

TERMS OF REFERENCE

Individual Consultant to Support the Management Information System of the Livelihood Empowerment Against Poverty (LEAP) programme with the Ministry of Gender, Children and Social Protection (MoGCSP)

CONTRACT MODALITY Individual Consultancy

DUTY STATION Accra, Ghana, remote

DURATION OF CONTRACT 11 months

Purpose of Assignment

The consultancy will provide strategic technical and coordination support to the LEAP Programme under the MoGCSP to develop / enhance and maintain a role-based LEAP MIS covering the modules stated under the scope of work as well as capacity building of the LEAP Management Secretariat MIS team to manage the LEAP information management system independently and effectively

Scope of Work

The consultant will work under the supervision of the UNICEF, Programme Specialist (Social transfer) and under the overall Oversight of the UNICEF Chief of Social Policy and Inclusion. UNICEF and the LEAP Management Secretariat, of the MoGCSP, will provide regular technical support to the consultant and facilitate the engagement and collaboration with relevant MoGCSP directorates, social protection partners, and sector stakeholders.

The scope of this assignment is to provide tailored technical backstopping to the LEAP Management Secretariat over eleven-months throughout the LEAP reassessment period and enhance the capacity of the LEAP MIS staff to effectively utilize the LEAP MIS to ensure that no one is left behind as the LEAP database is transitioned to GNHR as part of the LEAP reassessment.

During inception, the consultant shall assess the existing LEAP MIS architecture, source code, database, infrastructure, integrations, documentation, licensing, security posture, and operational constraints. The inception report shall recommend, with justifications. Work assignment includes the following

Objectives:

The consultancy will enhance, operationalise, and maintain a secure, role-based LEAP MIS that digitizes the end-to-end beneficiary pathway from GNHR data ingest through validation, selection, case management, payment enrolment, payroll, FSP transaction integration, reconciliation/reporting, and third-party data exchange, in support of LMS/MoGCSP programme delivery. Specifically, the consultant will enable LEAP MIS system and staff to

1. Integrate LEAP MIS with the GNHR Registry API for controlled seeding of households and members.
2. Deliver an offline-capable household and member validation system for field operations.
3. Implement a quota-based selection engine driven by a configurable community ranking algorithm.
4. Integrate with Financial Service Providers (FSPs) for enrolment onto payment instruments (e-Zwich, Mobile Money, and other LMS-approved channels).
5. Generate periodic payrolls based on dynamic, configurable input parameters (grant rates, cycles, eligibility rules, exclusions, etc.).

6. Integrate with FSPs for payroll transaction submission, status tracking, and operational reporting.
7. Provide detailed payroll reconciliation and management reporting for LMS, MoGCSP, and authorised partners.
8. Implement a full Case Management module for intake, assignment, investigation, resolution, and reporting of beneficiary cases, grievances, and programme exceptions.
9. Design and implement secure integration with other third-party systems for bidirectional or unidirectional data exchange, using agreed standards, APIs, and governance controls.
10. Enforce role-based access control (RBAC) across all modules, with auditability appropriate for public social protection systems

Key Deliverables

The consultant will be responsible for the following deliverables:

Requirements & design - Confirm functional/non-functional requirements with LMS; produce technical design, data model, API contracts, and security model.

Role-based platform - Users, roles, permissions, organisation/FSP scoping, session security, audit logs

Module 1 GNHR seeding - Integration with GNHR API; seeding jobs; data quality controls; cohort/batch traceability

Module 2 Offline validation - Offline-first field validation for households and members; sync; conflict handling

Module 3 Selection engine - Community ranking algorithm + district/community quotas; selection runs; audit trail

Module 4 FSP enrolment - Enrolment onto FSP payment platforms (e-Zwich, Mobile Money, etc.)

Module 5 Payroll generation - Periodic payroll engine with dynamic parameters

Module 6 FSP payroll transactions - Submit/monitor payroll transactions with FSPs; operational reporting

Module 7 Reconciliation - Detailed reconciliation, exception management, and management reports

Module 8 Case Management - Case intake, assignment, workflow, SLAs, dashboards, and linkages to households/members/payroll hold

Module 9 Third-party data exchange - Secure integrations with external systems for data sharing/exchange beyond GNHR and FSPs

Testing & UAT - Unit/integration tests, staging UAT with LMS and (as needed) FSP/third-party counterparts

Documentation & knowledge transfer - Technical docs, operator manuals, training, handover

Maintenance window - Agreed post-go-live support / defect remediation (1st December 2026 30 October 2027)

Methodology The consultant is expected to: Use an agile / iterative delivery approach with demoable increments. Maintain a product backlog prioritized with LMS Conduct joint design reviews for algorithm transparency (Module 3), payroll rules (Modules 5 7), case workflows (Module 8), and third-party interface schedules (Module 9). Coordinate with GNHR, FSP, and other approved third-party technical counterparts for interface testing. Provide weekly progress updates during active development. Ensure every production schema change is migration-controlled and reversible where feasible.

Work Assignments Overview	Deliverables/Outputs	Delivery deadline to complete the deliverable
Inception and Current state assessment: During inception, the consultant shall assess the existing LEAP MIS architecture, source code, database, infrastructure, integrations, documentation, licensing, security posture, and operational constraints.	Deliverable 1 Inception report confirming functional/non-functional requirements with LMS; produce technical design, data model, API contracts, and security model. Users, roles, permissions, organisation/FSP scoping, session security, audit logs	10.12.2026

The inception report shall recommend, with justification, whether each component should be retained, refactored, replaced, or newly developed		
Module 1 — GNHR Seeding - Integrating existing data migration or controlled GNHR seeding of households Minimum requirements 1. Authenticated integration with the GNHR API (credentials via secure configuration; no secrets in source control). 2. Controlled seeding by geography, cohort/batch, and/or other LMS-approved filters. 3. Persist households and members with stable unique identifiers (e.g. GNHR UUIDs) and key welfare/categorisation fields needed for targeting and validation. 4. Asynchronous/job-based seeding with clear statuses (queued, running, completed, failed), progress indicators, and resumability. 5. Idempotent upserts to avoid duplicates on re-seed. 6. Data quality checks (required fields, member–household linkage, duplicate detection). 7. Operator UI to initiate, monitor, and review seeding outcomes (role-gated). 8. Full audit trail: who seeded what, when, filters used, counts, and errors. Acceptance criteria (illustrative) A seeding job can pull and store a defined district/community sample end-to-end. Re-running the same job does not create duplicate households/members.	Deliverable 2 System configuration ensuring Household and member records from the Ghana National Household Registry are accurately and consistently imported into the LEAP MIS and made available for programme implementation and reporting.	20.12.2026

Failures are visible and recoverable without data corruption.		
Module 2 — Offline-based household and member validation system. Offline-capable client (approved technology stack: e.g. PWA / hybrid / lightweight app) for household and member validation workflows. Capture/update of validation outcomes, structured responses, photos/media metadata, GPS (where required), and timestamps. Local queueing of records while offline; sync when connectivity resumes. Conflict resolution rules (server wins / field wins / manual review — as approved by LMS). Device/user authentication and role restrictions for field officers. Server APIs to receive validation payloads (with validation, rate limiting, and anti-abuse controls appropriate for field ingest). Supervisor dashboards: validation coverage, pending sync, quality flags, and exception lists.	Deliverable 3 Enable field validation of household and member data in low/no-connectivity environments, with secure synchronisation to the MIS. A confirmed report with LMS having the following controls: • - Privacy and data-protection impact assessment • Data classification and processing inventory • Data minimization and purpose limitation • Encryption in transit and at rest • Multi-factor authentication for privileged users • Privileged-access controls • Audit-log protection and retention • Secure coding review • Vulnerability assessment • Penetration testing before production acceptance • Incident response and breach-notification procedures • Backup and restore testing • Retention and secure disposal rules • Separation of development, testing, staging, and production environments • Masked or synthetic personal data in non-production environments	30.12.2026

Module 3 Selection algorithm (quota + custom community ranking) Minimum requirements 1. Configurable community ranking algorithm (weights and indicators approved by LMS typically incorporating poverty/PMT-related measures and extreme-poor counts/shares, consistent with programme targeting practice). 2. Quota management at district (and/or other agreed) levels, with community-level allocation derived from ranking and selection percentage rules. 3. Selection runs that are versioned and auditable (inputs, parameters, outputs, operator, timestamp). 4. Household selection within selected communities according to approved poverty categorisation / ranking rules (e.g. extreme poor first). 5. Operator UI to configure parameters, run selection, review results, and export selected lists. 6. Flags/markers on selected households for downstream enrolment and payroll eligibility. 7. Documentation of the algorithm sufficient for programme transparency and third-party review. Acceptance criteria (illustrative) Given fixed parameters and a frozen dataset, two runs produce identical selection outputs. Quotas are not exceeded except under explicitly documented surplus/deficit rules. Outputs are exportable and reconcilable to the run audit record.	Deliverable 4 A brief report with LMS confirmation showing Community ranking algorithm + district/community quotas; selection runs; audit trail resulting in transparently select communities and households for enrolment using LMS-approved ranking logic and quota constraints	20.01.2027
Module 4 Integrating with Financial Service Providers for enrolment onto payment	Deliverable 5 Selected and validated	24.01.2027

platforms Minimum requirements 1. FSP master data and territory/assignment mapping. 2. enrolled/exception. 3. Support for multiple payment instruments (at minimum e-Zwich and Mobile Money; extensible). 4. Secure APIs and/or file-based interfaces as agreed with each FSP. 5. Role-based FSP portal and/or LMS operator screens for enrolment management. 6. Validation of KYC/account attributes required by each FSP channel. 7. Status notifications and exception queues (missing account, name mismatch, duplicate MSISDN, etc.). 8. Audit trail of all enrolment transactions and operator actions. Acceptance criteria (illustrative) SA Sample batch of beneficiaries can be submitted to an FSP sandbox/test endpoint (or agreed stub) and statuses updated in MIS. LMS and FSP users only see data within their authorised scope.	beneficiaries, and caregivers where applicable, enrolled onto designated Financial Service Provider (FSP) payment platforms, including e-Zwich, Paycode, and Mobile Money, to facilitate timely and secure transfer payments.	
Module 5 Generating periodic payrolls for dynamic input parameters Minimum requirements 1. Payroll cycle definition (period, payment number/cycle label, cut-off rules). 2. Dynamic parameters, including but not limited to: Grant amounts / household size bands (aligned to LMS policy) Eligibility inclusions/exclusions Suspension, graduation, death, and case-hold rules Payment Channel mix (e-	Deliverable 6 Bi-monthly (or other periodic) payrolls generated using configurable business parameters	05.02.2027

Zwisch / Mobile Money / Paycode, other) 3. Generation of payroll batches with household/caregiver line items and expected amounts. 4. Pre-payroll validation reports (missing enrolment, invalid accounts, duplicate payees, quota mismatches). 5. Approval workflow (maker checker) before release to FSP transaction module. 6. Immutable snapshot of parameters used for each generated payroll. • Acceptance criteria (illustrative) Changing a parameter and regenerating (before approval) changes amounts as expected. • Approved payrolls are locked against silent edits; corrections create a new version/adjustment batch		
Module 6 Integrating with FSPs for payroll transactions and reporting Minimum requirements 1. Submit approved payroll batches to FSP systems via API and/or secure file exchange. 2. Track transaction-level statuses (pending, processing, paid, failed, reversed, exception). 3. Retry/resubmit controls for failed items under defined rules. 4. FSP and LMS operational dashboards: batch progress, success/fail rates, aging. 5. Secure acknowledgements, checksums/hashes for file interfaces, and replay protection for APIs. 6. Scheduled and on-demand operational reports for LMS and	Deliverable 7 Approved payrolls transmitted to Financial Service Providers (FSPs), transaction outcomes tracked and reconciled, and operational payment reports produced and submitted	10.02.2027

FSPs. Acceptance criteria (illustrative) End-to- end test: approved payroll → status updates reflected in MIS. Partial failures do not block reporting of successful payment		
Module 7 Detailed payroll reconciliation and reporting Minimum requirements 1. Reconciliation of MIS payroll instructions against FSP payment confirmations (and, where available, settlement reports). 2. Exception categories with clearing workflow (underpayment, overpayment, unpaid, unknown beneficiary, duplicate payment, channel mismatch). 3. Cycle-level and cumulative reconciliation statements. 4. Management reports: disbursement by region/district/MMDA, by vulnerability category, by channel, by FSP, by gender/household composition (as data allows). 5. Export to CSV/Excel/PDF for LMS, MoGCSP, and partner reporting. 6. Retention of reconciliation artefacts for audit (duration per LMS policy). Acceptance criteria (illustrative) For a closed cycle, instructed amount, paid amount, and unexplained difference are reportable to the pesewa/currency unit used by LMS Exception items can be assigned, resolved, and reflected in subsequent cycles.	Deliverable 8 Reconciled payment records comparing approved payroll instructions against actual payments made, with management-grade reports produced and submitted for oversight, accountability, and decision-making.	20.02.2027
Module 8 Case Management Minimum requirements 1. Case intake from multiple channels (Social Welfare Officers,	Deliverable 9 A structured, role-based case management system established	28.02.2027

LMS operators, Single Window Citizen Engagement Services (SWCES), FSP escalations, validation exceptions, payroll/reconciliation exceptions, and authorised third-party referrals). 2. Configurable case types and priorities (e.g. grievance, data correction, death/exit, new birth/addition to household membership, suspension, payment failure, NHIS linkage, complementary service referral). 3. Full case lifecycle: intake → screening → assignment → investigation/action → resolution/closure → reopen (where policy allows) 4. Role-based assignment and reassignment (e.g. Case Management Admin assigns; Case Management Officer works assigned caseloads). 5. Linkage of each case to household and/or member identifiers (GNHR UUID / LEAP IDs, FSP payment instrument ID), geography and related payroll/enrolment records where applicable 6. . Ability to place or recommend payroll holds / suspensions subject to maker checker and LMS policy. 7. SLA timers, aging dashboards, and escalation rules. 8. Attachments/evidence (documents, photos, notes) with access control. 9. Case status history and immutable audit trail of actions and status changes. 10. Management dashboards and reports: caseload by type/status/district/officer, SLA breach rates, resolution times, reopen rates. 11. Optional field/offline capture	and operationalized to manage beneficiary issues and grievances, household and member record updates, payment exceptions, and referrals to complementary services throughout the LEAP programme lifecycle.	
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of case reports with synchronisation to the central MIS (aligned with Module 2 patterns where feasible). 12. Integration points so Modules 2, 5, 6, 7, and 9 can open or update cases automatically on defined events (e.g. repeated payment failure) Acceptance criteria (illustrative) A case can be created, assigned, progressed through statuses, and closed with a complete audit history. Officers only see cases within their authorised scope; admins can reassign. Dashboard totals match underlying case records for a frozen test dataset. A payroll-related exception can generate (or link to) a case and be reflected in operator workflows		
Module 9 Integration with other third-party systems for data exchange with named modules and agreed business processes Illustrative counterpart systems (final list to be confirmed with LMS/MoGCSP) National Health Insurance / complementary health linkages National identification or civil registration services (where authorised) Other MoGCSP/MLCRA social protection / complementary programme systems M&E, analytics, or partner reporting platforms (World Bank, UNICEF, FCDO, etc., as approved) SMS/USSD/notification gateways Interoperability hubs or government data-exchange	Deliverable 10 Secure and governed data exchange interfaces established and operationalized between the LEAP MIS and approved third-party systems, enabling controlled data sharing, interoperability, and compliance with data governance requirements beyond GNHR data seeding and FSP payment integration	31.03.2027

platforms Minimum requirements 1. An integration architecture supporting API-based exchange and, where required, secure batch/file exchange. 2. A reusable adapter/connector framework so new third parties can be onboarded without rewriting core MIS modules. 3. Support for push and pull patterns; synchronous and asynchronous exchange; webhook/callback handling where applicable. 4. Clear data contracts (schemas, field mappings, code lists) versioned and documented per partner. 5. Security controls: mutual authentication (e.g. API keys, OAuth2/mTLS as agreed), encryption in transit, IP allowlisting where required, and least-privilege scopes. 6. Consent, legal basis, and purpose limitation controls aligned with MoGCSP / Data Protection requirements for each exchange. 7. Transformation, validation, and rejection handling with quarantine queues for failed messages. 8. Idempotency, replay protection, and deduplication for inbound/outbound messages. 9. Full integration audit log: partner, direction, payload reference/hash, timestamp, success/failure reason (avoid storing unnecessary personal data in logs). 10. Operator console to monitor integration health, reprocess failed exchanges, and manage partner endpoints/credentials (role-		
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gated). 11.Non-production sandboxes/stubs for each major partner interface during development and UAT. 12.Memorandum/technical interface schedule template for each third party (ownership, SLA, support contacts, data fields, frequency). Acceptance criteria (illustrative) At least two distinct third-party exchange patterns are demonstrated end-to-end in staging (e.g. one API pull/push and one batch file), using stubs if live partners are unavailable. Failed messages are visible, reprocessible, and do not silently drop data. Partner credentials and endpoints are configurable without code redeploy. Audit records allow reconstruction of what was sent/received for a given household/batch without exposing secrets.		
System wide testing: Testing & UAT - Unit/integration tests, staging UAT with LMS and (as needed) FSP/third-party counterparts	Deliverable 11 • Approved test plan and traceability matrix • Unit, integration, regression, performance, and security-test results • Test data and test scripts • Defect register with severity and status • FSP and third-party interface-test evidence • UAT completion report • Signed UAT acceptance • Go-live readiness	31.03.2027

	assessment	
Documentation & knowledge transfer • Training-needs assessment • Training plan by user role • Administrator and technical- team training • Operator and supervisor training • Training materials and exercises • Training attendance records • Knowledge checks or practical assessments • Train-the-trainer sessions • Handover readiness assessment • Follow-up support during the maintenance period	Deliverable 12 Technical documents, user documentation and training, operator manuals, handover to the LEAP MIS team	30.04.2027
Maintenance Window	Deliverable 13 Agreed post-go-live support / defect remediation, defined warranty and maintenance support (duration to be specified in contract)	31.10.2027

Payment Schedule:

Payment will be made on submission and acceptance of deliverables. UNICEF reserves the right to withhold payment in case the deliverables submitted are not up to the required standard or in case of delays in submitting the deliverables on the part of the consultant.

Important Notes

- Individuals engaged under a consultancy or individual contract will not be considered “staff members” under the Staff Regulations and Rules of the United Nations and UNICEF’s policies and procedures and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.
- Contracts are conditional upon the selected candidate's willingness to comply with any current or future vaccination requirements that may be established by UNICEF, where applicable. Failure to comply with applicable vaccination requirements, where required and without an approved medical exemption by UNICEF, may result in the withdrawal of the consultancy offer or termination of the contract in accordance with the General Terms and Conditions of Contract.
- UNICEF offers reasonable accommodation for consultants with disabilities. This may include, for example, accessible software, travel assistance for missions or personal attendants. We encourage you to disclose your disability during your application in case you need reasonable accommodation during the selection process and afterwards in your assignment.

QUALIFICATIONS / SPECIALIZED KNOWLEDGE / EXPERIENCE/ COMPETENCIES (CORE/TECHNICAL/FUNCTIONAL) / LANGUAGE SKILLS REQUIRED FOR THE ASSIGNMENT

- Minimum requirements:
- Education:
- An advanced university degree in Computer Science, Software Engineering, Information Systems, Computer Engineering, Data Engineering, or a closely related technical discipline.
- Degrees in Statistics, Economics, or Data Analytics may be accepted where accompanied by substantial, demonstrable professional software-engineering and systems-integration experience.
- Work Experience: At least 10 years of experience in the design, development of large-scale Management Information Systems, computer programming and integration of complex data management systems.
- Experience working with national social cash transfer programmes is an asset.
- Professional qualification in software Development or computer science is an advantage
- Demonstrated experience working closely with government partners and systems is required.
- Excellent analytical, communication, facilitation and capacity building skills are required.
- Ability to work independently and as part of a team.
- Skills:

- Extensive experience (minimum 10 years preferred) in designing and developing production information systems.
- Demonstrated experience delivering rolebased web MIS / transaction systems (preferably large-scale, multi-district or nationwide).
- Proven experience with API integration, relational databases, secure authentication/authorisation, and operational deployment.
- Demonstrated understanding of Social Protection systems (cash transfers, beneficiary registries, targeting/PMT, payment service providers, payroll/reconciliation, or closely related domains). Experience on comparable programmes in Ghana or the African region is a strong advantage.
- Excellent facilitation, consultation and stakeholder coordination skills, including the ability to engage government agencies, Development Partners, and IFIs.
- Ability to work independently, manage multiple tasks within agreed timelines and produce high-quality deliverables.
- Language Requirements: Excellent written and verbal communication skills in English are required.
- Desirables:
 - **Solution architecture** Experience designing modular, scalable, transaction-intensive information systems
Ability to produce architecture diagrams, data models, interface specifications, and deployment designs
Experience assessing and modernizing legacy systems
 - **Software engineering** Demonstrated experience delivering production web applications Version control, peer review, automated testing, and build/release practices Configuration and environment management Maintainable and documented source code
 - **Database and data engineering** Relational data modelling and optimization. Data migration, quality validation, deduplication, and lineage.
Handling high-volume batch processes
Transaction integrity and reconciliation
 - **Systems integration**
RESTful APIs and secure batch exchanges
OAuth 2.0, mutual TLS, API keys, digital signatures, or equivalent authentication patterns
Asynchronous processing, webhooks, retries, idempotency, replay protection, and error queues
API and data-contract versioning
 - **Cybersecurity and privacy**
Secure software-development lifecycle
Threat modelling
Role-based access and segregation of duties
Encryption, key and secrets management
Security testing and remediation
Privacy-by-design and protection of sensitive personal information
 - **Digital payments**
Payment enrolment and KYC validation
Payroll or bulk-payment processing
Transaction-status management
Payment exception handling Financial reconciliation and audit controls Maker-checker approvals
 - **Offline field systems** Offline-first application architecture Local encrypted storage Synchronization, conflict resolution, and recovery

Device and user authentication

Low-bandwidth optimization

- **DevOps and production operations**

Automated deployment or controlled release practices

Environment separation

Monitoring, logging, alerting, backup, and recovery

Incident and problem management

Performance and capacity testing

- **Quality assurance**

Test planning and traceability

Unit, integration, regression, UAT,

performance, and security testing

Defect prioritization and resolution

Production-readiness validation

- **Knowledge transfer**

Technical documentation

Administrator and operator manuals

Training delivery

Coaching government counterpart teams

Structured handover and sustainability planning

- **Ability to engage government programme and ICT stakeholders.**

- Ability to document algorithms and financial controls clearly for non-software audiences.

- Integrity and discretion when handling sensitive beneficiary data
-