REQUEST FOR PROPOSAL (RFP)

NAME & ADDRESS OF FIRM	DATE: February 23, 2022
	REFERENCE: RFP-BD-2022-005

Dear Sir / Madam:

We kindly request you to submit your Proposal for **Hiring a firm for e-Commerce Platform Replication in Yemen-a2i.**

Proposals shall be submitted on or before 4.30 p.m. (local time) on Wednesday, March 09, 2022

Please be guided by the form attached hereto as Annex 2, in preparing your Proposal.

Proposals may be submitted on or before the deadline indicated by UNDP in the e-Tendering system. Bids must be submitted in the online e-Tendering system in the following link: https://etendering.partneragencies.org; using your username and password. If you have not registered in the system before, you can register now by logging in using

Username: event.guest
Password: why2change

and follow the registration steps as specified in the system user guide.

Your Proposal must be expressed in the English, and valid for a minimum period of 90 days.
You are kindly requested to indicate whether your company intends to submit a Proposal by clicking on "Accept Invitation" in the system.

In the course of preparing and submitting your Proposal, it shall remain your responsibility to ensure that it submitted into the system by the deadline. The system will automatically block and not accept any bid after the deadline. Kindly ensure attaching the required supporting documents (*with file name less than 60 characters*) in pdf format which must be free from any virus or corrupted files. Proposals that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation.

The Financial Proposal and the Technical Proposal files MUST BE COMPLETELY SEPARATE and uploaded separately in the system and clearly named as either "TECHNICAL PROPOSAL" or "FINANCIAL PROPOSAL", as appropriate. Each document shall include the Proposer's name and address**. The file with the "FINANCIAL PROPOSAL" must be encrypted with a password** so that it cannot be opened nor viewed until the Proposal has been found to pass the technical evaluation stage. Once a Proposal has been found to be responsive by passing the technical evaluation stage, UNDP shall request via email the Proposer to submit the password to open the Financial Proposal. The Proposer shall assume the responsibility for not encrypting the financial proposal.

PLEASE DO NOT PUT THE PRICE OF YOUR PROPOSAL IN THE 'LINE ITEMS' IN THE SYSTEM. INSTEAD PUT 1 AND UPLOAD THE FINANCIAL PROPOSAL AS INSTRUCTED ABOVE.

Any discrepancy between the unit price and the total price shall be re-computed by UNDP, and the unit price shall prevail, and the total price shall be corrected. If the Service Provider does not

accept the final price based on UNDP's re-computation and correction of errors, its Proposal will be rejected.

No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the Proposal. At the time of Award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Contract or Purchase Order that will be issued as a result of this RFP shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a Proposal implies that the Service Provider accepts without question the General Terms and Conditions of UNDP, herein attached as Annex 3.

Please be advised that UNDP is not bound to accept any Proposal, nor award a contract or Purchase Order, nor be responsible for any costs associated with a Service Providers preparation and submission of a Proposal, regardless of the outcome or the manner of conducting the selection process.

UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a Purchase Order or Contract in a competitive procurement process. In the event that you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link:
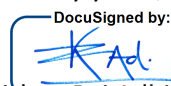http://www.undp.org/content/undp/en/home/operations/procurement/business/protest-and-sanctions.html
UNDP encourages every prospective Service Provider to prevent and avoid conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, cost estimates, and other information used in this RFP.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to preventing, identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its Service Providers to adhere to the UN Supplier Code of Conduct found in this link :
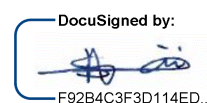https://www.un.org/Depts/ptd/sites/www.un.org.Depts.ptd/files/files/attachment/page/pdf/unscc/conduct_english.pdf

Thank you and we look forward to receiving your Proposal.

Sincerely yours,

Krishna Raj Adhikari
Senior Operations Manager
23 February 2022

Annex 1

Description of Requirements

Context of the Requirement	As Yemen's conflict is increasingly protracted, the economic crisis has deepened and challenged enterprises to access markets. Yemen's businesses continue to struggle, and access to internal and external markets could present a more significant opportunity to help enterprises thrive while creating a circular economy. Increasing access to both physical and virtual needs would help Yemeni businesses to recover and enhance their capacity to expand and grow.	
	From an international trade perspective, e-commerce can provide low-income countries access to high-income countries. E-commerce can provide opportunities for employment, consumer savings, and productivity.	
	With the support of the Global Policy Network, UNDP Yemen reached out to the a2i programme to discuss the potential to scale up the aggregated E-commerce platform and its related services together with the application programme interface (API) connection development for Yemen and the global market.	
	The rural aggregated e-Commerce platform, ekShop, was built to bridge the gap between urban and rural populations and enable them in accessing e-commerce and other digital services. ekShop has aggregated the largest e-commerce platforms through API connectivity into a single system. a2i and its ekShop initiative have extensive experience in replicating the e-Commerce module in two countries, Turkey and South Sudan. The modules were replicated with hyper-local features and have shown considerable success.	
	In addition to connecting the local and transnational markets, the opportunity that a2i presents could bring huge potential for Yemeni businesses and the private sector to rebuild the economy and support the value chain to thrive.	
Implementing Partner of UNDP	Aspire to Innovate (a2i) Programme, UNDP	
Brief Description of the Required Services	A2i, with the assistance from UNDP Yemen, wants to implement the eCommerce platform and its related services, together with API connectivity for Yemen and the global market, through the following activities:	
	● E-commerce module replication and API connectivity for Yemen and the global market	
	● ekShop delivery platform replication for Yemen and global market	
	● Hosting, subscription and API integration with Amazon, Alibaba, Qoovee, and eBay	
List and Description of Expected Outputs to be Delivered	**DELIVERABLES**	**TIMELINE**
	E-commerce module replication and API connectivity for Yemen and the global market ○ Fully operational, stable, and secured Web application. ○ Transfer of complete source code with standard documentation.	At the end of month 1

	Delivery platform replication for Yemen and global market
	   o Integration with e-commerce module for a mid-mile and last-mile operation
	   o Logistics console app development and integration
	   o Last-Mile console app integration
		At the end of month 1

	Hosting, subscription and API integration with Amazon, Alibaba, Qoovee, and eBay for 8 months	At the end of month 2
	Platform Maintenance and Support	At the end of month 3
Person to Supervise the Work/Performance of the Service Provider	The consultancy will be overseen by the Project Manager.	
Frequency of Reporting	As indicated in the TOR	
Progress Reporting Requirements	As indicated in the TOR	
Location of work	☐ Exact Address/es *[pls. specify]* As indicated in the TOR.	
Expected duration of work	3 Months	
Target start date	March 2022	
Latest completion date	May 2022	
Travels Expected	As indicated in the TOR.	
Special Security Requirements	☐ Security Clearance from UN prior to travelling ☐ Completion of UN's Basic and Advanced Security Training ☐ Comprehensive Travel Insurance ☐ Others *[pls. specify]* ☒ N/A	
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	☐ Office space and facilities ☐ Land Transportation ☒ Others as per TOR.	
Implementation Schedule indicating breakdown and timing of activities/sub-activities	☒ Required ☐ Not Required	
Names and curriculum vitae of individuals who will be involved in	☒ Required ☐ Not Required	

completing the services	
Currency of Proposal	☒ United States Dollars ☐ Euro ☒ Local Currency (BDT) (Conversion rate UNORE Feb 2021, UNORE 85.7)
Value Added Tax on Price Proposal	☒ must be exclusive of VAT and other applicable indirect taxes
Validity Period of Proposals *(Counting for the last day of submission of quotes)*	☒ 90 days In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.
Partial Quotes	☒ Not permitted

Payment Terms	Deliverables	Timeline	% of payment
	Upon submission of the fully developed web portal, which includes all these deliverables:		

	E-commerce module replication and API connectivity for Yemen and the global market
	  ○ Fully operational, stable, and secured Web application.
	  ○ Transfer of complete source code with standard documentation.
		At the end of month 1	20%

	Delivery platform replication for Yemen and global market
	  ○ Integration with e-commerce module for a mid-mile and last-mile operation
	  ○ Logistics console app development and integration
	  ○ Last-Mile console app integration
		At the end of month 1	

	Hosting, subscription and API integration with Amazon, Alibaba, Qoovee, and eBay for 8 months	At the end of month 2	60%
	Platform Maintenance and Support	At the end of month 3	20%

Person(s) to review/inspect/ approve outputs/complete d services and authorize the disbursement of payment	Solution Architect Specialist, a2i, will closely oversee the work.
Type of Contract to be Signed	☒ Contract for Professional Services

Criteria for Contract Award	☒ Highest Combined Score (based on the 70% technical offer and 30% price weight distribution)
	☒ Full acceptance of the UNDP Contract General Terms and Conditions (GTC). This is a mandatory criterion and cannot be deleted regardless of the nature of services required. Non-acceptance of the GTC may be grounds for the rejection of the Proposal.
Criteria for the Assessment of Proposal	Bidder must have adequate technical ability, resources, human resources and processes. As such, following are defined as minimum eligibility criteria: **Minimum Eligibility Criteria for the Firm:** • Business Licenses – valid trade license, TIN Certificate, VAT Registration Certificate, Certificate of Registration of the business, including Articles of Association (if applicable); • Updated Tax Registration/Payment Certificate issued by the National Board Revenue evidencing that the Bidder is updated with its tax payment obligations, or Certificate of Tax exemption, if any such privilege is enjoyed by the Bidder. • Company Profile, which should not exceed fifteen (15) pages including any printed brochure relevant to the services being procured; • Must submit updated audit reports for the last two years. The firm must have average turnover of BDT 30 lac in last 2 years. • Must have minimum five (5) years of experience in web-service development with government/national or international organizations. • Must have at least one experience of developing a national/international e-Commerce platform. **Minimum Eligibility Criteria for the Key personnel:** CVs of the Team leader and key team members containing their experiences on relevant issues must be submitted with detailed proposal. Beside that the evaluation team is expected to fulfil the following qualifications:

S.l.	Person	Qty	Qualification & Experience
1	Project Manager	1	i) Minimum graduate in Business/Management or relevant subject. ii) Minimum 5 years of experience in managing at least one (1) IT /ICT enabled software with any corporate /international /government client
2	Business Analyst	1	i) Minimum graduate in Computer Science and Engineering/ICT/BBA or other relevant business disciplines from any reputed University. ii) Must have a minimum of 2 years of experience in at least one (1) IT /ICT enabled software projects experience for requirement study and business process analysis with government/international/corporate clients.

	3	System Analyst	1	i) Minimum graduate in Computer Science and Engineering/ICT or any other relevant Science disciplines from any reputed University.
				ii) Must have a minimum of 2 years of experience in the field of System analysis and design for ICT based applications or Software Development projects.
	4	Software Architect	1	i) Minimum graduate in Computer Science and Engineering/ICT or any other relevant Science disciplines from any reputed University.
				ii) Must have a minimum of 2 years of experience at least one (1) ICT enabled Applications or software project experience in the field of Software architecture design.
	5	Database Administrator (DBA)	1	i) Minimum graduate in Computer Science and Engineering/ICT or any other relevant Science disciplines from any reputed University.
				ii) Must have a minimum of 2 years of experience in database design, data normalisation, data analysis, database management, and administration for ICT-based applications or Software projects.
	6	Senior Developer/ Senior Programmer	1	i) Minimum graduate in Computer Science and Engineering/ICT or any other relevant Science disciplines from any reputed University.
				ii) Must have a minimum of 3 years of experience in web-based software programming/coding/scripting for ICT-based applications or Software development.
	7	Developer/ Programmer	1	i) Minimum graduate in Computer Science and Engineering/ICT or any other relevant Science disciplines from any reputed University.
				ii) Must have a minimum of 2 years of experience in software programming/coding/scripting for at least one (1) ICT enabled application or software project experience.
	8	QA Expert	1	i) Minimum graduate in Computer Science and Engineering/ICT or any other relevant Science disciplines from any reputed University.
				ii) Must have a minimum of 2 years of experience in software Quality assurance in web-based application or Software development.

9	System Administrator	1	i) Minimum graduate in Computer Science and Engineering/ICT or any other relevant Science disciplines from any reputed University ii) Must have a minimum of 3 years of experience in the field of system administration, especially on operating system installation, configuration and deployment, iii) Experience on large-scale data backup and user management systems.
10.	Technical Document Expert	1	i) Minimum graduate in any English/Computer Science/business administration related discipline. ii) Must have a minimum of 2 years of experience in technical documentation.
11	UI/UX Designer	1	i) Minimum graduation in Science/Commerce/arts/social sciences. ii) Minimum 5 years' experience in developing UI for web and APP

Note:
Necessary document must be submitted to substantiate the above eligibility criteria. Consultancy firm that do not meet the above eligibility criteria shall not be considerate for further evaluation. The firm must provide CV's of all proposed personnel for the assignment, stating name, highest academic qualification, professional certification, length of experience, role/function or other related information.

Technical Proposal (70%)
☒ Expertise of the Firm
☒ Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan
☒ Qualification of Key Personnel

Basis of Technical evaluation:

SL	Criteria	Weight	Max. Points
1	**Overall experience and expertise of the organization/Firm**		**20**
1.1	Experience in web-service development with government/national or international organizations and experience of developing a national/international e-Commerce platform.	70	10
1.2	Organization profile, administrative and financial management structure, and strength		5

	1.3	Organizational Commitment to Sustainability • Organization is compliant with ISO 14001 or ISO 14064 or equivalent – (2.5) • Organization is a member of the UN Global Compact – (1.25) Organization demonstrates significant commitment to sustainability through some other means: for example, internal company policy documents on women empowerment, renewable energies or membership of trade institutions promoting such issues – (1.25)		5
	2	**The expertise of key personnel**		**30**
	2.1	**Project Manager**		**10**
		Educational Qualification		3
		Professional Experience		7
	2.2	**Team expertise**		**20**
		Educational Qualification of team members (Business Analyst, System Analyst, Software Architect, Database Administration (DBA), Senior Developer/Senior Programmer, Developer/Programmer, QA Expert, System Administrator, Technical Documentation Expert, UI/UX Designer)		05
		Professional Experience of team members (Business Analyst, System Analyst, Software Architect, Database Administration, Senior Developer/Senior Programmer, Developer/Programmer, QA Expert, System Administrator, Technical Documentation Expert, UI/UX Designer)		15
	3	**The methodology proposed in the technical proposal**		**20**
	3.1	Demonstration of the understanding of the assignment & proposed solution design for the technical development		5
	3.2	Technical approaches and methodology of the development and maintenance support work		5
	3.3	Proposed staffing and work plan with detailed staff engagement schedule		5
	3.4	Change request/quality control mechanism		2.5
	3.5	Risk Management & Overall flexibility		2.5
	Financial Proposal (30%) To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP.			

UNDP will award the contract to:	☒ One and only one Service Provider
Contract General Terms and Conditions	☒ General Terms and Conditions for contracts (goods and/or services) Applicable Terms and Conditions are available at: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
Annexes to this RFP	☒ Form for Submission of Proposal (Annex 2) ☒ Detailed TOR (Annex-3) ☒ Written Self Declaration (Annex-4)
Contact Person for Inquiries (Written inquiries only)	bd.procurement@undp.org ***Please mention the following in the subject while sending any query to UNDP regarding this RFP on or before 28 February 2022.*** ***"Queries on RFP-BD-2022-005"*** Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.
Other Information *[pls. specify]*	A pre-bid meeting will be held **Online** for the clarification on the bidding document and ToR **on 28 February 2022 at 11:00am using the following link:** https://undp.zoom.us/j/84678895022?from=addon; Join Zoom Meeting

FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL[1]

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery[2])

[insert: *Location]*.
[insert: *Date]*

To: [*insert: Name and Address of UNDP focal point]*

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP dated *[specify date]* , and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions:

A.   **Qualifications of the Service Provider**

The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of UNDP by indicating the following :

a) *Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations;*
b) *Business Licenses – Registration Papers, Tax Payment Certification, etc.*
c) *Latest Audited Financial Statement – income statement and balance sheet to indicate Its financial stability, liquidity, credit standing, and market reputation, etc. ;*
d) *Track Record – list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references;*
e) *Certificates and Accreditation – including Quality Certificates, Patent Registrations, Environmental Sustainability Certificates, etc.*
f) *Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.*

B.   **Proposed Methodology for the Completion of Services**

The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.

C.   **Qualifications of Key Personnel**

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[1] *This serves as a guide to the Service Provider in preparing the Proposal.*
[2] *Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes*

> *If required by the RFP, the Service Provider must provide :*
>
> a) *Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;*
> b) *CVs demonstrating qualifications must be submitted if required by the RFP; and*
> c) *Written confirmation from each personnel that they are available for the entire duration of the contract.*

D. **Cost Breakdown per Deliverable* (Financial proposal must be password protected)**

	Deliverables *[list them as referred to in the RFP]*	Percentage of Total Price *(Weight for payment)*	Price *(Lump Sum, All Inclusive)*
1	E-commerce module replication and API connectivity for Yemen and the global market o Fully operational, stable, and secured Web application. Transfer of complete source code with standard documentation.	20%	
2	Delivery platform replication for Yemen and global market o Integration with e-commerce module for a mid-mile and last-mile operation o Logistics console app development and integration Last-Mile console app integration		
3	Hosting, subscription and API integration with Amazon, Alibaba, Qoovee, and eBay for 8 months	60%	
4	Platform Maintenance and Support	20%	
	Total	100%	

*This shall be the basis of the payment tranches

E. **Cost Breakdown by Cost Component *[This is only an Example]*: (Financial proposal must be password protected)**

Description of Activity	Remuneration per Unit of Time	Total Period of Engagement	No. of Personnel	Total Rate
I. Personnel Services				
Project Manager	1			
Business Analyst	1			
System Analyst	1			
Software Architect	1			
Database Administrator (DBA)	1			
Senior Developer/ Senior Programmer	1			
Developer/ Programmer	1			
QA Expert	1			
System Administrator	1			
Technical Document Expert	1			
UI/UX Designer	1			
The bidder can propose additional human resources in the team composition taking into consideration the scope and duration of the project.				

II. Out of Pocket Expenses				
III. Other Related Costs				
Primary Survey Cost				
FGD and KIIs Cost				
Others				
Please mention VAT separately with %				

*[Name and Signature of the Service Provider's
Authorized Person]*
[Designation]
[Date]

<div align="right">**Annex-3**</div>

<div align="center">

Terms of Reference

For

Hiring a firm for e-Commerce Platform Replication in Yemen

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A.   Project Title: Aspire to Innovate (a2i) Programme

B.   Project Description

Aspire to Innovate (a2i), a whole-of-government programme of ICT Division, supported by Cabinet Division and UNDP, catalyses citizen-friendly public service innovations, simplifying government and bringing it closer to people. It supports the government to be at the forefront of integrating new, whole-of-society approaches to achieve the society. The project's objective is to increase transparency, improve governance, and reduce the time, difficulty, and costs of obtaining government services for under-served communities of Bangladesh. This is to be achieved by the following major three components of the project:

   Component 1: Institutionalizing Public Service Innovation and Improving Accountability
   Component 2: Catalysing Digital Financial Services and Fintech Innovations
   Component 3: Incubating Private Sector-enabled Public Service Innovation

C.   Scope of Services, Expected Outputs and Target Completion

1.   Background of the service

As Yemen's conflict is increasingly protracted, the economic crisis has deepened and challenged enterprises to access markets. Yemen's businesses continue to struggle, and access to internal and external markets could present a more significant opportunity to help enterprises thrive while creating a circular economy. Increasing access to both physical and virtual needs would help Yemeni businesses to recover and enhance their capacity to expand and grow.

From an international trade perspective, e-commerce can provide low-income countries access to high-income countries. E-commerce can provide opportunities for employment, consumer savings, and productivity.

With the support of the Global Policy Network, UNDP Yemen reached out to the a2i programme to discuss the potential to scale up the aggregated E-commerce platform and its related services together with the application programme interface (API) connection development for Yemen and the global market.

The rural aggregated e-Commerce platform, ekShop, was built to bridge the gap between urban and rural populations and enable them in accessing e-commerce and other digital services. ekShop has aggregated the largest e-commerce platforms through API connectivity into a single system. a2i and its ekShop initiative have extensive experience in replicating the e-Commerce module in two countries, Turkey and South Sudan. The modules were replicated with hyper-local features and have shown considerable success.

In addition to connecting the local and transnational markets, the opportunity that a2i presents could bring huge potential for Yemeni businesses and the private sector to rebuild the economy and support the value chain to thrive.

2. Scope of Service

A2i, with the assistance from UNDP Yemen, wants to implement the eCommerce platform and its related services, together with API connectivity for Yemen and the global market, through the following activities:

- E-commerce module replication and API connectivity for Yemen and the global market
- ekShop delivery platform replication for Yemen and global market
- Hosting, subscription and API integration with Amazon, Alibaba, Qoovee, and eBay

2.1. E-commerce module replication and API connectivity for Yemen and the global market

This platform will be replicated, focusing on the Yemen context, and this will be in English & Yemeni Arabic language. Concerning authority, the firm will discuss preparing the inception report on the firm's action plan and the timeline for the platform. The activities include,

- **Platform Replication:** The firm will replicate the ekShop platform and other features to make the platform more usable in Yemen. User-friendly features of ekShop like merchant onboarding, seamless product upload, product buying journey, store opening, architecture, etc., must be replicated in the platform. Features like wallet mechanism, reporting section and payment method, coupon, and campaign should be customised in Yemen.
- **Project Management Plan:** The firm will submit a comprehensive and detailed project management plan for the client's approval with a PowerPoint presentation and a hardcopy of documents.
- **System Requirement Specification (SRS):** The selected firm has to analyse the complex functions, processes, documents, actors, service delivery sites and infrastructure of the relevant services precisely of the concerned organisation. At this phase, the firm's ultimate objective will be to finalise the e-Service requirements in detail under the scope of TOR and receive approval from the concerned organisational authority.
- **System Design Document:** The firm will have to submit a report on System Design, including HLD and LLD based system design on which development will be started. High-level design (HLD) will ensure the architecture used for developing this solution. The architecture diagram will provide an overview of an entire system, identifying the main components formed for the system and their interfaces. Low-level design (LLD) is a component-level design process in which the software components, modules and functional requirements are designed. This process can be used for designing data structures, required software architecture, source code and ultimately performance algorithms.
- **Test Plan:** The firm should prepare an extensive testing plan so that any functional failure can be detected and corrected timely and adequately. This testing plan should cover all the standard testing approaches applicable for this solution, including phase-wise testing activities like test scripting, test cases, testing tools, testing process, test log, result, and report.
- **Integration Plan:** The firm can follow standard integration mechanisms such as exposing standard Restful APIs for the service process in different components. Any component or service can exchange data and related resources whenever required by satisfying the Agency's business purposes. The list of integrations required
  - ekShop Delivery Console
  - Standard payment gateways including Yemen specific gateways

- o MFS gateways
- o Local logistics partners
- o Merchant agencies

- **Web application:** The application backend, a web-based solution, should be hosted in a centralised Web-server. The application should be developed following Service Oriented Architecture (SOA). The application should support the MVC framework. Considering the operating/client environment at different levels of this application, it should be developed in such a way so that it requires low bandwidth to run. The web-based application should support cross-browser platforms (popular web-browsers such Mozilla Firefox, Opera, Chrome, Internet Explorer, Safari etc.). The application should integrate with future modules/components/applications seamlessly. The application should be lightweight and have rich client-side scripting. UI should be developed based on the analysis of UX. Any web interface of this application should be fully responsive.

- **Mobile Application:**
  - o The app needs to be built natively to support Android SDK API level 21 to API latest SDK API, which will cater to most users.
  - o A dedicated API set should be developed to support the mobile application efficiently.
  - o Some mobile application features should be used offline or with a very low internet connection.
  - o The vendor should publish the app.
  - o The client may provide any account-related documentation.

2.2. ekShop delivery platform

While not exhaustive, the following basic requirements for the platform have been identified:
a. **Integration With E-Commerce Module for Mid Mile And Last-Mile Operation**

The delivery platform aims to provide a data-driven solution for maximising space utility in their fleet, not only in a traditional way but also by accumulating the distributed stakeholders and their assets around the country. Many transportation resources are being kept unutilised or unused due to the lack of information sharing and systematic composition among the demand and supplies. The platform is intended to provide an integrated digital platform where all the stakeholders can share and utilise transportation resources for their logistics management. The platform should give platform access and API access to the e-commerce modules and should be integrated with existing logistics providers to play as an aggregator channel for logistics. The firm should replicate the platform and modify the platform in Yemen Context.

b. **Login Access as Per Dynamic Roles and Permissions -**
  - Consumer access
  - Manager/Agent access
  - Driver access
  - Admin access

    c. Logistics Booking and Intelligent Routing -
- The system should be able to automate the logistic assignment to localised drivers/agents based on the business logic given to the system.
- The system should handle/assign partner logistics route assignments for third party logistics handling automatically or manually.
- The system should have a mechanism to book global freight, and the process should comply with global logistics handling standards.

- The system should have the following management capabilities:
    - Merchant management mechanism
    - Parcel management
    - Payment collection and disbursement
    - Fragile logistics management
    - Courier insurance management
    - Dynamic pickups and delivery
    - Driver management

    d. Payment, Report Analytics -
- The platform should have an in-built detailed report and analytical engine.
- All relevant reports and data should be exported as per necessary formats (i.e., doc, pdf, CSV, video, png etc.
- The report should have indicators to forecast the business trend to take action accordingly.
- The system should be able to manage payment collection and disbursement with the integrated logistic partners and consumers/merchant's action

    e. Language Support -
        a. It should be in Arabic and English Language

    f. General Settings -

The system should have the following settings area:
        i. SIte title
        ii. Currency
        iii. About Us
        iv. Contact Us
        v. Timezone
        vi. Logo management
        vii. Theme management
        viii. Email template management
        ix. SMS templating

    g. Performance And Security -

The system should have a performance booster management system that consists of,
        i. Asset optimisation
        ii. Content Delivery Network (CDN) management and

         iii. Cache management

         iv. The system communication should be protected using SSL encryption

         v. The system should be protected from cross-site scripting, Request Forgery Ddos and similar common threats.

    h. Integration -

        a. The system. should be integrated with these API's

           i. SMS gateway

           ii. Email SMTP service

           iii. At least 02 local logistic companies

           iv. Global logistics tracking API (if available)

           v. Global logistics booking API (if available)

i. Search Engine Optimisation (SEO) -

        a. The system should have a mechanism to do site SEO for front end content.

        b. The system's default language will be English. The system should support multilingual options, i.e., English & Yemeni Arabic for both the web version and mobile application. All the user interfaces will be displayed, and input controls can take input both in English & Yemeni Arabic. System/App users can choose and set their preferred language in the profile setting for the system interfaces.

2.3. Hosting, subscription and API integration

The application will be hosted in a2i, UNDP Bangladesh CO, or UNDP Yemen CO. provided data centre for 1 month. Therefore, at this stage, firms are requested to submit a "Hosting Architecture & Requirements" in their technical proposal for this Software application.

Furthermore, the firm should provide hosting with total capacity in a cloud web service platform and include its service for **8 months** in the financial proposal.

Primary Database Node Specification

Data backup	Daily
Data security	Firewall protected
DB engine	MySQL
Disk	100 GB
Failsafe standby node	One (01) node
Memory	8GB
Scaling	Flexible
Uptime	99.9%
vCPUs	4vCPUs

Application Server

Memory	32GB
vCPUs	8vCPUs
Disk	600 GB
Failsafe standby node	One (01) node
Scaling	Flexible
Uptime	99.9%
Data security	Firewall protected
Data backup	Weekly

Server Capacity Estimation

With the mentioned allocated server resources. We estimate the below capacity can be served:

Visitors	50,000 visitors per day
Bandwidth	40 Gbps
Product	1 million +
Merchant	10,000+
TPS	1500

Subscription

The firm is required to provide API subscription with Amazon, Alibaba, Qoovee, and eBay for a duration of **8 months.**

The subscription should include the purchase of the following features,

1) Ease of integration
2) Offer faster response times
3) Get access to the items for sale in the desired shop (Amazon, Alibaba, Qoovee, and eBay);
4) Fetch and display customers' reviews;
5) Build own store to sell products;
6) Search for items;
7) Fetch product details in preferred language;
8) Advertising API
9) Reviews API
10) Product Advertising API
11) Shipping API
12) Price API

2.4.**Maintenance and Support**

● The developed and deployed software application should run smoothly and bug-free.

- In case of any technical problem or support requirement, the firm's response to the solution must be very prompt.
- Technical complexity and support requirement, the response and problem solution plan must be predefined and precise.
- Firms must consider contingency plans to manage and solve sudden complexity, technical problems that arise and support requests.
- The help desk remote support should be comprehensive, robust, standard and adequate.
- The maintenance support plan should consider improving user engagement, user training, and receiving user review & feedback.
- Communication, software performance evaluation, continuous improvement for user satisfaction and right time reporting to the concerned authority should be planned well ahead and executed simultaneously as standard service.

- Maintenance and support should be provided for **2 months after successful deployment**

2.5. **Security and Privacy Requirements**

The firm should submit an extensive "Security and Privacy Plan" including comprehensive security architectures in their technical proposal for this proposed application considering the following issues:
- Project technical scopes
- Functional and non-functional requirements and ultimate objectives
- Concerned service provider organisation's operational environments and capacity
- User roles - Accessibility, Authentication, Authorisation and Accountability
- Importance of data management & data privacy
- Strength of technologies to be used for development, operate & maintenance
- Deployment & hosting
- Service recipients and providers' security, confidentiality and privacy
- A checklist of security measures to be taken for this solution
- Overall, security standards should apply to a system.

Apart from these, the firm should keep in account the following considerations. The firm should provide a checklist based on the system and hosting security plan (i.e., fraud, hacking, money laundering, etc.) & the test report of that checklist.

System Security Requirements:
I. The firm should follow any industry-standard secure development methodology such as Comprehensive Lightweight Application Security Process (CLASP) by OWASP.
II. The firm should consider common vulnerabilities such as SQL Injection, Cross-Site Scripting (XSS) etc.
III. The firm will undertake responsibility for Input Validation Controls, Authorisation/Authentication Control and other security controls in place in both testing and production environments of application.
IV. The following vulnerabilities must be checked and ensured security from the beginning:
   - Cross-Site Request Forgery (CRSF)
   - Cross-Site Scripting (XSS)
   - Session hi-jacking
   - Session Fixation

- SQL Injection and Code Injection
- Input Validation/Filtering
- Output Escaping
- Secure File Access

V. The firm shall minimally provide Access control, Authentication and accountability security mechanisms for backend operations of the system.

VI. The proposed security solution shall be scalable and should not affect the performance by creating a bottleneck or single point of failure to the overall system.

VII. The system should provide tamper-proof audit trails and logs for the administrator or auditor to check for the actions committed by users. The audit trails shall consist of the following details:

- Login and logout
- Attempts to access unauthorised resources
- User profile changes
- Past audit events.
- Track all actions performed on documents attached/uploaded.
- The system should have a provision to assign the access rights of other resources on a need basis to authorised users.
- Information in the System that is deemed sensitive shall be encrypted and protected from accidental and unauthorised modification.
- The system shall provide automatic session disconnection for inactive users after session time [Proposed best practice session time] is over.
- The system shall protect the audit trails from being modified by unauthorised personnel or privileged users.

Security requirement for electronic payments & transactions:

I. The solution should comply with all standardised security features, message protocols and encryption.

II. Payment Gateway should have DC and DR as per international standard guidelines.

III. Payment Gateway should comply with international monetary security standards and be certified by internationally recognised security authorities and financial payment-related auditors.

2.6. Language Support

The system's default language will be in English & Yemeni Arabic. The system should support multilingual options for both the Web version and mobile responsive web application. All the user interfaces will be displayed, and input controls can take input both in English & Yemeni Arabic. System/App users can choose and set their preferred language in the profile setting for the system interfaces.

2.7. Sizing, Performance and Scalability Requirements

- The system shall handle online functionalities for a database of at least 10,00,000 entries.
- The system processing shall be scalable to support the volume estimates for one year at a 10% annual growth rate.

- The system shall be designed to handle an estimated 100 simultaneous visitors (online users) when it is ultimately rolled out.
- The firm must conduct an extensive load testing task and submit a load testing result considering the above factors.
- The database architecture should make the system available to users with at least 99% uptime.
- Page load time, login response time, the on-click load time for the web application should be less than 5 seconds while this is accessed over the intranet.
- Average transaction response time, on-submit response time, or any other database access/ search time should be less than 3 seconds when the system solution is accessed over the intranet.
- Considering the network infrastructure challenges in Yemen, the solution must support low bandwidth conditions for the services defined in the functional requirements.
- The proposed solution should be highly scalable to accommodate current and future requirements within the scope mentioned in the TOR.
- Analyse the requirements whether both horizontal scaling (scale-up) and vertical scaling (scale-up) will be required for this system or not
- The design should provide an appropriate caching mechanism to handle very high-traffic scalability.
- The firm may propose here other relevant measures for system scalability.

- Publish to the Google Play Store and Apple Store for any apps developed under the scope. Sufficient versions of apps should be released for testing.

Note: The firm should submit a "Strategic & Action Plan for System Optimization", including the method of sizing, mechanism and measures that will be taken for ensuring the standard of performance, mentioning the proposed system's functional process and completion of standard time and scalability of this solution.

2.8. Interoperability and Data Exchange

The selected firm must develop this system following all the standards and protocols of interoperability, integration and data exchange with other systems. It is expected that the system will be based on open architecture and will be fully interoperable with current and future systems.
The following are the critical expectations on interoperability requirements:
  I.   The system should be designed for interoperability using industry-standard protocols.
  II. The system must expose Advanced Message Queuing Protocol and REST data via TLS. All imported data must undergo data validation to ensure complete integrity.
  III. Data exchange within the system at different levels via the internet shall be encrypted.
  IV. The system should exchange data with other systems or external institute systems.
  V.   The system shall have the functionality to export/import files based on the standard template defined through web services and/or API.

Full API documentation must be provided so that third party integrators can integrate their system with this system.

2.9. Risk Management

Software development is an activity that uses a variety of technological advancements and requires high levels of knowledge because every software development project contains elements of uncertainty. This is known as project risk. The success of a software development project depends quite heavily on the amount of risk that corresponds to each project activity. As a project manager, it's not enough to merely be aware of the risks. To achieve a successful outcome, they must identify, assess, prioritise, and manage significant risks. A standard risk management process includes the following steps:

I. Identify risks and their triggers.
II. Classify and prioritise all risks
III. Craft a plan that links each wager to a mitigation
IV. Monitor for chance triggered during the project
V. Implement the mitigating action if any risk materialises
VI. Communicate risk status throughout the project

The firm should submit a "Risk Management Plan" addressing all types of risks, including the steps mentioned above following standard risk management principles and their mitigation plan.

2.10. **Technology Requirements**

Technology

The below-described technology specification is given as preference. The bidding firm may choose any modern web-based application framework suitable for the project development.

ITEM	Specification
Server-side language	PHP
Framework	Laravel
Front end	Blade /Vue js
Javascript component & libraries	Livewire & necessary libraries
Web Server	Open Litespeed, Apache
CDN network	Cloudflare
Server-Side caching	Memecache, File cache
Database	MariaDB, PostgreSQL, MongoDB
Hosting environment	Linux Cloud VPS
Failsafe backup	Required
Server performance monitoring tool	Suggested
Automatic DB & code backup,	Yes
Automatic backup frequency	Daily
Autoscale	Suggested

Firewall	● Server-level firewall is a must ● sucuri.net, Cloudflare preferable for DDoS protection
SSL protection	Required
API encryption	Required (SHA-1, MD5)
API framework	REST
Application activity log	Scalyr, Sentry
Application Performance Grade	Acceptable grade from A to C *on https://tool.pingdom.com/*

3. **Institutional Arrangement**

Solution Architect Specialist, a2i, will closely oversee the work.

4. **Duration of the Work**

The total time of the assignment is three (3) months

5. **Expected Deliverables**

Please refer to the Annex 1

6. **Supervision and Performance Evaluation:**

The firm will be working closely with the ekShop Team of Aspire to Innovate project. The Team Leader of the ekShop Team will be responsible for reviewing and approving the performance/activities.

7. **Location of Work:** Bangladesh.

8. **Team Composition:**

Qualification of the Resource Personnel:

The minimum required qualification and experience of professional staff are as follows:

S.l.	Person	Qty	Job Description
1	Project Manager	1	● Responsible for planning and overseeing projects to ensure they are completed in a timely fashion and within budget. ● Plan and designate project resources, prepare budgets, monitor progress, and keep stakeholders informed the entire way
2	Business Analyst	1	● Responsible for understanding and assessing the changing needs of the business. ● Analyse the impacts of change ● Document and support communication between relevant groups and stakeholders ● Capture requirements are needed to initiate a change.
3	System Analyst	1	● Implement, maintain, and support IT and information systems to meet the business needs of organisations and scale as organisations grow. ● Analyse and create tests, and develop specifications and requirements for developers and programmers to follow.
4	Software Architect	1	● Team leader for the innovation and creation of new software and program features. ● Oversee a team of programmers. ● Manage and facilitate the proper design of large websites or programs within products.
5	Database Administrator (DBA)	1	● Build database systems of high availability and quality depending on each end user's specialised role ● Design and implement database in accordance to end users information needs and views ● Perform tests and evaluations regularly to ensure data security, privacy and integrity
6	Senior Developer/ Senior Programmer	1	● Define, develop, test, analyse, and maintain new software applications to support the achievement of business requirements. ● This includes writing, coding, testing, and analysing software programs and applications.
7	Developer/ Programmer	1	● Collaborating with business analysts and developers to produce software designs ● Formulating program specifications and basic prototypes ● Transforming software designs and specifications into high functioning code in the appropriate language
8	QA Expert	1	● Interpret, build upon, and comply with company quality assurance standards ● Identify training needs and take action to ensure company-wide compliance ● Pursue continuing education on new solutions, technology, and skills

9	System Administrator	1	• Responsible for the maintenance, configuration, and reliable operation of computer systems and servers. • Actively resolve problems and issues with computer and server systems to limit work disruptions.
10.	Technical Document Expert	1	• Maintain the documents for a company, change and update records • Keep a database of the documents to track the different versions of reports created. • Oversee a library of materials specific to the project.
11	UI/UX Designer	1	• Creating user-centred designs by understanding business requirements and user feedback. • Creating user flows, wireframes, prototypes and mock-ups. • Translating requirements into style guides, design systems, design patterns and attractive user interfaces.

9. **Evaluation Criteria:**

The evaluation process of selecting a farm will be based on technical (70) and financial (30) points.

<div align="center">Please refer to the Annex 1</div>

10. **Payment Schedule:**

<div align="center">Please refer to the Annex 1</div>

11**. Exit Process**

During the contracted period, there will be a technical team at procuring entity side who will be engaged to gather knowledge on both the technology and operation of the service.

Once contract is expired and service is delivered to ekShop, a2i, UNDP Yemen will take over the responsibility of the service.

Annex-4

Declaration

Date:

United Nations Development Programme
UNDP Registry, IDB Bhaban, Agargaon
Sher-E-Bangla Nagar, Dhaka, Bangladesh

Assignment **_____**

Reference: RFP-BD-2022-005

Dear Sir,
I declare that …………………………………………………………………. is not in the UN Security Council 1267/1989
List, UN Procurement Division List or Other UN Ineligibility List.

Yours Sincerely,