**CONSULTANCY - TERMS OF REFERENCE**

Product and Data Analyst

*Division: Office of Innovation/Giga*

*Duty Station: Barcelona*

*Duration: 12 months*

# *“I will champion lifelong learning for all and convene a Summit on Transforming Education in 2022 to accelerate progress towards the achievement of SDG4.*

*Digital inclusivity will be a vital part of the Summit, building on existing efforts such as the Giga initiative, which aims to ensure that all schools are connected to the Internet by 2030.”*

* **UN Secretary General, Antonio Guterres**

Report of the Secretary-General “Our Common Agenda”

September 2021

**Advertising summary**

We are seeking a product and data analyst who would like to use their data analytics skills to advance Giga’s products and processes in order to achieve the goal of connecting every school in the world to the Internet.

**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):

**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](https://connectinglearners.economist.com/connecting-learners/) 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 cannot fix a problem unless you can see it, so the first step is to map schools and their connectivity levels. Giga uses machine learning to scan satellite images and identify schools. These are then marked by coloured dots on an open-source map: green where there is good connectivity (over 5mb/s); amber where it is limited; and red where there is no connectivity at all.

Just as building railroads allowed previously isolated towns to flourish, providing good quality Internet access will allow communities to participate in the digital economy for the first time. But Giga’s work in laying the tracks for connectivity is only one part of a wider effort to bridge the digital divide. UNICEF’s Reimagine Education initiative brings all of this work together and has set the goal of connecting every child and young person – some 3.5 billion - to world-class digital learning solutions by 2030. In addition to Giga, it includes components focusing on the affordability of data and content, access to devices, teacher certification and the engagement of young people. Along with ITU’s digital skills programme and other initiatives, Reimagine Education aims to ensure that, once connected, young people are empowered with the tools they need to shape their own futures.

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

**Purpose of the appointment / main activities**

We seek a product and data analyst who can work with a diverse, global and interdisciplinary team to help us improve and scale our products and processes through their critical data analysis. You´d be the caretaker of Giga´s main datasets, the one taking care of their quality and integrity. This would mean creating automated reports and alerting systems, using existing open-source tools to analyze different datasets, setting and managing data quality benchmarks, and supporting the engineering team with writing high quality data pipelines.

You will:

* Create automated reports to track and analyze Giga’s progress in mapping schools, their connectivity and the infrastructure available to them.
* Analyze real-time school internet Quality of Service (QoS) data from different sources, including Internet Service Provider (ISP) data through APIs as well as data obtained directly from schools through Giga’s desktop application and browser extension ([www.projectconnect.world](http://www.projectconnect.world)).
* Setup product and user analytics and suggest product and process improvements and contribute directly to the efforts in mapping schools and their connectivity across the globe.
* Be the data quality expert within the team and support data engineers to write robust data quality checks across data pipelines and workflows.
* Lead the process of data documentation and metadata management within the data and tech team.
* Contribute to building data-driven culture across the team by supporting them with efforts like defining and tracking KPIs, funneling analysis of their processes and templatizing data queries.

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|  | **Tasks** | **Deliverables** | **Time Frame** | **Payment** |
| **1** | Automate reports for Giga’s progress tracking | * Analytical dashboard of schools and their parameters across time and countries. * Time-series analytical dashboard of real time internet data across products. | Month 1 | 10% |
| * Materials to onboard non-tech teams like partnership, comms to the analytical dashboards and data queries. * Teams with primary dashboards set up. | Month 2 | 10% |
| **2** | **QoS product and data recommendations** | * Actionable dashboards for countries and school admins to track data shared through Daily Check App. | Month 3 | 5% |
| * Analytical dashboards and automated data quality reporting for the QoS data shared through APIs by multiple ISPs. | Month 4 | 10% |
| **3** | **Triangulate Internet Quality of Service data across sources** | * Report with methodology to triangulate different QoS proxies to represent internet quality data of schools. * Revised methodology through collaboration and validation with internet data and tech experts and advisors of Giga | Month 5 | 10% |
| * Data pipeline prototype for Project Connect. | Month 6 | 5% |
| **4** | **Data Quality standards and automation support.** | * Evaluation of data pipelines and code with data quality assertions to automate and build robust data pipelines. | Month 7 | 10% |
| **5** | **Product Analytics** | * Product and user analytics dashboards for our mapping products like Project Connect and Daily Check App. * Documentation with product and process improvements based upon the analysis. | Month 8 | 10% |
| **6** | **Data Governance** | * Data documentation and metadata for key datasets. * data documentation and metadata templates | Month 9 | 5% |
| * ML team onboarded on templates and set up process to track the efforts | Month 10 | 10% |
| **7** | **Blogs and analytical stories** | * Interactive analytical story on real time QoS data of schools published. | Month 11 | 5% |
| **8** | **Completion of contract** | * Final handover report | Month 12 | 10% |

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

* An academic degree in Statistics, Data Analytics, Computer Science **or equivalent work experience.**
* A minimum of five (5) years of relevant professional experience in data and products analytics
* A minimum of three (3) years of e**xperience in open-source analytical stack Superset, Metabase, PostgreSQL DB, Apache Airflow.**
* A minimum of three (3) years of e**xperience with** SQL and python or R
* A minimum of three (3) years of e**xperience in data governance best practices and toolkit like Datahub, Deltalake, Great expectations.**
* Knowledge of computer networks and understanding how ISP (Internet Service Providers) work is an asset
* Experienced and comfortable with remote team dynamics, process, and tools (Slack, Zoom, etc.)
* Near obsession with quality, accuracy and actionable data insights for product and process improvements.
* Developing country work experience and/or familiarity with emergency conditions is considered an asset.
* Fluency in English is required. Knowledge of another official UN language (Arabic, Chinese, French, Russian or Spanish) or a local language is an asset.

### 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:**

* Interest applicant is required to submit a financial proposal with all-inclusive fee.
* 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](https://uni.cf/UNICEFValues)).

To view our competency framework, please visit [here](https://www.unicef.org/careers/media/1041/file/UNICEF%27s_Competency_Framework.pdf).

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.