

TERMS OF REFERENCE (ToR)
Institutional Consultancy
for the Development of Learner Unit Record Information Tracking System (LURITS)
in Katsina, Kebbi, Sokoto and Zamfara States, Nigeria

Purpose	The objective of this consultancy service is to strengthen the Educate A Child (EAC) “More out of school children in school in Nigeria” project data collection, processing, and visualization system by developing a functional and effective Learner Unit Record Information Tracking System (LURITS) at school level, including a web-based dashboard integrating different data sources, linked with overall Education Management Information System (EMIS) and develop capacity of the national ministry of education project teams to rollout and maintain the system for sustainability.
Duration	April to June 2022
Reporting to	UNICEF Sokoto Field Office Monitoring and Evaluation Specialist under the overall supervision of Sokoto Field Office Education Manager
Location	Sokoto, Nigeria

1. Background and justification

UNICEF Nigeria is implementing “More out of school children in school in Nigeria” a multi-year Educate A Child (EAC), education project funded by the Qatar Foundation.

The goal of the EAC project is to contribute to the reduction of the number of children out of school in Katsina, Kebbi, Sokoto and Zamfara States in Northern Nigeria. One of the project results areas is to strengthen evidence generation for planning and decision making, including the development of Learner Unit Record Information Tracking System (LURITS).

The EAC funded project has three main objectives:

Objective 1: Increase access for out-of-school children

Objective 2: Improve quality of teaching and learning environment

Objective 3: Strengthened evidence generation

EAC objective 3 is aligned with UNICEF Nigeria workplan outcomes and outputs as follows:

Outcome 5: All children access and complete quality education, within a safe learning environment, with skills and knowledge for lifelong learning.

Output 5.1: The education system at all level/federal and state levels has strengthened capacities to deliver quality basic education.

The development of Learner Unit Record Information Tracking System (LURITS) falls under EAC Objective 3 and UNICEF workplan Output 5.1.

The LURITS data collection component of the specific intervention aims to capture data on pupils' Unique ID, admission number, date of birth, date of enrollment, daily attendance etc. from hand-written school records to track student admission, attendance, movement, progress etc.

As part of the system, the development of a web-based dashboard is expected to integrate disaggregated data by sex, grade, school, etc. from different sources to display the number of children enrolled, promoted, repeated, dropped out, moved out to another school, or moved into the school from another school, and transition between cycles, etc. for the purpose of monitoring and decision-making support at different levels. Additionally, through the dashboard a feedback loop mechanism is built to provide feedback on agreed key indicators for school and local government area officials to take corrective and timely actions.

In addition, by including auto-conversion process of handwritten school records teachers can continue recording attendance data on pen and paper without disruption to the data collection system at school level. The auto-conversion capability is then automatically digitized when a teacher or school support officer takes a picture with the app on an Android smartphone. This will enable both recording and digitizing to be implemented smoothly at school level where the data is sourced. The schoolteachers and government officials at different levels will have better knowledge about the attendance situation of each student, and teachers and/or community members can execute timely and targeted follow-ups on absentees to improve the attendance rate using inbuilt feedback mechanism to the dashboard.

2. Purpose of the assignment

The purpose of the consultancy service is to strengthen the project data collection, processing, and visualization system by developing a functional and effective Learner Unit Record Information Tracking System (LURITS) at school level including a web-based dashboard integrating different data sources and with overall Education Information management System (EMIS) at State and National level and develop capacity of the national ministry of education project teams to rollout and maintain the system for sustainability.

Reporting to UNICEF Monitoring and Evaluation (M&E) Specialist in Sokoto Field Office, under the overall supervision of Sokoto Field Office Education Manager, the consultancy firm will be responsible for the development and deployment of a web-based dashboard and mobile based data collection system including software and any required tools to capture handwritten school records to auto-transcribe to digital data. The contracted firm will also support the development of the capacity of the national ministry of education project teams to rollout and maintain the system for sustainability.

3. Scope of work

Required services to be rendered for this consultancy are outlined below. The deployment of the service is to 2,000 schools in Katsina, Kebbi, Sokoto and Zamfara States in North West

Nigeria.

3.a Major tasks to be accomplished and process workflow:

S.N.	Services	Expected Results
1	Design and development of an application to convert handwritten school records to electronic form and provision of required tools. Gather iterative feedback for the design process and test the prototype registers at school level.	Agree on data to be collected, develop an application to capture the agreed data at school level enabled with GPS and timestamp and provide any required tools for this system to be operationalized at school level.
2	Data Quality Checks and Refinement	Develop a system to automatically check data quality, flagging issues such as missing data, missing pages, data recorded in incorrect ranges. This feedback will be sent in a timely manner to the field team.
3	Data Portal	Deploy the data portal to host the captured data and maintenance.
4	Development of web-based dashboard	Design a dashboard based on agreed indicators to be used by schoolteachers and government official at different levels using android phone and/or computers using full-stack web development and/or open-source business intelligence software.
5	Training	Develop project-specific training materials with the team, and train specified local staff to serve as trainers in the field in the use of the data collection tools and managing the web-based dashboard.
6	Tech Support, Project Communications and Data Portal Hosting	Ensure reliable access to the application and the collected data. Provide responsive technical and administrative assistance to improve data quality .

3.b Deliverables, and payment schedules:

S.N.	Deliverable	Timeline	Payment
1	Data collection application designed, tested and ready for deployment <ul style="list-style-type: none"> - First draft school attendance form designed - Designed data collection tool tested in selected 	April 2022	20% (May 2022)

	schools <ul style="list-style-type: none"> - Feedback from field test of the tools is integrate and form updated - Final version of school attendance form is ready for printing Provision of required tools for this system to be operationalized at school level.		
2	Field staff trained and data collection tools printed <ul style="list-style-type: none"> - Data collection tools printed and ready for deployment - Field staff trained on the use of the data collection tools - Technical support provided during the data collection process. 	May 2022	60% (July 2022)
3	Web-based dashboard developed, and field team trained <ul style="list-style-type: none"> - Design and deploy draft web-based dashboard using business intelligence software - Train primary users on how to design and maintain the web-dashboard. 	June 2022	
4	Technical support with capacity development for maintenance <ul style="list-style-type: none"> - Provide technical support to the field team in the process of data collection, uploading & updating web-dashboards etc. - Integrate feedback from primary users and the dashboard. Final development process report on consultancy with recommendations on sustainability of the system and maintenance process instructions.	By end June 2022	20% (June 2022)

All technical services should assume user-based design and must include adequate provision for testing and quality assurance. This will be the full responsibility of the company providing services.

4. Duration

The contract will be valid for a period of 3 months from April to June 2022. The successful company will be expected to be available for potential contracts immediately after the anticipated award date.

5. Responsibilities

The bidder,

- Unless otherwise negotiated on a case-by-case basis, is fully responsible to procure any equipment or software license that is required for fulfilling the specified duties, there will be no provision of equipment or development tools from UNICEF.
- Will organize a regular status update online meeting to monitor and evaluate the

progress agreed deliverables.

- Will provide training and capacity building to UNICEF team and partners on the use of the system, management, troubleshooting, maintenance, and source code administration of web-based dashboards.

UNICEF, upon request, will provide the vendor with access to all the sample datasets that help for the development of web-based dashboard.

6. Qualifications or specialized knowledge/experience required

The institution must have:

- Experience with development and deployment of an application to auto-digitize handwritten records; concrete examples of working products are mandatory to present.
- Proven experience in developing web-based and mobile application and develop interactive dashboards for data visualization and program monitoring
- A team of experts with MSc or above in Computer Science, Engineering, Information Management System or related field with 5 years of experience and qualification in areas of data science and/or statistics degree is desirable.
- At least 5 years institutional experience with development of Information Management Systems.
- Competency in relational database design particularly with PostgreSQL and/or MySQL databases.
- Extensive knowledge and skills of computer programs applications, particularly in development of web-based business intelligence services using open source.
- Desirable experience with some of the following framework and/or programming languages: Python/Django, PHP/Larva etc.
- Solid knowledge of front-end technologies such as JavaScript, HTML5 and CSS3 and proficient experience in using one or more advanced JavaScript libraries and frameworks such as AngularJS, Vue JS, ReactJS, etc.
- Demonstrated experience in developing innovative information technology solutions for developing countries.
- Communicates effectively, both orally and in writing, to varied audiences,
- Able to work effectively in a multicultural environment, sets high standards for quality of work and consistently achieves project goals.

Language

- Fluency in English

7. Proposal evaluation

Technical Evaluation Criteria: 49 points

S.N.	Evaluation criteria	Maximum points
1	Overall response	

	<ul style="list-style-type: none"> - General adherence to Terms of Reference and tender requirements and completeness of responses 	10
2	Company and Key Personnel <ul style="list-style-type: none"> - Sample of previous similar work - Team member(s) meet academic requirements - Company meets minimum required years of experience - Company has previously conducted similar work - Company is properly registered a/o has required certifications, memberships, etc. 	30
3	Proposed methodology and approach <ul style="list-style-type: none"> - Technical quality of the proposal, including previous similar work - Deliverables are addressed as per TOR - Proposed timelines are met 	30
	Maximum mark	70
	Minimum technical score: 70% of 70 points = 49 points	

Submitted proposals will be assessed using the Cumulative Analysis Method. All requests for proposals will be weighed according to the technical (70%) and financial considerations (30%). Financial proposals will be opened only for those applications that attained 49 points or above on the technical part.

Financial Proposal: 30 points

A financial proposal with a breakdown of all costs that are to be charged to UNICEF. This includes the cost of supplies and all other related costs.

The Contract shall be awarded to a bidder obtaining the highest combined technical and financial scores. Proposals not complying with the terms and conditions contained in this ToR, including the provision of all required information, may result in the Proposal being deemed non-responsive and therefore not considered further.

8. Other Clauses

PSEA Language Consistent with the UN Secretary General's Bulletin related to "Special measures for protection from sexual exploitation and sexual abuse" (ST/SGB/2003/13), entities and individuals entering into cooperative agreements with an agency of the United Nations are obligated to "take preventative measures against sexual exploitation or abuse, to investigate allegations thereof, or to take corrective action when sexual exploitation or sexual abuse has occurred."

Failure to do so "shall constitute grounds for termination of any cooperative arrangement with the United Nations." The Contractor is expected to have in place explicit policies related to the prevention of sexual exploitation and abuse of beneficiaries, including commitment to the IASC 6 Core Standards (IASC/2002), and the investigation of such cases. Where the contractor does not have enough capacity for the investigation of such cases, it should request the support of UNICEF. Reasonable suspicion of sexual exploitation or abuse

of beneficiaries may be reported by any individual to UNICEF if the complainant so prefers.

9. Conditions

- The contractor's fee shall be inclusive of all office administrative costs.
- The contractor will work on its own computer(s) and use its own office resources and materials in the execution of this assignment.
- The contractor's fee should be inclusive of all travel costs.
- All Covid_19 related costs should be included in financial proposal.
- Please also see UNICEF's Standard Terms and Conditions attached.

All software services provided under contracts with UNICEF shall also consider the following special terms and conditions that UNICEF commonly upholds its vendors to in projects:

- **Sharing of source codes:** Source code for the development of web-dashboard and mobile applications will be shared with UNICEF and Government Implementing Partners. Documentation, testing and frequent commitment of all code to UNICEF and/or to appropriate online repositories such as GitHub.
- **Data Protection:** The vendor shall ensure provision of Data Protection.
- **Travel:** The vendor should be willing to travel to develop/deploy/test software in the field. Travel costs to be included in the proposal and fully covered by the company.