
EUROPEAN FOREST INSTITUTE

TENDER SPECIFICATIONS

PROCUREMENT REFERENCE NUMBER 01-15.2-2026

Design, Development, Deployment, and Operationalization of a National
Metadata Portal for Spatial Data Management in Guyana

1. TERMS OF REFERENCE

1.1 Introduction

The Guyana Lands and Surveys Commission (GLSC), acting under the authority of the GLSC Act of 1999, holds a legal and institutional mandate as the custodian of all public lands, rivers, and creeks in Guyana. It is also charged with being the national agency for surveying, mapping, and spatial data management. Among its responsibilities are the establishment of national geographic and land information policies, the development of spatial data standards, and the maintenance of a land information system capable of supporting national development priorities.

The European Forest Institute (EFI) is a pan-European international organization that provides forest-related knowledge around three interconnected and interdisciplinary themes: (i) bioeconomy, (ii) resilience and (iii) governance. The European Forest Institute Rapid Response Project (EFI-RRP), with funding from the United Kingdom's (UK) Foreign, Commonwealth and Development Office (FCDO), delivers support to the forest governance reform processes in several countries including Guyana. The European Forest Institute's Rapid Response Programme (EFI-RRP) Guyana is currently in its second project cycle providing support through FCDO's second Forest Governance, Market and Climate (FGMC) Programme to the Guyana Forestry Commission (GFC) and other Agencies supporting/ contributing to the implementation of the Guyana Timber Legality Assurance System (GTLAS).

In alignment with these responsibilities and under the framework of the Forest Law Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreement (VPA) signed between the Government of Guyana and the European Union, the GLSC is a key implementing partner in the deployment of the GTLAS. As part of these efforts, access to authoritative spatial data must be strengthened to enable accurate verification of land leases and to facilitate inter-agency coordination across forest governance, compliance enforcement, and land use planning.

It is in this strategic context that GLSC, with the support of the European Forest Institute EFI-RRP is in the process/ intends to design, development, and operational deployment of a publicly accessible Metadata Portal, Metadata Management Tool, SOPs and Finalised Metadata Standard.

1.2. Context and Justification

Despite a longstanding recognition of the importance of metadata in national geospatial data infrastructure, Guyana currently lacks a functional and centralized metadata system through which government agencies, researchers, planners, NGOs, and the private sector can identify, assess, and request access to available spatial datasets. At present, metadata resides in institutional silos, is rarely published, and is often incomplete or inconsistent —inconsistent, severely limiting the effectiveness of cross-agency collaboration, geospatial analysis, and evidence-based policy development.

Multiple ministries and agencies collect and maintain valuable spatial datasets, but few mechanisms exist for coordinated cataloging, systematic publication, or user-friendly discovery of these datasets. Data is often stored in silos, with limited visibility to external agencies, resulting in redundancy, inefficiency, and delays in decision-making processes that depend on up-to-date geospatial information. For example, when verifying timber legality or lease compliance, forestry regulators must manually reconcile GIS data from GLSC with lease data from other government bodies —often through

ad hoc data sharing requests or email-based communication. This limits the effectiveness of GTLAS and reduces trust in the accuracy of verification workflows.

Furthermore, many institutions lack clear standards, standard operating procedures for data publication, or the technical infrastructure to publish even non-sensitive metadata about their holdings. This reality impedes the establishment of a national Spatial Data Infrastructure (NSDI), which requires a strong foundation in metadata transparency, cataloging, and inter-agency interoperability.

To address these shortcomings, the proposed Metadata Portal will provide a centralized digital interface that enables institutions to publish structured metadata about their geospatial datasets, according to a nationally agreed-upon metadata standard. This portal will not host the datasets themselves; rather, it will act as a clearinghouse that allows stakeholders—including government agencies, civil society, academia, and the private sector—to discover what data exists, who owns it, what it covers, how it may be accessed, and under what restrictions. This transparency will reduce duplication of data creation, improve decision-making, and strengthen the capacity of government actors to coordinate on land governance and compliance tasks.

1.3. Objectives of the assignment

The overarching objective of this initiative is to **design, develop, and operationalize a Metadata Management System, SOP, Standard and Portal** for spatial datasets in Guyana. This system will serve as a foundational component of the country's emerging National Spatial Data Infrastructure (NSDI) and will directly support initiatives such as the **Guyana Timber Legality Assurance System (GTLAS)** under the European Union's Forest Law Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreement (VPA).

This objective is defined across four interrelated pillars:

A. Technical Robustness and Standards Compliance

The portal must be designed and built as a production-grade system using internationally recognized, open-source technologies. It shall be based on an open-source platform, which provides a standards-compliant foundation for geospatial metadata discovery and sharing.

- Metadata standard to be developed, validated, and adopted nationally to ensure consistency and reliability of published metadata. This will consist of a custom subset of fields that will be as compliant as possible with existing standards.
- Designed for interoperability, modularity, and long-term scalability.
- Incorporates metadata creation, validation, ingestion, harvesting, and search capabilities.

B. Institutional Integration and Governance Alignment

The portal shall not function in isolation but must be embedded within the broader institutional landscape of Guyana's public administration and data governance structures. The Guyana Lands and Surveys Commission (GLSC) will serve as the national host and lead agency for the system.

- **Governance model** established through formal inter-agency collaboration and agreements (e.g., Memoranda of Understanding).

- A **National Metadata Working Group** to be formed and supported for the coordination of the collection of metadata, oversight and policy alignment. The Working Group would be Chaired by the GLSC.

C. Usability and Access for a Broad User Base

The platform must offer intuitive, secure, and accessible interfaces tailored to various types of users. These users include technical staff in government agencies, researchers and planners, private sector developers, civil society actors, and the general public.

- **Public metadata discovery interface** with keyword and geospatial search functionality.
- **Secure administrative interface** for metadata authoring, editing, and quality control.
- **Role-based access controls** to support differentiated user privileges and protect sensitive content where necessary.
-

D. Operational Sustainability and Capacity Transfer

A key objective is to ensure that the portal not only functions well at the point of delivery but continues to provide value into the future without dependence on external consultants. This requires the establishment of robust internal capacity within GLSC and other participating agencies.

- **Comprehensive documentation** to be delivered, including SOPs, metadata authoring guides, governance procedures, configuration manuals, and system administration guides.
- **Structured capacity-building program**, including:
 - Hands-on training sessions tailored to different roles (metadata authors, administrators, IT support staff).
 - Pre- and post-training assessments to evaluate knowledge transfer.
 - On-call mentorship support for at least three months post-deployment.
- Strategies for continuous improvement, including mechanisms for user feedback, updates to metadata standards, and inclusion of new stakeholders.

By fulfilling these objectives, the Metadata Portal will become a central platform for improving **data discoverability, coordination and transparency**. It will reinforce Guyana's spatial data governance ecosystem, reduce redundancy in data collection, and catalyze the implementation of national and sectoral initiatives requiring authoritative geospatial information.

1.4. Detailed Objectives and Expected Results

The assignment is situated at the intersection of digital transformation, land governance, and open data policy. The objective is not merely the delivery of software, but the establishment of a durable institutional and technical framework that empowers the Guyana Lands and Surveys Commission (GLSC) and its partner agencies to fulfil their mandates through efficient, interoperable, and transparent management of geospatial metadata.

1.4.1 Specific Objectives

The following specific objectives frame the required outputs of the assignment:

1. **Design and develop** a national metadata portal using an open-source platform, customized to Guyanese institutional needs and operating within a secure, scalable, and standards-compliant architecture;
2. **Establish a National Metadata Standard** aligned with ISO 19115, OGC, FGDC, and other internationally recognized frameworks, tailored for national application through participatory processes and institutional validation;
3. **Create institutional capacity** across GLSC and participating agencies for metadata authoring, editing, validation, publishing, governance, and portal administration through structured training and post-deployment mentorship and technical support;
4. **Deliver institutional governance frameworks** including standard operating procedures (SOPs), inter-agency agreements, and a long-term metadata coordination mechanism to ensure metadata records are kept accurate, updated, and accessible;
5. **Ensure sustainability through documentation** — including the provision of detailed technical documentation, training manuals, user and admin guides, and developer-level handover assets (e.g. source code, configuration files, and environment specifications).

These objectives respond directly to the core constraints currently limiting progress on spatial data governance in Guyana, which include fragmentation of metadata assets, absence of cross-agency standards, low awareness of data availability, and insufficient institutional expertise in metadata management.

1.4.2 Expected Results

The implementation of this assignment will produce the following transformational results:

- **Result 1: A fully operational, web-accessible Metadata Portal system**, built on an open-source platform, offering real-time search, browsing, and discovery of authoritative metadata records from across government institutions, initially prioritized for forestry and land use.
- **Result 2: An officially validated, National Metadata Standard**, encompassing mandatory and optional fields, vocabularies, file formats, and validation rules, supported by institutional agreements and formally adopted by relevant custodial agencies.
- **Result 3: A cadre of trained administrators and metadata authors** within GLSC and partner institutions, equipped with tools, manuals, and support mechanisms to manage and maintain the portal independently post-deployment.
- **Result 4: Operational integration of the portal into national geospatial workflows**, including through working group structures, inter-agency data coordination, and embedded standard operating procedures across relevant ministries and commissions.
- **Result 5: An end-to-end documentation suite** including user training materials, technical guides, system architecture documentation, metadata authoring guidance, governance handbooks, and a comprehensive final report on system rollout and institutionalization.

1.4.3 Contribution to National and Sectoral Objectives

The Metadata Portal will directly support national priorities in three key ways:

1. **Support to GTLAS and FLEGT VPA:** By enabling the discovery and verification of land tenure metadata, the portal will enhance the spatial validation components required for legality verification of forest products under GTLAS.
2. **Advancement of NSDI Development:** The Portal serves as a foundational building block toward Guyana's National Spatial Data Infrastructure (NSDI), enabling improved data coordination, institutional collaboration, and public access to authoritative metadata.

3. **Improved Land and Resource Governance:** More accurate and accessible metadata will enable better-informed decision-making in sectors such as forestry, mining, agriculture, environmental protection, and infrastructure development—reducing duplication, improving transparency, and supporting environmental sustainability.

The assignment shall therefore be seen as a flagship intervention in support of national land information management reform and open data maturity. It is expected to deliver real, lasting improvements to institutional workflows and service delivery capacity across multiple ministries, departments, and agencies.

1.5. Scope and tasks

The implementation of the Metadata Portal project entails a multifaceted body of work that must be approached as a coherent, interdependent effort combining systems engineering, Metadata governance, human capacity development, and long-term institutionalization. The selected service provider will be required to lead the end-to-end planning, design, development, deployment, and capacity transfer of a fully functional, standards-compliant, and future-proof Metadata Portal for the Government of Guyana. The scope of work has been designed to ensure that the result is not merely a technical prototype or demonstration system, but rather an operational national asset underpinned by clearly defined processes, supported by trained personnel, and guided by a robust governance and sustainability framework.

The work to be carried out under this Terms of Reference comprises four interconnected domains: (1) system design and development; (2) metadata standardization and institutionalization; (3) capacity building and operational readiness; and (4) governance, sustainability, and documentation. The comprehensive execution of tasks in each of these areas is essential to the overall success of the initiative.

1.5.1 System Design and Development

The project shall commence with an in-depth assessment of user requirements, involving structured consultations with primary and secondary stakeholders. These include, but are not limited to, the Guyana Lands and Surveys Commission (GLSC), the Guyana Forestry Commission (GFC), the Ministry of Natural Resources, the Bureau of Statistics, the Environmental Protection Agency (EPA), and other key data custodians across government. These consultations will aim to elicit detailed information on anticipated user roles, metadata content requirements, administrative workflows, system integration preferences, security concerns, and accessibility considerations. Building upon the information gathered, the service provider shall develop and implement a complete metadata discovery and cataloguing system based on an open-source platform, tailored to the context and institutional environment of Guyana. The solution shall be designed to adhere to the principles of modularity, scalability, and extensibility, supporting future integration into a broader National Spatial Data Infrastructure (NSDI). The implemented system must support core functions such as metadata ingestion, creation, validation, and editing; public-facing metadata search and discovery; metadata harvesting using standard OGC Catalogue Services for the Web (CSW) protocols; and backend administrative tools for managing users, access rights, system configurations, and analytics. The solution must also implement a thematically appropriate user interface that reflects Guyana's national identity and institutional branding. All technical specifications shall conform to international metadata and geospatial interoperability standards, including (but not limited to) ISO 19115, FGDC CSDGM,

ISO/IEC 11179, and INSPIRE. The architecture shall accommodate spatial, temporal, and thematic filtering, and the system must be integrated with existing GIS platforms and national data repositories wherever feasible.

In terms of deployment, the system must be securely hosted on infrastructure approved by GLSC. Options may include on-premises deployment in GLSC's data center or hosting on a compliant cloud platform with secure data sovereignty provisions. The system must also implement robust role-based access control, secure login mechanisms, encrypted communications, and audit logs for all transactions and changes.

1.5.2 Metadata Standardization and Institutionalization

Concurrently with the technical development of the portal, the assignment shall also address the critical institutional requirement of developing, adopting, and enforcing a National Metadata Standard. This standard will serve as the authoritative framework for the structure, content, encoding, and validation of all metadata records to be published to the portal. It will define a core set of required and optional metadata elements, specify controlled vocabularies and taxonomies, delineate syntax and semantics, and provide mappings to international standards to ensure compatibility and interoperability.

The service provider will conduct a comparative technical analysis of existing metadata standards relevant to spatial data infrastructures, drawing lessons and structure from well-established international practices. A Technical Working Group shall be facilitated to review, validate, and customize the proposed standard to align with local realities and institutional capacities. The provider shall support this process through the drafting of position papers, convening of validation workshops, and refinement of the standard based on stakeholder feedback.

Upon finalization, the National Metadata Standard shall be accompanied by a professionally produced Metadata Authoring Guide. This guide will offer clear and user-friendly instructions for metadata creators, enabling them to consistently produce high-quality metadata records that conform to the adopted standard. The guide shall be tailored for non-technical users and include illustrative examples, recommended field values, and validation checklists.

The formal endorsement of this standard by GLSC and partner agencies will be supported by the service provider through the preparation of required institutional documentation and decision-support materials.

1.5.3 Capacity Building and Operational Readiness

The sustainability and long-term success of the Metadata Portal depend fundamentally on the presence of well-trained institutional personnel and well-documented workflows. As such, a major component of this assignment is the structured development of institutional capacity and operational readiness.

The service provider shall begin by conducting a comprehensive capacity needs assessment, targeting both metadata producers and system administrators. This assessment shall identify existing competencies, skill gaps, and training needs, disaggregated by agency, role, and function.

Based on the assessment findings, the provider shall develop and deliver a series of targeted, hands-on training interventions designed to enable independent, confident use of the Metadata Portal. These sessions shall cover the full spectrum of Metadata Lifecycle activities—from metadata authoring and editing to search, review, and curation—as well as the use of administrative tools for managing the portal itself.

In addition to live training sessions, the service provider shall produce a complete training package, including user manuals, step-by-step guides, Standard Operating Procedures (SOPs), and a series of short, tutorial-style videos. These materials shall be designed to support long-term self-learning, onboarding of new staff, and use during refresher training or outreach events.

Following deployment of the portal, the provider shall conduct a mentorship and support period of no less than three months. During this period, the provider shall offer real-time helpdesk-style support, conduct regular check-ins with users and administrators, and refine processes and configurations in response to emerging issues.

Capacity-building activities shall include pre- and post-training evaluations to measure knowledge gains and assess system readiness across participating institutions.

1.5.4 Governance, Sustainability, and Documentation

A robust technical system is only one component of success. Institutional structures for governance, maintenance, coordination, and continuous improvement are equally critical. The service provider will be required to establish and institutionalize these elements as part of the assignment.

First, the service provider should assist GLSC in establishing a National Metadata Working Group. This group shall include representatives from core data-producing agencies, academic institutions, and relevant ministries. The provider shall prepare draft Terms of Reference for the working group, facilitate its launch, and support its initial meetings.

Second, the provider shall develop a proposed Operational Governance Framework for the Metadata Portal. This framework shall articulate the roles and responsibilities of GLSC and other stakeholders in relation to system maintenance, metadata publishing, content validation, dispute resolution, and policy alignment. It shall also propose a model for periodic review of metadata records, update schedules, and cross-agency coordination mechanisms.

Where appropriate, the provider shall draft templates for inter-agency Memoranda of Understanding (MoUs) governing data sharing, metadata maintenance, and cooperative development of standards and tools.

Finally, the assignment shall conclude with a formal handover process. This process will include the secure transfer of all source code, configuration files, user accounts, credentials, deployment documentation, training materials, and system manuals. The provider shall deliver a final narrative report detailing the work completed, lessons learned, implementation challenges, and recommendations for enhancement and expansion.

In addition, the governance framework shall incorporate principles of data ethics and privacy, ensuring that published metadata does not inadvertently disclose sensitive information, personal data, or

precise geolocations of sensitive sites. Mechanisms for continuous monitoring of ethical compliance shall be included as part of ongoing governance by the National Metadata Working Group

The governance arrangements shall also include a performance monitoring framework for the portal post-deployment, with clear indicators (e.g., system uptime, query response time, user engagement, metadata validation accuracy) and reporting cycles to track operational performance over time.

1.6. Risk Management Requirements

Given the strategic importance and technical complexity of the Metadata Portal initiative, it is imperative that proactive and structured risk management practices are embedded throughout the lifecycle of the assignment. To this end, the service provider shall be required to develop and submit a comprehensive Risk Management Plan as part of their technical proposal. This plan will form a mandatory component of the overall bid evaluation.

The Risk Management Plan shall demonstrate the service provider's ability to anticipate, analyze, and respond to operational, technical, institutional, and logistical risks that may arise during the execution of the project. It must reflect a deep understanding of the implementation environment in Guyana, the multi-agency nature of the portal's use, and the sensitivities related to data governance and institutional coordination.

At a minimum, the Risk Management Plan shall:

- Identify potential risks associated with each major component of the project—such as delays in stakeholder engagement, system deployment challenges, interoperability issues, insufficient uptake by partner agencies, or training inefficiencies.
- Assess the likelihood and impact of each identified risk using a clear and rational framework (e.g., risk matrix, qualitative descriptors, or scoring models).
- Propose concrete mitigation strategies and response plans, tailored to the nature of each risk and grounded in realistic, context-appropriate measures.
- Define clear roles and responsibilities within the provider's team for risk monitoring, reporting, and resolution.
- Describe the methodology that will be used to track emerging risks throughout the project, including how new risks will be documented and how mitigation responses will be adjusted over time.

During the contract period, the Risk Management Plan will be reviewed at inception, with updates required at each major project milestone. The plan will form part of the project's reporting deliverables and will be used as a tool during coordination meetings with GLSC and EFI-RRP.

The absence of a credible risk management strategy will be considered a material weakness in the tender, and service providers are therefore encouraged to allocate appropriate time, expertise, and realism in the formulation of this component.

1.7. Expected Outputs and Deliverables

The successful completion of this assignment shall be evidenced through the production and formal acceptance of a coherent set of interdependent outputs and deliverables. These should not only confirm the technical implementation of the metadata portal but also ensure that the necessary policy frameworks, standards, training instruments, governance mechanisms, and sustainability provisions

are in place. The following deliverables are to be submitted in accordance with the schedule and quality criteria mutually agreed upon at project inception and are subject to acceptance by GLSC and EFI-RRP.

1.7.1 Inception Report

Within the first three weeks of contract entering into force, the service provider shall submit a detailed Inception Report. This report shall summarize the provider's understanding of the assignment, propose refinements to the work plan, define project milestones and timelines, outline the stakeholder engagement strategy, and present an annotated outline of all anticipated deliverables. The report shall also include a risk management matrix and the initial project implementation schedule using Gantt or similar visual timeline formats.

1.7.2 Functional and Technical Specifications Document

Based on initial stakeholder consultations and needs assessment activities, the provider shall submit a comprehensive specifications document outlining the functional, technical, and architectural requirements of the Metadata Portal. This document shall describe system features, integration points, user types and roles, metadata standards to be supported, and security measures. It shall serve as a baseline for system development and validation.

1.7.3 Fully Functional Metadata Portal System

The principal deliverable of this assignment shall be the development and deployment of a fully operational Metadata Portal, based on an open-source platform. The portal shall be deployed in a secure production environment and shall support all functionalities described in the Scope of Work. This includes, but is not limited to, public metadata discovery, metadata creation and editing interfaces, user and access rights management, harvesting from external sources, metadata validation, and administrative dashboards.

The portal must comply with recognized metadata and geospatial standards and be capable of integration with national GIS platforms. Where relevant, the system shall support integration through secure APIs with designated national spatial systems such as the Land Administration System, Forestry GIS, and other approved platforms. The specific systems for integration shall be confirmed during the inception phase.

It must be optimized for performance, user experience, and scalability, and accompanied by full documentation of the codebase, deployment procedures, and system configuration.

1.7.4 National Metadata Standard

A formal National Metadata Standard document shall be developed, validated, and published under the leadership of the provider. The standard shall define metadata elements, field requirements, accepted vocabularies, encoding formats, validation rules, and crosswalks to international standards. The standard must be developed in collaboration with a national technical working group and must be officially endorsed by GLSC. The final deliverable shall include the full standard, a summary implementation guide, and recommendations for periodic review and update.

1.7.5 Metadata Authoring Guide

To complement the national standard, the provider shall produce a detailed Metadata Authoring Guide. This guide shall be written in a user-friendly format for non-specialist staff in public institutions and civil society organizations. It shall provide concrete examples, screenshots, field-by-field explanations, and step-by-step instructions for creating metadata that is compliant with the adopted standard. This guide will serve as a critical capacity-building instrument and must be made available in both digital and printable formats.

1.7.6 Metadata Management Toolkit

A suite of open-source metadata management tools shall be configured or developed as part of the system. These tools enable users to create, edit, validate, publish, and review metadata records. A light-weight desktop or web-based interface may be included for bulk import or offline editing. All tools must integrate seamlessly with the Metadata Portal backend and comply with international protocols such as CSW.

1.7.7 Training Package and Institutional Capacity Building Materials

A complete and replicable training package shall be developed and delivered, including all materials used for face-to-face or virtual training. These shall include, at a minimum:

- Facilitator guides and session outlines
- PowerPoint decks
- Hands-on exercises and sample metadata records
- Pre- and post-training assessment tools
- Standard Operating Procedures (SOPs)
- Short-format video tutorials for key functions

All materials shall be handed over in editable formats and licensed for open institutional use by GLSC and other agencies.

1.7.8 Delivery of Training Sessions and Mentorship Support

Comprehensive, continuous in-person training sessions (or their equivalent in virtual modules) of to-be-determined durations shall be conducted with staff from GLSC and other participating agencies. Training shall cover general principles of metadata, technical use of the portal, creation and editing of metadata records, and administration of the system. The service provider shall also conduct ongoing mentorship and operational support over a minimum period of three months after portal deployment, responding to queries, correcting errors, and assisting with process optimization.

Training shall also include Training of Trainers (ToT) module to equip selected personnel from GLSC and partner agencies to independently deliver future training and onboarding sessions, ensuring continuity of capacity in the event of staff turnover

A final Capacity Building Report shall summarize training activities, attendance, evaluation results, and recommendations for future training needs.

1.7.9 Governance and Institutionalization Package

The service provider shall assist GLSC in institutionalizing the governance of the Metadata Portal and broader Metadata ecosystem. This includes the establishment and launch of a National Metadata Working Group, the drafting of its Terms of Reference, the preparation of inter-agency Memoranda of Understanding for Metadata sharing and maintenance, and the proposal of a Metadata Governance Framework for long-term oversight and accountability.

These deliverables shall ensure that the metadata system is not only technically functional but also institutionally embedded and sustainable.

1.7.10 Final System Documentation and Handover

At the conclusion of the project, the provider shall conduct a full technical and administrative handover. This will include:

- Source code and compiled builds of all software components
- System configuration files and environment settings
- Installation and re-deployment instructions
- Administrator and user documentation
- Access credentials and user account documentation
- A Final Implementation Report documenting activities, challenges, lessons learned, and enhancement recommendations

All deliverables shall be packaged in a secure, well-organized format and submitted in both digital and printed form.

1.8. Implementation Timeline and supervision

The successful execution of this assignment is envisioned over a carefully phased timeline of approximately/ not exceeding **nine (9) calendar months**, allowing additional time for institutional onboarding, extended capacity-building activities, and thorough validation of the national metadata standard. This must be inclusive of preparatory consultations, system development, training, operational deployment, and post-deployment support.

The implementation will be supervised jointly by GLSC's Information Systems Division and EFI-RRP, with monthly reviews and milestone-based reporting. A mid-term review will be conducted in month three to validate progress and allow for course correction if needed.

The timeframe is indicative and shall be refined during the inception phase based on the mutually agreed implementation schedule. The timeline shall be structured into five principal phases, e.g.:

a. Phase I – Inception and Requirements Analysis (Month 1-1.5)

This initial phase shall focus on laying a solid foundation for implementation through structured planning, stakeholder engagement, and design alignment. Key activities will include stakeholder consultations, metadata needs assessment, infrastructure analysis, and presentation of the Inception Report with detailed work plan and risk matrix. This phase also includes the formation of the National Metadata Working Group.

b. Phase II – System Design and Standards Finalization (Months 1.5-3)

During this phase, the service provider shall lead the co-creation of technical specifications for the metadata portal, develop the system architecture, and work with stakeholders to finalize the national

metadata standard. Activities will include technical design workshops, benchmarking of international best practices, and submission of the Metadata Standard and Authoring Guide for stakeholder review.

c. Phase III – Portal Development and Initial Testing (Months 3-7)

This core implementation phase shall focus on developing, configuring, and testing the Metadata Portal using an open-source platform. It will include backend and frontend development, security setup, metadata management workflows, and the integration of harvesting services and search functionalities. Internal system testing and validation will be conducted with designated technical representatives.

d. Phase IV – Capacity Building, Training, and Governance Setup (Months 7-8)

Once the system reaches functional maturity, attention will turn to institutional readiness. Comprehensive capacity building activities will be undertaken for GLSC and partner agencies, including training workshops, delivery of all training materials, and initiation of inter-agency governance mechanisms. This phase also includes the operationalization of the Metadata Working Group and the signing of inter-agency MoUs.

e. Phase V – Full Deployment, Mentorship, and Handover (Months 8-9)

The final stage includes system deployment to a production environment, user acceptance testing, technical handover of all software and documentation, and provision of three months of post-deployment support. The final project report shall consolidate all lessons learned, document open issues, and offer a sustainability roadmap.

The detailed implementation calendar shall be refined and confirmed at project kickoff. Progress shall be tracked monthly, with quarterly milestone reviews involving GLSC and EFI oversight.

1.9. Quality assurance requirements

As part of the acceptance criteria for deliverables, the provider shall ensure that the portal meets defined quality assurance benchmarks. At a minimum, the system must pass agreed performance and load stress tests under realistic usage conditions, and metadata validation processes achieve an error rate less than 2% across sample records. These benchmarks shall be verified during user acceptance testing prior to final handover.

1.10. Post-Deployment Maintenance and Support Provisions

To ensure the continued operational integrity, security, and relevance of the Metadata Portal beyond the initial deployment period, the service provider shall be required to include, as part of their proposal, detailed provisions for a minimum one-year post-deployment maintenance and support warranty.

The maintenance and support warranty must, at a minimum, include the following elements:

- **Scope of Maintenance Services**
 - Routine system health checks, security updates, and application of patches.
 - Bug fixing and issue resolution within agreed service levels.
 - Support for metadata standard updates (where applicable) and compatibility adjustments with evolving technologies.
- **Service Level Agreements (SLAs)**
 - Defined response times for issue acknowledgement and resolution based on severity levels.
 - System uptime commitments and performance guarantees.
 - Escalation protocols for critical failures or security incidents.
- **Support Channels and Availability**
 - Availability of remote and, where necessary, on-site technical support.
 - Defined working hours, emergency support procedures, and contact points.
- **Change Management Provisions**
 - Process for handling requests for system enhancements, new features, or integration with additional platforms.
 - Impact assessment and approval workflow for proposed changes.
- **Reporting and Reviews**
 - Periodic maintenance reports summarizing activities performed, incidents resolved, and recommendations for system improvements.
 - Scheduled review meetings with GLSC to assess maintenance effectiveness and agree on updates.
- **Costing and Contract Duration**
 - Clear cost breakdown for maintenance services, renewable on an annual basis or as otherwise agreed.
 - Any options for scaling the service up or down based on institutional needs.

The warranty must clearly demonstrate the provider's capability and resources to deliver these services, including the qualifications of the personnel assigned to maintenance activities during the warranty period.

1.11. Human and financial resources

The Team of experts mobilized by the Contractor will collectively comply with the following requirements:

- Proven experience implementing national metadata portals or spatial data infrastructures using open-source technologies.
- Deep technical proficiency with the open-source platform, OGC standards, PostgreSQL/PostGIS, and related web GIS stacks.
- Experience in institutional capacity building, especially in the Global South.

- Ability to facilitate high-level consultations, mediate consensus, and deliver comprehensive documentation.

The Contractor will have to mobilize a Team of experts for a total minimum **of 250 working days** with the following requirements for below listed positions and roles:

a) Team Leader / Lead Expert

The Team Leader shall have overall responsibility for technical quality, coordination, and delivery of the assignment. The Team Leader shall demonstrate proven experience leading the design and implementation of national or large-scale metadata portals, spatial data infrastructures, or comparable public-sector digital platforms; a strong understanding of international metadata and geospatial interoperability standards such as ISO 19115 and OGC; experience in institutional coordination and stakeholder engagement in multi-agency environments; and responsibility for the overall methodology, governance alignment, quality assurance, and liaison with GLSC and EFI-RRP.

b) Metadata and Systems Architecture Expert

The Metadata and Systems Architecture Expert shall be responsible for the technical design and implementation of the Metadata Portal and associated tools. The Expert shall demonstrate proven experience in designing and implementing open-source metadata catalogues or spatial data infrastructure components; technical proficiency in relevant open-source technologies, databases, and geospatial platforms; experience in system architecture design with attention to security, scalability, and interoperability; and contribution to technical documentation and handover materials.

c) Governance, Standards, and Institutionalisation Expert

The Governance, Standards, and Institutionalisation Expert shall be responsible for metadata standards development, governance frameworks, and institutional embedding. The Expert shall demonstrate experience in developing or adapting metadata standards and associated governance processes; proven ability to design institutional frameworks, standard operating procedures, working group arrangements, and inter-agency coordination mechanisms; and experience supporting the formal adoption of standards and governance models within public institutions.

d) Capacity Building and Training Expert

The Capacity Building and Training Expert shall be responsible for training, knowledge transfer, and operational readiness. The Expert shall demonstrate proven experience in designing and delivering institutional capacity-building programmes in the public sector; experience with Training-of-Trainers approaches and the development of training materials; and the ability to support post-deployment mentoring and ensure independent operational capability within beneficiary institutions.

The same individual may cover more than one Expert profile, provided that all required competences are demonstrably met. The roles and responsibilities of each nominated Expert shall be clearly described in the Technical Proposal.

A comprehensive financial proposal must be submitted, detailing consultant fees, system development costs, per diem, training costs, travel and logistics, documentation production, and associated costs for the minimum one-year post-deployment support. The budget shall also include necessary licenses (if any), cloud hosting subscriptions (if required), and allowances for stakeholder engagement activities.

If subcontracting is required under this assignment, procurement and financial operations will comply with EFI's procurement requirements.

2. TENDER DOCUMENTATION

2.1. Administrative Documentation

The tender shall include the following documentation, properly filled out and signed:

- Cover letter (Annex 1)
- Identification form (Annex 2) including supporting documentation
- Bank identification form (Annex 2a)
- Declaration on Exclusion Criteria and Absence of Conflict of Interest (Annex 3)
- Nomination of Experts form (Annex 4)
- Minimum criteria declaration (Annex 5)
- The consortium agreement (Annex 6) shall be included, properly filled out and signed, if the tender is submitted jointly by a consortium of economic operators. The consortium agreement (Annex 6) shall not be included if the tender is submitted by a single Tenderer proposing subcontracting of tasks.

2.2. Technical Proposal

In order to evaluate the tender against the minimum criteria and the award criteria A.I. – A.II in section 3.1. and 3.2., the Tenderer shall submit a technical proposal consisting only of the following elements:

1) A nomination of the following Experts to carry out the tasks in the Terms of Reference:

- Team Leader / Lead Expert
- Metadata and Systems Architecture Expert
- Governance, Standards, and Institutionalisation Expert
- Capacity Building and Training Expert

The same individual may cover more than one Expert profile, provided that all required competences are demonstrably met. The roles and responsibilities of each nominated Expert shall be clearly described in the Technical Proposal.

The Technical Proposal shall include CV's of the nominated Experts.

The Tenderer shall be able to certify the information contained in the CV's for the nominated Experts at EFI's request.

The CV shall have all the information as in the EuroPass CV
<https://europass.cedefop.europa.eu/documents/curriculum-vitae>

The Tenderer can use the EuroPass CV template or its own CV template.

2) A description of no more than 5 (five) pages, **making reference to the Terms of Reference and the previous experience of the Expert** showcasing the Tenderer's understanding of:

- **The assignment and the methodology** : providing Tenderer comprehension of the ToR, the approach of the ToR including the sequencing and interdependencies of activities, the institutional context of GLSC and partner agencies.
 - **The required competences**: demonstrating the Tenderer understanding of the key competences required to execute the assignment, and an explanation of how these competences are covered by the proposed Expert(s). These shall include, as applicable:
 - i. Design and implementation of national metadata portals or NSDI components using open-source technologies
 - ii. Application and localisation of international metadata and interoperability standards (e.g. ISO 19115, OGC)
 - iii. Development and institutional adoption of metadata standards and associated SOPs
 - iv. Institutional capacity building and knowledge transfer, including Training-of-Trainers approaches
 - v. Design of operational governance models for multi-agency environments
 - vi. Sustainability and operational planning for long-term system maintenance and evolution
 - vii. Risk and quality management in complex public-sector digital programmes
- 3) A presentation of no more than 20 (twenty) pages on the **Tenderer’s methodology for the assignment** – building upon the Terms of Reference and the experience of the Expert(s)– clearly setting out the **core of the proposed solution as an integrated combination of technical implementation, governance, capacity building, and sustainability measures**, and addressing the following elements under separate headings.**
- **Proposed technical architecture** with best practices in metadata and NSDI platforms; suitability of the open-source stack (including use of an open-source platform); modularity, scalability, and security of the system) referring to previous development by the Tenderer with highlighting direct comparison with scope of the expected assignment/service (indicating publicly available reference/link)
 - **Approach for Capacity Building** including a proposed training strategy; detailed list of training materials to be delivered in editable formats; inclusion plans for different levels of users; Training-of-Trainer’s approach; and methods for ensuring uptake and retention of knowledge and independent operational readiness
 - **Approach for proper governance, institutional package and handover**, including the proposed governance framework (roles and responsibilities, inter-agency coordination mechanisms, working group support, SOPs) and a structured handover of source code, documentation, configurations, and operational procedures.

- **Clear and detailed Project Management Plan** with work plan, timelines with activities and experts allocated
- **Clear and detailed Risk Management Strategy** outlining potential technical, institutional (mechanisms for cross-agency coordination), financial risks and corresponding mitigation strategies and quality assurance requirements
- **Approach for stakeholder Mapping and Engagement Plan**, including preliminary matrix mapping key stakeholders, their roles in metadata production/consumption, and proposed engagement strategies.
- **Clear and detailed proposal of a Sustainability and Maintenance plan**, including post-deployment support arrangements, routine maintenance and security updates, hosting and operational assumptions, change-management procedures, and a roadmap for long-term system evolution and scaling.

The core of the Tenderer's proposal shall be an integrated solution that delivers not only a technically sound Metadata Portal, but also the institutional capability to govern, operate, maintain, and continuously improve it as a national asset. Accordingly, the elements above shall collectively describe a coherent combination of technical implementation, governance arrangements, capacity building, and sustainability measures, rather than a standalone IT system.

2.3. Financial Proposal

The Tenderer shall submit a financial proposal, which shall be completed by using the form in annex 7 and by following the instructions therein.

The full general conditions applicable to the payment of fees and per diem as well as the reimbursement of costs can be found in annex 8 (model contract).

3. EVALUATION OF TENDERS AND AWARD OF THE CONTRACT

3.1. Minimum Criteria

The Tenderer must meet the following criteria:

N°	Criteria description
M.I.	Experience in developing metadata portal or similar systems in line with ISO 19115, FGDC, or other relevant standards; by contextualizing international norms to national requirements (Providing as evidence Prior Experience Reference Sheets Documentation of previous assignments of comparable scope, including client references and system URLs where applicable).
M.II.	Previous year turnover or average yearly turnover of the last two financial years above EUR 100,000 (last two accounting year - 2023 and 2024 - for which the leading entity's accounts have been closed) of the economic operator applying alone or for the economic operator applying as leader of a consortium.
M.III.	Legal entity (legal person) registered in Guyana or authorised to operate in Guyana

The team of experts nominated must meet collectively the following criteria:

N°	Criteria description
M.IV.	Proven experience implementing national metadata portals or spatial data infrastructures using open-source technologies.
M.V.	Deep technical proficiency with the open-source platform, OGC standards, PostgreSQL/ PostGIS, and related web GIS stacks.
M.VI.	Experience in institutional capacity building, especially in the Global South.
M.VII.	Ability to facilitate high-level consultations, mediate consensus, and deliver comprehensive documentation.

Tenders not fulfilling the minimum criteria will be rejected.

3.2. Award Criteria

Tenders which fulfil the minimum criteria will be evaluated using the following award criteria:

A. Technical component (maximum 75 points)		
N°	Award criteria	Max points
A.I.	Understanding of:	15
i.	The assignment and the methodology : providing Tenderer comprehension of the ToR, the approach of the ToR including the sequencing and interdependencies of activities, the institutional context of GLSC and partner agencies.	7
ii.	The required competences: demonstrating the Tenderer understanding of the key competences required to execute the assignment, and an explanation of how these competences are covered by the proposed Experts.	8
A.II.	Proposed methodology for the implementation of the tasks	60
i.	Proposed technical architecture with best practices in metadata and NSDI platforms; suitability of the open-source stack (including use of an open-source platform); modularity, scalability, and security of the system) referring to previous development by the Tenderer with highlighting direct comparison with scope of the expected assignment/service (indicating publicly available reference/link)	15
ii.	Approach for Capacity Building including a proposed training strategy; detailed list of training materials to be delivered in editable formats; inclusion plans for different levels of users; Training-of-Trainers approach; and methods for ensuring uptake and retention of knowledge and independent operational readiness	10
iii.	Approach for proper governance, institutional package and handover, including the proposed governance framework (roles and responsibilities, inter-agency coordination mechanisms, working group support, SOPs) and a structured handover of source code, documentation, configurations, and operational procedures	10
iv.	Clear and detailed Project Management Plan with work plan, timelines with activities and experts allocated	8
v.	Clear and detailed Risk Management Strategy outlining potential technical, institutional (mechanisms for cross-agency coordination),	7

	financial risks and corresponding mitigation strategies and quality assurance requirements	
vi.	Approach for stakeholder Mapping and Engagement Plan, including preliminary matrix mapping key stakeholders, their roles in metadata production/consumption, and proposed engagement strategies	5
vii.	Clear and detailed proposal of a Sustainability and Maintenance plan, including post-deployment support arrangements, routine maintenance and security updates, hosting and operational assumptions, change-management procedures, and a roadmap for long-term system evolution and scaling	5

The Technical component (TC) is calculated according to the following formula:

$$TC = A.I. + A.II.$$

Tenders must receive a score of more than half of the maximum Technical component to be considered qualitatively acceptable.

Tenders not considered qualitatively acceptable will not be considered further.

B. Financial component (maximum 25 points)

Tenders presenting a total financial proposal (Fo) superior to the maximum contract value of EUR 150,000 will not be considered further.

For tenders being considered, the Financial component (F) is calculated according to the following formula:

$$F = (Fmin / Fo) \times 25$$

where

Fmin is total sum in the tender in the evaluation with the lowest total financial proposal; and

Fo is the total sum in the financial proposal being considered.

C. Most economically advantageous tender

A combined score (CS) will be calculated according to the following formula:

$$CS = TC + F$$

The Tenderer with the highest combined score (CS) for Technical component (TC) and Financial component (F) will be awarded the Contract.

Where two or more tenders have an equal combined score the contract will be awarded according to the highest score for the financial component (F).

ANNEXES

Annex 1	Cover letter
Annex 2	Identification form
Annex 2a	Bank identification form
Annex 3	Declaration on exclusion criteria and absence conflict of interest
Annex 4	Nomination of Experts form
Annex 5	Minimum criteria declaration
Annex 6	Consortium agreement
Annex 7	Financial Proposal form
Annex 8	Model contract
Annex 9	Per diem