

Terms of Reference

UNDP/GEF Project: Moldova Sustainable Green Cities – Catalysing investment in sustainable green cities in the Republic of Moldova using a holistic integrated urban planning approach

Digitizing the General Urban Development Plan of Chisinau municipality (2007) in order to update the integrated territory management platform

Duty station:	Chisinau, Moldova
Contract type:	Contract for professional services

I. PROJECT BACKGROUND INFORMATION

The [objective of the project](#) is to catalyse investments in low carbon green urban development based on integrated urban planning approach, by encouraging innovation, participatory planning and partnerships between a variety of public and private sector entities.

The strategy of the project is to create, launch and support a new institutional mechanism called “Green City Lab” (GCL) as a vehicle for encouraging and supporting new innovative measures and approaches in addressing the urban development challenges and barriers. Green City Lab has to become the leading knowledge management and networking platform, clearing house, an facilitator of financing various green urban development projects, and a source of innovations and expertise to catalyse sustainable low carbon green city development in Moldova with a mission to transform Chisinau and other cities/towns in Moldova into modern green and smart European cities with improved quality of life for their citizens, while also demonstrating opportunities for sustainable economic growth.

The current General Urban Development Plan (GUDP) was developed in 2007, but its implementation was done with big deviations and caused a series of problems for the city development.

In accordance with the national legislation, the Chisinau Municipality General Urban Development Plan must be developed in 2 stages:

- a) Development of the basic studies, researches and GUP concept
- b) General Urban Development Plan

Development of the basic studies, researches and GUDP concept serves as a mandatory step for the GUDP of Chisinau.

Development of the basic studies, researches stage should be based on the provisions of the old GUP, should reflect the current situation analysis (including also provisions of the architectural permissive documents issued from 2007), and also according to the NCM B.01.02:2016.

The objective of this assignment is to provide support to the beneficiary - Chisinau Municipality (in particular General Directorate for Architecture, Urbanism, land relations) in preparation for development of the Chisinau Development Concept and Strategy (with financial support of the "RosKongress Foundation" and „Academy of Real Estate", Russian Federation) and new General Urban Development Plan (GUDP) of Chisinau (with financial support of the "Asociatia Centrul de Cercetare pentru Dezvoltare Durabila", Romania) based on the integrated approach for urban development. The assignment is based on the continuous support from UNDP related to urban planning. In this regard the UNDP developed guidelines for [urban planning](#) and [zoning](#) should be taken into account (where appropriate).

Chisinau City hall via its General Directorate for Architecture, Urbanism, Land Relations is responsible for implementing the integrated territory management platform and for updating the geo-spatial data fund for the area of the municipality.

More specifically, UNDP Moldova through the Green city project was requested to support the Municipality in development of the integrated urban development strategies (Chisinau Development Concept and Strategy and General Urban Development Plan of Chisinau) through digital transformation of the municipality's paper and pdf based [2007 GUDP](#) in GIS format to be further included in the Municipality updated geo-spatial data fund.

II. EXPECTED RESPONSIBILITIES AND DELIVERABLES:

The contractor will have the following responsibilities:

- Support municipality in integration of the current structure and design of the GUDP and General urban planning regulation into the integrated territory management platform of the General Directorate for Architecture, Urbanism, Land Relations. Assess and develop additional layers needed for data integration, ensuring the traceability of digital transposition in accordance with the national legislation in domain.
- Digital transformation of the municipality's paper and pdf based 2007 GUDP in GIS format, developing associated databases, including:
 - verification, validation of correctness, consistency of data and correlation of spatial data at project level:
 - incomplete data sets (e.g. layers that do not contain data for the entire administrative area of the analysed territory);
 - outdated data sets (e.g. a significant number of elements in a layer that no longer correspond to field reality or official documents);
 - incorrect data sets (e.g. a significant number of elements in a layer that contain incorrect values).
 - For each category of digitally transformed data, identify areas containing the highest number of problems and agree with the beneficiary on the applicable technical solutions. Based on the conclusions of the evaluation, the propose a concrete plan of actions necessary to complete the data base so as to reach the level at which to meet the quality and completeness requirements, formulated by urban planners, in order to carry out substantiation studies and to draft the GUDP.
- Ensure that the GIS data have associated databases

- Preparing the data sets to be mainstreamed into the integrated management platform;
- Elaboration of the documentation of the data standard and the receipt procedure.
- Development of the **Unified institutional standard** for drafting urban planning documents in digital format. The purpose of this task is to develop the necessary specifications to be imposed on the designers/architects so that, when handing over the urban planning documents to be approved/ authorized, the data are delivered in a standardized format so that they are taken directly into the integrated territory management platform and are immediately used in the transverse and longitudinal analyses necessary for integrated city administration.

Two major products will be developed:

1. **The 2007 General Urban Development Plan and Urban Planning regulation in a standardized GIS format, as part of the integrated territory management platform of the General Directorate for Architecture, Urbanism, Land Relations**
 - a. GUDP in force with data on functional use of the analyzed territory and with urban planning indicators corresponding to the zoning of the city, with a view to mainstreaming them into the Municipality integrated territory management platform;
 - b. Urban planning regulations included in the local urban planning regulation in order to mainstream them into the integrated territory management platform. Territorial transposition of all regulations contained in the urban planning regulation, approved at the time of approval of the General Urban Development Plan, which are in force;
2. **Unified institutional standard for drafting urban planning documents in digital format.**

Note:

Regardless of the type of program and the database used by the contractor, the final version of the General Urban Development Plan will have to be transposed into an open source format, which would facilitate the approval and dissemination of documentation by Chisinau City Hall. The contractor will offer overall support to the beneficiary during the deliverable's consultation process according to the legal requirements and shall be responsible for introducing any additions and comments made during the consultation process.

The resulting data will comply with the GIS data topology good practice rules, in accordance with the legislation of the Republic of Moldova. These shall be stored in a spatial database; the vector component being stored in the database tables along with technical regime descriptive data. Vector and alphanumeric data will be managed in an integrated manner in an open relational database. The precision of placing the collected information will be consistent with the accuracy of the data source.

III. Methodology

A detailed description of the methodology for implementing the digital transformation of the General Urban Development Plan and the local urban planning regulation from paper format, respectively pdf in GIS (Geographic Information System) format in a high-performance standardized digital format is required to be presented by the potential contractor. The format will be structured on layers of information that comply with the agreed digital standard for the vectorization of information, in a national coordinates system.

Specific requirements:

- Evaluation and estimation of the transformation effort (calibration, processing and generation of a standardized structure) of the GUDP data in the national GIS coordinates system;
- Presentation of the detailed plan for the proposed implementation methodology, indicating the main methods of diagnosis and analysis that will be used, which will have to include:
 - the general approach framework proposed for implementation;
 - project-wide timetable (Gantt diagram), work packages and component activities, dependencies, start and end dates, deliverables, checkpoints, testing and acceptance of the activities;
 - project organizational structure (organizational chart and description of the activities carried out by the proposed team);
 - detailed presentation in a concise form, for each type of deliverable (goods or services), the testing methodology used for acceptance and the manner of their acceptance;
 - detailed presentation of the quality plan for each proposed deliverable, reference to the standards met, presentation of the quality principles achieved, control and audit methods and specialized technical methods, change management procedure and other quality assurance tools;
 - detailed presentation of the contents of the report with regard to the expected results.
- Description of the geo-spatial database model used to store the results and the principles to be applied. Through its technical solution, the potential contractor will propose an open geo-spatial database model in which the digital plans can be stored, so as to meet the requirements detailed above and comply with the principles specific to the databases and being easy to integrate into the integrated territory management platform of the General Directorate for Architecture, Urbanism, Land Relations ;
 - a detailed description of the database should be presented, including timelines and deliverables resulting the technical solution may contain any other elements that the competitor considers necessary to mention as an added value;
 - the description of the structure of the mandatory spatial elements for the digital transformation of the GUDP and the local urban planning regulation is requested, so as these become a unified institutional standard for the development of urban planning documents in digital format; a process should be proposed by which this data model will become a single standard, at the level of Chisinau city hall, for drafting digital urban planning documentation;
 - the following will be considered
 - evaluation of existing data from the perspective of their usefulness in the process of digital transformation of the GUDP and identification of actions to be carried out in order to ensure a stock of spatial data necessary for the urban design process;
 - key principles related to practical implementation of data processing and analysis of digitally transformed data;
 - description of the standardized structure;
 - value of the nomenclatures used;
 - data processing and analysis in order to provide geo-spatial information support for substantiation studies for new urban planning documentation (GUDP, PUZ, PUD);

- algorithms, parameters used;
- stages of implementation - the timeframes will be related to the volume of works.

Practical demonstration

The exact structure of the GIS database of the current General Urban Plan remains at the discretion of the developer, but it will have to encompass all the actions and achieve all the objectives listed above and national legislation.

For breaking ties between the potential contractors, the beneficiary reserves the right to hold a demonstration session during which the bidders will have to hold a demonstration using an example of a similar project carried out and present:

- the resulting standard database model;
- procedures used for digital transformation;
- examples of territorial analyses over the developed database model to demonstrate the flexibility of the proposed database model.

IV. ESTIMATED TIMING

The assignment will be carried out in maximum **6 months** after contract signature. Advantage will be given to that bidder that will perform the deliverables in the shorter period, but not against the quality of work. All the deliverables shall be submitted within the timeframe shown in the table below:

	Deliverable(s)	Due date
1.	Draft version of the Reports on: a) The 2007 General Urban Development Plan and Urban Planning regulation in a standardized GIS format, as part of the integrated territory management platform of the General Directorate for Architecture, Urbanism, Land Relations b) Unified institutional standard for drafting urban planning documents in digital format in line with national legislation.	By October 15, 2020
2	Final version consulted versions of the Reports on: a) The 2007 General Urban Development Plan and Urban Planning regulation in a standardized GIS format, as part of the integrated territory management platform of the General Directorate for Architecture, Urbanism, Land Relations b) Unified institutional standard for drafting urban planning documents in digital format in line with national legislation.	By November 30, 2020

V. Institutional arrangements:

The contractor will work under the direct supervision of the Green cities Project Manager, Head of the General Directorate for Architecture, Urban Planning and Land Relations of Chisinau City Hall and UNDP Cluster Lead.

The Provider shall coordinate all the technical and functional activities of the assignment with the General Directorate for Architecture, Urban Planning and Land Relations of Chisinau City Hall, through the chief architect/head of department.

The General Directorate for Architecture, Urban Planning and Land Relations, as the technical representative of the Beneficiary, will provide information to the plan developer when requested.

During the preparation of the work, the contracting team will have mandatory consultations with the team of specialists of the Directorate, with the chief architect of Chisinau City Hall; Urban Planning Council, in order to clarify all the undetailed aspects in the assignment and also during the implementation of the assignment.

In addition to the tasks contained in this assignment, all other provisions of the legislation adopted during the contract implementation will be integrated.

After the delivery of each stage, the contractor is obliged to receive the deliverables within a maximum of 15 days of delivery, by concluding a receipt protocol, signed by both parties. The beneficiary is in right to propose intermediate stages, which has to agree at the beginning of the assignment.

Where the beneficiary and contracting authority finds non-conformities in the quality of the deliverables, makes objections, observations or recommendations, the contractor shall be obliged to review the delivered deliverables within a maximum of 15 days.

The contractor shall draw up the specific documentation and ensure the presentation of deliverables and shall obtain all opinions/endorsements according to the legal procedures, including introducing any additions and comments made during the consultation process.

The work shall be handed over according to the following:

- in open geo-spatial digital format, in digital format, open source geo-spatial database, in the national coordinates system.
- the database drawn up by the contractor shall be handed over in digital format to the General Directorate for Architecture, Urban Planning and Land Relations and UNDP, with the address of submission, to which the protocol of documentation hand-over and receipt will be attached, which will get a registration number;
- quantitative receipt, on physical delivery of deliverables, in the presence of the contractor;
- qualitative receipt, after installation, configuration, verification of the operation at normal parameters and training the user on how to use the resulting standard;
- all deliverables, resulting from the execution of the contract, shall become the property of the UNDP at the time of payment, which shall be able to use, publish, assign or transfer them as it deems appropriate, without any geographical or other limitation.

Receipt process

In the event that the developer does not respond in a substantiated and reasoned manner to the objections, observations and recommendations of the UNDP and Beneficiary, the Contracting Authority may reject the delivered materials to which objections, observations or recommendations have been made.

Upon the hand-over of each stage, the Contracting Authority is obliged to receive the materials handed over by the developer within a maximum of 15 days from their hand-over, by means of a protocol, signed by both parties.

The contractor shall take overall responsibility on the quality and timeliness of project implementation process within its competency. The contractor is responsible for the compilation and editing of the draft material, presentation and the final product in Romanian language.

VI. Payment

Payment for services shall be provided in two instalments as follows:

1. 60% of contract cost – after submission and approval by UNDP and Municipality of the draft version of the Reports;
2. 40 % of contract cost – upon submission and approval by UNDP and Municipality of the final version of the Reports.

The receipt of services corresponding to the stages of the project will be carried out by a commission, whose composition will be determined by the Beneficiary with inclusion of UNDP representative. The receipt will be based on the services receipt protocol, signed by both the provider and the representatives of the UNDP and Municipality. The receipt of services will be made following their quantitative and qualitative verification.

The contractor should calculate the possible costs associated with the current assignment such as transportation, logistics, acquiring various maps, layouts and other relevant documents or information required for successful finalisation of all tasks. UNDP shall not accept any additional expenses which are not included in the financial offer.

VII. Qualification requirements:

The selected contractor should be a registered legal entity, that will meet the following criteria:

- At least 5 years of professional experience in GIS, urban planning, IT or another relevant field;
- Demonstration of technical capacity by presenting similar experience in implementation of minimum 3 projects with similar content;
- Proved experience in providing services in the development and digitization (GIS) of General Urban Plans or similar projects;
- Proven capacity to provide the necessary resources, to carry out its activities and to achieve its stated objectives within the specified timeframe;
- Provision of technically responsible team of experts for the proper implementation of the contract who must possess the general and specific competences and experience, necessary for the full performance of the tasks set out in the terms of reference and who can work in a coordinated and efficient manner in the implementation of the contract in order to achieve the expected results.

The team of experts will be led by a project implementation coordinator and at least one GIS expert:

- **Project implementation coordinator:**
 - University degree or advanced courses in urban planning, project management, geoinformatics or relevant;
 - At least 5 years of experience in project management in IT or GIS domains;
 - Experience in 2-3 projects similar projects in which he/she held a similar position.
 - Experience in the implementation of geo-spatial IT solutions in public administration.
 - Project coordinator will lead the project and have the following tasks:
 - will be responsible for coordinating the activities of the entire supply team, will authorize all project documents produced by the supplier prior to their transmission to the beneficiary and will be the point of contact for all communications with the beneficiary;

- will monitor the progress of all project activities, prepare periodic status reports and perform specific activities to frame and maintain the project within the agreed timelines for the agreed purpose, in the agreed quality and budget terms;
 - will propose the most appropriate management solutions for all work processes that are part of the scope of the project;
 - will propose solutions to all errors and problems that require advanced knowledge of system administration or development;
 - will cooperate with all other experts involved in the project with a view to troubleshooting errors or problems that may occur at the level of the project components.
- **GIS expert/'s:**
 - University degree or advanced courses in computer science/computers, geoinformatics or relevant;
 - At least 3 years of experience in IT or GIS domains;
 - Experience in 2-3 projects similar projects in which he/she held a similar position.
 - Experience in the implementation of geo-spatial IT solutions in public administration, in the field of geo-spatial data processing using GIS software packages - calibration, validation, vectorization, use of advanced analysis functions necessary for urban planning, etc.
 - GIS expert/'s will have the following tasks:
 - development of the design of the geo-spatial database model in which the results will finally be stored and its integration principles into the integrated territory management platform.
 - development of the structure of the mandatory spatial elements of the GUDP and general urban planning regulation;
 - ensure the traceability of digital transposition, so that the summary form of the general urban plan in force allows both longitudinal and transversal analyses;
 - management and quality control of GIS data created by the project;
 - preparing the datasets to be mainstreamed into the integrated management platform;
 - elaboration of the documentation of the data standards

VIII. Financial proposal template

Work	Nr. of units*	Rate / USD	Total / USD
Experts	working days		
e.g. Expert 1			0
e.g. Expert 2 (if any)			0
e.g. Expert 3 (if any)			0
			0
Consultation process	lump sum		
Meetings			0
Draft final report consultation meeting (meals/coffee breaks and rental expenses will be supported by the project)			0
			0
			0
Administrative and Travel expenses	lump sum		
Travel			0
Administrative costs (phone, internet, etc)			0
Other costs			0
			0
TOTAL			0

* Estimates are indicated in the TOR, the applicant is requested to review and revise, if applicable.

** Add rows as needed