

IRCAI and ITU Webinars on Emerging technology for connectivity - Smart cities and communities

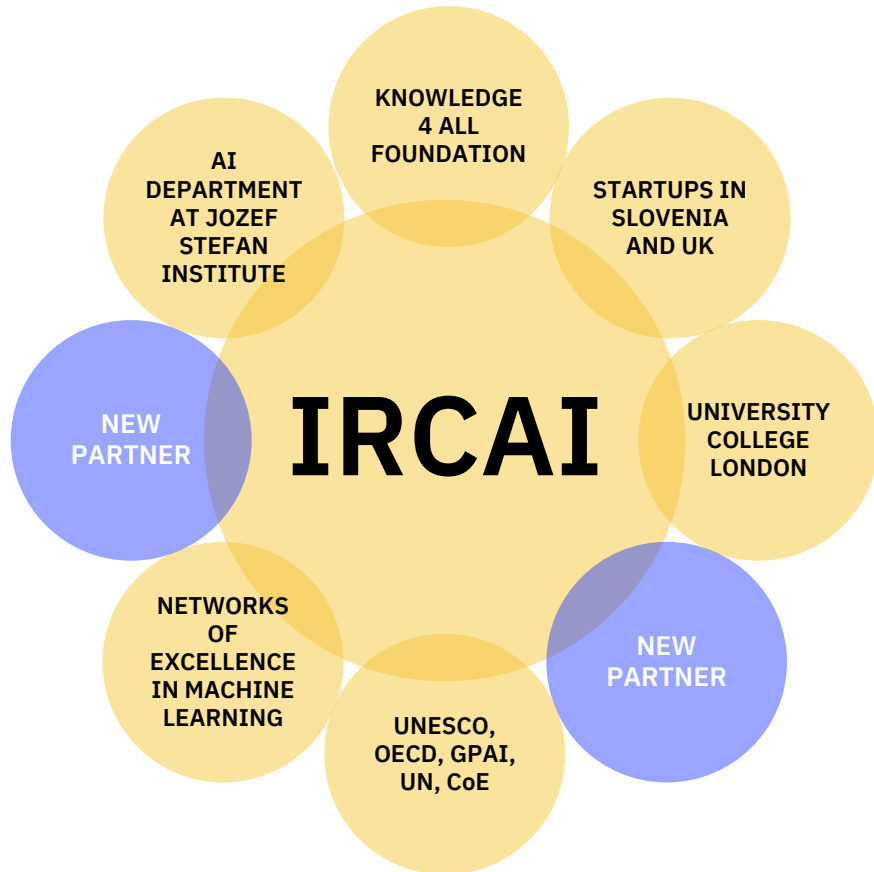


John Shawe-Taylor
Director



Davor Orlic
Chief Operations Officer

1. **The International Research Centre in Artificial Intelligence (IRCAI)** was founded by the Government of Slovenia as the UNESCO AI arm in 2020 and approved at the 40th session of the General Conference, where 193 UNESCO Member States supported the establishment of the Center.
2. It was inspired by the international work in the field of AI by an ecosystem of high-level institutions and researchers involved in scientific, industrial and policy actions working directly with UNESCO and **set up to showcase the use of Artificial Intelligence for the benefit of humanity.**
3. **The Center is independent and acts as a clearing house for Excellent Research** to scale up into spin-offs and is exploring ways of creating an ambitious and realistic AI Global Research Agenda, to mobilize the World's AI community to tackle United Nations Sustainable Development Goals (SDGs).
4. IRCAI will undertake a **Needs Assessment for Artificial Intelligence (AI), Digital transformation and Open Data for SIDS.** This survey aims at developing an understanding of capacity building needs for AI enabled digital transformation and related Open Data ecosystem.



Its current initiatives envisage **the Center as a coordination point, funding route, and exploitation accelerator for approaches to the SDGs that make use of AI.**

At the core of the Center are Program Committees around different Grand Challenges which put scientific quality first.

These are the fora made of AI and domain experts where individual international projects from any Region or Community are reviewed, approved for adoption, and prioritized for funding.

Naiades – A holistic water ecosystem for digitalization of urban water sector (H2020-SC5-2018-2)

Based on big data technology, the EU-funded NAIADES project promotes innovative water management solutions to improve services for homes and public buildings, such as shopping malls and hospitals. It collects real-time data from buildings to provide information about the maintenance of operations. The project is implemented along three different dimensions: spatial (including groups such as ageing, disabled persons and children), temporal and nodal. For personalised feedback and recommendation services, the project is designing an app aimed at promoting user engagement in water conservation activities.



<https://ircai.org/>



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Thank you for your support and we invite you to apply with your project!



Social imagery available at this link.



United for Smart Sustainable Cities (U4SSC) Initiative

TANIA MARCOS
Vice-chairman
United for Smart Sustainable Cities

July 2021


United for Smart Sustainable Cities




City Platforms


Economic recovery in cities and urban resilience building in the time of COVID-19


Guiding principles for artificial intelligence in cities


Procurement Guidelines for Smart Sustainable Cities


Innovative Financing Instruments for Smart Sustainable Cities



U4SSC KPIs



Dimensions



U4SSC Cities:

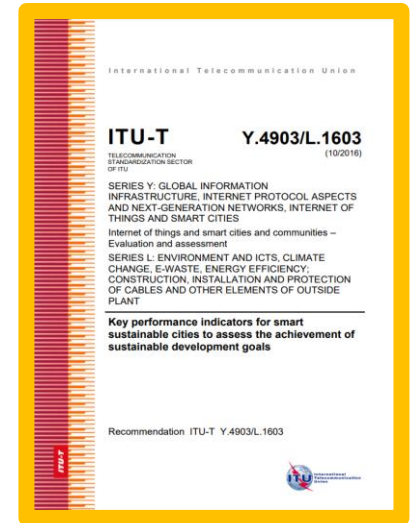
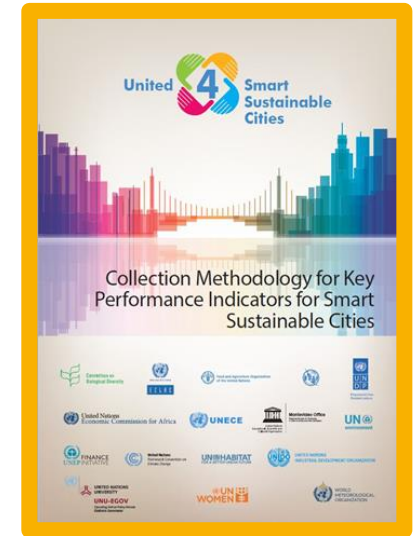
- ▮ Dubai
- ▮ Singapore
- ▮ Moscow
- ▮ Bizerte
- ▮ Valencia
- ▮ And 100+ more!

Economy	Environment	Society and Culture
<ul style="list-style-type: none"> • ICT Infrastructure • Water & Sanitation • Drainage • Electricity Supply • Transport • Public Sector • Innovation • Employment • Waste • Buildings • Urban Planning 	<ul style="list-style-type: none"> • Air Quality • Water and Sanitation • Waste • Environmental Quality • Public Space and Nature • Energy 	<ul style="list-style-type: none"> • Education • Health • Culture • Housing • Social Inclusion • Safety • Food Security

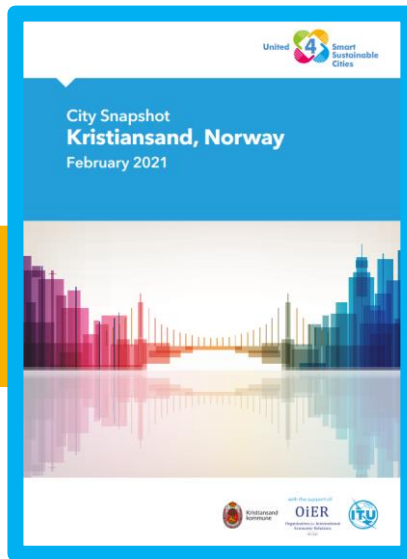
55 Core Indicators + 36 Advanced Indicators

- 20 Smart + 32 Structural + 39 Sustainable
- 132 Data Collection Points

Categories



ITU's implementation of the U4SSC KPIs



City Snapshots
Provide a visual overview of a city's U4SSC KPIs performance based on global benchmarks



Verification Reports
Summarize the conclusions of a city's U4SSC KPIs project

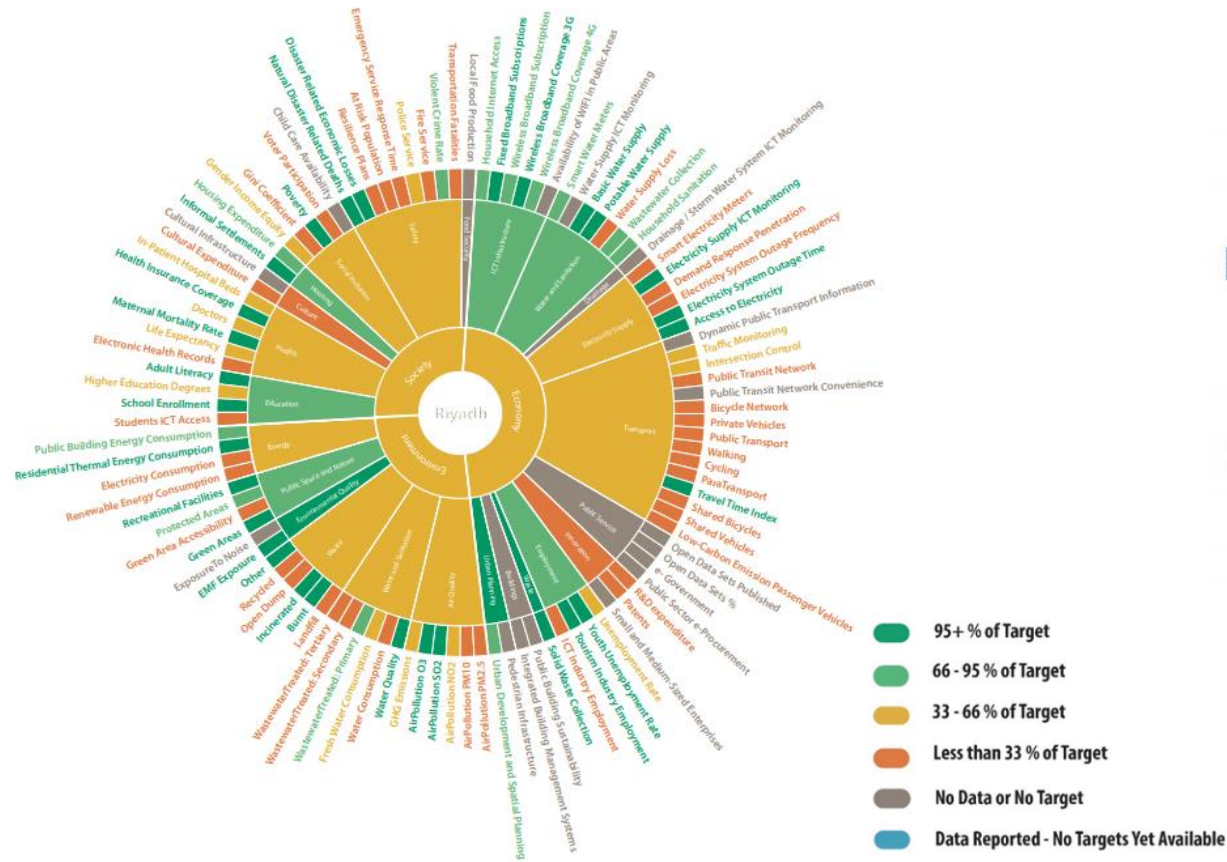


Factsheets
Elaborate and analyze the results of a city's U4SSC KPIs project



Case Studies
Detail a city's journey towards successfully becoming a smart sustainable city

Applications of the U4SSC KPIs



The U4SSC KPIs help cities to:



Track progress



Perform trend analysis



Benchmark performance



Compare results

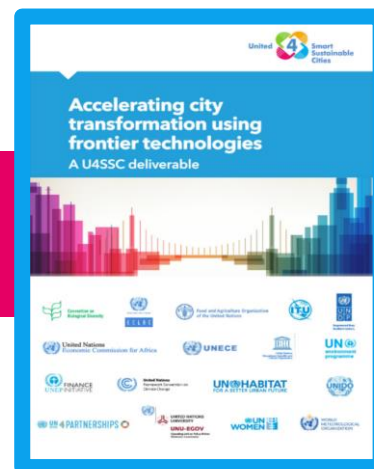
Latest U4SSC Publications



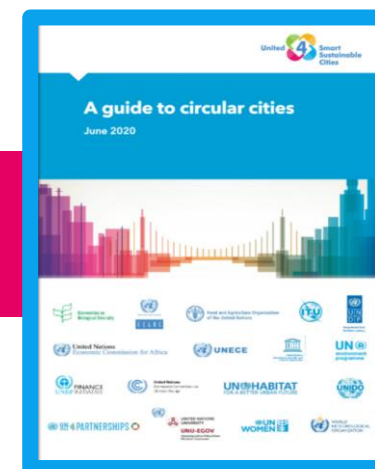
Identifies smart interventions not requiring excessive material or capacity inputs, but helping cities be sustainable



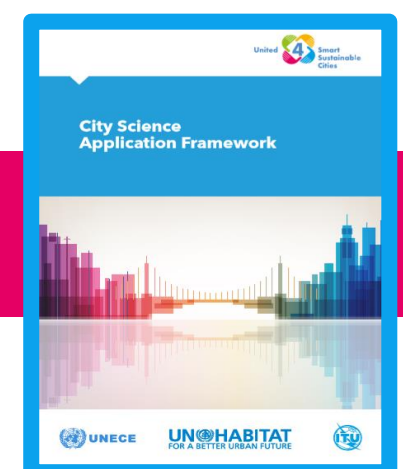
Gives insight into the potential of blockchain technology in building trust within cities



Sheds light on the impact of frontier technologies in cities and on citizens



Provides a framework to improve circularity in cities



Offers a four-step methodology to assess, prioritize and boost city applications

Thank you!

Questions? Interested in learning more?
Let us know!



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Website

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Smart Villages

**A WHOLE-OF-GOVERNMENT
APPROACH TO DIGITALLY
TRANSFORM RURAL
COMMUNITIES**



Context

45 % of the global population live in rural areas



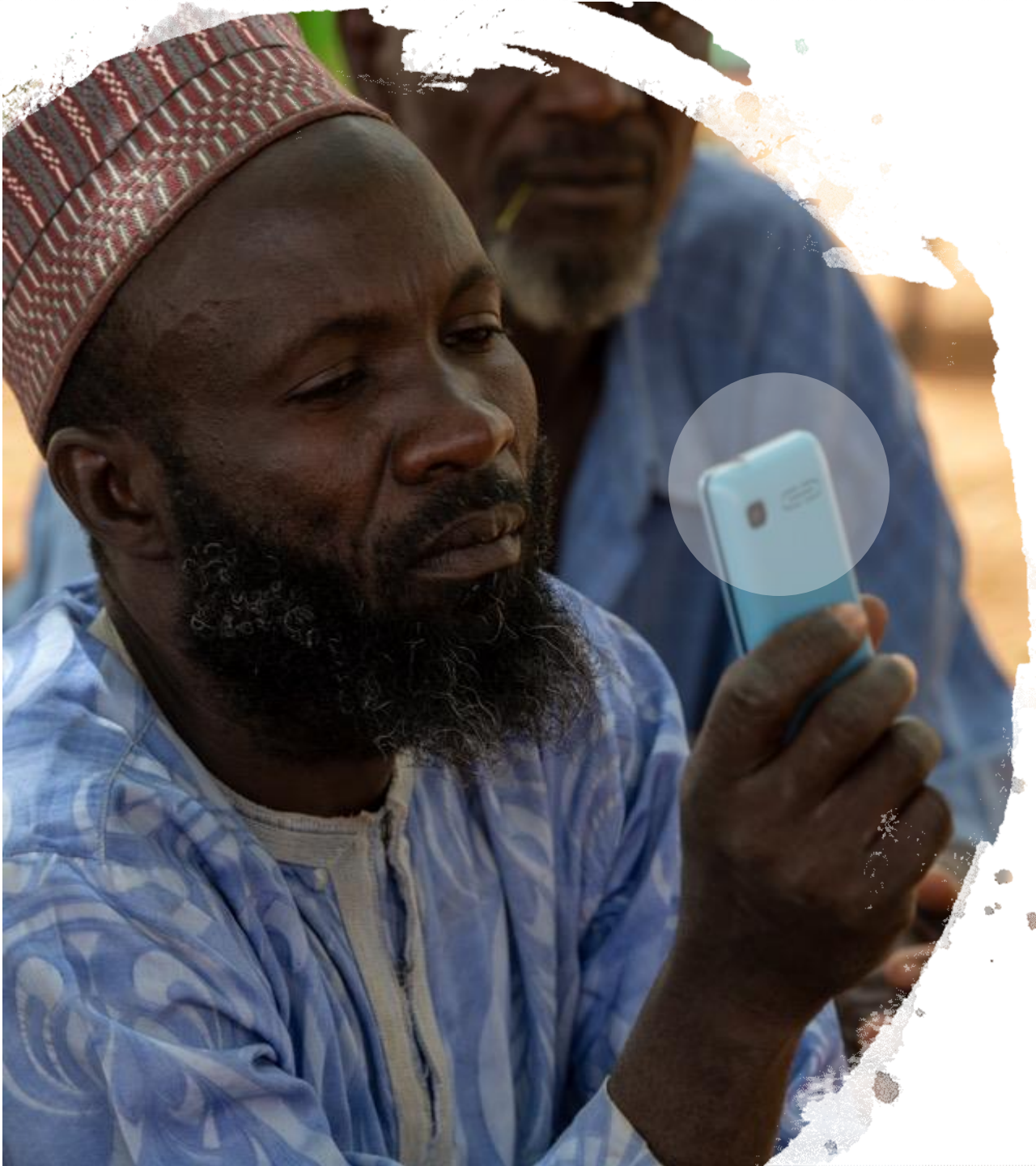
The incidence of extreme poverty is 3 time higher than in the cities



The shortage of health workforce is 2 times more acute



Low proficiency in reading and mathematics is up to 20% more proliferate



New approach is needed

Digital technologies

can be used as a powerful tool for the provision of equitable and qualitative SDG-related services to the disadvantaged rural populations

However,

traditional supply-side, siloed approaches to leveraging these technologies have yielded only limited results in addressing the problems that hinder rural development



Difficult to scale



High cost



Low efficiency



Duplication of efforts



Smart Villages

- Smart Villages is a holistic, multi-sector, and inclusive approach to improving access to essential digital services for SDG in rural settings
- A Whole-of-government, Whole-of-society approach for SDG digital investments and digital transformation
- Concrete approach to mutualize digital investments to achieve cost efficiencies through economies of scale [similar to «Car Pooling»].
- Consider various citizens' needs in an integrated manner.
- It is a "**gateway to rural development**" through the pooling and coordination of development programs, in order to create the necessary synergy to sustain investments.

Life in the Smart Village: A user-centric approach



Farmers

- Access to health education and Advisory services
- Buy local inputs and sell products
- Better Plant & Animal Disease Management
- Access to market prices & financial services
- Share and learn new information from other farmers
- Access to Digital and Basic Literacy courses
- Emergency support



Women

- Better Mother and Child Health Tracking
- Access to health education & Advisory services
- Sell local products/handcrafts
- Access to financial services
- Access to continuing learning
- Access to Digital and Basic Literacy courses
- Better access to quality health care services



Children

- Access to quality education
- Access to numeracy and digital literacy courses
- Girls education
- Access to Edutainment content
- Registration of new birth
- Digital identification & Better Vaccination Tracking

Citizen's view

Life in the Smart Village: A user-centric approach



Agriculture
Extension
Worker

- Access to Advisory services
- Buy local inputs and sell products
- Access to Animal Disease Management
- Access to market prices & financial services
- Share and learn new information from other farmers
- Access to Crop and Weather Calendar
- Access to information about production and consumption of nutritious foods.



Health
Worker

- Tools to improve Mother and Child Health Tracking
- Better Stock Management
- Access to Decision support tools at Point-of-care
- Access to Tele-expertise, Remote diagnostics Application
- Access to continuing learning
- Ability to report on Malaria cases
- Better Identification of children and improved vaccination tracking



Teachers and school
administrators

- Access to Teachers professional training
- Access to numeracy and digital literacy courses
- Access to schools textbooks
- Access to educational games and Apps
- Access to illiteracy eradication Apps
- Access to digital support learning materials in class

Professional's view

- Established access to broadband networks needed for delivery of digital services for all
- Improved resilience of networks and connectivity

- Shared broadband connectivity and devices
- Shared /common digital infrastructure
- Support from government from USO
- Use of PPP model
- Establishment of public WiFi in schools, hospitals, public offices and libraries

- Trainings and digital literacy programs conducted and awareness raised in the target communities
- Collaboration with partners for cross-sectoral initiatives
- Creating Community Experts-ownership
- Youth, women and PwD empowered through targeted activities

- Service delivery platform established for the development and delivery of digital applications and services
- Various digital applications and services developed and made available for socioeconomic development, including e-learning, e-agriculture, e-health, e-commerce and e-tourism

Broadband connectivity accessible to remote islands

Enhanced affordability

Digital skills enhanced

Wide range of digital service delivered

Evidence based, future proof (integrated emerging technology), partnership driven, whole-of-government approach

Limited access to broadband and digital services in remote islands / villages

Limited access to broadband connectivity

- Limited access to broadband networks needed for delivery of digital services
- Limited resilience in broadband connectivity
- Sustainability of broadband connectivity not established

Insufficient affordability

- Insufficient
- affordable devices
 - affordable internet services
 - Wi-Fi in schools, hospitals, public offices, libraries...

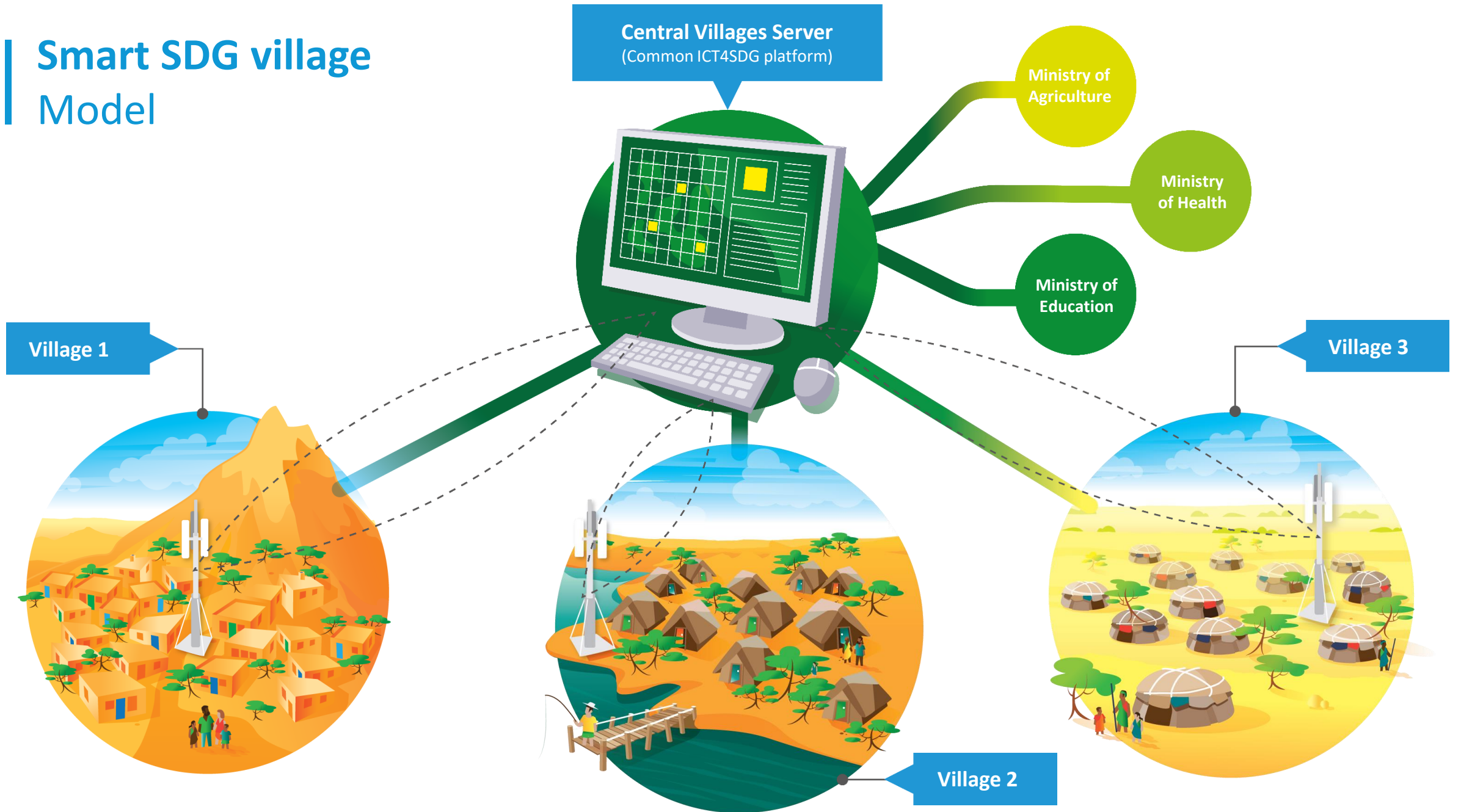
Insufficient digital skills

- Insufficient
- training programs
 - education opportunities
 - digital literacy and skills
 - awareness
 - community engagement
 - youth and women participation

Limited digital services (access, scale and scope)

- Limited
- service delivery platforms
 - range of digital applications and services (e-commerce, education, health, finance, agriculture, tourism etc.)

Smart SDG village Model



Smart SDG village

Niger project

Mobile
Agriculture
Extension



Village 1

Local Village Server

Broadband connectivity

Each village has a local server to cache content related to education, health, agriculture, etc.

Local wifi access point

Mobile
School Unit

Connect school

Mobile School unit to give access to education resources for formal and vocational training and Teachers training

Mobile Clinic

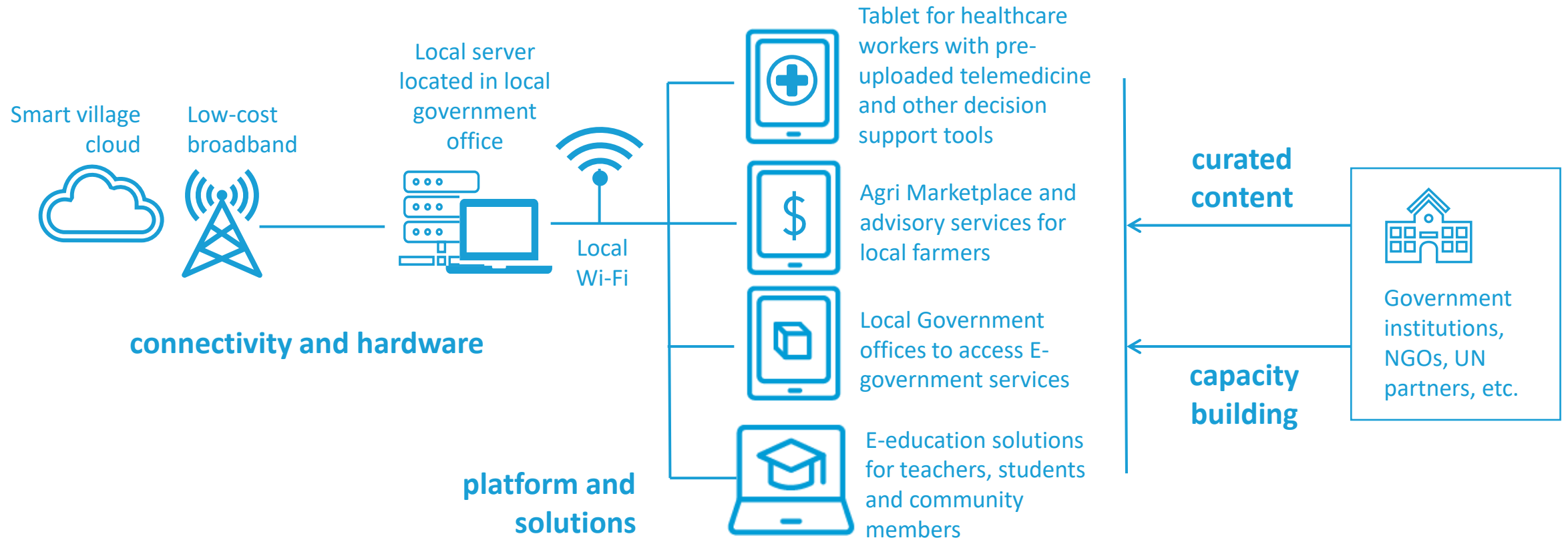


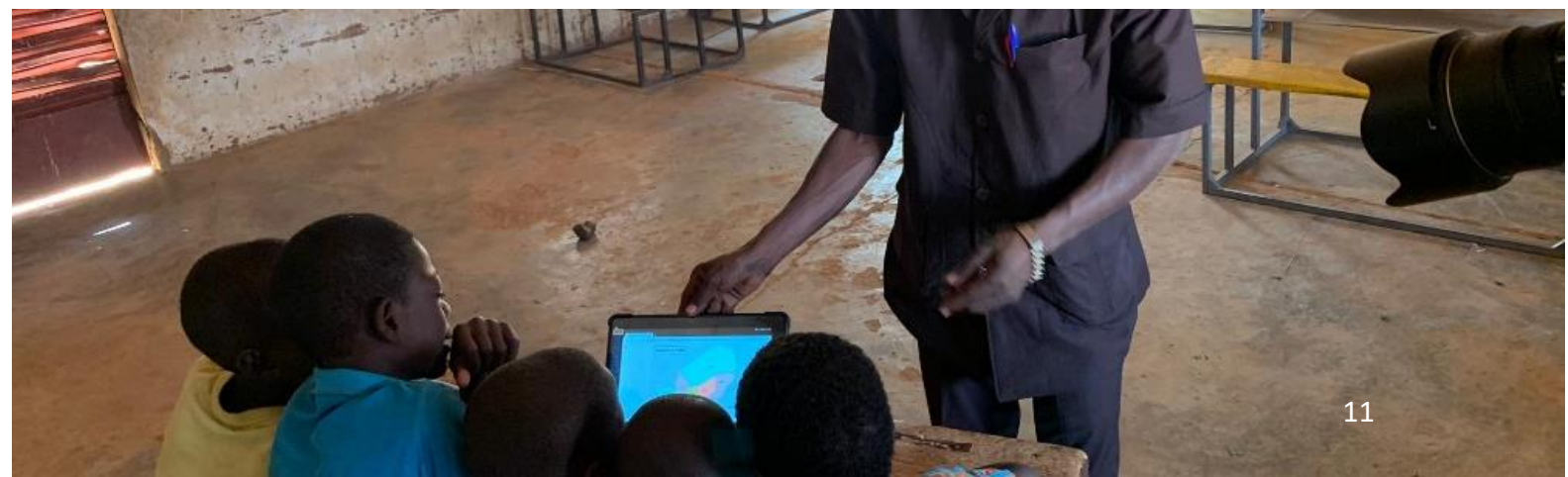
Community members can access Local village Portal or web directly

Community members receive SMS and voice messages related to topics of their interest

Connect Health center

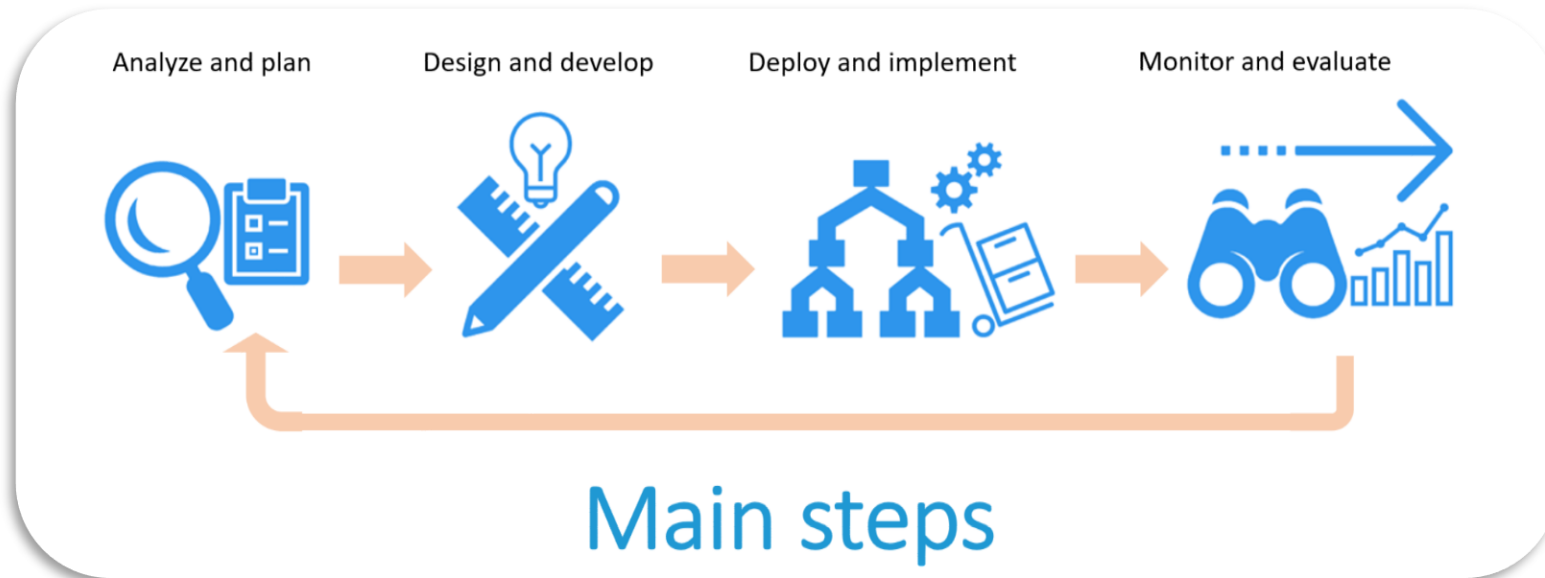
Framework: Digital service infrastructure





Smart Villages Blueprint

A practical tool for establishing smart villages



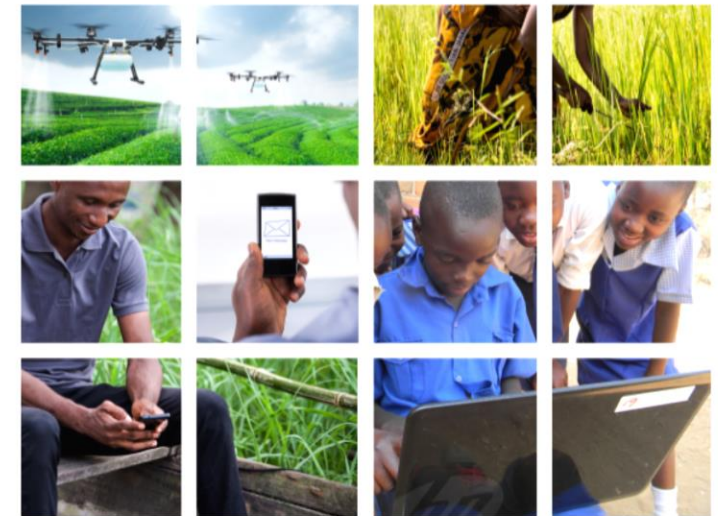
https://www.itu.int/pub/D-STR-SMART_VILLAGE.NIGER-2020

Thematic reports
ICT Applications

ITU Publications

Building Smart Villages: A blueprint

As piloted in Niger



In collaboration with



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