TERMS OF REFERENCE

Mojaloop & Tazama System Integrator

The GHASALC-GHAMFIN-CUA Inclusive Instant Payment System (GIIPS) Implementation

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1. Background

The Ghana Association of Savings and Loans Companies (GHASALC), in collaboration with the Ghana Microfinance Institutions Network (GHAMFIN), Ghana Cooperative Credit Union Association (CUA), the Institute for Inclusive Digital Africa (IIDiA), Mojaloop Foundation, and Tazama Foundation under the supervision of The Bank of Ghana (BoG),), is implementing an Inclusive Instant Payment System (GIIPS) for non-bank digital financial service providers (DFSPs) in Ghana.

The initiative aims to deploy a Mojaloop-based shared payment switch with the real time Tazama fraud detection system, operated as a not-for-profit utility to enable interoperable, real-time, low-cost digital payments for Savings & Loans companies, Microfinance Institutions (MFIs), and Credit Unions.

The programme aligns with Ghana's Financial Inclusion Development Policy, the digital finance agenda of the Bank of Ghana, and Level One Project (L1P) principles for inclusive instant payment systems.

The platform will incorporate:

- Mojaloop open-source interoperable payment switch
- Tazama real-time fraud monitoring platform
- Alias-based addressing through Account Lookup Service (ALS)
- Inter-member liquidity management
- Credit scoring and Credit Reference Bureau (CRB) integration
- Pathway to national interoperability with GhIPSS
- RTGS-aligned settlement supporting settlement file formats and protocols

The pilot phase will onboard up to five (5) DFSPs from GHASALC, GHAMFIN, and CUA.

To support the successful deployment, customization, onboarding, and sustainable operation of the platform, GHASALC and partners seek to procure an experienced Mojaloop System Integrator (SI) operating in close partnership with qualified local system integrators.

2. Objective

The primary objective is to procure a qualified and experienced System Integrator (SI) with demonstrated expertise in open-source technology, preferably Mojaloop and Tazama deployments, interoperable payment systems, and inclusive instant payment infrastructure.

The selected SI will be responsible for the end-to-end deployment, configuration, integration, testing, onboarding support, and technical operationalisation of the GIIPS platform. The SI will partner with a qualified Ghanaian local system integrator throughout the programme, with the explicit mandate to guide, mentor, and transfer operational ownership to the local partners

The SI will work closely with GHASALC, IIDiA, BoG, GhIPSS, Mojaloop Foundation, Tazama Foundation, participating DFSPs, and other ecosystem stakeholders to ensure that the system:

- Meets regulatory and sandbox requirements of the Bank of Ghana
- Aligns with Mojaloop FSPIOP API and L1P standards
- Supports sustainable long-term operations
- Enables interoperability among participating DFSPs
- Aligns with TAZAMA latest version standards
- Integrates Tazama fraud monitoring and credit infrastructure from inception
- Achieves high availability, security, and scalability standards
- Is fully adapted to the Ghanaian regulatory and technical context through active collaboration with local system integrators

All bids are encouraged to be submitted in association with a Ghana/regionally-based local integrator or implementation partner with demonstrable understanding of the Ghanaian digital finance market. A commitment to working with local system integrators will also be considered.

3. Role of Local System Integrators

The local system integrator is a delivery partner, not a sub-contractor in a support-only role. The selected regional SI and the local SI shall jointly deliver the programme under clearly defined responsibilities. The following principles govern this relationship:

- The regional SI is responsible for the deployment of Mojaloop and Tazama core components, overall technical architecture, platform security, and programme delivery governance.
- The local SI is responsible under the guidance and mentorship of the regional SI for all use-case development, Ghanaian-context customisation, DFSP Core Connector development, ALS alias integration, RTGS settlement file development and operational support activities.
- All features, integrations, and customisations developed outside of the Mojaloop and Tazama core open-source components are the delivery responsibility of the local SI, with the regional SI providing technical direction, code review, quality assurance, and sign-off.
- The regional SI must commit to an active mentorship and knowledge transfer programme throughout the engagement, not limited to a final handover phase.

4. Scope of Work

The selected System Integrator shall undertake the following activities:

A. Feasibility Assessment and Implementation Planning

- Conduct technical readiness assessment of participating DFSPs with the local SI conducting field-level DFSP assessments
- Assess hosting, connectivity, API, and infrastructure readiness of pilot DFSPs
- Review regulatory and sandbox requirements with BoG and GhIPSS
- Support the development of implementation roadmap with milestones and dependencies: baseline performance metrics and success criteria
- Produce risk assessment matrix and mitigation plan
- Support sustainability and operational transition planning
- Participate in Steering Committee and Technical Committee sessions where required

B. Mojaloop Platform Deployment

- Deploy Mojaloop core components including but not limited to:
    - Switch
    - Central Ledger
    - Account Lookup Service (ALS)
    - Settlement Module
    - Transaction Request Service
    - Participant Registry
    - Mojaloop API Adapters
- Configure Ghana-specific parameters including:
    - Ghana Cedi (GHS)
    - BoG-aligned transfer limits and velocity rules
    - Settlement windows and net deferred settlement parameters
    - Liquidity rules and inter-member pre-funding parameters
- Deploy separate staging/sandbox and pilot production environments
- Configure system for a minimum 5transactions per second (TPS) peak capacity
- Establish high-availability (99.9% minimum up time) and design disaster recovery architecture
- Configure secure VPN/network connectivity for DFSP participants

C. Tazama Fraud Management Integration

- Deploy and configure Tazama alongside Mojaloop
- Configure initial fraud typologies aligned with Ghana risk patterns
- Implement transaction monitoring interfaces
- Configure alerting and case management workflows
- Ensure all transactions are processed through Tazama
- Support Tazama integration testing and validation with the Mojaloop hub

D. Alias-Based Addressing (ALS)

- SI to design and configure ALS core components; local SI to lead integration and testing
- Implement alias registration and resolution workflows
- Support agreed upon alias addressing mechanism
- Configure participant routing logic per DFSP
- Support testing of alias resolution and interoperability flows, local SI to lead.

E. DFSP Integration and Onboarding

- Support onboarding of up to five (5) pilot DFSPs by ensuring compliance to Mojaloop standards and code review
- Support development DFSP Core Connector integration by providing a reference Core Connector architecture, API documentation, and integration standards
- Provide API documentation and integration guidance
- Support Participant Integration Validation (PIV) testing by providing test templates
- Configure participant settlement and liquidity settings
- Support onboarding certification process by reviewing and sign off of PIV results
- Provide troubleshooting and integration support throughout the onboarding process

F. Testing and Quality Assurance

- Develop comprehensive testing strategy covering:
    - Unit testing
    - Integration testing
    - System testing
    - User Acceptance Testing (UAT)

- Friendly User Trials (FUT)

- Conduct Mojaloop TTK conformance testing
- Conduct load and performance testing (minimum 5 TPS under sustained load)
- Support BoG sandbox review processes
- Produce testing reports and remediation plans

G. Go-Live Support and Friendly User Trials

- Support phased go-live approach
- Support controlled Friendly User Trial (FUT) transactions
- Monitor transaction flows and operational performance throughout FUT
- Resolve defects and incidents during pilot operations
- Provide enhanced technical support during go-live periods
- Support stabilization and transition activities

H. Capacity Building and Knowledge Transfer

- Design and deliver comprehensive Train-the-Trainer programs to local system integrators covering all aspects of platform operations, Core Connector development, ALS management and Tazama monitoring
- Deliver targeted training to GHASALC, GHAMFIN, CUA operations teams on hub operations, settlement, dispute management, and incident response
- Support Mojaloop Accelerator Programme activities where required
- Train participating institutions on Core Connector operations, ALS alias management, and Tazama compliance reporting
- Develop detailed user operational manuals, system documentation, and knowledge transfer materials
- Establish technical support helpdesk and escalation procedures
- Support operational handover to the future SPV operating entity
- By contract completion, the local SI must be capable of independently supporting Core Connector development, DFSP onboarding, and first-line incident resolution without regional SI involvement

I. Operational Support and Maintenance

- Provide post-deployment technical support during the pilot period through the local Sis as primary support layer, with the regional SI providing escalation support

- Monitor system availability and transaction performance
- Apply patches, upgrades, and configuration updates
- Support issue management and troubleshooting
- Maintain technical and operational documentation
- Support operational transition to the SPV including formal handover of all system access, credentials, documentation, and repositories

5. Technical Requirements and Specifications

5.1 Infrastructure Requirements

- High-availability deployment architecture
- Minimum 99.9% system uptime target, with maximum 4 hours monthly downtime
- Real-time transaction processing capability, Minimum 5TPS peak capacity with ability to scale
- Secure encrypted data storage compliant with BoG data residency requirements
- Disaster recovery and backup capability with defined RPO and RTO targets
- Monitoring and observability tooling
- Secure participant connectivity architecture

5.2 Security Requirements

- End-to-end encryption using industry-standard protocols (TLS 1.3, AES-256)
- Role-based access controls
- Multi-factor authentication for administrative access
- Secure API authentication mechanisms
- Comprehensive audit logging
- Secure storage of credentials and certificates
- Compliance with international security best practices

5.3 Integration Standards

- RESTful APIs architecture with Open API 3.0 specification
- FSPIOP API standards
- ISO 20022 alignment
- Mojaloop Testing Toolkit (TTK) compliance
- Real-time settlement support with T+1 processing

- Support for interoperability with GhIPSS

5.4 Functional Requirements

The deployed system must support the following use cases, with the local SI responsible for use-case development under regional SI guidance:

- P2P transfers
- Loan disbursement
- Loan repayment
- P2B bill payments
- Alias-based addressing
- Liquidity management
- Real-time Tazama fraud monitoring and alerting

6. Deliverables

Phase I – Design, Assessment and Sandbox Deployment (6 months)

- Comprehensive stakeholders' feasibility and readiness assessment report
- Technical architecture document and deployment design specifications
- Local SI capability and development plan with milestones for independence
- Detailed project implementation plan with timeline and milestones
- Risk assessment and mitigation framework
- Sandbox deployment documentation
- Mojaloop sandbox environment
- Tazama sandbox deployment
- ALS configuration and testing report
- API documentation and Participant onboarding strategy and procedures
- Training plan and knowledge transfer plan

Phase II – DFSP Integration and Pilot Deployment (8 months)

- Integrated DFSP Core Connectors (local SI development, regional SI sign-off)
- Participant onboarding and certification reports
- Comprehensive testing reports (SIT, UAT, performance, security)
- PIV and TTK conformance testing reports

- Operational SOP documentation
- Go-live readiness assessment
- Friendly User Trial (FUT) support reports
- Incident and issue management logs
- Performance monitoring reports
- Training completion reports
- Technical operations manuals

Final Deliverables

- Final production deployment documentation
- Source code/configuration repositories and handover documentation
- Knowledge transfer completion report
- Operational transition and handover report
- Final project closure report

7. Duration and Timeline

Total Contract Duration: The initial contract will be for a period of 06 months with the possibility of extension/renewal based on performance and project needs.

The initial contract covers Phase I only. Extensions to Phase II detailed above, are not automatic. There is potential for a Phase III to cover all non-bank DFSPs in Ghana, which is beyond the scope of the current project.

The integrator must support readiness for pilot activation subject to Bank of Ghana approval.

7. Reporting and Governance Structure

7.1 Reporting Lines

The System Integrator will report to:

- Primary: GHASALC Programme Lead
- Technical Oversight: IIDiA Technical Assistance Lead
- The local SI reports to the regional SI for technical delivery, and directly to the GHASALC Programme Lead for operational activities

7.2 Coordination Framework

The SI shall work closely with:

- GHASALC
- GHAMFIN
- CUA
- IIDiA
- Bank of Ghana (BoG)
- GhIPSS
- Mojaloop Foundation
- Tazama Foundation
- Participating DFSPs
- Local System Integrators
- Steering Committee
- Technical Committee

7.3 Governance Participation

The SI may be required to:

- Participate in Technical Committee sessions
- Provide implementation status updates
- Support Steering Committee reporting
- Escalate critical implementation risks
- Participate in regulatory and stakeholder workshops

8. Required Qualifications and Experience

8.1 Institutional Requirements (Mandatory)

Mojaloop Experience

- Proven experience deploying or supporting Mojaloop implementations
- Experience with interoperable payment systems and instant payment infrastructure
- Added advantage will be given to registered Mojaloop System Integrators

Payment Systems Expertise

- Demonstrated experience implementing large scale digital payment switches or interoperable payment platforms
- Experience with real-time transaction processing systems

Technical Capabilities

- Expertise in:
    - Kubernetes
    - APIs and microservices
    - DevOps and CI/CD
    - Cloud and on-premise deployments
    - Secure systems architecture

Fraud and Risk Management Experience

- Experience integrating fraud monitoring or AML/CFT systems
- Familiarity with Tazama or similar fraud monitoring solutions is an advantage
- Added advantage will be given to registered Tazama System Integrators

Regional and Emerging Market Experience

- Proven track record working in Africa or emerging market digital finance ecosystems
- Experience supporting central bank-regulated payment systems

Regulatory Compliance

- Proven experience with central bank regulations and financial compliance frameworks

Security Certification

- Should be ISO 27001 certified

8.2 Key Personnel Requirements

Technical Lead (Mandatory)

- Minimum 3 years payment systems architecture experience
- Experience leading at least one Mojaloop implementation or comparable open-source payment switch deployment
- Strong knowledge of payment industry standards (ISO 20022)
- Knowledge of FSPIOP and payment standards

DevOps / Infrastructure Engineer (Mandatory)

- Kubernetes Administration certification
- Minimum 3 years DevOps experience in financial services
- CI/CD and infrastructure automation experience

- Financial services infrastructure deployment experience

Integration Engineer (Mandatory)

- Minimum 3 years API development and integration experience
- Experience integrating core banking systems
- Experience with legacy system integration and middleware
- Strong software engineering capability (programming skills in Java, Node.js, or similar)

Fraud & Risk Integration Specialist (Mandatory)

- Experience implementing transaction monitoring systems
- AML/CFT and fraud management experience
- Experience with Tazama is an advantage

8.3 Additional Requirements

- English language proficiency
- Ability to deploy key personnel full-time for the duration of the assignment
- Commitment to knowledge transfer and local ecosystem capacity building

9. Evaluation Criteria (Weighted Scoring)

9.1 Technical Capability – 35 Points

- Mojaloop implementation experience, methodology and success rate – 10 points
- TAZAMA Fraud Management experience, methodology and success rate – 10 points
- Technical architecture and deployment approach – 5 points
- Security and fraud management approach – 5 points
- Innovation and scalability considerations – 5 points

9.2 Team Expertise and Capacity – 25 Points

- Qualifications and experience of key personnel – 10 points
- Team composition and delivery capability – 5 points
- Capacity-building commitment and knowledge transfer approach – 5 points
- Strength and role of local integration partner – 5 points

9.3 Implementation Approach – 20 Points

- Project timeline and implementation methodology – 8 points

- Risk management and mitigation strategies – 7 points
- Stakeholder engagement and change management approach – 5 points

9.4 Financial Proposal – 15 Points

- Cost competitiveness and value for money – 8 points
- Clear cost mapping to deliverables – 4 points
- Total cost of ownership and operational support considerations – 3 points

9.5 References and Track Record – 5 Points

- Client references and project success stories – 3 points
- Similar implementation experience and case studies – 2 points

Minimum Qualifying Score: 70 out of 100 points

10. Submission Requirements

Interested firms must submit the following details for **Phases I & II**.

The current contract will only cover phase I:

10.1 Technical Proposal

- Detailed technical approach and methodology
- Project implementation plan and timeline with clear milestones and dependencies
- Deployment and architecture approach
- Risk management framework and mitigation strategies
- Testing and quality assurance methodology
- Change management and stakeholder engagement strategy
- Knowledge transfer and sustainability plan

10.2 Organizational and Team Information

- Company profile
- Relevant project experience
- Organizational structure
- Proposed project team
- CVs of key personnel
- Local partner information

- Subcontracting arrangements (if applicable)

10.3 Financial Proposal

- Detailed cost breakdown by phase and deliverable
- Resource allocation and pricing structure
- Payment schedule aligned with milestones
- Support and maintenance pricing
- Cost estimates for extension period
- Assumptions and exclusions

10.4 References and Supporting Documentation

- Case studies from similar Mojaloop & Tazama implementations
- Relevant certifications and accreditations
- ISO 27001 Certification
- Financial statements and company registration documents
- Insurance and bonding information
- Client references
- Company registration documents

11. Terms and Conditions

11.1 Contract Type

- Fixed-price contract with milestone-based payments
- Contract extension subject to performance and programme requirements

11.2 Intellectual Property

- All customizations, deployment artifacts, and locally developed configurations shall become the property of the GIIPS programme/SPV
- Mojaloop and Tazama components remain open-source
- Documentation and training materials shall be transferred to the programme

11.3 Confidentiality and Data Protection

- The SI must comply with applicable Ghana data protection and confidentiality requirements
- All participant and transaction data must be securely handled

11.4 Service Levels

- Target system availability: 99.9%
- Timely incident response and escalation procedures
- Performance monitoring and reporting obligations: e.g. agreed TPS and response time targets
- Defined issue resolution timelines: 4 hours for system-down issues

12. Indicative Procurement Timeline

Activity	Timeline
RFP Publication	18th May 2026
Clarification Period	18th May – 10th June 2026
Submission Deadline	24th June 2026
Evaluation Period	24th June – 4th July 2026
Vendor Selection & Notification	6th July 2026
Contract Award	10th July 2026
Project Kick-Off	20th July 2026

13. Special Notes

This call for tenders is contingent upon financing, and we reserve the right not to proceed.

14. Contact Information

For clarifications and submissions:

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