

# **Development of a web portal for LC data handling and automation Domestic LC Park via Webpage to SAP**

## **Business Requirement Document (BRD)**

**Department:** AR -Domestic Banking

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### Project Vision and Scope Report

#### PART 1: EXECUTIVE SUMMARY

This report outlines the vision and scope for automating the Letter of Credit (LC) handling workflow between the Sales and AR Teams. The proposed solution integrates a

Web Portal with SAP HANA using APIs and OCR technology to streamline LC processing, improve collaboration, and ensure accurate and timely financial postings. The implementation will be phased to ensure smooth adoption and minimal disruption. The current manual process involves multiple steps including draft LC upload, review, correction, final LC upload, OCR extraction, and financial posting. These steps are prone to delays, miscommunication, and manual errors. By automating the workflow, the organization aims to enhance operational efficiency, reduce turnaround time, and improve data accuracy.

The Web Portal will serve as the central interface for document exchange and communication between teams. Integration with SAP HANA via APIs will enable real-time data synchronization, while OCR technology will facilitate automated data extraction from LC documents. The system will also include validation logic to ensure compliance with Sales Order terms before financial postings are made.

This initiative supports the organization's strategic goals of digital transformation, improved customer experience, and enhanced financial control. The phased implementation approach will include core application functionality, SAP integration, and vendor mobile application rollout.

## PART2: Approvals

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**Business Analyst**

Date:

### Reviewed by:

Mr. Rahul Chaturvedi  
**Sr. Lead Digitization-IT**

Date:

### Approved by:

Kalpesh Tamakuawala  
**Sr. Lead - Domestic Banking**

Date: 30/10/2025

Rajesh Patel  
**Sr. Lead - Export Documentation**

Date: 30/10/2025

## PART 3: PURPOSE

The purpose of this project is to automate and optimize the Letter of Credit (LC) handling process by integrating SAP HANA with a centralized Web Portal. This integration aims to streamline the end-to-end workflow between the Sales and

Accounts Receivable (AR) Teams, ensuring seamless collaboration, data accuracy, and operational efficiency.

Currently, the LC process involves multiple manual steps, including document uploads, email communications, and data entry into SAP. These manual interventions increase the risk of errors, delays, and miscommunication. By introducing automation through API-based data synchronization and Optical Character Recognition (OCR) for document abstraction, the project will significantly reduce manual workload and improve turnaround time.

The Web Portal will serve as a unified interface for uploading draft and final LCs, reviewing comments, and tracking status updates. It will also facilitate real-time validation of LC content against Sales Order (SO) data retrieved from SAP HANA. The OCR engine will extract relevant information from uploaded LCs and initiate the creation of FINST documents in SAP up to the park stage, subject to AR Team review and final posting.

Ultimately, this project will enhance transparency, accountability, and compliance in LC processing, while enabling faster material movement and improved customer satisfaction.

#### **PART 4: CURRENT PROCESS – AS-IS MODEL**

##### **Section 4.1: What is the Business Problem?**

The current Letter of Credit (LC) handling process is **manual, time-intensive, and error-prone**. It lacks integration with real-time Sales Order data, resulting in:

**Delayed approvals** due to multiple email exchanges.

**Frequent data inconsistencies** and manual corrections.

**Limited visibility** into the status of LC requests and associated documentation.

**Operational inefficiencies** that impact turnaround time and customer satisfaction.

This fragmented workflow hinders agility and increases the risk of compliance issues and financial discrepancies.

##### **Section 4.2: Where is the Business Problem?**

The business problem is primarily observed in the **coordination between the Sales and Accounts Receivable (AR) teams**, where

**Document handling is done via email**, leading to version control issues and delays.

**Sales Order and LC data validation is manual**, lacking integration with **SAP HANA**, which prevents real-time posting and verification.

**Approval workflows are fragmented**, with no centralized tracking or audit trail.

#### **SECTION 4.3: WHY IS THERE A BUSINESS PROBLEM?**

The lack of a centralized platform and automated data exchange mechanisms across terminal operations has resulted in:

**Operational Inefficiencies:** Manual data handling and fragmented systems slow down decision-making and increase turnaround time.

**Delays in Communication:** Disparate systems hinder real-time updates between stakeholders, leading to coordination gaps.

**Financial Discrepancies:** Inconsistent data formats and manual entries elevate the risk of billing errors, revenue leakage, and audit challenges.

**Limited Visibility:** Absence of integrated dashboards restricts management's ability to monitor vessel movements, cargo status, and safety metrics effectively.

**Compliance Risks:** Without standardized data exchange, regulatory reporting becomes error-prone and time-consuming.

These challenges collectively impact productivity, stakeholder satisfaction, and the overall reliability of port operations.

#### **PART 5: VISION AND SCOPE: TO-BE MODEL**

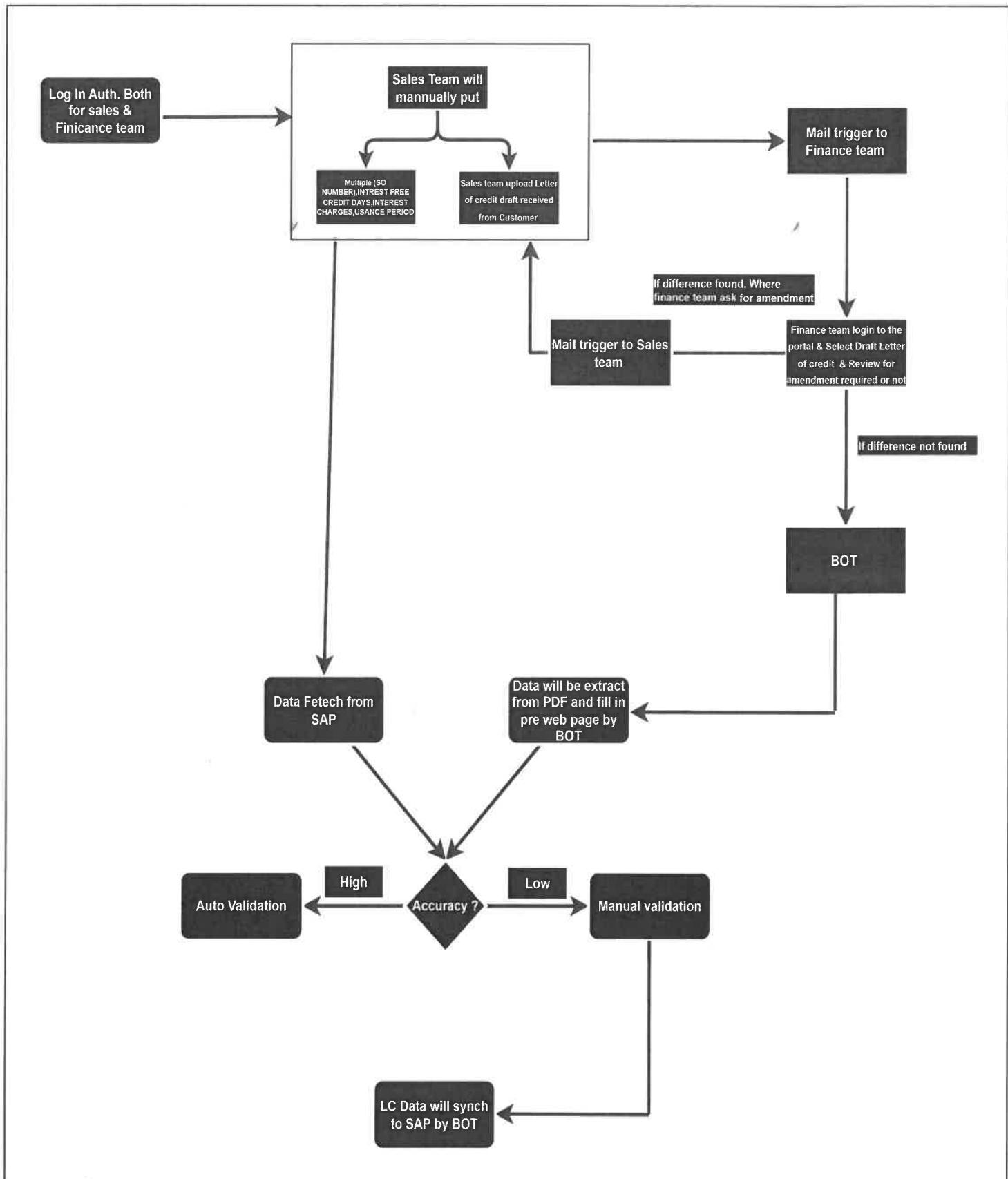
##### **SECTION 5.1: OBJECTIVE—PROCESS IMPROVEMENT TARGETS**

The objective is to implement a Web Portal integrated with SAP HANA to automate LC handling. Key targets include:

- Real-time SO data retrieval via API
- Automated OCR-based LC abstraction
- streamlined collaboration and approval workflow
- Accurate FINST generation and posting

##### **Process Steps:**

1. Sales team or finance team login to the portal
2. Enters SO / Multiple SO & Data auto fetch like Sold to party, ship to party, plant code, so value Line-item details, Pyt Terms, Special Remark-Sales Contract, Cust. Reference / PO number, Cust. Ref. Date / PO Date etc. from SAP
3. Upload Received LC PDF for Data Extraction for LC Creation
4. After data fetch from SAP & LC PDF final SAP like screen fill required data & save as draft for finance verification
5. Finance team cross check the data & can EDIT if found some data correction & submit for LC creation in SAP
6. Mail to be auto trigger to respective sales team & finance team for LC created
7. Inward no. should be replicated in web page against LC Number
8. list of Open & Created LC need to be available
9. If any amendment received, it should be updated by finance team



Sales Executive receive LC from Customer

## Screen-1

Sales Executive to open "WEB PAGE"

Screen will appear "CREATE REQUEST"

Screen will have following Tabs:

Multiple (SO NUMBER)	INTEREST FREE CREDIT DAYS	INTEREST CHARGES	USAGE PERIOD
Sales to enter	Sales to enter	Sales to enter	Sales to enter

COMPANY CODE	PLANT CODE	CUSTOMER CODE	SHIP TO PARTY	SO VALUE	PY TERMS	Special Remark-Sales Contract	Cust. Reference/PD number	Cust. Ref. Date/PO Date
Auto Capture from SO	Auto Capture from SO	Auto Capture from SO						

Attachment.PDF

Password

Note: Alert to be given before SUBMIT Regarding SO Data as per LC

## Screen-2

Instrument_Number	DPCBOM401240
Form_of_DOC	IRREVOCABLE
Opening_Bank	HSBC0400002
Opening_Date	30.04.2025
Unance_Period	90
Dispatch_Upto_Date	30.07.2025
Negotiation_Days	21
Expiry_Date	21.08.2025
Place_TakeIn_charge	ANY WHERE IN INDIA
Place_of_Final_Destination	BLUE STAR LTD WADA MAHARASHTRA
Advising_Bank	SBIN0005996
ES	No
ET	No
ER	Yes
Grace_Value	25488000
Percentage Credit amount Tolerance:	10/10
Cust_Name_Inv_Print	HSBC Bank A/C
Customer_Name	HSBC Bank   BLUE STAR LIMITED
Clause45A	CPT BLUE STAR LTD WADA MAHARASHTRA. COLOR COATED COILS AS PER PO NO.2500123644 DT.25.04.2025
Incoterm	CPT
IMPS Remark	CPT BLUE STAR LTD WADA MAHARASHTRA
Additional Condition 46 A	Summary of Additional Condition
Clause78	Bank name & Address
Comment for amendment	Mail Trigger to sales team for amendment

Screen-3

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## PART 6: ASSUMPTIONS, DEPENDENCIES, AND CONSTRAINTS

### ASSUMPTIONS

#### 1. SAP HANA APIs Are Available and Accessible

- SAP HANA system exposes required APIs (OData/REST) for integration with external applications.
- APIs provide access to relevant business objects such as:
  - Purchase Orders
  - Sales Orders
  - Business Partners
  - Document Flow
  - Custom CDS Views
- Authentication mechanisms (OAuth2, Basic Auth, etc.) are configured and credentials/tokens are securely managed.
- Network connectivity between the application and SAP HANA is established and stable.
- API endpoints are reachable from the application environment (e.g., mobile app, web portal, middleware).
- API responses are optimized for performance and support pagination, filtering, and sorting.
- Error handling and logging mechanisms are in place for API calls.
- SAP HANA system is maintained and updated regularly to ensure compatibility and security.

#### 2. OCR Engine Supports LC (Letter of Credit) Document Formats

- The OCR engine is capable of processing scanned and digital LC documents in formats such as:
  - PDF (including multi-page)
  - TIFF
  - JPEG/PNG
- OCR engine supports recognition of:
  - Printed and handwritten text
  - Tabular data
  - Stamps, signatures, and watermarks
- The engine can identify and extract structured sections from LC documents, including:
  - Applicant and Beneficiary details
  - Terms and Conditions
  - Amounts and Currencies
  - Validity Dates
  - Bank Instructions
- OCR output is provided in structured formats (e.g., JSON, XML) suitable for downstream processing.

- Confidence scores are available for extracted fields to support validation workflows.
- OCR engine supports multilingual text recognition and various font types.
- Integration APIs or SDKs are available for embedding OCR functionality into the application.
- Post-processing logic (e.g., NLP or rule-based parsing) is available to convert raw OCR output into structured data.

## DEPENDENCIES

### **1. SAP HANA System Availability**

- The solution relies on the continuous availability and operational stability of the SAP HANA system.
- Any downtime, maintenance, or performance degradation in SAP HANA may directly impact:
  - Data retrieval and synchronization
  - API-based integrations
  - Real-time transaction processing
- SAP Basis and Infrastructure teams are responsible for ensuring uptime, backup, and disaster recovery protocols.
- Version compatibility between SAP HANA and integrated applications must be maintained.

### **2. Timely User Training and Adoption**

Successful implementation depends on end-user readiness and adoption across all roles (e.g., Gatekeeper, QC Inspector, Admin/SAP, Supplier).

**Training programs must be conducted prior to rollout, covering:**

- Functional workflows
- Mobile/Web application usage
- Exception handling and escalation procedures
- User feedback loops should be established to refine usability and address adoption challenges.
- Support resources (e.g., helpdesk, manuals, FAQs) must be available during and after deployment.

## CONSTRAINTS

### **1. Budget Limitations**

- The scope, scale, and timeline of the solution are subject to financial constraints defined by the project budget.
- Selection of third-party tools, platforms (e.g., OCR engine, cloud services), and licensing models must align with approved cost allocations.
- Custom development, infrastructure upgrades, and extended support services may be limited or phased based on budget availability.

- Any change requests or scope expansions must undergo cost-benefit analysis and budget re-approval.

## **2. Integration Complexity with Legacy Systems**

Existing legacy systems may have limited interoperability due to outdated technologies, lack of APIs, or proprietary data formats.

**Integration may require:**

- Custom middleware or adapters
- Data transformation and mapping logic
- Manual data reconciliation in certain cases
- Legacy systems may not support real-time data exchange, impacting automation and responsiveness.
- Technical debt and undocumented processes in legacy systems may introduce risks during integration and testing.
- Coordination with legacy system owners and IT support teams is essential for successful integration.

## **PART 7: RISKS**

### **1. Data Extraction Inaccuracies from OCR**

OCR engine may misinterpret or fail to extract key information from LC documents due to:

- Poor scan quality or resolution
- Handwritten annotations or non-standard fonts
- Complex layouts or multi-language content
- Inaccurate data extraction can lead to:
- Misclassification of documents
- Errors in downstream processing or validation
- Increased manual intervention and reduced automation benefits

**Mitigation:**

- Implement confidence scoring and human-in-the-loop validation
- Use pre-processing techniques (e.g., image enhancement, layout normalization)
- Continuous model training and tuning based on real-world samples

### **2. Delays in SAP Integration**

**Integration with SAP HANA may be delayed due to:**

- API unavailability or version mismatches
- Network/firewall restrictions
- Dependency on SAP Basis or third-party consultants

- Delays can impact project timelines and user onboarding.

**Mitigation:**

- Early engagement with SAP technical teams
- Parallel development of mock APIs or sandbox environments
- Clear escalation paths and contingency planning

### 3. User Resistance to New Workflow

- Users may resist adopting the new digitized workflow due to:
- Lack of familiarity with the system
- Perceived complexity or increased workload
- Preference for legacy/manual processes
- Resistance can lead to underutilization of the system and reduced ROI.

**Mitigation:**

- Conduct targeted training and onboarding sessions
- Involve users early in design and testing phases
- Provide intuitive UI/UX and responsive support channels

### PART8. TIMELINE – TBD

The project timeline will be finalized after stakeholder approval and resource allocation.

Phase	Timeline	Milestone
Requirement Finalization		BRD Approval
Development Start		Backend Architecture Finalized
UI/UX Design		Wireframes & Design Sign-off
Development		Core Modules Developed
Testing		UAT Sign-off
Deployment		Go-Live
Feedback & Iteration		Post-Go-Live Enhancements

**PART 9: PROJECTED BENEFIT ESTIMATES**  
**SECTION 9.1: PROJECTED BENEFIT ESTIMATE**

**Tangible Benefits**

Benefit Area	Description	Estimated Impact	Measurement Metric
<b>Reduction in Manual Data Entry</b>	Automated OCR and SAP integration reduce manual input of LC document data.	60–80% reduction	Number of manual entries avoided per month
<b>Faster Document Turnaround</b>	Digitized workflows accelerate LC verification and approval cycles.	50–70% faster processing	Average processing time per LC document
<b>Improved Data Accuracy</b>	Structured extraction minimizes human errors in financial/legal data.	90%+ accuracy	Error rate in extracted vs. verified data
<b>Operational Cost Savings</b>	Reduced manpower hours and paper handling costs.	₹ annually	Cost saved in FTE hours and materials
<b>Enhanced Compliance &amp; Auditability</b>	Digital traceability improves audit readiness and regulatory compliance.	High	Number of audit findings reduced
<b>Real-Time SAP Sync</b>	Immediate data availability in SAP for downstream processes.	Near real-time	Sync latency (seconds/minutes)
<b>Scalability for Future Modules</b>	Foundation for expanding to other document types and workflows.	High	Number of modules added post-deployment

**Intangible Benefits**

Benefit Area	Description	Impact	Remarks
<b>Improved User Experience</b>	Digitized workflows and intuitive UI reduce cognitive load and frustration.	High	Enhances user satisfaction and engagement
<b>Organizational Digital Maturity</b>	Adoption of OCR and SAP integration reflects progress in digital transformation.	Strategic	Aligns with long-term IT modernization goals
<b>Enhanced Decision-Making</b>	Real-time data availability supports faster and more informed decisions.	High	Improves operational responsiveness
<b>Brand Reputation</b>	Demonstrates commitment to	Medium	Strengthens

Benefit Area	Description	Impact	Remarks
<b>&amp; Trust</b>	Innovation and compliance.		Stakeholder confidence
<b>Employee Empowerment</b>	Role-based access and automation reduce repetitive tasks.	High	Boosts morale and productivity
<b>Scalability &amp; Future Readiness</b>	Platform can be extended to other document types and workflows.	Strategic	Supports future automation initiatives
<b>Environmental Impact</b>	Reduction in paper usage and manual documentation.	Positive	Contributes to sustainability goals

#### PART 10: VISION AND SCOPE REPORT REVISION LOG

Version	Date	Author	Section(s)Revised	Des. of Change	Remark
1.0	25-09-25	Tushar Gujarati	Initial Release	First draft submitted to IT	
1.1	08-10-25	Himadri Bhushan Rout	Modified Draft with benefits	Reviewed by Business Owner	
1.2	15-10-25	Himadri Bhushan Rout	Final Draft	Approval For Business Owner	