

# **Software Requirements Specification**

**Project Name: Debt Recovery System (DRS)**

**Version: 1.0**

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# 1. Introduction

## 1.1 Purpose

The SLT recovery section currently processes debt recovery procedures manually, which includes gathering data, filtering it, initiating legal actions, facilitating communication, distributing cases, implementing settlement plans, handling customer responses, financial matters, and commission and bonus calculations. The Debt Recovery System aims to visualize data using dashboards, facilitate reporting, minimize manual work, reduce time-consuming tasks, and reduce human errors and risks. The system will automate and streamline the recovery process, minimizing risks. The target audience includes employees of the SLT recovery section, legal officers, DRA companies, and Recovery Officers.

This Software Requirement Specification (SRS) report provides a detailed description of the Debt Recovery System application, including its purpose, project scope, functional features, non-functional requirement references, and external interface requirements. The features were proposed after understanding client requirements, and the document aims to improve customer and client base efficiency and accuracy in business operations. The target audience includes employees of the SLT recovery section, legal officers, DRA companies, and Recovery Officers.

## 1.2 Project Overview

The project aims to automate Sri Lanka Telecom's debt recovery process, enhancing efficiency and performance. The system will gather data from various platforms, implement filtering mechanisms, handle legal processes, automate communication between parties, and provide real-time reporting and notifications. This will enable faster processing, minimize risks, improve decision-making, minimize financial losses due to human errors, and provide customizable workflow. The project also aims to streamline communication between external parties and internal units, ensuring better decision-making and minimizing financial losses due to human errors.

## 1.3 Scope

The Debt Recovery System is a fully automated solution for managing accounts, collections, and legal actions in financial contexts. It aims to integrate with other SLT systems and includes features for efficient handling of account statuses, payment processing, and legal proceedings. The key components of the product scope include.

## 1.4 Definitions, Acronyms, and Abbreviations

- CPE: Customer Premises Equipment
- DRC: Debt Recovery Company
- OSS: Operational Support System

- CAM: Credit Account Management
- OWA: Overdue With Agent
- PLD: Print Legal Demand
- BS: Being Settled
- FMB: Forwarded to Mediation Board
- VIP: Very Important Person

### 1.5 Assumptions and Dependencies

- Proposed system will monitor only the given accounts.
- Even though with the time the account has been changes to a new account the proposed system will monitor the recovery process with the arrears account.
- A customer can have many accounts, but the system will assign a same DRA to same customer to handle all accounts is they have arrears cases.

### 1.6 System Users and User Privileges

User	Internal /External	Privileges within system
Legal Officer	Internal	<ul style="list-style-type: none"> <li>- Access and view case information to issue LOD, FTL LOD, Final reminder letters.</li> <li>- Generate letters based on preset up system templates with pre-configured parameters/values.</li> <li>- Edit and customize letter contents.</li> <li>- Approve letters with digital or manual signature.</li> <li>- View LOD, FTL LOD, Final reminder statuses and customer responses.</li> <li>- Extend deadlines given when needed.</li> <li>- Set timelines, deadlines.</li> </ul>

		<ul style="list-style-type: none"> <li>- Access and view mediation board statuses and updates.</li> <li>- Privileges for case management ( closing cases, forward for settlements)</li> <li>- Access and view system reports, past data and logs.</li> </ul>
Accountant	Internal	<ul style="list-style-type: none"> <li>- Access and view outstanding debts and account balances.</li> <li>- Update payment statuses.</li> <li>- Calculate commissions.</li> <li>- Access and view financial logs.</li> </ul>
Customer Care Officer	Internal	<ul style="list-style-type: none"> <li>- Access and view case information to issue LOD, FTL LOD, Final reminder letters.</li> <li>- Generate letters based on preset up system templates with pre-configured parameters/values.</li> <li>- Edit and customize letter contents.</li> <li>- Send letters to customers.</li> <li>- View LOD, FTL LOD, Final reminder statuses and customer responses.</li> <li>- Access and view mediation board statuses and updates.</li> <li>- Access and view system reports, past data and logs.</li> </ul>

Main Agent ( The company /DRA)	External	<ul style="list-style-type: none"> <li>- View assigned cases and information.</li> <li>- Assign cases to sub agents.</li> <li>- Monitor progress ( money and unit collection)</li> </ul> Update progress and fields in progress reports.
Sub Agent (Billing center)	External	<ul style="list-style-type: none"> <li>- View assigned cases and information.</li> <li>- Assign cases to agents.</li> <li>- Monitor progress ( money and unit collection)</li> </ul> Update progress and fields in progress reports.
Agent (RO)	External	Report and update progress and fields in progress reports.

## 2. Comparison between Previously Proposed System and Current DRS

### 2.1 Account Management Process

Feature	Previously Proposed System	DRS
<b>Account Registration Process</b>	<ul style="list-style-type: none"> <li>• Auto-register accounts from the final notice list (CAM) sent by the Credit Control Section.</li> <li>• Include accounts from the Product Deleted list (OSS).</li> <li>• Manually register accounts from various lists: Age Analysis Report, Corporate List, OPMC Fail List, and Special List.</li> </ul> <p><b>Data gathering order is not defined.</b></p>	<ul style="list-style-type: none"> <li>• <b>Step 1</b> : Collect inputs ( Arrears, product termination) <ul style="list-style-type: none"> <li>- Account</li> <li>- Case type</li> <li>- Tele number</li> <li>- CP collect</li> </ul> </li> <li>• <b>Step 2</b> : Gather information for <i>above gathered Accounts</i> <ul style="list-style-type: none"> <li>- OSS, BSS, CRM</li> </ul> </li> </ul> <p><b>Data gathered in clearly defined with two steps to gather correct and relevant data.</b></p>
<b>Filter 1 criteria</b>	<ul style="list-style-type: none"> <li>- Customer Type = SLT</li> <li>- Arrears threshold (less than a specified limit).</li> <li>- Active BSS Product (status TX/TA.SU).</li> </ul>	<p>Should add following to filtering criteria:</p> <p>➤ <b>Active BSS Product (status TX/TA.SU).</b></p>

	<ul style="list-style-type: none"> <li>- VIP Customers (Credit classes 3, 7, 10, 43).</li> <li>- Specific Customer Names (Banks, Brandix, MAS).</li> <li>- Specific Customer Segments (Data segments 2, 4, 6, 7).</li> </ul>	<p>➤ <b>Specific Customer Names (Banks, Brandix, MAS).</b></p>
<b>Rejected Accounts Excel Generation</b>	<ul style="list-style-type: none"> <li>• Generate an Excel sheet with the reject reasons for these accounts.</li> </ul>	<ul style="list-style-type: none"> <li>• There are no Excel reports, if reject DRS send <i>a message with the reject reason.</i></li> </ul> <p>This facilitates the real-time communication and immediate actionability.</p>
<b>Re-register rejected Accounts</b>	<ul style="list-style-type: none"> <li>• Option to register rejected accounts manually after high-level management approval.</li> </ul>	<p>➤ <b>In current DRS there is no option to re-register rejected accounts.</b></p> <p>In current DRS can enable , disable and add again the filtered cases</p>
<b>Marketing feedback over business customer list.</b>	<ul style="list-style-type: none"> <li>• Filter the business customer list and send a mail to get marketing feedback.</li> </ul>	<p>➤ <b>No mention about a marketing feedback.</b></p>
<b>After filtering business accounts process</b>	<ul style="list-style-type: none"> <li>• Directly checks for the cases that has arrears only.</li> </ul> <p><b>Only “arrears only” route has considered after gathering data and after first filtering.</b></p>	<ul style="list-style-type: none"> <li>• There are 3 types of cases in the process <ol style="list-style-type: none"> <li>1. Arrears only</li> <li>2. CP only</li> <li>3. Arrears + CP</li> </ol> </li> </ul> <p><b>All possible routes have considered after gathering data and after first filtering.</b></p>
<b>Accounts with Arrears Less Than Rs. 50,000</b>	<ul style="list-style-type: none"> <li>• Divide these into separate segments and display the number of accounts with their total arrears.</li> <li>• Sub-categorize accounts with arrears less than Rs. 50,000.</li> </ul>	<ul style="list-style-type: none"> <li>• Filter cooperate and government cases.</li> <li>• Check the cases that have arrears amount more than 50000 Rs, whether that arrears amount is greater than 1M Rs.</li> </ul>

	<ul style="list-style-type: none"> <li>• Provide an option to <b>register these accounts either through the system or manually.</b></li> </ul> <p><b>Flows of the cases are ambiguous.</b></p>	<ul style="list-style-type: none"> <li>• If so then forward case to FTL LOD ( Forward To Litigation LOD)</li> <li>• If it's not check the region of the case and if its metro then forward case to Mediation Board if not again check arrears amount is greater than 100K Rs. If so, forward case to Mediation Board if not check the case for 3 months (validity period).</li> </ul>
<b>Distribute to Agent</b>	<ul style="list-style-type: none"> <li>• Issue "ONA" (Open No Agent) accounts list to selected companies either through the system or manually, depending on the company's preference (some companies work with all lists, others with selected ones).</li> </ul>	<ul style="list-style-type: none"> <li>• Not manually only through system.</li> </ul>
<b>Generate an Excel sheet</b>	<ul style="list-style-type: none"> <li>• <b>Generate an Excel sheet</b> from the Recovery system and send it to DRCC for details.</li> </ul>	<ul style="list-style-type: none"> <li>• Report creations (PDF format) only.</li> </ul>
<b>Agent path</b>	<ul style="list-style-type: none"> <li>• Assign accounts to relevant companies, except for those with <b>recent payments</b> (where at least 80% of the arrears have been paid).</li> <li>• Check and reject accounts with already paid or small arrears/adjustments less than Rs. 1,000.</li> <li>• Change the status of remaining "Issued" accounts to "<b>Reject</b>" and</li> </ul>	<ul style="list-style-type: none"> <li>• Not only agent path in every path these conditions will be checked.</li> </ul>



	update the reason for rejection in an Excel sheet	
ONA	<ul style="list-style-type: none"> <li>For ONA accounts that haven't received physical payment <b>after one month</b> of the assigned date, send a <b>reminder email</b> to DRC staff and copy the SLT staff through the system.</li> </ul>	
OWA	<ul style="list-style-type: none"> <li>Field reports should be updated <b>weekly</b> (Every Monday/Tuesday), and these updates should be uploaded to the system for the relevant week.</li> <li>Once a month (on the <b>20th</b>), if cases are still unpaid, update the field reason as "fail" through the system.</li> <li><b>Generate an Excel sheet</b> with field status updates and send it via email to the DRCC, copying SLT Officers.</li> <li><b>Physical payment</b> received before the effective date should be subtracted from the arrears, and the balance is considered <b>collectable arrears</b>.</li> </ul>	
<b>Minimum Installment Requirement for Success</b>	<p>To be successful, the <b>minimum installment amount</b> must be paid during the validity period:</p> <p>➤ Arrears &lt; Rs. 1,000 = Minimum Installment Amount: Rs. 500.</p>	

	<ul style="list-style-type: none"> <li>➤ Arrears between Rs. 1,001 and Rs. 2,500 = Rs. 1,000.</li> <li>➤ Arrears between Rs. 2,501 and Rs. 5,000 = Rs. 1,500.</li> <li>➤ Arrears between Rs. 5,001 and Rs. 10,000 = Rs. 2,500.</li> <li>➤ Arrears between Rs. 10,001 and Rs. 25,000 = Rs. 4,000.</li> <li>➤ Arrears between Rs. 25,001 and Rs. 50,000 = Rs. 7,500.</li> <li>➤ Arrears between Rs. 50,001 and Rs. 100,000 = Rs. 10,000.</li> <li>➤ Arrears greater than Rs. 100,000 = Rs. 25,000.</li> </ul>	
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## 2.2 Commission

Feature	Previously Proposed System	DRS

## 2.3 Legal Process

Feature	Previously Proposed System	DRS
Register Direct LD Cases.	<ul style="list-style-type: none"> <li>• <b>Register LD Accounts</b> with a status of “Direct LD” through the system or manually.</li> </ul>	<ul style="list-style-type: none"> <li>• LD cases will be registered only through the system after the first filtering.</li> </ul>
<b>Factors that cause not eligible for litigation.</b>	<b>Reject accounts</b> for the following reasons:	

	<ul style="list-style-type: none"> <li>• Recent Payment (at least 50% of due PLD arrears).</li> <li>• Arrears below 1000.</li> <li>• Already fully paid.</li> <li>• Product status active.</li> <li>• LD has already been sent within the last 6 months.</li> </ul> <p><b>Rejected Accounts</b> are updated with the case status 'Legal Rejected.</p>	
<b>Final Reminder</b>	<p><b>Physical payments</b> after the Final Reminder date:</p> <ul style="list-style-type: none"> <li>• Generate weekly payment reports for recovery officers.</li> </ul> <p><b>Full payment within 6 months:</b></p> <ul style="list-style-type: none"> <li>• Change status to "Direct_LD_FR_Closed" or "Fail_DRC_FR_Closed."</li> </ul> <p>Non-payment or partial payment:</p> <ul style="list-style-type: none"> <li>• <b>After 6 months</b>, update LD status to "Direct_LD_FR_Fail" or "Fail_DRC_FR_Fail."</li> <li>• <b>For products with status SU/TX</b>, change the case status to "Pending Write_Off" and send a monthly write-off accounts list.</li> </ul>	

## 3. Overall Description

### 3.1 System Environment

The DRS will be integrated with SLT's existing OSS, BS, and CRM systems, operating either in a cloud-based or on-premise environment.

### 3.2 User Characteristics

Legal Officers: Generate and manage legal documents.

Accountants: Handle payments and commissions.

Recovery Officers: Manage cases and communicate with customers.

### 3.3 Constraints

Legal compliance with Sri Lanka's data protection regulations.

Performance metrics under concurrent user loads.

## 4. Functional Requirements

## 5. Non-Functional Requirements

### 5.1 Performance Requirements

- **Response Time:** The system should process login requests within 2 seconds under normal load.
- **Data Fetching:** The system should retrieve data from OSS, BS, and CRM systems within 5 seconds for up to 1,000 records.
- **Filtering Process:** The data filtering process should complete within 3 seconds for datasets of up to 10,000 entries.

### 5.2 Scalability

- The system should support up to 500 concurrent users without performance degradation.
- The architecture must accommodate an increase in data volume, allowing for growth of at least 50% in user base and data size annually.

### 5.3 Security Requirements

- **Authentication:** The system must enforce strong password policies, requiring passwords to be at least 8 characters long, including uppercase, lowercase, numeric, and special characters.
- **Data Encryption:** All sensitive data (user credentials, financial information) must be encrypted both in transit and at rest.
- **Access Control:** The system must implement role-based access control (RBAC) to ensure that users can only access data and functionalities relevant to their roles.

#### 5.4 Usability Requirements

- **User Interface:** The system should have an intuitive and user-friendly interface, requiring no more than three clicks to access any primary function.
- **Error Messages:** The system must provide clear and actionable error messages for login failures and data retrieval issues, helping users understand and resolve issues promptly.
- **Training:** Documentation and training materials must be provided to all users, ensuring they can effectively navigate and use the system within one week of deployment.

#### 5.5 Reliability and Availability

- The system must achieve 99.9% uptime, excluding scheduled maintenance.
- Backup processes should ensure that data is recoverable within 24 hours in the event of a system failure.

#### 5.6 Maintainability Requirements

- **Code Quality:** The system codebase should adhere to established coding standards (e.g., consistent naming conventions, modular design) to facilitate ease of maintenance and updates.
- **Logging:** The system should implement logging of critical actions (e.g., logins, data access) for audit purposes, retaining logs for a minimum of 12 months.

#### 5.6 Compliance Requirements

- The system must comply with relevant data protection regulations (e.g., GDPR, CCPA) regarding the handling and storage of personal and sensitive information.
- Audit trails must be maintained to track user actions for compliance purposes, ensuring that all access and changes to sensitive data are logged and reviewable.

#### 5.7 Interoperability Requirements

- The system should integrate seamlessly with existing SLT applications (OSS, BS, CRM) through defined API endpoints, ensuring compatibility with the current technology stack.

## 6 System Models and Diagrams

6.1 Use Case Diagram: Depicts user interactions with the system.

6.2 Sequence Diagram: Shows workflows such as case filtering and settlements.

6.3 System Architecture Diagram: Highlights the integration of SLT systems with the DRS.

## 7 External Interface Requirements

### 6.1 User Interfaces

Intuitive web-based dashboard for data visualization.

### 6.2 Software Interfaces

RESTful APIs to fetch data from OSS, BS, and CRM systems.

### 6.3 Communication Interfaces

Secure email notifications and system alerts for case updates.

## 8 Appendices

### 8.1 Glossary

- **OSS:** Operational Support System
- **LOD:** Letter of Demand

### 8.2 References

- [API Documentation for SLT Systems]
- [Sri Lanka Data Protection Act]