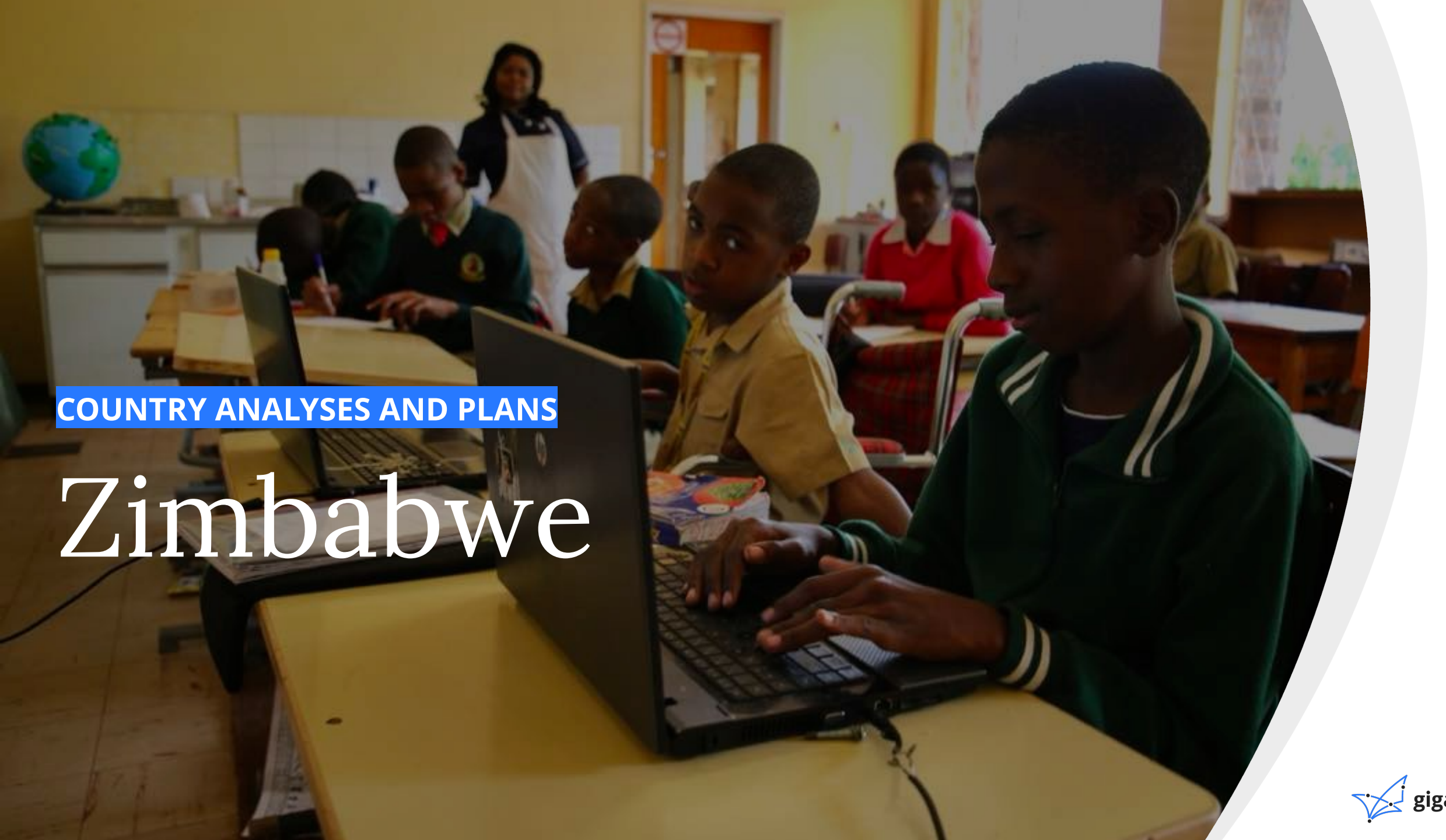

COUNTRY ANALYSES AND PLANS

# Zimbabwe

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**ZIMBABWE**

# $36M of CapEx funding and $40M of annual OpEx funding will enable Zimbabwe to connect a further 6,611 schools.

This investment will bring **2.6 million students and teachers** online and bring connectivity to **3.5 million community members** who live locally, potentially enabling up to $0.6 billion USD in GDP (1.4%) growth.

Source: Dalberg Analysis based on Giga mapping and modelling data, 2020

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## ZIMBABWE

“It is envisaged that all sectors of the economy and society at large will harness the power of ICT for the development of our nation.”

**H.E. PRESIDENT EMMERSON MNANGAGWA**
President of the Republic of Zimbabwe

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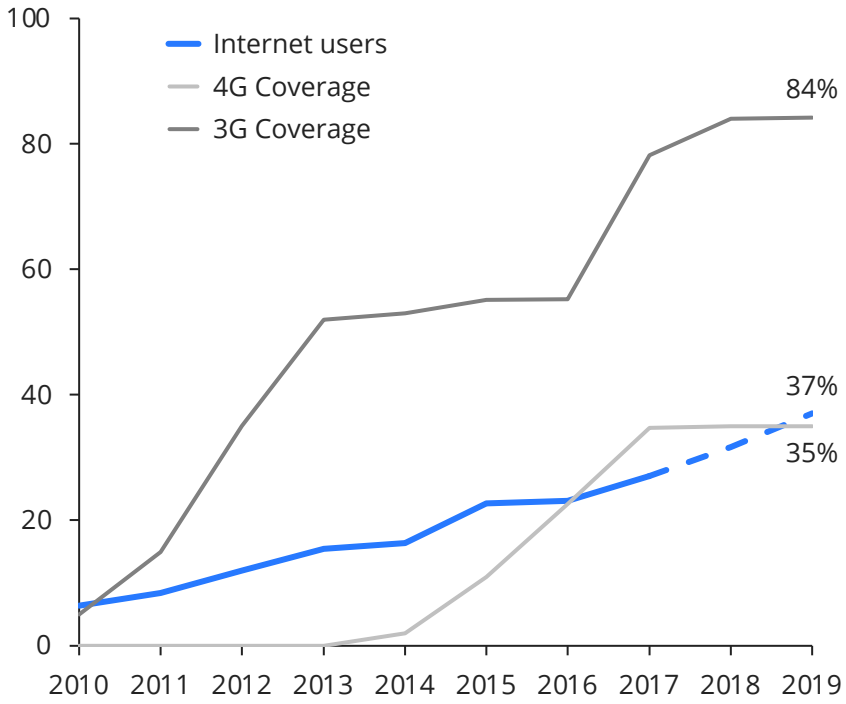
**ZIMBABWE**

# Over the last 10 years significant progress has been made to reach the government's 2020 universal access target

## In the last 10 years mobile connectivity has expanded, use has steadily increased

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




## The Government of Zimbabwe is aiming to drive economic growth through digitization, with universal access to connectivity in 2020

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

- Zimbabwe National Policy for ICT 2016: Set the country on a path to become a knowledge-based society targeting ubiquitous connectivity by 2020. Strategic focus included: closing the digital divide through rural coverage, improved electricity access, ICT skills development and policy streamlining. The policy also includes a target that 30% of applications used by government are developed locally. ICT usage in primary and secondary schools is flagged as a policy priority
- Education Sector Strategic Plan (2016-2020): Concurrently a major pillar of the education sector plan put ICT at the center of the curriculum and placed an emphasis on the provision of specialist equipment/rooms. The plan also emphasizes the importance of ICT to improve institutional management and administration

Note: Figure refers to 4G and broadband networks.
Source: ITU (2020) World Telecommunication/ICT Indicators Database; Ministry of Information, Communication, Technology, Postal and Courier Services of Zimbabwe (2016) Zimbabwe National Policy for Information and Communications Technology (ICT); Ministry Of Primary And Secondary Education (2015) Education Sector Strategic Plan 2016 – 2020

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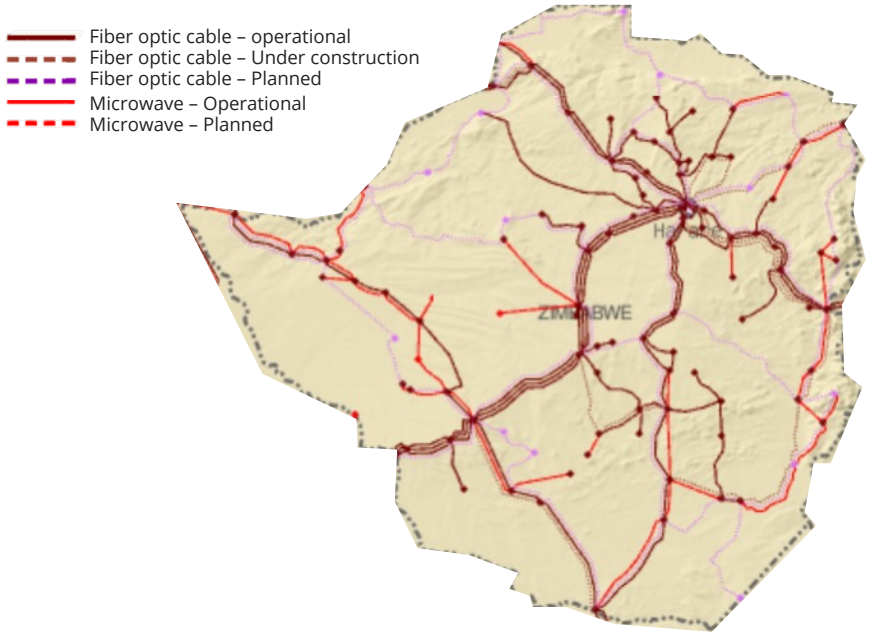
# ZIMBABWE

## National fiber network




| | Mobile | Fixed |
|---|---|---|
| **Subscriptions per 100 inhabitants** | 52 | 1.4 |
| 5-year CAGR | +4% | +4% |

# Current status: National Coverage and Connectivity

The country's National Broadband Backbone (NBB) has three international connections. The transmission network has over 9,500km of fiber interconnecting major cities and towns across the country

Sources: ITU (2020) World Telecommunication/ICT Indicators Database; ITU (2020) Broadband Transmission Mapping; Potraz (2020) National Broadband Backbone Description – Website

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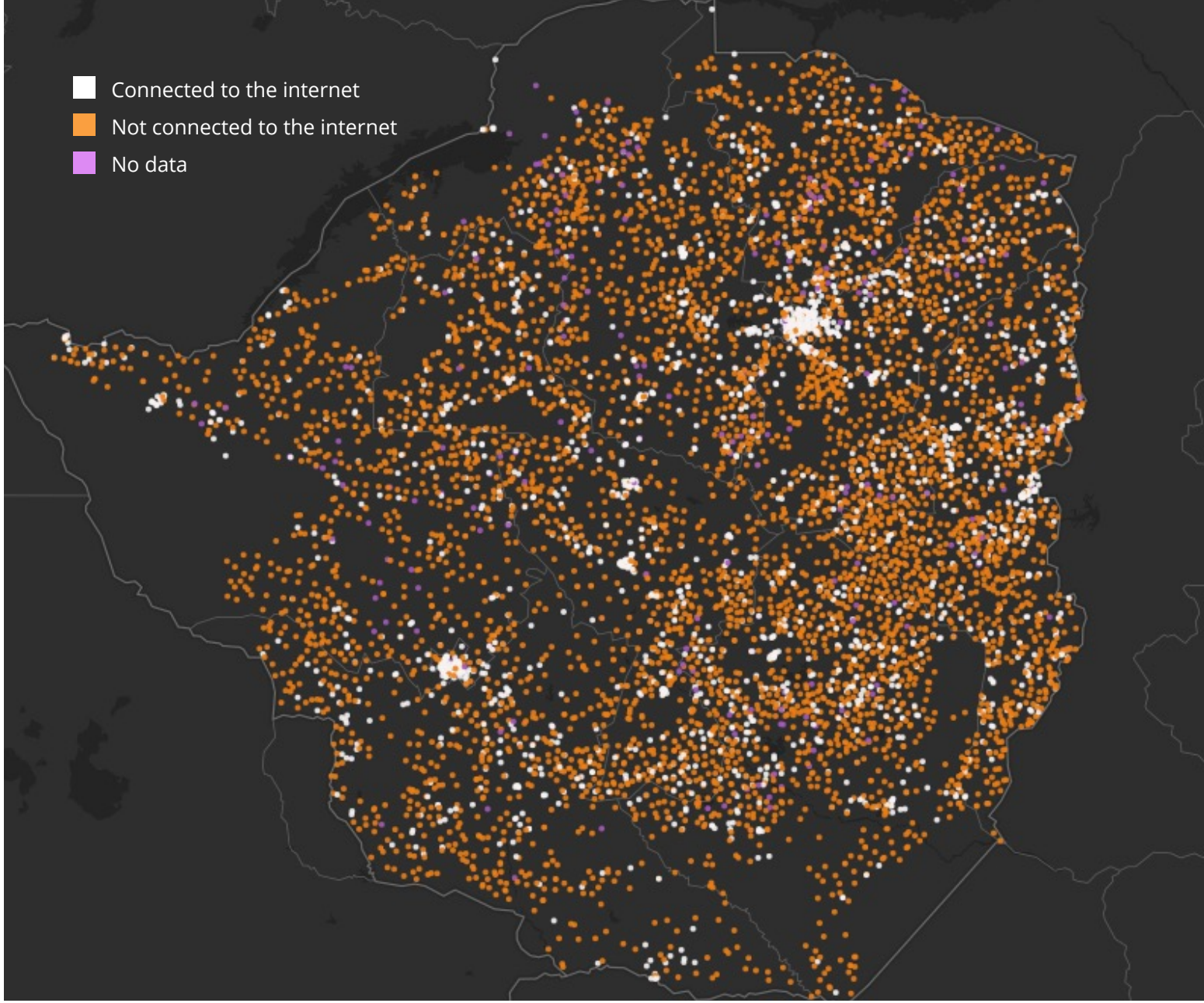
# School Coverage and Connectivity

| School type | Total | With | Without |
|---|---|---|---|
| Primary | 6,671 | 1,751 | 4,920 |
| Secondary | 2,954 | 1,263 | 1,691 |
| **Total** | **9,625** | **3,014** | **6,611** |

Approximately 31% of Zimbabwe's primary and secondary schools have internet access. In rural areas the vast majority are connected by ADSL or VSAT. Primary schools form the bulk (75%) of the country's 6,611 unconnected schools.




Note: From the 2017 Census to the more recent education statistics report school without internet connectivity actually increased for both primary schools (4683 to 4920) and secondary schools (1499 to 1691)
Source: Ministry Of Primary And Secondary Education (2020) 2019 Primary And Secondary Education Statistics Report; Information And Communication Technology (ICT) Census (2017) – Access And Use By Education Institutions Report

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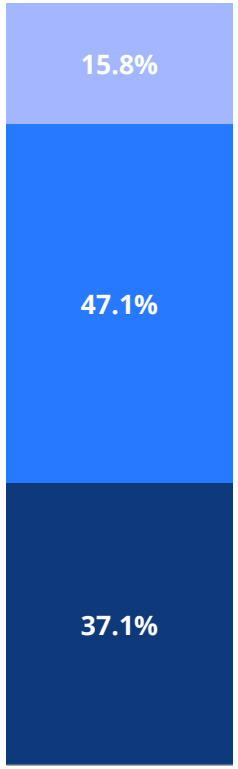
## ZIMBABWE

# Almost 16% of Zimbabweans lack coverage and 47% face affordability and electrification challenges

### THE MOBILE INTERNET COVERAGE AND USAGE GAP




| CONNECTIVITY ACCESS | | NEEDS | GOALS |
|---|---|---|---|
| 15.8% | COVERAGE GAP<br>**No mobile internet** | Increase coverage | +1 million Zimbabweans |
| 47.1% | USAGE GAP<br>**Covered by 3G/4G but not connected** | Increase affordability<br>Increase electrification | -$12/GB (-81%)<br>Power 8.6 million off-grid users |
| 37.1% | CONNECTED<br>**Active mobile internet use** | Achieve digitally enabled growth for all | 80% Internet geographical coverage |

Notes: *Mobile internet prices have fluctuated within the last 12 months, in part due to price increase by POTRAZ but also due to unstable domestic currency. Some sources quote much higher prices, up to $75 (Cable, 2019). 2% GNI per capita is the Broadband Commission's global recommendation. Note that Individuals in remote locations will likely spend a higher proportion due to lower income levels.
Source:ITU (2020) World Telecommunication/ICT Indicators Database

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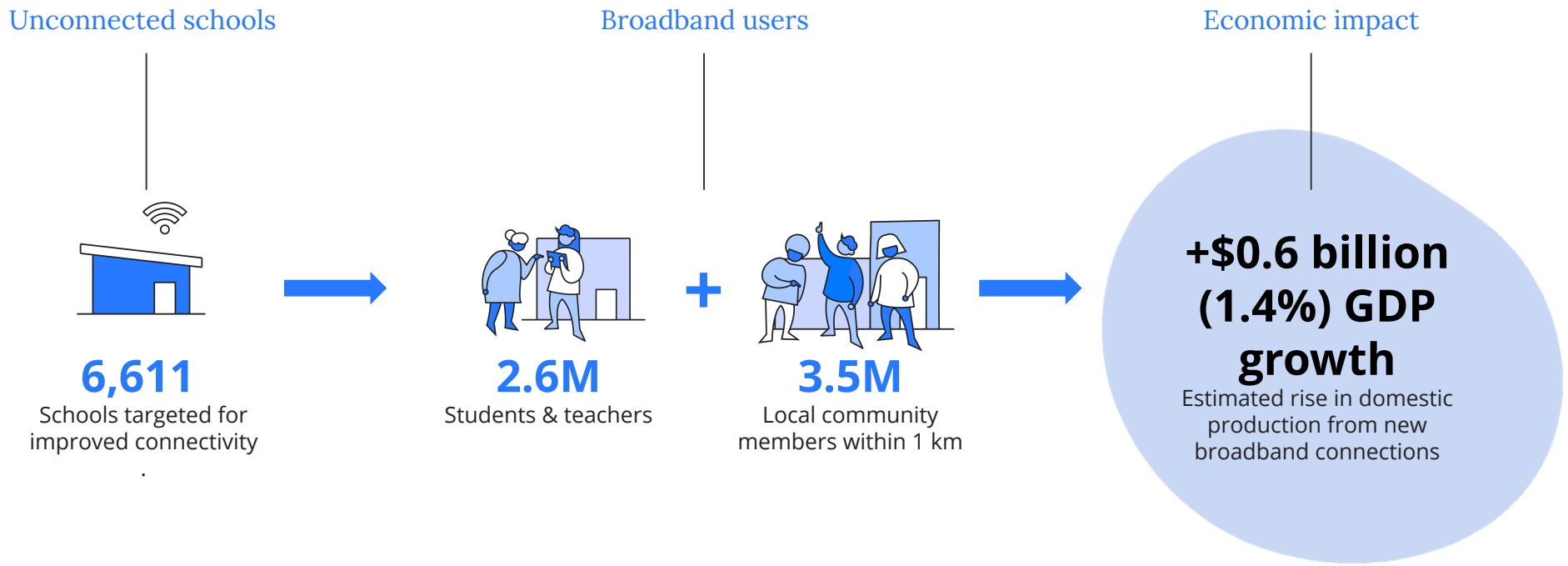
**ZIMBABWE**

# Targeted financing for connecting 6,611 schools can create GDP growth of over $0.6 billion

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




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
Source: Dalberg Analysis;; ITU (2020) World Telecommunication/ICT Indicators database; UNESCO UIS.Stat, 2018; World Bank (2020) World Development Indicators (WDI); ITU (2018) The Economic Contribution of Broadband

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## ZIMBABWE

# School connectivity will require an estimated $36M of upfront capital expenditure and up to $40M of ongoing annual funding

Giga will help to mobilize investment and financing to bridge initial infrastructure gaps and provide mechanisms to supply longer-term financing to boost geographic reach and affordability through smart subsidies

(Schools to be connected: 6,611)

### UPFRONT LAST-MILE INFRASTRUCTURE CAPITAL

Based on an initial technology assessment: 28% Fiber, 33% WISP, 18% 4G and 21% Satellite

**$36M**

Estimated total capital expenditure needed to reach 6,611 schools*

*This does not factor in potential volume discounts or other sources of funding

### ONGOING ANNUAL FUNDING FOR REGULAR SERVICE FEES

Estimates based on an all-in service FEE (64%) and a maintenance and technical support fee (36%):

**$40.8M** [a]

Potential service fees for 6,611 schools (Current estimate)*

*This does not factor in potential volume discounts or other sources of funding

**The Government of Zimbabwe has invested $xxM in connecting schools since xxxx year.[b]**

Notes: These high-level estimates can be further refined as the workflow progresses and more mapping and specific cost date is established. A) Based on a 2017 ICT in schools census, approximately $10.8M was spent on internet charges and connection fees across 1,752 educational institutions, averaging 6,147 per school, this is used to establish the baseline service level in Zimbabwe. B) Source: Ministry of ICT and Ministry of Education
Source: Giga and Dalberg Analysis (2020) based on Giga ACTUAL mapping and modelling input data

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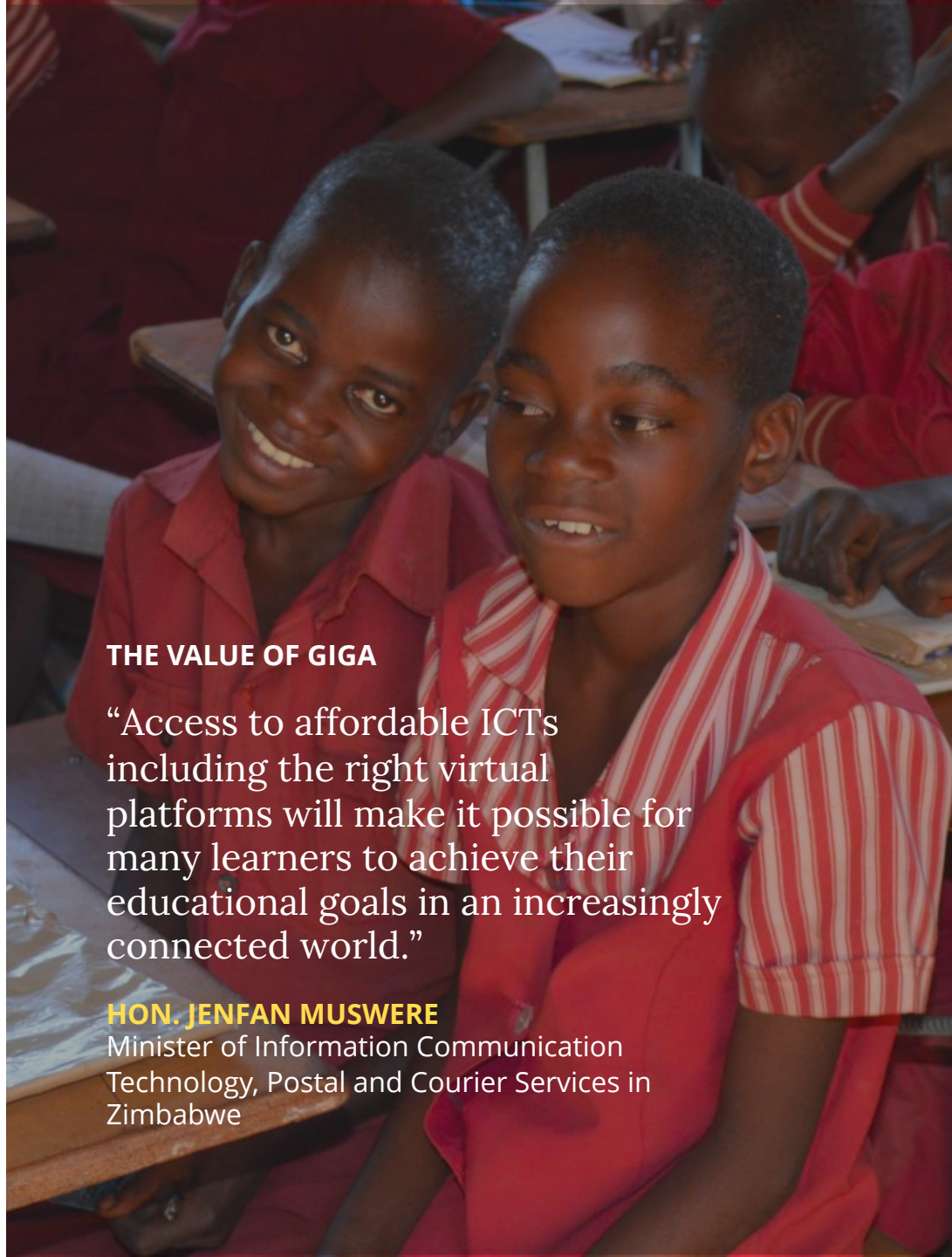
**ZIMBABWE**

# Giga has started to engage with the Government of Zimbabwe (GoZ)

**Key Stakeholders:** The Government of Zimbabwe; Ministry of Information Communication Technology, Postal and Courier Services; Ministry of Primary and Secondary Education; Ministry of Finance and Economic Development; Information Communication Technology, Postal and Courier Services regulators and service providers

**Giga engagement to date**

- High level support from His Excellency President Emmerson Mnangagwa and line Ministers
- A focal point established at the Ministry of Information Technology and Courier Services
- School mapping data shared with Project Connect Team
- Completion of an upfront assessment to identify priorities, opportunities and initiatives to leverage



**THE VALUE OF GIGA**

"Access to affordable ICTs including the right virtual platforms will make it possible for many learners to achieve their educational goals in an increasingly connected world."

**HON. JENFAN MUSWERE**
Minister of Information Communication Technology, Postal and Courier Services in Zimbabwe

**ZIMBABWE**

# Giga has identified several activities to support the cost-effective connection of 6,611 schools

**Use Project Connect mapping** to identify schools and refine the investment needs for unconnected schools

**Augment existing service providers programming** with real time monitoring to confirm service levels and report on ongoing internet service coverage

**Work with ISPs and MNOs** (to identify opportunities to reduce data costs for schools and students

**Estimate capex and ongoing opex** costs for connecting all schools

**Support the design of policies and regulatory strategies** for affordable last mile access technologies and connectivity options

**Define a partnership and fund strategy** to connect the 6,611 schools that currently lack connectivity

**Co-develop sustainable models** for improving affordability of connectivity along with potential incentives for successful public-private partnerships

**Work with Ministries of Education and ICT** to explore opportunities for DPGs to play a role alongside other emerging private e-learning platforms

**Strengthen the entrepreneurial ecosystem** to build a pipeline of locally developed digital public services and goods (e.g. link to venture funding and acceleration content for public goods creation)

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**ZIMBABWE**

# Rapid Regulatory Scan

## Policies

| **Sector strategies:**[1] | |
|---|---|
| Digital transformation/broadband strategy | Yes |
| Planned e-government roll out | Yes |
| Digital education in strategy[9] | Yes |
| **Child online protection:**[2] | |
| National strategy/policy? | Yes |
| Responsible agency? | Yes |
| Non-discriminatory inclusive use policy? | No |
| **Data sharing:**[2] | |
| Data protection policy? | Yes |
| Privacy and data protection laws | Yes |

## ICT Regulatory Tracker

| **Sector strategies:**[3] | |
|---|---|
| Generation of ICT Regulation | G3 |
| Overall | 74/100 |
| C1: Regulatory Authority | 19/20 |
| C2: Regulatory Mandate | 14/22 |
| C3: Regulatory Regime | 14/30 |
| C4: Competition Framework | 26/28 |

## Regulation

| **Regulatory structure**[1] | |
|---|---|
| Public/private sector consultation | Yes |
| Regulatory autonomy from the government | Partial |
| Clear planning and licensing process? | Yes |
| Procurement or competition agency? | Yes |

## Competition

| **Regulatory structure**[1] | |
|---|---|
| SMP in national anti-trust/competition law | No |
| Spectrum technology neutrality in place | No |
| No foreign investment restrictions? | Yes |
| Infrastructure sharing? | Yes |
| Wireless Operators Market HHI[4] | 5398 |
| Fixed Broadband Operators Market HHI[4] | 6260 |

## Taxation

| **Services** | |
|---|---|
| VAT[5] | 14.5% |
| Sector specific tax on internet services[5] | 10% |
| ITA Participant[6] | No |
| ICT Equipment import duties[7] | 5% |
| Ongoing regulatory/license fees[1] | Yes |

## Universal Access

| **Services**[8] | |
|---|---|
| Is school broadband is universal service? | Yes |
| Operational Universal Service Fund (USF)? | Yes |
| Total amount allocated/disbursed so far | $44M |
| Contributions as % of revenue | 1.5% |
| Other public financing mechanisms? | Yes |
| Fully utilized currently? | Limited |
| Fully active in the last 5 years? | Partial |

Strength
Neutral
Limitation

Notes: HHI – Hirschman Herfindahl Index (HHI) Score, > 4,000 Highly concentrated. Import duties based on a review of several Telecommunications, Electrical and Radio Transmission Equipment HS codes
Sources: 1) Latest ITU World Telecommunication/ICT Regulatory Survey 2019 2) ITU (2019) Global Cyber Security Index 3) ITU (2018) ICT Regulatory Tracker 4) EIU (2020) The Inclusive Internet Index 5) ITU (2019) Taxation Survey Country
6) World Trade Organization (2020) Information Technology Agreement Website 7) WITS (2020) World Integrated Trade Solution – Tariff Database 8) Latest ITU Global Report (2020) and, where available, the country's Universal Service Fund website 9) Zimbabwe Education Sector Strategic Plan (2016-2020)

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