TERMS OF REFERENCE

Technical Assistance for the implementation of the activities provided for in the consulting firm´s Evaluation Report on the Usability Rates of the Land Management Information and Transaction System

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1 BACKGROUND

The land register implemented on the islands of Sal, Boavista, Maio and the rural area of the island of São Vicente is one of the key achievements with regard to land management, providing clearer and more transparent rights and creating key conditions in the establishment of an enabling environment for investments in the real estate and tourism sector.

With the implementation of the land registry system on these islands, the entire property registration and transaction process was conducted through an IT platform designed and implemented for this purpose, called SIGTP - Property Management and Transaction Information System, thus simplifying procedures and boosting improvements in the interaction among the institutions involved in this process.

The SIGTP is thus an integrated technological platform for information on land in Cabo Verde, shared by a variety of public institutions, allowing each institution to focus, consistently and transparently, on its main duties based on the information available. This is key, on one hand, to avoid inconsistencies and undesirable gaps that may contribute to poor transparency and legal ambiguity and, on the other, create efficiencies for users and/or data consumers.

The SIGTP is intended to ensure technological support to citizens and companies in service provision by public entities responsible for property registration, preservation, maintenance, management and transaction services in a permanent, effective, efficient, timely manner as well as with quality assurance and legal confidence and based on the one stop shop principle and, in general, conforming to electronic governance.

NOSI has been ensuring technical and operational support to the system with occasional financial support from the National Institute for Land Management (INGT), mainly for the design of new features and corrections of some errors that the SIGPT still has and that hinder the performance of the entities involved.

Although INGT is the leading entity in the land registry process, the system is used by several entities directly involved in property management, and transaction processes, including Municipal Councils, through the Municipal Information System; the Land Registry Office, through the Land Registry Information System; Notaries, through the Notary Information System and the INGT itself, which, in addition to leading the process, is directly responsible for the management and integration of data in the National Spatial Data Infrastructure – IDE-CV.

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The system is used on the 4 registered islands and it has enabled institutions to fulfill their responsibilities in terms of property management and transaction, but constraints and functional limitations have been frequently reported as they pose challenges to institutions in efficiently and effectively performing their tasks, which were normally performed prior to using the system.

With the end of the project in 2017, most of the technicians who were involved no longer work on the system development and stabilization, and those who remained are only partially involved to address the feature limitations mentioned above.

During the project lifetime, the system was submitted to some assessments, including:

- In 2014, while testing the system, the architecture and features for the systematic data collection and processing operations were evaluated in the field by 3 international experts. It was concluded that the system long-term sustainability should be considered.

- In 2017, with the Property Management and Transaction Information System already in operation, another assessment was conducted by a national firm on the architecture, data model and system operation in performing essential actions required by the entities directly involved. The main findings of the assessment are:

  - ✓ SIGTP´s architecture is too complex and difficult to maintain;

  - ✓ Operation considered dispersed, too attached to outdated systems (which are in turn closely linked to the systems supporting institutions, in particular in Municipal Councils, Land Registry Offices and Notaries) unclear and incoherent for the key business it supports;

  - ✓ Difficulty in simultaneously meeting the needs of registered properties, those being registered and those to be registered.

However, more specific and detailed assessments were always recommended so that alternative solutions can be proposed in order to ensure the system´s sustainability and effectiveness.

- Therefore, more recently (end of 2019 and beginning of 2020), a national consulting firm conducted an evaluation on usability rates in the human-computer interaction

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process aiming at identifying potential intervention levels with a view to its sustainability in the medium and long term.

2 OBJECTIVE

The purpose of this term of reference is to implement the recommendations made by the consulting services on the usability rates in the human-computer interaction process aiming at identifying potential intervention levels with a view to SIGTP´s sustainability in the medium and long term.

3 ACTIVITIES TO BE DEVELOPED

The following activities will be carried out regarding the efficiency and effectiveness of the daily use of the SIGTP and for each intervention in the SIGTP, the processes must first be calibrated in order to strengthen the documentation, standardization and rationalization of the inter-institutional workflow and Processes of the following services: : (i) property registration, (ii) preservation, (iii) maintenance and lands transaction services, and (iv) management, based on the electronic governance principles, the applicable legal framework, the one-stop-shop approach, and the recommendations made by the consulting services about the SIGTP´s usability rates and sustainability in the medium and long term.

a) Developing flexible solutions, since it has been concluded that the analogy of incidents creation to correct small errors is very rigid;

b) Reviewing and correcting the horizontal property creation process. This is because, when it is necessary to verify the Property Identification Certificate - (CIP) of the parcels, the user feels "forced" to resort to the registration process, because these do not appear in the "print CIP" menu.

c) Creating notice features in order to aid users in the early stages of the processes, such as: when the process of purchasing land at the City Council (CM) is completed, the system should generate an alert, following the same analogy alert for the next institution;

d) Enabling the Registrar, as the last stage of registration process, to have access to certain features to change the building status from "deferred cadaster" to "cadaster".

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e) Creating a historical cycle of processes/transactions that enables immediate access to structured information to help the user in making timely decisions;

f) Reviewing and eliminating incoherent data available in other systems complementary to the SIGTP, so that there is no exchange of wrong or incomplete data between systems;

g) The search system, such as the registration of a property, calls for a review to make the operational model of tasks associated with them more flexible;

h) Determining a logical sequence among institutions in order to clarify where a process begins and ends in order to improve the details of a listing items and/or reports;

i) Enhancing the SIGTP help system with interactive videos as well as increase the user's learning graph in acquiring knowledge of new features or modules;

j) Ensuring full platform integration and guaranteeing centralized technical support, as well as future innovations;

k) Conducting a thorough review of the use of certain visual metaphors that do not intuitively reflect their representativeness in relation to their real objective, which makes the user´s immediate action difficult with reduced reasoning effort.

l) Reviewing the visual communication model regarding the path location and numbering of steps to be followed in a given process, with a view to integrating a logical and color sequence with cognitive and semiotic correspondence for user communication;

m) Reviewing and correcting the calculation model to decrease the percentage value in the processes of separating parcels.

n) Optimizing the number of fields in the forms, with auto-completion capability and sequential summarization of the number of open windows in a single active process;

o) Building capacity of users with in person or distance training, whenever any material change or update is made and whenever it is considered relevant or necessary;

p) Creating a single channel for sharing and disseminating information on the constraints and solutions found in the SIGTP (frequently asked questions and answers);

q) Creating a permanent training program for system users;

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r) Identifying and producing the manuals that need to be updated;

s) Identifying the new features lacking manuals and preparing the manuals;

t) Providing the manual through SIGTP;

u) Implementing the "one-stop-shop" approach; In requests for a Property Identification Certificate - CIP based on Property Identification Numbers - NIP, it should be issued immediately;

v) The CIP´s report has too much built-in logical complexity (business rules); users should move to views and features in the corresponding schema supporting the CIP; avoid building features as well as DECODE procedures and situations within reports with a negative impact on performance and causing impossibility of reuse;

w) Reviewing the mechanism for CIP delivery, by eliminating the table for CIP delivery management - "CAD_CIP_VALIDAR". Considering other similar solutions;

x) Providing for a one-stop shop allowing other entities (INGT, City Council) to make a registration request. This option can solve the outstanding problem of self-request for registration; a possible solution is to have an RNI user who assesses and approves the request in the registration system.

y) Making it possible to view the respective CIP before approval. Approval would therefore be an update to the records that would make them final and properly numbered; despite this being a significant change and requiring careful work, it is necessary to give the approving entity peace of mind regarding the output generated; the replacement of a double validation (registration and then CIP) for a validation that shows the CIP, improves the efficiency of the services provided and gives security to the acts, since it is possible to see how CIP progresses at any stage of the process;

z) Making it possible to view all records associated with the approval/registration process so that they can appear clearly and explicitly (type of record, date of fact, date of registration, etc.);

aa) Making it clear for any stakeholder that there is an ongoing transaction on a given NIP. If a transmission is initiated (in this case, between private individuals and in any one regardless of the State, municipality, individuals involved) it should be clear that this

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NIP has a request in progress in a given institution and that the transaction that includes the processing between institutions is in progress, until, with its conclusion, the data become coherent again.

bb) Maintaining the common basis in processing between the Front Office and Back Office, regardless of the acts involved;

cc) The implementation of a transaction between the City Council and individuals should have a common denominator with the procedure between individuals - the stakeholders change, but the structure and workflow should be, whenever possible, similar.

dd) Improving and making the dashboard in the SIGTP uniform;

ee) Designing and implementing the feature that allows to manage deferred registrations

ff) Designing and implementing the feature on property transaction volume and number;

gg) Producing a Location Plan and making improvements in the CIP model;

hh) Designing and implementing the feature that allows to register (re-registration) parcels that had not been registered under the land registration process and that do not have a "registo matricial" (by the city council) or "registo predial" (by the registry office).

4 COMPOSITION OF THE TECHNICAL TEAM AND QUALIFICATIONS REQUIREMENTS OF THE MANAGER

This technical assistance shall be conducted by a firm with a minimum of 5 years of experience and consisting of a multidisciplinary technical team coordinated by one of its members and shall ensure, at least, the participation of experienced specialists in the fields of computer engineering, information system, programming, project management. The technical team shall be of sufficiently good repute and be sufficiently experienced.

4.1 Senior Experts

Bidding firms shall include at least 5 key experts as provided below:

i. **1 (one) Project Coordinator** – College degree in Computer, at least 10 years of working experience and a minimum of 2 (two) as Project Manager in similar projects.

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ii.   **1 (one) Expert/business analyst** – College degree in Law or related field and a minimum of 10 years of working experience in land issues and with solid knowledge of the subject to assist in designing business processes and workflow rules.

iii.   **1 (one) Data and document analyst**– College degree in Computer Engineering or related field and a minimum of 5 years of working experience in data and information collection and analysis.

iv.   **1 (one) Programmer** – College degree in Computer Engineering specially oriented to programming/development and a minimum of 5 years of working experience in system module or features designing.

v.   **1 (one) Expert (tester) -** College degree in Computer Engineering specially oriented to executing tests and a minimum of 5 years of working experience.

The firm to be hired shall ensure that the team will be exclusively and full-time committed to the project during the entire implementation phase.

The winning firm can only change the work team if the academic and professional qualifications of the proposed member are similar to or higher than those presented in the bidding process.

4.2 Target groups
- City councils of the registered areas;
- Directorate General for State Assets and Pubic Procurement;
- National Institute for Land Management (INGT).
- Land and Notary Registry Offices;
- Property owners;
- Investors;
- Etc.

4.3 Project Management

The contract is managed by MIOTH through the National Institute for Land Management (INGT) and the General Directorate for Planning, Budget and Management (DGPOG).

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The technical team includes technicians from municipalities of the areas with "registo cadastral" (by the cadaster team), registrars and notaries and technicians from the State assets department.

The Consultant will report to the Special Project Management Unit (UGPE) for contract management.

A team will be available to monitor the work to be implemented. Whenever necessary, INGT will provide a meeting room with broadband connection to Internet.

5 OUTPUTS AND DEADLINES

The contract term is 28 weeks (7 months).

The firm shall submit the following reports in Portuguese in both digital and paper format as per the schedule provided below. Each of this output will be validated by the monitoring team.

End product	Activities	Qty	Output	Deadline
P1: Inception Report including a detailed work plan	It shall indicate all the tasks to be performed, the material and human resources and the description of the methodology to be used for each of the activities, and a detailed task implementation schedule;	1	Inception Report	5 days after contract signature
P2: Features improved	It shall specify the initial progress made, the difficulties encountered and expected in making improvements to the features provided for in paragraphs: • a, b, c, d, e, f, g, h, k, l, m, n, v, w, z, aa, bb, cc, dd, ii	19	Report on the implementation of the features improved	60 days after contract signature
P3: (New) features implemented	It shall specify the initial progress made, the difficulties encountered and expected in making improvements to the features provided for in paragraphs: • j, u,y, ee, ff, gg, hh	6	New features implementation report	99 days after contract signature
P4: Documents/Manuals	It shall specify the initial progress made, the difficulties encountered and expected in preparing the manuals/documents provided for in paragraphs: • i, p, q, r, s, t	6	SIGTP manuals and videos	119 days after contract signature
P5: Capacity building	It shall specify the initial progress made, the difficulties encountered and expected in capacity building of SIGTP users provided for in paragraph:		SIGT users capacity	149 days after contract signature

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	• o,	1	building report	
P6: Final Report	Final implementation report on technological solutions including sufficiently detailed description of the different options to enable an informed decision on approval.	1	Final Report	154 days after contract signature
Total		**32**		**7 months**