

INVITATION

FOR

EXPRESSION OF INTEREST (EOI)

TO

Supply, Installation, Implementation, Support and Maintenance of

A Core Banking (Microfinance) System

with Integrated Technologies and Related Services.

(EOI Ref No: SWBBL/ICT/CBS/EOI/01/074-75)

For



SWABALAMBAN LAGHUBITTA BIKAS BANK LTD.

Baluwatar, Kathmandu

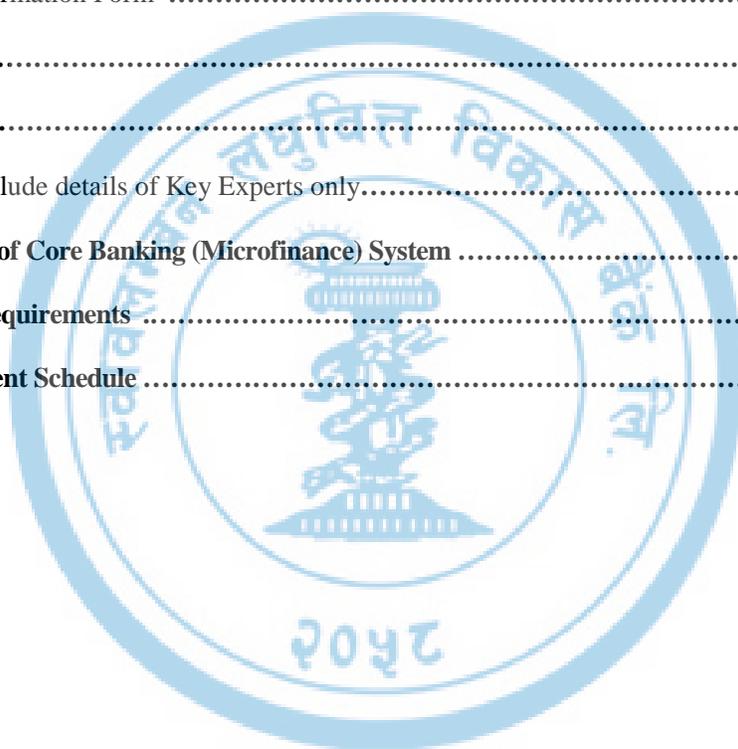
2017

Abbreviations

ADC.....	Alternative Delivery Channel
ADSL.....	Asynchronous Digital Subscriber's Line
AMC.....	Annual Maintenance Contract
AO.....	Area Office
ATM.....	Automated Teller Machine
BCP.....	Business Continuity Planning
BO.....	Branch Office
CBS.....	Core Banking (Microfinance) System
CDMA.....	Code-Division Multiple Access
CMMI.....	Capacity Maturity Model Integration
CV.....	Curriculum Vitae
DBA.....	Database Administrator
DC.....	Data Center
DRC.....	Data Recovery Center
DRP.....	Disaster Recovery Plan
DSS.....	Decision Support System
EOI.....	Expression of Interest
EIS.....	Executive Information System
GB.....	Gigabyte
GPRS.....	General Packet Radio Service
GSM.....	Global System for Mobile Communications
HO.....	Head Office
ICT.....	Information and Communication Technologies
IFRS.....	International Financial Reporting Standard
ISO.....	International Standard Organization
IT.....	Information Technology
IVR.....	Interactive Voice Response
Kbps.....	Kilobits per second
KYC.....	Know Your Customer
MIS.....	Management Information System
MPOS.....	Mobile Point of Sale
NFRS.....	Nepal Financial Reporting Standard
NPA.....	Non- Performing Asset
NRB.....	Nepal Rastra Bank (A Central Bank of Nepal)
OS.....	Operating System
QA.....	Quality Assurance
QC.....	Quality Control
RDBMS.....	Relational Database Management System
SLA.....	Service Level Agreement
SRS.....	System Requirement Specification
SQA.....	Software Quality Assurance
SQL.....	Structural Query Language
TOR.....	Terms of Reference
UAT.....	User Acceptance Testing

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A. Request for Expression of Interest

to

Supply, Installation, Implementation, Support and Maintenance of a Core Banking (Microfinance) System with Integrated Technologies and Related Services for Swabalamban Laghubitta Bikas Bank Ltd.

(EOI Ref No: SWBBL/ICT/CBS/EOI/01/074-75)

Date: December 13, 2017.

- 1. SWABALAMBAN LAGHUBITTA BIKAS BANK LTD.** (The Bank) on its own initiative intends to procure a new web based core banking (microfinance) system at all its bank offices, including head office, area offices and branch offices.
- The Bank now invites Expression of Interest (EOI) from eligible consulting firms (The Consultant) to provide the consulting services to **SUPPLY, INSTALLATION, IMPLEMENTATION, SUPPORT AND MAINTENANCE OF A CORE BANKING (MICROFINANCE) SYSTEM WITH INTEGRATED TECHNOLOGIES AND RELATED SERVICES.**
- Interested eligible consultants may obtain further information and EOI document free of cost at the address; General Services Department, Swabalaban Laghubitta Bikas Bank Ltd., Central Office, Baluwatar, Kathmandu., during office hours on or before January 12, 2018.
- The Consultant may associate with other consultants to enhance their qualifications.
- Expressions of interest shall be delivered manually to the address; General Services Department, Swabalaban Laghubitta Bikas Bank Ltd., Central Office, Baluwatar, Kathmandu., during office hours on or before January 12, 2018.
- 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.
- EOI will be assessed based on Qualification [35], Experience [50], and Capacity [15] 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.
- Minimum score to pass the EOI is 60.
- The Bank reserves the right to accept or reject in part or in full any or all the expression of interest at any time, without assigning any reason whatsoever.

B. Instructions for submission of Expression of Interest

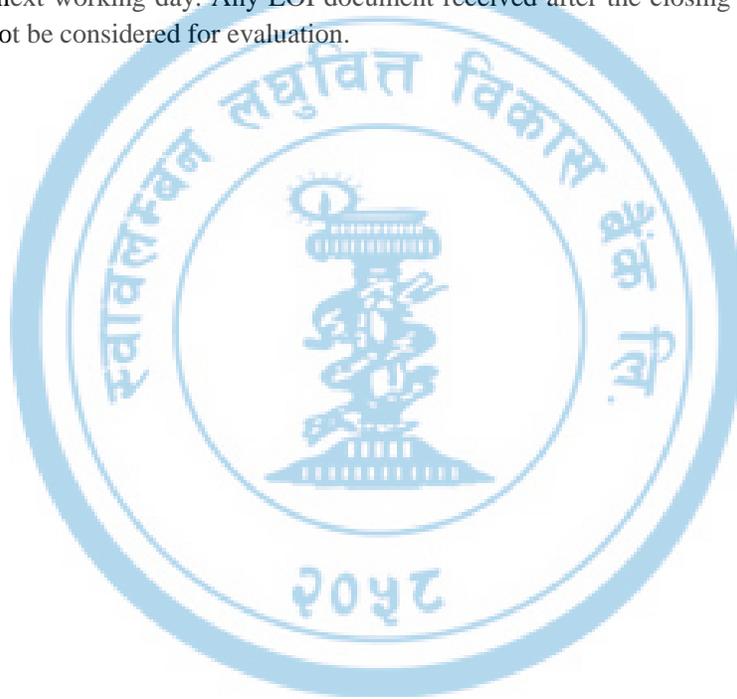
1. Expression of Interest may be submitted by a sole firm or a joint venture of consulting firms. Maximum three companies/ firms can participate as joint venture.
2. Interested consultants must provide information indicating that they are qualified to perform the services (*descriptions, organization 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 consulting firms/ companies.
4. Four to six consulting firms/ companies shall be shortlisted for RFP.
5. After the shorting of the firms/ companies, none of the shortlisted firms/ companies can merge and bring new joint venture companies.
6. The shortlisted firms/companies cannot provide sub-contract to any other companies.
7. All the documents of EOI must be submitted in English language.
8. All the currency must be mentioned in Nepalese Rupees.
9. The consulting firms/companies shall submit notarized copy of certificate of firm/company registration including renewal if any, notarized copy of latest tax clearance certificate & notarized copy of PAN/VAT registration certificate.
10. The consulting firms/companies shall submit audited financial statements of last three fiscal years.
11. The consulting firms/companies shall submit the evidence of implementation of core banking system (banks/financial institutions/financial trustee except cooperatives) within last seven years. The evidence shall consist of work completion certificate from clients with date & contract amount of implemented projects.
12. The consulting firms/companies shall submit the evidence of general experience of the firm in implementation of Enterprise Level Software in any organization within last seven years. The evidence shall consist of work completion certificate from clients with date for whom the project is deployed.
13. The consulting firms/companies shall submit evidence of software development experience in foreign country except Nepal & the country in which the company is registered. The evidence shall consist of work completion certificate from clients with date & contract amount of implemented projects.
14. The consulting firms/companies shall submit the notarized copy of ISO 9001 or ISO 27001 or CMMI certificate. However, the company must submit renewed certificate if it expires before the award of contract.
15. The consulting firms/companies shall submit the list of all staffs & CV with professional certifications

(OCP or equivalent, Sun/Oracle Certification Java Programmer/Developer Certification or equivalent, Microsoft Certified Solution Developer Certification or equivalent). Expired professional certifications shall not be considered for evaluation.

16. The consulting firms/companies shall propose the technology and knowledge transfer approach/ methodology.
17. The Bank's financial administration bylaws 2073 and public procurement act 2063 will apply to all above and rest of the conditions.
18. The consulting firm/company not meeting the following eligibility criteria would not be considered for further evaluation of EOI. Eligibility Criteria for Consultants are as under.
 - (i) The Consultant (each individual company/firm) should be a registered company/firm with each partner of JV of at least 5 years of registration.
 - (ii) The consulting firm/company should have an average annual turnover of at least NRS. 60 million (NRS. 6 Crores) in the last 3 fiscal years (combining all Partners of JV).
 - (iii) The consulting firm/company and each partner of JV should submit the audited financial statements of last three years and the latest tax clearance certificate.
 - (iv) The consulting firm/company or at least one partner of JV should have minimum experience of last 3 years in the development and implementation of enterprise level financial software for banks/financial institutions/financial trustee except cooperatives.
 - (v) The consulting firm/company or at least one partner of JV should have minimum experience of development and implementation of enterprise level microfinance software for at least one microfinance financial institution.
 - (vi) The consulting firm/company and each partner of JV should be ISO 9001 or ISO 27001 or CMMI certified.
19. 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).*
20. The assignment has been scheduled for a period of **one year** (1 year for development/ customization, testing, migration and deployment; 1 year warranty after the completion of the project; 10 years of support). Expected date of commencement of the assignment is February, 2018.
21. Applicants may submit additional information with their application but shortlisting will be based on the

evaluation of information requested, eligibility and completeness test EOI evaluation criteria and included in the formats provided in the EOI document.

22. A Consultant will be selected in accordance with the **Qualitative and Cost Based Selection (QCBS)** method, with technical weightage 80% and financial weightage 20%.
23. 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 Supply, Installation, Implementation, Support and Maintenance of a **Core Banking (Microfinance) System** with Integrated Technologies and Related Services. The Envelope should also clearly indicate the name and address of the Applicant.
24. 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

to

Supply, Installation, Implementation, Support and Maintenance of a Core Banking (Microfinance) System with Integrated Technologies and Related Services

<p>1. Background</p>	<p>1.1 Introduction</p> <p>Swabalamban Laghubitta Bikas Bank Ltd. (the Bank) is a national level microfinance financial institution in Nepal, operating under the license from Nepal Rastra Bank (Central Bank of Nepal) as category “D” class financial institution. Initially, the Bank was registered as a limited company on October 5, 2001, in the Company Registrar’s Office and it has obtained a license to conduct the financial activities as Swabalamban Bikas Bank (Financial Institution) from Nepal Rastra Bank on January, 2002 and later it has changed its name to Swabalamban Laghubitta Bikas Bank Ltd. (Bank and Financial Institutions Act, 2006). A primary mission of the Bank is to deliver microfinance services to the deprived sectors of the community, and uplift the lives of the poor towards the micro-entrepreneurship.</p> <p>The Bank follows the micro financing business based in a popular Grameen model (of Bangladesh), with regional differences that best suits the domestic economy of Nepal, as directed by the Nepal Rastra Bank (NRB).</p>																						
	<p>1.2 Glimpse of the Bank</p> <table border="1"> <tr> <td>Institution Name</td> <td>Swabalamban Laghubitta Bikas Bank Ltd.</td> </tr> <tr> <td>Genre/ Industry</td> <td>Microfinance Financial Institution/ Finance and Banking</td> </tr> <tr> <td>Address</td> <td>Central Office, Baluwatar, P.O.Box: 19246, Kathmandu, Nepal. Tel: +977-1-4434921/22. info@swbbl.com.np http://www.swbbl.com.np</td> </tr> <tr> <td>Bank Office Structure</td> <td>123+9+1= 133 (Branch Offices + Area Offices + Head Office)</td> </tr> <tr> <td>Number of Clients</td> <td>Approx. 2,18,000</td> </tr> <tr> <td>Number of Accounts</td> <td>Approx. 20,00,000 (Loans+ Deposits+ Protection Schemes)</td> </tr> <tr> <td>Daily Account Transactions</td> <td>Approx. 65,000</td> </tr> <tr> <td>Average Oracle Dumps Size</td> <td>Approx. 1GB/ Branch Office (runs independently at each branch offices)</td> </tr> <tr> <td>Servers Hardware / Services</td> <td>Dell PowerEdge R730; IBM x3250 M2; Web, DNS, Exchange, HR, Others</td> </tr> <tr> <td>Network Devices</td> <td>Head Office= Fortigate 100D, Cisco x2960; Area offices + branch offices= Cisco 867 VAE/ K9 Routers</td> </tr> <tr> <td>Connectivity</td> <td>90% Sites- 512/ 512 Kbps L2- Intranet 10% Sites- 192 Kbps L3- Internet</td> </tr> </table>	Institution Name	Swabalamban Laghubitta Bikas Bank Ltd.	Genre/ Industry	Microfinance Financial Institution/ Finance and Banking	Address	Central Office, Baluwatar, P.O.Box: 19246, Kathmandu, Nepal. Tel: +977-1-4434921/22. info@swbbl.com.np http://www.swbbl.com.np	Bank Office Structure	123+9+1= 133 (Branch Offices + Area Offices + Head Office)	Number of Clients	Approx. 2,18,000	Number of Accounts	Approx. 20,00,000 (Loans+ Deposits+ Protection Schemes)	Daily Account Transactions	Approx. 65,000	Average Oracle Dumps Size	Approx. 1GB/ Branch Office (runs independently at each branch offices)	Servers Hardware / Services	Dell PowerEdge R730; IBM x3250 M2; Web, DNS, Exchange, HR, Others	Network Devices	Head Office= Fortigate 100D, Cisco x2960; Area offices + branch offices= Cisco 867 VAE/ K9 Routers	Connectivity	90% Sites- 512/ 512 Kbps L2- Intranet 10% Sites- 192 Kbps L3- Internet
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1.3 Structure and hierarchy of the Bank Offices

The Bank is a leading national level microfinance financial institution in Nepal with more than 130 bank offices across the nation, serving over 0.2 million clients. Currently, the Bank is operating at the following districts through the respective bank offices:

Head Office	Area Offices	Branch Offices	District	
1 Head Office	1.1 Lahan		Kathmandu	
			Siraha	
		1.1.1 Bishnupur	Siraha	
		1.1.2 Lahan	Siraha	
		1.1.3 Mirchaiya	Siraha	
		1.1.4 Golbazaar	Siraha	
		1.1.5 Siraha	Siraha	
		1.1.6 Maheshbari	Siraha	
		1.1.7 Kalyanpur	Saptari	
		1.1.8 Pato	Saptari	
		1.1.9 Rupani	Saptari	
		1.1.10 Rajbiraj	Saptari	
		1.1.11 Fattepur	Saptari	
		1.1.12 Bhardaha	Saptari	
		1.1.13 Mahuli	Saptari	
		1.1.14 Kushaha	Saptari	
		1.1.15 Okhaldhunga	Okhaldhunga	
		1.1.16 Katari	Udaypur	
		1.1.17 Gaighat	Udaypur	
	1.1.18 Salleri	Solukhumbu		
	1.1.19 Manebhanjyang	Okhaldhunga		
	1.2 Bardibas			Mahottari
		1.2.1 Dharapani		Dhanusha
		1.2.2 Sabaila		Dhanusha
		1.2.3 Bardibas		Mahottari
		1.2.4 Gaushala		Mahottari
		1.2.5 Dhalkebar		Dhanusha
		1.2.6 Jaleswor		Mahottari
		1.2.7 Sitapur		Mahottari
		1.2.8 Janakpur		Dhanusha
		1.2.9 Hariwon		Sarlahi
		1.2.10 Sindhuli		Sindhuli
		1.2.11 Manthali		Ramechhap
	1.3 Birgunj			Parsa
		1.3.1 Mahuban		Parsa
		1.3.2 Bhimpheedi		Makwanpur
		1.3.3 Palung		Makwanpur
		1.3.4 Shreepur		Parsa
		1.3.5 Kalaiya		Bara
		1.3.6 Pokhariya		Parsa
		1.3.7 Jeetpur		Bara

			1.3.8 Hetauda	Makwanpur
			1.3.9 Bindabasini	Parsa
			1.3.10 Bastipur	Makwanpur
			1.3.11 Maisthan	Parsa
			1.3.12 Subarnapur	Parsa
		1.4 Itahari		Sunsari
			1.4.1 Dharan	Sunsari
			1.4.2 Inaruwa	Sunsari
			1.4.3 Pakali	Sunsari
			1.4.4 Laukahi	Sunsari
			1.4.5 Duhabi	Sunsari
			1.4.6 Chakraghatti	Sunsari
			1.4.7 Hile	Dhankuta
			1.4.8 Myanglung	Terathum
			1.4.9 Biratchowk	Morang
			1.4.10 Biratnagar	Morang
		1.5 Birtamod		Jhapa
			1.5.1 Ilam	Ilam
			1.5.2 Phiddim	Paanchthar
			1.5.3 Phikkal	Ilam
			1.5.4 Damak	Jhapa
			1.5.5 Dhulabari	Jhapa
			1.5.6 Birtamod	Jhapa
			1.5.7 Chandragadhi	Jhapa
			1.5.8 Taplejung	Taplejung
		1.6 Gathaghar		Bhaktapur
			1.6.1 Sankhu	Kathmandu
			1.6.2 Lubhu	Lalitpur
			1.6.3 Bungamati	Lalitpur
			1.6.4 Banepa	Kavrepalanchok
			1.6.5 Chuchhepati	Kathmandu
			1.6.6 Taukhel	Lalitpur
			1.6.7 Kamalbinayak	Bhaktapur
			1.6.8 Phancekhal	Kavrepalanchok
			1.6.9 Chautara	Sindhupalchok
			1.6.10 Kirtipur	Kathmandu
			1.6.11 Lele	Lalitpur
			1.6.12 Panauti	Kavrepalanchok
			1.6.13 Thimi	Bhaktapur
			1.6.14 Khandichaur	Sindhupalchok
			1.6.15 Kuntabesi	Kavrepalanchok
			1.6.16 Nagarkot	Bhaktapur
			1.6.17 Dolalghat	Kavrepalanchok
			1.6.18 Betrawati	Rasuwa
			1.6.19 Khadgabhanjyang	Nuwakot
		1.7 Ghorahi		Dang
			1.7.1 Ghorahi	Dang
			1.7.2 Lamahi	Dang
			1.7.3 Narayanpur	Dang
			1.7.4 Sandhikharka	Sandhikharka
			1.7.5 Tamghas	Gulmi

				1.7.6	Dhanauri	Dang
				1.7.7	Thada	Sandhikharka
				1.7.8	Shreenagar	Salyan
				1.7.9	4 No Jeetpur	Kapilbastu
				1.7.10	Birendranagar	Surkhet
				1.7.11	Liwang	Rolpa
				1.7.12	Tulasipur	Dang
				1.7.13	Tharmare	Salyan
				1.7.14	Saljhandi	Rupandehi
				1.7.15	Rajhena	Banke
				1.7.16	Khanskarkando	Banke
				1.7.17	Kalika	Bardiya
				1.7.18	Musikot	Rukum
				1.7.19	Chaurjahari	Rukum
				1.7.20	Khalanga	Jumla
			1.8	Pokhara		Kaski
				1.8.1	Dhadingbesi	Dhading
				1.8.2	Dumre	Tanahu
				1.8.3	Gorkhabazaar	Gorkha
				1.8.4	Putalibazaar	Syangja
				1.8.5	Khanikhola	Dhading
				1.8.6	Arughat	Gorkha
				1.8.7	Kawasoti	Nawalparasi
				1.8.8	Bardaghat	Nawalparasi
				1.8.9	Parsa	Chitwan
				1.8.10	Bhimad	Tanahu
				1.8.11	Phalewas	Parbat
				1.8.12	Naundanda	Kaski
				1.8.13	Tityang	Baglung
				1.8.14	Khudi	Lamjung
			1.9	Dhangadhi		Kailali
				1.9.1	Bauniya	Kailali
				1.9.2	Suda	Kanchanpur
				1.9.3	Sanfebagar	Achham
				1.9.4	Pahalmanpur	Kailali
				1.9.5	Tikapur	Kailali
				1.9.6	Magalsen	Achham
				1.9.7	Krishnapur	Kanchanpur
				1.9.8	Silgadhi	Doti
				1.9.9	Hasuliya	Kailali
				1.9.10	Dhangadi	Kailali

- Head Office: Head Office (HO) is a central office. It is responsible for policy formation, operating, accounting, auditing, controlling, research, training and support of business activities performed at Area Offices and Branch Offices. HO inspects and regulates the business process as per the policies and regulatory directives. Various consolidate reports and product design is the essential requirements of the HO.
- Area Offices: Area Offices (AO) are the regional offices. They are responsible for monitoring, supervising, controlling, reporting feedback

	<p>of business activities of all the Branch Offices that lies under that particular AO. It needs to compile the reports and monitor the Branch Office activities.</p> <ul style="list-style-type: none"> ▪ Branch Offices/ Sub- Branch Offices: Branch Offices (BO) is the operation offices. It is responsible to conduct the core business of financial activities with the Clients. Normally, there are Branch Manager, Accountant and Field Officers in a BO. ▪ Satellite Office: Satellite Office is temporary offices that are extended by the Branch Offices to a remote location, where the center meeting took place once in a while around that specific locality.
	<p>1.4 Business Overview</p> <p>Basically, the Bank’s business operates at the center meeting (field), where the different financial and non-financial activities takes place. Loan officer belonging to a branch office are responsible to create clients, enroll them into a group; and form a Center with a number of groups.</p> <p>A Field officer print out a report (Collection-Sheet) at a branch office for each center and it include the transactional information of all the individual accounts. A Field officer travels to a center meeting place, usually conducted at a local school, club, temple, or center meeting house (built in initiation of a center). The clients are sited in rows as per their groups and the group leaders and its assistant are periodically appointed to conduct the meeting. A center chief and its assistant represent all the groups and its clients in a center and they are elected from time to time, and handle the financial transaction and issues of the clients from respective groups. A Field officer collects all the dues- interests and principal, and conducts other transactions relating to loans, deposits and protection schemes. Loans are demanded and approved loans are disbursed at a center meeting. All the information is manually recorded in collection sheet and client’s passbook. A Field officer enters the financial data (earlier recorded in collection sheet) into the information system at branch office. The clients may visit the branch office as well, to conduct the financial activities.</p> <p>At a center meeting, non-financial activities like client’s attendance and behavior; financial discipline; discussion on the business entrepreneurship, problems and reviews; other activities were closely monitored and manually recorded.</p> <p>The Bank offices primarily operate on 28 days (7 days) and monthly (30 days) center meeting schedules as per bank offices’ needs.</p>
	<p>1.5 Technical Overview</p> <p>The Bank is currently operating on locally developed custom built decentralized software named “MFin” (NepaSoft Solution Pvt. Ltd.) with Oracle 10g as the back-end database and front-end developed using Oracle Forms 6i, at all its branch offices with separated databases installed, for last seven years. The software solution offer various types of loans, deposit and protection scheme products; but at the same time, it lacks features, stability and performance, and it isn’t flexible enough to meet the Bank’s versatile needs. All the technical</p>

	<p>software related problems and issues faced at branch offices are troubleshooting by the Bank's technical support team at head office.</p> <p>More than 90% of the Bank offices are connected through L2- Intranet (512/512 Kbps Broadband Connection) and remaining sites are connected through L3- Internet (192Kbps ADSL Connection, GPRS/ GSM/ CDMA Mobile Data Connection).</p> <p>Almost all the bank offices have power backup solution and there are 2-3 computers (laptop and desktop) on average, operating at each bank offices. Dot matrix printer is used to print the financial statements and reports.</p>
<p>2. Objectives</p>	<p>2.1 Objective of the Project</p> <p>In an initiative of the Bank to enhance, better and convenient services to its clients; automate and managed information flows; operate various financial schemes and step into a comprehensive digital information system; the Bank intends to procure a new, technologically advanced, more reliable, convenient, scalable and secured web based, centralized, online, real-time, banking (microfinance) system with integrated technologies and related services.</p> <ul style="list-style-type: none"> (i) Introducing a world class - state of the art – CBS supporting industry standard operating platform with RDBMS at back-end. It shall automate the business process, and enhance the institution's overall productivity. (ii) It should handle all the existing business processes efficiently as well as new operations in days to come. (iii) Adopting a reliable, flexible, secured, scalable, advanced and proven technology. (iv) Real-time consolidated financial report of accounting and business portfolio. (v) Generate different customized report based on account manual and book keeping manual of the Bank, NRB and NFRS. (vi) Enable data synchronization between DC and DRC and ensure BCP. (vii) Better and convenient services to the clients, through ADC. (viii) Migration of the existing data into a new proposed CBS. (ix) Successful implementation, deployment of live operation in a shortest possible time, not exceeding twelve months from the date of contract sign. (x) Training to the bank's staffs on operation, functional and technical aspects of CBS.
<p>3. Outcomes- Solution Requirement</p>	<p>3.1 The outcomes of the service</p> <ul style="list-style-type: none"> (i) Technologically enable all the banking functionalities/ products like

	<p>Loans, Deposits, Protection Schemes, Credit Monitoring / NPA Management, Collection functions, Customer Relationship Management System, General Ledger, MIS and Reports, etc., as per the Bank's activities. It should also incorporate the bank's business structure.</p> <ul style="list-style-type: none"> (ii) A comprehensive CBS, keeping in mind the current requirements as per the central bank, NRB guidelines and as per microfinance financial institution norms and rules, and provide provision for integration/ interface with other systems like Credit Information Center, Clearing House. (iii) The CBS that comprises of financial aspects as well as community development concepts of the clients. (iv) Maximum features and functionalities of a CBS Requirement Works are expected to address by the off-the-shelf solution. (v) The CBS must not be hard-coded; it should support parameterized based scripting to incorporate additional variables/ fields or alteration as per the Bank's future needs. (vi) A system development of CBS must have incorporated n-tier service oriented system architecture (at least three tiers). (vii) A CBS should support independent operating platforms, like independent operating systems, independent database, and independent alternative delivery channels; although a proven operational platform configuration for best performance must be proposed. (viii) Alternative Delivery Channels should be supported. A CBS should interface with delivery channels like Tablet Banking and MPOS (for Field Staffs/ Agents); and IVR Banking, SMS Banking, Internet Banking, Mobile Banking, ATM, Kiosk (for Clients) as and when they may be introduced. (ix) A CBS should be Client/ Customer Centric (single view of all accounts of a Customer) and follow the KYC (Know Your Customer) guideline. (x) Designing of new products with a flexible parameterized driven business rules and introduce them at no time.
<p>4. Brief Scope of Work</p>	<p>4.1 A project comprises of CBS Solution and its implementation strategy.</p> <p>Project shall involve, but not limited to the followings:</p> <ul style="list-style-type: none"> (i) Supply, installation, implementation, maintenance and support of the CBS, with consideration of data migration, business continuity strategy and related services. (ii) CBS should be flexible enough to incorporate remaining requirements through parameterization or few customizations, without degrading the performance of the overall system.

	<p>(iii) A robust system that must operate well, without any major problems; regardless of volume of data or the number of hits in a CBS, with a proper sizing of the resources planning and recommendation, projected for at least next five years.</p> <p>(iv) A CBS must support all the popular web browsers (Internet Explorer, Microsoft Edge, Mozilla Firefox, Google Chrome, Opera, Safari, etc), based user interface.</p> <p>(v) Offline mode of operation in tablet application and MPOS (Mobile Point of Sales) with the entire center meeting data; that must be synchronized immediately in a presence of connectivity (specially, at branch offices) which shall be enabled with mobile printing of transaction slips. Tablets/ MPOS must secure the data encrypted in backup memory storage.</p> <p>(vi) A CBS must comply with the information security management framework and a standard audit trail features.</p> <p>(vii) Preparing and conducting test data and test environment.</p> <p>(viii) Data migration tool and the data should be migrated to the proposed solution for all the bank offices. Migration of the existing data with all transaction history of all accounts (available at the Bank) into a new proposed CBS.</p> <p>(ix) A CBS must be scalable enough to integrate with the third party services and technologies through a secured standard middleware over the different platforms.</p> <p>(x) Private on-premise hosting of a CBS.</p> <p>(xi) The Bank reserves its rights to change the scope of the work (<i>Annexure-II Work Requirements</i>) considering the size and variety of requirements and changing business conditions or for any other purpose which the Bank may deem fit.</p> <p>(xii) A CBS would need to technologically enable all banking functionalities/products like Loans, Deposits, Protection Scheme, Credits Monitoring, NPA Management, Clearing and Collection functions, Term Lending, Customer Information System, General Ledger, MIS and Reports, etc., as mentioned in Work Requirements. It shall support a 24x7-processing environment across all the business units of the Bank. This solution should be maintainable, reliable, secure, scalable, interoperable, portable and understandable.</p> <p>(xiii) The Bank expects the Consultant to provide the Bank with a complete parameterized web based CBS keeping in mind the current requirements and the guidelines issued by NRB, and other regulators and to advise the Bank to channel integration and interfaces with other system and to render all possible assistance to the Bank including training for a Bank wide implementation of the CBS.</p>
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	<p>4.2 The features and functionalities of CBS are:</p> <p>(i) Front Office Modules</p> <ul style="list-style-type: none"> ▪ Product and Service Manager ▪ Customer Relationship Management ▪ Alternative Delivery Channels <p>(ii) Back Office Modules</p> <ul style="list-style-type: none"> ▪ Administration ▪ Accounting and Finance ▪ Reporting <p><i>(Refer to Annexure-I Modules of CBS)</i></p>
	<p>4.3 Requirement/ GAP Analysis</p> <p>(i) The Consultant shall be responsible to gather all the requirements. Based on the review of existing software systems and discussion with the Bank, the Consultant shall present solution. Upon the approval of the Bank, the Consultant shall finalize a list of the CBS users and their information needs and further develop templates for all forms, reports and tables to be generated by the system.</p> <p>(ii) The Consultant shall be responsible for gap identification and resolution so as to provide all functionalities as mentioned in the EOI including work requirements.</p> <p>(iii) The Consultant shall provide the Bank with the gap identification report along with necessary solutions to overcome the gap and the time frames.</p> <p>(iv) The Consultant shall ensure that gaps pointed out by the audit and inspection team, statutory and regulatory bodies, or any third party agency engaged by the Bank will be resolved immediately.</p> <p>(v) The Consultant shall ensure that all gaps identified at the time of system testing are immediately resolved.</p> <p>(vi) Resolve gaps by proposing a suitable work around or customizing the proposed solution by way of modification/ enhancement as necessary, to the proposed CBS. The Consultant shall provide all statutory, regulatory, and ad-hoc MIS (Management information System) and EIS (Executive Information System) reports as required by the Bank in the desired format during the initial phase of customization process.</p> <p>(vii) The Consultant shall provide for all subsequent changes to reports as suggested by the statutory and regulatory bodies from time to time immediately to the Bank at no additional cost.</p>
	<p>4.4 The Consultant shall supply, customize, and implement CBS as per requirements</p>

	<ul style="list-style-type: none"> (i) A systematic approach to manage all changes made to a product or system. The purpose is to ensure that unnecessary changes are not made, all changes are documented, services are not unnecessarily disrupted and resources are used efficiently. (ii) Mandatory customization are the changes on the system related to the regional and regulatory requirements, and it should be consider as a default regular customization and it shouldn't be charged. These changes are vital and used as on general purpose for a territory or country. (iii) Business customizations are the specific requirement that depends on uniqueness of the business model and its rules. The Consultant should specify if the Bank will have the rights to business customized codes (if it is being charged).
	<p>4.5 Data Conversion and Migration</p> <ul style="list-style-type: none"> (i) The Consultant shall provide Data mapping, migration strategy and approach. Migration plan and guidance on existing data cleansing and data standardization. The Consultant must identify what data is required, and develop a data migration tool and conduct all the migration of data into a new system. (ii) The existing systems should be replaced by the new centralized system and the data need to be converted for the same. More data may require by the new system, so the data may need to be entered manually. (iii) The Consultant shall train the bank's staff on data conversion process, including data conversion tools and validation of the data. Training on system handling; tasks that should be done by the bank, like data entry, data cleansing, data upload, etc. (iv) The Consultant shall perform migration of entire data pertaining to live accounts (from the time of account opening or from the time the data is available) for accounts like loans, deposits, protection schemes etc, to the proposed CBS for all the branch offices. The history data should at least fulfill the objectives of printing back dated customer statements (for all products, accounts, and schemes supported by the legacy application) general ledger, profit & loss statement, trial balance, account master information, standing instruction and transaction history (including GL, PL heads and other office accounts, office accounts/ statements/ returns) and should also supports printing MIS reports as desired by the Bank for the legacy data migrated. The Bank would require a standard input engine so that it may perform the migration job itself; enabling data migration and data entry. (v) The Consultant shall clearly mention about the migration terms, responsibilities, and time associated with it. (vi) Migration of static data; those are the customer information and product details that remains constant and gets update periodically. For example,

	<p>client profile and product details, etc.</p> <p>(vii) Transactional data migration is related to every transaction that makes effect on accounts. Those are constantly changing and updated; and its information has to get maintained throughout the time. For example, account balance, fines, etc.</p> <p>(viii) Validation of Migrated Data</p> <ul style="list-style-type: none"> ▪ Migration must be validated, without leaving any future adjustments ▪ Testing with migrated data.
	<p>4.6 Implementation of CBS</p> <p>(i) The Consultant is required to study the Ledger heads, sub-heads, codes and sub-codes in all branch offices and prepare an appropriate and scalable migration tool for smooth and convenient migration of data from the existing system to CBS ensuring uniformity of Ledger heads, sub-heads, codes and sub-codes.</p> <p>(ii) The Consultant shall propose a CBS roll-out in phrases; like, as per the branch size or region. System performance evaluation; as the numbers of branch offices get deployment. Handling of change management plan and strategy.</p> <p>(iii) The Consultant should propose with an appropriate solution on how the CBS would address the temporary offline mode at remote branch offices, especially during absence of network connectivity. Limited functionalities (of installments collection only) maybe proposed.</p> <p>(iv) A Data Center (DC) and Disaster Recovery Centre (DRC) are to be set-up and its specification shall be determined as required for a smooth operation of a CBS, scalable to future growth. The Bank shall provide the necessary site furnished with Air-Conditioning, Power Supply and Backup, Servers and Storage Solutions for which a separate tender will be float. The Consultant need to provide hardware and software specification for server (including hardware and system software), storage and connectivity to meet the optimal CBS performance, proposed with the business growth for at least next five years from the date of project completion.</p>
	<p>4.7 Provision of Test Environment</p> <p>(i) The Consultant shall provide test environment of at least 500 concurrent users accessing the CBS. The Consultant needs to provide separate test environments for alternate delivery channels, being a part of the solution to be provided by the Consultant. The Consultant is also expected to provide test scripts and model test cases for a complete acceptance testing of the CBS solution including all customizations. These will be perused and separately verified by the Bank using its own or third party tools/services.</p> <p>(ii) The Consultant shall prepare a test data to operate on full system</p>

	<p>configuration.</p> <p>(iii) Functional test to validate all the operational functionalities to run as expected. User Assessment Testing- ensure operation of the entire modules and its functionalities smoothly.</p> <p>(iv) Quality Assessment Testing- System performance under maximum loads and hits.</p>
	<p>4.8 Data Storage and Retrieval</p> <p>(i) In a CBS environment, the Bank wants to keep a minimum of 60 months of data before archiving the data. Whenever necessary the Bank should be able to extract required statements from the archived data from data committed to archives of data pool.</p> <p>(ii) The Consultant shall provide the Bank with a real time data in plain format in Standard SQL along with the field description. The Consultant shall provide the table/ data structure to the Bank for retrieval of the data as and when necessary by the Bank. If the Consultant is not willing to share its table details, it may provide a transaction engine from its tables to another set of tables for dumping the necessary data and will provide the Bank with details of such tables.</p> <p>(iii) Banking data must be backup at real-time. The Consultant shall propose a solution, with proper data handling techniques, including redundant backup strategy, data splitting and data archiving.</p>
	<p>4.9 Security and Audit Tool</p> <p>(i) The Consultant shall develop Information Security Management Framework guidelines for the Bank.</p> <p>(ii) The Consultant shall be responsible to perform Vulnerability Assessment and Penetration Testing for all the modules of CBS to ensure the Bank that software is designed to operate at a level of security that is consistent with the potential harm that could result from the loss, inaccuracy, alteration, unavailability, or misuse of the data and resources that it uses, controls, and protects. The Consultant should ensure Confidentiality, Integrity, Availability and Non Repudiation for all the software modules.</p> <p>(iii) The Consultant should implement security measures in CBS to prevent SQL injection, non-validated input, broken access control, broken authentication and session management, cross site scripting, buffer overflows, injection flaws, improper error handling, insecure storage, denial of service, insecure configuration management. The Consultant should provide the evidence of security assessment report.</p> <p>(iv) The Consultant need to develop and provide automated Audit Tools for the Bank's internal and concurrent auditors for auditing all the components of the CBS solution provided. The Bank will also create and deploy such tools it may deem necessary for cross verification. The</p>

Consultant is required to assist in this by providing relevant documentation.

4.10 User Manual and Technical Manual

- (i) The Consultant shall prepare a user manual for each module and its functional activities of the Bank. The manual shall clearly specify daily operating procedure for all ICT functions consisting start-up, close down, restart and recovery, minor system maintenance, handling of errors and other relevant guidance on the application system. The Consultant shall prepare a Technical Manual for entire admin settings of system.

4.11 Management of Users, Roles and Role Groups

- (i) The Consultant shall enable Security Management System in CBS for each user with the aid of Role Based Access Control List. It should be provided by discovering and logically grouping application-level, fine-grained authorizations and entitlements into job roles, which can then be assigned to people by rule-based provisioning or request-approval workflows.

4.12 Training

Employee	No. of Users	Batch	Time
Executives	10	1	4 days
Core Team	10	1	2 weeks
End-User	10	1	1 weeks

The duration of a day will be of 8 hours.

4.13 Warranty

- (i) The Warranty shall be deemed to commence from the date of issue of a project completion certificate by the Bank after successful final implementation for the minimum period of one year.
- (ii) Onsite service during the warranty period for quick troubleshoots technical guidance and system support, configuration and setup, etc. Routine preventive measures of the system must be conducted once in every quarter so as to ensure smooth functioning of the system. The Consultant will have to strictly adhere to the schedule submitted upon the approval of the Bank.

4.14 Support Service (Annual Maintenance)

- (i) The Consultant should provide one year free support warranty on the Bank on proposed CBS, after project completion and full fledge operation.

	<ul style="list-style-type: none"> (ii) The Consultant shall commit the support service for at least ten years after the warranty period. (iii) Satisfactory arrangement to receive and attend complaints which includes ticket system that registers every complaints made by the Bank and the action taken during a time thereof shall be recorded and maintained. (iv) Separate contract on AMC (Annual Maintenance Contract) of each consecutive year (Guaranteed for at least ten years) shall be made upon successful completion of one year warranty period at the approved rate provided by the Consultant in its Financial Proposal. The Consultant shall also mention the rate of AMC increment according to time periods. (v) List of liabilities cover by the parties during AMC and SLA. Document of project implementation guarantee terms on the quality, implementation and deployment of the project mentioning the duration of the time frame. Compensations to be considered under the unfavorable circumstances, if any.
	<p>4.15 Disaster Recovery and High Availability Implementation and DBA Support</p> <ul style="list-style-type: none"> (i) Disaster Recovery Plan is crucial in a mission critical business like banking. Disaster Recovery must ensure downtime of the IT system; such that the system could be brought online without losing any data in very short span of time. So, the Consultant has to develop steps and strategy in setting up Disaster Recovery Plan (DRP) and High Availability plan. No data should be lost if Data Center goes down. (ii) The Consultant should develop complete disaster recovery plan for the system and Consultant should implement high availability in Data Center (DC) and database replication service in a DRC sites of the Bank using features of proposed enterprise level relational database management system. The proposed database system should have features of database replication and clustering. The Consultant should provide DBA service support during warranty period and AMC period.
	<p>4.16 Software Quality Assurance</p> <ul style="list-style-type: none"> (i) Software Quality Assurance includes a means of monitoring the software engineering processes and methods used by Consultant to ensure quality. The methods by which this is accomplished may include ensuring conformance to one or more standards, such as ISO 9001 or ISO 27001 or a model such as CMMI. (ii) The Consultant shall demonstrate for verifying or determining whether products or services meet the Bank's expectations. This includes process-driven approach with specific steps to help define and attain goals. This process considers design, development, production, and service.

	<p>4.17 Future Up-gradation and Framework</p> <p>(i) The CBS should be very much scalable and dynamic. The Consultant should be responsible to design software in such a way that if any new business logic is introduced in future by the Bank, the software should be able to incorporate the business logic change as a pluggable upgradable module.</p> <p>(ii) New releases and system upgrade must be a part of SLA and it should be tested and implemented without disrupting the regular operation of the Bank.</p> <p>(iii) Timely upgrade patched and bug fixes. The Consultant should mention updates/ upgrades releasing frequency.</p> <p>4.18 Reporting</p> <p>(i) CBS shall be capable of generating different customized reports based on Account Manual/ Directives and Book Keeping Manual of the Bank and accounting practices namely Nepal Rastra Bank Reporting Standard, International Financial Reporting Standards (IFRS) as well as Nepal Financial Reporting Standards (NFRS).</p>
<p>5. Knowledge/ Technology Transfer</p>	<p>5.1 Transfer of knowledge and skills to the bank's staff.</p> <p>(i) The capacity building should enable the bank staff to install and implement the chosen system independently, without the involvement of the Consultant.</p> <p>(ii) Train the Bank's project team in the setting up, implementation, commissioning, use and maintenance of a system, hardware and related services, like databases, etc. Furthermore, the bank's staff must be incorporated in the customization, tuning, and preparation of acceptance tests and documentation before commissioning.</p> <p>(iii) The Consultant will be responsible for training the Bank's staffs in the areas of implementation, operations, management, error handling, and system administration of the customized CBS solution. The Training should at least cover the following areas for various segments of users.</p> <ul style="list-style-type: none"> ▪ Core Banking (Microfinance) System concepts ▪ Functionality available in the solution and 'hands-on' session on the same ▪ Parameterization ▪ Audit Techniques ▪ Techniques of generating various MIS / DSS / EIS reports from the solution provided ▪ Design, development and deployment of new products using the solution ▪ Security, System Administration and Management of the system

	<ul style="list-style-type: none"> ▪ First level troubleshooting and diagnosis <p>(iv) User operational training with "training of trainer" concept so that the trainer could teach and guide the staffs as needed. It should be provided with a different set of instructions manuals mentioning techniques to conduct the training sessions, at various levels of roles.</p> <p>(v) System tuning and troubleshooting guidelines.</p> <p>(vi) Specially tailored classroom and hands-on instruction on a software operation. All training shall be in English and Nepali language. At the operational level, training should include Nepali speech. It is envisaged that the Consultant should train the bank's project team and branch users.</p> <p>(vii) All training programs, materials, equipment, and facilities should be provided by the Consultant, as per the needs of the Bank's staff skill levels and educational background. User Operational Training for the operational users, who use a system as a part of their job. For example, client enrollment, entering the loan request, etc.</p> <p>(viii) Functional User Training for the administrators and supervisor, who creates, modifies and removes business rules in functionalities of a system. For example, introducing a new product, changing the interest rates, etc.</p> <p>(ix) Technical User Training for the administrative and system personnel; who are directly or indirectly associated with technical aspect of a system. It can be broadly categorized as follows:</p> <ul style="list-style-type: none"> ▪ Level-1: It is a first level of technical support and it should include the training related to the help desk and handling of complaints/ problems. ▪ Level-2: It includes quick troubleshooting and error handling at various stages of a system operation. Also, it should cover system optimization modules. ▪ Level-3: It includes script level, batch processing of a system such that database handling and integration with third party system should be accomplished without involvement of the Consultant. <p>(x) System administrators training to configuration system settings and Training to local IT specialist/ experts.</p> <p>(xi) A place/ location/ venue for the training shall be arranged by the Bank and the Consultant shall be responsible for the cost associated with the trainers and equipment (computers, multimedia, projector, notes); including traveling/ boarding/ food etc. Most training should be provided on-site or nearby locations.</p>
6. Consultant's	6.1 The Consultant shall deploy a team of following personnel for the Project:

Personnel	Post	Education	General Experience	Specific Experience
	Project Lead/ Manager <i>(Required Person: 1)</i>	Masters in IT OR Bachelor in IT and Masters in Management	At least 5 years of experience in IT	As project manager/ team lead in at least three enterprise level financial applications.
	Business Analyst <i>(Required Person: 2)</i>	Bachelor in IT OR Equivalent	At least 5 years of experience in IT	As business analyst in at least three enterprise level financial applications.
	Technical Architecture <i>(Required Person: 2)</i>	Bachelor in IT OR Equivalent	At least 3 years of experience in IT	As technical architect in at least two enterprise level financial applications.
	Lead Software Engineer <i>(Required Person: 3)</i>	Bachelor in IT OR Equivalent	At least 3 years of experience in IT	Experience as lead software engineer in at least two enterprise level financial applications.
	Software Programmer/ Developer <i>(Required Person: 12)</i>	Bachelor in IT OR Equivalent	At least 2 years of experience in IT	Experience as programmer of at least two financial applications
	Database Engineer <i>(Required Person: 6)</i>	Bachelor in IT OR Equivalent	At least 2 years of experience in IT	As database engineer for at least two enterprise level financial application with experience in performance monitoring and tuning, SQL optimization, database, clustering, role and security management, database design, DC/DRC replication and database backup.
	User Interface Designer <i>(Required Person: 2)</i>	Bachelor in IT OR Equivalent	At least 2 years of experience in IT	As User Interface design of at least two web based enterprise level applications

	QA Engineer (Required Person: 2)	Bachelor in IT OR Equivalent	At least 2 years of experience in IT	As Software Tester or QC/QA Engineer in at least two enterprise level financial applications using test scenarios, test cases, test plans and test scripts
	Build and Release Expert (Required Person: 2)	Bachelor in IT OR Equivalent	At least 2 years of experience in IT	As a build and release expert in at least two web based enterprise level applications
	Technical Writer (Required Person: 2)	Bachelor in IT OR Equivalent	At least 2 years of experience in IT	As a technical writer in at least two enterprise level applications
	Financial Expert (Required Person: 1)	Chartered Accountant OR Equivalent	At least 2 years of experience in Finance and Accounts	As financial expert in at least two enterprise level financial application.

7. Project Timeline

7.1 The Consultant should provide complete activity plan of the project.

- (i) The Consultant shall complete the project of supply, customization, installation, implementation, migration, testing and commissioning- a CBS with integrated technologies and related services, specified in the scope of work within the time period of twelve months from the date of signing of the contract.
- (ii) Time Schedule:

Stage	Brief Description	Estimated Time Frame	Deliverables
I	Commencement of the project.	Within 2 week- from the date of signing of contract.	Inception Report (establishment of project office along with project manager, system analyst, and other technical staffs)
II	GAP analysis, system customization and testing	Within 12 weeks- from the date of signing of contract.	A complete working prototype (SRS, design document, operational manual, test case reports)
III	Finalizing technical specification (hardware system software and	Within 1 week- after approval of working prototype	Technical specification of hardware (server

		connectivity)		and backup solutions) and system software license (OS, RDBMS, etc) required for a CBS at DC and DRC.
IV	Development and use of data migration tool implement strategy; and pilot testing	Within 6 week- after approval of working prototype	Data migration tool and its manual and validation; Full-fledge CBS implementation strategy report; Successful implementation of at least 5 bank offices of different shape and size.	
V	Server implementation, data migration and UAT	Within 4 weeks- after successful pilot test with migrated data; at least 5 bank offices	Live-run (Installation of Hardware, System Software and Connectivity; Successful Data Migration Report and UAT report)	
VI	Deployment	26 weeks- after issuance of UAT report	Complete migration and implementation of all the remaining bank offices and a complete rollout of proposed CBS solution	
VII	Training	30 weeks- after issuance of UAT report	Training materials, User Manuals, System Manuals, Change Management Strategy document.	
VIII	Tuning and Final Report	Within 4 weeks after completion roll out of proposed CBS solution at all the bank offices.	Project Completion Report; System Architecture Diagram; Issuance of Final Acceptance Certificate.	
IX	Free Warranty	1 Year- After issuance of Final Acceptance Certificate.	Technical Support	
X	AMC	After successful completion of warranty period- for each successive	Technical Support	

		consecutive year for at least next 10 years.	
(Refer to Annexure-III Project Schedule.)			
<p>7.2 Implementation Requirements</p> <p>7.2.1 Commencement of the project</p> <p>Scope of Work: The Consultant shall finalize a comprehensive project execution plan including the objectives and output of the assignment. The Consultant will carry out the following activities.</p> <ul style="list-style-type: none"> ▪ Finalize the project execution approach and methodology submitted in the proposal. ▪ Discuss and agree on roles of different stakeholders, task assignment, work plan, timing of required inputs, etc. ▪ Identify any issues likely to affect project progress and discuss how they could be resolved. ▪ Finalize administrative arrangements for the project. <p>The Consultant shall include a project execution approach and methodology, including a project plan containing details showing various activities with time schedule to provide overall view of the proposed approach towards execution of the project.</p> <p>The project management approach shall include:</p> <ul style="list-style-type: none"> ▪ Project management structure with identified roles and responsibilities. ▪ Project communication strategy ▪ Issue escalation procedure ▪ Risk mitigation approach ▪ Quality assurance approach <p>Deliverables:</p> <ul style="list-style-type: none"> ▪ Technical Specification for hardware and system software. ▪ Final project execution plan with list of activities and schedule along with roles and responsibilities. <p>7.2.2 System Requirement Analysis</p> <p>Scope of Work: The Consultant shall undertake the following activities.</p> <ul style="list-style-type: none"> ▪ Detailed As-Is process study including existing manuals and rules and regulation; conducting discussions for understanding the detailed business processes for the different functions and identification of key issues and challenges in the current environment. ▪ Analysis of the current software being used; detailed assessment of current forms and formats being used, analyze the reporting 			

requirements of different users.

- Conduct workshop to discussion and validate of As-Is process maps and finalize of GAP analysis report.

Deliverables:

- As-Is process map
- Detailed requirement document
- GAP analysis report.

7.2.3 System Design

Scope of Work: Based on As-Is business processes and system requirement study; the Consultant shall carry out the following activities:

- Prepare a task level To-Be business process document. This document will describe how existing processes will be executed post software implementation. Finalize the functional and technical requirement specification based on To-Be process design.
- Conduct workshop to discussion and validate of To-Be processes and functional requirement specification and prepare System Requirement Specification (SRS).
- Prepare a System Design Document (SDD) defining the system architecture, modules, database design, interfaces, data requirements and reporting requirements in line with the finalized functional requirement specification

Deliverables:

- To-Be process document
- Detailed functional requirement specification
- System requirement specification
- System design document.

7.2.4 Software Development/ Customization

Scope of Work: The Consultant shall carry out the following activities during software development/ customization:

- The Consultant shall develop/customize all modules of CBS based on approved functional and system requirement specifications and finalized system designs.
- A standard methodology shall be adopted for the Software development/customization.
- Depending on various stages of completion, the Consultant will demonstrate the software to the Bank on multiple occasions to take feedback. The software shall be tested by the users at various stages of completion.
- Consultant shall be responsible to prepare test script and test environment.
- The feedback provided to the Consultant after each round of testing must be documented and submitted to the Bank. The action on feedback need to be demonstrated for seeking the Bank's approval

for carrying out further software development/customization activity.

- A standard high availability and disaster recovery system should be deployed and tested.

Deliverables:

- Software solution prototype
- Testing feedback document
- Fortnightly progress report.

Equipment for Customization and Testing: It will be responsibility of the Consultant to arrange for all the equipment, system software and any other tools required for customization/ modification and testing of CBS till the actual hardware is available.

7.2.5 Software Testing

Scope of Work: During the software development/ customization life cycle, the Consultant shall conduct various types of testing like unit testing, integration testing, performance testing, stress testing, user acceptance testing, stabilization tests, etc. The Consultant shall carry out the following testing activities:

- The Consultant shall design the software testing strategy including test scripts, traceability matrix, detailed test cases and conduct testing of various components of the software customized/ configured.
- The Consultant shall obtain the sign-off from the Bank on testing approach and plan. The Consultant shall perform the testing of the solution based on the approved test plan, document the results and shall fix the bugs found during the testing.
- The Consultant shall provide all support to the Bank employees and/ or any other party who might be assigned by the Bank to conduct acceptance testing.
- The Bank is required to provide formal approval for the test plan. However, it is the ultimate responsibility of Consultant to ensure that the end product delivered meets all the requirements of the Bank.

Deliverables:

- Software test strategy, test scripts, test cases, traceability matrix
- List of various testing tools to be used
- Test result
- Bug fixing report

7.2.6 Migration

Scope of Work: The Consultant will be responsible for migration of existing digital data into the proposed CBS, through a migration tool. There should be a mapping between the source and target data models by the Consultant that should be approved by the Bank. The Consultant has to

provide checklists to the Bank or its representative for verification, including number of records, validations (where possible), other controls / hash totals for the migrated data. The Consultant will carry out the following data conversion and migration activities:

- The Consultant shall perform data digitization and migration requirements study and shall prepare the data migration strategy, plan and tool for migration of existing digital data.
- Prepare master data format and schematics.

Deliverables:

- Migration report
- Migrated data validation report.

7.2.7 Supervise, support on commissioning and system integration of ICT infrastructure required for the proposed CBS

Scope of Work:

- While preparing for DC-DRC replication service plan, the Consultant should consider clustering for database and application for real time fail over.
- Any software, tools and equipment required to carry out above tests has to be arranged by the Consultant at its own cost.

Deliverables:

- Hardware/ networking configuration document and schematics.
- System software configuration documents with number of users etc. to run the proposed CBS as desired.
- Inspection Report

7.2.8 Installation and commissioning of operating system, database, middleware, and other system software as required for a proposed CBS

Scope of Work: The Consultant will be required to install/ configure and commission the operating system, database, middleware, and other system software as required to run proposed CBS application with the desired performance.

Deliverables:

- Checklist of all system configuration including features and parameters to be selected of different system software.

7.2.9 User Acceptance Test

Scope of Work: Acceptance criteria for the User Acceptance Test (UAT) of the system would be laid down by the Bank (for the functional and business inputs). The UAT shall conduct at the Bank's premises and the Consultant would be required to facilitate this process and it would be incumbent upon the Consultant to meet all the criteria laid down for UAT.

	<p>Deliverables:</p> <ul style="list-style-type: none"> User Acceptance Test Report <p>7.2.10 Implementation of proposed CBS and Go-live</p> <p>Scope of Work:</p> <ul style="list-style-type: none"> After successful UAT and addressing all the gaps identified during the testing of the software, the Consultant needs to implement the accepted software for production. The Consultant is also required to perform the migration of data and documents to the production instance and needs to ensure that the software is operational in all aspects. Upon implementation of the production system, the CBS software shall be put into operations. During the go-live phase, the Consultant shall deploy engineers at the Bank's head office, Kathmandu for handholding. Also a telephonic support center with adequate number of professionals has to be setup at branch offices to provide help desk support. <p>Deliverables:</p> <ul style="list-style-type: none"> Operational Manual Maintenance Manual 																						
<p>8. Software Performance for Final Acceptance</p>	<p>8.1 The following software performance parameters will be monitored during pilot and post implementation.</p> <p>The Consultant is required to setup tools to monitor the performance parameter for final acceptance. The Consultant will submit regular fortnightly/ monthly report for both software performance and maintenance. The performance testing should be done using the full system configuration.</p> <table border="1" data-bbox="483 1276 1425 1900"> <thead> <tr> <th>Activities</th> <th>Response Time</th> </tr> </thead> <tbody> <tr> <td>Menu Navigation – To display the menu as per the defined user role and profile</td> <td>< 3 seconds</td> </tr> <tr> <td>Screen Opening – To display the selected data entry screen from the menu chosen</td> <td>< 5 seconds</td> </tr> <tr> <td>Field Navigation – To navigate between the data entry fields in the Screen</td> <td>< 2 seconds</td> </tr> <tr> <td>Look up response time – To display items from List of values</td> <td>< 2 seconds</td> </tr> <tr> <td>Look up response time – To display items from table</td> <td>< 8 seconds</td> </tr> <tr> <td>Screen Navigation – Time taken to navigate from one screen (tab page) to another which does not involve processing in earlier screen</td> <td>< 2 seconds</td> </tr> <tr> <td>Transaction Commit – Response time taken to commit a simple transaction like opening of forms for registration</td> <td>< 3 seconds</td> </tr> <tr> <td>Query Retrieval Response Time - Simple query</td> <td>Should be optimized</td> </tr> <tr> <td>Query Retrieval Response Time - Medium complexity query</td> <td>Should be optimized</td> </tr> <tr> <td>Query Retrieval Response Time - High Complexity query</td> <td>Should be</td> </tr> </tbody> </table>	Activities	Response Time	Menu Navigation – To display the menu as per the defined user role and profile	< 3 seconds	Screen Opening – To display the selected data entry screen from the menu chosen	< 5 seconds	Field Navigation – To navigate between the data entry fields in the Screen	< 2 seconds	Look up response time – To display items from List of values	< 2 seconds	Look up response time – To display items from table	< 8 seconds	Screen Navigation – Time taken to navigate from one screen (tab page) to another which does not involve processing in earlier screen	< 2 seconds	Transaction Commit – Response time taken to commit a simple transaction like opening of forms for registration	< 3 seconds	Query Retrieval Response Time - Simple query	Should be optimized	Query Retrieval Response Time - Medium complexity query	Should be optimized	Query Retrieval Response Time - High Complexity query	Should be
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9. Software SLA during Maintenance Period	9.1 Service levels agreed with the Consultant would be monitored by the Bank on a monthly basis and payments would be made after subtracting the total penalties arising due to noncompliance of the SLA.																												
	<p>The Consultant will submit regular fortnightly/ monthly report for both software maintenance SLAs during the maintenance period. During the period of warranty and Annual Maintenance Contract, as the case may be, the Consultant will attend and rectify the defects at all the bank sites within the maintenance period as mentioned as follows; from the time and date the complaints are reported to the vendor or its representatives.</p> <table border="1"> <thead> <tr> <th></th> <th>SLA Parameters</th> <th>Performance Target</th> <th>Penalty (Beyond Performance Target)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Resolution of High-Critical issues reported/support sought by the users</td> <td>Within 3 hours of reporting the problem</td> <td>15% of total cost of maintenance</td> </tr> <tr> <td>2.</td> <td>Resolution of Medium-Critical issues reported/support sought by the users</td> <td>Within 6 hours of reporting the problem</td> <td>10% of total cost of maintenance</td> </tr> <tr> <td>3.</td> <td>Resolution of Low-Critical issues reported/support sought by the users</td> <td>Within 48 hours of reporting the problem</td> <td>5% of total cost of maintenance</td> </tr> </tbody> </table> <p>Definition of criticality mentioned in the above table is provided below:</p> <table border="1"> <thead> <tr> <th></th> <th>Issue Type</th> <th>Explanation</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>High Critical</td> <td> <ul style="list-style-type: none"> ▪ Application breakdown /crash. ▪ Has serious implications on running the production server and has impacted all business critical process. ▪ It has affected or may affect more than 50% of users. </td> </tr> <tr> <td>2.</td> <td>Medium Critical</td> <td> <ul style="list-style-type: none"> ▪ Serious degradation in the application performance. ▪ Has impacted majority of the business process but still be able to continue the operations with the system limitations. ▪ May have serious implications on the data integrity. ▪ It has affected or may affect 10% -50% of users. </td> </tr> <tr> <td>3.</td> <td>Low critical</td> <td> <ul style="list-style-type: none"> ▪ Applications are stable and have no impact on the day-to-day working. ▪ It has affected or may affect a single user. E.g. Knowledge related calls </td> </tr> </tbody> </table>			SLA Parameters	Performance Target	Penalty (Beyond Performance Target)	1.	Resolution of High-Critical issues reported/support sought by the users	Within 3 hours of reporting the problem	15% of total cost of maintenance	2.	Resolution of Medium-Critical issues reported/support sought by the users	Within 6 hours of reporting the problem	10% of total cost of maintenance	3.	Resolution of Low-Critical issues reported/support sought by the users	Within 48 hours of reporting the problem	5% of total cost of maintenance		Issue Type	Explanation	1.	High Critical	<ul style="list-style-type: none"> ▪ Application breakdown /crash. ▪ Has serious implications on running the production server and has impacted all business critical process. ▪ It has affected or may affect more than 50% of users. 	2.	Medium Critical	<ul style="list-style-type: none"> ▪ Serious degradation in the application performance. ▪ Has impacted majority of the business process but still be able to continue the operations with the system limitations. ▪ May have serious implications on the data integrity. ▪ It has affected or may affect 10% -50% of users. 	3.	Low critical
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	<p>The Consultant is required to deploy required resources to maintain the technical and operational SLAs. The penalty will be calculated based on aggregated performance for a specific quarter.</p>
<p>10. Technical Requirement</p>	<p>10.1 Software Requirements</p> <ul style="list-style-type: none"> (i) Should be based on n-tier Architecture. (ii) Must follow W3C standards as applicable. (iii) Should support IPSec, SSL for secure communication over web. (iv) Should support encryption and compression features. (v) Should integrate with any other portal products through open standards such as HTML, XML, RSS, web services, as applicable. (vi) Should be modular in nature with ease of addition / modification of functional requirements/ business rules. (vii) Should be based on current state-of-the-art technology platforms which have been in use in the industry for at least one year. (viii) Should have a definite upgrade path and plan for at least next 5 years. (ix) Hardcopies and softcopies of a comprehensive system and user manual mentioning every aspect of a proposed CBS and its environment, including system settings and configurations. <p>10.2 System Capacity and Performance Requirements</p> <ul style="list-style-type: none"> (i) Local support facility with it capacity of expertise. (ii) The application platform suggested and the architecture that the Consultant would propose must be proven to handle the expected load throughout the project. (iii) Deployment plan must be such that minimum downtime shall meet the required reliability and availability of 99%. (iv) Must provide support for at least 500 concurrent users, with a response time as mentioned in 8.1 (v) Capacity to handle transactions per second. (vi) Capacity to handle numbers of accounts simultaneously. (vii) Backup and restore time. (viii) EoD and BoD time. (ix) Specify how the system handles the failure conditions:

	<ul style="list-style-type: none"> ▪ Power failure ▪ Disk failure ▪ OS failure ▪ Database failure <p>(x) System Loads</p> <ul style="list-style-type: none"> ▪ Processor load, if maintained at maximum 50% on average. ▪ Internal memory load, if maintained at maximum 60% on average. ▪ Hard disk space, if maintained at maximum 50% on average.
	<p>10.3 Security Requirements</p> <p>(i) The proposed solution must include design and implementation of a comprehensive IS security policy in line with ISO 27001 or equivalent standards.</p> <p>(ii) The proposed solution must provide security including identification, authentication, authorization, access control, administration and audit and support for industry standard protocols.</p> <p>(iii) The proposed solution must support the Security Standards as applicable: (Authentication, Authorization, Encryption, Secure Conversation, Non-repudiation, XML Firewalls, Security standards support, Web Service Security).</p> <p>(iv) The proposed solution must provide database security mechanism at core level of the database.</p> <p>(v) The database of the proposed solution must provide option for secured data storage for historic data changes for compliance and tracking the changes.</p> <p>(vi) The proposed solution must be able to generate a report on all "Authorization Failure" messages per user ID.</p> <p>(vii) The proposed solution must provide ability to monitor, proactively identify and shutdown the threat incidents through different modes of communication (email, SMS, phone call, dashboard etc.) as applicable.</p> <p>(viii) The proposed solution must provide a security model that can be configured for enforcement of user rights.</p> <p>(ix) Access security must dictate who gets access to the system, as well as the functions that are accessible.</p> <p>(x) Administrative users must have access to a facility to maintain the software security features.</p>

	<p>10.4 Technical Specification Requirements</p> <ul style="list-style-type: none"> (i) The consultant should advise details of the minimum and recommended configuration of various hardware and system software. (ii) Specification for servers and storage (CPU Cores/RAM/Storage/ OS/ RDBMS, etc). (iii) Whether any additional third party software is required in order to make the system operable. Mention the product name, versions, licensing, etc. (iv) Specify the backup mechanisms supported by the proposed CBS solution along with the hardware and software required for the same. (v) Specification for network connectivity (bandwidth/ latency etc).Bandwidth required for a complete transaction per terminal, including over-the-counter, ATM, MPoS, tablet. (vi) Specification for PCs and printers (CPU/ RAM / OS/ Storage/ etc). (vii) Specification for alternative delivery channels (tablet banking, MPOS, ATM, etc.) (viii) Sizing calculator of all hardware resources projected for at least next five years, considering the bank's business growth. (refer to Bank's glimpse and profile for business size) <p>10.5 Project Management Requirement</p> <ul style="list-style-type: none"> (i) A complete responsibility of managing the project including, supply, customization, data migration, implementation, integration and maintaining the software, till the clearance of the acceptance test of the project as defined under the various phase with effect from the date on which acceptance certificate for successful commission of system is issued by the Bank. <p>10.6 Software Support Requirement</p> <ul style="list-style-type: none"> (i) Onsite support for software that may include incorporation of requisite changes in the software and documentation for a period of one year after successful implementation (first live run) of the software duly certified by the Bank. This support includes, providing solution to the day-to-day problems that may be encountered due to any of the constituents of the system software, application software, and data etc. It may also include minor changes in the software and customization required for report generation.
<p>11. Logistic Support</p>	<p>11.1 Logistic Support</p> <ul style="list-style-type: none"> (i) The Bank shall provide a room in head office premise for day to day activities.
<p>12. Escrow</p>	<p>12.1 Assurance of customized source code</p>

Mechanism	(i) The Bank and the consultant shall agree for an escrow mechanism, at any point of time, for the deposit of the customized source code for the CBS product supplied by the Consultant to the Bank in order to protect its interests in an eventual situation. As a part of the escrow arrangement, the finally selected Consultant is also expected to provide a detailed code documentation of the CBS solution, which has been duly reviewed by an external independent organization.
13. Patent and Copyright	13.1 Patent and Copyright (i) Indemnify the Bank against all third party claims of infringement of patent, copyright, trade mark, license or industrial design rights and other intellectual property rights, software piracy arising from the use of the system or any part thereof in Nepal.



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.

<u>i) Eligibility & Completeness Test</u>	Compliance
Copy of Registration of the company/firm	
VAT/PAN Registration (<i>for National consulting firm only</i>)	
Tax Clearance/Tax Return Submission/Letter of Time Extension for Tax Return Submission [<i>insert Fiscal year</i>] (<i>for National consulting firm only</i>)	
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	

<u>ii) EOI Evaluation Criteria</u>	<u>Insert Minimum Requirement if Applicable</u>	<u>Score [Out of 100%]</u>
A. Qualification		
Qualification of Key Experts		35%
Experience of Key Experts		
B. Experience		
General of consulting firm		50%
Specific experience of consulting firm within last 7 years.		
Similar Geographical experience of consulting firm		
C. Capacity		
Financial Capacity		15%

E. EOI Forms & Formats

Form 1. Letter of Application

Form 2. Applicant's Information Form

Form 3. Experience

Form 4. Capacity

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



1. Letter of Application

(Letterhead paper of the Applicant or partner responsible for a joint venture, including full postal address, telephone no., fax and email address)

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]

[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.)

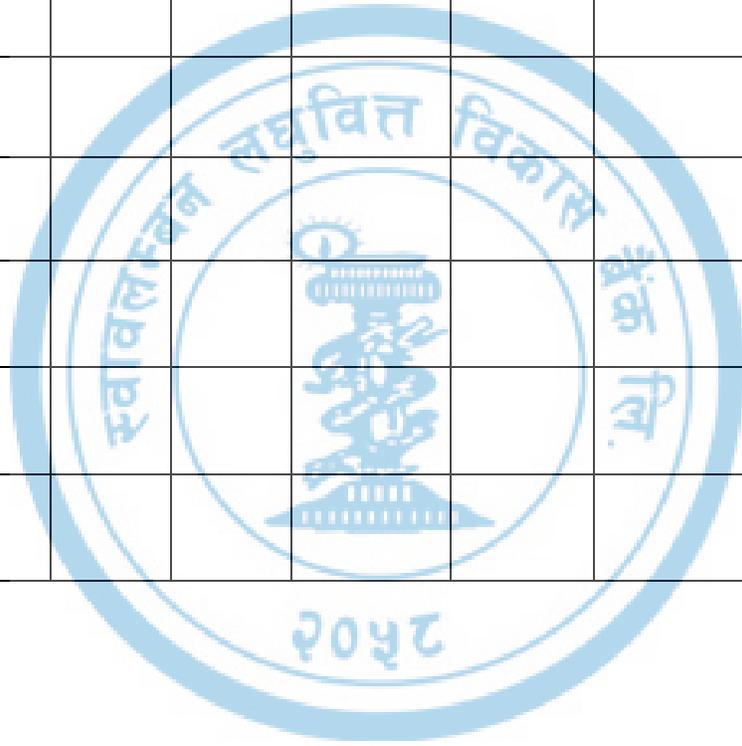


3. Experience

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):
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: _____

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

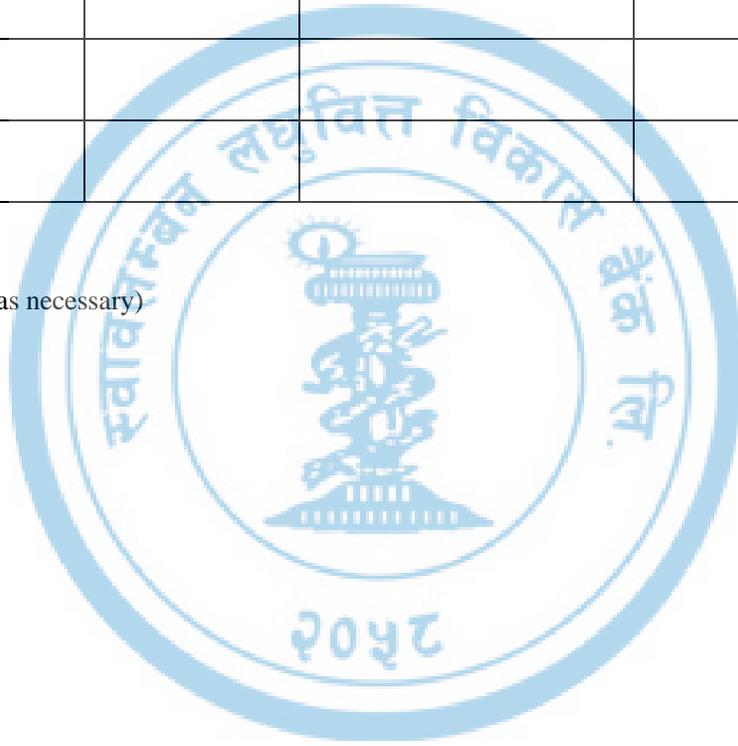
(Note: Supporting documents for Average Turnover should be submitted for the above.)

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)



Annexure-I Modules of Core Banking (Microfinance) System

BACK OFFICE	ADMINISTRATION	FINANCE & ACCOUNTING		REPORTING
	Human Resource Inventory Internal Audit	FINANCE	ACCOUNTING	Operational Regulatory Financial Management
	Planning & Budget Finance Asset	Chart of Accounts Sub- Ledger Accounting GL		
FRONT OFFICE	PRODUCT AND SERVICE			
	LOAN	DEPOSIT	MICRO-INSURANCE	OTHERS
	Individual Loans Solidarity Groups Collateral Mgmt Guarantor Mgmt Credit Scoring	Savings Account Solidarity Groups Collateral Mgmt Guarantor Mgmt Credit Scoring	Client Insurance Cattle on Loan Premium	Loan Officer Mgmt Inter-Branch Transfer Remittance
	CLIENT MANAGEMENT			
	Client Information Mgmt	Customer Relationship Mgmt	Potential Client Mgmt	
ALTERNATIVE DELIVERY CHANNELS				
Teller Mgmt	MPoS	Internet Banking	Mobile/Tablet Banking	ATM

Annexure-II Work Requirements

Bank's Requirements	
1	System
1.1	Architecture
1.1.1	Three or more tier architecture.
1.1.2	Modular architecture.
1.1.3	Service oriented architecture (SOA)
1.1.4	Parallel multi-processing.
1.1.5	Entire data must reside in a centralized SAN.
1.1.6	Online real-time fault tolerance system to avoid one point failure in High Availability (HA) with clustering at Data Center (DC).
1.1.7	Database replication at Disaster Recovery Center (DRC).
1.1.8	Operable in Sun, IBM, AIX and Intel based hardware systems.
1.1.9	Operation platform- Industry standard server operating system (Unix/ Ms Windows).
1.1.10	RDBMS- Industry standard relational database management system (Oracle/ Ms SQL Server).
1.1.11	Software development- Parameter based programming/ scripting (not hard coded).
1.1.12	Private hosting (with private servers in own Data Center).
1.1.13	Concurrent user based license; regardless of volume of the bank's business; number of the clients or transaction or accounts or bank (branch) offices.
1.1.14	License must include unlimited interfacing channels.
1.1.15	The annual maintenance cost must include any future version or releases upgrades of a system.
1.1.16	Third party assurance certificate of the source code for the situation like; the merger, acquisition or dissolve; or discontinue of the product versions/ releases.
1.2	Integration
1.2.1	Integrated solution including modules; Client Information Management, Center Management, Employee Management, Branch Management, Loan Portfolio, Deposit Management, Micro-Insurance, Accounting, Reporting, Document Management.
1.2.2	Capability to interface with heterogeneous platforms; including third party modules and services.
1.2.3	Seamless interfacing with alternative delivery channels.
1.2.4	Interfacing with the system based on ISO 8583
1.2.5	Standard communication protocols, such as HTTPS, SOAP, API and XML.
1.2.6	SWIFT messaging
1.2.7	Data capturing integration, including KYC and biometric data.
1.2.8	Integration to credit information bureau system.
1.2.9	Integration to nepal clearing house system.
1.2.10	Import and Export Tools from/ to different formats (docx, xlsx, csv, pdf).
1.2.11	Integration with in-house email system for notification.
1.3	Connectivity
1.3.1	TCP/IP Network with LAN and WAN connectivity.
1.3.2	It must be operable in minimum connectivity bandwidth as low as 64Kbps.

1.3.3	It must operate in Fiber, ADSL, DSL, MPLS, GSM (2G, 3G, 4G), CDMA, Lease Line, RF, VSAT, Dial up connectons.
1.4	Localization
1.4.1	Multi-calendar, multi-currency and multilingual.
1.4.2	Nepali calendar must be mapped with English calendar in accurate manner, set for N number of years.
1.4.3	Fiscal year calendar set up with EoM, EoQ, EoH, EoY for specific calendar days (Nepali and English).
1.4.4	Handling of holidays and non-working days for at least 2 years time in advance. Overriding based on a local context/situation at each branch office level.
1.4.5	Calendar featuring today, next working day and last working day; in the generation of loan installment schedule and collection dates.
1.4.6	Nepalese standard time for system time.
1.4.7	User definable date and currency formats.
1.4.8	A rounding should support the universal method; that is, upper value for decimal 5 or more and lower value for decimal below five.
1.4.9	Languages of choice as per the user basis; English Language and Nepali Language (Nepali Unicode) mode of operation.
1.4.10	Nepalese Currency and its exchange rate integrated to the Central bank forex.
1.5	Performance
1.5.1	System must run 365 days throughout the year. Service availability must guarantee 99% uptime annually.
1.5.2	Transition from one day to another (Start of day, End of day, End of Month, End of Quarter, End of Half Yearly, End of Year, Close of accounting period) without having to stop bank operations, offering a true 24/7 availability.
1.5.3	Consistent system response time; regardless of volume of data, transactions, accounts and concurrent users. (minimum 65,000 daily transaction hits; 1GB data on average per branch; minimum 500 concurrent users; 15,00,000 or more accounts).
1.5.4	System load must be optimized as CPU usage at maximum 50% on average at most, Internal memory at maximum 60% on average and storage at maximum 50% on average.
1.5.5	The data in a system must include a perpetual client's data that are optimized using data splitting, data archiving and other data management techniques.
1.6	Administration
1.6.1	Parameterized templates for setting up the bank policies.
1.6.2	System administration functionalities.
1.6.3	Administrator/ System login through front-end for system access and configuration; backend changes should not be allowed.
1.6.4	Add/ edit/ delete extra fields as needed and enable/disable without technical intervention.
1.6.5	All parameters control through maker and multi-level checker.
1.6.6	Centralized and branch wise EoD and BoD process.
1.6.7	Automatic and manual fully parameterized EoD and BoD process
1.6.8	Appropriate message should display in user screen, while EoD and BoD in progress.
1.6.9	Ability to operate on earlier business day, in case EoD could not be accomplished for some reasons.

1.6.10	Independent branch operation, reporting and accounting.
1.6.11	Possibility to operate branch offices in off-line mode (limited functionalities like collection details) for temporary, data synchronization once the connectivity gets established.
1.6.12	Role based access control for different permissions (edit, view, full control).
1.6.13	Printer setup with type and size as required by the devices.
1.7	Management of User and Role
1.7.1	Creation and management of unique key for user identities.
1.7.2	Create new user and maintain user profile.
1.7.3	Activation and deactivation of users.
1.7.4	Create new group and maintain group data.
1.7.5	Assign users to a group and remove users from a group.
1.7.6	Create role, change permissions for role, delete role.
1.7.7	Modules, functions and menus to add and remove in each role.
1.7.8	Assign a role to a group/ user and remove a group/ user from a role.
1.7.9	Reporting (Search, sort, display and print role, user and group).
1.7.10	Access and restriction at central and branch level.
1.8	User Interface
1.8.1	Graphical user interface; keyboard, pointing device and touch screen enabled.
1.8.2	Featuring color highlight in key (important) fields/ points/ dates.
1.8.3	Consistent and responsive user interface as per screen resolution, layouts and menus.
1.8.4	Run on popular and latest web browsers; internet explorer, microsoft edge, mozilla firefox, google chrome, opera, safari.
1.8.5	Single point log-in for modules, menus and functions.
1.8.6	User wise dashboard; limited to menus, functionalities and modules.
1.8.7	Dash board manager with a summary, including approvals for checkers, portfolio at risk; center meeting today; client information; cash flow; loan performance; installments dues; repayment rate; loan disbursed today; loans in pipeline; accounts opened/ closed during the day; cashier position; notes and reminders.
1.8.8	Configurable hot keys (function key) for quick actions, shortcuts, tools.
1.8.9	User friendly error messages and possible corrections.
1.8.10	User wise alerts and notifications for operators, administrators and technical users.
1.9	Security and Password
1.9.1	Device binding through IP, MAC, IMEI.
1.9.2	System Restriction Time; time-of-day or terminal access restrictions- configurable for users and roles.
1.9.3	Authentication, Authorization, Secure Conversation, Non-repudiation, XML Firewalls.
1.9.4	Vulnerability assessment and penetration testing.
1.9.5	Security assessment on preventing SQL injection, non-validated input, broken access control, broken authentication and session management, cross site scripting, buffer overflows, injection flaws, improper error handling, insecure storage, denial of service, insecure configuration management.
1.9.6	System audit trail, featuring every traces and logs relating to the changes made in the system. Details regarding the station, terminal, user, date, time and all the queries; enabling filtering by criteria.

1.9.7	System edit history, featuring modification (old values replaced by new ones); deletion of data.
1.9.8	Violation alerts and logs on suspicious fraudulent activities in client's accounts; like, failure attempts, large transactions, etc.
1.9.9	Alert on unusual login, such that off-hour or off-site user login.
1.9.10	System log and events log for every changes/ updates made.
1.9.11	Automated notification on system status; with hardware, software and network.
1.9.12	Security notifications through dashboard, email, SMS, phone call.
1.9.13	Two factor authentication.
1.9.14	Default System Passwords must never be used.
1.9.15	Password must not be read; forgotten passwords must be reset.
1.9.16	Mandatory password change in first login.
1.9.17	Password must be in encrypted and compressed format while transmitting and storing.
1.9.18	Single session and multi session feature for single login Id.
1.9.19	User authentication levels- operating system login; application login; access to functionalities.
1.9.20	Password policy parameters; minimum length; complexity, mandatory change, repeated password, etc.
1.9.21	Dynamic password authentication featuring OTP, Email, SMS.
1.9.22	Encryption Techniques- 3DES, AES, RSA.
1.9.23	Secure connectivity- SSL VPN and IPSec VPN.
1.9.24	Page expiration- Automatic logging off from the inactive screen.
1.9.25	Log-in freeze with a number of unsuccessful attempts and reporting of the same. Authorized user/ role must reset the password.
1.9.26	User profiles, access rights and permissions.
1.9.27	Full audit trails.
1.10	Backup and Recovery
1.10.1	Real-time mirroring of data in Tape Drive Backup Storage.
1.10.2	Data Backup Mode (Selected, Scheduled, On demand, After data changed, Incremental, Full).
1.10.3	System snapshots; configuration backup for various recovery points.
1.10.4	Multiple backups, during a different timestamps.
1.10.5	Backup must not interfere with the running transactions.
1.10.6	Data splitting and data archiving techniques.
1.10.7	Generating reports or query data from archived data.
1.10.8	System recovery and restore.
1.10.9	Data recovery and restore.
2	Client Information Management
2.1	Client Setting
2.1.1	Client centric system with all accounts linked to the client record (single view of all accounts of a client), following periodic history of the client's profiles and evaluation on the parameters based on what are the different stages of clients' economic progresses throughout the time.

2.1.2	Unique identification number.
2.1.3	Maximum number of client creation along with a various related fields.
2.1.4	Specifying fields as mandatory or optional.
2.1.5	Clients' associated with groups and without groups (non members).
2.1.6	Acquisition as per pre-set business rules; along with necessary data and documentation requirements for admission/ enrollment.
2.1.7	Tracking introducer's details.
2.1.8	Allocating to a field officer.
2.1.9	Pre-group training (PGT) and other trainings information.
2.1.10	PRA (Participatory Rural Appraisal) and PWR (Participatory Wealth Ranking) functionalities.
2.1.11	Guarantor's documents for all the product/services acquired.
2.1.12	Group and center acceptance and enrollment.
2.1.13	Registration approval.
2.1.14	Client's borrowing limit management as per the loan cycle, center meeting participation and discipline, repayments, etc.
2.1.15	Printing clients' profile and account statements.
2.1.16	Transfer between groups, centers and branch offices.
2.1.17	Defining relationships; for example, clients belonging to a same family must not be allowed in a microfinance program.
2.1.18	Special client status, based on different parameters like number of years, number of loan cycles, etc.
2.1.19	Client's appraisal on the basis of parameters, relating to scoring under various disciplines.
2.2	Client data entry and modification
2.2.1	Client data entry, featuring additional custom fields.
2.2.2	Collecting and capturing of information for KYC that must include; personal details, family details, income details, asset details, business details, financial details, nominee details etc.
2.2.3	Personal details must include full name, addresses, dob, id card no., occupation, ethnic group, etc.
2.2.4	Family details must include spouse, father-in-law, father, mother, grandfather and other family member information.
2.2.5	Clients' assets details during different courses of time.
2.2.6	Incorporating physical identification of clients (photograph, signature, finger print, other biometric information). Photograph and signature must be possible to scan against the client record.
2.2.7	Notes to add in client records.
2.2.8	Address map tracking.
2.2.9	Link scanned documents to a client record.
2.2.10	Attendance of participants in center meeting.
2.2.11	Additional services to a client, like Internet banking, SMS banking, mobile banking, etc.
2.3	Client Information Access
2.3.1	Tracing of client data throughout the bank. Ability to see and make changes to client's all accounts altogether on a single screen, by drilling down into client list.

2.3.2	Validation against age group, martial status, ethnic information, family member restriction, etc. For example, single, disabled, dalit, deprived sector, senior citizen, migrated, etc.
2.3.3	Clients' transfer/ merge/ inactive updates and history.
2.3.4	Creation, changes and deletion of clients' records must be audit traceable.
2.3.5	Tracking of potential client information (progressive profile).
2.3.6	Follow-up on clients' performance status (impact information).
2.3.7	Facility to check the clients' behavior (credit and deposit status and history).
2.3.8	Historical data on clients (including cancelled, rejected and closed loans).
2.3.9	Tracing clients at different stages of the process (prospect, active, blocked).
2.3.10	Tracking of clients at different levels (individual, group, village, branch, region, institution).
2.3.11	Tracking of clients with duplicate accounts and larger dues.
2.3.12	Identifies potential duplicates (double entry of same client at different branches).
2.3.13	Blacklisting and releasing from blacklisting.
2.3.14	Status as active/ deactivate.
2.3.15	Exit and reinstatement. Rules such as reinstatement prior some defined period (3 months) must not be allowed.
2.3.16	Provisioning for clients, in the cases like accidents, death and other situations.
3	Group Information Management
3.1	Group Settings
3.1.1	Maximum number of groups creation with various related fields.
3.1.2	Restricting minimum and maximum number of clients in a group.
3.1.3	Group recognition test (GRT).
3.1.4	Group category as full OR partial. For example, group with less than 5 clients is considered as partial group.
3.1.5	Group approval and its association with the center.
3.1.6	Group merge and dissolve.
3.2	Group Data Entry/ Modification
3.2.1	Group data -Client list, leader, secretary, status, creator's name, creation date.
3.2.2	Periodic updates of group data and its history maintenance.
3.2.3	Notes to add on group records.
3.3	Group Information Access
3.3.1	Group status at various course of time.
3.3.2	Ability to view and make changes in a group in a single screen and drill down into a client records.
3.3.3	Creation, changes and deletion of group's records must be audit traceable.
3.3.4	Target group and group evaluation report.
4	Center Information Management
4.1	Center Settings
4.1.1	Maximum number of centers creation with various related field.
4.1.2	Center recognition approval along with approver details.
4.1.3	Center handover- assigning centers to a field officer.

4.1.4	Center meeting schedule and reschedule- meeting day/time change for unscheduled holidays, which should be change (back and forth) temporarily that makes impact on any single meeting without affecting all the other meetings in future.
4.1.5	Center transfer from one branch to another.
4.1.6	Center status as formed, activate, inactive, dissolve, merge.
4.1.7	Center must have a saving account (welfare fund) that is used for social purposes.
4.2	Center Data Entry/ Modification
4.2.1	Center Data -center name, chief, vice-chief, established date, meeting date, center house, and other categories.
4.2.2	Brief activities performed by the center chief.
4.2.3	Periodic updates of center data.
4.2.4	Notes to add on center record.
4.3	Center Information Access
4.3.1	Creation, changes and deletion of center's records must be audit traceable.
4.3.2	Ability to see and make changes to all centers (including inactive ones) on a single screen.
4.3.3	Track the groups and clients associated with the center.
4.3.4	Center evaluation details and social performance report.
5	Field Employee Management
5.1	Employee Settings
5.1.1	Belonging branch; creating and dissolving centers, groups and clients.
5.2	Employee Data Entry/ Modification
5.2.1	Employee Data- id, full name, address, contact, branch, assigned centers.
5.2.2	Centers are added and changed periodically for a field staff, especially during transfer/ leave.
5.3	Employee Information
5.3.1	Center meeting activities, during different course of time.
5.3.2	Field officer performance (Target Vs Achievements) # Number of clients handling- Active Members # Loan investment- Total Loanee # Loan collection- Overdue # Loan utilization analysis # Saving, overdue, refreshers, trainings, etc # Refreshers' training # Accounts, records and reports # Other parameters.
5.3.3	Field officer conducting PGT (pre-group training) and GRT (group recognition training).
6	Branch Management
6.1	Branch Settings
6.1.1	Maximum number of bank offices, with multiple hierarchies like, head office, area office, branch office, sub-branch office and others, like unit office.
6.1.2	Bank Data- branch code, name, address, category, region, bank manager, etc.

6.1.3	Branch grading, based on various performance parameters like total number of client, loans, profit, etc.
6.1.4	Any changes, updates and introduction of new products should get affected to all branch offices on single-shot from head office.
6.1.5	Enforcing and Mapping of policies for each branch offices separately.
6.1.6	Vault transaction maintenance that should include vault limits; approval for excess amount; cash denomination; vault opening and closings; etc.
6.1.7	Split a branch into two smaller branches ("splitting") or consolidate two branches into one large branch ("merging"), without re-entering data or losing history (i.e. client history gets transferred as well).
6.1.8	Branch active, inactive status.
6.1.9	Day close procedure. For example, it must governed by the rule such as no day-end process without client attendance entry and all the other related information regarding the clients.
6.1.10	Each client must be assigned to a field officer in a branch.
6.2	Branch Information
6.2.1	Centers and Client centric- unified real-time view of the client and center details/ activities. For example, training, per staff clients, saving, loan, saving-loan ratio.
6.2.2	Branch wise day-book.
6.2.3	Income and expenditure summary details.
6.3	Teller Management
6.3.1	Assigning teller.
6.3.2	Opening and closing of Counter.
6.3.3	Cash overage and shortage management.
6.3.4	Transfer cash from vault to a Counter and vice-versa.
6.3.5	Transfer cash from one Counter to another.
6.3.6	Transfer cash from HO to Branch office.
6.3.7	Transfer cash from Branch office to HO.
6.3.8	Cash to cash transfer by or to client.
6.4	Front Office Cash Handling
6.4.1	Teller must post the transaction immediately in pre-defined General Ledger codes, depending on the type of transaction.
6.4.2	All front-office voucher transaction needs to get validated by the system at the time a transaction is recorded, along with sequentially-generated voucher number.
6.4.3	Teller must post cash value back to the vault and reconciled, before logging out.
6.5	Inter-Branch Transaction
6.5.1	A voucher is drawn in the name of head office by the sender branch and the head office generates the voucher to the recipient branch office, but the fund may transfer directly from one branch to another, showing only the transaction affect at head office. All the transfers and pending should be recorded and shown at head office.
6.5.2	It shouldn't take effect in accounting unless the transaction is completed; the acknowledgement of the received fund is essential.
6.5.3	IBT (Inter-branch transaction) feature tracking with all the logins and approvals.
7	Product Management
7.1	Product Setup

7.1.1	Parameter driven configuration framework, based on business rules and workflows, enabling the banks to create new products or modify existing ones.
7.1.2	Maximum varieties of product creation/ modification with activation/ deactivation features. There could be various products of different nature; suppose, a special product based on regions, ethnic groups, with change in parameters like interest rates and service charges.
7.1.3	Defining sub-category products with default sets, that could further customized as needed.
7.1.4	Marking the products as active or inactive. No new accounts can be created for inactive products.
7.1.5	Multiple products per client.
7.1.6	All product updates in a collection sheet for a center meeting.
7.1.7	Parameterized fees, taxes, fines and charges as product-by-product basis.
7.1.8	Product wise limits changing (minimum and ceiling).
7.1.9	Historic data on products as per clients' accounts.
7.1.10	Tracking of non-performing accounts (NPA), dormant accounts.
7.1.11	Tax calculation on Interest
7.1.12	Alert on key dates
7.2	Loan Management
7.2.1	Loan Product Setup
7.2.1.1	User define loan account numbering in serial fashion with regards to loan type and its automatic increment as per iteration/ cycle.
7.2.1.2	Loan Portfolio management should include complete loan cycle; application to payoff/write off (application, appraisal, approval, disbursement, payment, limits, and others).
7.2.1.3	Parameter based loan product set up, based on regions, branch, and occupation.
7.2.1.4	Loan product interdependence; for example, the clients with number of installments paid for a loan are only eligible for seasonal loan, or the clients with education loan are not eligible for other categories of loan, etc.
7.2.1.5	Default expected repayment amount, along with contracts, repayment schedules, account statement, as a drill-down feature.
7.2.1.6	Handling of unscheduled payments (underpayment and overpayment).
7.2.1.7	Credit rating/ scoring methodology- Five "C" -Character, Collateral, Capital, Condition, Capacity.
7.2.1.8	Real-time tracking of delays.
7.2.1.9	Screening of borrowers who take multiple loans.
7.2.1.10	Product wise field officer and approvals tracking.
7.2.1.11	Monitoring of co-applications' (guardian) details.
7.2.1.12	Tracking of loan history and schedules.
7.2.1.13	Loan application witnesses details. For example, it must belong to same group (group leader or secretary)
7.2.1.14	Credit committee limits; mandates; loan approval details.
7.2.1.15	Automation of the maker and multiple checker processes related to loans and advances activities. In case of delayed checking, it must be forwarded to another authorized checker after predefined time, set as parameterized setup.
7.2.1.16	Loans must be integrated with accounting system, throughout the course of time, with all the related documents attached.

7.2.1.17	Back date entry should be allowed, but should not exceed the monthly/ quarterly/ yearly datelines. It must be parameterized driven and allowed at top level authorized users only.
7.2.1.18	Loan Insurance details tracking.
7.2.1.19	Possible to place liens on a fixed deposit/ saving account, for specified amounts. This could be because the balance is used as a guarantee for a loan. The lien is distinct from the minimum account balance. If more than one lien is applied, the frozen balance must be cumulative. Lien functionality is distinct from compulsory savings, the whole balance is frozen until the loan is repaid; a lien should be removed at any time, through authorized user.
7.2.1.20	Lending Products- Overdraft, Line of Credit
7.2.2	Loan Product Definition
7.2.2.1	Automatically generation (initially set) of account number based on the loan, loan cycle, branch, center, group, clients, purpose etc.
7.2.2.2	Broadly, there are two categories of loan products; one with collateral and another without collateral. Individual clients are provided with the collateral loans, whereas the non-collateral loans are provided to the clients with a group and a center guarantee and liabilities.
7.2.2.3	Loan Schemes definition- Configuring minimum and maximum balances; Loan fees setup; Loan interest procedure set up, loan types, due date, grace time, purpose, loan cycle.
7.2.2.4	Group Lending Management, along with field officer and client/ group/ center details.
7.2.2.5	Individual and group loans, comprising of clients coming together for a purpose of availing bank loan on individual basis or through a group/ center against mutual liability.
7.2.2.6	Purpose wise lending with a list of dynamic categories and sub-categories; like ginger or cinnamon cultivation, investment on cattle for milk or meat, etc.
7.2.3	Loan Process Workflow
7.2.3.1	Paperless flexible loan origination and multi-level approval process.
7.2.3.2	Approval workflow process in hierarchy as per loan limits. The field officer approves the Nano loans; branch manager approves if it is in his pre-defined limits or else recommend it to further process by passing it to higher designated user roles; such that it should be instantly displayed to corresponding authority's login dashboard. It must feature maker and multi-level checker functionalities.
7.2.3.3	The notification on loan status should sent directly to a branch and corresponding loan officer.
7.2.4	Interest Calculation and Accrual
7.2.4.1	Interest calculation on daily/ weekly/ monthly/ quarterly/ yearly in accounting balance.
7.2.4.2	Interest capitalization on daily/ weekly/ monthly/ quarterly/ half-yearly/ yearly.
7.2.4.3	Daily interest calculation that should show effects on client's loan accounts, addition with service charge, penalty and other fees (if applicable).

7.2.4.4	Interest calculation methods: # Flat # Declining balance # Fixed rates # Discounted from the loan # Floating/Variable rate # Daily interest calculation (with weekly or monthly installments) on principal outstanding # Other (user defined)
7.2.4.5	Loan interest accumulated or accrued to date but not collected (not just overdue). The calculation must post automatically to the General Ledger; either as a reversing journal or through another process which undertakes a reversal when the accrued amounts are collected.
7.2.4.6	Penal interest calculation and rebate on special situations (client/ center/ branch).
7.3	Loan Application and Approval
7.3.1	New Loan Entry and Analysis
7.3.1.1	Each application for a loan must be recorded against the client, including details such as product requested, application date, loan amount, purpose, etc.
7.3.1.2	Alert user during new loan entry if client has active loan outstanding for any of the loan product or insufficient attendance or any other mandatory pre-requisites; but not prevent the new loan being entered into the system. It is specially bounded by the type of accounts entitled by the client and the number of loan cycles.
7.3.1.3	Ability to track loans by purpose (Agriculture, Trade), sub-purpose (dairy, crop cultivation, etc) with other hierarchical for branch. The user should be able to define a list of sub-purposes for each purpose; and when the data entry operator chooses a purpose, the sub-purpose field should automatically get auto-populated with the correct list till the final purpose is identified. The purposes and sub-purposes should be configured for multiple levels/ layers.
7.3.1.4	A parameterized checklist of information to be collected should be automatically attached to the application record. The checklist should be defined as part of the product definition. Each checklist item can be mandatory or optional, based on the product types. A loan request cannot be accepted until all mandatory items are marked as completed.
7.3.1.5	There are loans that are provided to the clients who doesn't belong to any groups or centers, which are known as non-client/ member loans.
7.3.1.6	Certain pre-defined parameters of loan product can be overridden on an account-by-account basis, by authority user role. It must be possible to define which characteristics of a loan product can be overridden and which cannot be overridden, during the creation of an account.
7.3.1.7	Modification of existing loan products; along with the introducing the new products. Change in parameters like duration, interest rates and repayment schemes. The loans should have effective date.
7.3.1.8	Loan types and its history has to get maintained and its information must be provided while analysis process of future loan requests.
7.3.1.9	View past and current credit/deposit/other history for all accounts of the client to help make credit decisions. The system must display this information on a single screen/report. Information/ Records of closed loans should be included.
7.3.1.10	Identifying the possible duplicates and bad profile individuals from third party credit bureau system.

7.3.1.11	Loan analysis statement- Information related to the payments of the loans should be displayed, showing how the loan is paid; for example delay or insufficient installment payments, center participation, saving, assets, KYC information, existing loans, etc.
7.3.1.12	Automation of Credit checks and verification with quick data entry.
7.3.2	Credit Scoring
7.3.2.1	Credit scoring capabilities; using a client's attributes like participation in center meetings, behavioral attributes, number of loan cycles, repayment history, financial condition of client's family; to predict the individual's credit risk.
7.3.2.2	Loan repayment performance highlights.
7.3.3	Guarantor/ Collateral Tracking
7.3.3.1	Generate and print loan guarantor/collateral contracts via the system. These contracts should be generated combining data from the system with fixed data such as terms and conditions. The contract format and content should be editable by an authorized user role.
7.3.3.2	Guarantor tracking- Defining loans guarantors in a system. A loan must have all the clients of a group/ center as default guarantors and a guarantor might provide a guarantee for more than one loan within a center. It should be possible to report all clients' loans having a specific guarantor.
7.3.3.3	Loan guarantor tracking through the loan information and number of guarantor per loan features. Guarantor details such as official ID card copy and collateral details such as copy of property (house, land) document should be attached, with each loan.
7.3.3.4	Collateral information and collateral valuation should be recorded with all the details. It should be possible to record expiry dates, collateral types, descriptions, values and other details.
7.3.3.5	Collateral (cash and non-cash) records and tracking, sorted by branch offices.
7.3.3.6	Setting up valuation person/ agency details and its limits.
7.3.3.7	Collateral offered must be able to be recorded against the loan application record.
7.3.3.8	Collateral tracking- Collateral as a guarantee for a loan. In some instances this may have an expiry date (such as a lease) or may decrease in value over time (such as a Rickshaw). Each collateral type must be able to be defined in a table, with an associated percentage amount representing the proportion of the item's value that could be expected to be realized in the event of a forced sale.
7.3.4	Loan Approval
7.3.4.1	Loan request is made at the center meeting by the client and first level group and center recommendation is needed, who knows the client better and support the individual client with group guarantee which is liable to the group/ center members (clients).
7.3.4.2	Loan has to get approved through the various levels of managerial hierarchy that depends on the loan ranges (user defined) associated with the authorization to approval, based on roles; that is, higher the rank of authority has maximum limit of loan approval rights. The recommendation and approval (maker and checkers) is needed at various levels and it has to get proceed throughout the approval hierarchy.
7.3.4.3	Loans are needed to get approved by a loan approval committee; and a system should address the parallel level of decision making on loans with equal responsibilities (rights) on the loan approval.

7.3.4.4	All the status regarding the loan should be displayed throughout the approval process. The loan approval are based on the parameters like its purpose; capacity of the client; past repayment of the dues; credit information etc. Thus, every loan associated with the clients should be well documented throughout the process.
7.3.4.5	System should have workflow to move loan from application to approval, disburse, repayment and close. Rules can be defined and specified around who performs the step (for example, branch manager approves loan) and under what conditions (for example, loan cannot be closed if outstanding balance remains OR senior manager approval for loan amount is above a specified limit). Multiple approval stages can be specified based on loan amount. At each stage, the name of the authorized personnel and the date of authorization is recorded and in the event of a rejection, the reason (selected from a pre-defined list of reasons) can be specified. Rejected loans should retain in the system against the client's record.
7.3.4.6	Transaction narration- possible to clearly identify in a historical transaction inquiry which payment paid with which installment, including instances where more than one installment has been paid at one time. This is to enable the analysis of late and early payment history to aid consideration of future loan applications.
7.3.4.7	Approved loans are needed to be collected within its time (expiry date); otherwise its status should to display.
7.4	Loan Disbursement
7.4.1	Disbursement Process
7.4.1.1	Disbursement methods as lump sum, partial, top ups.
7.4.1.2	Disbursement of the approved loans in partially as well as wholly. The progresses of the purpose for the loan needs to get considered while the different disbursement of partial loans.
7.4.1.3	In certain cases a loan may be approved for an amount lower than the original application. Disbursement should prevent from being a higher amount than that which has been approved.
7.4.1.4	Loan disbursement happens in cash/ cheque/ account transfer at the branch or the center meeting field.
7.4.1.5	A number of fees are applied to loans at the time of disbursement. The fee type (insurance, service charge, mandatory collection on saving) and calculation bases (flat amount, a percentage of the loan, or a percentage with a minimum amount) must be able to be user-defined and linked to the loan product.
7.4.1.6	A code of the employee who disburses the loan to the clients should be recorded in the system. There could be more than one bank employee may involve in the loan disbursement process.
7.4.1.7	Loan disbursement documentation, loan deed (trust/ security) should be attached along all the loan accounts.
7.4.2	Payment Schedule
7.4.2.1	The payment schedule should be automatically generated from the date of disbursement based on the product parameters and the center meeting date; default parameters may be overridden manually by authorized user role in a case-by-case basis prior to printing and issuing schedule to the clients.
7.4.2.2	Rounding of transactions amount (installments) should be appropriately handled while generating the installment schedule. How the rounding would be computed and adjusted throughout the loan installments must be clearly stated.

7.4.2.3	Loan schedule/simulation including installment schedule for repayment should be previewed and printed at various levels of approval and it should have re-schedule feature in case of grace and other provisions that may need to apply in future under unusual circumstances.
7.4.2.4	Payment types # Term loans with constant payments # Term loans with constant principal # Irregular payments (set by the user; for example interest on monthly regular basis and principal in 2-3 months) # Balloon schedule (interest only installments and principal at the end) # Possibility to choose order of repayment between penalties/ fines, Interest and Principal # Other (user defined)
7.4.2.5	Payment frequencies # Daily # Weekly # Bi-weekly # Every 4 weeks # Monthly # Bi-monthly # Quarterly (every 3 months) # Bullet loan (single repayment) # Other (user defined)
7.4.2.6	Payment year supported # 366 days (Leap Year) # 365 days # 360 days (30 days/ month) # 336 days (4 weeks/month) # 52 weeks # Exact date of that year # Others (if any)
7.4.2.7	System should handle the two installments lies on the same month, if any, if applicable. For example, there could be more than one installment lies under the payment frequencies in days/ weeks lesser than monthly.
7.4.2.8	Additional types of payments # Commission and fees (different stages of the loan cycle those fees may be charged) # Penalty fees for late payments (the user may suspend these fees) # Credit insurance # Group insurance fees # Other (user defined)
7.4.2.9	Trace of the loan repayment schedule and make changes for correction needed, if applicable.
7.4.2.10	The installment schedule should include the columns like, installment date, remaining balance, installment amount, principal amount, interest amount and others.
7.4.2.11	Payment schedule roll-back for any modifications that may discover later, by the authorized user role.
7.4.3	Post Disbursement Process
7.4.3.1	Loan disbursement form.

7.4.3.2	System should be able to track loan utilization check (verification that the loan is being used for the given purpose)- User should be able to get report of which loans are ready to be checked based on the bank's business rules. After performing the LUC (loan utilization check), the user should be able to update the loan account specifying that the LUC is done, whether the loan is being used for the given purpose or not, and comments on the same. It will be used as one of the factor for credit scoring.
7.5	Loan Collection and Calculation
7.5.1	Collection Process
7.5.1.1	As installments are collected in cash in the field, a collection sheet should be able to be previewed and printed as to a specified date, by field officer. System should support manual collection through collection sheet and passbook as well as automatic transaction through a tablet banking (Field officer) with printing a slip and other channels like cheques, transfer from other accounts, etc.
7.5.1.2	User defined collection sheet, including client wise product list with the information like installment number of the product, principal and interest of past and current, etc. The user should be able to enter the collection within the scope of the same and the system should calculate all the transactions accordingly.
7.5.1.3	Tracking of loan cycles by product against each client. It should increment the number of cycle for each additional loan periodically and consequently, it determines the qualification of some other types of loans. Also, the loan limits gets increased as the loan cycle iterates and various positive factors like, minimum 60%-80% attendance, financial discipline, etc.
7.5.1.4	Bulk data entry of collections sheet with exception posting such that actual payments are pre-entered with expected values so that the user only have to modify/record payments that are different than expected.
7.5.1.5	Posting order for payments on product by product basis, such that how a payment is apportioned between products. It should consider interest, principal, fees, fines, penal, etc; that could be overdue, due, and not due.
7.5.1.6	Advance repayment of loan.
7.5.1.7	Repayment methods and tools # Cash # Cheque # Money order # Transfer from other accounts # Mobile banking # Internet banking # ATM/ Kiosk banking # Other (user defined)
7.5.2	Special Cases
7.5.2.1	Handle early and late payments based on the provisions like fees/penalty charges applied and its effects on other associated accounts and client's credit history. Any such charges should be pre-defined as a part of product definition.
7.5.2.2	Manage extra payments appropriately by reducing it from the total outstanding amount. The system should be parameterized for exceeding or insufficient amount to get deducted from remaining interest and then principal, OR if the amount is insufficient/ exceeds the installment; then it should be deposited to client's personal saving (default) accounts.

7.5.2.3	Prepayments to close the loan. It should provide a view/report that clearly indicates the balance payment required to close the loan as well as loan transaction history that can help the loan officer explain the basis of the calculation to the client. In addition, there might be an early closure penal for the particular product.
7.5.2.4	Cash short and over to close slightly underpaid and overpaid loans. This could happen because of rounding issues, thus the system should be able to identify such loans and be able to close them in bulk, with proper adjustments.
7.5.2.5	Grace periods should be allowed with no repayments due for the number of days/weeks on principal only OR on principal + interest OR interest only, etc.
7.5.2.6	Grace periods must be controlled by only authorized user role. # Late payment grace period should be allowed # Grace period in days could be set for each type of loans # Installment re-schedule grace with interest allowed # Others (user defined)
7.6	Delinquency Management
7.6.1	Late Payment Handling
7.6.1.1	The computation penal fees for late payment on a product by product basis, (percentage of overdue principal, percentage of installment, or flat amount), penal grace period, max number of days for applying default penal, etc.
7.6.1.2	Suspension, reduction or waiving of penal fees in a case-by-case basis. This function should be limited to authorized user role. The identification of the person who waived the penalties should be recorded by the system. It should clearly identify in posted transactions the amount of interest/penalty realized vs. waived. A reason for any waiver should be able to be recorded, under the separate categories.
7.6.1.3	Monitoring and tracking of the users with approving, waiving, granting authorities along with all the efforts (letters, inquiries) made for repayment.
7.6.2	Rescheduling and Restructuring
7.6.2.1	Rescheduling- must only be undertaken by authorized user role and must be tightly controlled and audited, with the user who undertook the rescheduling being recorded by the system and ideally a separate multi-approval process being required. Portfolio rescheduled due to client payment problems should be marked as such and be traced separately.
7.6.2.2	At the time of rescheduling, a reason must be recorded, with pre-defined options. The transaction history for the loan should clearly indicate the transactions that were undertaken by the system at the time.
7.6.2.3	Reschedule roll-back- In the event of a loan is rescheduled, whatever the reason, the full previous schedule must be retained on the system for reference and can be retrieved and printed at any time.
7.6.2.4	Restructuring of loans. For example, making changes in terms and condition on loan amount restructure, etc.
7.6.3	Loan Payoff and Write-off
7.6.3.1	Write-off management facilities should be present with the provisions of payments recoverable for written-off loans. Write-off is done for the due remaining from saving deduction.
7.6.3.2	Write-off form should be filled with details to consider an account state as a write-off. All the write-off accounts is taken from active state to inactive state, and it is monitored strictly, with write-off alert for the number of periods. Write-off decision should be considered from branch to area and area to head office approval.

7.6.3.3	Loan Payoff- Recoverable from the write-off should go to the profit/income of that branch with appropriate heading.
7.6.3.4	Option to calculate the interest on write-off.
7.6.3.5	Write-off should allow automatic deduction from loan portfolio and loan classification.
7.6.3.6	Write-off reports should be shown with all the appropriate details.
7.6.3.7	Separate ledger for write-off.
7.6.4	PAR and Loan Loss Provisioning
7.6.4.1	PAR is defined as the total outstanding (not just overdue) principal amount for those loans which are defined as being at risk. PAR reports must be able to be run on demand, for a single branch or on a consolidated basis with authorized role, and sorted, summarized or restricted by user-definable socio-economic indicators such as gender, occupation, house type, etc.
7.6.4.2	Portfolio aging categories used for PAR calculations should be able to be defined and modified by the user, specifying a particular aging category as the default for a product. Consequently, PAR reports are run using this default category. Nevertheless, the user can choose a different aging category for a report. Loan loss percentages for each category can be specified which are used to estimate loan loss reserve.
7.6.4.3	Client wise provisioning and if it is less than PAR, it should reverse. It should be categorized as doubtful, watchable, and other (user defined).
7.6.4.4	<p>Loan loss provisions must be automatically calculated, based on the PAR aging brackets, using certain percentages which must be able to be parameter-driven and changed from time to time. The provision is based on the aging of total outstanding principal amount for those loans which are defined as being at risk. For example;</p> <p>General - Pass (Overdue date to 3months)- 1% Provisioning Specific - Sub-Standard (Overdue date for 3 to 6 months)- 25% Provisioning - Doubtful (Overdue date for 6 to 9 months)- 50% Provisioning - Loss (Overdue date for more than 1 year)- 100% Provisioning</p> <p>In case of third party collaterals, additional percentage of provisioning is done on above matrices. Also, the bank is allowed to place the client to high level of provisioning. Lower category are allowed to take to upper categories on client profile, for new provisioning with each loan.</p>
7.6.4.5	Allow to make bad loan to good loan, with proper reasoning options as system parameterized defaults, on case-by-case basis.
7.6.4.6	Loan loss provision percentages may vary for rescheduled loans and must be defined as a system parameter for each type of loans.
7.7	Deposit Management
7.7.1	Deposit Product Setup
7.7.1.1	Multiple accounts should available for group and non-group clients with mandatory and optional accounts. Opening and management of various deposit products, including recurring deposits, fixed deposit accounts with the option of applying different business rules such as interest rates, interest payment periods, renewal conditions, etc.
7.7.1.2	Set up deposit schemes- A new product could be defined with any combination of the user defined parameters.
7.7.1.3	Setting up the minimum balance and interest calculation.

7.7.1.4	Entering and modification of deposit products; such that changing the interest paid on a savings account. User should be able to choose whether the changes applies just to future accounts OR to current accounts as well, OR both.
7.7.1.5	Default nominee and account wise nominee. Nominee details (relationship, name, photograph, copy of citizenship/ passport copy, etc.) should be attached.
7.7.1.6	Default saving accounts should be created automatically which are mandatory, at the time of client registration. For example, compulsory account, etc.
7.7.1.7	First saving with loan disbursement. There are accounts like; Compulsory saving should be accredited before any/all loan disbursement. For example, some percent of a loan amount, or fixed set of amount gets deposits every time.
7.7.1.8	Auto extraction from default deposit to loan repayment.
7.7.1.9	Multiple deposit transfer.
7.7.1.10	Term deposit schedule/ simulation.
7.7.1.11	Deposits integrated with accounting system.
7.7.1.12	Tracking of all deposits, with different filter.
7.7.1.13	Monitoring and calculation of received interest on value dates.
7.7.1.14	Tracking of deposits on lien details.
7.7.1.15	Fixed term deposit with/without automatic renewal.
7.7.1.16	Auto-renewal or added to another saving account on mature deposits.
7.7.1.17	Monitoring of account maturity details.
7.7.1.18	Account closing and balance transfer.
7.7.1.19	Electronic saving schemes, like; e-wallet.
7.7.2	Deposit Product Definition
7.7.2.1	Mandatory and voluntary deposits
7.7.2.2	Types of deposit accounts with parameterized flexibility # Fixed Account # Saving Account # Term Deposit # Other (User defined)
7.7.2.3	Interest on deposits calculation # Time weighted method # Minimum daily balance # Minimum monthly balance # Average daily balance # Average monthly balance # Change in Interest effect on existing deposits # Other (User defined)
7.7.2.4	Setting up jointly held accounts.
7.8	Protection Scheme (Micro- Insurance)
7.8.1	Scheme Setup
7.8.1.1	Protection schemes to the client that depends on term period and premiums to be paid. There could be various categories of protection schemes, including life protection, livestock protection, etc., with differences in nature.
7.8.1.2	Information tracking with third party insurance company for every protection scheme. For example, crop insurance, loan insurance, etc, and details associated with it.
7.8.1.3	Calculation of premium on daily basis.

7.8.1.4	Premiums should be collected through the collection sheet that should be mentioned periodically.
7.8.2	Scheme Registration
7.8.2.1	Client needs to register on life protection scheme, with certain amount periodically, which shall facilitate the clients at the times of emergency; like, during family member's death, pregnancy, etc., which should be included in system. Scheme registration is mandatory while clients' registration process, that should be renewed every year and it should be based on the center established date.
7.8.2.2	Livestock protection scheme would allow the client with a loan invested in livestock by paying some premium. It consists of feature like valuation of livestock, collection of premium, payment of benefit and awards, etc.
7.8.2.3	Farmer protection scheme against lost; for example, a farmer should insure the crop before harvesting against drought.
7.8.3	Scheme Maturity
7.8.3.1	Scheme maturity should base on the nature of the business as per the center established date.
7.8.3.2	Some percentage of total premiums paid would be return at its maturity to the clients for protection scheme.
7.9	Remittance Management
7.9.1	Remittance Setup
7.9.1.1	Separate user roles should be carried out for the remittance services and all the controls associated with it.
7.9.1.2	List of remittance company (third party) should be listed and created, with details on the transaction recorded by the system for the individual branch office.
7.9.1.3	The commission charges for the amount and destination to transfer the fund, which needs to be changed periodically.
7.9.1.4	It should be integrated with an accounting module. Branch-wise commission should be shown, and later calculated as a combined income.
7.9.1.5	Digital voucher and authentication documentation to attached.
8	Fund Management
8.1	Fund Provider Profile
8.1.1	Finance department should be able to enter the information about the fund-providers for long term, midterm and short terms, along with different cost of funds and other related information.
8.1.2	Keeping track of the fund available through donor; projects; aid, etc. including its purpose and terms.
8.2	Funding Details
8.2.1	Fund details; principal, interest, duration and terms & conditions. The entire signed document should be maintained as an attachment with corresponding cases (funds).
8.2.2	The partial and pre-maturity payment of the finance amount, with all the parameters associated.
8.2.3	Selection of a set of assigned and unassigned loans based on various criteria (regions, branch, loan officer, date range, etc).
8.2.4	Alerts and notification on all the key due dates for repayment/revision of interest rates and loans.

9	Delivery Channels and Services	
	9.1	Delivery Channels Set up
	9.1.1	The mode of payment should be over the branch office counter and branchless banking at field through field staffs and agents.
	9.1.2	Add/ Edit/ Remove and enable/disable the payment channel functionalities.
	9.1.3	Online and offline transaction mode for all delivery channels- Collecting funds and updating the transactions details into a system is either done in a field with mobile internet or in batch transaction process upon returning to the branch.
	9.1.4	The payment using different delivery channels; such as for field staff- manual (over the passbook), POS/ MPOS and Tablet; and for the clients- Smart Phone, Internet, ATM, Kiosk, etc.
	9.1.5	At least two factors authentication.
	9.1.6	Authentication of the client through signature, photograph, cards (magnetic strip, security chip card, smart card), password, pin code, biometric (finger print, retina scan, facial recognition), SIM.
	9.1.7	Integrated services like; withdrawal, deposit, balance inquiry, print mini statement, pin change, card renew request, new card dispenser, utility payments, etc.
	9.1.8	Option to slip (Receipt) print for every transaction.
	9.1.9	Notification to the client on every transaction through email, SMS, IVR.
	9.1.10	Client receipt as manual (passbook), receipt voucher, electronic printout slip and digital receipt.
	9.1.11	Multiple signatories in Joint Accounts.
	9.1.12	EFT (Electronic Fund Transfer) Switch
	9.1.13	Popular payment gateway; like VISA, MasterCard.
	9.2	Services to Client
	9.2.1	Opening account, additional accounts and it confirmation.
	9.2.2	Statement of account- viewing and printing the account balance. Transaction history per account in selected period of time.
	9.2.3	Client query related to the account transactions.
	9.2.4	Transfer of funds between own accounts within the bank.
	9.2.5	Transfer of funds to another account within the bank.
	9.2.6	Transfer of funds to accounts from other banks.
	9.2.7	Order for services like, SMS banking, Internet Banking, Cards, Cheque book, etc.
	9.2.8	View and modify address and contact details.
	9.2.9	Change password/ pin.
	9.2.10	Request for OTP (One Time Password).
10	Accounting and Transactions	
	10.1	Calculation
	10.1.1	Branch wise daybook, trail balance, profit & loss, balance-sheet and cash flow.
	10.1.2	Client balance calculation with all the accounts related to fine and dues; like debit, credit and fine outstanding.
	10.1.3	Decimal should be computed with each four digit values at the back office accounting calculation with proper adjustments on rounding; and two digits decimal value in client statement, which should feature rounding up whenever needed. Rounding as per user defined parameter. The rounding difference must be maintained properly.
	10.1.4	User definable decimal value or exact figures or values in thousands.

10.1.5	Consolidation and verification of all accounts at head office.
10.1.6	Charges and Fees Management.
10.1.7	Automated debit of account fees.
10.1.8	Income and corporate tax calculation.
10.1.9	Interest calculation.
10.1.10	Add deficit amount by credited product, if the provisional interest is not sufficient.
10.2	Accounting Integration
10.2.1	Accounting system- cash based calculations (the universal accounting norms that must comply with the central bank of Nepal).
10.2.2	Accounting entries related to portfolio transactions should get automatically posted to the accounting system.
10.2.3	Set up of GL formats with parameters and Sub-classification of ledger accounts.
10.2.4	Every financial transaction should tie up to main GL.
10.2.5	Multicurrency GL accounts.
10.2.6	Accounting entries of all transactions posted must be integrate and automatically posted to the main GL as a part of EoD process. It should be possible to modify transactions once posted, by authorized user role.
10.2.7	Tracking of all accounts and its details regarding balances, interest, transactions, etc. as per date, center or client.
10.2.8	Tracking of accounts and clients documents; such as Accounts/GL related transactions monitoring.
10.2.9	Field transactions initiated and submitted by field officers are updated and processed by accountants at the branch. Auto reconciliation process forces a field officer to confirm submission of all cash collected through field transactions and a cashier to confirm the reconciliation of cash by denomination with ledger balance.
10.2.10	Compound journal entries (i.e. more than one debit or credit per entry).
10.2.11	All transaction should be included in a summary voucher, with product wise, client-wise, and others (user defined).
10.2.12	All GL entries should have automatic sequential transaction numbers. A transaction record/voucher should be able to be printed at the time of journal entry.
10.2.13	Voucher of all transaction should be maintained properly. For example, receipt voucher transaction, payment voucher transaction, journal voucher transaction, reverse voucher transaction, hisab-milan voucher transaction and others (user-defined).
10.2.14	Portfolio related transactions should post to pre-defined GL accounts. These will be specified setup based on product type.
10.2.15	Closure of accounts period.
10.2.16	Dormant account management.
10.2.17	Advances management.
10.2.18	Branchless banking agents' management.
10.2.19	Accounts monitoring and performance graphs.
10.2.20	Perform cost/profitability analysis by product, branch, region, other user defined categories.
10.2.21	Liquidity and Equilibrium inspection.
10.2.22	Track all types of transactions in client's accounts and general ledger.
10.3	Chart of Accounts
10.3.1	Based on double-entry accounting system.

10.3.2	Flexible and user-definable chart of accounts (number of digits, levels, and formats) should be present.
10.3.3	Control by code numbers related to accounting heads and sub-heads within the various layers of chart of accounts.
10.3.4	Voucher creation controlled by the budget module and voucher approval based on its limit.
10.3.5	In contra account, there should be option to choose from chart of account.
10.4	Interest Accrual and Capitalization
10.4.1	Automated daily interest calculation, accrual and posting.
10.4.2	Interest calculation should be based on different balances. # Daily minimum balance # Weekly minimum balance # Monthly minimum balance # Quarterly minimum balance # Yearly minimum balance
10.4.3	Defining, on a product-by-product basis, when and how deposit interest will accrue and capitalized (daily, weekly, monthly, quarterly, half-yearly or yearly), and how the General Ledger gets impacted. Product wise interest accruals.
10.4.4	Interest rate, penal interest rate, interest on interest.
10.4.5	Loan interest capitalization- Compound Interest.
10.4.6	IRR (Internal Rate of Return) on calculation and setting up the interest of the product based on the total outcome expected in the product maturity. Principal and interest should be separately shown on the ledger.
10.5	Reconciliation
10.5.1	Bank Reconciliation Tool- Branch wise reconciliation, centralized reconciliation, cash reconciliation.
10.5.2	A standard reconciliation report matching GL balances to portfolio balances.
10.5.3	Tracing of the time periods (aging) of reconciliation.
10.5.4	Featuring Subsidiary Balance/ Cash-Flow/ PL/ Financial Analysis, etc.
10.6	Transaction Handling
10.6.1	Day book entry; day-open and day-close.
10.6.2	All the transactions should be properly handled and make affect in all accounts, according to the defined business rules.
10.6.3	Transaction, including cashless; should be handled taking effect on the respective accounts; operated by the cashier or the system (ATM, Internet, Payment channels) with the full audit trail featured.
10.6.4	System should be able to generate past transactions on all the clients account. The view/report should specify the date of the transaction, transaction amount, transaction mode, and data entry user.
10.6.5	Transaction originating and approving date, time, user, terminal Id.
10.6.6	Transactions from third party system with embedded security.
10.6.7	Transfer of amount from one account to another, with adequate authorization and approvals.
10.6.8	Limits on number of transactions and withdrawals per day.
10.6.9	Reversal of posted transactions with all necessary effects.
10.6.10	Batch transactions/ journals posting.
10.6.11	Automated teller transactions.

10.6.12	Group transaction posting.
10.6.13	Accounts transaction (deposits and withdrawals)- Debit and Credit.
10.6.14	Transaction through the Standing instructions.
10.6.15	Transaction tracking and stop payments. Freezing/ releasing of transaction to accounts.
10.6.16	Transaction session lock and release for all the delivery channels.
10.6.17	Transaction receipt management process- The receipts delivered to clients during field transactions must be tracked. Both 'Field Receipt' and 'Payment Acknowledgement' receipts should be managed. The entire process from ordering money receipt books, receiving of finance, transferring the fund to branch offices, issuing receipts to field officers, and using the receipt by field officers must be fully automated.
10.6.18	Transactions handled by terminal during a specified period (daily, weekly, monthly, yearly).
10.7	Tax Handling
10.7.1	Tax calculation rate- as per client type/ category, individual account, total transaction, etc. It should be flexible in case-by-case basis, with tax calculation with minimum balance, or region, or occupation or any other categories (user defined).
10.7.2	Tax calculation frequency; computed on daily, weekly, monthly, quarterly, half-yearly, yearly or as required with date setting parameters.
10.7.3	Tax on interest and capitalization; interest is capitalized on an account, a withholding tax is automatically deducted. The amount of the withholding tax must be shown as a separate line on the account transaction history and must also be posted to a separate General Ledger account.
10.7.4	Tax on posted interest should be match with tax laws, predefined and it should be able to make changes as per dynamic tax policy.
10.8	Loan Loss
10.8.1	Loan loss provisioning and reserves- General Ledger journals are automatically posted as a result of running the provisioning reports.
10.8.2	Write-off should be deducted/ adjusted through the separate category of voucher.
10.9	End of Period Processing
10.9.1	End of period processing as per the bank's requirements. It must not be possible to post transactions to closed periods.
10.9.2	Closing format should able to be change as needed.
11	Portfolio Management
11.1	Client Portfolio
11.1.1	Client status throughout the time period, with details of region wise clients; ethnic group, age, cast; type of house and its condition; use of toilet, and other parameters user defined.
11.1.2	Business risk rating, credit scoring for client portfolio.
11.2	Loan Portfolio
11.2.1	Loan products, loan limits, loan concentration, loan purpose, etc.
11.2.2	Portfolio wise installments paid, not paid and overdue, in center, branch.
11.2.3	Sector-wise targets and it progress.
11.2.4	Limitation ceiling.
11.3	Deposit Portfolio
11.3.1	Flexible interest and product schemes to promote and encourage deposit products.

	11.3.2	Saving, Recurring and Long term deposits.
	11.3.3	Mismatch on the type of deposits.
12	Reporting	
	12.1	Report Settings
	12.1.1	Setting up reporting formats; with font sizes, types, etc.
	12.1.2	Report formats should be clear and readable. It must feature appropriate identification information indicating the report name, date-time generated, user who generated, any filters used, etc.
	12.1.3	Text, Tabular and Graphical form with a standard formats prescribed by the bank.
	12.1.4	Report should be in English and Nepali languages.
	12.1.5	Number of copies to report print or stored.
	12.1.6	Immediate and scheduled batch reporting.
	12.1.7	Real-time reporting of accounting and business portfolio.
	12.1.8	Multi-dimensional reporting features; such as, consolidated with option by area, branch, units, center, group, based on age, ethnic group, and other user defined parameters.
	12.1.9	Listing/ grouping of the reports as per user requirements.
	12.1.10	User level field selection and report design/ formatting.
	12.1.11	Model a reporting format- Reporting with multiple "Slice & Dice" options to generate reports in flexible formats based on user specific needs.
	12.1.12	Criteria based searching and filtering.
	12.1.13	Temporary report views with quick calculations.
	12.1.14	Generating reports from archives.
	12.1.15	Scheduled reports for day end, month end, quarter end, year end.
	12.1.16	Consolidate report with data from all branch offices.
	12.1.17	GUI based report builder.
	12.1.18	Report generator within the software applications and launch it through simple keystrokes.
	12.1.19	Create custom queries and reports should be stored, printed and emailed.
	12.1.20	Display, print, archiving of all the reports.
	12.1.21	All reports can be exported to XML, Excel and PDF.
	12.1.22	Dumping of necessary reports in excels/ csv format to be done after completion of EOD, the feature shall be customizable as per the bank's requirement.
	12.2	Standard Reporting (not limited to)
	12.2.1	Management and Back office Reporting.
	12.2.2	Social/ community impact analysis.
	12.2.3	Regulatory and management reports as per prescribed reporting formats and intervals.
	12.2.4	All regulator (Nepal Rastra Bank, Credit Investigation Bureau) prescribed reports and various financial and non-financial reports essential for the bank. These reports are generated as required user definable templates and parameters.
	12.2.5	Pre-packaged reports for FIS, MIS, and Regulatory Reporting. Standard financial reports (GL- balance sheet, income statement, cash flow, trail balance etc.) should be available. Generate different financial (FIS) and operational (MIS) reports as per the bank's requirements.
	12.2.6	Audit trail reports for all transactions and events.
	12.2.7	Online Audit and Security Reports.

12.2.8	Branch Wise User Detail.
12.2.9	Holiday Information Report.
12.2.10	Backup Operation Report.
12.2.11	Day Operation Register.
12.3	Regulatory Reporting (not limited to)
12.3.1	Statement of capital fund.
12.3.2	Statement of borrowings for the purpose of investment on deprived sector (quarterly).
12.3.3	Statement of risk weighted assets (RWA).
12.3.4	Statement of assets and liabilities (monthly).
12.3.5	Profit and loss account (monthly).
12.3.6	Statement of micro credit development bank (monthly).
12.3.7	Statement of compulsory reserve and liquidity
12.3.8	Statement of statutory liquidity ratio (SLR)
12.3.9	Statement of sector (purpose) wise loans and advances (quarterly).
12.3.10	Quarterly financial statement
12.3.11	List of bank/ branch/ regional offices (quarterly).
12.3.12	Statement of interest rate wise deposit (quarterly).
12.3.13	Statement of interest rate wise credit (quarterly).
12.3.14	Closing report NRB prescribed form
12.3.15	Comply with Nepal Financial Reporting Standards
12.4	Administrative Reporting (not limited to)
12.4.1	Employee Detail Report.
12.4.2	Employee handling center meeting report
12.4.3	Interest calculation report.
12.4.4	Interest payable on deposit.
12.4.5	Provision on account receivable report.
12.4.6	Report of loan legal actions.
12.4.7	Write-off loan and interest report.
12.4.8	Interest receivable and interest suspense reconciliation report.
12.4.9	Employee handling advance payment report.
12.4.10	Passbook/ cheque distribution report
12.4.11	Daily loan application report.
12.4.12	Daily loan disbursement report.
12.4.13	Daily loan repayment report.
12.4.14	Tamsukh registration report.
12.4.15	Graduate member report.
12.4.16	Staff performance report.
12.4.17	Center meeting schedule report.
12.4.18	Center evaluation report.
12.4.19	Fund requirement report.
12.4.20	Center information bureau report.
12.4.21	Inter-branch reconciliation report.
12.4.22	Head office interest calculation report.
12.4.23	Bank reconciliation report
12.4.24	Product popularity report
12.4.25	Cash in vault report

12.4.26	Branch progress trend analysis report
12.4.27	Top borrower report
12.4.28	Top saver report
12.4.29	Insurance loan report
12.4.30	Write back loan report
12.4.31	Repayment of write-off loan and interest loan report
12.4.32	Detail of sundry debtor report
12.4.33	Detail of sundry creditor report
12.4.34	Branch grading report
12.4.35	Employee field movement report
12.4.36	Business Coverage as per the geographic allotment like metropolitan, municipality, VDC and others.
12.4.37	Target group selection based on PWR, target group details.
12.4.38	Pre-group training report- member participants, recognition, ineligible, etc.
12.5	Financial/ Accounting Reporting
12.5.1	Voucher details.
12.5.2	General ledger.
12.5.3	Trail balance.
12.5.4	Profit and loss account.
12.5.5	Balance sheet.
12.5.6	Closing report.
12.5.7	Transaction Report.
12.5.8	Income-Statement.
12.5.9	Receipt & Payment/ Expenditure.
12.5.10	Cash Flow Statement.
12.5.11	Chart of Account.
12.6	Cash Management Reporting (not limited to)
12.6.1	Loan Sanction Statement.
12.6.2	Interest Rate Change Detail.
12.6.3	Enhanced and Renewed OD.
12.6.4	Loan Transaction Statement.
12.6.5	Loan Disbursement Statement.
12.6.6	Loan Repayment Statement.
12.6.7	Excess Repayment Settlement.
12.6.8	Loan Outstanding Summary.
12.6.9	Loan Portfolio Statement.
12.6.10	Loan Account Statement.
12.6.11	Loan Account Register.
12.6.12	Loan Repayment Schedule.
12.6.13	Loan Classification Statement.
12.6.14	Loan Overdue Statement.
12.6.15	Loan Overdue Movement Statement.
12.6.16	PAR Statement.
12.7	Portfolio Reporting
12.7.1	Product wise loan disbursement, repayment and outstanding report.
12.7.2	Product wise overdue loan and overdue loan summary.

12.7.3	Loan aging report.
12.7.4	Loan loss provisioning report.
12.7.5	Purpose wise loan report.
12.7.6	Business wise loan report.
12.8	Client Information Reporting
12.8.1	Client enrollment report- client, member, new client, etc.
12.8.2	Client drop out report.
12.8.3	Client history report.
12.8.4	Center wise client attendance report.
12.8.5	Latest client status report.
12.8.6	Blacklisted client report.
12.8.7	Area/ branch/ center wise client report.
12.8.8	Dormant or inactive client report.
12.8.9	Client target Vs. achievement report.
12.8.10	Client Detail Information.
12.8.11	Client Summary Information.
12.8.12	Group Summary Report.
12.8.13	Branch wise Group.
12.8.14	Group wise Member.
12.8.15	Customer Transfer.
12.8.16	Inter-Branch Transfer.
12.8.17	Loanee report- product/ center/ branch/ area/ age/ default/ loan size/ potential micro-entrepreneur/ top loanee report.
12.9	Center Reporting
12.9.1	Center foundation detail report- members, loanee, loan outstanding, balance saving, etc.
12.9.2	Center meeting starting and closing report.
12.9.3	Center meeting shift as morning, day, and evening report.
12.9.4	Full and partial center report.
12.9.5	Center wise chief-chief appoint date.
12.9.6	Center meeting report as per the payment mode; monthly, weekly.
12.9.7	Center collection sheet.
12.9.8	Center report on the basis of group, member and loanee.
12.9.9	Center meeting attendance report.
12.9.10	Center wise member, loanee, saving, overdue, etc.
12.9.11	Center target Vs achievement report.
12.10	Saving Report
12.10.1	Collection, withdrawal and balance report- client, product wise.
12.10.2	Inactive saving balance report.
12.10.3	Deposit Information-General.
12.10.4	Deposit Information-Group.
12.10.5	Deposit Operation-General.
12.10.6	Deposit Account Transaction Information.
12.10.7	Client Deposit Detail.
12.11	Protection Scheme or Insurance Premium Report
12.11.1	Premium collection due date and alert report.

12.11.2	Premium collection report.
12.11.3	Compensation report.
12.11.4	On the process compensation report.
12.12	Receipt Management Reporting (not limited to)
12.12.1	Receipt Receive Detail.
12.12.2	Receipt Delivery Detail.
12.12.3	Receipt Delivery To Field Officer.
12.12.4	Receipt Transfer Field Officer.
12.12.5	Stop Money Receipt Detail.
12.13	Internal Audit Report
12.13.1	Financial Analysis Report
12.13.2	Ratio Analysis Report
12.13.3	Budget Vs. expenses report.
12.13.4	Center Monitoring report by Branch Manager
12.13.5	Passbook description and monitoring report
12.13.6	Check book usage record
12.13.7	Center designated personnel report
12.13.8	Sundry debtors and Sundry Creditors
12.13.9	Closing report
12.13.10	Limit exceed reserve cash report
12.13.11	Limit exceed cheque drawn report
12.13.12	Work area, profile and coverage report
12.13.13	Staff planning and staff details
12.13.14	Staff wise target and achievement report
12.13.15	Overdue loan and loan classification report
12.13.16	Loan Register
12.14	Adding New Reports
12.14.1	Flexible (custom) report creation capabilities such as user definable data selection criteria, user definable columns and headings, etc. Adding a new report to the system should be straight forward and should be done by the user without need of technical help. It includes custom reports, created with user defined formats and parameters.
12.14.2	Link to the database from a “drag and drop” third party report writer such as Crystal Reports in order to create new reports outside the system.
12.14.3	Multi-dimensional reporting capabilities, with the option of centralized/ region/ branch specific view. It allows the setting up of groups/users and mapping certain reports to a user group. Furthermore, report-building on an ad-hoc basis and storing the report templates for future use should be possible with the inclusion of an enhanced report generation/ formatting tool.
12.14.4	The reporting of a system should be capable of generating different customizable reports based on accounting manual and book keeping manual of the bank and accounting practices and local (regional) standards.
12.14.5	A list of reports essential for communities like CGAP, Mix-Market; like, PPI (Progress out of Poverty Index), etc.

Annexure-III Assignment Schedule

Phase	Activities	Days→	31	28	31	30	31	30	31	31	30	31	30	31
I	Commencement of the project.													
II	GAP analysis, system customization and testing													
III	Finalizing technical specification (hardware system software and connectivity)													
IV	Development and use of data migration tool implement strategy; and pilot testing													
V	Server implementation, data migration and UAT													
VI	Deployment													
VII	Training													
VIII	Tuning and Final Report													

