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TERMS OF REFERENCE

Job title:	National IT Expert on Semantic Catalogue
Duty station:	Chisinau, Republic of Moldova
References to the projects:	Enhancing democracy in Moldova through inclusive and transparent elections
Contract type:	Individual Contract (IC)
Expected workload:	210 working days during October 2017 – December 2018
Indicative starting date:	09 October 2017

1. Background:

“Enhancing democracy in Moldova through inclusive and transparent elections” (EDMITE Project) is a newly approved project that sets the overall goal to achieve an enhanced transparency and inclusiveness of the electoral process in Moldova through a modernized IT system, improved legislation and intensified public participation, addressing the root causes of the current challenges hampering the further development of the democracy and the advancement of the electoral process in the Republic of Moldova.

The Project aims to contribute to: (1) achieving a more accurate State Register of Voters (SRV), improving the quality and accessibility data by re-engineering the Civil Status Service (CSS) systems, fully developing the State Address Register and facilitating data exchange and interoperability between different central public institutions via governmental platform for data exchange MConnect; (2) enhancing the inclusiveness of the electoral process through developing a remote voting tool and adjusting the State Automated Information System “Elections” (SAISE) to keep up with the technical and political developments; (3) legal reform in the area of elections to erase ambiguities and respond to the technical developments; and (4) enhancing political participation of citizens by setting up and implementing the voter information and civic education programmes.

Except for the CEC which is the main Beneficiary of the Project, EDMITE will continue to expand the previously partnering set-up with other central public institutions, like the Agency for Public Services (Cadastre Department, Population Registration and Documentation Department), the Electronic Government Center. These are different state actors that center the population registration process and are responsible for important data sets necessary for fair and credible Elections. Specific interventions are aimed to improve their systems and processes in order to enable them to supply the required data in a reliable quality and a required time frame, thus achieving an inclusive and transparent electoral process.

In the past years, the Electronic Government Center (EGC) made significant progress in modernizing governance using ICT, establishing a robust world-class core ICT infrastructure for electronic services,

including MCloud reliable hosting facility, MConnect innovative interoperability and data exchange Platform, MSign digital signature, MPay electronic payments system, etc.

The new draft legal and regulatory framework on data exchange and interoperability, currently in the process of approval, is one of the major activities that positively marks the collaboration between UNDP and EGC. The establishment of a Semantic Catalogue is one of the most important provisions of the new draft Law. The Semantic Catalogue is going to be an Information System, operational for a free of charge, accurate and coherent use of the data exchange and interoperability Government Platform MConnect. The Semantic Catalogue will describe the definitions of data structures and will represent a source of semantic assets to be used exclusively for electronic data exchange and for the harmonization of electronic data format for future adjustments or development of information systems in the public area.

The Semantic Catalogue will be part of the MConnect data exchange and interoperability government platform administered by the EGC. The data structures, elements and definitions included in the Semantic Catalogue will be linked to a semantic inventory, officially called Semantic Assets, which will be applied and shared by all the producers or consumers of data via MConnect.

2. Objectives:

The project intends to contract a National Expert (hereafter the Consultant) to develop the Semantic Catalogue (IT System) and establish the inventory of the Semantic Assets for electronic data exchange and interoperability platform. The Consultant will provide support to the EGC and the UNDP Project as it follows:

- a) Technical expertise in developing the IT System - Semantic Catalogue, in accordance with the existent ToR for this system;
- b) Technical expertise in defining the metadata for Semantic Assets;
- c) Technical expertise in determining the Semantic Assets for the government entities that supply data for electoral processes (as per the list indicated below);
- d) Technical expertise in identifying the validation rules for the Semantic Assets;
- e) Technical advice for the Semantic Catalogue adaptability and accessibility for the needs of the persons with different types of disabilities, linguistic minorities (where relevant), other targeted and vulnerable groups.

The Consultant will have the following responsibilities:

- Support the development of the IT System Semantic Catalogue;
- Define the metadata for semantic assets;
- Define the Semantic Assets for the government entities that supply data for electoral processes: Agency for Public Services/ Department of Cadaster, Department of Population Registration and Documentation, Ministry of Justice, Ministry of Internal Affairs, Ministry of Defence, Ministry of Health and Social Affairs, Ministry of Education, Culture and Research);
- Establish the validation rules for the Semantic Assets;
- Assist the EGC and the UNDP Project to ensure that the Semantic Catalogue is adaptable to the use of the persons with different types of disabilities, linguistic minorities, targeted and vulnerable groups of people, in accordance with the current existent regulations, and where possible, respond to the WAI (Web Accessibility Initiative) recommendations (<http://www.w3c.org/WAI>).

3. Key deliverables and tentative timetable:

Nr.	Key deliverables	Tentative Timeline /Working days
1.	Inception Report, comprising a desk review and describing in detail the activities to be fulfilled and their timeline, coordinated with and approved by the EGC and the UNDP Project;	2 WDs, by October 2017
2.	Metadata for Semantic Assets defined, coordinated with and approved by the EGC and the UNDP Project;	12 WDs, by November 2017
3.	Validation rules for the Semantic Assets established, coordinated with and approved by the EGC and the UNDP Project;	12 WDs, by January 2018
4.	Semantic Assets for the Agency for Public Services/ Department of Cadaster defined, coordinated with and approved by the EGC and the UNDP Project;	10 WDs, by February 2018
5.	Semantic Assets for the Agency for Public Services/ Department of Population Registration and Documentation defined, coordinated with and approved by the EGC and the UNDP Project;	10 WDs, by March 2018
6.	Semantic Assets for the Ministry of Justice defined, coordinated with and approved by the EGC and the UNDP Project;	10 WDs, by April 2018
7.	Semantic Assets for the Ministry of Defence defined, coordinated with and approved by the EGC and the UNDP Project;	10 WDs, by May 2018
8.	Initial version of the IT System Semantic Catalogue developed, coordinated with and approved by the EGC and the UNDP Project;	75 WD, by June 2018
9.	Semantic Assets for the Ministry of Internal Affairs defined, coordinated with and approved by the EGC and the UNDP Project;	10 WDs, by July 2018
10.	Semantic Assets for the Ministry of Health and Social Affairs defined, coordinated with and approved by the EGC and the UNDP Project;	10 WDs, by September 2018
11.	Semantic Assets for the Ministry of Education, Culture and Research defined, coordinated with and approved by the EGC and the UNDP Project;	10 WDs, by October 2018
12.	Semantic Catalogue is adaptable to the use of the persons with different types of disabilities, linguistic minorities, targeted and vulnerable groups of people, in accordance with the current existent regulations, and where possible, respond to the WAI (Web Accessibility Initiative) recommendations (http://www.w3c.org/WAI);	2 WDs, by November 2018
13.	Final version of the IT System Semantic Catalogue developed, coordinated with and approved by the EGC and the UNDP Project;	35 WDs, by November 2018
14.	Final Report on services provided containing key findings and further recommendations submitted, discussed with and approved by the EGC and the UNDP Project.	2 WDs, by December 2018

Note: Deliverables and the final timeline can be amended or specified for the purpose of the assignment.

4. Administrative arrangements

The timeframe for the work of the Consultant is planned for the period October 2017 – December 2018. During this time the consultant is expected to work a total of 210 working days (average of 14 working days per month).

For substantive aspects, the assignment shall be performed in close cooperation and coordination with the EGC specialists and under the direct supervision of the EGC Chief Information Officer, and the UNDP Project.

The EGC will provide the Consultant the necessary information and materials for the fulfilment of the envisaged tasks. UNDP Project will provide administrative and logistical support in the organisation of the necessary meetings and/or consultations.

For administrative aspects, the assignment will be coordinated with the UNDP Senior Project Officer. Payments will be done in multiple tranches upon total completion of the deliverable/s (where possible) and the submission of Timesheets including Deliverable Progress Charts approved by the EGC and certified by the UNDP Project.

5. Qualifications and Skills required

Academic Qualifications:

- BA degree in ICT, data analysis. MA would be a strong advantage.

Experience:

- At least three (3) years of developing web applications, using .NET technologies;
- At least three (3) years of working experience dealing with domain modeling and data structure definitions;
- At least two (2) years of working experience in XML/JSON and related technologies, especially XSD/JSONSchema and good data validation rule practices;
- Experience in working with Unified Modeling Language (the applicant should describe in detail this experience in his/her CV);
- Experience in electronic data exchange and interoperability (the applicant should describe in detail this experience in his/her CV);
- Proven experience of working with central public administration institutions of the Republic of Moldova is an asset.

Competencies:

- Familiarity with the Government Interoperability Framework Program (Government Decisions No. No. 404 and No. 656);
- Familiarity with semantic-related technologies and standards, such as ISO/IEC 11179, NIEM, RDF, OWL or others;
- Knowledge about the Semantic Catalogue for data exchange and interoperability;
- Knowledge of the EU Interoperability Framework for Pan-European Services;
- Understanding of the web/-software accessibility issues and ways to insure web/-software accessibility for persons with different type of disabilities, linguistic minorities, vulnerable and targeted groups;
- Knowledge of English, Romanian and Russian languages for the purposes of the assignment;
- Knowledge of one or more additional languages relevant for Moldova, including Bulgarian, Gagauzian, Romani, Ukrainian or sign language is an asset.

Personal qualities:

- Proven commitment to the core values of the United Nations, in particular, respecting differences of culture, gender, religion, ethnicity, nationality, language, age, HIV status, disability, and sexual orientation, or other status;

- Responsibility, creativity, flexibility and punctuality, ability to meet deadlines and prioritize multiple tasks.

The UNDP Moldova is committed to workforce diversity. Women and men, persons with different types of disabilities, LGBT, Roma and other ethnic, linguistic or religious minorities, persons living with HIV, as well as refugees and other non-citizens legally entitled to work in the Republic of Moldova, are particularly encouraged to apply.

6. Documents to be included when submitting the proposals:

Interested individual consultants must submit the following documents/ information to demonstrate their qualifications:

- Proposal: explaining why they are the most suitable for the work including previous experience in similar Projects (please provide brief information on each of the above qualifications, item by item);
- Financial proposal (in USD, specifying a total requested amount per working day, including all related costs, e.g. fees, phone calls etc.);
- Duly completed and signed Personal History Form (P11), personal CV and at least 3 references.

Note: Please, refer to the Individual Procurement Notice of this recruitment for a more detailed information on the application and selection process.