Niger opportunity brief

**Giga:** An initiative to connect every person in the world to information, opportunity and choice

October 2020
“The Giga initiative is a great project for us because it comes to complement the already existing efforts we had of last mile connectivity to different essential services like schools.”

- Ibrahima Guimba-Saidou, Director, ANSI & Minister – Special Advisor
Mobile coverage has steadily increased over the last 5 years, further connectivity is required to achieve rural development plans

In the last 5 years mobile broadband coverage has grown but internet use has lagged behind

Broadband coverage and internet penetration, % of population. (ITU, 2020)

The Nigerien government is aiming to drive economic growth through digitization with universal access to connectivity

Niger hopes to achieve this target through the following internet connectivity and education policies:

- **Renaissance Act II Program**: The President’s 2016 reform program envisages an improvement in the quality of public services by improving digital communication within society. This led to the creation of National Agency for Information Systems (ANSI) and the strategic vision “NIGER 2.0”

- **Niger 2.0 Strategic Plan**: Under the supervision of the Presidency, ANSI’s work is anchored in four strategic areas: e-government, digital skills promotion, a smart villages program and creating an innovation and technology city

- **Niger 2.0 Smart Villages**: Launched in August 2018 by the Government of Niger and its partners (ITU, FAO, UNESCO, WHO, WB) the program aims to expand internet access to digitally enabled services in education and other sectors (health, agriculture, commerce etc.)

- **Education Sector Plans**: The Programme Sectoriel de l’Education et de la Formation 2014-24 (PSEF) & Transition Plan (2020-22) have limited reference to digital learning but EMIS has been identified as a strategic activity to improve school management and teacher training

Note: 1) ITU estimates that total internet users were approximately 5.2% of the population in 2018, this share has increased, varying by demographic/location and the government records level up to 52% in certain areas

The Goal

National Coverage and Connectivity

Fiber networks are concentrated in populous southern areas, mobile internet coverage of 3G and over is limited throughout the country, and the first 4G licensees became operational last year.

Subscriptions per 100 inhabitants*

<table>
<thead>
<tr>
<th>Mobile</th>
<th>Fixed</th>
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<tbody>
<tr>
<td>52**</td>
<td>&lt;1</td>
</tr>
<tr>
<td>+95%</td>
<td>+4%</td>
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</tbody>
</table>

Source: Map - ITU Broadband Map; Table - ITU (2020) World Telecommunication/ICT Indicators Database *latest data from 2017, Mobile penetration rate was 4 in 2017 according to ITU records, government recently confirmed penetration is 52% of adults
Continued efforts to increase coverage, affordability and digital literacy can help to achieve digitally enabled growth

The mobile internet coverage and usage gap

- **Increase coverage**
  - +17.7 million Nigeriens
  - The government and operators are planning to roll out 4G coverage in the next 3 years

- **Increase affordability**
  - -$4.17/GB (-87%)
  - The average Nigerien would pay 15% of monthly income for a gigabyte of data, well above the Broadband Commission's target of 2%

- **Increase digital literacy**
  - Transform learning to build digital skills
  - Overall youth literacy is only 40% and 13% of Nigeriens are digitally literate. Any growth will depend on fewer children out of school (34%) and higher secondary completion rates (20%)

- **Increase electrification**
  - Power 19 million off-grid users
  - Electricity penetration in Niger is 18%. In rural areas, only 12% of inhabitants have access to power and 48% in urban areas.

- **Achieve digitally enabled growth**
  - 8.6M digital financial service users (+300%)
  - The smart villages program envisages additional rural economic activities across sectors by utilizing digital platforms, specifically increasing mobile money access and usage.
The Giga Solution

School Coverage and Connectivity

Few Nigerien schools (80) are connected to the internet. There is limited information on both school location and coverage status. Estimates suggest over 8,500 schools are within 10km of 3G, 4G or fixed broadband.
Schools present an opportunity to target investment, reach unconnected communities, and boost economic activity

Targeted expansion to schools provides a gateway to community connectivity

**Target schools**

19,355
New primary and secondary schools connected to the internet with bundled electrification

**Broadband users**

3.5M Students & teachers

7.2M Local community members within 1 km

**Economic impact**

+$525 million (1.8%) GDP growth
Estimated rise in domestic production from new broadband connections

Note: Economic impact calculation assumes that school connectivity is comparable to gaining access to a fixed line connection in a middle/lower income country in terms of reliability, bandwidth, use etc. Assumes middle income fixed broadband which is a conservative assumption when compared to low income mobile broadband.

Giga has engaged significantly with the Government of Niger (GoN)

Key Stakeholders: National Agency for the Information Society (ANSI), Six Ministries of Education, Ministry of Planning, Regulatory Authority for Electronic Communications and Post (ARCEP)

- High level buy-in from Minister Ibrahima Guimba-Saïdou and established a focal point at National Agency for the Information Society (ANSI)
- Data sharing agreements and subsequent mapping analysis through project connect
- Completion of an upfront joint assessment to align on opportunities and constraint
- Co-creation workshop to identify priorities and next steps (see next page)

The Value of Giga

“School cannot be the same as it used to be, so this project is timely and very important”
Mohamed Zeidane SG, Ministry of Secondary Education
In partnership with the GoN, Giga has identified several activities to support the cost-effective connection of 19,355 schools

Map
1. Use mapping technology to more accurately deploy connectivity to create efficiencies in the roll out of Smart Villages
2. Build real-time monitoring platform for accountability of providers
3. Support municipal education authorities in their ongoing mapping efforts
4. Work with ANSI and MNOs to use mapping to inform and optimize 4G expansion plans to accommodate school coverage

Connect
5. Start a connectivity working group (alongside ANSI, the World Bank and Ministry of ICT) to share knowledge and coordinate school connectivity deployment across actors
6. Showcase GoN leadership on global stage through Smart Villages as global example, e.g. learning from Niger’s bandwidth needs, financial models, etc.
7. Explore ways to build on regulatory reforms/activities to increase investment attractiveness

Finance
8. Targeted investment in addition to the World Bank package – e.g. schools first opportunities; immediate opportunities for small scale pilots for different last-mile technologies
9. Develop innovative financing methods, e.g. digital bond in Honduras with the IDB - framework to aggregate demand across villages to bring down prices from satellite and telco ISPs
10. Work with 4G licensees to provide tailored packages for school use

Empower
11. Onboard Niger as a Digital Public Goods Alliance Pathfinder, identify areas of public services that need open source solutions and mobilize resources together to build/scale chosen applications
12. Explore opportunities for local providers to engage in Smart Villages and support the local entrepreneurial ecosystem by scaling existing programs e.g. Code Local
13. Link with UNICEF Education to accelerate Smart Villages ‘Education Quick Wins’
14. Identify approaches to fully engage women, girls and out of school youth in both school and community internet use