



CONSULTANCY - TERMS OF REFERENCE

Technical Expert, Connectivity Credits

Division: UNICEF Office of Innovation - Giga, Geneva, Switzerland

Duration: **12 months (Deliverable-Based)**

Duty Station: Geneva, Switzerland

Advertising summary

We are seeking an experienced Connectivity Credits Technical Expert to join Giga, an initiative to connect every school in the world to the Internet and every young person to information, opportunity and choice. The Technical Expert will work with a multidisciplinary team to provide technical expertise and strategic guidance for the development of the Giga Connectivity Credits Marketplace (<https://www.weforum.org/agenda/2021/06/how-connectivity-credits-could-help-billions-get-online/>), a blockchain-based system designed to incentivize companies to provide sustained internet access to underserved communities.

If you have a passion for creating impact and a desire to contribute to closing the digital divide, join us as we empower every young person with information, opportunity, and choice. Your work will not only connect schools but also spark socio-economic growth by turning education into a gateway for community-wide advancement.

Child Safeguarding

Is this project/assignment considered as "Elevated Risk Role" from a child safeguarding perspective? YES NO

If YES, check all that apply:

Direct contact role YES NO

If yes, please indicate the number of hours/months of direct interpersonal contact with children, or work in their immediately physical proximity, with limited supervision by a more senior member of personnel:

Child data role YES NO

If yes, please indicate the number of hours/months of manipulating or transmitting personal-identifiable information of children (name, national ID, location data, photos):

More information is available in the [Child Safeguarding SharePoint](#) and [Child Safeguarding FAQs and Updates](#)

UNICEF works in some of the world's toughest places, to reach the world's most disadvantaged children. To save their lives. To defend their rights. To help them fulfill their potential.

Across 190 countries and territories, we work for every child, everywhere, every day, to build a better world for everyone.

And we never give up.

For every child...innovate

UNICEF has a 70-year history of innovating for children. We believe that new approaches, partnerships and technologies that support realizing children's rights are critical to improving their lives.

The **Office of Innovation** is a creative, interactive, and agile team in UNICEF. We sit at a unique intersection, where an organization that works on huge global issues meets the start-up thinking, the technology, and the partners that turn this energy into scalable solutions.

About Giga

Launched in 2019 as a joint initiative between UNICEF and ITU, **Giga** has set the ambitious goal to connect every school in the world to the internet. Half of the world's population has no regular access to the Internet. Millions of children leave school without any digital skills, making it much more difficult for them to thrive and contribute to local and global economies. This has created a digital divide between those who are connected and those who are not, a divide that has become even wider during the Covid-19 pandemic. 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.

Giga focuses on connecting schools so that children and young people have access to information, opportunity, and choice. It 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 2021 report by the Economist Intelligence Unit found that a 10% increase in school connectivity can increase effective years of schooling by 0.6% and increase GDP per capita by 1.1%.

Based in Switzerland with an open-source technology centre in Barcelona, Giga not only aims to provide children and young people with access to information but also envisions schools as anchor points to uplift entire communities.

Giga is building a Connectivity Credits system. Connectivity Credits are envisioned as a fast and efficient mechanism to enable (small) internet service providers to connect schools in underserved areas. ISPs automatically earn Credits every time they connect a school and can redeem these Credits for a variety of incentives, including subsidies, tax reliefs, or infrastructure access - through respective Ministry of Finance or regulatory bodies, subject to individual country determinants.

The Connectivity Credits system includes many innovative elements which reinvent traditional financing and procurement in order to be 'fit to size' for small, local ISPs. These elements are being tested in a number of in-country pilot projects. The learnings from these pilots are integrated into the Connectivity Credits system.

You can read more about Giga's work at <https://giga.global/> and by following us on twitter @Gigaglobal

How can you make a difference?

We seek a strong, self-motivated Technical Expert to help build one of Giga's ambitious products; the Connectivity Credit Marketplace, a global system designed to incentivize companies to provide internet access to underserved communities.

The Technical Expert will work under the guidance of the Programme Manager (Connectivity Credits Lead).

Your main responsibilities will be / (Key outputs)

1. Explore and draft different technical architectures and designs for a global "Connectivity Credit Marketplace", ensuring scalability, reliability and security.
2. Collaborate with product managers, software engineers, external partners and other stakeholders to understand and translate project requirements into technical solutions for a global "Connectivity Credit Marketplace"
3. Build proof of concepts (PoC) for some of the identified solutions to validate their feasibility.
4. Offer strategic guidance on technical decisions impacting the success of the Connectivity Credits initiative.
5. Provide technical assistance in reviewing submissions from external vendors and partners, assessing the technical aspects of proposals, including feasibility, quality, innovation and alignment with Giga's mission.
6. Conduct regular technical reviews of vendor and partner work to ensure it meets quality standards and projects stay on scope, on time and on budget.
7. Create and maintain technical documentation about the proposed designs for a global "Connectivity Credit Marketplace"

Description of assignment

#	Tasks	Deliverables/Outputs	Delivery deadline	% of Payment/ estimated combined workings days
1	Explore and draft various technical architectures and designs	Explore and draft various technical architectures and designs	End of month 1	22 days (8.43%)
2	Collaborate with stakeholders to translate project requirements	Technical product requirements	End of month 2	22 days (8.43%)
			End of month 3	22 days (8.43%)
3	Provide technical assistance in reviewing vendor proposals	Assessments of vendor proposals.	End of month 4	22 days (8.43%)
4	Develop and test prototypes based on selected solutions	Functional prototypes	End of month 5	22 days (8.43%)
			End of month 6	22 days (8.43%)
		Gather feedback for iterative improvements.	End of month 7	21 days (8.05 %)
5	Conduct regular technical reviews of vendor work	Technical reviews of vendor work	End of month 8	22 days (8.43%)

6	Create and maintain technical documentation	Technical documentation	End of month 9	21 days (8.05 %)
			End of month 10	21 days (8.05 %)
		Codebases following open-source best practices	End of month 11	22 days (8.43%)
7	End of year Report	Comprehensive evaluation report of the year, focused on lessons learned and recommended improvements	End of month 12	22 days (8.43%)

To qualify as an advocate for every child you will have...

- And Advanced University degree (Master's or higher) in Computer Science, Engineering, Information Technology). *A first University Degree in a relevant field combined with 2 additional years of professional experience may be accepted in lieu of an Advanced University Degree.
- A minimum of 5 years of experience in designing, developing and implementing technology solutions
- Experience with blockchain and/or cryptocurrency products
- Knowledge of blockchain technologies
- Understanding of smart contract development and implementation and corresponding languages such as solidity, Java
- Strong analytical skills and ability to use data to make informed decisions.
- Strong communication and interpersonal skills.
- Fluency in English is required. Knowledge of another official UN language (Arabic, Chinese, French, Russian or Spanish) or a local language is an asset.

Travel

- The consultant is expected to travel to Geneva one time (1 trip), for a stay of 5 nights.
- The consultant is expected to travel to two Giga countries (2 trips), for a stay of 5 nights.

Payment details and further considerations

- Payment of professional fees will be based on the submission of agreed deliverables. UNICEF reserves the right to withhold payment in case the deliverables submitted are not up to the required standard or in case of delays in submitting the deliverables on the part of the consultant.
- Consultant is responsible for his/her own health and travel insurance.
- Consultant is responsible to arrange his/her own travel, including visa.
- This consultancy is based in Geneva.
- UNICEF will facilitate the process for obtaining local permits exclusively for the consultant, excluding any dependents.
- For more information on *Non-staff members IO* based in Geneva, you can visit this [link](#)

How to apply:

- Interested applicants are required to submit a financial proposal with an all-inclusive fee. Please see the financial proposal template.

- Financial proposal must include travel costs (economy class) and daily subsistence allowance, if travel is required as per TOR and any other estimated costs: visa, travel/health insurance
- **Applications without a financial proposal will not be considered.**

For every Child, you demonstrate...

UNICEF's values of Care, Respect, Integrity, Trust, Accountability, and Sustainability ([CRITAS](#)).

To view our competency framework, please visit [here](#).

UNICEF is here to serve the world's most disadvantaged children and our global workforce must reflect the diversity of those children. The UNICEF family is committed to include everyone, irrespective of their race/ethnicity, age, disability, gender identity, sexual orientation, religion, nationality, socio-economic background, or any other personal characteristic.

UNICEF offers reasonable accommodation for consultants/individual contractors with disabilities. This may include, for example, accessible software, travel assistance for missions or personal attendants. We encourage you to disclose your disability during your application in case you need reasonable accommodation during the selection process and afterwards in your assignment.

UNICEF has a zero-tolerance policy on conduct that is incompatible with the aims and objectives of the United Nations and UNICEF, including sexual exploitation and abuse, sexual harassment, abuse of authority and discrimination. UNICEF also adheres to strict child safeguarding principles. All selected candidates will be expected to adhere to these standards and principles and will therefore undergo rigorous reference and background checks. Background checks will include the verification of academic credential(s) and employment history. Selected candidates may be required to provide additional information to conduct a background check.

Remarks:

Only shortlisted candidates will be contacted and advance to the next stage of the selection process.

Individuals engaged under a consultancy or individual contract will not be considered "staff members" under the Staff Regulations and Rules of the United Nations and UNICEF's policies and procedures, and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws. For more information on Non-staff members IO based in Geneva, you can visit [this link](#).

The selected candidate is solely responsible to ensure that the visa (applicable) and health insurance required to perform the duties of the contract are valid for the entire period of the contract. Selected candidates are subject to confirmation of fully-vaccinated status against SARS-CoV-2 (Covid-19) with a World Health Organization (WHO)-endorsed vaccine, which must be met prior to taking up the assignment. It does not apply to consultants who will work remotely and are not expected to work on or visit UNICEF premises, programme delivery locations or directly interact with communities UNICEF works with, nor to travel to perform functions for UNICEF for the duration of their consultancy contracts.