



**TERMS OF REFERENCE
DATA MODELER (SPLIT-REF-001-B)**

I. PROCUREMENT SUMMARY

1. Component:	IT Support and DMS
2. Related Major Activity:	CLOA Document Management System
3. Fund Source:	Loan Proceeds (LP)
4. Contract Duration:	Twelve (12) Months – Annual Renewal
5. Name of Supervisor:	DNPD for IT Support and DMS Component
6. Procurement Unit:	Central Project Management Office
7. Monthly Salary:	PHP 200,000.00

II. RATIONALE

The **CLOA Document Management System (CLOA-DMS)** is planned for development under the IT Support and Document Management System Component of Project SPLIT wherein the aim is to support the streamlining of the parcelization processes hitherto performed manually. The introduction of technologies such as digital forms and records shall be created that can be securely maintained, stored, and shared with partner agencies. Beneficiaries of the project shall have a digital basis of ownership; hence, providing them access to lending institutions and other agricultural and/or social services, thereby, providing due empowerment in the increase in crop productivity and competitiveness.

The **CLOA-DMS** and **Digital Archiving System (DAS)** shall establish a central database wherein the status of each CLOA is tracked, and various statistical and management reports are generated to duly assist in the decision-making processes through the close monitoring of activities and updated reports. The system shall also provide information regarding the performance of Regional and Provincial Project Management Offices (R/PPMOs) along with the processing time for each major step in the parcelization process that can be utilized.

It shall also generate gender-disaggregated data and other relevant reports in support of the Monitoring and Evaluation (M&E) Reports in an addendum to the information of the completed CLOA Cases that are hitherto planned for storage in the agency's DAS for future reference. However, under the existing legal framework, the individual titles are archived and maintained by the Land Administration Authority (LRA).

In support of the development of the CLOA-DMS, there is a necessity to hire Information Technology (IT) Professionals who will exclusively tackle the challenges necessary for the development of the system through the study, documentation, and eventual due development of a Data Model or Database Design of the CLOA-DMS for a period of three (3) to five (5) months along with the provisioning of support for the implementation to R/PPMOs during the seven (7) to twelve (12) months period encapsulating one (1) year of service, at the minimum.

Hence, the model shall be the primary reference document for the development of programs, modules, and systems for the CLOA-DMS.

1. GENERAL REQUIREMENTS

- Render five (5) **working days a week** with at least, **eight (8) hours per day**.

2. SPECIFIC TASKS AND RESPONSIBILITIES

The **SPLIT-REF-001 (Data Modeler)** shall accomplish the following deliverables, produce outputs, and accomplish it within the specified timelines, if not earlier, *to wit*:

Deliverables	Output	Timeline
1st Month		
Gather existing information from the DAR, DENR, LRA, and NCIP to establish the data requirements of the CLOA-DMS with the IA-JTWG on Data Sharing, Exchange Requirements, Format Definitions, Attributes, and Fields.	Data Requirements; and, Preliminary Data Model and Entities	4 Weeks
2nd Month		
Identify record keys that will be utilized as reference for various entities. Construct an Association Matrix that	Entities to Association Matrix; and, Entity Relationships Schematic Diagram	2 Weeks

<p>will cross reference entities to entities.</p> <p>Draw the relationships between the entities</p>		
<p>Describe all logical paths to access data contained in the Data Model, duly identifying key and primary candidates along with foreign keys.</p>	<p>Preliminary Conceptual Data Model</p>	<p>2 Weeks</p>
<p>3rd Month</p>		
<p>Normalize the proposed Data Model.</p> <p>Refine the assignment of attributes to entities and relationships.</p>	<p>Database Schema</p>	<p>2 Weeks</p>
<p>Translate entities and relationships into two-dimensional tables.</p> <p>Review the logical Data Model with the IA-JTWG.</p>	<p>Logical Data Model</p>	<p>2 Weeks</p>
<p>4th Month</p>		
<p>Design the Physical Data Model.</p> <p>Test the Physical Data Model with data from the existing systems to ensure efficacy.</p> <p>Present the tests to the IA-JTWG for their review and approval.</p>	<p>Physical Data Model Design, Testing, and Presentations</p>	<p>3 Weeks</p>

Compile all documentation and submit the design for the final approval of the IA-JTWG.	Database Design Document Folder	1 Week
5th Month		
Discuss the Database Design with the hired/contracted Systems Designer	Collaboration with SPLIT-REF-002	1 Week
Design and implement the Data Model which must adhere to the following standards indicated in the Outputs Section.	Land Administration Domain Model (ISO 19152:2023); Geographic Information – Land Administration Domain Model (LADM); PDF/A Standard for Scanned Data and Digital Archiving; Philippine Identification System (PhilSys) for the Personal Identification Register; and, Exchange File Formats (i.e., CSV, GML/XML, JSON, etc. – defined in the Data Sharing MOU for DAR/DENR/LRA/NCIP).	3 Weeks
6th Month		
Assess the utilization of the farmers' and fishermen's registers and data.	Technical Studies on the Interoperability with the DA Registry System of Basic Sectors in Agricultural Database.	2 Weeks
Collaborate with the Development Firm to focus on FGDs with the Developers and the IA-JTWG.	Focus Group Discussions, Reports, and Evaluations.	2 Weeks

7th Month		
Collaborate with the Development Firm to focus on FGDs with the Developers and the IA-JTWG.	Focus Group Discussions, Reports, and Evaluations.	2 Weeks
Provision training and knowledge transfers to SPLIT IT Consultants and Implementation Teams for the CLOA-DMS Implementation.	Project Proposals, Training, and Evaluations.	2 Weeks
8th Month		
Provide training and knowledge transfers to SPLIT IT Consultants and Implementation Teams for the CLOA-DMS Implementation.	Project Proposals, Training, and Evaluations.	4 Weeks
Provide guidance and Help Desk Support to the C/R/PPMOs on Data Entry, Exchange, Management, and Reporting.	Help Desk Support and Virtual/On-Site Consultations	4 Weeks (Consistent Occurrence)
Generate reports from the CLOA-DMS for the C/R/PPMO Officials and Personnel.	Statistical Reports, and others that may be requested.	
9th Month		
Provide guidance and Help Desk Support to the C/R/PPMOs on Data Entry, Exchange, Management, and Reporting.	Help Desk Support and Virtual/On-Site Consultations	4 Weeks (Consistent Occurrence)
Generate reports from the CLOA-DMS for the C/R/PPMO Officials and Personnel.	Statistical Reports, and others that may be requested.	

10th Month		
Provide guidance and Help Desk Support to the C/R/PPMOs on Data Entry, Exchange, Management, and Reporting.	Help Desk Support and Virtual/On-Site Consultations	4 Weeks (Consistent Occurrence)
Generate reports from the CLOA-DMS for the C/R/PPMO Officials and Personnel.	Statistical Reports, and others that may be requested.	
11th Month		
Provide guidance and Help Desk Support to the C/R/PPMOs on Data Entry, Exchange, Management, and Reporting.	Help Desk Support and Virtual/On-Site Consultations	4 Weeks (Consistent Occurrence)
Generate reports from the CLOA-DMS for the C/R/PPMO Officials and Personnel.	Statistical Reports, and others that may be requested.	
12th Month		
Provide guidance and Help Desk Support to the C/R/PPMOs on Data Entry, Exchange, Management, and Reporting.	Help Desk Support and Virtual/On-Site Consultations	4 Weeks (Consistent Occurrence)
Generate reports from the CLOA-DMS for the C/R/PPMO Officials and Personnel.	Statistical Reports, and others that may be requested.	

Indicated in the timeline above-cited is the line of responsibilities and outputs expected from SPLIT-REF-001 (Data Modeler); however, the following is subject to adjustments which can conclude their proposed deliverables and outputs earlier or later than the Month 12 Projection.

III. QUALIFICATIONS

1. Educational Qualifications

- Bachelor's Degree duly related to Information Technology or Computer Science; and,
- A Graduate Degree is an advantage.

2. Work Experience

- Five (5) Years of Experience in Designing and Establishing Databases utilizing a Relational Database Management System (RDBMS), preferably for a National Government Agency with, at least, two (2) projects previously handled;
- Five (5) Years of Experience in varied Binary Large Objects and Geographic Information System (GIS) Spatial Data Formats with, at least, two (2) projects previously handled;
- Five (5) Years of Experience in Standard Data Model Tools; and,
- Five (5) Years of Experience in Structured Query Language and various Data Handling Tools (Data Manipulation Languages [DML] and Data Definition Languages [DDL]).

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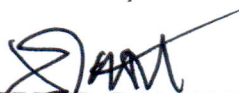
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