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World Space Forum

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ORGANIZED JOINTLY BY:

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UNITED NATIONS
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Space 2030 Agenda and Giga

Chris Fabian
Giga co-Lead, UNICEF

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www.giga.global / www.projectconnect.world

Giga is a partnership between UNICEF and ITU with the single goal of connecting every school in the world to the internet. We cannot accomplish this without Space Science. In the last 18 months:

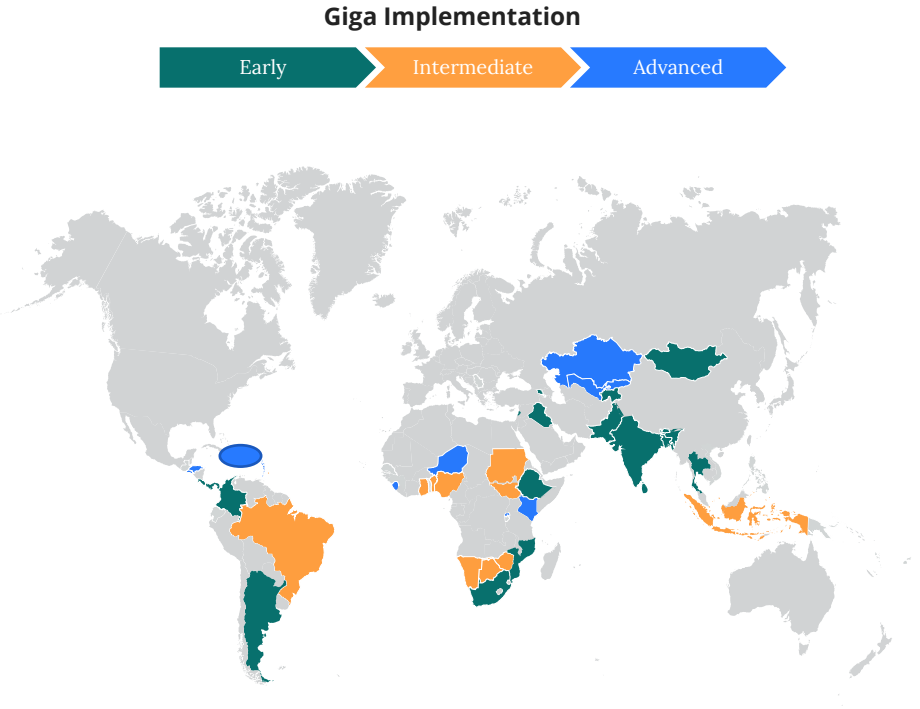
2.1 Mn+
students connected
&

1.1 Mn+
schools mapped

5.5K+
schools connected directly by Giga

16
partners

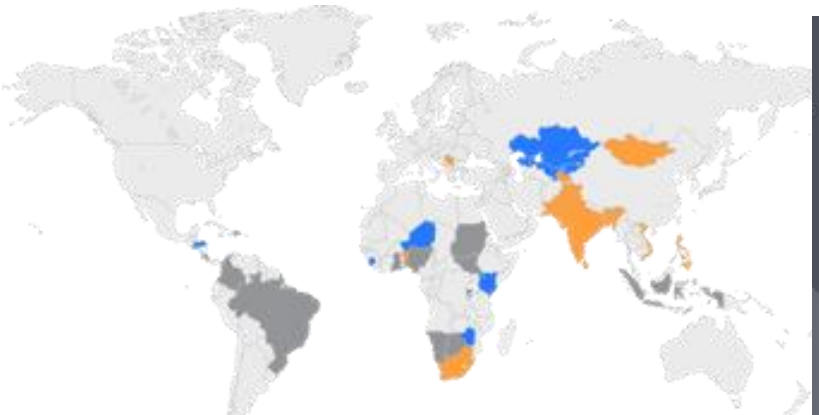
19
countries



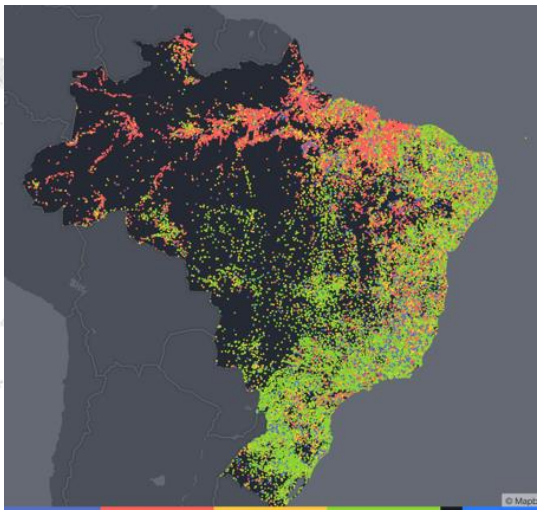
How Giga Works

Giga is working in 19 countries (with President/ head of state buy-in).

1. **Map** the location of schools and monitor school connectivity status in real-time
2. **Plan** the infrastructure, policies, regulations and investments needed to deliver school connectivity
3. Design solutions to **finance** the capital and operational costs of connecting schools
4. Help governments to **contract** connectivity for schools



Giga's Secretariat is Hosted by Switzerland, in Geneva.
Its Technology Centre is Hosted by Spain, in Barcelona.



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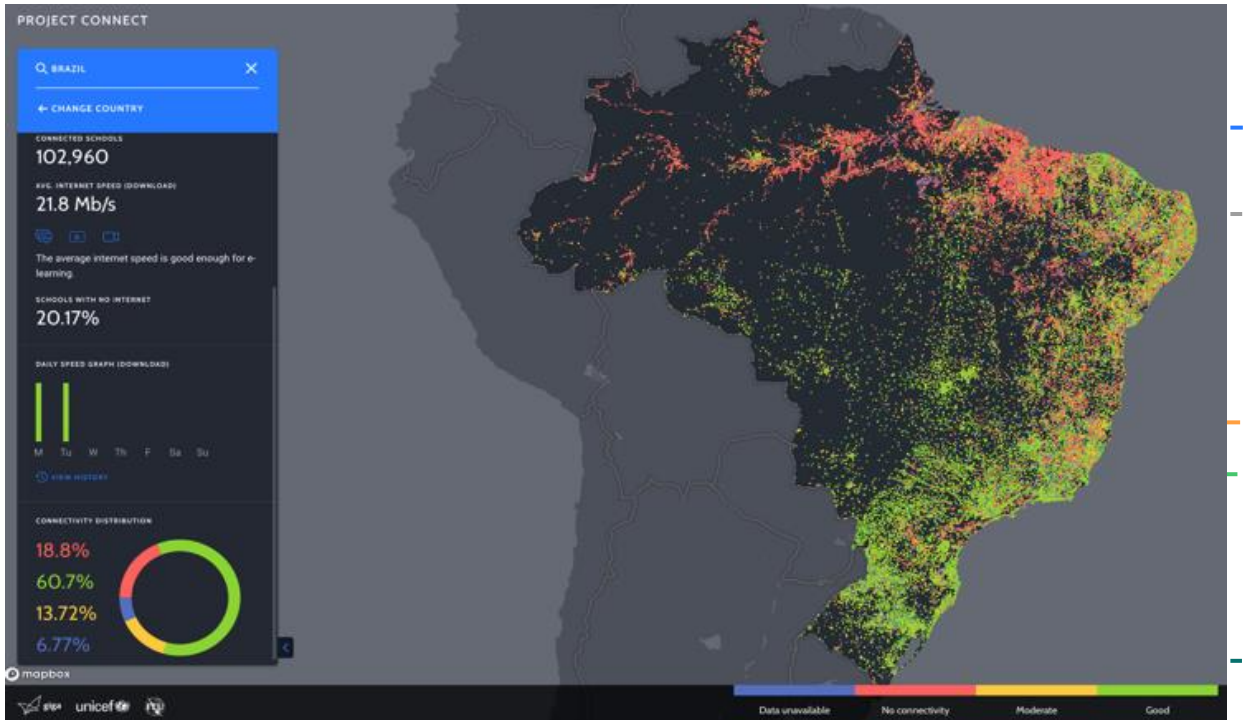
Space 2030 Agenda and Giga

Giga's goal of providing internet connectivity to schools in over 190 countries, aligns with the **"Space2030" Agenda's focus** on leveraging space technologies and applications for economic growth and sustainable development.

Accurate, real-time data is the key to connecting schools and measuring impact



Giga School Connectivity Map – Brazil, September 14 2021

- Show what schools, cities, regions are leading / lagging the most
- Inspire a real sense of need by making the problem concrete
- Aggregate market demand for investors (and businesses)
- Show opportunities to telcos and startups
- Make contracting accountable: if the school is “green” services are being delivered. If not, the contract is not being honoured.

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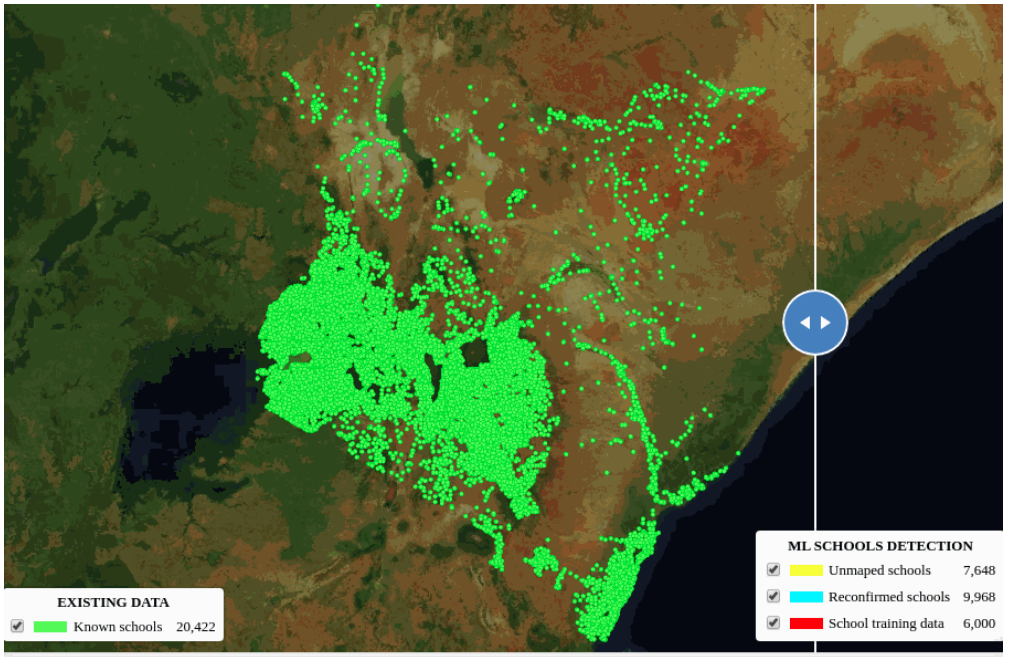
Global collaboration on producing digital public goods using space technology

- Mapping global school locations using satellite observations – open source models, data sets, and approaches
- Building infrastructure database for connecting schools – creating public data from public finance, and using it for insights to benefit humanity

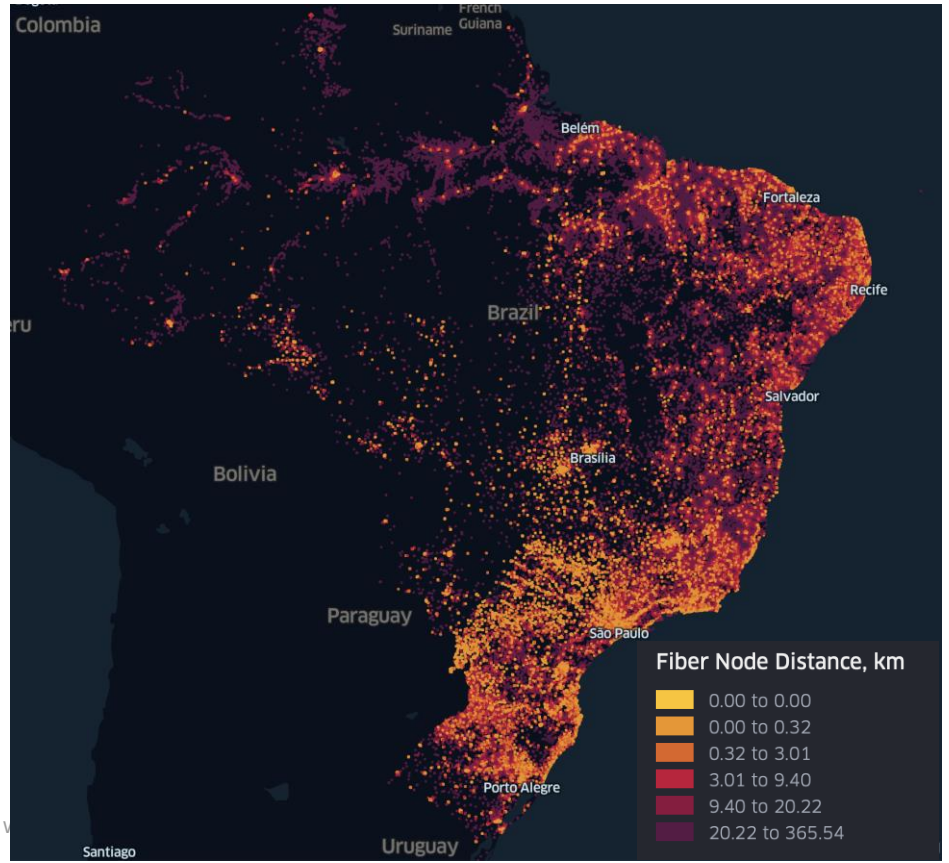
Scaling AI to map every school on the planet

Used AI and high-resolution satellite imagery to add 23,100 unmapped schools to the map in Kenya, Rwanda, Sierra Leone, Niger, Honduras, Ghana, Kazakhstan and Uzbekistan.



https://developmentseed.org/blog/2021-03-18-ai-enabling-school-mapping

Infrastructure maps



To identify **infrastructure needs**, Giga maps and analyzes the infrastructure around schools to:

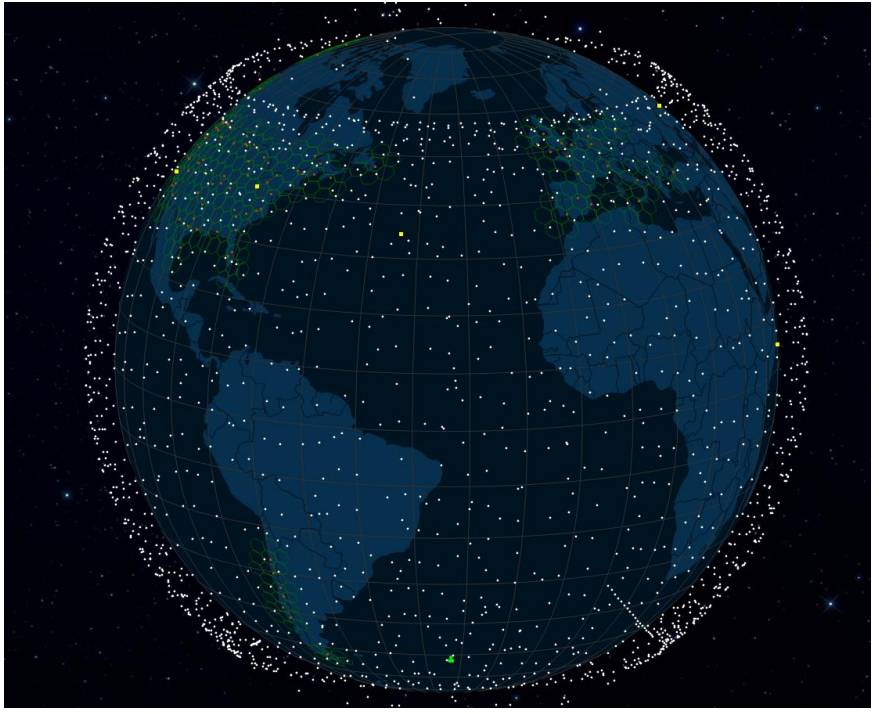
- assess the viability of different connectivity technologies and network designs,
- estimate capital and operational expenditure requirements, and
- define efficient solutions.
- **Satellite observations are importance input**

Giga as a platform for creating the infrastructure to provide digital connectivity

- Building solutions for contract, finance and regulation for internet connectivity including satellite-based internet
- Supporting the Space 2030 agenda by leveraging space activities and tools to achieve global agendas and sustainable development goals

Provision of Satellite based Internet Access for Schools

- Satellites based internet can cover remote areas where fiber or mobile network cannot reach
- Potential cost save through competition with existing network providers
- RFI published in November 2022 to assess the possibility of using satellite technologies for sustainable internet connectivity for schools
- Enhancing private-public partnerships on the applications and advancing space technology



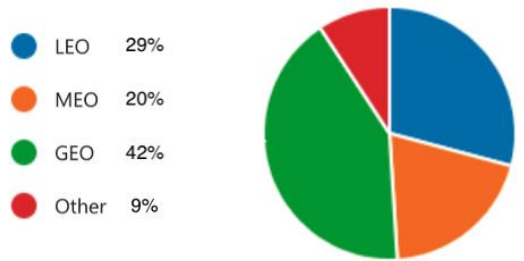
Current locations of LEO satellites (white dots) and areas covered by their ground stations (green hexagons) (Image source : Starlink webpage)

The potential for satellite-based internet solutions to connect schools

- Giga's November 2022 RFI for satellite-based internet provision for schools received **75 submissions from companies providing LEO (29%), MEO (20%), GEO (42%) and mixed (9%) solutions**

- Supporting the Space 2030 Agenda by leveraging international collaboration on the advance of space-based technology for SDG

- Space technology as a key enabler to reduce the digital divide for the most remote schools in the world



Giga's Asks for the Space Sector

- **Earth Observation**: Collaborate with the new Giga Technology Center in Barcelona on enhancing/scaling the open source AI to map schools or other infrastructure from Space.
    - Access to data, engineers, and modeling resources – as the European Space Agency/ phi lab is currently doing

- **Connectivity**: Add schools that your company or initiative is connecting through a live API (coming Q2 2023) to Giga's global school mapping website (projectconnect.world).

- **Data:** Share open source data on connectivity, infrastructure, footprint, etc. with Giga's infrastructure team.

Giga Chief Scientist Do-hyung Kim (dokim@unicef.org) and Chris (cfabian@unicef.org)

Thank you

cfabian@unicef.org