Development of Ticketing application for 1600

1. Project Requirement overview:

Bhutan Telecom Limited is seeking a CRM solution to streamline the handling of customer complaints and inquiries received via calls, SMS, and email. This comprehensive system will integrate with internal and external systems, providing a unified interface for ticket management and resolution. The project aims to enhance customer service and improve operational efficiency.

The CRM will be developed with a focus on maximum security, optimal reliability, and seamless integration with existing systems, including Avaya, MyBT app, and WhatsApp chatbot application.

The application should have following requirements:

- Multi-Channel Complaint Handling: The CRM application should enable the efficient registration and processing of complaints and inquiries received through various channels, including calls, SMS, and email.
- Hardware and Networking: BTL will provide the necessary hardware, and network infrastructure will be handled by BTL.
- Integration with Avaya System: The CRM application must seamlessly integrate with the Avaya system to capture Caller Line Identification (CLID) information from incoming calls.
- Integration with MyBT App: The CRM system should integrate with the MyBT mobile application through APIs to provide a unified customer experience.
- WhatsApp Chatbot Integration: The application must offer APIs for seamless integration with BTL's WhatsApp chatbot application to enhance customer engagement.
- Latest Software Versions: All components of the application, including the application framework, database server, SMS server, application server, and other dependencies, should be built using the latest available versions to ensure optimal performance and security.
- Mobile Application: Develop a mobile application for internal users, allowing them to view and process tickets efficiently.
- Call Script: Should be able to upload and re-upload call script for each service

The selected vendor must also fulfill the following obligations:

- Source Code and Database: Provide the complete source code and a well-structured database with comprehensive data migration scripts.
- Documentation: Deliver detailed system documents, including user manuals, technical specifications, and architectural diagrams.
- User Role-Based Access: Implement a user role-based access control system to ensure the security of the CRM application
- Training: Comprehensive training for system admin and all the users
- Security Measures: Implement robust security measures to guarantee authenticated access and protect sensitive data.
- Warranty Support: Offer a warranty support period of 3 months after the CRM application's go-live date, including any necessary changes or bug fixes.

2. Detailed application Features:

2.1 Requirements for User Management

User Management is generic for call processing complaints and complaints received through SMS applications and mobile application. Following are the requirement details for User Management

Reqmt Id	Description
USM - 001	Role based users to be created (Agent, Supervisor, Admin. Tech Support)
USM - 002	Admin users should be able to add/modify the master data
USM - 003	Admin users should be able to reset the Agents /Supervisor /Tech Support password
USM - 004	Admin users, supervisors & Agents should be able to view the reports
USM - 005	Agents should be able to receive the complaints by call or SMS
USM - 006	Agents will be able to enter complaint data
USM - 007	Administrator should be able to assign roles to the agents and modify all other data
USM - 008	Supervisor should be able to assign/re-assign tickets to Technical Support team
USM - 009	Supervisor should be able to edit complaint data
USM - 010	Mobile application for Field staff to attend and close tickets
USM - 011	Other USM feature as present in existing ticketing application
USM - 012	API for third party application such as MyBt app and Whatsapp application

2.2 Requirements for User Login

Login functionality will be provided for both the applications. Following are the requirement details for Login

Reqmt Id	Description
ULG - 001	Login page for receiving the complaints, Support user should be able to create tickets
ULG - 002	Text fields for entering username and password will be provided
ULG - 003	"LOGIN" button will be provided for login into the application
ULG - 004	Forgot password functionality will be provided for all users
ULG - 005	Other ULG feature as present in existing ticketing application

2.3. Complaint Registration Application

This will be a web-based application to receive and process the customer complaints. Agents will be attending the call.

Reqmt Id	Description
CRA-001	Screen pop should be displayed on the agent desktop when the call lands to agent
CRA-002	Screen pop application will auto populate default fields and call information (caller id, and other details.).
CRA-003	Agents should be able to select/enter the complaint details on the screen pop application
CRA-004	Agents should be able to submit register the complaint through the screen pop application
CRA-005	Once the complaint is registered by the agent, screen pop application should be able to send confirmation SMS and email to the caller and to tech support user for escalated ticket

CRA-006	Supervisor should be able to edit the registered complaint
CRA-007	Agent/Supervisor should be able to view the complaint registration records
CRA-008	Pagination and Search functionality will be provided to view the registered complaints
CRA-009	Sorting on column headers to view the complaints received will be provided
CRA-010	Agents will be able to select the complaint received
CRA-011	By Default, screen pop application will display the BT complaint form
CRA-012	Other CRA feature as present in existing ticketing application

4.4 Processing incoming complaints through SMS

This will be a web-based application to receive and process the customer complaints through SMS. Agents will be attending the complaints received through SMS message.

Reqmt Id	Description
SMS-001	Application should be displayed on the agent desktop to process the incoming complaint through SMS
SMS-002	Caller Id, Time and SMS content to be displayed on the web application for viewing the received SMS.
SMS-003	All agents should be able to see the incoming SMS complaints
SMS-004	Only one agent will be allowed to work on an SMS complaint. While the agent opens a SMS complaint, other agents will see the complaint as "In Process"
SMS-005	Pagination and Search functionality should be provided to view the registered complaints through SMS
SMS-006	Sorting on column headers to view the SMS complaints received
SMS-007	Sorting on column headers to view the SMS acknowledgments sent.
SMS-008	Agents should be able to create a new ticket by reading the incoming SMS
SMS-009	Agents should be able to mark the SMS read as Junk if the content of SMS is not related to complaint.
SMS-010	SMS display should be in conversation format, like other chat system such as mobile SMS, Whatsapp or messenger
SMS-011	Automate reply for common queries/complains based on the sms keywords
SMS-012	Other SMS feature as present in existing ticketing application
SMS-013	SMS Moderation: Filtering of abusive incoming SMS

2.5 Processing incoming complaints through email

Reqmt Id	Description
EMC-001	Incoming Emails will be displayed with the following fields <<Date, Time, Subject. From>>
EMC-002	Supervisor/Agent will be able to open the email and read message
EMC-003	Supervisor will be able to assign the email to any agent.
EMC-004	Incoming Emails older than 15 days from current system date, will not be read for processing
EMC-005	Email with Attachments shall be received and displayed without attachment
EMC-006	Agent will be able to view only those emails which are assigned to him/her
EMC-007	Agent will be able to create a new ticket after reading the email message
EMC-008	Agent will be able to mark the Email as a junk email if the content is junk

EMC-009	Plain Text and HTML based Incoming Email messages are only supported and are displayed as they are received
EMC-010	Email body text maximum limit is 1000 characters only [inclusive of html tags]. Only these many characters will be read from incoming email for processing.
EMC-011	Reply functionality for email through the application will be provided for only emails that are converted to a support ticket by the agent.
EMC-012	Email Moderation: Filtering of abusive incoming email
EMC-013	Other EMC feature as present in existing ticketing application

2.6 Processing voice complaints

Only 1600 caller will be provided an option for recording their complaints through voice when all agents are busy during the time of call transfer

Reqmt Id	Description
VFT-001	Provision for recording complaints through voice recording for 1600 callers only
VFT-002	Supervisors/Admin users will be able to download the voice recorded complaints. The complaint audio file will be displayed as a link in the application.
VFT-003	Supervisor/Agents will be able to register a new complaint after listening to the recorded complaint
VFT-004	Supervisor/Agents will be able to assign the complaint to Tech Support user for resolution
VFT-005	Other VFT feature as present in existing ticketing application

2.7 Mapping wave file server

Currently all the customer complaints received through phone are recorded and stored. A link will be provided to the complaint recorded over the phone

Reqmt Id	Description
WFS-001	Link to be provided for each complaint registered and recorded by the ACR.
WFS-002	Other WFS feature as present in existing ticketing application

When all agents are busy the caller can record his complaint by leaving a voice message. A link will be provided to the complaint recorded over the phone

Reqmt Id	Description
WFS-002	Link to be provided for each complaint recorded by the DD application.

2.8 Support Ticketing System

Support Ticketing System is an embedded part of the Screen Pop application which the agent will be using for raising a new ticket.

Reqmt Id	Description
STS-001	Agents will be able to enter the Incoming Call Details in screen pop and submit the form, automatically the details will be populated to the support ticketing system.
STS-002	On submission of support ticketing form the details will be stored in a backend database and a new ticket will be generated
STS-003	Supervisor will be able to assign the ticket to support users
STS-004	Agents/Supervisor will be able to view the support tickets
STS-005	Any agent can view and work on any ticket raised, however only one agent shall be able to update the complaint resolution status at a time

STS-006	Agent shall be provided provision on call registration form to send SMS to the caller and also to the support team.
STS-007	Agent shall also be provided provision on call registration form to send email to the caller and also send email to the support team
STS-008	sms and email shall be sent to the end customer's registered email id regarding the closure of the incident.
STS-009	Administrator can configure the list of all status which can be assigned to the ticket raised.
STS-010	Supervisor/Agent can view the complaint history and update the status of the complaint
STS-011	List of all support tickets with specified date range will be displayed in Support Ticket History
STS-012	Search facility to search for a ticket will be provided with search criteria as ticket id
STS-013	support user should get email and sms notification for escalated ticket
STS-014	Should be able to configure multiple phone number for tech user
STS-015	Tech support should be able to see only ticket that are escalated to him (from web and mobile app)
STS-016	Email notification to support user's immediate supervisor if tickets not attended within given time based on ticket priority set by agents
STS-017	Other STS feature as present in existing ticketing application

2.9 Reports

Reports for both the applications will be developed. Admin users, Supervisors, Tech Support users and Agents will be able to view the reports. Agents will be able to see the reports specific to the complaints handled by them.

Reqmt Id	**Description**
RPT-001	SMS sent reports for the complaints received through SMS. Filters for search based on Start Date and End Date will be provided
RPT-002	Support Ticket reports based on status of the complaints, based on Agent selection, based on Service Type, based on complaint received mode (SMS, Email, Call, Voice recording) will be provided Filters for search based on Start Date and End Date will be provided
RPT-003	Email Sent and Received reports for the complaints received through Email will be provided. Filters for search based on Start Date and End Date will be provided
RPT-004	User Activity reports will be provided
RPT-005	Realtime dashboard for complain tracking and monitoring
RPT-006	Integration with BT Website to give access to customer raise ticket and also view their complain
RPT-007	Users will be able to export the reports to excel & pdf
RPT-008	Pagination functionality will be provided to view the reports
RPT-009	Sorting on column headers will be provided for all reports
RPT-010	Agent will be able to search the list of all tickets raised by a customer based on customer email id / subject/status of ticket.
RPT-011	Other RPT feature as present in existing ticketing application