Kenya opportunity brief

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

November 2020
“Broadband is expected to facilitate connections ... that will help in transforming Kenyans' lives regardless of their location and thus enable the societal and economic benefits of digital transformation to be realized.”

- Hon. Joe Mucheru EGH. Secretary, Kenya Ministry of ICT
Kenya has significantly expanded mobile connectivity, and has policies in place to promote future broadband expansion

The Kenyan government is aiming to grow the digital economy with universal access to connectivity by 2023

Kenya hopes to achieve this target through the following broadband connectivity policies:

• **Kenya National Broadband Strategy 2018-2023**: Aims to provide last mile infrastructure through fixed or wireless technology to achieve 95% national broadband coverage, with fixed infrastructure available in every ward by 2020. The target is to provide 2 MBPS in communities and 10 MBPS in high impact economic areas, schools and other essential public services by 2023

• **Kenya Digital Economy Blueprint**: Seeks to create a digital economy that supports Kenya in its aim to emerge from a low middle-income economy to an emerging markets/advanced economy. The 5 pillars include: Digital Government, Digital Business, Infrastructure, Innovation Driven Entrepreneurship, and Digital Skills and Values

• **Kenya Basic Education Framework 2017**: Outlines the competency-based curriculum strategy that Kenya will adopt across all levels of education. Digital Literacy is one of the strategic pillars within the framework

• **Kenya Digital Literacy Programme - DigiSchool**: Aims to equip pupils with relevant skills needed in today’s digital world. To date, 1,148,160 devices have been distributed to 21,232 schools with additional investment on digital content, teacher training, and electricity supply
The Goal

National Coverage and Connectivity

GoK has made significant investments in the National Backbone, and most of the population is now covered. Remaining gaps are in low population density areas such as ASALs (arid and semi-arid lands), although new technology is beginning to bridge these gaps.

Fiber networks and 4G coverage

<table>
<thead>
<tr>
<th>Subscriptions per 100 inhabitants</th>
<th>Mobile</th>
<th>Fixed</th>
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<tbody>
<tr>
<td>5-year CAGR</td>
<td>+36%</td>
<td>+34%</td>
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Note: 1) Broadband is defined as access to 4G or fiber networks. The Kenyan government has targeted reaching 94% of population with 3G coverage by 2020.
Source: ITU (2020) World Telecommunication/ICT Indicators Database; ITU Broadband Map, Dalberg analysis
Addressing the usage gap is key to bridging the digital divide, and may be driven by efforts to increase affordability and digital literacy.

The mobile internet coverage and usage gap:

- **Coverage Gap (no mobile internet):** 6.7%
- **Usage Gap (covered but not connected):** 70.7%
- **Connected to the mobile internet:** 22.6%

### Increase Coverage

- **+3.5 million Kenyans not covered**
  - The government targets 100% coverage with at least 3G by 2023.

### Leverage Electrification

- **75% of population electrified**
  - High levels of national connectivity mean rural communities (72%) and schools (83%) are primed for internet connectivity.

### Increase Affordability

- **43% cite affordability as barrier**
  - **Data costs are not prohibitively high** with the average Kenyan paying 2.4% of income for a gigabyte (government target 2%). **Device costs are the primary affordability barrier.**

### Increase Digital Literacy

- **Digital literacy mainstreamed in the education system**
  - Digital literacy is one of the pillars of the **Basic Education Curriculum** framework, and the government aims to mainstream digital literacy across all tiers of academic education.

### Bridge the Digital Divide

- **$425m (13%) annual growth**
  - **Annual growth of Kenya’s ICT sector from 2017-18.** Consumers without connectivity are excluded from the skills, services, and jobs offered by the growing digital economy.

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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 Commission’s 2% global recommendation. Note that individuals in remote locations will likely spend a higher proportion due to lower income levels. 43% of mobile users aware of mobile internet who identified the following as the single most important barrier to using mobile internet.

Giga support to Kenya’s school connectivity objectives

School Coverage and Connectivity

The National Broadband Strategy sets a goal of reaching 100% connectivity of all schools with 1GBPs by 2030, with 50% coverage of primary schools by 2022. The Giga initiative will prioritize these public primary schools (23,300 out of 43,000 total schools).

Source: ITU (2020) World Telecommunication/ICT Indicators Database; Giga Project Connect mapping
Schools present an opportunity to target investment, reach unconnected communities, and create economic growth

Universal expansion to all schools provides a gateway to community connectivity.

**Target schools**

23,300

School targeted for improved connectivity

**Broadband users**

8.5M

Students & teachers

+ 12.8M

Local community members within 1 km

**Economic impact**

+3.3 billion (1.4%) GDP growth

Estimated rise in domestic production from new broadband connections

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Notes:
1: Number of Kenyan primary and secondary schools lack access to internet with speeds over 10Mbps. This is around half of the country’s 43,000 schools. 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 already engaged significantly with the Government of Kenya (GoK)

**Key Stakeholders:** Ministry of ICT, Kenya ICT Authority, Ministry of Education, Communications Authority of Kenya, and Kenya Institute of Curriculum Development

- High level buy in from Ministry of ICT and Ministry of Education established and currently in the process of being formalized
- Set up a sub-committee on school mapping to coordinate efforts amongst different stakeholders including MoE, USAID, Kenyan National Examination Council
- Co-creation workshop to identify priorities and next steps (see next page)

**Giga Country engagement 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 Kenyan ministries to determine options for open-source software across tele-education, tele-health, tele-work, and financial services

**Giga Accelerate actions to date**

*The Value of Giga*

“Digital literacy is one of our strategic pillars in the Basic Education Curriculum Framework. We want young Kenyans to be able to access and acquire skills useful not only for solving real-life problems, but also so they can participate meaningfully and thrive in the digital economy - and working with Giga helps us achieve this.”

- Prof. George Magoha, Cabinet Secretary, Kenya Ministry of Education
In partnership with the GoK, Giga has identified the following activities to support the cost-effective connection of 23,300 schools

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<thead>
<tr>
<th>Map</th>
<th>Connect</th>
<th>Finance</th>
<th>Empower</th>
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<tbody>
<tr>
<td>A. Use Project Connect mapping to identify need and refine business case that sizes the investment opportunity</td>
<td>A. Provide technical assistance to address policy, regulatory and tax barriers (particularly around USF, spectrum allocation, infrastructure sharing, child protection, intellectual property, data protection laws and excise taxation) to boost competitiveness and protect consumers</td>
<td>A. Mobilize funding to connect 23,300 primary schools that currently lack connectivity</td>
<td>A. Provide support to develop local regionally relevant digital solutions, especially digital public goods (DPGs)</td>
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<td>B. Refine school connectivity strategy based on benchmarks and set targets for connectivity</td>
<td>B. Commission feasibility studies on the inclusion of school connectivity under KENET</td>
<td>B. Work with the government to prepare procurement lots for school connections</td>
<td>B. Support open data platforms for education and youth development</td>
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<td>C. Use Project Connect mapping to monitor real time connectivity, DPL and performance of the CBC</td>
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<td>C. Across sectors, identify gaps where global DPGs can be combined with local solutions, adapted and scaled</td>
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<td>D. Support business model development and explore financing options to scale open data/content solutions, including local hosting</td>
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<td>E. Facilitate connections with broader UNICEF expertise and other initiatives on scaling digital textbooks and content</td>
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Contact us

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