Terms of Reference for institutional services for Giga Connectivity Credits and Limited POC

INTRODUCTION

Giga (www.giga.global) is seeking a company / institution**, to rapidly design, prototype, document, and launch a prototype of a Giga Connectivity Credit that will help connect schools to the internet.

The Giga Connectivity Credit takes inspiration from the work done with carbon credits, and from the accountability and transparency that blockchain technologies offer. It aims to create a set of incentives and linkages to 'tokenize a gigabyte' and ensure that a market exists for rural connectivity providers.

The work is limited to proof of concept development and includes a) building an Minimum Viable Product (MVP)of the marketplace (described in part I) and b) piloting and launching the prototype in a Giga country (described in part 2). Companies can apply to either part 1 or 2 or to both 1 and 2. If a company applies to only one of two parts, it does not disqualify them. However, preference will be given to companies that apply to both parts 1 and 2.

You can read an article with context of the Connectivity Credit marketplacein Annex B.1.

** Preference will be given to companies, foundations or other institutions (further referred to as companies) registered in Giga countries (Kenya, Rwanda, Niger, Sierra Leone, El Salvador, Honduras, Organisation of Eastern Caribbean States (9), Uzbekistan, Kazakhstan, Kyrgyzstan), although companies with the right qualifications in non-Giga countries are encouraged to apply.

BACKGROUND

According to the International Telecommunication Union (ITU), nearly 3.7 billion people remain unconnected from the internet, and by extension, unconnected from digital products and services that could dramatically improve their lives. Approximately 29% of 18-24 year-olds, most of them in Sub-Saharan Africa, do not have digital access (~360m people) and thereby lack access to the same information, opportunity and choice as their more-connected peers. Unless things change, a big part of this rapidly growing group of young people is in danger of being left behind, excluded from the modern digital world.

Giga combines UNICEF's focus on children and education with ITU's experience in connectivity policy, to ensure that every school in the world has access to the internet – and every young person has access to information, opportunity, and choice.

In addition to connecting the more than 1 billion young people that Giga is aiming to serve through their schools, last mile infrastructure can also be used to allow for other public (and private) growth of internet access.

Easy to reach and wealthy schools are usually the first ones to be connected, while hard to reach and less developed places are being left behind. One of the reason for this is that the Internet Service Provider (ISP) or Mobile Network Operator (MNO) sees no business case in investing in the infrastructure for connecting a remote school and their community. These market dynamics further increase the digital divide, leading into a generation of children with unequal access to information, opportunity and choice.

The Giga Connectivity Marketplace aims to solve for this problem by creating a marketplace that will connect ISPs and MNOs with public sector entities and other incentive providers – in this marketplace, the public sector and others will be able to offer incentives (i.e. tax breaks, free ads, …) and the ISPs and MNOs will be able to exchange them for credits they´ll earn by connecting (capex) and by keeping connected (opex) schools - the harder to connect the school the more credits and the more incentives. Through this we will:

- Provide governments with a tool to prioritize school connectivity: based on factors such as remoteness, poverty and impact.

- Enable business cases for sustainable connectivity in hard-to-reach areas.

- Enhance trust and transparency in existing mechanism such as Universal Service Funds.

- Increase operational efficiency and accountability when delivering connectivity.

PURPOSE AND MAIN ACTIVITIES OF THE RFPS

The goal of the assignment is to design, prototype, document and launch a version of a Giga Connectivity Credit marketplace in a specific country as POC**. For this, the main activities include:

Part 1:

- Work with UNICEF/Giga's blockchain team to understand the problem and define the right solution.
- Prototype and deliver an MVP of an open-source marketplace for the Connectivity Credit / Token in cooperation with Giga and demonstrate the capabilities of a Connectivity Credit (or Token) marketplace.
- Validate the MVP with ~10 test users in a real-world scenario, for example, a Giga country.
- Document the learnings thoroughly, as preparation to pitch for a further round of funding (i.e. implementing the working prototype system in a specific country, that Giga can then help scale).

Part 2:
- Conduct stakeholder interviews to determine pains and gains to being part of the Giga Connectivity Credit marketplace and using such a platform. Create system diagrams and roadmap for adapting MVP to local context.
- Document all of this thoroughly, as preparation to pitch for a further round of funding (i.e. implementing the working prototype system in a specific country, that Giga can then help scale).
- Build the relationships with all the 'users,' with the support of the Giga global team, so that this is a win-win and an exciting new way to monitor and incentivize extension of rural and global connectivity.

Through the assignment, the team would work fairly independently, with advisory support of UNICEF/ Giga HQ team as well as Giga (and/or UNICEF and ITU leads) in country, and be accountable to Giga leadership for final deliverables.

If a company applies to both Part 1 and 2, they are encouraged to combine activities in both parts and create a proposal that jointly covers for the entire scope.

The resulting methodology and algorithms will be open (and open source) and available to the public according to appropriate creative commons or open-source terms.

The company awarded will be responsible for any recurrent hosting / maintenance costs for the MVP/platform to be developed upon finalization of Phase 1, or Phase 2 if implemented.

 ** Preference will be given to companies registered in Giga countries, although companies with the right qualifications in non-Giga countries are encouraged to apply

EXPECTED RESULTS (MEASURABLE RESULTS)

Part 1

Task(s)	Deliverable(s)	Acceptance Criteria	Timeline
- Onboarding by the Giga team. - Review and revision of existing materials and documentation related to Giga. - Review of existing materials related to Giga Connectivity Credits	Slides regarding understood project scope.	Scope approved by UNICEF team.	**Week 1**

– Describe use cases for the marketplace to discuss with Giga – Design Basic system diagram	– Document with first draft of described use cases. – Basic system diagram outlining the user flows for the different roles that exist in the system, including the flow of tokens. – Proposed data sources and data sets to be used in the work, especially for credit score. – Brief executive pitch deck.	– Use cases agreed on by UNICEF. – Feedback provided by UNICEF on system diagram. – Feedback provided by UNICEF on proposed data sources. – Executive pitch deck reviewed and approved by UNICEF.	**Week 2**
- Create revise user flow diagrams. - System architecture diagrams that outline key technical components revised. - Finalize Data sources and data sets to be used in the work. - Define product roadmap and scope.	- V2 of user flow diagrams - V2 of System architecture diagrams. - Product requirements document. - Backlog with user stories for MVP version as well as for the V1 version of the platform. - Additional pitch decks on specifics. Specific areas should cover business requirements, design, development, testing, and	- User flow diagram approved by UNICEF - System architecture approved by UNICEF - PRD approved by UNICEF - Product backlog approved by UNICEF - Additional pitch deck slides review and approved by UNICEF - Final data sources reviewed and approved by UNICEF	**Week 3-4**

Task(s)	Deliverable(s)	Acceptance Criteria	Timeline
	- implementation plans. - Final Data sources and data sets to be used in the work.		
- Design and develop the first MVP, model in a sandbox environment and on a test blockchain network. - Draft whitepaper.	- Deployed MVP on testnet and staging environment - Draft of Whitepaper	- Deployed MVP approved by UNICEF - Whitepaper approved by UNICEF	**Week 5-8**
- Consolidation of prototype and model. - Test launch on a 'live' environment.	- Deployed MVP on live environment - First 10 beta test users onboarded. - Diagnosis and learning shared w/ advisory board as brief deck. - Blogpost published.	- Deployed MVP approved by UNICEF - Onboarded beta testers confirmed by Giga - Brief deck confirmed by Giga - Blog post approved by UNICEF	**Week 9-10**
- Further builds and refining. - Update of next phase project plan. - Update of advisory board.	- Slide deck with recommendations for further builds. - Project plan for phase 2. - Slide deck for advisory board	- Slide deck approved by UNICEF. - Project plan approved by UNICEF. - Advisory slide deck approved by UNICEF.	**Week 11-13**
- Final documentation.	- Codebase and documentation shared via github	- Codebase and documentation approved by UNICEF.	**Week 14**

Part 2

Task(s)	Deliverable(s)	Acceptance Criteria	Timeline

− Onboarding by the Giga team. − Review and revision of existing materials and documentation related to Giga. − Review of existing materials related to Giga Connectivity Credits	− Presentation to Giga team regarding understood project scope	− Scope approved by UNICEF team.	**Week 1**
− Describe use cases for the marketplace to discuss with Giga − Design basic system diagram outlining the user flows for the different roles that exist in the system, including the flow of tokens. − Describe Environmental concerns and impact draft. − Mapping of key stakeholders and setup of initial stakeholder interviews	− Document with first draft of described use cases. − Basic system diagram outlining the user flows for the different roles that exist in the system, including the flow of tokens. − Proposed data sources and data sets to be used in the work, especially for credit score. − Environmental concerns and impact draft. − Stakeholder description and interview schedule plan	− Documents approved by UNICEF	**Week 2-3**
- Work with Giga team to conduct first set of stakeholder interviews.	- Interviews conducted - Revised user flow diagrams based on stakeholder feedback. - System architecture diagrams that	− Interviews attended by Giga − Documents approved by UNICEF	**Week 4-7**

	outline key technical components revised based on stakeholder/user interviews. - Product requirements document based on stakeholder interviews. - Backlog with additional user stories - Stakeholder engagement strategy for each type of actor (service providers and industry, government, regulatory authorities, among others) -		
- Engaging government and regulatory authorities to secure their commitment for testing the use of the Connectivity Credits prototype in a controlled environment (sandbox).	- Formulated strategic plan. - Presentation document to be used in government discussions. - Recordings of conducted interviews - Report detailing the findings after concluding the interviews	– Documents approved by UNICEF	**Week 8-10**
- Consolidation of prototype and model. - Test launch on a 'live' environment.	- Deployed MVP on live environment - First 10 beta test users onboarded.	– Documents approved by UNICEF	**Week 11-15**

- - User feedback gathered.	- Diagnosis and learning shared w/ advisory board as brief deck. - Blogpost published.		
- Further builds and refining. - Stakeholder meetings. - Update of next phase project plan. - First rollout steps for testing. - Integration with key MNO/other actors. - Update of advisory board.	- Slide deck with recommendations for further builds. - Updated project plan. - Testing plan - Engagement plan for MNO's / other actors - Slide deck for advisory board	− Documents approved by UNICEF	**Week 16-20**
- Testing in field. - Documentation. - Roadmap	- Target of 10 schools engaged in connectivity measurement, one MNO working with project, connectivity credit / token on a public blockchain network. - Final documentation, including whitepaper and presentation. - Roadmap for next steps (seuggestions)	− Documents approved by UNICEF	**Week 21-25**

KEY SKILLS, TECHNICAL BACKGROUND AND EXPERIENCE REQUIRED

The applying company must provide a team of personnel with the minimum 6 competencies below (please provide a CV/LinkedIn and Social (Twitter, Instagram, etc.) account for each team member):

- **Lead**: At least 5 years of professional experience with strong Environment, Social and Corporate Governance (ESG) background, and understanding of environmental approval models from oil and gas or telecommunications or the built environment. System dynamics for ESG negotiations and partnerships, implementing government engagement strategies and deep reporting knowledge for ESG related activities and markets.
- **Licensing and Regulatory** At least 5 years of strong experience working with national telcom and energy regulatory practices, as well as technology and innovation regulatory work being done by the government (i.e. fintech sandboxes, spectrum licensing innovations, etc.). Also, expertise in environmental matters, both in terms of regulation and real impact in the ecosystem.
- **Network Design.** At least 5 years of experience with communication network design, product pricing (data packages, gb, etc) and pricing elasticity as well as consumer dynamics in selected market.
- **Product Management.** At least 5 years of product management, scrum and agile experience.
- **Design:** At least 5 years of experience in user research and systems design.
- **Blockchain / token economics.** At least 5 years of experience with blockchain technologies, understanding of setup for a crypto economy, experience building open-source blockchain products. Experience with setting up token launch (fair launch) and working within L1 ecosystems and solid FE experience.
- The team will have regular check-in calls with the UNICEF Giga team and should be available to reach within 1 working day for any queries

ELIGIBLE PROPOSALS WILL BE ASSESSED AGAINST THE FOLLOWING CRITERIA

Proposals will be reviewed following a two-step process:

1. Technical evaluation (80 points)
   1.1 Desk review (60 points)
   1.2 Interview (20 points)

2. Financial evaluation (20 points)

Technical evaluation: Phase 1 with a maximum of 60 points

The technical proposals will be evaluated against criteria as shown in the table below. The total amount of points allocated for the technical review are 60 points.

UNICEF welcomes proposals which provide in-kind support or discounted price. If that is the case, bidders are encouraged to flag this in their financial proposal.

Only proposals that obtain a minimum score of 40 will be considered for the Interview stage and will be invited to an interview panel. All other proposals will be disqualified from further consideration.

Technical Evaluation: Phase 2 interview with a maximum of 20 points

Those proposals that pass the minimum score of 40 points in Phase 1 will be invited to Phase 2. The bidders that qualify for this Phase will be notified by email. The purpose of Phase 2 is to further evaluate the offered services. UNICEF shall not be expected to reimburse any expenses incurred by the bidders with regards to this exercise.

Only proposals that obtain a minimum score of 40 points in Phase 1 and 15 points in Phase 2 which shall result in a combined minimum score of 55 points will be considered for the financial evaluation. All other proposals will be disqualified from further consideration

Separate Technical and Financial proposals should be submitted for this bid. All the proposals received will be assessed against the technical criteria.

Currently UNICEF is requesting information on environmental and social policies and related documentation with Bids submitted by prospective suppliers. UNICEF is incorporating environmental and social criteria considerations into the evaluation process on social, economic and environmental pillars

EVALUATION CRITERIA FOR TECHNICAL PROPOSAL

Technical Evaluation - Desk Review	Max points
Evidence of experience, ability to provide high caliber deliverables and complete assigned project in a timely manner. Complete proposal with concise approach and methodology detailing the interest to undertake the assignment, relevance of their qualification and experience, and time frame	15
Diversity and a minimum of 2 samples of relevant work and links to open-source GitHub repositories. The institution's relevant experience and qualifications as outlined in the TOR. The range and depth of experience in undertaking similar projects or assignments, at various levels.	5
Team and key personnel. The team should possess key qualifications and experience as indicated above	15
Regional/country experience	10

Provide at least 3 client references with detailed contacts.	5
The UNICEF Procedure on Sustainable Procurement is one of UNICEF's responses to the Sustainable Development Goals (SDGs) particularly Goal 12 – "Ensure Sustainable Consumption and Production Patterns" and its target 12.7 – "promote public procurement practices that are sustainable, in accordance with national policies and priorities". Sustainable procurement encompasses three pillars – economic, environmental and social. **Bidders are encouraged to read** Sustainable procurement procedure (UNICEF Supply Division). If applicable, please checkmark the box for the following: ❑ Is your company a member of the UN Global Compact ❑ Has your company made a commitment to economic sustainability (example: inclusion of local resources to develop local economy in area of work, including small businesses and businesses owned by marginalized groups). ❑ Has your company made a commitment to social sustainability (example: protecting human rights and labour issues (workers' rights), inclusion of persons with disabilities and gender in the work force) ❑ Has your company made a commitment to environmental sustainability (example: minimize the impact on environment from purchasing, reduction of wastage, reduced CO2 emissions etc.) ❑ Please explain how you plan to integrate sustainability measures in the execution of the contract, if awarded to you (250 words max):	5
Quality and completeness of the overall proposal. Demonstrate a clear understanding of the assignment.	5
TOTAL POINTS TECHNICAL EVALUATION	**60**

Financial Evaluation	Max points
Budget	20
TOTAL POINTS FINANCIAL EVALUATION	**20**

The proposers should ensure that all pricing information is provided in accordance with financial proposal template. The financial evaluation of all technically compliant proposals will be conducted. The proposals will be ranked from the lowest to the highest based on the total cost.

The financial proposals should be prepared in US Dollars (USD) only. The financial proposals will be evaluated only for those offers that meet the minimum passing score of 55 points in the Phase 2 technical evaluation. The financial proposals will be graded on a scale of 0-20. The highest number of points will be awarded to the proposal with the lowest financial value. Other financial proposals will be scored on a relative scale, with points determined based on the percentage of difference with the lowest score.

The total score for the financial offer (TS_{FO}) will be calculated in the following manner (rounded to one decimal):

$$TS_{FO} = \frac{Lowest\ offer}{Actual\ Offer} x\ 20$$

The total combined score (TS) for the proposal will then be calculated by adding the scores for the technical and financial proposal within the service area.

The recommendation for award of contract will be made based on best combination of technical and price scores and based on the results of the reference checks and financial stability of the vendors(s). UNICEF may select a service provider based on the final assessment scores and/or any other criteria that UNICEF deems in its best interest (regardless of the overall combined technical/commercial score).

If the bidders provide in-kind support or a discounted price for any of the inputs/line items, that should be made explicit in the financial proposal.

Please find more information and carefully consider the detailed instructions provided in the RFPS.

PAYMENT SCHEDULE

Payment terms:

For Professional Services: shall be provided based on an all-inclusive fixed cost deliverable-based engagement based on the deliverables indicated above as per detailed budget proposal submitted using

Annex-C. Payment will be effected Net 30 days after receipt of accurate invoice(s) and satisfactory performance of all tasks/activities that comprised the relevant deliverables and upon timely receipt and acceptance of each deliverable by UNICEF.

- Unless otherwise agreed by the Parties, there will be one payment per accepted deliverable.
- Timely performance of tasks/activities and completion of each deliverable will be assessed against the agreed by the Parties Project Plan and timelines for provision of deliverables.

LOCATION AND DURATION OF ASSIGNMENT

The services should be performed off-site from the vendor's premises with no travel expected to UNICEF/Giga's premises.

PERIOD OF PERFORMANCE:

Engagement not to exceed 25 weeks from contract signature. Expected Timeframes for provision of each deliverable are indicated above.

Vendor to submit a complete timeline (workplan) reflecting all the activities required for the engagement. Kindly refer above with regards to additional details on the expected timeline (workplan) and Deliverables for the engagement. Services under contract to start immediately upon contract signature.

However, If the decision by UNICEF is to extend the initial term of the contract to accommodate for further maintenance and support services, the selected vendor must guarantee the provision of those services ("Optional Services") under the same terms and conditions (including pricing) offered in its proposal for a minimum of four (4) additional 12-month periods to be exercised at the discretion of UNICEF and subject to the satisfactory performance by the vendor. The selected vendor must also recognize the right of UNICEF to cancel contracted services at any time at no cost.

PROJECT MANAGEMENT/CONTRACT SUPERVISOR AND OTHER STAKEHOLDERS

- **Roadmap refinement & planning-** Weekly calls with Giga product team and/or other team members and users based on requirements to refine backlog that require diverse inputs from the team, and also discuss the plan for the sprint.
- **Asynchronous Standups-** Daily update on common communication tool (Slack preferred) to update on progress, roadblocks and requests.
- **Demos-** Weekly call to demonstrate product development and take feedback from Giga team and users as per the agenda of the demos.

- **Monthly retrospective-** Call every month to discuss feedback on product, process, team and/or major roadblocks.
- **General Guidelines-** Have clear meetings agendas, practice detailed documentation and notes wherever possible for efficient remote work collaboration. Response time to any query should not exceed 1 working day.

Through the assignment, the team would work independently, with the advisory support of the Giga HQ team primarily consists of the innovation manager, product lead and designer. The team will be accountable to UNICEF´s Giga leadership for final deliverables.

What to Submit

Applicants will need to provide a 1) Technical Proposal and 2) Financial Proposal. Applicants should provide the information in their bids using the following structure and templates.

 Technical and financial proposal must be submitted in In-Tend.

1) TECHNICAL PROPOSAL REQUIREMENTS

The list below explains the technical proposal requirements. Your submission should address all aspects and criteria outlined in the Request for Proposal and include the following:

1. **Title Page:**
   a. This should clearly indicate the name of the bidding entity and contact person
2. **Bidder profile:**
   a. Please complete **Annex B.2**
   b. Include a description of your mission, background and focuses with emphasis on relevant experience and services.
   c. Include curriculum vitaes/resumes or bios of key personnel, which demonstrate qualifications in areas relevant to the scope of work.
   d. Include any other information which exemplifies your qualifications.
3. **Qualifications and technical background:**
   a. Proposed methodology, course of action and solutions to be provided for each of the main services / activities. A proposal evolved from the perspective of the marketplace and its users/stakeholders is preferred. Motivate all choices as how they will support the engagement of all stakeholders towards the end of providing connectivity to the schools. This text should provide enough information for UNICEF to judge whether the proposer has the skills and personnel profile(s) required to carry out the category of work, as well as the vision and forethought to lead on new and innovative learning design solutions.

b. Describe how you / your company will deal with risk management in this service.
c. Share samples of work related to the specific services which demonstrate a diversity of styles and skills in your portfolio. Any file / email must be no more than 10MB or will not be accepted.
d. Provide a list of software or tools being used and level of expertise where relevant.
e. Provide a list of previous UN contracts, Government contracts or other partners carried out in related fields of work, if any.
f. At least three (3) reference letters or evaluation forms from previous contracts of a similar nature. Note that letters that do not explicitly refer to the name of the contracted entity will not be considered.

4. **Other:** Clarifications the proposer would like to make that are not expressed elsewhere, in support of their proposal. Innovative, out-of-the-box ideas are welcome.

   *No price information should be contained in the technical proposal.

2) FINANCIAL PROPOSAL REQUIREMENTS

1. **Budget proposal**: Please complete Annex C - Financial proposal template
2. **Signed Request for Proposals for Services Form**: included in the RFPS (page3).
3. **Articles of incorporation:** please provide a copy of the cover and signature pages of the articles of incorporation of the company/institution submitting the proposal;

ANNEX B.1: How "Connectivity Credits" can help a billion young people get online

Overview:

- 3.7 billion people aren't connected to the internet today[1]
- Giga, the UNICEF & ITU partnership to connect every school in the world, endorsed by the Secretary-General in his Roadmap for Digital Cooperation, and other experts estimate that it will cost upwards of $428B[2] to build the infrastructure necessary to have a fair, inclusive digital humanity.
- We believe Giga, and other efforts involved in driving universal connectivity, can explore the creation of a new product to align industry, investors, and governments in connecting every school: a 'Connectivity Credit.[3]'
- A Connectivity Credit could, like a carbon credit, be an incentive for those seeking to provide connectivity to less profitable areas by building up a marketplace where 'connectivity' can be traded across providers, users, and geographies.
- Advances in blockchain technology, and cryptocurrency and digital finance, can make the issuance of these credits, the real-time tracking of them, and their fungibility relatively low friction, particularly compared to a legacy setup like the carbon market.

The Need:

As we have seen during Covid, when people are not connected to the internet their ability to learn, work, and create is significantly diminished. Giga combines UNICEF's focus on children and education with ITU's experience in connectivity policy, to ensure that every school in the world has access to the internet – and every young person has access to information, opportunity, and choice.

In addition to connecting the more than 1 billion young people[4] that Giga is aiming to serve through their schools, last mile infrastructure[5] can also be used to allow for other public (and private) growth of internet access. A key issue in rural connectivity discussions revolves around population density and revenue per user[6]. Using schools as a 'hub' for connectivity allows Giga to create cashflow guarantees and other levers to strengthen investment cases at a national level.
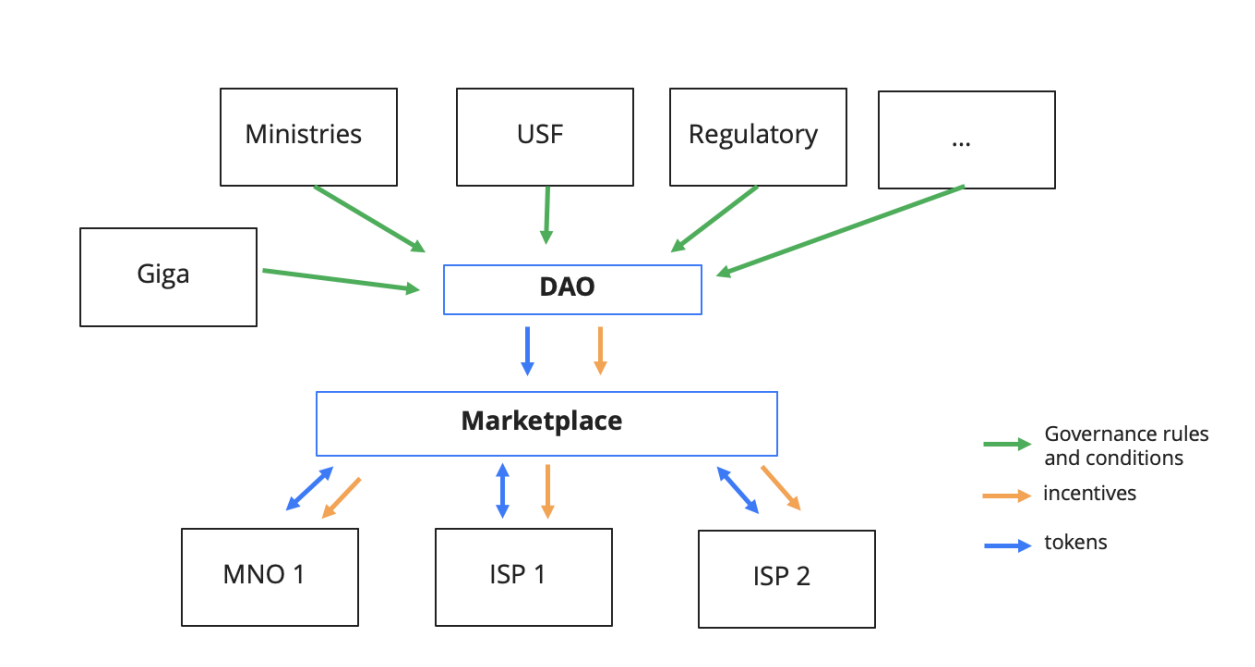
However, many of the poorest schools are also the most difficult to connect. It has been difficult to prove the business cases using traditional means, as there is not, usually, pre-existing revenue from the poorest communities that can be used to estimate future profits.Additionally, these communities often don't have other fundamental infrastructure like electricity or roads making it even more expensive, per unit (per school) to connect. The result is that many of these communities remain disconnected.

A Solution: The Connectivity Credit:

A Connectivity Credit Market would create incentives for service providers and other technology companies to extend networks to the poorest regions and connect public facilities. By creating a token that is backed by connectivity, we could ensure that funds that enter this system are spent appropriately, with a minimum of overhead expense.

In this solution, governments will provide incentives to the telecom companies in exchange for providing school connectivity. These will be the main stakeholders with the supervision of Giga and/or a supervisory board. Tenders will be proposed, which will consist of providing (or maintaining connectivity) to a school or a set of schools, and telecoms will be able to accept them in exchange for a certain amount of tokens that, upon tender completion, they will be able to redeem for certain incentives (tax breaks, access to frequency spectrum, access to public infrastructure etc). The amount of tokens provided for the completion of a tender will depend on the remoteness and socioeconomic level of the school (and population around it), as well as the type of connection, both from a technical and an environmental point of view (credit score). The image below shows an example of how the marketplace could be envisioned.

What would the total supply of Connectivity Credits be? Projects like Giga give us, for the first time, a denominator of human need in the realm of connectivity. This denominator (the number of disconnected schools in the world) could be a peg for the total Credit supply.

As the number of connected schools increases, the token supply could decrease, making them more valuable over time. The token could then represent yearly cost and an provide an ability to

see delivery of gigabyte to each school.   Until Giga, no one has known the number of schools in the world; the project has mapped 1,000,000 in the last year. In the next 36 months Giga will have live data about somewhere between 6 and 9 million schools.

Backing: Who pays for credits: Connectivity Credits could be backed by a basket of currencies (fiat and crypto) from sponsor nations and partners. Increased global connectivity creates more users online, more opportunities for digital commerce and enterprise, and more space for innovation in new markets.

This backing could come from entities who have an interest in increased global connectivity as a "layer" for their own enterprises (whether those are development- or business-oriented.) It can also be drawn from national Universal Service Funds (USF) or similar mechanisms which already are 'taxing' connectivity for the wealthy but often underutilized.

Issuance: Who gets the Credits:

Although schools are not active users of the marketplace, the credits are associated with them, and whether they get connected or their connectivity is maintained over time. In the future, other public facilities can be included in the marketplace. As already mentioned, credits are associated with the difficulty of connecting the school (credit score).

Projects like Giga, working with Ministries of Telecommunication and Finance, can provide assessments of the difficult of connecting any given school: Is it further away from the main grid? Is there no electricity? Is it further than 2km from a fiber optic connection? Eventually, Credits might allow schools to access software or services online, or to incentivize the creation of open source digital public goods, through a variety of partners.

Monitoring: Who counts the distribution of gigabytes?: Because Giga monitors school connectivity in real-time[8], the actual efficacy and distribution of gigabytes can be counted.

Unlike carbon sequestration, where a provider needs to sequester a minimum of one metric ton for a credit, units of connectivity can be measured in granular detail (i.e. a gigabyte, megabyte, etc) and counted by the minute, hour, or day. Also, unlike the carbon market, where secondary montitoring infrastructure is needed (people, technology, and partnerships), connectivity monitoring is *built into* the network itself. Once a facility is connected it has, by definition, the innate ability to report on its connectivity status through the cables, radio-signals, or satellites used to connect it.

The Users: Who Uses the Credits:

Giga, government and other stakeholders assign credits to schools on regular basis. Network Operators, ISPs, and other connectivity partners would collect Credits as they provide connectivity. Hosting providers and other digital public good partners could participate either in the primary or secondary market.

The Local Market: What's the basis for the Credits? How many would be issued per country?: Governments already tax internet service providers and mobile network operators. Governments also provide the spectrum licenses to these providers to operate.

This bi-directional flow of incentives, including potential tax-breaks, subsidies, other guarantees, spectrum allocation and more, makes government an ideal partner for using (redeeming, buying, and issuing) credits at a national level.

The Global Market: How would credits be used at a global level? The global market could access the backing, or reserve, described above to issue more credits for certain areas, or could raise more money and increase the size of the reserve, should it need.

An interesting thought experiment would be to imagine a scenario where wealthy governments agree to lowering tax burdens on multinational companies which are providing Credits from work done globally, effectively allowing for onshoring of profit and other incentives.

Conclusion:

One of the many lessons from the world of carbon credits is that building an alliance, and a global, unified standard from the beginning will help drive adoption and create liquidity. If this is done, a Connectivity Credit framework could create a global marketplace of connectivity for the most difficult to reach populations. It could incentivize "good behavior": connecting difficult-to-connect schools and communities. It could be created when public infrastructure is built in underserved areas, allowing for service providers and others to redeem these Credits for tax breaks or other incentives.

[1]   https://www.weforum.org/agenda/2020/04/coronavirus-covid-19-pandemic-digital-divide-internet-data-broadband-mobbile/

[2]https://www.unicef.org/media/87296/file/Reimagine%20Education%20Summary%20Case%20for%20Investment-2020.pdf

[3] A "Connectivity Credit" would be a fungible, tradable, liquid "token" representing connectivity. This "tokenized Gigabyte" would be used to track connectivity efforts for marginalized populations, to provide incentives to technology companies creating connectivity opportunities, and to create a global marketplace where any actor could be part of the effort to provide universal, safe, and useful connectivity.

[4]   https://www.unicef.org/press-releases/two-thirds-worlds-school-age-children-have-no-internet-access-home-new-unicef-itu and https://www.itu.int/en/ITU-D/Statistics/Pages/youth_home_internet_access.aspx

[5] Including everything from 'where the fibre ends' – all the way to wireless access points and digital hubs in communities located on schools.

[6]   https://blogs.worldbank.org/digital-development/digitizing-infrastructure-technologies-and-models-foster-transformation

[7] https://gitcoin.co/blog/introducing-gtc-gitcoins-governance-token/

[8] www.projectconnect.world is Giga's data platform, has more than 1,000,000 schools mapped, and is increasingly providing data in live or "near-live" updates.

ANNEX B.2: Bidder Profile

GENERAL INFORMATION

Please check the box when appropriate.

Full name of entity:	
Address:	
Country:	
Contact Person, Position Title:	
E-mail address:	
Website:	
Telephone:	
Fax:	
Alternative Contact person, Position Title:	
E-mail address:	
Type of Entity:	❏ Private Sector ❏ NGO ❏ Foundation ❏ Other: (please indicate)

MAIN SERVICES

Briefly describe your entity's main services and areas of expertise (max 150 words)

GEOGRAPHIC FOOTPRINT & PRESENCE

List all countries where you have already carried out related work including details of such work. List any country offices, number of employees per country, etc. (where applicable). (max 150 words)

ADDITIONAL INFORMATION

Company established in (year):	
Years of experience providing similar service(s):	
Number of employees (if any):	
Annual turnover (USD):	
Registration with UNGM[1]	❏ If so, provide registration number:
Experience working with UN Agencies over the last 5 years	❏ No ❏ Yes. If yes, briefly mention the UN agencies and the type of work done, including the details of referees

[1] United Nations Market Place (www.ungm.org)