GIGA COMMUNICATIONS STRATEGY 2023

© UNICEF.UN0143506.Prinsloo - Teacher Albert Matakone uses a computer tablet as a reference as he teaches children about the human digestive system at a school in Baigai, northern Cameroon

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1. Introduction

The United Nations Children's Fund (UNICEF) and the International Telecommunication Union (ITU) established Giga to connect all schools and children to the Internet by 2030.

To achieve this ambitious goal, we need to inspire the public, attract financial and in-kind support from partners, and gain the buy-in of governments and world leaders to help us achieve our mission.

A clear communications strategy will help us reach our target audience effectively, which will in turn help us achieve our goals. By engaging our audiences, we want to reach a tipping point where leaders are convinced that universal school connectivity should be a top priority, and that they need to take action to close the digital divide. We want to inspire a global community of supporters that will help us connect every school to the Internet, and provide every child with access to information, opportunity, and choice.

2. Giga Goals in 2023

Our first three years have helped us understand how the Giga approach works in different contexts. In 2023, with the support of our partners, we are ready to scale what we've learned.

By the end of 2023, we aim to:

- **Map 2.5 million schools**
- **Reach 40 countries**
- **Support governments to connect 20,000 schools to the Internet**

Engaging our target audiences through strategic communications approaches will help us create a global movement and mobilize resources to deliver these results.

3. Communication Objectives

In line with our overall Giga goals, our communications strategy for 2023 has two clear objectives: -

1. Use stories of our work to inspire leaders, technology companies, donors, governments, supporters, and beneficiaries to support Giga's mission of connecting all schools to the internet by 2030.
2. Create a larger community of Giga supporters through traditional and social media as well as through participating in strategic events.

4. Key Messages

Our communications can be distilled into three core key messages:

- **2.7 billion people having limited or no access to the Internet is unjust and unacceptable.**

Closing the digital divide is an important and urgent issue that needs global attention and action. Giga is responding to this by helping governments and partners to connect all schools to the Internet by 2030. Connecting all schools to the Internet is ambitious but achievable, if Giga's mission gets support from governments and partners.

*Source: *http://www.itu.int/factsandfigures2022*

- **Connecting schools to the internet is the right thing to do.**

Connectivity reduces inequalities of opportunities and information. It creates an equal playing field for youth across the world to be part of a digital future. Children and young people who have access to the internet can access information, opportunity, and choice. Schools are the center of the community. They are centers of hope and learning. By connecting schools, we provide connectivity and hope to communities.

- **Connectivity requires concerted investment and action by governments, technology companies and multilateral donors.**

Connecting all schools to the Internet requires mapping schools, regulatory and policy reforms, technical expertise, and infrastructure financing. With our track record of innovating and collaborating with partners across sectors, we are on track to achieving universal school connectivity.

5.Target Audiences

There are three broad categories of audiences that Giga will target in 2023: partners who are primarily technology companies, governments and UN agencies, and the public which include beneficiaries.

5.1 Partners

Most of Giga's partners are technology companies that support our work through financial and in-kind contributions.

Maintain existing partnerships: We want our partners to feel a sense of pride and joint ownership of the impact we create together. We want to show how their support creates meaningful change in the world. By working with us, they are not just associating their brand with Giga's mission, but they are also contributing to achieving universal school connectivity. Working with Giga will not only give them visibility, but also instill meaning and purpose beyond their commercial work.

Attract new partners: Giga's communication in 2023 aims to attract new partnerships and collaborations. Technology companies should learn about our work through various channels such as authoritative technology podcasts, magazines, newspapers, and technology events. Through our communication, potential partners will see the opportunity to work with a meaningful tech-for-good initiative, compelling them to share their technical expertise and support through financial and in-kind contributions. Most importantly, they will see that their potential investment in connecting schools can create visible, tangible, real-life impact on society.

As part of our strategy, we will also encourage our partners to promote Giga through their own channels.

5.2 Governments and UN agencies

Governments are the ultimate decision makers when it comes to connecting schools to the Internet. Universal school connectivity depends on their buy-in, legislation, and continuous support. In our strategy, we target heads of state, ministries, and decision makers at both national and local levels.

We also target UN agencies as we rely on these networks as an entry point to work with governments across the world. We want to nurture our relationships with UNICEF and ITU counterparts at the regional and country levels by involving them whenever we collect and create content from the field and maintaining regular internal communications with them.

Through the stories of our work and the testimonials of other global leaders, we want to gain the trust of decision-makers and inspire them to join our mission. We want them to be part of a growing community

of world leaders who advocate for school connectivity – and in the process, become connectivity champions themselves.

5.3 Thought leaders in technology and education.

Giga targets influential thought leaders in technology and education to champion the Giga mission. These individuals could be influential in funding circles and perhaps (but not necessarily) have a social media following of people who are in the know in the technology and education sector. More importantly, these are individuals that can persuade people in power to invest in Giga.

Using our stories from the field, we want these influential people to feel a sense of urgency, but also a sense of hope that the problem can be solved given the right partnerships and investments. We want to inspire them to use their voices and amplify our mission of connecting schools to the Internet.

6. Channels

Giga will use the following channels to convey our messages:

6.1 Traditional Media

Giga will focus on building relationships with traditional media this year, because they have established trust with authorities and influence decision-makers who invest in Giga. Traditional media include news outlets (both online and offline, mainstream and specialized).

As a start, we will forge relationships with technology-focused outlets, and the technology editors of mainstream media outlets. The aim is to make **Giga the go-to authority for school connectivity.**

6.2 Social Media

Social media includes online platforms with large numbers of daily active users, making it an attractive channel to spread our messages to the general public. Each social media platform has its own niche – for example, LinkedIn attracts business and industry-related content, Twitter is a great platform for sharing ideas, and Instagram is great for multimedia content.

Giga is currently active on LinkedIn, Twitter, and Instagram, and will launch its TikTok and YouTube channels this year. TikTok's short video content is great for capturing attention in an entertaining manner while YouTube is a great repository tool for long-form video content.

For more information, please refer to **Annex 1: Social Media Strategy**

6.3 The giga.global Website

Giga runs its own website at giga.global, which houses all the basic information about Giga using blogs, case stories, long-form articles and videos.

This year, Giga will focus on growing its website hits by reorganizing its layout, linking our social media content with our website content, and updating the website with new resources. The website will also be a repository for resources like our one-pager, fact sheets, and annual reports. To enhance usage, the team will also produce and publish product videos, a fresh 'why work for Giga video,' and a segment where the technology teams write blogs about products and innovations.

The website will also contain an updated calendar of Giga events, and content coming from those events, such as photos, talk recordings, and related social media posts.

Giga will also work with country communication teams to create 'voices of impact,' a segment that is dedicated and produced by countries featuring beneficiaries and Giga's work on the ground. This is a deliberate effort to create fresh country content from select countries that we work in. Products will include videos, blog posts and pictures. This was created to foster a sense of ownership by the country communication teams of Giga's work that they help to produce and give them credit for their efforts.

6.4 Events

Events are valuable means for building relations between Giga and its numerous and increasing number of partners. We classify our events into three main categories – technical events that showcase Giga's technical excellence, political events that build and strengthen alliances with like-minded figures and agencies, and internal events that focus on the Giga team.

Participating in events involves an investment in time, effort, and money, but they go a long way in forging connections when used strategically.

For a comprehensive list of the events we plan to attend this year, please refer to **Annex 2: Events Strategy**.

7.Channels X Target Audience Mix

While all channels can be suited to each target audience, we have prioritized specific channels for each target audience, as shown in the table below:

	Governments	Partners	Public	Notes
Traditional Media				
- TV	☑	☑	☑	Includes private and state-run media. It also includes print, broadcast, and online channels.
- Radio	☑	☑	☑	

- News outfits	☑	☑	☑	
- Magazines	☑	☑		Priority on industry-specific magazines
Social Media				
- LinkedIn	☑	☑	☑	Includes the opportunity to tag and engage government figures and partners
- Twitter	☑	☑	☑	
- Instagram			☑	
- YouTube		☑	☑	To be launched in 2023, with the general public in mind
- TikTok		☑	☑	
- Podcast guesting	☑	☑		Includes the opportunity to engage partners as speakers
Website and in-house productions				
- Blogs		☑	☑	Mainly targets but also an opportunity to engage governments and partners by featuring them
- Case stories	☑	☑	☑	
- Podcasts		☑	☑	
- Newsletters & Factsheets	☑	☑		Open to the public, but currently offered as an additional perk that our partners receive for supporting us
- Think pieces and long-form content	☑	☑	☑	Mainly targets partners, especially technical supporters to stimulate their thinking
- Commissioned research	☑	☑		Targets governments and partners to help in planning and implementation
- Reports and briefers	☑	☑		
- Annual Reports	☑	☑	☑	Contains basic information about Giga's achievements – this should be suited to all audiences
Events				
- Technical events	☑	☑		Involves networking. These events mainly target governments and partners.
- Political events - Internal events	☑	☑		

8.Communication Initiatives

To deliver our strategy, we are launching and implementing the following initiatives:

1. **Comms Hub and Content Library.** In response to Giga's growing communication needs, we will build a Comms Hub and Content Library that can be accessed anytime by all Giga members. The materials in these repositories will be developed over time and will be updated on a quarterly basis.

   The schedule for updates this year after the first content is uploaded is as follows; May 1st, August 1st and October 2nd.

   The **Comms Hub** will contain fundamental, 'evergreen' communication materials, including:
   - **Key Messages** – this comprehensive document will contain an expanded version of our key messages, messaging dos and don'ts, thematic messages, and key statistics. The Key Messages document will serve as a quick source of talking points for various events, and a source for blurbs and boilerplates for written materials.
   - **Brand and Style Guide** – this will contain guidelines for maintaining Giga's brand – including our visual identity (logos, banners, templates), as well as our positioning (messages, approach). This resource is intended for Giga staff producing external-facing materials, as well as vendors creating materials for Giga.
   - **Templates and graphic assets** - this contains all the templates for branded materials such as pitch decks, letterheads, zoom backgrounds, etc. This will also contain graphic assets such as high-resolution logos of Giga and its partners.
   - **Story Collection Guide**- a guide for partners, vendors, and Giga staff who intend to collect stories for Giga.

   The **Content Library** will contain fresh and growing content from our programs. These will be raw materials that can be adapted to create different communication products such as pitch decks and promotional materials. It will house a Story Bank, photos, uncut footage (B-Roll), recordings of live events, and interviews (including quotes).

2. **Regular story collection.** In order to populate the content library, we will work with our country offices to collect stories on a regular basis – ideally **every two to three months**. There are different modes of story collection, further discussed in.

   During story collection trips, the Communications team will gather materials (photos, footage, interviews) from the field with the view of developing them further into full-length articles and case stories, multimedia content, and social media posts. The raw materials gathered from the field will also be used to supplement other Giga materials such as presentations, reports, and campaigns. The materials will not only be accessible to Giga, but also to country offices supporting our content collection work.

   This year, the comms team will establish its first contact with country office communication teams in a structured manner and explore ways of working with them. In order to do this, we will host Giga's first story collection retreat with communication officers from our partner country offices. Through this event, we aim to build relationships with our comms counterparts, identify

potential areas of collaboration, and co-create a workflow for collecting Giga stories and content from the field.

We will also produce a Story Collection Guide as part of the Comms Hub.

3. **Social media and website growth and traditional media outreach.** We will grow our existing social media accounts on LinkedIn, Twitter, and Instagram, and build a presence on TikTok and YouTube. We will also grow our NFT community through the Patchwork Kingdoms project.

   In 2022, Giga's social media channels experienced a significant rise in followers, with the highest increase of 52.2% on LinkedIn, 35% on Instagram, and 26.2% on Twitter. Our goal for 2023 is to double Giga's follower count on every platform and expand Giga's presence by adding YouTube and TikTok to our outreach efforts.

   In terms of website growth, according to Google Analytics, there were 35,060 visitors to the Giga website between January and December of 2022. We plan to increase the number of visitors by 20% to 42,072 in 2023.

   For more information, please refer to **Annex 1: Social Media Strategy**

   In parallel, we will also increase our traditional media coverage by pitching on a regular basis and building and maintaining relationships with media contacts by hosting 'meet the editors' and strategically inviting journalists to events we host.

4. **Strategic events.** Guided by our Events Strategy, we will seek to raise our profile among leaders in government, tech, and development sectors. The key events of this year include roadshows in Spain and Switzerland, and participation in high-profile events such as the Mobile World Congress and the UN General Assembly.

5. **In-house communications training.** There is a wealth of expertise and experience among Giga staff, and we want to capitalize on this by training our team to tell our story better. This year, we will design and run a series of communication training courses for Giga staff to help develop stories on Giga's products. These workshops will preferably be in person, and some will be conducted online.

6. **Story collection retreat for in-country comms officers.** This year, we will host Giga's first story collection retreat with communication officers from our partner country offices. Through this event, we aim to build relationships with our comms counterparts, identify potential areas of collaboration, and co-create a workflow for collecting Giga stories and content from the field.

7. **Annual Report 2023**. Integrating lessons learned from Giga's Annual Report 2022, the Communications team will set up an annual report committee by the fourth quarter of this year to outline the direction and overall narrative of this year's annual report. With a strengthened process of collecting data and cases from the field, sourcing stories for the next annual report should be smoother.

9. Monitoring and Evaluation

We will monitor and evaluate our communication initiatives based on the following targets set for the end of 2023. Note output and outcome indicators are presented together below.

1. Produce and launch the 2022 Annual Report.
2. Establish a Comms Hub containing our Key Messages, Brand & Style Guide, templates and graphic assets, and Story Collection Guide.
3. Write and publish at least 10 case stories gathered from at least 3 story collection trips.
4. Secure at least 10 publications, mentions, and features on traditional media.
5. Gain at least 3% engagement rate on Twitter and 7% on LinkedIn.
6. Double our following across our existing channels. Reach at least 11,258 subscribers on Twitter, 8,250 subscribers on LinkedIn, and 3,026 subscribers on Instagram.
7. Establish our YouTube channel and gain 500 subscribers by the end of the year and establish our Tiktok channel with at least 1000 subscribers by the end of the year.
8. Attend at least 6 strategic events where Giga's message is shared to its core audiences.
9. Produce at least 2 newsletters by the end of 2023.
10. Increase our website's visitor growth by 20%, with at least 42,072 visitors by the end of 2023.
11. Run our first story collection retreat with at least 10 communication officers from Giga countries.
12. Train at least 10 internal Giga members in creating communication outputs.

We will also factor indirect results achieved by other Giga departments, in which our communication initiatives played a role. Examples include the number of new partnerships formed (as a result of our promotions and events), and new countries signing up for Giga.

We will seek feedback from related Giga teams to evaluate how our communication initiatives have been useful, and how they could be refined further to suit their needs. Similarly, the Comms team will also gather feedback from target audiences to evaluate the effectiveness of our approach.

10. Approvals

All communications can be classified into the following levels, each with their own sign-off procedures:

Level 1 – Comms Lead Approval

Level 1 outputs include day-to-day communications that are typically created by the comms team and approved by the communications lead. These outputs are typically drawn from our Key Messages, and other pre-approved materials such as reports and papers. Examples of these materials include regular social media posts, internal facing documents, and derivative products from previously approved materials.

> **Example scenario:**
> **Output:** A tweet highlighting the number of schools we connected in 2022, with a 15-second video to increase engagement.

Context: By the time of the intended tweet schedule, Giga has already produced its annual report and an annual report video – both already approved by Giga co-leads and external partners. Giga's social media manager only has to reword existing materials and cut the existing video into a 15-second version.
Approver: The communications lead can approve these materials as they are created based on existing materials that have been pre-approved or have low political sensitivity.

Level 2 – Co-approval from relevant sub-teams

Level 2 outputs are materials which involve collaboration with different Giga sub-teams, and/or external collaborators and partners. They are typically long-form outputs, which rely heavily on data provided by other teams. For Level 2 outputs, approvals need to be secured from the communications lead, and the relevant lead/s and/or partners involved in the collaborative output.

Examples of these materials include case stories, podcasts, and feature videos.

Example scenario:

Output: An in-depth blogpost about our work about how Giga has helped the Rwandan government reduce connectivity costs significantly.
Context: The blogpost will contain statistics, quotes from key figures, and photos from the field. Data gathering for this output may also be included in upcoming content collection trips.
Approver: Before publishing this blogpost, the Giga's content writer will have to secure the approval of the communications lead, as well as clearance from relevant teams – in this case, the country engagement team and the Rwanda country office. Clearance will involve fact-checking to make sure all numbers are correct, and the precise language we use to describe our work are accurate.

Level 3 – Approval from Giga Co-Leads

High stakes are often involved in Level 3 outputs. They typically include sensitive information and announcements, important Giga milestones and partnerships, as well as messages involving Giga leads, sponsors, and high-ranking officials. For Level 3 outputs, approvals are done by Giga co-leads, with the assumption that the outputs have been cleared by relevant units.

Examples of these materials are high-level presentations and interviews, annual and milestone reports, and Giga announcements.

Example scenario:

Output: A Presentation on Giga's 2022 annual results at a UN-sponsored conference.
Context: The ITU Secretary General has been tasked to present Giga's annual results at a conference attended by heads of state and Giga partners. Giga's event manager must ensure that all communications materials are provided – including a set of talking points, a presentation deck, and a hand-out for the conference participants.
Approver: All the materials that the ITU Secretary General has to present should be checked by

the communications lead, with facts and figures cleared by relevant Giga teams, and with final approval from the Giga co-leads.

Level 4 – Approval beyond Giga

Level 4 outputs involve high-level outputs and announcements, typically including highly political sensitive information. They are similar to Level 3 outputs, except that they involve checks and approval from offices beyond Giga, such as the Secretary General Offices or UNICEF's Office of Innovation. Level 4 outputs are approved by parties external to Giga, with clearance from Giga co-leads and relevant units. Examples of these materials are high-level presentations on Giga by the Secretary General of ITU.

Example scenario:

Output: A media release announcing the release of funding to establish the Giga Technology Centre in Barcelona, Spain

Context: The Governments of Spain, Catalan, and Barcelona have all entered an agreement to fund Giga. Upon signing the agreement, funds will be released to establish the Giga Technology Centre and the new technology jobs that will be housed there. The announcement involved the UNICEF Secretary General's Communication team.

Approver: All communication related to this announcement would have to be cleared by the UNICEF Partnership and SG's Communication team who liaise with the Governments of Spain, Catalonia, and Barcelona and inform the Giga co-leads, and the Giga communications lead.

Here's a summary of the levels:

	Level 1	**Level 2**	**Level 3**	**Level 4**
Description	Day-to-day communications based on pre-approved key messages and materials	Collaborative outputs with different Giga sub-teams and/or external partners	High-level Materials and announcements containing key Giga-wide updates and sensitive information	High-level announcements and materials concerning other units outside Giga
Materials	Regular social media posts (based on key messages and approved outputs), case stories, and derivative materials	Case stories, podcasts, feature videos, website content	High-level presentations and interviews, annual and milestone reports, and Giga announcements	High-level materials and announcements involving other units outside Giga
Approvers	Communications Lead	Communications Lead and Leads of	Giga Co-Leads, Communications Lead, and Leads of	External Leads, UNICEF Office of Innovation

		other involved units	other involved units.	UNICEF & ITUSG's office, Giga Co-Leads, Communications Lead, and Leads of other involved units/institutions/ Governments.

11.Timeline of Activities

This provisional calendar shows a schedule for our upcoming activities in 2023:

No	Initiative	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	J24
	Comms Hub and Story Collection												
1	Comms Strategy												
2	Annual Report 2022 (1 Mar launch)												
3	Develop Key Messages Document												
4	Develop standard Giga Slide Deck												
5	Develop Country Case Studies (at least 1x per month)												
6	Develop Brand and Style Guide **in collaboration with Giga's Design Specialist*												
7	Develop Story Collection Guide												
8	Launch of Comms Hub and Content Library												
9	Develop Annual Report 2023 (Launch January 2024)												
10	Establish Connections with Country Offices for Story Collection + scoping of potential trips												
11	Story Collection Trips												
12	Story Collection Retreat with Country Offices												
13	Think pieces and commissioned reports												
	Social Media Channels												
13	Social media management and content creation across channels, including international days & joint campaigns with partners												
14	Launch of YouTube Channel												
15	Launch of TikTok Channel												

Events

Initiative	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Events												
Mobile World Congress (27 Feb-2 Mar) Barcelona, Spain												
World Summit on the Information Society Forum (13-17 Mar) Geneva, Switzerland												
Arizona State University + Global Silicon Valley Summit (17-19 Apr) San Diego, USA												
Transform Africa Summit (26-28 April) Victoria Falls, Zimbabwe												
Ambassador Lauber's high-level event (10 May), Geneva, Switzerland												
World Telecommunication & Information Society Day (17 May), online event												
GITEX Africa (31 May - 2 June), Marrakech, Morocco												
Giga Road Show Switzerland (June TBC)												
UN General Assembly (12-30 Sep), New York City, USA												
Giga Road Show Spain (October TBC)												
Building Bridges (2-5 Oct), Geneva, Switzerland												
Africa Tech Festival (14-16 Nov), Cape Town, South Africa												
NFT2.0 Auction with CfC. St. Moritz (December TBC)												
Internal Meetings and events– Perhaps all of them after June; Some we can do online (sooner)												
Partnership X Comms Meeting in Geneva												
Comms training for Giga Staff (combination of online and offline events)												
Giga Staff Retreat												

12.Team

Giga's communication strategy will be implemented by a core team that sits within Giga, with support from both UNICEF and ITU staff:

Giga Core Comms Team

Ngasuma Kanyeka
Communications Lead

Muhamad Fahmi Ramadhan
Social Media and Website Manager

Vivien Gyuris
Event Manager

Aildrene Israel Tan
Technical Content Creator

Giga ITU Comms

Victoria Knight
ITU SG Comms

Cansu Pekmez
ITU SG Comms

Maria Duran de Bernardo
Giga ITU Project Officer

Senior Management

Chris Fabian
Giga Co-Lead
UNICEF Office of Innovation

Alex Wong
Giga Co-Lead
ITU Secretary General's Office

13.Next Steps

Once the Communications Strategy is approved, a detailed Work Plan will be produced with timelines, responsibilities, and indicators. The Comms team will conduct a mid-year check-in to evaluate the strategy and refine it if needed.

Annex 1: Social Media Strategy

Giga social media strategy will align with Giga's overall communication goals by targeting the intended target audience and promoting messages through different channels. Below are the targets and content pillars of Giga social media and website in 2023:

Social Media Targets

Follower Growth

Indicators	Twitter	LinkedIn	Instagram	YouTube	TikTok	Website
Baseline as end of 2022	5629	4125	1603	n/a	n/a	35,060 visitors
Growth target in 2023	100%	100%	100%	n/a	n/a	20%
Total increase by 2023	5629	4125	1603	500	1000	7012 visitors
Total followers by end of 2023	11,258	8250	3026	500	1000	42,072 visitors

Engagement Rates

Indicators	Twitter	LinkedIn
Baseline as end of 2022	2%	6%
Growth target in 2023	1%	1%
Total by end of 2023	>3%	>7%

Means of Verification: social media and google analytics.

Social Media Content Pillars

No.	Content Pillars	Description
1.	Did You Know?	Provide factual information about connectivity, the digital divide, and the impact of connectivity.
2.	Quotes	Asking Giga partners, external champions or beneficiaries in Giga countries for quotes and to share this in support of Giga.
3.	Stories of connectivity or digital public goods on external media	Showcase stories or articles on the external media and emphasize the importance of connectivity and Giga.
4.	Product pitches	Promote Giga key products, such as Project Connect, Connectivity Costing Tool, Giga Counts, etc.
5.	Stories of Impact	Share progress and impact of Giga projects; Human-interest stories from Giga countries
6.	Events	Curate social media content before, during, and after events
7.	Quiz	Ask quick, easy questions to engage with our audience
8.	International Days related to Giga's mission	Emphasize the significance of international days related to connectivity and highlight Giga's efforts to address connectivity issues on these relevant international days. List of Relevant International Days **International Day of Education** (24 January) **International Day of Women and Girls in Science** (11 February) **International Women's Day** (8 March) **International Girls in ICT Day [ITU]** (27 April) **World Telecommunication and Information Society Day** (17 May) **World Youth Skills Day** (15 July) **International Youth Day** (12 August) **International Literacy Day** (8 September) **World Teachers' Day** (5 October) **International Day of the Girl Child** (11 October)**United Nations Day** (24 October) **World Science Day for Peace and Development** (10 November) **World Children's Day** (20 November)
9.	Patchwork Kingdoms Community	Support the PWK community and promote the use of NFTs for social good.
10.	Spotlight of ITU Secretary-General & UNICEF Executive Director	Captures statements from ITU Secretary-General or UNICEF Executive Director regarding Giga on International days or significant events.

Annex 2: The 2023 Events Strategy

The 2023 Giga Events strategy is aligned with the Communications and Partnership Strategies. The Events Strategy is a strategically planned, data-driven, and measurable plan that outlines what Giga aims to accomplish through events, how it will achieve and measure those goals. Events are valuable means for building relations between Giga and its numerous and increasing number of counterparts. The Event Strategy offers a tool for prioritizing, planning and executing events with a particular emphasis on the Giga Roadshows in the strategic partner countries of Giga, Switzerland and Spain.

Defining and categorizing events

The term 'event' refers to a pre-arranged social activity, such as high-level meetings, general assemblies, conferences, expos, exhibitions, technical meetings, galas, roundtables, online technical discussions, webinars and dinners. Events can be categorized based on (i) purpose, (ii) size, and (iii) technological modality. Based on purpose, the following event categories exist guided by the key objectives of the Event Strategy to build Giga's visibility and credibility among key technical and political stakeholders:

Technical events: showcasing the technical excellence of Giga

Technical events refer to events that are organized by or with the participation of leading tech or finance companies potentially with global outreach. Here the focus is on showcasing the technical excellence of Giga. These events also support peer learning, knowledge sharing and networking. The majority of these tech events have strategic importance from the perspective of initiating new partnerships, sponsorships or alliances in the digital technology and finance ecosystems.

Some examples:

- Larger events, such as roadshows in Spain and Switzerland with the objective of engaging larger tech companies, Mobile World Congress, Africa Tech Festival, Web Summit, International Wireless Communications Conference and Expo, Satellite Conference and Exhibition, etc. (See Annex 1 for list of proposed larger Tech Events for 2023).
- More targeted and smaller events, such as pre-arranged meetings with potentially significant strategic partners, like the Gates Foundation, Musk Foundation, Amazon, etc.

Political events: building alliances with like-minded and strategically well-positioned agencies

Political events refer to events with high-level participation from international development or government agencies. Here the focus is more political, building alliances with like-minded and strategically well-positioned stakeholders and displaying Giga's forward-looking and innovative approach to enabling universal school connectivity.

Some examples:

- UN-focused events, such as the United Nations General Assembly, etc.
- Other high political events, including agencies such as the World Economic Forum, World Bank/IFC, European Commission, regional development banks, and bilateral agencies. These can be both large, like the World Bank's Annual Meeting or smaller ones, like meeting government officials with potential interest to join Giga's club of partners and sponsors.

Giga's own events: technical upskilling, connecting, team building, training, and networking

Giga's own events refer to events that are organized exclusively by the Giga team for technical knowledge sharing, connecting, team building, training, and communications purposes.

Some examples:

- Events initiated by Giga for technical knowledge sharing and peer learning purposes, such as inviting experts from Giga countries to spend a few days at the Barcelona Giga Technology Centre and discuss different thematic areas, meet the host agencies of Spain, and reach out to relevant companies or research centers of the Barcelona-based local tech ecosystem.
- Annual event or Giga Gala celebrating its achievements, staff, partners and sponsors. It is important to expose and display Giga's achievements, along with the people who made it all possible. An annual event for the extended Giga community.
- Annual staff retreat to build further ties among colleagues, with additional focus on targeted capacity building and peer learning.

Events by size

Events vary from small bilateral meetings to large conferences or expos.

- Bilateral or small events have the benefit of discussing issues more openly with partners, preferably during meals.
- Mid-size meetings, of around 5-15 people, are ideal for technical discussions, like roundtables or roadshows that are a series of small events.
- Large size events, around 15-50 are good for knowledge sharing, presenting, and increasing visibility, but less ideal for more in-depth discussions and exchanges.
- Extra-large events, over 50 participants are excellent for increasing visibility, if presenting on the plenary and meeting new partners. In addition, extra-large events, usually international events, host side-events, smaller group roundtables and technical discussions which could also be ideal for Giga for more personalized, technical and in-depth discussions with partners.

Events by technological modality

Events can be online, in-person and blended. After the pandemic, events are seemingly returning to be held in person. The benefits of in-person events are clearly higher than those of online events; however, their costs are also significantly higher, along with a higher risk of nonattendance due to unforeseen circumstances like illness. For Giga, in addition to the in-person events, it would be advisable to also carry on with bilateral meetings held online supplementing or preparing in-person meetings, visits or other events.

Selecting the list of events to run

Given Giga's growing visibility, the list of events to attend is also growing. To strategically select the events that support Giga's objectives, events need to be pre-assessed using a set of criteria included in the Selection Matrix.

- How well the proposed event serves the strategic objectives of Giga events?
- Whether the required investments, such as cost and human resources (including time) and probable achievable outcomes are reasonable?

- Whether there might be a less obvious factor that has a significant impact on the outcome of the event?

Planning and conceptualizing

Each event needs to have a Concept Note defining the event infrastructure, including its vision, objectives, expected outcomes, target group, messages to communicate, organizational modalities, KPIs, budget, communications (branding, social media, website), executing team, event technology, risk assessment and mitigation, timeline, evaluation of success. See below a guide for developing Event Concept Notes.

Launching and executing the event

Once the Concept Note is developed, the event can be launched. This includes communications to promote and follow the event, developing briefing packs and talking points, arranging display materials, supporting the executing team, monitoring technology and last-minute arrangements. Depending on the type and size of the event, tasks vary for this phase.

Closing and measuring event success

The event closes with preparing and sending out follow-up materials, thank you letters, and evaluation surveys in some cases. Success evaluation can be done by the organizing team and/or by the event participants. In any cases, lessons learnt, and conclusions of the event need to be compiled, filed and evaluated against event objectives, feeding valuable learning to future events.

Guide for Developing Event Concept Notes	
This document aims to provide a guide for any Giga staff engaged in designing and executing events. It includes a set of considerations to discuss and plan answers to. Any event needs strategic planning, and this framework can help set a standard for Giga's various events, varying from small bilateral ones to extra-large expos.	
1. Vision and Objectives	**Answers – Comments**
What is the vision of the event? What are the objectives? What does it want to achieve and how are those aligned with Giga's Comms Strategy and annual targets?	
2. Expected outcomes	
What are the expected outcomes?	
3. Target group	
What is the target group of the event? What key messages does the event want to communicate to them?	
4. Executing team	

Define executing team. Provide briefing packs and talking points as needed.	
5. Risk assessment and mitigation	
Identify risk factors that can hamper implementation and set alternative actions to mitigate them.	
6. Organizational modalities	
Is it going to be organized online, in-person and/or blended? What is the reasoning behind it?	
7. Timeline	
Define the timeline of the event execution. It is helpful for progressing backwards from the event's actual date.	
8. Budget	
Prepare budget including contingency planning based on your risk assessment.	
9. Milestones (KPIs)	
How will you monitor the execution process? Define KPIs to keep you on track.	
10. Communications	
Develop communications plan including branding, social media, and website management. Monitor communications activities ahead of, during and after the event.	
11. Event technology	
What technology will be used? Is it provided and controlled by the organizers? Clarify all unclear issues with the organizers and inform the executing team accordingly. Be ready for alternative solutions.	
12. Closing and Lessons learnt	
Assemble agreed upon next steps. Send out follow-up materials and thank you letters. Gather all useful lessons learned of the execution process that can be used in future events and strategies.	
13. Evaluation of success	
Evaluate the success of the event by sending out post-even surveys to participants, conducting internal debriefings, assessing outcomes against previously defined event objectives, looking at planned finances	

and actual spending, communications results (# and quality of hits, posts, articles, etc.)	
Summary	
The Concept Note of an event helps define the big picture. The picture that has the overall vision in mind along with key milestones and indicators. The strategy must be firm but also flexible. Able to change and adapt as situations change.	

Giga Strategic Events 2023 - Shortlist

The document includes the 2023 key strategic events to attend for Giga.

Event	Dates	Venue	Types of Events
Mobile World Congress	27th February - 2nd March 2023	Barcelona, Spain	Technical & Political Includes various speaking opportunities at high-level political and more technical levels, including several bilateral events with partners and government representatives.
WSIS World Summit on the Information Society Forum	March 13-17, 2023	Geneva, Switzerland	Technical & Political This is a key ITU annual event, with a separate session on Giga with high-level political and technical attendees.
ASU + GSV Summit Arizona State University + Global Silicon Valley Summit	April 17-19, 2023	San Diego, USA	Technical This is a new opportunity to showcase Giga to the academic community in the US and investors in research and technology for public good.
Transform Africa Summit Victoria Falls, Zimbabwe	April 26-28, 2023	Victoria Falls, Zimbabwe	Political and Technical There are 3-4 Giga speaking events scheduled, most of them under the Ministerial program.
Ambassador Lauber's High-level Event	May 10, 2023	Geneva, Switzerland	Political This is a high-level fundraising event for Giga offered by Ambassador Lauber.
World Telecommunication & Information Society Day	May 17, 2023	online	Political and Technical This is an online fundraising event lead by ITU in cooperation with Partner to Connect, exclusively targeting at mobilizing pledges for Giga.
GITEX Africa	May 31-June 2	Marrakech, Morocco	Political and Technical

			There are 3-4 Giga speaking events scheduled, most of them under the Ministerial program.
Giga Roadshow Switzerland	June 2023 (TBC)	Switzerland	Technical This is a week-long series of meetings with key players of the Swiss finance and technology ecosystems to showcase Giga and engage in future partnerships.
UN General Assembly (UNGA) including SDG Summit (UN High-level Political Forum on Sustainable Development (HLPF)	New York City, USA	September 12-30, 2023 (TBC)	Political and Technical This is the highest-level UN event where Giga is displayed as a champion of universal school connectivity.
Giga Roadshow Spain	October 2023 (TBC)	Spain	Technical This is a week-long series of meetings with key players of the Spanish technology ecosystem to showcase Giga and engage in future partnerships.
Building Bridges	October 2-5, 2023	Geneva, Switzerland	Political and Technical This is a key ITU event following up on the 2022 UNGA TES and showcasing Giga as a champion on universal school connectivity.
Africa Tech Festival - AfricaCom: Connectivity Infrastructure and Digital Inclusion	November 14-16, 2023	Cape Town, South Africa	Technical and Political This is a key digital inclusion event with a focus on Africa. Giga attended it in 2022 and has been invited in 2023 also. Provides opportunity for high-level meetings and showcasing Giga's work in digital inclusion.
NFT2.0 Auction with CfC. St. Moritz	December 2023 – January 2024 (TBC)	St. Moritz, Switzerland	Political and Technical This will be the second NFT auction for Giga with a number of High-Net-Worth Individuals present. Additional smaller preparatory events are also planned with limited communications tasks for Giga.

Annex 3: Content Strategy

About Content

Content refers to various communication products, each targeting specific audiences across different channels. They include, but are not limited to the following:

- Blogs
- Long-form articles
- Map stories
- Photo essays
- Factsheets
- Newsletters
- Reports
- Explainer videos
- Short-form videos
- Podcasts
- Talks
- Social media posts
- Twitter Spaces
- Brochures

When used purposefully, these kinds of content can educate, entertain, and inspire Giga's target audiences. With an engaged audience, we build a stronger brand, and we grow a following that's inspired to support our mission and spread the word about us.

Content Library

In order to produce these materials, it is essential to build a content library where *'content raw materials'* can be stored and accessed by everyone at who wishes to use them. Ideally stored in SharePoint, the library will include the following:

- Case stories
- Interviews (including quotes)
- Recordings of live events
- Photos
- Raw footage
- Giga Key Messages
- Brand and Style Guide
- Graphics Pack

Collecting Content

To build a solid library, regular content collection needs to be integrated in our work – and can be done in various modes including:

- **Giga story collection trips** – in-person content collection facilitated by the Comms team.
- **Remote content collection trips** - content collection involving in-country contractors, managed online by the Comms team
- **Partner-led content submissions** – content sent to the Giga team, sourced by partners (including UNICEF country offices) on the ground. Partner contracts could include requirements to submit stories, photos, and/or footage in specified time periods
- **Recording of events** – Recording of key highlights of talks and events attended by Giga staff and partners
- **Online Interviews** – Recorded interviews purely done online.
- **User-generated content** – Content generated by our beneficiaries – school leaders, teachers, and students. This will entail close guidance and training from the Comms the team, but it is a good way to get authentic content for our audiences. This is also in line with our mission of empowering communities through the Internet.

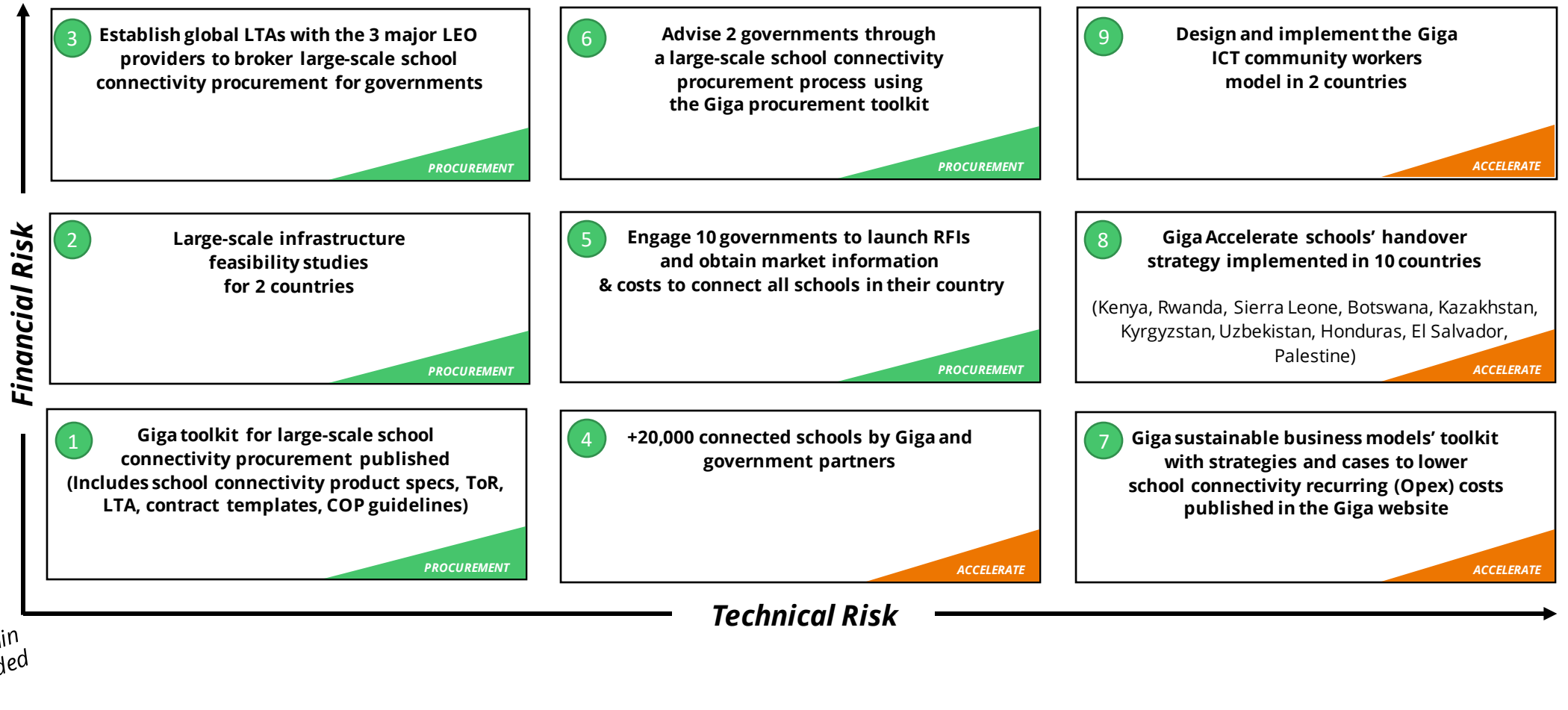
Giga

2023 Annual Work Plan

2023 - CONNECT

Priorities

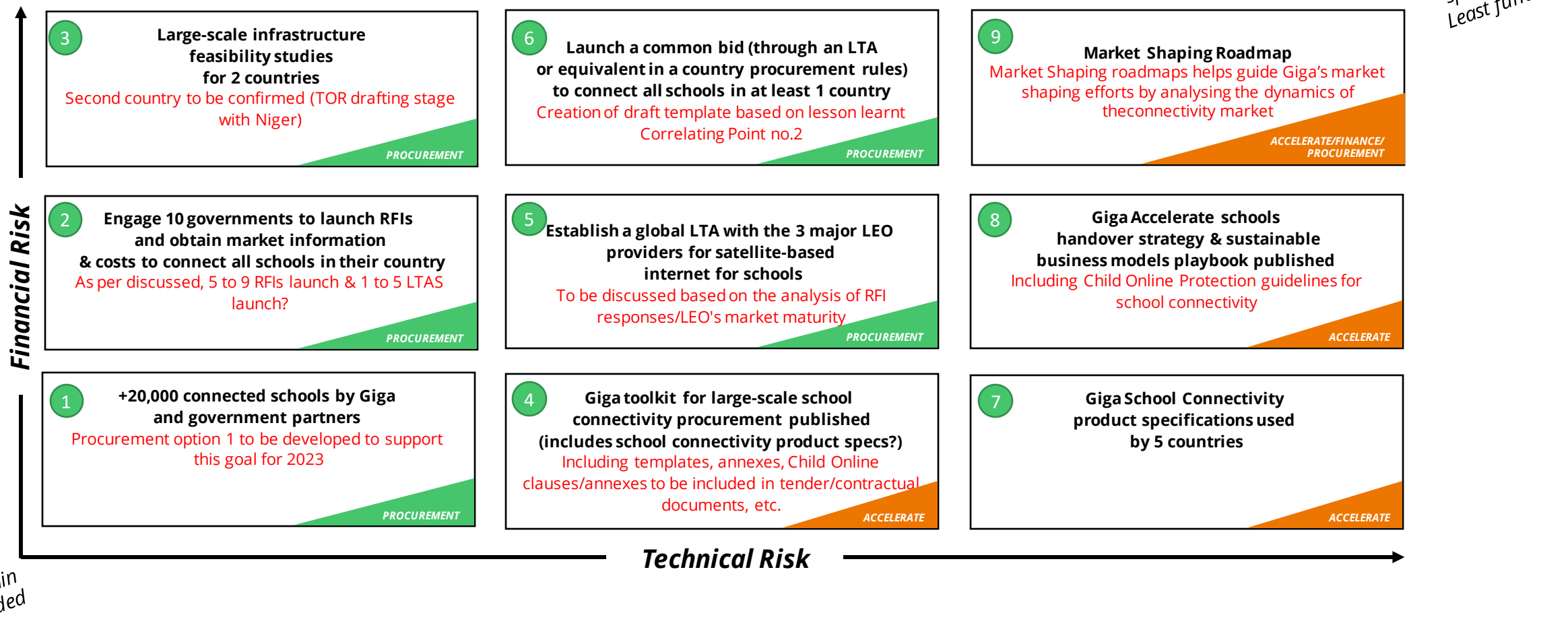
Draft for discussion



2023 - CONNECT

Priorities

Draft for discussion – Claire's inputs



2023 - CONNECT

Priorities

Draft SLT Input

Design and implement the Giga ICT community workers concept in 2 countries

Sounds great...what does this entail?

CNCT

Giga toolkit with strategies to lower school connectivity upfront (Capex) & recurring (Opex) costs published

How is this different from the SB< playbook? Ref of how we could explain journey towards lowering costs https://www.thecatalyst.org.uk/research/digital-journeys/

CNCT

Most speculative Least funded

3 Large-scale infrastructure feasibility studies for 2 countries

Action: Research, develop analysis and present to ...?

CNCT

6 Launch a common bid (through an LTA or equivalent in a country procurement rules) to connect all schools in at least 1 country

Action: Research, develop analysis and present to ...?

CNCT

9 Something related to market shaping?

Action: Host or join two major connectivity multi-stakeholder events to present Giga work and aims and receive feedback, support, etc..?.

CNCT

Financial Risk

2 Engage 10 governments to launch RFIs and obtain market information & costs to connect all schools in their country

Action: Provide technical assistance and best practice to design RFIs, collate market information

CNCT

5 Establish a global LTA with the 3 major LEO providers for satellite-based internet for schools

Action: Analyse the strengths and weaknesses of different LEO providers, match them with pilot schools and develop agreements that speak to the toolkit best practice (including exit strategy).

CNCT

8 Giga Accelerate schools handover strategy & sustainable business models playbook published

Action: Analyse current 1000 schools, identify areas and strategies for cost reduction and best practice for enabling equal access (installation, operation, partnership sup... etc,.)

CNCT

1 +20,000 connected schools by Giga and government partners

Support governments and partners to connect +20,000 schools

Action: Elicit commitment from Governments to join Giga objectives, monitor number of schools connected

End of 2022: 5,539

CNCT

4 Giga toolkit for large-scale school connectivity procurement published (includes school connectivity product specs?)

Action: Collate lessons learned and best practice, develop the toolkit and share in/with...?

CNCT

7 Giga school connectivity product specifications used by 5 countries

CNCT

Technical Risk

Most certain Most funded

Child Online Protection guidelines for school connectivity?

Yes! This would be the 1 product for schools in Giga? Consider including technical, process and behaviour (eg: awareness building of risks, stigma etc.)

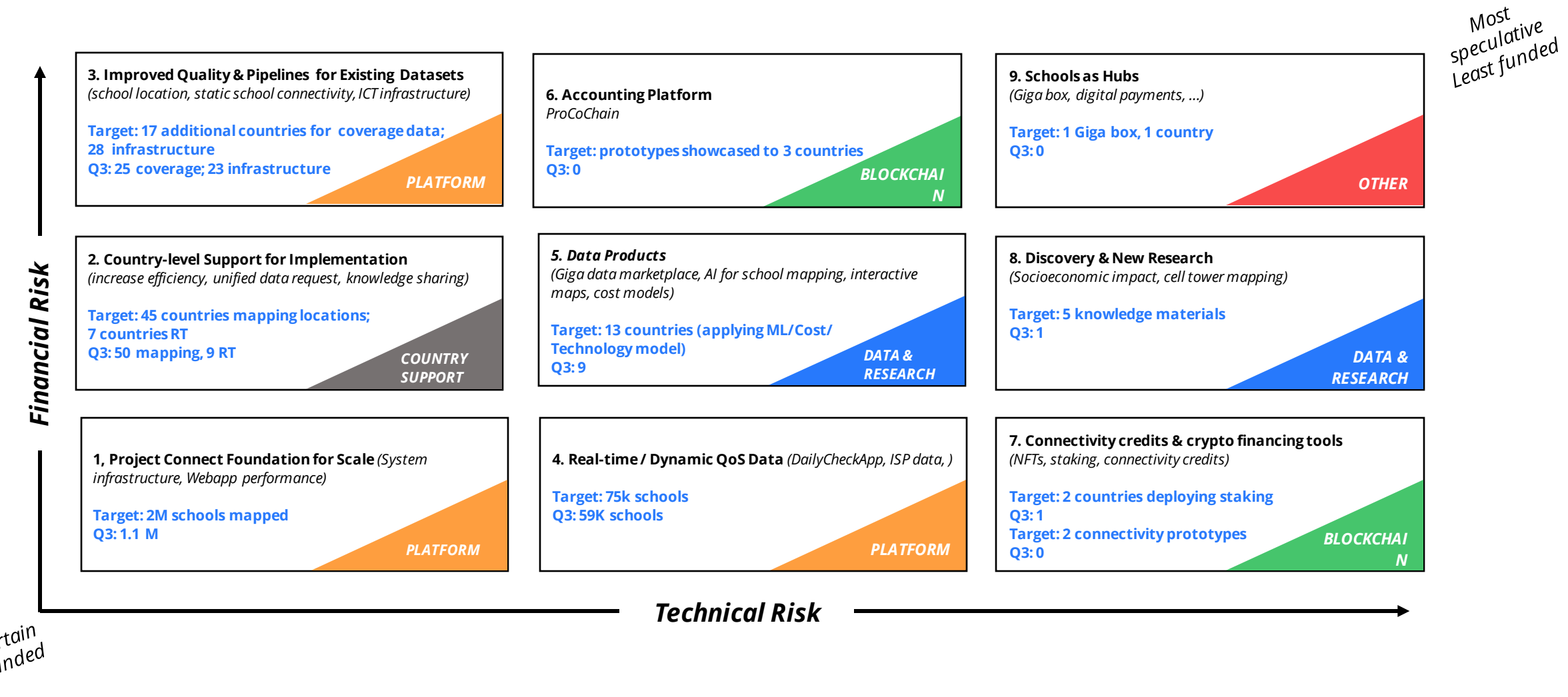
giga

Giga

2022 Annual Work Plan – Q3 Review

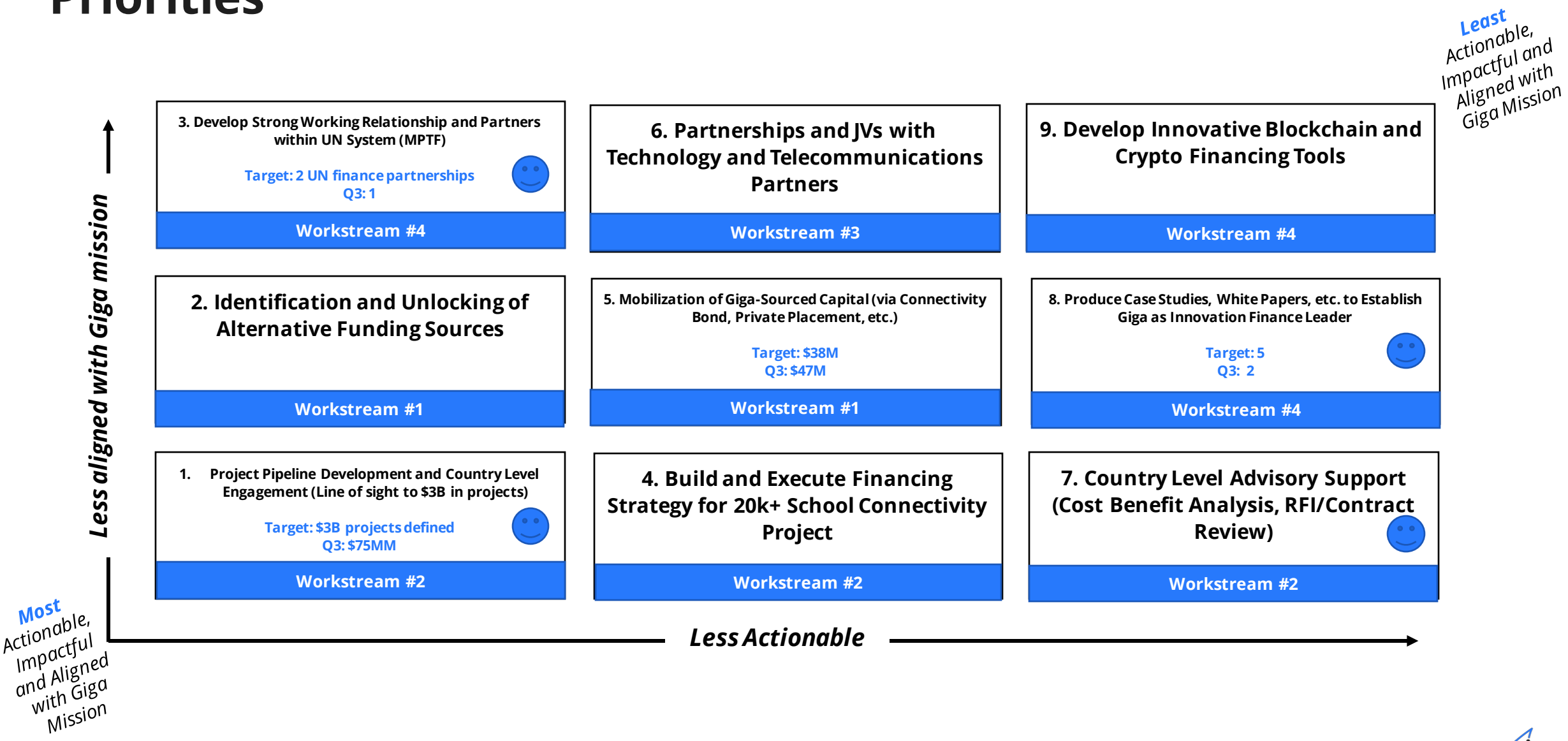
MAPPING & TECH

Priorities



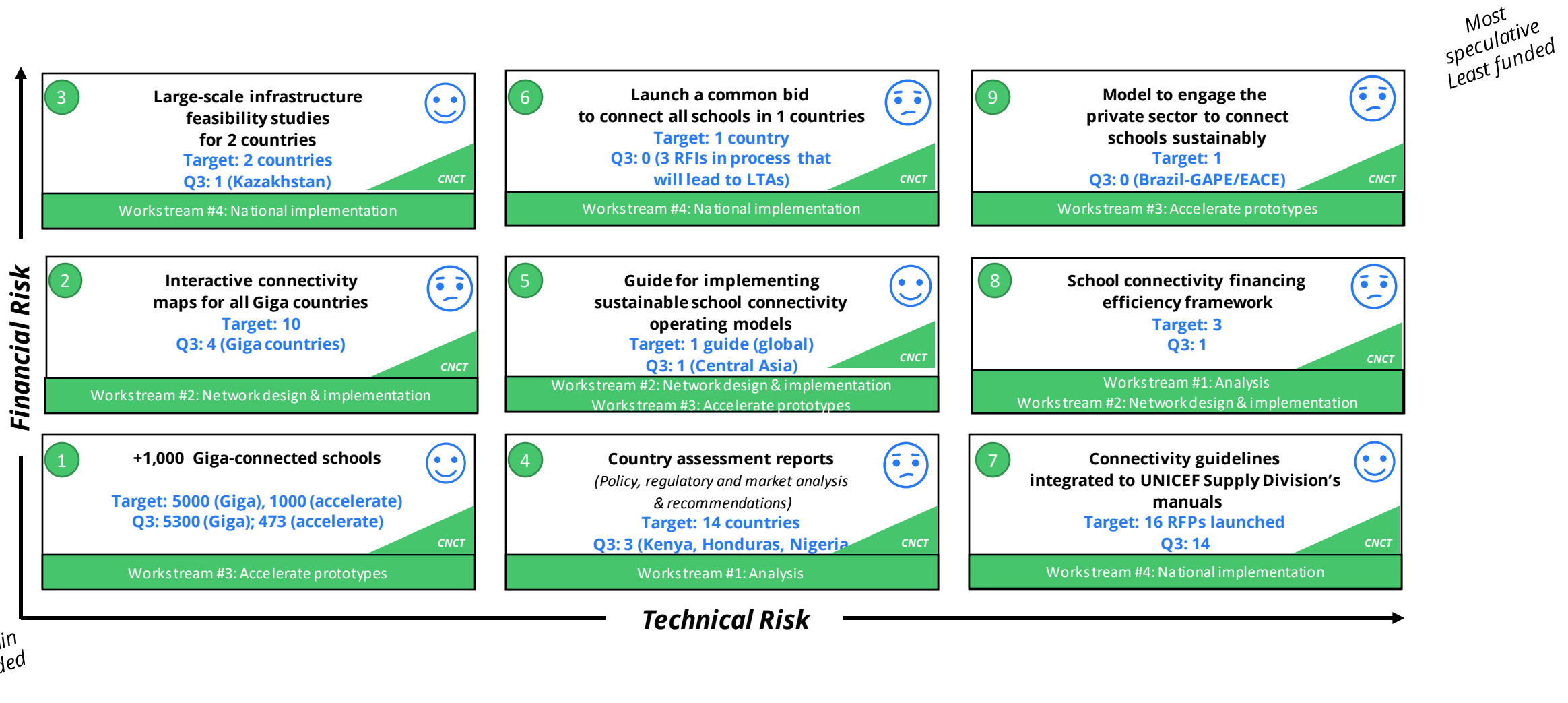
FINANCE

Priorities



CONNECT

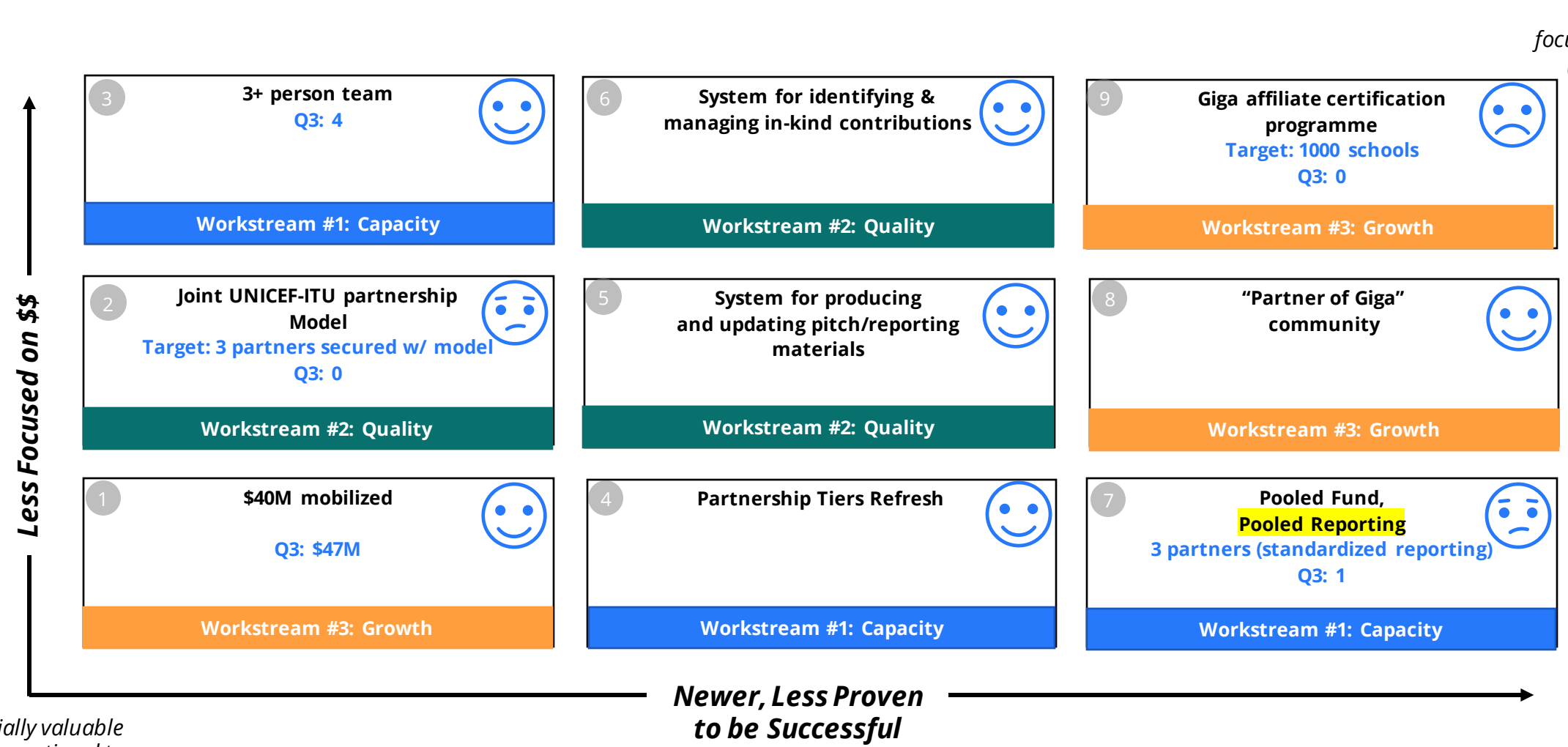
Priorities



GIGA 2022 WORK PLANNING

Partnerships Prioritization

Innovative and focused on alternative (non-$) value of partnerships



Financially valuable and conventional to resource mobilization

COMMUNICATIONS

Priorities

Most speculative
Least funded

Time / financial cost

3

2x followers on all social channels. TW engagement: > 2% (2021: 1.8%)
LI engagement: > 8% (2021: 7%)
Q3: x TW followers & x% engagement; LI x; x

6

Restructure website
Incl. new dedicated pages on Map, Finance and Connect

9

Raise >$1m from NFT and other direct fundraising campaigns

Q3: $700k

2

≥ 1 story per month print or broadcast media (Tier 1 international or Giga country national)
Target: 12
Q3: x

5

Giga features in 2 international events per month
Target: 24
Q3: x

8

≥ 1 joint activation per month with Giga partners
Target: 12
Q3: x

1

Giga core documents (narrative, slides, FAQs) updated quarterly

4

Build a cross UNICEF-ITU comms team: social; press; design; events.

7

New stories from Giga countries:
≥ 2 per month
Target: 24
Q3: x

Need others to help us

Most certain
Most funded

giga

GIGA 2022 WORK PLANNING

Team Priorities

Priority Programmes / Giga Pillars

MAP FIN CNCT EMPWR GLOBAL TECH

Most speculative Least funded

3. Web3 Layers under Map in ~4 countries (transact/account/apps) in Project Connect Q3: insert # of countries	6. Transition at least 2 countries from Accelerate to universal school connectivity Q3: Kazakhstan (98%); Kyrgyzstan (99%). In process: El Salvador, Botswana	9. Giga NFT2 released Q3: unlikely to launch this year, but moving forward with procurement process to build the concept for a launch next year.
2. Hosting by Switzerland and Spain, including personnel movement and location setup, and rebuild of Interim Advisory Group Q3: support secured – contracts signed.	5. 100M revolving capital vehicle identified and/or built Q3: $47M raised;$ $xx identified	8. Connectivity Credits alpha deployment in 2 countries Q3: progress not as expected at the beginning of the year, however, expecting some updates before the end of the year.
1. Project Connect (2M schools) with real time connectivity data (75k schools) and infrastructure mapping layers (for Tier 1 countries). Q3: 1.1M schools mapped; 57k schools RT; 23 countries Infrastructure maps (10 Tier 1 countries)	4. 11 Steps run through by in country Giga team in each tier 1 country (10M kids connected, policy/reg in each country, etc.) Q3: Kazakhstan (80%), Rwanda, Kyrgyzstan, Uzbekistan (70-80%), Kenya, Sierra Leone, El Salvador & Honduras (60%)	7. Certificate /training courses for capacity building for Giga on regulation, mapping, tech for gov't partners Q3: xxx

Financial Risk

Technical Risk

Most certain Most funded

giga

Giga

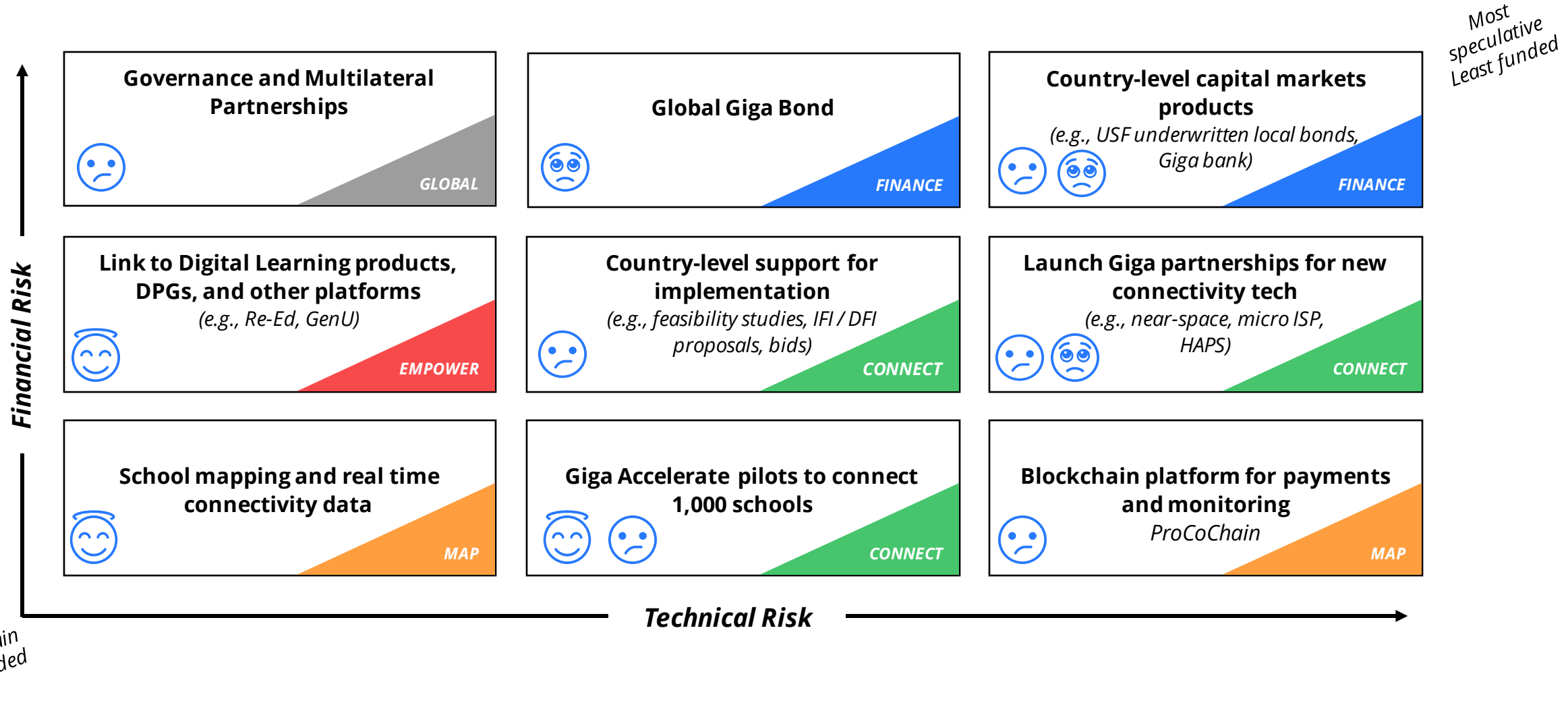
2022 Annual Work Planning

GIGA **2021** WORK PLANNING

Priorities

Priority Programmes / Giga Pillars

MAP | FIN | CNCT | EMPWR | GLOBAL



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GIGA 2022 WORK PLANNING

Team Priorities

Priority Programmes / Giga Pillars

MAP FIN CNCT EMPWR GLOBAL TECH

Most speculative Least funded

3. Web3 Layers under Map in ~4 countries (transact/account/apps) in Project Connect	6. Transition at least 2 countries from Accelerate to universal school connectivity	9. Giga NFT2 released
2. Hosting by Switzerland and Spain, including personnel movement and location setup, and rebuild of Interim Advisory Group	5. 100M revolving capital vehicle identified and/or built	8. Connectivity Credits alpha deployment in 2 countries
1. Project Connect (2M schools) with real time connectivity data (75k schools) and infrastructure mapping layers (for Tier 1 countries).	4. 11 Steps run through by in country Giga team in each tier 1 country (10M kids connected, policy/reg in each country, etc.)	7. Certificate /training courses for capacity building for Giga on regulation, mapping, tech for gov't partners

Financial Risk

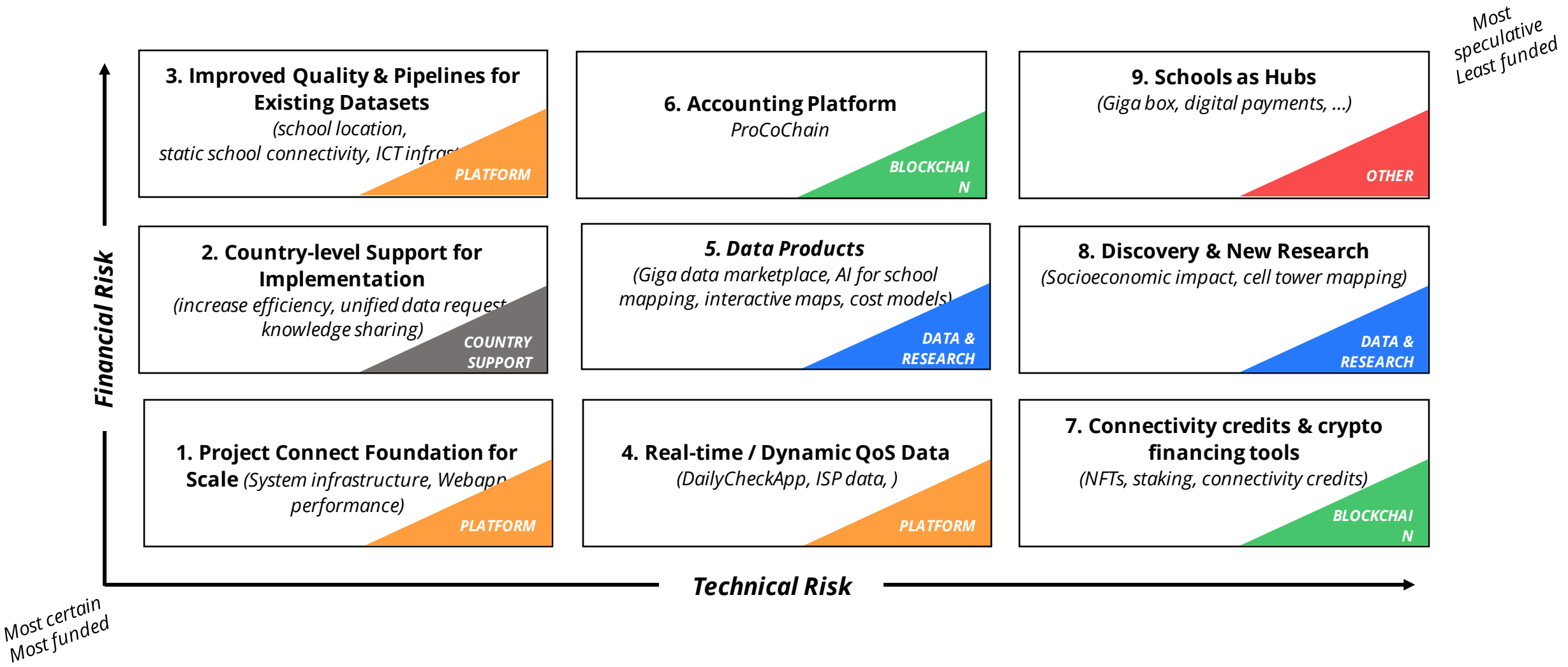
Technical Risk

Most certain Most funded

giga

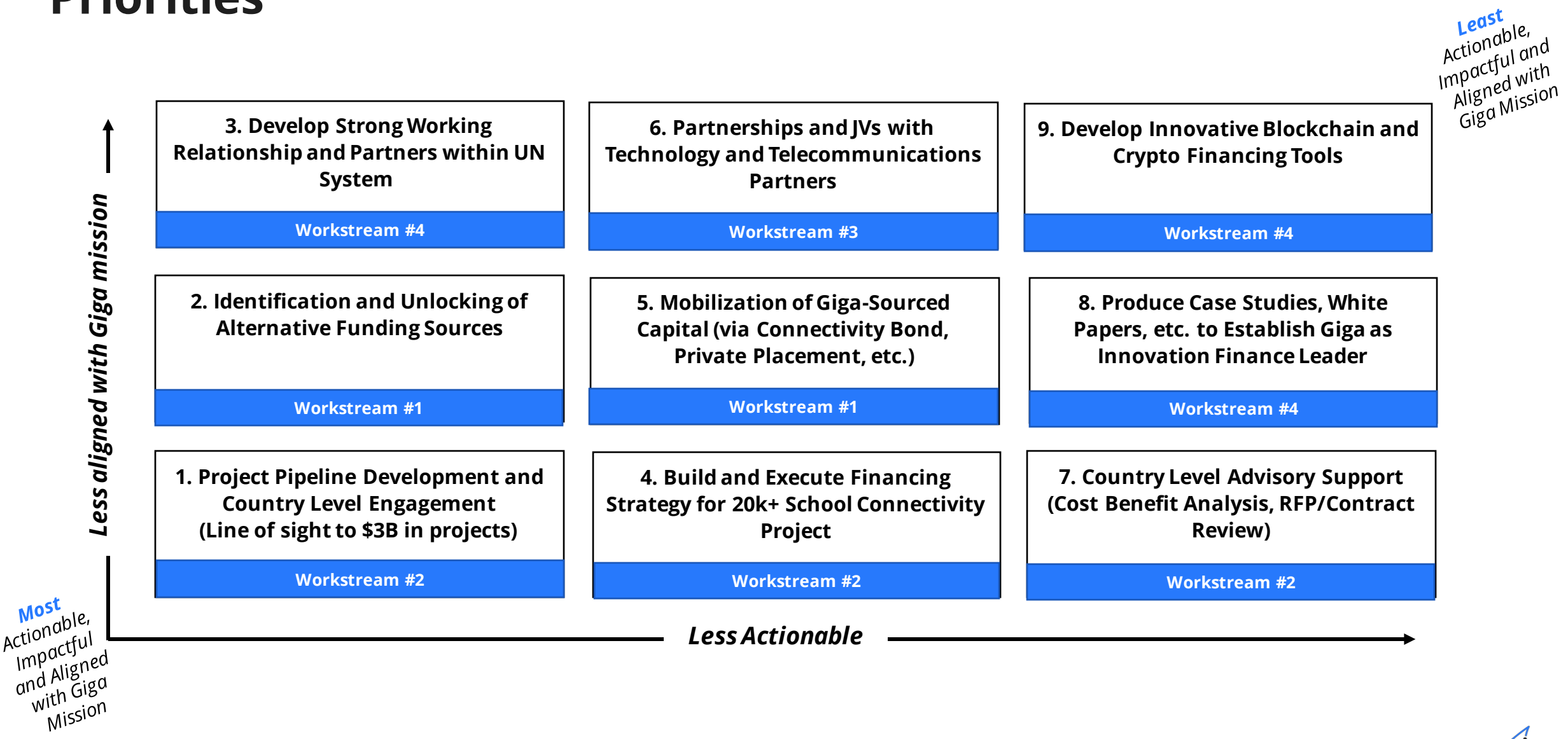
MAPPING & TECH

Priorities



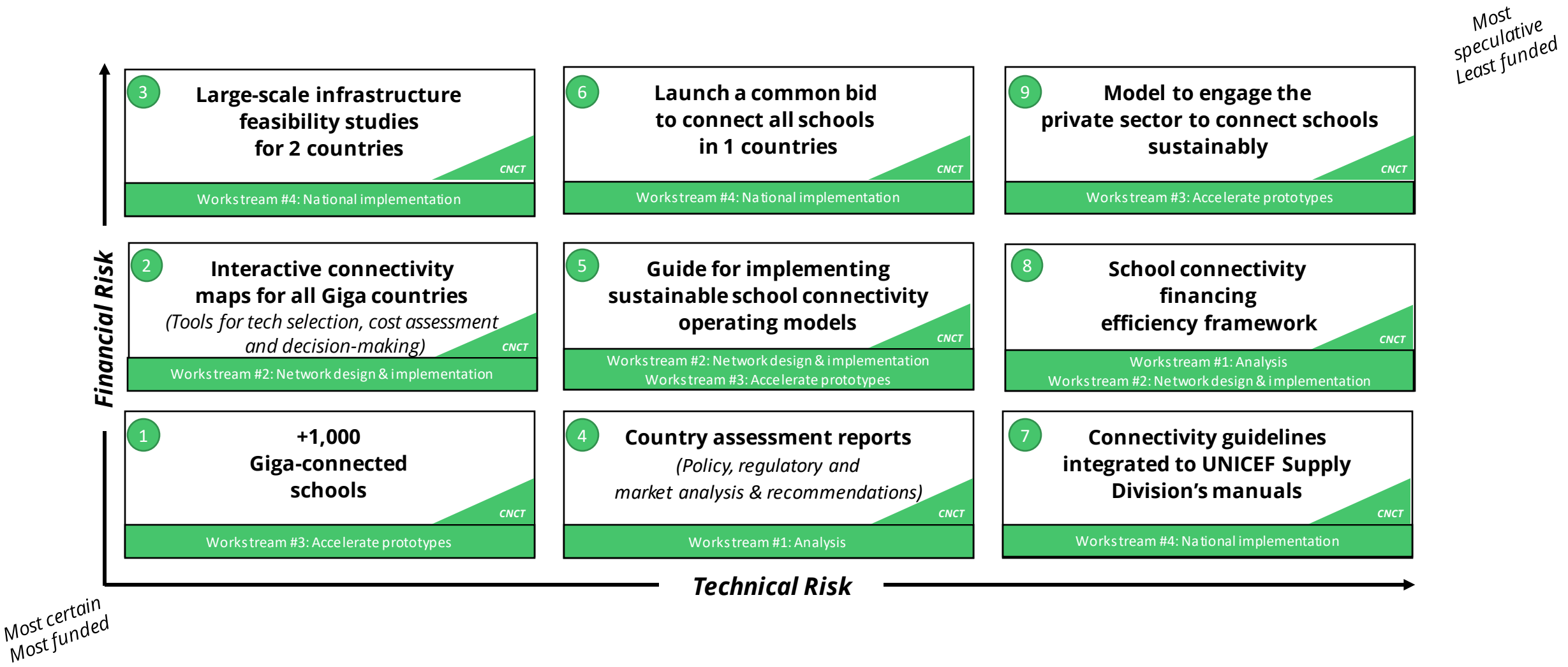
FINANCE

Priorities



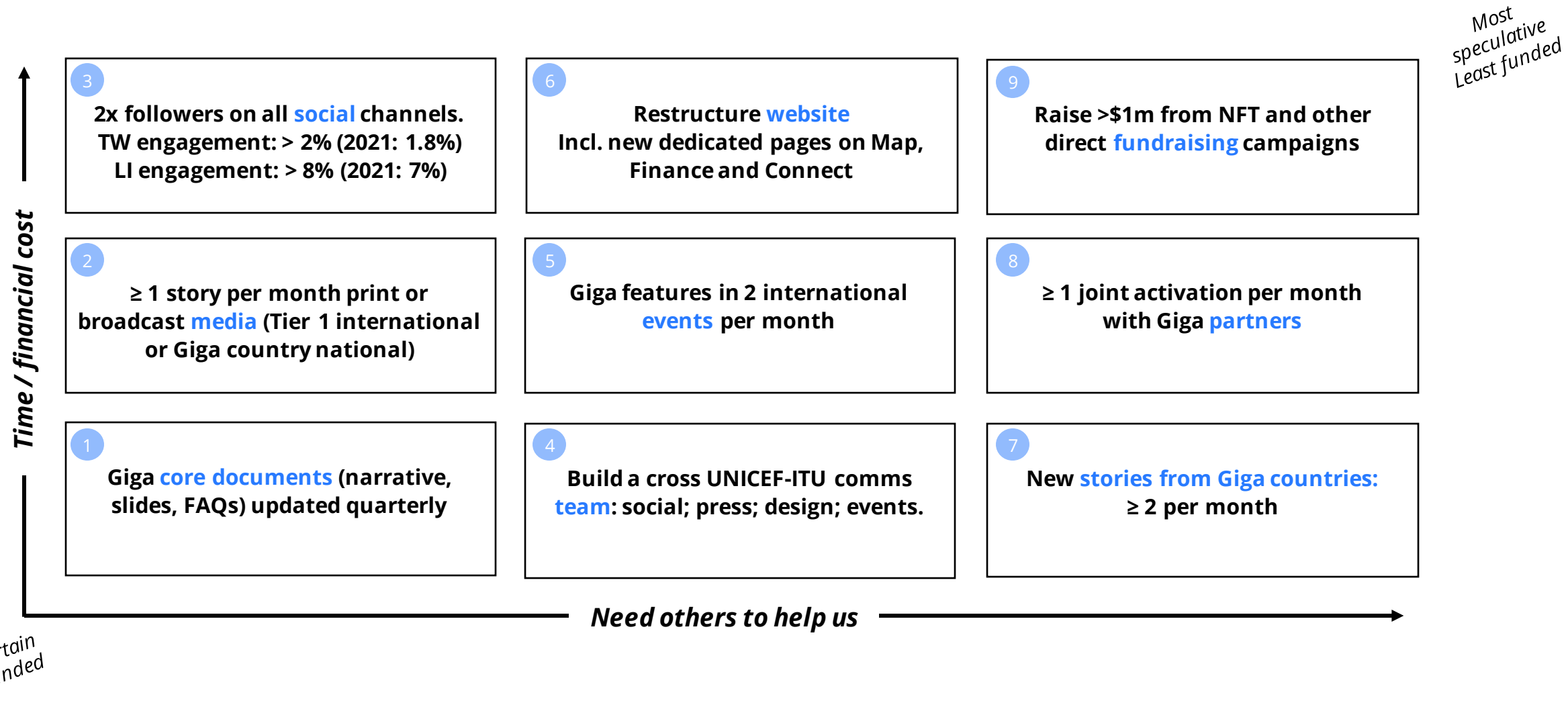
CONNECT

Priorities



COMMUNICATIONS

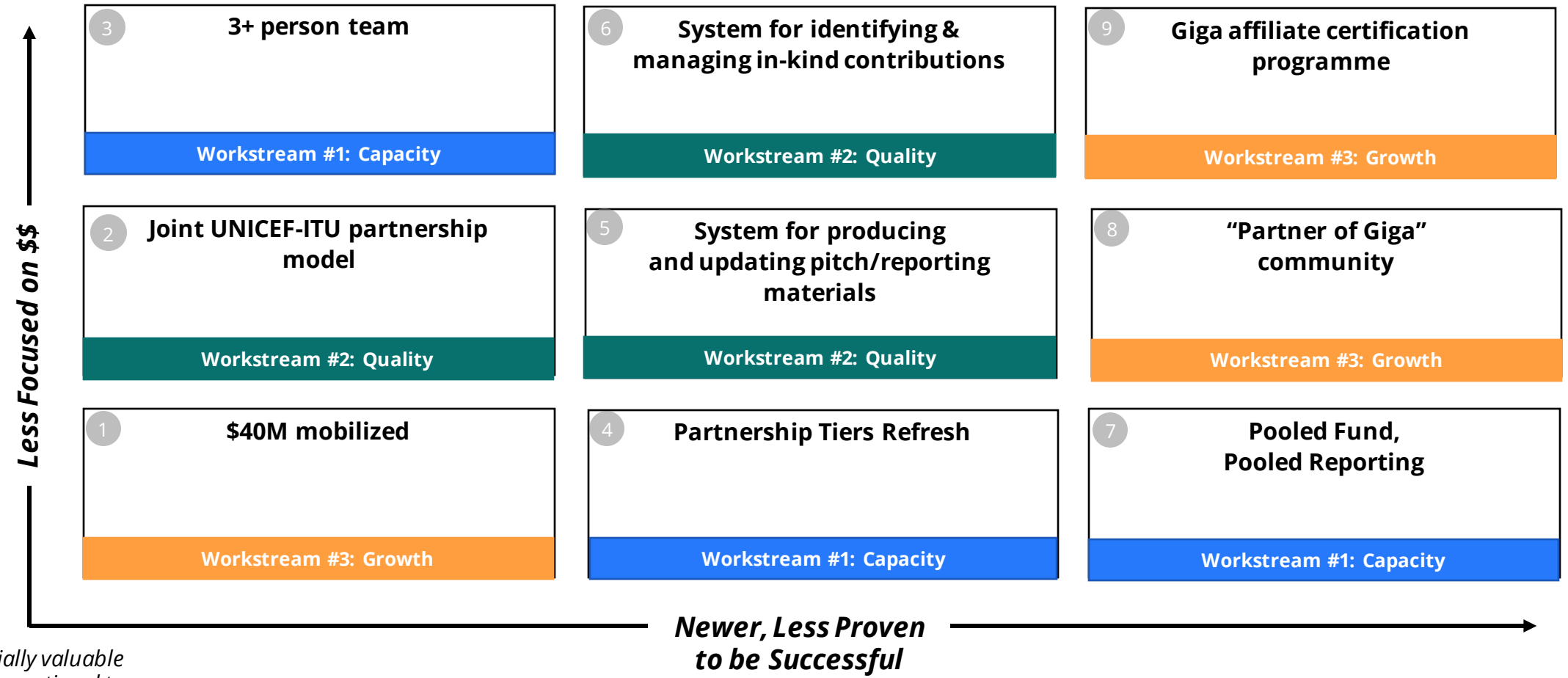
Priorities



GIGA 2022 WORK PLANNING

Partnerships Prioritization

Innovative and focused on alternative (non-$) value of partnerships



Financially valuable and conventional to resource mobilization

Annex
RBM framework

GIGA 2022 WORK PLANNING

CONNECT

	Objective(s)	Risks and planned actions	Indicators and targets

PRIORITY / RESULT
+1,000 Giga-connected schools
	• Connect +1,000 schools with a minimum of 10 Mbps, 20 Mbps / 1 Mbps per 20 students where feasible; online children safety measures; content filtering, connectivity accessible in all school premises; reporting real-time connectivity status & speeds to Project Connect.	• Risk: Lack of capacity at a country-level to effectively oversee the use of funding for connectivity implementation
		• Actions: Advise COs to appropriately allocate funding between procurement and resourcing; develop guidelines and documents for CO and government use to streamline procurement
			• Indicator 1: Number of schools connected to the internet (by Giga and partners)
			  • Baseline (by end of December 2021): 3,200 by Giga and partners and 186 by Giga Accelerate
			  • **Target (by end of Dec 2022): 5,000 (by Giga and partners) & 1,000 by Giga Accelerate prototypes**
			  • **Q2 Target value: 300**
			  • Means of verification: Country Office verification

PRIORITY / RESULT
Country assessment reports
	• Policy, regulatory and market assessment to identify barriers to ensure safe, secured and reliable school connectivity.
	• Actionable recommendations to country governments to ease market access for broadband deployment and attract & sustain public & private investment in school connectivity.
		• Risk: Uncompetitive market structures present an obstacle to the adoption of innovative technology and implementation of sustainable business models for school connectivity.
		• Actions: Provide governments and key stakeholders with assessments that identify major blockers for affordable school connectivity and kickstart policy and regulatory discussions.
			• Indicator 2: Number of country assessment reports:
			  • Baseline (by end of December 2021): 1 (BCG report & country case studies)
			  • **Target (by end of Dec 2022): 5 (Honduras, OECS (9 countries), Kenya, Nigeria, Sierra Leone)**
			  • **Q2 Target value: 1 country connectivity assessment**
			  • Means of verification: Analytical reports.

PRIORITY / RESULT
Connectivity guidelines integrated into UNICEF Supply Division's manuals
	• Use of Giga's standard for school connectivity (as a minimum) by UNICEF and partners in procurement processes, negotiations between governments and providers, etc.
	• Standardize the minimum requirements for meaningful & sustainable connectivity in the countries / regions where Giga is active.
		• Risk: Diverse minimum standards for school connectivity creates risks for learners' experience with internet to be unreliable
		• Actions: Promote Giga's standards for school connectivity in procurement processes led by Giga, in negotiations with providers and in all others where governments procure school connectivity.
			• Indicator 3: Number of school connectivity RFPs launched through UNICEF & according to guidelines
			  • Baseline (by end of December 2021): 11
			  • **Target (by end of Dec 2022): 5**
			  • **Q2 Target value: 1**
			  • Means of verification: Country Office Verification, partners

GIGA 2022 WORK PLANNING

CONNECT

	Objective(s)	Risks and planned actions	Indicators and targets

PRIORITY / RESULT
Interactive connectivity maps for all Giga countries
	• Create interactive connectivity maps for all Giga tier 1 countries and other countries as needed.
	• Use of last-mile internet connectivity solutions guide, ITU broadband map and ICT business planning toolkit to recommend technologies, models for school connectivity and provide cost estimations.
		• Risk: Countries do not provide information to feed the Giga data-based analytical tools, and decisions are made without considering mapping analysis.
		• Actions: Country engagement team will make other support conditional to governments sharing the required data, and this information will be used for decision-making using Giga tools.
			• Indicator 5: Number of Giga countries with an interactive connectivity map
			  • Baseline (by end of December 2021): 2
			  • **Target (by end of Dec 2022): 10**
			  • **Q2 Target value: 5**
			  • Means of verification: 1 self-paced training to deliver with the interactive connectivity mapping

PRIORITY / RESULT
Guide for implementing sustainable school connectivity operating models
	• Create a playbook with the results from Accelerate prototypes that considers different commercial models and operating set-ups to provide meaningful and sustainable connectivity.
	• Lessons and insights from testing different solutions.
	• Implementation guidelines for countries interested in sustainable business models.
		• Risk: Schools connected by Giga do not have the resources to continue paying for their connectivity services and get disconnected after one year
		• Actions: Implement at least 5 different business models to test in connected schools to assess which models have the potential to offset connectivity costs and produce a guide with lessons learned from implementation.
			• Indicator 6: Guide for sustainable school connectivity published
			  • Baseline (by end of December 2021): 0
			  • **Target (by end of Dec 2022): 1 guide published**
			  • **Q2 Target value: Lessons learned and insights from prototypes**
			  • Means of verification: Guide published in Giga's website

PRIORITY / RESULT
School connectivity financing efficiency framework
	• Leverage from the ITU-FCDO toolkit to provide guidance to country governments on the assessment, the financing, the support, the design, implementation, monitoring and evaluation of School Connectivity programmes.
	• Conduct training on the toolkit in at least 2 countries.
		• Risk: Competing priorities in public sector budgeting and social investing relegate school connectivity (especially for remote & rural areas) from government's spending plans.
		• Actions: Apply the school connectivity efficiency toolkit to assess and enhance the impact of investing public and private resources in school connectivity.
			• Indicator 7: Implementation of the school connectivity financing efficiency framework
			  • Baseline (by end of December 2021): 0
			  • **Target (by end of Dec 2022): 3 countries**
			  • **Q2 Target value: 1 countries**
			  • Means of verification: Training on the toolkit provided.

GIGA 2022 WORK PLANNING

CONNECT

	Objective(s)	Risks and planned actions	Indicators and targets

PRIORITY / RESULT
Large-scale infrastructure feasibility studies for 2 countries
	• Support the implementation of large-scale infrastructure projects for school connectivity through feasibility studies that assess the technical, economic and environmental aspects, as well as cost-benefits.	• Risk: Financing for large-scale school connectivity infrastructure projects need to consider the technical, economic and environmental feasibility of the proposed solutions.
		• Actions: Giga has established a Long-Term Arrangement with 3 firms specialized in producing feasibility studies for large-scale telecom projects.
			• Indicator 7: Number of feasibility studies for large-scale infrastructure projects
			  • Baseline (by end of December 2021): 1 (Kazakhstan)
			  • **Target (by end of Dec 2022): 2**
			  • **Q2 Target value: ToRs for 2 feasibility studies**
			  • Means of verification: Giga Steering Committees

PRIORITY / RESULT
Launch a common bid to connect all schools in 1 country
	• Advise a country's government through a large-scale procurement process to connect all schools.
	• Use Giga mapping tools to recommend optimal network design, tech selection and cost estimates.
	• Provide all inputs needed to build a country-level financing strategy.
		• Risk: Giga continues as a small-scale school connectivity initiative
		• Actions: Create the analytical and financial tools needed to support a country's national-scale school connectivity roll-out.
			• Indicator 8: Number of countries at national-scale implementation
			  • Baseline (by end of December 2021): 0
			  • **Target (by end of Dec 2022): 1**
			  • **Q2 Target value: 0**
			  • Means of verification: Country Office Verification

PRIORITY / RESULT
Model to engage the private sector to connect schools sustainably
	• Implement a proof-of-concept model to test new technologies and engage operators and tech companies to connect schools sustainably up to Giga's standards and guidelines.	• Risk: Every school connected by a Giga Accelerate prototype adds financial risk to the initiative if they are not capable of covering their connectivity service fees after being connected.
		• Actions: Leverage Giga's lessons learned in the Accelerate prototypes and create a proof-of-concept model for operators to connect schools sustainably.
			• Indicator 9: Proof-of-concept model for school connectivity sustainability
			  • Baseline (by end of December 2021): 0
			  • **Target (by end of Dec 2022): 1 model developed with operators engaged to implement it.**
			  • **Q2 Target value: Identification of interested operators**
			  • Means of verification: Press releases, programme documents, or other forms of verification

GIGA, MAPPING & TECH 2022 WORK PLANNING

PLATFORM

PRIORITY / RESULT	Objectives	Indicators & Targets	Team and Key Partners
Project Connect Foundation for Scale *PLATFORM*	• Map all schools • Improve system infrastructure and team collaboration processes/tools • Enhance Webapp (v1) for low bandwidth environments	**Map Indicator 1: # of schools mapped** Baseline: 1M (by end of 2021) **Target 2022: 2M schools mapped** **Q2 Target value: 1.3M** Means of verification: ProCo	• Primary: TBD • Team: Yonas, ICTD person, Data Engineer, Kwang, UX Specialist • Internal: ICTD, Cross-functional Giga team requirements • External: Cloud provider (Azure/AWS), countries, BI Tool / System Provider
Improved Quality & Pipelines for Existing Datasets *PLATFORM*	• Improve & automate data ingestion and quality workflows for school location data • Data accuracy metrics defined • Automate school coverage data workflows • Build ICT infrastructure data ingestion and quality workflows	**Map indicator 2: # of countries with school coverage data available on ProCo and ICT infrastructure data ingested** Baseline: 12 coverage data; 18 infrastructure data (by end of 2021) **Target 2022: 17+ coverage data; 28 infrastructure data** **Q2 Target value: 15 coverage data; 22 infrastructure data** Means of verification: ProCo, infrastructure maps	• Primary: TBD • Team: Data Engineer, Yonas, Iyke, Shilpa, Oguz, ICTD person, Kwang, UX Specialist • Internal: ICTD, Giga Country Team • External: Ericsson, Facebook, GSMA, IHS Towers

PLATFORM

PRIORITY / RESULT

Real-time / Dynamic QoS Data

PLATF ORM

Objectives

- Develop new measurement solutions (Daily Check App)
- Establish data sharing agreements with providers
- Create QoS data standards and aggregations

Indicators & Targets

Map Indicator 3 : # of schools with dynamic QoS in countries
Baseline: 45,000 schools (by end of 2021)
Target 2022:75,000 schools
Q2 Target value: 50,000
Means of verification: ProCo

Team and Key Partners

- Primary: Ihar, TBD
- Team: Yonas, Gerben, Data Engineer, ICTD person, Data Scientist (tbd)

- Internal: ICTD, Giga Country Team
- External: Ericsson, providers (Liquid, AFCOM, ...), mLab

GIGA, MAPPING & TECH 2022 WORK PLANNING

DATA & RESEARCH

PRIORITY / RESULT	Objectives	Indicators & Targets	Team and Key Partners
Data Products (D & R)	• Create a data marketplace for Giga • Access levels and licensing are defined for each dataset • Create API for school location • Designing data and tech stack and best practices for data team • Global Giga data consortium framework defined • Package existing models and analysis so that they are easily replicable	**Map Indicator 4: # of countries implementing ML/Cost/Technology model** Baseline: 8 countries (by end of 2021) **Target 2022: 13 countries** **Q2 Target value: 10 countries** Means of verification: report, blog post	• Primary: Shilpa • Team: Dohyung, Iyke, Ihar, Oguz, Data Engineer, Kwang, UX Specialist • Internal: Giga Accelerate, Finance teams • External: Mapbox, ACTUAL
Discovery & New Research (D & R)	• Improve existing AI models for school mapping • Extend existing feature extraction models to new types of infrastructure • Validate the hypothesis of positive impact of connectivity on socio-economic development	**Map Indicator 5: # of knowledge materials developed** Baseline: 3 (by end of 2021) **Target 2022: 5** **Q2 Target value: 3** Means of verification: reports/ research paper	• Primary: Dohyung • Team: Iyke, Shilpa, ICTD person, Data Engineer • Internal: • External: Omdena, Jumia, Jobzi,

BLOCKCHAIN

PRIORITY / RESULT	Objectives	Key Results	Team and Key Partners
Accounting Platform BLCK	• Build initial prototype to proof the concept • Develop domain expertise on SLAs and accounting • Playbook with regulatory framework and SLAs for ISPs and internet connectivity for 2-3 countries, as well as data inputs necessary for its accounting • Work with selected Giga countries to adapt and pilot solution	**Map Indicator 6: Functioning prototype developed and showcased to countries** Baseline: 0 (by end of 2021) **Target 2022: 3** **Q2 Target value: 0** Means of verification: Working prototype, country feedback	• Primary: Gerben • Team: Ihar, Kwang, UX Specialist • Internal: Giga Country team, Accelerate • External: Ethereum Foundation, vendor
Connectivity credits & crypto financing tools BLCK	• Further explore NFTs for fundraising and community engagement • Prototype innovative financing tools (i.e. staking) for financing school connectivity • Create a marketplace for connectivity (connectivity credits) • V0 of a connectivity scoring system	**Map indicator 7: # of countries deploying nodes (staking)** Baseline: 0 (by end of 2021) **Target 2022: 2 countries** **Q2 Target value: 1** Means of verification: **Map indicator 8: # of Giga connectivity token prototypes in countries** Baseline: 0 (by end of 2021) **Target 2022: 3 prototypes in 3 countries** **Q2 Target value: 0** Means of verification: prototype developed	• Primary: Gerben • Team: Vladimir, Kwang, UX Specialist • Internal: Giga Country team, Finance team, Natcoms, PFP • External: Ethereum Foundation, Snowcrash, vendors, Lemann Foundation

GIGA, MAPPING & TECH 2022 WORK PLANNING

COUNTRY SUPPORT

PRIORITY / RESULT

Country-level Support for Implementation

COUN TRY

Objectives

- Increase efficiency when doing mapping in a country (less resources, less time)
- Unify different data requests and data related country engagements (school data, ICT infrastructure data)
- Create a space for knowledge sharing and collaboration across countries

Key Results

Map indicator 9: # of additional countries mapping locations and real-time data
Baseline: 41 (by end of 2021)
Target 2022: +5 countries school locations; +6 Countries RT
Q2 Target value: +3 countries; +2 countries
Means of verification: ProCo

Team and Key Partners

- Primary: Country mapping coordinator
- Internal: Aditi, Claire, Gerben, Dohyung, Vladimir
- External: Country governments, local stakholders

OTHER

PRIORITY / RESULT

Schools as Hubs

OTHR

Objectives

- Demonstrate the potential of schools as nodes once they get connected
- Pilot payments solution with Jumia
- Models for 'empower' type of data/blockchain product engagements defined

Key Results

Map indicator 10: # of Giga box build and showcased in countries
Baseline: 0 (by end of 2021)
Target 2022: 1 Box, 1 country
Q2 Target value: 0
Means of verification: report, blog post

Team and Key partners

- Primary: Naroa
- Team:

- Internal: Accelerate
- External: Jumia, NYU

GIGA FINANCE 2022 WORK PLANNING

CAPITAL FORMATION AND PIPELINE DEVELOPMENT

Priority	Objectives	Indicators & Targets	Team, Partners, Risks
Mobilization Project Capital Directly and via Alternative Sources	• Mobilize $1B, including significant Giga-source capital via connectivity bond issuance or private placement. • Mobilize incremental $2B in alternative financing sources for connectivity projects	**Finance Indicator 1: $ amount sourced by Giga** Baseline: $27M (by end of 2021) **Target 2022: $3B** **Q2 Target value: $0** Means of verification: Sum commitment amounts	• Primary: Joakim, Paul • Team: to be hired • Internal: PPD, PFP, Accelerate • External: WEF, IDB, AIIB, WB, IFC, Citi Risks: • Inability to identify and engage with decision-makers at sovereigns and others key donor partners • Unwillingness by PPD to lean into Giga advocacy due to competing interests or other reasons • Inability to define projects and demonstrate the capacity to deliver them; general lack of government buy in
Project Pipeline Development and Country Finance Engagement	• Define project pipeline, creating line of sight to $3B in executable projects • Build and execute financing strategy for 20k+ school connectivity project • Identify key internal partners and make targeted outreach; create dashboard to track country-level progress for finance objectives	**Finance Indicator 1: $ amount projects defined** Baseline: $0M (by end of 2021) **Target 2022: $3B** **Q2 Target value: $0** Means of verification: Sum project sizes	• Primary: Karina, Paul • Team: to be hired • Internal: Country Offices, Accelerate, Mapping, ITU • External: Cost Model Vendor (tbd) Risks: • Inability to secure the market inputs or tools to produce tenable cost estimates for Giga projects • Inability to engage the market for feedback • Inability to provide value-add solutions around, procurement, technology choices and project execution • Limited engagement by country offices; inability to demonstrate finance value-add

GIGA FINANCE 2022 WORK PLANNING

PARTNERSHIPS AND JVs

Priority

Establish Giga as an Innovation Finance Leader Internally and Externally

Objectives

- Produce case studies, white papers that Giga can point to as examples of successful projects
- Collaborate with value-add partners within the UN community (UNCDF, UNICEF USA Impact Fund, etc.)
- Develop target map and outreach strategy for key finance partners
- Develop innovative sustainable business models including elements like blockchain and crypto financing tools

Indicators & Targets

Finance Indicator 3: White papers or case studies
Baseline: 2 (by end of 2021)
Target 2022: 5
Q2 Target value: 0
Means of verification: Giga website

Finance Indicator 4: UN Finance partnerships
Baseline: 0 (by end of 2021)
Target 2022: 2
Q2 Target value: 0
Means of verification: Finance team verification

Finance Indicator 5: Business model innovations
Baseline: 0 (by end of 2021)
Target 2022: 1
Q2 Target value: 0
Means of verification: Finance team verification

Team, Partners, Risks

- Primary: Paul, Karina
- Team: to be hired

- Internal: Accelerate, Mapping, Partnerships, Giga Leadership
- External: Private Sector Partners (TBD), UN agencies

Risks:
- Inability to share examples of delivered projects
- Decline in CSR-related funding/focus; confidentiality issues
- Extended focus on humanitarian efforts

GIGA COMMS 2022 WORK PLANNING

COMMS

PRIORITY / RESULT	Objectives	Indicators & Targets	Team, Key Partners, Risks
Stories about the need for school connectivity and Giga's role in delivering it.	• ≥ 2 per month new stories (videos, blog posts etc.) from Giga countries, preferably featuring teachers and students • ≥ 1 story per month print or broadcast media (Tier 1 international or Giga country national)	**Comms Indicator 1: # Stories published on website** Baseline: approx. 10 (2021 figure) **Target 2022: 24** **Q2 Target value: 12** Means of verification: Website **Comms indicator 2: # Stories in print or broadcast media** Baseline: approx. 5 (2021 figure) **Target 2022: 12** **Q2 Target value: 6**	• TEAM: Comms Lead; SM Manager; ITU Comms (Beatriz) • KEY PARTNERS: UNICEF Country Offices and ITU Regional Offices; DGCA. • RISKS: difficulty getting air-time vs. major crises (like Ukraine); persuading COs and ROs to devote resource to developing stories.
Partners and governments persuaded to support Giga	• ≥ 1 joint activation per month with Giga partners • Giga features in 2 international events per month	**Comms indicator 3: # joint activations with partners** Baseline: approx. 6 (2021) **Target 2022: 12+** **Q2 Target value: 6+** Means of verification: Giga Twitter feed **Comms indicator 4: # events featuring Giga** Baseline: approx. 20 (2021) **Target 2022: 24+** **Q2 Target value: 10+** Means of verification: Giga Twitter feed / comms calendar	• TEAM: Comms Lead; SM Manager; ITU Comms (Beatriz); Partnerships Team • KEY PARTNERS: 14 partners; PFP; DGCA, UNSG Office. • RISKS: partnership bureaucracy overwhelms capacity to deliver external content. • NOTE: mid-way target deliberately less than half due to high number (c.8) of events expecting during UNGA week in September.
Follower growth and high engagement on social media channels	• x2 followers on all social channels. • Twitter engagement rate: > 2% (2021: 1.8%) • LinkedIn engagement tate: > 8% (2021: 7%)	**Comms indicator 5: SM follower growth** Baseline: TW 4152, LI 1972, IG 1036 (by end of 2021) **Target 2022: TW 8304 LI 3944 IG 2072** **Q2 Target value: TW 6228 LI 2956 IG 1554** Means of verification: SM analytics **Comms indicator 6: SM engagement rates** Baseline: TW 1.8%, LI 7% (2021 avg) **Target 2022: TW >2%, LI >8%** **Q2 Target value: as above** Means of verification: SM analytics	• TEAM: Comms Lead; SM Manager; ITU Comms (Beatriz) • KEY PARTNERS: UNICEF and ITU global channels; Country and Regional Offices; 14 partners. • RISKS: follower growth leads to lower engagement rates (a common phenomenon as followers are less close to day-to-day of project).

Full Partnerships Q2 Update Document - here

GIGA PARTNERSHIPS 2022 WORK PLANNING

PARTNERSHIPS

PRIORITY / RESULT	Objectives	Indicators & Targets	Team, Key Partners, Risks
Build a strong foundation to accommodate growth	• Grow team to 3+ people • Partnership tiers refresh • Pooled fund, pooled reporting	**Partnerships Indicator 1: # of full-time team members supporting Giga Partnerships** Baseline: 1 (2021) **Target 2022: 3** **Q2 Target value: 3** Means of verification: Contracts **Partnerships Indicator 2: # of partners brought on with standardized tiered system / reporting** Baseline: 0 (2021) **Target 2022: 3** **Q2 Target value: 1** Means of verification: Partnership agreements	• Team: Sophia (Lead), Galileo • Key Partners: PFP, select NatComs • Risks: Dependencies on Operations and Legal teams to set up the pooled fund and approve all corresponding documentation
Improve coordination to produce better inputs / outputs	• Develop new branded "packages" to attract partners focused on specific themes or outputs • Develop a system for identifying and managing in-kind contributions sustainably • Joint UNICEF-ITU partnership model	**Partnerships Indicator 3: # of partners (financial) secured through ITU partnership agreements for Giga (100%)** Baseline: 0 (2021) **Target 2022: 3** **Q2 Target value: 0** Means of verification: Partnership agreements	• Team: Krister (Lead) • Key Partners: ITU Partnerships-enabling teams • Risks: TBD • Note: Sophia collect necessary info from Krister after the workplanning session with Alex and Chris, planned for Week of April 18
Capture alternative value and create new partnership opportunities	• Giga affiliate certification programme • Build "Partner of Giga" community • Develop well-designed, strategic pitch and proposal templates • Create intra-UNICEF resource library for Giga partnerships	**Partnerships Indicator 3: # schools recognized as connected by a Giga affiliate** Baseline: 0 (2021) **Target 2022: 1,000** **Q2 Target value: 0** Means of verification: Project Connect (ideal), manual record (back-up) **Partnerships Indicator 4: $$ mobilized through partnerships** Baseline: $27M (2021) **Target 2022: $40M** **Q2 Target value: $30M** Means of verification: Partnerships Master Tracker	• Team: Sophia, Mauricio, Galileo • Key Partners: PFP, Project Connect team • Risks: technical capability to operationalize the tracking of school connectivity; potential pushback from PFP due to perceived cannibalization of potential partners

Full Partnerships Q2 Update Document - here

Q2 UPDATE

PARTNERSHIPS

Objective	Key Result/Priority	Strategies	Indicators / Targets	Q2 Update

Capacity
 	
Build a strong foundation to accommodate growth
	Grow team to 3+ people	• Hire / onboard Account Manager
		• Hire / onboard Partnerships Strategist
		• Hire / onboard ITU Partnerships Specialist
		• Set-up internal reporting, project management system, and team meeting structure
			# of full-time team members supporting Giga Partnerships
			Baseline: 1
			Q2 Target: 3 - ***Complete***
			Q4 Target: 3
				• Three team members onboarded
				• Partnerships team coordination in place:
				  • Trello for progress tracking
				  • Biweekly meetings
				  • Slack channel

	Partnership tiers refresh	• Redevelop tiers and corresponding benefits • Pressure test with PFP / NatComs to refine and improve	# of partners brought on with standardized tiered system / reporting Baseline: 0 Q2 Target: 1 – ***Off track (0)*** Q4 Target: 3	• Tiers developed and summary doc uploaded to Repository site • Next Step: update website to differentiate current partners by tier
	Pooled fund, pooled reporting	• Create pooled report template and process for annual / bi-annual development • Set up a pooled fund		• Partner reporting schedules all synchronized (pooled and non-pooled) • Pooled impact indicators in development • Next Step: proceed with pooled report development to leverage across pooled *and* non-pooled partners • Risk: Pooled Fund mechanism on-hold pending host country set-up

Full Partnerships Q2 Update Document - here

Q2 UPDATE

PARTNERSHIPS

Objective	Key Result/Priority	Strategies	Indicators / Targets	Q2 Update
Quality Improve coordination to produce better inputs / outputs	System for producing and updating pitch/reporting materials	• Develop new branded "packages" to attract partners focused on specific themes or outputs • Create system for updating / improving on an ongoing basis, including a process for sharing with NatComs and PFP regularly	N/A	• Core set of pitch products developed and made available on Repository site • Next Step: share as resource to NatCom contacts
	System for identifying & managing in-kind contributions	• Develop a system for identifying and managing in-kind contributions sustainably • Identify easy, low-effort "asks" to drive partner engagement		• Initial framework for in-kind contribution types developed • Next Step: build external-facing products to communicate in-kind needs and collab process
	Joint UNICEF-ITU partnership model (Krister)	• Develop corresponding ITU pitch and proposal materials • Develop pipeline for ITU partnerships on Giga	# of partners (financial) secured through ITU partnership agreements for Giga (100%) Baseline: 0 Q2 Target: 0 – ***On track*** Q4 Target: 3	• Draft ITU product pitches in progress • Identification of ITU partner pipeline in progress • Next Steps: finalize product pitches; setup operational mechanism for joint-collaboration on partnerships

Full Partnerships Q2 Update Document - here

Q2 UPDATE

PARTNERSHIPS

Objective	Key Result / Priority	Strategies	Indicators / Targets	Q2 Update
Growth Capture alternative value and create new partnership opportunities	Giga affiliate certification programme	• Develop standards for school connectivity • Create brand and incentives for companies that meet standards • Develop method for validating standards on an ongoing basis • Launch a campaign to attract companies to join	# schools recognized as connected by a Giga affiliate Baseline: 0 Q2 Target: 0 Q4 Target: 1,000 – ***at risk***	• Initial concept note and standards developed • Challenge: after initial scoping discussions, it was determined that a major dependency was not ready. Requires Project Connect API to onboard and validate • Next Step: (for discussion)
	Build "Partner of Giga" community	• Develop Comms Asset Pack offerings to partners • Organize team learning sessions with partners	N/A	• First Comms Asset Pack in development • Dependency: Comms Lead onboarding
	Reach $40M mobilized	• Develop well-designed, strategic pitch and proposal templates • Create intra-UNICEF resource library for Giga partnerships	$$ mobilized through partnerships Baseline: $27M Q2 Target: $30M ***– depends how counting Spain*** Q4 Target: $40M	• Core set of pitch products developed and made available on Repository site • Decision: don't engage in active resource mobilization efforts at this point, focus on other priorities

Comms tracker – Mar 2022

	PRODUCT	Monthly target	On track?	Jan	Feb	Mar	Mar Notes
1	**Giga core documents (narrative, slides, FAQs) updated quarterly**						
2	**Build a cross UNICEF-ITU comms team: social; press; design; events.**						SM recruitment underway; Comms Lead advertised
3	**New stories from Giga countries (esp. images/videos): ≥ 2 per month**	2		1	2	3	Teachers from Dominica and Rwanda; Sudan mapping; Kazakhstan rep
4	**≥ 1 story per month print or broadcast media (Tier 1 international or Giga country national)**	1		1	0	0	Struggling to attract interest given international news
5	**Giga features in 2 international events per month**	2		0	1	1	Citibank Digital Money Symposium
6	**≥ 1 joint activation per month with Giga partners**	1		1	0	1	IWD video with Sage/Naza
7	**2x followers on Twitter**	346		492	52	82	
	TW engagement: > 2% (2021: 1.8%)	2%		5.6%	3.4%	3.1%	
	2 x followers on LinkedIn	164		151	178	187	
	LI engagement: > 8% (2021: 7%)	8%		5.8%	6.8%	7.3%	
8	**Restructure website, incl. new dedicated pages on Map, Finance and Connect**						New website launched. Page views up 30%.
9	**Raise >$1m from NFT and other direct fundraising campaigns**						NFTs blog post 80k impressions; on UNICEF.org homepage

Business Models for Accelerate Prototypes (implementation in progress)

Sustainable Business Models

El Salvador

1 Community Collaboration

- Community contributes to the building and/or maintaining of its own network
- Various structures exist, for involving the community and ownership
- Initial funding could come from Gov't, NGO or Telco CSR; OpEx may be covered by key clients (e.g. Gov't buildings or hospitals in the area who pay a fixed monthly fee)
- Community fees depending on ability-to-pay and control over connectivity (varying structures)

Selling Wi-Fi Hotspot or School as an ISP

Kenya
Honduras
Sierra Leone

2 Wi-Fi Access for the Community

- School sets up ISP equipment at the school to sell internet to the community
- Options include:
  1. "Pay-as-you-go" **Wi-Fi Hotspot** at school
  2. **Subscriber nodes** in the community
- Improves affordable internet access for community members
- Profit is used to subsidize the school's connectivity. "Recycle" money generated into connecting more schools

Selling excess solar energy

Sierra Leone

3 Clean Energy Access for the Community

- Selling excess electricity to the community at affordable rates
- Improves reliable, clean energy supply for the community (either a solar panel on the school's roof or on-site)
- Profit is used to subsidize the school's connectivity
- "Recycle" money generated into connecting more school

Source: BCG Analysis

Business models (2/4)

Sustainable Business Models

4 Penalty System

- Large service providers can trade financial penalties in return for NPV-negative connectivity projects for rural or hard-to-reach areas
- A service agreement can be put in place to ensure that parties provide agreed service levels and necessary maintenance
- A penalty system often takes years between the handing out of a fine and the actual payment

Botswana

5 Advertising or Free Rating Websites

- **Wi-Fi hotspot homepage** has advertising or offers free rating of websites (which adheres to local standards /regulations) to generate revenue to offset costs (Examples include, mobile banking, job boards, e-commerce, media/news, remote learning or social media)
- **Regulated advertising at schools**, which adheres to local standards and requirements to generate revenue to offset costs (Some examples include, educational activities or local festivals)

Botswana
Brazil

6 Data Credits / Incentives (Online Social Programs)

- Government utilizes the Wi-Fi from the school to service the neighbouring community and encourages positive behaviours with **data credits (MBs)**
- For example, data credits (MBs) for completing online training programs, utilizing government services, starting a business (entrepreneurs), etc.

Source: BCG Analysis

Business models (3/4)

Sustainable Business Models

Brazil

7 Spectrum Auction / Minimum Subsidy

- School connectivity can be a prerequisite in a 5G auction, where the winner has an obligation to connect schools
- Governments can also send out an RfP and ask for a minimum subsidy needed to connect a number of schools
- Important to do this on a national level as some regions are more attractive

Botswana
Kazakhstan

8 Anchor Tenants (Government Contract)

- Local government **buildings** (e.g., hospitals, schools, police stations,) work together as one big internet contract
- Government guarantees payment for certain capacity for long period of time (e.g., by using USF) and community will pay depending on monthly demand
- Commercial operators will have more attractive economics to deploy a network in otherwise not viable areas

Uzbekistan

9 Local Revenue Sharing (Co-invest)

- Local player (e.g. ISP) builds and maintains network in an area otherwise not economically attractive for larger commercial players
- Coverage as a service, where a large TelCo player allows a local player to add onto their network and then operates the network with the goal of “sharing” in the profits
- Positive business case as large Telco obtains a fee (profit share) and the local player can maintain the network more efficiently and reach more people (lower costs)

Source: BCG Analysis

Business models (4/4)

Sustainable Business Models

10 Tax Exemptions or Tax Refunds

- The Government provides tax exemptions or refunds for TelCo revenue from school connectivity
- Reducing taxes makes it more economically attractive to connect hard-to-reach, rural and remote areas
- Need clear oversight to ensure the telco player delivers on their agreements to obtain the tax exemptions
- Could also be reducing license fees

Brazil
Kenya

11 Universal Service Fund (USF) Support

- Utilize a USF for a dedicated school connectivity mandate
- A portion of revenue from all internet providers is pooled in a fund and deployed across the country
- Transparency and clear definitions on how the money is to be spent is imperative for the success of a USF

Botswana

12 Infrastructure Sharing

- Through regulation, governments can incentivize service providers to share infrastructure (technology, partners, sourcing, geography or architecture) to reduce the capex and opex costs to extend connectivity to remote areas.
- Infrastructure sharing arrangements can be passive (sharing non-electronic infrastructure) or active (access to the network).
- Regulation is key for co-deployment and co-sharing infrastructure.
- Specific arrangements can be decided for tech, partners, sourcing, geography, architecture

Source: BCG Analysis

Blockchain @Giga

A quick overview

January 2023

Gerben Kijne – Blockchain Product Lead at Giga

@gkijne | @gigaglobal

Agenda

01 Introduction

02 What are we solving?

03 What are we building?

01

Introduction

OVERVIEW

Giga aims to connect every school to the internet and every young person to information, opportunity, and choice.

Map

Resolving information gaps with real-time connectivity maps of schools

Plan

Planning the infrastructure, policies, regulations and investments needed to deliver school connectivity

Finance

Stacking layers of public and private financing to de-risk investment and move capital “out” to the ”edges”

Contract

Partner with governments and help them to contract connectivity for schools.

Areas of exploration

Giga is looking into how blockchain technology can help to...

- Use real-time monitoring for transparency and accountability?
- Connect schools in rural, remote and challenging environments?
- Move money around efficiently and affordably.
- Improve schools' connectivity and quality of service?
- Ensure schools can pay for connectivity services over time?
- Use the school as a hub to extend connectivity and services to the community?

giga

02

Blockchain Solutions at Giga

Blockchain Products

- Patchwork Kingdoms
- NFT2
- Gigacounts
- Connectivity Credits
- Staking

giga

Patchwork Kingdoms

Let's build a community of supporters for the Giga initiative and raise funds to bring reliable, robust connectivity to schools across the globe.

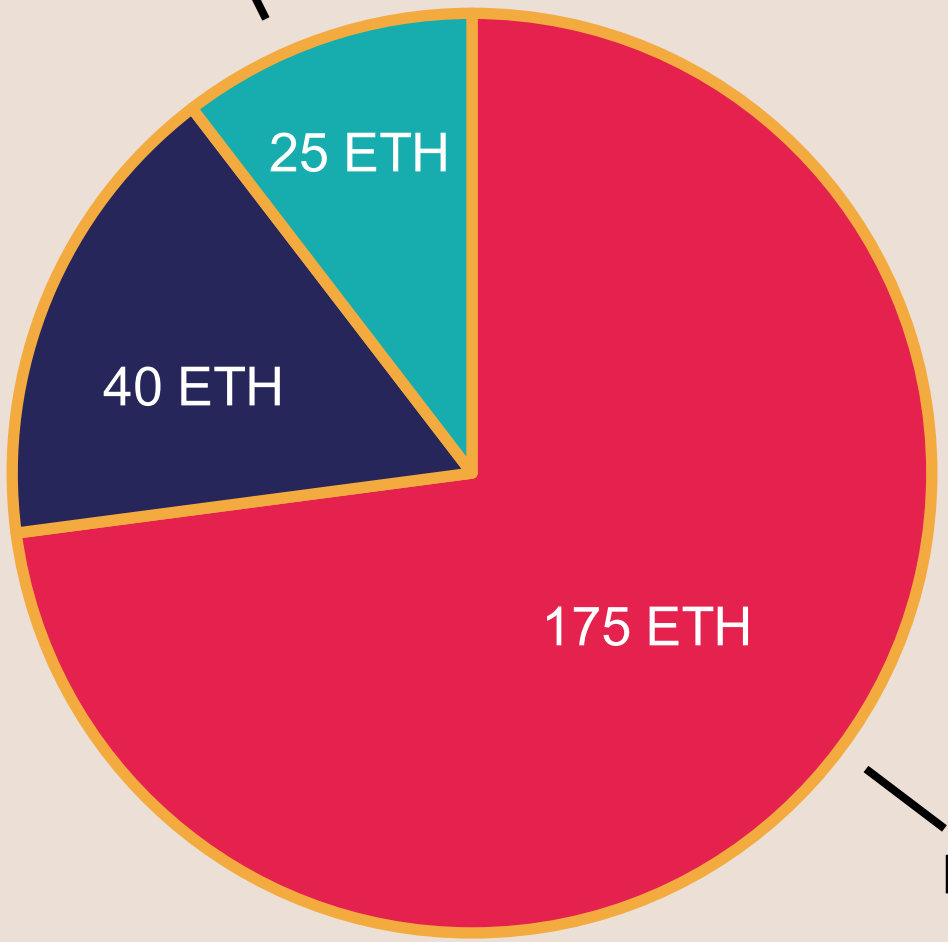
Results

240 ETH

Raised so far

552

Owners



giga

NFT2.0

The world’s largest decentralized database of crowdsourced school data.

Gigacounts

A web application to monitor quality of service, track the flow of funds and automate payments for connectivity.

Connectivity Credits

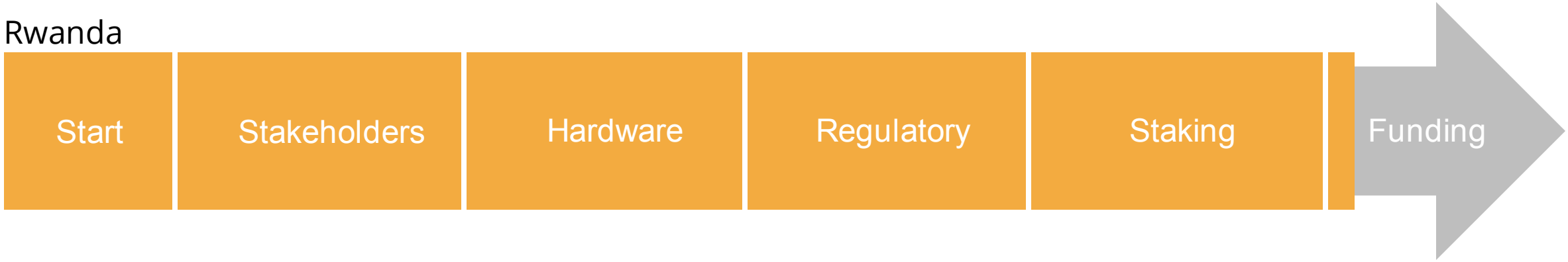
A global marketplace to incentivize connectivity providers to extend their network to underserved areas.

Staking

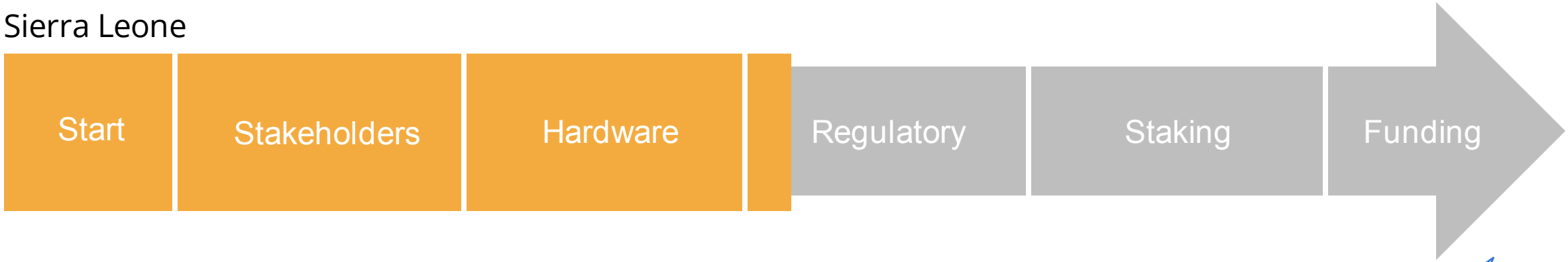
An experiment in funding operational expenses of internet connectivity for schools.

Roadmap

Rwanda



Sierra Leone



giga

Feel free to contact me!

Gerben Kijne - gkijne@unicef.org

@gkijne | @gigaglobal

Further Links

- Blog post on giga.global about the staking pilot in Rwanda.
- Link to the active staking node for the Rwanda pilot.
- Article that explains in more detail, the difference between mining and staking.
- Article with context on crypto regulation in Africa.

Giga Connectivity Credits

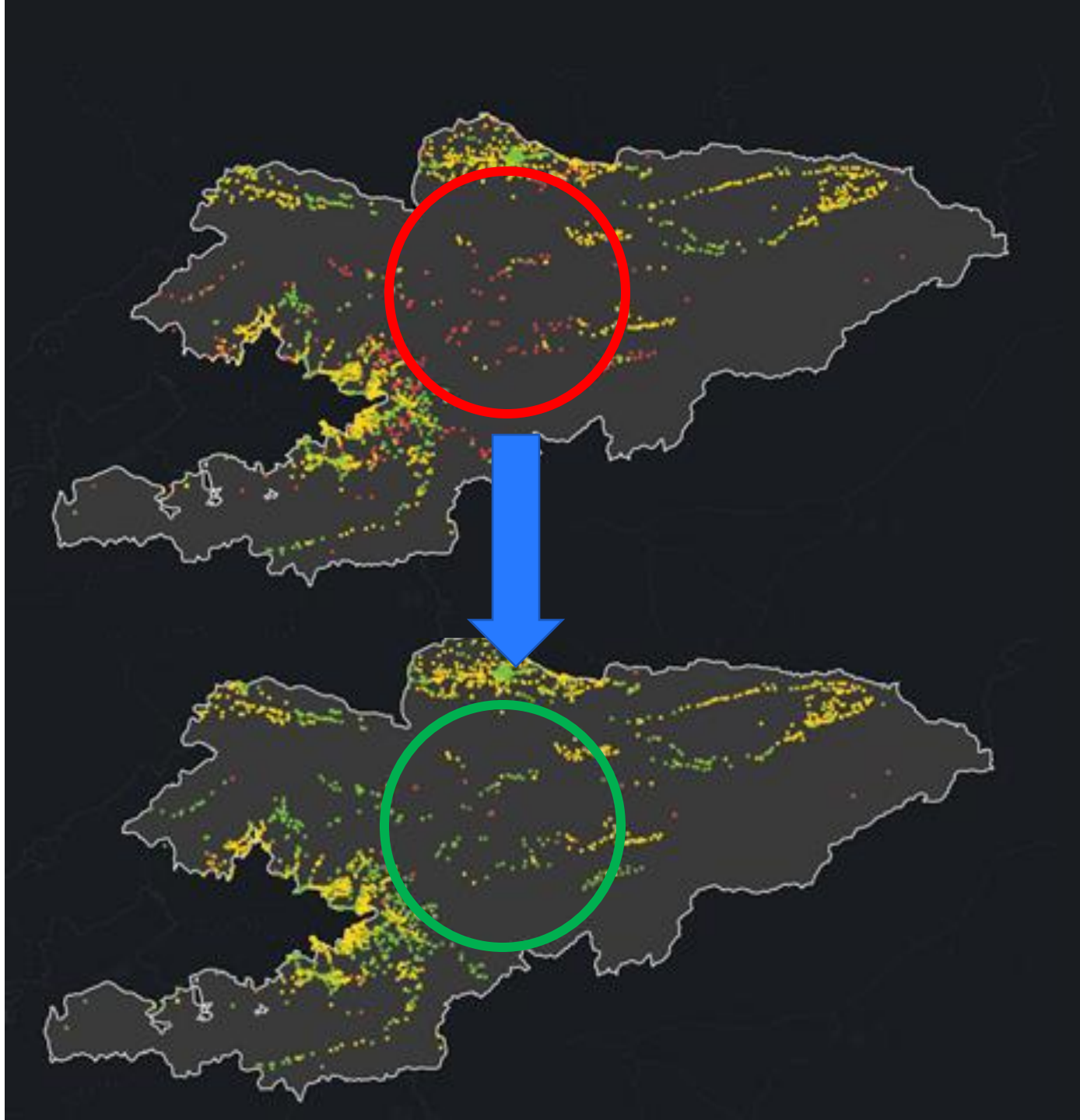
(Better, faster, stronger Carbon Credits, but for gigabytes)

Full, public, immutable accounting for all public procurements and Giga contracts.

School turns green, ISP gets paid.
School turns red, ISP gets replaced.
Schools become points of procurement and contract management.

We can tokenize the gigabyte allowing ISPs to get credits for connecting poor areas, and redeem credits for tax incentives & more

A global gigabyte marketplace will upend entrenched, inefficient incumbents. Shed light on darkness.



Giga Connectivity Credits

How it works

Data: we work with governments to create the 'source of truth' for school data

1. Consolidate and assess quality of existing data from different sources

giga_id_school	country	source	archived_id	source_id_school	school_name	latitude	lo
82679ff0-f358-3	Brazil	governme	G_BRA_000(	11000023	EEEE ABNAEL	-8.7585	
115d27ba-82a1	Brazil	governme	G_BRA_000(	11000040	EMEIEF PEQU	-8.7937	-(
3d7fb661-61a4-	Brazil	governme	G_BRA_000(	11000201	EMEF PROF H	-8.764	-(
9507b9e6-4ea6	Brazil	governme	G_BRA_000(	11000260	COLEGIO TIRA	-8.7383	-(
b5ec97ef-a418-	Brazil	governme	G_BRA_000(	11000309	ESCOLA MUN	-8.7508	-(
b62fd5d3-1a21-	Brazil	governme	G_BRA_000(	11000317	EEEFM DR JO	-8.7422	-(
de9b1bc8-6536	Brazil	governme	G_BRA_000(	11000368	EMEIEF 13 DE	-8.8043	-(
b5c7720e-5bfd-	Brazil	governme	G_BRA_000(	11000376	EEEF 21 DE AB	-8.7506	-(
b42536af-edfb-	Brazil	governme	G_BRA_000(	11000384	EEEFM 4 DE J/	-8.7414	-(
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dd0e6466-2414	Brazil	governme	G_BRA_000(	11000449	EMEF ANIBAL	-8.3259	
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987244a1-03e5	Brazil	governme	G_BRA_000(	11000546	EMEF BAIXA \	-9.7843	-(
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79a70405-cccb-	Brazil	governme	G_BRA_000(	11000562	EMEF BARAO	-9.5285	-(
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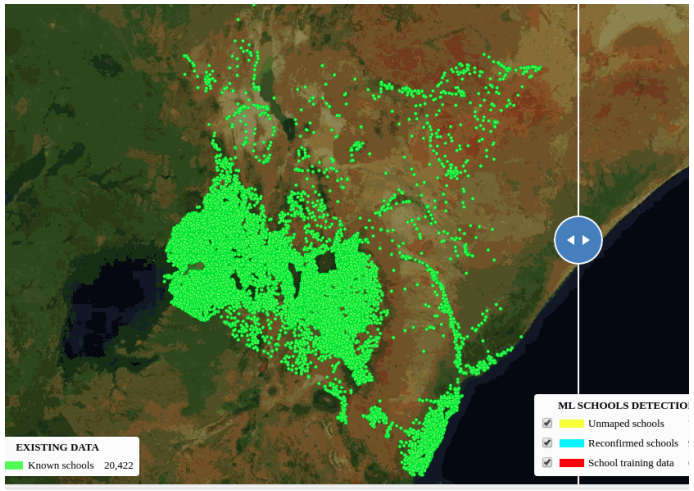
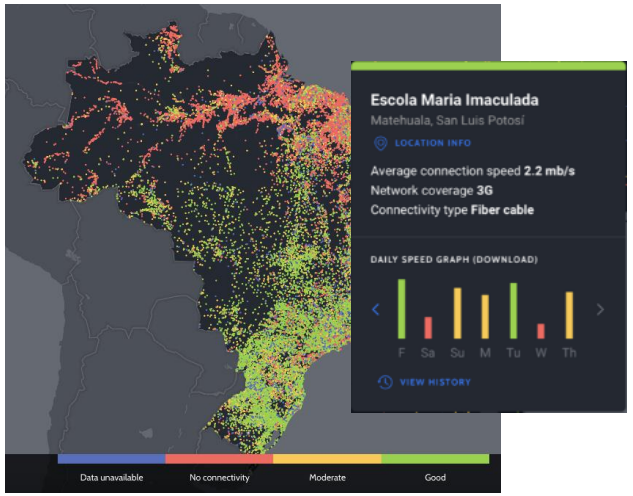
b94bafc1-6b3d-	Brazil	governme	G_BRA_000(	11000597	EEEFM BELA \	-8.7984	-(

2. Apply ML models to validate existing locations and find missing ones



3. Deploy real-time internet monitoring solutions and get dynamic QoS data



Priorization: we use the data to know how difficult is to connect a school and score it

Score = f(remoteness, poverty, population, ...)

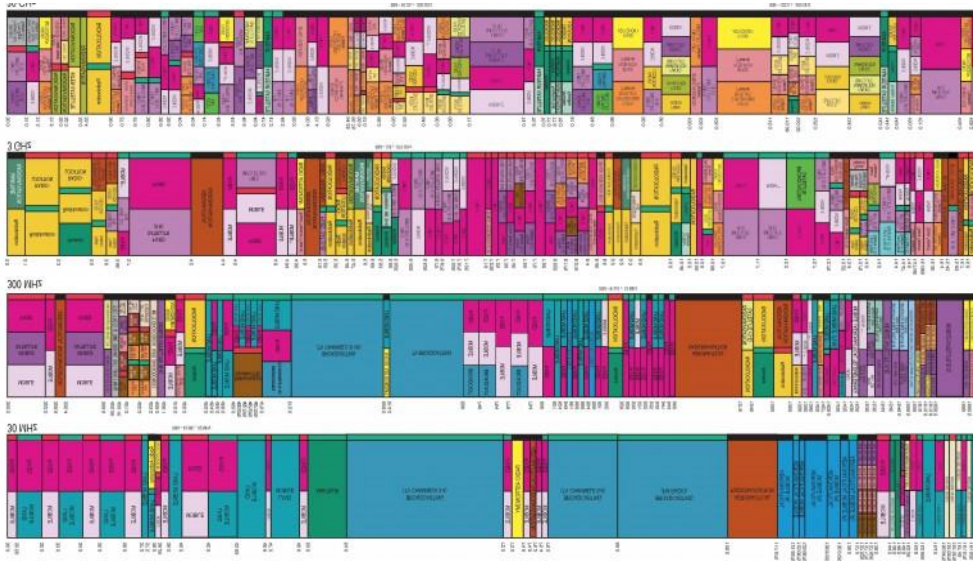
Multipliers = QoS, environmental impact, price/cost

Tokens issued = **Score** x $\mathbf{m_1}$ x $\mathbf{m_2}$ x **...**

Incentives: we work with governments to create incentives for providers to connect schools

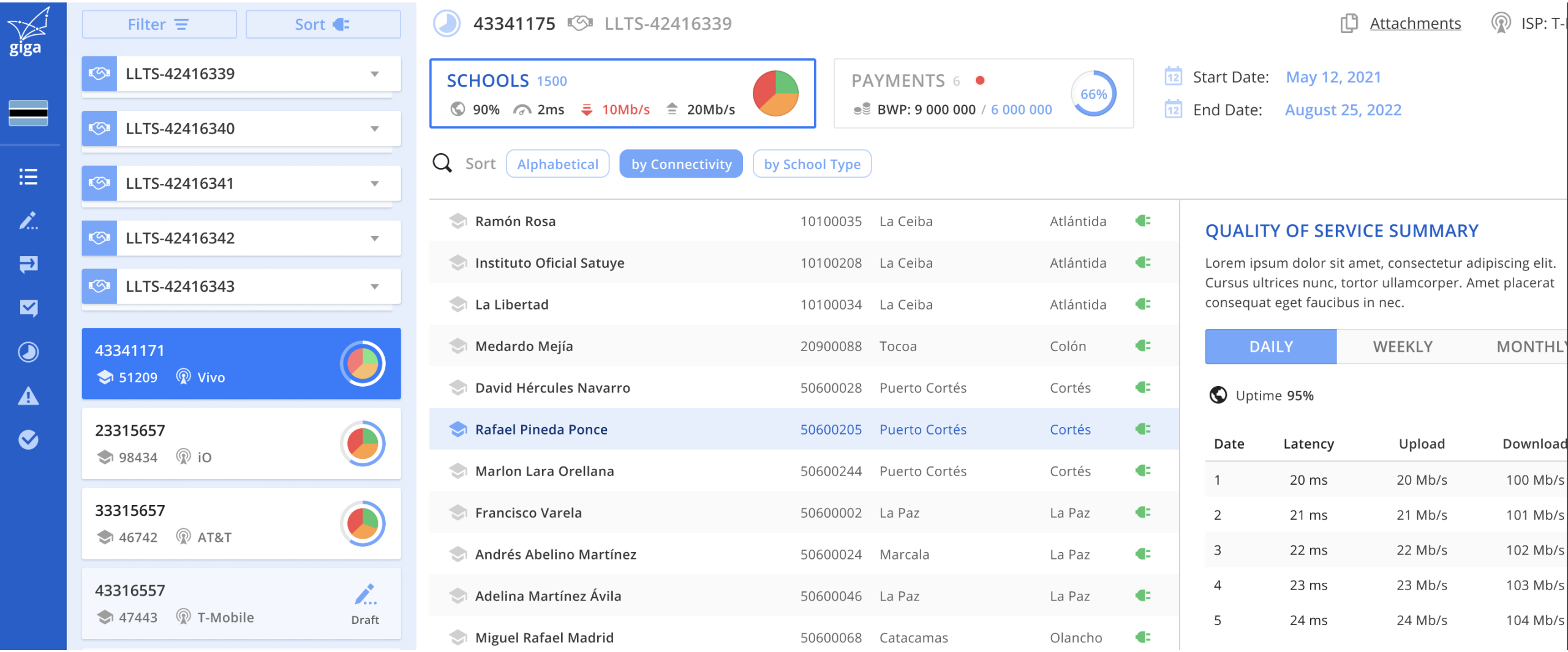
Tax breaks (i.e. to USF)

Spectrum allocation

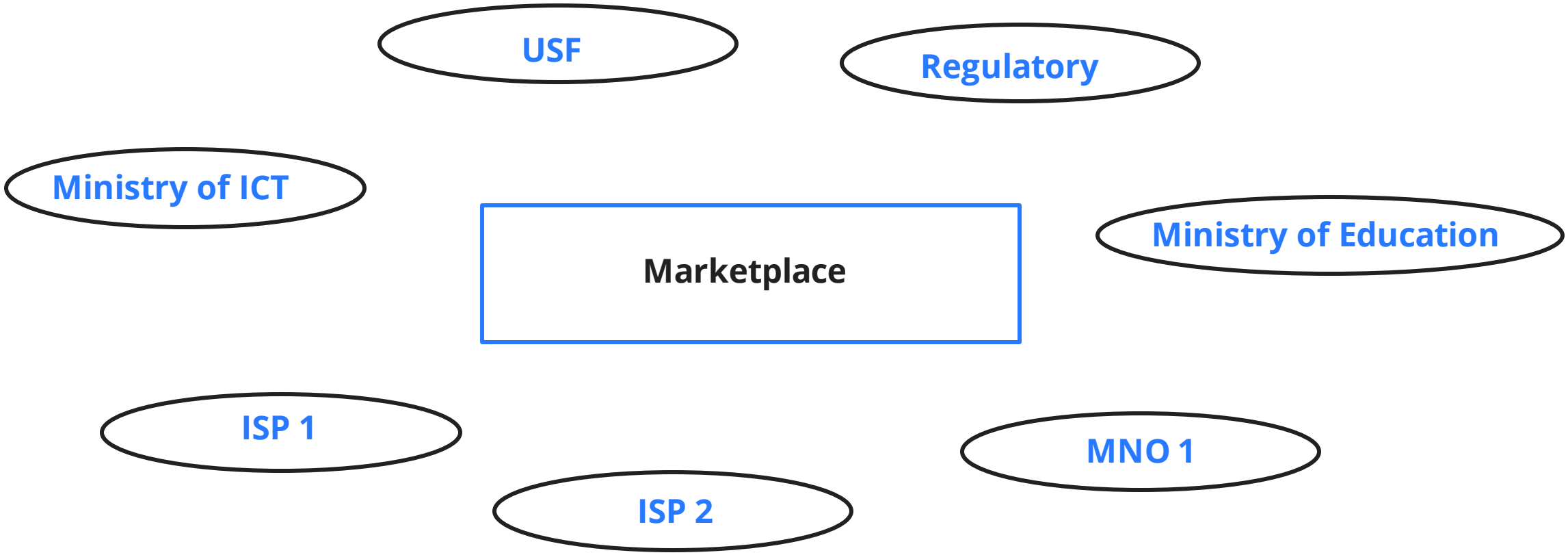


Access to shared infrastructure

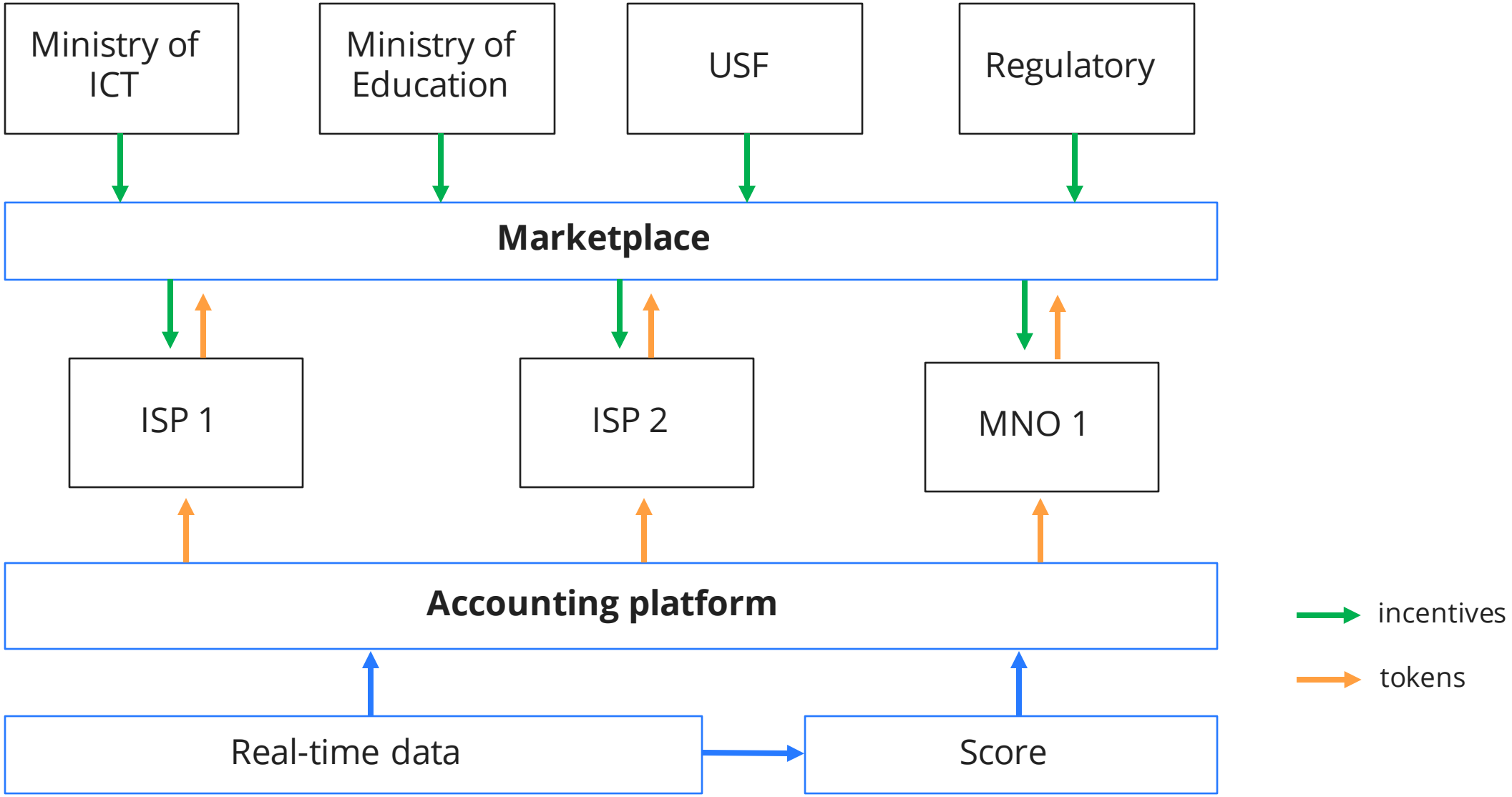
Accounting: we are building an accounting platform for managing contracts and ensure that providers are delivering them



Marketplace: we are building a marketplace for providers to be rewarded for connecting schools by redeeming connectivity credits for a set of incentives



Giga Connectivity Credits



The Connectivity Credit Marketplace architecture has three layers

We've spent the last year prototyping them independently

Giga Node

	Prototypes built in 2021	Why it's important for the Marketplace
Application layer *Payments, fintech, SME products*	• Piloting ETH staking in Rwanda and Sierra Leone. • Launched 1000 NFT test project (700k$ raised)	• 2 Governments now running Giga Crypto regulatory sandbox • Each school will be its own 'collectible' card, allowing for global engagement
Transaction Layer *Methods for exchange of value*	• Piloting smart contracts to pay for connectivity in Sierra Leone and Rwanda • Prototype Gigabyte token being developed in Botswana	• ISPs can be accountable to realtime data (i.e. if there is no connectivity they don't get paid) in govt contracts. • Botswana regulator + govt ready to test Connectivity Credit Marketplace
Accounting Layer *Monitoring and tracking Gb flow for billing*	• Tracking connectivity speeds on-chain in Brazil • Ethereum Foundation partnership to build public-sector connectivity accounting	• On chain means full records means that a marketplace can be fair and public. • Govt owned open-source platforms for accounting means marketplace can interface across ministries (finance, telcom, etc)

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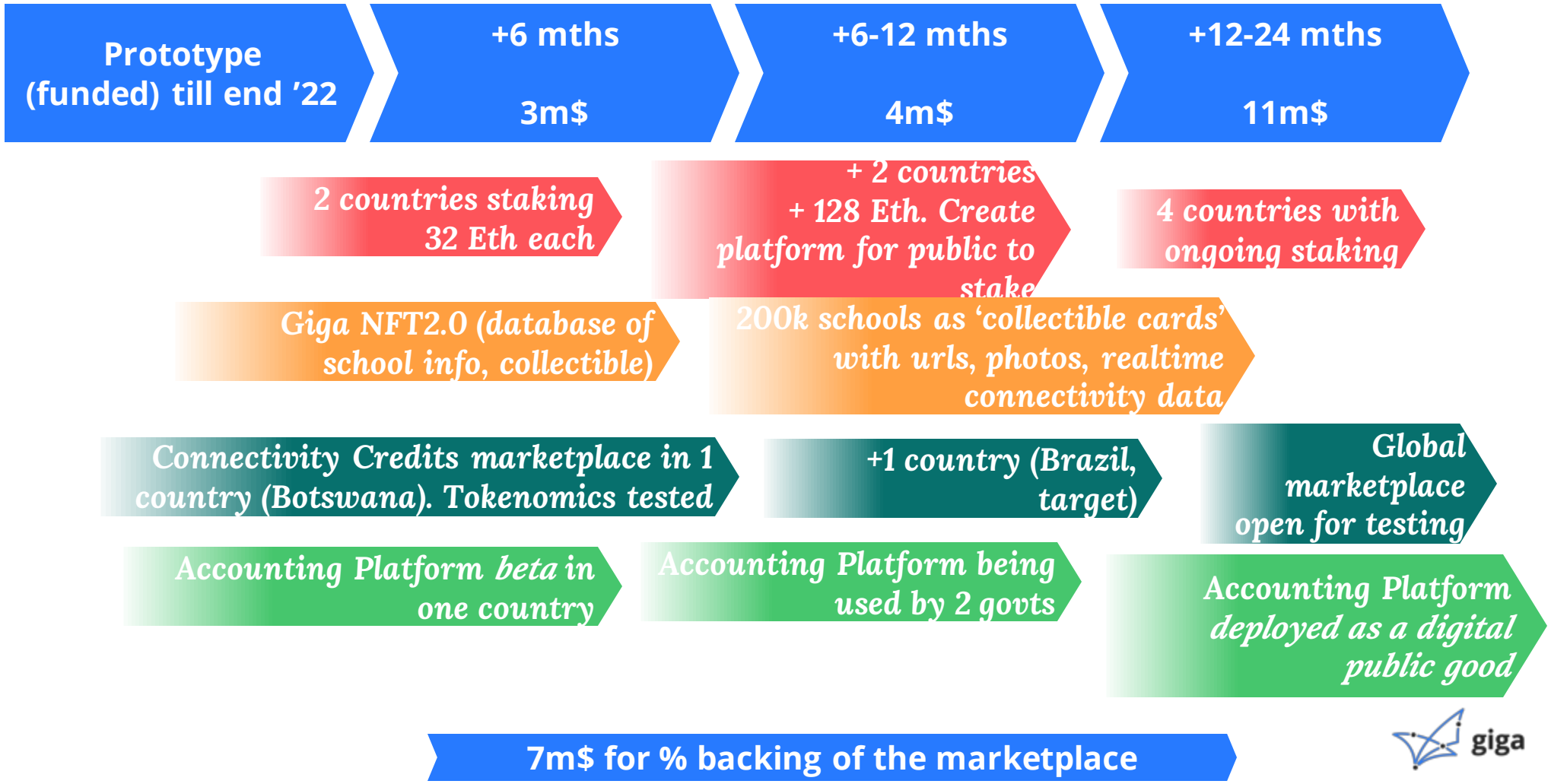
Looking for a seed donor / investor for our 2nd phase (24 months)



The Connectivity Credit Marketplace is

- Based off the Giga ProjectConnect map.
- After initial funding, Giga raised an additional 20M€ to build out the vision of a realtime network operations center for humanity.
- Now we want to add financial engineering into the equation.
- Every school on the map will be a node in the connectivity marketplace.
- The farther the school is away, the harder it is to connect, the more it will be 'worth.'
- The tokenized Gigabyte will be a way of counting value and accounting for connectivity (and more.)
- Better, more liquid, more divisible than the MTCo2E unit used in carbon credits, but slightly analogous.
- Credits for connecting can be redeemed for a variety of incentives (tax holiday, onshoring, spectrum bids, etc.)
- Credits can begin to extend outside of the connectivity space alone – as the marketplace becomes 'alive.'

The Connectivity Credit Marketplace roadmap

+ 6 Months

- Alpha / testnet Connectivity Credit Marketplace release
- 300 schools connected to Credits Market infrastructure (100k students)
- 3 different ISPs agreeing to take part / connecting to marketplace
- Tokens being issued to schools / providers in at least one country
- Schools can begin to be 'points of procurement"

+12 months

- Beta / testnet marketplace release
- 1000 schools connected to Credits Market infrastructure (300k students)
- 10 ISPs working
- Footprint in 3 countries (with Ministries of telcom/finance)
- Test tokens being distributed in all markets, measured and assessed
- Gigabytes being monitored in realtime and cost of monitoring lowered for governments.
- Direct link to at least 1 universal service fund

+24 months

- Beta / mainnet release
- 3000+ schools connected to CCM (1M students
- Organic growth 10pc/month targeted (measured by tokens issued, new schools participating, etc)
- Footprint in 5 countries and growing, with an eye to 25 by Y3
- Engagement in at least one major market (Brazil, Nigeria, Spain)
- Reduction of costs for school connectivity bids by 30% in participating markets
- Students using tokens to help with other school connectivity tasks

accelerate

giga | unicef for every child | ITU

Contents

In the following pages you will find information about Giga's Accelerate program and the projected outputs and deliverables for the year 2021.

This presentation is categorized into: **Key Questions** that will guide the pilots to inform current and future Giga implementation;

the **Targets** that we aim to achieve in the expected timeline

followed by the **Accelerate Countries** that we are collaborating with to roll out 'accelerate' and develop resources to further tailor Giga inputs into the national package and advance on our pillars of work;

and the **Key Accomplishments** thus far.

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OVERVIEW

What is Accelerate?

Accelerate targets a set of countries focusing on quick sprints to prototype for scale and provide insights to fast-track governments' universal connectivity programs.

Through **"Accelerate",** Giga is connecting the **first schools** in each partner country and exploring diverse **technologies**, **business models** and **regulatory arrangements** to provide broadband connectivity solutions to schools and communities.

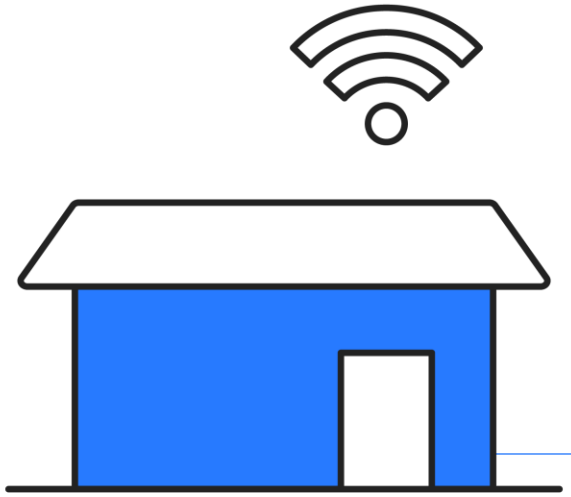
1,000
Schools per country

~2M
Learners

9
Countries

$4.8M
Committed
+
$5M
Expected

Why schools?



Schools are the entrance point for Giga to identify connectivity gaps.

Through **school mapping** and **real-time monitoring** of connectivity, Giga can use the school as a **node** to test technologies and business solutions that enable sustainable and affordable connectivity for schools and surrounding communities

2020

800,000+
schools mapped across 30 countries

2025

2,000,000
Schools mapped

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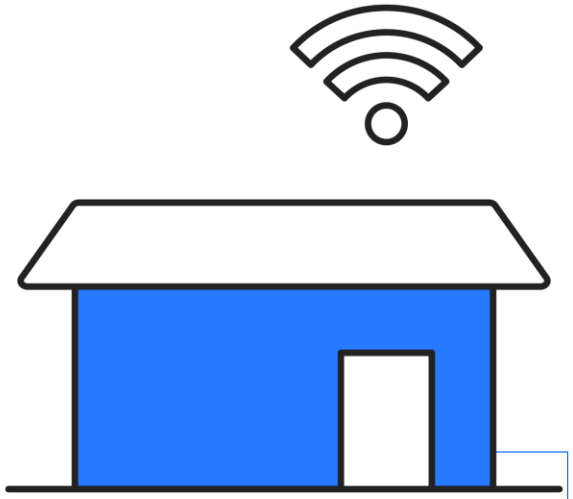
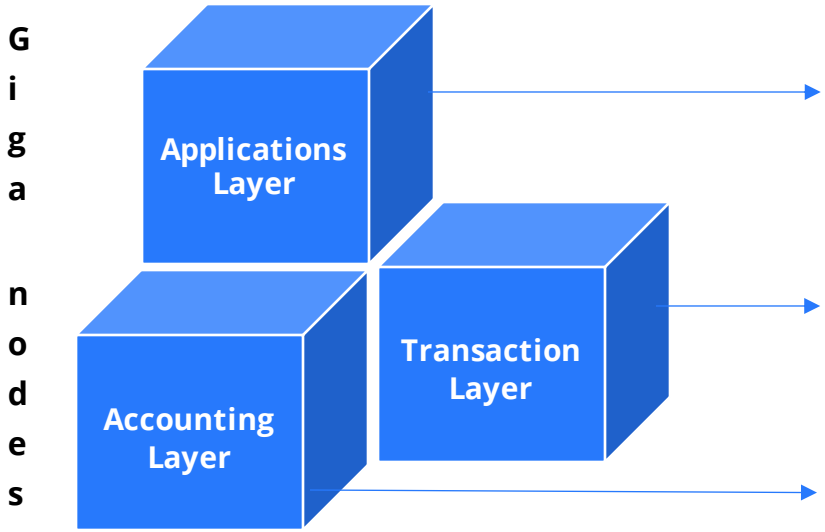
Schools as Giga nodes



Schools connected through Accelerate will work as nodes to test and prove solutions to integrate young people and communities to information, opportunity and choice

Giga nodes will have three layers:



- Financial services, digital payments, Fintech, SME products
- Methods for exchange of value: i.e.: Sandboxes to use crypto / interface between sellers & buyers, smart contracts
- Monitoring and tracking Gb flow for billing

OVERVIEW

Minimum Requirements for a school to work as Giga Node

Mapping

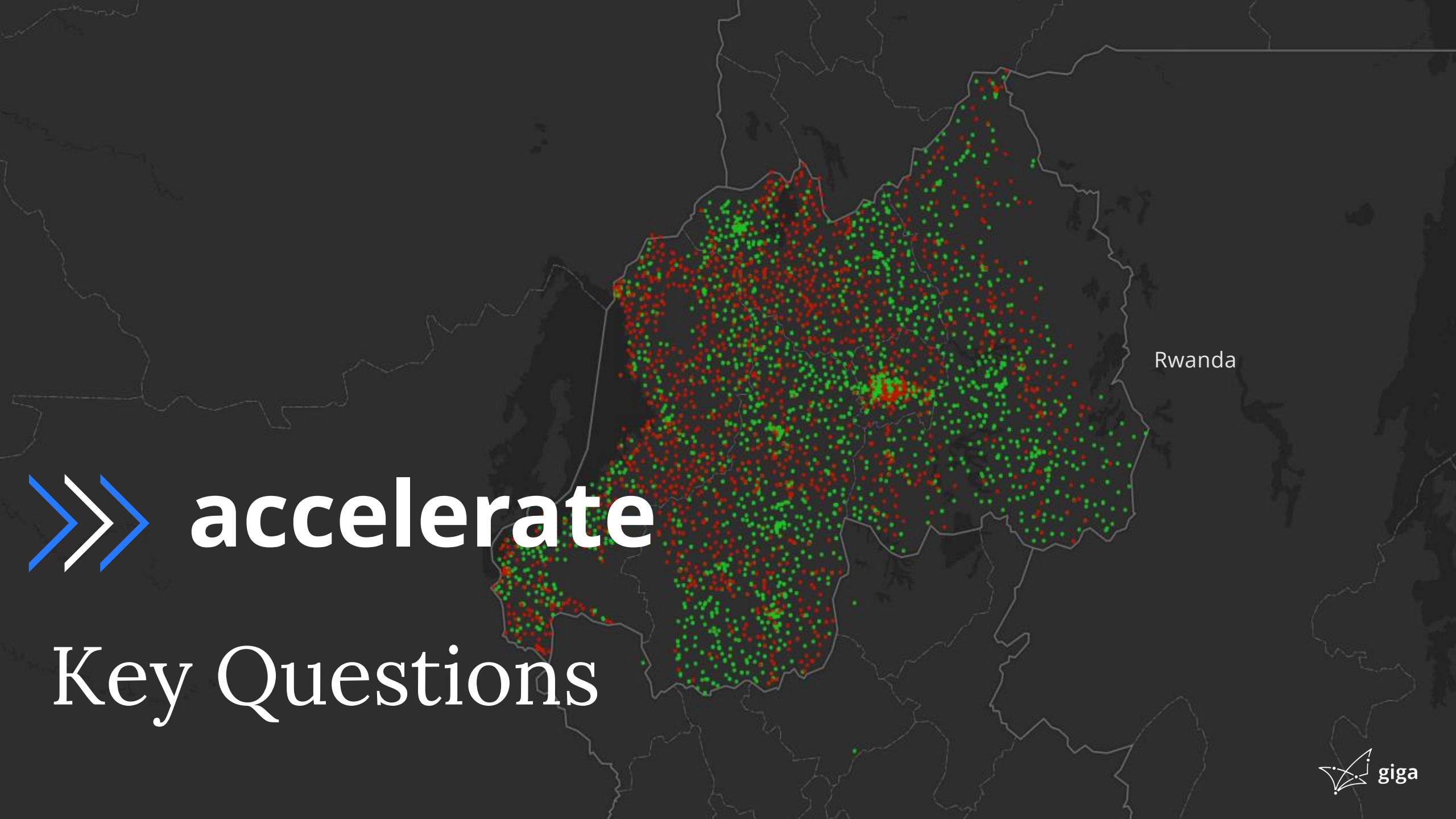
- Location of school mapped and publicly available in Giga's Project Connect live map
- Identity markers & contact information

Connectivity & Monitoring

- Capacity to report connectivity quality of service in real time
- 1-to-2-year contract for connectivity service provision with at least 20 Mbps per school
- Service agreement with the connectivity provider to share real-time data

Safety & Accessibility

- Safeguarding procedures for online safety and Child Online Protection
- Positive assessment of schools' readiness for deployment of digital solutions (including digital learning products)



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Key Questions

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KEY QUESTIONS

Accelerate areas of exploration

Accelerate will explore and test solutions in 3 major areas:

- **Technologies**
- **Business models**
- **Regulatory arrangements**

The lessons learned and best practices observed will guide future Giga programming and resource mobilization efforts at the national, regional and global level.

What **technologies**, **business models** and **regulatory arrangements** can help to...

- use real-time monitoring for transparency and accountability?
- connect schools in rural, remote and challenging environments?
- improve schools' connectivity and quality of service?
- ensure schools can pay for connectivity services over time?
- use the school as a hub to extend connectivity and services to the community?

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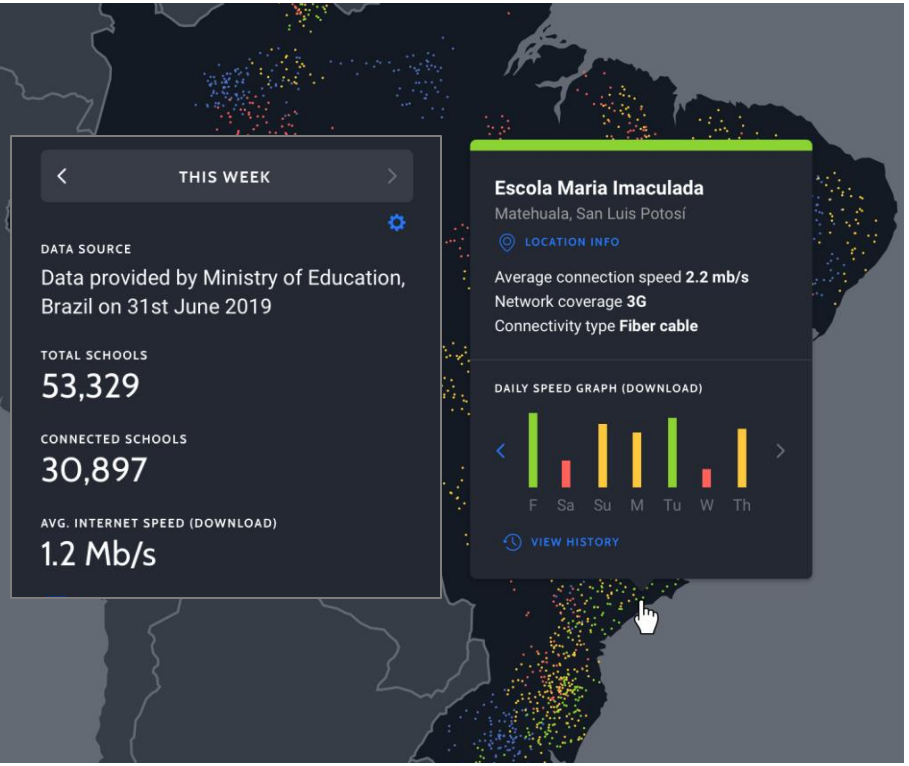
KEY QUESTIONS

1 How might we use real-time monitoring?



Real-time school mapping in Brazil, soon to be live on Project Connect in Q2 2021

RT monitoring can track the progress and quality of connectivity of schools over time, providing data to identify untapped demand and improve accountability and transparency for investment opportunities.

The following RT monitoring tools will be tested in accelerate schools:

Service level agreements

all Giga Accelerate providers report RT QoS data on the connected schools

Browser extension measurement tool

developed by Measurement Labs, to report the RT QoS of Internet at the device.

Data sharing agreements with ISPs/MNOs

to obtain periodical updates of the QoS of school connectivity through an API.

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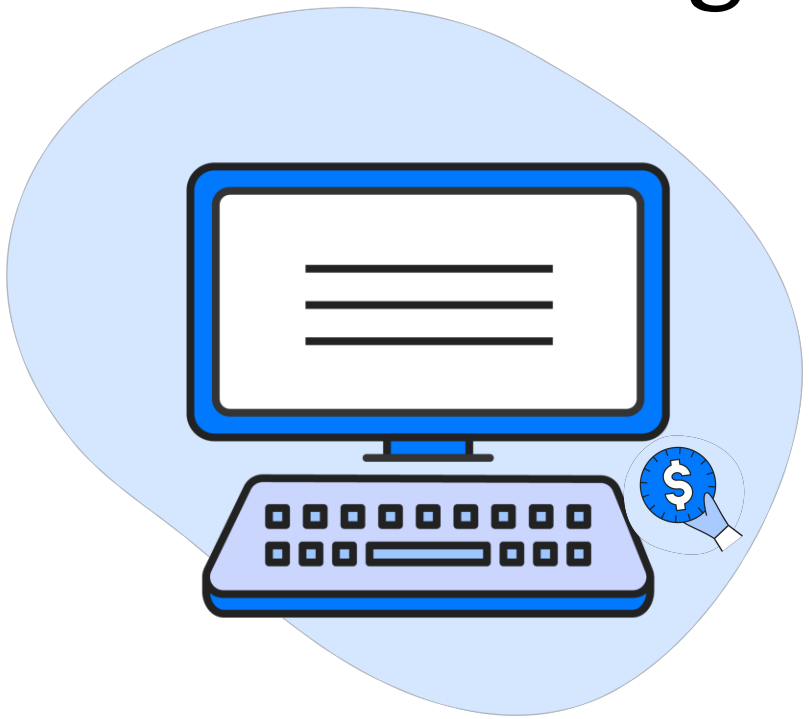
KEY QUESTIONS

2 How might we connect schools in rural, remote and challenging environments?



High costs are a barrier for connectivity, but emerging technologies and business models for rural areas can help

Accelerate will launch innovation challenges for the ICT industry to test their technologies to **provide sustainable and affordable connectivity** to schools in remote areas and extend the connectivity, through a commercial model, to the most disadvantaged populations. These include but are not limited to:

Last-mile technologies

tv white space, airborne network infrastructure, fiber POP within range of Wi-Fi links, LEO satellites, mesh networks, directional wi-fi, light beams, etc.

Sustainable and affordable business models

cooperative PPPs, network as a service, third party network ownership, freemium Wi-Fi hotspots for community access etc.

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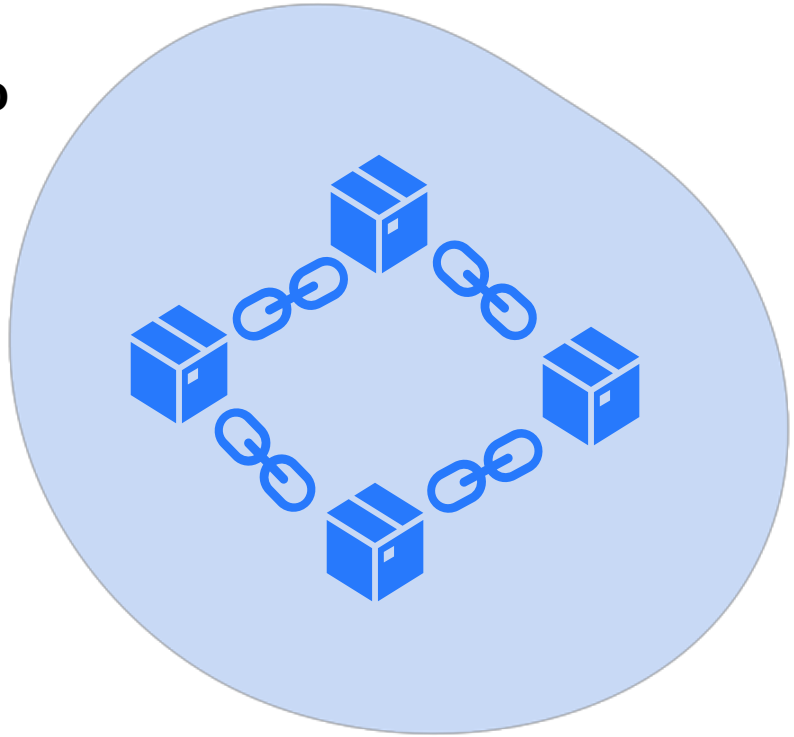
KEY QUESTIONS

3 How might we improve schools' connectivity and quality of service?

Giga can create the incentives for service providers to deliver better quality of service

For example, blockchain can be used to increase efficiency, transparency, and accountability for investments, managing payments and the relation with ISPs

Accelerate countries can prototype:



ProCoChain

to store and monitor RT data on a public blockchain, receive donations in crypto, pay ISPs, transparent bidding.

Smart contracts

automated pay-by-performance and incentive-based models for procurement of connectivity services.

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KEY QUESTIONS

4 How might we ensure schools can pay for connectivity services over time?

Buying models (i.e., demand aggregation) and financing mechanisms (i.e., USF, Giga Bond, digital impact bonds) can help make investments in school connectivity more efficient and sustainable.

Demand aggregation

- **Users:** Estimation of latent demand based on # of learners, curriculum, and surrounding community's needs
- **Public buyers:** Aggregate latent demand of users regionally and over time to improve negotiation power

Universal Service Funds (USF)

Opportunities to test the mechanisms to link needs to connectivity financing, in cases where there have been recent changes to USF regulation and operation.

Sustainability

Models that enable schools and communities to pay for their connectivity services

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5 How might we use schools as hubs to extend connectivity and services to the community?

School connectivity can directly benefit the surrounding community by improving access to connectivity infrastructure

These pilots explore how schools can monetize the connectivity they receive, understanding "monetization" as the reselling of connectivity outside of school hours in order to raise funds for schools' connectivity expenses.

Solutions

- **Local WISP & community networks:** Locally owned and operated networks
- **Open-source software and hardware network designs** for local ISPs
- **Technologies:** Directional wireless, mesh, etc.

Operator models

- **Free / freemium Wi-Fi hotspots:** Wi-Fi, microwave relays, TV Whitespace, renewable energy solutions (for example, Mawingu in Kenya; AirJaldi in India, ViRural in Nigeria, Bluetown, among others)

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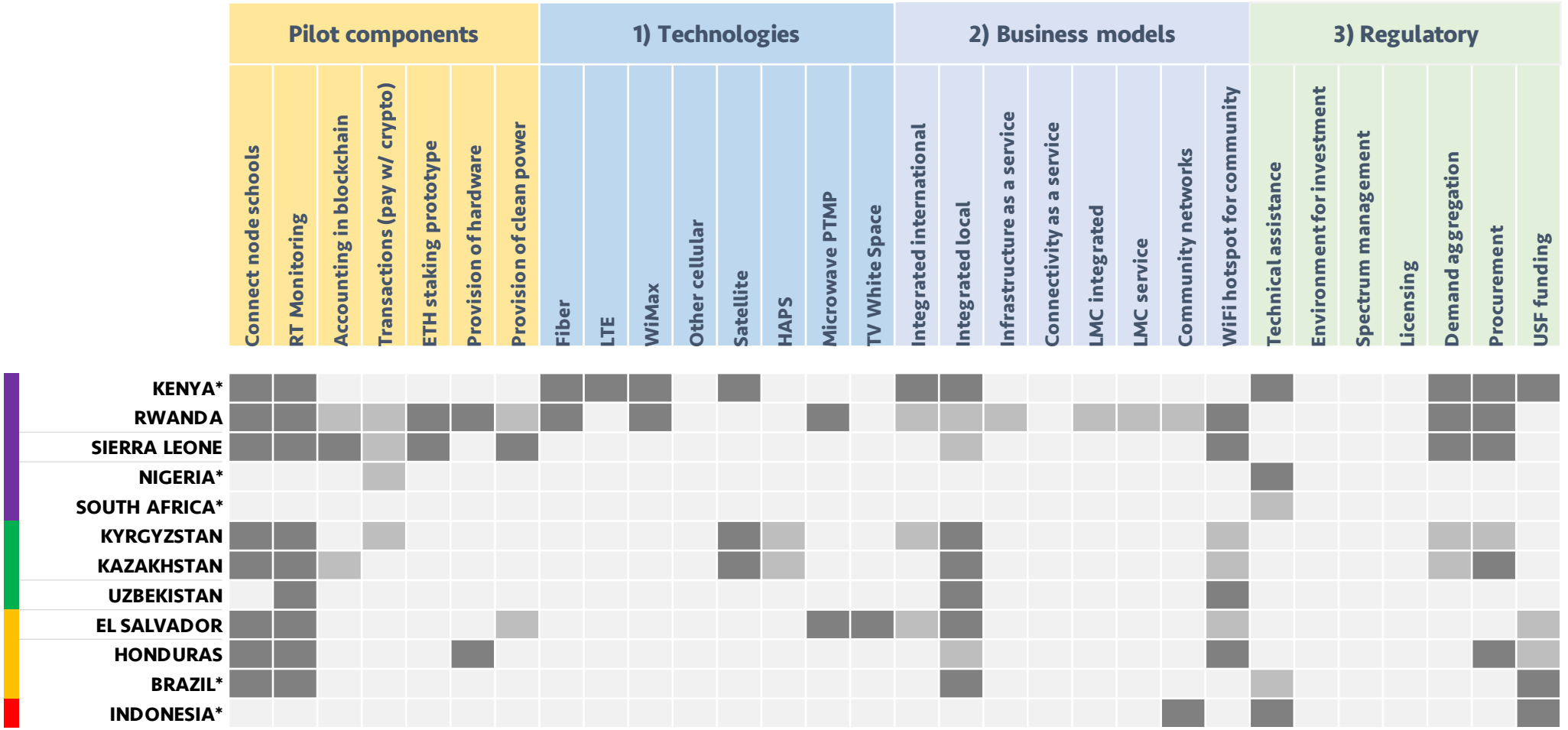
Prototypes Grid

Updated Apr 6, 2021



** FCDO countries*

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What do countries want to test?

	Prospective Accelerate Prototypes	What do we want to know?
Kenya* 	**Connect first 1,000 schools where DLP devices have been distributed** • Demand aggregation procurement for 100 schools • Provide unlimited connectivity (10 Mbps download & 5 Mbps upload) • Monitor connectivity QoS in real time • Test LTE, WiMax, satellite and fiber solutions • Streamline process to use and apply for USF funding	• How to scale from 100 to 1,000 to 10,000 schools in a country? • Results from creating synergies with national scale programs (i.e. DLP) • Cost-efficiency and quality of service from different technologies
Rwanda 	**Connectivity "packages" for the most disadvantaged schools** • Initial procurement for 63 schools (including schools in refugee camps) • Bundled technology and business model solution proposed by industry • Connectivity package includes unlimited data, minimum of 25 Mbps per school and clean and stable power supply to schools • Possible extension of the connectivity from selected schools to the community	• How to embed sustainability into connectivity provision? • What do we need to know when connecting schools in challenging environments? • Is the required standard of 25 Mbps per school the ideal for Rwanda? • What is needed to extend the connectivity from schools to the community?
Sierra Leone 	**Connectivity in environments without power supply** • Technologies to provide connectivity where most of the schools lack access to a stable power supply (~90% without electricity) • Provide unlimited connectivity (10 Mbps minimum per school) • Test the use of blockchain for smart contracts and financing	• What technologies and business models are the most appropriate to connect schools where there is no electricity? • Use of blockchain to improve transparency • Prototype uses of crypto to fund connectivity

* FCDO country

What do countries want to test?

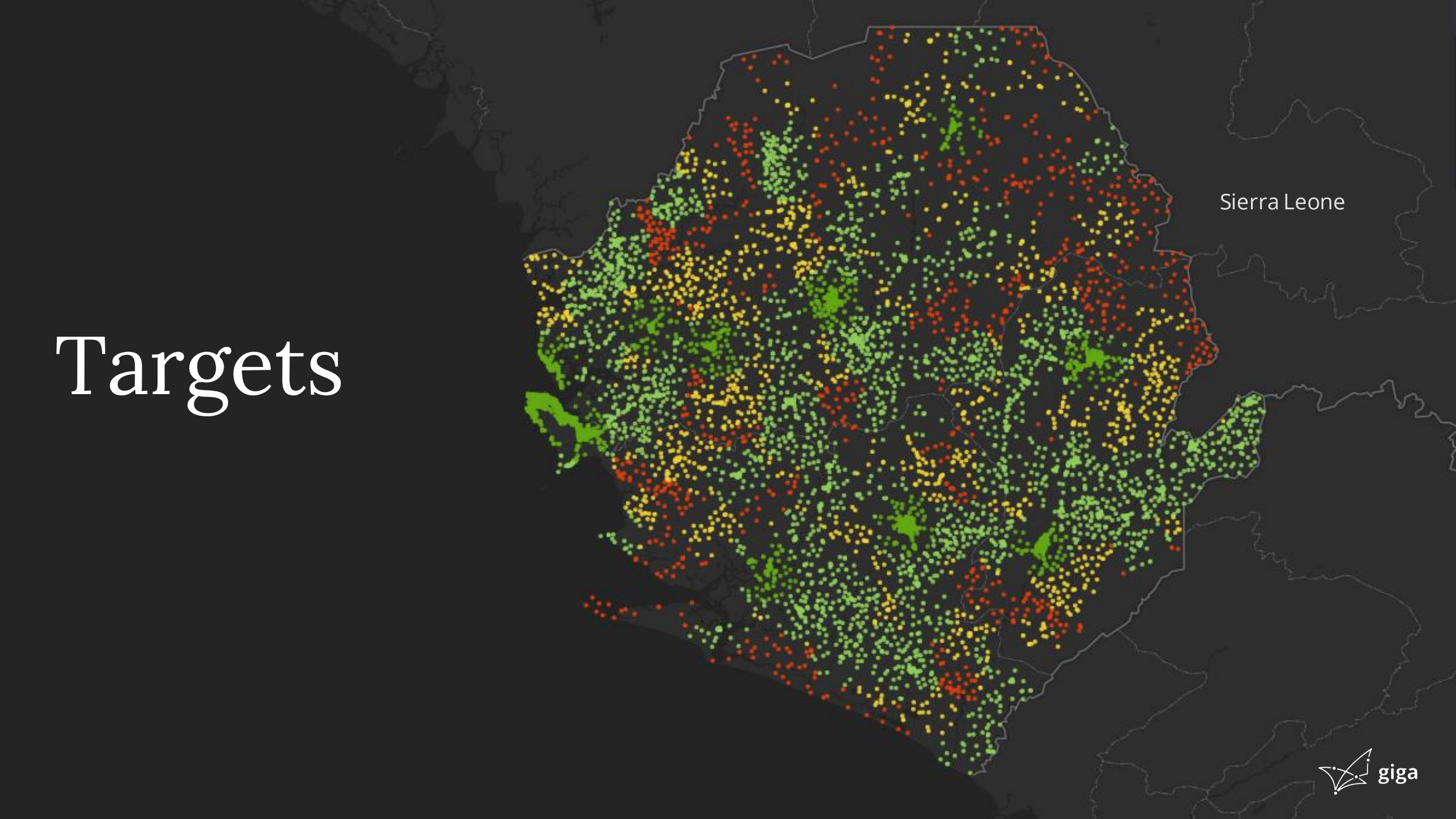
	Prospective Accelerate Prototypes	What do we want to know?
Kyrgyzstan 	**Connecting mountainous schools** • Connect at least 8 of the 20 mountainous schools that remain unconnected where costs far exceed national average (~$60k/school) - far away from current fiber points of access (>30km) • Unlimited data, 10 Mbps minimum per school international zone / 50 Mbps KG zone • Test last-mile disruptive technologies (i.e., LEO satellite, open source software & hardware network designs, directional wireless, light beams, etc.) • Pilot extension of the connectivity to the community • RT reporting of quality of connectivity • Possible prototype of payments to service providers using crypto	• What technologies and business models are the most appropriate to connect schools in mountainous, inaccesible and challenging environments? • Create a model (technology + business solution) to connect schools in the most challenging environments
Kazakhstan 	**Connecting the hardest-to-reach schools** • Connect 25 schools that remain unconnected in the country • Unlimited data, 10 Mbps minimum per school • Test last-mile disruptive technologies • Possible extension of the connectivity to the community • Pilot extension of the connectivity to the community • RT reporting of quality of connectivity	
Uzbekistan 	**Real-time monitoring for decision-making and extension of connectivity** • Use RT monitoring to inform MoPE's school connectivity program decision-making • Leverage the network of 200 schools that will be connected by MoPE, MoICT, IT Park, to extend the connectivity wirelessly to the community and assess the impact	• RT monitoring for decision-making use case • Impact of extending connectivity wirelessly to the surrounding community

What do countries want to test?

	Prospective Accelerate Prototypes	What do we want to know?
El Salvador 	**Connect schools as nodes of the National Connectivity Network** • Test TV White Space, Microwave PtP and WiFi to connect 35 schools in the most impoverished areas. • Unlimited data, 20 Mbps • Leverage Secretaria de Innovacion's partnerships with ETESAL (the national telecommunications company) to create an investment model where part of the returns from connectivity projects will be reinvested to extend connectivity in rural areas.	• Is TV White Space a long-term sustainable solution for extending connectivity to rural areas in El Salvador? • Effectiveness of PPP models to extend connectivity in the country.
Honduras 	**Use schools as Wi-Fi hotspots to extend connectivity to the community** • Connect 10 schools with the ideal bandwidth to support digital learning • Develop a model for schools to provide Wi-Fi to the community • RT monitoring of school connectivity • Link results from the pilot with available sources of funding from development banks	• Feasibility of using schools as connectivity hubs for the community
Brazil* 	**Connectivity pilot to inform better practices to use Universal Service Funds** • Connect 20 schools to provide insights and best practices for governments on how to use the *Fundo de Universalização dos Serviços de Telecomunicações* (FUST) for school connectivity. • Lessons from the connectivity pilot to inform advocacy campaigns • Streamline process to use and apply to FUST funding.	• How to streamline the process of using FUST resources for school connectivity projects • Show the impact of school connectivity for learners and the community to advocate for FUST usage

* FCDO country

Targets



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TARGETS

Accelerate global (illustrative)

Outcome/Outputs	Indicators	Target			
		Q2	Q3	Q4	Q1 (2022)
Outcome 1: Improved access and quality of connectivity in schools and surrounding communities					
Output 1.1: Schools connected as nodes for connectivity meeting minimum connection speed and required bandwith	# of schools connected as Giga nodes	360	740	1000	1500
Output 1.2: Increased community access to internet through extension of school connectivity	# of Giga nodes being used as a hub for community to access internet	25	50	75	100
Output 1.3: Increased access to digital solutions and services	# of Giga nodes used to provide digital solutions and services	15	30	45	50
Outcome 2: Improved accountability and transparency in connectivity service provision					
Output 2.1: Real-time connectivity data mapping for schools	% of connected schools reporting real-time data (browser extension, ISPs, MNOs, routers)	5	15	25	35
Output 2.2: Capture school location and connectivity data on public blockchain	# of countries with full data captured on blockchain	5	15	25	35
Output 2.3: Smart contracts to automatically manage agreements and service delivery of connectivity providers	# of countries managing relations with ISPs using smart contracts			1	2
Outcome 3: Strengthened financial delivery systems/technology through and for schools (i.e. digitial payments, lending and funding)					
Output 3.1: Develop Giga credit to be used by various providers	# of countries piloting Giga credit				2
Output 3.2: Digital payments for service delivery	# of countries	3	3	3	15
Output 3.3: Funds mobilised for connectivity	Amount raised (USD)				

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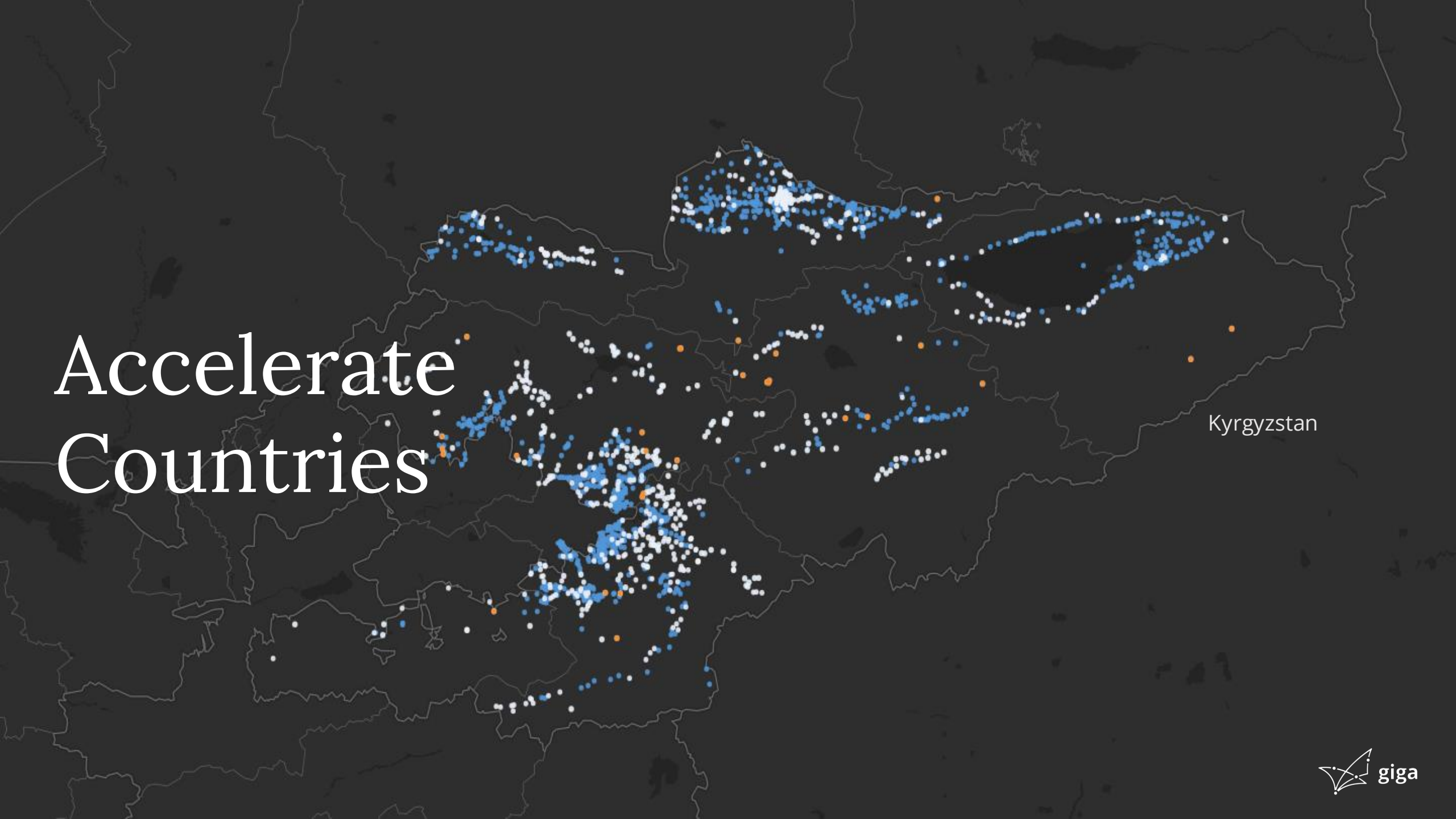
TARGETS

Accelerate in country (illustrative)

Outcome/Outputs	Indicators	Target			
		Q2	Q3	Q4	Q1 (2022)
Outcome 1: Improved access and quality of connectivity in schools and surrounding communities					
Output 1.1: Schools connected as nodes for connectivity meeting minimum connection speed and required bandwith	# of giga nodes connected	80	120	200	300
Output 1.2: Increased community access to internet through extension of school connectivity	# of nodes being used as a site for community to access internet	5	10	15	20
Output 1.3: Increased access to digital learning solutions and devices	# of nodes providing digital learning solutions	5	10	15	20
Outcome 2: Improved accountability and transparency in connectivity service provision					
Output 2.1: Real-time connectivity data mapping for public schoos	% of schools reporting real-time data (browser extension, ISPs, MNOs, routers)	5%	40%	80%	>80%
Output 2.2: Capture school location and connectivity data on public blockchain	% of schools with full data captured on blockchain	5%	40%	80%	>80%
Output 2.3: Smart contracts to automatically manage agreements and service delivery of connectivity providers	# of smart contracts			1	2
Outcome 3: Strengthened financial delivery systems/technology through and for schools (i.e. digitial payments, lending and funding)					
Output 3.1: Test Giga credit to be used by various providers	# of service providers piloting Giga credit				2
Output 3.2: Digital payments for service delivery	# of schools				
Output 3.3: Funds mobilised for connectivity	Amount raised (USD)				

Accelerate Countries



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Accelerate country onboarding

Accelerate countries have committed a minimum investment of $100,000 to connect a cluster of unconnected schools as Giga nodes and are piloting a combination of the 5 key accelerate prototypes.

Accelerate countries also have a plan for:

- Physically **mapping all schools** in the country (lat, long) and making public the data in Project Connect
- Reporting **information on the connectivity status for schools** on existing public contracts; and
- **public procurement for school connectivity**

ACCELERATE COUNTRIES

Funds raised to implement accelerate in countries

ESARO

Kenya

$1.4M

Rwanda

$920,000

WCARO

Sierra Leone

$985,000

MENA

ECARO

Kazakhstan

$310,000

Kyrgyzstan

$165,000

LACRO

El Salvador

$400,000

Honduras

$290,000

Brazil

$215,000

$4.8M

Raised*

*Funding sources: Dubai cares, Musk, 7%.

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Accelerate Funding Breakdown *internal only*

Status		Country	Amount Allocated / Funding Source				Totals
			7% 2020	7% 2021	Dubai Cares	Musk Foundation	
Confirmed	1	**Kenya**	*$374,000*		*$450,000*	*$600,000*	$1,424,000
	2	**Rwanda**	*$20,000*		*$300,000*	*$600,000*	$920,000
	3	**Sierra Leone**	*$85,000*	*$50,000*	*$250,000*	*$600,000*	$985,000
	4	**Kazakhstan**	*$210,000*		*$100,000*		$310,000
	5	**Kyrgyzstan**		*$65,000*	*$100,000*		$165,000
	6	**El Salvador**	*$200,000*	*$200,000*			$400,000
	7	**Honduras**	*$200,000*	*$90,000*			$290,000
						Total	**$4,494,000**

Set aside funds/ activities - but pending confirmation	8	**Uzbekistan**		*$60,000*	*$100,000*		$160,000
	9	**Brazil**		*$215,000*			$215,000
	10	**Botswana**		*$67,000*			$67,000
	11	**Palestine**		*$200,000*			$200,000
	12	**Nigeria**		*$50,000*			$50,000
	13	**Costa Rica**		*$70,000*			$70,000
	14	**OECS**					$-
						Total	**$387,000**

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Annex

Connectivity

	Q2	Q3	Q4
Kenya  **$1.4M**	**25/ 220 schools connected (11%)** **0% RT**	**155+**	
Rwanda  **$920,000**	**RFP launched to connect 63 schools** **0% RT**		

ACCELERATE COUNTRIES

Accelerate country overview

ESARO

Kenya

$1.4M

Rwanda

$950,000

Botswana

$67,000

WCARO

Sierra Leone

$900,000

Niger

$50,000

Nigeria

$

ECARO

Kazakhstan

$200,000

Kyrgyzstan

$165,000

Uzbekistan

$100,000

LACRO

El Salvador

$400,000

Honduras

$290,000

Brazil

$215,000

Costa Rica

$70,000

OECS

$

$4.8M Raised*

*Funding sources: Dubai cares, musk, 7%.

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Musk Global Targets Year 1

- Connect ~360 schools in 3 countries as **prototypes for national bids** (2021 Q4)
- **Live map of connectivity** for schools (NOC) for management
- **300 schools and 5 governments** testing Giga 'accelerate'

	Targets	2021 Q2	2021 Q3	2021 Q4	2022 Q1
	Prototype schools connected Each school running full Giga Nodes	Start: **80 Rwanda** & **80 Kenya;** + 200 underway **360 Total**	Start: **80 Sierra Leone;** + 300 underway + 360 **740 Total**	**>1,000 Total**	**>1,000 Total**
giga nodes	**Applications layer** **Testing use** - i.e.: teacher/school payments	**3 Countries** Pay kids for locating schools w/ crypto	**Same 3 Countries** Staking Eth. For rev & pay teachers for service	**Same 3 Countries** Expand prototypes to national scale	**Scale to 15 Countries**
	Transactions layer **Testing methods of exchange** of money	Monitor Gb flow to nodes	Interface between sellers and buyers of Gbs	Create Giga credit that works across various service providers	Test credit across consumers & across borders
	Accounting layer **Testing monitoring mechanisms** – measure Gb flow for billing	**5 Countries** Browser based connectivity reporting	**15 Countries** Add MNO/ other data APIs for connectivity & identity	**25 Countries** Full data capture on public blockchain	**35 Countries** Reporting from school routers
	Risks/ Need	Technical capacity	Government buy-in and commitment	Scalable product	TBD

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Overview

GIGA Region/Country Engagement Methodology

Design

1 Engage
Identify and engage a GIGA Lead Organization/Lead Country as an Influential Champion for connectivity and digital skills for young people across a broad group of stakeholders (governments, private sector, civil society)

2 Align
Develop a GIGA shared agenda, including high-level vision, principles, and targets to be achieved through the initiative (key to align with national and regional ICT strategies and other stakeholder plans e.g. funders)

3 Structure
Establish the partnership structure for GIGA and sign an agreement to drive collaboration and mutual accountability among organizations. Build in a transition strategy for long-term sustainability

Implement

4 Assess
Establish working groups per GIGA pillar and collectively identify gaps, barriers and opportunities for school connectivity and digitalization to be addressed at country level. Determine pre-requisites such as investment, policies, capabilities & partnerships required

5 Plan
Collaboratively define specific goals, timelines and funding approaches, and elaborate action plans to deliver outcomes in the four GIGA pillars. Plans include partner roles and expectations; roadmap and milestones to be reached

6 Implement
Implement GIGA action plans by experimenting with new collaboration approaches, financial and technical innovations, and bringing together necessary stakeholders. Identify and set up **quick wins** for early progress and momentum

Monitor and scale

7 Monitor
Track progress of GIGA action plans and leverage milestones to drive progress including high-level global leadership convenings and in-country partnership meetings

8 Review
Review the GIGA partnership agreements, strategies and structures as needed to seize new opportunities over time

9 Scale
Scale proven initiatives for extending affordable access to connectivity and providing digital public goods and services, documenting and sharing lessons and innovations developed through in-country or global / regional partnership networks

GIGA Region/Country Engagement Methodology

Design	Key actions	Outputs / Deliverables
1 Engage **Identify and engage a GIGA Lead Organization / Lead Country** as an Influential Champion for connectivity and digital skills for young people across a broad group of stakeholders (governments, private sector, civil society)	✓ Identify a lead organization / lead country ✓ Discuss roles and responsibilities ✓ Agree on the terms of engagement ✓ Identify potential countries and organizations in the region who might be interested to participate in the initiative	- **Letter of Intent (LoI)** between the Lead Organization / Lead Country, UNICEF and ITU - **Announcement of the collaboration** in a high-level (virtual) meeting / event. - **Blogs and media coverage** of the collaboration's kick-off
2 Align **Develop a GIGA shared agenda,** including high-level vision, principles, and targets to be achieved through the initiative (key to align with national and regional ICT strategies and other stakeholder plans e.g. funders)	✓ Organize a first (virtual) meeting between UNICEF, ITU and the GIGA Lead Organization / Lead Country. ✓ Discuss and agree on the high-level vision, principles, targets, budget and contributions (financial and non-financial)	- **Project document** with the GIGA high-level vision for the region / country, principles and targets. - **Budget** document that includes the **financial and non-financial contributions** of each participant to the initiative.
3 Structure **Establish the partnership structure for GIGA and sign an agreement** to drive collaboration and mutual accountability among organizations. Build in a transition strategy for long-term sustainability	✓ Agree on the governance structure for the initiative in the country and region. ✓ Agree on the participants, roles and responsibilities of the GIGA Steering Committee/chosen governance structure. ✓ Agree on the positions and team structure to implement the initiative in the region.	- **Terms of Reference** for the **GIGA Steering Committee.** - Document with the roles and responsibilities for country-level focal points. - **Terms of Reference for the GIGA regional team positions:** project lead, finance manager, connectivity specialist, DPG coordinator.

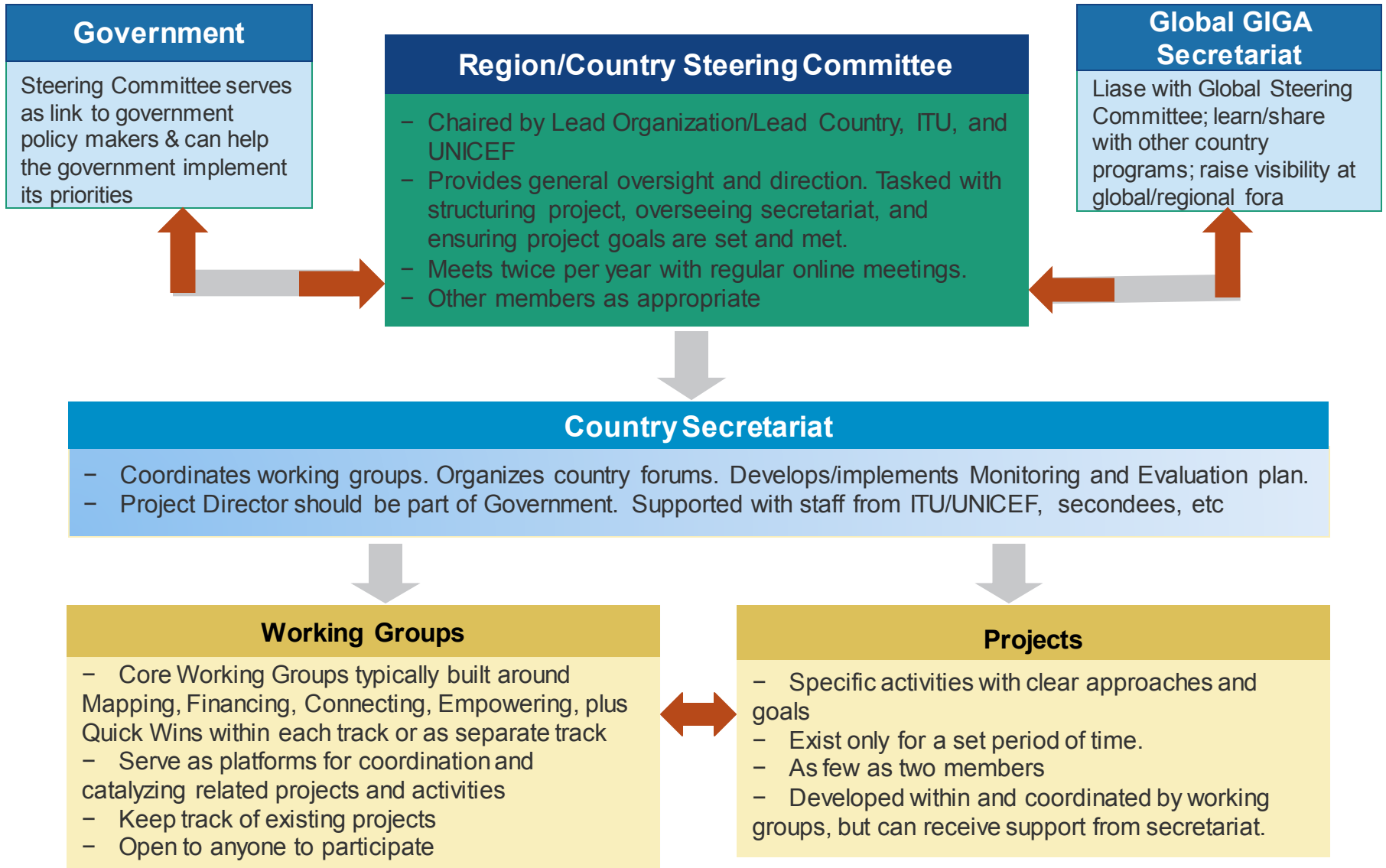
GIGA Region/Country Engagement Methodology

Implement	Key actions	Outputs / Deliverables
4 Assess **Establish working groups per GIGA pillar and collectively identify gaps, barriers and opportunities for school connectivity and digitalization** to be addressed at country level. Determine pre-requisites such as investment, policies, capabilities & partnerships required	✓ Within the Steering Committee, assign a 'champion' country or organization per GIGA pillar and establish a working group to coordinate implementation. ✓ Assign leads in each working group. ✓ Working groups to discuss and define a strategy for their pillar (mapping, finance, connect, empower)	- **Document with the structure of Working Group(s)** leads and participants. - **Workplans** for the four GIGA pillars: mapping, finance, connect, empower. - Schedule regular sessions of the Steering Committee and high-level meetings with participant countries.
5 Plan **Collaboratively define specific goals, timelines, and funding approaches, and elaborate action plans** to deliver outcomes in the four GIGA pillars. Plans include partner roles and expectations; roadmap and milestones to be reached	✓ Agree on a GIGA work plan for the region / country (based on the input of the working groups). ✓ Identify key stakeholders, partners in private and public sector to support the implementation of the GIGA initiative in the region / country. ✓ Put in place required team for implementing GIGA	- **GIGA work plan for the region / country** with objectives, targets, indicators, budgets, deadlines, and a framework to monitor progress. - **Recruitment** of GIGA regional team
6 Implement **Implement GIGA action plans** by experimenting with new collaboration approaches, financial and technical innovations, and bringing together necessary stakeholders. Identify and set up **quick wins** for early progress and momentum	✓ Identify quick wins in the Mapping and Empower pillars and define a fast-track strategy to provide quick results in these areas. ✓ Engage multilateral development banks, national development agencies, private investors, donors, industry to create a models for financing and delivering connectivity.	- **Quick wins / fast-track** plan for selected outputs in the Mapping and Empower pillars - Onboard **GIGA regional team** - **Business case** documents created for funding asks - Bring in **new partners (financiers + industry)** to support the Finance and Connect pillars

GIGA Region/Country Engagement Methodology

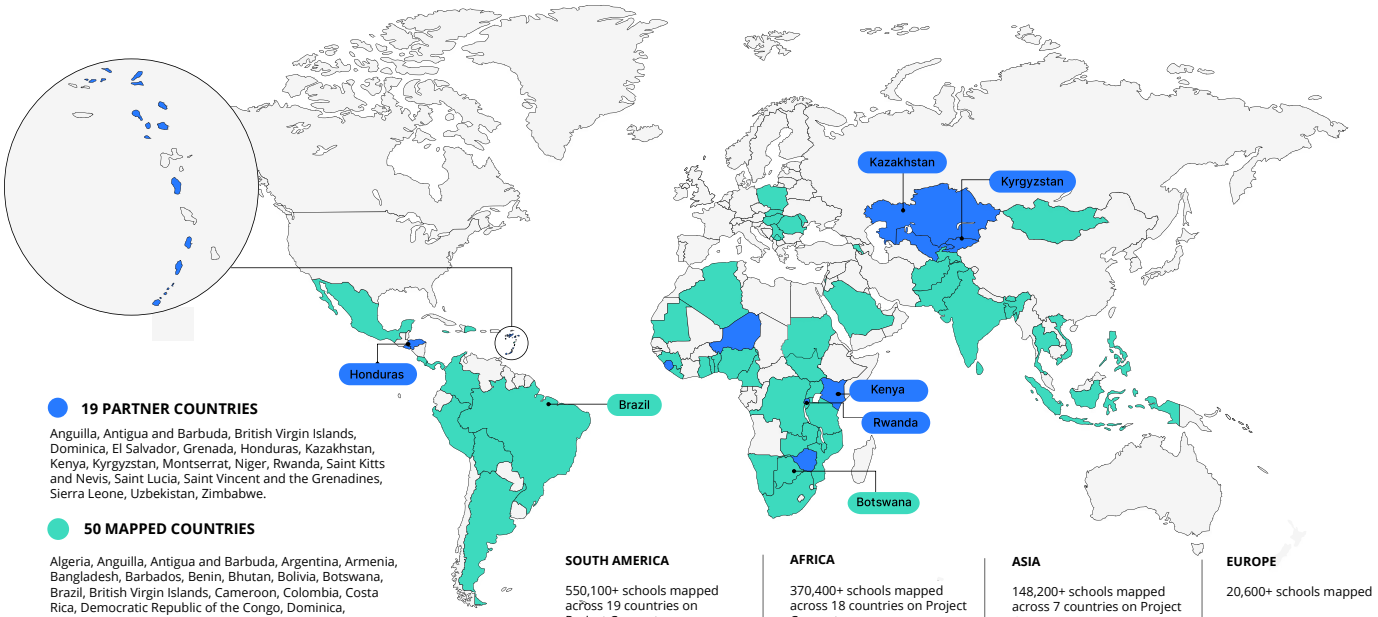
Monitor and scale	Key actions	Outputs / Deliverables
7 Monitor **Track progress of GIGA action plans and leverage milestones to drive progress** including high-level global leadership convenings and in-country partnership meetings	✓ Regular Steering Committee to update and track progress	- **Specific outputs in each of the four pillars:** Mapping, Finance, Connect, Empower
8 Review **Review the GIGA partnership agreements, strategies and structures** as needed to seize new opportunities over time	✓ Regular high-level meetings with the participant countries and other key stakeholders and partners to update and adjust if necessary	- **Adjustments to GIGA workplans and strategies**
9 Scale **Scale proven initiatives for extending affordable access to connectivity and providing digital public goods and services,** documenting and sharing lessons and innovations developed through in-country or global / regional partnership networks	✓ Identify and document successful models (financing, business models, etc.) across all 3 pilot regions.	- Finalised f**inance models** to expand affordable access to connectivity - **Connected schools** - Investment in developing and scaling required **Digital Public Goods** for education, remote learning, online teacher training, etc.

GIGA Region/Country Governance Structure



10 Fast Facts About Giga

1.1 MILLION SCHOOLS MAPPED | **5,539 SCHOOLS CONNECTED** | **2.1 MILLION STUDENTS CONNECTED**



19 PARTNER COUNTRIES

Anguilla, Antigua and Barbuda, British Virgin Islands, Dominica, El Salvador, Grenada, Honduras, Kazakhstan, Kenya, Kyrgyzstan, Montserrat, Niger, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sierra Leone, Uzbekistan, Zimbabwe.

50 MAPPED COUNTRIES

Algeria, Anguilla, Antigua and Barbuda, Argentina, Armenia, Bangladesh, Barbados, Benin, Bhutan, Bolivia, Botswana, Brazil, British Virgin Islands, Cameroon, Colombia, Costa Rica, Democratic Republic of the Congo, Dominica, Dominican Republic, El Salvador, Ghana, Grenada, Guinea, Honduras, Hungary, India, Indonesia, Jamaica, Kazakhstan, Kenya, Kosovo, Kyrgyzstan, Liberia, Malawi, Mauritania, Mexico, Mongolia, Montserrat, Mozambique, Namibia, Niger, Nigeria, Pakistan, Palestine, Panama, Peru, Philippines, Poland, Republic of Moldova, Romania, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Saudi Arabia, Serbia, Sierra Leone, Slovakia, South Africa, South Sudan, Sri Lanka, Sudan, Tajikistan, Thailand, Togo, Uganda, United Republic of Tanzania, Uzbekistan, Viet Nam, Zambia, Zimbabwe.

SOUTH AMERICA

550,100+ schools mapped across 19 countries on Project Connect

2,458+ schools connected b y Giga and partners in 12 countries

478,500+ students connected through Giga and partners connectivity initiatives

AFRICA

370,400+ schools mapped across 18 countries on Project Connect

2,270+ schools connected by Giga and partners in 4 countries

1,100,000+ students connected through Giga and partners' connectivity initiatives

ASIA

148,200+ schools mapped across 7 countries on Project Connect

811+ schools connected by Giga and partners in 3 countries

490,400+ students connected through Giga and partners' connectivity initiatives

EUROPE

20,600+ schools mapped

1. Giga is a UNICEF-ITU partnership to connect every school in the world to the internet by 2030 and every young person to information, opportunity, and choice. Giga maps connectivity in real time, finances through loan, grants or investments and ultimately, connects schools and support governments on regulatory frameworks, public procurement, and contracting.

2. Giga is the Secretary-General's only named initiative for connectivity (Common Agenda, Digital Cooperation Roadmap) that has a laser focus on school connectivity.

3. The total cost of universal school connectivity is estimated to cost at least $428B USD.

4. More than 1.3B kids do not have good access to internet (particularly the poorest, girls and those with disabilities).

5. In the 19 lead countries, Giga works with Heads of States (Presidents Kagame, Bio, Masisi and Kenyatta have been leading voices).

6. Although Giga has mapped 1.1M schools, no one knows how many there are total in the world (~6-7M) and this map is vital to funders, governments, and accountability.

7. Giga has raised $27M, from donors like Elon Musk, Ericsson, Dell, the Governments of Spain and Switzerland.

8. Giga has helped direct and deploy more than $210M (WB, ISDB loans and grants, and Brazilian tax revenue (USF)) to last-mile school connectivity.

9. With $210M, more than 25,200 more schools will be connected, reaching 8.3M students.

10. Giga's technology team works with advanced open-source technology: satellite data to find schools; machine learning to understand how connected they are; and blockchain to track their connectivity over time, and in some cases facilitate payments.

Updated as of November 1st, 2022.

Giga | August 2020

Collaborating with Giga

Giga is a global initiative to connect every school to the Internet and every young person to information, opportunity, and choice.

We've already been collaborating to connect schools and empower young people with colleagues in **Colombia, Eastern Caribbean, El Salvador, Honduras, Kazakhstan, Kenya, Kyrgyzstan, Niger, Rwanda, Sierra Leone, Togo, Uzbekistan**, and **Zimbabwe** — without their efforts, Giga would not have been able to go full speed and gather support from ED Fore and UN Secretary-General Antonio Guterres, and secure several partners providing funding and technical support.

We are eager to collaborate with more colleagues across the world to bring the power of meaningful connectivity to fast track young people's access to educational resources and opportunities. Working closely with Generation Unlimited, UNICEF's Education Strategy and related teams at country level, we support needs assessments and the deployment of digital solutions that give young people the skills to fully and meaningful participate in the digital economy.

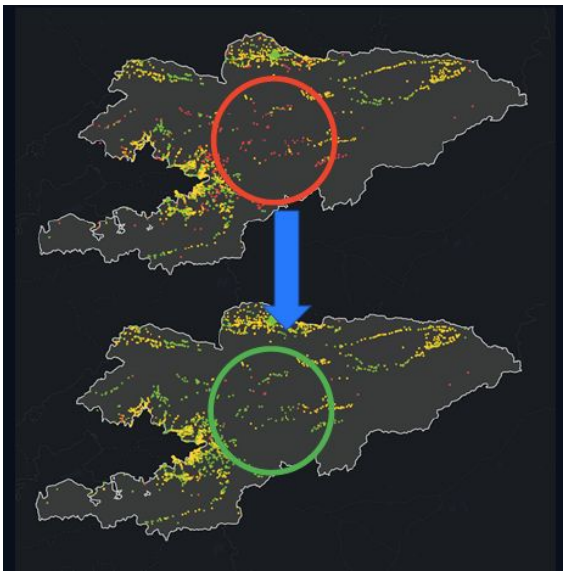
Why should your Country Office join Giga, and how can we help you get started? How can we support your ongoing education and connectivity initiatives, or those you are collaborating on with your respective governments and ministries? What have various Country Offices been doing and achieving working with Giga?

In addition to those, we've gathered your questions and feedback and are excited to share with you a collection of information and resources here.

If you would like to chat with us, we also share the team's contact information in this document.

What is Giga?

- Some 3.6 billion people in the world do not have access to the Internet. This lack of connectivity means exclusion, marked by the lack of access to the wealth of information available online, fewer resources to learn and grow, and limited opportunities for the most vulnerable children and youth to fulfill their potential. Closing the digital divide requires global cooperation, leadership and innovation in finance and technology.
- Giga will bring the power of **meaningful connectivity** to fast track young people's access to educational resources and opportunities. Giga will ensure every child is equipped with the **digital public goods** they need, and empowered to shape the future they want.
- Giga is anchored in the Secretary-General's High-level Panel of Digital Cooperation's recommendations 1A and 1B which state, respectively, that by "2030 every adult should have affordable access to digital networks" and that "a broad, multi-stakeholder alliance, involving the UN, create a platform for sharing digital public goods."



Having mapped data and communicated this with network operators, Kyrgyzstan has saved the government 40% ($200k/year) of its education connectivity budget.

What has Giga currently been working on with COs, and what are the results?

- With **Kazakhstan,** who signed on as the Regional Lead for Central Asia, we are developing the first financial model. A Giga Regional Centre, and a regional team in Nur-Sultan, has been established to implement the initiative. To date, we have mapped **10,200 schools** and integrated this into Giga's global mapping platform.

- Giga and the Government of **Kyrgyzstan** have connected the remaining **690** unconnected public schools. Giga has helped generate **$200k savings per year** — by seeing all the schools on a map and their corresponding connectivity, the Government was able to renegotiate contracts and subsequently secured a lower rate per Gigabyte (lowered by 50%) for schools, lowering the total cost.
- In the **Eastern Caribbean,** Giga is establishing a Regional Centre and team to implement the initiative. By working with the OECS, GIga will enhance the connectivity of schools and develop digital public goods to support the new digital education vision for the Eastern Caribbean.

How do we initiate the process at country level?

- Giga for any starts with country engagement and data collection. Therefore, it is helpful if you are able to gather information that can help us initiate discussions with the government and lay the groundwork for a formal agreement on the Giga work plan. Similarly, it is helpful if you are able to assess the availability of data and initiate the process to share that with our Mapping team. These initial pieces of work are needed in order to proceed with conversations about financing connectivity.
- If a country is not on the priority list but already has interest and potential partners, we encourage you to reach out to the Giga team - we work with ALL countries and adapt to their current stage and context in these efforts.
- We have developed an 11-step approach, which the Giga team will collaborate on with each CO to walk through the steps — which can all be done even if the country is not in the initial list of "quickstart" countries. To get started with us on these steps, you can reach out to anyone on the Giga team.
    a. Structure a Giga-specific partnership with country leadership
    b. Form a multi-stakeholder partnership coalition around country workplan
    c. Develop a foundation of data to identify need and size of the investment opportunity
    d. Build on existing country plans and policies by gathering data on economic, political, and regulatory landscape
    e. Evaluate regulatory barriers and identify potential levers
    f. Survey the market conditions for implementation (ISPs, MNOs, NRENs)
    g. Secure public financing to de-risk private investment
    h. Form a block of private funders and implementation companies
    i. Advise government on procurement structure
    j. Support government(s) to roll out procurement procedures
    k. Create sustainable business model - continuous monitoring and expansion of tech

- **Giga Team Contacts** for more information and guidance on getting involved: Aditi Poddar (apoddar@unicef.org), Jaime Archundia (jarchundia@unicef.org), Naroa Zurutuza (nzurutuza@unicef.org) and Sophia Farrar (sfarrar@unicef.org)

How do you match the weak purchasing power and investment opportunities/financing for very poor and undeveloped countries? There are some contexts which need a lot more of the public money/grant money than the institutional/investment side. The Giga team will collaborate with individual countries to fully incorporate contextual needs and collaborate on customized steps toward connectivity.

What can Giga add, if we already have some existing efforts across Education, Youth Skills, and/or Connectivity?

- Through strategic partnerships with government(s) and private sector, Giga can provide:
    - Country plans with and for every government
    - Support to COVID-19 response, with connectivity and remote learning solutions
    - Research to develop financial models that fund connectivity
- Giga has the ability to layer public and private money (i.e. GAVI) through convening partners and creating:
    - National budgets (Education, Health)
    - Creation or expansion of USFs
    - A pool of donors and investors
    - Collaborations with the Broadband Commission Working Group on School Connectivity
- Giga can offer regulatory and network & digital infrastructure expertise, including:
    - Regulatory frameworks fostering a competitive ICT environment
    - Products, services, and expertise on Telecommunication/ICT network and digital infrastructure
    - Holistic and scalable digital strategies and services to empower digital societies
- And any additional support to the following, ensuring we focus on the child (digital skills & education):
    - Government programs to connect schools
    - Infrastructure programs
    - Education solutions: remote learning, teacher's training, etc.
    - Entrepreneurship and Digital Finance

Once we have the government on board and a plan, does the CO fundraise or would there be support for fundraising? The government has to be engaged to commit their budgetary resources to connectivity, which is key so we can bring additional players like development banks and private investors to also contribute with funding for connectivity.

Are we expecting the role of the government to focus on endorsement only, buy-in, financial commitments? The role of the government is key. We expect endorsement and buy-in, and also financial commitments. For example, most governments have Universal Service Funds, which we could explore how to use more efficiently and targeted to connect schools.

How can Giga help our CO/RO? Will Giga help us fund and staff the project?

- Working with the CO/RO, Giga provides services that support country governments to develop their case for investment through data transparency, regulatory reform, and public financing. On the other hand, Giga packages and develops investment opportunities in coordination with private funders and implementation companies to support a successful procurement process.
- Giga acts as a convener between funding opportunities and connectivity projects for schools in disconnected areas and, ultimately, their communities.
    - We help funders hold governments and providers to account through clear target-setting and timeline management
    - We provide grants and technical advisory services to help governments in project preparation
    - We enable relevant regulation, and establish and share best practices in mapping connectivity demand, identification of funding, project preparation, project delivery, and post-delivery service adoption and empowerment
- **Kazakhstan** signed on as Giga Lead in Central Asia, as the initiative aligns with the country's connectivity and digitalization priorities, and the CO leads coordination and programme implementation. The programme is estimated to cost USD 8.35M over 4 years; and Giga, along with contributions from the SDG Fund and the Government of Kazakhstan, has committed:
    - To cover dedicated Giga staff in Kazakhstan through 2020
    - Additional investments from UNICEF's USD 29M Venture Fund into open source solutions for connectivity and improving learning outcomes
    - Part of the USD 5M funding from the Government of Norway to scale and facilitate access to Digital Public Goods to be invested in Kazakhstan
    - Contributions of staff capacity for mapping and real-time monitoring, as well as identifying suitable technologies based on Kazakhstan's needs and context
- The Government of Kazakhstan has committed as well to host office space, workshops, and technical meetings, and will second staff to the project to support identifying national needs and developing financial models.

Will schools that are connected to the internet through the Giga Project be required to pay for their internet? Payment is usually through the Ministry of Education and existing channels, but we work on this country by country.

Is the UNICEF CO the project lead in each country?

- In each country, the initiative is led by the UNICEF Representative along with an ITU Representative; within the Office, we work closely with technical and programme teams, such as colleagues across ICTD and Education programmes.

What are the types of analysis and insights that mapping can provide?

- **Assess the levels of connectivity access across communities** by mapping areas without connectivity and estimating the number of children living in those areas and that are not able to continue with their learning or receive relevant information about the pandemic. This analysis will inform Country Office's remote learning response and direct the decision tree by answering the first question of "Does your target population have access to connectivity at home?"
- **Map school locations and their connectivity status**. This information will support the coordination and delivery of resources, services, and connectivity to schools and the communities around them. During emergencies, this information can also guide response efforts by informing how to deliver critical information and other supplies.
- **Map the levels of vulnerability of communities** by looking into different factors such as access to connectivity in schools and communities or access/distance to schools and health centers from population centers.
- **Identify out-of-school children** and their distribution by comparing enrollment numbers at school level against school aged population.
- **Monitoring the rollout of education programmes** such as digital literacy programmes, as well as their results.
- The Giga team has been quickly supporting COs by providing the data and analysis needed to help direct COVID-19 response. If you would like our support as well, here is a summary of how we can work together and what Giga will provide.

Map of schools in Sierra Leone colored based on their connectivity level

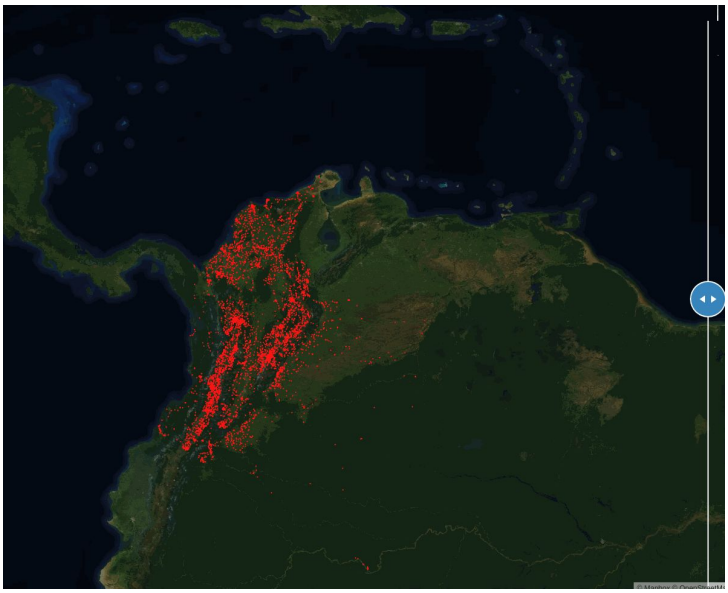
Why mapping?

- **Shows where resources are needed**. Many governments do not know where all of the schools in their countries are. Without that information, they – and other nongovernmental organizations – cannot effectively provide services or deliver resources to children and their communities.
- **Know where there is internet and if it is reliable**. Many governments and organizations are committed to connecting schools to the internet, but don't yet have the ability to monitor whether schools are actually connected and where.
- **Improves access to data for good**. It has been proven that availability and quality of data is considerably higher for wealthier regions. This data inequity leads to disparities in resource allocation, where vulnerable populations are left behind.
- **Highlights gaps in infrastructure**. Without knowing where connectivity needs to be extended, governments and investors don't know how much it will cost, making it more difficult and riskier to finance.
- **Captures market demand**. Because internet service providers aren't able to measure the size of potential new customers, they struggle to make a case for bringing infrastructure to remote areas. This results in limited investment and increased prices.

Why is my region not on the map? We started in 3 regions as prototypes in September 2019 to fine-tune our processes. We now welcome any country and region to join us.

What are some case studies of how countries have benefited from the mapping?

- **Kyrgyzstan:** the government used the mapping to identify schools without access and to negotiate fair market prices to connect the remaining 660, while also bringing down prices nationally. This year, the government of Kyrgyzstan has saved 40% of its annual education connectivity budget ($200k/yr) and school internet speeds have nearly doubled.
- **Sierra Leone:** we worked with the government to map distance from communities to schools and to connectivity and use this to map out-of-school children as well as to identify factors (availability of basic infrastructure at schools, learning materials, teacher training) that impact learning outcomes the most.
- **Colombia:** we applied artificial intelligence techniques to automatically map schools from satellite imagery and provide the government the location of 7,000 schools that were not part of their official datasets.
- **Kenya:** we overlaid the location of schools with other datasets to estimate the cost of extending connectivity to every public primary school in the country. This will help us unlock the necessary funding to bring connectivity to them.



In Colombia, we applied AI techniques into satellite imagery, allowing us to automatically map schools — Through this, we found and provided the government with the location of 7,000 additional schools that were not part of their official data sets.

Is the purpose to map schools in a region or to provide access to the Internet or both?

- The purpose of Project Connect is to map school connectivity globally. This will be the foundational data / analytics platform for Giga, a project that aims to provide access to connectivity to schools.
- Therefore, even if the purpose of Project Connect itself is not to connect schools, it aims to serve as a baseline to identify gaps, aggregate demand for connectivity as well as an accounting tool to monitor progress in the provisioning of connectivity.

If schools are connected but students are not, due to schools being closed, what is the main impact? Giga is about connecting learners (and teachers!). By connecting the school as a focal point, we branch out to secondary (community), tertiary (town, etc.) rings of benefit and value.

What are the data points that we are looking for?

- We are mostly interested in the indicators below - however, any information related to schools is useful.
    1. School name
    2. Geolocation of school (latitude, longitude)
    3. Availability of Internet connectivity (Yes/No)
    4. Availability of electricity (Yes/No)
    5. Speed of Internet connectivity (Mbps)
    6. Type of Internet connectivity (i.e. wireless, fiber, satellite)
    7. Periodical updates of que QoS of Internet connectivity (upload/download speed, latency)
    8. Any additional indicators (number of students, number of teachers)

Do you also have bandwidth per student representation? We can; we have data on the number of students from EMIS, among other data, and this can be derived.

What about data sharing and data privacy?

- Our school mapping work is guided by the core belief that data is a public good. In line with UNICEF's Strategic Framework for Data for Children, we believe that smart demand, supply and use of data drives better results for children. Data has the potential to improve access to critical services and resources for children and their communities. In many cases, these services are found in and provided by schools.
- Giga has developed a data sharing framework centered around three core principles:
    - **Public data gathered with public money creates public goods.** Digital cooperation is a key enabler of Giga's mission and is reflected in the priorities of many organizations, including the recommendations of the Secretary General's High-Level Panel on Digital Cooperation.
    - **School location data is a public good**. The ability to know where education and other foundational resources can be found is a public good, similar to any health center or government building. In most places where data exists, school locations are already shared publicly on sites like Google Maps, 2GIS, and OpenStreetMaps.
    - **Child protection should always be prioritized.** Giga adheres to UNICEF's Child Data Protection Policies and follows the Principles of Responsible Data

for Children. Our maps aim to provide information that can have a positive impact without putting children at risk.

Are you already thinking of a framework/modalities of how this data will be availed to UNICEF programmes and its partners? We have developed a data sharing framework to make sure that the broader community can benefit from it, giving priority to child protection and data privacy. We will also continuously explore synergies across programmes, such as Social Policy for example, on a case by case basis.

Is this school-based only, or can it be envisioned as community-based? Can the focus be on "school community connectivity"?

- We identified, and have been using, the school as a "point" for counting aggregate demand which in turn helps us pool and aggregate financing for public sector connectivity. The school is now the focal point and stepping stone toward connecting its entire surrounding community, including other facilities (health centers, youth centers, etc.), which is the end goal.
- In a sense, we are using the school as a concrete target, a single, countable unit, into which many efforts can direct laser focus.
- Giga is about using schools to identify demand for connectivity (a number of students in a school tells us about a number of people in a community, and that tells us about how much demand there might be). It is also about using schools as an analogy for learning and connecting – which, in their best instances, they have always been – where the community can come together and support its next generation.
- Giga aims to connect communities, starting with schools. We find that schools are a very effective proxy for household demand. They are also a great focus to begin with because of the various funding sources dedicated to education and children. But this does not mean that we do not also seek to connect households in the communities around those schools.

In most cases where there is a school, you find a health facility too, and these complement each other. Are we building synergies on the already existing network of health facilities' connectivity? We are building on existing networks! We are also training our satellite and machine learning systems, not only to recognize schools, but also health centres/facilities.

Is there a model pilot for low device and low electricity infrastructure contexts?

- Resource constraints (electricity, bandwidth, local technical capacity, etc.) are a major challenge in many deployments and we are drawing from a number of prior successful deployments of sustained school connectivity in those situations. As an example, in 60% of the deployments being done in the Philippines through UNDP, the schools are completely off the electrical grid, so that poses unique challenges particularly around designing appropriate service level agreements (SLAs) to ensure robust, high quality service provision.
- The ITU Team has a low infrastructure guidebook as a resource. We are also building procurement/bid models, including some centered around low/no electricity contexts.

Does Giga provide support for hardware, electricity, and service fees?

- Giga evaluates the primary barriers to connectivity in each unique context and works with the country government, private sector, and other stakeholders to bridge the gap. This includes ensuring that connected schools have the required electricity, as well as putting in place sustainable operating models that can manage service fees into the future.
- Giga is technology agnostic, but will support country governments and schools to evaluate hardware options and incorporate the cost of that technology into account when budgeting projects.

Will Giga deploy the digital solutions once there's connectivity?

- Through its engagement with countries, Giga can support needs assessments and support to deploy digital solutions.
- We can provide connections to partners, resources, capacity building, and financing to scale learning solutions. In partnership with the Digital Public Goods Alliance, we can help identify and scale digital solutions and the role of the local ecosystem in developing, scaling and maintaining open source solutions.
- Through a network of partners, we will facilitate the deployment of tele-work, tele-health, tele-education, and financial services at low cost, scale, and adapted to local languages.

Does Giga work with existing Internet Service Providers in-country to build out infrastructure and capacity? Yes, and particularly with local providers.

Are you combining this initiative with technology capacity development for teachers and students? Lack of ICT capacities is an important limitation at country level.

- Giga will support providing digital connectivity to schools and the initiative complements the initiative “Digital Learning For Every Child, Everywhere” from the PD Education team, which will be focusing on developing the right set of skills in teachers & students to leverage the use of connectivity in changing the learning experience.
- We work with PD Education for each situation.

How are you managing the concept of Change Management in connected schools so far, to change leadership, ownership and sustainability? Our colleagues in Education are working to build out teacher training and digital packages.

To what extent are you leveraging already-deployed solutions, e.g. EduTrac, to complement the work that you are doing?

- A lot of data from EduTrac, other EMIS, or EMIS add-ins are helping us 1) crowdsource school locations and 2) gather data around number of children in school, among others.

How will public investment impact private sector investment in connectivity?

- Private sector investment in connectivity is often discouraged due to the high upfront cost of infrastructure and the risk that revenue streams from newly connected regions will not justify the investment, among other reasons. Giga directs public funding in ways that reduce those inhibitors, thereby creating more interesting opportunities for private sector investment. A couple examples of this includes subsidizing capex, making advance market commitments, or subsidizing service fees for consumers.

Giga Regional Updates:

Central Asia (3 countries):

- Kazakhstan’s Vice-Minister of Digital Development signed a partnership to support the development of financing models and tools to connect schools and empower young people.
- Kazakhstan will lead the roll out of the initiative to support digital connectivity in Central Asia.
- Giga Digital Connectivity Center in Astana and regional team to implement the initiative.
- Kazakhstan, Uzbekistan and Kyrgyzstan will be among the first countries to roll-out Giga.
- Other possible countries include Mongolia and Tajikistan.

Africa (5 countries):

- Kenya, Niger, Sierra Leone, Rwanda and Zimbabwe will be implementing Giga to provide affordable digital connectivity to schools; and through Giga Accelerate the first 1,000 schools in each country will be connected by early 2021.
- Rwanda will lead digital cooperation efforts in Africa to connect all schools in the continent by 2030 through Giga.
- Sierra Leone will share their experience in school mapping and lead the Digital Public Goods work in the region.
- Niger received a USD$100 M (50% grant / 50% IDA loan) from WB and will work with Giga to expand connectivity in schools and 2,100 villages.

Eastern Caribbean (9 countries):

- The Organization of Eastern Caribbean States (OECS) will be leading the implementation of Giga in 9 Member States.
- 8 countries in the Eastern Caribbean states (OECS) have completed mapping of their school connectivity and the OECS Commission has agreed to serve as the Giga Lead Organization for the region.
- Launch of the Giga Eastern Caribbean Steering Committee (April) and the Investment and Partnerships Working Group (July).
- The Giga initiative has been presented to regional Ministries of Education to support the Digital Education model in the Caribbean

Latin America (3 countries):

- El Salvador will develop a real-time monitoring tool for connectivity and a new financial model to invest in a national telecom company based on a public-private collaboration.
- Honduras, with support from an IDB loan, will develop a digital connectivity bond using their Universal Service Fund as a guarantee
- Colombia will be developing a real-time monitoring tool to assess the quality of service that schools receive.
- In conversations with Guatemala, Ecuador and Argentina

Giga Team Contacts

- For more information and guidance on getting involved: Aditi Poddar (apoddar@unicef.org), Jaime Archundia (jarchundia@unicef.org), Naroa Zurutuza (nzurutuza@unicef.org) and Sophia Farrar (sfarrar@unicef.org)

Giga Stories

Africa

Country and Challenge	Giga Solution	Story Angle
KENYA The Kenyan Government is aiming to grow the digital economy with universal access to connectivity by 2023. They seek to create a digital economy, propelling Kenya from a low-middle income economy to an emerging markets/advanced economy. However, although 70% of Kenyans are covered by 3G/4G, they cannot connect due to affordability and digital literacy concerns.	Working with the Government, Giga's school mapping will help refine the connectivity strategy. Giga will also help address policy, regulatory and tax barriers to boost competitiveness and protect consumers. Giga will also mobilize funding and prepare procurement lots — this targeted financing for connecting over 23000 schools that currently lack connectivity in Kenya could mean an estimated GDP growth of US$3.3 billion. Giga will simultaneously facilitate connections on scaling digital textbooks, content, and other educational digital public goods while providing support to develop local, regionally relevant digital solutions.	Over 1.2 million primary school-aged children in Kenya do not attend school – the hardest to reach include children with disabilities, children living in pastoral and nomadic communities and in urban informal settlements, leaving them further behind and unable to propel not only themselves to a brighter future but also their country to the advanced economy it aims to be. By connecting every school and community, we can ensure that more children – especially children with disabilities, those from rural areas and from urban informal settlements – can access quality, inclusive education, helping them build the life skills for employability. By equipping children and young people with digital literacy, we're matching them with job opportunity, fostering entrepreneurship, and empowering a large generation of Kenyans to fully engage with their society and transform Kenya's economy.
NIGER Niger is a young, predominantly rural country.	Giga is supporting the Government of Niger in its goal	If there is one area in which digital technology can drive change in Niger, it is education. The vast majority of students

Commented [AP1]: I think my general comment is that all the stories start blending together. And I know that it's going to be hard to create niche stories for different countries because the final aim is the same. But a few do stand out, like the El Salvador one, or the Rwanda one about lack of natural resources. Maybe there is a way to have a very clear and different problem statement in the first para for each country that can then show how connectivity is solving these different problems (like building human resources to fill in the lack of natural resources, or give children an opportunity for a different life than the current one with violence)?

58.2% of its population is below 18. In theory, a young population should drive economic growth; however, over 50% of children aged 7-16 are not in school due to geographic gaps in school coverage and poor retention rates – deepening inequities with the poorest and rural children least likely to attend school. On top of this, some parents choose not to enroll their children due to safety concerns, the distance to school, and child marriage. Few Nigerien schools – only 80 – are connected to the Internet.	of driving economic growth through digitization, with universal access to connectivity and education policies. By connecting over 19,000 schools and their surrounding communities, Giga aims to extend internet access to over 7 million Nigeriens. In partnership with the Government, Giga's mapping technology can help accurately deploy connectivity and support the government efficiently roll out its connectivity programs. Niger has already received $100M from the World Bank toward connecting schools and villages, and Giga is providing technical assistance in identifying locations for infrastructure and additional financing.	living in rural areas, without digital technology and the ability to access it, have been literally cut off from the world – making it impossible to continue learning. Imagine the future of Niger if we can connect every school, community, child and young person to the Internet and scale up modernized education – including world-class digital solutions, distance learning, relevant skill set training, entrepreneurship and remote work. By connecting schools and their surrounding community, we not only accelerate access to digital technology, we also close the digital divide and shatter inequities experienced by young Nigeriens, especially the poorest living in rural areas, due to circumstances beyond their control. Education is the best pathway out of poverty. With connectivity, we bring equal access to quality modern education. Empowering Niger's young population will drive economic growth and help eradicate poverty.
RWANDA Rwanda's young generation today is the largest in its history – about 5.4 million are under 18. Over the past years, Rwanda has achieved significant progress toward reaching middle-income status largely due to political stability,	Rwanda aims to grow its digital economy and public services through universal broadband usage. Giga will support the Government to leverage high coverage levels to close connectivity gaps quickly,	The Rwandan Government realizes that education is crucial for the economic prosperity of this small country with a lack of natural resources – by making the Internet a basic public utility, it can instead tap the power of its human resources.

Commented [AP2]: Is there some way to make this very Niger specific? Like for Kenya the focus was children with disabilities or with nomadic lifestyles.

strong governance, fiscal and administrative decentralization and zero tolerance for corruption. However, despite rapid urbanization, around 75% of the population live in rural areas and poverty remains widespread – disproportionately affecting children. Nearly all Rwandan schools are within its fiber network and/or covered by mobile broadband – but 1,796 schools remain without internet. As the Government of Rwanda invests in classroom infrastructure and digital content to empower learners with digital skills, ensuring connectivity for all schools means no one is left behind.	aligned with their existing SMART Classrooms program. Given the country's hilly geography, significant investment is needed for last-mile fiber connections. Giga will explore ways to build on regulatory reforms and activities, increasing investment attractiveness, boost affordability and protect consumers. Giga will not only explore innovative and appropriate last-mile connectivity solutions, but also mobilize concessionary investment to deploy these to connect the remaining schools.	By extending connectivity in a cost-effective and reliable way to ALL schools in Rwanda regardless of location, children and young people can enjoy learning with adapted global DPG resources, including digital textbooks and content for remote learning. We can pursue inclusive, equitable, and quality education for Rwanda's largest young generation and helping them emerge from school prepared for not only their future but also a global future, further spurring the country's growth.
SIERRA LEONE The Government of Sierra Leone provides free admission and tuition for children in approved schools; but many children are still out of school as they live in remote, rural communities, and due to high, persistent levels of poverty, parents are unable to pay the direct and indirect costs of education. While 80% of Sierra Leone's 11,200 schools are within 3G/4G coverage, only 205 schools are connected. Access to quality education, retention and completion of school remain challenges for children in Sierra Leone; furthermore, few opportunities exist for	Connecting 10,995 schools provides a gateway to connecting 3 million community members. Through mapping, Giga can articulate connectivity needs using schools as focal points based on which business cases and investment opportunities can be built, along with monitoring real time connectivity. Giga will also work with the Government to identify appropriate, innovative technologies for middle- and last-mile connectivity and mobilize the funding needed to connect the schools without connectivity. Giga will also provide technical assistance to	Not being able to attend school should not mean children and young people should stop learning. As we've seen during school closures due to lockdowns, it is imperative for young people to continue learning everywhere and anywhere. By connecting schools as a focal point, we can bring meaningful connectivity to every community. In Sierra Leone, there is a dire need for a comprehensive alternative learning pathway – including accelerated learning and marketable skills development programs – to help prepare out-of-school children and young people to re-enter formal education or pursue options of skills and

alternative education for out-of-school children and young people, keeping them unable to acquire functional literacy for sustainable livelihoods and economic empowerment, helping them realize, despite their circumstances, their full potential and contribute meaningfully to nation building.	the Government on best practices for efficient, cost-effective deployment of these funds toward reliable school and community connectivity.	livelihood development for sustainable employability. With access to the Internet, Sierra Leonean learners can build 21st century skills for employment in their own and a global labor market, enabling them to contribute meaningfully to their economy.
ZIMBABWE 76% of Zimbabwe's children live in poverty, with most living in rural areas – those hardest to reach in terms of health, education, nutrition, water and sanitation, access to information, and other basic indicators of well-being and quality of life – while urban vulnerability increases as internal migration does. The Government aims for holistic development of the nation by harnessing the power of ICT across all sectors of the economy and by society at large; however, children are unable to build these digital skills and contribute to nation-building with 6,611 schools unconnected – with 75% of these being primary schools.	In collaboration with the Government, Giga will use mapping to identify schools and refine investment needs for unconnected schools. This includes real time monitoring to confirm service levels are being upheld as well as using this data to define a partnership and fund strategy to connect the 6,611 schools. Giga will also work with Zimbabwe's Ministries of Education and ICT to explore opportunities for digital public goods to play a role alongside emerging private e-learning platforms and strengthen the entrepreneurial ecosystem to build locally developed digital public services and goods.	Access to affordable ICTs – including the right virtual platforms – will make it possible for many learners to achieve not only their educational goals but also their overall skilling goals, in an increasingly connected world. By connecting schools, over 3.5 million community members can access information, opportunity and choice increasingly found online, and build the digital and life skills with a wealth of digital public goods enabling digital growth for all. This expanded community connectivity could result in a US$0.6 billion in GDP growth for Zimbabwe, allowing more resources to flow into holistic development.

Central Asia

Country and Challenge	Giga Solution	Story Angle
KYRGYZSTAN Kyrgyzstan is a young nation, with 2.1 million children making up 36.5% of its	With Giga's support, Kyrgyzstan has provided basic broadband to 99% of its schools and increased speeds and lowered	Many children in Kyrgyzstan enter and end formal schooling without the required life-skills and become unprepared for their futures. This is especially

population. Child poverty is a serious issue and concern for the future, as a result of – as well as resulting in – poor access to quality services and protection, missing out on education and healthcare. The poorest children live mainly in rural areas. 31 mountainous schools in the country remain unconnected to the internet, while 671 schools on local government budgets are either unconnected or pay for slower, less reliable coverage.	the costs of service; working with the Government, Giga has mapped schools and helped identify 702 schools that lacked high quality internet. Giga also worked with the Prime Minister's Office to negotiate ongoing service fees; prices were lowered by almost half while speeds doubled, saving 40% of its annual education connectivity budget. Giga will mobilize targeted financing for connecting or improving connectivity in 702 schools and support sustainable financing opportunities for ongoing fees.	compounded among the poorest children and young people – those living in rural, mountainous areas with no access to the Internet in their schools and communities. This inability to access services and digital education is seen as youth unemployment and underemployment rates remain high. The digitalization of society is a requirement today, and the Government has invested in its free e-learning website. By connecting schools, children and young people in Kyrgyzstan can find their own opportunities to rise out of poverty, gaining the necessary life-skills they need and want regardless where they are from.
UZBEKISTAN The Government has set transitioning to a digital economy as of its highest priority tasks; it sees digital knowledge and modern information technologies as necessary to achieve progress. In line with this, it aims to connect all schools with reliable internet service; but 3,833 schools remain unconnected, and only 7% of secondary schools met the Ministry of Education's standard of a high speed, uninterrupted internet connection. Uzbekistan is rapidly investing in school connectivity and digital content creation to	Giga is supporting the Government across all stages of school connectivity and access to digital public goods, to help realize its 2035 policy toward enhancing the country's position in science, technology, and innovation. Through integrating government data into Giga's mapping, the country's school connectivity strategy can be refined with clear speed targets. Giga will continue advising the Government on mechanisms to bring in investments, as well as facilitate connections with investors.	As the country shifts from its independent isolation into a global outlook, Uzbekistan has to simultaneously – and urgently – incorporate educational and professional opportunities for Uzbeks, especially children and young people, to bring it to the global stage. The Government has put programs in place to ensure early childhood education services are expanded and the quality of basic education is improved. With universal, reliable connectivity, we can ensure these efforts reach the most vulnerable and prepare all children and young people for life-long learning and

support learners through COVID-19 and beyond.	By connecting 6,237 schools and their surrounding communities, Giga hopes to plant the seeds of internet skills and digital ecosystem development to empower 10 million community members.	meaningful participation in a growing economy. To make connectivity meaningful, Giga will support to develop, strengthen and contextualize digital public goods, especially focusing on youth development services.

Latin America

Country and Challenge	Giga Solution	Story Angle
EL SALVADOR 40% of El Salvadorians are covered by 3G/4G but remain unconnected due to affordability, electricity, and digital literacy barriers. If all can not only connect to the Internet but also participate in a digital economy, El Salvador can become a competitive country (I.e. in the Global Competitive Index).	Giga will work with the Government to map school locations and their connectivity status, and subsequently provide technical assistance and mobilize funding to safely connect every child. Giga will then extend support to develop locally relevant digital public goods, and identify gaps where global solutions can be adapted to or combined with local solutions.	Political and civil unrest and safety issues have taken a toll on El Salvador, forcing families to find sanctuary and opportunity elsewhere. El Salvador wants to address these concerns — but taking a forward looking lens, it wants to become a competitive country especially in the ever-growing global, digital economy – but how can it do so with its human capital, especially the young, fleeing? By connecting schools and communities and offering young people the opportunity to gain digital skills, they can form El Salvador's homegrown digital workforce and boost the country's competitiveness, boosting not only its standing but also its reputation as a tech centre in Central America.
HONDURAS The Honduran Government aims to equip all learners with equitable, quality education that will allow them to effectively participate in a modern economy. However,	To ensure every Honduran is covered and can access the Internet, Giga will work with the Government in mapping schools connectivity and	In Honduras, 44% of children (3-17) are out of school, either due to their location (rural, hard-to-reach areas) or lack of economic resources. These children and young people do not want to continue studying,

there are over 2 million Hondurans that are not covered by mobile broadband. Closing the digital divide is needed to ensure digital literacy grows through academic and vocational education, increasing employment and incomes.	identifying appropriate last-mile connectivity solutions. As we connect every school and community, Giga will help strengthen the Honduran entrepreneurial ecosystem by building a pipeline of locally developed digital public services and goods, and identify solutions to scale in other Giga countries.	because they do not think education opens the doors to the world of work. Establishing universal connectivity means every child could meaningfully access the Internet, whether at school or at home, and enter a world of information and opportunity where they can build any and all digital skills they want and need. Learning and skilling becomes not only fun, but especially ubiquitous. With every young Honduran becoming a digital native, they can find their niche in the digital economy and pioneer a modern economy in Honduras.

OECS

Country and Challenge	Giga Solution	Story Angle
OECS Across the Eastern Caribbean, overall connectivity is high, but poorer, rural areas lack quality coverage; and where there is access, speeds are slow and service costs are high. The Organisation of Eastern Caribbean States has set digital transformation as a regional priority, envisioning digital education powering this. However, while many schools have some connectivity, tracking and improving service quality across all 1,147 schools would be a significant step towards truly universal connectivity.	Giga is supporting the OECS to ensure regional harmonization, transitioning all Member States into digital education systems with e-learning platforms integrated. Giga's mapping work will help monitor in real time schools' internet connectivity to improve quality, reliability and consistency, and value for money for internet services. Once established, Giga will help integrate connectivity plans for other public services and mobilize investment to support deployment, expand, or improve connections to ALL schools.	A lack of reliable, affordable access to the Internet means children and young people are excluded from the wealth of information available online, limiting their opportunities to learn and grow and to fulfill their potential. Empowering children to succeed through broadened access to quality education is one of the best defenses against poor choices later in life. With improved connectivity, children and young people can better access their education and gain ICT skills in the process. Providing access for all children will help support their whole development, regardless or ability or

		background, helping them avoid the pressures and dangers which typically result in resorting to violence. Doing so can help raise employment for youth and disadvantaged groups – with education, even children and young people living in the poorest communities can get the best start in life and ready to face the pressures and complexities in the ever-changing modern world.

GigaNFT2 (v2)

Roadmap and background

4 May 2022

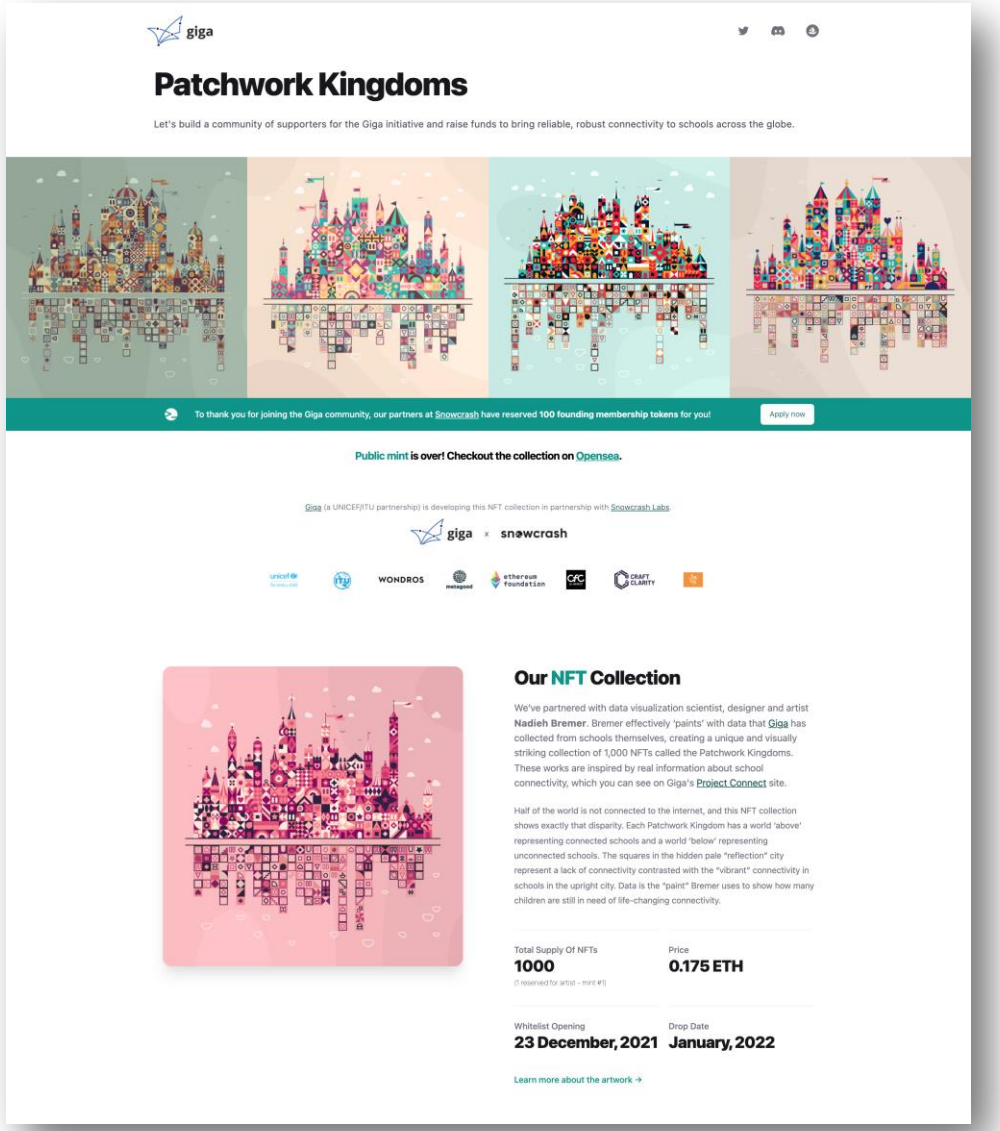
UNICEF/ITU
Not for Circulation

01

Introduction

GigaNFT1
aka
Patchwork
Kingdoms

Patchwork Kingdoms

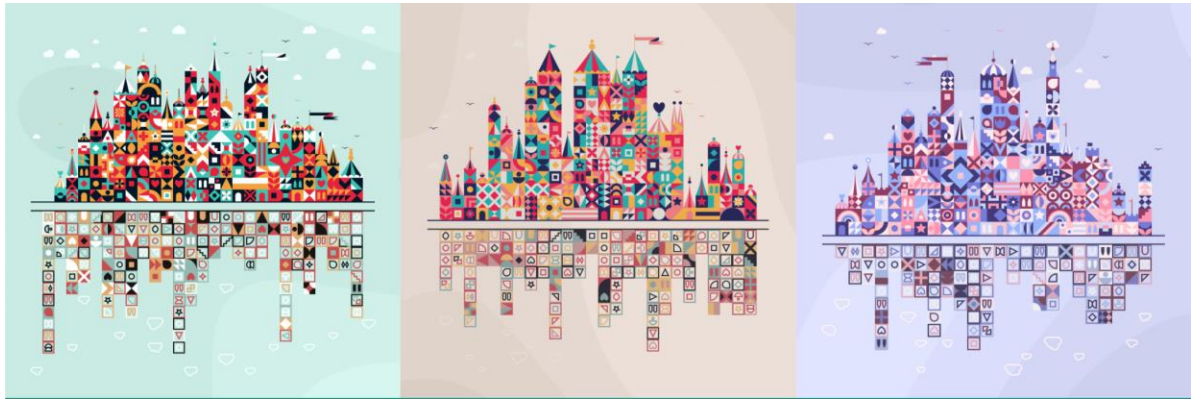


- **Partnership** with Snowcrash, UNICEF France, and others [list all partners here]
- **Artist** developed the concept and created 1000 unique art pieces based on Giga data
- Develop and deploy the **Smart Contract.**
- Listing on NFT marketplace **Opensea** and connecting the metadata.
- **Whitelist** (8 429 people signed up)
- **Public Sale** (Sold out in <6 hours hours) @0.175 eth/piece
- Collaboration with UNICEF France, Switzerland, Christies

- Amount raised: **~$600K + ongoing 20% royalty in perpetuity for every sale of an item.**

The Art for GigaNFT1

- Half of the world is not connected to the internet, and this NFT collection shows exactly that disparity. Each Patchwork Kingdom has a world ‘above’ representing connected schools and a world ‘below’ representing unconnected schools. The squares in the hidden pale “reflection” city represent a lack of connectivity contrasted with the “vibrant” connectivity in schools in the upright city. Data is the “paint” Bremer uses to show how many children are still in need of life-changing connectivity.



"Utility" of the collection

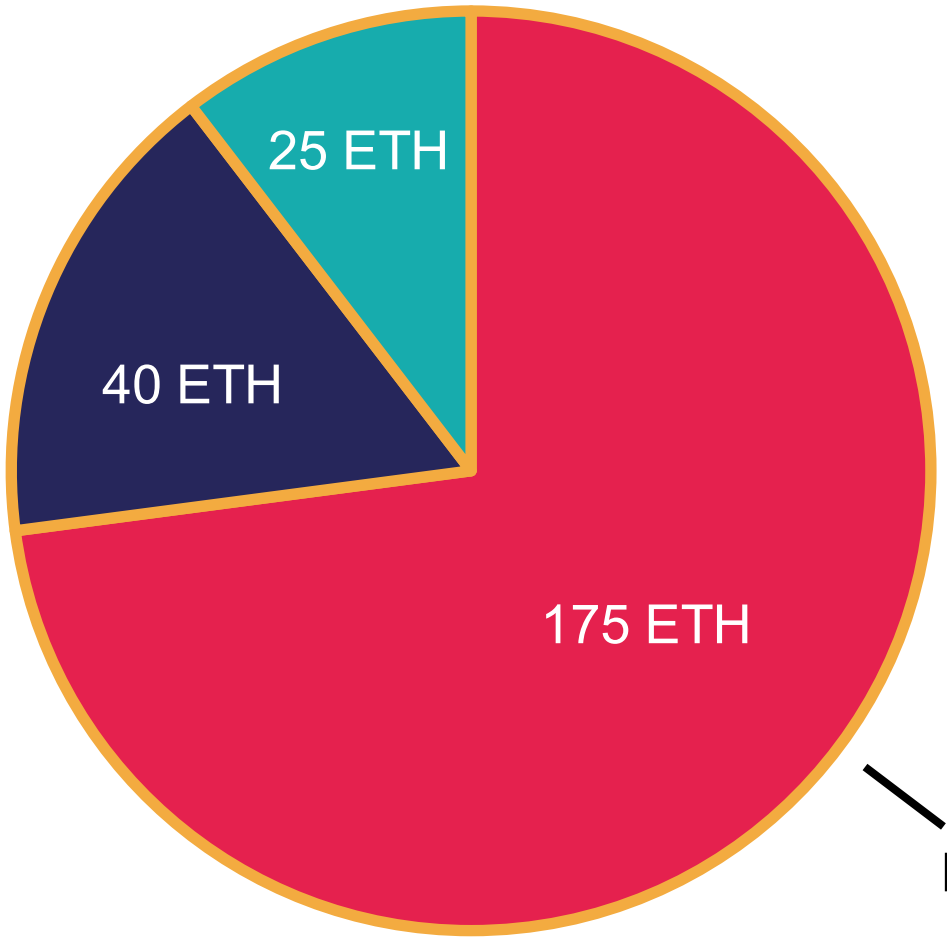
The Patchwork Kingdom Collection is about Raising Funds for GIGA.

What if every PWK owner becomes
an ambassador for raising funds for Giga?

"Utility" of the collection

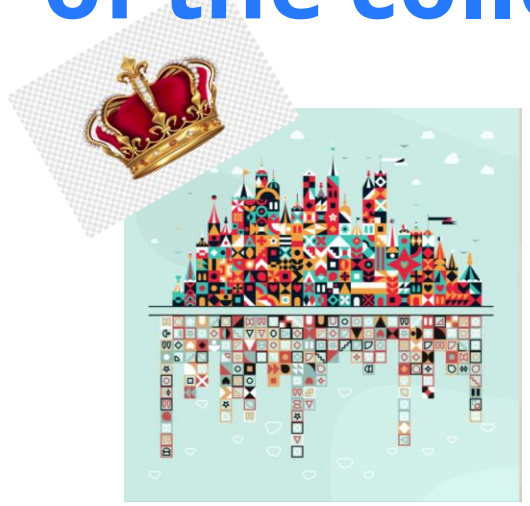
240 ETH

Total raised so far



"Utility" of the collection

Due to the transparency of the blockchain, it's possible to track at an individual PWK level how much funds have been raised for giga.



#1

PWK #564 – Blabla
Funds contributed to Giga: **0.229 ETH**
- Minting: [100% * 0.175 ETH]
- Traded on Apr 1 for [20% * 0.12 ETH]
- Traded on May 3 for [20% * 0.15 ETH]

#2

PWK #564 – Blabla
Funds contributed to Giga: **0.219 ETH**
- Minting: [100% * 0.175 ETH]
- Traded on Apr 1 for [20% * 0.12 ETH]
- Traded on May 3 for [20% * 0.15 ETH]

#3

PWK #564 – Blabla
Funds contributed to Giga: **0.209 ETH**

02 Next Phase: GigaNFT2

Who are we targeting?

- A younger audience (Gen Z) - born between 1997 and 2012
- Digitally native
- Largest generation alive today - 2 billion worldwide
- (Skeptical of international organisations?) [assumption]
- https://www.edelman.com/sites/g/files/aatuss191/files/2019-09/Infographic_Edelman.pdf

Observations of PWK community

- PWK holders act entitled, like shareholders.
- They want to be treated like corporate donors, (but for a fraction of the price).
- They demand accountability and transparency.
- They care about visibility of the project.

Current level of accountability

xx Million USD
from Ericsson

240 ETH raised
by PWK

xx million? USD
from others?

??
Big pot of Giga money

Important stuff
gets done

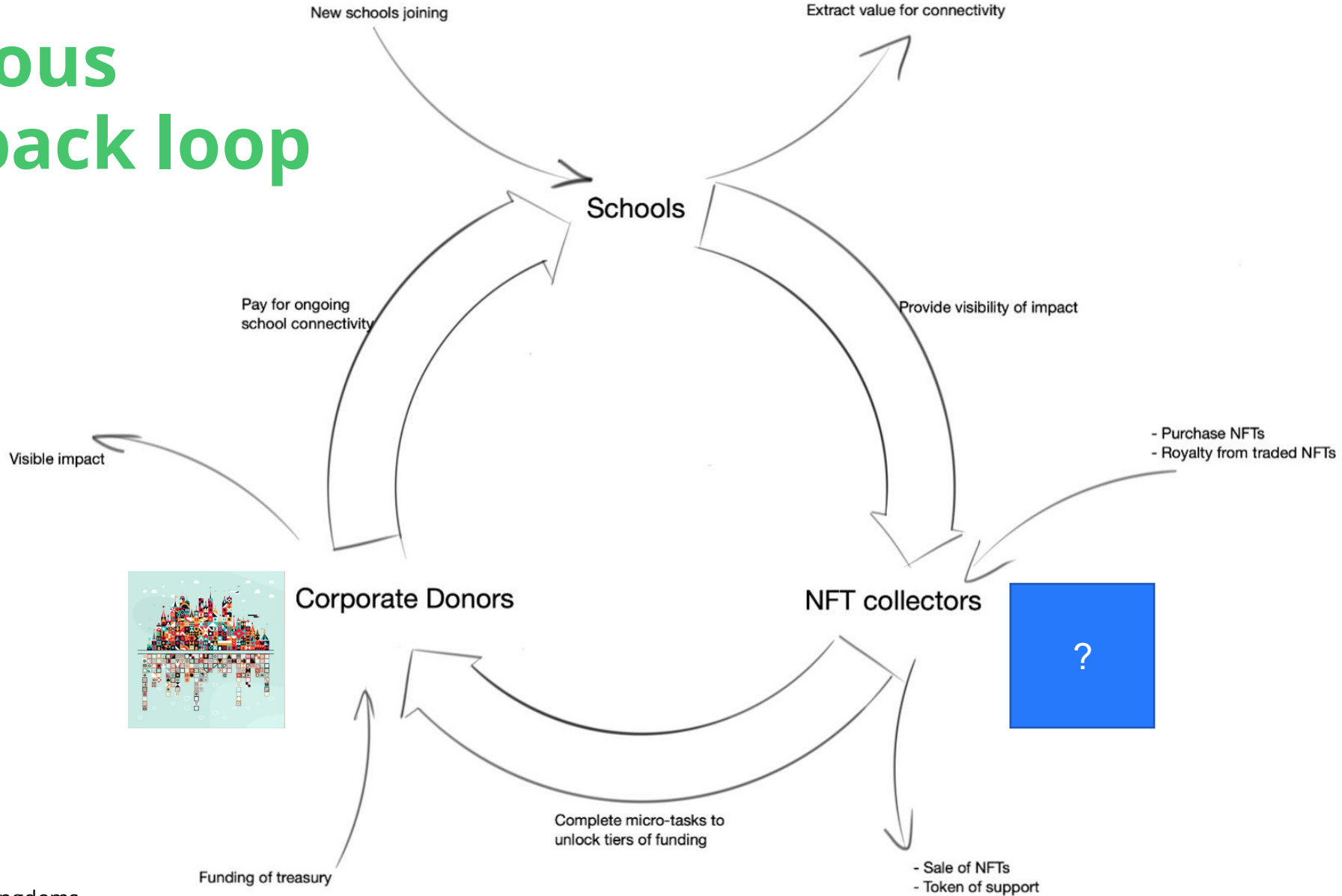
But was the exact impact of MY contribution?

Raison d'être of NFT2

A trustless philanthropic project, where funds that are raised and spent are 100% transparent.

A crypto-only end-to-end platform.
Funds raised are crypto, impact paid for is crypto.

Virtuous feedback loop



Raison d'être of NFT2

- PWKs are the (only?) way to get funds into the system.

- NFT2 will provide the
  - Visibility of the impact
  - Accountability of how funds are spent
  - An online presence for schools

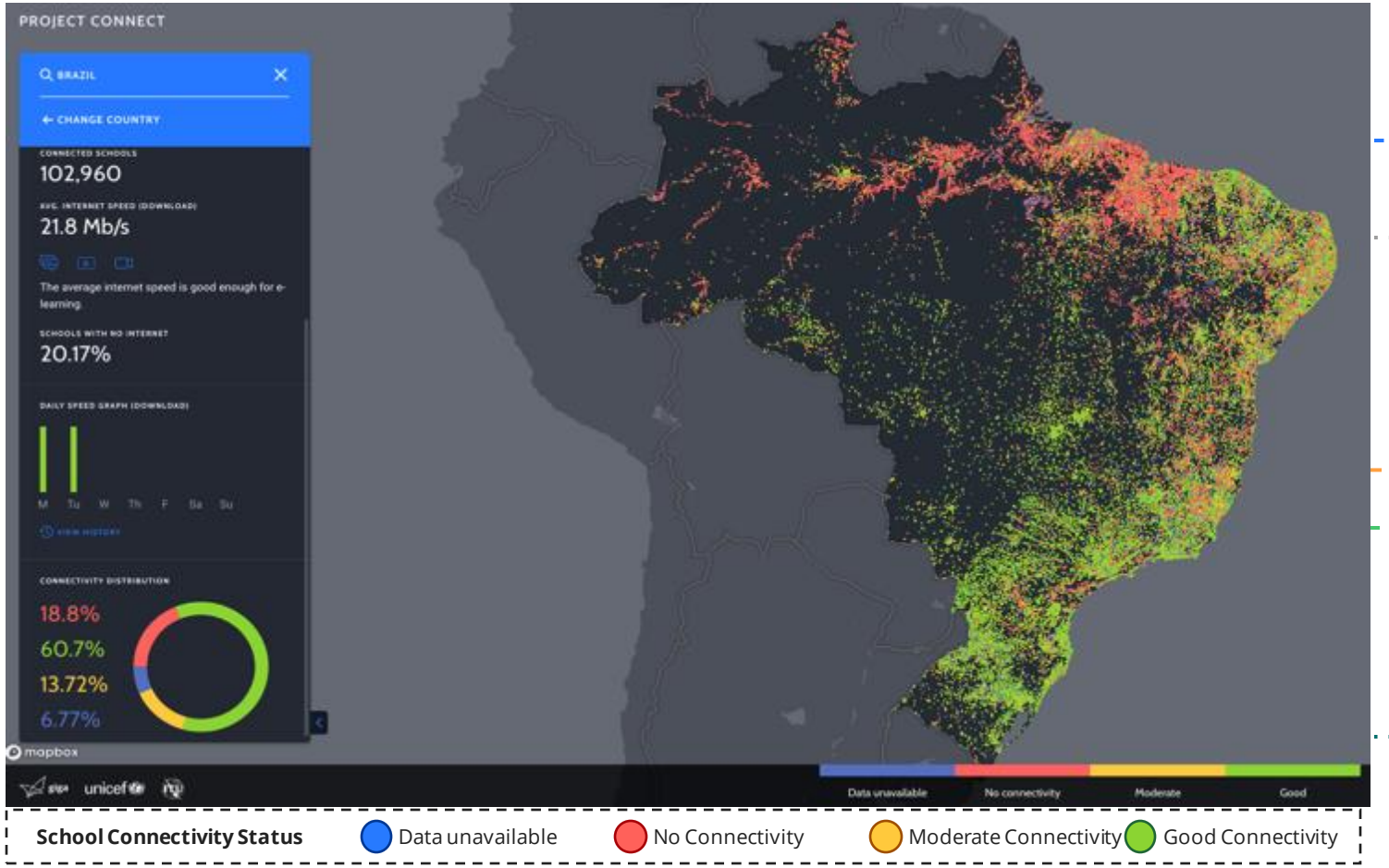
Thank you

What would NFT2 do?

Amount targeted: **~$10M + ongoing 20% royalty in perpetuity for every sale of an item.**
1M NFTs minted

- GigaNFT2 will create 2 NFTs for each connected school. Each NFT will be similar to a collectible sports trading card. Instead of player information, jersey, club, and stats it will have 3D imagery of the school, connectivity data, and more.
- Each GigaNFT2 card will be able to be updated as schools get more connected. Collectors will be able to trade for 'sets' of schools from various countries, regions, etc.
- Each GigaNFT2 will be integrated into various metaverses as 3d objects (I.e. virtual schools) that can decorate virtual worlds (like Sandbox, Cryptovoxels, neoTokyo etc.)
- Agreements with the various Metaverses will make GigaNFT2s valuable to gamers and communities of the virtual worlds as a badge charity and philanthropy.
- There will be 2 of each GigaNFT2 (2 per school). One will be available to the public. The second will be kept for the school. Giga will hold this 2nd NFT until the school has a wallet and an ability to custodian it. This will be done through a smartcontract/DAO vault so ownership can be transferred automatically when the school is ready.
- This means that schools will also capture ½ of the value for this project directly. This will create ways to use schools as hubs for web3 activities (community finance, payments for connectivity, and more) and be appealing to partnerships from Web3 giants.

Each school can be a node, a wallet-holder, an entity in a connected, Web3 world



Every school in Brazil, mapped in realtime. 130k potential NFTs

GigaNFT2 can

- Capture these schools on a public blockchain, and allow their data to be updated regularly
- Inspire a real sense of need by making the problem concrete
- Create a sense of competition across countries, mobile network operators, funders
- Allow schools and communities to develop web3 fintech and digital skills
- Create opportunities for blockchain applications that safely solve problems for the world's poorest and most vulnearlbe

Based on collectible sports cards

Front of GigaNFT2 Collectible Card

Your School Here

3D image, satellite map view, art from students on the front.

As much on chain as possible

Back of GigaNFT2 Collectible Card

Statistics on the back: connectivity status, what country it's in, etc. all data that can be adjusted over time as it changes (and all on chain)

03

Next Steps

Internal next steps for team

- A major learning from GigaNFT1 was that the community of NFT owners must come first in planning. NFT projects are not about the art or the concept, but primarily about how we engage with the people who are buying, holding, and trading these NFTs.
- GigaNFT1 was entirely produced and minted by UNICEF France, with support from UNICEF Switzerland and Christies and Snowcrash Labs. GigaNFT2 will extend these partnerships with support from the Govts of Spain and Switzerland, and other Natcoms.
- We will use the resources from GigaNFT1 to hire a small team to develop the platform and community for GigaNFT2. $600K will give us initial runway to hire a small team to build the art and platform.
- Work on concept has already begun. With the correct senior leadership sponsorship we expect to see a prototype by end of Summer 2022.
- We will need UNICEF and ITU to help fast-track certain capacities to hold crypto (particularly to allow Giga to have its own wallet, and to hold ERC20 and ERC721 tokens) as well as a set of Natcoms committed to this project.

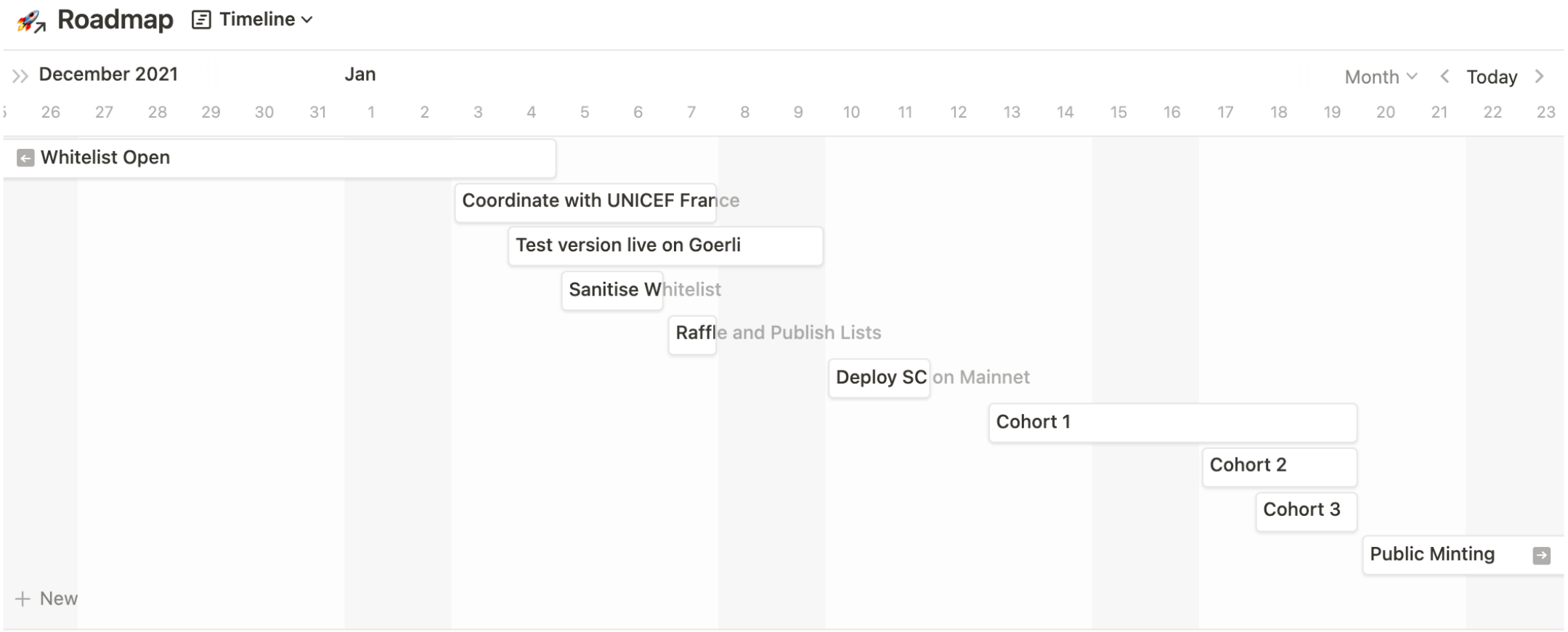
Practical external next steps for team

- Hire relevant resources
- Figure out tech platform for minting and architecture of game
- Figure out game mechanics (packs of cards, etc.)
- Make agreements with metaverses to integrate
- Get several prototype countries on board (Kenya, Namibia, Botswana have expressed interest)
- Get major network operator to agree to crypto payment (Strive/Liquid?)
- Get Samuel Eto’o and others to sign on to project

04

Further background and next steps on GigaNFT1

Process for GigaNFT1



Vision for extension Of GigaNFT1

. Rather than asking yourself: what is it that I'm going to GET from this project, we want to encourage people to instead think about the question:

What is it that I can do to help further Giga's mission of making the world just a little bit more connected?

In doing so, we can have the community work together to bring more value to their own tokens, but also to this project as a whole.

We want to reward people that contribute to our real-world mission. We believe that with all of our individual contributions, we can collectively be a positive force to be reckoned with and as a result we will see our project (and the value of our tokens) grow.

Community management and storytelling

- Hire a full-time **discord community manager**, with XP in marketing in the crypto space. Responsibilities would include:
  - Maintaining a “news” page on the official PWK website, where all media mentions and project activities will be noted.
  - Making partnerships with new NFT projects, so that PWK owners get whitelist spots in their projects.
  - Collecting and sharing "Stories of PWK owners" - series of interviews or blog posts where people who bought a PWK share their stories why they bought and why this is important for them.
  - organising and hosting a series of discord related activities, such as AMAs, guest speakers etc.

- Get **dev support** for some of the short term things we want to do.
  - Create a way for PWK holders to connect their wallet and download a full-res version of their kingdom.
  - Create a gallery on our homepage of the kingdoms and their owners.

- Storytelling.
  - Create some content that tells "the success story of Giga's NFT Genesis collection" e.g. a blog post or vblog that we can use as a reference when reaching out to other outlets.

Beginnings of the Collectible Card Game (steps to GigaNFT2)

- **Gamification** of PWK membership. We identify real-world things you can do to help giga's mission and this will increase your rank in the community. e.g. send a tweet, write to local govt. etc etc. Levelling up would upgrade your NFT, giving it more value. Another application of this could be our school mapping game (map schools to level up).
- Identify applicants from the blockchain **innovation fund call** that can provide special utility to PWK holders and have a need for community interaction, thereby providing a win-win.
- Get Giga **partners** to buy PWKs and display them publicly. Ericsson, Dell, Musk foundation etc etc. Plus get a dedicated place on the giga site to display them and replace the boring corporate logo section part with something cooler.
- Metaverse integration. Creating patchwork kingdoms in Sandbox (or similar metaverses). could be member driven. You create it and we feature it.

Giga

The Barcelona Giga Technology Centre

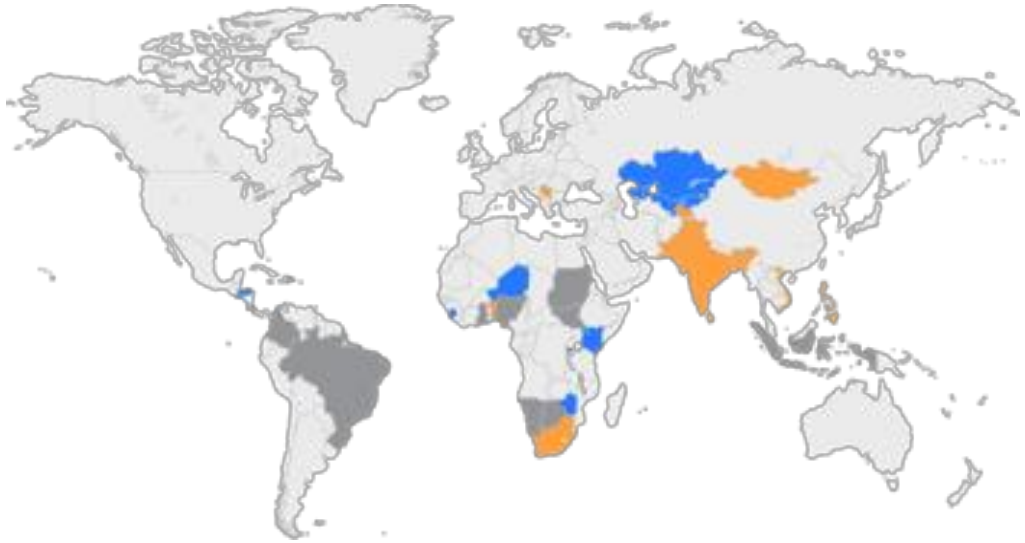
High Level Discussions and Partnership
18 July, 2022, Barcelona

The Connectivity Challenge exists everywhere

- Nearly half of the **6 million schools** in the world are not connected to the internet today, mostly in the poorest countries and areas.
- More than **500M students have no access to internet.**
- Of the estimated **2.9 billion** unconnected people, the majority are women and girls (ITU, 2021).
- Giga is working hard to address these issues.

How Giga Works

1. **Maps** previously unmapped schools, and monitor connectivity in real-time using open-source AI/ML
2. **Finances** connectivity projects using the most capital efficient solutions available
3. **Connects** using the best possible technical solutions and the right enabling policy & regulatory framework to provide schools with sustainable connectivity, including planning, procurement and delivery tools and templates



Giga is working in 19 countries (with President/ head of state buy-in). 35 more "in the queue"

In the Giga Technology Centre we will build open source products including:

1. The Giga School Map
2. The Giga Infrastructure and Policy Planning platform
3. The Giga Connectivity Credits platform

... and more

giga

1) The Giga School Maps

www.projectconnect.world

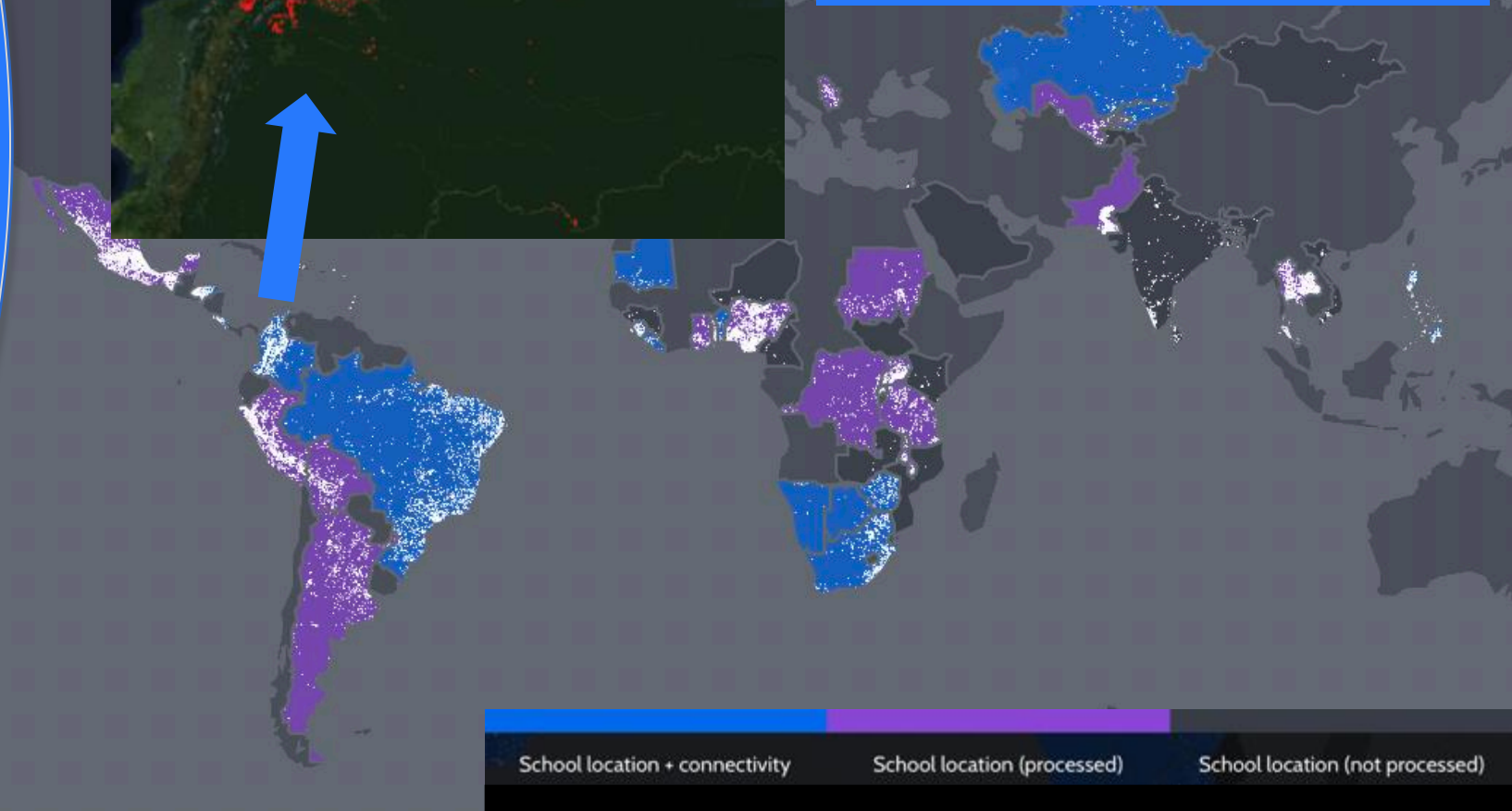
1.2M+ schools mapped across 41 countries

55,000+ schools across 3 countries reporting daily live connectivity data

25 countries reporting quarterly on school connectivity

Giga helped the Colombian Govt locate 7,000 schools (all the yellow dots) using satellite imagery and machine learning and artificial intelligence.

The Spanish Giga Tech Center will let us extend this tool globally.

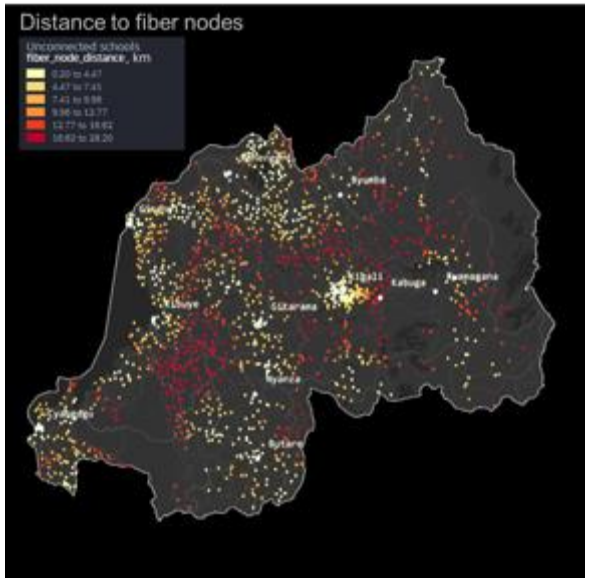


2) The Giga Infrastructure and Policy Platform

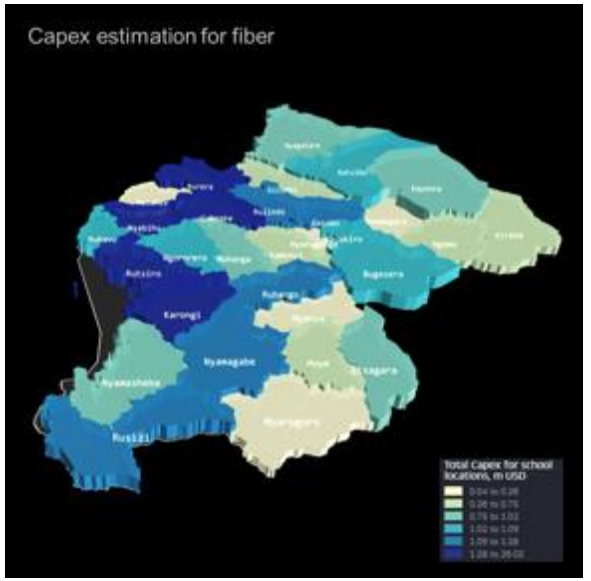
- Our open source **analysis platform** will combine **the world's most complete and detailed database** of infrastructure and policy data for school connectivity with **powerful analytical tools** to serve as a resource for governments and identify optimal technology, policy and procurement **solutions**.

- Built with the support of Barcelona's technology ecosystem, this will be an open planning resource for the world's telecommunication giants (and start-ups).

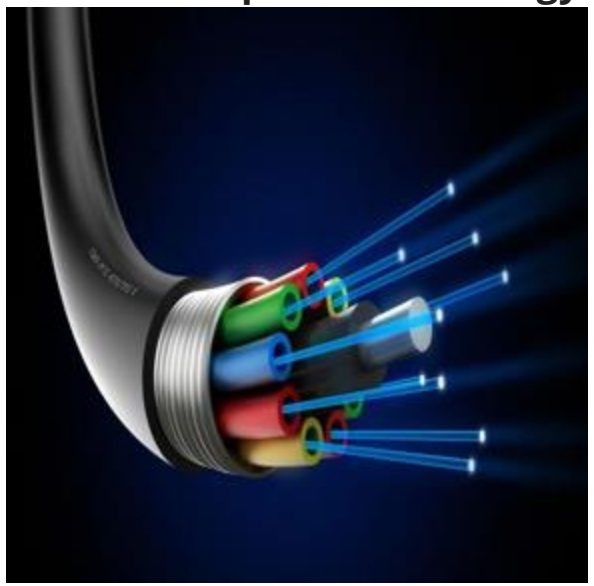
Where is the infrastructure?



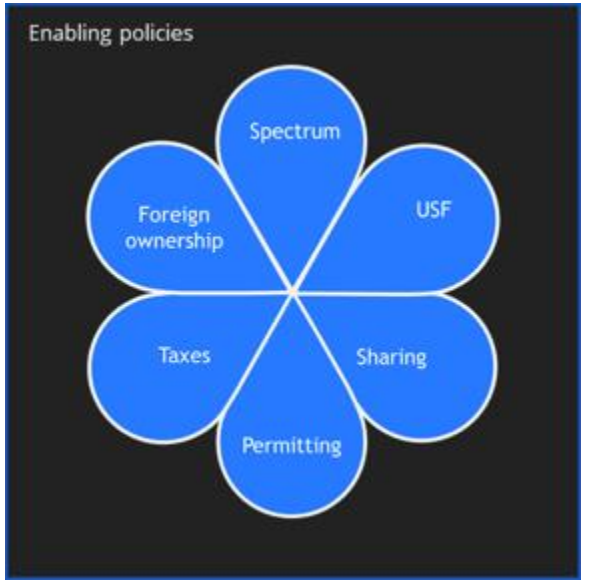
What will it cost to connect?



What is the optimal technology?



What is the optimal policy?



3) Giga Connectivity Credits

(A "Carbon Credit marketplace", but for gigabytes)

Full, public, immutable accounting, on a blockchain for all public procurements and Giga contracts.
School turns green, ISP gets paid.
School turns red, ISP gets replaced.
Schools become points of procurement and contract management.

We can tokenize the gigabyte allowing ISPs to get credits for connecting poor areas, and redeem credits for tax incentives & more
A global gigabyte marketplace will upend entrenched, inefficient incumbents. Shed light on darkness.

Connectivity Credits will 'pay more' to connect difficult schools as an incentive to telcoms and a tool for governments.

To build these tools, and more, Barcelona will host collaboration from partners like these, as well as emerging market government tech leaders, from Giga's Ministry partners. Help us add Spanish tech / telcoms to this list

MUSK FOUNDATION

ERICSSON

BCG BOSTON CONSULTING GROUP

DELL Technologies

JUMIA

SoftBank Investment Advisers

arm

LIQUID INTELLIGENT TECHNOLOGIES

Meta

IHS Towers of strength

دبي العطاء Dubai Cares

giga

Giga will need to build strong partnerships with Spanish science, research, design, and technology academic institutions

The Giga Node – 13 July, built by NYU

Barcelona Super Computing Centre

Harbour Space University

And we will host some of the incredible technologists on Giga's global team (UNICEF and ITU), as well as new hires, in the Ca l'Alier space.

***note, not all team members will be present in Barcelona, this is a representative view of the entire team for informational purposes**

giga

giga

It’s time to get started!

Moltes gràcies!

unicef for every child

ITU

GigaNFT2 is an extension of the Giga's first successful foray into the space of blockchain-based NFTs (non fungible tokens) GigaNFT1 sold 1000 pieces of data-art, and raised >650K$ for Giga, as well as creating 20% royalties from all secondary-market sales, for the project, in perpetuity. GigaNFT2 plans to raise >10M$ and extend UNICEF and ITU's capacities in web3 financing.

NFTs can be a conduit for ongoing capital sent to schools over the coming decade. GigaNFT2 will serve as a prototype for this system of 'highways and toll-booths" for school connectivity.

Message: NFTs are a new way of creating community by selling 'tokens' that create more "value" as more people collect them. This value can be financial, but it can also be the value of a community and network of people committed to UNICEF and ITU's missions.

Key Points on GigaNFT2

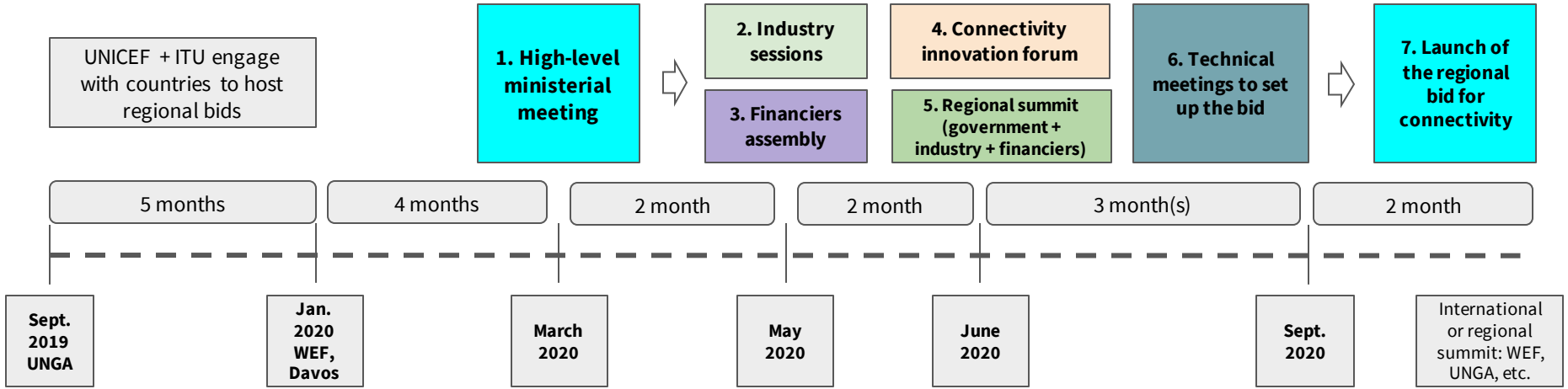
1. A major learning from GigaNFT1 was that the community of NFT owners must come first in planning. NFT projects are not about the art or the concept, but primarily about how we engage with the people who are buying, holding, and trading these NFTs.
2. GigaNFT1 was entirely produced and minted by UNICEF France, with support from UNICEF Switzerland and Christies and Snowcrash Labs. GigaNFT2 will extend these partnerships with support from the Govts of Spain and Switzerland, and other Natcoms.
3. GigaNFT2 will create 2 NFTs for each connected school. Each NFT will be similar to a collectible sports trading card. Instead of player information, jersey, club, and stats it will have 3D imagery of the school, connectivity data, and more.
4. Each GigaNFT2 card will be able to be updated as schools get more connected. Collectors will be able to trade for 'sets' of schools from various countries, regions, etc.
5. Each GigaNFT2 will be integrated into various metaverses as 3d objects (I.e. virtual schools) that can decorate virtual worlds (like Sandbox, Cryptovoxels, neoTokyo etc.)
6. Agreements with the various Metaverses will make GigaNFT2s valuable to gamers and communities of the virtual worlds as a badge charity and philanthropy.
7. There will be 2 of each GigaNFT2 (2 per school). One will be available to the public. The second will be kept for the school. Giga will hold this 2nd NFT until the school has a wallet and an ability to custodian it. This will be done through a smartcontract/DAO vault so ownership can be transferred automatically when the school is ready.
8. This means that schools will also capture ½ of the value for this project directly. This will create ways to use schools as hubs for web3 activities (community finance, payments for connectivity, and more) and be appealing to partnerships from Web3 giants.
9. .We will need UNICEF and ITU to help fast-track certain capacities to hold crypto (particularly to allow Giga to have its own wallet, and to hold ERC20 and ERC721 tokens) as well as a set of Natcoms committed to this project.
10. We will use the resources from GigaNFT1 to hire a small team to develop the platform and community for GigaNFT2. $600K will give us initial runway to hire a small team to build the art and platform.
11. Work on concept has already begun. With the correct senior leadership sponsorship we expect to see a prototype by end of Summer 2022.

Commented [SW1]: Love the link to individual schools. Is this 'each school connected by Giga and partners' or 'all schools on ProCo that have a connection'? Either way, it'd be good to include something on carbon offsetting if we're heading into a higher volume approach for mark 2.

Commented [SW2]: We've been saying throughout that the funds raised will go to help get schools online. So while you could argue this is indirectly doing that, we'd need to think about how to justify this use of the money. Especially if NFT2 doesn't sell well, as then the contributions wouldn't even help schools indirectly.

Prototype process for host countries role in GIGA

- 7 step process led by regional host country
- 7 - 9 months engagement from the high-level ministerial meeting to launching the regional bid



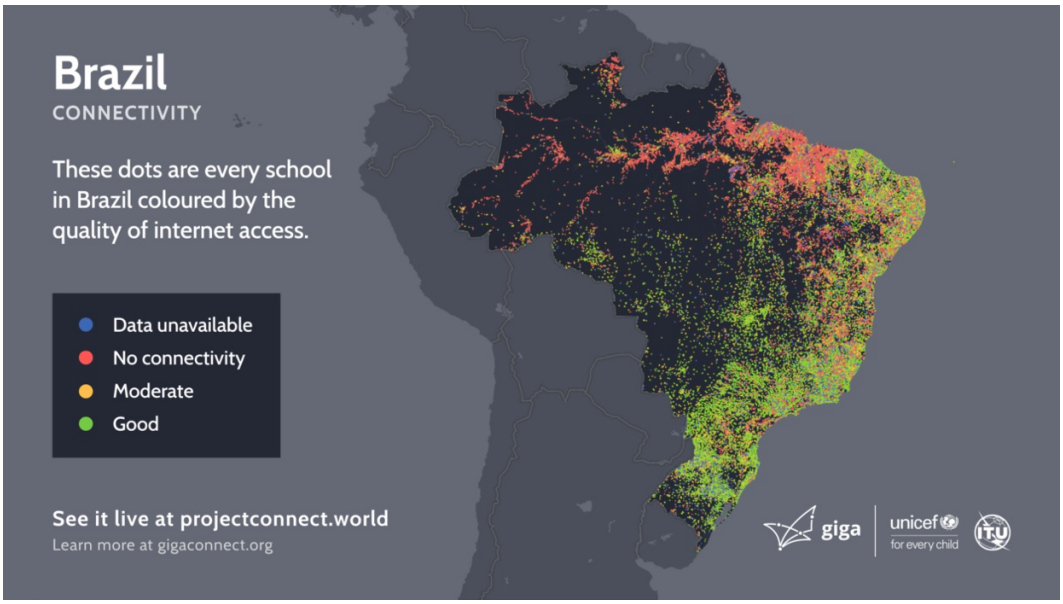
What is Giga?

Giga is a UNICEF-ITU global initiative to connect every school to the Internet and every young person to information, opportunity, and choice.

1.3 billion children have no access to the Internet at home and only around half of the world's schools are online. This digital exclusion particularly affects the poorest, girls and those with disabilities; causing learners to miss out on the resources online, the option to learn remotely (e.g. during pandemics or instability), and the opportunity to develop digital skills. UNICEF and ITU have therefore joined forces to create Giga, an initiative to connect every school in the world to the Internet and address this new form of inequality.

What Giga Does

- It **maps** schools' Internet access. No one knows how many there are in total in the world (estimate: 6-7 million) and Giga's Project Connect map provides a real-time display of access and need for funders, governments, and accountability. Giga has mapped over 1 million schools in 49 countries.
- It creates models for innovative **financing.** It could cost $428 billion or more to connect every school. Giga aims to mobilise $5 billion to catalyse investment in connectivity infrastructure. Giga has secured the support of 14 partners to develop solutions for affordable, sustainable connectivity.
- It supports governments **contracting** for connectivity. Giga helps governments design the regulatory frameworks and competitive procurement processes needed to get schools online. Since 2019, Giga and its partners have connected over 1.3 million students in over 3,700 schools.



Giga is already connecting schools in 19 countries and is prototyping several test solutions, including in refugee camps and remote, mountainous regions. Many of these solutions use advanced open-source technology: satellite data to find schools; machine learning to understand how connected they are; and blockchain to track their connectivity over time, and in some cases facilitate payments. The lessons from these prototypes will help lower risks for investors and support national rollouts.

Giga's achievements since its launch in 2019

1,100,000+
Schools mapped
Across 49 countries and all viewable on the Project Connect Platform

3,715
Schools connected
in Kenya, Sierra Leone, Rwanda, Botswana, Kazakhstan, Kyrgyzstan, Honduras and the OECS

1,350,000+
Students connected
Through Giga and partners' connectivity initiatives

$300M+
Funding mobilized
To countries and UNICEF Country Offices to accelerate connectivity

19
Countries joined
In Sub-Saharan Africa, Central Asia and Latin America & the Caribbean

14
Partners joined
Ericsson, Dubai Cares, Musk Foundation, IHS Towers, Dell, SoftBank, BCG, NIC.br, Actual, Jumia, Liquid, GSMA, FCDO, Mapbox

Giga also uses schools as anchor points for their surrounding communities: if you connect the school, you can also connect local businesses and services. This creates opportunities for service providers to generate revenue from paying users, making connectivity more sustainable. A recent report by the Economist Intelligence Unit found some countries could see a boost of up to 19% to GDP if they increased schools connectivity to Finland levels.

Giga's work in laying the tracks for connectivity is only one part of a wider effort to bridge the digital divide. Giga therefore works with a range of initiatives in UNICEF, ITU and beyond to ensure that students and teachers can access the skills, devices and content they need to make full use of connectivity.

To help deliver on its ambition, Giga needs:

- both governments and companies to **share data sets** to help with open-source mapping;
- governments to join the 19 countries already connecting schools as part of the Giga project and to work with Giga to implement the **regulatory changes** needed to allow universal connectivity and infrastructure innovations to thrive; and
- donor governments and foundations to help raise **$5 billion in catalytic investment** to help accelerate the process of bringing schools online.