

UNICEF-Turkey
TERMS of REFERENCE (ToR)

National Institutional Service Provision

Developing Data Warehouse and Business Intelligence Reporting and Analysis System
on the Integrated Social Assistance System (ISAIS) of the Ministry of Family, Labour and Social
Services (MoFLSS)

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| Developing Data Warehouse and Business Intelligence Reporting and Analysis System on the Integrated Social Assistance Information System (ISAIS) of the Ministry of Family, Labour and Social Services (MoFLSS) | (Ref: SP/TURA/2020-A) |
| <p>Links with the Country Programme Priorities:</p> <p>Country Programme Outcome 1 - Equity increased through social inclusion and resilience building By 2020, the education, child and social protection and health systems, NGOs, communities and families provide vulnerable children with increasingly inclusive opportunities to realize their rights to protection, education, development and participation</p> <p>Output: By 2020, families, local authorities and the social protection system (including governmental and non-governmental actors) have increased capacity to support vulnerable children in accessing the means to fulfil their rights</p> <p>Activity: Extension of the Conditional Cash Transfer for Education (CCTE) Program to Syrians and Other Refugees</p> | |

I. BACKGROUND AND RATIONALE

Turkey is home to the largest number of refugees in the world. There are 3.7 million Syrians under temporary protection and near 400,000 persons from other nationalities under international protection in Turkey. 1.7 million of refugee population are children. UNICEF Turkey Country Office supports the Government of Turkey through several programmes and partnerships in the areas of social protection, child protection and education.

The Government of Turkey has extended the national Conditional Cash Transfers for Education (CCTE) Programme to refugee families in Turkey. This extension (CCTE for Refugees) has been implemented since 2017 through a partnership between the Ministry of Family, Labour and Social Services (MoFLSS), the Ministry of National Education (MoNE), the Turkish Red Crescent Society (TRC) and UNICEF.

The CCTE for Refugees has two components. First, a cash component, under which a cash transfer is provided to families with at least one child attending school. This component is implemented across the country. Transfer values are set per child and vary by school level and gender, the amount being higher for girls than boys and for secondary school students than primary school students. Second, the CCTE for refugees has a child protection component, aiming at referring vulnerable children who stop attending school to a range of child protection services. This component is currently implemented in 15 provinces with highest number of refugees.

The operational backbone of the CCTE Programme is the Integrated Social Assistance Information System (ISAIS). ISAIS is an information management system originally developed by the MoFLSS and Scientific/Technological Research Council of Turkey (TUBITAK). It is currently used by the Ministry and more than 1000 Social Assistance and Solidarity Foundations for implementing assistance programmes. It covers a range of processes from the point of applying to social assistance to the generation of assistance payment lists and payments to the beneficiaries. ISAIS is a complex digital

system for service-delivery, service-monitoring, analysis and reporting. ISAIS can make real-time inquiries and process data from 20 governmental databases. It is the biggest software platform in Turkey for provision of social assistance and is still being modified by the MoFLSS in line with emerging needs and new programs.

The CCTE is a data-intensive operation. Its extension to refugees - now reaching over 560,000 children- has significantly increased the workload of the ISAIS, which has slowed its operational capacity. To increase the capacity of the ISAIS, a modification of its database and installation of a new software are required.

II. PURPOSE OF THE SERVICE PROVISION

The purpose of the service is to strengthen the capacity of MoFLSS's information management system, ISAIS, which is used as the main architecture for all social assistance programmes. This includes a range of modifications on ISAIS, such as increasing daily operational capacity, restructuring certain aspects of database, and generating complex and ad-hoc analyses (such as time-based and what-if analyses). For this purpose, a Data Warehouse and Business Intelligence Reporting and Analysis System needs to be developed through information management solutions. The solution could be an off-the-shelf commercial product, or an open-source product without license restrictions. It is important to enable full compatibility with the current structure of the information management system, capable of working seamlessly with current operations and in line with the specifications defined in this document.

III. SCOPE OF WORK

Two key activities will be undertaken: (1) A data warehouse will be established in the ISAIS database and the old data will be moved to the data warehouse. This will increase the daily operational capacity of the system. (2) A reporting and analysis software (Business Intelligence) will be prepared and integrated into the ISAIS. This will allow to generate complex analyses, predictive scenarios, what-if and time-based queries, along with dash-board type graphical support.

The service provider shall deliver the following overall services/deliverables and realize sub-tasks with the specified principles and specifications as described below (please note that "CONTRACTOR" refers to the selected service provider, "ADMINISTRATOR" and "ADMINISTRATION" refer to the IT Staff and experts appointed by General Directorate of Social Assistances under the MoFLSS:

1 DEVELOPING INTEGRATED SOCIAL ASSISTANCE INFORMATION SYSTEM (ISAIS) DATA WAREHOUSE

1.1 Services/Deliverables:

- 1.1.1** The CONTRACTOR shall develop or provide the relevant information management solution as described below by using a commercial or open source software/product relevant for the purpose.
- 1.1.2** If a solution with commercial products is provided, all the necessary license fees for 25 users, for a period of 2 years, without any hardware restrictions should be paid by the CONTRACTOR.
- 1.1.3** The CONTRACTOR shall also provide a 2-year maintenance service for the proposed information management solution (either commercial, or open source) without any extra

charge which starts after the delivery date of the product and the finalization of contract period (please refer to the Section IV for the details of cost and services).

- 1.1.4** A data warehouse system shall be developed under the supervision and consultation of the ADMINISTRATOR to be able to make decisions via comprehensive data analysis and meet the business specialist's operational reporting needs in a timely and effective manner, by the decision of the ADMINISTRATOR with the following specifications and principles;

- 1.1.4.1 The data warehouse system shall be designed and configured to use the data in the ISAIS system as the source.
- 1.1.4.2 The CONTRACTOR shall develop ETL (Extract, Transform, Load) processes that are necessary for the data changes that would occur on the source system to be moved to the data warehouse system;
- 1.1.4.3 The CONTRACTOR shall provide the data transfer software or all other required tools that would be used as data transfer tool;
- 1.1.4.4 The data transfer period shall be daily basis.

- 1.1.5** Household/individual poverty indicators, household/individual assistance indicators, household/individual delivery indicators, household/individual central investigation indicators, household/individual household investigation form indicators, Social Assistance and Solidarity Foundation (SASF) performance indicators, SASF risk indicators and all other necessary indicators should be detected in the analysis and recorded in the data warehouse in a time-based manner with the following specifications and principles;

- 1.1.5.1 By using the indicators defined in the previous article, access to a snapshot of a household's situation at a certain time in past should be provided.
- 1.1.5.2 In case of need for other indicators for further analysis within this process, other required data/indicators should also be recorded in data-warehouse.

1.2 General principles:

- 1.2.1** Data warehouse system shall be developed as per the ADMINISTRATOR's institutional data security and confidentiality policies.
- 1.2.2** The CONTRACTOR shall be responsible for working with the designated staff of MoFLSS to complete the tasks in line with the timeline stipulated in Section V of the ToR.
- 1.2.3** The CONTRACTOR shall be responsible for installation, configuration, documentation and maintenance of the all software and any developed data management solutions with the specifications, timelines and durations stipulated in this ToR.

1.3 Training and maintenance for Data Warehouse system:

- 1.3.1** The CONTRACTOR shall be responsible for providing classroom trainings within the scope of time intervals given in this document, and with the following specifications and principles;
- 1.3.1.1 Two classroom trainings for the users shall be organized (maximum 15 attendees per session, 30 attendees in total).
- 1.3.1.2 Two classroom trainings for the system administrators shall be organized (maximum 8

attendees for each two day session, 16 attendees in total).

- 1.3.2** The CONTRACTOR shall be responsible for providing maintenance and service support for 2 years with no additional cost within the overall service of provision starting upon delivery of the product and the finalization of the contract period (please see Section IV for more information on the cost of services) with the following specifications and principles:

- 1.3.2.1 The CONTRACTOR shall be responsible for taking relevant actions within 12 hours after a service call is initiated either by remote connection or phone call. The CONTRACTOR must be in agreement with MoFLSS on the type of service channel (email, phone call or via app etc.) to be used for these services.
- 1.3.2.2 The CONTRACTOR shall be responsible for addressing any problem raised by a service call with an operational solution within 48 hours.

2 CREATING BUSINESS INTELLIGENCE REPORTING AND ANALYSIS SYSTEM

2.1 Services/Deliverables:

- 2.1.1** A dashboard shall be developed and integrated to the Business Intelligence System as per the following specifications and principles:

- 2.1.1.1 The dashboard integrated to the Business Intelligence System shall have sub-reports.
- 2.1.1.2 Different dashboards may be created for different users.
- 2.1.1.3 Multiple dashboards shall be available for users.
- 2.1.1.4 The CONTRACTOR shall provide commonly used visualization tools such as line, stacked column, cluster, bar, pie, tornado, heatmap and map charts in dashboards.
- 2.1.1.5 User should be able to filter dashboard reports by selecting fields on visualization tools in dashboards. Details of the filtering functionality of the visualization tools will be determined in the analysis phase.
- 2.1.1.6 The Map View of Business Intelligence System shall support Geographical Information System (GIS) Intersection and Buffer Analysis if the data is appropriate. The ADMINISTRATOR should not need to buy additional software products, and the CONTRACTOR shall provide City, District, Neighborhood current polygon map layers of Turkey without any charge incurred to ADMINISTRATOR.
- 2.1.1.7 The map view should support displaying and hiding layer information, zoom in and zoom out functionality from the user interface. The map view should provide heat map, point view, section coloring features. Other such specifications will be discussed and articulated in the inception phase.
- 2.1.1.8 The dashboards shall be designed compatible with mobile and tablet devices. The CONTRACTOR is not responsible developing any mobile application but is responsible for making all the dashboards displayable/compatible on the available mobile web interfaces (Responsive).

- 2.1.2** The CONTRACTOR shall provide a Reporting System that can generate ready-made reports (in such formats as word, excel, pdf etc) available to users according to following specifications and principles:

- 2.1.2.1 The CONTRACTOR shall analyze ADMINISTRATOR needs to generate ready-made reports in development period.
- 2.1.2.2 There may be up to 25 ready-made reports.
- 2.1.2.3 These reports shall have some basic filtering options according to ADMINISTRATOR's needs.
- 2.1.3 The CONTRACTOR shall provide a custom reports interface as per the following specifications and principles:
 - 2.1.3.1 Users should be able to customize reports by choosing data indicators.
 - 2.1.3.2 Users should be able to group parameters.
- 2.1.4 The CONTRACTOR shall provide the relevant tool to export reports in PDF and Excel formats.
- 2.1.5 The CONTRACTOR shall provide the relevant tool to generate some reports from the real-time ISAIS database in case the ADMINISTRATOR requests within the development period.
- 2.1.6 The Business Intelligence Systems should be capable of accurately executing and displaying any reports developed under this tool within 60 seconds.
- 2.1.7 The business Intelligence System shall have cross browser compatibility.
- 2.1.8 The users should be able to make what-if and time-based analyses in case there is a need.
- 2.2 **General principles:**
 - 2.2.1 The Business Intelligence System shall be developed as per the ADMINISTRATOR's data security and confidentiality policies.
 - 2.2.2 The Business Intelligence System shall keep logs of all the generated and running reports base on the information (Users, Criteria, SQL etc.).
 - 2.2.3 The Business Intelligence system should be integrated with the Identity Management System in place,
 - 2.2.4 The CONTRACTOR shall be responsible for working with the designated staff of MoFLSS to complete the tasks as per the ToR.
 - 2.2.5 The CONTRACTOR shall be responsible for installation, configuration, documentation and maintenance of the all software and any developed data management solutions with the specifications, timeline and duration services/deliverables as stipulated in this ToR.
- 2.3 **Training and Maintenance for Business Intelligence Reporting and Analysis System:**
 - 2.3.1 The CONTRACTOR shall be responsible for providing classroom trainings within the scope of time intervals given in this document, and with the following specifications and principles:
 - 2.3.1.1 Two classroom trainings for the users shall be organized (maximum 15 attendees for each, 30 attendees in total).
 - 2.3.1.2 Two classroom trainings for the administrators shall be organized (maximum 8 attendees for each for two days, 16 attendees in total).
 - 2.3.2 The CONTRACTOR shall be responsible for providing maintenance and service support for 2

years with no additional cost within the overall service of provision starting upon delivery of the product and the finalization of the contract period (please see Section IV for more information on the cost of services) with the following specifications and principles:

- 2.3.2.1 The CONTRACTOR shall be responsible for taking relevant actions within 12 hours after a service call is initiated either by remote connection or phone call. The CONTRACTOR must agree with MoFLSS on the type of service channel (email, phone call or via app etc.).
- 2.3.2.2 The CONTRACTOR shall be responsible of addressing any problem raised by a service call with an operational solution within 48 hours.

IV. DURATION, COST and PAYMENT

Applicants shall submit their price quotations in TRY (excluding VAT). At the end of the selection process, UNICEF will sign an agreement with the selected service provider.

The company will work under the supervision of IT staff and experts appointed by General Directorate of Social Assistance of the MoFLSS, and in consultation with UNICEF Information and Communications Technology Officer and Social Policy Officer in accordance with the standards, norms and procedures of UNICEF.

- **Duration:** At the end of the competitive selection process, UNICEF will sign an agreement with the selected service provider for a period of 6 months in line with the timeline stipulated in Section V.
- **Cost of services:** The selected service provider shall provide a detailed financial proposal based on the scope of the work defined in this document. The maintenance services mentioned in this document shall be provided with the specifications and principles stipulated in section III for a duration of 24 months starting from the delivery of the product and finalization of the contract period as a part of the overall service of provision without any additional cost.

An undertaking letter shall be signed by the selected service provider as a guarantee of providing the maintenance services in a timely and appropriate manner, and the services provided over the course of 24 months shall be reported to UNICEF on mutually agreed intervals. The services provided will be reported to MoFLSS by the contractor, MoFLSS will send this to UNICEF through a formal letter after having reviewed and endorsed the report.

- **Payment:** Payments will be made upon task finalization and when the formal approval letter on the finalization of tasks/deliverables signed by MoFLSS is received by UNICEF. The selected contractor will send all the relevant documents/reports for each deliverable to MoFLSS; MoFLSS will review them and send a formal approval letter to UNICEF for each deliverable along with all the documentation and the brief progression report in a timely manner. UNICEF, in coordination with MoFLSS, reserves the right to ask the selected contractor for additional documentation on the tasks and deliverables, revisions on the documents or demonstration of the services/software as a proof of finalization of the tasks/deliverables if the provided services/documents are found inadequate or unaligned with the ToR. UNICEF will also monitor all the deliverables through participating in meetings, reviewing produced services and documents. The contractor, in coordination with MoFLSS, should liaise with UNICEF for the meetings and all deliverables.

- **Copyright of the developed product:** The copyright of all developed products (software, services or information management solutions) will be shared between UNICEF and MoFLSS. The Contractor shall not use the developed products for any other purposes than those articulated in this TOR and/or without the written permission of UNICEF. The license of any commercial products for the information management solution (specified in 1.1.3) will belong to MoFLSS with the duration and specifications stipulated in this ToR.
- **Data & information:** The selected service provider shall guarantee that any developed software, service or information management solutions, information and data will not be used for other purposes and also guarantee a high level of information confidentiality, data security and conformity as per the MoFLSS's data security and confidentiality policies.

V. SCHEDULE OF TASKS and DELIVERABLES

The design, configuration, test, installation and training phases will cover a **6-month period (March 2020–September/October 2020)** and payments will be affected upon finalization of the tasks along with submission of deliverables as spelled out in the tentative work-plan (payments are only made as per the formal approval by MoFLSS, as stated below).

| TASKS | | DELIVERABLES | TIME FRAME | PAYMENT SCHEDULE |
|--|--|---|--|--|
| 1- DESIGN PHASE | | | | |
| 1.1 | Briefing with the team, joint review of the TOR, services, specifications and timeframe | - Document/SOP for the design phase along with the detailed explanations on the service, specifications, maintenance plan and the detailed workplan for the development, installation, maintenance and training sessions (in English and Turkish) | End of March 2020 - April/May 2020 | 20% As per the formal approval letter by MoFLSS (please see section IV for more details on payments) |
| 1.2 | Exploratory analysis and need assessment of the ISAIS database and modules within the scope of the requested services/software | | | |
| 1.3 | Designing of the services/software | | | |
| 1.4 | Documentation of the design phase with the detailed specifications and timeframe | | | |
| 2- INSTALLATION, CONFIGURATION AND TEST/VERIFICATION PHASE | | | | |
| 2.1 | Development and installation of all the software/services | - Activating test version, | April/May 2020 - End of September 2020 | 70% As per the formal approval letter by MoFLSS (please see section IV for more details on payments) |
| 2.2 | Activating a test version for all the services and software | - Modification and refinement of the test version | | |
| 2.3 | Briefing with the team, joint review of the test version | - Activating the final version | | |
| 2.4 | Modification/refinement of the test version as per the requested changes | - Document/SOP for the installation, configuration and test/verification phases | | |
| 2.5 | A joint meeting for the demonstration of all refined | | | |

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| | services and software through real data | along with all documentation, specifications and planning for the 24-month maintenance service (in English and Turkish) | | |
| 2.6 | Designing and planning for the maintenance of all services and software with the specifications and principles stipulated in section 3 and 4 for a duration of 24 months | | | |
| 2.7 | Documentation of the installation, configuration and test/verification phase | | | |
| 3- TRAINING PHASE | | | | |
| 3.1 | Providing all relevant trainings | - Documentation on the trainings provided | End of September or Early October 2020 <i>(Depending on availability of MoFLSS staff for training sessions)</i> | 10% As per the formal approval letter by MoFLSS <i>(please see section IV for more details on payments)</i> |

VI. EXPERTISE, TEAM STRUCTURE AND QUALIFICATIONS

The company should have at least 5 years of proven experience in the relevant field of work. The company should have a proven experience on configuration of data warehouse, developing business intelligence and reporting/analyses systems and a good understanding to deliver the services in deadlines. Prior experience with governmental institutions with at least 3 nationwide IT governmental projects, along with certificates of work completion as proof documents, is an additional asset. The service will be provided by a team of experts with the following team structure (a team with maximum of 8 members, which the distribution of members will be determined as per the structure stipulated below):

Project Manager, who will be responsible for the overall delivery of the service. S/he will have primary responsibility for leading the team, designing the methodology, workplan as well as documentation in line with this ToR. This person should have a degree on programming, computer science, information technologies or relevant fields with a minimum of 10 years' experience of working in the field of information management. Having prior experience of data warehouse and business intelligence, preferably for the government, is an asset.

Software Developer, who will be responsible for developing and directing software components of the proposed solution. This person should have a bachelor's degree in computer science, computer engineering, or another related field with proven work experience as a software developer. This person must have hands on full stack experience using relevant languages.

System Architect and Database Specialist, who will be responsible for designing the overall architecture of the system, helping define nonfunctional requirements, determining the major elements, subsystem and interfaces, collecting, storing, processing, and analyzing of huge sets of data. This person should have a bachelor's degree in computer science, computer engineering, or another related field with a minimum 10 years' experience of working in the field of information management. This person must have hands on experience of creating and managing big data infrastructure using relevant tools and frameworks.

VII. REMARKS AND RESERVATIONS

UNICEF reserves the right to terminate the contract with a one-month notice/or withholding all or a portion of payment if the rules and the regulations regarding confidentiality, ethics and procedures of UNICEF and the partners are not followed, the performance is unsatisfactory, or work/deliverables are incomplete, not delivered or fail to meet the deadlines.

The service provider must respect the confidentiality of the data handled during the provision of the service. Documents and information provided must be used only for the tasks related to these terms of reference under the supervision of UNICEF and MoFLSS. The contractor should sign an agreement of non-disclosure to maintain the confidentiality of data handled.

VIII. APPLICATION PROCESS

Bidders are expected to submit to UNICEF the following documents:

1. **Technical proposal**, including:
 - 1a. Methodology of the study with rationale
 - 1b. Annotated sample analytical work
 - 1c. Detailed workplan
 - 1d. Demo visualization analysis work;
 - Should be generated from the sample reports provided at this ToR's Annex.
 - Should reflect the proposed work in a simple and easy way,
 - Should be easily accessible and self-explanatory format,
 - Can be shared via weblink, in a flash disk or CD,
 - If needed, a presentation should be provided by the bidders.
2. **Financial proposal** as per the attached template,
3. **CVs of all team members** as stated in Expertise, Team Structure and Qualifications section.
4. **A table which clearly indicates the number of days each team member will dedicate to each task/deliverable** (This table and CVs can be part of the technical proposal).
5. **Technical and financial proposals should be submitted, in separate folders by 5pm Turkey time on the indicated deadline date.**

A pre-bid meeting will be held while the bidding process is open. A second meeting may also be held when needed. Interested bidders are advised to check UNICEF website regularly for updates on the tender process.

If needed, a presentation session for the demo visualization work may be asked during the bid evaluation process from bidders who send their offers.

The technical evaluation will be completed based on the attached evaluation criteria form. After the technical evaluation, the financial proposals of qualified candidates will be evaluated.

IX. CRITERIA FOR JUDGING THE PROPOSALS

The proposals will be first technically evaluated and then the price proposals of the technically qualified offers will be assessed. The technical evaluation of the submitted offers will be conducted in five main categories as per the technical evaluation criteria shown in the table below.

| Item | Technical Evaluation Criteria | Max. Points Obtainable |
|-------------|---|-------------------------------|
| 1 | Understanding of the TOR | 4 |
| 1.1. | Presence of methodology | 1 |
| 1.2. | Presence of workplan | 1 |
| 1.3. | Presence of sample analytical work | 1 |
| 1.4. | Overall presentation | 1 |
| 2 | Quality/Appropriateness of Proposal | 24 |
| 2.1. | Appropriateness of proposed methodology | 7 |
| 2.2. | Appropriateness of time allocation to tasks and workplan. | 7 |
| 2.3. | Quality & relevance of submitted sample of analytical work | 10 |
| 3 | Demo Visualization Analysis Work | 12 |
| 3.1. | Quality & relevance of demo with the proposed work and ToR | 3 |
| 3.2. | Ease of use and the architecture of the demo | 3 |
| 3.3. | Ease of maintenance | 3 |
| 3.4. | Openness for adaptation | 3 |
| 4. | Previous Work Experience | 20 |
| 4.1. | Work experience in the field of relevant service provision for Government | 6 |
| 4.2. | Work experience in development of data warehouse | 7 |
| 4.3. | Work experience in designing and configuring Business Intelligence and Reporting and Analysis Systems | 7 |
| 5. | Quality of the Proposed Team (Professional experience of the team) | 10 |
| | Project Manager | 4 |
| | Software Developer | 3 |
| | System Architect and Database Specialist | 3 |
| | TOTAL TECHNICAL SCORES | 70 |