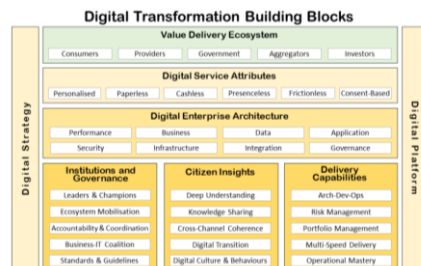
# Some ITU resources

2019



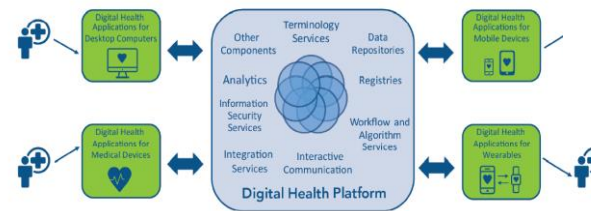
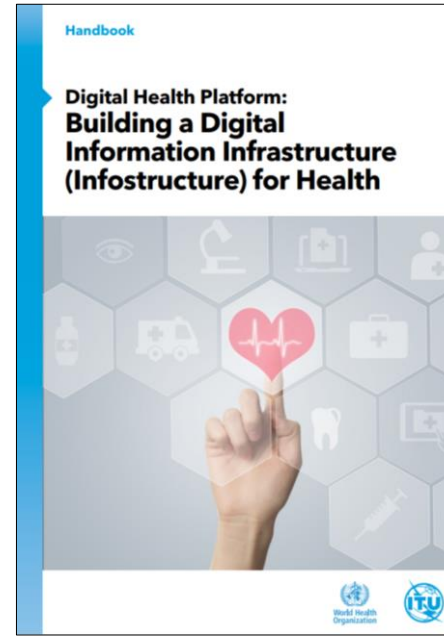
[https://www.itu.int/dms\\_pub/itu-d/opb/str/D-STR-DIGITAL.02-2019-PDF-E.pdf](https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-DIGITAL.02-2019-PDF-E.pdf)

2019



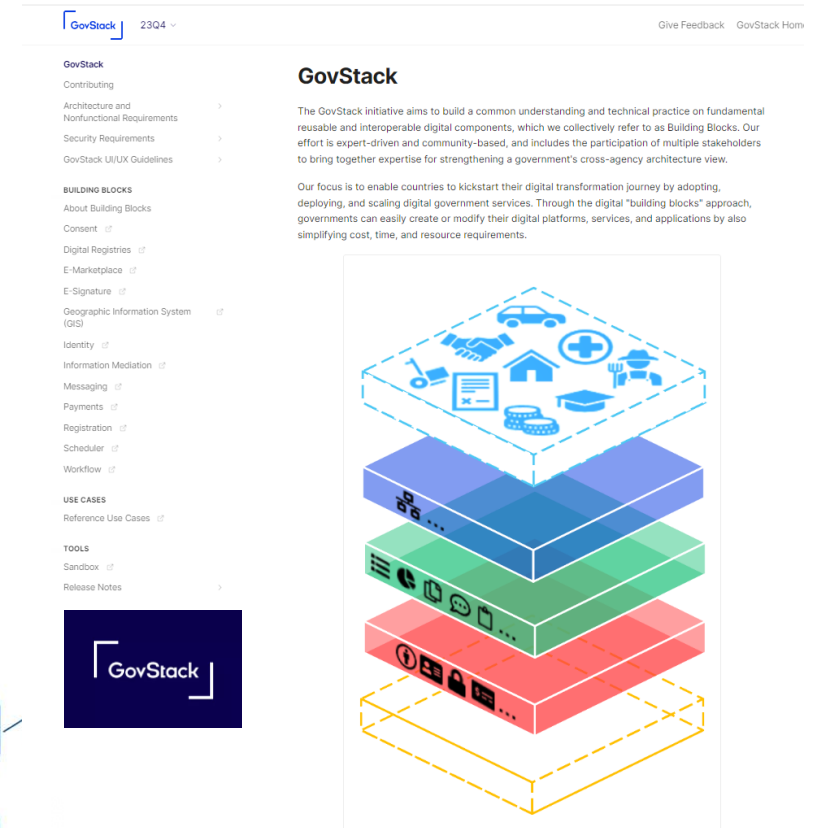
[https://www.itu.int/dms\\_pub/itu-d/opb/str/D-STR-DIG\\_TRANSF-2019-PDF-E.pdf](https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-DIG_TRANSF-2019-PDF-E.pdf)

2020



[https://www.itu.int/dms\\_pub/itu-d/opb/str/D-STR-E\\_HEALTH.10-2020-PDF-E.pdf](https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-E_HEALTH.10-2020-PDF-E.pdf)

2020-2024



<https://www.govstack.global/>





# Some ITU Digital Services Division Projects

1. GovStack – Digital Government Transformation Acceleration
2. Smart Village – A whole-of-Society Rural Digital Transformation
3. Open Source Ecosystem Enablement Project
4. ITU OSPO
5. Digital Health



Empowering societies to  
chart their digital futures

Lesotho, 29th January 2024



REPUBLIC OF ESTONIA  
MINISTRY OF FOREIGN AFFAIRS



Bundesministerium für  
wirtschaftliche Zusammenarbeit  
und Entwicklung



digital  
impact  
alliance

## GovSpecs



Building Blocks build the basis for **scalable, interoperable** digital services  
Functional specifications for foundational building blocks

## GovTest



A digital testing environment to **learn, experiment,** and **prototype services Sandbox** for building blocks and create prototypes for **eGovernment services**

## GovLearn



Supporting countries in **using building blocks** through the GovStack **Implementation Playbook,** workshops and **Communities of Practices.**

## GovExchange



A platform to explore and compare products, view use cases, post or find RFPs.

# GovStack offerings accelerate the digitization of governments services

## GovSpecs



## GovTest



## GovLearn



## GovExchange



## Country Engagement

Countries build their services based on Building Block specifications  
Countries may contribute to their development in working groups.

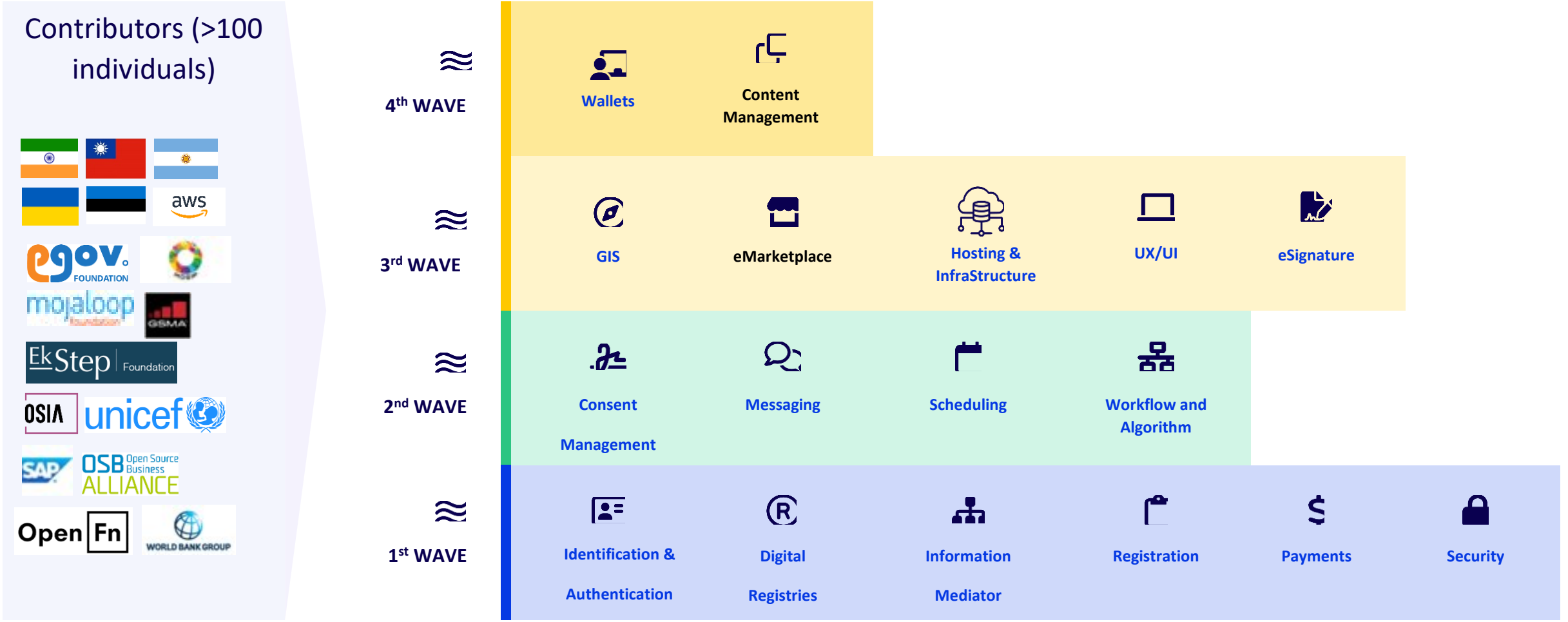
Countries identify and prioritize use cases which can then be demonstrated, tested and explored in sandboxes.

Countries benefit from capacity building (e-learning, implementation playbook, workshops) and exchange knowledge through Communities of Practice.

1

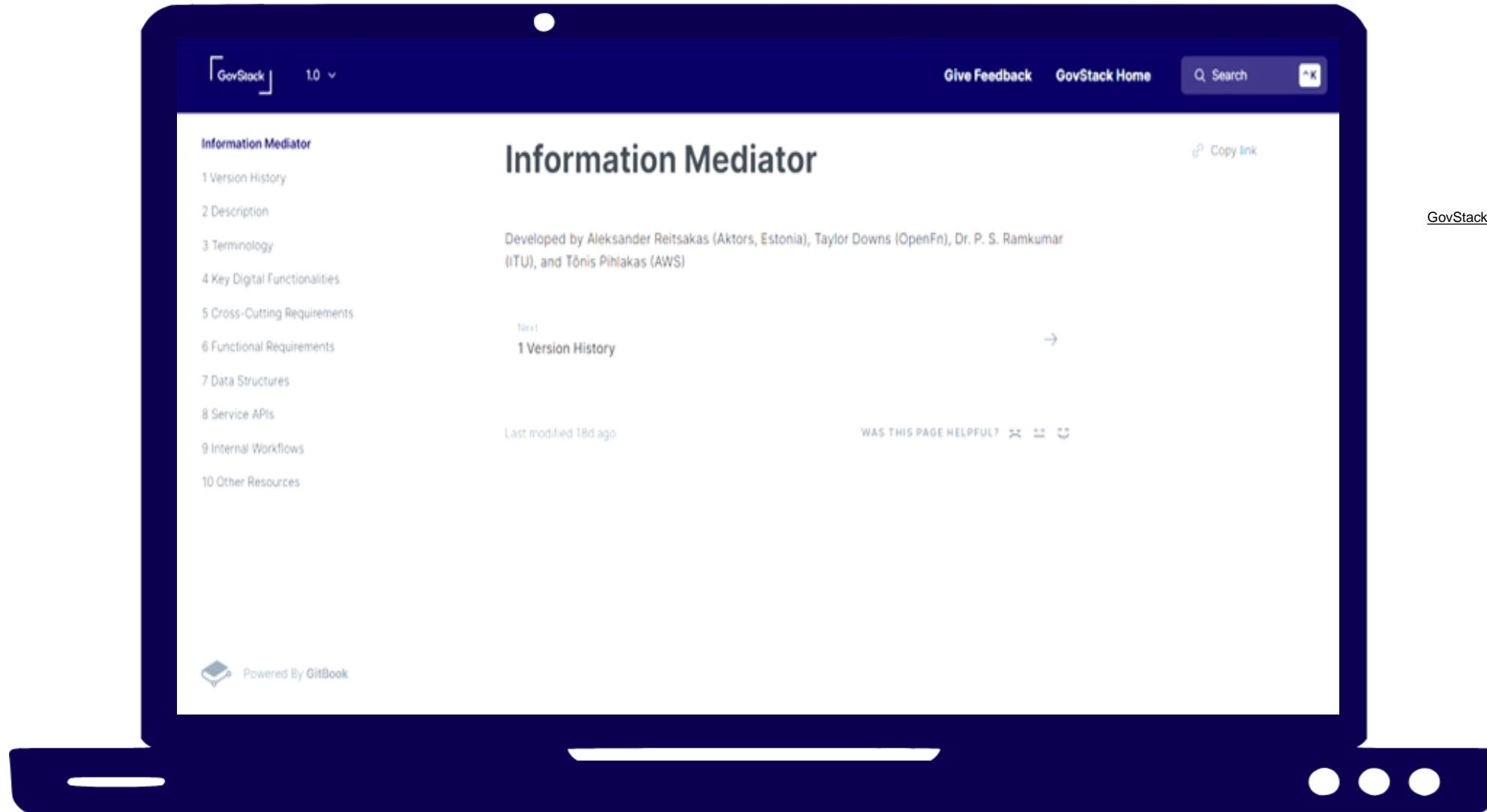
GovSpecs

# Working Groups published 14 Building Block specifications



Contributors (>100 individuals)

# Technical specifications accelerate software development and API integration among BBs



[GovStack - GovStack Specification \(gitbook.io\)](https://gitbook.io/govstack-specification)

2

GovTest



# GovTest: The GovStack sandbox is being developed

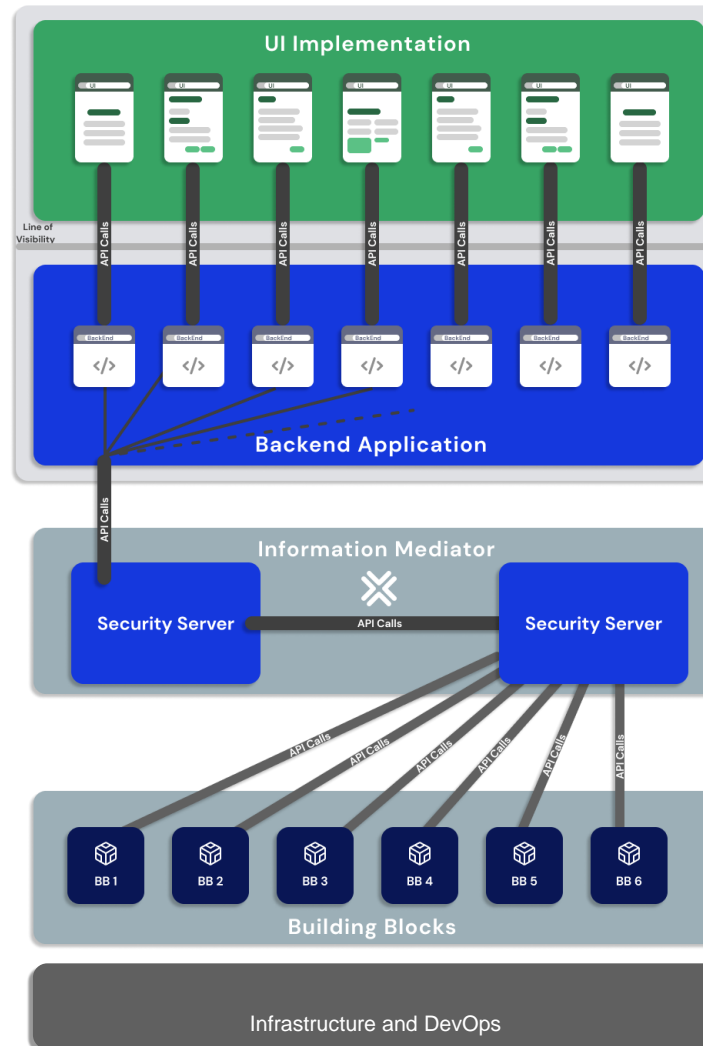
## Sandbox Features

- ✓ makes the GovStack approach **tangible**
- ✓ is an isolated, safe environment **simulating** a small governmental e-service system (reference implementation)
- ✓ encapsulates the **business logic and data** necessary to represent multiple GovStack (APIs, BB, use cases and workflows)
- ✓ follows the GovStack **architectural approach** centered around APIs and microservices to help unlock monolithic legacy systems to increase the speed of IT project delivery, leading to more effective and cost-efficient digital governments

Link: <https://www.govstack.global/our-offerings/govspecs/simulation/>

The screenshot displays a web application interface for the 'Unconditional Social Cash Transfer Program'. The header includes 'GovStack' and 'GovCase Unconditional Social Cash Transfer'. The main content area shows a greeting 'Hello, Civil Servant!' and a notification: 'You have 1 candidates, 0 cases up for review today!'. Below this, there are two summary cards: 'Assigned Candidates' with a count of 1 and 'Beneficiary Cases' with a count of 0. Each card has a corresponding 'Review' button. A right-hand sidebar titled 'BUILDING BLOCK ACTIVITY' lists various components like Consent, ID & Authentication, Information Mediator, etc. The bottom of the screen features a navigation bar with 'CIVIL SERVANT CHECKS FOR ASSIGNMENTS PRIMARY TASK' and 'CIVIL SERVANT CURRENT VIEW'. A footer contains the text 'GovStack 2023 - this is a frontend only simulation' and links for FAQ, Terms of usage, and Get in touch.

# The Solution for Tech User: Full Stack Prototype



3

GovLearn

# GovLearn: capacity building through eLearning, workshops, implantation playbook & communities of practice

## GovStack Playbook

Resources, guidelines and step-by-step instructions

## E-learning modules

around GovStack implementation and & the building blocks



Available for everyone, may be used for independent guidance as well as a step-by-step guide understanding and implementing GovStack

Hosted on atingi and ITU Academy, complementing the Playbook; a-synchronous short courses. ITU contracted an eLearning provider to develop 15 e-courses

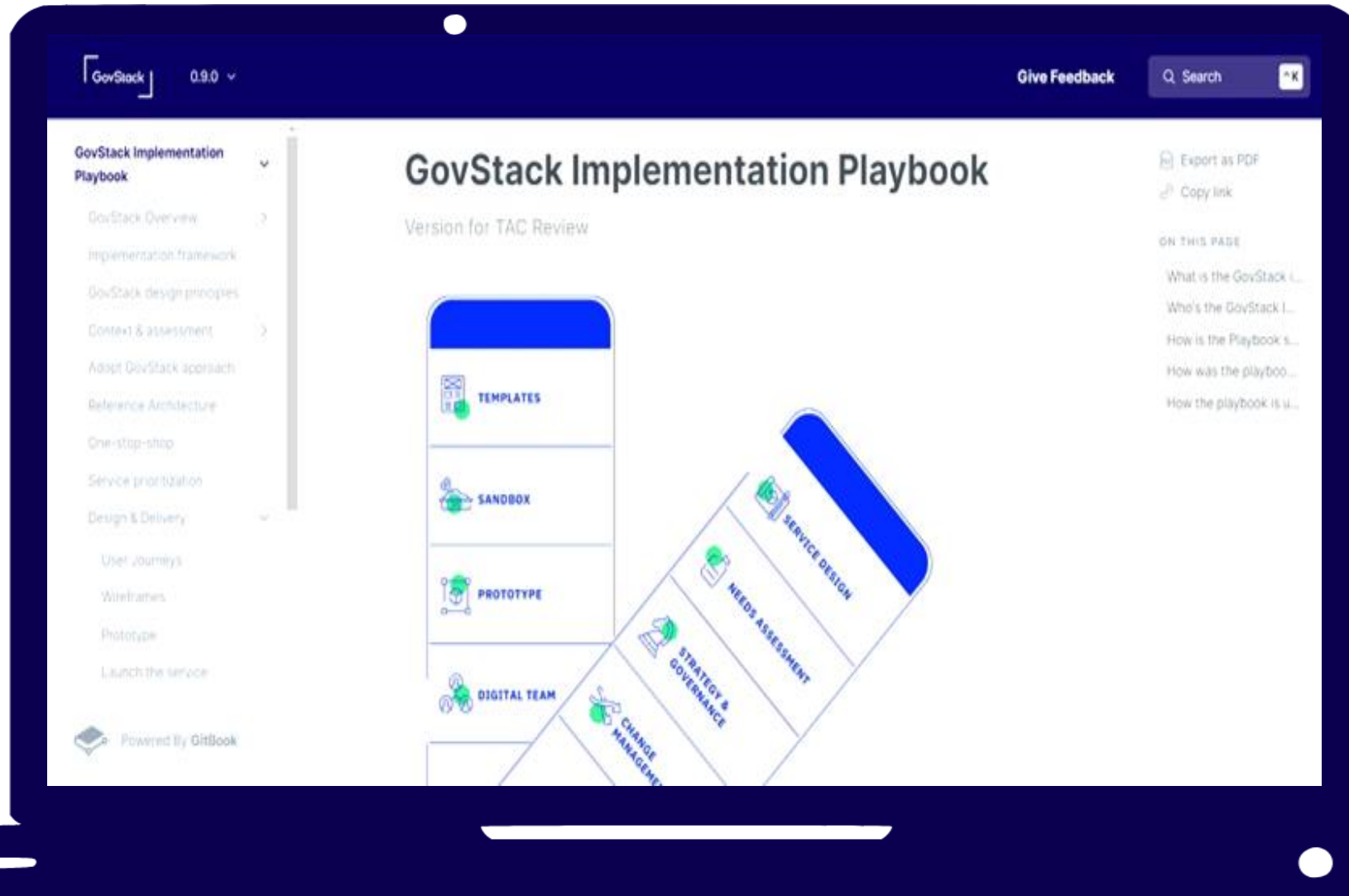
CIO Forum, WSIS award, Women in GovTech, etc.

## Communities of Practice & other exchange formats

## In-person trainings

Specific trainings/deepdives based on needs assessment in focus-countries

# GovStack Implementation Playbook: a step-by-step guide to digital service design using the Building Block approach



Each step within the journey describes of:

- Activities/Resources
- Digital teams roles & responsibilities
- Deliverables

# Green GovStack ICT procurement guidelines

The screenshot shows the ITU website page for the 'Circular and sustainable public procurement - ICT equipment guide'. The page features a navigation bar with 'About ITU', 'Radiocommunication', 'Standardization', and 'Development'. Below the navigation bar, there are links for 'Events', 'Publications', 'Membership', and 'News'. The main content area includes a large image of a woman's face, the title 'Circular and sustainable public procurement - ICT equipment guide', and several tags: 'Circular economy', 'Climate change', 'Social impact', 'E-waste', 'ITU-D', 'SDG 12 Responsible consumption and production', and 'Sustainable development'. A 'Download' button is visible. Below the main content, there is a section titled 'In this issue' with a paragraph of text.

<https://www.itu.int/hub/publication/d-hdb-guidelines-04-2023/>

The screenshot shows the ITU Academy website page for the 'Circular and Sustainable Public Procurement for ICTs' training course. The page features a navigation bar with 'Home', 'About', 'Partners', 'Training courses', and 'ITU-D Capacity Development'. Below the navigation bar, there is a search icon and a 'Full catalogue' dropdown menu. The main content area includes the title 'Circular and Sustainable Public Procurement for ICTs', a 'Price \$0.00' box, and an 'ENROLL FOR FREE' button. The page also displays registration details, event dates, location, and training topics.

<https://academy.itu.int/training-courses/full-catalogue/circular-and-sustainable-public-procurement-icts>

**4**

**Country Engagement**

# GovStack Country Engagements (selection)

## The Gambia



A deepdive training delivered in Q1/2024 depending on funds availability

## Lesotho



A deepdive training delivered in Q1/2024

## Bangladesh



Interest in adopt GovStack for a2i in a comprehensive manner. Delivered a first high level deepdive, to be followed by deepdive into specific use cases

## Bostwana



Provided intro on GovStack to be followed by more indepth introduction. Possibly to run a deepdive training in Q4/2023 (TBC)

## Laos



Received an interest letter from Lao to adopt GovStack. A first training was delivered to be followed up with a deepdive

## Cambodia



In-depth training on GovStack Specifications and Whole of Government Framework in planning

## PNG



Interest in specific Building Blocks particularly Digital Identity



# GovStack Country Engagements (selection)

## DJIBOUTI

(co-financed by the EU)



2 use cases selected: **Construction Permits & eCabinet**

## KENYA

(co-financed by the EU)



Potential use case identified: **Integrated Case Management System**

## Somalia

(co-financed by the EU)



2 use cases selected: **High-school certificate verification & service catalog (Content Management System)**

## Rwanda



**Extended Producer Responsibility (EPR)** use case will be implemented using a GovStack approach.

## Ukraine



Platform of Registries is tested against GovStack Specifications: It covers 70% of GovStack specifications

## Egypt



In-depth training on GovStack Specifications and Whole of Government Framework delivered in August 2023

## Togo



GovStack approach has been incorporated in their **interoperability framework** reference document.

## Kazakhstan



Interest in sharing their DPGs and supporting a regional program of GovStack for CIS region.

## Moldova



Interested in **replicating the SandBox demo environment** as part of their digitization plan to host FOD (Moldova Stack)

# Smart villages

Whole-of-government approach using shared “ICT building blocks” to digitally transform rural areas





# Context in Africa

**>50%**

of the  
population is  
rural

**3 out of 4**

individuals in rural  
regions do not have  
access to the Internet

**>30%**

of rural workers  
are poor  
( $<US\$1.9$  PPP)

# An innovative solution



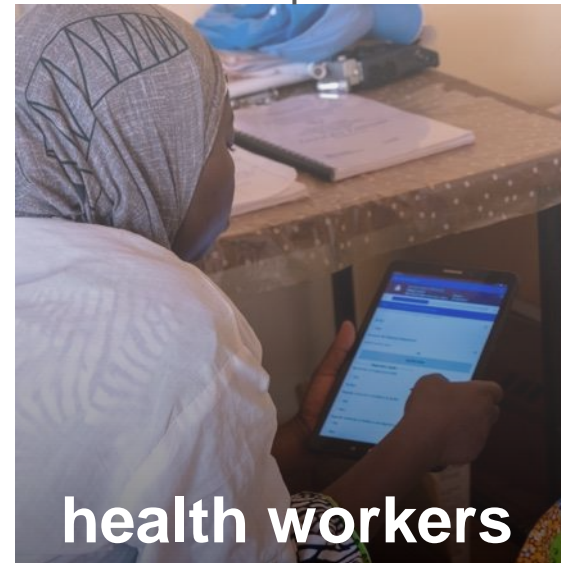
an integrated platform to deliver SDG-related services to



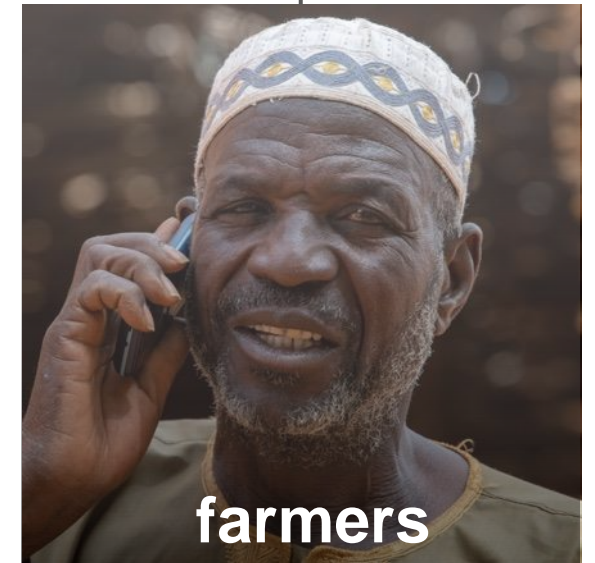
women & children



educators

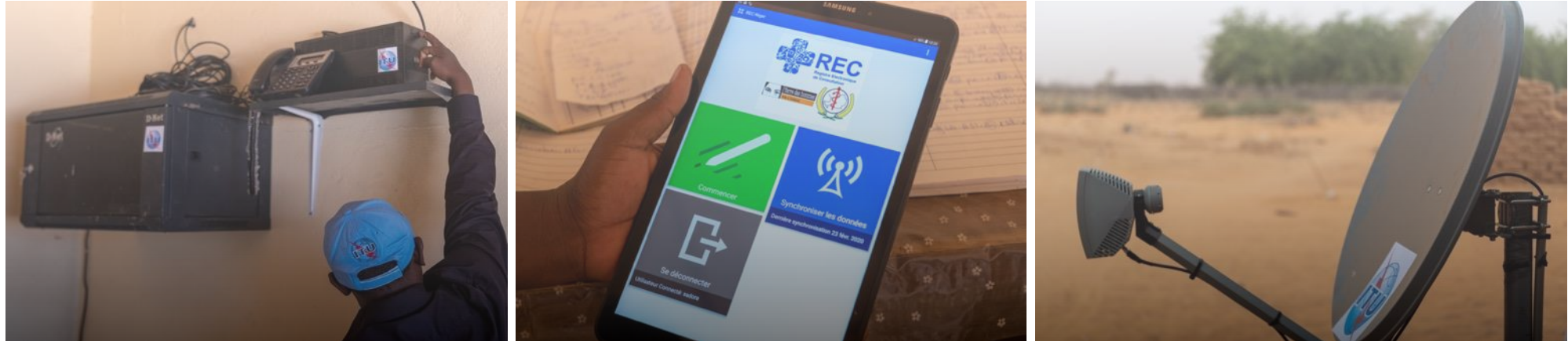


health workers

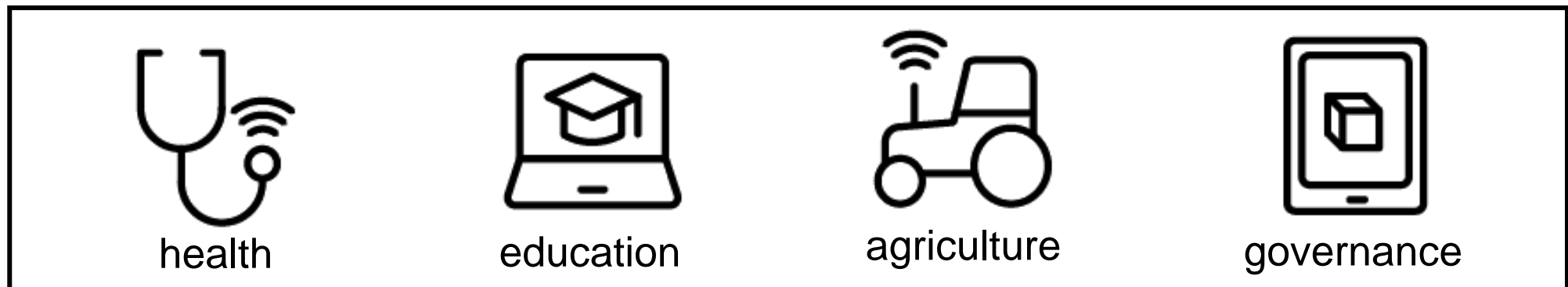


farmers

# Common “ICT building blocks”



to simultaneously support e-applications in



**lower cost - better scalability - inter-sectoral collaboration**

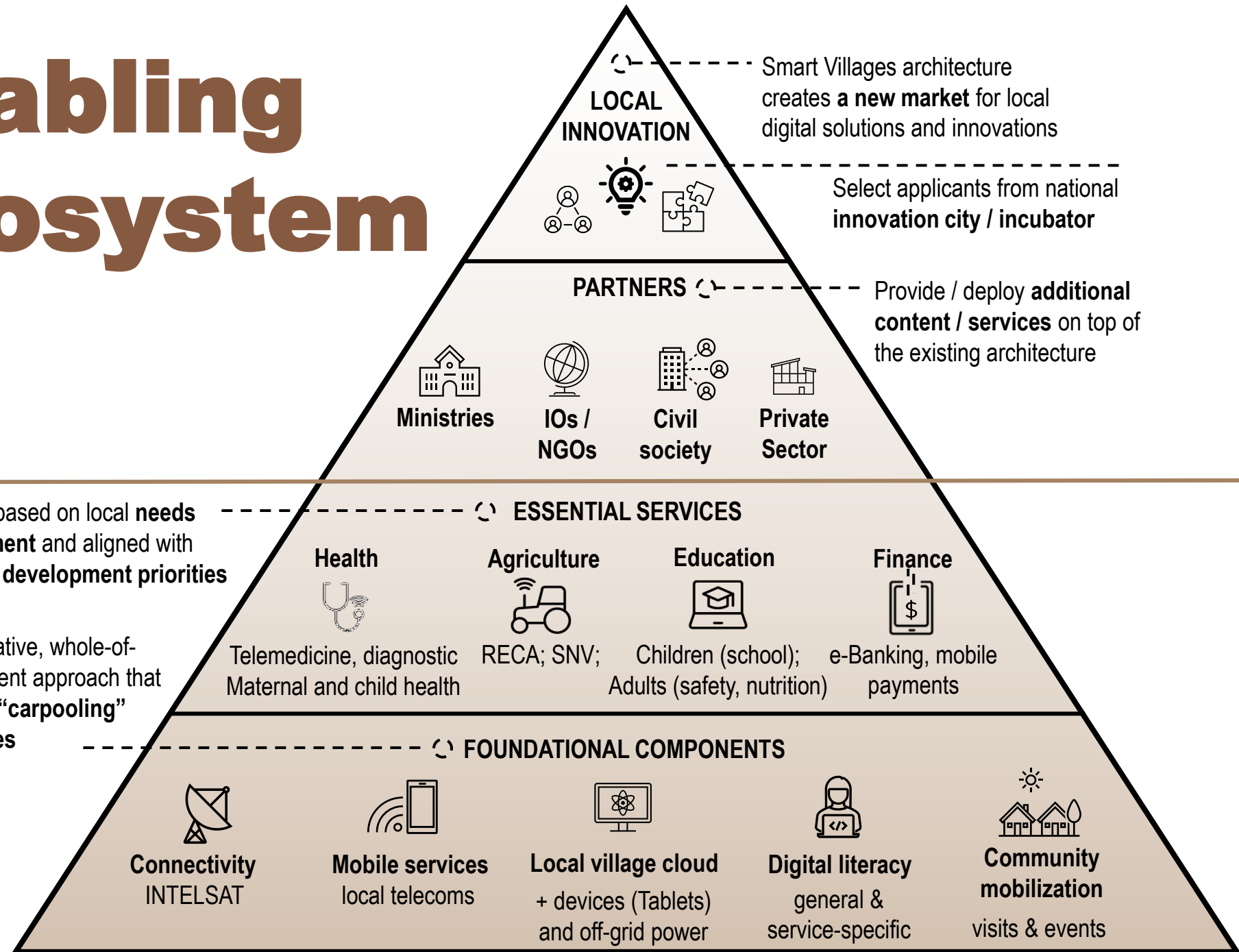


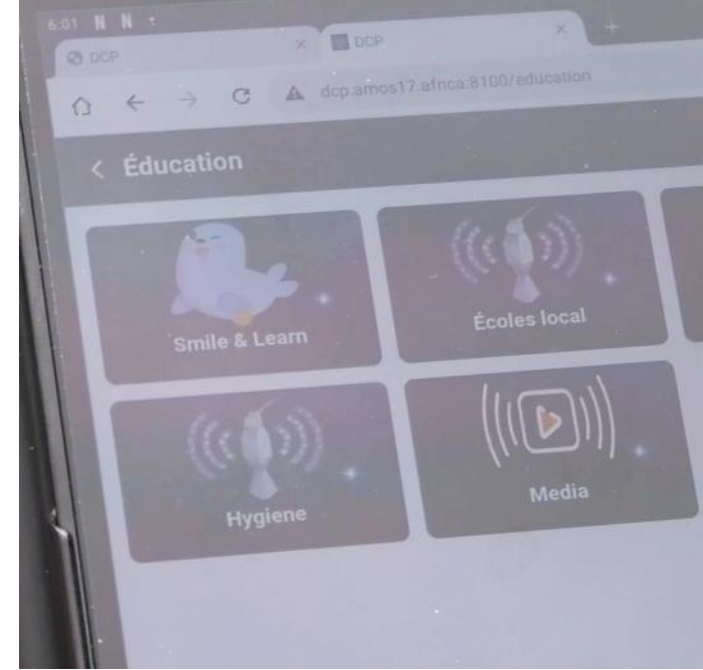
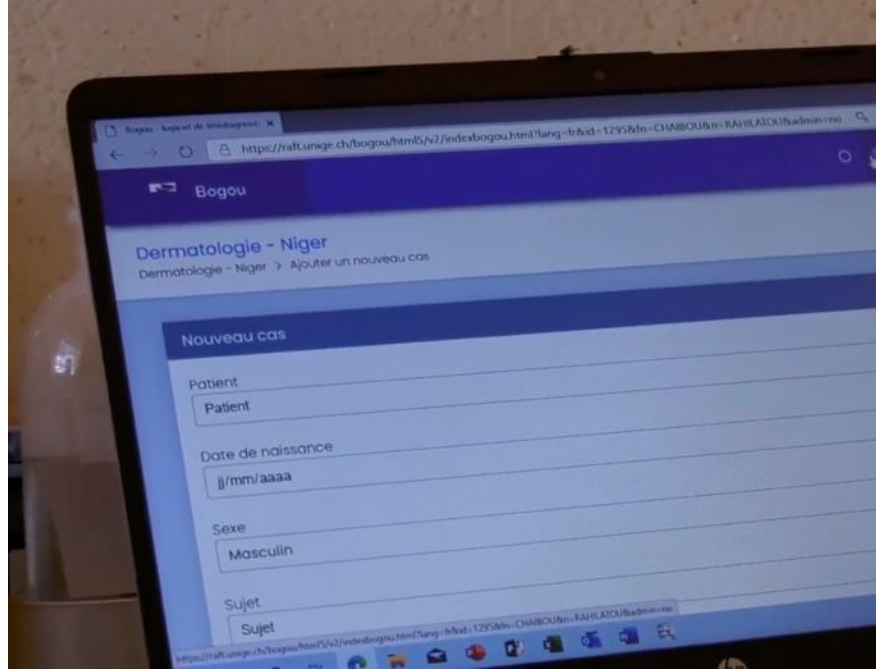
# Enabling Ecosystem

Core Package (MVP)

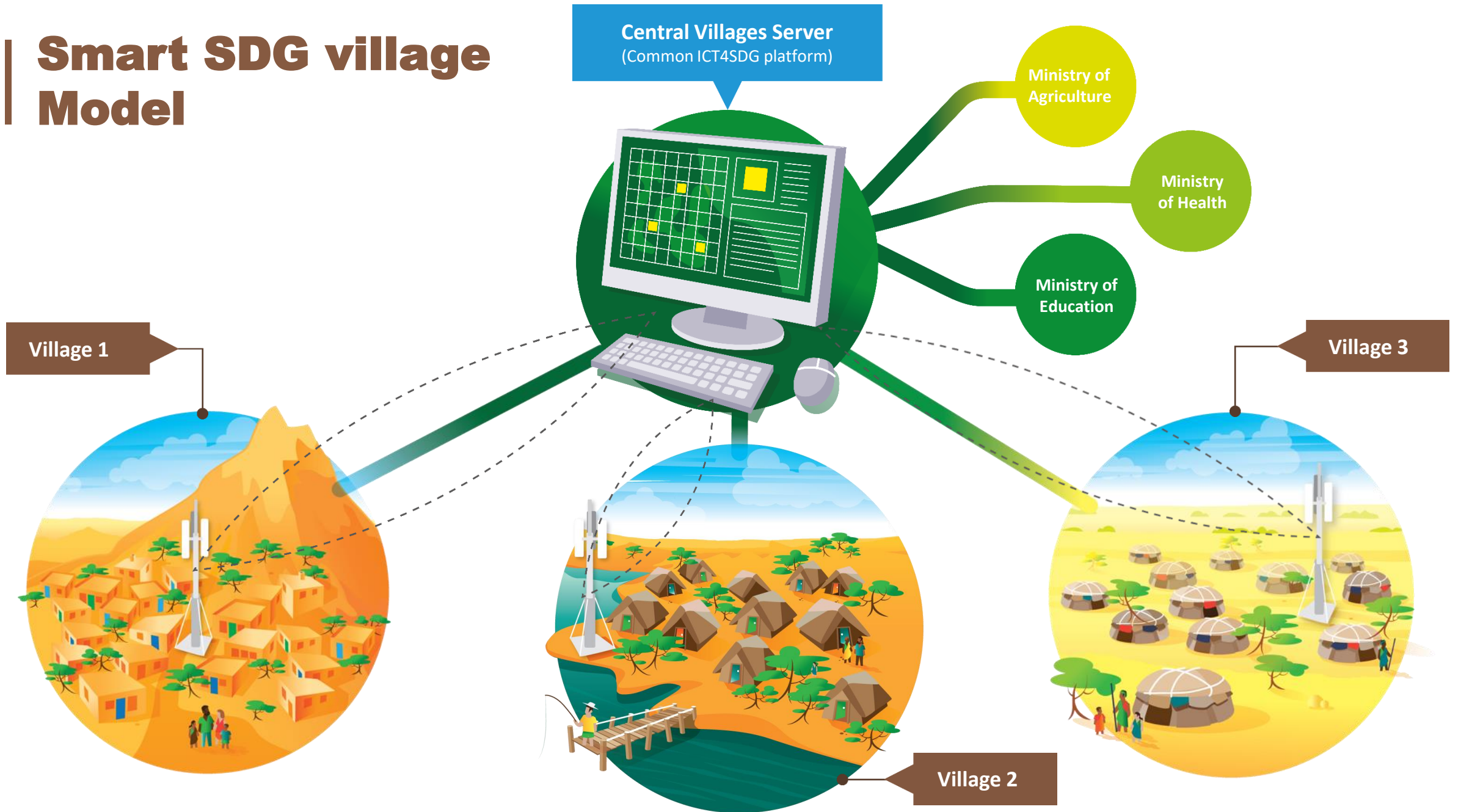
Defined based on local **needs assessment** and aligned with **national development priorities**

Collaborative, whole-of-government approach that involves **“carpooling” resources**





# Smart SDG village Model





# Smart SDG village Model

**Mobile Agriculture Extension**  
(Specialized tablet)

Sync daily with main server



Village 1

**Local Village Server**

Local server sync daily with main server

Low-cost Broadband connectivity

Each village will have a local server to cache content daily from the main server and from Internet

Local wifi access point

**Mobile Multimedia Unit**

Mobile School unit with a Micro-server, 20-40 tablets and a pico-projector running on battery to be used in schools or community centers. Students connect on the local webserver of the unit.

Sync weekly wirelessly with local server

**Mobile Clinic**  
(Specialized tablet)

Sync daily with main server



Community members can access Local village Portal or web directly  
Community members receive SMS and voice messages related to topics of their interest



# Progress achieved



## eAgriculture service:

- e-karkara (SMS, IVR, USSD)



## eHealth services deployed:

- e-Dermato;
- Integrated eDiagnostic Approach (leDA)



## eLearning service:

- Kalibri
- Moodle



12

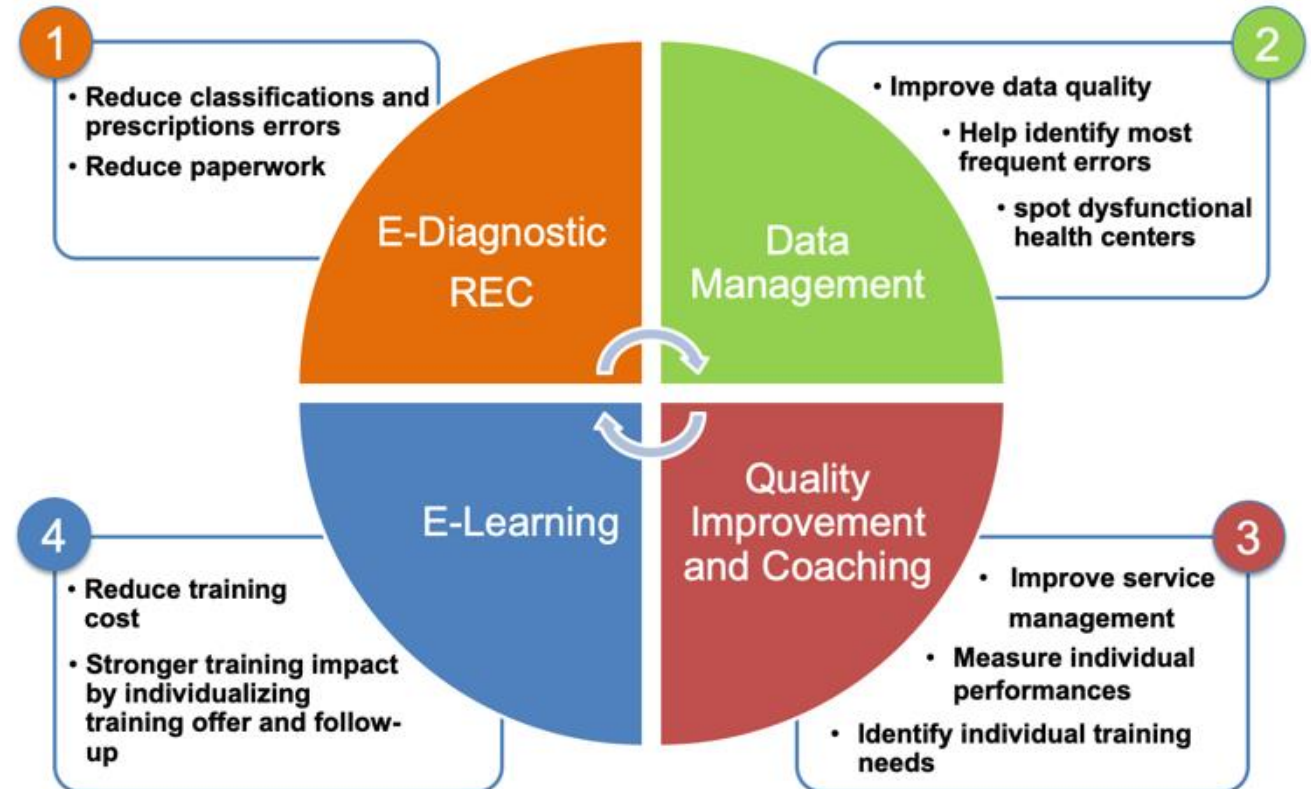
Villages connected;  
**3 villages** awaiting  
equipment installation;  
**10 more villages** to be  
connected shortly

# leDA and IMCI

REC IMCI has been contextualized to nigerien IMCI and implemented in 2 health centers in the Tillaberi Region :

- CSI (Centre de Santé Intégré) de Borgo-Darey;
- CS (Case de Santé) de Sadoré

**The use of the service for the consultation of children under 5 is 69% and 100% in the two Health Centers, respectively**



# Digital transformation in action - impacting lives

## NIGER

### e-Dermato

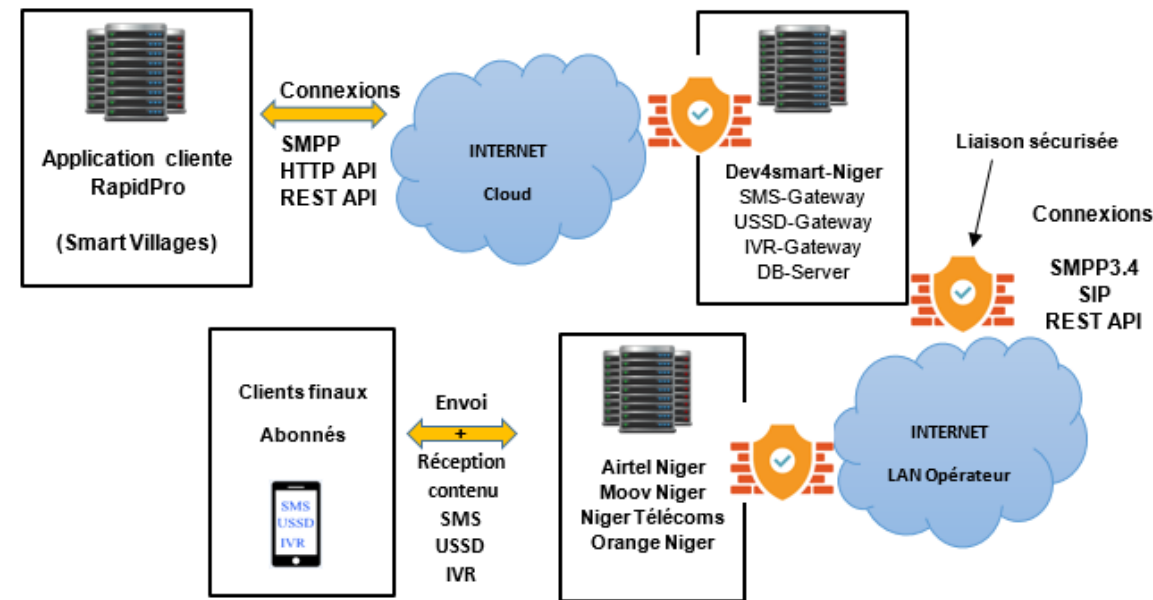
A telemedicine programme rolled out on top of the Smart Villages platform in Niger allowed to provide a timely diagnosis to a child who was mistakenly thought to require a limb amputation. Following the remote diagnostic, the right treatment was prescribed, and the disease was cured without any surgical intervention.



# E-Karkara

The service allows local farmers to receive useful information directly on their phones (both text and voice messages). There have been more than **200,000 instances** of used of e-karkara.

During COVID-19 the same service was re-purposed for COVID-19 response



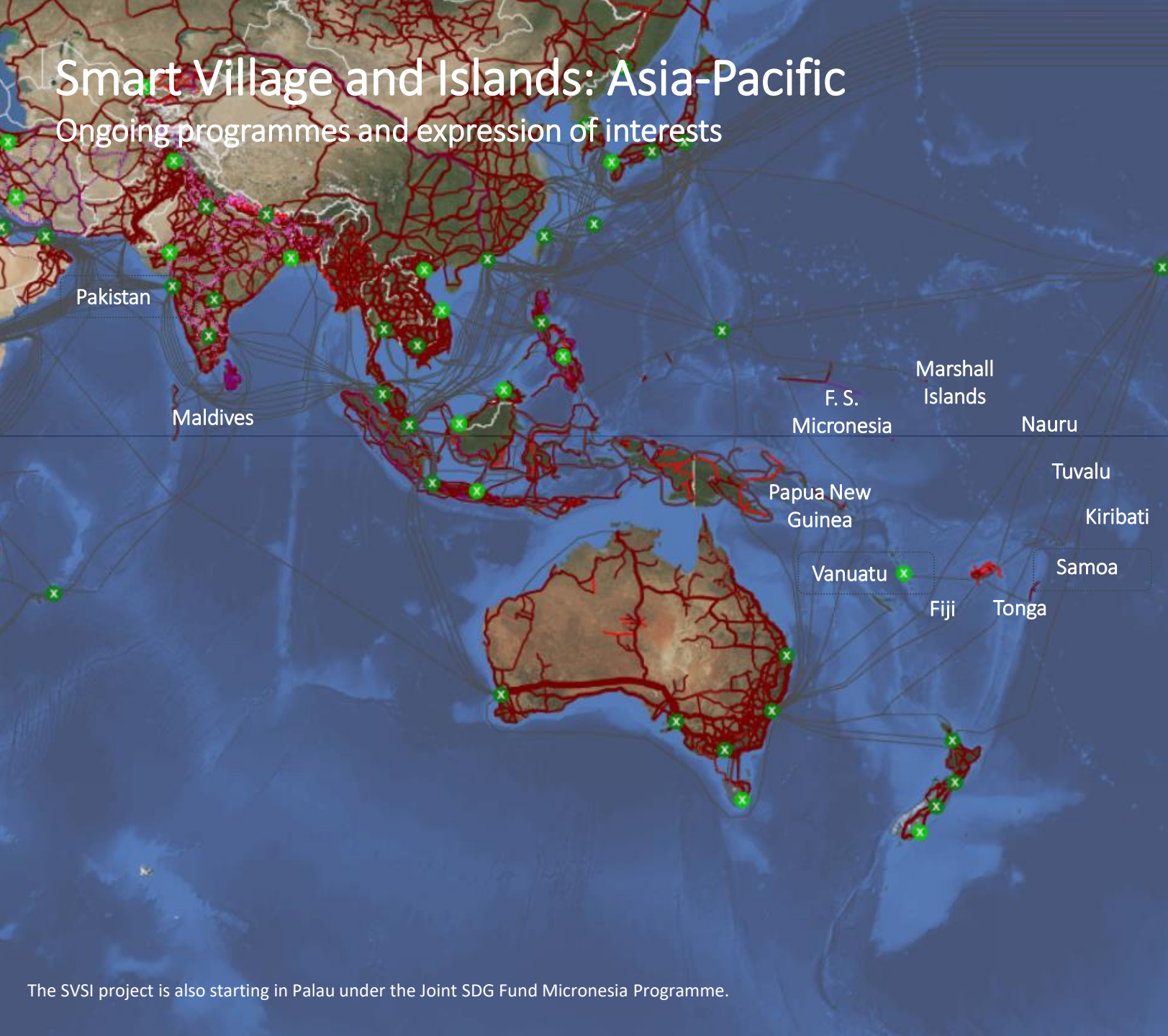
The COVID-19 response banner includes the following information:

- Logos:** République du Niger, Ministère de l'Agriculture, ANSI.
- Text:** 'NUMÉROS UTILES', '701 CONSEIL', '15 ASSISTANCE', 'PAGE SPÉCIALE COVID-19', 'MINISTÈRE DE LA SANTÉ PUBLIQUE DU NIGER', 'WWW.CORONAVIRUS.NE'.
- Footer:** 'L'ACTUALITÉ EST IMPRÉVISIBLE MAIS CE QUI EST IMMuable C'EST NOTRE VOLONTÉ DE VOUS OFFRIr DES FAITS VÉRIFIÉS, UNE COUVERTURE GLOBALE ET UNE ANALYSE PRÉCISE'.



# Smart Village and Islands: Asia-Pacific

Ongoing programmes and expression of interests



**low cost;  
better scalability;  
multi-sector collaboration  
partnerships;**



The SVSI project is also starting in Palau under the Joint SDG Fund Micronesia Programme.

# Digital literacy

The basic **digital skills training** offered by ITU experts in 9 Pacific countries reached

**1,574 villagers**

including 683 female participants, 41 Persons with Disabilities, 490 youths, and 176 special job groups (As of April 2024)







Smart Island South Malekula,  
Vanuatu

# Smart Village Gokina, Pakistan



# DIGITAL SERVICES



## Education

- Teletaleem
- Virtual University

2 Smart Classes are equipped by Teletaleem with digital equipment in the Gokina girls school. More than 100 girls from grades 8 and 9 are now enrolled and learning science subjects ( 3 classes per day), which would accelerate STEM education amongst girls in Gokina.



## Health

- Sehat Kahani

Since the soft launch of Sehat Kahani's telemedicine clinic on 15<sup>th</sup> January, 2023, more than 125 patients have availed the services so far, with 80% women representation ( 70 patients in the clinic+ 55 in the telemedicine camp)



## Entrepreneurship

- Virtual University
- Jazz

Creating market for digital services



Thank you

# Open Source Ecosystem Enabler

*Building digital public  
services for impact*



#OSEE



Funded by  
the European Union



## Digital Public Goods (DPGs)

Social development and **OSS growth found to be most important facilitators for eGov maturity**, across countries of all stages of development [1]

While digitalizing government administrative tasks can save money in the long-term, **all associated direct and indirect costs should be considered** including license agreements, upgrades, extensions, technical support, training, and maintenance fees [2]

Poor uptake can come **from the design of the digital services and the lack of proper staff within the government** to understand what would make citizens use the app [3], chatbot, or other service

Need for new **contractual clauses for open source procurement processes** in particular for OS AI [4]

[1] Lakka, S.; Stamati, T.; Michalakelis, C.; & Anagnostopoulos, D. (2015) "Cross-national analysis of the relation of eGovernment maturity and OSS growth". Technological Forecasting and Social Change, 99: p132-147, ISSN 0040-1625.

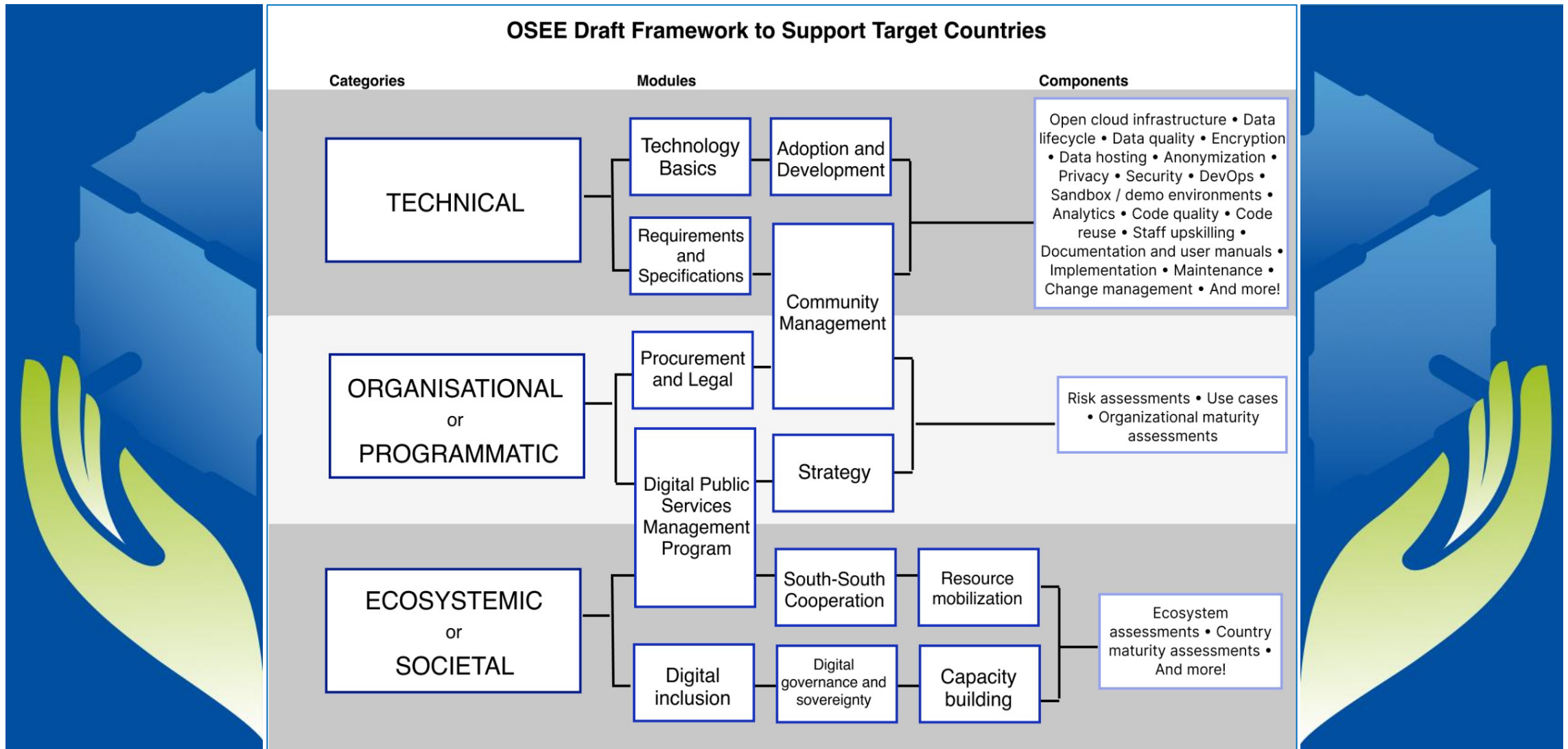
[2] Bouras, C.; Filopoulos, A.; Kokkinos, V.; Michalopoulos, S.; Papadopoulos, D.; & Tseliou, G. (2014) "Policy recommendations for public administrators on free and open-source software usage". Telematics and Informatics, 31(2), p237-252.

[3] Reis, J.; Espírito Santo, P.; & Melao, N. (2019) "Artificial Intelligence in Government Services: A Systematic Literature Review". Brazilian Journal of Operations & Production Management, 18(1).

[4] European Commission. (2023). (working paper). Proposal for standard contractual clauses for the procurement of Artificial Intelligence (AI) by public organisations.

## What are the main issues faced by governments in adopting and/or developing digital public services / DPGs ?

- **Cost**
  - Costs of hiring skilled staff
  - Costs of technical support, licensing..
  - Cost of infrastructures etc
- **Skills and capacity building**
  - Private and public local, regional, global ecosystems
  - Appropriate education and training
- **Technical complexity**
  - Efficiency and effectiveness in service provision
  - Understanding the benefits of using OSTs
  - User acceptance of digital gov services
  - Digital service scalability
- **Sustainability**
  - OST updates, extensions, portability
  - Innovation pace
- **Procurement**
  - Processes opening and adaptation
- **Risk management**
- **Ethics and regulations**
  - Decision support tools in the decision-making process
  - Public goods vs privacy, acceptable tradeoff
  - Sensitive services and use-cases (e.g. citizen security and safety)
- **Reach**
  - Bridging digital divide
- **Governance**
  - Digital services and multi-agency governance models



OSEE Framework to be open sourced + call to community for contribution...



# Country Selection Process

---

OSEE Project



## OSTF Country Selection Criteria



- **Strong political commitment to leverage Open Source** for Public Services with actual implementation of at least one DPG for Public Services
- **Country expresses officially their interest** by participating in the call for “Expression of Interest (Eoi)”

- **Country has already an initial, nascent active local ecosystem**
- **Country has identified as a strategic priority** and would like to explore and leverage DPGs
- **Country can be considered as a “champion”** in its region and/or globally and willing to share their experience and learn from others
- **Ensure diversity and representation** of different regions and different contexts

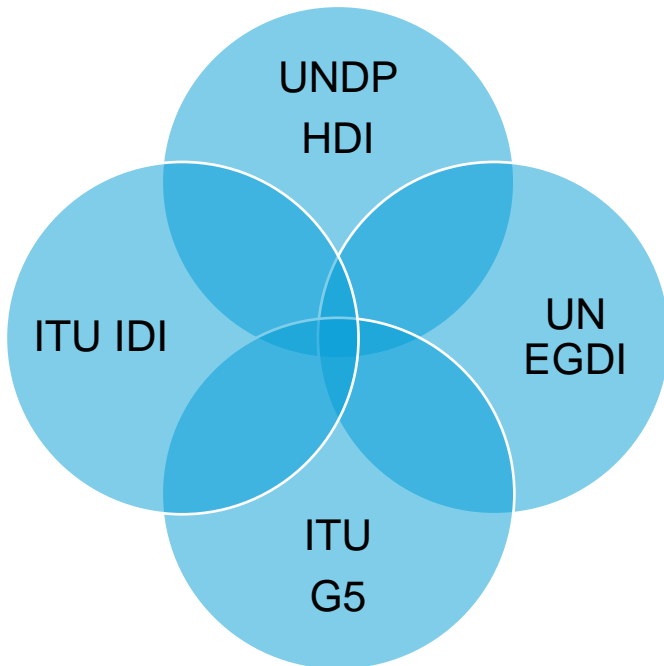
### OSTF Host sub-criteria

- Hosting agency should **be a public, academic or non-for-profit organization with a mandate** to develop local digital ecosystem and improve public services
- Hosting agency should have **sustainable income resources** that can possibly maintain and sustain the OSTF post project

# Country Identification and Selection Process

- Assessing countries digital maturity to ensure project deployment and success
- Based on a set of 4 important UN indexes:
  - UNDP Human Development Index (HDI)
  - UN E-Government Development Index (EGDI)
  - International Telecommunication Union, G5 Benchmark, gold standard for fast-track collaborative, cross-sector Digital regulation,
  - International Telecommunication Union, ICT Development Index (IDI)
- Call for Eol published 15th April 2024,
- Deadline 15 May 2024

**Country selection: 10th June 2024**



The screenshot shows a webpage with the following content:

- Header: Call for Expression of Interest to Host an Open Source Programme Office
- Navigation: YOU ARE HERE ITU > HOME > ITU D > ITU-D DIGITAL SERVICES AND APPLICATIONS
- Share icons: Facebook, Twitter, LinkedIn, YouTube
- Main heading: ITU and UNDP are seeking Expressions of Interest (Eol) from low- and middle-income countries committed to leveraging open-source technologies for public service delivery.
- Timeline section:
  - Click to complete the form
  - Timeline:
    - April 15th: Online form opens for Expressions of Interest
    - April: Informational webinar and open Q&A (exact date will be announced online)
    - May 15th: Online form closes for Expressions of Interest
    - June 10th: Selection of the 2 countries and associated hosts
- Background information section:
  - Text: Digital innovation is vital for global su... role in achieving 70% of the Sustain... global population online and increas... supported over 100 countries in ent... progress, challenges such as gender i...
  - Text: Open-source can be defined both in a... different kinds of openness that gove... prioritize seeking and acting on feed... standards, to maximize the interper... approaches to stimulate economic gr... provided by government. In a recent v... organizations would need to spend... investments, strong planning and st... societal and broader benefits.
  - Text: However, despite known advantages of open-source technologies and approaches, they have proven tricky to embark upon for countries. Open-source can require new skill sets, embracing sometimes unfamiliar software development lifecycles, and developing sustainable business plans around the maintenance of systems. Whilst engagement with open-source communities can require new capacities and resources in governments, as well in the local ecosystems.

# AI Global Summit 2024

**Unleashing the Power of Open-Source AI: Transforming Digital Public Services for a Better Tomorrow / 31st May 2024 8.30am to 12.15pm CEST**

## Abstract / Description

As governments worldwide increasingly recognize the transformative potential of Artificial Intelligence (AI), ensuring ethical, sustainable, and cost-effective approaches to its implementation is paramount. This session will delve into the crucial role of open-source AI technology and frameworks in enabling safe and efficient adoption, use, and scaling of AI-based services and applications within the public sector. It is co-organized by the International Telecommunication Union (ITU) and the German Development Cooperation initiative FAIR Forward implemented by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

The session will foster dialogue among diverse stakeholders, sharing experiences, best practices, and cooperation opportunities to enhance AI capacity in public administration. It will feature real-world use cases from Kenya, Rwanda, and Kazakhstan, offering insights into lessons learned and different stakeholders' perspectives. To further illustrate the potential of AI applications in public administration, a prototype implementation of a Generative AI (GenAI) solution, leveraging open-source software and Large Language Models (LLMs), will be showcased to tackle basic public administration use-cases such as citizen chatbot and process automation.

A critical aspect of the discussion will be the alignment of concrete use-cases, tools, and experiences with open-source AI policy considerations, including regulations, norms, and practices. In a concluding panel discussion, the session will explore approaches to fostering national and international ecosystems conducive to the emergence of ethical open-source AI tools, which can be shared and re-utilized as Digital Public Goods (DPGs). Examining open-source AI within the framework of data governance, international standards, and DPGs, this session equips policy- and decision-makers with insights to drive impact-oriented action. By promoting AI solutions that positively impact the public sector and beyond, whilst equally highlighting risks and harms to avert, the session aims to catalyze meaningful progress towards inclusive and sustainable development goals.

## AI for Good Global Summit

Accelerating the United Nations  
Sustainable Development Goals

**Geneva, Switzerland, CIGG**  
**30-31 May 2024**

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PROGRAMME

# Focussing on the AI track...

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## Open Source (generative) AI for Public Services Innovation

ITU Events



Open source (generative) AI for public services innovation

Thursday, 18th January 2024  
18:00 - 15:15 Geneva (CET)  
08:00 - 09:15 New York (EST)  
21:00 - 22:15 Beijing (CST)  
aiforgood.itu.int

With the recent advances in AI, and in particular generative AI, there is a growing interest from the public sector to invest in AI to facilitate and improve public services. AI usage in the public sector span from simple redundant task automation, to more advanced chatbots to serve citizens and to decision support tools to improve public policies, investment and services.

With less than 10 years to achieve the Sustainable Development Goals (SDGs), AI holds great promise in supporting better country public services. ITU is actively contributing to raising awareness and providing education and capacities in AI for public services innovation.

The invited focus will be all countries.

The five week opportunity

Speakers:

Moderator(s):


David Manset  
Senior Project Coordinator of the EC-funded OSEE project  
International Telecommunication Union (ITU)

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## Innovating Education: Navigating Challenges in Open-Source (Generative) AI Integration

ITU Events



Open Source AI for Education, New Approaches and Services

Thursday, 28 March 2024  
14:00-15:00 Geneva (CET)  
09:00-10:00 New York (EDT)  
21:00-22:00 Beijing (CST)  
aiforgood.itu.int

The panel discussion, "Innovating Education: Navigating Challenges in Open-Source (Generative) AI Integration," brings together experts from the fields of education, technology, and policy to explore the issues and challenges faced in developing new education services, approaches, and materials based on open-source AI.

The discussion will delve into the opportunities and challenges of integrating AI into educational frameworks, emphasizing the role of open-source AI in addressing these challenges and inspiring new educational models and practices.

The panel is exploring opportunities for open-source AI in education, by addressing the role of open-source AI in shaping the future of education and inspiring new educational models and practices.

Speakers:

Moderator(s):

David Manset  
Senior Project Coordinator of the EC-funded OSEE project  
International Telecommunication Union (ITU)

## Create a community

Complete Jobs Learn Talk Community Partners

### Moham Public Health Systems LLM Challenge

Can you train an LLM?

Hi...

Info Discussions leaderboard

Description

Overview

Prize

Timeline

Additional Info

Notes

The purpose of this challenge is to build an AI assistant capable of providing knowledge contained in the Malawi Technical Guidelines for Integrated Disease Surveillance and Response (TIS for IDS).

You will train an open-source LLM to answer context-specific questions about Malawi's public health processes, case definitions and guidelines, with training done on a dataset derived from the Malawi TIS for IDS.

The first models developed in this challenge will improve on the prototype (Inferno) app, currently being developed by AI Lab. The solution will contribute to an interactive and adaptive training resource for health professionals to enhance their skills, receive real-time guidance on data collection, and stay updated on evolving practices.

This is a complete project with a lot of relevant information. Please be sure to read the full project description and details under the "Additional information" heading below.

AI Lab at the Malawi University of Business and Applied Sciences (muab.ac.mw)

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PROGRAMME



Prototype  
Implementation for Public  
Services



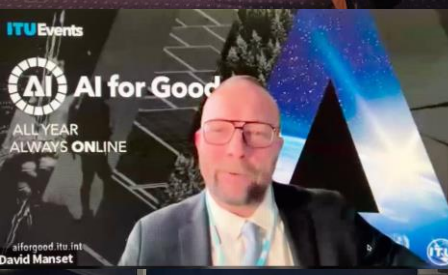
Thank you !

**Open Source Ecosystem Enabler**

Building digital public services for impact

#OSEE

Funded by the European Union



ICT AFRICA SYMPOSIUM 2023

YAOUNDE, 13<sup>th</sup>-14<sup>th</sup> December 2023

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## ITU OSPO

### Open source AI for Public Services

Supporting standards-driven,  
efficient, and SDG-focused GenAI  
applications in the public sector



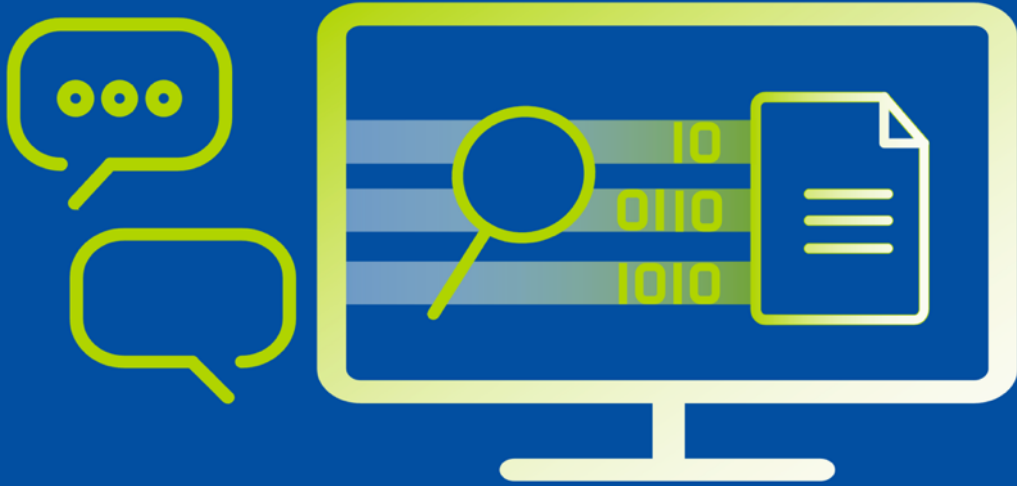
# RATIONALE



## **Public sector**

*plays critical role in advancing the Sustainable Development Goals (SDGs) as most SGD targets critically depend on the work of public institutions.*

**How can we harness AI technology to enhance the efficiency of the public sector and deliver better services to people?**



ITU Open Source Programme Office



ITU Open Source Programme Office (OSPO) is committed to harnessing the power of open-source technologies to empower nations, organizations, and individuals to leverage cutting-edge digital solutions for the sustainable development.



The GovStack Global Initiative



Open Source Ecosystem Enabler



ITU-D Network & Digital Infrastructure

ITU OSPO funded by:



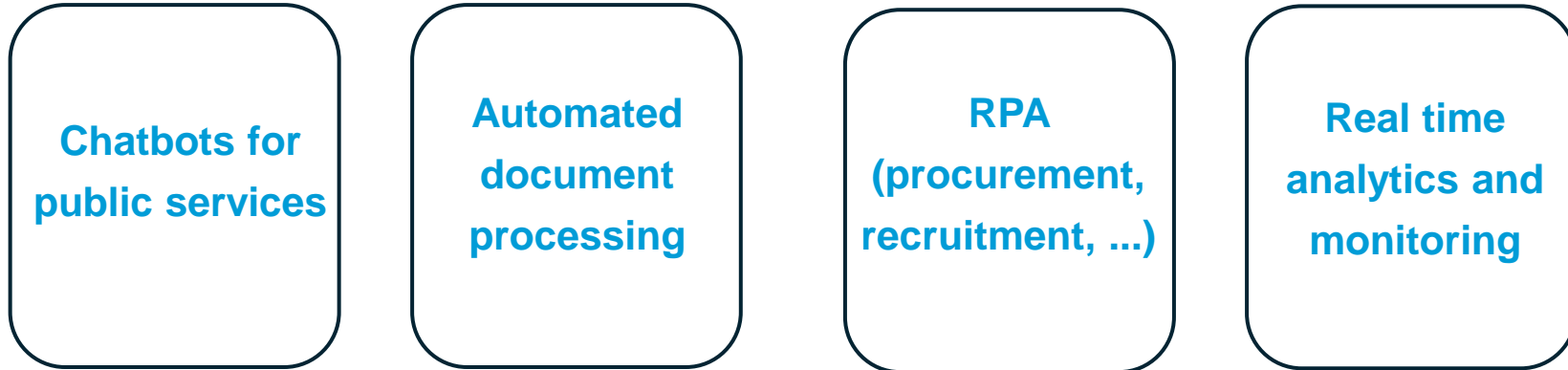
# Challenge “AIntuition”

**Retrieval Augmented Generation (RAG) for Public Services and Administration Tasks**

<https://zindi.africa/competitions/retrieval-augmented-generation-rag-for-public-services-and-administration-tasks>



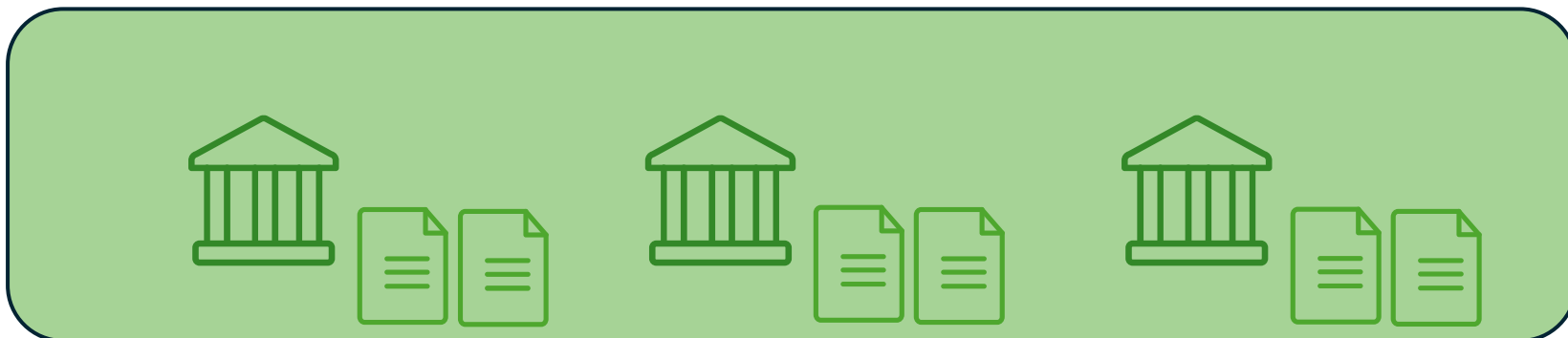
# Public sector LLM use-cases



Opportunity to improve efficiency and deliver better services using data



RAG



Public institutions are typically the main owners of data in countries

# WHY OPEN-SOURCE ?



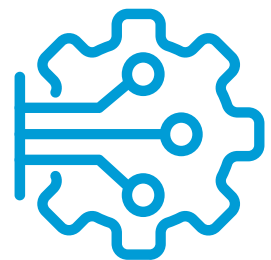
**Security, privacy,  
and reliability**



**Performance  
and quality**



**Cost and  
administration**



**Flexibility and  
fine-tuning**

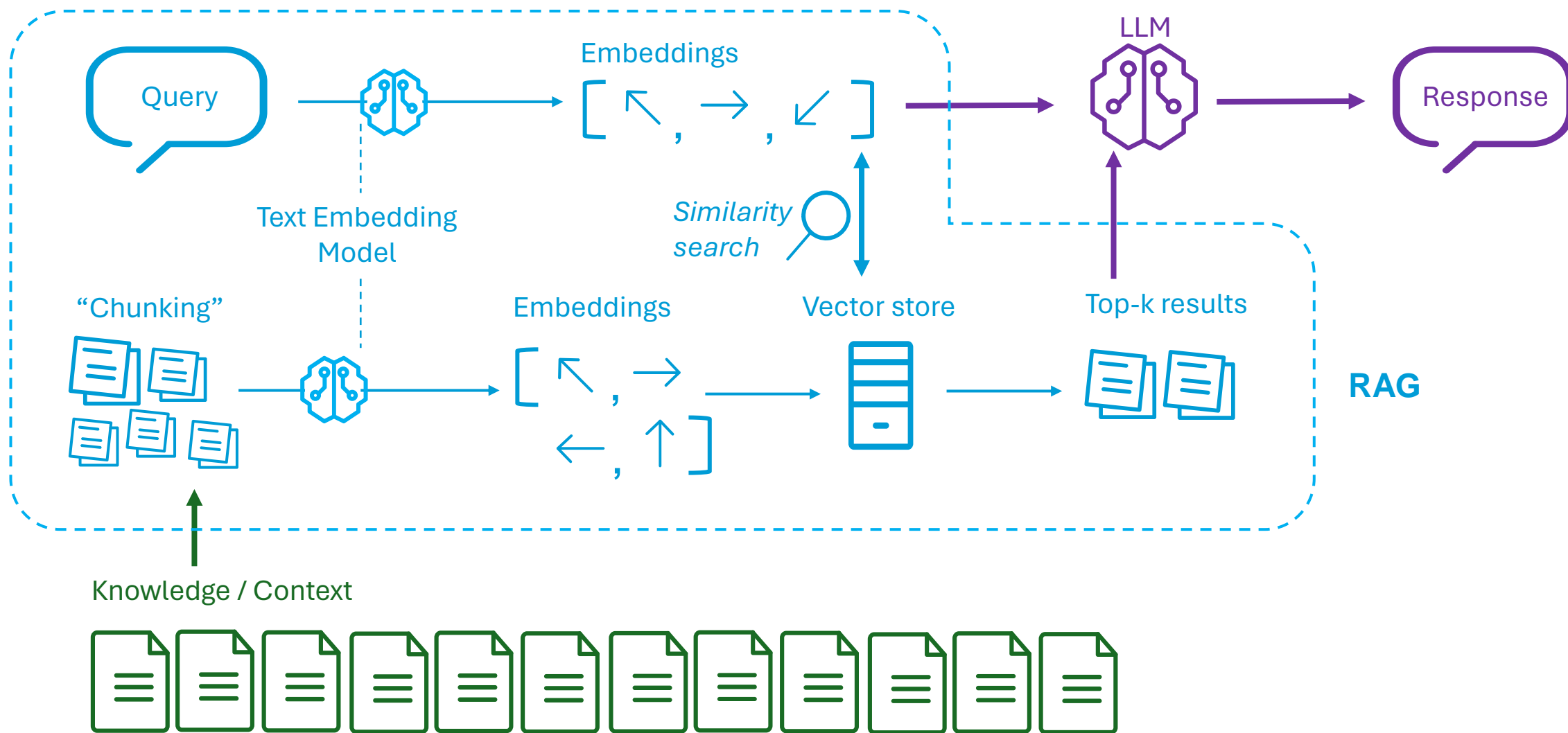


**Collaboration  
and exchange**



**Ethics, standards,  
and transparency**

# WHAT IS THE CHALLENGE ABOUT ?



## USE CASE EXAMPLES: RAG



***Efficient Information Extraction:*** RAG facilitates the extraction of relevant information from complex public records, streamlining data interpretation and analysis for policymakers.

***Customized Citizen Interaction:*** With RAG's ability to generate personalized responses, public sector agencies can offer tailored information and support to citizens, improving service quality.

***Enhanced Transparency:*** Utilizing RAG for automated report generation promotes transparency by producing clear, consistent, and easily understandable public documents and communications.

***Data-Driven Policy Insights:*** RAG's analytical capabilities can transform raw data into actionable insights, aiding in evidence-based policymaking within the public sector.

***Streamlined Workflow Automation:*** Integrating RAG with public sector workflows can automate routine tasks, freeing up resources for more complex and value-added activities.

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# BE HEALTHY BE MOBILE

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World Health  
Organization



# BE HE@LTHY BE MOBILE

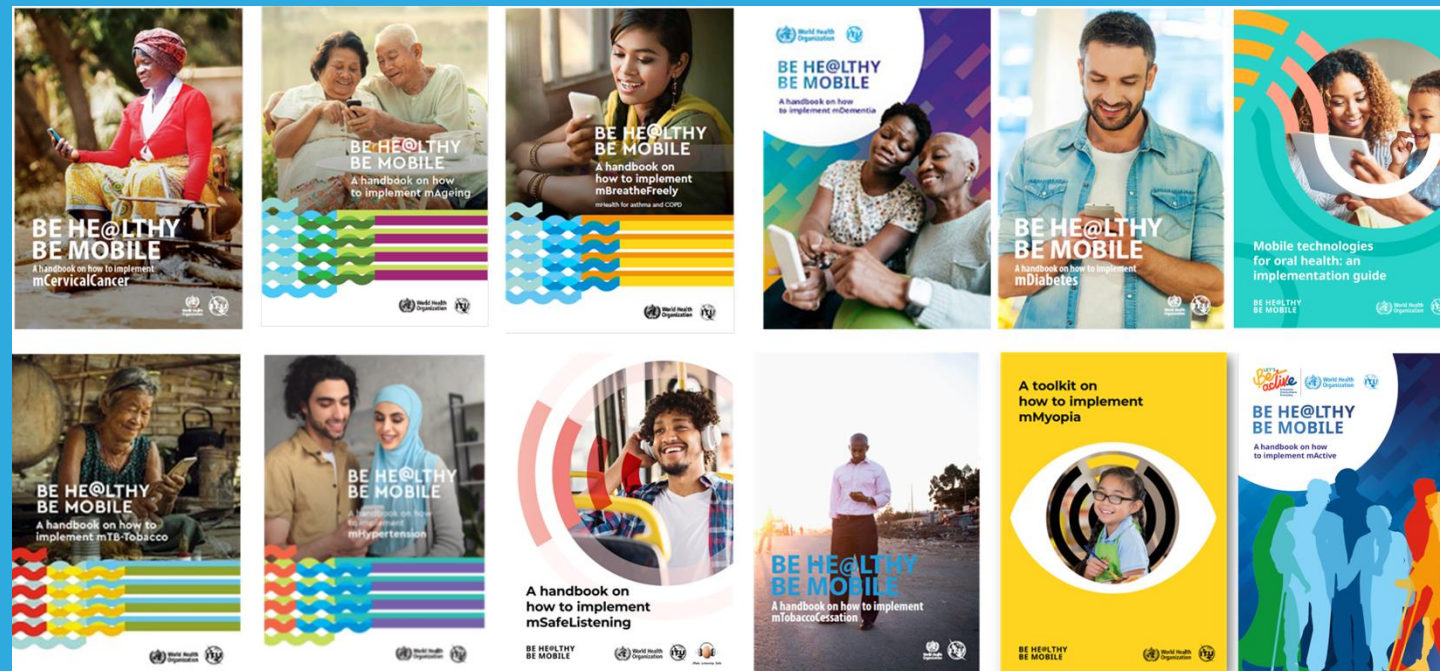
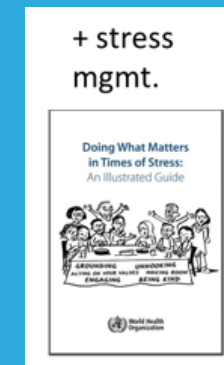
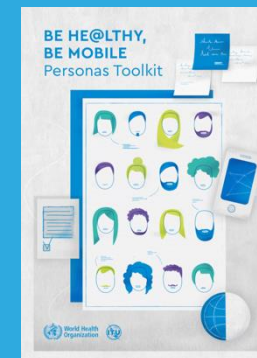
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12 BHBM programmes on  
NCDs currently available  
+ Personas Toolkit  
+ Mental Health module



Evidence-based message libraries included



**THANK YOU**