

Terms of reference (ToRs) for the procurement of services below the EU threshold

Consultancy Services for the Design, Validation, Testing, Documentation, Outreach and Evaluation of an Open Commerce-Logistics API for E-Commerce in Ghana	Project number/ cost centre:
	G-18154-004

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0. List of abbreviations

AG	Commissioning party
AN	Contractor
AVB	General Terms and Conditions of Contract for supplying services and work
FK	Expert
FKT	Expert days
KZFK	Short-term expert
ToRs	Terms of reference

1. General information

The Digital Transformation Center

The Digital Transformation Center in Ghana is part of a pan-African network of flagship projects that the Federal Ministry for Economic Cooperation and Development (BMZ) is building to support the transformation process on the African continent. The goal of the Digital Transformation Center Ghana is to improve the preconditions for using digital transformation for more employment and entrepreneurship, specifically in rural areas. This means equipping young people with the digital skills they need to thrive in the 21st century and making sure everyone is on board. This also means supporting digital innovation in rural areas. What is lacking are not ideas and innovations, but the various means to realize these and scale them up: trainings, mentoring-support and networks.

The Digital Transformation Center in Ghana can be regarded as an umbrella that encompasses four distinct projects:

1. Digital Transformation for Inclusive Entrepreneurship in Ghana (DTEG) supports inclusive development in Ghana by promoting digital entrepreneurship among informal MSMEs through tailored gender transformative capacity development.
2. The Pan-African e-Commerce Initiative (PeCI) which aims at improving the preconditions for companies in selected African countries to participate in cross-border e-Commerce
3. FAIR Forward - Artificial Intelligence for all, which aims to promote a framework for the application of artificial intelligence.
4. The Tech Entrepreneurship Initiative Make-IT in Africa

Background on Pan-African e-Commerce Initiative

The Pan-Africa e-Commerce Initiative (PeCI) promotes the creation of an enabling environment for companies, especially SMEs to engage in national and cross-border digital trade activities. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH implements this project on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) in Ghana, Nigeria, Kenya and Rwanda.

The project works towards creating the preconditions for e-commerce to thrive in Africa, under the following:

- Provision of tailor-made capacity development sessions for small and medium-sized enterprises to utilize e-commerce solutions
- Supporting cross-sectoral networks to bring together private and public sector stakeholders to promote knowledge sharing and support to e-commerce networks at the national, regional, and pan-African levels.
- Improving framework conditions through the implementation of national and regional e-commerce strategies, as well as the support of the Smart Africa Alliance in implementing of a blueprint on e-payments for the facilitation of trade.

- Increasing trust in digital trade through the establishment of Trust Seals in line with relevant regulations, including e-transactions, consumer protection, and data privacy and security.

1.1 Background

Online commerce in Ghana is growing faster than the operational infrastructure that supports it. Merchants who sell through websites, social platforms, chat applications, and in some cases basic phones still arrange most logistics tasks manually. They book pickups by phone, track shipments through follow-up calls, hold inventory at home or in shared retail space, handle cash-on-delivery reconciliation by hand, and process returns on an ad hoc basis. This manual layer limits order volumes, slows fulfilment processes, increases operating costs, and introduces avoidable inefficiencies throughout the commerce-logistics value chain.

To address these challenges, the Pan-African e-Commerce Initiative (PeCI), implemented by GIZ, intends to support the design, development and pilot implementation of an **Open Commerce-Logistics API** for Ghana. The API will provide a standardized integration layer exposing the complete service catalogue of ShaQ Express through a single technical interface. It will support on-demand, standard and intercity delivery services, warehouse and inventory management, pick-and-pack operations, cash-on-delivery reconciliation, and reverse logistics.

ShaQ Express will serve as the initial logistics operator during the pilot phase, while the API specification will be published openly to enable adoption by additional courier companies, particularly members of the Association of Licenced Courier Companies, Ghana.

1.2 Context

Four key challenges currently constrain the efficiency of e-commerce logistics in Ghana.

The first challenge is the absence of a common integration standard. Most merchants wishing to automate logistics must negotiate bespoke integrations with courier companies, making automation expensive and inaccessible, particularly for MSMEs.

Secondly, existing courier APIs provide only limited functionality, typically supporting same-day dispatch while excluding critical fulfilment services such as warehousing, inventory management, pick-and-pack operations, cash-on-delivery reconciliation, and reverse logistics.

Thirdly, current logistics solutions disproportionately serve merchants operating websites or sophisticated digital platforms, while the majority of Ghanaian MSMEs conduct business through social media, messaging platforms and feature phones.

Finally, courier companies operate isolated proprietary systems with no interoperable interface, preventing merchants from switching providers easily and reducing competition within the logistics ecosystem.

Collectively, these gaps increase operational costs, delay deliveries, reduce customer satisfaction and constrain the growth of digital commerce.

1.3. Objectives of the Pilot

The consultancy supports implementation of the following pilot objectives:

- Design and publish an Open Commerce-Logistics API specification covering dispatch services, fulfilment, inventory management, warehouse services, cash-on-delivery and reverse logistics.
- Develop and validate a production-ready reference implementation with ShaQ Express.
- Enable low-barrier access for merchants without technical integration capabilities.
- Integrate the API with selected platform partners and onboard merchant cohorts across multiple service tiers.
- Generate ecosystem awareness through structured marketing, merchant engagement and developer outreach.
- Produce evidence on operational performance, merchant experience and scalability to support future nationwide adoption.

1.3 Purpose of the Consultancy

The purpose is to provide end-to-end technical, advisory, communication, stakeholder engagement and independent evaluation services to support the successful implementation of the Open Commerce-Logistics API pilot.

The consultancy shall work closely with GIZ, ShaQ Express, platform partners, merchant associations, developers, logistics providers and other ecosystem stakeholders throughout the project lifecycle.

The duration of the contract is from 20th August 2026 to 20th March 2027.

2. Tasks to be Performed by the Contractor

The tasks to be performed, as listed below are grouped into four (4) work packages, reflecting the sequence of activities from development through to monitoring and reporting.:

The roles are organised into the following work packages.

Work Package 1: Technical Architecture, API Specification and Fulfilment Advisory

Objective

Provide technical leadership in defining, validating and refining the Open Commerce-Logistics API and its operational fulfilment model.

Activities

The consultant shall:

- Develop the complete Open Commerce-Logistics API specification covering:
 - Dispatch services
 - Warehouse management
 - Inventory management

- Pick-and-pack workflows
 - Cash-on-delivery
 - Reverse logistics
 - Authentication
 - Event notifications
 - Error handling
 - API governance
- Review and advise on fulfilment workflows and inventory models.
- Validate operational processes against ShaQ Express capabilities.
- Review interoperability requirements for future adoption by additional courier companies.
- Participate in technical design reviews throughout implementation.

Deliverables

- Inception technical assessment report
- Complete API Specification Document
- Fulfilment and Inventory Advisory Report
- Technical Design Review Reports
- Final API Governance Recommendations

Work Package 2: Security Assurance, Testing and Technical Documentation

Objective

Ensure that the API meets industry security standards and is supported by high-quality technical documentation.

Activities

The consultancy shall:

- Conduct security architecture reviews.
- Perform vulnerability assessments.
- Conduct penetration testing.
- Recommend remediation measures.
- Validate implementation after remediation.
- Review and edit developer documentation.
- Produce user-friendly API reference materials.
- Design documentation templates and developer guides.

Deliverables

- Security Assessment Report
- Penetration Testing Report
- Risk Mitigation Recommendations
- Updated Developer Documentation
- API Integration Guide
- Technical Reference Manual

Work Package 3: Merchant Engagement, Communications and Ecosystem Activation

Objective

Drive awareness, stakeholder engagement and merchant adoption throughout the pilot.

Activities

Marketing and Communication

- Develop marketing concepts and campaign materials.
- Produce digital communication content.
- Design promotional materials.
- Develop ecosystem awareness content.

Merchant Outreach

- Produce merchant brochures, flyers and onboarding materials.
- Conduct market activation visits.
- Support merchant onboarding campaigns.

Stakeholder Workshops

Organise and facilitate:

- Project inception workshop with merchants and platform partners.
- Fulfilment design review workshop with selected merchants.
- Mid-pilot consultation with the Courier Association of Ghana.
- Closing dissemination conference.
- Developer Day showcasing API capabilities.

Deliverables

- Marketing and Communication Strategy
- Creative Assets Package
- Merchant Outreach Toolkit
- Workshop Reports
- Event Proceedings
- Developer Day Report

Work Package 4: Monitoring, Evaluation and Learning

Objective

Assess project performance, capture lessons learned and generate evidence for future scale-up.

Activities

- Design project monitoring framework.
- Develop merchant satisfaction survey methodology.
- Conduct tier-segmented merchant surveys.
- Participate in quarterly project review meetings.
- Undertake independent evaluation during Phase 4.
- Document lessons learned.
- Produce recommendations for national scaling.

Deliverables

- Monitoring Framework
- Merchant Satisfaction Survey Instruments
- Survey Reports
- Quarterly Review Reports
- Independent Evaluation Report
- Lessons Learned Report
- Final Project Evaluation

Methodology

The consultancy shall employ a participatory and iterative methodology including:

- Technical consultations
- Co-design workshops
- User-centred design approaches
- Agile review processes
- Security testing
- Merchant validation sessions
- Stakeholder engagement
- Independent performance assessment

Expected Outputs

The consultancy shall deliver:

- Comprehensive Open Commerce-Logistics API specification
- Fulfilment process recommendations
- Security audit and penetration testing reports
- Complete developer documentation
- Marketing and communication materials
- Merchant onboarding toolkit
- Stakeholder workshop reports
- Merchant satisfaction assessment
- Independent pilot evaluation
- Final project report including recommendations for national adoption

Duration/Milestones

Certain milestones, as laid out in the table below, are to be achieved during the contract term:

Work Package	Duration
WP1 - Technical Design	1 – 3 Months
WP2 - Security & Documentation	3 – 6 Months
WP3 - Outreach & Ecosystem Engagement	2 – 8 Months
WP4 - Monitoring & Evaluation	1 – 8 Months

3. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 2 (Tasks to be performed) are to be achieved, if applicable under consideration of further method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Note: The numbers in parentheses correspond to the lines of the technical assessment grid.

Technical-methodological concept

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter **Error! Reference source not found.** Context) (1.1.1). Following this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Tasks to be performed) (1.1.2).

The tenderer is required to present the actors relevant for the services for which it is responsible and describe the **cooperation (1.2)** with them.

The tenderer is required to present and explain its approach to **steering** the measures with the project partners (1.3.1) and its contribution to the **results-based monitoring system** (1.3.2).

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) that describes how the services according to Chapter **Error! Reference source not found.** (Tasks to be performed by the contractor) are to be provided. In particular, the tenderer is required to describe the necessary work steps and, if applicable, take account of the milestones and **contributions** of other actors (partner contributions) in accordance with Chapter 2 (Tasks to be performed) (1.4.2).

The tenderer is required to describe its contribution to knowledge management for the partner (1.5.1) and GIZ and to promote scaling-up effects (1.5.2) under **learning and innovation**.

Project management of the contractor (1.6)

The tenderer is required to explain its approach for coordination with the GIZ project. In particular, the project management requirements specified in Chapter 2 (Tasks to be performed by the contractor) must be explained in detail.

The tenderer is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

4. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 6), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

Team leader

Tasks of the team leader/Digital Commerce Specialist

- Overall responsibility for the advisory packages of the contractor (quality and deadlines); Lead the design, coordination and delivery of the entire communication and marketing campaign, ensuring all work packages are executed to schedule and to the required standard.
- Coordinating and ensuring communication with GIZ, partners and others involved in the project; serving as the main point of contact with GIZ, and ShaQ Express throughout the assignment.
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments.
- Regular reporting in accordance with deadlines
- Oversee the preparation and submission of all quarterly progress reports and a final report to GIZ and ShaQ Express, consolidating inputs from all work packages.

Qualifications of Team Leader

Education/Training (2.1.1): A minimum of a Master's degree in Digital Commerce, Information Systems, Computer Science or Business Administration

Language (2.1.2): C1-level language proficiency in English.

General professional experience (2.1.3): Professional certifications in Project Management (PMP, PRINCE2, Agile, Scrum) or Digital Transformation will be an added advantage.

Specific professional experience (2.1.4)

- Minimum of **12 years** of progressively responsible professional experience in digital economy, e-commerce, digital trade, ICT or innovation ecosystem development.
- At least **10 years** leading complex multi-stakeholder projects involving public and private sector institutions.
- Proven experience leading digital platform, interoperability, API ecosystem or digital transformation projects.
- Experience working with MSMEs, digital commerce platforms, logistics providers and government institutions.
- Demonstrated experience facilitating high-level stakeholder consultations and technical working groups.

Leadership/management experience (2.1.5): Excellent report writing, project management and communication skills.

Regional experience (2.1.6): Strong knowledge of digital trade policies, e-commerce ecosystems and innovation ecosystems in Africa.

Development cooperation (DC) experience (2.1.7): Demonstrated experience managing donor-funded projects financed by organizations such as GIZ, World Bank, AfDB, UN agencies, EU or similar development partners.

Key Expert 1: Logistics and Fulfilment Specialist

Qualifications

Education/training (2.2.1): A minimum of a Bachelor's degree in Logistics, Supply Chain Management, Operations Management, Industrial Engineering, Transport Management, Business Administration or related discipline.

A Master's degree in Logistics, Supply Chain Management or Operations Management will be an advantage.

Language (2.2.2): C1 -level language proficiency in English

General professional experience (2.2.3): Minimum of **15 years** of professional experience in logistics, courier operations, warehousing or fulfilment services.

Specific professional experience (2.2.4): At least **15 years** of Demonstrated experience designing or improving logistics and fulfilment systems for e-commerce businesses.

- Experience with warehouse management systems (WMS), inventory management systems and last-mile delivery operations.
- Experience developing fulfilment workflows including order processing, pick-and-pack, inventory visibility and reverse logistics.
- Strong understanding of cash-on-delivery operations and reconciliation processes.

- Familiarity with digital logistics technologies, courier platforms and transport management systems.
- Experience working with MSMEs and e-commerce merchants is highly desirable.
- **Leadership/management experience (2.2.5):** Minimum of 10 years of finance and partnership management experience
- **Regional experience (2.2.6):** 10 years of experience in projects in Africa, of which 3 years in projects in Ghana.
- **Development Cooperation (DC) experience (2.2.7):** 8 years of experience in DC projects. Familiarity with donor-funded project environments and experience writing proposals for bilateral or multilateral development funders is a significant advantage.

Key expert 2: API Architect & Cybersecurity Specialist

Education/Training (2.2.1): A minimum of a Bachelor's degree in Computer Science, Software Engineering, Information Technology, Cybersecurity or a related field.

A Master's degree in Software Engineering, Information Systems or Cybersecurity will be an advantage.

Language (2.2.2): C1 -level language proficiency in English

Specific professional experience (2.2.4): Minimum of **12 years** of professional experience in software architecture, API design, systems integration or enterprise application development.

- Demonstrated experience designing RESTful APIs, OpenAPI specifications, API gateways and microservices architecture.
- Proven experience designing interoperable digital platforms and integration frameworks.
- Minimum of **10 years** of experience in cybersecurity assessments, vulnerability analysis and penetration testing.
- Experience implementing secure authentication mechanisms including OAuth2, JWT, API Keys and role-based access control.

Regional experience (2.2.6): Experience working in related positions within the sub-region is essential

Development Cooperation (DC) experience (2.2.7): Demonstrated experience managing donor-funded projects financed by organizations such as GIZ, World Bank, AfDB, UN agencies, EU or similar development partners.

Key Expert 3: Communications and Marketing Specialist

Education/training (2.2.1): A minimum of a Bachelor's degree in Communications, Marketing, Public Relations, Journalism, Digital Media, Business Administration or related field.

A Master's degree in Marketing, Strategic Communications or Digital Marketing is an advantage.

Language (2.2.2): C1 -level language proficiency in English

Specific professional experience (2.2.4): Minimum of **12 years** of experience in strategic communications, marketing, stakeholder engagement or public awareness campaigns.

- Demonstrated experience designing communication strategies for digital innovation or technology-related projects.
- Experience producing communication materials including brochures, flyers, social media content, promotional videos and event branding.
- Proven experience planning and managing stakeholder engagement activities, workshops and public events.
- Experience implementing outreach campaigns targeting MSMEs and business communities.
- Knowledge of digital marketing tools and analytics.
- Excellent writing, editing and presentation skills.
- Experience working on donor-funded development communication projects will be an added advantage.

Development Cooperation (DC) experience (2.2.7): Demonstrated experience managing donor-funded projects financed by organizations such as GIZ, World Bank, AfDB, UN agencies, EU or similar development partners.

Key Expert 4: Monitoring and Evaluation Specialist

Education/training (2.2.1): A minimum of a Master's degree in Monitoring and Evaluation, Statistics, Economics, Development Studies, Public Policy, Social Sciences, Business Analytics, Data Science or another relevant discipline

Language (2.2.2): C1 -level language proficiency in English

Specific professional experience (2.2.4): Minimum of **12 years** of experience in monitoring, evaluation, learning and research for development programmes.

- Demonstrated experience designing logical frameworks, theories of change, performance measurement frameworks and results-based monitoring systems.
- Proven experience conducting baseline studies, mid-term reviews, end-line evaluations and impact assessments.
- Experience designing and administering surveys, including digital data collection tools and merchant/customer satisfaction surveys.
- Strong quantitative and qualitative research skills, including statistical analysis and data visualization.
- Experience producing high-quality evaluation reports and policy recommendations.
- Familiarity with OECD-DAC evaluation criteria and donor reporting requirements.
- Experience evaluating digital transformation, ICT, e-commerce or private sector development projects will be a strong advantage.

Development Cooperation (DC) experience (2.2.7): Demonstrated experience managing donor-funded projects financed by organizations such as GIZ, World Bank, AfDB, UN agencies, EU or similar development partners.

5. Costing requirements

Assignment of personnel and travel expenses

Per-diem and overnight accommodation allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (downloadable at <https://www.bundesfinanzministerium.de>).

Accommodation costs which exceed this up to a reasonable amount and the cost of flights and other main forms of transport can be reimbursed against evidence

All business travel must be agreed in advance by the officer responsible for the project.

Sustainability aspects for travel

GIZ would like to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest-emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO₂ efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

If they cannot be avoided, CO₂ emissions caused by air travel should be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance \(German only\)](#) has published a [list of standards \(German only\)](#). GIZ recommends using the standards specified there.

Specification of inputs

	Number of experts	Number of days per expert	Total	Comments
Designation of Team Lead	1	20	20	
Designation of Expert 1 (Logistics & Fulfilment Specialist)	1	15	15	
Designation of Expert 2 (API Architect and Cyber Security Specialist)	1	10	10	

Designated Expert 3 (Communications & Marketing Specialist)	1	10	10	
Designated Expert 4 (Monitoring & Evaluation Specialist)	1	20	20	

6. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 15 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in English (language).

Please calculate your financial tender based exactly on the parameters specified in Chapter 5 Quantitative requirements. The contractor is not contractually entitled to use up the days, trips, workshops or budgets in full. The number of days, trips and workshops and the budgets will be contractually agreed as maximum limits. The specifications for pricing are defined in the price schedule.