Giga
Connecting every school in the world to the Internet

Model

Model the infrastructure and investments needed to deliver school connectivity

Finance

Redirect global development funds towards the connectivity, with measurable and verifiable outcomes
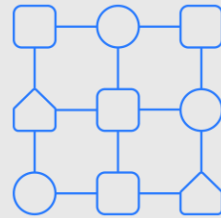
Contract

Help governments with competitive procurement process, resulting in lowering internet prices and increased internet quality

Support with **convening and governance** of all stakeholders relevant to school connectivity

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Map

Map and measure school connectivity status in real-time to empower modelling, finance and contracting solutions

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Giga has helped connect 11M+ students globally in 5 years
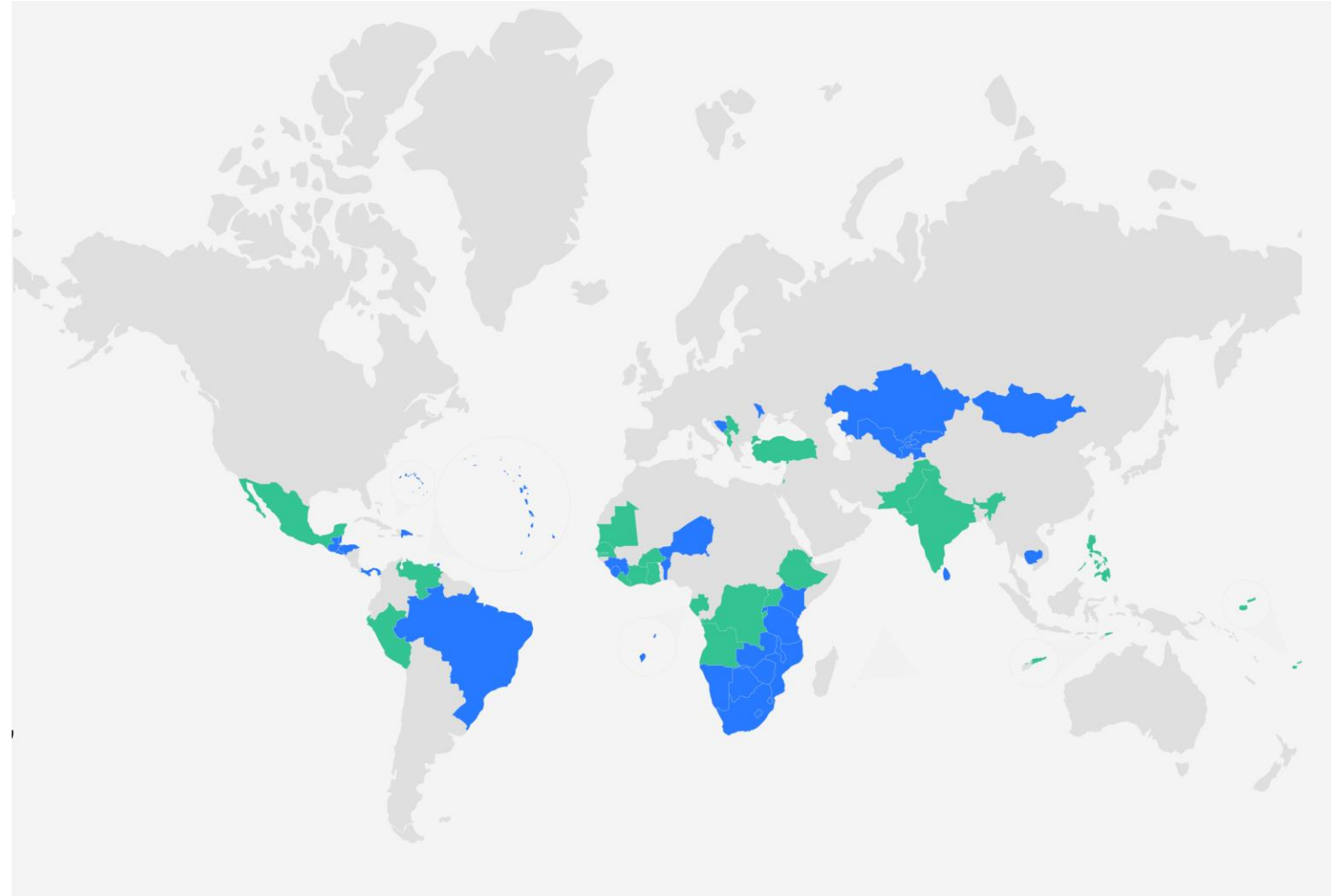
46 | **26**

Countries

132,400+

Schools reporting
real time connectivity
across 35 countries

11M+

Students supported
with increased access
to connectivity

24,000+

Schools with
increased access
to connectivity

giga

Measurement & Quality Standards | Needs & Challenges | Brazil

Need:

Policy Enforcement:
Real-time data allows Brazil's Ministry of Communications (MCom) to monitor compliance with national benchmarks, such as *1 Mbps per enrolled student in the longest shift*, as outlined in the *Estratégia Nacional de Escolas Conectadas (Enec)*.

Outcome-Based Funding:
Through the *FUST Fiscal Benefit*, ISPs can deliver actual high-speed connectivity instead of paying into the Universal Service Fund (USF), with performance measured and validated through live data.
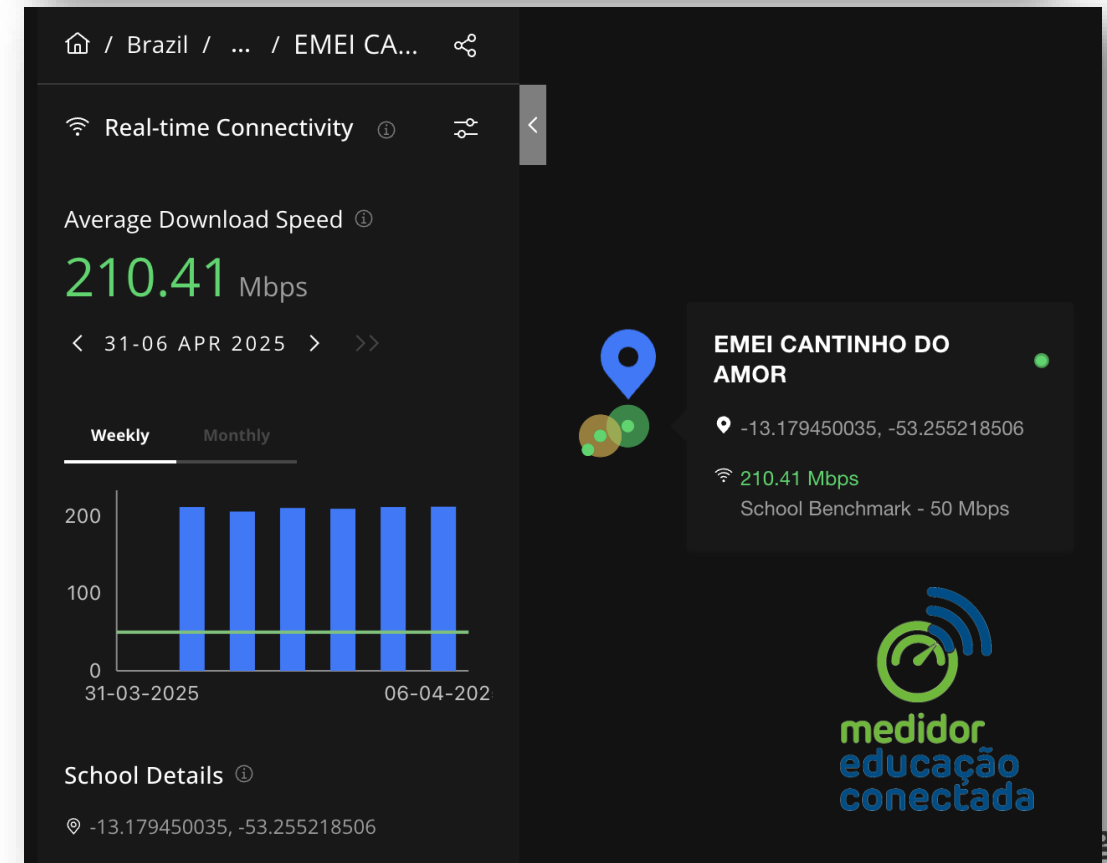
Challenges:

Data:
Missing data on equitable access of good quality internet within the schools.
Currently, measurements are through the NIC.br app on user devices in schools running speed tests twice every day.
Deployment scale challenges with router-based speed test.

Quality Standard:
Policy's restrictive focus on only download speed, and are missing latency, uptime and other key metrics.

Measurement & Quality Standards | Needs & Challenges | Botswana

Need

Evidence-based project monitoring:
Government via its SmartBots initiative is using measurement data to assess which schools have enabling infrastructure to reach the government's 100 Mbps mandate.
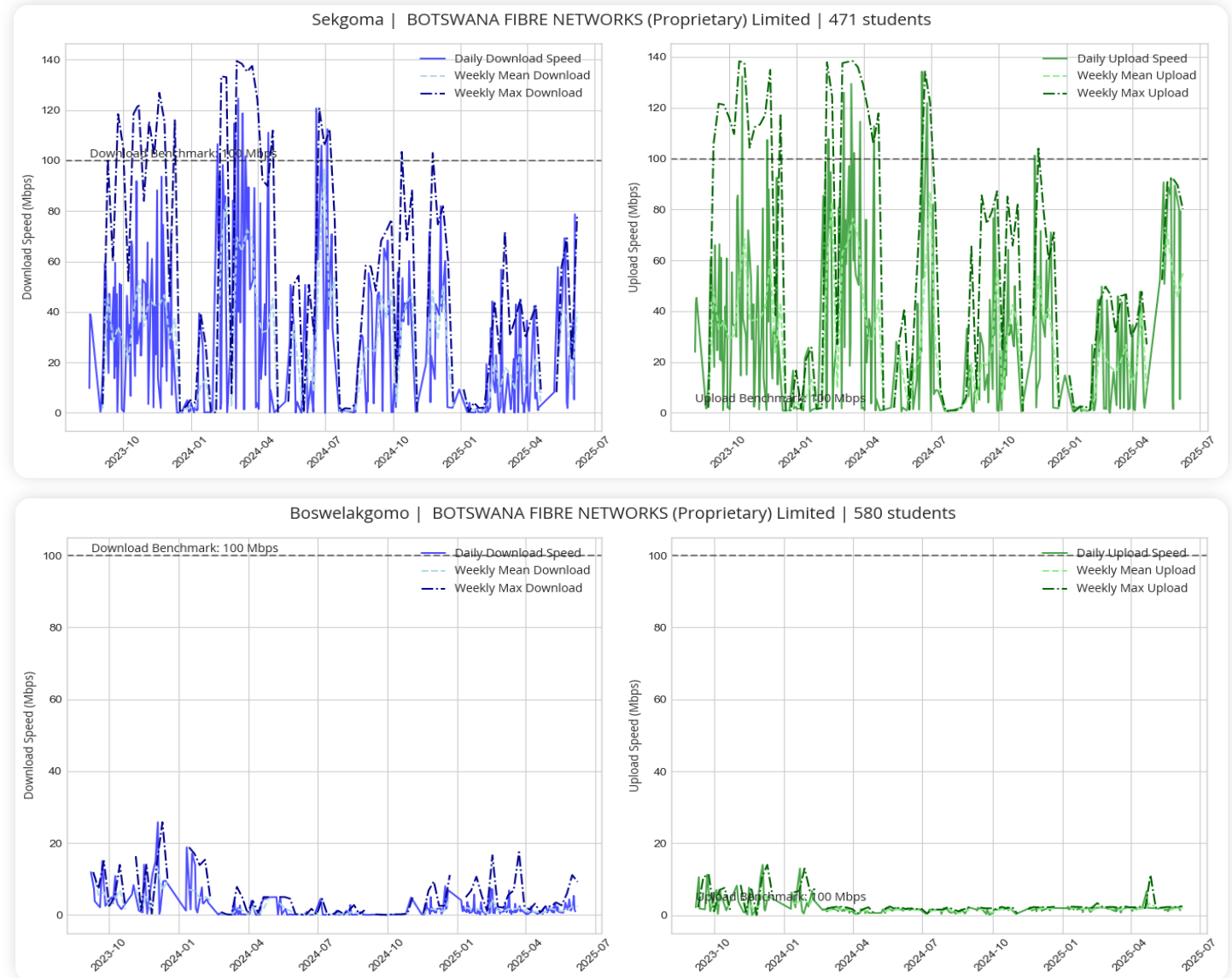
With ~700 schools already connected, the government is now extending the same model to health centres and community facilities. By sharing infrastructure across sectors, this integrated approach improves affordability and amplifies the impact of public investment.

Challenges

Data: Software compatible issues, preventing giga meter app installation

Data: Expensive deployment of hardware (IoT) for router level measurement

Quality Standard: Policy's restrictive focus on only download speed, and are missing latency, uptime and other key metrics.

Sekgoma | BOTSWANA FIBRE NETWORKS (Proprietary) Limited | 471 students

Boswelakgomo | BOTSWANA FIBRE NETWORKS (Proprietary) Limited | 580 students

Measurement & Quality Standards | Needs & Challenges | Mongolia

Need

**Network performance quality triangulation:**
Education Information Technology Centre (EITC) monitors the internet uptime and usage in schools via SNMP (LibreNMS) on routers, APs, and bandwidth speed on user devices with Giga Meter across the country. The data is used as a key input to monitor the local area network of schools, helping triangulate, troubleshoot and support decisions to improve the quality of experience for end-users.

Decentralisation:
EITC is adopting a decentralized connectivity contracting approach, giving autonomy for schools to contract directly the ISPs while keeping standardizing Service Level Agreements, being monitoring and actioned upon through real-time data.

Challenges

- **Data:** GigaMeter– Hard to maintain & deploy additional measurement software at a national level.
- **Data:** Inadequate servers for measurement - recently solved with EITC donating server to Mlab fleet.
- **Quality Standard**: SLAs are not holistic – only focus on Uptime – Giga is working with ministry to update SLAs
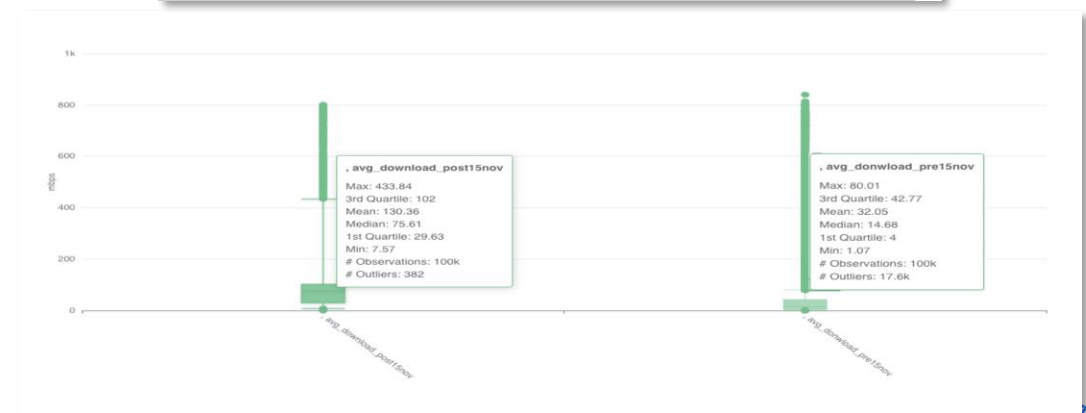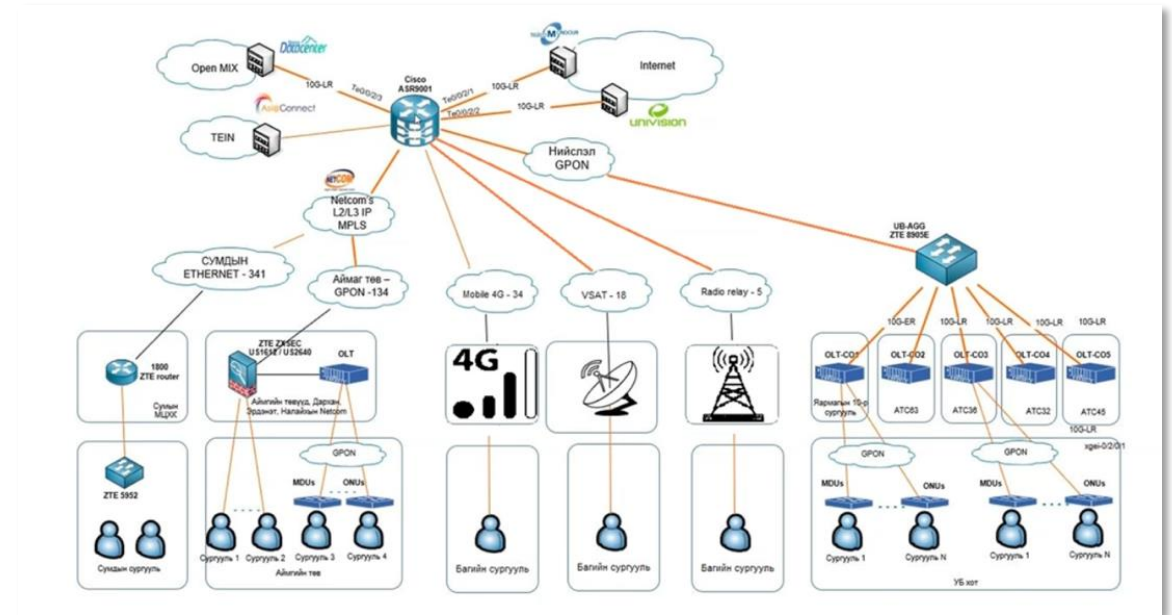
Need:

Digital education expansion in Moldova schools.

By 2027, Moldova aims for:

- 70% of schools to meet ICT standards (up from 30% in 2024)
- 70% of teachers DigCompEdu certified (from 25% in 2024)
- 50% of pupils in STEAM programmes (from 20% in 2024)
- 3,000 new digital content units produced annually (from 1,000 in 2025)

Challenges

Missing measurement data:

All schools are connected, but quality is unmonitored. Schools manage their own ISP contracts, and the Ministry and policymakers lack data to identify gaps or intervene where service is poor. *(Recently, started GigaMeter deployment)*

Missing policy standards:

No enforceable performance benchmarks: Current policy focuses on equipment standards (e.g., Wi-Fi, cabling, device ratios), not on whether connectivity is "fit for purpose" for digital teaching and learning. *(Started IQB-Edu framework with Giga and Mlab)*
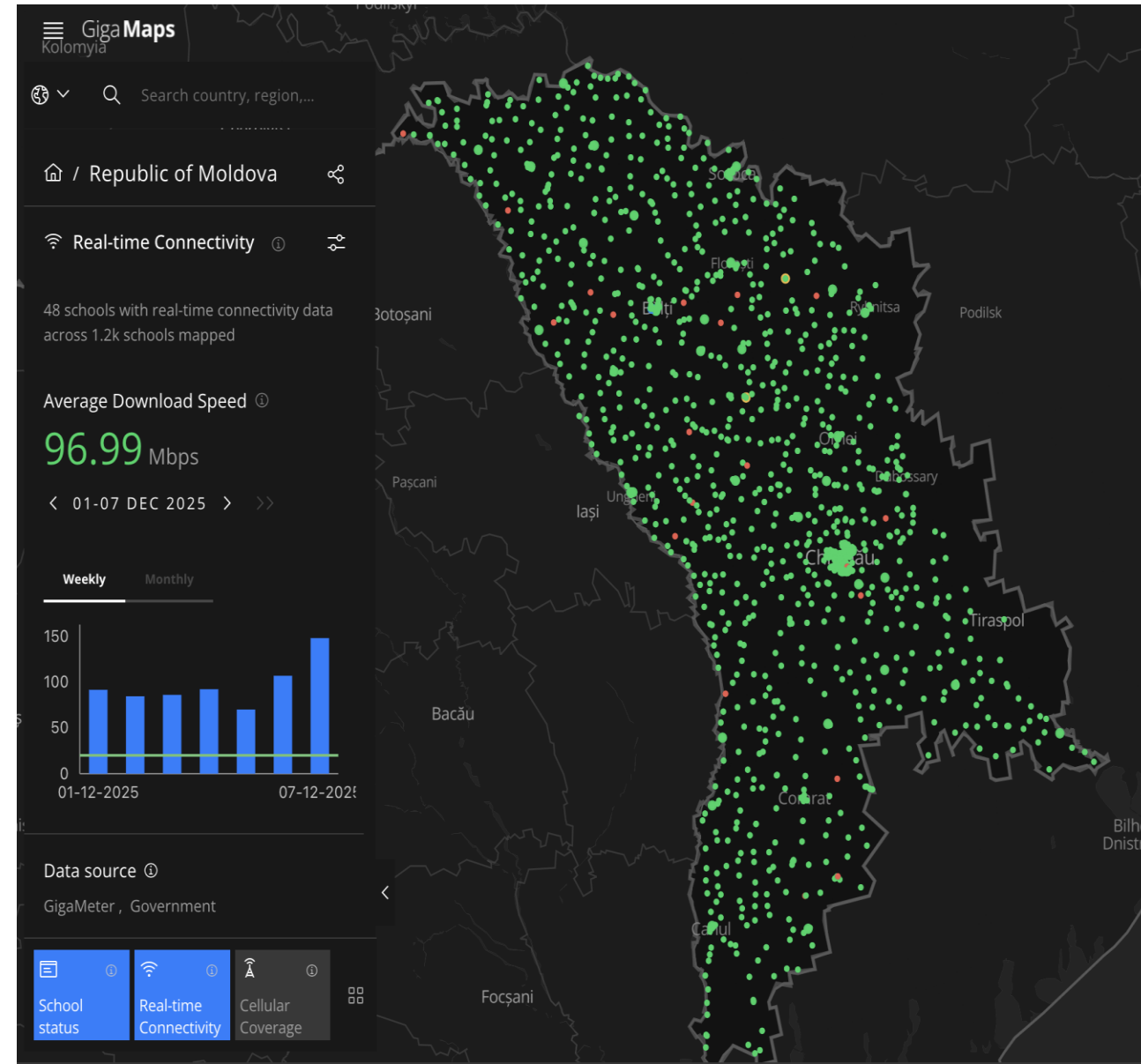
Challenges & solutions forward...

Missing standards for assessing network performance for public facilities

Internet Quality Framework/Standards for public facilities and government that can help them define national connectivity policy standards, holistic Service Level Agreements with ISPs, find infrastructure gaps and drive up the internet quality experience for the users.

Lack of cost effective Internet measurement stack options for public facilities

Cost effective and representative stack for internet measurement in public facilities to measure end-to-end network performance for varied use cases– **what to measure, where to measure, how to measure?**

Thank you

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