Sierra Leone opportunity brief

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

October 2020
“Access to connectivity, algorithms and open solutions are essential for driving our national vision of #DigitizationforAll and our principles of #MobileFirst.”

- David Moinina Sengeh, Minister of Education & Chief Innovation Officer
Sierra Leone has a strong focus on mobile coverage and aims to expand the covered population from 56% to 80% by 2024

The Government of Sierra Leone plans to expand broadband coverage to 30% of the population and mobile internet (at least 3G) to 80% by 2024 and create a digital economy. Sierra Leone hopes to achieve this target through new national development plans and digitization strategies:

- **Medium term National Development Plan 2019-2023**: addresses government plans to expand national broadband penetration and increase mobile coverage, with a focus on upgrading infrastructure and increasing coverage and affordability, particularly in rural areas.

- **DSTI - National Innovation & Digital Strategy 2019-2029**: articulates the “Digitization for all” strategy that underpins DSTI’s mandate to use science, technology and innovation to help the government deliver on its Medium Term National Development Plan (MTNDP) and to establish Sierra Leone as an ‘Innovation Nation’. The strategy outlines the need for connectivity in schools and an ecosystem approach to address content provision, the local start-up ecosystem, and accessible and distributed energy (among others) that are necessary for full connectivity.

- **MBSSSE National Curriculum Framework & Guidelines For Basic Education**: aims to cultivate talents, nurturing a problem-solving, and includes technology and ICT literacy in basic education with a focus on empowering learners with foundational competencies and ICT skills that are applicable in various contexts such as business, engineering, and education.

The Goal

National Coverage and Connectivity

Through SALCAB, Sierra Leone continues to invest in a national fiber network that primarily supports a growing user base of mobile based service provision.

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<th>Subscriptions per 100 inhabitants</th>
<th>Mobile</th>
<th>Fixed</th>
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<td>5-year CAGR</td>
<td>+5%</td>
<td>&lt;1%</td>
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Map of fiber networks

Addressing the usage gap is key to bridging the digital divide, and may be driven by efforts to increase affordability and digital literacy.

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<th>The mobile internet coverage and usage gap</th>
<th>Addressing the Gap</th>
<th>Expected Outcomes</th>
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<tr>
<td>Increase coverage</td>
<td>+3.1 million more Sierra Leoneans covered</td>
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<td>Increase electrification</td>
<td>The government targets <strong>80% coverage</strong> with at least 3G by 2024.¹</td>
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<td>Increase affordability</td>
<td><strong>Increase from 26% to 60%</strong></td>
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<tr>
<td>Increase digital literacy</td>
<td>Increasing Sierra Leone’s <strong>electrification rate</strong> will create opportunities for school and community connectivity projects</td>
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<td>Bridge the digital divide</td>
<td><strong>3.79 USD/GB reduction in prices</strong></td>
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<td>The average Sierra Leonean pays <strong>11% of income for a gigabyte.</strong> The government could seek to reduce these prices by 82% to <strong>0.82 USD/GB</strong></td>
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<td><strong>Increase the number of schools teaching digital literacy</strong></td>
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<td><strong>2% of Sierra Leonean schools are currently teaching Basic Computer Skills</strong>¹. The government aims to increase digital literacy across the education sector.</td>
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<td><strong>9.7% annual growth of mobile subscriptions and 1.9% annual growth of internet users</strong></td>
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<td><strong>ICT sector growth in 2018.</strong> Consumers without connectivity are excluded from the skills, services, and jobs offered by the growing digital economy.</td>
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Notes: Prices based on ITU Data-only mobile broadband basket 1.5GB, pro-rated down to 1GB for comparison against the Broadband Commissions 2% recommended target.
Sources: 1) DSTI education data hub; Dalberg analysis; Medium term National Development Plan 2019-2023; GSMA, Hjort and Poulsen; Internet in Africa, 2019.
The Giga Solution

School Coverage and Connectivity

While 80% of schools are within 3G coverage, only 205 schools are connected

Spatial location of schools, population and coverage status
Source: Giga analysis, 2019

Source: Giga (2020) Project Connect mapping
Schools present an opportunity to expand the reach of the initial investment to reach unconnected communities, and create economic growth

Universal expansion to all schools provides a gateway to community connectivity, beginning with mobile connectivity, but planning for future investments in fiber.

**Target schools**

- 10,995 School targeted for improved connectivity

**Broadband users**

- 2.1M Students & teachers
- 3M Local community members within 1 km

**Economic impact**

- +$0.3 billion (2.2%) GDP growth

Giga has already engaged significantly with the Government of Sierra Leone

Key Stakeholders: Directorate of Science, Technology and Innovation, and Ministry of Basic and Senior Secondary Education, Ministry of Finance

Giga Country engagement to date

• High level buy in from the Directorate of Science Technology and Innovation and a focal point established as Minister David Sengeh
• Sierra Leone is one of the leading members of the DPG alliance
• Data sharing agreements and subsequent mapping analysis through project connect
• Completion of an upfront joint assessment to align on opportunities, constraints priorities and next steps

Giga Accelerate actions to date

• Developed a proposed way forward on connecting 1,000 schools using a variety of connectivity technologies to achieve quick wins that extend connectivity during COVID-19, and test potential solutions for broader implementation
• Sought out financing opportunities to support Giga Accelerate efforts
• Engaged with Sierra Leonean counterparts in the DPG alliance to determine options for open-source software across tele-education, tele-health, tele-work, and financial services
In partnership with the GoSL, Giga has identified the following activities to support the cost-effective connection of 10,995 schools

**Map**
A. Augment Project Connect mapping to identify connectivity vs coverage in order to articulate needs and refine business case that sizes the investment opportunity
B. Refine school connectivity strategy based on benchmarks and set targets for connectivity
C. Use Project Connect mapping to monitor real time connectivity, electrification, and map vulnerability

**Connect**
A. Work with partners to take advantage of potential regulatory opportunities (particularly around child online protection, intellectual property and data protection laws) to boost competitiveness
B. Survey the landscape of implementation options – ISPs, MNOs, to identify appropriate and innovative technologies for middle mile and last mile connectivity cases

**Finance**
A. Mobilize funding to connect 10,795 schools that currently lack connectivity
B. Work with SALCAB to pilot Project One Access and extend implementation to 1000 schools
C. Provide technical assistance to UADF committee on best practices for the efficient and cost-effective deployment of funds towards school connectivity

**Empower**
A. Identify Sierra Leonean DPG solutions to scale in other Giga countries
B. Work with existing accelerator programmes and ecosystem actors including DSTI to build capacity around DPGs
C. Leverage and scale solutions that go beyond learning and skills building
D. Leverage Sierra Leone’s co-chair role on the DPG Alliance to elevate country as a regional DPG leader
E. Strengthen capacity in DSTI and promote DSTI as a best practice for other countries in the region