

Budgetary Estimate for **eNiyamasabha Project, Kerala**

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INVITATION FOR PROPOSAL

Submitted to: UL Technology Solutions Private Limited

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1. Proposed System Architecture

SBL Knowledge Service Ltd has successfully developed and copyrighted “eParliament™“ software solution for automation of all essential processes of Parliament. The solution comprises of four major vertical applications as follows:

In House application (eChamber Application)

This vertical, also known as “eChamber”, consists of all applications running within the house. The key stakeholders are Honorable Speaker, Parliament secretariat, Ministers, Members, House staff etc. eChamber application comprises of the following modules:

- Server Daemon
- Admin Application
- Business Controller
- Display Module
- eBook Module
- SpeakerPad
- Secretarypad
- Media User book
- Message broker

Intranet Application

This vertical consists of all the Backoffice application modules facilitating the house to function. The key stakeholders are the Honorable Speaker, Parliament secretariat, Ministers, Members, Legislative Assembly Staff. Key modules in intranet Vertical of eParliament™ are:

- Reporter Module
- Committee Management
- Question Processing
- Notice Processing
- Bill Processing
- Library Management
- User Management
- Member Registration
- Master Forms

Internet Application

This is a public portal that links the public with the house. Key stakeholders are public and legislative members. Main modules in Internet Vertical of eParliament™ are:

- Public Website
- Question Submission
- Constituency Management

- Entry Pass Management
- MLA Hostel Management
- Constituency Public Work Monitor
- Web GIS based Office Information
- Press Release Management

Mobile Applications

Mobile Application stack helps the public & Honorable members connect to the system on the Go

- Member Application
- Public Module

The system architecture is as depicted in FIG 1 below:

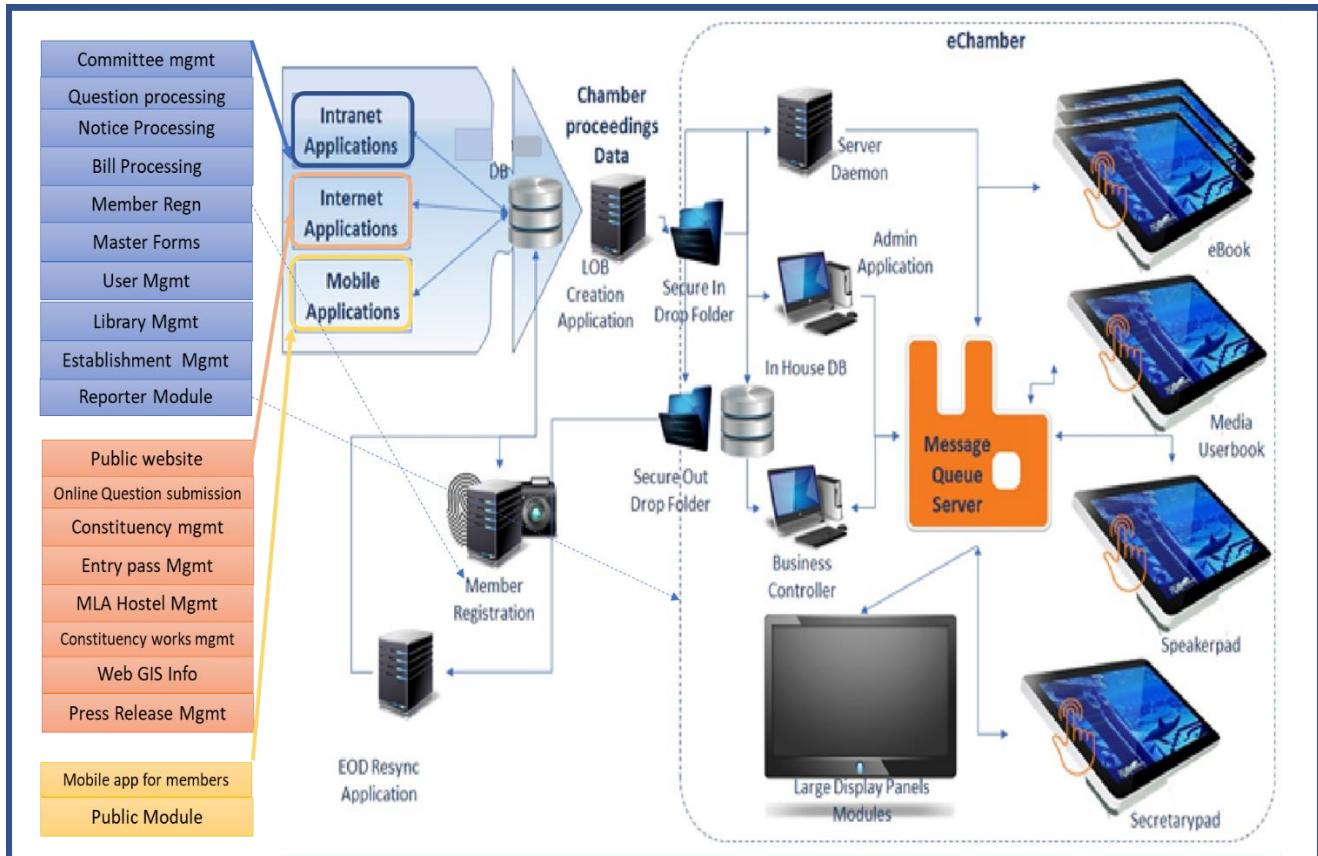


FIG 1 eParliament™ System Architecture

Elsewhere in the world, legislative assemblies have successfully launched paperless parliament initiatives

similar to that being proposed in this proposal. SBL was instrumental in implementing a **similar system** in Himachal Pradesh successfully. The Statesman newspaper web edition dated 25th February 2017 carried a news item on Himachal Pradesh State Legislative Assembly “saving greens and wealth”. **Being the first and only one to go fully paperless in India over two years ago, the Himachal Pradesh Assembly in Shimla roughly saves 6,000 trees (from felling) and INR 15 Crore (App \$ 2.2 M) annually by switching to online system, as per officials.**

The e-Vidhan initiative by the septuagenarian state Assembly Speaker Brij Bihari Lal Butail has seen the young and aged Members of Legislative Assembly in the hill state keenly take to the modern technology for legislative functioning. After a series of trainings by IT experts, the MLAs in HP have adapted to the use of touch screen-based e-books installed on their tables to view the business, replies of questions, bills, the budget and to lay papers in the house, e-Voting etc.

An identical system is being proposed for Kerala Niyamasabha as well in ensuing section.

2. Overview of Application Modules & Features

eParliament™ solution offered by SBL, in general, strives to achieve the following features:

2.1 Enhanced User Experience

When paper-based legislative operations are converted into paperless, user interface need to be much better than conventional computer-based user interface that requires knowledge of computers, keyboard operation, UI navigation skills etc. The contents would have to be presented in the form of an eBook application (hereafter to be referred as eBook), especially inside house.

eBooks are simple and easy to flip through (to read) just like printed papers. eBooks are searchable, and one can easily search for any information in an eBook, instead of turning page after page. Order book and Order paper contents can be organized in a hierarchical manner with links to details from summary. This helps in easy access to more detailed information from within material provided and/or any related websites (if connected to internet). The eBooks can be launched on the laptops or tablets. Fonts in eBooks can be resized, making it easier to read for people with special requirements. With an additional software, it is possible to turn some of the eBooks into audio books too.

Further, eBooks (running on tablets) can be provided to the honorable members so that they can download all relevant materials for reading anytime anywhere with same convenience and user friendliness.

eBooks can be printable, so that if honorable members wish to read an eBook in the traditional way, they can very inexpensively print it with home printer or at common printing facility in the Parliament.

Similarly, for Hansard, reporting module should include intelligent auto scripting feature to help “auto text” words commonly used in the parliamentary recordings as well as accord reporting aids. Typical reporting aids include ready reference information like names of ministers/honorable members, their constituencies, Standing orders etc.

All modules of eParliament™ support enhanced user experience.

2.2 Streamlined & Integrated Environment

For going paperless in the Parliament Chamber, a well-structured process needs to be created as follows:

- a. Facility for remote switching on, off and diagnostics of each of member machines
- b. Remote downloading of relevant documentation in the form of PDFs to member machines
- c. Facility to step through, display and control the proceedings of the Chamber and

synchronizing member eBook displays to the current agenda item in discussion.

- d. Additional functionalities like Voting, Member attendance, Chamber proceedings display etc. to be integrated.

Current business process needs to be finetuned in order to facilitate easy execution of the above process.

For Hansard, the reporting module shall comprise of an integrated reporting environment with word processing facility and Video/Audio playback facility.

Basic architecture of eParliament™ offers streamlined, integrated environment.

2.3 Improved Security

Information security is of utmost importance in the proposal.

Currently there is no network within the House. Implementing network within House over wireless would be cost effective and easy to implement. However, wireless networks are prone to weak security features, limited bandwidth capabilities with single point failure. The speed, availability and security of the network need to be ensured by installing a wired network connectivity with redundant connectivity paths. There shall be exclusive network for the House with secured connectivity to Niyamasabha intranet (and to internet via firewall as well). Additionally, the network (and the associated business process) should be architected for standalone operation in the event of Niyamasabha intranet getting swarmed by virus/malware attack.

A recent news item that appeared in THE TIME OF INDIA 9th FEB 2019 underlines importance of Security.

Oz parliament network hacked

Sydney: Australia's parliament revealed on Friday that its computer network had been compromised by an unspecified "security incident". "Following a security incident on the parliamentary computing network, a number of measures have been implemented to protect the network and its users," parliamentary authorities said.

Officials declined to comment on the nature of the cyber security breach. "We have no evidence that this is an attempt to influence the outcome of parliamentary processes or to disrupt or influence electoral or political processes," a statement said. "Our immediate focus has been on securing the network and protecting data."

Security is the hallmark of eParliament™

2.4 Supporting Building Block Approach

Available Intranet, internet and mobile applications of KLA have evolved over the past decade and have found full acceptance from various users and stakeholders. Thus, any new initiative should be

based on the same building blocks available as well as planned. In other words, any incremental effort should support implementation on top of existing/planned initiatives.

However, detailed study would have to be undertaken to understand the functionalities and data structure specific to Kerala Legislative Assembly before we can commit on integration with them.

2.5 Collaborative Platform

Taking into consideration the knowledge and expertise of the IT team of Parliament of KLA, we offer eParliament™ solution that is designed to evolve in collaborative environment (as opposed to turnkey system implementation) based on Open stack platform.

3. Overview of Various Modules & Supported Features

Following are the quick overview of various modules and supported features

In House		
Sr.No	Module Name	Key Functionalities
1	Server Daemon	Server Demon configuration
		Wake on LAN
		Initiate daily download
		Flush files & switch off machines
2	Admin Application	Manage seats
		Enable/Disable seat
		Admin App Configuration
		Initiate Daily Downloads
		Wake On LAN
		Client Download Control
		Shutdown On LAN
		Flush Daily Download
3	Business Controller	LOB display
		Attendance
		Event /Sub event process
		Member Search
		Paper Laying
		Discussions
		e-Voting
		New Event/Sub Event Creation (e.g. Adjournment motion)
4	Display Module	Manage an Event
		Manage Members
		Voting Start
		Voting Stop
		Approve Voting
		Event Time Display
5	eBook	Login module
		LOB Client Display
		Question answer Display
		PDF Viewer
		Voting and Result Display

		Attendance marking
		Direction and Rules
		Budget
6	Speakerpad	Speaker can view the LOB activities and can interact by sending messages.
		Display of Business in order of LOB and Current event occurring
7	Secretarypad	Secretary can view the LOB activities and can interact by sending messages.
		Display of Business in order of LOB and Current event occurring
8	Media User Book	View List of Business
		View Questions and Answers
		View Budget Documents
		PDF Viewer
		Navigation Buttons
		Allow user to view new event
9	Message broker Server	
Intranet		
1	Reporter Module	Create, Edit, Delete group
		Add and Remove members from group
		Create time slot
		Change group for a time slot
		Manage sequence order for group
		Prepare time slot data
		Edit Timeslot document
		Send document for editor's approval
		Edit and Approve/Reject document by Editor
		Edit and Approve/Reject document by Deputy Chief Editor
		Edit and Approve/Reject document by Joint Chief Editor
		Edit and Approve/Reject document by Chief Editor
		Edit and Approve/Reject document by Secretary
		Edit and Approve/Reject document by Speaker
		Prepare diary document
		Edit Diary document
		Send diary document for approval
2		Manage Committee

	Committee Management	Manage and Map Member-Committee Create, Edit, Remove Notification/Petition/Ordinance/SRO Create, Edit report based on Notification/Petition/Ordinance/SRO Review report based on Notification/Petition/Ordinance/SRO through the different levels of authority Send report to committee Validate report by Committee Fix date
3	Question processing	View the submitted question by the diary user Add, Edit, Delete question by the diary user Initial approval by the secretary Assign typist by the legislative user Type question by the typist View the question by the typist Approve the question by the proof reader Verify and freeze the question by the legislative user Approve/Reject the question by the secretary Bracket the question by the legislative user Change the question type by the legislative user Recert rejected question by the legislative user Withdraw question by the legislative user previous company boys Fix question for a session by the legislative user Approve the session date by the secretary Submit answer by the department Prepare questionnaire by the translator Prepare final approval by the secretary
4	Notice Processing	Create new notice Edit, Delete notice by diary user Send notice for secretary approval Initial Approval by secretary Assign typist by legislative user for notice processing Type notice by typist Verify, Edit notice by typist Send notice for proof reading Approve or send back notice details by proof reader View approved notice details by proof reader

		View approved notices by secretary Edit and Submit notice by legislative user Final approval by secretary Submit reply by department user Draft and edit reply by department user View submitted reply by department user
5	Bill processing	Create new bill View existing bills Edit bills Review bills Fix date to present bill in the assembly
		Add, Edit, Delete location
		Add, Edit, Delete Subscription Items
		Add, Edit, Delete Paid member details
		Add, Edit, Delete bill information
6	Library management	Add, Edit book details
		Write off book
		Stock verification
		Facility to delete book details
		Issue book
		Facility to edit issued book information
		Return book
		Reissue book
		Add, Edit, Delete document
		Issue document
		Edit issue document details
		Return document
		Reissue document
		Reports
7	User Management	Manage User Roles
		Manage and Map Department-Designation
		Manage and Map Role-Permission
		Manage and Map User-Designation
		Activate or Deactivate User
8	Member Registrations	View unregistered members
		View registered members
		View all members
		Search members

		Enroll fingerprint of members
		View already enrolled fingerprints
9	Master Forms	All the Master data processing forms for the system
Internet		
1	Public Website	
2	Online Question Submission	Create a Question
		View My Question List
		Search my question list
		View My Question Details
		Edit My Question
		Submit Question
		Delete Question
3	Constituency Management	Add public grievance
		Facility to view status of submitted grievance
		Facility to edit saved grievance
		Facility to view submitted grievance
		View list of grievance
		Reject a grievance
		Forward the grievance to concerned department
		Redressal of Demands
		Online submission of Demands & requests to members
		Add offices/institutions in constituency(Administrator)
		View list of offices/institutions
		Edit offices/institutions
		Delete offices/institutions
		View offices/institutions of constituency(MLA)
		Add public work
		Search public work
		View public work list
		Edit public work
		Remove public work
		Update status of public work
		View all constituency
		View logged member constituency
		View constituency details
		View office / institution details
		View budget allocation information

4	Entry Pass Management	
5	MLA Hostel Management	
6	Constituency Public Works Monitoring	
7	Web GIS office information	
8	Press release Management	
Mobile		
1		Member Profile Notice Board News Updates View House documents View Salary/Bill reimbursement Bill Introduced Bill Passed Rule and Directions View Budget Documents List Office, Institution and Services Contact details Submit, Forward, Reject Grievance Current and Next LOB view Add Questions Calendar View Bulletin Bills for amendments, Members' amenities request
2		Post Grievances View status of grievances Status of public work

4. Compliance Statement

Compliance to Requirements as per Invitation For Proposal

We have gone through the software requirements (Module wise as stated in the IFP and we comply with most of the software requirements except the following classification

- a. Features which need customisation
- b. Modules that need to be developed afresh.

4.1 Features that need to be customized are as under

Sl. No	Sub Heading	Feature Need Modification
1	House Operation	Scope of this work would include the development of web portal and mobile application which would enable the following functionalities
2	Editing Section	Provision to search based on Keyword e.g. Member's name, subject and activities by Date, time.
		Provision to send synopsis and gleanings to honorable speaker's approval.
		Provision to amend the verbatim prepared on proceedings with specific to Member.
		Provision to send documents to client press for printing.
		Provision to view/download the uploaded answers.
		Provision to record the day's proceedings
3	Protocol	Provide multilingual support in English & Malayalam.
		Raise request for room allotment, conference room booking to House Keeping.
		Travel request management.
		Guest's feedback management - Provision for a Feedback form to be scanned and captured against guest/date of visit
		Vehicle management- Provision to Book Vehicle with date/time/for details
4	Speaker Office	Request for watch and ward for security of guests through online- Provision to raise service request to Watch & Ward Department
		Provision to view adjournment motion request and approval of request.

		Provision to view 'Calling attention' request and approval of the request.
		Provision to send 'Short Communication/Notification' to minister's office.
		Provision to manage different types of approvals of the Honorable Speaker.
		Provision to prepare running notes for Hon. Speaker to read
5	Secretary Office	Provision to view the bill pending for submission
		Provision to view and approve Question & Answers to be submitted on the table
		Provision to view and approve Member performance report
		Provision to view Staff Details by section
6	Work Flow Configuration	SMS/Email alert system for generating reminders/Information's automatically, to be configurable based on the different alerts required

Given the software requirement of the above, duly signed off by the customer and time as assessed by us, we can customise and integrate with our proposed system (at an additional cost). It shall be noted that BRD signoff, UAT etc will have to be taken by ULTS

4.2 Module that need to be Developed afresh

Modules that need to be developed afresh are as under:

Sr.No	Sub Heading	Feature Unavailable
1	Table section	Preparation and publishing of Calendar and Summons
2	Management of List of Business	Prepared LOB to send for approval
		Publish approved LOB to members
		View Notification from sections for activities to be scheduled in LOB.
3	Assembly Diary	Part 1 bulletin and Part 2 bulletin - There should be a provision to prepare and publish the Bulletin part 1 and Bulletin part 2
		Members Complaint management system – This module will consist of the following functionalities
4	Certificate Issue	Provision to request a certificate by the members

		Table section should be able to view service request submitted by members and to attach a letter to the request
5	Government Bill	<p>Provision to send bill for approval to different levels within Legislative section and also to the Secretary and to Hon. Speaker</p> <p>Provision to update the status of gazette notifications (To update the status, date and time when published in Gazette).</p> <p>Provision to capture public opinion (if the bill is sent for Public Opinion)</p> <p>Provision to send to Subject Committee</p> <p>Provision for Bill approval process (Governor/ President of India)</p> <p>Provision to forward Acts to CPL</p>
6	Private Members Bills and Resolution (PMBR)	<p>Provision for Members to submit bills online</p> <p>Provision to View bills submitted by the member and send them for approval.</p> <p>Provision to send approved bills to Law department.</p> <p>Provision to capture reply from law department by PMBR section</p> <p>Provision for Balloting to select Bill to be taken for submission during the session.</p> <p>Provision to forward the Selected Bill to Table section.</p> <p>Provision to update the status of the bill after tabled in the assembly.</p> <p>Provision to view the bill details to be available for view to Members and authorized users</p>
7	Committee Paper Laying (CPL) Sections	<p>Provision to track reminders.</p> <p>Provision to send communication/Notice on the number of documents to be tabled in the assembly during the current/next session.</p> <p>Provision to track committee meeting dates, attendance and to record minutes of meetings</p>
8	Legislature committees	<p>Initiate meeting schedule.</p> <p>Provision to capture meeting proceeding by Editing Team.</p> <p>Provision to view and correct the captured meeting proceedings.</p> <p>Provision to record members presence during the meeting.</p> <p>Provision to capture any communication sent to departments</p>

		Provision to send the notifications to the table Section regarding the date for submission of report in the assembly
9	CPST – A	Provision to apply for Training
		Provision to publish Training calendar
		Provision to track attendance
		Provision for downloading available materials
10	CPST – B	Provide a public web portal for notification and publication of course details
		Provision for Online application.
		Provision for Shortlisting of students.
		Provision for Exam Notification to students
		Provision for downloading available study materials for students.
		Provision to submit clarification/query by students and response from section.
		Provision for Online Fee Payment
11	Client Press	Provision to upload documents for printing with following details(No of copies, cover page requirement, language of printing, style of printing)
12	Web portal	Online submission of suggestion on bills
		RTI filing related to client
		The following features should be accessible to the members(View answers, View Notifications from Non-Speaker/Minister, View bill pending submission, Access to reports as published to members, view committee meeting schedules and their agenda, submit their objections/changes desired in the draft report)

Given software requirement of the above modules, duly signed off by the customer and time as assessed by us, we can develop and integrate with our proposed system (at an additional cost). It shall be noted that BRD signoff, UAT etc will have to be taken by ULTS.

4.3 Queries need Clarifications

Further going through Section 3, Solution Requirement, one gets more questions (than solutions). Sample list of requirements under Solution Requirements and Related Queries that need to be answered to come up with a solution are given as under:

Sl. No	Sample list of Solution requirements	Related Queries that need to be answered to come up with a solution
1	Web & Mobile based software application	Detailing which are web applications and which are mobile applications
2	Redressal of public grievances/Demands	What is the process intended
3	Notification/Alert message to be sent to all members on short notice. User should be able to define the notification to be circulated to members/ministers	Where do we collect member cellphone nos
4	The system to integrate all 37 legislature committee with in-house application	What all need to be integrated from 37 committees
5	Document revision history	Which all documents
6	Provision to have dashboards to view status/ reports in an user friendly manner	Specify details of dashboards
7	Application should support continues integration and development operation	Details of the exact requirement
8	The system to automate working of legislative assembly Houses and members	Specify what to automate which all activities of legislative house and members
9	Monitoring various works running in the constituency	Who enters work progress and how do we capture them in our system
10	The application should be able to link (interface) to other 3rd party applications.	Please give details of applications and what is desired to be linked
11	Member's amenities (Interface with 3rd party application as required by business). Basically, to call other applications	Details of software requirement
12	The system shall automate all file movements from one section to another & avoid use of paper for all operation related to legislative assembly house	Specify which all file movements
13	To have option to send documents to printing Section. All documents generated for the house can be sent for printing, but optional	List of documents to be sent for printing
14	Option to scan and store documents digitally which are published time to time	Does this require supply/implementation of a Digital archival system?

15	Member performance analysis report	What parameters quantify member performance and which module acquires the same
16	Workflow and approval system should be configurable by each section. Workflow refers to defining flow of transactions	Which all sections, which all stakeholders
17	Approval should be mapped with all type of operation/transaction	what all types of operation/transaction
18	To automate all the functional areas of committee for paper lying with modules of paper laid on table, SRO Formats & delay statement request	Specify clearly the functional areas
19	The system should be able to manage all operations of committee , committee formation, meeting schedule, minutes of meeting, Reports and final reports prepared by committee and forwarding to CPL for laying in the legislative assembly house	Specify clearly what all operations of the committee
20	To integrate the existing solution for question management, assurance management or to ensure that the proposed solution to address the current process with better flexibility.	Details of existing solution
21	Provision to have an audit trail of all documents with date of updation /revision	Specify list of documents to be audit traile
22	All workflow routing functions should be logged, and logs should be available in UI for admin to review	Specify clearly the workflow routing functions
23	All operational failures - alerts mechanisms should be part of application.	Specify expected operations failure alerts

The queries, as listed above, have been communicated to ULTS before and we have not been able to get any clarity on the above. Many of the requirements leave the requirement specification open ended. Hence, if we accept this Solution Requirement, it would be very difficult to conclude the project in time and hand over. **Unless this Solution Requirement gives more clarity, detail and specificity as required, it would be very difficult to comply with Solution Requirement Section. If eNiyamasabha is to be successfully implemented benefitting the end customer, we strongly recommend that our eParliament™ solution as proposed in Section 2.0 be implemented as such.**

5. Deployment Architecture

eParliament™ deployment architecture is as depicted in FIG 2 below

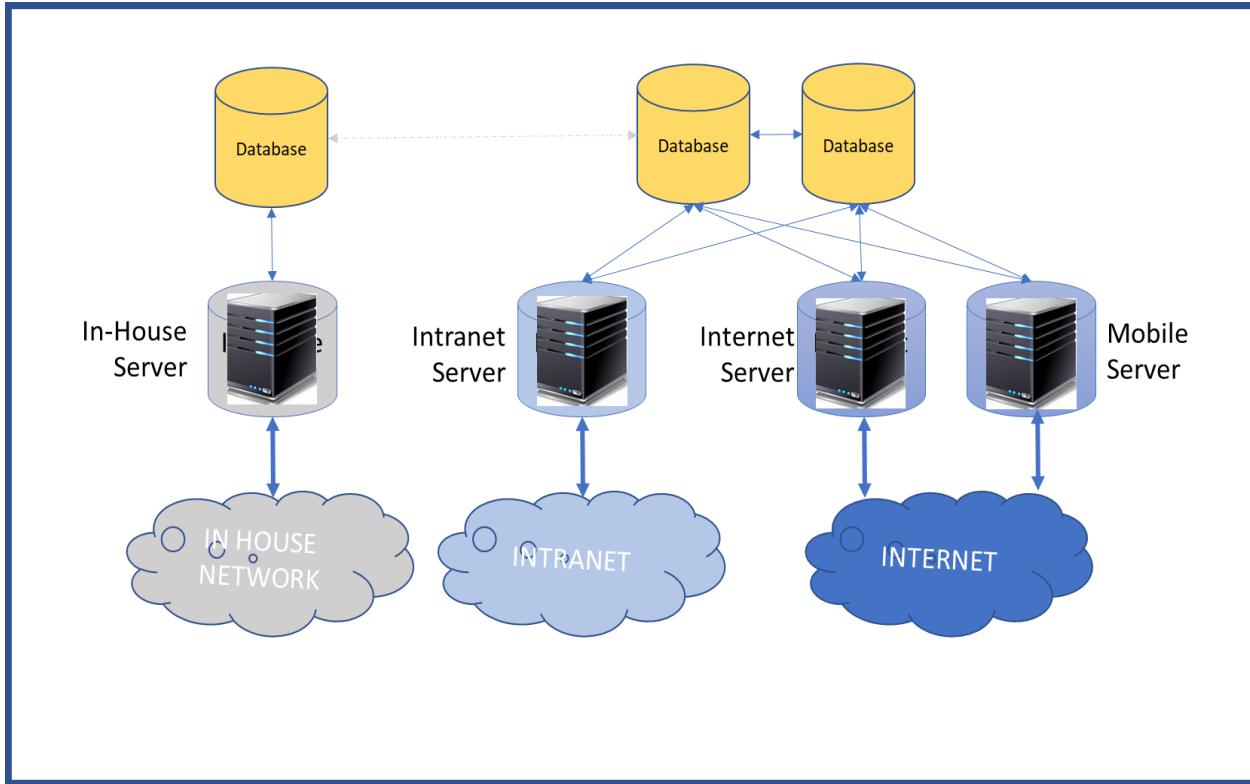


FIG 2: Deployment Architecture

The deployment envisages the following:

1. All servers i.e... In House Server, Intranet Server, Internet Server & Mobile Server) are all housed in KLA Data Centre with standard perimeter security systems
2. Three distinct networks are created i.e. In-House, Intranet and internet
3. Data exchange between Intranet/Internet and in-houses take place in a sterile manner so that in House data is highly secure
4. All access devices in IN house are eBooks pre-dominantly, while Intranet /Internet access devices are desktop/laptop based and mobile access devices are laptops/tablets/smartphones.

6. Implementation Methodology, Training & Support

This section provides a detailed description of the various steps involved in our implementation methodology:

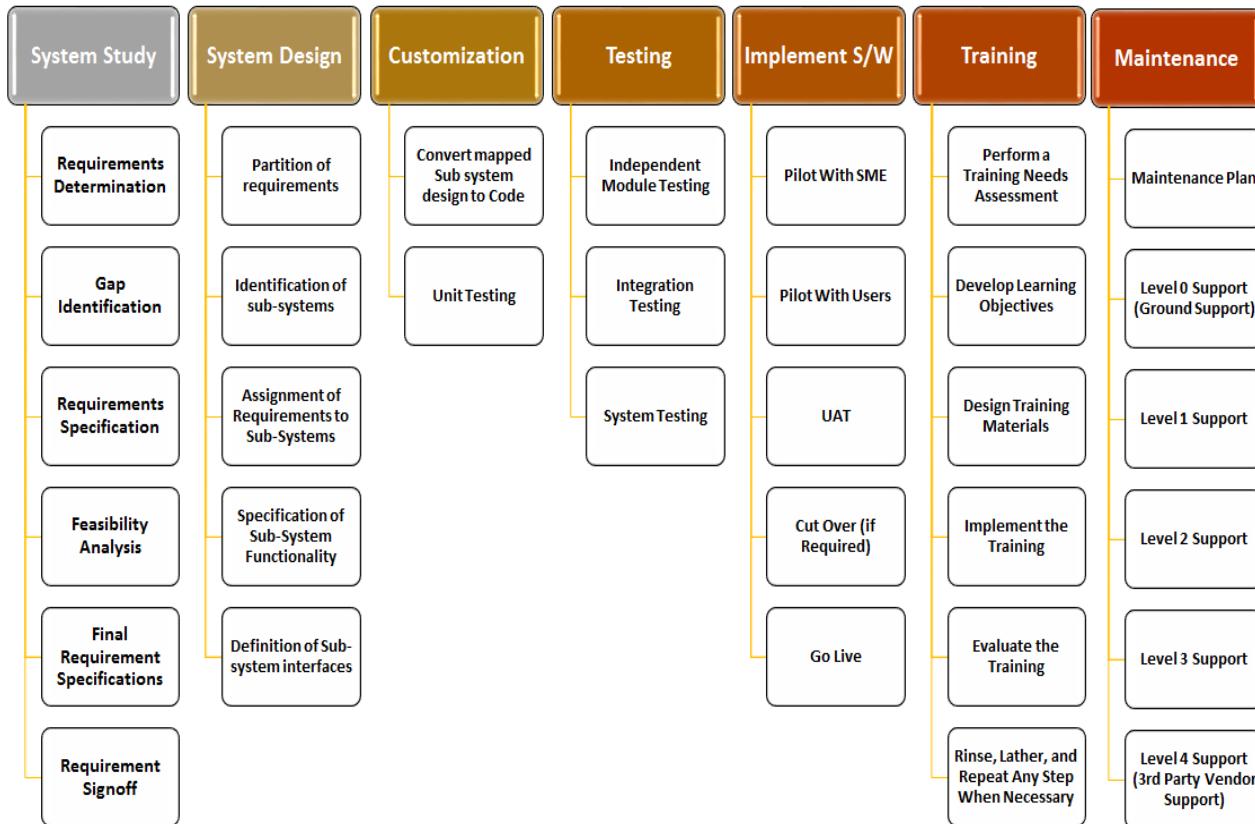


Figure 3 – Implementation Methodology

6.1 System Study

Once the project is awarded, we will focus on understanding and analyzing the business requirements and seeking further information from all the stakeholders. SBL has a well-defined methodology and process for requirements analysis and documentation.

We will designate our resource to work at customer location during the requirements study stage. SBL resources bring to table their capability and experience in understanding and articulating business requirements in context of current state and future need. During Requirement Study, following sub activities will be performed

1. Requirements Determination – In this stage, all the requirements for the intended system is determined and listed.

2. Gap Identification – In this stage, a mapping between the intended system and existing product/project is created, and all the gaps are identified and listed.
3. Requirements Specification (SRS)- During this stage, a well-defined document for transforming the existing system to a proposed system as per the understanding of the existing System Applications and required system is created.
4. Feasibility Analysis - A feasibility study done to see if the of a proposed system to its workability. At this step Impact on the stakeholders, organization, ability to meet user needs, and effective use of resources are all considered. This consists of Technical, Operational, Schedule and Economical aspects.
5. Final Specifications – Based on the Feasibility Analysis the SRS prepared will be fine-tuned to form the final Requirement Specification. Specifications would state what the system would achieve.
6. Requirement Signoff – This is the final sage in System Study stage. The SRS created will be reviewed and signed off by the customer to freeze and finalize the requirement set for which the design and development/customization will happen. Changes beyond this point will have to go through the approved change management process.

6.2 System Design

The design framework and system architecture will be in line with the scalability and flexibility needs. We will create a solution design document, which will include a high-level architecture of the proposed solution and detailed flowcharts for business process and data. The features and functions laid down in the requirements document will be translated into integral components of a comprehensive solution for the new application. During System Design, following sub activities will be performed

1. Partition of Requirements - After analyzing the system requirements they are organized into related groups using several partitioning options.
2. Identification of Sub-Systems - The objective of this activity is to identify the sub-systems that can individually or collectively meet the system requirements. The relationships between sub-systems are also identified at this time.
3. Assignment of Requirements to Sub-Systems - In this activity the requirements are assigned to the identified sub-systems. If the sub-system identification is based on the results of requirements partitioning it provides an unambiguous assignment.
4. Specification of Sub-System Functionality - It is the specification of functionality provided by each sub-system. There shall be no overlapping or similar functions, the architecture shall be followed.
5. Definition of Sub-System Interfaces - Interfaces provide the communication between the sub-systems. Once the interfaces have been defined it becomes possible to develop sub-systems in parallel.

6.3 Customization

During this phase, UI, workflows and other aspects of the system will be developed and unit tested. We will customize the system to suit the business requirements of the customer. Our system design will be flexible enough to accommodate any future enhancements. We will follow secure coding techniques and standards to ensure security and integrity of the system source code. Code reviews will be conducted during development

to handle any errors and to ensure adherence to the system development standards.

Our development approach provides the following benefits to Customer:

- Reduce project risk
- Ease in making changes to the code or configurations during the development process
- Allow an iterative modification process until each set of features/functionalities developed as part of the system exactly meets the Customer needs
- Allow Customer involvement throughout the development process, thereby increasing the likelihood of acceptance of the final implementation

6.4 Testing

Our testing approach will mainly emphasize on testing the features and functionalities of the new application at unit and site levels. The system will be tested and validated at unit/site levels using the respective test plan and specifications. The test results will be documented, and all defects will be fixed and verified. A final copy of the test results will be shared with Customer.

Implementation S/W:

Once the customization and Testing phases are over, the system is ready for rollout. During this phase following sub activities will be performed

1. Pilot with SME – Piloting with SME is the first step in implementation. During this phase the system will be piloted with a limited number of subject matter experts (probably in a conference room). This step is to make sure that all the requirements and business functions are implemented as required by the business. If there are changes, then the changes are assessed and passed through a change management process. This is iterated till all the required business functions are implemented as expected.
2. Pilot with Users – Upon confirmation from SME, next step is to pilot the system with a limited number of key business users (probably in a conference room). This step is to make sure that all the requirements and business functions are implemented as required and there is no mismatch with the version of SME. If there are changes, then the changes are assessed and passed through a change management process. This is iterated till all the required business functions are implemented as expected.
3. UAT – At this stage all the business functions are confirmed by end users. The next process is to get the system to a larger end user community and get them test as in production. Any UAT defects are taken at high priority and fixed to closure. Once all the UAT defects are closed approving authority should provide acceptance move the system to production.
4. Cut Over (Optional) - This is an optional phase and the last activity before Go Live where any some sub systems that needs to be remove from service or redirected to the new system because of this new system, that can be done at this point.
5. Go Live – This is the final step in roll out process. The system is moved into the production environment and the connected system are brought online. A dry run is performed to make sure the system is behaving as expected.

6.5 Training

Nearly everyone recognizes the value and benefits of a training. When done properly, training can make the team more efficient, increasing production, reduce ambiguity, increase profits while decreasing costs, waste, and inefficiencies. Effective training can lead to increased compliance with regulations. It can even lead to a happier, more satisfied and engaged team. Following activities are performed during the training process.

1. Perform a Training Needs Assessment – This is the final step in roll out process. The system is moved into the production environment and the connected system are brought online. A dry run is performed to make sure the system is behaving as expected.

The basic training needs assessment is a four-step process. Those steps are:

- a. Identify a clear business goal that the training supports - Business goals include things like increasing revenue and efficiency, decreasing costs and waste, supporting a new product, teaching a new or changed production process, or complying with regulations. For example, a business goal might be to train employees to create a new product.
- b. Determine the tasks the team need to perform so the organization can reach that goal - During this phase, training team will identify the “performance gap” between what the team can do now, and what they must be able to do. To keep with the new implementation, the team might need to know what the new product is, how the product is produced, and the tasks the stakeholders must perform on the job.
- c. Determine the training activities that will help the team learn to perform the tasks – The next step is to identify the training activities that will help the team to learn to do those tasks. This may include a quick and short explanation of the product, an equally quick and short overview of the production process, and demonstrations mixed with hands-on practice of the tasks they'll have to perform on the job.
- d. Determine the learning characteristics of the team that will make the training more effective - Finally, consider the average characteristics of team to determine the type of training that will be most effective for them. Following are some aspects that needs to be considered:
 - i. Are they more comfortable with computer-based training or instructor-led training?
 - ii. Do they like self-guided or self-paced learning, or would they struggle in that environment?
 - iii. Are they youngish or older; are there cultural issues that may factor in?
 - iv. Do they learn better from reading, listening, or doing?

2. Develop Learning Objectives - Learning objectives are a list of things that the team must be able to do after the training is completed. Once the training objectives are created, contents are prepared that covers the objectives. In addition, any quizzes, tests, case studies, or hands-on exercises performed during training are also prepared so that trainers can evaluate the comprehension of the training.
3. Design Training Materials – This is the “plan before you perform” phase of training. Word, Excel,

and similar “Office” programs are used to create handouts and to create training outlines and notes for the instructor. While designing the materials following points are considered:

- a. It's important to design before rushing into the next step
- b. Always focus primarily on the learning needs, and not on what's easy for the trainers
- c. Hands-on practice or simulation are included to the maximum
- d. More interaction with the trainer and with each other during the training is adopted
- e. Feedback during training are collected frequently
- f. Training materials are made as small “chunks” that are easier to take in and understand
- g. Training materials are order in a logical manner

Following types of training materials are created

- a. Materials for hands-on elements and/or role-playing elements of the training
 - b. PowerPoint for projections and/or handouts to deliver to team.
 - c. Flip-charts, posters, transparencies, and/or computer-generated graphics for presenting visual materials during training
4. Implement the Training – This is the major area in the training process. It may seem obvious, but first and foremost activity of this phase is to inform the participants/trainees. Training schedule is shared way ahead so that trainees get plenty of time in advance to work it into their schedules and complete any necessary pre-training preparation.
- The actual training can take a variety of forms. It may be classroom instruction; practice opportunities such as role-playing exercises, focus groups, case studies, or small group assignments; on-the-job skills-based training; the delivery of paper-based hand-outs for individual reading and study; etc.
5. Evaluate the Training – Evaluating the training effectiveness is one of the critical aspects in training. One of the supporting tools to do this is by doing Assessments during and post training. Assessments during the training should evaluate the teams' actual learning of the objectives. Assessments post the training would be to assess how the team is utilizing the new knowledge/skills/attitudes from training and applying them.
6. Rinse, Lather, and Repeat Any Step When Necessary – Based on the learning from the first trainings there might be fine tuning required in any/all of the above steps. Here those learning and brought back into the feature trainings and fine-tuned accordingly

SBL will provide training for the users on the implemented/proposed system through, on the floor training, training sessions and through user manuals.

The training will be provided for the following set of stakeholders:

1. Speaker, Deputy Speaker, Secretary, Ministers and MLAs
2. Key Employees and nominated employees of the Assembly
3. Nominated key Employees of Government Departments and Undertakings/Corporations

Training will be provided at the following stages of implementation

1. Implementation completion of In-House application
2. Implementation completion of Intranet Applications
3. Implementation completion of Internet Applications
4. Implementation completion of Mobile Applications

Training will be provided to the stakeholders on

1. General computer training
2. Paper less legislative assembly module specific training

Along with SBL will train the trainers who can take the training process further

6.6 Maintenance

Software maintenance is a vast activity which includes optimization, error correction, deletion of discarded features and enhancement of existing features. Since these changes are necessary, a mechanism must be created for estimation, controlling and making modifications. SBL application support and maintenance process follows the below steps while performing support activities

1. **Maintenance Plan** - The essential part of software maintenance requires preparation of an accurate plan during the development/customization cycle. Maintenance plan includes mainly following sections:
 - a. Preparation – This section describes software preparation and transition activities including the conception and creation of the maintenance plan; describe how to handle problems identified during development and configuration management.
 - b. Modification – This section describes how to analyze each request; confirm and check validity; investigate and propose solutions; document the proposal and get the required authorizations to apply the modifications after the application has become the responsibility of the maintenance team.
 - c. Implementation – This section elaborates the process for considering the implementation of the modification itself.
 - d. Acceptance – This section describes how the modification is accepted by the maintenance team.
 - e. Migration – Describe any migration tasks that need to be executed. If the software needs to be moved to another system, steps are outlined to do so without impacting its functionality.
 - f. Transition – Document the sequence of activities to transition the system from Development to Maintenance.
 - g. Service Level Agreements – This section will have the defined SLAs and maintenance contracts negotiated.
 - h. Change Request – Outline the problem-handling process to prioritize, documents and route change and maintenance requests.
 - i. Modification Request acceptance/rejection – Describe the request including details of the size/effort/complexity. If this is too complex to resolve, outline the steps to route the issue back to the software team.
 - j. Retirement – This is the final stage in the lifecycle. Describe how to retire the software and the steps to archive any data that may be a by-product of the system.
2. **L0 Support** – These are the support activities performed in the assembly floor. These support members will be facing the end customers directly and will be handling and resolving minor issues they are facing which doesn't need any software knowledge. Any issues that this team will not be

- able to handle will be escalated to core Support team
- 3. L1 Support – These are the first point of contact for customers reporting service disruption or requesting service and majorly collaborate with the L0 support team. They are responsible for recording, classifying, matching, routing, resolving (unless assigned to other support groups) and closing incidents.
 - a. Monitors and tracks incidents
 - b. Fulfils service requests
 - c. Provide customer updates as required
 - 4. L2 Support – This is the Second Line Support in core support group. These technicians have more experience than L1 support technicians and manage incidents raised by the L1s or as agreed in documented SLA (Service Level Agreement) timelines. L2 technicians follow documented processes and workflows provided by SME's or higher-level support representatives, vendors, product management, etc. They are expected to escalate to the L3's when documentation is insufficient to complete the tasks or do not solve the incident. L2s usually maintain a Run-Book which they use for immediate resolutions. They collaborate with any other support or dependency groups in case the incident has a linkage to other support personnel or outside vendors.
 - 5. L3 Support – L3 technical experts resolve issues that are typically difficult or subtle. L3 engineers participate in prioritization, minor enhancements, break fix activities, problem management, stability analysis, etc. These support leaders have specific, deep understanding and expertise in technology platforms. L3 engineers are proactive in nature, identifying problems in advance and looking for continuous service improvement opportunities.

L4 Support - L4 support refers to product or vendor support and often involves vendor product architects, engineers, software developers, hardware designers and the like. When all other levels of support cannot solve a problem, a request is made to this level of support – usually managed by the L3 support technician or through special project/program management resources. These escalations can often involve product bugs, detailed configuration requirements, or other expert level guidance.

7. Implementation Schedule

Note:

Total duration of the implementation would be 44 weeks and Onsite Warranty Support would be 12 months.

Detailed high-level plan for the project implementation is given below.

8. Budget Estimate

Sl No	Details of Work	Rate (Exclusive of GST) in INR
1	The budgetary estimate for our eParliament standard 28 modules based on our understanding	₹ 12,19,33,658
Total in Words: Rupees Twelve Crores Nineteen Lakhs Thirty Three Thousand Six Hundred and Fifty Eight Only		

Split up of Commercial			
Sl No	Details		Cost (INR)
1	Core product Cost	In-house	₹ 17,369,129
		Intranet	₹ 17,369,129
		Internet	₹ 17,369,129
		Mobile	₹ 8,684,564
2	System Study		₹ 2,345,007
3	Customization charges		₹ 16,905,000
4	Implementation Handover & UAT		₹ 8,452,500
5	Training		₹ 2,450,000
6	Warranty Support (1 Year)		₹ 14,490,000
7	3 Years Support		₹ 16,499,200

The budgetary estimate for our eParliament standard 28 modules based on our understanding would work out to a total amount of **INR ₹ 12,19,33,658/-** (Rupees Twelve Crores Nineteen Lakhs Thirty Three Thousand Six Hundred and Fifty Eight Only). All Applicable Taxes are extra.

It includes the following:

1. Base cost of the 28 standard modules as listed above
2. System study, Finetuning the Requirement Design, Adapting to our Architecture & Customer Sign off
3. Customization/Development
4. UAT
5. Training
6. Implementation & Handover
7. One-year warranty support

Kindly note that all travel, accommodation, per diem allowance etc. shall be extra and charged at actuals to ULTS. In addition, all taxes, GST etc. shall be extra.

Payment Schedule:

PAYMENT SCHEDULE		
Description	%	Amount in INR
Advance	50%	₹ 44,747,729
Upon System Study completion	40%	₹ 1,031,803
Upon customization completion	40%	₹ 7,438,200
Upon UAT	40%	₹ 1,239,700
Upon completion of Training	40%	₹ 1,078,000
Upon completion of Implementation & handover	40%	₹ 5,796,176
Upon handover (base price)	50%	₹ 28,163,850
Warranty support first quarter advance	25%	₹ 3,984,750
Warranty support second quarter advance	25%	₹ 3,984,750
Warranty support third quarter advance	25%	₹ 3,984,750
Warranty support Fourth quarter advance	25%	₹ 3,984,750
Onsite Support Year 1	50%	₹ 8,249,600
Onsite Support Year 2	30%	₹ 4,949,760
Onsite Support Year 3	20%	₹ 3,299,840
Total		₹ 121,933,658

9. Terms & Conditions

General Terms & Conditions:

1. On acceptance of this proposal, ULTS shall release a separate and specific work order, as well as a separate comprehensive agreement entered into between the parties as per finalized terms and requirements on mutual agreement.
2. ULTS will be front-ending the e-Niyamasabha project and will handle all client communications with KLA.
3. ULTS shall arrange and obtain all necessary approvals and permissions required for the successful and timely implementation of the solution in KLA.
4. ULTS need to provide SBL the customer signed off clearly stated, mutually agreed requirement specification, before the start of the project.
5. In the RFP shared by ULTS, SBL had highlighted certain modules which need customization and another set of modules which need to be developed afresh. The scope for the customization, requirement for the fresh development needs to be clarified by ULTS. Given the software requirement of the modules duly signed off by the customer and the time as assessed by SBL, SBL can develop and integrate those requirements with SBL's proposed system at an additional cost. It shall be noted that BRD Sign Off, UAT etc. will be the responsibility of ULTS. It may also be noted that we will not be able to comply with Section 3 SOLUTION REQUIREMENT as the requirements stated therein go far beyond any realistic implementation system needs.
6. Any scope of work other than the ones stated in this proposal will not be covered under the scope of this proposal. In case if there are any additional scope to be included in future, it will be considered as a change request and the terms and condition for the change request will be discussed and agreed mutually on a later stage. All hardware's and other related infrastructure requirement related to eNiyamasabha project will be handled by ULTS.
7. ULTS shall arrange necessary third-party certification (STQC or any other certification) for hosting the software solution in state data-center or any other data center as specified by ULTS/KLA.
8. During the contract period, SBL will assign a Project Manager who will be the single point of contact for all Software related matters. It is the responsibility of the Project Managers of SBL to interact with his team and get all the deliverables completed as per the Project

Schedule. ULTS shall also deploy a Single Point of Contact for the successful implementation of the project.

9. All deliverables submitted by SBL as per the schedule will be subject to approval by ULTS and such approvals should be communicated to SBL within 10 days from the date of submission of such deliverables. If no confirmation is received from ULTS as regards the acceptance of any deliverables, it shall be deemed as accepted by ULTS and SBL shall accordingly raise the invoice for such deliverables on the basis of deemed acceptance by ULTS.
10. Invoice shall be raised by SBL after completing the milestones stated in the payment schedule to ULTS project-in-charge. All invoice raised will be cleared with 15 days from the receipt of the invoice. Any delay in releasing the payment after the due date will accrue an interest of 18% per annum on the pending invoice amount.
11. SBL shall provide necessary and committed support for making the application integration success with ULCCS applications or by 3rd party, subject to the availability of credentials and complete details required for the integration and the technical possibility of the same. All such integrations will be charged additionally based on the actual effort estimation.
12. SBL shall share the software source code, configuration files, database passwords and control data sets with ULTS/KLA after implementation and support period, for the client use only for the proposed eNiyamasabha project and not for any commercial purpose or third-party usage and provided that the fee specified for the services as agreed between the parties as per the payment schedule and is duly paid to SBL.
13. SBL will provide onsite trainings, documentation for end users of the application for successful usage of the eNiyamasabha application by the end users. SBL will provide eNiyamasabha training for the following stakeholders which include Speaker, Dept. Speaker, Secretary, Ministers, MLA, Key Employees, nominated employees of KLA and nominated representative of other Govt. bodies who are stakeholders for eNiyamasabha Solution. SBL will provide two set of trainings on each application vertical i.e. In-house, Intranet, Internet and Mobile. Any additional training requirements mutually agreed will be handled separately on an additional cost.
14. In order to ensure the Confidentiality, both the parties shall at all times keep the information provided by each other in complete confidence.

15. Intellectual Property Rights of any deliverables which are developed specifically by SBL in accordance with the specifications in the Work Order, shall vest with ULTS/KLA. In case of any intellectual property rights in SBL's Pre-Existing eParliament™ System, SBL's technical knowhow, software or product etc., SBL shall retain all right, title and interest in such pre-existing works.
16. Onsite warranty support proposed by SBL in the proposal is for 12 Months. Any requirement for the extension of warranty support will be discussed and mutually agreed at an additional cost.
17. On completion of the warranty period of one year, SBL will provide off-site support for a period of 3 Years. 50% of the cost for off-site support for each year shall be paid at the beginning of the support period and the balance 50 % shall be paid on the completion of the respective support period
18. All onsite visit expenses i.e. travel, accommodation, per diem, conveyance undertaken by SBL employees with regard to the project shall be borne by ULTS

Warranty Terms:

SBL warrants that the eNiyamasabha System will perform the functions specified in the proposed system; upon written notification from the CLIENT, SBL will promptly provide replacements or Corrections to any part of the Software System that are non-performing. This warranty shall not apply if the problem has been caused by

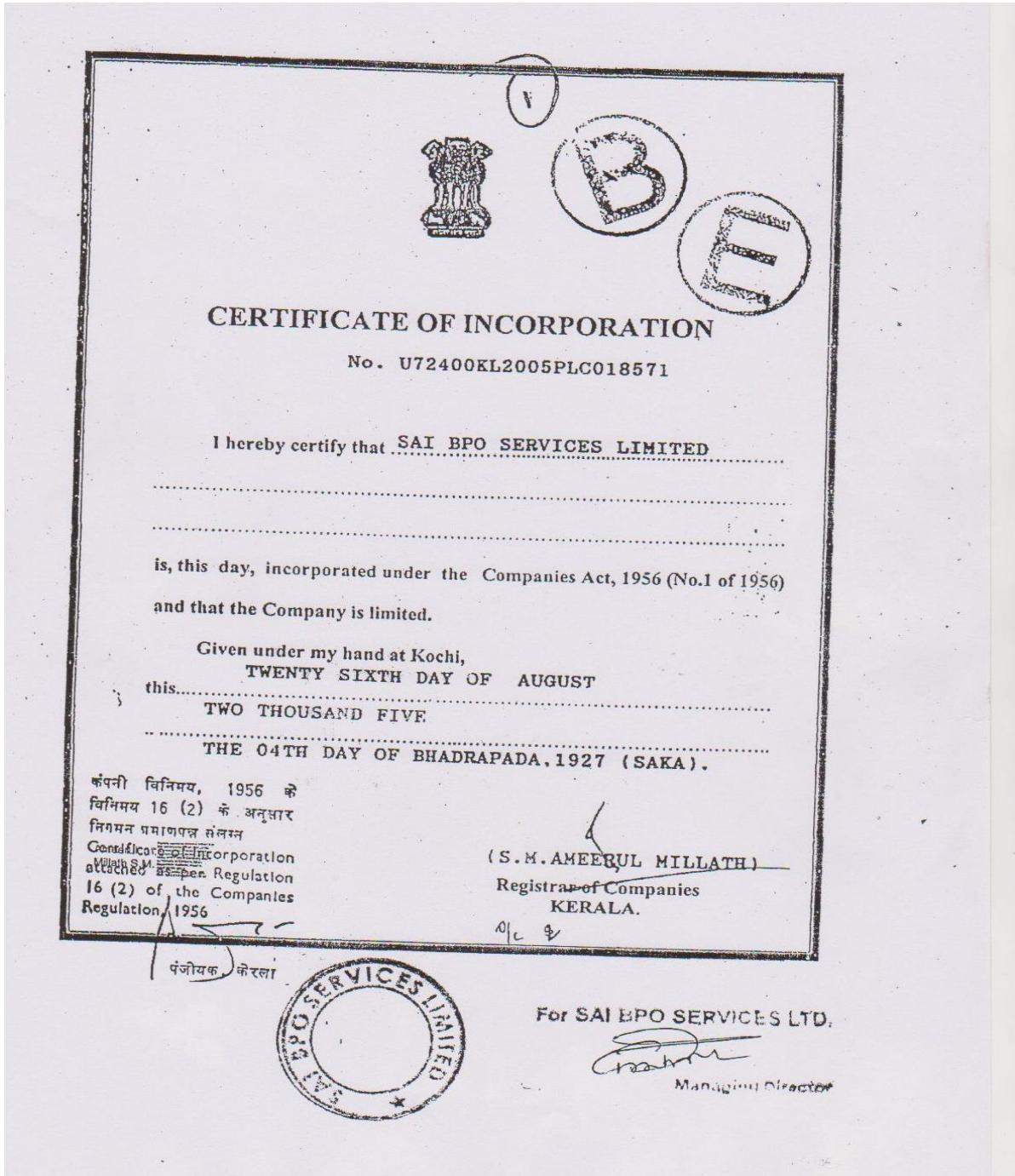
- a) unauthorized amendment to the eNiyamasabha System,
- b) use that is contrary to the instructions specifically set out in the eNiyamasabha User Manuals,
- c) the CLIENT operating on a Main Release of the Software System older than the stipulated Main Releases, or
- d) any modifications to the eNiyamasabha System performed by CLIENT without SBL's written consent.
- e) any Virus attacks or hacking attempts
- f) damage caused to the system due to any natural calamity
- g) non-performance of the system due to any defect in the hardware or other infrastructure related problems.

ULTS shall assume full responsibility for the procurement, maintenance, overall effectiveness, and efficiency of the hardware and operating environment upon which the eNiyamasabha System is to function.

10. Compliance to Pre-Qualification

S.no	Pre-Qualification Criteria	Documents to be Attached	Present Yes/No
1	Company Profile clearly indicating name of the Firm/Company/Organization, address, Contact Person with mobile numbers and notable credentials.	Enclosed Certificate of Incorporation, Certificate of Incorporation pursuant to change of name, Certificate of registration, Company Profile, Company Name and details, Point of Contacts.	Yes
2	Self-Certification stating that the Company are not Debarred / Blacklisted by any Central / State Governments, Government Departments, Government Bodies or PSUs.	Enclosed Self-Declaration Letter stating that the Company are not Debarred / Blacklisted by any Central / State Governments, Government Departments, Government Bodies or PSUs.	Yes
3	Copy of audited balance sheet for the last three years including turnover details.	Enclosed copy of audited balance sheet for the year 2015-16, 2016-17, 2017-18 & Turnover Certificate	Yes
4	The applicant should have the skilled/experienced staff to manage the project. A brief profile of key persons for this project shall be attached. .	Enclosed the details of the proposed manpower. Detailed resume of the key project personnel shall be submitted later upon receipt of the work order.	Yes
5	Proof previous Experience in Application Development and Mobile App development. At least three Work order & Work completion should be scanned and attached.	Enclosed Work Order/ Work Completion Certificates.	Yes
6	Proof of GST and PAN of the firm.	Enclosed GST Registration Document and PAN CARD.	Yes

11. Certificate of Incorporation



12. Certificate of Incorporation Pursuant to Change of Name



GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS

Office of the Registrar of Companies
1st Floor, Company Law Bhawan BMC Road, Ernakulam, Kerala, India, 682021

Certificate of Incorporation pursuant to change of name
(Pursuant to rule 29 of the Companies (Incorporation) Rules, 2014)

Corporate Identification Number (CIN): U72400KL2005PLC018571

I hereby certify that the name of the company has been changed from SAI BPO SERVICES LIMITED to SBL KNOWLEDGE SERVICES LIMITED with effect from the date of this certificate and that the company is limited by shares.

Company was originally incorporated with the name SAI BPO SERVICES LIMITED.

Given under my hand at Ernakulam this Fifteenth day of September two thousand sixteen.



A. SEHAR PONRAJ
Registrar of Companies
Registrar of Companies
RoC - Ernakulam

Mailing Address as per record available in Registrar of Companies office:

SBL KNOWLEDGE SERVICES LIMITED

SBL, LEELA INFO PARK, 1st FLOOR, KAKKANAD, ERNAKULAM, Ernakulam, Kerala, India,
682030



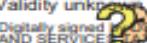
13. Certificate of Registration



Government of India
Form GST REG-06
{See Rule 10(1)}

Registration Certificate

Registration Number : 32AAJCS2322M3ZC

1.	Legal Name	SBL KNOWLEDGE SERVICES LIMITED		
2.	Trade Name, if any			
3.	Constitution of Business	Public Limited Company		
4.	Address of Principal Place of Business	1ST FLOOR,CARNIVAL INFOPARK PHASE II, PHASE II, INFOPARK SPECIAL ECONOMIC ZONE, KAKKANAD, COCHIN, Ernakulam, Kerala, 682042		
5.	Date of Liability	01/10/2018		
6.	Period of Validity	From	01/10/2018	To NA
7.	Type of Registration	Regular 		
8.	Particulars of Approving Authority			
Signature		Validity unknown  Digitally signed by [REDACTED] GOODS AND SERVICES TAX NETWORK 1 Date: 2018.10.11 00:16:29 IST		
Name				
Designation				
Jurisdictional Office				
9.	Date of issue of Certificate	17/10/2018		
Note: The registration certificate is required to be prominently displayed at all places of business in the State.				

14. Company Name and Details

Company Name and Address

SBL Knowledge Services Ltd.,

Carnival Infopark-Phase-IV

Kochi, India – 682042

Phone: +91 48440 41399

E-mail: info@sblcorp.com

URL: <http://www.sblcorp.com>

GST No:32AAJCS2322M3ZC

Point of Contacts

Business Development -Point of Contact	Partner Engagement – Point of Contact
<p>Manoj Jacob</p> <p>General Manager - Sales & Marketing</p> <p>SBL Knowledge Services Ltd.,</p> <p>Carnival Infopark-Phase-IV</p> <p>Kochi, India - 682042</p> <p>Cell: +91 98957 64860</p> <p>E-mail: manoj.jacob@sblcorp.com</p> <p>URL: http://www.sblcorp.com</p>	<p>Anuroop Geetha Asokan</p> <p>Partner Manager</p> <p>SBL Knowledge Services Ltd.,</p> <p>Carnival Infopark-Phase-IV</p> <p>Kochi, India - 682042</p> <p>Cell: +91 98957 64867</p> <p>E-mail: anuroop@sblcorp.com</p> <p>URL: http://www.sblcorp.com</p>

Business Development– Point of Contact	Project Management – Point of Contact
<p>Ratheesh N T</p> <p>Senior Manager – Business Development</p> <p>SBL Knowledge Services Ltd.,</p> <p>Carnival Infopark-Phase-IV</p> <p>Kochi, India - 682042</p> <p>Cell: +91 96332 76008</p> <p>E-mail: ratheesh.t@sblcorp.com</p> <p>URL: http://www.sblcorp.com</p>	<p>Bipin Chandran</p> <p>Asst. General Manager- Software</p> <p>SBL Knowledge Services Ltd.,</p> <p>Carnival Infopark-Phase-IV</p> <p>Kochi, India - 682042</p> <p>Cell: +91 94470 58148</p> <p>E-mail: bipin.chandran@sblcorp.com</p> <p>URL: http://www.sblcorp.com</p>

15. Self-Certification Stating that the Company are not Debarred / Blacklisted by any Central/State Governments, Government Departments, Government Bodies or PSUs

To,

Mr.Ravindran Kasturi,

Chief Executive Officer,

UL Technology Solutions Private Limited

UL Cyberpark, Kozhikode



Subject: Self declaration not been not Debarred / Blacklisted by any Central / State Governments, Government Departments, Government Bodies or PSUs.

Sir,

I hereby declare that SBL Knowledge Services Limited, having its registered office at Carnival Infopark, Phase IV, Kakkanad, Cochin, Pin 682042, has not been not Debarred / Blacklisted by any Central / State Governments, Government Departments, Government Bodies or PSUs.

Place: Cochin

Date: 17th April 2019

Authorized Signatory,



Bibin Kumar M C

Asst. General Manager

SBL Knowledge Services Ltd

16. Copy of Audited Balance Sheet for the Last Three Years Including Turnover Details

Profit and Loss 2015-16

Particulars	Note No.	Year ended	
		March 31, 2016	March 31, 2015
		₹	₹
INCOME			
Revenue from operations	15	23,31,71,675.95	16,79,87,602.91
Other Income	16	25,69,328.77	26,04,094.27
Total Revenue		23,57,41,004.72	17,05,91,697.18
EXPENSES			
Employee benefit expense	17	10,35,22,706.31	8,89,63,603.19
Financial Cost	18	7,137,577.44	48,20,143.21
Depreciation and amortization expense	19	1,21,77,056.31	1,16,87,804.96
Other expenses	20	10,39,47,129.45	6,17,57,172.25
Total Expenses		22,67,84,469.51	16,72,28,723.61
Profit before tax		89,56,535.21	33,62,973.56
Tax expense:			
(1) Current tax		(17,06,668.00)	(6,40,815.00)
(2) MAT Credit		16,63,606.00	6,40,815.00
(3) Deferred tax		9,99,534.50	10,88,949.30
(4) Excess/(Short) provision of tax for earlier years		-	-
		9,56,472.50	10,88,949.30
Profit after tax		99,13,007.71	44,51,922.87
Earning per equity share: - Basic and Diluted (₹)		4.86	2.18

Significant Accounting Policies 1
The Notes are an integral part of financial statements 2-20

As per our report of even date

For FRG Associates,
Chartered Accountants
Firm Registration No.008504S

ALWYN FABER
Partner
Membership No.201858
Kochi , 2nd September, 2016

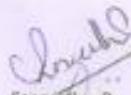
On behalf of the Board of Directors

Gopakumar, P
Managing Director
DIN: 01205205
Kochi , 2nd September, 2016

Sangeetha, P
Director
DIN: 01235236



Balance Sheet – 2015-16

Particulars		Note No	As at	
			March 31, 2016	March 31, 2015
			₹	₹
EQUITY AND LIABILITIES				
Shareholder's Funds				
Share Capital	2		2,03,88,000.00	2,03,88,000.00
Reserves and Surplus	3		2,88,36,207.96	1,89,23,200.25
Non-Current Liabilities				
Long term Borrowings	4		4,99,99,322.44	5,17,56,948.57
Deferred tax liability	5		3,67,955.00	13,67,409.50
Current Liabilities				
Trade payables	6		2,82,57,362.26	2,60,52,483.72
Short Term Borrowings	7		17,78,157.09	38,63,812.59
Short-term provisions	8		17,06,668.00	6,40,815.00
Other Current Liabilities	9		71,83,668.40	54,84,267.38
Total			13,85,17,341.15	12,84,77,017.01
ASSETS				
Non-current assets				
Fixed assets				
(i) Tangible assets	10		3,25,57,281.36	3,76,79,553.46
(ii) Intangible assets			66,77,446.47	84,17,695.73
(iii) Capital work-in-progress			4,12,181.00	43,98,262.00
Other Non Current Assets			23,04,421.00	6,40,815.00
Current assets				
Trade Receivables	11		4,82,69,331.47	2,71,14,644.16
Cash and Bank Balances	12		1,53,51,994.29	1,41,44,494.38
Short-term loans and advances	13		3,29,27,901.45	3,60,64,768.24
Other Current Assets	14		16,784.11	16,784.11
Total			13,85,17,341.15	12,84,77,017.01
Significant Accounting Policies				
The Notes are an integral part of financial statements			1	
			2-20	
As per our report of even date				
For FRG Associates, Chartered Accountants Firm Registration No.0085045			On behalf of the Board of Directors	
			 Gopakumar, P Managing Director DIN:01205205 Kochi , 2nd September, 2016	
ALWYN FABER Partner Membership No.201858 Kochi , 2nd September, 2016			 Sangeetha, P Director DIN: 01235236	

Profit and Loss 2016-17

SBL KNOWLEDGE SERVICES LIMITED
 (Formerly Sai BPO Services Limited)
 Registered Office : Dasari Building, 1st Floor, Market Road, Karumangappally -690518
 CIN: U72400KL2005PLC018571

Statement of Profit and Loss for the year ended 31st March, 2017

Particulars	Note No	Year ended	
		March 31, 2017	March 31, 2016
INCOME			
Revenue from operations	16	229,746,530.11	233,171,675.95
Other Income	17	7,023,594.96	7,369,328.77
Total Revenue		237,570,043.07	233,741,004.72
EXPENSES			
Employee benefit expense	18	125,381,754.88	103,523,906.31
Financial Cost	19	7,510,025.22	7,137,577.44
Depreciation and amortization expense	20	8,442,112.70	12,177,056.31
Other expenses	21	91,670,615.66	103,945,929.45
Total Expenses		233,011,508.46	226,704,469.51
Profit before tax		4,558,534.61	8,956,535.21
Tax expense:			
(1) Current tax		870,000.00	1,706,668.00
(2) MAT Credit		(610,899.00)	(1,663,606.00)
(3) Deferred tax		1,229,028.00	(999,534.50)
(4) Excess/(Short) provision of tax for earlier years			-
Profit after tax		1,482,129.00	[956,472.50]
Earnings per equity share: - Basic and Diluted (₹)		3.076,445.61	9.913,007.71
		151	4.86

Significant Accounting Policies

The Notes are an integral part of financial statements

1

2-22

At the time of preparation of these financial statements

For PRG Associates,

Chartered Accountants

Firm Registration No.0085005

On behalf of the Board of Directors

Alwyn Faber

Partner

Membership No.201050

Kochi, 5th September, 2017

Gopakumar, P

Managing Director

DIN: 01205205

Kochi, 5th September, 2017

Sangeetha, P

Director

DIN: 01235236

Kochi, 5th September, 2017



Balance Sheet 2016-17

SBL KNOWLEDGE SERVICES LTD LIMITED (Formerly Sat BPO Services Limited)			
Registered Office : Dasan Building, 1st Floor, Market Road, Karunagappally -690518 CIN: U72440KL2005PLC018851			
Balance Sheet as at 31st March, 2017			
Particulars	Note No	As at March 31, 2017 ₹	As at March 31, 2016 ₹
EQUITY AND LIABILITIES			
Shareholder's Funds:			
Share Capital	2	20,388,000.00	20,388,000.00
Reserves and Surplus	3	31,912,613.57	28,836,207.96
Non-Current Liabilities:			
Long term Borrowings	4	15,359,981.83	11,349,844.65
Deferred tax liability	5	1,596,983.00	367,955.00
Current Liabilities:			
Trade payables	6	26,855,572.86	30,977,157.25
Short Term Borrowings	7	70,073,224.95	40,427,634.88
Short-term provisions	8	2,576,668.00	1,706,668.00
Other Current Liabilities	9	5,054,054.53	7,306,523.40
Total		174,617,098.74	141,259,991.14
ASSETS			
Non-current assets:			
Fixed assets:	10		
(i) Tangible assets:		36,056,004.78	36,081,645.32
(ii) Intangible assets:		8,434,053.35	3,153,082.51
(iii) Capital work-in-progress:		223,831.00	412,181.00
Non Current Investments	11	7,684.00	-
Other Non Current Assets		2,921,320.00	2,304,421.00
Current assets:			
Trade Receivables	12	65,976,379.16	50,957,291.46
Cash and Bank Balances	13	28,551,636.73	16,559,374.26
Short-term loans and advances	14	32,427,605.61	31,775,211.48
Other Current Assets	15	16,784.11	16,784.11
Total		174,617,098.74	141,259,991.14

Significant Accounting Policies

The Notes are an integral part of financial statements

1

2-22

As per our report of even date

For FBG Associates,
Chartered Accountants
Firm Registration No. 60185045

On behalf of the Board of Directors



Alwyn Fabry
Partner
Membership No.201850
Kochi , 5th September, 2017

Gopakumar. P
Managing Director
DIN#1205285
Kochi , 5th September, 2017

Sangeetha. P
Director
DIN#01235236
Kochi , 5th September, 2017

Profit and Loss – 2017-18

SBL KNOWLEDGE SERVICES LIMITED
(Formerly Sat BPO Services Limited)

 Registered Office : Dasan Building, 1st Floor, Market Road, Karunagappally -690518
 CIN: U72400KL2005PLC018571
Statement of Profit and Loss for the year ended 31st March, 2018

Particulars	Note No.	Year ended	
		March 31, 2018	March 31, 2017
INCOME			
Revenue from operations	10	137,041,000.00	113,740,330.11
Other income	17	7,773,240.44	7,823,504.96
Total Revenue		244,814,305.51	237,570,043.07
EXPENSES			
Employee benefit expense	18	132,557,904.14	125,388,754.88
Financial cost	19	11,290,766.95	7,510,025.22
Depreciation and amortization expense	20	7,633,185.91	8,442,112.70
Other expenses	21	88,010,216.78	91,670,615.66
Total Expenses		239,492,073.78	233,011,508.46
Profit before tax		₹ 322,231.73	4,558,534.61
Tax expense:			
(1) Current tax		1,018,000.00	870,000.00
(2) MAT Credit		(337,673.00)	(616,899.00)
(3) Deferred tax		462,062.00	1,229,028.00
(4) Excess/(Short) provision of tax for earlier years		-	-
		1,139,389.00	1,482,129.00
Profit after tax		4,182,842.73	3,076,405.61
Earnings per equity share:			
- Basic and Diluted (₹)		2.05	1.51

Significant Accounting Policies

1

The Notes are an integral part of financial statements

9.2.2

As per our report of even date

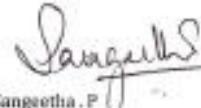
For FRC Associates,
 Chartered Accountants
 Firm Registration No.008504S

Alwyn Faber
 Partner
 Membership No.201858
 Kochi
 1st September, 2018



On behalf of the Board of Directors

Gopakumar, P
 Managing Director
 DIN: 01205205
 Kochi
 1st September, 2018


 Sangeetha, P
 Director
 DIN: 01235236
 Kochi
 1st September, 2018

Balance Sheet 2017-18

SBL KNOWLEDGE SERVICES LIMITED
(Formerly Sai EPO Services Limited)
 Registered Office : Dasan Building, 1st Floor, Market Road, Karunagappally -690518
 CIN: U72400KL2005PLC018571
 Balance Sheet as at 31st March, 2018

Particulars	Note No	As at	
		March 31, 2018	March 31, 2017
		₹	₹
EQUITY AND LIABILITIES			
Shareholder's Funds			
Share Capital	2	20,388,000.00	20,368,000.00
Reserves and Surplus	3	36,095,456.30	31,912,613.57
Non-Current Liabilities			
Long term Borrowings	4	19,180,858.80	15,359,981.83
Deferred tax liability	5	2,059,045.00	1,596,983.00
Current Liabilities			
Trade payables	6	54,573,107.22	26,855,572.86
Short Term Borrowings	7	79,697,061.15	70,073,224.95
Short-term provisions	8	3,591,668.00	2,576,668.00
Other Current Liabilities	9	7,711,738.77	5,854,054.53
Total		223,296,935.24	174,617,098.74
ASSETS			
Non-current assets			
Fixed assets	10		
(i) Tangible assets		36,611,150.75	36,056,004.78
(ii) Intangible assets		6,209,358.24	8,434,053.35
(iii) Capital work-in-progress		225,631.00	225,631.00
Non Current Investments	11	7,684.00	7,684.00
Other Non Current Assets		3,258,993.00	2,921,320.00
Current assets			
Trade Receivables	12	134,733,201.15	65,976,379.16
Cash and Bank Balances	13	3,674,698.23	28,551,636.73
Short-term loans and advances	14	37,516,056.99	32,427,605.61
Other Current Assets	15	1,060,161.08	16,784.11
Total		223,296,935.24	174,617,098.74

Significant Accounting Policies

The Notes are an integral part of financial statements

2

2-22

As per our report of even date

For FRG Associates,
 Chartered Accountants
 Firm Registration No.008504S

On behalf of the Board of Directors

Alwyn Faber
 Partner
 Membership No.201858
 Kochi
 1st September, 2018



Gopakumar. P
 Managing Director
 DIN:01205205
 Kochi
 1st September, 2018



Sangathhee P.
 Director
 DIN: 01235236
 Kochi
 1st September, 2018

Turnover Certificate

FRG Associates
Chartered Accountants
CERTIFICATE

It is hereby certified that the annual turnover, profitability and the net worth of M/S SBL Knowledge Services Ltd for the last four financial years are as follows:

(INR in Crores)

Financial Year	2013-14	2014-15	2015-16	2016-17
Annual Turnover	13.05	17.05	23.57	23.75
Profitability	-0.15	0.33	0.895	0.455
Total Net Worth	4.11	3.92	4.91	5.22

The Figures are based on the audited financial statements and the average turnover of the above for the last four years is Rs 19.355 Crores.

For FRG Associates

Chartered Accountants

Reg No. 08504S

Alwyn Faber

Partner

Membership No. 201858



Date: 25.01.2018

Place: Cochin

17. Details of Proposed Manpower

SL NO	SOLUTION SERVICE WISE MANPOWER DEPLOYMENT
1	Project Control Board
	Project Director PMO
	Project Manager Offsite
	Project manager Onsite
2	System Study
	Systems Engineer (1 No.)
	Analyst-S/w (2No's)
	Architect (1No.)
3	Customization
	Project Manager (1 No.)
	Project lead (2 No's)
	Analyst-S/w (2 No's)
	Architect (1 No.)
	Onsite Customization Engineers (2 No's)
	Offsite Customization engineers Engineer's (7 No's)
	Onsite Testing engineers (2 No's)
	Offsite Testing engineers Engineer's (2 No's)
	Offsite QA Engineers (2 No's)
4	Implement S/W

	Project Manager (1 No.)
	Onsite Customization Engineers (6 No's)
	Offsite Customization Engineers (3 No's)
	Onsite Testing engineers (3 No's)
	Offsite Testing engineers Engineer's (1 No's)
	Offsite QA Engineers (2 No's)
	Onsite Analyst-S/w (1 No's)
	Offsite Analyst-S/w (1 No's)
5	Training
	Manager (1 No.)
	Trainers (4 No's)
6	Operate (Session Mgmt/opr support/website hosting & maintenance, Help Desk), facilitation center)
	Manager (1 No.)
	Facilitation Center engineers (7 No.s)
	Software engineer (2 No's)
	Offsite Analyst-S/w (1 No's)
7	Maintain (s/w)
	Engineers (1 no's)

18. Digital Archival Management System for Kerala Legislative Assembly – Work Order

Telephone No. 2512524
Post Box No. 5430
Fax : 0471-2305891
Pin-695 033



Telegram: NIYAMASABHA
E-mail: secretary@niyamasabha.org

SECRETARIAT OF THE KERALA LEGISLATURE

No. 16554/Ac.D1/2007/Leg. Vol.II

Thiruvananthapuram.
28.12.2011.

From

The Secretary,

To

M/s. SBL Sai BPO Services Ltd,
1st Floor, Leela Infopark Phase II,
SEZ, Kusumagiri P.O, Kakkanad,
Cochin-682030, Kerala.

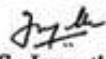
Sir,

Sub: Secretariat of the Kerala Legislature- Digitisation of Kerala Legislative Assembly Proceedings – regarding.

- Ref:** 1) Open Tender Notice No. 16554/Ac.D1/2007/Leg. Dated 10.06.2011
2) Your offer dated 29.07.2011.
3) Demonstration held on 10.12.2011.
4) Minutes dated 10.12.2011 of the Implementation Committee constituted for Digitisation of Legislative Assembly Proceedings.

I am to inform you that the Digitisation of Kerala Legislative Assembly Proceedings from 1888 to 1956 and 1982 to the present (of which soft copies are not available) has been allotted to your firm, as per the decision of the Implementation Committee constituted for digitisation of Assembly Proceedings, after examining written Documentation Submitted by all the firms which participated in the demonstration held on 10.12.2011, subject to the general conditions and special conditions mentioned in the tender. You are, therefore, invited to sign a Memorandum of Understanding with this Secretariat in a stamp paper worth 100/- purchased from the State of Kerala on or before 31.12.2011 after furnishing a security deposit equivalent to 5% of the total cost of the work. The Security deposit may be remitted in cash and in such cases the cash should be remitted in the nearest Government Treasury under "Security deposits" countersigned by the purchasing officer or in the form of Bank Guarantee from any scheduled Bank in India. Cheques are not acceptable. No other charges except the rate quoted in your offer (₹ 4.90/- per page) will be paid in this regard. The number and date of this order should be quoted in all future correspondences in this regard.

Yours faithfully,


S. Jayanthi,
Under Secretary II (Accounts),
for Secretary.

Enclosure: Copy of MOU

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19. Annexure 1

About SBL & It's competencies in eParliament

9.1 About SBL

SBL is a CMMI Level 3, ISO 9001:2015 & ISO 27001:2013 accredited global IT & IT Enabled Services Company headquartered in India. SBL delivers consulting, systems integration and back office services to its clients that enhance the value of the client investments.

SBL's robust implementation methodology ensures best value for money and faster ROI. SBL's team of highly experienced consultants brings true value to customer and help realize their higher return on investments through a consultative, collaborative implementation approach.

9.2 Corporate Strengths

- Board with high level expertise with Fortune 500 companies.
- Strong and capable top management across multiple verticals – strong financial, Ability to ramp up/down at relatively short notice.
- Strong market reputation for timely delivery and quality service.
- Adherence to proven methodologies, standards, and processes.
- Established quality practices.
- Record of profitability every year since inception.

9.3 eParliament Software

eParliament is a super set of eParliament application proposed in this proposal.

eParliament is an end-to-end enterprise solution which helps the State and Citizens benefit from the use of technology in the government sector. It provides a paperless digital solution to automate the day-to-day events of the Parliament and Legislative assembly. eParliament solution provides maximum benefits that have an operational, environmental, social and economic impact.

SBL's team has been instrumental in development and roll out of two of the major eVidhan initiatives in India: - one at the state level and another in the national level.

Benefits of eParliament Software:

Integration of application ecosystem enabling Government departments to interface with the

- Parliament/Legislative secretariat.
- Monitoring of Government functionaries through the automated Parliament/Legislative committee system.

- Mobile applications for Parliament/Legislative members for tracking development issues in the constituencies.
- Mobile applications for citizens to interact with Constituency representatives for grievance redressal.

Powerful search engine and retrieval applications for citizens to view public documents offered by the government agencies.

20. Annexure 2

Capability Assessment

SBL Knowledge Services Limited

As an organization SBL possess capabilities in following key areas.

- Product Development
- Hardware Sourcing
- Hardware Implementation
- Software Implementation
- System Integration
- Digitization
- Training
- Support and Maintenance
- Help-desk
- Internet Applications
- Mobile Application
- eDinette (.Net and Android platform) – A solution built around streamlining and semi-automatic functioning of Hospitality industry, especially Hotels and Restaurants
- DAMS (.Net platform) – A platform to automate the entire workflow of digitization projects
- CETUS (.Net platform) – A ERP solution catering to the specific needs to Seafood industry
- LandFinder (.Net platform) – A GIS based land/leasing solutions letting people search property based on criteria and locate the property in the map

Product Development

SBL offers a range of technology services and solutions that allow you to leverage technology to improve productivity.

- Application development and maintenance.
- Mobility solutions
- ERP customized solutions.
- GIS application development
- Ecommerce end-to-end Application development and implementation

Proven solutions that meet the Industry specific requirements.

Following are some of the proven solutions, SBL had provided to our satisfied customers

- eParliament (Opensource Technology stack) – This is a solution built to facilitate and automate the operations of parliament/legislative assembly. This consists of mainly four verticals
 - In House Applications (eParliament as proposed in this specific proposal)
 - Intranet Applications
 - Internet Applications
 - Mobile Applications
- eDinette (.Net and Android platform) – A solution built around streamlining and semi-automatic functioning of Hospitality industry, especially Hotels and Restaurants
- DAMS (.Net platform) – A platform to automate the entire workflow of digitization projects
- CETUS (.Net platform) – A ERP solution catering to the specific needs to Seafood industry
- LandFinder (.Net platform) – A GIS based land/leasing solutions letting people search property based on criteria and locate the property in the map

21. Annexure 3

Quality Management and Security Measures SBL adopts

Purpose

The purpose of this document is to describe about the quality process followed in SBL knowledge services Ltd. However, as per the requirements of the project, it would be fine-tuned as appropriate as the current proposal involves mainly customization of the existing application.

Accreditation

SBL is an ISO 9001:2015, ISO 27001:2013 and CMMI Dev V1.3 ML3 certified company, aligned to provide IT services and solutions to clients across the globe.



Streamlined Quality Process in SBL

1. Project Initiation

The technical proposal shall be prepared by the project team in the Proposal Format (Proposal Document for Technology Division_FM102). The project team will get started on the requirements from the customer, once they get a go ahead from the internal management. Project charter or SOW shall be signed off from the customer. The Business Analyst shall communicate and collect requirements from the customer through mails/conference calls/meetings.

Project Manager shall kick off the project by conducting a meeting where all stakeholders are identified, and their roles and responsibilities are defined during meeting. Project risk shall be identified during the kickoff meeting. Defect prevention activities for the requirements phase shall be discussed during the kick off meeting.

2. Requirement Development

The Business Analyst, along with the project team, shall carry out the following activities for developing the requirements:

- Requirement Elicitation
- Requirement Analysis

- Validate the Requirements
- Develop requirements specification document using the SRS Format (SBL/FM/01) based on detailed requirement analysis, duly approved by the customer.
- Track and update traceability across work products

3. Detailed Estimation

The project estimation and its revisions shall be done as per the Procedure for Software Estimation (SBL/PR/04). Project manager shall be responsible for preparing the estimation for the project. On completion of each phase of the project, the actual effort and schedule for that stage are captured. Reasons are analyzed when the project crosses the specified limits and corrective actions are taken.

Assumptions, basis and open issues regarding estimation shall be mentioned in Project Plan.

4. Schedule

Schedule shall be prepared based on estimates. Schedule shall be based on activity codes (as defined in Handbook for Activity Code (SBL/HB/01)), which subdivides the projects into tasks that are defined and tracked. The responsibility (resource) for each task shall be defined. This shall be identified for each phase at least at the start of the phase. The schedule shall be set into different milestones and shall be analyzed at the end of every milestone. The schedule of reviews and the review team constitution shall be shown. Critical dependencies shall be defined and negotiated with relevant stakeholders. Project leader shall prepare the project schedule; project manager shall review and approve the same.

5. Project Management

5.1 Project Planning

Project Plan (PP) shall be generated in Project Plan Format (SBL/FM/07) by the PL with reference to the decisions taken in the planning kick off meeting. Planning decisions shall be informed to the stakeholders of the project. PP shall be reviewed by critical stakeholders. PM is responsible for approval of project plan. Revisions in project plan shall be informed to all stakeholders.

5.2 Project Monitoring

Project activities shall be tracked against the plan.

Regular team meetings shall be conducted inside the project for tracking the project factors against the plan.

Identified risk shall be discussed, monitored and controlled during every meeting.

MOM shall be recorded for every meeting and its action items shall be tracked.

If any training request is received from stakeholders, it shall be identified in Project plan and training shall be provided.

5.3 Project Metrics

- Projects shall collect basic measurements of Size, Effort, Schedule and Defects on a regular basis. PL shall ensure the integrity of data collected.
- The basic measurements shall be used for calculating derived parameters (metrics) like Productivity, Defect Density, Coding Speed, Review Efficiency etc.
- Metrics shall be analyzed periodically (at least at milestones)
- Corrective actions and decisions shall be taken based on the analysis of metrics
- The results of metrics analysis shall be communicated to relevant stakeholders through discussions in project meetings.

5.4 Risk Management

Risk will be identified and analyzed from both QMS and ISMS perspectives during weekly meetings and on trigger basis throughout the project lifecycle. Risk shall also be identified for any lack of competency for the identified project resources. Project Risk shall be tracked. Proper mitigation shall be taken for risks that have values between 1.5 and 3.0 Risks with value less than 1.5 shall be either retired or assigned to watch mode depending on the scenario. Risks with value greater than 3.0 shall be informed to Senior Management through status reports.

Risk identified, and its status shall be communicated to customer at the end of each milestones.

6. Configuration Management

The configuration management activities shall be planned in all the projects. It shall be either planned in Project Plan (PP) (SBL/FM/07) or a separate CM plan.

CMIC (identified during project kick off) shall be responsible for the CM system.

All the work products shall be reviewed, baselined and shall be maintained in configuration management tool. Only authorized persons shall be given permissions to add/edit/delete work products to the CM system. The members and their type of permission with respect to their role in projects shall be documented in CM plan. Access rights provided to CM system shall be periodically reviewed by CMIC.

7. Design and Coding

SBL have implemented procedures for software development and testing (PR03 Procedure for Software Design, PR06 Procedure for Coding, PR09 Procedure for Independent Testing).

7.1 Design

- Design kick-off meeting shall be conducted. Defect prevention activities for the design phase shall be discussed during the kick off meeting. Design kick off checklist shall be referred (SBL/CL/18). Detailed schedule shall be planned, and targets shall be set. Architectural design and detailed design shall be separately identifiable activities in schedule. Milestone review shall be planned at the end of the design phase. Intermediate milestones analysis may

be planned.

- Using the SRS, detailed analysis shall be carried out to arrive at the system architecture for the project.
- Architecture Design documents shall follow the format for Architecture Design (SBL/FM/21).
- The architectural design shall identify the product components that are to be developed, along with their interface description. Architectural design shall also address the design constraints, creation of reusable components in the project and possible reuse of components for the project
- For cases which need an objective evaluation of various possible solutions to arrive at a design decision, Decision Analysis and Resolution (DAR) methodology shall be used for finalizing architecture/framework/ technology/designing interfaces (as the case maybe). Refer DAR guidelines (SBL/GD/04).
- Design phase shall explore the feasibility of making, buying or reusing components. In case of multiple options, DAR methodology shall be used for finalizing the solution. Refer DAR guidelines (SBL/GD/04).
- The architectural design shall be reviewed before proceeding to the detailed design. There shall be at least one member who is a domain expert in the review team for architectural design.
- Based on the architectural design document, detailed design shall be prepared for each of the product components identified. If the product components are very complex or very large, an architectural design for that component shall be prepared. This process shall be repeated until sufficiently detailed design is evolved.
- Detailed Design shall follow the format for detailed design (SBL/FM/29).
- The Design document format shall change depending on the customer requirement and design paradigm. Such deviation shall be mentioned in PP
- Detailed design shall address the details of the functionalities handled by each of the product components, sequence diagrams etc.
- Design Evaluation criteria shall consider the attributes mentioned in the design guideline (SBL/GD/02).
- Review of design shall be done as per Procedure for Reviews (SBL/PR/16). Design review shall be done using the checklist for architecture design (SBL/CL/13) and checklist for detailed design review (SBL/CL/14).
- Design shall be reviewed by customer and thus validated, if required
- Traceability between SRS ->Architectural design -> Detailed Design; Design ->Integration Test Cases and Integration Test Cases->Design shall be maintained. Traceability within design components shall also be maintained. Traceability shall be updated in the traceability sheet of the format Master list of Requirements (SBL\FM\19)

- Design baseline requires baselining all the relevant design related documents mentioned in the Output section.

7.2 Coding

- Coding kick off meeting shall be conducted. Defect prevention activities for the coding phase shall be discussed during the kick off meeting. The implementation aspects of identified reusable components shall be discussed in the Coding kick off meeting. Checklist for Coding Kick off (SBL/CL/19) shall be used. Detailed schedule shall be planned, and targets shall be set. Milestone review shall be planned at the end of the coding phase. Intermediate milestones analysis may be planned.
- Project leader shall assign the coding work to individual developers/ group of developers along with the Timelines to complete the work.
- Coding shall be done as per the coding standards of the organization (SBL/SD/01). If the customer specifies a different coding standard, then the coding shall be done as per the customer supplied standard. The standard(s) to be adopted for the project shall be identified in the Project Plan.
- In case there is requirement for software development in a language where coding standard is not available, then industry specific coding standards shall be used. During project closure, coding standards for the new language shall be developed.
- Traceability from Design -> Code; from Code->Unit Test Cases and from Unit Test cases->Code shall be maintained. Traceability shall be documented in the traceability sheet of Master List of Requirements (SBL/FM/19).
- Code shall be reviewed by the code review team as per Procedure for Reviews (SBL/PR/16).
- Code review shall be done using the checklist for code review (SBL/CL/15). If the project uses a different checklist, that shall be mentioned in the project plan as tailoring.
- Any design changes which shall occur during coding phase needs to be reflected in the design document and shall be re-baselined as per Procedure for configuration management (SBL/PR/05) before delivery to Independent Testing Team (ITT).
- Interface changes shall be incorporated during the coding phase itself with the approval of Project Analyst. Refer Procedure for software design (SBL/PR/03)
- During the coding phase, developer shall do the unit testing before code review. Code coverage shall be measured, and reports shall be maintained in the CM tool.

8. Testing

8.1 System Testing

System testing is the phase of testing where a complete and integrated system is validated against the requirement specification. System testing is usually conducted on the complete integrated system and in most cases on a replicated production environment. System Testing also evaluates system compliance with specific functional and nonfunctional requirements.

System testing is particularly important because it is only at this stage the system can be tested with

its full complexity. The focus of systems testing is to ensure that the product responds correctly to all possible input conditions and the product handles exceptions in a controlled and acceptable fashion. System testing is often the most formal stage of testing and more structured.

System testing is an investigative testing phase with tests with destructive nature usually beyond the requirements, conventions and expectations.

8.2 Security Testing

Software security is about making software behave as intended in the presence of a malicious attack. Security testing ensures how well the system protects against unauthorized internal or external access, willful damage, etc. The focus of security testing is to make sure that the software withstands any kind of threats that may arise during operation in the real world. In most cases a security threat arises from a deliberate attempt which exploits the vulnerabilities (Error or bugs) in the software itself.

Experts suggest that security testing should not be confined to only black box testing methodology. The tester should also utilize the internal design to devise in-depth tests. There are two different approaches to be employed in security testing.

- Testing security mechanisms to ensure that their functionality is properly implemented.
- Performing risk-based security testing motivated by understanding and simulating the attacker's approach.

8.3 Test design Techniques

The following points should be taken care during test design.

- Creating security abuse/misuse test cases.
- Listing normative security requirements.
- Performing penetration testing in the final environment.
- Cleaning up after security breaches.

9. Guideline for Coding

This guideline confirms the code quality with the following factors:

- Readability
- Maintainability
- Efficiency
- Robustness

9.1 Guideline for Code Review

This guideline guides the developer to review the codes and describes the pre-requisites for code review. Code review is carried out by using a code review checklist (CL15 Checklist for Code review).

9.1.1 Pre-requisites

Review members should:

- Know the functionality expected out of the code
- Know at least the preliminary design of the code that is to be reviewed
- Know about the test cases
- Know the Coding Standard for the programming language
- Have coded at least 2 projects using the programming language

9.1.2 General Checklist for Code Review

While reviewing source code, developers shall ensure the following:

- Unwanted/redundant parameters / member variables
- Unwanted/unused functions
- Duplicated/similar code
- Allocation and corresponding de-allocation
- Resource Management
- Check all loops whether there is a chance for infinite execution
- Check for divide by Zero possibilities in code
- Give special care to blocks of code not covered by test cases
- Large functions and large number of function parameters
- Look for optimization of code for performance
- Hard Coding
- Error Checking
- Synchronization
- Naming conventions, coding style, commenting style etc.
- Code grouping. Grouping of similar type of codes.
- Large class in terms of number of lines. Large class can be split to multiple partial classes.
- Commented Codes

10. Workflow

- a. Coding kick off meeting shall be conducted. Defect prevention activities for the coding phase shall be discussed during the kick off meeting
- b. Project leader shall assign the coding work to individual developers/ group of developers along with the Timelines to complete the work.
- c. Coding shall be done as per the coding standards of the organization.
- d. In case there is requirement for software development in a language where coding standard is not available, then industry specific coding standards shall be used.
- e. Code shall be reviewed by the code review team as per Procedure for Reviews (SBL/PR/16).
- f. Code review shall be done using the checklist for code review (SBL/CL/15).

- g. During the coding phase, developer shall do the unit testing before code review.

Testing

1. Workflow

Following are the steps involved in validation to ensure the completeness of the designed product.

- a. Test Lead shall estimate the effort required for independent testing in the project.
- b. Prepares Test plan.
- c. The test environment set up shall clearly mention the hardware and software required for testing. If the customer specified environment cannot be simulated for testing, the probable risks associated shall be analyzed and managed.
- d. Test cases shall be prepared based on:
 - Product specifications (SRS/GUI Spec/API Spec) to conform to the customer specified environment
 - Product quality goals (as identified in PP)
 - Test cases prepared by development team or customer if available.
 - User Manual
 - Design documents
- e. The test cases shall be reviewed before the internal release.
- f. The Test Estimation and Tracking Tool (SBL/TL/03) shall be used for predicting and tracking the bugs.
- g. Test results shall be analyzed after completing testing activities based on the type, phase origin and impact.
- h. Test Lead shall issue the Software Test Certificate, if the product meets the certification criteria.
- i. Certification criteria are as below:
 - All core features of the product are working satisfactorily
 - No exception or other program stop condition occurs in the normal operation of software
 - All 'Quality' goals planned for the product are met to the satisfaction of test team
 - Acceptance Criteria agreed upon with customer, if any, is met.

2. Types of Testing

Following are the different types of testing performed:

- Unit Testing
- Module testing
- Integration Testing
- System Testing

- Performance Testing
- Security Testing

11. Quality Assurance

QA Team consist of QA Head, QA Lead and QA Associates. QA is responsible to do the organizational audits.

The organization shall undergo three types of audits.

- First Party Audit
- Second Party Audit
- Third Party Audit

11.1 First Party Audit

There shall be regular audits within the projects as well as organization wide audits.

Audits shall be done against

- Standards and models adhered to by the organization
- Information Security
- Quality Management System of the organization
 - Any mandates from organization committees like EPG
- Statutory and regulatory requirements specified for the project, if any
- Approved tailoring specified for the project, if any
-

The following audits shall be planned within projects and executed by the Process consultant (identified during Kick off). The audit findings shall be sent to Project Manager (PM), Project Leader (PL), Configuration Management in Charge (CMIC), Test Lead (TstL) as part of fortnightly audit report (SBL/FM/15) raised by Process Consultant. Process Consultant of the project or CISO shall take the role of Security Audit.

Type of Audit	Frequency	Relevant Checklist	Auditee	Output
Project Audit and Security audit	Fortnightly basis	SBL/CL/2 4 SBL/CL/3 0 for GIS	PL	Audit Report (SBL/FM/15)
Configuration Management Audits	Monthly basis	SBL/CL/2 5	CMIC	

Type of Audit	Frequency	Relevant Checklist	Auditee	Output
Lifecycle Audits - start up audit	Once in a project, after PP is baselined	SBL/CL/02	PL	Filled in Audit Checklist and Report (SBL/CL/02)
Lifecycle Audits – closure audit	Once in a project, after closure report is baselined	SBL/CL/02	PL	Filled in Audit Checklist and Report (SBL/CL/02)

Table1: Project Audits

*Project audits shall include process audits and work product audits. The checklist for project audits (SBL/CL/24) shall ensure this.

Work products audits shall include sample verification of

- Verified review reports of the work products
- Test results of the product (executed test cases of the product)
- Traceability across work products

11.2 Second Party Audit

There shall be customer driven audits within the projects. This shall be done by the customer directly or shall be done by an external agency as directed by the customer. The frequency of the audit shall be as decided by the customer.

11.3 Third Party Audit

Third party audits shall be conducted once in a year for ensuring adherence with models and standards such as CMMI-Dev v1.3 Maturity Level 3, ISO 9001, ISO 27001. The models and standards to be complied to shall be decided as per the decisions from MR (Managing Representative). Relevant information about the organization required for the third-party audit shall be shared with the auditing team, with approval from MR. Relevant changes in the organization shall be informed to the auditing agency.

11.4 External Delivery and Project Closure

External Delivery is the delivery made to the customer on the agreed upon schedule with the customer. All the mutually agreed user needs between SBL and customer shall be incorporated.

External delivery criteria shall be mentioned in the project plan/test plan. Person identified for external delivery shall check whether the work product meets the criteria for external delivery.

Independent Testing Team (ITT) shall issue Software Test Certificate (STC) for external deliveries made to the customer if the delivery meets the external delivery criteria mentioned in the project plan (PP) /Test plan (TP).

The PL shall initiate the closure activities after final delivery of product to customer. Closure audit shall be done by the process consultant and ensure all the specific requirements to be satisfied.

The project leader shall ensure that the knowledge transfer shall be planned and completed before the resource is released from the project.

Technical and management lessons learned from the projects shall be maintained in Knowledge repository and can be used in future projects.

12. Secure Development Measures

12.1 Information Security Policy

Information is an important business asset of significant value to the company and needs to be protected from threats that could potentially disrupt business continuity. This policy has been written to provide a mechanism to establish procedures to protect against security threats and minimize the impact of security incidents.

The Chief Executive Officer has approved the Information Security Policy.

The objective of this Policy is to protect the Information assets belong to the company or obtained from our customers from all threats, whether internal or external, deliberate or accidental. The implementation of this policy is paramount to maintaining company's integrity as a quality service provider to our customers.

The Policy Scope covers Physical Security and encompasses all forms of Information Security such as data stored on computers, transmitted across networks, printed or written on paper, stored on tapes and diskettes or spoken in conversation or over the telephone.

IT IS THE POLICY OF SBL Knowledge Services Limited; SBL Knowledge Services Limited, 3rd Floor, Carnival InfoPark - Phase IV, Kakkanad, Cochin – 682 030, Kerala, India; SBL Knowledge Services Limited, Dasan Building, Opposite Krishna Theatre, Market Road Karunagappally – 690 518, Kerala, India; and SBL Knowledge Services Limited, 1st Floor, ELCOT IT PARK, SEZ, Ilanthalikulam, Madurai – 625 020, Tamil Nadu, India; to ensure that:

- **Information will be protected against unauthorized access**
- **Confidentiality** of information will be maintained by preventing unauthorized access.
- **Integrity** of information will be maintained by providing protection from unauthorized modification.

- All employees will be **trained** in the relevant aspects of Information Security.
- **Regulatory** and **legislative** requirements regarding Intellectual property rights, Data protection and privacy of personal information will be met.
- **Business Continuity Plans** will be produced, maintained and tested.
- **All breaches of Information Security**, actual or suspected are reported and investigated by the **Security Policy Review Team**.
- All controls and procedures are derivatives of the standard as applied to the context of the company.

12.2 Information Security Practice

SBL is an ISO 9001:2015, ISO/IEC 27001:2013 and CMMI Dev V1.3 ML3 certified company. Mr. Jayakrishna R is the Chief Information Security Officer (CISO) and has responsibilities to ensure that all requirements of the ISMS in conformance with the standard is developed, implemented and maintained.

12.3 Security Practices in Project Management

SBL Knowledge services Ltd. have implemented various policies to ensure information security:

Following are the information securities controls: -

- PL01 CCTV Monitoring Policy
- PL02 Internet Usage Policy
- PL03 Password Security Policy
- PL04 Equipment Disposal Policy
- PL05 Information Security Policy
- PL06 Change Management Policy
- PL07 Access Control Policy
- PL08 Social Media Policy
- PL09 Email Security Policy
- PL10 Data Transfer Policy
- PL12 Employee Privacy Policy
- PL13 Environmental Policy
- PL14 Wireless Usage Policy
- PL15 Health and Safety Policy

- PL16 Information Classification Policy
- PL17 Laptop Usage Policy
- PL18 Media Handling Policy
- PL19 Mobile Computing Policy
- PL21 Remote Access Policy
- PL22 Whistleblower Policy
- PL23 Mobile Phone Policy and Agreement
- PR80 Procedure for Incident Management
- PR81 Procedure for Corrective and Preventive Action

12.4 Information Security objectives

Project Plan details the plan to ensure the Information Security objectives: -

- Null incidents for Customer property
- Null incidents on IPR (Intellectual Property Rights) during release, Escrow etc.
- Null incidents from Customer business secrets (like customer product release dates, strategy etc.)
- Null Access rights violations

12.5 Security Handling of Customer Assets

- Physical Assets received from customer shall be entered in the Inward register before its intake into office premises.
- All physical assets details shall be maintained in Department Asset register.
- Digital data from the customers is restricted among a defined number of concurrent operators.
- All project related data shall be placed in Configuration management tool. Authorities for the access to each project folder shall be mentioned in project plan. It shall be verified during Configuration Management Audit.

12.6 Business Continuity Plan

Business continuity plan (BCP) shall be planned for every project and shall be detailed in Project Plan. BCP shall ensure the continuity, resumption and recovery of critical business process to minimize the operational, financial, legal, reputational and other material consequences arising from a disaster.

12.7 Cyber Security

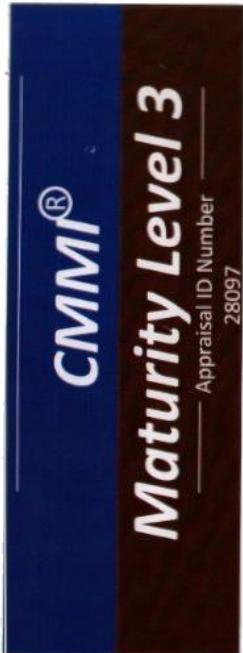
Physical and cyber security measures within the project like anti-virus, special entry zones etc. shall be detailed in project plan. We ensure that anti-virus software is installed on all PCs and servers used in a project unit and that anti-virus signatures are updated on a regular basis.

12.8 Custom Requirements from Client

If any specific requirements proposed from the customer, it shall be mutually discussed between two parties and accordingly it shall be executed based on the clients' specifications. The third-party audit can be conducted once in year to maintain the ensure the adherence with models and standards such as CMMI-Dev v1.3 Maturity Level 3, ISO 9001, ISO 27001

22. Annexure 4

Certificates



CERTIFICATE

This is to affirm that

SBL Knowledge Services Ltd.

Software Technology Division and Geo Spatial Division

was appraised at

Maturity Level 3

Of the CMMI® for Development v1.3

By means of a SCAMPI Class A v1.3

Onsite Period : Nov 21, 2016 - Nov 25, 2016

Appraisal ID No 28097

A handwritten signature of Rajarshi Kumar Das.

Rajarshi Kumar Das

Certified High Maturity Lead Appraiser

Id# 0400446-01

SFO Technologies Pvt. Ltd.

A NeST Group Company

CMMI Dev 1.3

BUREAU VERITAS
Certification



SBL KNOWLEDGE SERVICES LIMITED



HEAD OFFICE: 7TH FLOOR, CARNIVAL INFOPARK, PHASE - 2, INFOPARK P.O.,
KAKKANAD – 682 042, ERNAKULAM, KERALA, INDIA.

This is a multi-site certificate, additional site details are listed in the appendix to this certificate

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the Management System standard detailed below.

Standard

ISO 9001:2015

Scope of certification

**DESIGN & DEVELOPMENT OF SOFTWARE PRODUCTS & SERVICES.
PROVIDING IT ENABLED BUSINESS PROCESS MANAGEMENT SERVICES,
GEOSPATIAL SERVICES AND GRAPHICS & MULTIMEDIA SERVICES**

Original cycle start date: 04 July 2011

Expiry date of previous cycle: 03 July 2017

Recertification Audit date: 12 June 2017

Recertification cycle start date: 03 July 2017

Subject to the continued satisfactory operation of the organization's Management System,
this certificate expires on: 03 July 2020

Certificate No. IND17.5753/U/Q Version : 1 Revision date: 03 July 2017

Signed on behalf of BVCH SAS – UK Branch
Ramesh KOREGAVE
Director, CERTIFICATION
South Asia Region



Certification body address:

5th Floor, 66 Phascol Street, London, E1 8HG, United Kingdom

Local office:

Bureau Veritas (India) Private Limited (Certification Business)
"Manvah Centre" 5th Floor, Krishnadev Manvah Marg,
Opp. Ansal Industrial Estate, Off Saket Vihar Road,
Anand (East), Mumbai – 400 072, India.

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Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.
To check this certificate validity please call +91 22 6888 6300.

ISO 9001:2015

BUREAU VERITAS
Certification



Appendix to the certification

SBL KNOWLEDGE SERVICES LIMITED



ISO 9001:2015

SITE	SITE ADDITION DATE	ADDRESS	SCOPE
KOCHI SITE	19-10-2016	7 TH FLOOR, CARNIVAL INFOPARK, PHASE - 2, INFOPARK P.O., KAKKANAD – 682 042, ERNAKULAM, KERALA, INDIA.	DESIGN & DEVELOPMENT OF SOFTWARE PRODUCTS & SERVICES, PROVIDING IT ENABLED BUSINESS PROCESS MANAGEMENT SERVICES, GEOSPATIAL SERVICES AND GRAPHICS & MULTIMEDIA SERVICES
MADURAI SITE	21-8-2015	1ST FLOOR, ELCOT IT PARK, SEZ, ILLANTHAIKULAM, MADURAI – 625 020, TAMILNADU, INDIA.	PROVIDING IT ENABLED BUSINESS PROCESS MANAGEMENT SERVICES
KOLLAM SITE	4-7-2011	DASAN BUILDING, OPPOSITE KRISHNA THEATRE, MARKET ROAD, KARUNAGAPPALLY – 690 518, KOLLAM, KERALA, INDIA.	PROVIDING IT ENABLED BUSINESS PROCESS MANAGEMENT SERVICES

Certificate No. IND17.5753/U/Q Version: 1 Revision date: 03 July 2017

Signed on behalf of BVCH SAS – UK Branch
Ramesh KOREGAVE
Director, CERTIFICATION
South Asia Region



0008



Certification body address:

5th Floor, 66 Piccadilly Street, London, E1 8HG, United Kingdom.

Local office:

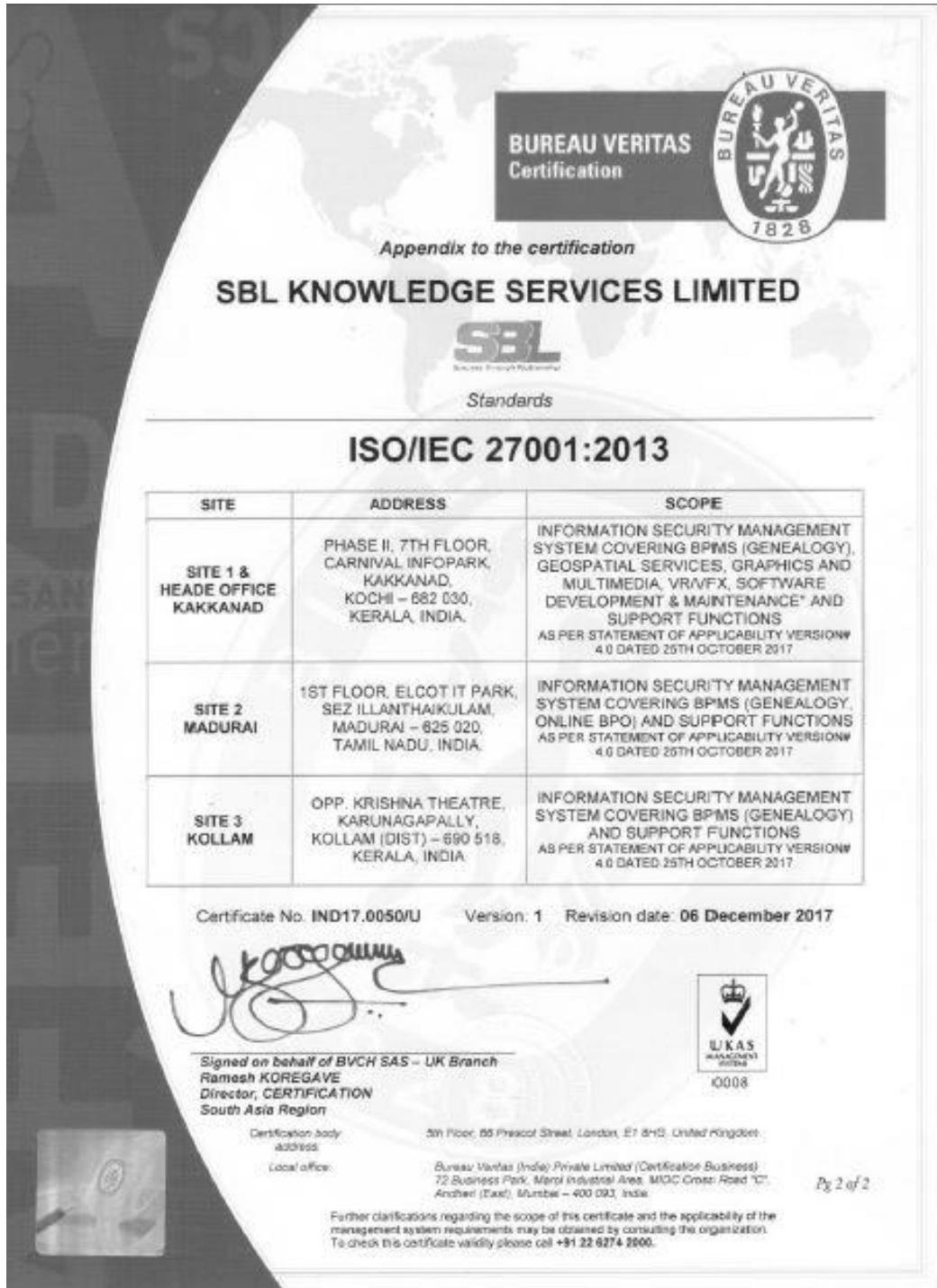
Bureau Veritas (India) Private Limited (Certification Business)
‘Wenesh Centre’ 6th Floor, Krishnadev Manav Marg,
Opp. Aram Industrial Estate, G/F Said Vihar Road,
Andheri (East), Mumbai – 400 072, India.

Pg 2 of 2

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.
To check this certificate validity please call +91 22 6695 6309.

ISO 9001:2015

**ISO 27001:2013**

**ISO 27001:2013**

References

- PR01 Procedure for Project Start up and Requirements Engineering
- PR02 Procedure for Project Planning and Monitoring
- PR03 Procedure for Software Design
- PR04 Procedure for Software Estimation
- PR05 Procedure for Configuration Management
- PR06 Procedure for Coding
- PR07 Procedure for Product Integration
- PR08 Procedure for Developer Testing
- PR09 Procedure for Independent Testing
- PR10 Procedure for Quality Assurance
- PR11 Procedure for Decision analysis and Resolution
- PR12 Procedure for Metrics
- PR13 Procedure for Process Definition and Revision
- PR16 Procedure for Reviews
- PR17 Procedure for External Delivery and Project Closure
- PR18 Procedure for Risk Management
- PR20 Procedure for Problem Resolution Management
- PR30 Procedure for Customer Satisfaction Feedback
- GD12 Guideline for Independent Testing and External Delivery
- GD15 Guideline for Coding
- GD16 Guideline for Types of Testing