Expression of Interest (EOI)

Title of Consulting Services:

Centralized Digital KYC software Upgrade/Development, Commissioning and Operation

National Competitive Bidding (NCB)

Project Name: Centralized Digital KYC Software Upgrade/Development, Commissioning and Operation
EOI: *01/CDSC/NCB/2077-2078*
Office Name: CDS and Clearing Ltd.
Office Address: *Share Markets Commercial Complex, Putalisadak, Kathmandu, Nepal*
Issued on: *06/04/2021*

Abbreviations

|		
CV	-	Curriculum Vitae
DO	-	Development Partner
EA	-	Executive Agency
EOI	-	Expression of Interest
GON	-	Government of Nepal
PAN	-	Permanent Account Number
PPA	-	Public Procurement Act
PPR	-	Public Procurement Regulation
TOR	-	Terms of Reference
VAT	-	Value Added Tax

Contents

A. Request for Expression of Interest

CDS and Clearing Ltd. (CDSC)
EXPRESSION OF INTEREST
First Date of Publication: **April 06, 2021**

1. CDS and Clearing Ltd. (CDSC) has allocated fund for **Centralized Digital KYC Software Upgrade/Development, Commissioning and Operation** and intends to apply a portion of this fund to eligible payments under the Contract for which this Expression of Interest is invited for National Consulting Service.
2. CDSC now invites Expression of Interest (EOI) from eligible consulting firms ("consultant") to provide the following consulting services: **Centralized Digital KYC Software Upgrade/Development, Commissioning and Operation**
3. Interested eligible consultants may obtain further information and EOI document free of cost at the address **CDS and Clearing Ltd., Share Markets Commercial Complex, Putalisadak, Kathmandu, Nepal** during office hours on or before **April 20, 2021, Time 14:00** or visit e-GP system www.bolpatra.gov.np/egp or visit the client's website **www.cdsc.com.np**
4. Consultants may associate with other consultants to enhance their qualifications.
5. Expressions of interest shall be delivered online through e-GP system www.bolpatra.gov.np/egp
6. In case the last date of obtaining and submission of the EOI documents happens to be a holiday, the next working day will be deemed as the due date but the time will be the same as stipulated.
7. EOI will be assessed based on **Qualification 40% , Experience 50%, and Capacity 10%** of consulting firm and key personnel. Based on evaluation of EOI, only shortlisted firms will be invited to submit technical and financial proposal through a request for proposal.
8. Minimum score to pass the EOI is **70%** in total.
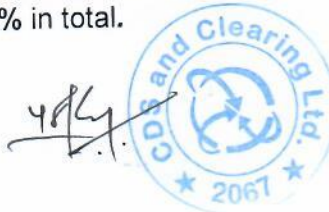
B. Instructions for submission of Expression of Interest

1. Expression of Interest may be submitted by a sole firm or a joint venture of consulting firms and the maximum number of partners in JV shall be limited to three.

2. Interested consultants must provide information indicating that they are qualified to perform the services *(descriptions, organization and employee and of the firm or company, description of assignments of similar nature completed in the last 7 years and their location, experience in similar conditions, general qualifications and the key personnel to be involved in the proposed assignment).*

3. This expression of interest is open to all eligible.

4. The assignment has been scheduled for a period of *5 month.* Expected date of commencement of the assignment is **November 2021.**

5. A Consultant will be selected in accordance with the **QCBS** method.

6. Expression of Interest should contain following information:

   (i) A covering letter addressed to the representative of the client on the official letter head of company duly signed by authorized signatory.

   (ii) Applicants shall provide the following information in the respective formats given in the EOI document:

   - *EOI Form: Letter of Application (Form 1)*
   - *EOI Form: Applicant's Information (Form 2)*
   - *EOI Form: Work Experience Details (Form 3(A), 3(B) & 3(C))*
   - *EOI Form: Capacity Details (Form 4)*
   - *EOI Form: Key Experts List (form 5).*

7. Applicants may submit additional information with their application but shortlisting will be based on the evaluation of information requested and included in the formats provided in the EOI document.

8. The Expression of Interest (EOI) document must be duly completed and submitted in sealed envelope and should be clearly marked as "EOI Application for Short-listing for the **Centralized Digital KYC Software Upgrade/Development, Commissioning and Operation**. The Envelope should also clearly indicate the **name and address of the Applicant**. Alternatively, applicants can submit their EOI application through e-GP system by using the forms and instructions provided by the system.

9. The completed EOI document must be submitted on or before the date and address mentioned in the **"Request for Expression of Interest"**. In case the submission falls on public holiday the submission can be made on the next working day. Any EOI Document received after the closing time for submission of proposals shall not be considered for evaluation.

C. Objective of Consultancy Services or Brief TOR

Terms of Reference (TOR), Expression of Interest for Centralized Digital KYC Software Upgrade/Development, Commissioning and Operation

1. Background

CDS and Clearing Limited (CDSC), a company established under the company act is a company promoted by Nepal Stock Exchange Limited (NEPSE) in 2010 to provide centralized depository, clearing and settlement services in Nepal. The company is inaugurated on 31st March 2011. The main objective of the company is to act as a central depository for various instruments (Equity, Bonds, and Warrants etc) specially to handle securities in dematerialized form. This organization is entrusted with the safekeeping, deposit, and withdrawal of securities certificates and transfer of ownership/rights of the said instruments. The depository functions will be performed by the company under the securities regulations of Securities Board of Nepal (SEBON). CDSC is a wholly owned subsidiary company of Nepal Stock Exchange Ltd. (NEPSE) which was established on 7th Poush 2067.
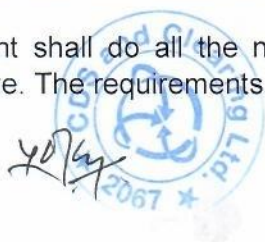
Central Digital KYC Application is a centralized repository of KYC records. The KYC records can be inter-usable across various capital market sectors. Its main objective to reduce the burden of producing KYC documents and getting those verified every time when the customer creates a new relationship with a Capital Market entity. Data update of the changed details is quick easy and will be reflected across all sectors. CDSC has already developed Centralized KYC application and this application is run by few Depository Participants, in this course SEBON has formulated its centralized KYC directive to be used across all Capital Market entity. With the introduction of the directive of SEBON, CDSC has planned to upgrade its KYC application with added features instructed in the directive.
The link of the directive can be found in CDSC's and SEBON's website.

2. Objective, Scope and Limitations

Now CDSC intends to upgrade/build centralized digital KYC application for customer onboard in Nepalese capital market. In this course, the main objective of this task is to **upgrade/develop the centralized digital KYC software, commissioning, and its operation**. This will fulfill following objectives:

- To ease the life of customer once a person is KYC verified, he or she does not have to fill up multiple forms or submit documents all over again
- To prevent identity theft, financial fraud, money laundering and terrorist financing
- To ease the job of market regulator like SEBON
- To help in the investigation process of CIAA, AML, Statutory bodies etc.
- To ease the record update process for the client as the updates like address changes, phone number changes, status etc can be updated in a central way.
- To make the KYC documentation process truly digital

The Consultant shall do all the necessary works for the main task mentioned in the objective above. The requirements are:

S.No.	Features / Functions	Description
1	System Architecture	a) Multi-Layer System Architecture with Application Server, Database Server, Middleware Servers, Interface Servers, load balancer, security gateways as required b) Application should be developed using OOP (Object Oriented Programming) approach and RDBMS (Relational Database Management System) concept c) Fully real-time replication architect wit HA environment: ZERO downtime Mission Critical Concept d) Application should be highly scalable and reliable. (Present – 2.8 million records and expected to reach 10 million in 5 years down the line) e) Load balancing and HA - High Availability mechanism is to be maintained at application level to manage the load for the application. f) Application should have cross browser compatibility to support various web browsers identically. g) Application should satisfy the security guidelines provided by the Nepal Government, Department of Information Technology. h) Application should not be dependent on specific platform. It should be platform independent.
2	Features / Functionalities	a) User based parameterization functionalities b) Customized input forms c) Customized key in fields d) Compliance according to Nepalese Calendar e) A unique KYC ID should be generated based on the data captured. New investor and existing investors with single/multiple BOID (Beneficiary Owner ID) will be mapped under this unique KYC ID. f) Reengineering of existing data and KYC integration g) Online web/mobile app-based application for customer onboard h) Web-based dashboard for different stakeholders
3	User Management Module	a) User Role based control architect (functional & features) b) Three Level of Control Mechanism (Maker, Checker and verifier) concept) for all system and functional activities c) Multi Institutional user base management control. d) Access Level Controls e) Menu / Sub-menu Level Controls f) Minimum of 4 tier role-based hierarchy – Super Admin, Admin, Approver, Initiator g) SMS and Mail OTP to validate the user number h) Profile management and Maintenance i) User profile Settings and customization user
4	Identification Management Module	a) <u>User / Identity Registration</u> i) Agent Based registration ii) KYC Version Control iii) User Requests for KYC modification followed by agent approval b) <u>User Managements Actions</u> i) Create, Edit / Modify ii) Approval

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		iii) Block / Un-Block
		iv) Delete
		c) <u>Parametrised based User Type Managements</u>
		   i) Individual
		   ii) Corporate / Business
		   iii) Community / Society etc.
		d) Implementation of Artificial Intelligence to perform following task
		   i. document verification and fraud document identification against the tampered and modified documents.
		   ii. personal photo verification mechanism against the fake or tampered photos
		   iii. Video KYC verification mechanism
		   iv. Predefined Forms verification with OCR/ICR or any other latest technology
		   v. Facial Recognition & verification Mechanism
		   vi. Customer verification using fingerprint
		e) Proper user login and authentication mechanism with role-based content management system.

5	Interface (s)	a) User friendly interface for the quick registration of investors leading to better throughput b) Full-fledged Mobile APP operational in both IOS and Android environment. c) KYC DATA access layer/download to the various stakeholders and other authorized authorities. d) QR code interface for each KYC ID created e) Biometric features incorporation like video, images, thump scan capture features f) Customer signature Capture Feature – through electronic PAD and Scan g) Responsive web and mobile design h) Multilingual support interface – English & Nepali (Unicode)
6	Bulk Operation Module	a) Create a Bulk Task b) View bulk task list c) Upload Bulk Task d) Approve/Reject a Bulk Task e) Cancel/delete a Bulk Task f) Maker/checker approval process
7	Reports Module	a) Proper and sufficient dynamic MIS Reports generation functionality with Business Intelligence features using appropriate analytical tools b) Entire MIS Reports defined by the concerned governing authorities
8	System Controls	a) Proper audit logs of KYC creation, modification, deletions, blocking, unblocking etc. b) Proper audit logs for DATA access, downloads and uploads activities c) Proper audit logs for IP and MAC Address

		d) Proper validation mechanism to ensure the deduplication of KYC record. e) Data analysis mechanism to find duplicate DEMAT accounts in existing database and maintain their unique KYC. f) END Users official consent taking options should be available in the system for the use of KYC ID by other stakeholders.
9	Systems Integration	a) Ability to integrate with and to be integrated with various other systems with standard APIs. For example, integration with government national ID, IRD PAN system, and different stakeholders. b) Dedicated API server must be implemented with minimum 5 set of standard APIs to be integrated with different stakeholders such as Banks, Brokers, DPs, PAN system etc.
10	Compliances	a) Application should satisfy the security guidelines provided by the Nepal Government, Department of Information Technology b) The centralized KYC application should follow all the features incorporated in the centralized KYC operational directive 2077. c) The application should be scalable as per the change in government regulation
11	Application Security Controls	a) Robust Standard Architect with a multiple layer security features integrated b) Application should satisfy Top 10 OWASP vulnerabilities c) Data process validation controls d) Strict access restriction to program source libraries e) Enforcement and implementation of formal change controls procedures f) Mandatory Data Encryption and secured connection during exchange of data g) A message authentication system for sensitive forms/data requiring high data integrity during data transmission and storage

12	Deliverables	a) SRS document
		   I. Functional/non-functional requirements
		   II. System Architecture including the network communication and database communication, middleware, and application (tired architecture)
		   III. Tentative hardware sizing document
		   IV. ER Diagram and database schemas
		   V. Process models: design diagrams and business logics (illustrated using DFD or class/object/sequence etc diagrams), process logic/algorithmic flow
		   VI. Interface designs
		b) Prototyping
		c) Verification and Validation
		d) VAPT report

| | |
| | e) Deployment
f) User Manual
g) Training and support
h) Software Backup with Source code with related technical document (with installation, configuration guideline, frontend, backend technology used etc). However, source code escrow alternative mechanism can also be considered. |

3. Project Period

The overall project is estimated to complete in 5 months from signing the contract agreement. The inception report including SRS document shall be submitted within the thirty days from signing the contract agreement.

The Consultant shall perform and deliver as stated below;

Deliverables	Timeline (calendar days)
SRS document	30
Prototype, Coding & DEMO	90
Testing (system test, load test and Acceptance test, VAPT)	30
Total	150 days
Commencement (Go LIVE)	Date will be mentioned by CDSC
Support service	12 months preventive maintenance and support after the commencement of the software

4. Service Level Agreement

Service level agreement with consultant firm:

1. The consultant should provide preventive maintenance and support for the system for 1 year (performance warranty period) from the date of successful deployment in production environment. Maintenance support includes support to users, rectification of any software failure, errors or bugs, shortcomings in report, unsatisfactory performance in terms of elapsed time for processing, excess resource consumptions, etc and minor changes.
2. The cost of preventive maintenance and support during the performance warranty period would be included on the total cost of the system/software.
3. The firm should provide post warranty service along with the cost statement as Annual Maintenance Contract (AMC) after completion of performance warranty period at least for next 3 years. After this time, the consultant can express its interest on AMC.
4. The consultant should provide support to the users as and when necessary.
5. CDSC fully reserves all the rights to accept or reject this service level agreement.

5. Payments

- 40% of the contract amount (for the development only) will be paid on the completion of Coding and Demo

- **Additional 50% of the** contract amount (for the development only) will be paid on the commencement of the software.

- Remaining amount of the contract amount (for the development only) will be paid after the 3 months of the operation of application.

- Payment of the support service will be paid after start of the 'Support Service', every 3 months after the completion the period,

The details of each milestone will be stated in detailed Request For Proposal

6. Method of selection

The project shall be evaluated on Quality and cost based system (QCBS) method: Technical – 70% and Financial – 30%

D. Evaluation of Consultant's EOI Application

Consultant's EOI application which meets the eligibility criteria will be ranked on the basis of the Ranking Criteria.

i) **Eligibility & Completeness Test**	Compliance
Copy of Registration of the company/firm	
VAT/PAN Registration *(for National consulting firm only)*	
Tax Clearance/Tax Return Submission/Letter of Time Extension for Tax Return Submission *076-77 (for National consulting firm only)*	
The Lead or single firm must be valid ISO or CMMI certified.	
In case of a natural person or firm/institution/company which is already declared blacklisted and ineligible by the GoN, any other new or existing firm/institution/company owned partially or fully by such Natural person or Owner or Board of director of blacklisted firm/institution/company; shall not be eligible consultant.	
EOI Form 1: Letter of Application	
EOI Form 2: Applicant's Information Form	
EOI Form 3: Experience (3(A) and 3(B))	
EOI Form 4: Capacity	
EOI Form 5: Qualification of Key Experts	

ii) **EOI Evaluation Criteria**	**Minimum Requirements**	**Score [Out of 100]**
A. Qualification		
Project Manager: 1 no.	• Master's degree in Computer science/Computer Engineering/ or relevant degree in IT • 10-years of relevant experience	40.0
Solution Architect: 1 nos	• Master's degree in Computer science/Computer Engineering/ or relevant degree in IT • 7-years of relevant experience	
Database Administrator: 1 nos.	• Bachelor's degree in Computer science/Computer Engineering/ or relevant degree in IT with 5-years of relevant experience • Relevant Certification	
Machine Learning Engineer: 1nos	• Master's degree in Computer science/Computer Engineering/ or relevant degree in IT with 3-years of relevant experience	
B. Experience		
General of consulting firm	*Experience in web, android and IOS based development in the last 5 years (at least 2).* *5 years of experience in IT sector for partners of the Jv*	50.0

ii) EOI Evaluation Criteria	Minimum Requirements	Score [Out of 100]
Specific experience of consulting firm within last 7 years.	*Minimum 7+ (seven+) years of experience in the development, support, and supply of financial and customer service-related systems to financial/capital market organizations (at least 2).* *Experience in development of KYC management software in financial/capital market.* *For other partners of JV:* *Successful completion of 2 (two) similar contract*	
C. Capacity		
Financial Capacity	*Minimum average annual turnover (from best 3 years of last 5 years) is 1.2 crore* *Lead partner shall meet at least 40% and each partner shall meet at least 25% and JV shall meet the requirement in total.*	*10.0*

- The Firm which does not meet any one of the above-mentioned minimum requirements will not be considered for the short-listing.
- The firm shall score at least 60% in A: Qualification B: Experience and C: Capacity
- And the firm shall meet 70% in total
- The firms not meeting above scores shall not be considered for short-listing

E. EOI Forms & Formats

Form 1. Letter of Application

Form 2. Applicant's information

Form 3. Experience *(General, Specific and Geographical)*

Form 4. Capacity

Form 5. Qualification of Key Experts

1. Letter of Application

Date:

....

To,

Full Name of Client: _____

Full Address of Client: _____

Telephone No.: _____

Fax No.: _____

Email Address: _____

Sir/Madam,

1. Being duly authorized to represent and act on behalf of (hereinafter "the Applicant"), and having reviewed and fully understood all the short-listing information provided, the undersigned hereby apply to be short-listed by *[Insert name of Client)* as Consultant for *{Insert brief description of Work/Services}.*

2. Attached to this letter are photocopies of original documents defining:

   a) the Applicant's legal status;

   b) the principal place of business;

3. *[Insert name of Client]* and its authorized representatives are hereby authorized to verify the statements, documents, and information submitted in connection with this application. This Letter of Application will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by yourselves to verify statements and information provided in this application, or with regard to the resources, experience, and competence of the Applicant.

4. *[Insert name of Client)* and its authorized representatives are authorized to contact any of _____ the signatories to this letter for any further information.[1]

5. All further communication concerning this Application should be addressed to the following person,

   [Person]

   [Company]

   [Address]

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[1] Applications by joint ventures should provide on a separate sheet, relevant information for each party to the Application.
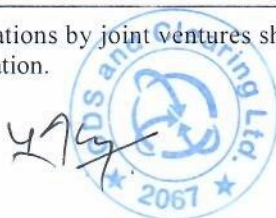
[Phone, Fax, Email]

6. We declare that, we have no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or business and our Company/firm has not been declared ineligible.

7. We further confirm that, if any of our experts is engaged to prepare the TOR for any ensuing assignment resulting from our work product under this assignment, our firm, JV member or sub-consultant, and the expert(s) will be disqualified from short-listing and participation in the assignment.

8. The undersigned declares that the statements made and the information provided in the duly completed application are complete, true and correct in every detail.

Signed   :

Name   :

For and on behalf of (name of Applicant or partner of a joint venture):

2. Applicant's Information Form

(In case of joint venture of two or more firms to be filled separately for each constituent member)

1. Name of Firm/Company:

2. Type of Constitution *(Partnership/ Pvt. Ltd/Public Ltd/ Public Sector/ NGO)*

3. Date of Registration / Commencement of Business *(Please specify):*

4. Country of Registration:

5. Registered Office/Place of Business:

6. Telephone No; Fax No; E-Mail Address

7. Name of Authorized Contact Person / Designation/ Address/Telephone:

8. Name of Authorized Local Agent /Address/Telephone:

9. Consultant's Organization:

10. Total number of staff:

11. Number of regular professional staff:

(Provide Company Profile with description of the background and organization of the Consultant and, if applicable, for each joint venture partner for this assignment.)

3. Experience

3(A). General Work Experience
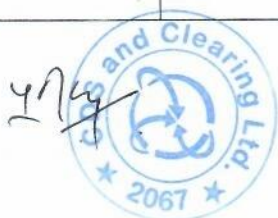
(Details of assignments undertaken. Each consultant or member of a JV must fill in this form.)

S. N.	Name of assignment	Location	Value of Contract	Year Completed	Client	Description of work carried out
1.						
2.						
3.						
4.						
5.						
6.						
7.						

3(B). Specific Experience

Details of similar assignments undertaken in the previous seven years
(In case of joint venture of two or more firms to be filled separately for each constituent member)

Assignment name:	Approx. value of the contract (in current NRs; US$ or Euro)[2]:
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total No. of person-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in current NRs; US$ or Euro):
Start date (month/year): Completion date (month/year):	No. of professional person-months provided by the joint venture partners or the Sub-Consultants:
Name of joint venture partner or sub-Consultants, if any:	Narrative description of Project:
Description of actual services provided in the assignment: **Note: Provide highlight on similar services provided by the consultant as required by the EOI assignment.**	

Firm's Name: _____

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[2] Consultant should state value in the currency as mentioned in the contract

3(C). Geographic Experience

Experience of working in similar geographic region or country
(In case of joint venture of two or more firms to be filled separately for each constituent member)

No	Name of the Project	Location (Country/ Region)	Execution Year and Duration
1.			
2.			
3.			
4.			
5.			
6.			
7.			

4. Capacity

4(A). Financial Capacity

(In case of joint venture of two or more firms to be filled separately for each constituent member)

Annual Turnover	
Year	**Amount Currency**

- **Average Annual Turnover of Best of 3 Fiscal Year Of Last 7 Fiscal Years**

(Note: Supporting documents for Average Turnover should be submitted for the above.)

4(B). Infrastructure/equipment related to the proposed assignment[3]

No	Infrastructure/equipment Required	Requirements Description
1.		
2.		
3.		
4.		
5.		

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[3] Delete this table if infrastructure/equipment for the proposed assignment is not required.

5. Key Experts *(Include details of Key Experts only)*

(In case of joint venture of two or more firms to be filled separately for each constituent member)

SN	Name	Position	Highest Qualification	Work Experience (in year)	Specific Work Experience (in year)	Nationality
1						
2						
3						
4						
5						

(Please insert more rows as necessary)