



**Civil Aviation Authority of Bangladesh  
Office of the Executive Director  
Central Procurement, Engineering and Store Unit  
Kurmitola, Dhaka-1229**

**Open Tendering Method (National)**

**TENDER DOCUMENT (NATIONAL)  
FOR THE PROCUREMENT OF NON-CONSULTING SERVICES  
(Single Stage Two Envelope Method)**

**General & Technical Document  
(ORIGINAL)**

**Submitted by  
Sheba Technologies Limited**

**Development, customization, installation, and commissioning of Import & Export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports.**

**Invitation for Tender No: CEMSU/COM-WS-04/2021-22  
Tender Package No: 30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021  
Issued on: 28/10/2021**

## Tender Submission Letter (Form PSN-1)

To: Date:01/12/2021

*Executive Director  
 CPESU, Civil Aviation Authority of Bangladesh  
 Kurmitola, Dhaka.*

Invitation for Tender No: CEMSU/Com-WS-04/2021-22

Tender Package No: 30.31.0000.121.07.217.21(ctg  
*Cargo)/177, Date: 28/10/2021*

We, the undersigned, offer to execute in conformity with the Conditions of Contract and associated Contract documents, the following non-Consultant Services, viz:

In accordance with ITT Clauses 22 and 23, the following prices apply to our Tender:	
The Tender Price is:	TK 20,790,000.00
(ITT Sub Clause 22.2)	Taka Twenty Million Seven Hundred Ninety Thousand.

In signing this letter, and in submitting our Tender, we also confirm that:
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- (a) our Tender shall be valid for the period stated in the Tender Data Sheet (ITT Sub Clause 25.1) and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (b) a Tender Security is attached in the form of a *pay order* in the amount stated in the Tender Data Sheet (ITT Sub Clause 26.1) and valid for a period of twenty eight (28) days beyond the Tender validity date;
- (c) if our Tender is accepted, we commit to furnish a Performance Security within the time stated under ITT Sub Clause 52.2 in the amount stated in the Tender Data Sheet (ITT SubClauses 51.1 and 51.2) and in the form specified (ITT Sub Clause 52.1) valid for a period of twenty eight (28) days beyond the date of issue of the Completion Certificate of the non-Consultant Service;
- (d) we have examined and have no reservations to the Tender Document, issued by you on 28/10/2021;
- (e) we declare that we are not associated, nor have been associated in the past, directly or indirectly, with a consultant or any other entity that has prepared the design, specifications and other documents in accordance with ITT Sub Clause .5;
- (f) we have not been declared ineligible by the Government of Bangladesh on charges of engaging in corrupt, fraudulent, collusive or coercive practices in accordance with ITT Sub Clause 5.7;
- (g) furthermore, we are aware of ITT Clause 4 concerning such practices and pledge not to indulge in such practices in competing for or in executing the Contract;
- (h) we confirm that we do not have a record of poor performance, such as abandoning the works, not properly completing contracts, inordinate delays, or financial failure, and that we do not have, or have had, any litigation against us, other than that stated in the Tenderer Information (**Form PSN-2**);

- (i) we are not participating as Tenderers in more than one Tender in this Tendering process. We understand that your written Letter of Acceptance constitute the acceptance of our Tender and shall become a binding Contract between us, until a formal Contract is prepared and executed;
- (j) we confirm that we do not have a record of insolvency, receivership, bankrupt or being wound up, our business activities were not been suspended, and it was not the subject of legal proceedings;
- (k) we confirm that we have fulfilled our obligations to pay taxes and social security contributions applicable under the relevant national laws and regulations of Bangladesh in accordance with ITT Sub Clause 5.5;
- (l) we accept the appointment of *Chairman, CAAB, Kurmitola, Dhaka.* as the Adjudicator with hourly fees and reimbursable as stated in GCC Sub Clause 59.1;
- (m) we understand that you reserve the right to reject all the Tenders or annul the Tender proceedings, without incurring any liability to Tenderers, in accordance with ITT Clause 47.

Signature:

	
<b>Name:</b> <i>Farhan Islam</i>	
<b>NID:</b> 552 405 0126	
<b>In the capacity of:</b> <i>Head of Business Operations</i>	

Duly authorised to sign the Tender for and on behalf of the Tenderer

**Attachment:**

[ITT Sub Clause 30.2]

Written confirmation authorising the above signatory to commit the Tenderer

## Authorization Letter for Signatory Authority

**AUTHORIZATION LETTER FOR SIGNATORY AUTHORITY****Date:** 25 November, 2021**Subject:** Authorization Letter for Signatory Authority of Sheba Technologies Limited.

Dear Sir/Madam,

I hereby authorize Mr. Farhan Islam (Head of Business Operations) to sign official documents of Sheba Technologies Ltd., on my behalf.

The authorization is effective from 25<sup>th</sup> November, 2021

Yours Sincerely,



Reaz U Ahmed  
Chief Executive Officer  
Sheba Technologies Ltd.



**Corporate Office:** 8th Floor, Khawja Tower, 95 Mohakhali C/A, Dhaka - 1212.  
**Registered Office:** House # 55, Road # 4/A, Dhanmondi, Dhaka-1209. +88 02 9661173, [info@shebatech.com.bd](mailto:info@shebatech.com.bd), [www.shebatech.com.bd](http://www.shebatech.com.bd)

## Tenderer Information (Form PSN-2)

Invitation for Tender No:

CEMSU/Com-WS-04/2021-22

Tender Package No:

30.31.0000.121.07.217.21(ctg  
Cargo)/177, Date: 28/10/2021

<b>1. Eligibility Information of the Tenderer [ITT –Clauses 5 &amp; 24]</b>					
1.1	Nationality of individual			Bangladeshi	
1.2	Tenderer's legal title			Sheba Technologies Limited	
1.3	Tenderer's registered address			House # 55, Road # 4/A, Dhanmondi R/A, Dhaka - 1209	
1.4	Tenderer's legal status [ <i>complete the relevant box</i> ]				
	Proprietorship				
	Partnership				
	Limited Liability Concern			<input checked="" type="checkbox"/>	
	Government-owned Enterprise				
	Others [please describe, if applicable]				
1.5	Tenderer's year of registration			2015	
1.6	Tenderer's authorised representative details				
	Name			Farhan Islam	
	National ID number, if any			552 405 0126	
	Address			8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
	Telephone / Fax numbers			01711547804	
	e-mail address			farhan.islam@shebatech.com.bd	
1.7	Tenderer to attach photocopies of the original documents mentioned aside			Refer to Annexure A-F	
1.8	Tenderer's Value Added Tax Registration (VAT) Number			001012445-0201	
1.9	Tenderer's Tax Identification Number(TIN)			533821572927	
<b>2. Qualification Information of the Tenderer [ITT Clause 24]</b>					
2.1	General Experience in non-Consultant Services of Tenderer				
	Start Month Year	End Month Year	Years	Contract No and Name of Contract Name and Address of Procuring Entity Brief description of Services	Role of Tenderer [Prime/Sub/Management]
01	March, 2020	December, 2021	1.5	Project Name: EKYC Solution for Guardian Life Insurance Limited  W/O Reference: GLIL/HO/WO/2020/050  Procuring Entity: Guardian Life Insurance Limited.  Project Summary: Customized EKYC solution for customer on- boarding featuring:	Prime

				<ul style="list-style-type: none"> <li>• Self Onboarding customer mobile and web application;</li> <li>• Facial recognition with Live customer image with NID;</li> <li>• Data fetch from EC web portal;</li> <li>• Optical character recognition;</li> <li>• Nominee Information Capture;</li> <li>• Digital Record Keeping;</li> <li>• Digital Signature capture;</li> <li>• SMS and Email integration;</li> </ul>	
02	Mon 12-Oct-20	November, 2021	01	<p>Project Name: EKYC System Development and Implementation for IDLC Finance Limited</p> <p>Procuring Entity: IDLC Finance Limited</p> <p>Project Summary:</p> <ul style="list-style-type: none"> <li>• Self Onboarding customer mobile and web application;</li> <li>• Facial recognition with Live customer image with NID;</li> <li>• Data fetch from EC web portal;</li> <li>• Optical character recognition;</li> <li>• Nominee Information Capture;</li> <li>• Digital Record Keeping;</li> <li>• Digital Signature capture;</li> <li>• SMS and Email integration;</li> </ul>	Prime
03	October, 2020	November, 2021	01	<p>Project Name: EKYC Implementation for United Finance Limited;</p> <p>W/O Reference: Oct/29/20/01</p> <p>Procuring Entity: United Finance Limited;</p> <p>Project Summary:</p> <ul style="list-style-type: none"> <li>• Self Onboarding customer mobile and web application;</li> <li>• Facial recognition with Live customer image with NID;</li> <li>• Data fetch from EC web portal;</li> <li>• Optical character recognition;</li> <li>• Nominee Information Capture;</li> <li>• Digital Record Keeping;</li> <li>• Digital Signature capture;</li> <li>• SMS and Email integration;</li> </ul>	Prime

04	2020	2021	01	PO Ref Number: BPD/2021/PO-2878  TASK MANAGEMENT PLATFORM (Subscription License)	Prime
05	April, 2021	Ongoing		Project Name: BRAC ERP Software(Artificial Insemination) Reference: BPD/2021/IFT-1032 Procuring Entity: BRAC  Project Summary: ERP solution for BRAC Artificial Insemination Model with full flexed ERP provision including Inventory management module.	Prime
06	April, 2017	2018	01	Project Name: Uttara Motors application; Procuring Entity: Uttara Motors Ltd. Project Summary: Developing, installing & commissioning of Mobile Application Software "uttara Motors Smart service	Prime
2.2 Specific Experience in non-Consultant Services of Tenderer Completed Contracts of similar nature, complexity and methods/technology					
Contract No Name of Contract			PO Ref Number: 4500044495 of 2018 Implementation of Subscriber Verification System (SVS)		
Role in Contract <i>[tick relevant box].</i>			✓ Prime Contractor	Subcontractor	Management Contractor
Award date Completion date Total Contract Value			05.12.2018 2018 BDT 25,645,512.00		
Procuring Entity's Name Address: Robi Corporate Office, 53 Gulshan South Avenue, Gulshan-1, Dhaka-1212, Bangladesh. T : +88 02 9887146-52, F : +88 02 9885463, Web : <a href="http://www.robi.com.bd">www.robi.com.bd</a>			Sheba technologies limited has been customizing the aforementioned software development and maintaining thereon. Similarly, The task assigned for this respective project involves software development customization maintenance and support systems.  We are keen on listening to our clients and entirely		

	<b>Brief justifications of the similarity</b>	capable enough to produce customized solution based on business requirements.		
	Contract No Name of Contract	Project Name: BRAC Online Career Hub; Procuring Entity: BRAC Project Summary: Customized Learning management Platform enabling modules of: <ul style="list-style-type: none"> <li>• Training Management;</li> <li>• Job Portal;</li> <li>• Learner counselling portal;</li> <li>• Participant assessment module;</li> </ul>		
	Role in Contract <i>[tick relevant box].</i>	<input checked="" type="checkbox"/> Prime Contractor	Subcontractor	Management Contractor
	Award date Completion date Total Contract Value	November, 2020 November 2021 BDT 88,20,000/- 		
	Procuring Entity's Name Address: BRAC BRAC Centre (15th Floor)   75 Mohakhali, Dhaka-1212, Bangladesh T: + 880-2- 9881265, (ext: 5409), M: 01713 052676	<p>Sheba technologies limited has been customizing the aforementioned software development and maintaining thereon.</p> <p>Similarly, The task assigned for this respective project involves software development customization maintenance and support systems.</p> <p>We are keen on listening to our clients and entirely capable enough to produce customized solution based on business requirements.</p>		
	<b>Brief justifications of the similarity</b>			
	Contract No Name of Contract	GP-03196, PO 300011061 GP Biometric MDM Development		
	Role in Contract <i>[tick relevant box].</i>	<input checked="" type="checkbox"/> Prime Contractor	Subcontractor	Management Contractor
	Award date Completion date Total Contract Value	13-JAN-16 31 Aug, 2021 50010036.26		
	Procuring Entity's Name Address: GPHOUSE Bashundhara, Baridhara Dhaka-1229 Phone: +88-02-222282990 , +880- 1799882990 Fax: +88-02-8416026 Email: info@grameenphone.com	<p>Sheba technologies limited has been customizing the aforementioned software development and maintaining thereon.</p> <p>Similarly, The task assigned for this respective project involves software development customization maintenance and support systems.</p> <p>We are keen on listening to our clients and entirely capable enough to produce customized solution based on business requirements.</p>		
	<b>Brief justifications of the similarity</b>			
	Contract No Name of Contract	Dashboard for Lab Monitoring Activities of Sheikh Russel Digital Labs		
	Role in Contract <i>[tick relevant box].</i>	<input checked="" type="checkbox"/> Prime Contractor	Subcontractor	Management Contractor
	Award date Completion date Total Contract Value	April 08, 2018 September 30, 2019 7910555/- 		

	Procuring Entity's Name Address: Department of Information and Communication Technology  Department of ICT, ICT Division, ICT Tower, Agargaon, Dhaka 1207.  <b>Brief justifications of the similarity</b>	Sheba technologies limited has been customizing the aforementioned software development and maintaining thereon. Similarly, The task assigned for this respective project involves software development customization maintenance and support systems.  We are keen on listening to our clients and entirely capable enough to produce customized solution based on business requirements.			
2.4	Annual Turn Over of the Tenderer [ITT Sub Clause 12.1(a)] <i>[total certified payments received for contracts in progress or completed for each year]</i>				
	Year	Amount in BDT			
	2019-2020	BDT 3,02,23,176.00			
	2018-2019	BDT 1,24,15,216.00			
	2017-2018	BDT 1,27,67,517.00			
2.5	Financial Resources available to meet the cash flow for performance of Services [ITT Sub Clause 12.1(b)]				
	No	Source of Financing			
		Scheduled Bank of Sheba Technologies Limited, The City Bank Bank, New Market Branch.			
		BDT Amount Available			
		BDT 21,000,000.00			
In order to confirm the above statements the Tenderer shall submit , as applicable, the documents mentioned in ITT Sub Clause 24.1(a), (b), (c), & (d).					
	Contact Details [ITT Sub Clause 24.1 (j)]				
	Farhan Islam Head of Business Operations Sheba Technologies Limited, 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212 Contact: 01711547804, E-mail: farhan.islam@shebatech.com.bd				
2.6	Qualifications and experience of Contract Supervisor proposed for Contract administration and management [ITT Sub Clause 24.1(g)]				
	Name	Position	Qualifications	Years of Experience	
				Total Works Experience	Similar Works Experience
1.	Farhan Islam	Contract supervisor	B.Sc in Computer Science	19 years	Customized software development
2.	Md. Sadi Arman	Contract administrator/project manager	B.Sc in Computer Science	7 years	Customized software development
3.	Sumaya Mahbub	Senior System Analyst	B.Sc in Computer Science	8 years	Customized software development

4.	Md. Shafiqur Rahman	Senior Software Architect	B.Sc in Computer Science	12 years	Customized software development
5.	A.K.M. Ariful Islam Shimul	Database Administrator	B.Sc in Computer Science	10 years	Customized software development
6.	Rokibul Hasan	App Developer	B.Sc in Computer Science	5 years	Customized software development
7.	Md. Rejwanul Reaz	Sr. Programmer	B.Sc in Computer Science	8 years	Customized software development
8.	Fahima Chowdhury	Software Engineer	B.Sc in Computer Science	7 years	Customized software development
9.	Nipun Ferdous	Junior Business Analyst	B.Sc in Computer Science	2 years	Customized software development
10.	Tayab Khan	Head of Infrastructure	B.Sc in Computer Science	10 years	Customized software development
11.	Md. Saiful Islam	Sr. Engineer, IT Services	B.Sc in Computer Science	7 years	Customized software development
12.	A.M. Rafat Rahman	UI/UX Designer	B.Sc in Computer Science	7 years	Customized software development
13.	Ajfar Uddin Ahmed Chowdhury	Technical Documentation Expert	B.Sc in Computer Science	2 years	Customized software development
14.	Abdullah Hel Azmain	Software Developer	B.Sc in Computer Science	2 years	Customized software development
15.	Md. Jeshad	SQA Engineer	B.Sc in Computer Science	3 years	Customized software development
16.	Nafisa Haque	SQA Engineer	B.Sc in Computer Science	4 years	Customized software development
2.7	Equipment proposed to carry out the Contract [ITT Sub Clause 24.1(h)]				
	Item of Equipment		Condition (new, good, average, poor)	Owned, leased or to be purchased (state owner, lessor or seller)	
1.	Desktop PC(26)		Good	Owned	
2.	Laptop (Core i3, i5, i7)(22)		Good	Owned	
3.	Brother LaserJet Network Printer (Color)(1)		Good	Owned	
4.	HP Laserjet Network Printer(3)		Good	Owned	
5.	Scanner(3)		Good	Owned	

6.	Multi Media Projector(2)	Good	Owned
7.	IP Telephone/ SIP Phone (AASTRA/ HUAWEI)(15)	Good	Owned

## Personal Information (Form PSN - 3)

[This Form should be completed for each person proposed by the Tenderer in Form PSN-2]

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22	
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	
<b>A. Proposed Position</b> (tick the relevant box)		
<input checked="" type="checkbox"/> Contract Supervisor	<input type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>		
Name:	Farhan Islam	
Date of Birth:	19-11-1982	
Years works experience:	19 Years+	
National ID Number, if any:	552 405 0126	
Years of Employment with the Tenderer:	06	
Professional Qualifications:	Head of Business Operations(02 years); Business Analysis(02 years); Software Product Management(04 years); Business Development and Communications(6years);	
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]		
Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	Head of Business Operations	
Years with the present Employer:	6 years	
Tel No: 01711547804.	Fax No:	e-mail address: <a href="mailto:farhan.islam@shebatech.com.bd">farhan.islam@shebatech.com.bd</a>
<p>Contact [manager/personnel officer]:  <b>Reaz U Ahmed, Chief Executive Officer.</b>          Tel-No: 01713044830.          E-mail: <a href="mailto:reaz.ahmed@shebanet.com.bd">reaz.ahmed@shebanet.com.bd</a></p>		

**D. Professional Experience**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1	2020	Ongoing	Head of Business Operations, Sheba Technologies Limited
2	2019	2020	Senior Business Analyst, Sheba Technologies Limited
3	2016	2019	Product Manager, Sheba Technologies Limited
4	2010	2016	Partner & Chief Business Development Manager, SkyHigh Communications, HK Limited
5	2009	2010	Manager Key Accounts & Client Relationship, Bangladesh Internet Press Ltd. (BIPL), Bangladesh.
6	2004	2005	Technical Maintenance Engineer, Apollo Fire detectors Limited, United Kingdom
7	2002	2003	Industrial Placement Engineer, iCubed Technologies Ltd. United Kingdom




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Farhan Islam, Head of Business Operations

Name of the Tenderer:	Sheba Technologies Limited		
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22		
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021		
<b>A. Proposed Position</b> (tick the relevant box)			
<input type="checkbox"/> Contract Supervisor		<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>			
Name:	Md. Sadi Arman		
Date of Birth:	04-02-1994		
Years works experience:	7 years		
National ID Number, if any:			
Years of Employment with the Tenderer:	01		
Professional Qualifications:	IT Project Manager;		
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]			
Name of the Employer:	Sheba Technologies Limited		
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212		
Present Job Title:	IT Project Manager		
Years with the present Employer:	1 year		
Tel No:01847287623	Fax No:	e-mail address: sadi.arman@shebatech.com.bd	
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804. email: farhan.islam@shebatech.com.bd			
<b>D. Professional Experience (Not Applicable)</b>			
Summarise professional experience over the last ten ( <b>10</b> ) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project			
	From	To	Company / Project / Position / Relevant Experience
1			



Md. Sadi Arman, IT Project Manager

Name of the Tenderer:	<i>Sheba Technologies Limited</i>		
Invitation for Tender No:	<i>CEMSU/Com-WS-04/2021-22</i>		
Tender Package No	<i>30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021</i>		
<b>A. Proposed Position</b> (tick the relevant box)			
<input type="checkbox"/> Contract Supervisor		<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>			
Name:	SUMAYA MAHBUB		
Date of Birth:	June 26, 1989		
Years works experience:	8 years		
National ID Number, if any:			
Years of Employment with the Tenderer:	01 month		
Professional Qualifications:	Business Analyst; Certified Scrum Master; System Analyst;		
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]			
Name of the Employer:	Sheba Technologies Limited		
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212		
Present Job Title:	Senior System Analyst		
Years with the present Employer:	01 month		
Tel No: 01787653542	Fax No:	e-mail address: <a href="mailto:sumaya.mahbub@shebatech.com.bd">sumaya.mahbub@shebatech.com.bd</a>	
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: <a href="mailto:farhan.islam@shebatech.com.bd">farhan.islam@shebatech.com.bd</a>			
<b>D. Professional Experience (Not Applicable)</b>			
Summarise professional experience over the last ten ( <b>10</b> ) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project			
	From	To	Company / Project / Position / Relevant Experience
1			



Sumaya Mahbub, Senior System Analyst

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22	
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	
<b>A. Proposed Position</b> (tick the relevant box)		
<input type="checkbox"/> Contract Supervisor	<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>		
Name:	MD. SHAFIQU R RAHMAN	
Date of Birth:	01-07-1989	
Years works experience:	12 years	
National ID Number, if any:		
Years of Employment with the Tenderer:	04 years	
Professional Qualifications:	Software Engineer; Software Solution Architect;	
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]		
Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	Senior Software Architect	
Years with the present Employer:	04 years	
Tel No:01847287639	Fax No:	e-mail address: <a href="mailto:shafiqur.rahman@shebatech.com.bd">shafiqur.rahman@shebatech.com.bd</a>
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: <a href="mailto:farhan.islam@shebatech.com.bd">farhan.islam@shebatech.com.bd</a>		
<b>D. Professional Experience (Not Applicable)</b>		
Summarise professional experience over the last ten ( <b>10</b> ) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project		

	From	To	Company / Project / Position / Relevant Experience
1			



MD. SHAFIQUR RAHMAN, Senior Software Architect

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22	
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	
<b>A. Proposed Position</b> (tick the relevant box)		
<input type="checkbox"/> Contract Supervisor <input checked="" type="checkbox"/> Key Personnel		
<b>B. Personal Data</b>		
Name:	A.K.M Ariful Islam Shimul	
Date of Birth:	07-01-1983	
Years works experience:	10 years	
National ID Number, if any:		
Years of Employment with the Tenderer:	02 years	
Professional Qualifications:	Computer Operations, Ministry of Social Welfare Hardware Application, Ministry of Social Welfare	
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]		
Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	Database Administrator (DBA)	
Years with the present Employer:	02 years	
Tel No:01724538432	Fax No:	e-mail address: <a href="mailto:ariful.islam@shebatech.com.bd">ariful.islam@shebatech.com.bd</a>
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: <a href="mailto:farhan.islam@shebatech.com.bd">farhan.islam@shebatech.com.bd</a>		

**D. Professional Experience (Not Applicable)**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1			



A.K.M Ariful Islam Shimul, Database Administrator (DBA)

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22	
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	
<b>A. Proposed Position</b> (tick the relevant box)		
<input type="checkbox"/> Contract Supervisor	<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>		
Name:	Rokibul Hasan	
Date of Birth:	21-07-1995	
Years works experience:	5 years	
National ID Number, if any:		
Years of Employment with the Tenderer:	4 years	
Professional Qualifications:	Mobile Application Development (Android)	
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]		
Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	App Developer	
Years with the present Employer:	4 years	
Tel No: 01711547804	Fax No:	e-mail address: <a href="mailto:rakibul.islam@shebatch.com.bd">rakibul.islam@shebatch.com.bd</a>
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804.		

E-mail: farhan.islam@shebatech.com.bd

**D. Professional Experience (Not Applicable)**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1			



Rokibul Hasan, App Developer

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	<i>CEMSU/Com-WS-04/2021-22</i>	
Tender Package No	<i>30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021</i>	
<b>A. Proposed Position</b> (tick the relevant box)		
<input type="checkbox"/> Contract Supervisor <input checked="" type="checkbox"/> Key Personnel		
<b>B. Personal Data</b>		
Name:	Md. Rejwanul Reaz	
Date of Birth:	August 22, 1986	
Years works experience:	8 years	
National ID Number, if any:		
Years of Employment with the Tenderer:	2 years	
Professional Qualifications:	Software Development and System Architecture	
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]		
Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	Sr. Programmer	
Years with the present Employer:	2 years	
Tel No: 01847418958	Fax No:	e-mail address: <i>rejwanul.reaz@shebatech.com.bd</i>
Contact [manager/personnel officer]: <i>Farhan Islam</i>		

Tel-No: 01711547804.

E-mail: farhan.islam@shebatech.com.bd

**D. Professional Experience (Not Applicable)**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1			



Md. Rejwanul Reaz , Sr. Programmer

Name of the Tenderer:	<i>Sheba Technologies Limited</i>
Invitation for Tender No:	<i>CEMSU/Com-WS-04/2021-22</i>
Tender Package No	<i>30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021</i>

**A. Proposed Position (tick the relevant box)**

<input type="checkbox"/> Contract Supervisor	<input checked="" type="checkbox"/> Key Personnel
--	---

**B. Personal Data**

Name:	Fahima Chowdhury
Date of Birth:	01-09-1992
Years works experience:	7 years
National ID Number, if any:	
Years of Employment with the Tenderer:	5 years
Professional Qualifications:	Professional Application Development with ASP.NET MVC Web Development in ASP.Net Web Programming

**C. Present Employment [to be completed only if not employed by the Tenderer]**

Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	Software Engineer	
Years with the present Employer:	5 years	
Tel No: 01847287620	Fax No:	e-mail address:

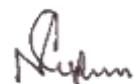
		fahima.chowdhury@shebatech.com.bd	
<p>Contact [manager/personnel officer]:  <i>Farhan Islam</i>          Tel-No: 01711547804.          E-mail: farhan.islam@shebatech.com.bd</p>			
<b>D. Professional Experience (Not Applicable)</b>			
<p>Summarise professional experience over the last ten (<b>10</b>) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project</p>			
	From	To	Company / Project / Position / Relevant Experience
1			



Fahima Chowdhury, Software Engineer

Name of the Tenderer:	<i>Sheba Technologies Limited</i>
Invitation for Tender No:	<i>CEMSU/Com-WS-04/2021-22</i>
Tender Package No	<i>30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021</i>
<b>A. Proposed Position</b> (tick the relevant box)	
<input type="checkbox"/> Contract Supervisor <input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>	
Name:	Nipun Ferdous
Date of Birth:	10-09-1995
Years works experience:	2 years
National ID Number, if any:	
Years of Employment with the Tenderer:	2 years
Professional Qualifications:	Business Analysis Foundations; Agile Foundations; System Design and Analysis;
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]	
Name of the Employer:	Sheba Technologies Limited

Address of the Employer:		8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:		Junior Business Analyst	
Years with the present Employer:		2 years	
Tel No:01847418964		Fax No:	e-mail address: nipun.ferdous@shebatech.com.bd
<p>Contact [manager/personnel officer]:  <i>Farhan Islam</i>          Tel-No: 01711547804.          E-mail: farhan.islam@shebatech.com.bd</p>			
<b>D. Professional Experience (Not Applicable)</b>			
Summarise professional experience over the last ten ( <b>10</b> ) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project			
	From	To	Company / Project / Position / Relevant Experience
1			



Nipun Ferdous, Junior Business Analyst

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22	
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	
<b>A. Proposed Position</b> (tick the relevant box)		
<input type="checkbox"/> Contract Supervisor		<input checked="" type="checkbox"/> Key Personnel
<b>B. Personal Data</b>		
Name:	Tayab Khan	
Date of Birth:	25-11-1985	
Years works experience:	10 years	
National ID Number, if any:		
Years of Employment with the Tenderer:	4 years	
Professional Qualifications:	Microsoft Certified Professional(MCP)	

	CCNA Linux Red hat Linux System and Network Administrating Certified from Department of Youth Development CCNP Security (Cisco Certified Network Professional Security) JNCIA-JUNOS (Juniper Network Certified Internet Associate) CNSS Certified Network Security Specialist
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**C. Present Employment [to be completed only if not employed by the Tenderer]**

Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	Head of IT Infrastructure	
Years with the present Employer:	4 years	
Tel No:01847418954	Fax No:	e-mail address: <a href="mailto:tayeb.khan@shebatech.com.bd">tayeb.khan@shebatech.com.bd</a>

Contact [manager/personnel officer]:

*Farhan Islam*

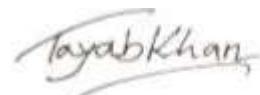
Tel-No: 01711547804.

E-mail: [farhan.islam@shebatech.com.bd](mailto:farhan.islam@shebatech.com.bd)

**D. Professional Experience (Not Applicable)**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1			



Tayab Khan, Head of IT Infrastructure

Name of the Tenderer:	Sheba Technologies Limited		
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22		
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021		
<b>A. Proposed Position</b> (tick the relevant box)			
<input type="checkbox"/> Contract Supervisor		<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>			
Name:	MD. SAIFUL ISLAM		
Date of Birth:	28-12-1990		
Years works experience:	7 years		
National ID Number, if any:			
Years of Employment with the Tenderer:	7 years		
Professional Qualifications:	Cyber Security Concepts & Principles RHCSA and RHCE CCNA		
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]			
Name of the Employer:	Sheba Technologies Limited		
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212		
Present Job Title:	Sr. Engineer, IT Services		
Years with the present Employer:	7 years		
Tel No: 01814242422	Fax No:	e-mail address: saiful.islam@shebatech.com.bd	
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: farhan.islam@shebatech.com.bd			
<b>D. Professional Experience (Not Applicable)</b>			
Summarise professional experience over the last ten ( <b>10</b> ) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project			
	From	To	Company / Project / Position / Relevant Experience
1			

*[Signature]*  
MD. SAIFUL ISLAM, Sr. Engineer, IT Services

Name of the Tenderer:	<i>Sheba Technologies Limited</i>		
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22		
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021		
<b>A. Proposed Position</b> (tick the relevant box)			
<input type="checkbox"/> Contract Supervisor		<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>			
Name:	A.M. Rafat Rahman		
Date of Birth:	07-04-1996		
Years works experience:	7 years		
National ID Number, if any:			
Years of Employment with the Tenderer:	1 year		
Professional Qualifications:	Frontend Design; UI/UX Design;		
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]			
Name of the Employer:	Sheba Technologies Limited		
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212		
Present Job Title:	UI/UX Designer		
Years with the present Employer:	1 year		
Tel No: 01847287622	Fax No:	e-mail address: rafat.rahman@shebatech.com.bd	
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: farhan.islam@shebatech.com.bd			
<b>D. Professional Experience (Not Applicable)</b>			
Summarise professional experience over the last ten ( <b>10</b> ) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project			
	From	To	Company / Project / Position / Relevant Experience

1			
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A.M. Rafat Rahman, UI/UX Designer

Name of the Tenderer:	<i>Sheba Technologies Limited</i>		
Invitation for Tender No:	<i>CEMSU/Com-WS-04/2021-22</i>		
Tender Package No	<i>30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021</i>		
<b>A. Proposed Position</b> (tick the relevant box)			
<input type="checkbox"/> Contract Supervisor	<input checked="" type="checkbox"/> Key Personnel		
<b>B. Personal Data</b>			
Name:	Ajfar Uddin Ahmed Chowdhury		
Date of Birth:	14-03-1993		
Years works experience:	2 years		
National ID Number, if any:			
Years of Employment with the Tenderer:	2 year		
Professional Qualifications:	Business Analysis Foundations; UI Essentials;		
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]			
Name of the Employer:	Sheba Technologies Limited		
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212		
Present Job Title:	Technical Documentation Expert		
Years with the present Employer:	2 year		
Tel No:01847287650	Fax No:	e-mail address: <a href="mailto:ajfar.chowdhury@shebatech.com.bd">ajfar.chowdhury@shebatech.com.bd</a>	
Contact [ <i>manager/personnel officer</i> ]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: <a href="mailto:farhan.islam@shebatech.com.bd">farhan.islam@shebatech.com.bd</a>			

**D. Professional Experience (Not Applicable)**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1			



Ajfar Uddin Ahmed Chowdhury, Technical Documentation Expert

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22	
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	
<b>A. Proposed Position</b> (tick the relevant box)		
<input type="checkbox"/> Contract Supervisor	<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>		
Name:	Abdullah Hel Azmain	
Date of Birth:	28-07-1999	
Years works experience:	2 years	
National ID Number, if any:		
Years of Employment with the Tenderer:	2 year	
Professional Qualifications:	Full Stack Software Developer	
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]		
Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	Software Developer	
Years with the present Employer:	2 year	
Tel No: 01847418951	Fax No:	e-mail address: <a href="mailto:abdullah.azmain@shebatech.com.bd">abdullah.azmain@shebatech.com.bd</a>
Contact [manager/personnel officer]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: <a href="mailto:farhan.islam@shebatech.com.bd">farhan.islam@shebatech.com.bd</a>		

**D. Professional Experience (Not Applicable)**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1			



Abdullah Hel Azmain, Software Developer

Name of the Tenderer:	<i>Sheba Technologies Limited</i>	
Invitation for Tender No:	CEMSU/Com-WS-04/2021-22	
Tender Package No	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	
<b>A. Proposed Position</b> (tick the relevant box)		
<input type="checkbox"/> Contract Supervisor	<input checked="" type="checkbox"/> Key Personnel	
<b>B. Personal Data</b>		
Name:	Md. Jeshad	
Date of Birth:	31-03-1997	
Years works experience:	3 years	
National ID Number, if any:		
Years of Employment with the Tenderer:	3 year	
Professional Qualifications:	SQA Fundamentals; Automation Foundations;	
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]		
Name of the Employer:	Sheba Technologies Limited	
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212	
Present Job Title:	SQA Engineer	
Years with the present Employer:	3 year	
Tel No:01847418950	Fax No:	e-mail address: <a href="mailto:md.jeshad@shebatech.com.bd">md.jeshad@shebatech.com.bd</a>
Contact [manager/personnel officer]: <i>Farhan Islam</i>		

Tel-No: 01711547804.

E-mail: farhan.islam@shebatech.com.bd

**D. Professional Experience (Not Applicable)**

Summarise professional experience over the last ten (**10**) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project

	From	To	Company / Project / Position / Relevant Experience
1			



Md. Jeshad, SQA Engineer

Name of the Tenderer:	<i>Sheba Technologies Limited</i>
Invitation for Tender No:	<i>CEMSU/Com-WS-04/2021-22</i>
Tender Package No	<i>30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021</i>
<b>A. Proposed Position</b> (tick the relevant box)	
<input type="checkbox"/> Contract Supervisor	<input checked="" type="checkbox"/> Key Personnel
<b>B. Personal Data</b>	
Name:	Nafisa Haque
Date of Birth:	02-11-1993
Years works experience:	4 years
National ID Number, if any:	
Years of Employment with the Tenderer:	1 year
Professional Qualifications:	Software Quality Assurance Foundation; Selenium essentials; API Testing; Automation Foundations;
<b>C. Present Employment</b> [to be completed only if not employed by the Tenderer]	
Name of the Employer:	Sheba Technologies Limited
Address of the Employer:	8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212
Present Job Title:	SQA Engineer

Years with the present Employer:	1 year		
Tel No:01847287646	Fax No:	e-mail address: nafisa.haque@shebatech.com.bd	
<p>Contact [<i>manager/personnel officer</i>]: <i>Farhan Islam</i> Tel-No: 01711547804. E-mail: farhan.islam@shebatech.com.bd</p>			
<b>D. Professional Experience (Not Applicable)</b>			
<p>Summarise professional experience over the last ten (<b>10</b>) years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project</p>			
	From	To	Company / Project / Position / Relevant Experience
1			




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Nafisa Haque, SQA Engineer

## Bank Guarantee for Tender Security (Form PSN-4)

Invitation for Tender No: CEMSU/Com-WS-04/2021-22

Date: 30/11/2021

Tender Package No: 30.31.0000.121.07.217.21(ctg  
Cargo)/177, Date: 28/10/2021

To:

Executive Director  
CEMSU, CAAB,  
Kurmitola, Dhaka.

### **TENDER GUARANTEE No: P.O/ 2483088**

We have been informed that *Sheba Technologies Limited* (hereinafter called "the Tenderer") intends to submit to you its Tender dated 30/11/2021 (hereinafter called "the Tender") for the performance of the Services of *Development, customization, installation and commissioning of Import and Export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports* under the above Invitation for Tenders (hereinafter called "the IFT").

Furthermore, we understand that, according to your conditions, the Tender must be supported by a Bank Guarantee for Tender Security.

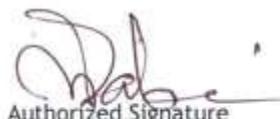
At the request of the Tenderer, we *The City Bank Ltd.* hereby irrevocably undertake to pay you, without cavil or argument, any sum or sums not exceeding in total an amount of TK 6,00,000 upon receipt by us of your first written demand accompanied by a written statement that the Tenderer is in breach of its obligation(s) under the Tender conditions, because the Tenderer:

- (a) has withdrawn its Tender after opening of Tenders but within the validity of the Tender Security; or
- (b) refused to accept the Letter of Acceptance (LOA) within the period as stated under ITT; or
- (c) failed to furnish Performance Security within the period stipulated in the LOA; or
- (d) refused to sign the Contract Agreement by the time specified in the LOA; or
- (e) did not accept the correction of the Tender price following the correction of the arithmetic errors as stated under ITT.

This guarantee will expire

- (a) if the Tenderer is the successful Tenderer, upon our receipt of a copy of the Contract Agreement signed by the Tenderer or a copy of the Performance Security issued to you in accordance with the ITT; or
- (b) if the Tenderer is not the successful Tenderer, twenty eight (28) days after the expiration of the Tenderer's Tender validity period, being 28<sup>th</sup> April, 2022.

Consequently, we must receive at the above-mentioned office any demand for payment under this guarantee on or before that date.

  
 Authorized Signature  
 29-11-2021  
**MOHAMMAD ZAKARIA**  
 Manager Branch Banking Trade Support  
 The City Bank Limited  
 New Market Branch, Dhaka  
 1200; Cell: 01714219936

  
 Authorized Signature  
 29-11-2021  
**Monirul Islam**  
 SAVP & Head of Unit-4, Dhaka-1200  
 Medium Business Division  
 The City Bank Ltd.

## Letter of Commitment for Bank's undertaking for Line of Credit (Form PSN-5)



The City Bank Limited  
Head Office: City Bank Center, 136, Gulshan Avenue, Gulshan-2, Dhaka-1212, Bangladesh

Address: New Market Branch, House: 5 Novera Square(1<sup>st</sup> floor), Road: 2, Area: Dhanmondi R/A, Dhaka - 1205.

### Letter of Commitment for Bank's Undertaking for Line of Credit (Form PSN-5)

Invitation for Tender No	:	CEMSU/Com-WS-04/2021-22	Date	:	28/11/2021
Tender Package No.	:	30.31.0000.121.07.217.21(ctg Cargo)/177, Date: 28/10/2021	Purpose	:	Development, Customization, Installation and commissioning of import and export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports.

To  
Executive Director  
CEMSU, CAAB,  
Kurmitola, Dhaka

### CREDIT COMMITMENT No: 330/2021

We have been informed that Sheba Technologies Limited intends to submit to you its CEMSU, CAAB for the execution of the works of Development, Customization, installation and commissioning of import and export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports under the above Invitation for Tenders no.: CEMSU/Com-W5-04/2021-22, Date-28-10-2021.

Furthermore, we understand that, according to your conditions, the Tenderer's Financial Capacity i.e, Liquid Asset must be substantiated by a Letter of Commitment of Bank's Undertaking for Line of Credit.

At the request of, and arrangement with, the Tenderer, we The City Bank Ltd., New Market Branch do hereby agree and undertake that Sheba Technologies Limited, 8<sup>th</sup> floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212 will be provided by us with a revolving line of credit, in case awarded the Contract, for execution of the works Viz Development, Customization, installation and commissioning of import and export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports for an amount not less than BDT 2,10,00,000.00 (BDT Two Crore Ten lac) only for the sole purpose of the execution of the above Contract. This Revolving Line of Credit will be maintained by us until issuance of "Completion Certificate" by the Procuring Entity.

In witness whereof, authorized representative of the Bank has hereunto signed and sealed this Letter of Commitment.

  
 Authorized Signature  
 29-11-2021  
**Mohamad ZAKARIA**  
 Manager Business Banking Trade Support  
 The City Bank Limited  
 New Market Branch, Dhaka  
 121661; Cell: 01714219936

  
 Authorized Signature  
 29-11-2021  
**Monirul Islam**  
 SAVP & Head of Unit-4, Chalg-1  
 Medium Business Division  
 The City Bank Ltd.

Phone: 58813483, 58814375, 58813126  
 Fax: 880-2-9884446; G.P.O. Box No. 3381, Dhaka  
 E-mail: info@thecitybank.com; Web: www.thecitybank.com; SWIFT: CIBLBDDH

## Comparative statement (Technical)

# Comparative Statement (Technical).

S.N.	Technical Specification	CAAB Requirements Name of the Tenderer: Sheba Technologies Ltd.	Compliance Statement	Tenderers Ref.
1. Eligibility of Tenderer				
1.1	<b>Documentary Evidence for Eligibility</b>	Minimum 3 years of overall experience in similar ICT/Software development related services	Complied	Annexure F
1.2		Successfully completed minimum 2 (two) supply of contract of at-least BDT 0.80 Crore under a single contract of ICT/Software development in the last 3 years with Govt / Semi-govt / Autonomous body/ Public Limited company of Bangladesh	Complied	Annexure F
1.3		Minimum 3 years of Specific Experience in Customized Software Development	Complied	PSN 02
1.4		Minimum value of Customized Software Development of BDT 0.60 Crore under a single contract in current operation mode	Complied	Annexure F
1.5		Firm must be ISO 9001 certified software company	Complied	Annexure A
1.6		Updated membership of BASIS (Bangladesh Association of Software and Information Services) and BCS (Bangladesh Computer Samity)	Complied	Annexure A
1.7		Firm must have at least BDT 0.80 (point eight zero) Crore as Liquid Asset (Line of Credit) to carry out the project	Complied	Annexure F
2. Tenderer must submit the following documents:				
2.1	<b>Technical Documents</b>	Full Technical Specifications	Agree to comply	Page 36
2.2		Original Money Receipt of purchasing Tender Document	Complied	Annexure H
2.3		Project Development Plan	Agree to comply	Page 49
2.4		System Workflow Diagram	Agree to comply	Page 122
2.5		Solution Architecture Diagram	Agree to comply	Page 124
2.6		System Integration Plan	Agree to comply	Page 71
2.7		User Acceptance Plan	Agree to comply	Page 101
2.8		Implementation Plan	Agree to comply	Page 74
2.9		Support/ Service Plan	Agree to comply	Page 114
3. Tenderer must submit photocopy of the following updated docs:				
3.01	<b>Company Documentation</b>	Valid Trade License	Complied	Annexure A
3.02		Latest income tax clearance certificate with TIN	Complied	Annexure A

3.03	VAT registration	Complied	Annexure A
3.04	Incorporation Certificate	Complied	Annexure A
3.05	Current Bank Solvency Certificate	Complied	Annexure A
3.06	Liquid Asset/Line of Credit Certificate	Complied	PSN 05
3.07	Audit Report for the last 3 years	Complied	Annexure E
3.08	CV of Supervisor with recent color photographs	Complied	Annexure G
3.09	CVs of 15(fifteen) full time ICT Personnel with recent color photograph	Complied	Annexure G
3.1	Payorder of BDT. 6lacs as Tender Security	Complied	Page 141
3.11	All the required docs as mentioned in section 7	Agree to comply	Fully Comply

#### 4. Feature list of the Export & Import Cargo Billing & Charging Automation

4.01	<b>Export Operational</b>	CAAB/Agent will be able to generate bar-code for AWB	Agree to comply	Fully Comply
4.02		User will be able to scan bar-code from AWB	Agree to comply	Fully Comply
4.03		User will be able create draft invoice	Agree to comply	Fully Comply
4.04		User will be able to create and send invoices	Agree to comply	Fully Comply
4.05		System will send email invoices through email	Agree to comply	Fully Comply
4.06		Admin user will be able to setup agents/airlines	Agree to comply	Fully Comply
4.07		User will be able to scan and upload AWBs	Agree to comply	Fully Comply
4.08		User will be able to view scanned AWB copy	Agree to comply	Fully Comply
4.09		User will be able to view different kinds of reports based on format given by end user and management	Agree to comply	Fully Comply

4.1	<b>Import Operational</b>	User will be able to enter data	Agree to comply	Fully Comply
4.11		User will be able to view data	Agree to comply	Fully Comply
4.12		Draft invoice generation	Agree to comply	Fully Comply
4.13		Invoice generation	Agree to comply	Fully Comply
4.14		System will generate email to send invoices to agents	Agree to comply	Fully Comply
4.15		User will be able to accept payment against invoice	Agree to comply	Fully Comply
4.16		User will be able to be assessed and realization report	Agree to comply	Fully Comply
4.17		User will be able to view dues report	Agree to comply	Fully Comply
4.18		User will be able to view paid report	Agree to comply	Fully Comply

4.19		System will create payment notes for bank transactions	Agree to comply	Fully Comply
4.2	<b>Integration</b>	During invoice generation, accounting entries should be passed as "accounts receivable" in the centralized accounting system through API	Agree to comply	Fully Comply
4.21		During payment against invoice, accounting entries should be passed as "accounts receivable" in the centralized accounting system through API.	Agree to comply	Fully Comply
4.22		for bank transactions based on invoices	Agree to comply	Fully Comply
4.23	<b>Hosting</b>	The proposed solution will be hosted at CAAB own data-center.	Agree to comply	Fully Comply

2021

# Technical Proposal

**Development, customization, installation and commissioning of Import and Export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports**

Submitted by Sheba Technologies Limited

December 01, 2021

Executive Director  
CPESU, CAAB,  
Kurmitola, Dhaka.

**Subject: Development, customization, installation and commissioning of Import and Export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports**

Dear Sir,

With reference to your IFT for Procurement of Development, customization, installation and commissioning of Import and Export cargo warehouse charge billing and payment system automation system at SAIA, Chittagong and other airports, we, Sheba Technologies Limited (STL), being agreed to the SOW as contained in the relative requirement documents, hereby submitting our proposal which includes the Technical Proposal, Financial Proposal and other relevant documents as required.

We would like to inform you that we have already probed through the required functional requirements and STL would be constructing the application considering all the required business requirements.

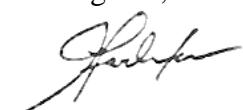
Having hands-on working experience in developing customized solutions for more than 6 years, covering 2 major telcos and other financial institutions, we are confident in our capacity for development of such solutions and are very much looking forward to add value to your prestigious organization.

We have also provided the comparative statement for your needful reference and kind perusal.

If you have any further queries with regards to the matter, please feel free to call or email me at your convenience.

Thank you.

Regards,



**Farhan Islam**  
Head of Business Operations  
Sheba Technologies Limited  
Phone: +8801711547804  
Email: farhan.islam@shebatech.com.bd

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# 1. Full Technical Specifications

## 1.1 Method Statement

Civil Aviation Authority of Bangladesh (CAAB) is responsible for safe, expeditious and efficient air traffic management. It provides various air traffic control services, communication and air navigation services. Aeronautical information services are also provided by CAAB. The meteorological services associated with air traffic movement are provided by Meteorological Department of Bangladesh.

To automate billing and payment system automation for import and export cargo CAAB requires a solution that can handle cargo based on barcode in the warehouse and manage, print AWB information on it, payment procedures, manage agents/airlines and integrate with existing accounting system for smooth operation of the Cargo warehouse.

## 1.2 Functions of Import & Export Cargo Billing Automation

The following section describes the high-level requirements for the software modules. Objective of this section is to give an idea of the scope of the software modules. Sheba Technologies Ltd. needs to prepare Business Requirement Specification (BRS), System Requirements Specifications (SRS) based on the requirement from end users, management and get it approved from the authority before development in the System Development Life Cycle (SDLC).

### 1 EXPORT CARGO

Export cargo automation means the billing of scanning charge. Weighing Charge, EDS, EDD charges and other charges related to export cargo (Outbound) operations.

Type	Requirements	Description
Operational	CAAB/Agent will be able to generate bar-code for AWB	User will be able enter AWB information from web dashboard User will be able to save AWB information from web Dashboard User will be able to publish AWB information from web dashboard User will be able to edit AWB information from web dashboard User will be able to delete AWB information User will be able to generate bar-code for the AWB User will be able to print bar-code (single or in batch) for the AWB
Operational	User will be able to scan bar-code from AWB	1. User will be able to scan the bar-code from AWB 2. User will be able to view the AWB information 3. User will be able to edit the AWB information 4. User will be able to post the AWB information
Operational	User will be able create draft invoice	<ul style="list-style-type: none"> <li>• User will be able to create draft invoices for the specific date range</li> <li>• User will be able to view draft invoices</li> <li>• User will be able to request change AWB</li> </ul>

		information
Operational	User will be able to create and send invoices	<ul style="list-style-type: none"> <li>• User will be able to create invoices for the specific date range</li> <li>• System will send invoices to the agent/airlines through mail</li> </ul>
Operational	System will send email invoices through email	<ul style="list-style-type: none"> <li>• System will send invoices to the agents/airlines through email as setup with each agents/airline</li> </ul>
Operational	Admin user will be able to setup agents/airlines	<ul style="list-style-type: none"> <li>• Admin user will be able to save/update/delete/agent/airline information</li> </ul>
Operational	User will be able to scan and upload AWBs	<ul style="list-style-type: none"> <li>• User will be scan AWB copy and upload to system</li> <li>• User will be able to scan AWB and upload in bulk</li> </ul>
Operational	User will be able to view scanned AWB copy	<ul style="list-style-type: none"> <li>• User will be view Scanned AWB copy</li> </ul>
Reports		User will be able to view different kinds of reports based on format given by end user and management

## 2 IMPORT CARGO

Type	Requirements	Description
Operational	User will be able to enter data	<ul style="list-style-type: none"> <li>• User will be able to enter data</li> <li>• User will be able to save data</li> </ul>
Operational	User will be able to view data	<ul style="list-style-type: none"> <li>• User will be able to view entered data</li> <li>• User will be able to edit data</li> <li>• User will be able to post data</li> </ul>
Operational	Draft invoice generation	<ul style="list-style-type: none"> <li>• User will be able to create draft invoice</li> <li>• User will be able to un-post data for modification</li> <li>• User will be able to post data</li> </ul>
Operational	Invoice generation	<ul style="list-style-type: none"> <li>• User will be able to create invoices for agents</li> <li>• User will be able to view invoices</li> </ul>
Operational	Email	<ul style="list-style-type: none"> <li>• System will generate email to send invoices to agents</li> </ul>
Operational	Payment	<ul style="list-style-type: none"> <li>• User will be able to accept payment against invoice</li> </ul>
Reports		<ul style="list-style-type: none"> <li>• User will be able to be assessed and realization report</li> </ul>
Reports		<ul style="list-style-type: none"> <li>• User will be able to view dues report</li> </ul>
Reports		<ul style="list-style-type: none"> <li>• User will be able to view paid report</li> </ul>
		<ul style="list-style-type: none"> <li>• System will create payment notes for bank transactions</li> </ul>

### 3 INTEGRATIONS WITH ACCOUNTING SYSTEM

Type	Requirements	Description
Integration	Accounts receivable	During invoice generation, accounting entries should be passed as “accounts receivable” in the centralized accounting system through API
Integration	Accounts Payable	During payment against invoice, accounting entries should be passed as “accounts receivable” in the centralized accounting system through API.
Integration	Bank transfer	Create excel and PDF file for bank transactions based on invoices
Hosting	The proposed solution will be hosted at CAAB own data-center.	

### SERVICE LEVELS, RESPONSE & RESOLUTION TIMES REQUIREMENTS

The following sets out the delivery standards for 1<sup>st</sup> Level Application Software Support, 2<sup>nd</sup> Level Application Software Support and 3<sup>rd</sup> Level Application Software Support from Service Provider to CAAB.

#### **1<sup>st</sup> Level Application Software Support - Service Level**

Users who require assistance as a consequence of any software (CAAB) problem that they cannot resolve themselves shall call Sheba Technologies Ltd. (Service Provider's) Central Help Desk. All support requests shall be logged on a Ticketing System which shall shoot out an e-mail to appropriate personnel in CAAB and Service Provider.

Upon receiving a support related call and subsequent logging in the Ticketing System, Service Provider shall respond to CAAB within 30 (Thirty) minutes of receiving such a call. Should the Central Help Desk personnel fail to understand the problem, a designated person from the Service tool to understand the problem and resolve it. After resolution, the Service Provider shall change the status of the case as “Closable” and CAAB shall change the status as “Closed” when satisfied with the solution. No 1<sup>st</sup> Level Support shall be left unresolved for more than 1 (One) working day, i.e. if a request is received at 4:00 p.m. on 2 September 2021, it shall be resolved by 4:00 p.m. on 5 September 2021.

#### **2<sup>nd</sup> Level Application Software Support - Service Level**

Upon receiving a support related call at the Central Help Desk and subsequent logging in the Ticketing System, Service Provider shall deploy its analyst(s) within 2 (two) Working Days from CAAB's request time and date for analysis and documentation of new requirements for submission to CAAB. Time to fully document the requirements will depend on the nature and complexity of the requirements but Service Provider shall be professional and reasonable in its approach and submit the requirements as soon as feasible. Service Provider shall evaluate any such request expeditiously and provide a costing for onward submission to CAAB. If acceptable, CAAB shall provide a sign-off before any further action is taken by the Service Provider.

Analytical and documentation related to 2<sup>nd</sup> Level Support shall be considered as consultancy work and for this a man-day costing will be provided by the Service Provider prior to commencement of work. Man-day costing will be pre-agreed as part of the Service Level Agreement.

### **3<sup>rd</sup> Level Application Software Support - Service Level**

3<sup>rd</sup> Level Application Software Support shall be provided by Service Provider and all requests for such support shall be recorded in a Ticketing System by CAAB. 3<sup>rd</sup> Level Application Software Support shall cover the following.

**Bug fixing services:** CAAB shall call the Service Provider's Central Help Desk and report a bug. Personnel at the Central Help Desk shall assess the nature of the problem and determine whether the bug is Critical, Major or Minor. All bug fixing shall be provided to CAAB free of charge. Description of each type of bug and the corresponding response time from Service Provider are given below:

<b>Severity</b>	<b>Response Time</b>
Critical Bug	If assessed as a Critical Bug, the Central Help Desk shall immediately engage a software engineer to look into the matter within 15 minutes and log the problem in a Ticketing System as a Critical Bug. Service Provider engineers shall respond within 60 Minutes to such bugs and resolve the same within <u>1 (One) Working Day</u> from reporting time and date or provide a temporary fix within 4 (four) hours and a permanent fix within 2 (two) Working Days.
Major Bug	If assessed as a Major Bug, the Central Help Desk shall immediately engage a software engineer to look into the matter within 15 minutes and log the problem in a Ticketing System as a Major Bug. Service Provider engineers shall respond within 90 minutes to such bugs and resolve the same within <u>2 (Two) Working Day</u> from reporting time and date or provide a temporary fix within 8(eight) hours and a permanent fix within <u>3 (Three) Working Days</u> .
Minor Bug	If assessed as a Minor Bug, the Central Help Desk shall engage a software engineer to look into the matter within 120 (One hundred twenty) minutes and log the problem in a Ticketing System as a Minor Bug. Service Provider shall resolve the problem within 5 (Five) Working Days from report date and time.

If due to the existence of a bug in software, the database of the CAAB is corrupted, Service Provider shall analyze and fix any database problem within an agreed period of time or as soon as feasible free of cost.

If and when a bug is found and fixed, Service Provider shall always have the bug fix tested internally and later install the bug fix in a test server for testing by CAAB. All software items transferred to the CAAB's live environment by Service Provider shall be prior tested by CAAB and officially signed-off within an agreed period of time.

As per best practice, Service Provider shall not be liable in anyway whatsoever for any subsequent discovery of a bug or bugs or take any responsibility whatsoever for damages, financial or otherwise, that may be incurred as a result of a bug or bugs. Service Provider shall however take all reasonable steps to provide bug fixes, if discovered, within the time stipulated

in the Service level Agreement or a reasonable and agreed period of time, depending on the nature of the problem.

**Correcting Database Errors Due to Operational Errors:** CAAB may request Service Provider to fix problems in the database of the software as a result of not following the correct operational procedures of the software or any of the Third Party Software necessary to run the software in accordance with Service Provider's prevailing procedures and the training provided by Service Provider to CAAB. If support is required, Service Provider shall try to resolve the problem within a timeline agreed with the concerned operational unit of CAAB.

**Customization/Enhancements:** CAAB may request for customization / enhancement by Service Provider. Upon receipt, Service Provider shall analyze the impact of the new requirements and submit a costing and approximate delivery date for the same to CAAB. Upon approval from CAAB, Service Provider shall deliver the customization /enhancement as per agreed timeline and costing. Man-day costing will be pre-agreed as part of the Service Level Agreement.

### **1.3 Major Components of the Import & Export Cargo Billing Automation**

**AWB Information management** – enables storage services with multiple customers to ensure the accuracy of goods being dispatched.

**CAAB Value Calculation Metrics** – performs in-depth metrics on the value of inbound or outbound shipments, taking into account a wide range of increments and decrements, to help organizations determine the best methodology for calculating customs values.

**Preference Management** – enables users to keep track of all preference certificates to ensure proper import/export duty arrangements have been made.

**Validation Engine and Error Alerts** – allows for auto- mated entry of all validations, as well as flags errors and warnings such as fluctuations in values that may affect customs compliance requirements.

**Inventory Movement and Status Overview** – provides an end-to-end audit trail with a direct link to inbound and outbound declarations for every transaction and/or movement within the customs warehouse.

**Duty Optimization and Preference Management** – includes features that allow organizations to leverage the best possible rates for goods within customs warehouse facilities through the following approaches:

**Clearing on the Shelf** – allows users to create an import declaration and pay duty on goods stored in the ware-house in the event of an anticipated increase in duties  
**Smart Picking** – automatically selects goods from the customs warehouse based on pre-configured prioritization measures to maximize efficiency and duty optimization

**Multiple Customs Warehouse Type Support** – supports Public A, B, F and Private C, D, E customs warehouse types. Seamless Integration of import, export and transit management modules to enable end-to-end functionality that encompasses declaration processing, document generation (e.g. stock records), tracking and information sharing.

**Seamless Data Capture** – offers multiple document upload options, including electronic messaging, manual capture (scanning/fax); as well as leverages existing and developing standards for electronic business documents, and supports multiple data types, including CIMP, XML, EDI, PDF and TIFF.

**Integration** – functions can be easily integrated with current back-end administration systems and other external entities like payment gateways to reduce cost and complexity.

## 1.4 Technical Details of Import & Export Cargo Billing Automation

### 1.4.1 High Level Architecture

#### 1.4.1.1 High Level Design

<b>Operating System</b>	: Debian 10
<b>Web Application Server</b>	: IIS/NGINX
<b>Technology</b>	: .NET CORE 6.0
<b>Database</b>	: MariaDB/PostgreSQL (SQL Based)
<b>Framework</b>	: ASP.NET
<b>IDE</b>	:Visual Studio

OR

<b>Operating System</b>	: Debian 10
<b>Web Application Server</b>	: IIS/NGINX
<b>Technology</b>	: Laravel 8, HTML5, CSS3, AJAX, JQuery.
<b>Database</b>	: MariaDB/PostgreSQL (SQL Based)
<b>Framework</b>	: MVC Architecture
<b>IDE</b>	: Visual Studio

#### 1.4.1.2 Architectural Goals and Constraints

For the web based Cargo Billing automaton have consider several key nonfunctional requirements that influence the way the system will be designed. These key requirements can be grouped into the following categories described in the subsequent sections:

- Modularity/Plugability
- Security
- User Interface
- Resource Use

## Modularity/Plugability

Modularity and Plugability requirements relate to the flexibility of the system and the ability to interchange components and external tools without additional coding effort. The external interface requirement has led to the use of the following patterns and frameworks to deliver these requirements.

Making objects as independent as possible will support modularity. All objects will have clearly defined roles and behaviors, and will collaborate with other objects through clearly defined interfaces. .NET 6.0 a lightweight dependency injection framework will be used to provide "plugability" making it both easy and non-pervasive to change between different implementations of a module.

## Interfaces

According to client there should be Integration with accounting department with their existing system. Hence, Cargo System will have external interface with existing Accounting software. An interface is a C# type that defines a "contract" between an object and its consumer. An object that implements an interface declares that it will meet the requirements of that interface. Consumer objects reference their collaborators via interfaces, so any object that implements the interface can be plugged in. As far as the consumer object is concerned, it does not care about the specific implementation as long as it fulfills this interface contract. In some cases, it may be desirable to split an interface between mandatory and optional behavior. Our system shall manage these interfaces via API communication.

## Adapter Design Pattern

The Adapter Design Pattern is a pattern that is used to simplify the integration with external systems. The Adapter Pattern specifies the creation of an interface to define the behavior of the external system. The Adapter Pattern calls for an adapter implementation that will convert between the system-defined interface and the real interface of the external system. To support a different external system simply requires that a new adapter be built and plugged into the application.

## Dependency Injection

Objects rarely achieve anything in isolation. Instead, an application ties many objects into a network of collaborators that work together to achieve the goals of the system. The use of interfaces to isolate an object's behavior from its implementation has already been discussed. However, this leaves the problem of how an object knows about its collaborators.

## Security

Securing an IT system consists of following 3 components

- Network Security
- Hardware Security
- Software Application Security

According to the scope of Tender Document our concern will be the software application security. Client is responsible for Network & Hardware security.

Hence we will discuss our approach and plan for software application security that is part of project plan.

- During development following security threats are minimized by programmers
  - Command Injection Flaws(SQL injection)
  - Cross Site Scripting (XSS)

Taking into consideration the sensitivity of data, the following prevailing data access and operation security tools have been proposed:

- i. For Admin user we suggest a 2 factor authentication and admin user will be bind with specific device by IP/MAC address.
- ii. Two layers of application-level login and password authentication with MD5 (Message-Digest algorithm 5 is a widely used cryptographic hash function with a 128-bit hash value) security standard can be used to authenticate a user of the software system.
- iii. Also, privilege (role)-based access control mechanism can be adopted as an additional means of security.

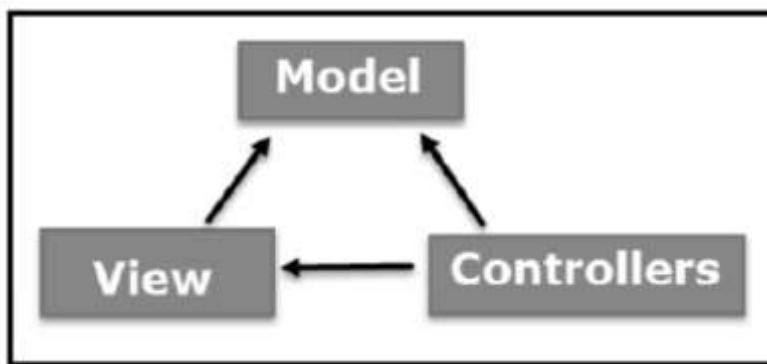
Error-handling/trapping measures can be taken care of to prevent accidental unauthorized viewing of the codes and access to data.

#### 1.4.1.3 MVC Architecture

Web applications share requirements for a large number of features including validation, presentation frameworks, security, and controller logic. As these requirements are independent of the application itself, a large number of design frameworks have been built that can be reused to provide this functionality. Many of these frameworks are modeled on the Model-View-Controller (MVC) pattern. This pattern dictates a separation between the business logic (model) and presentation logic (view). The controller is then responsible for bringing the model and view together to provide the application. The view layer will be developed using ASP .Net for presentation within the browser.

The MVC pattern ensures “separation of concerns” between the different layers. By separating the view component, its development can be assigned to a graphic design team, which requires a different skill set than development of the model or controller. The design team’s work can be easily integrated back into the application with minimum effort. The model is also entirely separated, allowing it to be tested independent of the user interface. Finally, the controller logic is built to bring the model and view together, assembling the full product into a usable web application.

## Components



### Model

The Model component corresponds to all the data-related logic that the user works with. This can represent either the data that is being transferred between the View and Controller components or any other business logic-related data. For example, a Customer object will retrieve the customer information from the database, manipulate it and update it back to the database or use it to render data.

### View

The View component is used for all the UI logic of the application. For example, the Customer view will include all the UI components such as text boxes, dropdowns, etc. that the final user interacts with.

### Controller

Controllers act as an interface between Model and View components to process all the business logic and incoming requests, manipulate data using the Model component and interact with the Views to render the final output. For example, the Customer controller will handle all the interactions and inputs from the Customer View and update the database using the Customer Model. The same controller will be used to view the Customer data.

#### 1.4.1.4 ASP.NET Core

ASP.NET Core is a cross-platform, high-performance, open-source framework for building modern, cloud-enabled, Internet-connected apps. With ASP.NET Core, we can:

- Build web apps and services, Internet of Things (IoT) apps, and mobile backends.
- Use your favorite development tools on Windows, macOS, and Linux.
- Deploy to the cloud or on-premises.
- Run on .NET Core.

ASP.NET Core is a redesign of ASP.NET 4.x, including architectural changes that result in a leaner, more modular framework.

ASP.NET Core provides the following benefits:

- A unified story for building web UI and web APIs.
- Architected for testability.
- Razor Pages makes coding page-focused scenarios easier and more productive.
- Blazor lets you use C# in the browser alongside JavaScript. Share server-side and client-side app logic all written with .NET.
- Ability to develop and run on Windows, macOS, and Linux.
- Open-source and community-focused.
- Integration of modern, client-side frameworks and development workflows.
- Support for hosting Remote Procedure Call (RPC) services using gRPC.
- A cloud-ready, environment-based configuration system.
- Built-in dependency injection.
- A lightweight, high-performance, and modular HTTP request pipeline.
- Ability to host on the following:
  - Kestrel
  - IIS
  - HTTP.sys
  - Nginx
  - Apache
  - Docker
- Side-by-side versioning.
- Tooling that simplifies modern web development.

ASP.NET Core MVC provides features to build web APIs and web apps:

- The Model-View-Controller (MVC) pattern helps make your web APIs and web apps testable.
- Razor Pages is a page-based programming model that makes building web UI easier and more productive.
- Razor markup provides a productive syntax for Razor Pages and MVC views.
- Tag Helpers enable server-side code to participate in creating and rendering HTML elements in Razor files.
- Built-in support for multiple data formats and content negotiation lets your web APIs reach a broad range of clients, including browsers and mobile devices.
- Model binding automatically maps data from HTTP requests to action method parameters.
- Model validation automatically performs client-side and server-side validation.

## Client-side development

ASP.NET Core integrates seamlessly with popular client-side frameworks and libraries, including Blazor, Angular, React, and Bootstrap. For more information, see Introduction to ASP.NET Core Blazor and related topics under *Client-side development*.

## ASP.NET Core target frameworks

ASP.NET Core 3.x and later can only target .NET Core. Generally, ASP.NET Core is composed of .NET Standard libraries. Libraries written with .NET Standard 2.0 runs on any .NET platform that implements .NET Standard 2.0.

There are several advantages to targeting .NET Core, and these advantages increase with each release. Some advantages of .NET Core over .NET Framework include:

- Cross-platform. Runs on Windows, macOS, and Linux.
- Improved performance
- Side-by-side versioning
- New APIs
- Open source

### 1.4.2 Logical Tiers

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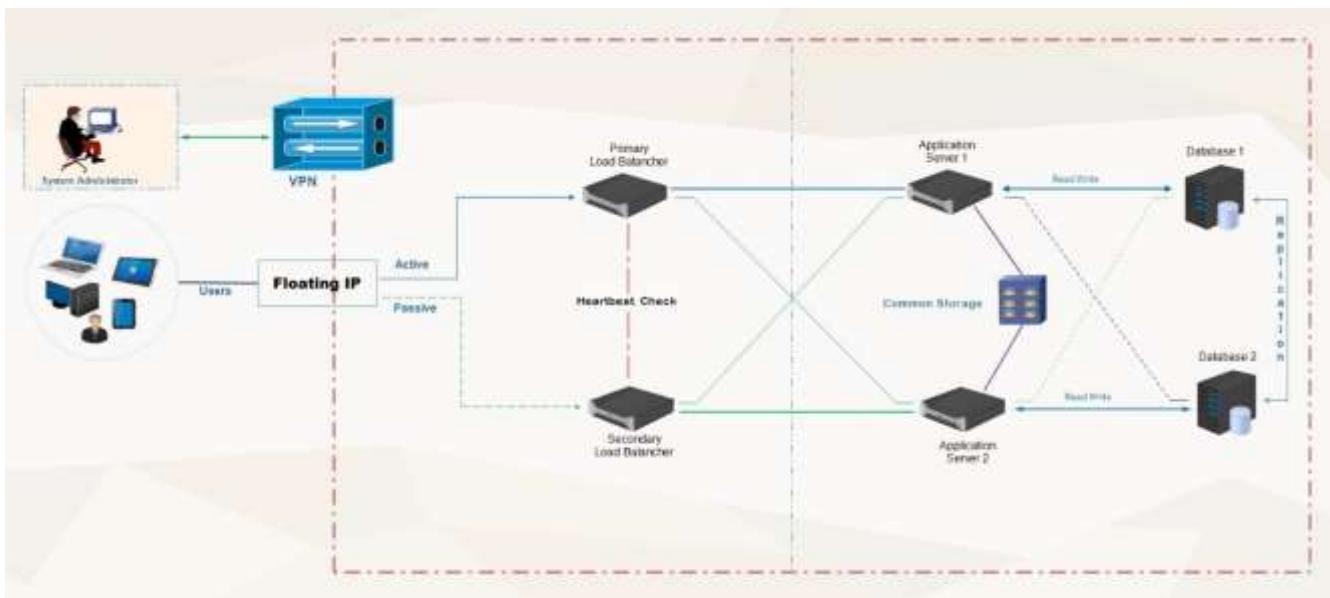
**User Interface Layer:** This layer will concern with only the presentation logic. To perform any operation this layer will call events of the proposed framework. The framework will be responsible to serve the request.

**Business Logic Layer:** Business logic layer will present all the logic related to the business. This logic will be executed by framework on request by UI Layer.

**Data Access Layer:** Data Access Layer will communicate with database and perform the requested operation on database. Framework will execute business logic using data access layer.

### 1.4.3 Hardware Platform & Deployment View

#### Hardware Architecture



#### Number of VPS (Proposed)

SL	Description	Package	Quantity
1	Application server	Advanced	2
2	Database	Standard	2
3	Load Balancer	Basic	2
4	Common Storage for Application server	2.2 TB	1
5	Real IP	N/A	2
6	VPN Users (if Needed)	N/A	2
7	OS	Debian 10	6

#### Proposed Technical Specifications

- **Application server**
  1. RAM: 32 GB
  2. Processor:
    1. Number of Processor: 2
    2. Core: 16
    3. Processor Speed 2.6 GHz
  3. SSD: 500 GB
  4. LAN:
    1. Number of LAN: 2
    2. Speed: 1 Gbps
  5. OS: Debian 10

- **Data Base server**
  1. RAM: 32 GB
  2. Processor:
    1. Number of Processor: 2
    2. Core: 16
    3. Processor Speed 2.6 GHz
  3. SSD: 360 GB HDD
  4. LAN:
    1. Number of LAN: 2
    2. Speed: 1 Gbps
  5. OS: Debian 10
- **Load Balancer**
  1. RAM: 4 GB
  2. Processor:
    1. Number of Processor: 1
    2. Core: 4
    3. Processor Speed 2.6 GHz
  3. HDD: 50 GB HDD
  4. OS : Debian 10
  5. LAN:
    1. Number of LAN: 2
    2. Speed: 1 Gbps

## 2. Proposed Work Plan and Methodology

### 2.1 Project Development Plan

#### 2.1.1 Project Initiation

---

The primary challenge of project management is to achieve all of the project goals and objectives while honoring the preconceived project constraints. Typical constraints are scope, time, and budget. The secondary and more ambitious challenge is to optimize the allocation and integration of inputs necessary to meet pre-defined objectives. The phases followed by us for Project Management are:

- **Value Proposition:** Build foundation for success with a good plan: A structured planning process for the project helps companies reach their targets in an efficient way. We help to improve our clients' planning methodologies and competencies by creating solid plans, securing the commitment of participants, ensuring sufficient resources and producing a workable schedule to ensure project execution.
- **Develop efficient teams:** Building a high-performing team and putting the right people in the right place at the right time is one important factor for success. We assist our clients to build winning teams, while leading individuals and handling conflicts effectively. We help design projects with relevant coordination and communication mechanisms to integrate and align project activities vis-à-vis other projects and operations.
- **Retain control by robust decision-making:** Understanding and knowing the project's risks and taking charge of the project's direction is probably the single most important task of managing any project. We can help to build these capabilities, or we can assist directly through regular analyses of project risks and assistant in necessary decision-making.
- **Communication and Reporting:** An analysis of stakeholder interest is a necessary foundation for successful communication about the project. We can either assist clients in designing the entire project communication systems or just communicate effectively with key stakeholders – in a well-timed appropriate way to ensure a smooth transition.

#### 2.1.2 Project Planning

---

Project planning is done to increase the likelihood that a project will be implemented efficiently, effectively and successfully. Project planning covers the first three stages of "the project management cycle." This cycle, illustrated below, describes the various stages for conceptualizing, planning, implementing and evaluating a project and recognizes that even when a project is finished; it may provide the starting point for a new on.

#### 2.1.3 Project Execution

---

During the Project Execution phase the project team produces the deliverable while the project manager will monitor and control the project delivery by undertaking:

- Time Management:** tracking and recording time spent on tasks against the Project Plan
- Cost Management:** identifying and recording costs against the project budget
- Quality Management:** reviewing the quality of the deliverable and management processes
- Change Management:** reviewing and implementing requests for changes to the project
- Risk Management:** assessing the level of project risk and taking action to minimize it

**Issue Management:** identifying and resolving project issues

**Acceptance Management:** identifying the completion of deliverable and gaining the customers' acceptance

**Communications Management:** keeping stakeholders informed of project progress, risks and issues

## **2.1.4 Project Monitor and Control**

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Only through constant monitoring and employing control operations can the project be implemented and maintained. The process is thus described below

As the monitoring and controlling process is always being executed every time any process is being initiated, thus the list of processes to monitor and control are varied. These processes have been described briefly below:

**Schedule progress:**

- The status of the activities that have been scheduled for the ongoing week/month.
- Measuring progress of activities. i.e., Ahead, behind or on-schedule.
- Change/ Correct in particulars of the progress.

**Budget:**

- Analysis of Budgetary Correlation.

**Scope:**

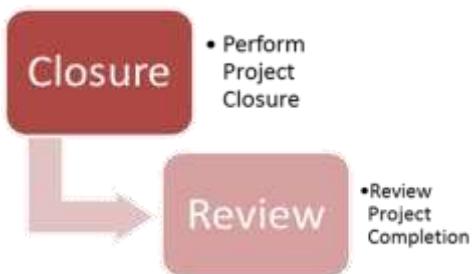
- Revised estimate to complete the work.
- Team working on activities that are in-scope or out-of-scope.
- Changes occurred that requires an additional scope.

There are additional things, such as Key Performance Indicators, that we want to monitor throughout the project but the ones mentioned above are the bare minimum. It is very important to monitor the progress on the project to ensure it does not get too far off the original plan.

Controlling the project refers to the actions that we will take as the project manager to ensure the project progresses according to the plan and actions. A change control procedure, where changes are identified, formally documented in a change order and then approved by CAAB is highly recommended.

## 2.1.5 Project Closure

The final phase of any project is the Project Closure where the project's success will be reported to CAAB and the project is formally closed.



**Figure: Project Closure Steps**

**Project Closure-** The project closure relies on identifying the completion criteria and fulfilling any outstanding deliverable or activities that are essential for implementation. Furthermore, any outstanding agreements that were required for implementation must be closed and the project resources will be released to the business while maintaining effective communication.

**Project Completion Review-** By performing a post project review, CAAB Shall identify the project successes, deliverable, achievements and lessons learned. The post project review is the last critical step in the project life cycle, as it allows an independent party to validate the success of the project and give confidence to the stakeholders that it has met the objectives it set out to achieve. This would technically involve the following:

- Measuring the benefits and objectives
- Deciding whether the project was within scope
- Assessing the final deliverable produced
- Reviewing the project against schedule
- Comparing the expenditure against budget
- Stating the final outcome of the project
- Communicate its success to stakeholders

## 2.1.6 Security & Data Privacy Plan

Considering the IT security and Data Privacy requirements to address citizen concerns and information security while providing optimal services, the plan has been. To prepare the Security and Data Privacy plan Sheba Technologies Limited has followed several national and international acts and benchmarks. Apart from IT Security and Data Privacy plan, this section also includes comprehensive security architecture, user roles-accessibility, checklist of security and hosting plan. Details of each section are given below:

### **Standard considered for this plan:**

While preparing this IT Security and Data Privacy Plan several national and international standards were considered. Each of the standards is listed below along with their scope of area in this plan:

## National Standards considered:

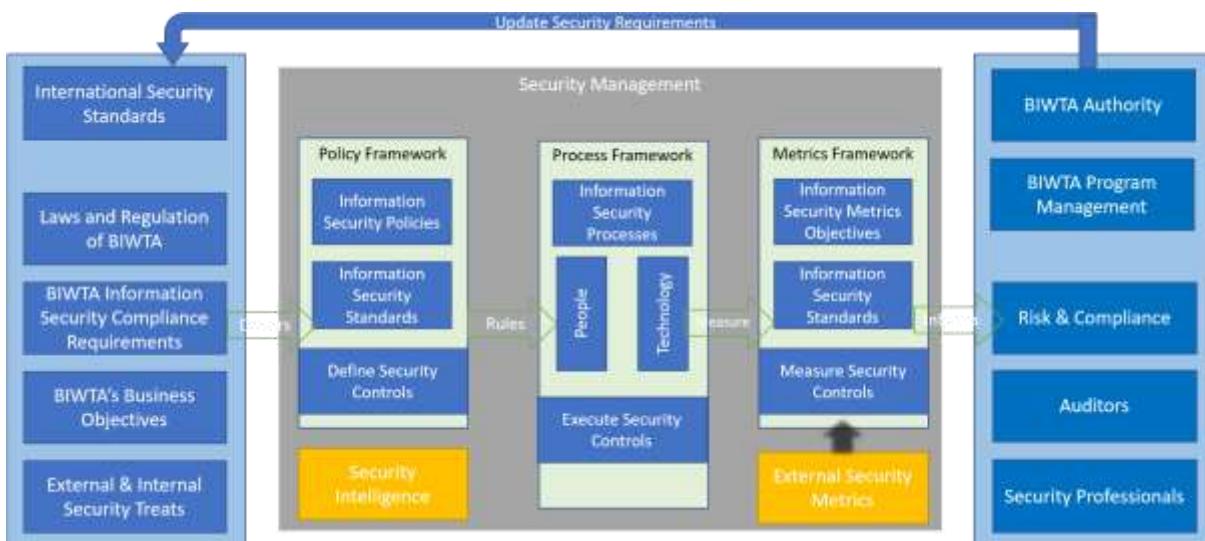
- **National ICT Policy-2009 by Government of Bangladesh-** This act has been formulated to Expand and diversify the use of ICTs to establish a transparent, responsive and accountable government; develop skilled human resources; enhance social equity; ensure cost-effective delivery of citizen-services. As the project will be developed to provide citizen services in a transparent and responsive way, therefore the guidelines of this policy will be followed to ensure transparency and cost effectiveness wherever most appropriate.
- **Digital Security Act 2018 by Government of Bangladesh-** This act has been formulated to ensure Digital Security and Digital Crime Identification, Prevention, Suppression, Trial and other related matters best practice recommendations on information security management. As the project will be completed based on the local laws of Bangladesh, therefore regulation of Digital Security Act 2018 is considered here.
- **Right to Information Act 2009 by Government of Bangladesh-** The right to information act was established to ensure that transparency and accountability in all public, autonomous and statutory organizations and in private organizations run on government or foreign funding shall increase, corruption shall decrease, and good governance shall be established. It is expedient and necessary to make provisions for ensuring transparency and accountability.

## International Standards considered:

- **ISO 27000-** As ISO 27000 series provides best practice recommendations on information security management and as the standard comes with over a dozen domains, therefore standards from ISO 27000 series has been considered as a benchmark here.
- **COBIT** - The Control Objectives for Information and related Technology (COBIT) is published by the Standards Board of Information Systems Audit and Control Association (ISACA) providing a control framework for the governance and management of enterprise IT.
- **ITIL (or ISO/IEC 20000 series)** - This document introduces a collection of best practices in IT service management (ITSM) and focuses on the service processes of IT and considers the central role of the user.
- **ISACA's Standards, Guidelines and Procedures** - This is a series of information systems auditing standards, guidelines and procedures issued by the Standards Board of Information Systems Audit and Control Association (ISACA).

## Security Requirements Management:

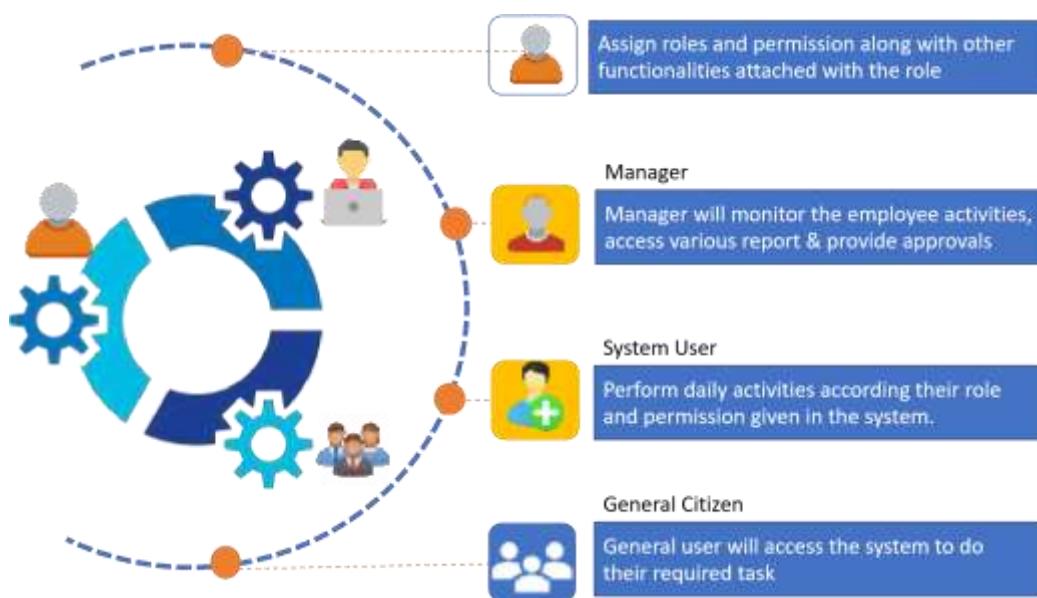
For information and system security process the following process flow will be followed. As per our security management framework, based on the requirements of CAAB Authority and Project Team will set the system and data security requirements based on the risk and compliance issues and on the feedback of auditors and security professionals. These requirements will be then checked with international security standards, laws and regulation of CAAB, internal security compliance of CAAB, CAAB's Business Objectives and Internal and External Security Threats. These compliance and requirements will be the drivers of Security Policy and Process Frameworks.



### User Roles Accessibility & Authorization

A proper user management is essential for a system that allows the administrators to manage user accounts by controlling access level, account setting rights, user roles etc. User management also provides the administrators/ authority to monitor the frequency in which a user logs on to, and also monitor what data and software users can see, how much of it they can see, and whether they have full rights within the software or to edit any data. This helps to increase the overall security as it focuses on the 'need to know' basis, and it can help simplify deployment processes for new software or technologies.

System will design and customize according to the user types to manage respective features designated to a user type. There will four types of users will have whose access level and roles will be subjective to their purposes in the software system.



### **2.1.7 Data Privacy Plan**

Security and data privacy plan is an outlines how an organization will protect the personal information of its customers and clients. A data privacy plan for an IT system depends on how an organization collects, processes and uses data. For data privacy, Sheba Technologies Limited includes the following activities in different phases of software development which

starts from the planning stages and continues throughout the journey of a software lifecycle. Several steps of data privacy are described below.

- **Identify the Types of Information Collected and Processed**

Sheba Technologies Limited will identify and takes extra care for certain types of commonly collected information which require special handling and protection.

- **Gather and Examine Internal Policies**

Sheba Technologies Limited will collect data retention and destruction policies of client's organization, privacy policies, data security procedures, and internal auditing and monitoring processes. All of these materials will be gathered and considered in the data security plan.

- **Assemble and Evaluate Risks**

As a precursor to developing (or revising) a data security plan, Sheba Technologies Limited will generate a list of the risks associated mishandling of data and data breaches. Once this risk analysis is complete, one or more methods for mitigating each risk will be prepared. Sheba Technologies Limited will also define the user roles that will be responsible for ensuring information security, privacy compliance and data protection.

- **Security Design for a Data Life Cycle**

Sheba Technologies Limited will consider customer privacy, legal compliance and data protection throughout the data lifecycle; i.e., collection, processing, storage and destruction.

- **Monitoring and Tracking Network Access**

To mitigating breaches or other types of security incidents Sheba Technologies Limited will continually coordinate with IT professionals to ensure that network access is adequately monitored such that suspicious activity on network can be detected prior to breach.

- **User Access Control & Role wise Access Permission**

As it has been observed that Employees can be a common cause of data breaches, data loss and data misappropriation if appropriate safeguards are not instituted and enforced in a system. To mitigate these risks, Sheba Technologies Limited will develop comprehensive policies and procedures that dictate which employees have access to particular data; establish how confidential and proprietary information must be handled through various roles and access controls.

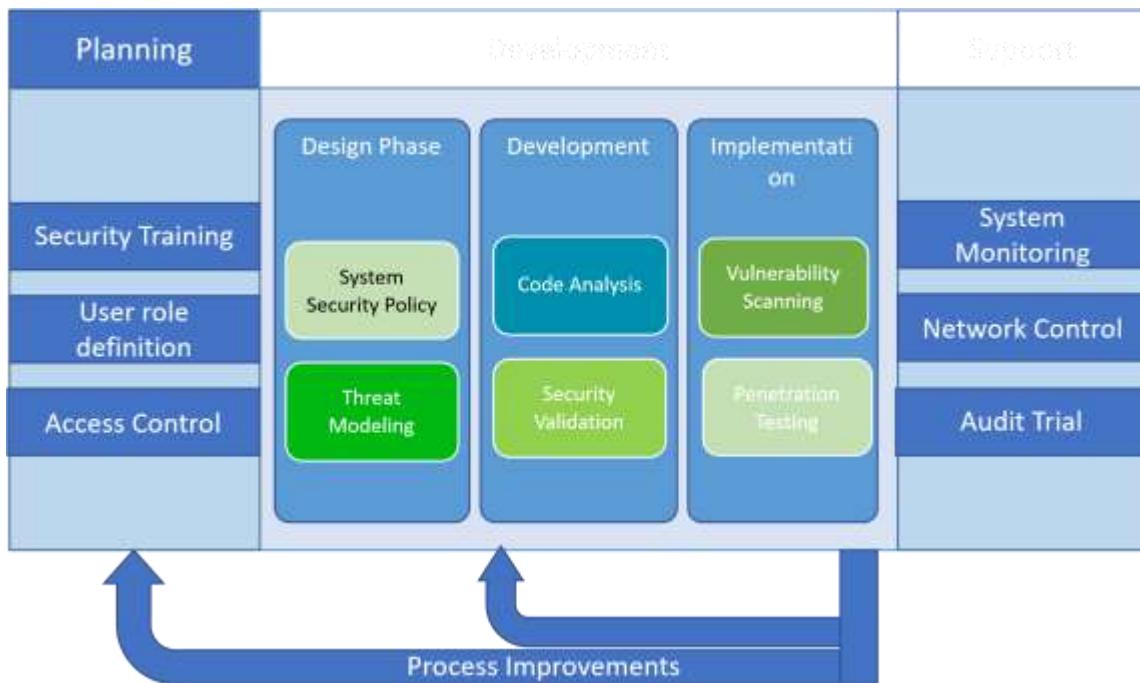
- **Develop a Breach Response Plan**

A critical part of data security plan is the breach-response plan, which governs how to respond to a suspected or actual breach. Sheba Technologies Limited's breach response plan will have clear instruction and will be easy to follow and scenario based.

- **Conduct Regular Audits**

Sheba Technologies Limited will regularly measure the effectiveness of the designed solution, including by revisiting and reevaluating all of the factors that went into developing them. Regular audits will also evaluate the current information-security practices.

After defining all the roles and plans; and after modeling the data security and privacy the following activities are performed by Sheba Technologies Limited during different phases of the software development life cycle to ensure data privacy.



## 2.1.8 Common vulnerabilities considered for their prevention

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Sheba Technologies Limited will check and prevent the following vulnerabilities during development, implementation and maintenance:

### Vulnerabilities considered for Web-based applications

- Cross-site scripting (XSS) vulnerabilities
- SQL injection vulnerabilities **Database applications**
- SQL injection vulnerabilities

### System Vulnerabilities considered

- Input validation
- Language-specific issues (PHP, Java)

### Cryptographic code

- Common cryptographic errors

### Input Validation Control

Input validation is essential for any software that deals with input from its external environment. As a number of users will access the system, Sheba Technologies Limited Ltd. will take responsibility for Input Validation Controls by the following process:

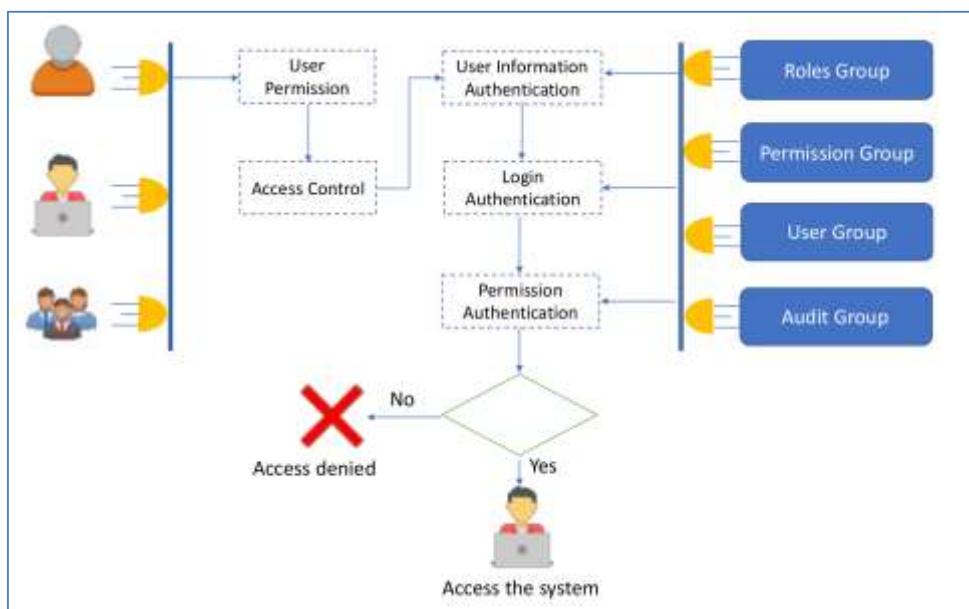
- **Verifying User and Host Identity:** Developed system will go through the user authentication, authorization, and account provisioning.
- **Specify variable types:** Type of variable will be specified in the system to prevent any input validation attack.

- **Data validity check:** This will allow only valid data to be entered into the system.
- **Logic check:** Illogical combinations of input will not be accepted.
- **Limit input size:** Input size will be limited for each field.
- **Log of validation:** Validations that were conducted will be logged. This will help to identify any missing data validation checks and improve the validation.

### **User Access, authorization and Authentication Control**

To provide secure access to the system and preventing any fraudulence each access permission will go through several permission phases in the system.

- **Single sign on (SSO) (Authorization):** the system will provide a single login entry point enabling users to login, authenticate and get authorization to all permitted functions in one step.
- **Common profiles (Authentication):** the system will provides common standard and customer customization profiles according to the most typical operational tasks.
- **User activity logging (Accountability):** Actions performed by any user are registered including information like unique user identification, timestamp and event will be recorded in the system through audit trial.



### **2.1.9 Requirement Analysis**

#### **Wire-framing**

- Wire-framing of complete project along with analysis is carried out
- Interactive client communication to achieve successful results
- Elegant design of the project in accordance with user interface depiction with clickable prototype

## System Architecture

- Decision about Framework design and duration of project by our experts
- Brief layout of work procedure with targeted milestone within stipulated time
- Architectural enhancement by technical teams combining all aspects of project

## Project Implementation

- The existing prototypes during previous phases are coded, programmed and modified during this phase.
- Successive execution of technical coding steps according to set milestones.
- Collaboration of technical aspects to deliver efficient product.

## Testing and Debugging

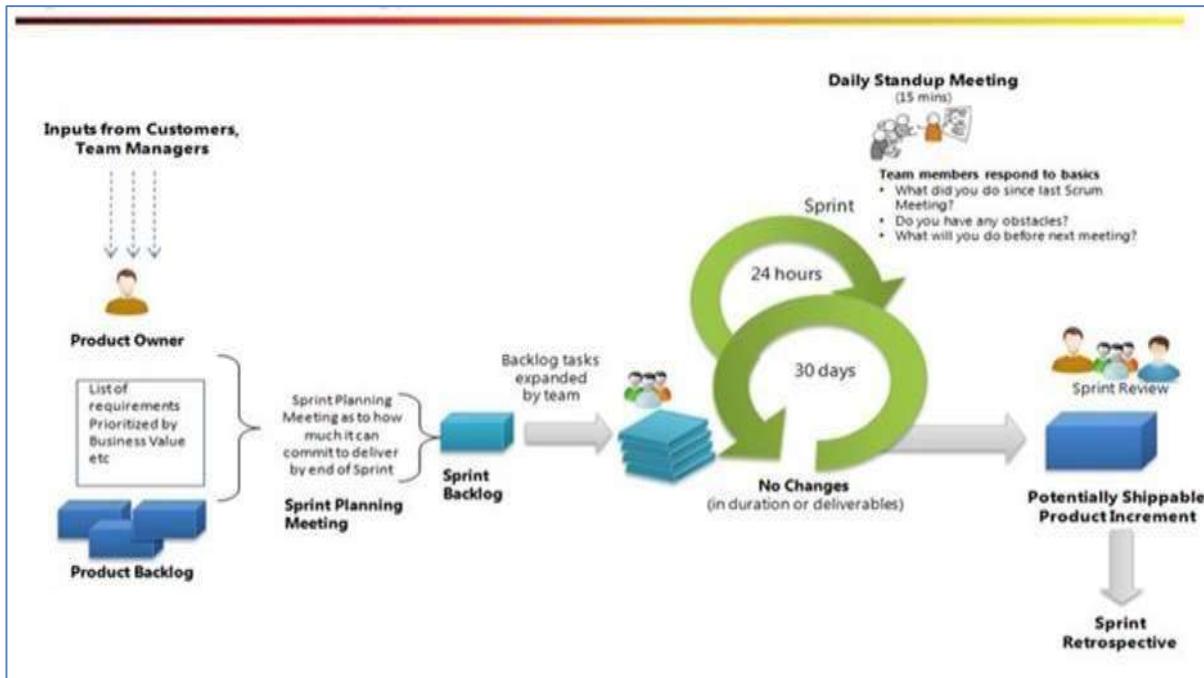
- The existing prototypes during previous phases are coded, programmed and modified during this phase.
- Successive execution of technical coding steps according to set milestones.
- Collaboration of technical aspects to deliver efficient product.

### **2.1.10 Agile Scrum Methodology**

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Scrum is the most commonly used agile framework for system/ customized software development. Scrum uses “flexible” strategy where customer has more transparency on the current progress of the project and customer can even change the project execution plan in the middle of the project according to the business values which is not possible with traditional/sequential approach. Scrum makes progress in a series of sprints which are time boxed for a month or less than a month. At the end of every sprint, a sprint review is conducted during which the team demonstrates the new functionality to the product Owner, stakeholders and to the customer.

Scrum framework provides “Change Anytime Strategy” so that, the solution might provide latest technology and support systems integration such as integration with accounting system of the existing procedure used by CAAB.



**Figure: Agile Scrum Methodology**

### Scrum Roles

**Product Owner:** The Product Owner is responsible for managing the Product Backlog, writing user stories and is the voice of the customer. Product Owner is accountable for maximizing the value of the product and work of development team. Product owner ensures that Product Backlog is visible to all and confirms what Scrum team will do in the next sprint.

**Development Team:** Development team is responsible for delivering a potentially releasable “Increment of Done Product” at the end of each sprint. The work done by Development team is self-organizing, cross functional (analyses, design, develop, test, technical communication, document, etc.).

**Scrum Master:** Scrum Master is responsible for ensuring that Scrum is understood by the entire team and for removing any hurdles which might affect sprint goal/deadlines. Scrum Master helps in coaching agility to the Product Owner and to the development team.

### Scrum Meetings

**Sprint Planning Meeting:** Sprint Planning Meeting is time boxed to eight hours for one month sprint and the meeting duration will be shorter for the shorter sprint. In the meeting we discuss what work to be done in this sprint and how we can get this work done.

**Daily Stand-up Meeting:** Daily Stand-up Meeting is time boxed to 15-20 mins for the Development team to create a plan for the next 24 hours.

**Sprint Review Meeting:** The Product Owner is responsible for managing the Product Backlog, writing user stories and is the voice of the customer. Product Owner is accountable for

maximizing the value of the product and work of development team. Product owner ensures that Product Backlog is visible to all and confirms what Scrum team will do in the next sprint.

**Sprint Retrospective Meeting:** Sprint Retrospective Meeting is time boxed to 3 hours for one-month sprint and will be shorter for the shorter sprint. Sprint Review Meeting held after the Sprint Review meeting and prior to the next Sprint Planning Meeting.

### Scrum Meetings

**Product Backlog:** Product Backlog is a list of user stories (requirements) which are maintained for the development. Product Backlog is dynamic and constantly changes to identify what the app needs to be appropriate, competitive and useful. Product Backlog is often ordered by value, risk, priority and necessity, and high priority items gets immediate development activities over lower priority items.

**Sprint Backlog:** Sprint Backlog is a list of selected items from the Product Backlog for the Sprint. Sprint Backlog makes visible all of the work that Development identifies as necessary to meet the Sprint goal. Once sprint tasks estimation is done and team is committed on sprint backlog items then we can't add additional user story in the sprint.

## 2.2 System Requirement Analysis Plan

Requirements finalization is a very important part in development methodology. Sheba Technologies Limited will carry out detailed requirement study and analysis on the each and every scope of enhancement and maintenance. Under this scope of work, Sheba Technologies Limited will analyze the detail functions, processes and get it signed off from concerned stake holder.

Technical requirements analysis begins with the business requirements documents created during the business analysis phase. Using the business requirements as a basis, you perform the following steps:

- Perform a usage analysis to aid in determining expected load on the deployment
- Create a set of use cases that model typical user interaction with the deployment
- Create a set of system requirements that are derived from the business requirements, use cases, and usage analysis

The following figure shows the technical requirements phase in relation to the business analysis, logical design, and deployment design phases.

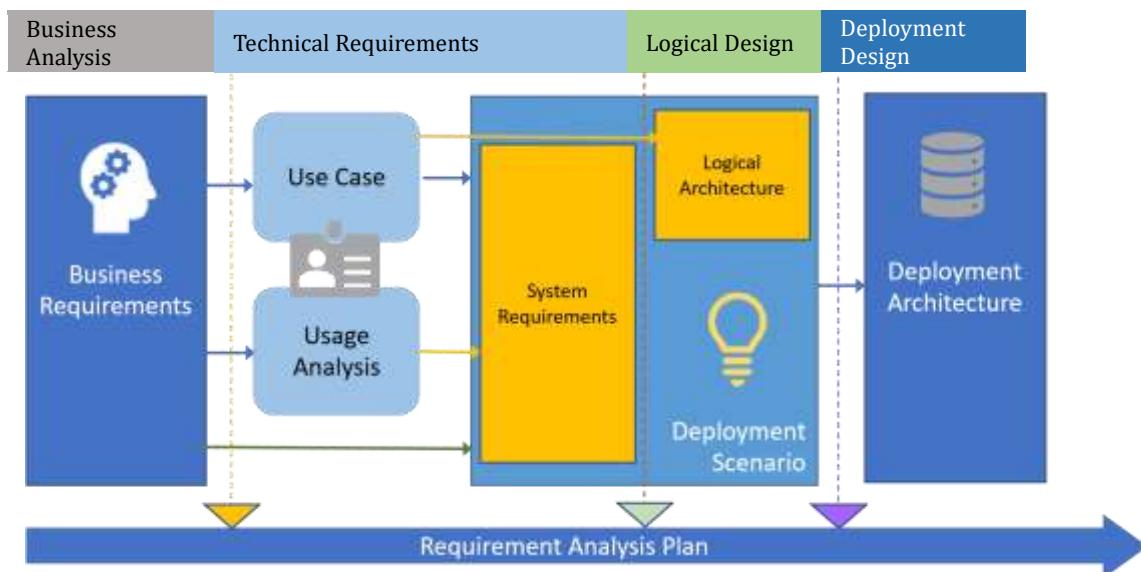


Figure: Technical Requirements Phase and Other Deployment Planning Phases

### 2.2.1 Business Analysis

In this Sheba Technologies Limited try to understand many components, such as:

- The data needed to accomplish the desired business objective
- Individual work tasks that manipulate, review, or act upon the data in some way
- Decisions that affect the data in the process or the manner in which the process is conducted
- The movement of data between tasks in the process
- Individuals and groups which perform tasks

In this stage to understand the nature of business requirements, Sheba Technologies Limited focuses on the requirements elicitation techniques as discussed below:

### **Requirements Elicitation Techniques:**

Requirements elicitation (also known as Requirements Gathering or Capture) is the process of generating a list of requirements (functional, system, technical, etc.) from the various stakeholders (customers, users, vendors, IT staff, etc.) that will be used as the basis for the our formal Requirements collection. Depending on the need and situation we will use the techniques mentioned below to correctly elicit requirements:

- Interviews
- Questionnaires
- User Observation
- Workshops
- Brainstorming
- Role Playing
- Use Cases & Scenarios
- Prototyping

### **Technical Requirements**

Technical requirements, in the context of software development and systems engineering, are the factors required to deliver a desired function or behavior from a system to satisfy a user's standards and needs. There are aspects such as performance, reliability, and availability those are recorded in this phase. To collect technical requirements Sheba Technologies Limited performs the following tasks:

#### **• Use Case Analysis:**

Sheba Technologies Limited uses Use case analysis for technical requirements collection as Use cases capture user requirements for a system by describing how a system will be used and to what ends in a way that the end user can understand. Use cases provide many benefits beyond defining user requirements and help us to

- Illuminate and document current or goal-stated methods, systems and stakeholders
- Identify business-domain classes and their associates
- Drive detailed application analysis and design
- Develop scripts for testing
- Suggest prototyping activity to Clarify architecture requirements of Highlight risks and needs for risk management

#### **• System Requirements Analysis:**

Software requirement is a functional or non-functional need to be implemented in the system. Functional means providing particular service to the user. Software requirement can also be a non-functional; it can be a performance requirement. In system requirements analysis phase Sheba Technologies Limited performs the following

1. **Business requirements:** They are high-level requirements that are taken from the business case from the projects.
2. **Architectural and Design requirements:** These requirements are more detailed than business requirements. It determines the overall design required to implement the business requirement.
3. **System and Integration requirements:** At the lowest level, we have system and integration requirements. It is detailed description of each and every requirement. It can be in form of user stories which describes everyday business language.

## Logical Design

Logical Design or Logical Process Modeling is the representation of a business process, detailing all the activities in the process from gathering the initial data to reaching the desired outcome. A sound logical design therefore helps to ensure a successful implementation. And a complete and accurate logical design for a database helps to ensure us:

- Data independence
- Physical database flexibility
- Integrity
- User satisfaction

Based on logical design, Sheba Technologies Limited then moves on to Logical Architecture Design and Deployment design:

- **Logical Architecture Design:** To demonstrate the concept applicability, in Sheba Technologies Limited we apply our ideas to a logical architecture design where the metadata is represented as an aspectual, crosscutting view. With the advantages of aspect-oriented specification approach we apply it to design such as data warehousing architecture design and so on.

## Deployment Design

During the deployment design phase of the solution life cycle, Sheba Technologies Limited designs a high-level deployment architecture and a low-level implementation specification and prepares a series of plans and specifications necessary to implement the solution.

## **2.3 System Design Plan**

### 2.3.1 Stage 1: Planning

The purpose of this 1<sup>st</sup> phase is to find out the scope of the problem determine solutions. Resources, costs, time, benefits and other items should be considered here.

### 2.3.2 Stage 2: System and Requirement Analysis

The 2<sup>nd</sup> phase is where teams consider the functional requirements of the project or solution. It's also where system analysis takes place or analyzing the needs of the end users to ensure the new system can meet their expectations.

### 2.3.3 Stage 3: System design

The 3<sup>rd</sup> phase describes in detail, the necessary specifications, features and operations that will satisfy the functional requirements of the proposal system which will be in place.

Basically, at this phase the detail functional scope defining and designing as per the standard of software engineering approach is required. This is very vital and important phase of any SDLC (Software Development Life Cycle).

Considering the existing system is running on stable architecture design, Sheba Technologies Limited Ltd. will undergo the existing system design with required redesign approach for robust, scalable, user friendly system when and if applicable.

At this system designing phase Sheba Technologies Limited will perform different following designing related tasks when new requirement for feature/module development comes up. Some may be listed as:

- Identifying module, components, tasks, I/O and functional features.
- Specifying technical and functional requirements.
- User Interface design.
- Description of UI and requirements.
- Preparing the use cases.
- Determine process and data flow.
- Database design.
- API Design.

#### **2.3.4 Stage 4: Coding**

Now the real work begins! The Coding phase marks the end of the initial section of the process. Additionally this phase signifies the start of production. The Coding stage is also characterized by installation & change.

#### **2.3.5 Stage 5: Integration & Testing**

This phase involves system integration and system testing- normally carried out by a Quality Assurance professional to determine if the proposed design meets the initial set of business goals.

#### **2.3.6 Stage 6: Implementation**

The 6th phase is when the majority of the code for the program is written and when the project is put into production by moving the data and components from the old system and placing them in the new system via direct cutover.

#### **2.3.7 Stage 7: Operation & Maintenance**

The last phase is when end users can fine tune the system if they wish to boost performance, add new capabilities or meet additional user requirements.

At this system designing phase the following design related tasks will be performed and will produce various standard System Designing Document (SDD):

- Identifying module, components, tasks, I/O and functional features
- Specify technical and functional requirements
- User Interface design
- Description of UI and requirements
- Preparing the use cases
- Defining Integration and Interoperability scope
- Designing system architecture
- Determine process and data flow

- Database design
- API design
- Finalized tools, technologies and frameworks to be used

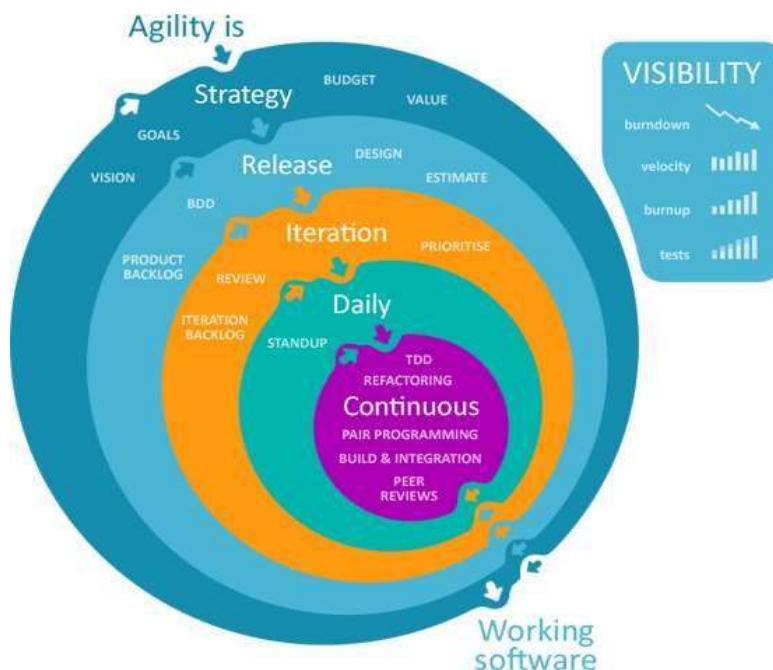
### **2.3.8 System Design**

<b>SL</b>	<b>Tasks/Elements</b>	<b>Responsibility</b>	<b>Outcome</b>	<b>Remarks</b>
<b>1</b>	Designing system architecture	System Analyst & team	Component of SDD	
<b>2</b>	Identifying Module, Components	System Analyst & team	Component of SDD	
<b>3</b>	Specify technical and functional requirements	System Analyst & team	Component of SDD	
<b>4</b>	User Interface Design	UI/UX	Wireframing	Wireframing is used to easy visualization of upcoming software for user
<b>5</b>	Use Case Preparation	System Analyst & team	Use cases & Diagram(Component of SDD)	
<b>6</b>	Determine process and data flow	System Analyst & team	<ul style="list-style-type: none"> <li>• Process flow diagram(Component of SDD)</li> <li>• Data Flow Diagram (Component of SDD)</li> </ul>	
<b>7</b>	Defining class & API Design	System Analyst & team	<ul style="list-style-type: none"> <li>• Class Diagram (Component of SDD)</li> <li>• API Documentation</li> </ul>	
<b>8</b>	Database Design	System Analyst & team	<ul style="list-style-type: none"> <li>• Data Dictionary (Component of SDD)</li> <li>• Database design document</li> </ul>	
<b>9</b>	Defining Integration and Interoperability scope	System Analyst & team	Component of SDD	
<b>10</b>	Finalized technologies tools, and frameworks	System Analyst	Component of SDD	Depending on functional, Non Functional & User requirements the tools, technologies and frameworks will be finalized

## 2.4 Application Development Methodology

### 2.4.1 Software Development Methodology

Sheba Technologies Limited will develop a significant project within short time with fixed requirements, so we would like to follow the **Agile Scrum Methodology** for Development. The lifecycle of this model is as follows:



The overall development model can be explained as follows:

- **Requirement Gathering and Analysis:** All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.
- **System Design:** The requirement specifications from first phase are studied in this phase and system design is prepared. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture.
- **Implementation:** With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.
- **Integration and Testing:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
- **Deployment of System:** Once the functional and non-functional testing is done, the product is deployed in the customer environment or released into the market.
- **Maintenance:** There are some issues which come up in the client environment. To fix those issues patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

Sheba Technologies Limited will be maintaining the MVC architecture for developing the online based systems:

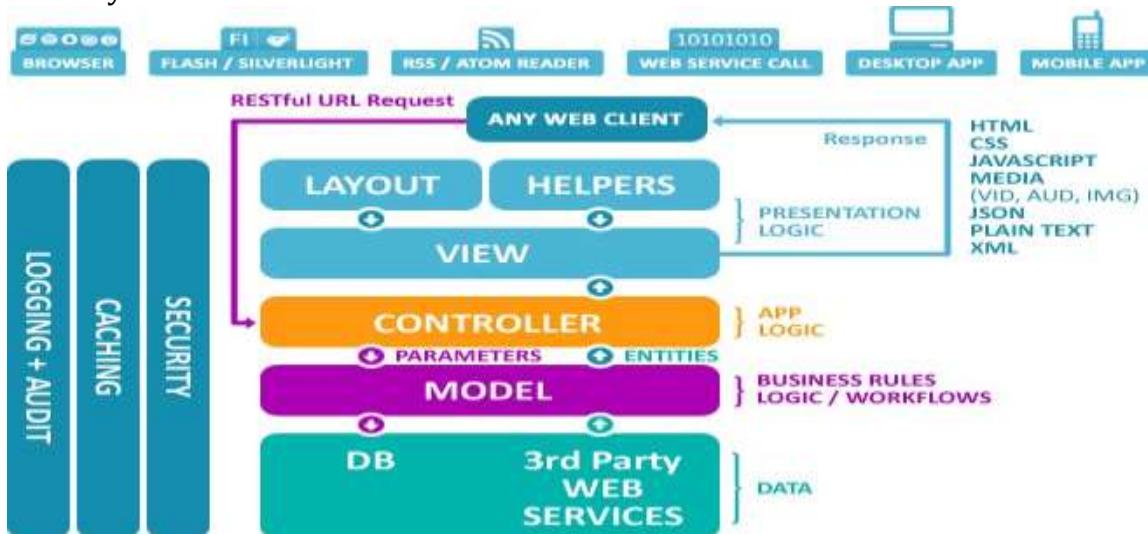


Figure: MVC Architecture

## Model

The model represents enterprise data and the business rules, logic and workflows that govern access to (and updates of) this data. Model has no governance over the presentation of the data, or how that data will be displayed at the receiving front-end client (typically a browser).

## View

The view represents the presentation of the application. The view accepts and returns data and instructions to and from the Controller and these are molded with presentation logic into a user interface. The view has no knowledge of where the data comes from or what it means - only owning an expectation of the data's structure.

## Controller

Whenever a user sends a request (e.g. get this, save this, delete this) the application routes it to the Controller. The Controller is responsible for intercepting the requests manifesting from View and wiring it to the business functions that exist in Model. After the action has been taken on the data, the controller is responsible for creating an appropriate response to the user, typically via the generation of a new View.

## API

API (Application Programming Interface) is a set of instructions, standards or requirements that enables a software or app employ features/services of another app, platform or device for better services. In short, it's something that let apps communicate with each other. Standard API will be developed as per CAAB guideline, API will be RESTful that covers all the basic communication model of CAAB and third parties.

## API Terminology

- API Key:** When an API request through a header or parameter to recognize the requester, the authorized code passed into the request is said to be an API Key.
- Endpoint:** When an API interacts with another system, one end of the communication channel is termed as Endpoint.

- c) **JSON:** JavaScript Object Notion or JSON is said to be a data format used for APIs request parameters and response body.
- d) **GET:** The RESTful API's HTTP method of obtaining resources is called GET.
- e) **POST:** It is the RESTful API's HTTP method for building resources.
- f) **OAuth:** It is basically an Open standard authorization framework that renders access from the user's side without directly sharing the credentials.
- g) **REST:** REST (Representational State Transfer) is a kind of programming architectural implementation meant to enhance the efficiency of communication between the two devices/systems. It is light-weighted and based on the idea of making a particular data available only when requested by sharing references to the data instead of the entire copy of the data itself. The systems enforced on this architecture are said to be 'RESTful' systems, and the most overwhelming example of RESTful systems is the World Wide Web.
- h) **SOAP:** SOAP or Simple Object Access Protocol is a messaging protocol for sharing structured information in the execution of web services in computer networks. It works with XML information set and application layer protocols (like HTTP and SMTP) for message format and message negotiation & transmission, respectively.
- i) **Latency:** Latency is defined as the total time taken by an API in the process from the request to the response.
- j) **Rate-Limiting:** The term API Rate-limiting refers to the process of defining the rate at which an end user can access the APIs. In other words, it means restricting the number of requests a user can hit to an API per time.
- k) **API Throttling:** The process of regulating the usage of APIs by users during a particular time period is called Throttling. This can be used for API limiting. For example, you set the limit of 1000 API requests per day. When the user hits the 1001 request, the server will send 429 messages as HTTP status to the end user along with the message, "Too many Requests".

### **2.4.2 Agile Methodology**

Agile is a time boxed, iterative approach to software delivery that builds software incrementally from the start of the project, instead of trying to deliver it all at once near the end. It works by breaking projects down into little bits of user functionality called user stories, prioritizing them, and then continuously delivering them in short two week cycles called iterations.

**AGILE methodology** is a practice that promotes **continuous iteration** of development and testing throughout the software development lifecycle of the project. Both development and testing activities are concurrent unlike the Waterfall model.

The agile software development emphasizes on four core values.

### **2.4.3 Features of Agile Model**

1. Agile method proposes incremental and iterative approach to software design
2. The agile process is broken into individual models that designers work on
3. The customer has early and frequent opportunities to look at the product and make decision and changes to the project
4. Agile model is considered unstructured compared to the waterfall model
5. Small projects can be implemented very quickly. For large projects, it is difficult to estimate the development time.
6. Error can be fixed in the middle of the project.
7. Development process is iterative, and the project is executed in short (2-4) weeks iterations. Planning is very less.
8. Documentation attends less priority than software development
9. Every iteration has its own testing phase. It allows implementing regression testing every time new functions or logic are released.
10. In agile testing when an iteration end, shippable features of the product is delivered to the customer. New features are usable right after shipment. It is useful when you have good contact with customers.
11. Testers and developers work together
12. At the end of every sprint, user acceptance is performed
13. It requires close communication with developers and together analyzes requirements and planning.

Individual and team interactions over processes and tools

Working software over comprehensive documentation

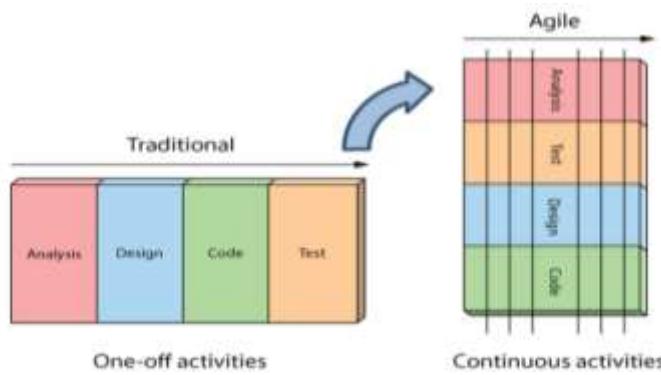
Customer collaboration over contract negotiation

Responding to change over following a plan

### **2.4.3 The Agile Approach**

Instead of treating these fixed stages Agilest believe these are continuous activities. By doing them continuously:

- Quality improves because testing starts from day one.
- Visibility improves because you are 1/2 way through the project when you have built 1/2 the features.
- Risk is reduced because you are getting feedback early, and
- Customers are happy because they can make changes without paying exorbitant costs.



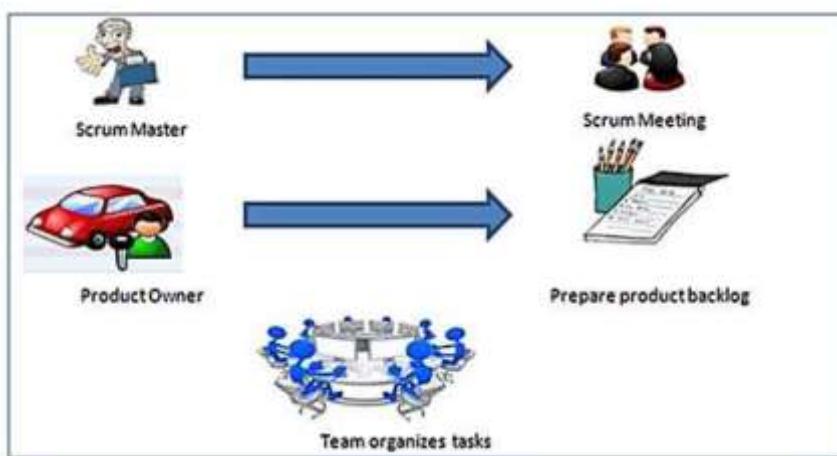
### Agile Testing Methodology

There are various methods present

in agile testing, but we will follow the Scrum method for testing.

#### 2.4.4 Agile Scrum Methodology

**Scrum** is a lightweight agile project management framework with broad applicability for managing and controlling iterative and incremental projects of all types. Ken Schwaber, Mike Beedle, Jeff Sutherland and others have contributed significantly to the evolution of Scrum over the last decade. Scrum has garnered increasing popularity in the agile software development community due to its simplicity, proven productivity, and ability to act as a wrapper for various engineering practices promoted by other agile methodologies. With Scrum methodology, the “Product Owner” works closely with the team to identify and prioritize system functionality in form of a “Product Backlog”. The Product Backlog consists of features, bug fixes, nonfunctional requirements, etc. – whatever needs to be done in order to successfully deliver a working software system.



SCRUM is an agile development method which concentrates specifically on how to manage tasks within a team-based development environment. Basically, Scrum is derived from activity that occurs during a rugby match. Scrum believes in empowering the development team and advocates working in small teams (say- 7 to 9 members). It consists of three roles, and their responsibilities are explained

As follows:

- **Scrum Master:**

Master is responsible for setting up the team, sprint meeting and removes obstacles to Progress.

- **Product owner:**

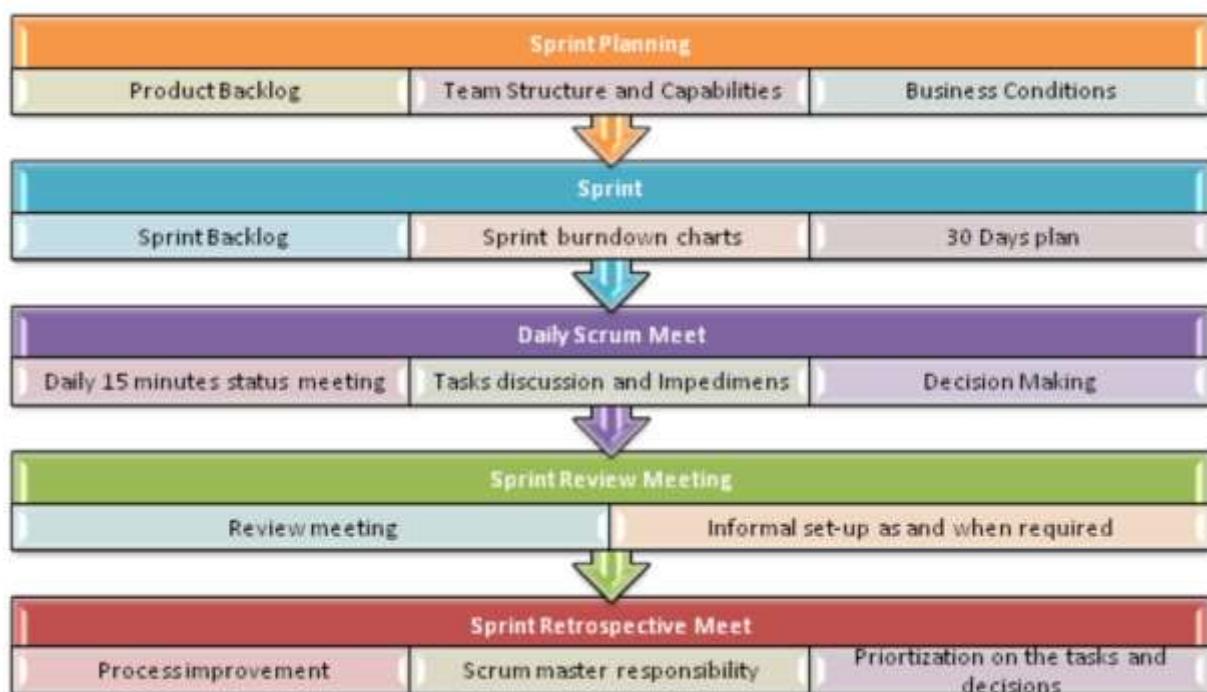
The Product Owner creates product backlog, prioritizes the backlog and is responsible for the delivery of the functionality at each iteration.

- **Scrum Team:**

Team manages its own work and organizes the work to complete the sprint or cycle.

- **Scrum Practices:**

Practices are described in detailed:



## 2.5 Deployment and Implementation Plan

This is the phase of SDLC, when the consent is being given to “GO LIVE” of the developed module of existing system after completed all kinds of development integration, testing and hosting. This is very crucial and sensitive stage for a Government application because at this stage the system becomes public and expose to access towards all levels of users. Sheba Technologies Limited will notify concerned stake holders before Deployment and Implementation covering the major activities to be performed, the deliverable to be provided etc.

In Software Development, for Continuous Integration and deployment Github private will be used.

For implementation some of these following mentions should be maintained:

#### **Implementation Schedule**

This section provides a schedule of activities to be accomplished

#### **Implementation Support**

This section describes the support hardware, software, facilities, and materials required for the implementation, as well as the documentation

#### **Implementation Impact**

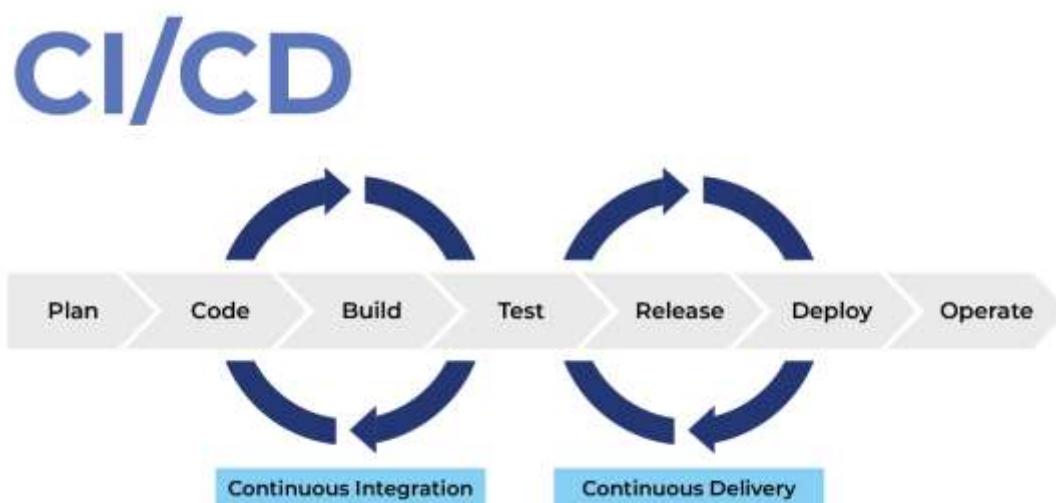
This section describes how the system's implementation is expected to impact the network Infrastructure, support staff, user community, etc.

#### **Performance Monitoring**

This part describes the performance monitoring tool, techniques and how it will be used to Help determine if the implementation is successful

#### **Configuration Management Interface**

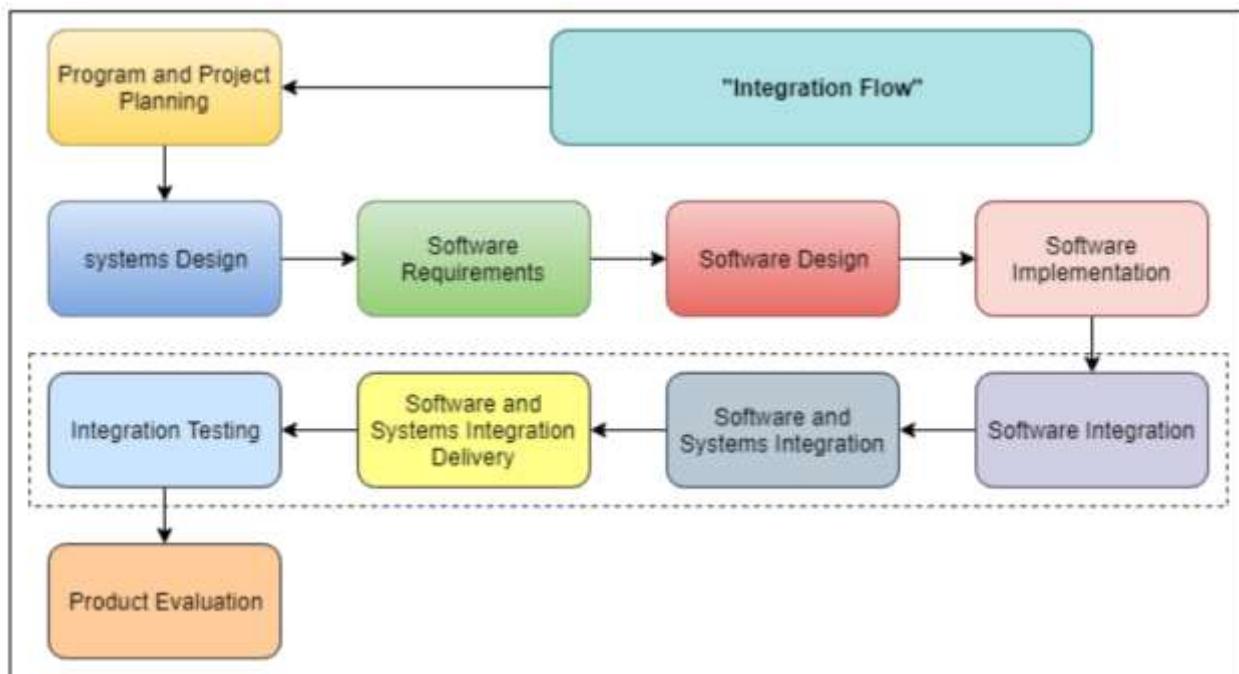
This section describes Configuration Management, such as when versions will be distributed



## **2.6 Integration Planning**

Integration with the required and other prescribed national system is very important and essential. Only by proper integration making interoperable, e-Service application can drive the ultimate citizen benefits with the optimum use of technology from service to Cargo Billing Automation of CAAB.

## 2.6.1 Integration Flow



Software integration provides required steps to be conducted for integration and checkout of informal software engineering builds. A strategy will be developed by Sheba Technologies Limited for planning, design, execution, data collection, and test evaluation. Our integration plan will involve such software integration activities that are informal and flexible for software checkout to prepare for the software and systems integration phase of the work product. The strategy for software integration will provide a road map that will describe the steps to be conducted as part of the implementation of software to start integration activities. After the planning of the strategy, then resources will be required. This strategy will be flexible and it will promote an approach that results in change.

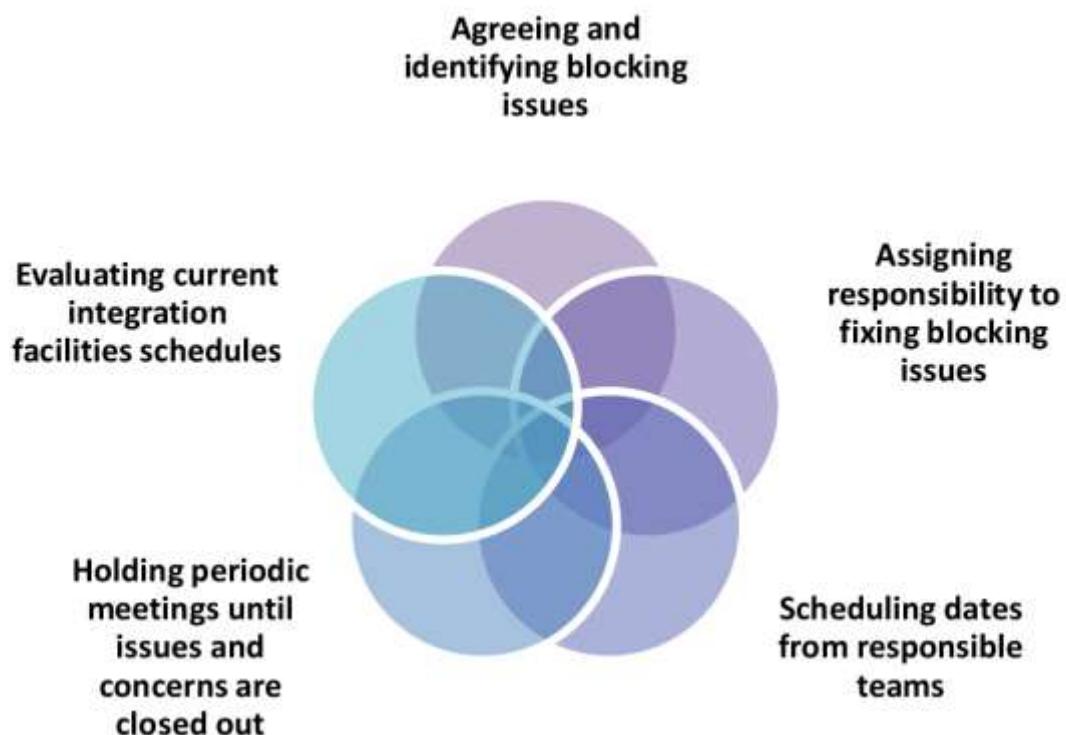
Sheba Technologies Limited will take a series of steps that address all aspects of the integration project: Strategy, Technology, and People.

Sheba Technologies Limited will follow the below steps before doing the integration part:



The software and systems integration method will provide a consistent approach to effective integration activities. The effective methods and processes for software and systems integration require disciplined software design and development practices, including test planning, test execution, configuration control, quality, and reporting to management and the customer of the work product being tested inside integration facilities.

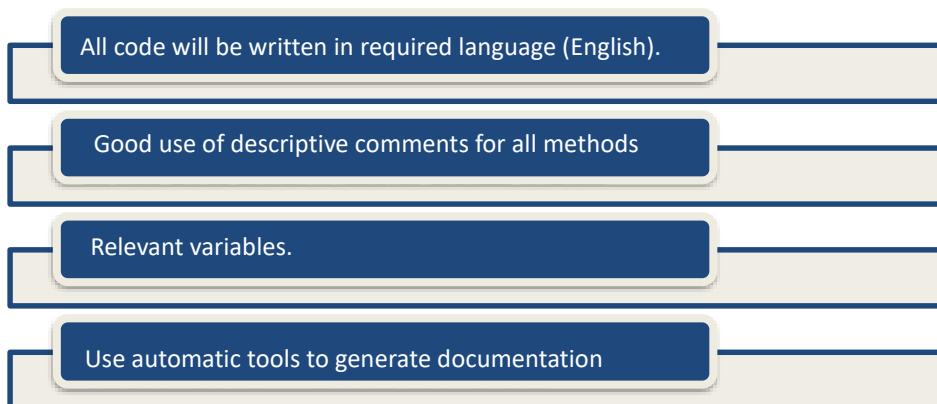
Successful software and systems integration objectives of Sheba Technologies Limited will be accomplished by:



## 2.7 Project Implementation Plan

### 2.7.1 Coding Convention Plan & Approach

Sheba Technologies Limited will follow the standard coding styles to produce high-quality code for further uses of the code in terms of reusability, refactoring, task automation, language factors etc. Sheba Technologies Limited will submit a standard coding convention approach which may include different conventions like commenting, indent style, naming etc. following the best coding practices. The document "**Code Convention for Programming Language**" is used as guidelines for coding standards.



This is a list of coding practices that will be standardized for each project, and may require additional specification or clarification beyond those detailed in the standards documents.

1. Select **Clear** and **Meaningful Names** Use and **Avoid Made-Up Acronyms**: Clear, complete and meaningful names make the code more readable and minimize the need for comments. For example; suppose a subroutine called "Process\_Input\_Line" calls "Push\_Input\_Character." If "Push\_Input\_Character" happens also to echo the input character, then either a different subroutine should be extracted (named "Echo\_Input\_Character") and called "Process\_Input\_Line", or the name of "Push\_Input\_Character" should be changed to "Push\_And\_Echo\_Input\_Character"
2. **Naming Class (Noun)**: Names of class shall consist of a noun and use **Pascal casing**
3. **Naming Interface(Noun)**: Names of interfaces shall consist of a noun and use **Pascal casing**
4. **Naming Subroutines/Methods/Functions** (verb and object): Names of procedures/methods/functions shall consist of a verb and (whenever appropriate) an object, such as "Push\_Input\_Character" and use **Pascal casing**.
5. **Naming Constants, variables** (noun): Names of constants, variables, and functions shall be noun, with or without modifiers (e.g., "Line ","InputLine ","NumInputLines ")
6. **Naming Types**: If allowed by the language, the names of types should have a distinguishable prefix or suffix. It is recommended that all names of types end with the

letters "Type". Further, if the type exists solely to define variable "Xyz", then the type shall be named "XyzType".

7. Use of upper/lower case and underscores to differentiate Subroutines, Variables, and Constants.
8. **Naming conventions:** What additional naming conventions should be followed. In particular, systematic prefix conventions for functional grouping of global data and also for names of structures, objects, and other data types may be useful.
9. **Project specific contents** of module and subroutine headers.
10. **File Organization:** What kind of Include file organization is appropriate for the projects data hierarchy, Directory structure, Location of the Make Files (note: "Actions taken before compilation or assembly is performed should be the directory in which the source code resides, unless otherwise specified.)
11. **Specifications for Error Handling:** specifications for detecting and handling of errors, specifications for checking boundary conditions for parameters passed to subroutines.
12. **Revision and Version Control:** configuration of archives, projects, revision numbering, and release guidelines.
13. **Standardization of the development environment** - compiler and linker options and directory structures.
14. **Conditionals and comparisons:** Always test floating-point numbers as <= or >= relational operator, never use exact comparisons (= or !=). No assumptions should be made about the value of uninitialized variables, unless the language definition makes a clear statement about this.
15. **Program Flow:** Interrupt handlers shall perform minimal processing, and shall be meticulously commented. In high-level languages, multiple exits from a unit are allowed if that avoids excessive control structure nesting. Multiple entries into a unit are not allowed.
16. **Binding time of variables and values:** When data files are accessed in a tree-structured directory environment, the names of the file directories shall not be hardwired in the code; whenever possible, environment variables or some similar mechanism shall be used to provide exact directory names dynamically. The same applies to the names of nodes which are accessed in a network.
17. Engineers should strive to develop code that is both clear, and efficient in its use of CPU time, memory, and other resources. However, when efficiency and clarity conflict, then clarity should take strong precedence over resource stinginess, unless it is proven that using the clear but less efficient method impairs the program critically. Micro-optimizations to small areas of code are especially to be avoided if they impair clarity

in any way, since it is generally only the program's overall algorithms that affect resource utilization significantly.

18. Whenever library routines, graphics packages, compiler/assembler features, or other sorts of utilities are helpful to the program, they should be utilized. The danger of losing access to the utility if the hardware, the compiler/assembler, or the operating system should change is generally overridden by the savings in software creation time. In those cases, in which there is no significant savings of software creation time, it is preferable to use the standard language features, for portability's sake.
19. Type casting integer and float variables makes code more portable. If the language allows, all integer and floating types which are important in the program should be defined as new types within the program. This will allow for easy correction if the code is ported to a different compiler or machine with different default work sizes. This also often allows for much better type checking, depending on the language.
20. Compiler dependent code should include tests. Whenever the code makes assumptions about how the compiler represents data structures, the code should include a test (if possible) to determine whether the assumption holds true, and display a prominent message and abort the program if the test fails. This will notify future maintainers who may unwittingly spoil the assumption, or who may port the program to a different compiler and/or machine.
21. Use ASCII files for runtime or machine dependent constants and macros. Whenever possible, values which remain static throughout runtime but which can be used to tune or modify the program shall be read from an ASCII file at the start of runtime, to allow for dynamic modification without recompilation or relinking. Note that in some cases, the program design may specify features to support dynamic tuning or modification of some of these values (for example, machine setpoints).
22. Use of prefixes (Hungarian) notations to differentiate the scope and type of a data variable
23. Macros and Constants: Fixed identifiers such as Macros and Constants shall contain underscores between words and use all UPPERCASE letters. For example; a constant that defines the maximum of a motor could be named "MAX\_MOTOR\_RPM"
24. Debugging: Rules for i.e. #define DEBUG\_MODULE\_NAME
25. Using structures and enumerators is recommended
26. Write Everything Code-Related in English
27. Always Write the Braces Around Single Line Blocks
28. Avoid Hard-Coded Strings and Magic Numbers.

## Variable Scope

Scope	Description	Prefix
Global	Variable is valid only within any module in a project	g (or unique prefix identifying the source module)
Local	Variable is valid only within the subroutine that it is defined	none
Module	Variable is valid only within the module that it is defined	m
Public	In Object Oriented languages, useable by all	pb
Protected	In Object Oriented languages, useable by members of any class derived from the defining class	prt
Private	In Object Oriented languages, useable by members only of the defining class	prv

## 2.7.2 Summary table for Naming Convention:

---

	Upper/lower case	Under-score	Prefixes or Suffix	Example
Class	Pascal casing	Yes	No	Human
Interface	Pascal casing	Yes	No	Human
Subroutines/Methods/Functions	Mixed case separated by underscores	yes	Hungarian prefix for the return type	iGet_Color()
Constants, Macros, Enum Constants	Upper case	yes	none	COLOR_RED
Types and User-type declarations (Structures, Enumerators, Unions)	MixedCase	no	Suffix (Type, Struct, Enum, and Union)	ColorType, EmployeeStruct
Variables	MixedCase	no	Hungarian prefixes	blStackIsUpdated

## 2.8 Business Continuity plan

Business continuity plan (BCP) is the process involved in creating a system of prevention and recovery from potential threats to a company. The plan ensures that personnel and assets are protected and are able to function quickly in the event of a disaster. The BCP is generally conceived in advance and involves input from key stakeholders and personnel.

BCP involves defining any and all risks that can affect the company's operations, making it an important part of the organization's risk management strategy. Risks may include natural disasters— fire, flood, or weather-related events—and cyber-attacks. Once the risks are identified, the plan will also include:



Sheba Technologies Limited Business Continuity plan for this eService application will play a very important role by creating the systems of prevention and recovery to deal with potential threats and risk of the e-Service operation. Regarding business continuity, Sheba Technologies Limited will take in account the followings issues if applicable or suitable for this e-Service Application

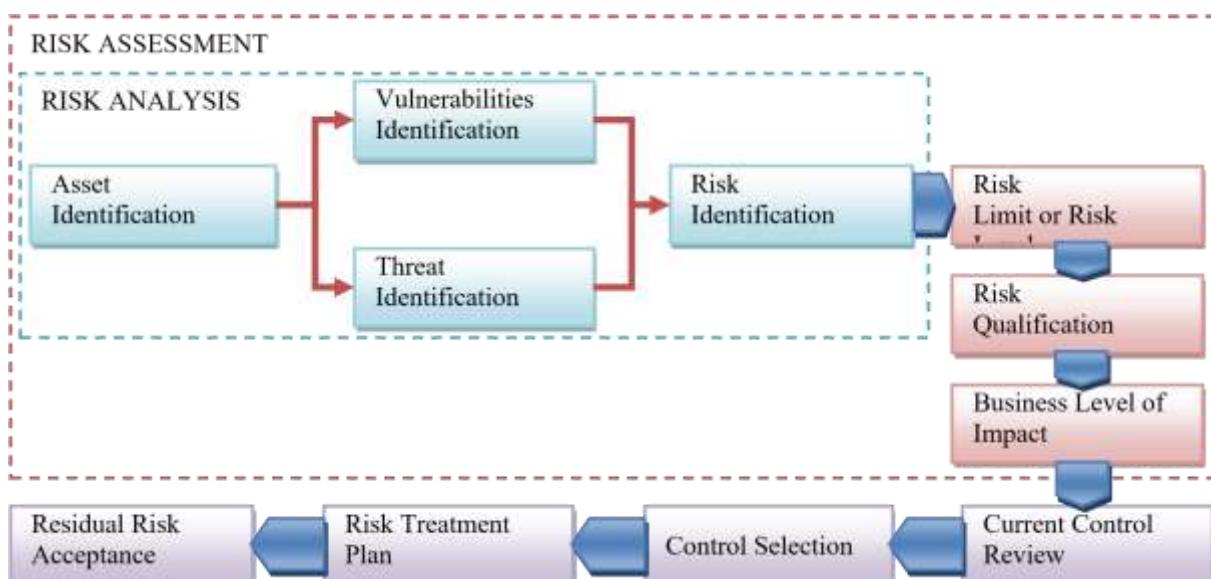
- All standard backup facilities will be supported by the system which can be started with diskbased backup facility,
- Data and the Operating system core component will be separated. A ghost image of the Operating system will always be available in case of rebuilding the server. All data will be restored in the data drive once the Operating System is restored.
- System will also have an automated Backup mechanism by which users can schedule the backups and the system will take the backups without manual intervention.
- System will check for the media and generate a report on backup with date time and details of backup.
- If a restoration fails for any reason, the system will prompt with proper error messages and suggest what has to be done to rectify the situation via on-screen, logs, email and text messages.
- System will maintain an automated recovery system and all versions of backup will be maintained. At any given point in time, the versions and incremental backup details can be retrieved from the system.

## 2.8 Risk Management Plan

### Risk Management

As with any project, risks are an essential aspect that must be studied, prevented and controlled. Sheba Technologies Limited stringently follows the principles and guidelines to design, implement and maintain risk management processes throughout the organization. All strategic, management and operational tasks of Sheba Technologies Limited throughout projects, functions, and processes are aligned to a common set of risk management objectives.

The first step in of that methodology is to identify the possible risks (caused by any Internal or External factors) and to assess the consequences (loss of vendor or clients). Once risk assessment is done, a Risk Management Process will be initiated accordingly. Risk Management Process will ensure to mitigate or to take necessary action for upcoming risk of the project.



**Figure: Risk Management Process**

Framework for Risk Monitoring and assessment will be maintained throughout project. Sample of the framework is as follows:

No	Category	Risks	Probability	Impact	Risk Exposure	Mitigation Plan
1	Category 1	Risk Description	Numeric Probability	Impact Assessment		<b>Mitigation Plan</b>
2	Category 2	Risk Description	Numeric Probability	Impact Assessment		<b>Mitigation Plan</b>
3	Category 3	Risk Description	Numeric Probability	Impact Assessment		<b>Mitigation Plan</b>

## 2.9 Interoperability and Data Exchange Plan

Cargo Billing System will be upgraded to ensure that it is fully interoperable with the current and future systems. The following system will also integrate and will exchange data with other systems if required.

The following are the key expectations on interoperability requirements:

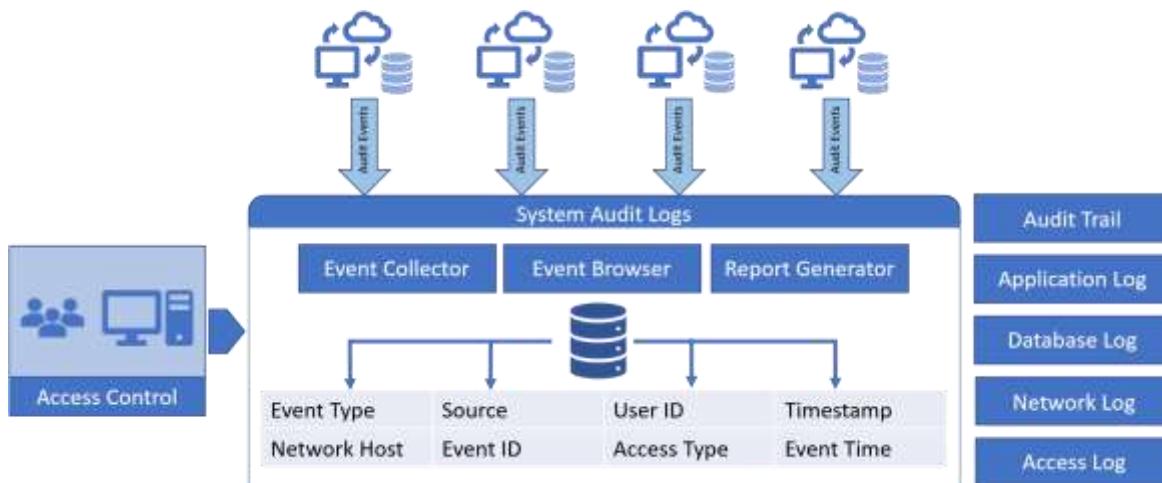
- The system will be designed for interoperability using industry standard protocols.
- System will expose data by Advanced Message Queuing Protocol and REST via TLS
- All imported data will undergo data validation to ensure full integrity.
- Data exchange within the system at different levels via the internet will be encrypted.
- The system will have functionality to exchange data with other own systems or external institute systems.
- The system will have functionality to export/import files based on the standard template defined through web services and/or API.

Through Interoperability and Data Exchange features, this proposed system will be benefited in several ways.

## 2.10 System Audit Plan

In the future Cargo Billing System, there will be an audit trial to log which will store all security-relevant chronological record and also track evidence of the sequence of activities that have affected any record in the database. In the Cargo Billing system the vital issues to be considered are:

- Log of the user accessing the system
- Log the parts of the application that are being accessed
- Log the fields that are being modified
- Log the results of those modification
- Log attempted breaches of access
- Log attempted breaches of modification rights
- Timestamp



**Figure: Audit Log Event**

To meet the above-mentioned requirements following logs will be implemented to keep information in audit trail database and to generate different audit reports as required:

- **Application-specific audit trail** – this will record each business-relevant event and stored in database tables.
- **Application logs** – This will include logs that are not necessarily part of the audit trail (e.g. debug messages, exceptions etc.).
- **Database logs** – This will log down history of all database queries, data capture or change tracking history will audit trail functionality.
- **Access logs** – access logs for web servers will be part of the audit trail especially for web base application system where a source IP address can more easily be mapped to particular users.
- **Network logs** – network log will record all access related data from network equipment (routers, firewalls) as part of the audit trail to ensure system security.

## 2.11 UX Planning

With the technological advancement in the 21st-century, everybody wants to experience the best technology without spending too much of their time and exhausting their busy brains. The same goes for surfing the websites or mobile applications as well where the quick and efficient the website or the mobile application responds, the successful outcomes it obtains. In short, it is about the consumers nowadays! And, when it comes to the mobile application or website user satisfaction, Sheba Technologies Limited turns towards the applications' User Interface (UI) and User Experience Design (UX). Sheba Technologies Limited always prioritize the user experience and customer satisfaction which ultimately helps increase the number of users of the specific application.

**User Experience (UX)** Development is the procedure of improving the overall experience of the users when they interact with the application or website in order to achieve its objective to provide the maximum customer satisfaction. It keeps customers in mind and creates the basic skeleton of any application. It mainly focuses on wire framing an application and structuring all

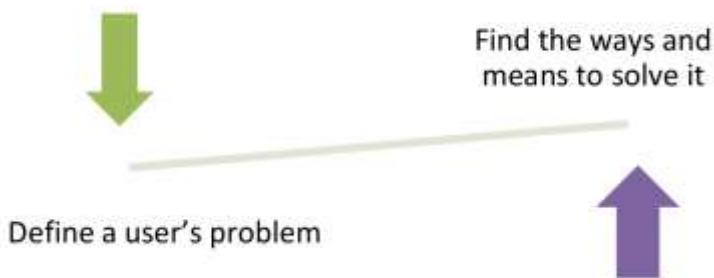
its components and elements appropriately to create the user flow. The goal of UX design is to create a digital product a user feels comfortable with. This embraces the way a product functions and a user operates it: content hierarchy, clear navigation, and functionality of the visual elements.

The **User Interface (UI)**, on the other hand, is the process of improving the presentation and the interactivity of the web or mobile application. It focuses on the app's look and interacts with the users. Each screen, page, buttons and other visual elements you see while using an application is the User Interface of that application. UI design makes achieving user goals aesthetically pleasing because of a UX designer's creativity.

Cargo billing system of CAAB is a nationally important project which will facilities the stakeholders to submit and receive their service request online through a single point of contact; While upgrading the Cargo billing system of CAAB, Sheba Technologies Limited will ensure the interfaces to be highly user friendly, easy to navigate and ensure fast loading. The System UX will be easily configurable if any changes are needed. And Sheba Technologies Limited will prepare the Menu, content and navigation based on the user entitlements, roles and permissions.

### **2.11.1 Approach and Methodology of UX/UI Design**

The whole UX design process of Sheba Technologies Limited will be oriented towards creating the best user experience by eliminating the information load. It will consist of two parts:



In the first part, our UX designer will be responsible to understand the user and his/her needs considering how to steer someone to achieve particular goals. Sheba Technologies Limited UX designer will serve as a guide for a user. And the UI designer, on the other hand, will pave this path with visual elements and will largely be responsible for the second part.

When designing for web, desktop, or mobile products, Sheba Technologies Limited UX-oriented team always keep in mind why the user needs this or that exact element. The user is the main character of this story, so our UX design will be user-oriented and emotional: a large part of the first stage of a UX design is devoted to exploring a user.

## User Research and Analysis

At this stage is, Sheba Technologies Limited requirement analysis team will understand the user and his/her pain points. This is when our UX designer works along with a business analyst to do market research, create a competitive analysis, conduct user and stakeholder interviews, record user observations, and define the user journey.

A UX designer will work in cooperation with a business analyst (BA) if needed. As a business analyst gathers requirements from stakeholders and potential users and frames them into software documentation, UX specialist translates it into the product's information architecture. Main deliverable of this phase are



## Information Architecture (IA)

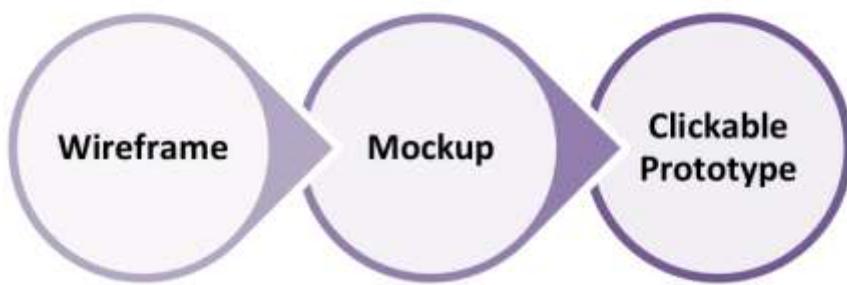
As a result of UX research, a designer will create the full structure of a digital product. Information architecture is everything for UX. The main goal of IA will be to classify the content in a way that a user can understand, enabling the user to easily find what he/she needs. As a result of card sorting, our UX designer will structure the content of the website or application. There are some patterns for information classification which will be followed in the Cargo billing system of **CAAB**.



## Prototyping

This part of UX design will play a significant role in the development because the deliverables will be tested by the users and shown to stakeholders. The designer will create wireframes, mockups, and prototypes. Those artifacts will represent a page layout and look similar but perform different functions: They will represent a product at different stages of development of UX/UI design.

**Main deliverables** of this phase are



## UI Design System

Final layout will be prepared in this phase, and designer will work on graphics. Wireframes and mockups are the skeleton, while graphics is the flesh of a digital product. At this stage, UI designer will start developing the graphical interface of the digital product. It entails drawing icons, choosing typography and color palette, as well as setting UI guidelines. Main Deliverables of this phase are Moodboard, UI style guide.

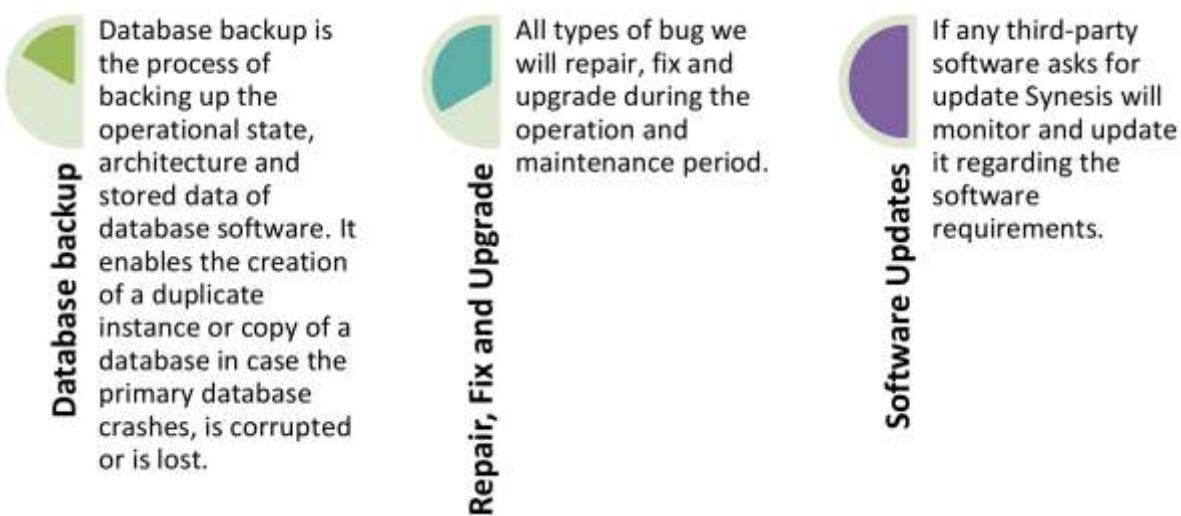
## Usability Testing

UX designer, front-end development team and UI designer will work together in this phase. As soon as the first prototype is ready, the development team will test its usability. Its main goal will be to get feedback from real users of the product to understand how intuitive the interface is, and whether the user can achieve their goal with the product. At this stage, the UX designer will record and analyze the results of testing. There will be few different types of usability testing.

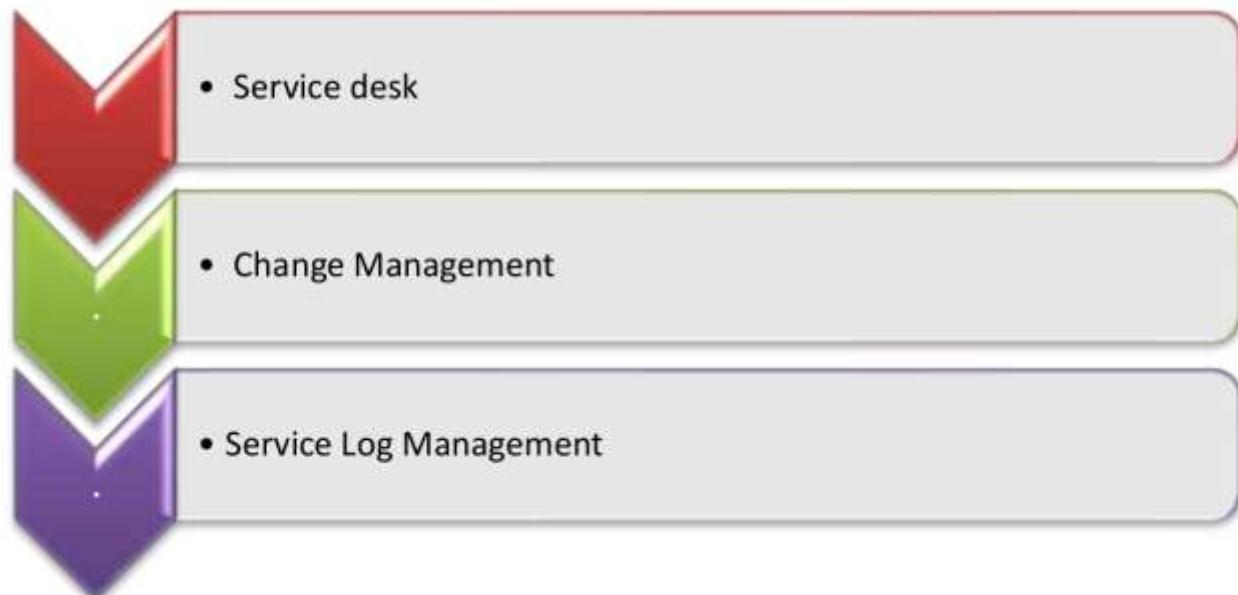
Comparative Usability Testing	will be used to compare one product to another, for example, a competitor's, or it can be similar to A/B testing when two versions of a design are compared and the best one is chosen.
Explorative Usability Testing	will be conducted before the release. It's focused on finding the blind spots and gaps in a product design that were not seen before, but are observed by the users. This testing facilitates improvement of the product before it reaches the market.
Usability Evaluation	will be occurred after the product is launched and all necessary improvements are made. That's when the product is tested again to make sure that the changes accommodate a positive and intuitive user experience

## 2.12 Operation Plan

Sheba Technologies Limited will provide operation, maintenance and support service for this Cargo Billing System for CAAB for 03 (three) years. Operation, Maintenance and Support in software engineering is the modification of a software product after delivery to correct faults, to improve performance or other attributes. A common perception of maintenance is that it merely involves fixing defects. There will be lot of maintenance work performed by Sheba Technologies Limited, some the main options are described as follows:



The objective of the following project is to ensure that Sheba Technologies Limited will keep the system up and running that is required for smooth operation at CAAB.



## **2.12.1 Categorized Application Support**

### **Configuration Management**

Configuration management (CM) is a governance and systems engineering process for ensuring consistency among physical and logical assets in an operational environment. The configuration management process seeks to identify and track individual configuration items (CIs), documenting functional capabilities, and inter-dependencies. Administrators, technicians, and software developers can use configuration management tools to verify the effect a change to one configuration item has on other systems.



### **Change Management**

The change management process plays a vital role in maintaining infrastructure and updating the basic configuration management database. Asset management and configuration management provides the information change management needs to assess the risks, costs and impact of change. Sheba Technologies Limited choose to implement change management and configuration management simultaneously in order to give a full strategic control of the infrastructure. To meet this strategic need, asset management, change management and a CMDB are important elements of software applications, which interact and provide added value.

### **Service Layers for Support**

Users will contact the service desk for any number of reasons; the next task of the service desk engineer performing the incident management function is to define the type of call, which will be one of:

Service Disruption	The call pertains to an incident which is defined as an abnormal condition of customer's infrastructure that is impacting the normal delivery of IT service
Service Request	The customer is calling for a move/add/change/delete type request
Consumables Request	Materials such as printer toner
Information Request	how to type queries

If the nature of the call is about an incident, the service desk engineer must prioritize the case. The purpose of prioritizing the tickets is to allow the efforts to be conducted according to a triage mentality rather than simply first come, first serve. The priority of an incident should be based upon three separate elements:

#### Impact

- How many users are affected?

#### Urgency

- How debilitating is the nature of the incident

#### SLA

- What is the service level objective in this case?

On the basis of these two factors the service desk should be able to assign a priority to the incident. Standard priorities include:



#### Blocker

A blocker issue prevents a user from performing a core component of their job. A blocker incident has no work around



#### Critical

A critical issue prevents a major system to be used in an effective manner. There is a work around for a critical



#### Normal

A normal incident detracts users from their ability to use the system. There is a workaround



#### Minor

A minor issue is an issue that can be worked around, and dealt with during a scheduled maintenance period

## Tools will be used for Support Service Management

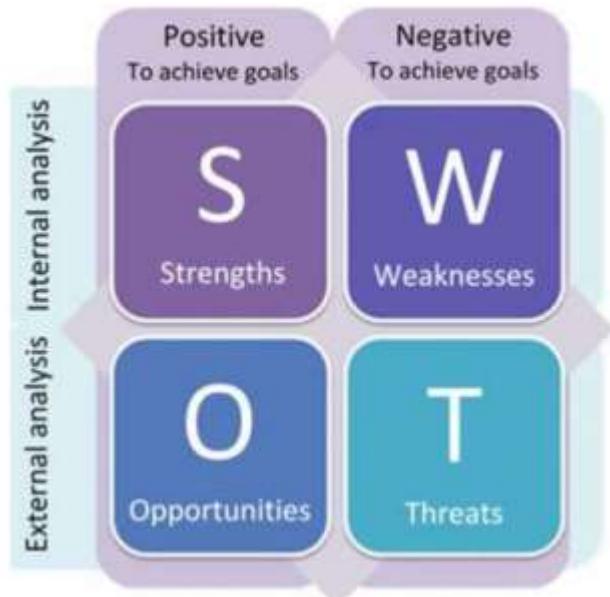
The SWOT analysis allows to analyze position from an objective and to define the best strategy to achieve it. Before performing a SWOT analysis, it is needed to define the objective on which we it is analyzed and considered:

**Internal analysis:** This is to see: internal structure, personnel, procedures, infrastructure, etc. in order to establish:

- Weaknesses that jeopardize or hinder the objective.
- Strengths favoring the objective.

**External analysis:** In this case, we look beyond: suppliers, customers, competitors, context... to establish:

- Threats that endanger or hinder the objective.
- Opportunities that support the objective.



A communication management plan documents how the maintenance support module manages and controls communication. All stakeholder needs must be addressed. Communication management plan becomes a part of the project management plan. The efforts of managing client's expectations also allow the communication channels to be open between them so that the clients can inform the maintenance support module of potential risks, changes and other related information.

## 2.13 Release Management

Release management is the process of managing, planning, scheduling and controlling a software build through different stages and environments; including testing and deploying software releases.

- Understands the requirement needs and their priorities, and under what circumstances those priorities can change.
- Works with product owners, IT project teams, and operations staff to ensure every release contains the correct features.
- Release Management has a clear picture of development dependencies, and how changes to one part of a product can affect the stability of the whole.
- Schedules release unit dependencies into release packages.
- Understands the bandwidth and work capacity of each team involved in development.
- Understands the availability of resources and environments for testing.

- Schedules builds and testing according to team and resource bandwidth and availability.
- Create release plans, including governance and approval requirements.
- Ensure compliance of new releases with governance requirements.
- Optimizes value creation at every step, from feature check-in to deployment.
- Schedules seamless release deployments.

## 2.14 Incident Management

Incident management as a process has a direct bearing on the availability of the customer systems. Incident reports should be used internally to support process improvements as well as externally to illustrate. Incident reporting is ideally driven from the PSA/ticketing solution as this system manages all incidents regardless of the source. Key reporting information includes:

- Number of incidents in the reporting period divided by priority
- Source of those incidents (N-central, phone, email, web)
- Mean time to recovery vs. objective

## 2.15 Problem Management

If incident management is about resolving customer issues quickly, then problem management is about identifying the underlying cause of one or more incidents and making recommendations to improve the ongoing stability of the infrastructure – by either producing a workaround and/or a solution for the problem. By the very nature of this process problem management is both reactive and proactive at the same time. By solving the problems that are causing a current incident, problem management is contributing to reactively supporting customers. By correcting the underlying problem or weakness within the infrastructure, thus preventing future incidents of a similar type, problem management is contributing to the proactive support of the customer as well.

## 2.16 SLA (Service Level Agreement)

A service-level agreement (SLA) is required to describe the level of service expected from Sheba Technologies Limited, laying out the metrics by which that service is measured, and the remedies or penalties, if any, should the agreed-upon levels not be achieved.

Sheba Technologies Limited understands the importance of an SLA to pull together information on all of the contracted services and expected reliability into a single document. Clearly stating metrics, responsibilities and expectations, it ensures both sides have the same understanding of requirements.

Sheba Technologies Limited provides an SLA in two areas: services and management:

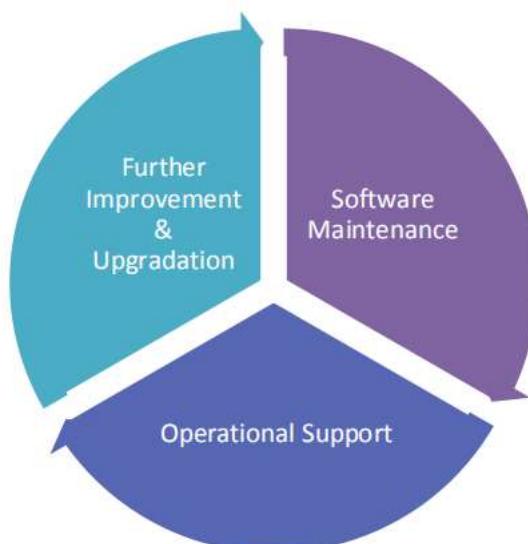
- Service elements include specifics of services provided, conditions of service availability, and standards such as time window for each level of service, responsibilities of each party, escalation procedures, and cost/service tradeoffs.
- Management elements should include definitions of measurement standards and methods, reporting process, contents and frequency, a dispute resolution process, an indemnification clause protecting the customer from third-party litigation resulting from service level breaches, and a mechanism for updating the agreement as required.

### **Availability of the services**

SL	Service	Availability	Response Time	Recovery Time
1	Application	99%	15 Minutes	4 Hours
3	Database	99%	15 Minutes	4 Hours
2	Hosting Service	99%	15 Minutes	4 Hours
4	User Support	99%	1 Hour	6 Hours
5	Problem Correction	99%	2 Hours	As per schedule

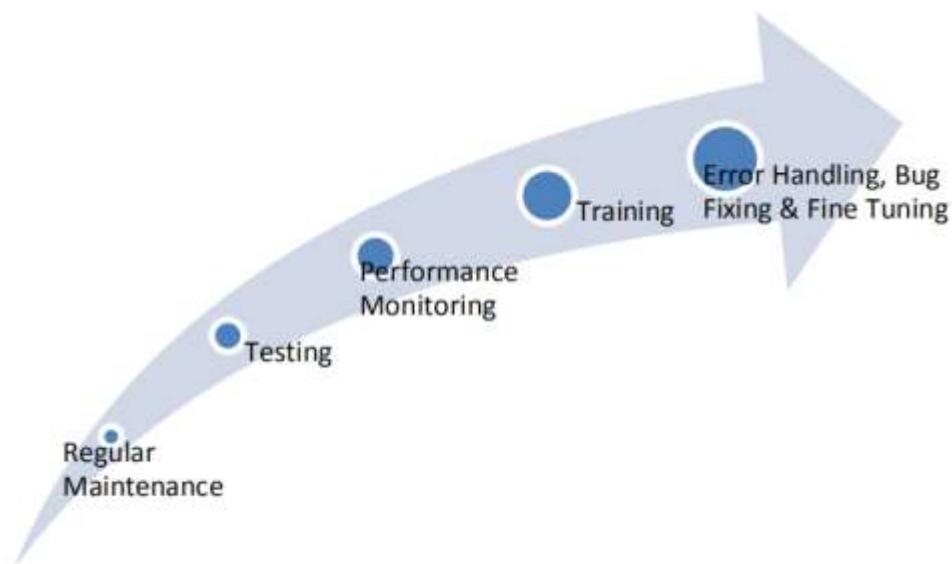
### **3. Major Components of the proposed project**

Sheba Technologies Limited will provide Maintenance Service, Operational support & further improvement of the developed Import & Export cargo Billing automation for CAAB. For capacity development of the CAAB personnel, Sheba Technologies Limited will arrange Training & Capacity Building session CAAB Officials. Each of the following components are described hereafter:



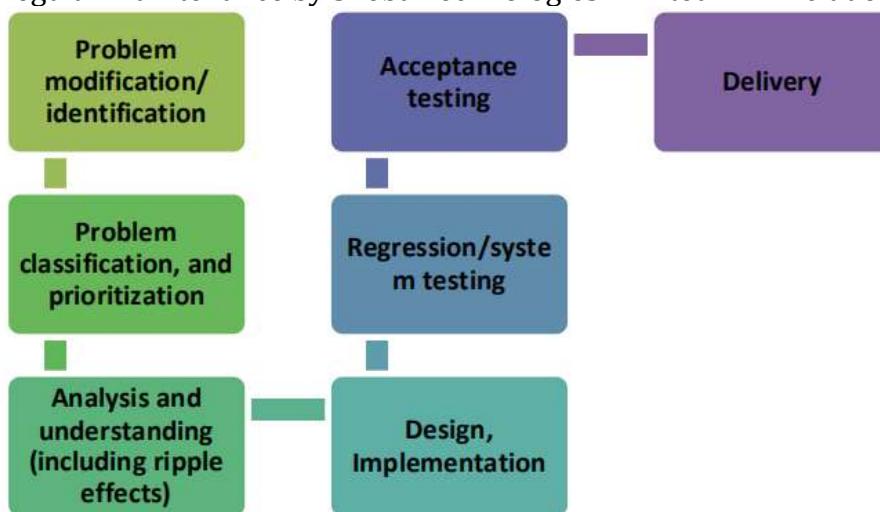
### 3.1 Software Maintenance

Software maintenance is a substantial activity which includes Optimization, Error Correction, and Deletion of Discarded Features And Enhancement of Existing Features. And Regular maintenance and monitoring of Billing Automation System of CAAB is one of the major parts of Software Maintenance for this project. For Regular maintenance and monitoring of Billing Automation System of CAAB system Sheba Technologies Limited will do the following tasks:



#### 3.1.1 Regular Maintenance

Regular Maintenance by Sheba Technologies Limited will include

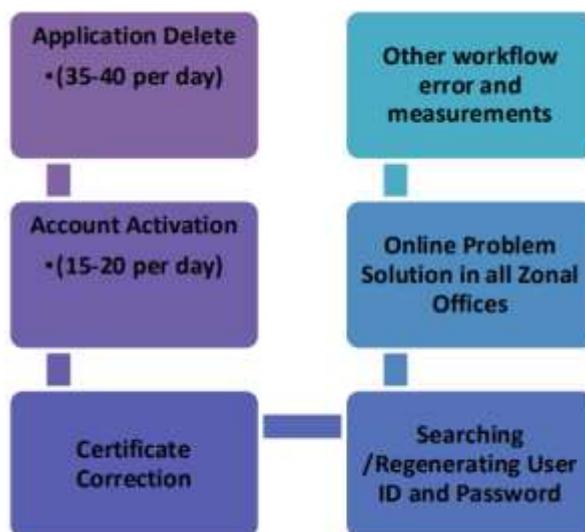


Since these changes are necessary, a mechanism will be created by Sheba Technologies Limited Ltd. for estimation controlling and making modifications. Our Software Maintenance Processes will include:

Maintenance Plan, containing any problem identification and findings about configuration Management.	problem analysis, checking validity, examining it and coming up with a solution and finally getting all the required support to apply for modification	Process acceptance, confirming the changes with the individual who raised the request.	Platform migration, if Cargo Billing System is needed to be ported to another platform without any change in functionality.
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### 3.1.1.1 Software Maintenance Activities of Sheba Technologies Limited Regular Maintenance

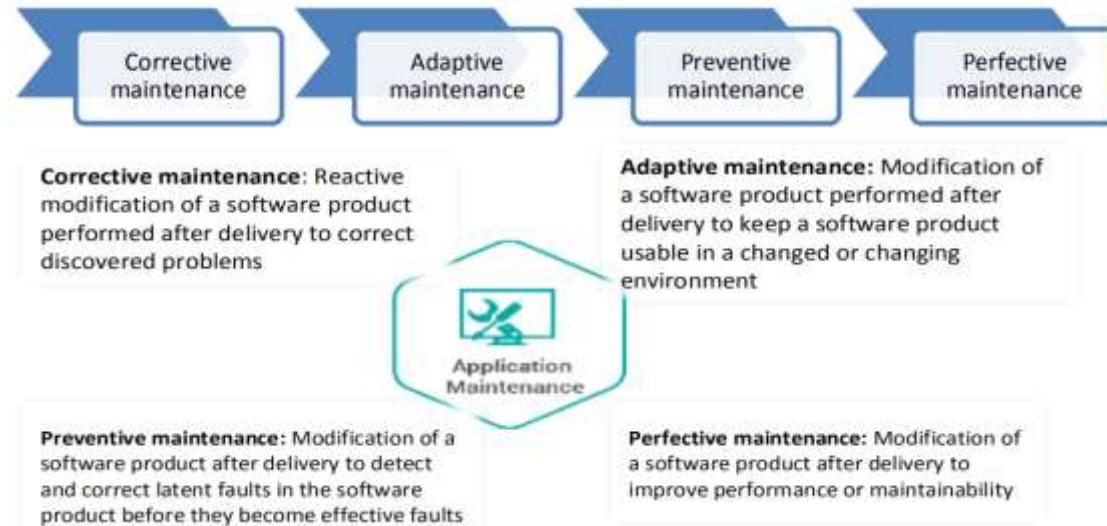
Sheba Technologies Limited will perform Regular Maintenance of the Billing Automation system. As per the CAAB requirements Regular Software Maintenance Activities included but not limited to:



### 3.1.1.2 Brief Description about Proposed Application Maintenance Phase

Software maintenance is the process of changing a system after it has been delivered. It basically modifies a program after it has been put into use. Maintenance does not normally involve major changes to the system's architecture where changes are implemented by modifying existing components and adding new components to the following system.

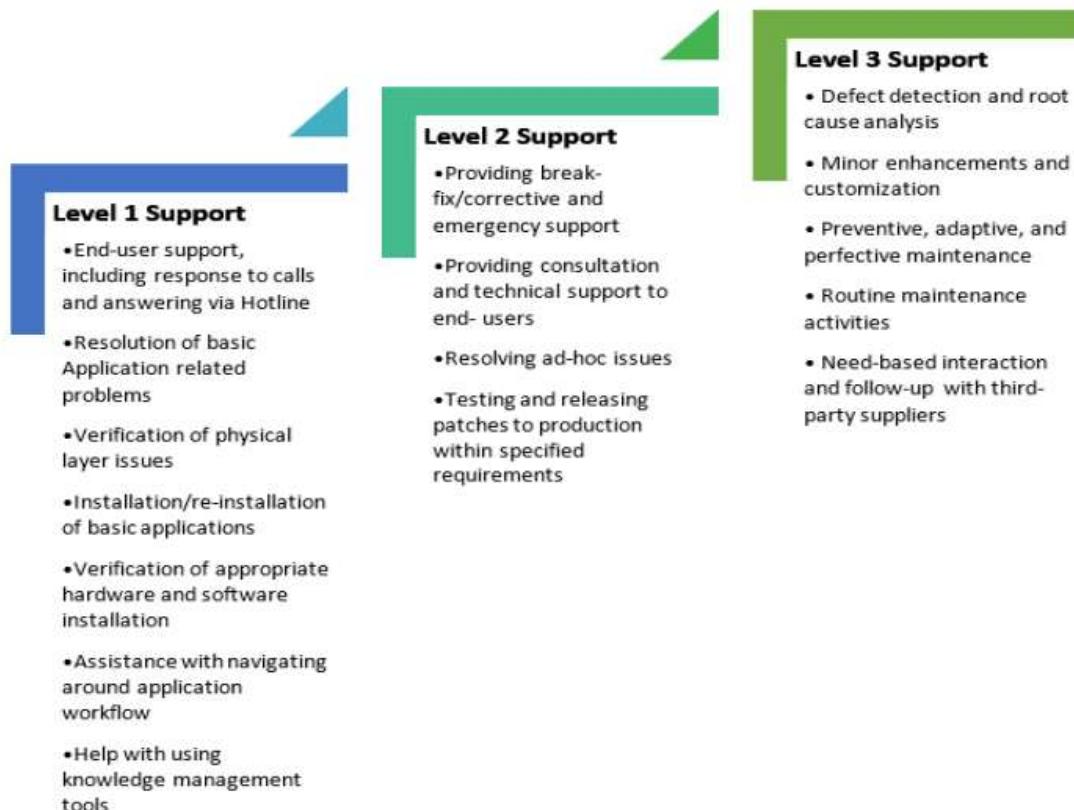
All maintenance activities have been grouped under four classes'.



### 3.1.1.3 Key Operation & Maintenance Support for Proposed System

- ❖ User Support
- ❖ Regulatory
- ❖ Minor Application Enhancement
- ❖ Configuration Management
- ❖ Corrective Maintenance
- ❖ Preventive Maintenance
- ❖ Database Administration
- ❖ Change Management
- ❖ Application and System Review
- ❖ SLA Management

### 3.1.1.4 Categorized Application Support



### 3.1.1.5 Description of Operation and Maintenance Support for Proposed System

#### Support Service Type and Mode of Service

In terms of the application support service, the service actions are divided into 4 (four) sections. They are described below:

Service Type	Service Definition
Critical	Critical updates with severe application impact
High	Incidents that affect applications and user but can continue with reduced functionality
Medium	Incident that only affect users performing standard business operations
Low	Incident with low impact on the application, only causing troubles to specific user of the system

### 3.1.1.6 Configuration Management

Configuration management (CM) is a governance and systems engineering process for ensuring consistency among physical and logical assets in an operational environment. The configuration management process seeks to identify and track individual configuration items (CIs), documenting functional capabilities, and interdependencies. Administrators, technicians, and software developers can use configuration management tools to verify the effect a change to one configuration item has on other systems.

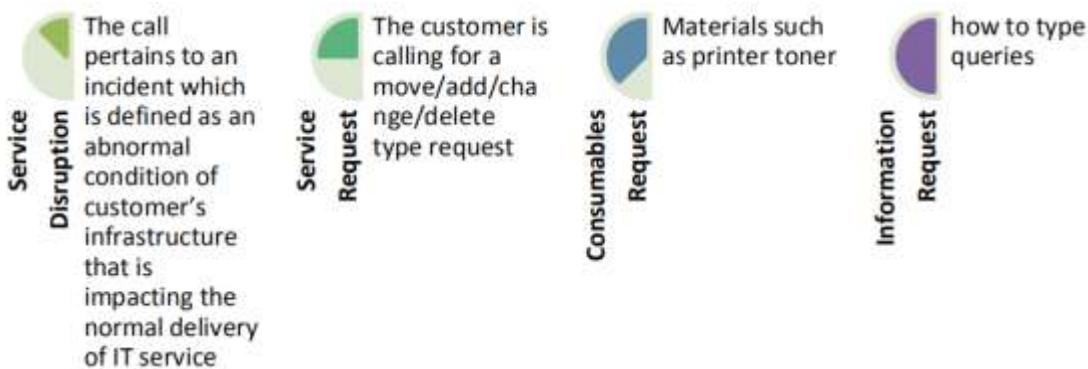


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The change management process plays a vital role in maintaining infrastructure and updating the basic configuration management database. Asset management and configuration management provides the information change management needs to assess the risks, costs and impact of change. Sheba Technologies Limited choose to implement change management and configuration management simultaneously in order to give a full strategic control of the infrastructure. To meet this strategic need, asset management, change management and a CMDB are important elements of software applications, which interact and provide added value.

### 3.1.1.8 Service Layers for Support

Users will contact the service desk for any number of reasons; the next task of the service desk engineer performing the incident management function is to define the type of call, which will be one of:



If the nature of the call is about an incident, the service desk engineer must prioritize the case. The purpose of prioritizing the tickets is to allow the efforts to be conducted according to a triage mentality rather than simply first come, first serve. The priority of an incident should be based upon three separate elements:

**Impact**

- How many users are affected?

**Urgency**

- How debilitating is the nature of the incident

**SLA**

- What is the service level objective in this case?

On the basis of these two factors the service desk should be able to assign a priority to the incident. Standard priorities include:

 <b>Blocker</b>	 <b>Critical</b>	 <b>Normal</b>	 <b>Minor</b>
A blocker issue prevents a user from performing a core component of their job. A blocker incident has no work around	A critical issue prevents a major system to be used in an effective manner. There is a work around for a critical	A normal incident detracts users from their ability to use the system. There is a workaround	A minor issue is an issue that can be worked around, and dealt with during a scheduled maintenance period

### 3.1.1.9 Tools will be used for Support Service Management

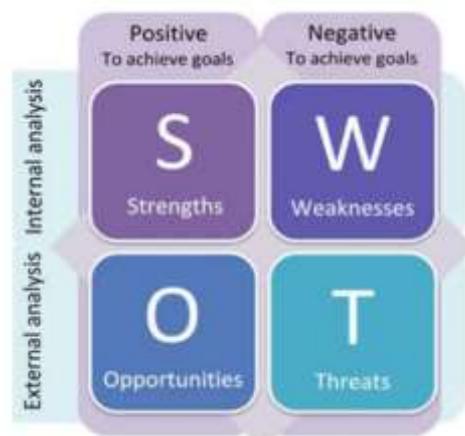
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### 3.1.1.10 Release Management

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- Works with product owners, IT project teams, and operations staff to ensure every release contains the correct features.
- Release Management has a clear picture of development dependencies, and how changes to one part of a product can affect the stability of the whole.

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- Mean time to recovery vs. Objective

### **3.1.1.12 Problem Management**

If incident management is about resolving customer issues quickly, then problem management is about identifying the underlying cause of one or more incidents and making recommendations to improve the ongoing stability of the infrastructure – by either producing a workaround and/or a solution for the problem. By the very nature of this process problem management is both reactive and proactive at the same time. By solving the problems that are causing a current incident, problem management is contributing to re-actively supporting customers. By correcting the underlying problem

or weakness within the infrastructure, thus preventing future incidents of a similar type, problem management is contributing to the proactive support of the customer as well.

### **Emergency Maintenance**

In case Emergence Maintenance CAAB will be informed instantly through email & phone call. System might be down at the time of maintenance.

### **Problem Receiving & Solving Approach**

The following procedures will be used to respond to problems that are received by the help desk. A problem is defined as an unplanned system event which adversely affects application processing or application deliverable.

## Prioritization Approach

Service requests for problems received by the help desk will be given a Severity Code from 1 – 4 based on how important responding to the problem is to the primary business of CAAB as a whole, as well as the availability of workarounds. The Severity Code will be the basis for scheduling work on the backlog and assigning resources to the request. Critical, important, and supportive application functions are defined in the section below.

Severity Code	Definition
1	A problem has made a critical application function unusable or unavailable and no workaround exists.
2	A problem has made a critical application function unusable or unavailable but a workaround exists. Or A problem has made an important application function unusable or unavailable and no workaround exists.
3	A problem has diminished critical or important application functionality or performance, but the functionality still performs as specified in the user documentation.
4	A problem has diminished supportive application functionality or performance.

## Application Function Type

The table below provides a brief definition of critical, important, and supportive application functions. For a complete list of the application functions included in this proposal.

Application Function Type	Definition
Critical	These application functions are critical to ensuring business profitability or CAAB reputation. Extended failure will impact profit or damage CAAB reputation.
Important	These application functions are important to business productivity but are not critical to profitability or CAAB reputation.
Supportive	These applications support productivity, but are not essential to business effectiveness.

## Response and Resolution Times

Severity codes are used in order to determine appropriate response and resolution times. Response and resolution times are measured from when the incident is opened by the help desk. If the problem is not resolved within the defined time-frame, continuous effort will be applied until the problem is resolved.

**Initial Response** is when a ticket is opened and acknowledged by help desk staff.

**Remedy** is when the user that logged the ticket is informed of an estimated resolution time.

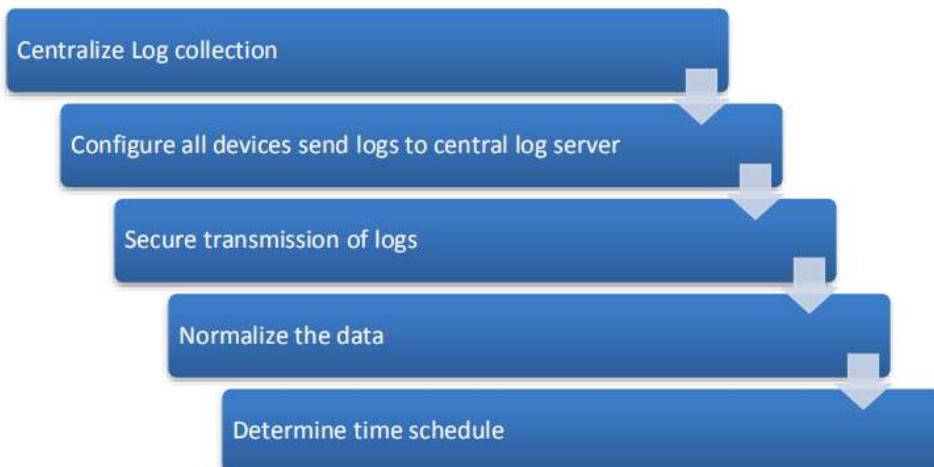
**Resolution** is the point at which the problem is resolved, and the application function is returned to a usable and available state.

Severity Code	Initial Response	Remedy	Resolution
1	1 hour	4 hours	8 hours
2	3 hours	6 hours	12 hours
3	12 hours	24 hours	48 hours

4	24 hours	As per discussion	As per discussion
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### 3.1.1.13 Service Log Management

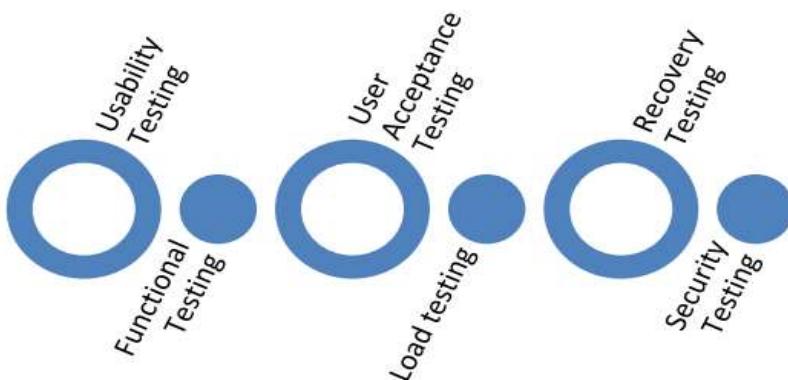
For maintenance service, Sheba Technologies Limited will follow Log Management process. Log management comprises an approach to dealing with large volumes of computer-generated log messages. The primary drivers for log management implementations are concerns about security, system and network operations (such as system or network administration) and regulatory compliance. It is basically a historical record of events that occurred. Benefits of Log Management are:



## 3.2 Testing

### 3.2.1 Testing Requirements of CAAB

As per the requirements of CAAB, Sheba Technologies Limited will conduct regular acceptance testing with the designated government staffs and remediate any problems encountered. Testing Activities of Billing Automation system will include the following testing but not limited to:



Details of testing plans and methodologies are given hereafter:

### 3.2.1.2 Testing Plan of Sheba Technologies Limited

This testing plan will cover all the suitable standard approaches for this e-Service application which may include phase wise testing activities like scripting, test cases, testing tools, testing process, test log, result and report formats. For example expected test deliverables based on the application development requirements.

Software testing methodologies are the different approaches and ways of ensuring that a software application in particular is fully tested. Software testing methodologies encompass everything from unit testing individual modules, integration testing of an entire system to specialized forms of testing such as security and performance.

Sheba Technologies Limited will perform the following major functions in the testing phase:

- Unit Test
- Integration testing
- System testing
- Functional Test
- Installation testing
- Compatibility testing
- Smoke and sanity testing
- Regression testing
- Stress Testing
- Software performance testing
- Usability testing
- Accessibility testing
- Security testing

### **3.2.1.3 Various Testing Methodologies**

As software applications get ever more complex and intertwined and with the large number of different platforms and devices that need to be tested, it is more important than ever to have a robust testing methodology for making sure that software products/ systems being developed have been fully tested to make sure they meet their specified requirements and can successfully operate in all the anticipated environments with the required usability and security.

#### **Usability Testing**

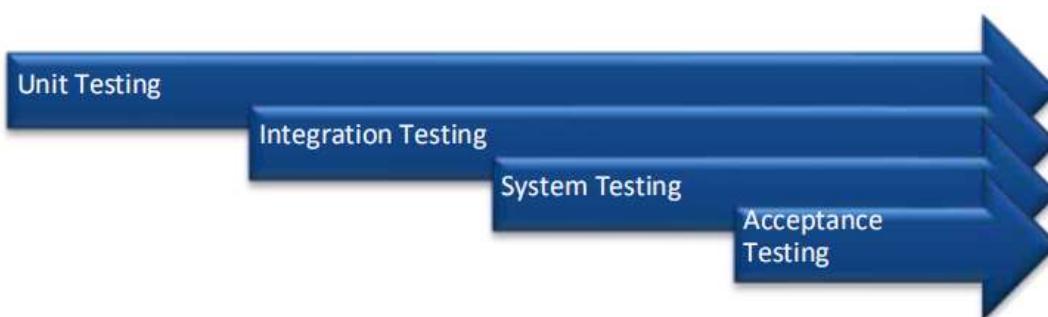
The usability testing part of a testing methodology looks at the end-user usability aspect of the software. The ease with which a user can access the product forms the main testing point. Usability testing looks at five aspects of testing -



#### **Functional Testing**

In most testing methodologies, functional testing involves testing the application against the business requirements. Functional testing is done using the functional specifications provided by the client or by using the design specifications like use cases provided by the design team.

The functional testing part of a testing methodology is typically broken down into four components.



These usually executed in this order. Each of them is described below.

### **Unit testing**

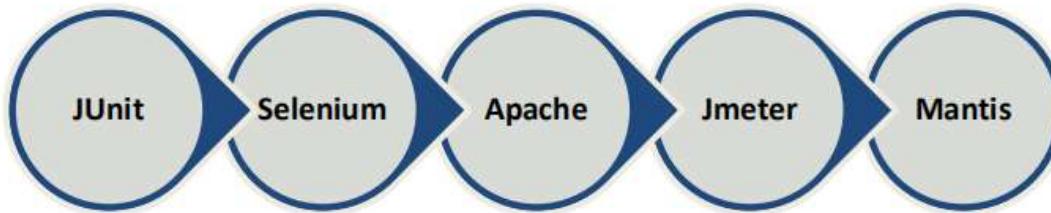
The unit testing part of a testing methodology is the testing of individual software modules or components that make up an application or system. These tests are usually written by the developers of the module and in a test-driven-development methodology (Such as Agile, Scrum or XP) they are actually written before the module is created as part of the specification. Each module function is tested by a specific unit test fixture written in the same programming language as the module.

### **Integration Testing**

The integration testing of a testing methodology is the testing of the different modules/ components that have been successfully unit tested when integrated together to perform specific tasks and activities (also known as scenario testing). This testing is usually done with a combination of automated functional tests and manual testing depending on how easy it is to create automated tests for specific integrated components.

### **System Testing**

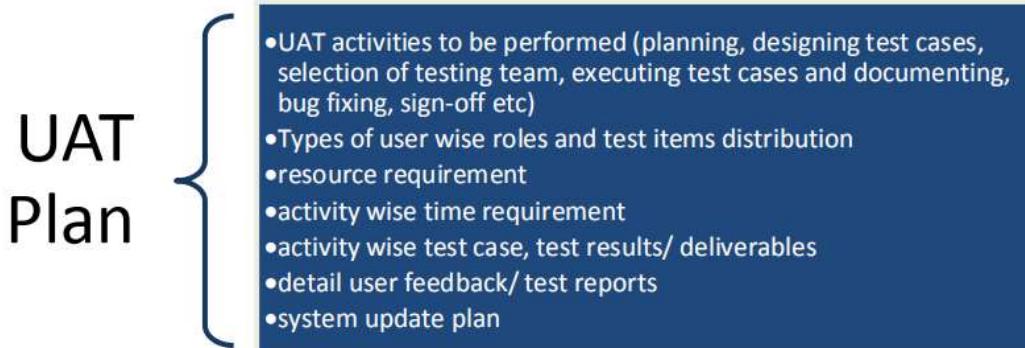
The system testing part of a testing methodology involves testing the entire system for errors and bugs. This test is carried out by interfacing the hardware and software components of the entire system (Which have been previously unit tested and integration tests) and then testing it as a whole. This testing is listed under the black-box testing method, where the software is checked for user expected working conditions as well as potential expectation and edge conditions. Automation testing can be performed using



### **User Acceptance Testing**

The user acceptance testing is the part of a testing methodology which is the final part of functional software testing and involves making sure that all the product/project requirements have been met and that end-users and customers have tested the system to make sure it operates as expected and meets all their defined requirements.

The UAT plan must consist of the following:



There will be some other testing involves testing the application against the non-functional requirements which typically involve measuring/ testing the application against defined technical qualities (also known as the ‘-ilities’ because they all end in ‘-ility’). For example, vulnerability, scalability, usability. Some of the non-functional testing is described below.

### **Load Testing**

There are several different types of performance testing in most testing methodologies for example:

performance testing measuring how a system behaves under an increasing load (both numbers of users and data volumes), load testing is verifying that the system can operate at the required response times when subjected to its expected load and stress testing is finding the failure points in the system when the tested load exceeds that which it can support.

### **Recovery Testing**

Recovery testing is a type of non-functional testing technique performed in order to determine how quickly the system can recover after it has gone through system crash or hardware failure. Recovery testing is the forced failure of the software to verify if the recovery is successful.

### **Security Testing**

Previously, security was something that was tested after-the-fact. With the rise in the cyber-crime and the awareness of the risks associated with software vulnerabilities, application security is now something that needs to be designed and developed at the same time as the desired business functionality. Security testing tests software for confidentiality, integrity, authentication, availability and non-repudiation. Individual tests are conducted to prevent any unauthorized access to the software code.

### **Compatibility Testing:**

The compatibility part of a testing methodology tests that the product or application is compatible with all the specified operating systems, hardware platforms, web browsers, mobile devices and other designed third-party programs (e.g browser plugins). Compatibility tests check that the product works as expected across all different hardware/software combinations and that all functionality is consistently supported.

#### **3.2.1.4 Testing Plan Details**

Test	Responsibility	Execution Time	Remarks
Unit Test case	Developer/Tester	Before the test execution	Testing requirements will be specified
Unit Test case	Developer/Tester	after completing a unit of task	Test result will be documented in the test report (Pass/Fail, Bug report, bug fixing tool)
Integration Test case	Developer/ Tester	Before the test execution	testing requirements will be specified
Integration Test	Developer/ Tester	after merging two units	Test result will be documented in the test report (Pass/Fail, Bug report, bug fixing tool)

System Test case	Tester	Before the test execution	testing requirements will be specified
System Test	Developer/ Tester	after the whole system being developed	Test result will be documented in the test report (Pass/Fail, Bug report, bug fixing tool)
UAT Test case	QA	After SRS preparation	testing requirements will be specified
UAT	User+QA	while user using the system	Test result will be documented in the test report (Pass/Fail, Bug report, bug fixing tool)
Non Functional Testing	Developer + Tester	After completing specific features	Test result will be documented in the test report (Pass/Fail, Bug report, bug fixing tool)

### 3.3.1.4 Performance Monitor

#### Performance monitoring:

In this task the Sheba Technologies Limited will assist CAAB in developing the following capabilities:



**Customer Service**  
Synesis will assist CCI&E in adapting best practice techniques by establishing a set of procedures, scripts, FAQs and tools to support the customer service function. In particular, the Synesis will incorporate an FAQ repository/ knowledge base through which questions and researched responses can be catalogued to ensure quick and consistent responses to similar enquiries in the future, as well as support the development and update of a FAQ page on the web site.



**Service Charter**  
Synesis will assist CCI&E team in developing acceptable standards of service for the Web site operation. This will include a minimum threshold of downtime for the site turnaround time for responding to questions sent by e-mail or phone, based on best practices in the private sector.



**Web site performance monitoring**  
Synesis will train the CCI&E team in analyzing web traffic and developing performance reports to be provided to CCI&E management.

## 3.3 Training

Sheba Technologies Limited will conduct training sessions for CAAB IT staffs, system administrators and CAAB staffs along with reviewing development proposals and showing different features of the system in order to fully acquaint them with the operation of the features and functionality of the application. Sheba Technologies Limited shall develop training materials to conduct the training . Sheba Technologies Limited will also be responsible to update

(in Bangla and English) system documentation and manuals for users and administrators and fully document any customization and change management made into the system. Detail training plan, scope with methodology is given hereafter:

### 3.3.1 Training Plan

Considering the scope of the project and the number of system users, we cannot stress enough the importance of user training in the implementation of this project. To make sure that all the stakeholders involved in the project will be able to use the system independently and in an efficient and error free manner, Sheba Technologies Limited will conduct comprehensive training for process stakeholders. Sheba Technologies Limited will provide the training outlining the below mentioned points.

Training Schedule & program details

Methods & modalities of user training

No. of targeted user groups and participants

Strategy of ensuring training standards

Methodology for evaluating performance

Ensuring smart training with latest tools & technologies

Innovative, user friendly, & multimedia training materials

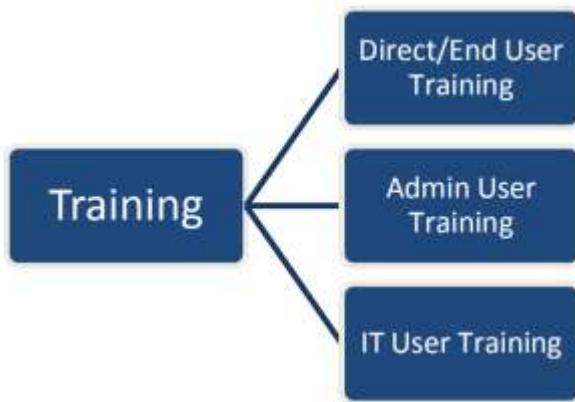
Team composition, skill and expertise as training provider

### 3.3.2 Draft Training Plan

The training program will be operated by Senior and strong technical training team member of Sheba Technologies Limited for maintaining large system and provide prompt support to the end-user. To upgrade technical personnel; Sheba Technologies Limited will provide technical training separately for assigned technical personnel so that they become confident enough to take responsibility and ownership of software after successful completion of training from us. Sheba Technologies Limited will provide all the instructions and guidelines to run, manage and maintain the Cargo Billing System software. We will be guiding through:

- Live Training Sessions
- We will be providing the below materials while giving the Trainings:
  - User Manual,
  - Frequently Asked Questions

### 3.2.3 Training Type



#### 3.2.4.1 Training Outline

Features	Value
Venue	<b>Venue will be provided by the CAAB</b>
Total Trainees	<b>40 (Forty Minimum)</b>
Trainee per Batch	<b>As required by CAAB</b>
No. Of Batch	<b>As Required by CAAB</b>
Training Duration per Batch	<b>08 (Eight) Hours</b>
Training Duration per Day	<b>08 (Eight) Hours</b>
Batch per Day	<b>01 (One)</b>
Trainers per Batch	<b>01 (One)</b>
Total Training Duration	<b>As required by CAAB</b>
Total Trainer	<b>01 (One)</b>

#### 3.2.4.2 Topics and Course list to be covered

##### Course List for System User

SL	Course Name	Description	Training Method	Participants
1	Introduction	Overall concept of the software, its scope and benefits	<ul style="list-style-type: none"> <li>Power Point Slide Presentations</li> <li>Questions and Answer Session</li> </ul>	Will be decided by client.
2	Getting Started with the system	The course will outline the overall operations of the software, security, database and web applications.	<ul style="list-style-type: none"> <li>Power Point Slide Presentations</li> <li>Live presentation of the software.</li> <li>Interactive Questions and Answer Session</li> <li>Evaluation of the training session by the trainees</li> </ul>	Will be decided by client.
3	End User Security Operations	The course will include all operations of end user security	<ul style="list-style-type: none"> <li>Power Point Slide Presentations</li> <li>Live presentation of the software.</li> </ul>	Will be decided by client.

		features, end user password administration, security awareness training.	<ul style="list-style-type: none"> <li>• Interactive Questions and Answer Session</li> <li>• Evaluation of the training session by the trainees</li> </ul>	
4	Software trouble Shooting	The course will cover trouble shooting of the system.	<ul style="list-style-type: none"> <li>• Power Point Slide Presentations</li> <li>• Live presentation of software.</li> <li>• Interactive Questions and Answer Session</li> <li>• Evaluation of the training session by the trainees</li> </ul>	Will be decided by client
5	Management system Concepts, Scope and its benefits	This course will include overall concept of the Software, its scope and benefits.	<ul style="list-style-type: none"> <li>• Power Point Slide Presentations</li> <li>• Interactive Questions and Answer Session</li> <li>• Evaluation of the training session by the trainees</li> </ul>	Will be decided by client.
6	Technical Knowledge on the system	The course will include technical knowledge transfer, report preparation and generations. The course will give instructions to take decision by using information technology	<ul style="list-style-type: none"> <li>• Power Point Slide Presentations</li> <li>• Live presentation of the software.</li> <li>• Interactive Questions and Answer Session</li> <li>• Evaluation of the training session by the trainees.</li> </ul>	Will be decided by client.

### 3.2.4.3 Training Materials & Features

Below materials is essential for providing training.

- Manuals (User & Training) in both English & Bengali (Soft copy),
- Power point Slides,
- The training program will possess several features to help enhance the quality of the training.
- Using PowerPoint presentations, trainers will help express themselves and dispense information to the trainees more effectively.
- Multimedia training materials for all users will be developed. These materials will be available for viewing and reviewing for all users through a web portal.
- Written help tutorials or user manuals would also be given to the trainees during each training session to ensure that they have everything they learn in speech, already noted down in writing.
- Training instructions will be provided both in English & Bengali.
- Training activities will cover the training feedback, evaluation & report also.

- Audio-video tutorials will be used as these could help in keeping the trainees focused as well as entertained.
- Questions would be encouraged particularly when any of the trainers is delivering a speech to ensure that all trainees can grasp accurately the concept being taught.
- A short review would be employed at the end of training session to help review the entire syllabus and answer any further questions that the trainees might have.
- After the end of the training, an exercise would be used to calibrate how well the trainees were able to grasp concepts taught.
- Training materials will include user manual, administration manual, quick start tutorial, online help and frequently asked questions.
- To help the users and the trainees, the soft copy of the training tutorials will be uploaded in the dashboard or portal of the developed System.

#### **3.2.4.4 Training Outcome:**

The final outcome of the training procedure is expected to be a highly thorough and informative lesson that would be able to ensure that all the participants have a well-defined grasp and knowledge of the use of the application and the subject as a whole. The participants should be ready for deployment after the training program as per meeting operational acceptance criteria. The training procedure and materials are designed in such a way to ensure that the participants can refer to them for help in the future as well as teach subordinates or newcomers. The feedback session would be used effectively to ensure that future training procedures evolve and are more articulate and thorough in the dissemination of information. Ultimately a “train the trainer” approach is being utilized as upon training of the trainers, they are deployed to train the participants of the training procedure, and these participants can then go on to train their subordinates.

#### **3.2.4.5 Training Methodology**

Training is the process for providing required skills to the employee for doing the job effectively, skillfully and qualitatively. Training of employees is not continuous, but it is periodical and given in specified time. Generally training will be given by an expert or professional in related field or job.

Before designing a training plan, Sheba Technologies Limited follows the below mentioned criteria.

#### **Design**

Designing a training course is like mapping out a road trip or creating a journey. A training design is basically an outline of all the “what, where, who, when and how” details of the training for use by coordinators, curriculum developers, and trainers. There are five primary components of a training design:

- Learning Outcomes: What will participants be able to do as a result of completing the training?
- Training Materials: What materials need to be developed and what will the materials include?
- Trainers and Content Experts: Who will facilitate the training and act as content experts to review materials?
- Training Methods: What methods will be used so that participants meet the learning objectives and learn the content most effectively?

- Logistics: Where and when will the training take place? Who will be invited and how will they be notified? Will a per diem be paid to participants? Etc.

Optimally, the results of a needs assessment inform these five training design components. For example, if we know the gap between what a target audience knows and what it needs to know, we can write learning outcome statements that precisely meet their job-related needs. Needs assessment will also help determine who will be needed as content experts for the training, and whether a course should be one, three, or five days long.

### **Course Design Process**

Course design refers to the planning and structuring of a course to achieve specific instructional goals. The course design process includes the following activities:

- Identifying appropriate goals
- Choosing content that's consistent with the goals
- Selecting ways to achieve the goals
- Assessing participant learning in relation to the goals
- As part of the design process, instructors should also consider:
  - Their own teaching style
  - The learning styles of the participants
  - The role of the course in the overall training effort

### **Before training begins**

Most design decisions must be made before the first session of the course. These decisions relate to these basic areas:

1. The content to include
2. The delivery methods to use
3. The time allocated for each of the goals
4. The tools for assessing participant learning

### **During the training session**

As we conduct the training, we will learn more about the participants and their needs. This information may require adjustments in the course design. For example, after working with the group, we may decide to:

- Change the time allocation for a particular topic
- Change the type of activity associated with a particular topic, for instance, from an individual to a group activity or vice versa.

### **Development**

Developing training involve writing materials, creating learning exercises, and working with content experts and trainers. It is the most time-consuming phase of training; draft materials may go through multiple revisions, involving several people, before they are ready for training use. As we progress through this development phase, we need to make sure the training materials and exercises match the learning outcomes we identified in the design phase, which are based on the needs assessment. All subsequent training phases should reflect these outcomes.

## Developing Material

When good content is matched with an appropriate design, even the most complex documents become appealing, credible, and easy to read. In fact, studies have shown that using the right design elements can have a positive impact on how well readers understand the material.

Curriculum and material development usually include the following:

- A. Background and descriptive information.
- B. Directions on how to use the curricula.
- C. Course planning forms and checklists.
- D. Guidance on tailoring each particular workshop so it matches the needs or wants of participants or fits a program's needs.
- E. Specific, measurable, and realistic learning objectives.
- F. Clear and complete course content.
- G. Integrated evaluation plan/tools.

Once we have developed a course document's basic content, the publication development process generally proceeds in two stages:

A. **The draft stage**—all design team members have input on all aspects of the project: Planning, Content Development, Draft Layout and a Preliminary Review.

B. **The final stage**—the final layout incorporates the final text and images; the materials are sent to the printer: Final Layout, Final Review, Printing, and After Printing

## Developing Presentations

Developing presentations is an extremely individual activity and each trainer/facilitator will have their own style and preference. But in designing coherent courses, it's important to adhere to a common style and format. Personal style and approach shows more in delivery. It is disorienting for participants to view presentations with different format and style every time a new trainer comes on. There are guidelines for developing presentations which trainers can adhere to without compromising their individuality.

## Delivery

The delivery phase of training is when the coordination, assessment of learning needs, design, and development phases come together. Successful training delivery depends on:

- Accurate identification of participants' training needs
- A carefully crafted training plan
- Well-managed training details
- Thorough and relevant materials
- Prepared trainers, ready to present a compelling learning experience

While the other steps of the training process focus heavily on creating the content of the training, the delivery or implementation phase is concerned with teaching the content and participant learning.

## Training Methods

There is a huge array and variety of training methods each with its advantages and disadvantages. In designing a course, a healthy mix of a few methods provides variety, overcomes monotony and boredom and energizes participants. But the mix is not an end in itself. Training methods need to be carefully selected to match the purpose and learning outcomes of each session.

## Evaluation

Training evaluation will take place throughout each phase of the training process, not as a last step. For example, after conducting a needs assessment, ask the design team and key informants if the needs identified are accurate. Have other trainers review written materials before finalizing and printing them for training. This kind of “formative” or process evaluation helps ensure that we have developed the training with great thought and analysis at each step.

## 3.3 Error Handling, Bug Fixing & Fine Tuning

### Error Handling

Error handling refers to the anticipation, detection, and resolution of programming, application, and communications errors. Specialized programs, called error handlers, are available for some applications. The best programs of this type forestall errors if possible, recover from them when they occur without terminating the application, or (if all else fails) gracefully terminate an affected application and save the error information to a log file. Error handling is important because it makes it easier for the end users of your code to use it correctly.

Sheba Technologies Limited will perform regular Error handling to the response and recovery procedures from error conditions present in current Cargo Billing System system for all processes. This will comprise of anticipation, detection and resolution of application errors, programming errors or communication errors. Sheba Technologies Limited will look after any sort of Logical errors, Generated errors, Compile-time errors and Runtime errors.

### Bug Fixing

A bug fix is a change to a system or product designed to handle a programming bug/glitch. Many different types of programming bugs that create errors with system implementation may require specific bug fixes that are successfully resolved by a development or other IT team. Sheba Technologies Limited will do corrective changes in software maintenance by fixing bugs, flaws and defects in the Cargo Billing System software.

### Fine Tuning

Sheba Technologies Limited will also do fine tuning of the system for the functionality and usability of the software by refining, deleting, or adding new features. This will include user interface tweaks, redesigns, or in-system user journey changes etc.

## 3.4. Operational Support

There will be three types of operational support to be provided by Sheba Technologies Limited. These supports are (but not limited to):



### **3.4.1 On-site Support**

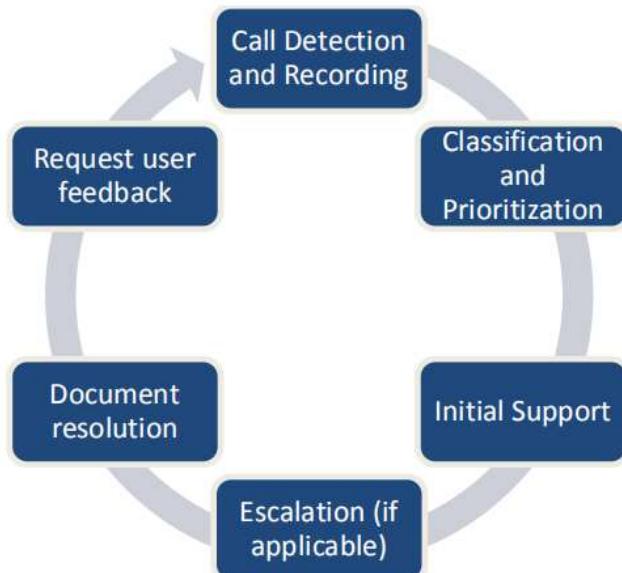
Dedicated on-site support engineers will be assigned for daily assistance of the Cargo Billing System system. CAAB requires engineers to perform their activity onsite for better understanding and time management. These support experts will physically ensure that the business runs smoothly, effectively, and professionally.

### **3.4.2 Help Desk Support**

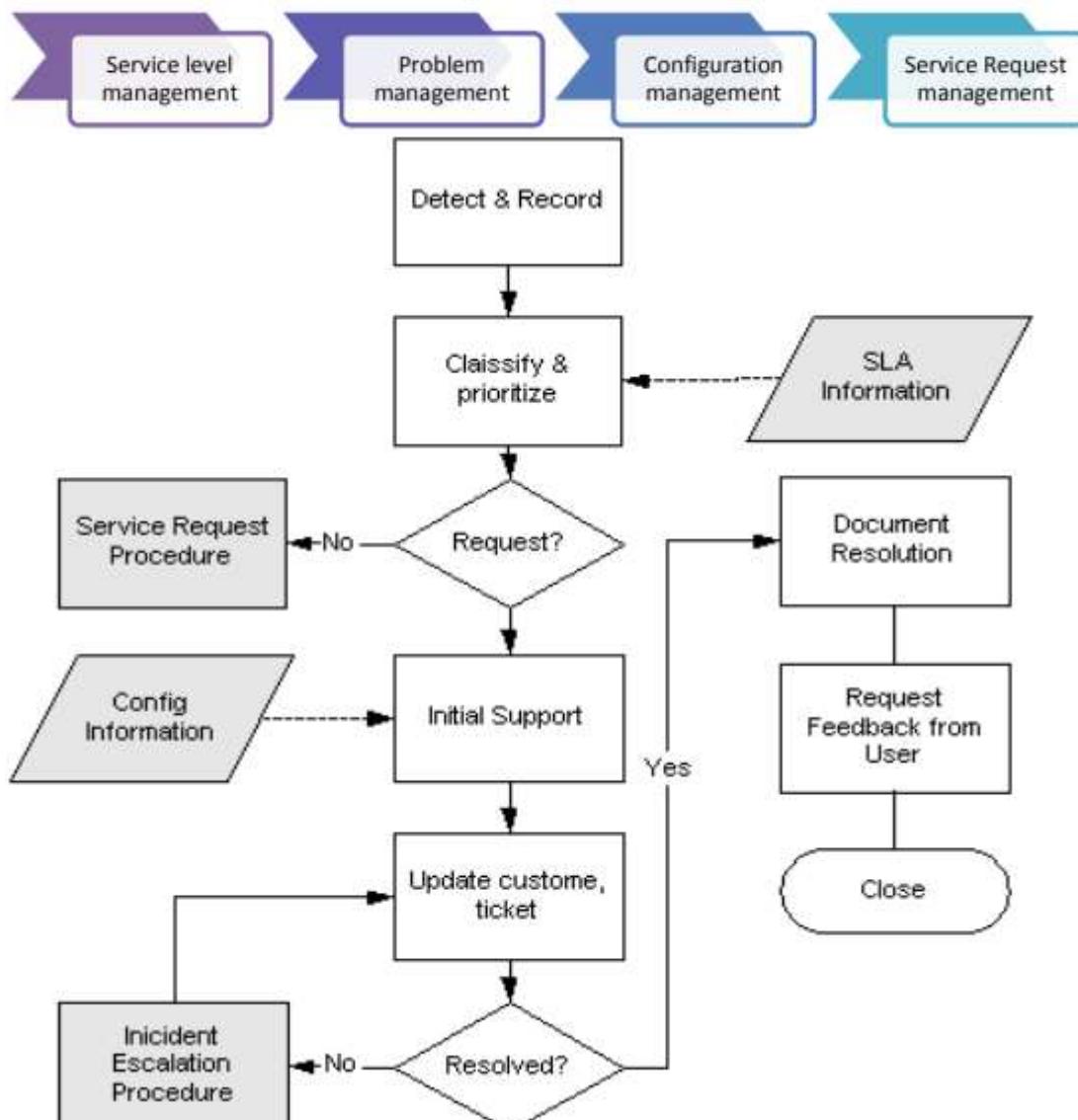
Sheba Technologies Limited will provide auto hunting telephone number for telephone assistance by qualified help desk support engineers between 9:00 am. and 6:00 pm. (Bangladesh time) to provide assistance to the general applicants. CAAB officials will also can get help from the hotline in attempt to correct or bypass defects or errors in the Software that have been brought to the attention.

For helpdesk support, responsible manpower will be present to answer all relevant support services. When general applicants and CAAB officials will be experiencing an issue, whether it's a network outage, or an inability to perform an action because they might not know how to use the system, they will want an expedient resolution to their problem through the helpdesk support. Restoring Cargo Billing System System to operational status as quickly as possible, is the main purpose of the helpdesk support and this support service process is called incident management process.

Sheba Technologies Limited IT's Incident management process defines how and where incidents originate, escalation points and definitions of categorization and prioritization. From the perspective of being responsive to a customer's needs, incident management is probably the most critical of all IT service support services. Incident management is comprised of the following activities:



Additionally, the incident management process interacts with the following other service management processes:



For detail trouble ticketing system (TTS), please check our “Incident Management” sub-section in the “Operation and Maintenance Support Methodology.

### **3.4.3 Business Continuity Support**

Sheba Technologies Limited will assist to carry out systems administration support. Other than that:

- CAAB will permit the firm to have remote access to the system to enable Sheba Technologies Limited to fix the defects/bugs. The Firm will commence work On the critical fixes within 4 hours of notification by the government IT staff and provide immediate response to critical problems that disable the system. If a defect in the application software cannot be fixed remotely, Firm will make its resource available by telephone or online to work with CAAB IT staff to complete the fix in the shortest time possible.
- Sheba Technologies Limited will provide a way to reach the support during off hours for critical issues. For that Sheba Technologies Limited will develop and SLA. Based on that availability of the services can be put in the Service Level Agreement (SLA) as below:

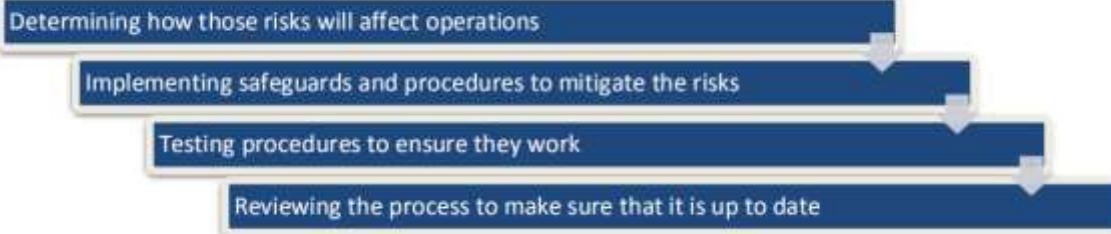
#### **Availability of the services**

<b>Priority</b>	<b>Classification</b>	<b>Response Time</b>	<b>Fix Schedule</b>
<b>Critical Faults</b>	Site/application function or process has stopped working or changed	15 Minutes	Sheba Technologies Limited will provide problem definition and expected resolution within 4 hours of notification.
<b>Help and Advice</b>	CAAB requires information, documentation or clarification regarding the Services, but there is no impact on the Services.	1 Hours	Sheba Technologies Limited will respond within 24 hours of notification.

#### **Business Continuity Plan**

Business continuity plan (BCP) is the process involved in creating a system of prevention and recovery from potential threats to a company. The plan ensures that personnel and assets are protected and are able to function quickly in the event of a disaster. The BCP is generally conceived in advance and involves input from key stakeholders and personnel.

BCP involves defining any and all risks that can affect the company's operations, making it an important part of the organization's risk management strategy. Risks may include natural disasters—fire, flood, or weather-related events—and cyber attacks. Once the risks are identified, the plan will also include:



There are several steps that Sheba Technologies Limited usually follows to develop a solid BCP. They include:

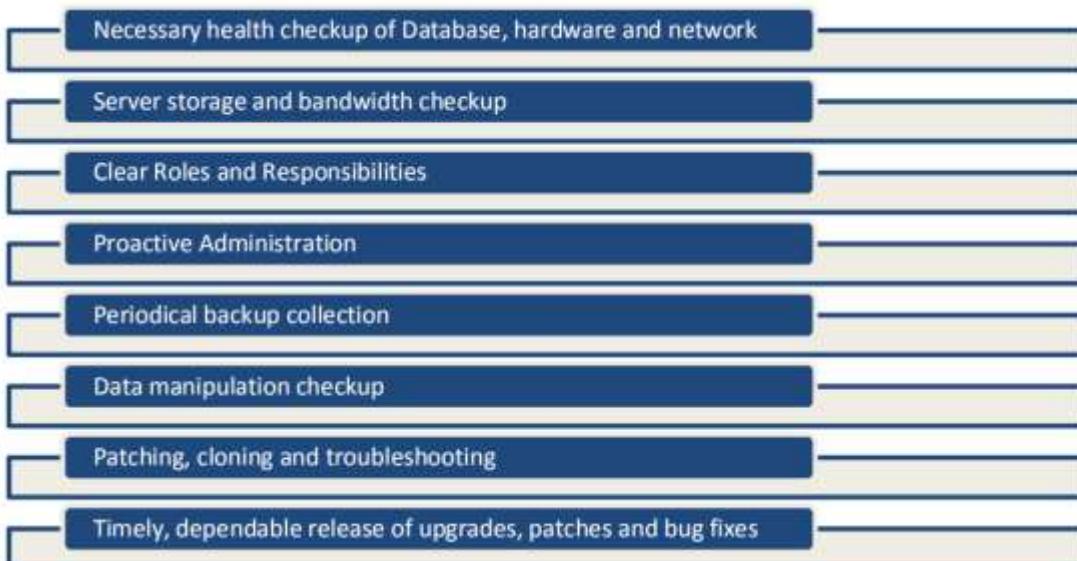


Sheba Technologies Limited Business Continuity plan for this eService application will play a very important role by creating the systems of prevention and recovery to deal with potential threats and risk of the this Service operation. Regarding business continuity, Sheba Technologies Limited will take in account the followings issues if applicable or suitable for this Cargo Billing System System.

- All standard backup facilities will be supported by the system which can be started with disk-based backup facility, gradually moving to Storage Area Network (SAN) based backup system.
- Data and the Operating system core component will be separated. A ghost image of the Operating system will always be available in case of rebuilding the server. All data will be restored in the data drive once the Operating System is restored.
- System will also have an automated Backup mechanism by which users can schedule the backups and the system will take the backups without manual intervention.
- System will check for the media and generate a report on backup with date time and details of backup.
- If a restoration fails for any reason, the system will prompt with proper error messages and suggest what has to be done to rectify the situation via on-screen, logs, email and text messages.
- System will maintain an automated recovery system and all versions of backup will be maintained. At any given point in time, the versions and incremental backup details can be retrieved from the system

### 3.4.4 System Administration and Database Administration Support

Sheba Technologies Limited will provide systems support for the operating environment such as Operating System, Database, Network, etc. as required. For that the firm will conduct:



### **3.4.5 Further Improvement and Up Gradation**

Any further improvement and obligations for change requests to the existing process will come under this component. Moreover, deployment of various API integration with national agencies, payment gateway, digital signature and thus up gradation of the software systems will be done.

### **3.4.6 Workflow and Development**

Sheba Technologies Limited will perform the tasks as per the CAAB requirement on the Cargo Billing System. Up-gradation of the CAAB and workflow will be tested thoroughly before going live in Cargo Billing System.. These can comprises of the following but not limited to:

- Workflow development
- Workflow change and modifications
- Report development
- System modifications
- Introduction of new processes
- User Experience Improvement
- Other Technology Improvement

### **3.4.6 User Experience Improvement**

Sheba Technologies Limited is experience in communicating with the mass citizen and is one of largest IT company to work with different ministry's process automation. Sheba Technologies Limited has proven technology which are already implemented and can be included in the project the mode of CR into the current System Cargo Billing System system.

#### **Introducing AI**

Artificial intelligence (AI) is often used to describe machines (or computers) that mimic "cognitive" functions that humans associate with the human mind, such as "learning" and "problem solving". Companies are embracing these new technologies to augment their work or business and make it better and faster.

Understanding the importance of using AI based system, Sheba Technologies Limited can develop and integrate with one online AI based bot system for enhanced search mechanism and

recommendation engine. This will recommend users for interested services based on agent data and activities.

### **Some practical case studies when AI in workplaces.**

- Amazon can 'predict' what you want to buy when you go shopping online. Because, they are using a complicated AI recommendation engine.
- A regular user of FACEBOOK on mobile phone experiences some visual presentations on screen such as friend request dashboard auto suggestions that you are preferring as per your inputs or likes or from frequently visiting data profiles or displaying some ads you are habitually visiting sites or portals, there are millions of hours of programming allowing a computer to understand millions of human preferences and patterns of data. These are the results of ML as well as AI.
- Visa or Master Cards often get blocked when the card holder goes aboard. Because, Visa and MasterCard use AI to recognize patterns out of the ordinary and try to detect when there is a break in the normal pattern. These are the productions of ML as well as AI.

### **3.4.7 Change Request Obligation**

There will be Change Requests Management Process for the further process improvement at any point of time. Change requests are necessary and can offer many benefits like:

- Process effectiveness
- Process enhancement
- System functionality improvement
- Time effectiveness
- Introduction of new processes
- System enhancement
- User Experience Improvement
- Technology Improvement

To manage this process in an effective way is to allow for greater intimal communication, efficiency, and alignment with overall business goals without intervening the software application. It is important to deal with the change request in an appropriate and timely manner there would be provisions for further change requests to registration and renewal processes of Cargo Billing System.

#### **3.4.7.1 Change Management Plan**

Change management is a service support and delivery process designed to minimize the business

impact of change. While change is inevitable in the IT world, the truth is that the majority of IT failures

can be directly related to a system or application change within the consumer infrastructure. The obvious solution is to not change anything, but since other processes like problem management demand change in order to solve existing issues, the key lies in balancing the benefits of change vs. the cost of change and taking all appropriate measures to minimize negative impacts due to change.

### **The Instigators of Change**

From an IT management perspective change equals destabilization of an existing ecosystem. With this in mind it is beneficial to understand where change within the IT infrastructure originates. Change can be traced to the following processes and activities:

**Problem management** – As part of the normal process of eliminating weaknesses within the consumer Infrastructure

**Capacity management** – As the consumer business grows, there will be new demands on the IT infrastructure that will eventually impact the quality and availability of the service

**New service delivery** – As the needs of the consumer business grow and evolve to include new IT services, the impact of those services on the existing infrastructure need to be accommodated

Note: Implementing a change within the consumer infrastructure is a project. Therefore, although we discuss the process of change management, it is important to understand that this process is used in tandem with an effective project management process.

### 3.4.71.1 The change Management Process

The change management process focuses primarily on the roles of the 'change manager' and the change advisory board. The change manager is an administrative role, designed to manage the approval (or decline) of changes through the change management process. The change advisory board (CAB) is a group of senior stakeholders that have the authority to make go/no go decisions on major changes. The individuals that would belong to a CAB would include:

- Account manager
- Service manager
- Representative of the consumer

The major steps for a typical SIL change management process, as shown in Figure 4, include:

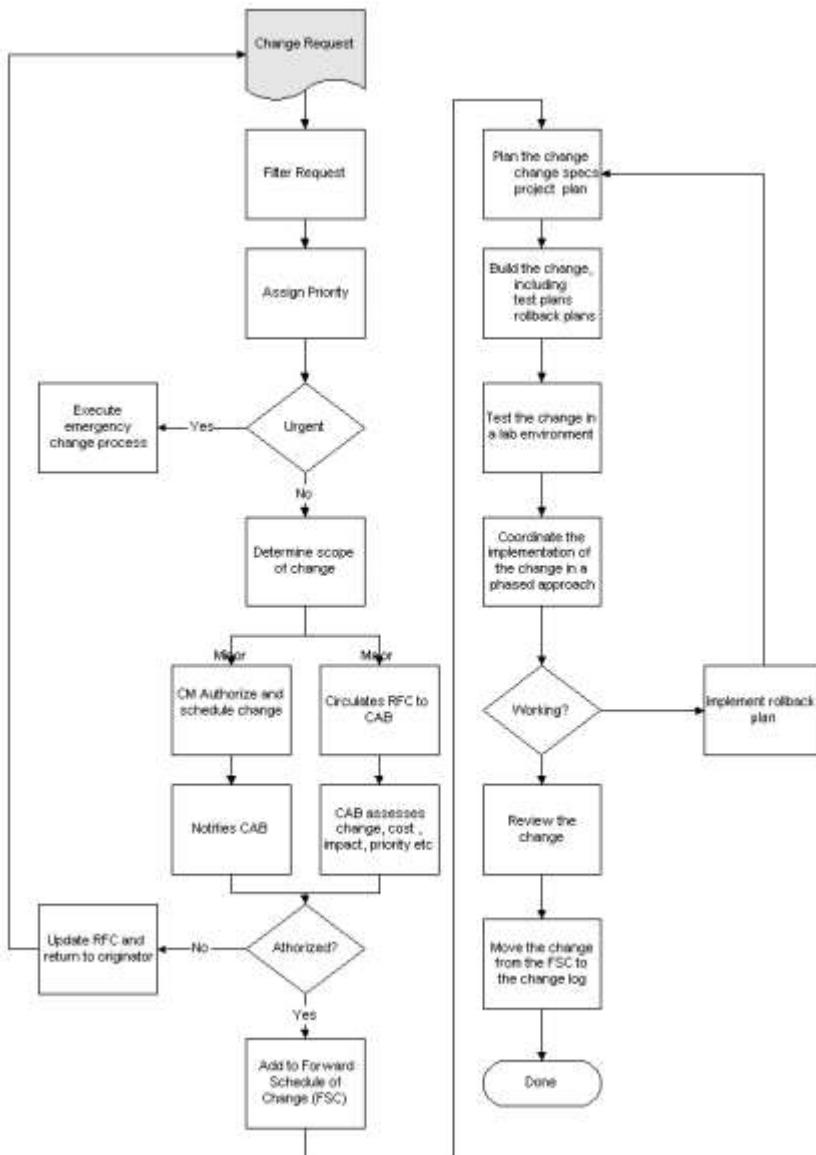
② Request Filtering - Some changes will simply not provide anywhere near enough value to justify the cost. The change manager can filter these change requests immediately

② Prioritization – Generally changes will either be urgent (critical problem with no work around) or they will be standard. The change manager must use the information provided in the request for change to determine the priority and then act accordingly.

② Determine Scope of Change – The above model illustrates two scope models (minor and major) where the change manager has authorization to approve minor changes and the change advisory board (CAB) must approve major changes. Depending on the size of the SIL, the size of the consumer's they engage with, regulatory implications etc., there may be many more scope models that include further levels of approval – potentially all the way up to the consumer's board of directors. The scope of the change will be determined by evaluating:

- The level of comfort with the tasks associated to the change
  - The cost of the change as it relates to the pre-authorization of each scope model
- ② The risks (technical and business) associated to the change.

② Circulating Change to Approval Board – If approval needs to be provided by a higher-level body than the change manager (CAB, or other) than the change manager, with the assistance of the change request author need to brief the approval board on all aspects of the change.



**Figure: Change Management**

- **Approval Board Assessment** – The CAB (or other approval board) will assess the cost, impacts and risks of the change and make a decision on the change
- **Notify CAB** – If the change falls within the authority of the change manager, then the CAB will be simply notified of the change. Common practice is to notify the CAB in a digest format of all of the changes that have occurred during a predefined reporting period.
- **Denied RFC** – If the RFC is unauthorized, the change manager will update the RFC with the appropriate information as to why it was declined. This allows the author (if they should so choose) to update the RFC and re-submit.
- **Update Forward Schedule of Change** – Once approved the change manager adds the change to the forward schedule of change
- Note: The forward schedule of change (FSC) is almost exactly like the change log –except that it describes changes that are going to occur rather than changes that have occurred.
- **Plan the change** – Including:
  - **Change specification** – depending on the scope of the change a specification may need to be developed that describes the planned implementation of the change
  - **Rollback plan** – Every planned change needs to have a rollback plan in case of emergency
  - **Project Plan** – Once the scope of work is known a final project plan must be developed that can be communicated to the consumer – may also require an update of the FSC.

- **Test the change** – The change must be tested in a lab environment prior to deployment in production. Ideally the change is tested by somebody other than the developer of the change.
- **Archive the change** – For the purposes of rapid deployment (either for new deployments or IT continuity planning) it is useful to have an archived image of the new configuration
- **Implement the change** – The change is implemented in the consumer location.
- **Implement Rollback** – If the change is unsuccessful, the systems must be rolled back to the previous configuration
- **Update change log** – In order to keep the CMDB up to date, the change must be moved from the FSC to the change log
- **Review the Change** – As an exercise to improve processes.

Additionally, the SIL requires an urgent change process to deal with critical changes that must be pushed through the process quickly in order to restore service to high priority services– without sacrificing control of the process. The process is effectively identical with the exception of the service manager calling an all-hands-on-deck condition where everybody that is required as part of the process is expected to be available on an as-needed basis. Operationally the key (different) elements to an urgent change process include:

- Providing the change manager with the decision framework with which to identify an urgent issue
- Identifying the key individual required in the event of an all-hands-on deck situation (including backup personnel)
- Ensure the service manager has contact information for all key individuals.

## 3.5 API Integration

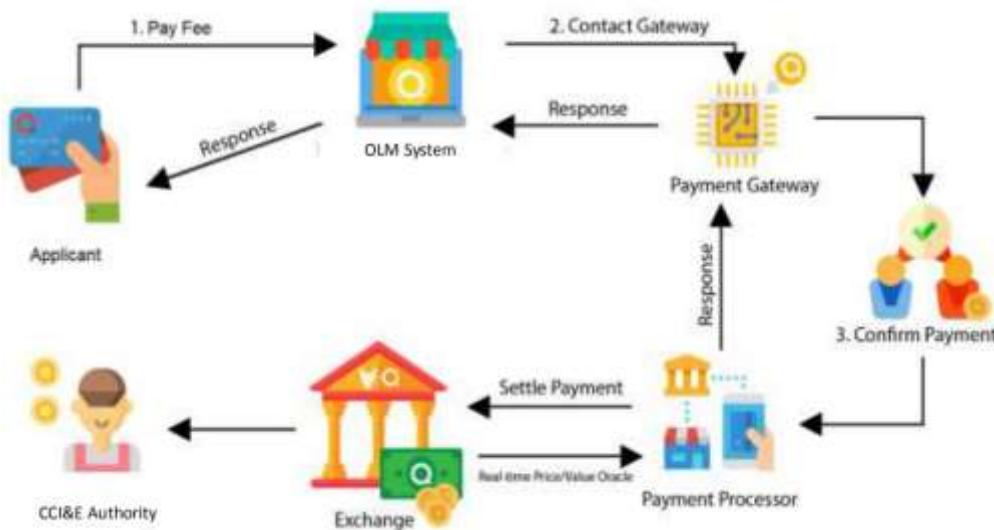
### 3.5.1 Payment gateway integration

The enhancement of the software will have provision to accept electronic payments and be able to process e-money. It will use proper security protocols and encryption to pass the transaction data safely from websites/application/mobile devices to payment processors/banks and back. The system will provide payment gateway integration to all major payment platforms including Bangladeshi & International VISA, MASTER and NEXUS Debit/Credit Card credit or debit cards along with bKash, Rocket and others

Sheba Technologies Limited will manage this payment system on behalf of CAAB to provide a smooth and dependable payment management system, Sheba Technologies Limited will ensure the tasks as described below:

- **Payment Reconciliation:** Payment Reconciliation is used to link payments with invoices. This feature will ensure payment and will notify the end-user regarding payment confirmation of the system.
- **Dispute Management:** The Dispute Management System is a communication process that helps the system manages inquiries, complaints and disputes regarding payment issues and queries; fairly and effectively.

With this huge experience, Sheba Technologies Limited Ltd. is confident enough to provide payment gateway integration service for the proposed eService Application, so that applicants can pay for their certificate online or upload their payment confirmation information. The system will be connected with different payment gateways.



- When applicant is asked to pay his required fee, he may submit it from the web based Cargo Billing System system. He will send request to pay fee and the system will contact the payment gateway for the payment procedure. When payment gateway confirms the payment, it will be sent to the payment processor and payment processor will settle the payment with CAAB.

### 3.5.2 Other API Integration

Sheba Technologies Limited will maintain existing Application Programming Interface integration with various government agencies' databases like BIDA, Election Commission, Fire Service, NBR and will do other API integration as required along with other up gradation of the software.

## 3.6 List of reports Schedule of deliveries, period of performance

### 3.6.1 Implementation Schedule and Tasks

The Maintenance Service, Operational support & Further Improvement of the Developed Export & Import Automation (Cargo Billing System) will be carried out over a period of Thirty-Six (36) Months from the date of signing.

The assignment will Cover full technical and operational support to the Cargo Billing System System in SAIA including head office (Dhaka).

A detailed **Project Implementation** plan is described in section 5.1 Form 5A5 Work Schedule, Team Composition Plan is described in **section 6.1 Form 5A6 Team Composition**, Staffing Schedule is described in **section 6.2 Form 5A7 Staffing Schedule**.

### 3.6.2 Reporting requirements

Sheba Technologies Limited will submit to the CAAB the reports and documents as specified and decided with both parties, in the form, in the numbers and within the time periods set forth. Reports may cover but not limited to:

Service Log	• Every month
System health	• Every 1 month
Completed tasks	• Every 1 month
Risk identification and mitigation plan	• Every 1 month

Other than these, the following deliverable will be provided during the operation phase:

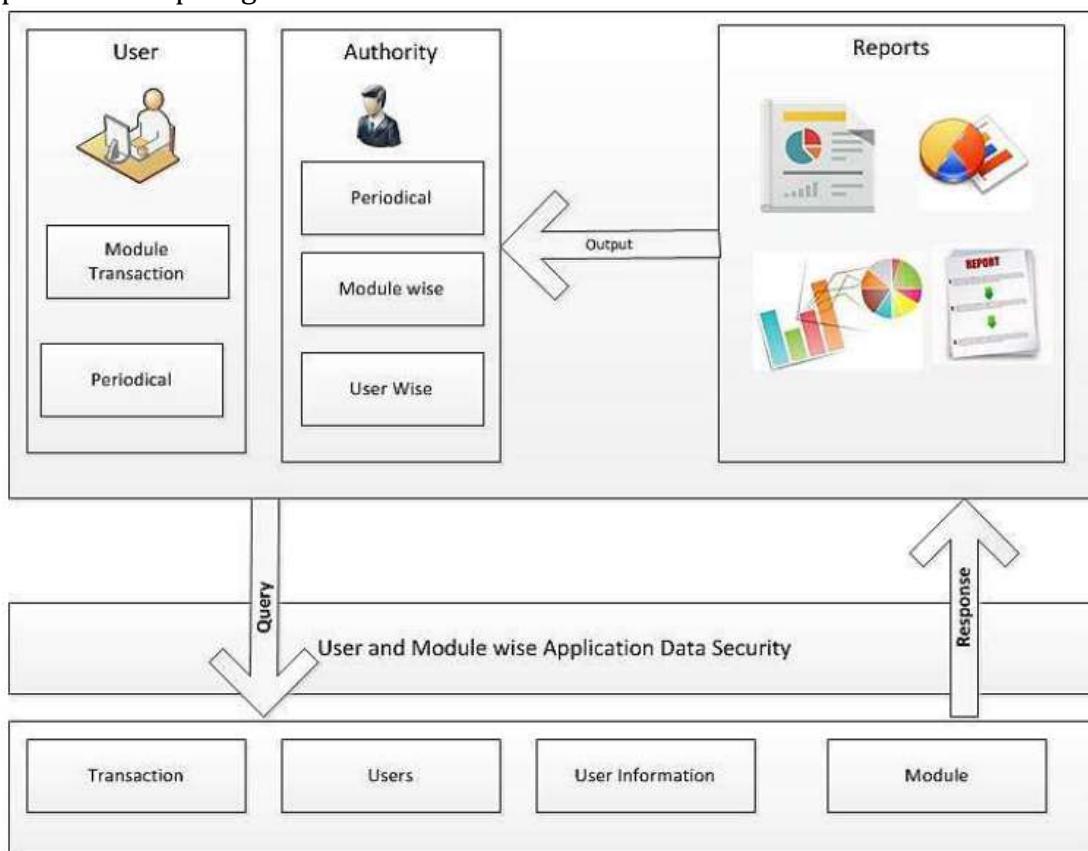
- Interactive Dashboards
- Various Analytical Reports

Details of analytical report module are given below:

### 3.6.2.1 Analytical Report Module

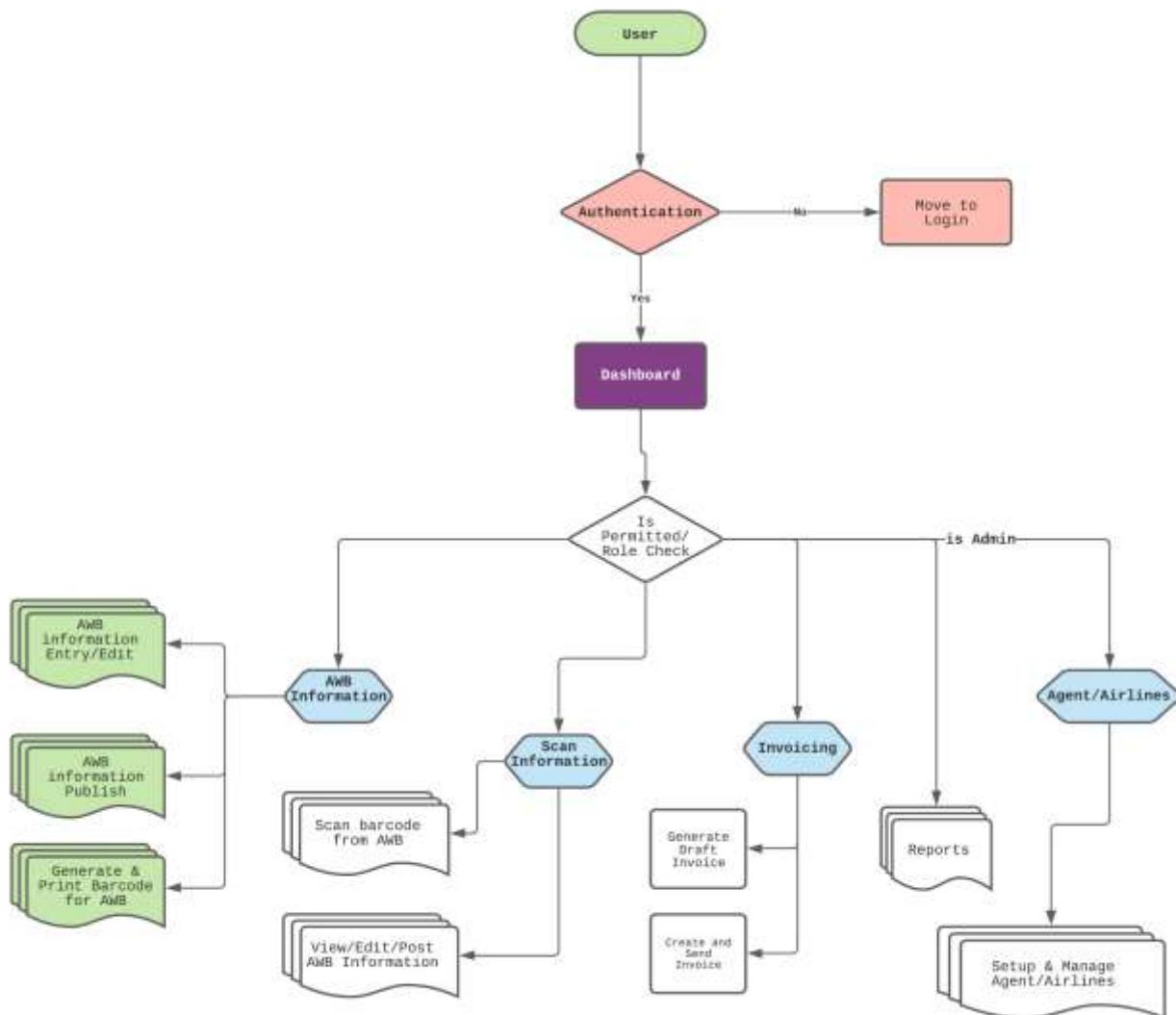
Sheba Technologies Limited will upgrade existing analytical report module where CAAB users will be able to generate various analytical report such as total number of registrations, industry wise importer/ exporter or imported product list and other reports as per the requirement of CAAB.

Different type of report will be generated based on user's permissions. Reports such as, periodical report, overall MIS reports would be generated as per the user's requests. And also, different reports based on business needs. The below figure shows the overall security and process of report generation.

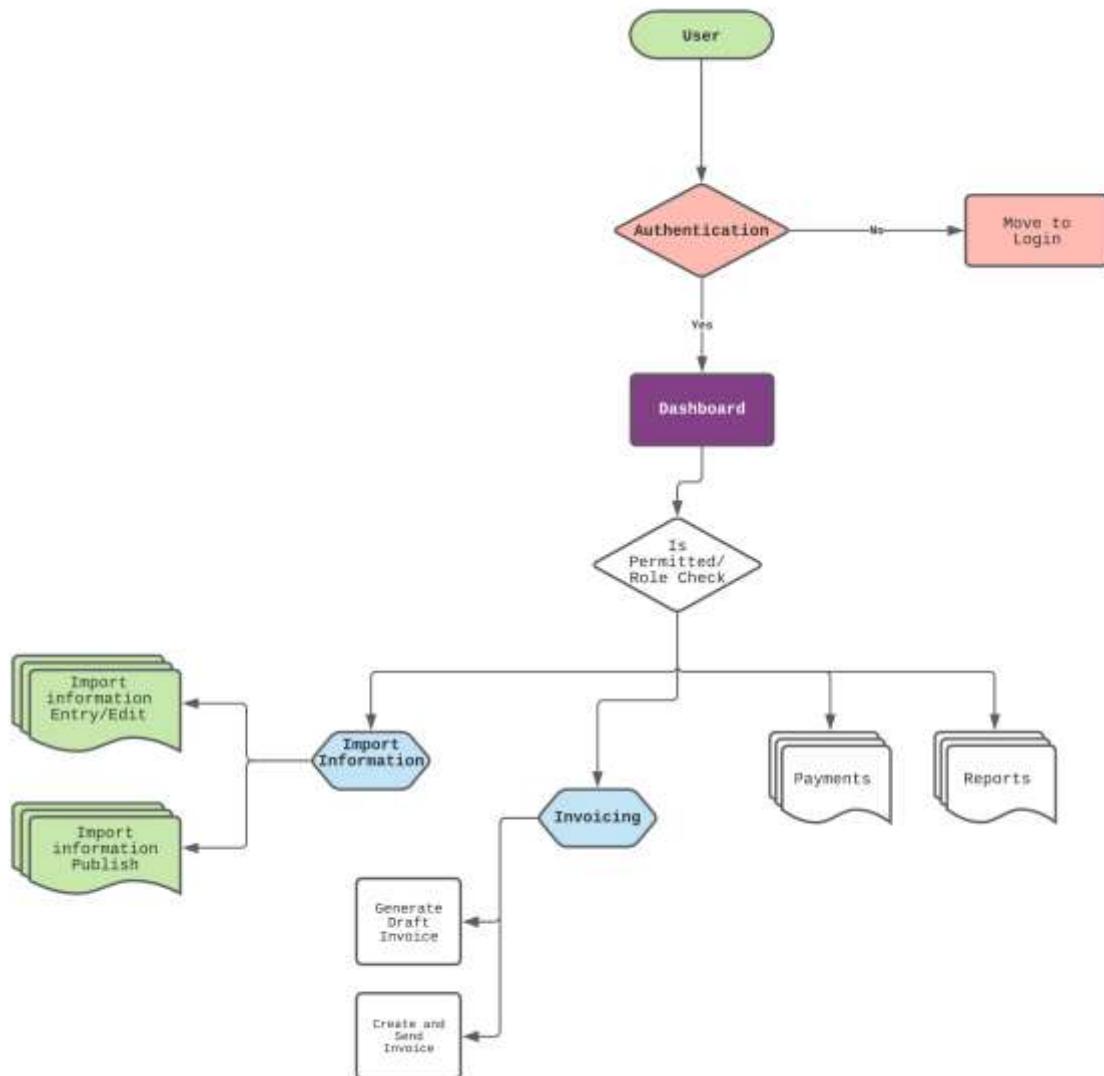


## 4. System Workflow Diagram

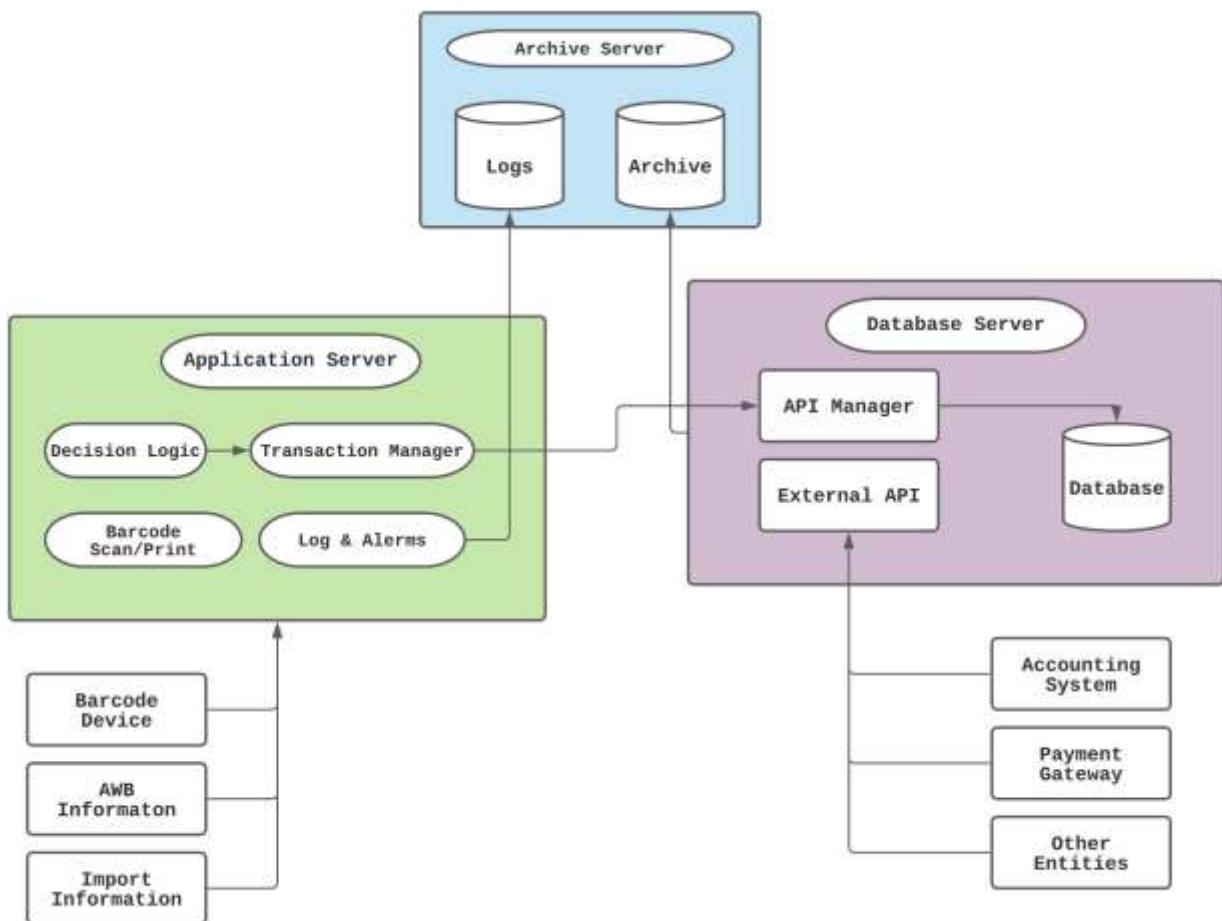
### Export Workflow



## Import Workflow



## 5. Solution Architecture Diagram



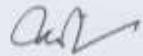
## 6. Work Plan

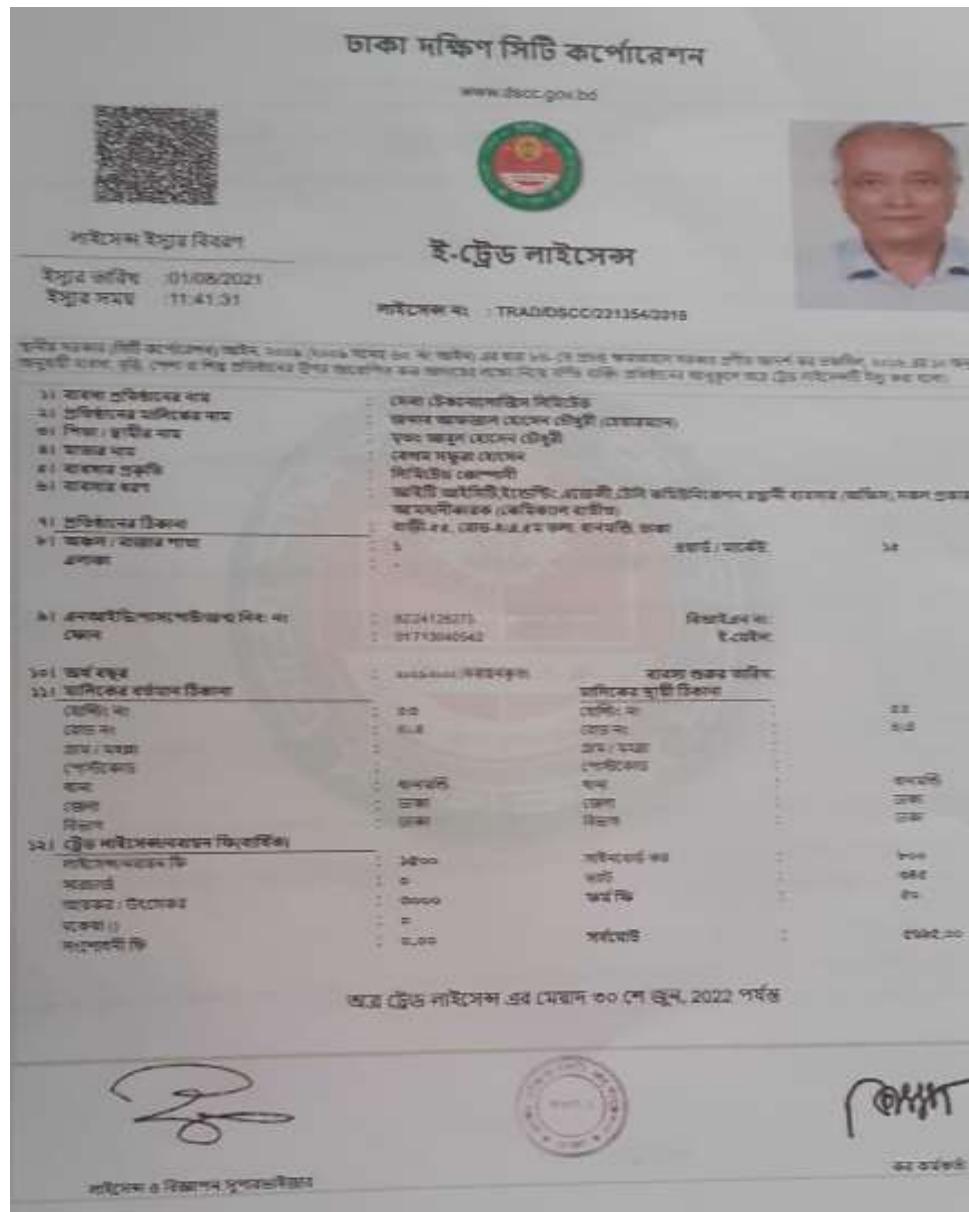
SL	Description	Module	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
1	Project initiation	BRS/SRS										
2	Stakeholders Meeting	BRS/SRS										
3	Requirement analysis with authority	BRS/SRS										
4	BRS Finalization	BRS/SRS										
5	SRS Finalization	BRS/SRS										
6	Technical/Connectivity finalization	BRS/SRS										
7	AWB analysis	BRS/SRS										
8	API analysis	BRS/SRS										
9	SRS Signoff	BRS/SRS										
10	Application Design	Design										
11	Database Design	Design										
12	Server Configuration	Design										
13	Role configuration	Design										
14	Export Cargo Development	Development										
15	Import Cargo Development	Development										
16	Barcode integration	Development										
17	API communication	Development										
18	Invoice	Development										
19	Reporting	Development										
20	Dashboard connectivity	Development										
21	Reporting	Development										
22	Integration	Development										
23	Migration	Development										
24	Beta Testing	Testing										
25	Field Testing	Testing										
26	Update changes	Testing										
27	Go live	LIVE										

## 7. Staff Month Input

No.	Position	Staff Month Input by Month																													Total Staff Man-Month Input						
		Development, Customisation, Installing and Commissioning of Import Export Cargo Warehouse Charging Billing and Payment Automation																																			
		M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 0	M 1	M 2	M 2	M 2	M 2	M 2	M 2	M 3																		
1	Project Supervisor	Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	
		Field	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	39	
2	Database Administrator	Office	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	39	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	Project Manager	Office	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
		Field	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
4	UI Developer	Office	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	Senior Software Eng 1	Office	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Senior Software Eng 2	Office	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Software Eng 1	Office	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	39	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Software Eng 2	Office	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Software Eng 3	Office	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	QA Analyst	Office	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	System Engineer 1	Office	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	System Engineer 2	Office	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Tester	Office	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
		Field	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Support Service 1	Office	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
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15	Support Service 2	Office	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Field	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	
																																					287

## Annexure A: STL Legal Documents

<b>Name of the Company</b>	Sheba Technologies Limited
<b>Contact Person:</b>	Farhan Islam Head of Business Operations Phone: 01711547804 Email: farhan.islam@shebatech.com.bd
<b>Constitution &amp; Year of Establishment:</b> Incorporation Year: 2015	 <b>Certificate of Incorporation</b> No. ..... C-120984/15 <p>I hereby certify that..... <b>Sheba Technologies Limited</b> .....</p> <p>..... is this day incorporated under the Companies Act (Act XVIII) of 1994 .....</p> <p>..... and that the Company is Limited.</p> <p>Given under my hand at ..... <b>Dhaka</b> .....</p> <p>this ..... <b>Fifth</b> day of ..... <b>February</b> .....</p> <p>..... two thousand ..... <b>Fifteen</b> .....</p>  Assistant Registrar of Joint Stock Companies & Firms, Bangladesh. 
<b>Registered Office/Corporate office/Mailing Address:</b>	Registered Office: H # 55, R # 4/A, Dhanmondi, Dhaka-1209, Bangladesh Corporate Office: 8 <sup>th</sup> floor, 95, Khaja Tower, Bir Uttam AK Khandakar Road, Mohakhali CA, Dhaka 1212



## **Trade License(01)**

১৭৮

中華書局影印

(The Municipal Corporations (Taxation) Rules, 1986, ss 42-48 रिफर्मेट्स)

(ক) অত্যন্ত কার্যকরীভাবে কার্যপদ্ধতি হৈ কোন কানুন বৈ কোন সহজ ট্রেড লাইসেন্সিং কার্যক্রম সম্পর্কিতভাবে দ্বিতীয় সম্মানণা কৃতি কৰার সুযোগ দান কৰিব।

(१) ये ट्रेन्ड लाईसेंस नाइट्रोजेन लिपिचक्ष त्रिपुराकान्तर नामकदंग, दमदारखाल, काटडीघा बहु-काँडे दानाखोर (कोल शहर अमालपुर जन्मना) यादवात करा गाए था, त्रिपुरा नाइट्रोजेन लाईसेंस लाईसेंस फॉले यादवात लिपिचक्ष दानाखोर एवं वार्षिक अपार्टमेंट घोषणा करा गया।

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(ক) প্রিচালাইসেন্সটি কেন্দ্রীয়মৈ ব্যাক্তরযোগ্য। নয়। কর্তব্য বাসিকভাবে বসন্ত অবস্থা একই অঙ্গে ব্যবহার কৃত পরিষেবার জন্ম ব্যাবস্থাকে সংজ্ঞাও কর কর্মকর্তা ব্যবহৃত আলোচন করে আন

(5) အမြန် အကြောင်းအရာများ ပါ၏ အလိုက် ချောင်းဆောင်ရွက် ပေးပို့သူများ အတွက် အမြန် အကြောင်းအရာများ

(५) गोपनीयताप्राप्ति प्रियोग वा प्राप्तवाच्छेद विकल्पनक, अपार्टमेंट, खण्डितप्रबंध वा लक्षणग्रंथ वा लक्षणग्रंथ लेखन वाच्य वा माल्पदेश जैव अप्टिकर कैमरे प्रक्रिया वायरलिंग कार्यक्रम चालाक शाब्दिक एवं

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(क्र) नाइट्रोजनाती व्हिये गेले किंवा वर्ष असे गेले आधारातीकलावे निकाट शमाव पाईवी करते भाईची अनुभवित सूनाव ट्रॉड नाईट्रोजन प्राप्तिर फलां गटाईत तरतु फर्मावती व्हिकंट आवश्यक

Trade  
License(02)

(५) शाईसकारी कर्तव्यान्वयन ये अधिकार वास्तविकता में प्रभावी।

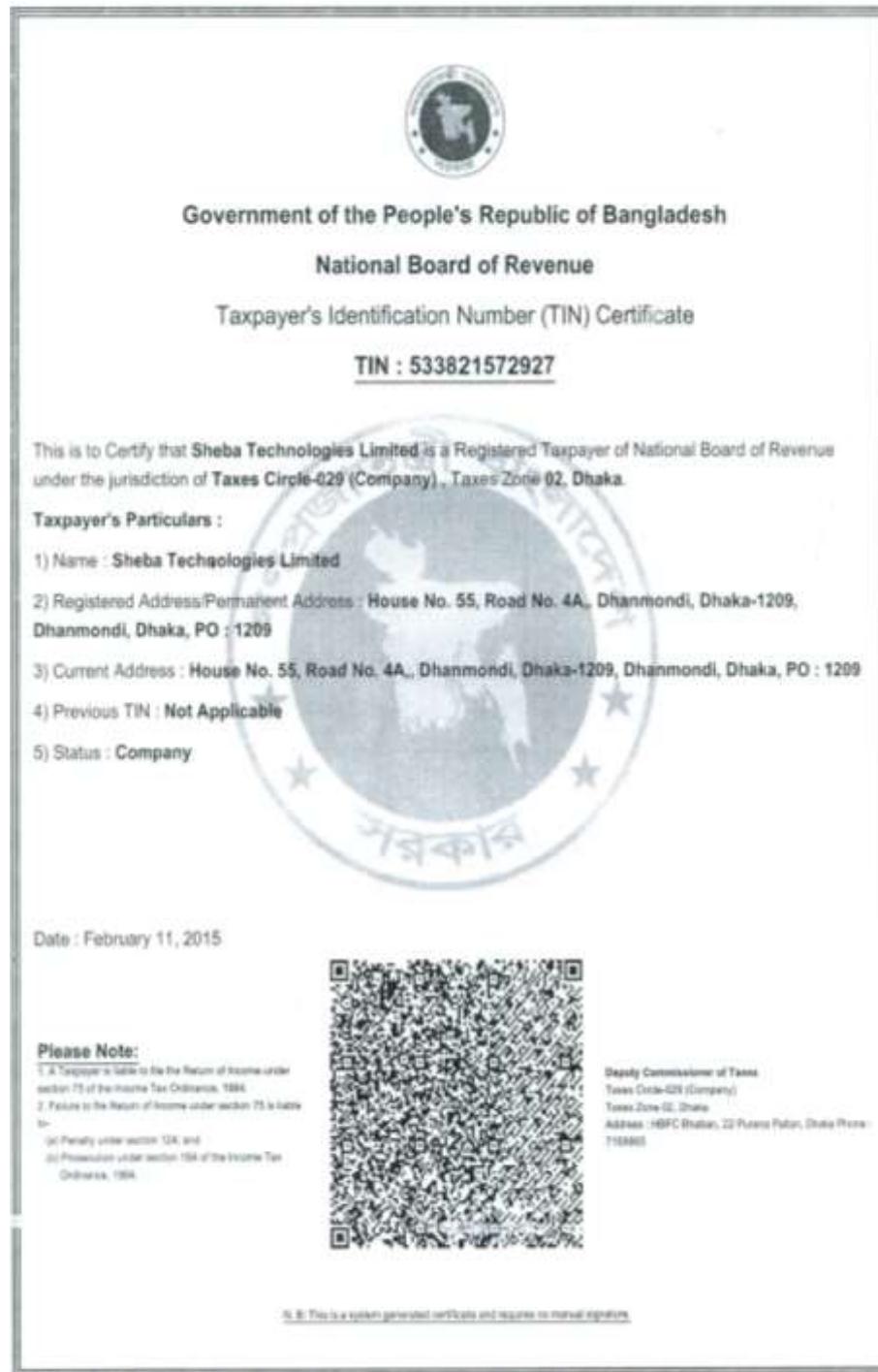
(५) नाईसेम्परला नाईसेम्परला यन्मासेन ताकार विशिष्टेन फट्टिकम्पि संस्कृत करावेह। नाईसेम्परला यो योगाद शेष यात्रां पूर्वी यात्रा सर्वेऽपि चूलाइ हायदे १० ग्रॅम्बीष एवं यद्यो चूलाति वारावेह (यो लाईसेम्परला यात्रां पूर्वी यात्रा सर्वेऽपि चूलाइ हायदे १० ग्रॅम्बीष एवं यद्यो चूलाति वारावेह)

ପ୍ରାଚୀ ମହିନାକାଳୀନ ଅନୁଷ୍ଠାନ ମଧ୍ୟ ଜୀବନ ସାଥେ ଯୋଗ୍ୟ ଉତ୍ସବାଣ୍ଵିତ କାର ଆରମ୍ଭିତ ହୈ—ଏହାରେ ଏହାରେ ଏହାରେ ଏହାରେ ଏହାରେ ଏହାରେ ଏହାରେ

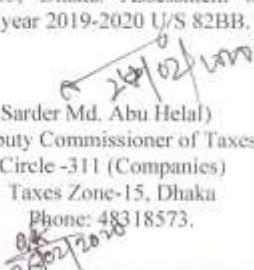
(ii) ଟ୍ରେଡ ଲାଇସେନ୍ସ ବାଧାନ ବାଟିକ କ୍ଲେମ ଶାକ୍ତ୍ରୀ/ପ୍ରତିକିଳିନ ଆତ୍ମ ସିର୍ତ୍ତ କର୍ମ୍ମାବେଳେ କ୍ଲେକ୍ଟରଙ୍କ ଦାତା ଖରିତନା କରାତେ ଯାହା ବିକିଷ୍ଟ ଜୀବିତ ସହକାର (ସିର୍ତ୍ତ କର୍ମ୍ମାବେଳେ) ଆଇଁ, ୨୦୦୯ ଏବଂ ୨୨ ଦାତା

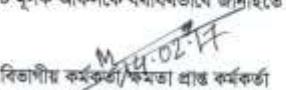
(গ) মেজে সর্বান্বাগের মুক্ত বাসন-বাল্য ও শৃঙ্খলার পরিবেশ বজায় রাখার পিপিটেন্ট পোকাকে একটি ডায়ামেট্রিক রাখতে হবে। আবশ্যিকে প্রকল্প-আবর্তনে উচ্চেস্থভিত্তিক জমা রেখে দেওকান বন্ধ করতে হবে।

## TIN Certificate



## Income Tax certificate

 Government of the People's Republic of Bangladesh National Board of Revenue Income Tax Wing Dhaka .
<b>INCOME TAX CERTIFICATE</b> No/No Income Tax Certificate/Cir-311(Com)/Taxes Zone-15/2019-20/263 Date-26/02/2020
<u>Description of assessee</u>
a) Name of Assessee : Sheba Technologies Limited b) Father's Name /Husband Name : Not Applicable. (For Individual) c) Permanent Address/ Registered office : House # 55, Road # 4/A, Dhanmondi R/A, Dhaka-1209 . d) Present Address : House # 55, Road # 4/A, Dhanmondi R/A, Dhaka-1209 . e) Status Individual/ Firm /AOP/Local/ Authority/ Company : Company. f) Tax payers Identification Number (TIN) : 533821572927/Circle-311 (Companies) g) Business Identification (BIN) : Not Applicable.
<p>This is to certify that <b>Sheba Technologies Limited</b> is a registered assessee of Taxes Circle-311(Companies), Taxes Zone-15, Dhaka. Assessment of the assessee has been completed for the assessment year 2019-2020 U/S 82BB.</p> <div style="text-align: right; margin-top: -20px;">           ( Sarder Md. Abu Helal )          Deputy Commissioner of Taxes          Circle-311 (Companies)          Taxes Zone-15, Dhaka          Phone: 48318573.       </div>

	<p>খ্যাতজ্ঞাতবী বাংলাদেশ সরকার তক, আবগারী ও মূল্য সংযোজন কর কমিশনারেট, ঢাকা (দসি) বিভাগ : <b>DHANMONDI DIVISION</b></p> <p>মূল্য সংযোজন কর নিবন্ধন পত্র/টার্ণওভার কর তালিকাভুক্তি পত্র/কুটির শিল্প তালিকাভুক্তি পত্র (বিধি ১১ ন্যূনত্ব/বিধি ৪(২) ন্যূনত্ব)</p> <p>নাম : <b>SHEBA TECHNOLOGIES LIMITED</b></p> <p>ঠিকানা : <b>HOUSE # 55 ROAD # 4/A DHANMONDI DHAKA-1209</b></p> <p>TIN (যদি থাকে) : <b>533821572927</b> ফোন নম্বর : পূর্ববর্তী BIN (যদি থাকে) : ফ্যাক্স নম্বর :</p> <p>আপনাকে মূল্য সংযোজন কর আইন, ১৯৯১ (১৯৯১ সনের ২২ নং আইন) এর অধীনে করমাতা হিসাবে ০৩/০৩/২০১৫ তারিখ হইতে নিবন্ধিত/টার্ণওভার কর/কুটির শিল্প তালিকাভুক্ত করা হইয়াছে। আপনার ব্যবসার প্রকৃতি : <b>Supplier(Trade), Service Renderer, Importer &amp; Exporter</b> ব্যবসার কার্যক্রম : <b>S099.10 :: Information Technology Enabled Services</b></p> <p>কাজেই আপনাকে - সকল কর্মসূচ্য পণ্য সরবরাহ বা সেবা প্রদানের ক্ষেত্রে মূল্য সংযোজন কর বা, ফেরহাত, মূল্য সংযোজন কর ও সম্পূর্ণ উক্ত প্রদান করিতে হইবে; চলতি হিসাবে সমস্যা অথবা ট্রেজারী চালানের মাধ্যমে ট্রেজারী বা অনুমোদিত ব্যাংকে অর্থ জমা প্রদানের মাধ্যমে মূল্য সংযোজন কর/সম্পূর্ণ অর্থ/টার্ণওভার কর পরিশোধ করিতে হইবে ; এবং যে কোন মাস সম্পর্কিত মূল্য সংযোজন কর সাধিলপত্র/টার্ণওভার কর সাধিলপত্র আইন ও বিধিমালা অনুযায়ী নির্ধারিত কর দেয়াদ সম্মতির পর বিধি ৪ এর উপ-বিধি (৫) এবং বিধি ২৪ এর উপ-বিধি (১) এ উল্লিখিত সময়ের মধ্যে পেশ করিতে হইবে আপনার নিবন্ধন/তালিকাভুক্তি সংখ্যা ও এলাকা কোড নিম্নে উল্লেখ করা হইল : এলাকা কোড <b>নিবন্ধন/তালিকাভুক্তি সংখ্যা</b> : <b>19141083189</b>      <b>কোড</b> : <b>190402</b></p> <p>এই সংস্কারণ আপনার ধারা প্রদত্ত সকল চালানপত্রে এবং মূল্য সংযোজন কর কার্যালয়ের সহিত আপনার সকল যোগাযোগের ক্ষেত্রে উল্লেখ করিতে হইবেআপনি মূল্য সংযোজন কর আইন, ১৯৯১ এবং মূল্য সংযোজন কর বিধিমালা, ১৯৯১ এর সকল বিধানসমূহ যথাযথভাবে প্রতিপালন করিতে বাধা থাকিবেন। এতদ্বিষয়ে কোন ব্যাখ্যা বা তাহার প্রয়োজন হইলে আপনি স্থানীয় মূল্য সংযোজন কর কার্যালয়ের সহিত অফিস চলাকালে যে কোন সময়ে যোগাযোগ করিতে পারিবেন। আপনার নিবন্ধন/তালিকাভুক্তির আবেদন পত্রে অন্ত তাহে কোন পরিবর্তন হইলে তাহা বিধি ১২ এর উপ-বিধি (১) এ উল্লিখিত সময়ের মধ্যে সংশ্লিষ্ট মূল্য অফিসকে যথাযথভাবে জানাইতে হইবে।</p> <p>তারিখ : <b>২৮/০২/২৯</b>  বিভাগীয় কর্মকর্তা/কর্মকর্তা প্রাপ্ত কর্মকর্তা " <b>Md. Golam Ali</b>"</p> <p style="text-align: right;">আবস্তুল্লাহ আল মাহুদ সহকর্তা কমিশনার কলাইম্বল এক্সকিউটিভ ও ভার্ট বাসরাতি বিভাগ, ঢাকা।</p>	
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**BIN Certificate**

 <b>Government of the People's Republic of Bangladesh National Board of Revenue</b>	
Customs, Excise and VAT Commissionerate, Dhaka (South) Dhanmondi Division	
<b>Mushak-2.3</b>	
<b>Turnover Tax Enlistment Certificate</b>	
This is to certify that the person whose details are given below is registered under Value Added Tax and Supplementary Duty Act, 2012 (Act No. 47 of 2012)	
<b><u>BIN : 001012445-0201</u></b>	
Name of the Entity	:SHEBA TECHNOLOGIES LIMITED
Trading Brand Name	:Sheba
Old BIN	:19141083189
e-TIN	:533821572927
Address	:House-55, Road-4A; Dhanmondi PS; Dhaka-1209; Bangladesh
Issue Date	:04/02/2018
Effective Date	:01/09/2019
Type of Ownership	:Private Limited
Major Area of Economic Activity	:Services, Imports
	
This is a system generated certificate and doesn't require any signature	



Date: April 26, 2020

**TO WHOM IT MAY CONCERN**

This is to certify that **Sheba Technologies Limited** located at 8th Floor, Khaja Tower, 95 Mohakhali C/A, Dhaka-1212; is a member of Bangladesh Association of Software and Information Services (BASIS) in the General Member category since January 2016. Their Membership Number is **G737**.



Hashim Ahmed  
Secretary  
BASIS

**BASIS**  
**Membership**  
**Certificate**

Bangladesh Association of  
Software & Information Services  
BEDL, Bhaton (Level-3, West)  
12 Kawran Bazar, Dhaka-1210, Bangladesh

info@basis.org.bd  
www.basis.org.bd  
Tel: +88 02 98122747 / +88 02 98151196,  
+88 0144728-3, Fax: +88 02 98151197





#### CMMI DEV Maturity Level – 3 Published Appraisal

Please go to the following link and search by entering Appraisal ID: 8487

<https://cmmiinstitute.com/pars/?StateId=49336a7a-8945-4c9b-ad4b-2c142bd10662>

##### SHEBA TECHNOLOGIES LTD.

ID: 8487

###### Appraisal Team Leader

Ravinder Pathi

###### Sponsors

Riaz Ahmed

###### Partner

Pinlab Technologies

###### OU Scope and Level

Software Development-CMMI DEV V1.3-HL3

###### Appraisal Validity

2020/08/30 - 2023/08/30

## CMMI Level 3 Certification

CMMI DEV Maturity Level – 3 Published Appraisal in favor of  
**Sheba Technologies Limited,**  
8th Floor, Khawaja Tower, 95, Mohakhali C/A,  
Dhaka-1212

## ISO 27001:2013 Certification

ISO/IEC 27001:2013



## ISO 9001:2015 Certification

ISO 9001:2015



**BCS  
Membership  
Certificate**





The City Bank Limited  
Head Office : City Bank Center, 136, Gulshan Avenue, Gulshan-2, Dhaka-1212, Bangladesh.

Sequence No.CBL/NEW MARKET BRANCH/Certificate/2021/1786

Date: 22 November, 2021

To whom it may concern

This is to certify that, Sheba Technologies Limited, address- of House-55, Road-4/A Dhanmondi, Dhaka, Bangladesh, Dhaka has been maintaining a SND account bearing Account No. 3101610226001 with The City Bank Limited, New Market Branch since 23 February, 2015 and the conduct of the account has been noted satisfactory.

This certificate is issued at the request of our valued account holder based on the accounts statement and without assuming any risk or prejudice on the part of this bank or any of its officials.

### Bank Solvency Certificate



Authorized Signature

ARIFA SULTANA  
Assistant Customer Service  
Manager  
The City Bank Limited  
New Market Branch, Dhaka



Authorized Signature

MAHFUZA PARVEEN  
AVP & SCSM  
The City Bank Limited  
New Market Branch, Dhaka

Phone: 58813483, 58814375, 58813126  
Fax: 880-2-9884446; G.P.O. Box No. 3381, Dhaka  
E-mail: info@thecitybank.com; Web: www.thecitybank.com; SWIFT: CIBLBDDH

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
জাতীয় বাহ্যিক বোর্ড  
বাজার ভবন, সেক্ষনবাগিচা, ঢাকা।

নথি নং.-০৮.০১.০০০০.০৩৪.০১.২২৪.১৬- ৪/১/৮

তারিখ: ০৯/০৯/২০২১ খ্রি।

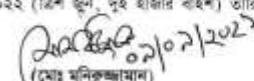
সমন্পর্ক নং- ১৯৯।

বিষয়: আজকর অধ্যাদেশ, ১৯৮৪ এর ৫২/৪ ধরণের হিটীয় খোজাইসের আওতায় আবক্ষ কর্তৃত বাতিলেকে বিল পরিশোধের সমন্পর্ক।

জাতীয় বাজার বোর্ড এ ঘৰ্মে সমন্পর্ক কৰছে যে, আজকর অধ্যাদেশ, ১৯৮৪ এর ৫২/৪ ধরণের হিটীয় খোজাইসে মোতাবেক অৰ্থ পৰিশোধের দাবিতে নিয়েজিত কৰ্তৃপক্ষ কৰ্তৃক Sheba Technologies Limited [ইটিআইলি-এণ্ড-ওয়েবডেভেলপমেন্টস/সি-০২৯ (সেক্ষনবাগিচা), কর অঞ্চল-০২, ঢাকা] কে Software development, Software or application customization, Website development, IT support & software maintenance, Call center service, Cyber security services ব্বক্সের ক্ষেত্ৰে পৰিশোধকোষ্য মূল্য হচ্ছে আজকর বাবদ কোন অৰ্থ কৰ্তৃত কৰাবেন না।

০২শ তবে, উপরিউক্ত বাবস্য বৰ্ণিত অবসন্নিকৃত সকলইওয়াত স্বৰূপতাৰ অধৰা তত্ত্ব-বিত্তৰ এবং কল্পিতৰ হাতৰওয়াত, হিটীয় ও অনুকূলিক যোগাশ স্বৰূপতাৰ অধৰা তত্ত্ব-বিত্তৰা, বাকে সুন, কোন সেবা কৰাম, ৬ষ্ঠ তফালি পার্ট-এ, প্যারা-৫০ বৰ্ণিত সেবা বা বাবস্য কোম বিল প্ৰাপ্তি এবং অনাম্ব বাবস্যাৰ ক্ষেত্ৰে এ সমন্পর্ক পৰোজ্য নহ'।

০৩। আজকর অধ্যাদেশ, ১৯৮৪ এর ৬ষ্ঠ তফালি পার্ট-এ, প্যারা-৫০ মোতাবেক ইন্দ্ৰিয়ত এ সমন্পর্কের মোয়াদ ০১/০৯/২০২১ (পৰেলা জুলাই, মুই হাজাৰ একশ) হচ্ছে ৩০/০৬/২০২২ (তিশ জুন, মুই হাজাৰ বাইশ) তাৰিখ পৰ্যন্ত কৰ্তৃত কৰকৰে।

  
(মেজ মনিকজ্ঞামান)

হিটীয় সচিব (কর অব্যাহতি)  
ফোন: +৮৮-২২২২২৬৪৬১

✓আপক:

বাবস্যকৰ্তা পৰিচয়ৰ  
Sheba Technologies Limited  
House # 55, Road # 4/A  
Dhanmondi R/A, Dhaka-1209.

নথি নং-০৮.০১.০০০০.০৩৪.০১.২২৪.১৬-

তারিখ: ০৯/০৯/২০২১ খ্রি।

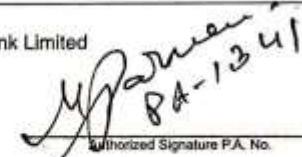
অনুলিপি অৰ্থাত ও প্ৰযোজনীয় বাবস্য প্ৰযোগেৰ জন্য প্ৰেৰিত হইল

১। কৰ কলিক্ষণাৰ, কৰ অঞ্চল-১৫, ঢাকা।

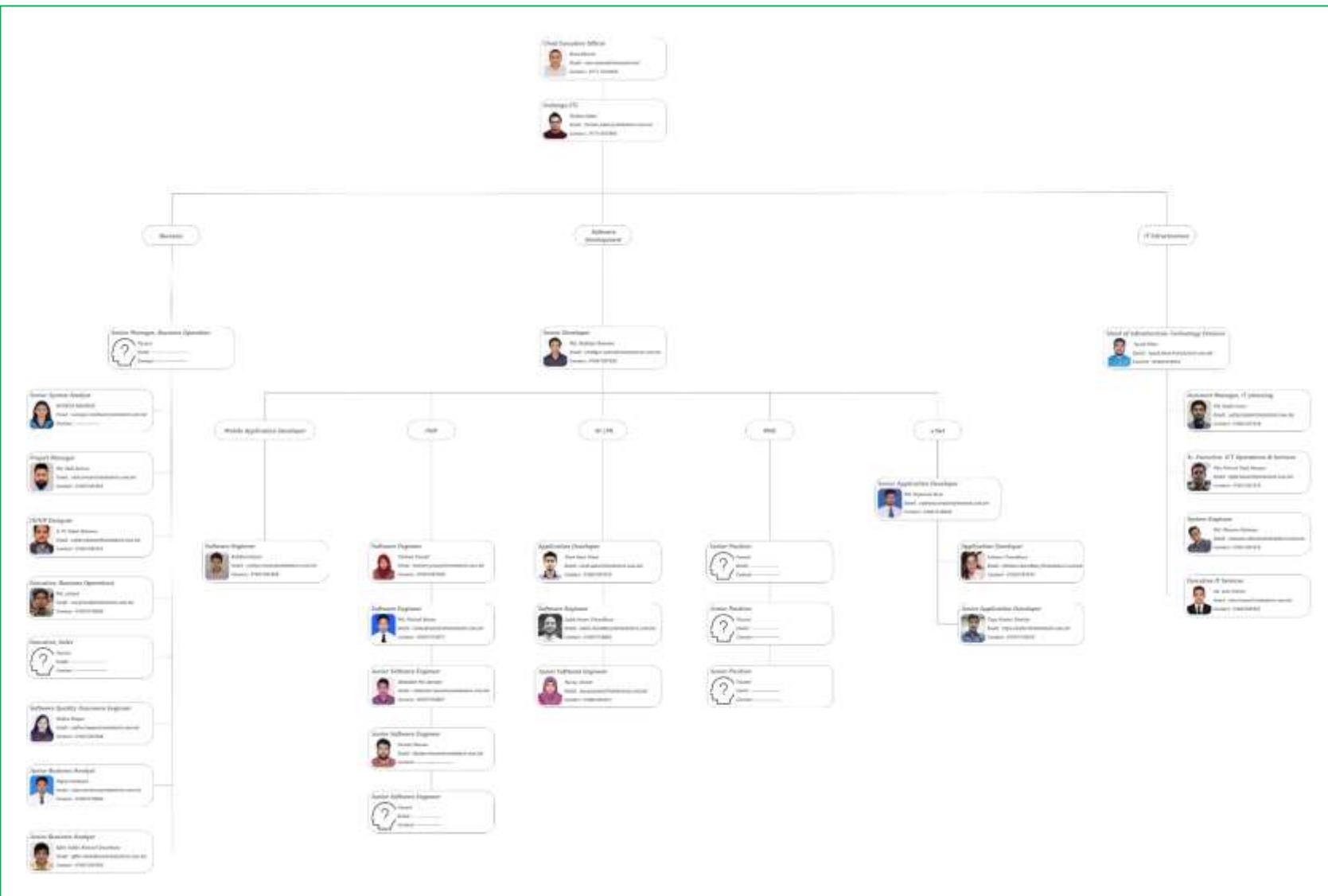
(মেজ মনিকজ্ঞামান)  
হিটীয় সচিব (কর অব্যাহতি)  
ফোন: +৮৮-২২২২২৬৪৬১

F:\OLD\EMAIL\Letter\Sheba Technologies Limited.doc

## Annexure B: Tender Security Deposit Pay Order

 <small>A/C Payee Only</small>	<b>Payable at any branch in Bangladesh</b> <b>225272684</b> <small>routing number</small> <b>EXECUTIVE DIRECTOR, CPESU, KURMITOLA, DHAKA</b>	<small>CB PO</small> <b>2483088</b> <small>DATE</small> <table border="1" style="display: inline-table;"><tr><td>2</td><td>9</td><td>1</td><td>1</td><td>2</td><td>0</td><td>2</td><td>1</td></tr><tr><td>D</td><td>D</td><td>M</td><td>M</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td></tr></table>	2	9	1	1	2	0	2	1	D	D	M	M	Y	Y	Y	Y
2	9	1	1	2	0	2	1											
D	D	M	M	Y	Y	Y	Y											
<small>THIS PAYMENT ORDER REQUIRES ENDORSEMENT</small>	<small>The Sum of Taka</small> <b>***SIX LAKH ONLY***</b> <span style="border: 1px solid black; padding: 2px;">TK      <b>***600,000.00***</b></span>																	
<small>ISSUED BY - NEW MARKET BRANCH</small> <b>1000137000002</b>		<small>For The City Bank Limited</small>  <small>Authorized Signature P.A. No.</small>																
 <small>Authorised Signature P.A. No.</small>																		
<b>2483088 225272684 1000137000002 19</b>																		

## **Annexure C: STL Organogram**



## Annexure D: Sheba Technologies Limited Brochure



### About - Sheba Technologies Ltd.

- Sheba Technologies Limited (STL) is part of the Sheba Group conglomerate which has been in Tech business for almost quarter of a century. We are always keen on listening to our customers and are constantly learning from their experiences while rendering Telecom and IT services. This has made us recognize the importance of evolving into the new 'normal' which is 'Data is everything'.
- With this aspiration, STL is fully committed to bring world class technologically advanced Business Process Automation by delivering architecturally superior Software solution, Off-the-Shelf customizable Software, Digital Identity platform for Citizens, Smart City initiatives, Artificial Intelligence and Machine Learning to our esteemed clients who are also our long-term strategic partners.

#### Our Services - Includes

- Software Development
- Mobile Application Development
- IT Infrastructure & Services



BACKGROUND

## Our Core Strength



### Design & Development - Tools



- UI / UX Design Tools:**
- Adobe Photoshop
  - Adobe Illustrator
  - Adobe InDesign
  - Adobe Creative Cloud
  - InVision
  - Just In Mind
  - Framer



- Programming Languages :**
- .NET & .NET Core
  - PHP & JavaScript
  - Android Native
  - iOS Native - Swift
  - NodeJS
  - Python
  - Java



- Database:**
- Oracle
  - My SQL
  - MS SQL
  - Mongo DB

STRENGTH

## Optical Character Recognition (OCR) Platform

It is a technology that recognizes text within a digital image which is commonly used to recognize text in scanned documents and images.



Optical Character Recognition

Using Artificial Intelligence

STRENGTH

## Biometric Identity Verification Platform

Custom Face Detection & Recognition with Biometric Verification System for Business Security which includes:

- Fingerprint Identification  
Currently Available
- Voice Verification  
Future Development
- IRIS Scanning  
Future Development
- Facial Recognition  
Currently Available

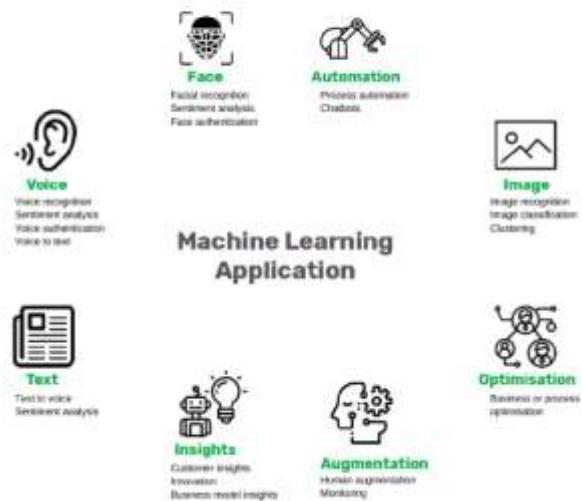
Biometric Verification for Business Security

Using Artificial Intelligence

STRENGTH

## Machine Learning Capabilities

It includes Face matching, OCR & predictive analytics.



## Data Engineering including Data Extraction



- We do all sorts of data engineering including data extraction, transformation, loading etc. for both structured and unstructured dataset. We use Python development language.
- Our ML capabilities includes face matching, OCR & predictive analytics.
- We can do system/service integration through API or database.
- We also provide customized dashboard development support.
- We develop mobile apps for both Android & iOS with multi lingual support.

STRENGTH

STRENGTH

## Analytical Dashboard



Customer Onboarding



Visitor Tracker



Bikroy Sheba POS



Relief Management System

STRENGTH

## Analytical Dashboard (Contd.)



Real-time Monitoring Panel



Sim Verification System



Retailer Management System



Customer Onboarding Solution



SME Solution



Lab Monitoring System

STRENGTH

## Analytical Dashboard (Contd.)



Air Lounge Management



Loan Management Solution



Employee Monitoring System



Priority Banking Solution



Bank MFS Platform



SaaS Cloud Market Place

STRENGTH

## Industries We Serve



Financial Institutions



Telecommunication



Software &amp; Services



Government





## Customer Onboarding Solution - via Face Verification



### Features

- Face Verification
- Optical Character Recognition (OCR)
- NID Image Capture
- Nominee Onboarding
- Digital Signature Capture / Upload
- Sanction & Screening
- Customer Risk Grading
- Nearest Branch Locator
- Appointments Scheduler



Android    iOS    Web



### Data Analytics

- Monitoring Dashboard Panel



### Sales Model

Perpetual & Subscription

### Customer Onboarding (Face Verification)

A customer on-boarding solution which uses AI, Python for OCR, facial recognition & face matching technology to on-board customers after successfully verifying their facial features via comparing & matching with Election Commission / Porichoy Database.

# PRODUCT

## Customer Onboarding Solution - via Fingerprint Verification


**Features**

- Fingerprint Verification
- Optical Character Recognition (OCR)
- NID Image Capture
- Nominee Onboarding
- Digital Signature Capture / Upload
- Sanction & Screening
- Customer Risk Grading
- Maker & Checker Environment
- Customer Profiling
- Digital Record Keeping


**Customer Onboarding (Finger print Verification)**

A customer on-boarding solution which uses biometric finger print technology to on-board customers after successfully verifying their finger prints from Election Commission / Porichoy Database.

**PRODUCT**


**Data Analytics**

- Monitoring Dashboard Panel


**Sales Model**

- Perpetual & Subscription

## Loan Performance Monitoring Platform


**Solution**

- Linux Platform


**Loan Collection Platform**

A highly interactive data visualization & monitoring dashboard for Small and Medium Enterprises (SME) division to seamlessly perform its country-wide operations.

**PRODUCT**


**Data Analytics**

- KPI Monitoring Dashboard


**Sales Model**

- Perpetual

## Priority Banking Platform


**Solution**

- Linux Platform


**Features**

- Account Information
- Card Information
- Product & Services
- Value Added Services
- Premium Banking Offers
- Premium Banking Centers
- Location Tracking
- 24/7 RM Response


**Data Analytics**

- Priority Customer Admin Panel


**Sales Model**

- Perpetual & Subscription



**Priority Banking Solution**

The Priority Banking mobile application is envisaged as a one-stop banking solution for High Net Worth clients that will provide them all the bank's services within a dedicated prioritized mobile application.

**PROPOSED**

## End-to-End Credit Line Management Platform


**Solution**

- Linux Platform


**Features**

- E-commerce
- E-Wallet
- E-KYC
- Digital Credit Line Issuance
- Loan Management
- Product Management
- Merchant Management
- Collection Management
- Work Flow


**Data Analytics**

- Monitoring Dashboard Panel


**Sales Model**

- Perpetual & Subscription



**Digital Credit Line Issuance**

Digital Credit Line Issuance is an envisaged Consumer White Goods (CWG) line of business implementation solution which will enable it to provide easy loan to customers on consumer goods through mobile & web channels.

**PROPOSED**



## Subscriber Verification System



### Solution

- Linux & Windows Platform



### Application Layer

- N-Tier Architecture



### Data Analytics

- Real time end-to-end monitoring



### Retailer & Subscription

- 140,000 Retailer
- 122 Million Subscriber



### Subscriber Verification System

Biometric Verification System to activate, re-enlist, supplant & deactivate SIMs utilizing biometric confirmation with the National Identification database from Election Commission.

SOLUTION

## Retailer Apps Consolidation


**Solution**

- Linux & Windows Platform


**Application Layer**

- N-Tier Architecture


**Data Analytics**

- Real time end-to-end monitoring


**Subscription**

- 60,000 Subscriber


**Retailer Single Application**

An all-in-one application for all retailers. All retailer functions such as SIM sales, retailer commission monitoring, product requisition, app installation, etc. can be performed through the Red Cube mobile application.

# SOLUTION

## SaaS Cloud Market Place


**Solution**

- Linux & Windows Platform


**Features**

- Product Management
- Shopping Cart
- Payment Gateway
- Tax Configuration
- Wish list Management
- Billing Package Management
- Order Subscription Management
- Order Tracking
- Ticketing System


**SaaS Cloud Market Place**

**Data Analytics**

- Monitoring Dashboard Panel


**Sales Model**

- Perpetual & Subscription

Virtual Cloud Service Environment for solution partners & registered customers to buy and sell Software as a Service (SaaS). This environment will work as a market place platform for any registered user to subscribe/purchase a wide range of application/software.

# PROPOSED

## Software & Services



### Learning Management Platform



#### Solution

- Linux Platform



#### Features

- Live Classes
- Quiz Scheduler
- Training Hub
- Analytical Dashboard
- Tracking Progress
- Course Manager
- Content Vault
- Assessment
- Certificates



#### Data Analytics

- Monitoring Dashboard Panel



#### Sales Model

Perpetual & Subscription



#### Learning Management System

Our cloud based Learning Management System is designed to help you attract, retain and develop key talent by introducing effective, engaging and relevant training to motivate your employees and develop their skills whilst improving the productivity of your workforce.

# PRODUCT

## Employee Task Management Platform


**Solution**

- Linux Platform


**Features**

- Task / Sub Task Management
- Reassign Task Control
- Task on Kanban Board
- Performance Log
- Custom Team Management
- Task Priority Control
- Analytical Dashboard
- Communication Channel
- Management Dashboard


**Data Analytics**

- KPI & Project Status Monitoring Dashboard


**Sales Model**

- Perpetual & Subscription



### Task Management Platform

Task management is more than a to-do list. It means tracking tasks from beginning to end, delegating subtasks to teammates and setting deadlines to make sure projects get done on time. Task management software empowers teams to work more productively and efficiently.

PRODUCT

## Touchless Attendance System


**Solution**

- Artificial Intelligent System


**Features**

- Employee Data Capture
- Facial Biometrics Registration
- Image Capture
- Image Learning Mechanism
- Optical Character Recognition
- Facial Data Verification
- Attendance Management

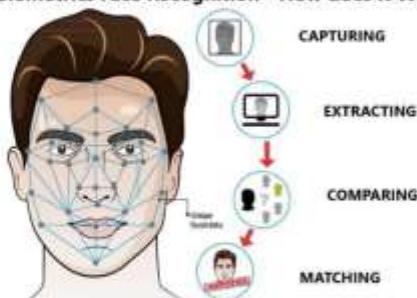

**Data Analytics**

- System Monitoring Dashboard


**Sales Model**

- Perpetual & Subscription

### Biometrics Face Recognition - How does it Work?



### Touchless Attendance System

The system is capable of registering/recording employee Attendance data digitally using Face Verification method with location and time stamp.

PRODUCT

## Visitor Tracker Platform


**Solution**

- Linux Platform


**Features**

- Visitor Management
- Visitor Recognition
- Pre-Booking Functionality
- Image Capture
- Print Badge
- Push Notification
- In-depth Reporting


**Data Analytics**

- System Administration Panel


**Sales Model**

Perpetual & Subscription


**Visitor Tracker**

Visitor Management System (VMS) is a solution designed to keep detailed visitor records of an organization by registering details of each entity visitation over time.

# PRODUCT

## Bikroy Sheba - Point of Sale (POS)


**Solution**

- Windows Platform


**Features**

- Inventory Management with Central Warehouse
- Procurement Management
- Sales Management
- Table & Waiter Management
- Kitchen Order Tracking
- Recipe Management
- Food Menu Management
- Multiple Branch Management
- 360 degree Reporting
- Many More...


**Data Analytics**

- Management Reporting Dashboard


**Sales Model**

Perpetual & Subscription


**Restaurant Management System**

A point of sale (POS) solution which offers a highly competitive feature-rich back office management system among other functionalities.

Visit Us : [pos.shebatech.com.bd](http://pos.shebatech.com.bd)

# PRODUCT

## Smart Service Platform


**Solution**

- Linux Platform


**Features**

- Vehicle Management
- Store Location Management
- Service Management
- Spare Parts Management
- Promotional Management
- Vehicle Paper Management
- Service Center Management
- Push Notification


**Sales Model**

Perpetual & Subscription


**Smart Service Solution**

Smart Service is a mobile application which enables customer's request for service appointments, maintain vehicle historical service history, SOS calls, manage vehicle paper works & perform many other relevant tasks.

# SOLUTION

## Training & Career Portal


**Solution**

- Linux Platform


**Features**

- Graduate Portal
- Employer Portal
- Graduate Profile Management
- CV Management
- Job Portal
- News Feed
- Real-time Chat


**Data Analytics**

- System Monitoring Dashboard


**Sales Model**

Perpetual & Subscription


**Graduate Job Portal**

Graduate Job Portal is a blend of a Social Media Platform with a job Portal where students can interact with one another by sending friend request and messages while scanning for jobs at all the registered employers in the platform.

# SOLUTION

## Board Meeting Management Platform


**Solution**

- Linux Platform


**Features**

- Board Meeting Agenda
- Post Meeting Document Management
- Share Documents
- Document Editor
- Manage Document Archive
- Messaging Service
- Group Chat
- Push Notification


**Sales Model**

Perpetual & Subscription



### Board Meeting Management Solution

An effective way for Board Directors to access the Board & Committee Papers and supplementary information directly on their devices. The platform facilitates quick decision making through a collaborative approach. All comments and feedbacks are available for view by the recipient stakeholders.

**PROPOSED**

## Airport Lounge Services Platform


**Solution**

- Linux Platform


**Features**

- Prebook Lounge Access
- Mobile Number Verification
- Promotion Management
- Value Added Services
- Food Order Management
- Food Menu Management
- Customer Feedback Management
- External Service Management


**Data Analytics**

- System Monitoring Dashboard


**Sales Model**

Perpetual & Subscription



### AIR Lounge Customer Solution

A convenience application for customers to pre-book lounge seats & order food.

**PROPOSED**

## Bikroy Sheba – Retail Point of Sale (POS)


**Features**

- Store Inventory Management
- Order Management
- Sales Module
- Accounts Module
- Vendor Management
- Customer Management
- Custom Reports


**Hardware Integration**

- Bar-code Scanner
- Cash Drawer
- Magnetic Card Swipe
- Customer Display
- Thermal Printer


**Sales Model**

Perpetual & Subscription

**Retail Point of Sale (POS)**

Bikroy Sheba Retail POS, provides detailed financial reporting, enables inventory tracking in real time, allows capture of all customer information for improved services and also permits flexible product pricing configuration.

FUTURE



Government

# PRODUCT

## Relief Distribution Platform (e-KYC)


**Solution**

- Linux Platform


**Features**

- Citizen Data Management
- Benefit Management
- Relief Distribution Management
- NID Image Capture
- Face Verification with ID
- Optical Character Recognition
- Relief Validity Timer
- Inventory Management


**Data Analytics**

- System Monitoring Dashboard


**Sales Model**

- Perpetual & Subscription


**Relief Management System**

An effective relief management system to monitor relief activities & ensure delivery of relief to the intended target group.

# SOLUTION

## Lab Monitoring & Management Platform


**Solution**

- Linux & Windows Platform


**Features**

- Device Agent
- Device Live Status Reporting
- Asset Management
- Lab Booking Management
- Event Management
- Ticketing System
- Live Messaging
- Push Notification


**Data Analytics**

- System Monitoring Dashboard


**Sales Model**

- Perpetual & Subscription


**Lab Monitoring & Management System**

A solution designed to track/monitor computer & mobile device assets in real time.

## Smart City IoT Platform


**Solution**

- Linux Platform


**Features**

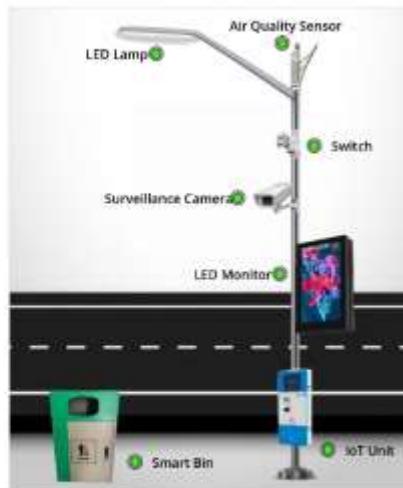
- LED Lamp
- Air Quality Sensor
- Wi-Fi
- Surveillance Camera
- LED Monitor
- Panic Button
- IoT Unit
- Smart Bin


**Data Analytics**

- System Monitoring Dashboard


**Sales Model**

- Perpetual


**Smart City Solution**

Installation & commissioning of air quality sensors, LED lamps, Wi-Fi surveillance cameras, digital display, panic button & IoT unit. The backend of the system is facilitated with an interactive dashboard to monitor & manage all devices.

# SOLUTION

## Partners – We have worked with



# Thank You!

Solution Portfolio 2020 - 21  
Sheba Technologies Ltd

## BUSINESS **CONTACT**

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**NORTH AMERICA:**  
566 Crystalberry Terrace,  
San Jose, CA 95129, USA

## Annexure E: Financial Capacity of the Firm

### Last 03 Years Audited Financial Report:

**2017-2018**



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#### Sheba Technologies Limited

#### Statement of Financial Position

As at 30 June 2018

ASSETS:	Notes	Figure in BDT	
		30 June 2018	30 June 2017
<b>Non Current Assets:</b>			
Property, Plant & Equipment	4	5,833,003	6,245,181
License & Short Code Acquisition		435,250	435,250
		<u>6,268,253</u>	<u>6,680,431</u>
<b>Current Assets:</b>			
Accounts Receivable	5	3,198,614	13,089,269
Advance, Deposit & Prepayments	6	736,927	1,234,049
Advance Income Tax	7	393,874	409,464
Cash & Cash Equivalents	8	175,087	417,938
		<u>4,504,502</u>	<u>15,150,720</u>
<b>Total Assets</b>		<u><u>10,772,755</u></u>	<u><u>21,831,151</u></u>
<b>EQUITY &amp; LIABILITIES:</b>			
<b>Shareholders' Equity</b>			
Share Capital	9	100,000	100,000
Retained Earnings/(Loss)		(53,042,140)	(21,436,739)
		<u>(52,942,140)</u>	<u>(21,336,739)</u>
<b>Current Liabilities</b>			
Accounts Payable	10	9,525,177	12,425,020
Inter-company Payables	11	51,264,797	27,331,022
Liabilities for Expenses	12	2,924,921	3,411,849
		<u>63,714,895</u>	<u>43,167,891</u>
<b>Total Equity &amp; Liabilities</b>		<u><u>10,772,755</u></u>	<u><u>21,831,151</u></u>

The annexed notes form an integral part of these financial statements.

Director

Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
26 December 2018

  
Mahfel Huq & Co.  
Chartered Accountants



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### Sheba Technologies Limited

#### Statement of Profit or Loss & Other Comprehensive Income

For the year ended 30 June 2018

Sl	Particulars	Notes	30 June 2018	30 June 2017	Figure in BDT
A.	Revenue from Operations	13	12,767,517	48,305,583	
B.	Direct Cost of Revenue	14	12,048,933	21,851,393	
C.	<b>Gross Profit (A-B)</b>		<b>718,585</b>	<b>26,454,190</b>	
D.	Operating Expenses:				
	General & Administrative Expenses	15	31,601,889	34,968,918	
	Depreciation & Amortization		738,084	705,493	
			<b>32,339,973</b>	<b>35,674,412</b>	
E.	<b>Profit/(Loss) from operations (C-D)</b>		<b>(31,621,388)</b>	<b>(9,220,221)</b>	
F.	Non operating Income		24,594	180,491	
G.	<b>Net Profit/(Loss) before Tax (E+F)</b>		<b>(31,596,793)</b>	<b>(9,039,730)</b>	
H.	Income Tax Expense		8,608	63,172	
I.	<b>Net Profit/(Loss) for the year (G+H)</b>		<b>(31,605,401)</b>	<b>(9,102,903)</b>	

The annexed notes form an integral part of these financial statements.

Director

Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
 26 December 2018

  
 Mahfel Huq & Co.  
 Chartered Accountants


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### Sheba Technologies Limited

#### Statement of Changes in Equity

For the year ended 30 June 2018

Figure in BDT

Particulars	Share Capital	Share Money Deposits	Retained Earnings	Total
Balance as at 01 July 2016	100,000	-	(11,495,912)	(11,395,912)
Net profit/(Loss) for the year	-	-	(9,102,903)	(9,102,903)
Adjustment during the year	-	-	(837,924)	(837,924)
<b>Balance as at 30 June 2017</b>	<b>100,000</b>	<b>-</b>	<b>(21,436,739)</b>	<b>(21,336,739)</b>
Balance as at 01 July 2017	100,000	-	(21,436,739)	(21,336,739)
Net profit/(Loss) for the year	-	-	(31,605,401)	(31,605,401)
<b>Balance as at 30 June 2018</b>	<b>100,000</b>	<b>-</b>	<b>(53,042,140)</b>	<b>(52,942,140)</b>

The annexed notes form an integral part of these financial statements.

Director

Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
 26 December 2018



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 Chartered Accountants





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**Sheba Technologies Limited**

**Statement of Cash Flows**

For the year ended 30 June 2018

Sl	Particulars	30 June 2018	30 June 2017	Figure in BDT
<b>A. Cash flows from operating activities</b>				
Net profit/(loss) before tax		(31,596,793)	(9,039,731)	
Add: Depreciation on property, plant and equipment		738,084	705,493	
		<u>(30,858,710)</u>	<u>(8,334,238)</u>	
Changes in working capital:				
Decrease/(Increase) in Accounts Receivables		9,890,656	(10,881,319)	
Decrease/(Increase) in Advance, Deposit & Prepayments		497,122	193,843	
Decrease/(Increase) in Advance Income Tax		6,983	(18,049)	
Increase/(Decrease) in Liabilities for Expenses		(486,928)	2,483,620	
Increase/(Decrease) in Account Payable		(2,899,843)	11,509,120	
<b>Net cash from / (used) in operating activities</b>		<u>(23,850,720)</u>	<u>(5,047,023)</u>	
<b>B. Cash flows from investing activities</b>				
Decrease/(Increase) in License Acquisition		-	(110,250)	
Acquisition of property, plant and equipment		(325,906)	(6,012,343)	
<b>Net cash used in investing activities</b>		<u>(325,906)</u>	<u>(6,122,593)</u>	
<b>C. Cash flows from financing activities</b>				
Inter-company Payables		23,933,775	11,385,758	
<b>Net cash flows (used)/from financing activities</b>		<u>23,933,775</u>	<u>11,385,758</u>	
<b>Net increase in cash and cash equivalents (A+B+C)</b>		<u>(242,852)</u>	<u>216,141</u>	
Cash and cash equivalents at the beginning of the year		417,938	201,797	
<b>Cash and cash equivalents at the end of the year</b>		<u>175,087</u>	<u>417,938</u>	

The annexed notes form an integral part of these financial statements.

Director

Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
 26 December 2018



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**Sheba Technologies Limited**  
**Schedule of Property, Plant & Equipment**  
**As at 30 June 2018**

Node-4

Sl.	Name of Assets	Cost		Depreciation			WDV as 30/06/2018		
		As on 01/07/2017	Addition d/y	As on 30/06/2018	Depreciation Rate	As on: 01/07/2017			
1	Computer Equipment	1,587,599	45,920	1,633,519	10%	240,106	163,352	403,458	1,230,001
2	Electronics Equipment	127,440	-	127,440	10%	23,664	12,744	36,408	93,032
3	Office Equipment	952,663	-	952,663	10%	107,259	95,266	202,526	750,137
4	Servers & Routers	1,687,804	173,025	1,860,829	10%	168,786	166,089	354,875	1,506,014
5	Cyber Security Lab	336,115	-	336,115	10%	33,612	33,612	67,223	268,892
6	IT Equipments	1,013,896	-	1,013,896	10%	101,390	101,290	202,779	811,317
7	ISP Equipments	1,136,087	-	1,036,087	10%	103,609	103,609	207,217	828,870
8	VAS Equipments	313,269	-	313,269	10%	31,327	31,327	62,654	256,615
9	POS Equipment	-	100,961	100,961	10%	-	10,096	10,096	96,265
	<b>Total</b>	<b>7,054,933</b>	<b>325,906</b>	<b>7,380,839</b>		<b>809,752</b>	<b>738,084</b>	<b>1,547,836</b>	<b>5,833,083</b>
	<b>30 June 2017</b>	<b>1,042,590</b>	<b>6,012,343</b>	<b>7,054,933</b>		<b>104,259</b>	<b>705,493</b>	<b>809,752</b>	<b>6,245,181</b>





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**Sheba Technologies Limited**  
 Notes to the Financial Statements for the year ended 30 June 2018

Figure in BDT

30 June 2018	30 June 2017
--------------	--------------

**Note-5: Accounts Receivables**

Grameenphone Limited	2,061,263	13,089,269
ASHIC Foundation	(40,762)	-
Aspire Garments	19,300	-
Bangladesh Youth Leadership Center	27,000	-
Bengal Brands Management Bangladesh Limited	918,390	-
Kazi Traders Ltd.	36,575	-
Sheba Hospitality Management Ltd.	3,519	-
Robi Axiata Limited	173,329	-
	<hr/> 3,198,614	<hr/> 13,089,269

The above amount represents receivables from above customers against rendering of Bio-metric MDM solution, cyber security services and software development & solutions.

**Note-6: Advance, Deposit & Prepayments**

The break-up of the advance, deposit & prepayments are as follows:

Advance against Expenses	123,051	351,992
Advance against Project	89,476	462,057
Security Deposit-Jashore IT Park	104,400	-
Bank Guarantee to BTRC	420,000	420,000
	<hr/> 736,927	<hr/> 1,234,049

**Note-7: Advance Income Tax**

Opening Balance	409,464	1,229,339
Less: Adjusted during the year	18,049	837,924
	<hr/> 391,415	<hr/> 391,415
Add: Paid during the year	2,459	18,049
Closing Balance	<hr/> 393,874	<hr/> 409,464



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**Sheba Technologies Limited**  
**Notes to the Financial Statements for the year ended 30 June 2018**

Figure in BDT	
30 June 2018	30 June 2017

**Note-8: Cash & Cash Equivalent**

The break-up of the cash & cash equivalent is as follows:

The City Bank Ltd.-SND	48,613	281,796
The City Bank Ltd.-CD	6,255	6,954
Janata Bank Ltd.-CD	63,407	44,557
Cash in Hand	56,812	84,631
	<b>175,087</b>	<b>417,938</b>

**Note-9: Share Capital**

Authorised capital:	10,000,000	10,000,000
(1,000,000 Ordinary shares @ Tk. 10 each)		
Paid up capital:		
Integrated Services Ltd.	80,000	80,000
(8,000 Ordinary shares @ Tk. 10 each)		
Teleport Bangladesh Ltd.	20,000	20,000
(2,000 Ordinary shares @ Tk. 10 each)		
	<b>100,000</b>	<b>100,000</b>

**Note-10: Accounts Payable**

The accounts payable consists of:

One Stop Service & Solution	-	49,253
United Continental Ltd.	-	32,339
99D. ARC	70,000	70,000
Zakir Traders	-	4,313
Bengal Mobile QA Solution	7,940,624	11,249,462
Arrow3 Live	150,000	255,605
Earth Telecommunication	35,650	35,650
Innovative Minds	694,444	-
M.I.H Enterprise	5,556	-
Techcity Bangladesh Ltd.	34,800	-
HRC Technologies	62,500	20,000
Locationguru	5,855	-
Metronet Bangladesh Ltd	6,900	28,700
Advance from Uttara Motors Ltd.	-	292,600
Office Rent	232,598	232,598
Amica Veritas	276,000	138,000
Race Online Ltd	10,250	16,500
	<b>9,525,177</b>	<b>12,425,020</b>





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### Sheba Technologies Limited

Notes to the Financial Statements for the year ended 30 June 2018

	Figure in BDT	
	30 June 2018	30 June 2017

#### Note-11: Inter-company Payable

Integrated Services Ltd.	51,209,797	27,276,022
Teleport Bangladesh Ltd.	55,000	55,000
	<b>51,264,797</b>	<b>27,331,022</b>

The above amount has been taken from inter-companies as advance to meet up the operational expenses without bearing any interest.

#### Note-12: Liabilities for Expenses

The break-up of the liabilities for expenses is as follows:

Salary & Allowances Payable	1,669,781	2,002,111
Outstanding Expenses	97,209	64,480
Income Tax Payable	8,608	63,172
Audit Fee Payable	46,000	46,000
Withholding Tax & VAT Payable	1,103,323	1,236,086
	<b>2,924,921</b>	<b>3,411,849</b>

#### Note-13: Revenue from Operations

The break-up of the revenue from operations is as follows:

GP NID Project	10,245,353	47,555,583
Web Development & System Solution	1,790,000	750,000
Cyber Security Solution	339,445	-
Surveillance Solution	392,720	-
	<b>12,767,517</b>	<b>48,305,583</b>

#### Note-14: Direct Cost of Revenue

The break-up of the direct cost of revenue is as follows:

Software Solution for NID Verification-GP Project	11,027,312	20,531,062
Web Development & System Solution	878,906	625,742
VAS Solution Development	10,085	406,639
Surveillance Solution Development	21,025	178,425
Cyber Security Development Cost	111,605	109,525
	<b>12,048,933</b>	<b>21,851,393</b>



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**Sheba Technologies Limited**  
**Notes to the Financial Statements for the year ended 30 June 2018**

	Figure in BDT	
	30 June 2018	30 June 2017

**Note-15: General & Administrative Expenses**

The break-up of the general & administrative expenses is as follows:

Salary & Allowances	21,501,014	25,560,852
Internet Bill	911,922	734,450
Telephone & Mobile Bill	250,144	569,545
IT Accessories Purchase & Maintenance	71,975	319,919
Audit Fee	46,000	46,000
Anti Virus	21,946	142,932
Office Running Expenses	25,000	-
Recruitment Expenses	24,287	73,673
Bank Charges & Commission	21,900	22,075
BASIS SoftExpo Fair Expenses	260,457	297,488
Business Planning Expenses	5,575	57,080
Motor Vehicle Running Expenses	280,419	432,568
AGM & Meeting Expenses	34,543	42,031
Car Rent & Tax Token	336,330	634,263
Digital World & Trade Fair Expenses	-	286,548
Clearing & Forwarding Charges	9,500	40,040
Design Charges	7,000	27,594
Electricity Bill	285,120	289,788
Valuer Fee	23,000	-
Fuel & Lubricants	115,339	294,748
Market Survey & Research Cost	-	1,840,097
Promotional Expenses	39,107	153,429
IRC, Trade Licence Renewal	58,845	38,755
Retainer	690,000	872,722
Books, Newspaper & Periodicals	15,000	32,772
Miscellaneous Expenses	65,000	93,480
Staff Welfare & Medical Expenses	-	37,949
Membership fee of DCCI, BASIS & APNIC	77,852	92,455
Office Rent	5,734,284	353,610
Office Renovation Expenses	26,380	232,857
Overtime Expenses	35,752	153,861
Liveries & Uniforms	4,200	21,800
Postage & Courier Expenses	-	10,937
Stationery Expenses	164,770	203,249



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 Chartered Accountants  
An independent member firm of AGN International



### Sheba Technologies Limited

Notes to the Financial Statements for the year ended 30 June 2018

	Figure in BDT	
	30 June 2018	30 June 2017
Tender Documents	5,900	-
Repair & Maintenance of AC	30,098	32,339
Security Certificate	-	10,973
Security Guard Hire Expenses	300,240	-
Software Development Expenses	-	636,850
Human Resources Development	-	8,100
Travelling & Conveyance (Local)	122,990	130,589
Travelling & Conveyance (Foreign)	-	140,500
	<u>31,601,889</u>	<u>34,968,918</u>



**2018-2019**


**Mahfel Huq & Co.**  
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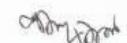


**Sheba Technologies Limited**  
**Statement of Financial Position**  
**As at 30 June 2019**

ASSETS:	Notes	Figure in BDT	
		30 June 2019	30 June 2018
<b>Non Current Assets:</b>			
Property, Plant & Equipment	4	5,277,344	5,833,003
License & Short Code Acquisition		435,250	435,250
		<u>5,712,594</u>	<u>6,268,253</u>
<b>Current Assets:</b>			
Accounts Receivable	5	2,595,453	3,198,614
Advance, Deposit & Prepayments	6	732,592	681,927
Advance Income Tax	7	393,551	393,874
Cash & Cash Equivalents	8	2,972,341	175,087
		<u>6,693,937</u>	<u>4,449,502</u>
<b>Total Assets</b>		<u><b>12,406,530</b></u>	<u><b>10,717,755</b></u>
<b>EQUITY &amp; LIABILITIES:</b>			
<b>Shareholders Equity</b>			
Share Capital	9	100,000	100,000
Share Money Deposit	10	79,895,522	51,209,797
Retained Earnings/(Loss)		(78,661,012)	(53,042,140)
		<u>1,334,510</u>	<u>(1,732,343)</u>
<b>Current Liabilities</b>			
Accounts Payables	11	9,385,966	9,525,177
Liabilities for Expenses	12	1,686,055	2,924,921
		<u>11,072,020</u>	<u>12,450,098</u>
<b>Total Equity &amp; Liabilities</b>		<u><b>12,406,530</b></u>	<u><b>10,717,755</b></u>

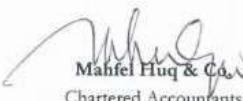
The annexed notes form an integral part of these financial statements.

  
 Director

  
 Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
 22 December 2019

  
 Mahfel Huq & Co.  
 Chartered Accountants





**Mahfel Huq & Co.**  
Chartered Accountants  
An independent member firm of AGN International

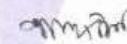


**Sheba Technologies Limited**  
**Statement of Profit or Loss & Other Comprehensive Income**  
**For the year ended 30 June 2019**

Sl	Particulars	Notes	Figure in BDT	
			30 June 2019	30 June 2018
A.	Revenue from Operations	13	12,415,216	12,767,517
B.	Direct Cost of Revenue	14	2,369,046	12,048,933
C.	<b>Gross Profit (A-B)</b>		<b>10,046,170</b>	<b>718,585</b>
D.	Operating Expenses:			
	General & Administrative Expenses	15	34,920,574	31,601,889
	Depreciation & Amortization		758,353	738,084
			<b>35,678,927</b>	<b>32,339,973</b>
E.	Profit/(Loss) from operations (C-D)		(25,632,758)	(31,621,388)
F.	Non operating Income		21,362	24,594
G.	<b>Net Profit/(Loss) before Tax (E+F)</b>		<b>(25,611,395)</b>	<b>(31,596,793)</b>
H.	Income Tax Expense		7,477	8,608
I.	<b>Net Profit/(Loss) for the year (G+H)</b>		<b>(25,618,872)</b>	<b>(31,605,401)</b>

The annexed notes form an integral part of these financial statements.

  
Director

  
Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
22 December 2019

  
Mahfel Huq & Co.  
Chartered Accountants



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**Mahfel Huq & Co.**  
 Chartered Accountants  
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### Sheba Technologies Limited

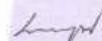
#### Statement of Changes in Equity

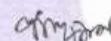
For the year ended 30 June 2019

Figure in BDT

Particulars	Share Capital	Share Money Deposits	Retained Earnings	Total
Balance as at 01 July 2017	100,000	27,276,022	(21,436,739)	5,939,283
Received during the year	-	23,933,775	-	23,933,775
Net profit/(Loss) for the year	-	-	(31,605,401)	(31,605,401)
Balance as at 30 June 2018	<u>100,000</u>	<u>51,209,797</u>	<u>(53,042,140)</u>	<u>(1,732,343)</u>
Balance as at 01 July 2018	100,000	51,209,797	(53,042,140)	(1,732,343)
Received during the year	-	28,685,725	-	28,685,725
Net profit/(Loss) for the year	-	-	(25,618,872)	(25,618,872)
Balance as at 30 June 2019	<u>100,000</u>	<u>79,895,522</u>	<u>(78,661,012)</u>	<u>1,334,510</u>

The annexed notes form an integral part of these financial statements.

  
 Director

  
 Managing Director

Dhaka,  
 22 December 2019

**Estd. 1974**





**Mahfel Huq & Co.**  
 Chartered Accountants  
 An Independent member firm of AGN International



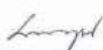
### Sheba Technologies Limited

#### Statement of Cash Flows

For the year ended 30 June 2019

Sl	Particulars	30 June 2019	30 June 2018	Figure in BDT
<b>A. Cash flows from operating activities</b>				
Net profit/(loss) before tax		(25,611,395)	(31,596,793)	
Add: Depreciation on property, plant and equipment		758,353	738,084	
		<u>(24,853,042)</u>	<u>(30,858,710)</u>	
Changes in working capital:				
Decrease/(Increase) in Accounts Receivables		603,161	9,890,656	
Decrease/(Increase) in Advance, Deposit & Prepayments		(50,665)	497,122	
Decrease/(Increase) in Advance Income Tax		(7,153)	6,983	
Increase/(Decrease) in Liabilities for Expenses		(1,238,866)	(486,928)	
Increase/(Decrease) in Account Payable		(139,211)	(2,899,843)	
<b>Net cash from / (used) in operating activities</b>		<u>(25,685,776)</u>	<u>(23,850,720)</u>	
<b>B. Cash flows from investing activities</b>				
Decrease/(Increase) in License Acquisition		-	-	
Acquisition of property, plant and equipment		(202,694)	(325,906)	
<b>Net cash used in investing activities</b>		<u>(202,694)</u>	<u>(325,906)</u>	
<b>C. Cash flows from financing activities</b>				
Share Money Deposit		28,685,725	23,933,775	
<b>Net cash flows (used)/from financing activities</b>		<u>28,685,725</u>	<u>23,933,775</u>	
<b>Net increase in cash and cash equivalents (A+B+C)</b>		<b>2,797,255</b>	<b>(242,852)</b>	
Cash and cash equivalents at the beginning of the year		175,087	417,938	
<b>Cash and cash equivalents at the end of the year</b>		<b>2,972,341</b>	<b>175,087</b>	

The annexed notes form an integral part of these financial statements.

  
 Director

  
 Managing Director

Dhaka,  
 22 December 2019



**Sheba Technologies Limited**  
**Schedule of Property, Plant & Equipment**  
**As at 30 June 2019**

Note-4

Sl.	Name of Assets	Cost			Depreciation			WDV as 30/06/2019
		Rs m. 01.07.2018	Addition d/v	As on 30/06/2019	Depreciation Rate	Rs m. 01.07.2018	Addition d/v	
1	Computer Equipment	1,633,519	77,357	1,710,876	10%	403,459	171,088	874,545
2	Electronics Equipment	127,440	-	127,440	10%	36,408	12,744	49,152
3	Office Equipment	952,665	65,260	1,017,925	10%	202,326	101,792	304,518
4	Servers & Routers	1,260,489	-	1,260,489	10%	354,875	186,089	540,964
5	Cyber Security Lab	336,118	60,077	396,192	10%	67,223	39,619	110,942
6	IT Equipments	1,013,896	-	1,013,896	10%	202,779	101,396	304,169
7	ISP Equipments	1,036,087	-	1,036,087	10%	207,217	103,609	310,826
8	VAS Equipments	313,269	-	313,269	10%	62,654	31,327	93,983
9	POS Equipment	106,963	-	106,963	10%	10,056	10,696	21,592
	<b>Total</b>	<b>7,180,639</b>	<b>282,694</b>	<b>7,583,533</b>		<b>1,547,836</b>	<b>758,353</b>	<b>2,306,190</b>
	<b>30 June 2018</b>	<b>7,054,933</b>		<b>7,380,839</b>		<b>809,752</b>	<b>738,084</b>	<b>1,547,836</b>
								<b>5,833,003</b>



B

**Sheba Technologies Limited**

Notes to the Financial Statements for the year ended 30 June 2019

	Figure in BDT	
	30 June 2019	30 June 2018

**Note-5: Accounts Receivables**

Gramophone Limited	1,833,334	2,061,263
ASHIC Foundation	2,966	(40,762)
Integrated Services Limited	35,000	-
Aspire Garments	19,300	19,300
Bangladesh Youth Leadership Center	7,000	27,000
AIC & Co. Limited	180,000	-
Teleport Bangladesh Limited	3,000	-
Bengal Brands Management Bangladesh Limited	490,812	918,390
Kazi Traders Ltd.	-	36,575
Sheba Hospitality Management Ltd.	7,038	3,519
AIC Securities Limited	15,000	-
Robi Axiata Limited	2,003	173,329
	<b><u>2,595,453</u></b>	<b><u>3,198,614</u></b>

The above amount represents receivables from above customers against rendering of Bio-metric MDM solution, cyber security services and software development & solutions.

**Note-6: Advance, Deposit & Prepayments**

The break-up of the advance, deposit & prepayments are as follows:

Advance against Expenses	21,040	123,051
Advance against Project	19,537	89,476
Step Up Communication	50,000	-
Teleport Bangladesh Ltd.	117,615	(55,000)
Security Deposit-Jashore IT Park	104,400	104,400
Bank Guarantee to BTRC	420,000	420,000
	<b><u>732,592</u></b>	<b><u>681,927</u></b>

**Note-7: Advance Income Tax**

Opening Balance	393,874	409,464
Less: Adjusted during the year	(2,460)	18,049
	<b><u>391,415</u></b>	<b><u>391,415</u></b>
Add: Paid during the year	2,136	2,459
Closing Balance	<b><u>393,551</u></b>	<b><u>393,874</u></b>



**Sheba Technologies Limited**

Notes to the Financial Statements for the year ended 30 June 2019

Figure in BDT

30 June 2019	30 June 2018
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**Note-8: Cash & Cash Equivalent**

The break-up of the cash & cash equivalent is as follows:

The City Bank Ltd.-SNID	1,602,867	48,613
The City Bank Ltd.-CD	4,760	6,255
Janata Bank Ltd.-CD	27,257	63,407
FDR with Phoenix Finance	1,300,000	-
Cash in Hand	37,457	56,812
	<hr/> <u>2,972,341</u>	<hr/> <u>175,087</u>

**Note-9: Share Capital**

Authorised capital:	10,000,000	10,000,000
(1,000,000 Ordinary shares @ Tk. 10 each)	<hr/> <u>10,000,000</u>	<hr/> <u>10,000,000</u>
Paid up capital:		
Integrated Services Ltd.	80,000	80,000
(8,000 Ordinary shares @ Tk. 10 each)	<hr/>	<hr/>
Teleport Bangladesh Ltd.	20,000	20,000
(2,000 Ordinary shares @ Tk. 10 each)	<hr/> <u>100,000</u>	<hr/> <u>100,000</u>

**Note-10: Share Money Deposit**

The amount has received as share money deposit from:

Integrated Services Limited	79,895,522	51,209,797
	<hr/> <u>79,895,522</u>	<hr/> <u>51,209,797</u>

**Note-11: Accounts Payable**

The accounts payable consists of:

991D. ARC	60,500	70,000
Bengal Mobile QA Solution	6,984,300	7,940,624
Arrow3 Live	42,187	150,000
Earth Telecommunication	35,650	35,650
Nikon Refrigerators	34,000	-
Innovative Minds	569,444	694,444
MLII Enterprise	5,556	5,556
Techcity Bangladesh Ltd.	313,200	34,800
ROWA Souvenir	30,000	-
Integrated Security Services Limited	52,164	-
HRCI Technologies	153,812	62,500
Locationguru	5,855	5,855
Metrone Bangladesh Ltd	12,600	6,900
Torun Ltd.	78,000	-
Office Rent	632,948	232,598
Amica Veritas	345,000	276,000
Race Online Ltd.	30,750	10,250
	<hr/> <u>9,385,966</u>	<hr/> <u>9,525,177</u>



**Sheba Technologies Limited**

Notes to the Financial Statements for the year ended 30 June 2019

	Figure in BDT	
	30 June 2019	30 June 2018

**Note-12: Liabilities for Expenses**

The break-up of the liabilities for expenses is as follows:

Salary & Allowances Payable	934,584	1,669,781
Outstanding Expenses	406,312	97,209
Income Tax Payable	5,341	8,608
Audit Fee Payable	46,000	46,000
Withholding Tax & VAT Payable	293,818	1,103,323
	<b>1,686,055</b>	<b>2,924,921</b>

**Note-13: Revenue from Operations**

The break-up of the revenue from operations is as follows:

Revenue from Grameenphone Ltd.	10,962,886	10,245,353
Revenue from Robi Axiata Ltd.	223,286	-
Web Development & System Solution	1,213,311	1,790,000
Cyber Security Solution	-	339,445
Surveillance Solution	15,733	392,720
	<b>12,415,216</b>	<b>12,767,517</b>

**Note-14: Direct Cost of Revenue**

The break-up of the direct cost of revenue is as follows:

Software Solution for NID Verification-GP Project	2,317,276	11,027,312
Web Development & System Solution	51,770	878,906
VAS Solution Development	-	10,085
Surveillance Solution Development	-	21,025
Cyber Security Development Cost	-	111,605
	<b>2,369,046</b>	<b>12,048,933</b>

**Note-15: General & Administrative Expenses**

The break-up of the general &amp; administrative expenses is as follows:

Salary & Allowances	23,200,837	21,501,014
Bandwidth & Internet Costs	644,862	911,922
Telephone & Mobile Bill	228,320	250,144
IT Accessories Purchase & Maintenance	135,790	71,975
Audit Fee	46,000	46,000
Anti Virus	60,000	21,946
Office Running Expenses	80,580	25,000
Recruitment Expenses	27,405	24,287
Bank Charges & Commission	201,753	21,900
BASIS Softexpo Fair Expenses	297,308	260,457
Business Planning Expenses	34,785	5,575



**Sheba Technologies Limited**  
 Notes to the Financial Statements for the year ended 30 June 2019

	Figure in BDT	
	30 June 2019	30 June 2018
Motor Vehicle Running Expenses	273,128	280,419
AGM & Meeting Expenses	32,765	34,543
PoP Shifting	52,374	-
Car Rent & Tax Token	57,000	336,330
Clearing & Forwarding Charges	-	9,500
Optical Fiber Cable	51,399	-
Design Charges	18,902	7,000
Electricity Bill	296,827	285,120
Valuee Fee	-	23,000
ISO Registration (9001 & 27001)	300,000	-
Fuel & Lubricants	287,594	115,339
Advertisement (Bdjobs)	95,958	-
TVAS Registration	64,190	-
Promotional Expenses	45,208	39,107
IRC, ISP & Trade Licence Renewal	356,632	58,845
Professional Fees	414,000	690,000
Books, Newspaper & Periodicals	22,024	15,000
Miscellaneous Expenses	69,011	65,000
Membership fee of DCCL, BASIS & APNIC	82,198	77,852
Office Rent	6,395,376	5,734,284
Office Renovation Expenses	39,077	26,380
Overtime Expenses	54,547	35,752
Liveries & Uniforms	4,400	4,200
Purchase of Surveillance Device	55,640	-
Stationery Expenses	117,056	164,770
Enlistment & Tender Documents	62,115	5,900
Repair & Maintenance of AC	123,688	30,098
Security Guard Hire Expenses	311,742	300,240
Travelling & Conveyance (Local)	177,445	122,990
Travelling & Conveyance (Foreign)	102,638	-
	<b>34,920,574</b>	<b>31,601,889</b>



**2019-2020**

**Mahfel Huq & Co.**  
Chartered Accountants  
An independent member firm of AGN International

**Sheba Technologies Limited**

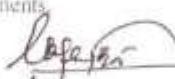
## Statement of Financial Position

As at 30 June 2020

Particulars	Notes	30 June 2020	Figure in BDT 30 June 2019
<b>ASSETS:</b>			
<b>Non Current Assets:</b>			
Property, Plant & Equipment	4	5,122,368	5,277,344
License & Short Code Acquisition		435,250	435,250
		<u>5,557,618</u>	<u>5,712,594</u>
<b>Current Assets:</b>			
Accounts Receivable	5	4,347,494	2,595,453
Advance, Deposit & Prepayments	6	1,667,457	732,592
Advance Income Tax	7	394,710	393,551
Cash & Cash Equivalents	8	18,317,599	2,972,341
		<u>24,727,260</u>	<u>6,693,937</u>
<b>Total Assets</b>		<u>30,284,878</u>	<u>12,406,530</u>
<b>EQUITY &amp; LIABILITIES:</b>			
<b>Shareholders Equity</b>			
Share Capital	9	85,100,000	100,000
Share Money Deposit	10	22,575,629	79,895,522
Retained Earnings/(Loss)		(97,970,286)	(78,661,012)
		<u>9,705,343</u>	<u>1,334,510</u>
<b>Current Liabilities</b>			
Accounts Payables	11	15,760,734	9,385,966
Liabilities for Expenses	12	4,818,802	1,686,055
		<u>20,579,535</u>	<u>11,072,020</u>
<b>Total Equity &amp; Liabilities</b>		<u>30,284,878</u>	<u>12,406,530</u>

The annexed notes form an integral part of these financial statements.

  
Director

  
Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
Dated : 25 November 2020

Mahfel Huq & Co.  
Chartered Accountants



**Mahfel Huq & Co.**  
 Chartered Accountants  
An independent member firm of AGN International



**Sheba Technologies Limited**  
**Statement of Profit or Loss & Other Comprehensive Income**  
**For the year ended 30 June 2020**

Sl	Particulars	Notes	Figure in BDT	
			30 June 2020	30 June 2019
			Restated	
A.	Revenue from Operations	13	30,223,176	12,415,216
B.	Direct Cost of Revenue	14	32,725,324	20,929,716
C.	<b>Gross Profit (A-B)</b>		<u>(2,502,148)</u>	<u>(8,514,500)</u>
D.	Operating Expenses:			
	General & Administrative Expenses	15	16,097,016	16,359,905
	Depreciation & Amortization		825,395	758,353
			<u>16,922,411</u>	<u>17,118,258</u>
E.	<b>Profit/(Loss) from operations (C-D)</b>		<u>(19,424,559)</u>	<u>(25,632,758)</u>
F.	Non operating Income		170,793	21,362
G.	<b>Net Profit/(Loss) before Tax (E+F)</b>		<u>(19,253,767)</u>	<u>(25,611,395)</u>
H.	Income Tax Expense		55,508	7,477
I.	<b>Net Profit/(Loss) for the year (G+H)</b>		<u>(19,309,274)</u>	<u>(25,618,872)</u>

The annexed notes form an integral part of these financial statements.

*AHC*  
*Loyd*  
 Director

*Jayashri*  
 Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
 Dated : 25 November 2020

*Mahfel Huq & Co.*  
 Chartered Accountants





**Mahfel Huq & Co.**  
 Chartered Accountants  
An independent member firm of AGN International



### Sheba Technologies Limited

Statement of Changes in Equity  
 For the year ended 30 June 2020

Figure in BDT

Particulars	Share Capital	Share Money Deposits	Retained Earnings	Total
Balance as at 01 July 2018	100,000	51,209,797	(53,042,140)	(1,732,343)
Received during the year	-	28,685,725	-	28,685,725
Net profit/(Loss) for the year	-	-	(25,618,872)	(25,618,872)
<b>Balance as at 30 June 2019</b>	<b>100,000</b>	<b>79,895,522</b>	<b>(78,661,012)</b>	<b>1,334,510</b>
Balance as at 01 July 2019	100,000	79,895,522	(78,661,012)	1,334,510
Received during the year	-	27,680,107	-	27,680,107
Issued share capital	85,000,000	(85,000,000)	-	-
Net profit/(Loss) for the year	-	-	(19,309,274)	(19,309,274)
<b>Balance as at 30 June 2020</b>	<b>85,100,000</b>	<b>22,575,629</b>	<b>(97,970,286)</b>	<b>9,705,343</b>

The annexed notes form an integral part of these financial statements.

AHC

Director

Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
 Dated : 23 November 2020





**Mahfel Huq & Co.**  
 Chartered Accountants  
An independent member firm of AGN International



**Sheba Technologies Limited**  
**Statement of Cash Flows**  
**For the year ended 30 June 2020**

SI	Particulars	30 June 2020	30 June 2019	Figure in BDT
<b>A. Cash flows from operating activities</b>				
Net profit/(loss) before tax		(19,253,767)	(25,611,395)	
Add: Depreciation on property, plant and equipment		825,395	758,353	
		<u>(18,428,371)</u>	<u>(24,853,042)</u>	
<b>Changes in working capital:</b>				
Decrease/(Increase) in Accounts Receivables		(1,752,042)	603,161	
Decrease/(Increase) in Advance, Deposit & Prepayments		(934,865)	(50,665)	
Decrease/(Increase) in Advance Income Tax		(1,159)	(7,153)	
Increase/(Decrease) in Liabilities for Expenses		3,077,240	(1,238,866)	
Increase/(Decrease) in Account Payable		6,374,768	(139,211)	
<b>Net cash from /(used) in operating activities</b>		<u>(11,664,429)</u>	<u>(25,685,776)</u>	
<b>B. Cash flows from investing activities</b>				
Decrease/(Increase) in License Acquisition		-	-	
Acquisition of property, plant and equipment		(670,420)	(202,694)	
<b>Net cash used in investing activities</b>		<u>(670,420)</u>	<u>(202,694)</u>	
<b>C. Cash flows from financing activities</b>				
Share Money Deposit		(57,319,893)	28,685,725	
Increase/(Decrease) in share capital		85,000,000	-	
<b>Net cash flows (used)/from financing activities</b>		<u>27,680,107</u>	<u>28,685,725</u>	
<b>Net increase in cash and cash equivalents (A+B+C)</b>		<b>15,345,258</b>	<b>2,797,255</b>	
Cash and cash equivalents at the beginning of the year		2,972,341	175,087	
<b>Cash and cash equivalents at the end of the year</b>		<b>18,317,599</b>	<b>2,972,341</b>	

The annexed notes form an integral part of these financial statements.

*[Signature]*  
 Director

*[Signature]*  
 Managing Director

Signed in terms of our separate report of even date annexed.

Dhaka,  
 Dated : 25 November 2020



*[Signature]*  
 Mahfel Huq & Co.  
 Chartered Accountants

**Sheba Technologies Limited**  
**Schedule of Property, Plant & Equipment**  
At 30 June 2020

Note-4

Sl	Name of Assets	Cost			Depreciation			WDV as 30.06.2020
		As on 01.07.2019	Addition dly	As on 30.06.2020	Depreciation Rate	As on 01.07.2019	Addition dly	
1	Computer Equipment	1,710,876	221,208	1,932,084	10%	574,545	193,208	767,753
2	Electronics Equipment	127,440	56,482	183,922	10%	49,152	18,392	67,544
3	Office Equipment	1,017,923	57,364	1,075,227	10%	304,318	107,523	411,841
4	Servers & Routers	1,860,889	-	1,860,889	10%	540,964	186,080	727,053
5	Cyber Security Lab	396,192	38,400	434,592	10%	106,842	43,459	150,301
6	IT Equipments	1,013,896	103,382	1,117,278	10%	304,169	111,728	415,897
7	ISP Equipments	1,036,087	-	1,036,087	10%	310,826	103,609	414,435
8	VAS Equipments	313,269	-	313,269	10%	93,981	31,327	125,348
9	POS Equipment	106,961	193,644	300,605	10%	21,592	30,061	51,453
	<b>Total</b>	<b>7,583,533</b>	<b>678,420</b>	<b>8,253,953</b>		<b>2,306,190</b>	<b>825,395</b>	<b>3,131,585</b>
	30 June 2019	7,380,839	202,694	7,583,533	-	1,547,836	758,353	2,306,190
								5,277,344



**Sheba Technologies Limited**

 Notes to the Financial Statements  
 For the year ended 30 June 2020

	Figure in BDT	
	30 June 2020	30 June 2019
Restated		

**Note-5: Accounts Receivables**

Grameenphone Limited	3,432,916	1,833,334
ASHIC Foundation	-	2,966
Integrated Services Limited	280,000	35,000
Aspire Garments	-	19,300
Bangladesh Youth Leadership Center	-	7,000
AHC & Co. Limited	195,000	180,000
Teleport Bangladesh Limited	39,000	3,000
Bengal Brands Management Bangladesh Limited	156,312	490,812
Sheba Hospitality Management Ltd.	49,266	7,038
AHC Securities Limited	195,000	15,000
Robi Axiata Limited	-	2,003
	<b>4,347,494</b>	<b>2,595,453</b>

The above amount represents receivables from above customers against rendering of Biometric MDM solution, cyber security services and software development & solutions.

**Note-6: Advance, Deposit & Prepayments**

The break-up of the advance, deposit & prepayments are as follows:

Advance against Expenses	19,719	21,040
Advance against Project	10,815	19,537
Step Up Communication	-	50,000
Teleport Bangladesh Ltd.	2,500	117,615
Security Deposit-Jashore IT Park	-	104,400
Bank Guarantee to BTRC	420,000	420,000
Security deposit with Sheikh Rasel Digital Lab	214,423	-
Security deposit with UCBL	1,000,000	-
	<b>1,667,457</b>	<b>732,592</b>

**Note-7: Advance Income Tax**

Opening Balance	393,551	393,874
Less: Adjusted during the year	-	(2,460)
	<b>393,551</b>	<b>391,415</b>
Add: During the year	1,159	2,136
	<b>394,710</b>	<b>393,551</b>

**Note-8: Cash & Cash Equivalent**

The break-up of the cash & cash equivalent is as follows:

The City Bank Ltd.-SND	16,790,051	1,602,867
The City Bank Ltd.-CD	3,495	4,760
Janata Bank Ltd.-CD	26,567	27,257
FDR with Phoenix Finance	1,459,201	1,300,000
Cash in Hand	38,285	37,457
	<b>18,317,599</b>	<b>2,972,341</b>



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**Sheba Technologies Limited**

 Notes to the Financial Statements  
 For the year ended 30 June 2020

Figure in BDT

	30 June 2020	30 June 2019
--	--------------	--------------

**Note-9: Share Capital**

Authorised capital:	<u>100,000,000</u>	<u>100,000,000</u>
(10,000,000 Ordinary shares @ Tk. 10 each)		
Paid up capital:		
Integrated Services Ltd.	85,080,000	80,000
(8,508,000 Ordinary shares @ Tk. 10 each)		
Teleport Bangladesh Ltd.	20,000	20,000
(2,000 Ordinary shares @ Tk. 10 each)		
	<u>85,100,000</u>	<u>100,000</u>

**Note-10: Share Money Deposit**

The amount has received as share money deposit from:

Integrated Services Limited	79,895,522	79,895,522
Opening balance	27,680,107	-
Add: During the year	107,575,629	79,895,522
Less: Ordinary Shares Issued	85,000,000	-
	<u>22,575,629</u>	<u>79,895,522</u>

**Note-11: Accounts Payable**

The accounts payable consists of:

99D. ARC	60,500	60,500
Bengal Mobile QA Solution	12,651,026	6,984,300
Arrow3 Live	42,187	42,187
Earth Telecommunication	35,650	35,650
Nikkon Refrigerators	-	34,000
Innovative Minds	-	569,444
M.I.H Enterprise	5,556	5,556
Techcity Bangladesh Ltd.	-	313,200
ROWA Souvenir	-	30,000
Integrated Security Services Limited	13,097	52,164
HRC Technologies	116,312	153,812
Locationguru	5,855	5,855
Metronet Bangladesh Ltd.	9,600	12,600
Toron Ltd.	608,020	78,000
Office Rent	1,948,872	632,948
Amica Veritas	238,000	345,000
Race Online Ltd	26,059	30,750
	<u>15,760,734</u>	<u>9,385,966</u>



**Sheba Technologies Limited**

 Notes to the Financial Statements  
 For the year ended 30 June 2020

		Figure in BDT
	30 June 2020	30 June 2019

**Note-12: Liabilities for Expenses**

The break-up of the liabilities for expenses is as follows:

Salary & Allowances Payable	3,031,180	934,584
Outstanding Expenses	234,698	406,312
Income Tax Payable	55,508	5,341
Audit Fee Payable	51,000	46,000
Withholding Tax & VAT Payable	<u>1,446,416</u>	<u>293,818</u>
	<u><u>4,818,802</u></u>	<u><u>1,686,055</u></u>

**Note-13: Revenue from Operations**

The break-up of the revenue from operations is as follows:

Revenue from Grameenphone Ltd.	9,046,150	10,962,886
DataSoft Systems Bangladesh Ltd.	2,530,168	-
Revenue from Robi Axita Ltd.	17,142,857	223,286
Web Development & System Solution	-	1,213,311
E-KYC Solution	461,999	-
Surveillance Solution, Cyber Security & IT Services	<u>1,042,002</u>	<u>15,733</u>
	<u><u>30,223,176</u></u>	<u><u>12,415,216</u></u>

**Note-14: Direct Cost of Revenue**

The break-up of the direct cost of revenue is as follows:

Software Solution for NID Verification	9,653,075	2,317,276
Web Development & System Solution	315,860	51,770
Surveillance Solution Development	772,800	-
Software Developer & Engineers salary	<u>21,983,589</u>	<u>18,560,670</u>
	<u><u>32,725,324</u></u>	<u><u>20,929,716</u></u>



**Sheba Technologies Limited**

 Notes to the Financial Statements  
 For the year ended 30 June 2020

Figure in BDT

	30 June 2020	30 June 2019
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**Note-15: General & Administrative Expenses**

The break-up of the general &amp; administrative expenses is as follows:

Salary & Allowances	5,602,080	4,640,167
Optical Fiber & Data Connectivity	496,409	644,862
Telephone & Mobile Bill	277,515	228,320
IT Accessories & Surveillance	69,363	135,790
Audit Fee	51,000	46,000
Anti Virus	94,080	60,000
Office Running Expenses	100,949	80,580
Recruitment Expenses	15,328	27,405
Bank Charges & Commission	16,611	201,753
BASIS SoftExpo Fair Expenses	-	297,308
Business Planning Expenses	35,850	34,785
Motor Vehicle Running Expenses	100,372	273,128
AGM & Meeting Expenses	25,550	32,765
PoP Shifting	-	52,374
Car Rent & Tax Token	30,320	57,000
Domain Registration	13,260	-
Optical Fiber Cable	64,913	51,399
Design Charges	-	18,902
Electricity Bill	328,225	296,827
ISO Registration (9001 & 27001)	-	300,000
Fuel & Lubricants	276,223	287,594
Advertisement (Bdjobs)	66,255	95,958
TVAS Registration	-	64,190
Promotional Expenses	85,328	45,208
IRC, ERC, ISP, Trade Licence & Other Renewal	206,187	356,632
Professional Fees	341,500	414,000
Books, Newspaper & Periodicals	20,350	22,024
Miscellaneous Expenses	35,350	69,011
Membership fee of DCCI, BASIS & APNIC	72,247	82,198
Office Rent	6,699,256	6,395,376
Office Renovation Expenses	38,327	39,077
RJSC Documentation Charge	85,402	-
Overtime Expenses	42,528	54,547
Liveries & Uniforms	2,500	4,400
Printer Toner	10,212	-
Purchase of Surveillance Device	32,325	55,640
Stationery Expenses	149,672	117,056
Enlistment & Tender Documents	28,730	62,115
Repair & Maintenance of AC	90,358	123,688
Security Guard Hire Expenses	273,799	311,742
Travelling & Conveyance (Local)	96,297	177,445
Travelling & Conveyance (Foreign)	122,325	102,638
	<hr/> <u>16,097,016</u>	<hr/> <u>16,359,905</u>



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## Annexure F: STL Work Experience

### BRAC Online Career Hub

To address the rising unemployment rate amongst the youth in Bangladesh, SDP wants to propose the development of a web and mobile platform that will serve as a medium for the learners to gain employability skills online to ultimately get employment. The end goal of the platform is to provide its learners necessary skills to get job opportunities/entrepreneurship support within the platform. For this reason, the platform will have features such as career counselling, skills training, and job posting capability.

→ Relevant Work Order attached below.



**Form BPD 1-20**  
 BRAC Procurement Department  
 75, Mohakhali, Dhaka-1212, Bangladesh.  
**Notification of Award Letter (NOAL)**

November 11, 2020

To  
**Sheba Technologies Limited**  
 95, Khawaja Tower, Bir Uttam AK Khandakar Road,  
 Mohakhali, Dhaka 1212, Bangladesh.

**Attention:** Farhan Islam, Senior Manager, Business Operations

**Subject:** NOAL for Online Career Hub Software for SDP.

Dear Sir,  
 This is to notify you that BRAC Management has been pleased to accept your offer submitted on November 09, 2020 for Online Career Hub Software for SDP at the following contract prices:

Item	M. Unit	Quantity	Unit Price (including VAT)	Total Price (including VAT)
Online Career Hub Software	Job	1	88,20,000	88,20,000/-
Total Price In word: Eighty Eight Lac Twenty Thousand Taka only.				88,20,000/-

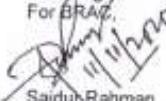
You are requested to proceed with furnishing a Performance Security (PS) amounting BDT 4,41,000/- in word Taka Four Lac Forty One Thousand only in form of pay order/bank draft/ bank guarantee in favour of "BRAC" within seven (07) days.

In case of failing to deliver the service in time or delay response in providing service, your Performance Security may be partially / fully forfeited.

Security money will be returned after successful completion of one year warranty period through an application to the Head of Procurement, BRAC.

BRAC reserves the right to accept or reject the order without assigning any reason whatsoever.

Thanking you  
 For BRAC.



Sajidul-Rahman  
 Head of Procurement, BRAC

  
 11-11-2020

  
 11-11-2020

BRAC  
 BRAC Centre  
 75 Mohakhali  
 Dhaka 1212  
 Bangladesh

T: +88 02 9881265  
 F: +88 02 9823542  
 E: info@brac.net  
 W: www.brac.net

Registered in  
 Bangladesh under  
 The Societies  
 Registration Act of 1860

## Grameenphone Mobile Device Management (MDM)

Sheba Technologies Ltd. has developed the Mobile Device Management (MDM) solution for Grameen Phone.

### Features

The solution provides full system administrative functionalities, list of which is provided below:

- ✓ Web control and usage policies
  - ✓ App whitelisting/blacklisting
  - ✓ Password and encryption enforcement
  - ✓ Remote wipes and locking
  - ✓ Mobile device inventory and tracking
  - ✓ App passwords, and custom application containers
  - ✓ Wi-Fi, Bluetooth and update control
  - ✓ App distribution or volume purchasing
- ➔ Relevant Work Order attached below.



**GPHOUSE**  
 Baridhara  
 Bashundhara  
 Dhaka  
 BD  
 Phone No: +88029882990  
 FAX No: +88029882970

Order No.: 300011061  
 Release No.:  
 Date: 13-JAN-16  
 PR Nos.: 108814  
 Department: DISTRIBUTION & RETAIL SALES

Supplier Name: SHEBA TECHNOLOGIES LTD.  
 Address: House-55, Road-4/A, Dhanmondi R/A  
  
 Telephone:  
 Fax:  
 E-mail:

Serial No	Item	Item Description	Delivery Date	To Supply		Price (in BDT)	
				Unit of Measure	Quantity	Unit Price	Total
1	3003340	BIOMETRIC APPLICATION DEVELOPMENT	30-APR-16	Each	1	4555970.10	4555970.10
2	3003341	BIOMETRIC APPLICATION MAINTENANCE	31-JAN-17	Each	3	56949.37	170848.11
3	3003342	BIOMETRIC MDM DEVELOPMENT	30-APR-16	Each	1	42123924.9	42123924.90
4	3003343	BIOMETRIC MDM MAINTENANCE	31-JAN-17	Each	3	1053097.71	3159293.13
				Total Price: BDT		50010036.26	

**Implementation & Development of EKYC Solution for IDLC Finance Ltd.**

Sheba Technologies Limited has provided fully functional EKYC solution to IDLC Finance Limited supported by Web Application and Mobile application both.

**Primary Functionalities:**

- ✓ Client NID verification & Identification;
  - ✓ Administration Dashboard;
  - ✓ Audit Trial;
  - ✓ Application Security;
- ➔ Relevant Work Order attached below.



### **United Finance Limited**

The EKYC Solution developed for United Finance will be based on Android and Web-based platforms. The solution will allow both Self verification of Customer along with Assisted Customer verification functionality. For Self-verification of Customer, users can use these two platforms to verify themselves digitally and will receive SMS notification once the verification process has been completed successfully. For Assisted Customer Verification, UFL or its nominated agents will assist the customer to directly get verified using the system. A separate backend web panel will be there for the process admin to maintain settings of the system.

- ➔ Relevant Work Order attached below.



### **UNITED FINANCE LIMITED**

Camellia House, 22 Kazi Nazrul Islam Avenue, Dhaka-1000, Bangladesh  
 Tel: +880-2-9669006 Fax: 880-2-9662596  
 E-mail : webmail@unitedfinance.com.bd

Copy of: Accounts / Admin / Supplier  
 W/O No.: Oct/29/20/01  
 Date: 29 October 2020

To: Sheba Technologies Limited  
 Attn. Mr. Farhan Islam, 95, Khawaja Tower, Bir Uttam AK Khandaker Road, Mohakhali, Dhaka 1212  
 Phone #: +880-1711547804

Please refer to your quotation, you are hereby requested to supply/ carry out the following materials/ jobs:

Sl. No.	DESCRIPTION	Rate	VAT	Amount: Tk.
<b>01</b>	<b>Work Order for E-KYC Implementation</b>			
<b>A</b>	<b>Software Cost (One Time)</b>			
1	Self-Customer Onboarding Solution (Android, iOS, Web)	900,000.00	45,000.00	945,000.00
2	Assisted Customer Onboarding Solution (Android, iOS, Web)	900,000.00	45,000.00	945,000.00
	<b>Work Order value</b>	<b>1,800,000.00</b>		<b>1,890,000.00</b>
<b>B</b>	<b>AMC for the Solution (after warranty period is over)</b>			
	AMC Charge: 15% on 1,800,000	270,000.00		
<b>C</b>	<b>Future Change Request cost:</b> Offsite Man days (Per Man Day)	7,000.00		
	Onsite Man days (Per Man Day)	8,000.00		
	<b>PAYMENT PLAN on work order value - 1.8 million</b>			
Project Kick off fee.	Advance	40%		
UAT	After successful UAT completion	30%		
Final Payment	1 Month After Application GoLive	30%		
		100%		
	<b>Price including VAT</b>			
Taka:	Eighteen Lac ninety thousand only.			<b>Grand Total. 1,890,000.00</b>

Note 1) If the above mentioned Materials / job is not supplied / done in time and are not up to acceptable standard the Company reserves the right to cancel this order without showing any reason.

## Guadian Life Insuarance

The EKYC Solution developed for GLIL will be based on Android, IOS and Web-based platforms. Customers can use all three platforms to on-board themselves digitally and will receive SMS and Email notification once the onboarding process has been completed successfully. It is essential to note that the on-onboarding parent app is a part of a larger GLIL 'Parent Application' which will call for the KYC application and will provide the system with the customer phone number and email ID (optional) through which customers will get on-boarding notification. A separate backend web application will be there for the system admin to monitor the system.

- Relevant Work Order attached below.



Ref: GLIL/HOWO/2020/050

Date: 10 March, 2020

Managing Director  
Sheba Technologies  
Khawaja Tower, 95 Mohakhali C/A  
Dhaka-1212

**Subject:** Work order for complete development, setup, installation, configuration and commissioning of the Electronic Know Your Customer (E-KYC) solution and other associated works at our Head office of Guardian Life Insurance Limited.

Dear Sir,

We refer to your quotation dated 08 March 2020 and are pleased to accept that for above mentioned subject work at Head Office of Guardian Life Insurance Limited (GLIL) at Plot No.2, Road No.144, Gulshan Model Town, Level 13, Tower 2, Police Plaza Concord, Dhaka 1212, subject to following terms and conditions:

**Scope and Value of the project:** The total cost of complete Self-Onboarding Customer Mobile Application & Web Application. Platform: Android, Web & iOS, Facial Verification with Live Customer Image with NID Image; Data Fetch from EC Web Portal for Face Matching; Mobile Number Verification; NID Image Capture; Optical Character Recognition (OCR); Digital Customer Onboarding; Nominee Information Capture; Digital Record Keeping; Digital Signature Capture/ Upload; SMS & E-Mail Integration; Deploy Face Verification Platform for Face Matching Server. (as mentioned in your commercial and technical proposal) will not exceed BDT8,50,500 (Taka eight hundred fifty thousand and five hundred only) inclusive of taxes and VAT. We shall deduct all necessary taxes at the applicable rate and copies of which shall be given to you in due course.

The works to be carried out under this work order shall comprise the provision of all coding, ID verification, design, tools, implements, scaffolding, supervision and other incidental items required for development, setup, installation, configuration and commissioning of the Electronic Know Your Customer (E-KYC) solution and completion of all works to the full satisfaction of the GLIL management.

Any additional work(s) or amendments to current work(s) that may increase the value of the work order must go through change management control and shall have GLIL's prior written approval.

**Terms of payment:** 40% of the project value will be payed after the completion of the POC and sign off from GLIL, another 50% payment shall be made after the solution Go Live (completion stage to be pre-determined on the project GANTT chart), another 10% payment shall be made after handing over of the project / completion of the job in all aspects and upon finalization of joint quantity / quality checks of supplied solution / system design.

**Annual Maintenance Cost (AMC):** Sheba Technologies Limited (STL) will charge BDT97,200/- (12% of the project value) annually as annual maintenance cost which will be effected after completion of system development and go live. Sheba Technologies Limited (STL) will ensure free version upgrades/system updates free of cost.

### Robi Subscriber Verification System

The solution will comprise of Web Based WIC App, an Android App, Web Portal/Back End for the Web APP, Central Control Management Panel, SVS Middleware, Business Logic Layer, Analytical Dashboard and Management Dashboard.

- ➔ Relevant Work Order attached below.

#### Robi Axiata Limited

Robi Corporate Office, 53 Gulshan South Avenue, Gulshan-1, Dhaka-1212, Bangladesh.  
T : +88 02 9887146-52, F : +88 02 9885463, Web : [www.robi.com.bd](http://www.robi.com.bd)  
Business Identification Number(BIN): 00000017B (18121025236)



#### Purchase Order

**Sheba Technologies Ltd.**  
House-55, Road-4/A , Dhammondi, Dhaka

Bangladesh

PO Number                    4500044495  
Version                        Original  
PO Date                      05.12.2018  
Robi Contact Person        Mr.Mashruf  
Robi Contact Number        +8801833181411

Your Contact person: Imran Sadik Chowdhury  
Your Contact Number: 01712 938344  
Your Supplier ID with us: 104044

Please deliver to: Axiata (Bangladesh) Limited 53 Gulshan South Avenue Dhaka

#### Implementation of Subscriber Verification System (SVS)

Currency: BDT

Sl#	Item Code	Description	Delivery Dt.	Quantity	UoM	Unit Price	Total Amount
20	30003660	Subscriber Verification System	31.08.2019	1.00	JOB	25,645,512.00	25,645,512.00
<b>Total PO Amount:</b>							<b>25,645,512.00</b>

(Total PO amount in words: BDT twenty-five million six hundred forty-five thousand five hundred twelve taka and zero paisha)

#### Price Summary:

Total PO Amount	25,645,512.00
VAT Amount	1,282,275.60
Total Amount (Including VAT, if any):	26,927,787.60

1) Tax <(>&<>) VAT: PO Value are inclusive of applicable Tax <(>&<>) VAT, Robi will deduct applicable Tax <(>&<>) 5% VAT during payment process

2) Payment Terms: 100% payment will be made through A/C payee cheque within 60 (sixty) days of submission of correct invoice after Go live.

3) Agreement validity : 06 (six) Year from agreement signing date or 10th Dec;18 whichever occurred later

4) Project Delivery Timeline : 150 (one hundred and fifty) Working Days form the date of PO issuance

5) Warranty : 01 year FOC Warranty after GO-Live

6) 05 year AMC : FoC for 1st year and BDT 8,500,000/yearly fixed for last 04(four) year

7) Performance Bond: Within 15 (fifteen) working days upon accepting the Purchase Order, the Supplier shall submit a Performance Bond in favour of Robi in the form of Bank Guaranty. The Bank Guaranty shall be from Standard Chartered Bank, HSBC, and Citibank NA or from any scheduled bank of Bangladesh which is amounting to 5% of PO value. The Bank Guaranty must have to remain valid for the entire Agreement Period and any extension thereof with a renewal option for further period.

8) Liquidated Damages for Delay in deliver/deployment: The supplier has to complete the entire work within the stipulated period as mentioned in PO, failure which Liquidated Damage @ 2% of the Purchase Order (PO) value for per week delay subject to a maximum ceiling of 10% of the PO value shall be levied. It is to be noted that delays in HW/SW and/or implementation will be considered independently. Supplier shall not be responsible for the delays caused by Robi (Dependent activities).

9) Scope, Technical spec, SLA <(>&<>) Other Technical/Commercial Terms/Conditions : As per negotiation between the parties



Created By: ASHEQ1574

( PO# 4500044495) Page 1

## BRAC BANK – SME Collection Dashboard

SME Dashboard for BRAC Bank is designed to provide a detailed overview of the loan activities for small & medium enterprises.

- This application will improve business collection and recovery efforts.
- Help RO's on-the-go to monitor their loan accounts in real time.
- Allows RO's to manage/input key details about their accounts.
- Allows BDM to get an overview of the real-time RO performance under them.
- Allows TM's to get an overview of the BDM's under them as well as an RO's account details in real-time.
- Option to generate various real-time reports as required.

→ Relevant Work Order attached below.

  Ref: BBL/Proc-IT/Opex/Y18/WO-59 July 21, 2020	BBL/Mark-Sheba Head Office: 8th Floor, 95/A, Mohakhali C/A, Dhaka-1212 22/B, Tejgarh-Ganjbari Link-Road Tejgarh, D/A, 1214/A, 1215, Bangladesh Phone: +88 02 9661173, +88 02 9661174 Fax: +88 02 9661175 SWIFT: BBLABDDB Email: info@shebatech.com.bd Website: www.shebatech.com.bd								
Sheba Technologies Limited (STL) Head Office: House #5, Road #4/A, Dhanmondi R/A, Dhaka-1209 Corporate Office: 8th Floor, Khawja Tower, 95 Mohakhali C/A, Dhaka - 1212 Attn: Mr. Farhan Islam (Senior Manager, Business Operations) [farhan.islam@shebatech.com.bd]									
Work Order of Supply of SME Collection Dashboard SW Solution for BRAC Bank Limited									
Dear Sir, With reference to your revised offer dated on January 18, 2020 we are hereby pleased to issue Work Order as mentioned below:									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Part Number</th> <th style="text-align: center;">Qty</th> <th style="text-align: center;">Unit</th> <th style="text-align: center;">Total Price in BDT (Excludes of VAT)</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">SME Collection Dashboard SW Solution</td> <td style="text-align: center;">1</td> <td style="text-align: center;">Unit</td> <td style="text-align: center;">\$581,000</td> </tr> </tbody> </table>		Part Number	Qty	Unit	Total Price in BDT (Excludes of VAT)	SME Collection Dashboard SW Solution	1	Unit	\$581,000
Part Number	Qty	Unit	Total Price in BDT (Excludes of VAT)						
SME Collection Dashboard SW Solution	1	Unit	\$581,000						
<b>Terms &amp; Conditions:</b> <ol style="list-style-type: none"> <li>1. Warranty: STL will provide 3 years warranty from the date of project delivered (i.e successfully, the date being mutually agreed as the day when end users (officer) will be able to download the application and launch successfully).</li> <li>2. Delivery: Delivery will be made at Bank's selected site in coordination with Mr. Md. Rezwanul Islam, assigned project manager (01730086223).</li> <li>3. Delivery Condition &amp; Delivery Lead Time: The delivery will be done 105 working days (as per BRAC Bank calendar) after getting confirmed Work Order or an per BBL user requirement. In failure of delivery in due time, 2% of total contract value will be deducted for each Week delay but Penalty will be considered on pro-rata basis. Bank will not consider any delay in delivery unless due to force majeure or mutually agreed extension. In case of any Covid-19 pandemic related lockdown the delivery will be continued normally with no additional time extension for the above unless exceptional cases also such as key parties being affected.</li> <li>4. Service Level Agreement (SLA) will be as per Annexure 2 attached.</li> <li>5. Mode of Payment: Payment will be made as per below milestones: After finalization of DRG stage will be 20%, after successful DRG 20% and after successful go-live date (as agreed 80%). Vendor has to submit the IEL with work order, Mutual NDA &amp; original contract which is duly signed by authorized personnel of BRAC Bank Limited (President's Sign, Name, MRN &amp; Seal, if available). Payment will be made through Bank Account only. BBL will deduct (if applicable) all applicable withholding income tax and VAT from the invoice at the time of payment as per Government Rules.</li> <li>6. AMC support Cost: No additional charge for the first three years since date of the operations made successful. After three years since the operations of the project as outlined in condition 3 (Delivery Condition &amp; Delivery Lead Time), the AMC cost will be 2.5% of SW value each year.</li> <li>7. Payment terms for AMC: Quarterly Arrear basis.</li> <li>8. Any changes in the VAT amount will be adjusted with the unit price during the time of payment.</li> <li>9. Bank reserves the rights of cancellation of work order any prior notice for the non-compliance of any terms and conditions mentioned above.</li> <li>10. Each party hereto agrees to indemnify, defend and hold harmless the other from and against any claim, action, proceeding, damage, liability, fine, penalty, cost and expense (including, without limitation, the reasonable fees and expenses of counsel and the costs of investigation and settlement) arising from any actual or alleged action or omission of the indemnifying party. You also agree to indemnify, defend and hold harmless BBL from and against any claim, action, proceeding, damage, liability, fine, penalty, cost and expenses (including, without limitation, the reasonable fees and expenses of defending) arising out of your act, omission or negligence under this agreement and under law.</li> <li>11. Bank reserves the right to cancel the work order any time for the non-compliance of any terms and conditions mentioned above.</li> </ol> <p>Please sign a "Photo Copy" of this work order, if you agree to this then return the same for our records or send us an email against the work order, as an acknowledgement of receipt of the WO. If the vendor does not provide the acknowledgement within three (3) days, Bank reserves the right to cancel the work Order.</p>									
 Authorized Signature									
									

## BRAC Artificial Insemination: ERP SOFTWARE

4/11/2021

BRAC e-Tender

brac\_ebsupport@bracit.com

099-77-444-888

BRAC Procurement Department  
 BRAC Centre  
75, Mohakhali, Dhaka 1212

### Notification of Award Letter

(On Purchaser normal letter head pad)

Reference No: BPO/2021/IFT-1032

Date: 11/04/2021 10:37

To: Sheba Technologies Ltd

This is to notify you that BRAC Management has been pleased to accept your offer/proposal dated 11/04/2021 10:37 for following items :

Sl.	Lot No/Group	Item Name	M Unit	Quantity	Unit Price	Currency	Sub Total(Quantity* Unit Price)(BDT)	Other Cost Name	Other Cost Value(BDT)	Grand Total(Sub Total+ Other Cost) (BDT)
1	Lot-1	ERP software	Pcs	1.00	5999963.0000	BDT	5999963.0000		0.0000	5999963.0000
Grand Total (BDT)										5999963.0000

This is to notify you that BRAC Management has been pleased to accept your Proposal for the provision of consulting services for the Contract Price of BDT 5999963.0000 as corrected and modified in accordance with the instructions to Tenderers.

You are requested to proceed with furnishing a Performance Security (PS) amounting BDT 300000.0000 in the form of pay order/bank draft/bank guarantee within seven (7) days, in accordance with ITT Clause 44 failing which your tender security will be confiscated. The PS must be valid until a date 28 days after the date of completion of the supplier's performance obligations under the contract, including any warranty obligations.

Signed

Duly authorised to sign for and on behalf of

| 09175050 | - Sadiq Rahman - Head of Procurement

Date: 11/04/2021 10:37

**Project: Dashboard for Lab Monitoring Activities of Sheikh Russel Digital Labs**

- Project Value approx. BDT 7910555/-



Government of the People's Republic of Bangladesh  
Office of the Project Director  
Establishment of Computer and Language Training Lab in Educational  
Institutions all over the Country Project  
Department of Information & Communication Technology  
Information & Communication Technology Division  
ICT Tower, Level-5, Agargaon, Dhaka-1207  
Web site: [www.doitct.gov.bd](http://www.doitct.gov.bd)

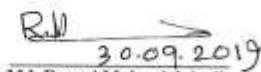
Dated: 30.09.2019

**To Whom It May Concern**

This is to certify that DataSoft Systems Bangladesh Limited, Rupayan Shelford (18-20th floor) 23/6, Mirpur Road, Shyamoli, Dhaka-1207 and Sheba Technologies Ltd, 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212 jointly have been working for "**Supply & Installation of Dashboard for Lab Monitoring Activities of Sheikh Russel Digital Labs/Classrooms and with its' necessary Software & Hardware**" from 8th April 2019 to 30<sup>th</sup> September 2019 under the Establishment of Computer and Language Training Lab in Educational Institutions all over the Country Project. As per agreement DataSoft Systems Bangladesh Limited and Sheba Technologies Ltd successfully have completed the project and handed over to the authority.

During the task, DataSoft and Sheba's personnel had worked with their utmost sincerity & professionalism. The project authority has accepted their solution with satisfactory.

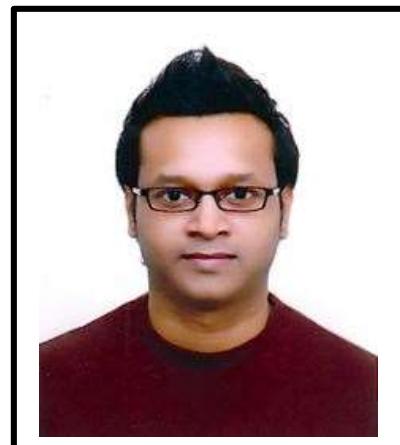
We wish DataSoft Systems Bangladesh Ltd and Sheba Technologies Ltd. every success for the foreseeable future. Thanking You.

  
Md. Rezaul Maksud Jahedi  
Project Director (Addl. Charge)  
(Joint Secretary)  
Establishment of Computer and Language Training Lab  
in Educational Institutions all over the Country Project  
Department of ICT, ICT Division  
ICT Tower, Agargaon, Dhaka-1207, Bangladesh



## Annexure G: Technical Experts for Performing the Assignment

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Head of Business Operations</b>
2	NAME OF PERSON	<b>Farhan Islam</b>
3	DATE OF BIRTH	19-11-1982
4	NATIONALITY	Bangladeshi
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A
6	EDUCATION:	<i>BSc. Computer Science, University of Portsmouth, United Kingdom</i>
7	OTHER TRAINING	N/A
8	LANGUAGES & DEGREE OF PROFICIENCY	Language      Speaking      Reading      Writing <i>English      Fluent      Excellent      Excellent</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh
10	EMPLOYMENT RECORD	
	<b>EMPLOYER: 1</b>  <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Head of Business Operations</b> <b>Duties and Responsibilities:</b>	FROM: <b>2020</b> TO: <b>Ongoing</b>

- Collect reports on upcoming project opportunities;
- Lead Technical Documentation Team;
- Lead Software Quality Assurance & Software Testing Group;
- Lead Business Analysts;
- Taken Responsibility as Head of Software Engineering Process Group (SEPG);
- Provide and support the implementation of business solutions by building relationships and partnerships with key stakeholders; identifying business needs; determining and carrying out necessary processes and practices; monitoring progress and results; recognizing and capitalizing on improvement opportunities; and adapting to competing demands, organizational changes and new responsibilities;
- Monitor Project schedules, milestone completions, track all phases of the project lifecycle;
- Manage Project team regularly to review project deliverables and deadlines;
- Manage existing products and its upcoming feature roadmap;

**EMPLOYER: 2**

FROM:      TO:  
**2019**      **2020**

**Sheba Technologies Ltd.**

<http://www.shebatech.com.bd/>

8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.

Position Held: **Senior Business Analyst**

**Duties and Responsibilities:**

- Lead UI/UX Team;
- Support and align efforts to meet customer and business needs;
- Manage customer relationships and expectations by developing a communication process;
- Capture and clearly document business and systems requirements;
- Lead or participate in multiple projects by completing and updating project documentation; managing project scope; adjusting schedules when necessary; determining daily priorities; ensuring efficient and

on-time delivery of project tasks and milestones; following proper escalation paths; and managing customer and supplier relationships;

- Provide project level analysis – producing required project analysis documentation (business requirements, scope matrix, use cases, sequence diagrams, future state proposals, UAT plan);
- Analyze Customer Business Requirements and present them with Non-Functional Prototypes to allow them to visualize and experience the solution to be;
- Create and maintain issue logs, meeting minutes, meeting schedules, project summaries and updates;
- Create and maintain project schedules by developing project plans and specifications, estimating time and resources, monitoring milestone completion, tracking all phases of the project lifecycle, providing timely reporting of issues that impact project progress, coordinating actions and resolving conflicts;
- Develop and execute test plans;
- Support system conversions, upgrades, enhancements;
- Oversee the design of new products, assisting with market trends in order to guide the design team;

**EMPLOYER: 3**
**Sheba Technologies Ltd.**
<http://www.shebatech.com.bd/>

8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.

Position Held: **Product Manager**
**Duties and Responsibilities:**

FROM:      TO:  
**2016**      **2019**

- Lead the product development process, including user research, prototyping, and business case generation while working very closely with the Technical Team;
- Develop and implement product strategies consistent with company vision;
- Collect and analyze feedback from customers, stakeholders and other teams to shape requirements, features and end products;
- Work with senior management to create product plans and road maps;

- Produce and review product requirement documents (PRD);
- Ensure products release as per “Go to Market” (G2M) Strategy;
- Managing the product through the delivery process, including managing key vendors / partners and influencing internal stakeholders;
- Monitoring product key performance indicators and continuously improving operational delivery to maximize performance;
- Preparing and conducting PoC (Proof of Concept), UAT (User Acceptance Test), User Manual, operation and quality control processes;
- Continuously communicate with customers and end users to meet their expectation and minimize gap;
- Recommending the nature and scope of present and future product lines by reviewing product specifications and requirements; appraising new product ideas and/or product or packaging changes;
- Assessing market competition by comparing the company's product to competitors' products;
- Providing source data for product line communications by defining product marketing communication objectives;
- Obtaining product market share by working with sales to develop product sales strategies;
- Providing information for management by preparing short-term and long-term product sales forecasts and special reports and analyses; answering questions and requests;
- Facilitating inventory turnover and product availability by reviewing and adjusting inventory levels and production schedules;
- Bringing new products to market by analyzing proposed product requirements and product development programs; preparing return-on-investment analyses; establishing time schedules with development;

- Introduces and markets new products by developing time-integrated plans with sales, advertising, and production;
- Determines product pricing by utilizing market research data; reviewing production and sales costs; anticipating volume; costing special and customized orders;

**EMPLOYER: 4**
**SkyHigh Communications, HK Limited**

 Position Held: **Partner & Chief Business Development Manager**

 FROM  
2010

 To  
2016

**Duties and Responsibilities:**

- Reaching out to interconnect with variety of other telecomm carrier's worldwide;
- Negotiating Voice Traffic Wholesale Rates as per destination and caller prefix;
- Keeping Local Capacity Suppliers available at all times with numerous **E1** capacity;
- Reviewing and Analyzing Call Success Rates along with Average Call durations every hour;
- Troubleshooting any issues that might arise while Routing VOIP traffic from Customer To Supplier To Soft switch (VOS3000);
- Maintain Monthly Traffic Revenue Accounts and Clearing Payments to all stakeholders.

**EMPLOYER: 5**
**Bangladesh Internet Press Ltd. (BIPL), Bangladesh.**

 Position Held: **Manager Key Accounts & Client Relationship**

 FROM  
2009

 To  
2010

**Duties and Responsibilities:**

- Use variety of resources to scan through Prospective Tenders & create relationship with the client's high-end authorities to find & gather in depth project related information;
- Schedule & Plan Tender Participation techniques and brief in-house team member to work accordingly;

- Actively participate in preparing Technical & Financial Proposal;
- Work as a bridge between existing Clients and our Development Team to ensure all Projects related work are well documented & maintained as per CMMI (Level 3) standards;
- Assist HR Department to scan through applicants in order to employ consultants for upcoming projects & also for any replacement in the ongoing projects;
- Work closely together with the Managing Director & the top-level management officials to identify future prospects of the Company.

**EMPLOYER: 6**
**Apollo Fire detectors Limited, United Kingdom**
**Position Held: Technical Maintenance Engineer**
**Duties and Responsibilities:**

 FROM  
2004

 To  
2005

- In charge of providing maintenance support to the shop floor which consists of a wide variety of machines in the production line of fire detectors;
- Also engaged partially in charge of Health and Safety from the electrical section, as to perform PAT test to make sure that all the items in use are safe to handle.

**EMPLOYER: 7**
**iCubed Technologies Ltd. United Kingdom**
**Position Held: Industrial Placement Engineer**
**Duties and Responsibilities:**

 FROM  
2002

 To  
2003

- iCubed Technologies mainly focuses on providing solutions for real time control systems in commerce and industry;
- Involved in Software development, Web Applications development, Embedded Applications Testing, User Interfaces Design and Documentation.

**CERTIFICATION**

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last Sixty five (65) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature



Date of Signing

**30-11-2021**

Day / Month / Year

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Technical Project Manager</b>			
2	NAME OF PERSON	<b>Md. Sadi Arman</b>			
3	DATE OF BIRTH	04-02-1994			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A			
6	EDUCATION:	<i>M.Sc. in IT (2021)</i>			
7	OTHER TRAINING	Project Management Professional;			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language	Speaking	Reading	Writing
		<i>English</i>	<i>Native</i>	<i>Native</i>	<i>Native</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD	<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Technical Project Manager</b> <b>Duties and Responsibilities:</b> <ul style="list-style-type: none"> <li>• Establish and implement training processes.</li> <li>• Analyse, plan and develop requirements.</li> <li>• Assign and oversee the daily tasks of technical personnel.</li> <li>• Hold regular technical team meetings.</li> </ul>			
		FROM: <b>2021</b>		TO: <b>Present</b>	

- Determine and define clear deliverables, roles and responsibilities for staff members required, etc.

**EMPLOYER: 2**

FROM: TO:  
**2019**      **2021**

**Nano Information Technology**

<http://www.nanoit.biz/>

Cha-88/1/B, North Badda (2nd & 3rd Floor), Badda, Dhaka,  
1212, Dhaka

Position Held: **IT Project Manager**

**Duties and Responsibilities:**

- Perform Requirement analysis,
- Risk Management analysis,
- Compile Software Requirement Specification and other essential documents based on relevance,
- Design Activity, Wireframe, user story, etc.
- Initiate Project (Agile/Waterfall methodologies),
- Lead team of developer and tester towards project completion,
- SQA when required,
- Deliver Projects to stakeholders and many more.

**CERTIFICATION**

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last Thirty One (31) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

**YES**

**NO**

Signature



Date of Signing

<b>30-11-2021</b> Day / Month / Year
---



Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	Senior System Analyst			
2	NAME OF PERSON	<b>SUMAYA MAHBUB</b>			
3	DATE OF BIRTH	June 26, 1989			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONAL SOCIETIES	<i>Certified Scrum Master</i>			
6	EDUCATION:	<i>B.Sc. in CSE, East West University</i>			
7	OTHER TRAINING	<ul style="list-style-type: none"> <li>✓ Work smarter not harder, Coursera</li> <li>✓ Business Writing, Coursera</li> <li>✓ Effective Problem Solving and Decision Making, Coursera</li> <li>✓ Internet of Things (IOT), BRAC IT Services Limited</li> <li>✓ CBAP, BRAC IT Services Limited</li> <li>✓ Oracle Procurement Cloud Implementation, BRAC IT Services Limited</li> <li>✓ Oracle Financial CloudImplementation, , BRAC IT Services Limited</li> </ul>			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language	Speaking	Reading	Writing
		<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD				
	<b>EMPLOYER: 1</b>  <b>BRAC IT Services Limited</b> Company Location: House 115, Road 5, Block B, Niketon, Gulshan, Dhaka.	FROM: June 15, 2015	TO: October, 2021		

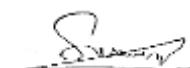
<p><b>Position Held: Business Analysis</b></p> <p><b>Duties and Responsibilities:</b></p> <p>Analyzing applications, find out solution considering the risk of the projects. Prepare flow diagrams, business analysis documents. Define scope, take vetting by clients. Share user experience, challenges of using the as is system/process to the cross functional team through documentation, and knowledge sharing sessions. Work effectively and efficiently to build a quality product through appropriate software development processes.</p>	
<p><b>EMPLOYER: 2</b>  <b>Transcom group</b>  <b>Position Held: Sadiatec Limited</b>  Company Location : House 2, Road 3, Sector 7, Uttara, Dhaka</p> <p><b>Duties and Responsibilities:</b></p> <ul style="list-style-type: none"> <li>• UI Designing, Database maintenance, Software support, marketing</li> </ul>	<p>FROM:  <b>September 1, 2013</b></p> <p>TO:  <b>June 10, 2015</b></p>

## CERTIFICATION

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this bio-data correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** as regular full time staff. Indicate "Yes" or "No" in the boxes below:

Signature



Date of Signing

<b>30-11-2021</b>
Day / Month / Year

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Senior Software Architect</b>			
2	NAME OF PERSON	<b>MD. SHAFIQUR RAHMAN</b>			
3	DATE OF BIRTH	01-07-1989			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A			
6	EDUCATION:	<i>Masters in Information Technology, University of Dhaka, 2016.</i>			
7	OTHER TRAINING	CCNA Linux			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language <i>English</i>	Speakin g <i>Fluent</i>	Reading <i>Excellen t</i>	Writing <i>Excellen t</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD	<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Senior Developer (Software Development)</b> <b>Duties and Responsibilities:</b> <ul style="list-style-type: none"> <li>• Design / Architect software solutions</li> <li>• Supervise and conduct development activities of a software life cycle</li> </ul> <b>EMPLOYER: 2</b> FROM: TO: <b>Nov, 2017 Present</b>			

**2RA Technologies Ltd**

Position Held: **Assistant Manager (Development)**

April,  
**2014**

**Duties and Responsibilities:**

- Developed online VISA tracking system.
- Electricity production and consumption monitoring system.

**EMPLOYER: 3**

**Noman Group of Industries**

Dhaka, Bangladesh.

FROM: TO:  
**Sep, 2009 April, 2014**

Position Held: **Senior Programmer**

**Duties and Responsibilities:**

- Developed HR & Payroll Software.
- Developed Inventory Management Software.
- Developed Production Management Software.
- Developed Requisition to Procurement Management Software.
- Developed Ticketing Software.

**CERTIFICATION**

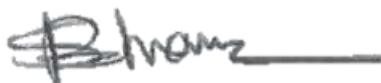
I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last fifty one (51) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

**YES**

**NO**

Signature

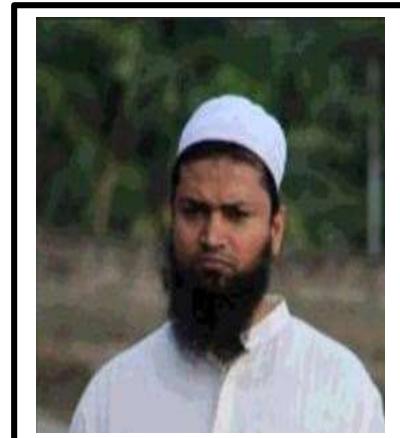


Date of Signing

**30-11-2021**

Day / Month / Year

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Database Administrator (DBA)</b>			
2	NAME OF PERSON	<b>A.K.M Ariful Islam Shimul</b>			
3	DATE OF BIRTH	07-01-1983			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A			
6	EDUCATION:	<i>M.Sc. in CSE, Jagannath University (2019)</i>			
7	OTHER TRAINING	J2EE (ESAD) Computer Operations, Ministry of Social Welfare Hardware Application, Ministry of Social Welfare			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language <i>English</i>	Speakin g <i>Fluent</i>	Reading <i>Excellen t</i>	Writing <i>Excellen t</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD	<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. <b>Position Held: Lead Application Developer</b> <b>Duties and Responsibilities:</b> <ul style="list-style-type: none"> <li>• Directly supervises others. Provide mentoring, coaching, performance feedback for direct reports or others in the application development area.</li> </ul>			
		<b>FROM: Feb, 2019</b> <b>TO: Present</b>			

- Develops, modifies and maintains application software that supports internal and external business processes of Greenheck that may be complex or sensitive in nature.
- Ensure quality standards are met for all development including internal, offshore and outsourced development initiatives.
- Sr. Member of Business Logic Layer team of Redon Project (Robi) and Lead of the Data Migration Team.

**EMPLOYER: 2**

FROM: TO:  
**Sept, 2013 Jan, 2019**

**Institute of Information and  
Communication Technology (IICT), BUET**  
Position Held: **Senior Programmer (Project)**

**Duties and Responsibilities:**

- Design & Develop Online Admission System for National University.
- Design & Develop Karnaphuli Gas Marketing System
- Design & Develop Karnaphuli Gas Online Billing System.
- Database Design & Support for CEGIS for Karnaphuli Gas GIS System

**EMPLOYER: 3**

FROM: TO:  
**Oct, 2012 Sept, 2013**

**IBCS-PRIMAX SOFTWARE LTD.**  
Dhaka, Bangladesh.

Position Held: **Programmer**

**Duties and Responsibilities:**

- Training for Novice Software Developer.
- Development & Reporting for Independent University Accounting System.
- Development & Reporting Walton HRMS.
- Development & Reporting Excel Enterprise Resource Planning (ERP).

### CERTIFICATION

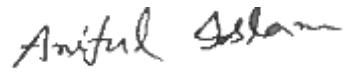
I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last forty three () month43

YES

NO

Signature



Date of Signing

**30-11-2021**  
Day / Month / Year

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Sr. Programmer</b>								
2	NAME OF PERSON	<b>Md. Rejwanul Reaz</b>								
3	DATE OF BIRTH	August 22, 1986								
4	NATIONALITY	Bangladeshi								
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	<i>N/A</i>								
6	EDUCATION:	<i>M.Sc. in CSE, Daffodil International University (Progressing)</i> <i>B.Sc. in CSE, Daffodil International University(2009)</i>								
7	OTHER TRAINING	<i>N/A</i>								
8	LANGUAGES & DEGREE OF PROFICIENCY	<table> <thead> <tr> <th>Language</th> <th>Speaking</th> <th>Reading</th> <th>Writing</th> </tr> </thead> <tbody> <tr> <td><i>English</i></td> <td><i>Fluent</i></td> <td><i>Excellent</i></td> <td><i>Excellent</i></td> </tr> </tbody> </table>	Language	Speaking	Reading	Writing	<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>
Language	Speaking	Reading	Writing							
<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>							
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh								
10	EMPLOYMENT RECORD	<p><b>EMPLOYER: 1</b></p> <p><b>Sheba Technologies Ltd.</b>  <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a>          8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.          Position Held: <b>Sr. Application Developer</b>  <b>Duties and Responsibilities:</b>          Software Architecture Design, Process Analysis,          Development. Review Code with debug and testing.</p>								
		FROM: <b>Dec, 2019</b> TO: <b>Present</b>								

**EMPLOYER: 2****Cygnus Innovation Ltd.**

(Financial Software Experts.)  
 House: C-39,Road:06, Block-c,  
 Niketon,Gulshan-1,  
 Dhaka-1212.

[www.cygnusinnovation.com](http://www.cygnusinnovation.com)

Position Held: **Sr. Software Engineer**

**Duties and Responsibilities:**

Programming & Develop Web Application (Asset Management System Developing, Vehicle Management & Monitoring , ERP, Merchant Banking Back Office Application) software architecture design, review code with debug, testing, prepare test reports, reporting, bugs & errors prevent, Android Application Design & Development etc.

**EMPLOYER: 3****Cluster BD**

HAK Tower (1st floor), 3/C Karwan bazaar, Dhaka.

Position Held: **Junior Programme**

**Duties and Responsibilities:**

User Interface Designing ,Programming & Develop the Application (Desktop Application Development),Review Code with debug and testing. Prepare Test Reports.

FROM: April, 2012  
TO: Dec, 2019

FROM: Sep, 2018 TO: Oct, 2009

**CERTIFICATION**

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and iii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last twenty seven (27) months as regular full time staff. Indicate "Yes" or "No" in the boxes below.

**YES**

**NO**

Signature



Date of Signing

**30-11-2021**

Day / Month / Year

		Recent Photo of the Individual			
1	PROPOSED POSITION FOR THIS PROJECT	<b>Software Engineer</b>			
2	NAME OF PERSON	<b>Fahima Chowdhury</b>			
3	DATE OF BIRTH	01-09-1992			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A			
6	EDUCATION:	<i>Masters in Computer Science United International University</i>			
7	OTHER TRAINING	Professional Application Development with ASP.NET MVC Web Development in ASP.Net Web Programming			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language <i>English</i>	Speakin g <i>Fluent</i>	Readin g <i>Excellen t</i>	Writing <i>Excellen t</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD	<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Software Engineer</b>	FROM: <b>March, 2016</b>	TO: <b>Present</b>	

**Duties and Responsibilities:**

- Software Development

**EMPLOYER: 2**

FROM: 2014 TO: 2016

**ICT Alliance**

12 Kawran Bazar C/A, Dhaka-1215, Bangladesh

**Position Held: Software Developer**
**Duties and Responsibilities:**

- Developing the Front End and Back End in ASP.Net
- Training the end user over Skype or Team Viewer

**CERTIFICATION**

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last fifty nine (59) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

**YES**

**NO**


Signature



Date of Signing

<b>30-11-2021</b> Day / Month / Year
---

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Business Analyst</b>			
2	NAME OF PERSON	<b>Nipun Ferdous</b>			
3	DATE OF BIRTH	10-09-1995			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A			
6	EDUCATION:	<i>B.Sc. in CS, BRAC University (2019)</i>			
7	OTHER TRAINING	N/A			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language <i>English</i>	Speaking <i>Fluent</i>	Reading <i>Excellent</i>	Writing <i>Excellent</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD	<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Junior Business Analyst</b> <b>Duties and Responsibilities:</b> <ul style="list-style-type: none"> <li>• Project Requirement Elicitation;</li> <li>• Feature Analysis;</li> <li>• Technical Diagramming;</li> <li>• Prepare Technical Documentation;</li> <li>• Software Testing</li> <li>• Maintain Q/A report</li> </ul>			
		FROM: <b>Jan, 2019</b>		TO: <b>Present</b>	

- Prepare Test cases
- Prepare Bug reports

## CERTIFICATION

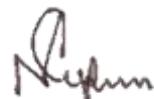
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I have been employed by **Sheba Technologies Ltd.** continuously for more than thirty two (32) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature



Date of Signing

30-11-2021
Day / Month / Year

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Head of IT Infrastructure</b>			
2	NAME OF PERSON	<b>TAYAB KHAN</b>			
3	DATE OF BIRTH	25-11-1985			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A			
6	EDUCATION:	<i>Masters in Computer Science, Dept of CSE.(2014)</i> <i>Jahangirnagar University</i>			
7	OTHER TRAINING	Microsoft Certified Professional(MCP) CCNA Linux Red hat Linux System and Network Administrating Certified from Department of Youth Development CCNP Security (Cisco Certified Network Professional Security) JNCIA-JUNOS (Juniper Network Certified Internet Associate) CNSS Certified Network Security Specialist			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language	Speaking	Reading	Writing
		<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD	<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a>			
		FROM: <b>2018</b>		TO: <b>2020</b>	

8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.

**Position Held: Head of System, Network and Infrastructure**

**Duties and Responsibilities:**

- Plan and design secure IT infrastructure of ISP, IIG and ICX.
- Lead overall Sheba Group Technical team especially System, Network and Infrastructure Team
- Deploy ICT Policy and Strategic Planning. Check current environment of the latest technology and also adopt those technologies.

**EMPLOYER: 2**

FROM: **2015** TO: **2017**

**Earth Telecom and Race Online Ltd.**

**Position Held: Head of System and Cloud**

**Duties and Responsibilities:**

- Lead overall system server and cloud implementation team.
- Lead IPTSP Team Plan and design secure IT infrastructure
- Train Technical team especially System & Network Team of ISP, IPTSP and Cloud Team.
- Deploy ICT Policy and Strategic Planning.
- Check current environment of the latest technology and also adopt those technologies.

**EMPLOYER: 3**

FROM: **2012** TO: **2014**

**Paradise Group, Exabyte and P.Tech**

Dhaka, Bangladesh.

**Position Held: CTO (Chief Technical Officer), DGM**

**Duties and Responsibilities:**

- Lead overall Paradise Group Technical team especially System & Network Team of IIG and ISP.
- Deploy ICT Policy and Strategic Planning. Check current environment of the latest technology and also adopt those technologies.

**CERTIFICATION**

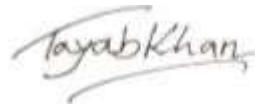
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I have been employed by **Sheba Technologies Ltd.** continuously for the last fifty one (51) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature



Date of Signing

30-11-2021

Day / Month / Year

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	<b>Sr. Engineer, IT Services</b>									
2	NAME OF PERSON	<b>MD. SAIFUL ISLAM</b>									
3	DATE OF BIRTH	28-12-1990									
4	NATIONALITY	Bangladeshi									
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A									
6	EDUCATION:	<i>B.Sc in Computer Science &amp; Engineering (CSE) University of Liberal Arts Bangladesh</i>									
7	OTHER TRAINING	Cyber Security Concepts & Principles RHCSA and RHCE CCNA									
8	LANGUAGES & DEGREE OF PROFICIENCY	Language <i>English</i>	Speakin g <i>Fluent</i>	Reading <i>Excellent</i>	Writing <i>Excelle nt</i>						
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh									
10	EMPLOYMENT RECORD										
<b>EMPLOYER: 1</b>		FROM: <b>July, 2018</b>		TO: <b>Present</b>							
<b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a>											
8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.											
Position Held: <b>Sr. Engineer, IT Services</b>											
<b>Duties and Responsibilities:</b>											
<ul style="list-style-type: none"> <li>• System Design, Architecture, Capacity Sizing</li> <li>• Python, PHP, .Net Core, JAVA application deployment and Maintenance.</li> </ul>											

- Solution Design and Deployment in various projects like eKYC, BlueBox, Redshift, Data-Hub, DoICT.
- System Deployment and Maintenance: Web, Radius, Database, DNS, Rack-Tables, IPLog and WHM/cPanel
- Virtualization and Storage with Clustering and High Availability: NFS Storage, Proxmox VE
- VMs management-Backup and Restore, Live Migration, Resource Planning.
- Load Balancer: Software based Ha-Proxy Load Balancer.
- Monitoring System: Nagios (NMS) and Cacti (MRTG) and Ticketing System: OsTicket.
- Spam Filter and eMail Gateway: MailScanner and Proxmox Mail Gateway.
- Operation Iredmail mail server and ensure security from viruses, spam, phishing, malware, other attacks and security vulnerabilities
- SLA, Preparation of RCA for Major Incidents and SSL Implementation.
- Infrastructure Hardening in accordance with standards and project/operational requirements.
- Security and Firewall: nDPI and pfSense.
- IIG and ISP network operations: Link Aggregation, Routing-BGP, OSPF, GGC, Firewall ACL and Policies.
- System and Network Services Check, Monitoring and Support 24x7 & SDC management.

**EMPLOYER: 2**

FROM: TO:  
**2016**      **2018**

**Sheba Technologies Ltd.**

<http://www.shebatech.com.bd/>

8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.

Position Held: **Engineer, ICT Planning and Development**

**Duties and Responsibilities:**

- Task plan on daily basis and Team Management
- Developing and publish management required Group IT policy, SLA, IT Handbook.
- Dealing with Top IT Vendors for IT Related Procurement, Price Negotiation & PO Releasing.

- L3 Support in various Telecom projects like GP BlueBox, Robi LBS.
- Technical handbook modify & update.
- RND Systems, Services and Various Processes for new & existing projects.
- Infrastructure (System and Network) and hardware planning, architecture, commissioning, deployment, configuration and management.

**EMPLOYER: 3**
**Sheba Technologies Ltd.**
<http://www.shebatech.com.bd/>

8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.

**Position Held: Executive, ICT Operations & Support**
**Duties and Responsibilities:**

- Vendor Management.
- Administration of LAN/WAN Network, Cabling, Network Sharing & Channeling.
- Administration of Access Point, Routers and Switches.
- Mikrotik Router Management (Bandwidth, Static, DHCP, IPsec, IPIP & PPTP VPN).
- Mikrotik Hotspot setup with radius server and user manager.
- Manage end user support to group of Branch Offices on physically or Remote Access.
- Linux/Windows systems installation, configuration and troubleshooting
- MS office & email client configure and troubleshooting.

**FROM: TO:**
**Jan, 2015 March, 2016**
**CERTIFICATION**

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last more than five (5) years as regular full time staff. Indicate "Yes" or "No" in the boxes below:

**YES**

**NO**


Signature

Date of Signing

30-11-2021

Day / Month / Year

		<p>Recent Photo of the Individual</p> 			
1	PROPOSED POSITION FOR THIS PROJECT	<b>UI/UX Designer</b>			
2	NAME OF PERSON	<b>A.M. Rafat Rahman</b>			
3	DATE OF BIRTH	07-04-1996			
4	NATIONALITY	Bangladeshi			
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A			
6	EDUCATION:	<i>Bachelor of Science (B. Sc.) in Computer Science and Engineering (2017)</i>			
7	OTHER TRAINING	N/A			
8	LANGUAGES & DEGREE OF PROFICIENCY	Language	Speaking	Reading	Writing
		English	Fluent	Excellent	Excellent
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh			
10	EMPLOYMENT RECORD				
<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a>		<b>FROM:</b> <b>Jul, 2021</b>		<b>TO:</b> <b>Present</b>	
8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>UI/UX Designer</b> <b>Duties and Responsibilities:</b> <ul style="list-style-type: none"> <li>• Story Boarding, User Guide, Brand Guide</li> <li>• Mobile and Desktop application interface designing</li> <li>• Brand Template Guide building, Prototyping,</li> <li>• Social Posts create</li> <li>• Website &amp; web application QA.</li> <li>• Mobile App UI, icons, wireframing</li> <li>• All Website, web application and Mobile Apps UI create</li> <li>• Sketch, Wireframing</li> <li>• UI template, Prototyping, Interaction Video</li> </ul>					

- *Realistic view, User Experience Collection*
- *User Presentation, Demonstration All Website, web application and Mobile Apps UI create*

**EMPLOYER: 2**
**Akij Group, IT Department**
[www.akij.net](http://www.akij.net)
**Position Held: UI/UX Designer**
**Duties and Responsibilities:**

- *Story Boarding, User Guide, Brand Guide*
- *All website re-branding, User Experience check,*
- *Mobile and Desktop application interface designing*
- *Brand Template Guide building, Prototyping,*
- *Social Posts create, IT Newsletter design.*
- *Website & web application QA.*
- *Mobile App UI, icons, wireframing*
- *All Website, web application and Mobile Apps UI create*
- *Content Collection, Sketch, Wireframing*
- *UI template, Prototyping, Interaction Video*
- *Realistic view, User Experience Collection*
- *Website Monitoring, Modification Analysis*
- *User Presentation, Demonstration All Website, web application and Mobile Apps UI create*

**FROM: TO:**
**Feb, 2018 Jun, 2021**
**EMPLOYER: 3**
**Freelancer**
[www.freelancer.com](http://www.freelancer.com)
**Remote.**
**Position Held: Front End Designer**
**Duties and Responsibilities:**

- *Website template design, Logo, Brochure design*
- *HTML, CSS, Bootstrap template development*
- *Story Boarding, User Guide, Brand Guide*
- *Mobile and Desktop application interface designing*
- *Brand Template Guide building, Prototyping,*
- *Social Posts create, IT Newsletter design.*

**FROM: TO:**
**Feb, 2014 Feb, 2018**
**CERTIFICATION**

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last four (4) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

**YES**

**NO**

Signature



Date of Signing

**30-11-2021**

Day / Month / Year

	Recent Photo of the Individual									
1	PROPOSED POSITION FOR THIS PROJECT	<b>Technical Documentation Expert</b>								
2	NAME OF PERSON	<b>Ajfar Uddin Ahmed Chowdhury</b>								
3	DATE OF BIRTH	14-03-1993								
4	NATIONALITY	Bangladeshi								
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A								
6	EDUCATION:	<i>Bachelor of Science (B. Sc.) in Computer Science(2020) Daffodil Institute of IT, Dhaka, Bangladesh</i>								
7	OTHER TRAINING	N/A								
8	LANGUAGES & DEGREE OF PROFICIENCY	<table border="1"> <tr> <td>Language</td> <td>Speaking</td> <td>Reading</td> <td>Writing</td> </tr> <tr> <td><i>English</i></td> <td><i>Fluent</i></td> <td><i>Excellent</i></td> <td><i>Excellent</i></td> </tr> </table>	Language	Speaking	Reading	Writing	<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>
Language	Speaking	Reading	Writing							
<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>							
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh								
10	EMPLOYMENT RECORD									
<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Junior Business Analyst</b> <b>Duties and Responsibilities:</b> <ul style="list-style-type: none"> <li>• Project Requirement Elicitation;</li> <li>• Feature Analysis;</li> <li>• Technical Diagramming;</li> <li>• Prepare Technical Documentation;</li> </ul>		<b>FROM:</b> <b>Feb, 2021</b> <b>TO:</b> <b>Present</b>								

## CERTIFICATION

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last thirty eight (8) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature



Date of Signing

<b>30-11-2021</b>
Day / Month / Year

	Recent Photo of the Individual				
1	PROPOSED POSITION FOR THIS PROJECT		<b>Jr. Software Engineer</b>		
2	NAME OF PERSON		<b>Abdullah Hel Azmain</b>		
3	DATE OF BIRTH		28-07-1999		
4	NATIONALITY		Bangladeshi		
5	MEMBERSHIP IN PROFESSIONALSOCIETIES		N/A		
6	EDUCATION:		<i>Bachelor of Science (B. Sc.) in Computer Science and Engineering (2020)</i> <i>American International University, Bangladesh</i>		
7	OTHER TRAINING		N/A		
8	LANGUAGES & DEGREE OF PROFICIENCY	Language	Speaking	Reading	Writing
		<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>
9	COUNTRIES OF WORK EXPERIENCE		Bangladesh		
10	EMPLOYMENT RECORD				
<b>EMPLOYER: 1</b> <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Software Engineer</b>			FROM: <b>May, 2021</b> TO: <b>Present</b>		
<b>Duties and Responsibilities:</b> Software Frontend Design, Development. Review Code with debug and testing.					

## CERTIFICATION

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last six (6) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature



Date of Signing

**30-11-2021**  
Day / Month / Year

Recent Photo of the Individual



1	PROPOSED POSITION FOR THIS PROJECT	App Developer								
2	NAME OF PERSON	<b>Rokibul Hasan</b>								
3	DATE OF BIRTH	21-07-1995								
4	NATIONALITY	Bangladeshi								
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A								
6	EDUCATION:	<i>B.Sc. in CSE (2017)</i>								
7	OTHER TRAINING	Mobile Application Development (Android)								
8	LANGUAGES & DEGREE OF PROFICIENCY	<table> <tr> <td>Language</td> <td>Speaking</td> <td>Reading</td> <td>Writing</td> </tr> <tr> <td><i>English</i></td> <td><i>Fluent</i></td> <td><i>Excellent</i></td> <td><i>Excellent</i></td> </tr> </table>	Language	Speaking	Reading	Writing	<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>
Language	Speaking	Reading	Writing							
<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>							
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh								
10	EMPLOYMENT RECORD									
	<b>EMPLOYER: 1</b>  <b>Sheba Technologies Ltd.</b> <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a> 8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212. Position Held: <b>Junior Android Developer</b> <b>Duties and Responsibilities:</b> <ul style="list-style-type: none"> <li>Design and Develop functions of Android Applications</li> </ul>	FROM: <b>2017</b>	TO: <b>Present</b>							
	<b>EMPLOYER: 2</b>  <b>Sheba Technologies Ltd.</b>	FROM: <b>July, 2017</b>	TO: <b>Sep, 2017</b>							

http://www.shebatech.com.bd/  
8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.

Position Held: **Android Developer Intern**

**Duties and Responsibilities:**

- Design and Develop functions of Android Applications

**CERTIFICATION**

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last Thirty One (31) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature



Date of Signing

<b>30-11-2021</b>
Day / Month / Year

	Recent Photo of the Individual									
1	PROPOSED POSITION FOR THIS PROJECT	<b>SQA Engineer</b>								
2	NAME OF PERSON	<b>Md. Jeshad</b>								
3	DATE OF BIRTH	31-03-1997								
4	NATIONALITY	Bangladeshi								
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A								
6	EDUCATION:	<i>Bachelor of Science (B. Sc.) in Computer Science and Engineering (2019) ULAB (University of Liberal Arts Bangladesh)</i>								
7	OTHER TRAINING	N/A								
8	LANGUAGES & DEGREE OF PROFICIENCY	<table border="1"> <tr> <td>Language</td> <td>Speakin g</td> <td>Reading</td> <td>Writing</td> </tr> <tr> <td><i>English</i></td> <td><i>Fluent</i></td> <td><i>Excellent</i></td> <td><i>Excellen t</i></td> </tr> </table>	Language	Speakin g	Reading	Writing	<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellen t</i>
Language	Speakin g	Reading	Writing							
<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellen t</i>							
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh								
10	EMPLOYMENT RECORD	<p><b>EMPLOYER: 1</b>  <b>Sheba Technologies Ltd.</b>  <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a></p> <p>8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.  Position Held: <b>SQA Engineer</b>  <b>Duties and Responsibilities:</b></p> <ul style="list-style-type: none"> <li>➤ As a Software Testing Engineer, responsible for Product Development, Design and Execute software testing to improve the quality and reduce operational risk of the developed application, prepare Test Plan, Test Case and UAT execution.</li> </ul> <p><b>Project Name:</b></p>								

**BRAC Task management platform** - It's a task tracking platform that is built on the concept of JIRA. After preparing the Test Plan & Test Cases based on SRS, called a meeting based on MoM for confirmed the UI/UX design from both parties.

**BRAC AI – ERP** – It's an Artificial Insemination ERP project. I'm responsible for the SQA manual testing lead.

**SRMS** – Sheba Relief Management Solution which is a relief management solution waiting for Govt. approval.

**DNCC** – Dhaka North City Corporations Attendance Solution waiting for Government approval.

**SRDL** - Sheikh Rasel Digital LAB which is a BD Govt. project for school lab monitoring.

**E-KYC** – Electronics Know Your Customer is an automatic face verification customer On-boarding IOS, Android & Web app solutions for UFL, MetLife & many more companies.

- Research for new products, Business Network Development, Business Analysis and strategy planning.
- Prepare user manual, conduct end users training, ensure effective software maintenance and change requirement management, Training and customer support.
- Organizational papers documentation (Business Strategy Presentation, SLA, MoU, BRS etc.).

#### CERTIFICATION

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last thirty two (32) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

<b>YES</b>	<input checked="" type="checkbox"/>
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<b>NO</b>	<input type="checkbox"/>
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Signature



Date of Signing

30-11-2021
Day / Month / Year

	Recent Photo of the Individual									
1	PROPOSED POSITION FOR THIS PROJECT	<b>Software Quality Assurance Engineer</b>								
2	NAME OF PERSON	<b>Nafisa Haque</b>								
3	DATE OF BIRTH	02-11-1993								
4	NATIONALITY	Bangladeshi								
5	MEMBERSHIP IN PROFESSIONALSOCIETIES	N/A								
6	EDUCATION:	<i>Masters of Science (MSc.) in Computer Science and Engineering (2017)</i> <i>Daffodil International University, Bangladesh</i>								
7	OTHER TRAINING	N/A								
8	LANGUAGES & DEGREE OF PROFICIENCY	<table border="1"> <tr> <td>Language</td> <td>Speaking</td> <td>Reading</td> <td>Writing</td> </tr> <tr> <td><i>English</i></td> <td><i>Fluent</i></td> <td><i>Excellent</i></td> <td><i>Excellent</i></td> </tr> </table>	Language	Speaking	Reading	Writing	<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>
Language	Speaking	Reading	Writing							
<i>English</i>	<i>Fluent</i>	<i>Excellent</i>	<i>Excellent</i>							
9	COUNTRIES OF WORK EXPERIENCE	Bangladesh								
10	EMPLOYMENT RECORD	<p><b>EMPLOYER: 1</b>  <b>Sheba Technologies Ltd.</b>  <a href="http://www.shebatech.com.bd/">http://www.shebatech.com.bd/</a></p> <p>8th Floor, Khawaja Tower, 95 Mohakhali C/A, Dhaka-1212.  Position Held: <b>Software Quality Assurance Engineer</b>  <b>Duties and Responsibilities:</b>  Software Testing.</p> <p>FROM:                    TO:  March,                  Present  2021</p>								

## CERTIFICATION

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before the submission of this proposal, and (ii) to the best of my knowledge and belief, this biodata correctly describes myself, my qualifications, and my experience. I understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by **Sheba Technologies Ltd.** continuously for the last six (6) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES

NO

Signature

Nafisa Haque

Date of Signing

30-11-2021

Day / Month / Year

## Annexure H: Original Money Receipt

ক্রমিক নং 185957 —————  ————— বছোর 1850  
**বাংলাদেশ বেসামরিক বিমান চলাচল কর্তৃপক্ষ**  
 (টাকা পাওয়া রশিদ)

জনাব / জনাবা / মেসার্স 8th Fl. Khawaja Tower, 95 Mohakhali  
 পত্র নং (যদি থাকে) Dhaka-1212. তারিখ 4A.  
 টাকা ৩,০০০/- (কথায়) One Thousand Only.  
 নগদ / চেক / ড্রাফট নং  
 T./NO: CEMSU/Com-WS-01/2021-2022  
 বিষয়ে বুঝিয়া পাওয়া গেল।  
 ভাউচার নং  
 তারিখ 17/11/2021.  
 টাকা = ৩,০০০/- *পাওয়া গেল*  
 সেক্রেট: একিউইমেন্ট, ইলিনিয়ারিং ও টেক ইণ্ডিস্ট্রি  
 সিলভার, সুর্মিট্রেল, ঢাকা-১২২৯  
 সহকারী হিসাব দফত কর্তৃপক্ষ  
 সেক্রেট: একিউইমেন্ট, ইলিনিয়ারিং ও টেক ইণ্ডিস্ট্রি  
 সিলভার, সুর্মিট্রেল, ঢাকা-১২২৯