United Nations Children's Fund
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for every child

CONSULTANCY - TERMS OF REFERENCE

Consultancy for School Connectivity Demand Estimation for Africa

Division: UNICEF Office of Innovation - Giga, Geneva, Switzerland
*Duration: **6 months, full time, deliverable based.***
Duty Station: Remote

Advertising summary

Giga's mission is to support governments to connect all schools in the world by 2030, so children and young people can have access to information, opportunity, and choice. Giga and UNICEF Supply Division are developing a market acceleration strategy to help African governments to scale up the number of schools that they connect to the internet through public procurement processes. This consultancy will assist UNICEF in estimating the current demand for school connectivity from African governments, as well as forecasting the potential demand for this service within the next five years. The consultant will use diverse datasets to produce estimates for the demand of school connectivity in the continent: a) school location and connectivity status data collected by Giga, b) governments' public budgets on allocations and commitments for digital projects, c) concessional loans and grants from international financial institutions, d) inputs from UNICEF Supply Division demand forecasting exercises, e) interviews and consultations with UNICEF country offices and government officials.

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

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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%.

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?

Giga seeks a consultant to develop a model that will help estimate the demand for school connectivity in Africa for the next five years, based on past and current procurement, school location and connectivity status data, public budget allocations and commitments, loans and grants from IFIs for digital development, forecasting exercises, interviews, among other data sources. Under the supervision and guidance of Giga's Procurement Section Programme Manager, the consultant will engage with UNICEF Supply Division teams, as well as with Giga's multidisciplinary team, particularly with the Procurement, Country Support, Mapping, Tech and Applied Science streams, to develop the demand estimation and forecasting model for Africa. The consultant should develop a model for estimating school connectivity demand that can work for all countries in Sub Saharan Africa. Using the model, the consultant should provide estimates that are representative at the regional level for ECOWAS, SADC and EAC regions. The successful candidate should possess expertise in the telecommunications industry and skills in estimating demand for connectivity services, including hands-on experience in providing technical guidance to governments or UN agencies for informed decision-making.

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Your main responsibilities will be / (Key outputs)

1. **Methodology:** Develop a methodology for school connectivity demand estimation based on previous demand estimation exercises from UNICEF in other markets and demand estimation practices in the telecommunications industry.
2. **Inputs:** Identify the required data and sources to estimate the demand for school connectivity. Engage with the relevant stakeholders to obtain access to the relevant data and information. Assess which data is required to produce the estimates and which data can be estimated.
3. **Data collection:** Compile, clean and organize all the relevant data from different sources to produce databases that will feed the demand estimation model.
4. **Model:** Develop the model to estimate and forecast demand for school connectivity solutions in Africa, leveraging existing connectivity costing models developed by Giga. The model should produce a result in terms of the number of schools to connect with the available & committed funding over the next five years, the estimated market opportunity for suppliers, and the overall bandwidth capacity that will be demanded by governments to internet service providers.
5. **Estimates:** Produce estimates that are representative at the Sub-Saharan Africa level, as well as estimates that are representative at the regional level: SADC, EAC, ECOWAS. The estimates should include all assumptions made by the model and different scenarios if there are changes in key variables.

Description of assignment

#	Tasks	Deliverables/Outputs	Delivery deadline
1	Develop a methodology for school connectivity demand estimation	Methodology document	Month 1
2	Identify required data and sources to implement the methodology	Map identifying all data and sources that are relevant to produce an estimation. The map should differentiate between required data and optional or "good to have" data.	Month 2
3	Compile, clean and organize all the relevant data	Databases to feed the model with all key variables.	Month 3 & 4
4	Develop the model and feed it with the data compiled, generate diverse iterations of the model, identify pros and cons of different models / estimation methodologies, and recommend a model for Africa	Model to estimate and forecast demand for school connectivity solutions in Africa.	Month 5
5	Produce representative estimates using the model	Estimates at the Sub-Saharan Africa level, and at the regional level for SADC, EAC, and ECOWAS.	Month 6

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

- An advanced degree, or equivalent, in Economics, Computer Science, Network Engineering, Telecommunications, Business Administration, or related fields.

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.

- Minimum 8 years of professional work experience in the telecommunications sector, preferably with a focus on connectivity solutions.
- Previous experience working in digital inclusion and internet connectivity services in developing (or LMIC/MIC) countries, preferably in Africa, will be considered a strong asset.
- Demonstrated experience in the public or private sector, with a strong understanding of market dynamics and telecommunications services demand estimation.
- Demonstrable experience in market analysis and modelling, competitive intelligence, and forecasting in the connectivity sector. Published research work on these topics is a plus.
- Ability to plan and implement projects in coordination with multiple stakeholders.
- Ability to work with a diverse team in a rapidly changing work environment and adapt to unforeseen changes.
- 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 the African countries Giga is working with on three (3) trips, for a stay of 5 nights each.
- The consultant is expected to travel two (2) trips to UNICEF Supply Division in Copenhagen, for a stay of 3 nights each.
- The consultant is responsible for arranging his/her own travel, including visa and travel insurance.

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.

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.

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.