**ANNEX B**

**Terms of Reference**

**Selecting Company for Strengthening and Modernizing the Electronic Immunization Module (E-IM)**

### Background

According to the joint appraisal report conducted in 2017 by UNICEF and WHO, overall immunization coverage recording and reporting system was well functioning in Georgia, however, there were issues with quality of data for surviving infants due to delays in registration and missing data on new-born at primary health care facilities. This was caused by the lack of analytical function and absence of linkages of the existing Electronic Immunization Module (e-IM) with other electronic modules functioning in the country within the E-Health system, such as the Birth Registry System (BR) and the Vital Registration System. The BR has become operational since January 1, 2016 with UNICEF support and it registers all newborns delivered at the maternities country wide. The system tracks newborns and their mothers up until discharge from the maternities. The Vital Registration System registers the vital events of Georgia’s citizens as demographic event occurs. The lack of analytical functions and data visualization of the module did not give a possibility to the National Immunization Program (NIP) to maximize the benefit that could be derived from this system. Also, the immunization e-module had no capacity for the vaccine and safety injection supply stock management and hence, it was not capable to automate real-time deduction or refilling of stocks.

To improve the situation in 2018, UNICEF with GAVI financial support undertook upgrading the E-IM at national and sub-national levels through strengthening of two sub-modules: immunization registration and stock management. It enabled the e-IM to ensure that no child is missed in the country and that personalized immunization history became readily available for each child. The introduction of vaccine stock management module enabled vaccine forecasting in an automatic regime.

However, as of today, there are still difficulties in the performance of quality data collection and quality data analyses, especially at district and health care provider levels to support decision and policy making, as well as program development. To improve the data collection and analysis process, further work is needed to ensure that health workers provide complete and reliable data.

To address this situation, UNICEF is providing technical assistance to NCDC within the framework of GAVI alliance Post Transition Engagement (PTE) program, funded for sustaining the gains achieved with GAVI support and mitigate potential risks to the sustainability of now self-financed vaccine programs.

Therefore, UNICEF is looking for a company with an expertise in developing/upgrading the electronic management information systems. This Terms of Reference sets out the purpose, objectives and operational modalities for a local IT company to be contracted by UNICEF Georgia to undertake the necessary upgrade of the e-IM to become an immunization performance monitoring tool at various levels.

**OBJECTIVES OF THE ASSIGNMENT**

To support the National Centre for Disease Control and Public Health (NCDC) in enhancing electronic Immunization Module (Frontend as well as backend) by using the latest web technologies/platforms without changing the functionality of the current system, except of certain revisions/additions that are spelled out below, in the scope of work.

Newly upgraded system is expected to ensure high quality of real time data collection and analyses at all levels, including district level.

### SCOPE OF work

The concrete tasks will include:

1. Upgrading immunization Web Application **(Please, see the description of the current web application attached - Annex 1)**, namely:
* Upgrading Module Interface using latest technologies
* Replacing General Vaccination Calendar used in the current system (**Please, see the Annex 1a**) by the personalized one which is tailored to individual needs of a child. Let us explain the task on the example of PCV vaccine administration **(Annex 1a)**:

According to the Vaccination Calendar, PCV is administered at the age of 2, 4 and 12 months. Parents tend to initiate the vaccination with significant delays, e.g. instead of vaccinating child with PCV at the age of 2 months, the parent happens to take child for the 1st vaccination at the age of 5 months. If the system generates immunization remainders as per the General Vaccination Calendar and parents’ adherence to the vaccination schedule is low, the vaccination reminder will not have any use. That’s why we are requesting the development of special algorithms that will underpin the generation of individualized remainders. This task needs to be done in close partnership with the immunization specialist.

1. Upgrading Immunization Mobile Application **(Please, see the description attached - Annex 2)** reflecting Personalized Vaccination Calendar instead of the General one
2. Upgrading Stock Management Module **(Please, see the description of the current module attached - Annex 3)** using latest technologies
3. Developing Data Synchronization Module, namely linking the immunization module with the Primary Health Care Electronic Management Information System operated by the MoLHSA (UNICEF will facilitate the process)
4. Developing Reminder Module, reminding (sending text messages) care-givers on upcoming immunization visits **(Please, see the module description attached - Annex 7)**. This module is currently operational based on the General Immunization Calendar. It is requested to use individual calendar instead of the General one (See, the bullet point#1 above)
5. Upgrading Analytical Module by using the latest web technologies **(Please, see the module description attached – Annex 4)**. It is requested to ensure the best visualization (graphs, charts, bars etc.) of immunization data. The enhanced module should entail new indicators **(Please, see the list of new indicators attached – Annex 5)** and it should make analytical dashboards available not only for the central level managers but for the middle level managers as well (Municipal public health professionals in charge of immunization surveillance in their respective municipalities)
6. Developing and/or updating the system related documentation, such as user’s manual and module guidelines

### DELIVERABLES and timelines

The selected company will be responsible to accomplish the following tasks in close collaboration with UNICEF health section:

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| **#** | **Deliverables** | **Deadlines**  |
|  | Immunization Web Application update | 30 June 2020 |
|  | Immunization Mobile Application Update | 30 June 2020 |
|  | Stock Management Module | 30 June 2020 |
|  | System user management update | 30 June 2020 |
|  | Analytical Module Replacement | 30 June 2020 |
|  | Reminder Module Development | 17 September 2020 |
|  | Data Synchronization Module development | 30 November 2020 |
|  | Preparation of Updated Documentations | 30 November 2020 |

**ELIGIBILTY CRITERIA**

* Intensive experience in software development in Georgia
* Sound knowledge of the Georgian health system regulations and business processes to be able to provide a technical assessment of system requirements, as well as an expert opinion/consulting to stakeholders on data input requirements, potential regulatory changes, development of software specifications etc.
* Knowledge of basic indicators in the field of Maternal and Child Health and good understanding of the problems related to the quality of reporting related data including immunization data
* Demonstrated knowledge of Georgia’s E-Health modules
* Proven record of similar (electronic health information management system) products
* Fluency in English and excellent writing skills of staff assigned to the contract.

**SUPERVISION AND ORGANIZATION**

The company will work under the direct supervision of UNICEF’s Health Education Officer and under the general guidance of Health and Nutrition Specialist. The company will work closely with the National Centre for Disease Control and Public Health (NCDC) to ensure the final product meets NCDC expectations.

 **HOW TO APPLY**

Proposer must provide:

* A cover letter
* A technical proposal (max. two pages)
* A financial proposal.

Technical Proposal with the cover letter and the corresponding Price Proposal should be submitted in separate closed envelopes with the reference to this Request for Proposal number. For details, please refer to the INSTRUCTIONS TO PROPOSERS.

The technical proposal should include, but not be limited to the following:

* **Narrative description** of the applicant’s experience and capacity
* **Relevant references**. UNICEF may contact reference persons for feedback on services provided by the company
* **Links to samples** of previous relevant work listed as reference of the applicant (at least three), on which the proposed key personnel directly and actively contributed or authored
* **Detailed timetable** by activity (it must be consistent with the general work plan and the financial proposal)
* **Description of the technologies to be used** in the process of up-grading e-IM.

**SUBMISSION OF APPLICATIONS:** For details, please refer to the INSTRUCTIONS TO PROPOSERS.

 **EVALUATION OF PROPOSALS**

Technical Criteria - max: 60%; Financial Criteria – max: 40%

**PAYMENT SCHEDULE**

The remuneration for the contract will be negotiated between applicants and UNICEF Georgia based on an initial proposal of the applicant. Payment will be carried out upon submission and approval of agreed quality deliverables.