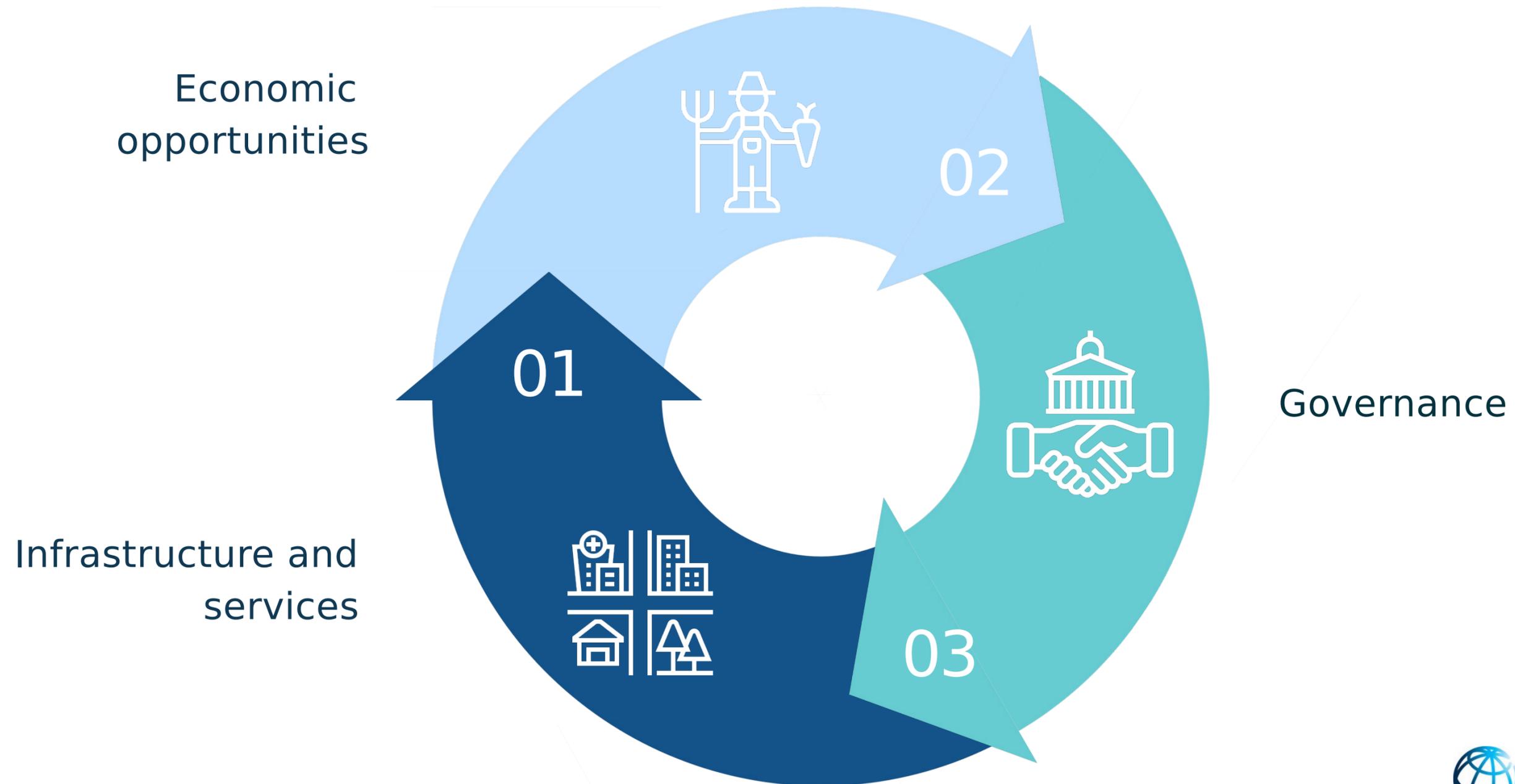


The Smart Village Approach to Rural Development  
Erik Johnson, Senior Social Development Specialist, World  
Bank

What is a 'smart village'  
approach to rural  
development?

# What are smart villages?

Smart villages use digital technology, innovation, and knowledge to improve:



# Examples of smart interventions

## Economic opportunities



Sharing economy  
Shared mobility (ride sharing apps)  
Community-based tourism (homestays)



Digital agriculture  
End-to-end platform bundling services: input procurement, sales, logistics support, credit; digital extension services; peer to peer agri-equipment lending platforms; smart farm cards



Smart finance  
Payment transfer: mobile & internet banking, hand-held ATM devices, digital payment platforms.  
Innovative financing models: PayGo, results-based financing, social bonds, crowdfunding, impact investments



Smart logistics  
IoT-based real-time tracking, IoT sensors to measure temperature, pressure, exposure to light in cold chains, etc.



E-commerce platforms  
Online marketplaces connecting suppliers and buyers of goods and services



Business incubation support  
Business incubation labs and accelerators, co-working spaces, fab labs

## Infrastructure and services



Optimized clean energy  
Smart meters and apps for optimizing energy use in solar lighting, heaters, water pumps, and cold storage



Edu-tech  
Virtual schools and labs, e-skilling platforms, innovation & STEM labs, etc.



E-health  
Telemedicine, tele-mentoring, remote diagnostic and screening devices, e-pharmacies, ATM pharmacies, etc.



Smart irrigation  
Irrigation debit cards, IOT based sensors, drip irrigation



Access to clean water  
Water ATMs, decentralized water purification systems, etc.



Smart transport and mobility  
Sensing technologies, traffic management systems, emergency notification systems



Smart housing  
Thermostats/temperature sensors, energy-efficient lighting, rainwater harvesting structures

## Governance



Digital IDs  
Smart ID cards, biometric identification



Civic technology  
Citizen feedback apps, digital citizen surveys, virtual consultations, social media, artificial intelligence



Service centers  
One-stop shop for public services, electronic kiosks, electronic registrations and payments, etc.



Digital community work  
Field-based data collection, community-generated video, digital village profiles, etc.

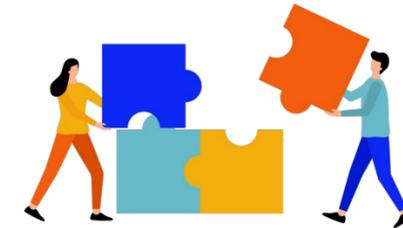


E-justice  
Field-based data collection, community-generated video, digital village profiles, etc.  
Electronic document filing, access to status of cases in progress, access to archives and registries, teleconference judicial proceedings

# Successful smart village approaches...



Are community-led and user-centric



Enable different actors to collaborate



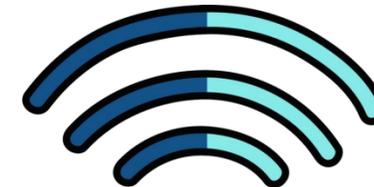
Drive local entrepreneurship



Are data-driven



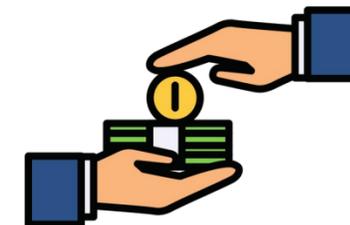
Use digital and social innovation



Are digitally-enabled (good connectivity & digital skills)



Take advantage of rural-urban links



Co-financed through existing government funds and external sources



Invest in cross-sector solutions



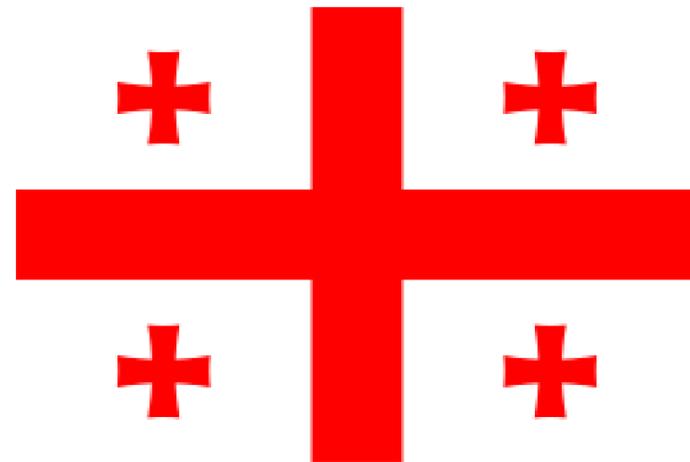
Have appropriate governance structures for local needs

# World Bank Smart village country assessments in the South Caucasus



## AZERBAIJAN

Analytical work on a two-track approach to building new smart villages in the conflict-affected areas while also building on strong community-driven platforms in other parts of the country .



## GEORGIA

Assessment focusing on the Guria region of Georgia, in order to define activities for a "smart villages" pilot which can be incorporated into Component II of the ongoing Log-In Georgia Project and scaled up to other regions.



## ARMENIA

Analysis led to a roadmap for a smart village pilot beginning with geographic targeting that will result in a baseline study and selection of a village cluster for SV model development (such as the Hovk village cluster).

# A smart villages readiness index

# Why and how should the Smart Villages Readiness Index be used?

The variables can be adjusted: the ones chosen were aligned to the characteristics of our definition of smart villages. The SV Readiness Index can be used to:

## Clusters

As a tool to identify economic clusters to be supported



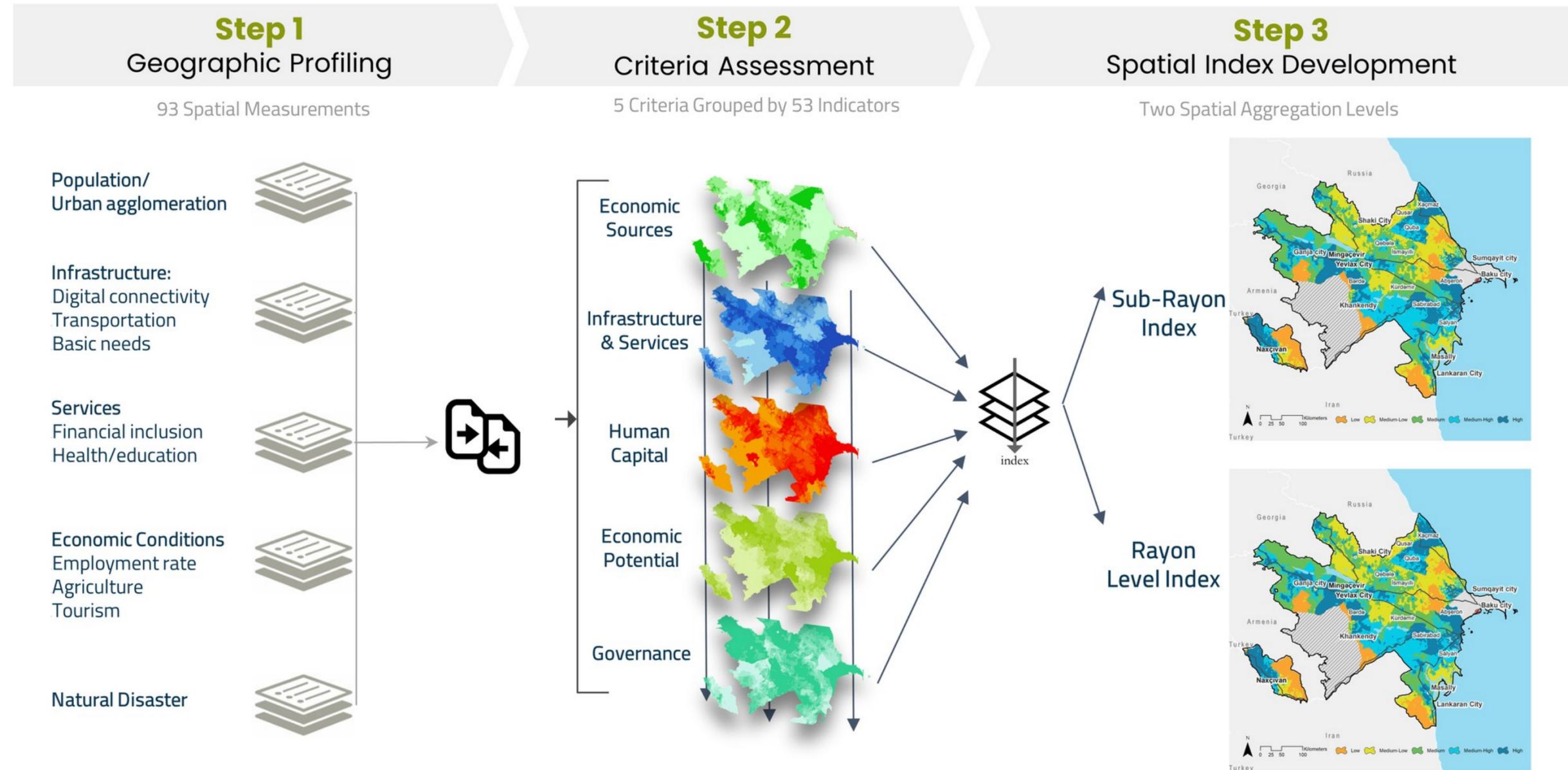
## Thematic areas

As a tool to identify specific thematic areas in need of support, which can be assessed in more depth on the ground

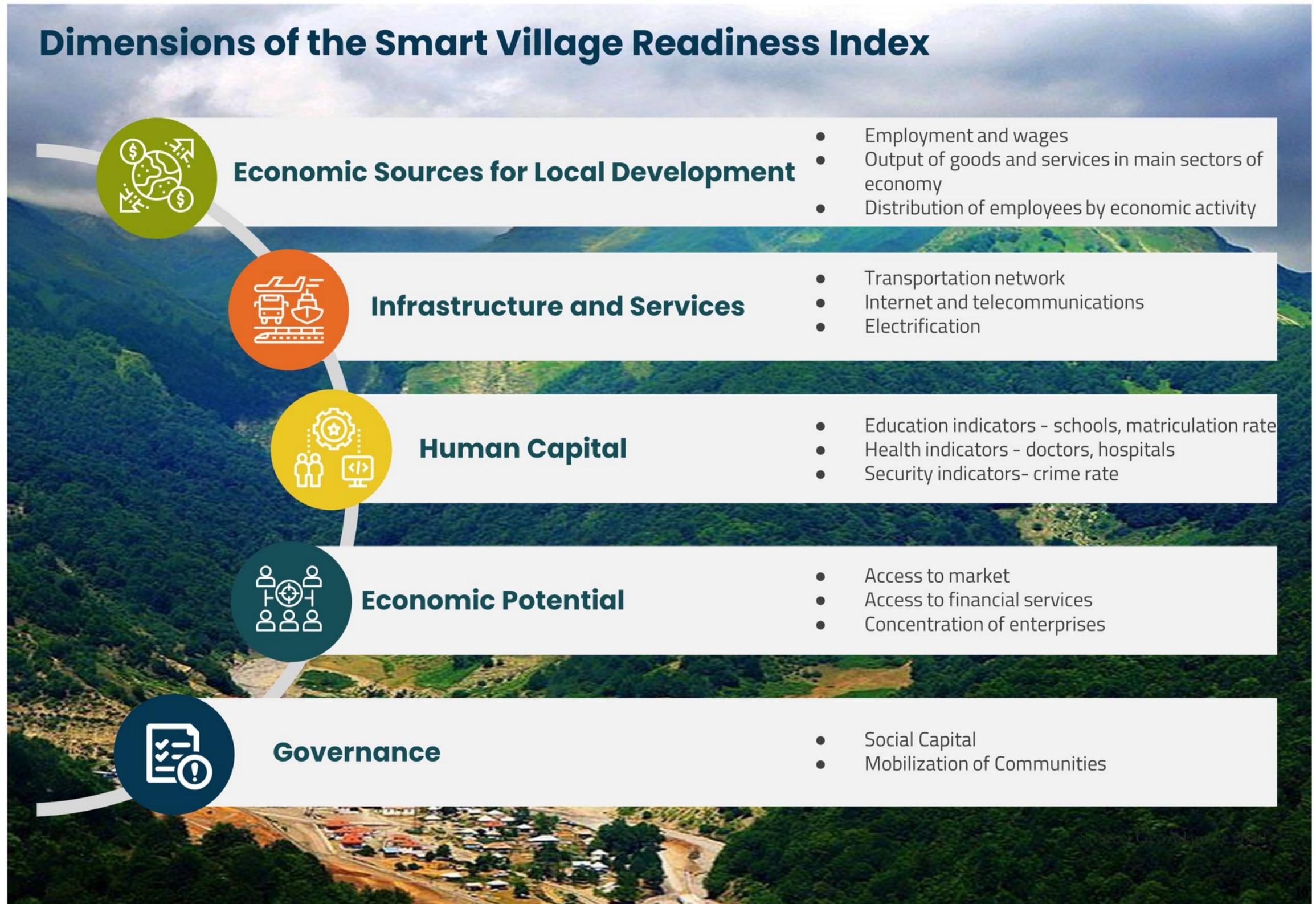
## Types of support

As a tool to identify areas in need of different levels and types of support

# Three Step Process to Assess Smart Village Readiness in Azerbaijan



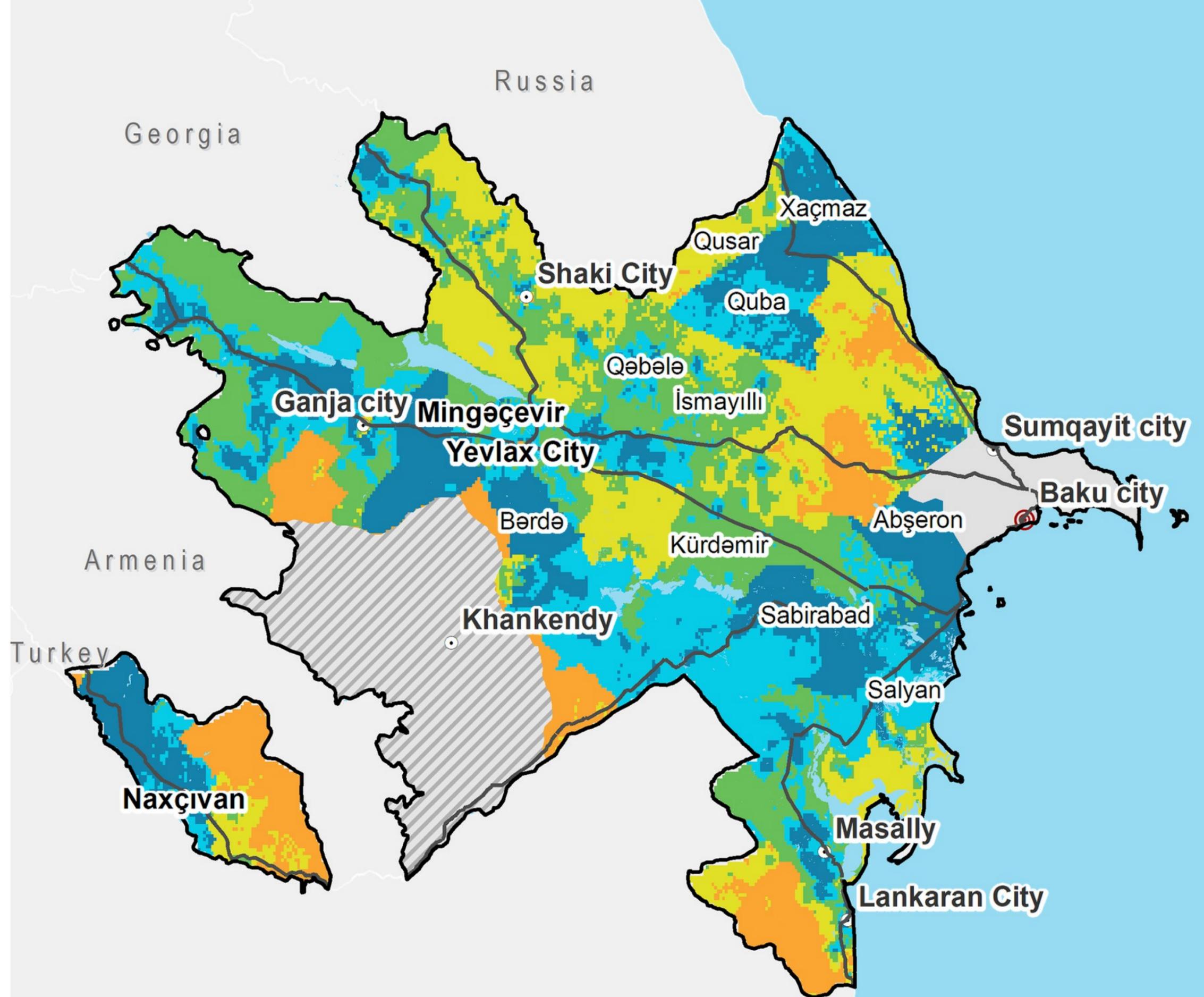
# Dimensions of the Smart Village Readiness Index



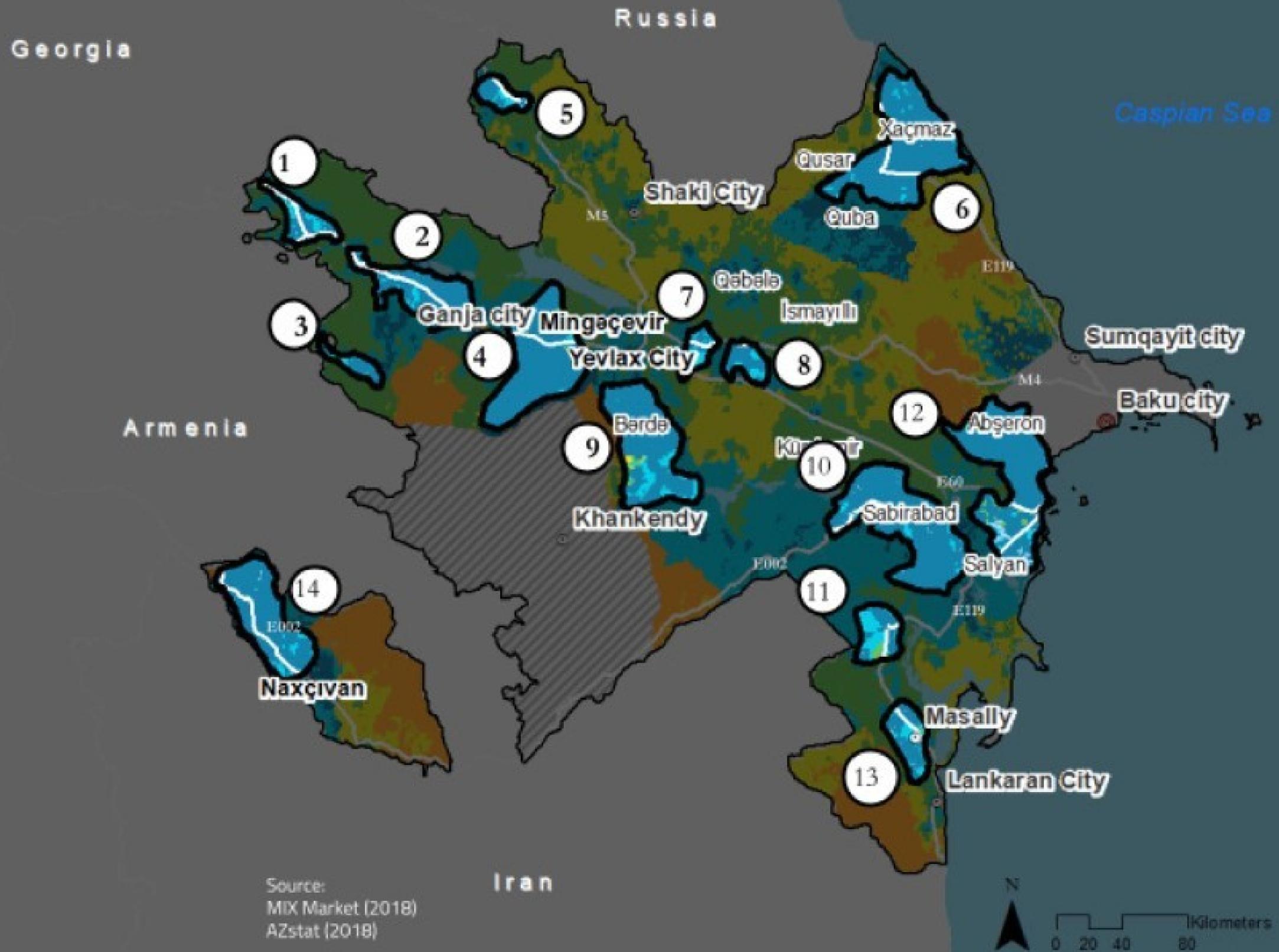
# Levels of Smart Village Readiness

| Index                      | Description  |
|----------------------------|--|
| <b>Amplify</b>             | Areas with the highest population density, established concentration of SMEs and financial services, and significant opportunities to accelerate or improve digital readiness and economic diversification |
| <b>Accelerate (High)</b>   | Areas with established concentration of SMEs and financial services that need to consolidate employment and human capital to increase opportunities for economic diversification and increasing incomes    |
| <b>Accelerate (Medium)</b> | Areas with slightly lower indicators than Accelerate High with lower levels of population density and economic activities  |
| <b>Accelerate (Low)</b>    | Areas with similar employment rates to areas in Accelerate Medium but with substantially fewer SMEs and financial services   |
| <b>Activate</b>            | Low population density areas with less employment and lowest levels of SMEs and financial services   |

# Smart Village Readiness



# Smart Village Readiness



# Implementing a 'Smart Villages' program

# Key ingredients of a smart village program



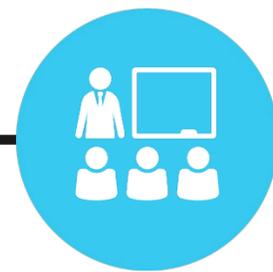
1

Targeting



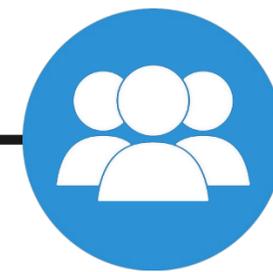
2

Digitally  
connecting



3

Training



4

Engaging  
citizens



5

Financing

# Targeting

Adapt, adopt, and apply the readiness framework for targeting

Village clusters have different circumstances: to determine how to best support them, decide whether to focus on the most ready, least ready, or a mix



# Digitally connecting

Define a digital connectivity threshold

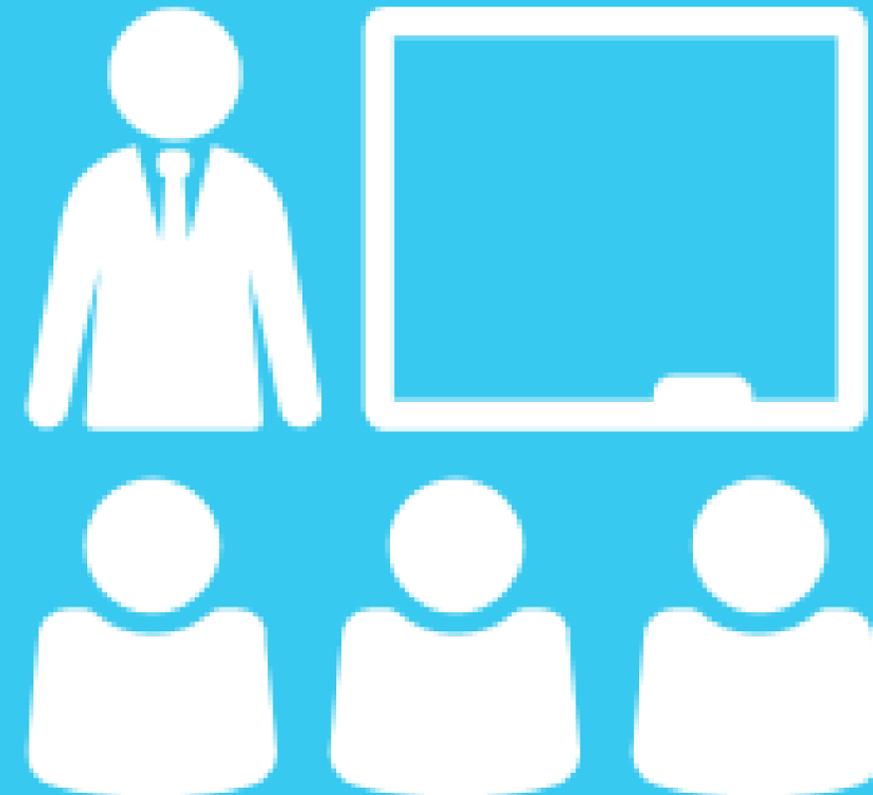
Identify actions that can bring villages in target clusters up to this level



# Training

Establish partnerships with training institutions to strengthen digital skills

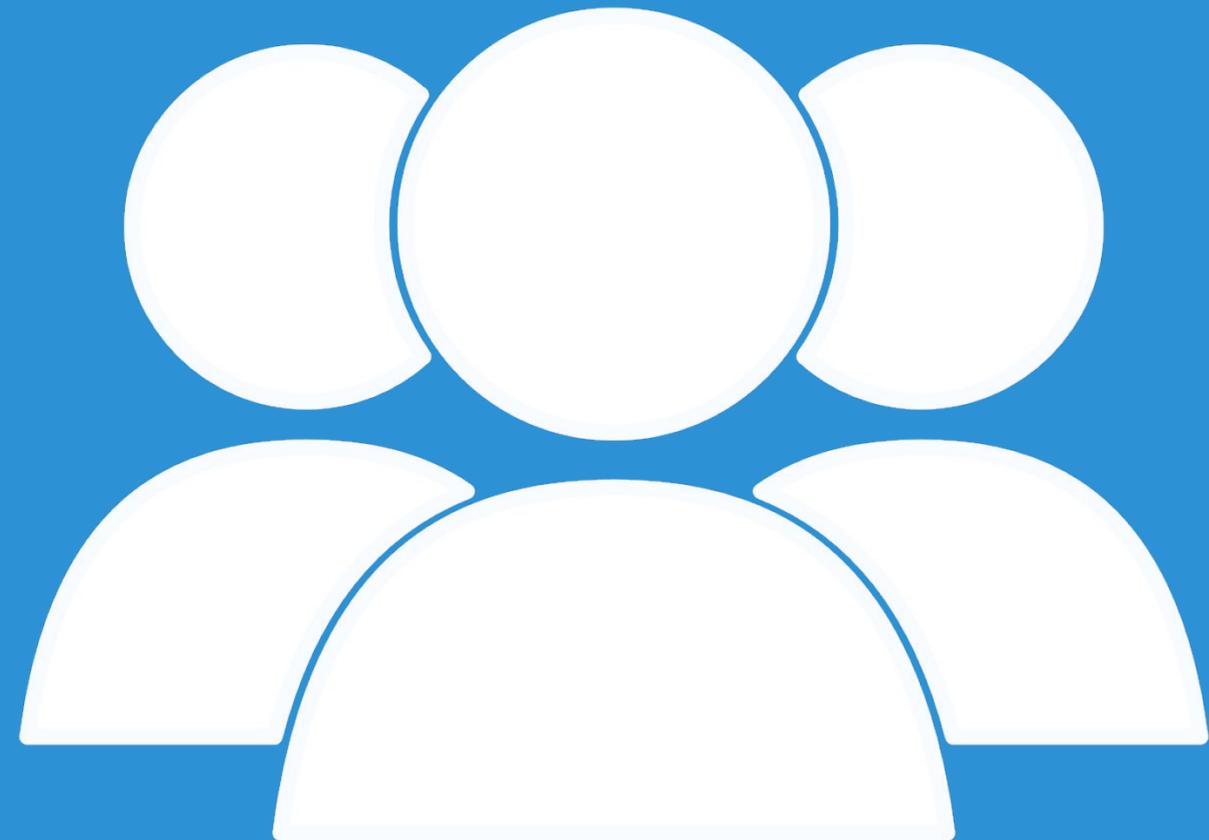
This should be in target clusters across a range of user groups, with a specific focus on supporting disadvantaged groups



# Engaging citizens

Establish a strong citizen engagement mechanism

This should help mobilize youth as a driver for digital development and innovation in their communities



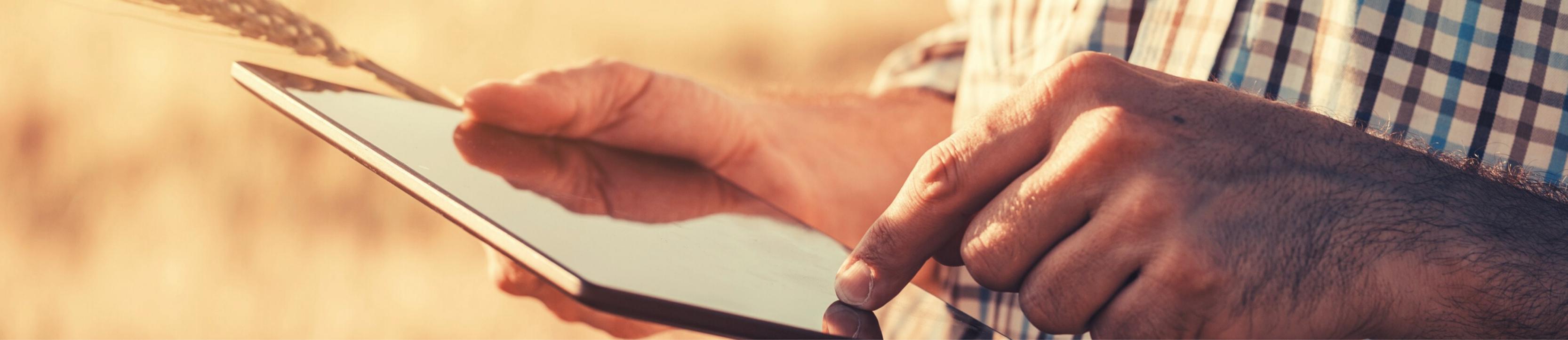
# Financing

Establish a financing mechanism to invest in smart development initiatives in a range of sectors

This can provide funds to community groups, NGOs, educational institutions, and private sector firms, with incentives for public, private, and non-profit groups to collaborate



# Vision of a 'smart village' program



## What could the results of a smart village program look like in five years?

### Improved economic opportunities

Increased income and business activities due to improved digital & e-commerce skills

More online activity due to increased connectivity

More activity by poor & vulnerable households due to improved digital skills & increased affordability

### Improved services, more satisfied

Increased use and higher satisfaction in public services through digital applications

People with more time for productive or leisure activities due to the efficiency of digital applications

Helping to bridge rural-urban divides and diversifying local economies