

## **Ultratech cement LTD- Order purchase system.**

### **1. Why is this project initiated?**

The project was initiated to address critical inefficiencies in Ultratech Cement's manual order processing system, which caused delays, errors, and poor user experience across sales, logistics, and dealer channels.

### **2.Current Problems in UTCL:**

1. Time-Consuming Process.
2. High Error Rate.
3. Duplicate or Lost Orders.
4. No Real-Time Tracking.
5. Lack of Data Analytics.
6. Compliance & Record Risk.
7. Inefficient training and support modules for employees.

### **3. Problems Solved by This Project:**

- Manual, Time-Consuming Processes → Automated, Instant Ordering.
- High Error Rate → Accurate Data Entry.
- Duplicate or Lost Orders → Centralized Digital Record.
- No Real-Time Visibility → Live Order Tracking.
- Lack of Data for Reporting → Built-in Analytics.
- Overdependence on Individuals → Role-Based Automation.
- Inventory Issues → Real-Time Inventory Integration.
- Dealer Frustration → Dealer Self-Service Portal
- Compliance and Audit Risk → Secure Digital Records
- Unscalable System → Future-Ready Digital Platform

## 4. Resources Required:

- **People:**
  - Business Analyst
  - Project Manager
  - Software Developers
  - UI/UX Designer
  - QA Testers
  - Trainers
  - ITS (Information Technology Services) team
- **Time:** Implementation within **6 months**.
- **Budget:**
  - Hardware, software, training, and services not to exceed **Rs. 15,00,000**.
  - Third-party tool evaluation and data reports not to exceed **Rs. 2,00,000**.

## 5. organizational change required to adopt this technology are

| Area                    | Level of Change | Action Required                    |
|-------------------------|-----------------|------------------------------------|
| Business Processes      | Moderate        | Redesign some manual workflows     |
| User Behavior           | High            | Train and support end users        |
| Technology Architecture | Moderate        | Upgrade existing infrastructure    |
| Organizational Policies | Low to Moderate | Update for automation & mobile use |

## 6. Time frame to recover ROI are

The **ROI recovery time** depends on:

- Initial project investment
- Operating cost savings
- Efficiency gains
- Business growth enablement

### 2. Sources of ROI Recovery:

| Area of ROI                  | Impact | Description                                                                                                                                    |
|------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Increased Sales Productivity | High   | Sales employees save time due to automated renewals, better task tracking, and mobile access, allowing them to focus more on lead conversions. |
| Reduced Operational Costs    | Medium | Automation reduces manual errors and support calls; fewer resources are needed for repetitive tasks.                                           |
| Improved Customer Retention  | Medium | Auto-renewal feature reduces drop-offs and missed renewals, boosting long-term customer value.                                                 |
| Time Savings                 | High   | Real-time dashboards and simplified access enable faster decision-making and reporting.                                                        |

### Estimated ROI Timeline:

| Month | Milestone                       | ROI Indicators                                             |
|-------|---------------------------------|------------------------------------------------------------|
| 0–3   | Project Kick-off & Design Phase | Investment only – planning, design, resource allocation    |
| 4–6   | Development & Internal Testing  | Early productivity impact begins internally                |
| 7–9   | User Training & Go-Live         | Improved process efficiency starts to reflect              |
| 10–12 | Adoption Growth                 | Sales team starts realizing value; drop in support queries |

|           |              |                                                                    |
|-----------|--------------|--------------------------------------------------------------------|
| 13–<br>18 | ROI Realized | Cost savings, improved KPIs, and higher conversion rates stabilize |
|-----------|--------------|--------------------------------------------------------------------|

## 7. How to identify Stakeholders?

### Step-by-Step Stakeholder Identification Process:

#### 1. Understand the Project Scope and Objectives

- Begin by reviewing the project's goals
- Understand what systems, departments, or functions are being impacted.

#### 2. Conduct Stakeholder Brainstorming Sessions

- Meet with senior management, project sponsors, or the PMO to get initial input.
- Review organizational charts and internal communication flows.

#### 3. Use Stakeholder Categories to Identify Types

Divide potential stakeholders into categories such as:

| Category                                 | Examples                                                                  |
|------------------------------------------|---------------------------------------------------------------------------|
| ♦ <i>Internal Business Stakeholders</i>  | Sales Managers, Relationship Managers, Field Sales Employees, Zonal Heads |
| ♦ <i>Internal Technical Stakeholders</i> | IT Team, System Architects, Data Analysts                                 |
| ♦ <i>Project Governance</i>              | Project Sponsor, Project Manager, BA Team                                 |
| ♦ <i>Support Functions</i>               | HR (for training), Operations, Risk & Compliance                          |
| ♦ <i>External Stakeholders</i>           | Customers (indirectly), Third-party app vendors, Regulators (if required) |

## Document 2: BA Strategy (Business Analyst Approach Strategy)

As a Business Analyst, the following strategy is followed to complete the project successfully from initiation to closure:

### 1. Elicitation Techniques to Apply

- ✓ To gather accurate and complete requirements, I would use a combination of the following elicitation techniques:
- ✓ **Interviews** – One-on-one sessions with stakeholders (e.g., business users, SMEs)
- ✓ **Workshops** – Conduct Joint Application Development (JAD) sessions for collaborative understanding
- ✓ **Questionnaires/Surveys** – For collecting standardized inputs from a wider audience
- ✓ **Document Analysis** – Review existing process documentation, reports, and SOPs
- ✓ **Observation (Job Shadowing)** – Understand current manual/automated processes firsthand
- ✓ **Brainstorming** – Generate ideas and solutions with stakeholders for new features

### 2. Stakeholder Analysis (RACI/ILS Matrix)

To manage responsibilities and ensure clarity in stakeholder roles, I will:

- **Identify all stakeholders** using organizational charts, interviews, and functional mapping
- **Create a RACI Matrix:**
  - **R** – Responsible (who does the work)
  - **A** – Accountable (who owns the outcome)
  - **C** – Consulted (who provides input)
  - **I** – Informed (who must be kept updated)
- **Use Influence-Interest Grid** to prioritize stakeholders for engagement

### 3. Documents to Prepare

The following key documents are prepared and maintained through the project:

- **Business Requirement Document (BRD)**
- **Functional Specification Document (FSD)**
- **System Requirement Specification (SRS)**
- **Use Case Specifications**
- **Process Flow Diagrams (UML, BPMN)**
- **Requirement Traceability Matrix (RTM)**
- **Test Cases (for UAT)**
- **Change Request Forms**
- **Client Project Acceptance Form (UAT sign-off)**

### 4. Process for Document Sign-off

- Submit the **BRD and FSD** to stakeholders for review.
- Conduct **walkthrough meetings** with stakeholders to ensure clarity.
- Use **version control** for draft and final versions.
- Once approved, get the **formal sign-off** via email or digitally signed documents.
- Store all signed documents in a centralized, secure repository (e.g., SharePoint or project folder).

### 5. How to Take Approvals from the Client

- Ensure each deliverable is **reviewed** in stakeholder meetings.
- Provide **review timelines** (e.g., 3 business days) for feedback.
- Use **email approvals** or an e-signature tool (e.g., DocuSign) for formal acceptance.
- Maintain a **Decision Log** to track all approvals.

## 6. Communication Channels to Establish and Implement

To ensure smooth and transparent communication:

- Use **emails** for formal updates and sharing documents
- Set up **weekly project meetings** (via MS Teams/Zoom)
- Use **project management tools** like Jira or Trello to track tasks
- Maintain **status reports** and circulate to stakeholders regularly
- Define **escalation paths** for critical issues

## 7. Handling Change Requests (CR)

- Receive CR in a **Change Request Form**
- Conduct **impact analysis** – cost, timeline, scope
- Review with project manager and technical team
- Obtain **approval from sponsor/client** before implementation
- Update **RTM and project documentation**
- Communicate the change to all stakeholders

## 8. Updating Project Progress to Stakeholders

- Prepare a **weekly status report** including:
  - Completed tasks
  - Pending items
  - Risks/issues
  - Next steps
- Share reports during **weekly review meetings**
- Maintain a **dashboard** (optional) to visually track KPIs
- Use **Gantt charts** or project timelines for milestone tracking

## 9. UAT and Client Sign-off Process

- Conduct **User Acceptance Testing (UAT)** with end-users

- Record outcomes in **UAT Test Case Execution Report**
- Resolve all issues/bugs before closure
- Share the **Client Project Acceptance Form**
- Obtain **formal sign-off** from the business owner or sponsor
- Archive the signed UAT document as closure proof

## Conclusion

The BA approach is built on planning, stakeholder collaboration, structured documentation, clear communication, proactive change control, and formal approvals. This ensures **project traceability, accountability, and delivery** as per the client's expectations.

## Document 3 – Functional Specifications

| Field                          | Details               |
|--------------------------------|-----------------------|
| <b>Project Name</b>            | Order punching system |
| <b>Customer Name</b>           | Ultratech cement Ltd. |
| <b>Project Version</b>         | 1.0                   |
| <b>Project Sponsor</b>         | Ms. Aditi Roy         |
| <b>Project Manager</b>         | Mr. shaktiraj singh   |
| <b>Project Initiation Date</b> | 1-july-2025           |

### Functional Requirement Specifications:

| Req ID | Requirement Name   | Requirement Description                                                                 | Priority (1-10) |
|--------|--------------------|-----------------------------------------------------------------------------------------|-----------------|
| FR0001 | User Login         | Users (Admin/Staff) must be able to securely log in to the system using credentials.    | 10              |
| FR0002 | Product Catalog    | The system should display a categorized list of available products with search options. | 9               |
| FR0003 | Inventory Tracking | Inventory should be automatically updated with each purchase or restock transaction.    | 10              |

| Req ID | Req Name          | Req Description                                 | Design                                                                                | D1      | T1  | D2  | T2  | UAT |
|--------|-------------------|-------------------------------------------------|---------------------------------------------------------------------------------------|---------|-----|-----|-----|-----|
| FR0001 | Login             | User must be able to login to access the system | Yes                                                                                   | Pending | No  | Yes | Yes | YES |
| FR0002 | Real-Time Stock   | Display real-time inventory updates             | Yes                                                                                   | Yes     | Yes | Yes | Yes | YES |
| FR0003 | Purchase Orders   | Create, update, and manage purchase orders      | Yes                                                                                   | Yes     | Yes | Yes | Yes | YES |
| FR0004 | Low Stock Alerts  | Auto alerts when stock falls below threshold    | Yes                                                                                   | Yes     | Yes | Yes | Yes | YES |
| FR0005 | Role-Based Access | Only authorized users access modules            | Yes                                                                                   | Yes     | Yes | Yes | Yes | YES |
| FR0006 | Order Tracking    | Customers can track their order status          | Yes                                                                                   | Yes     | Yes | Yes | Yes | YES |
| FR0007 | Reports           | Generate inventory and order reports            | Yes                                                                                   | Yes     | Yes | Yes | Yes | YES |
| FR0008 | Audit Logs        | Track and log all changes in the system         | Yes                                                                                   | Yes     | Yes | Yes | Yes |     |
|        |                   |                                                 |                                                                                       |         |     |     |     |     |
|        | FR0004            | Order Placement                                 | Users should be able to place, view, and track orders.                                |         |     |     |     | 9   |
|        | FR0005            | Vendor Management                               | The system should allow managing vendor information and link them to purchase orders. |         |     |     |     | 8   |
|        | FR0006            | Purchase Order                                  | Admin can create and track purchase orders to restock items from vendors.             |         |     |     |     | 9   |
|        | FR0007            | Report Generation                               | Generate sales, inventory, and order reports in Excel and PDF formats.                |         |     |     |     | 7   |
|        | FR0008            | Notifications                                   | Send email alerts for low inventory levels or delayed vendor shipments.               |         |     |     |     | 6   |
|        | FR0009            | Role Management                                 | Assign roles (Admin, Inventory Manager, Viewer) with specific access rights.          |         |     |     |     | 8   |
|        | FR0010            | Audit Trail                                     | Maintain a log of all critical user activities for traceability.                      |         |     |     |     | 6   |

Document 4 – Requirement Traceability Matrix

Business Requirements Document (BRD)

Project Name: order punching system

Project ID: UTCL-ENH-2024

**Version ID:** V1.0

**Author:** [kanika jagtap]

**Date:** [15/07/25]

## 1. Document Revisions

| Date       | Version | Document Changes |
|------------|---------|------------------|
| 15/07/2025 | 0.1     | Initial Draft    |

## 2. Approvals

| Role             | Name    | Title           | Signature | Date       |
|------------------|---------|-----------------|-----------|------------|
| Project Sponsor  | Mahesh  | Sponsor         |           | 15/07/2025 |
| Business Owner   | Swastik | Business Owner  |           | 15/07/2025 |
| Project Manager  | Mayank  | PM              |           | 15/07/2025 |
| System Architect | Yash    | Architect       |           | 15/07/2025 |
| Development Lead | Vishu   | Dev Lead        |           | 15/07/2025 |
| QA Lead          | Aniket  | Quality Lead    |           | 15/07/2025 |
| Content Lead     | Shubham | UX Content Lead |           | 15/07/2025 |

## 3. RASCI Chart for This Document

| Name          | Position         | R | A | S | C | I |
|---------------|------------------|---|---|---|---|---|
| Kanika Jagtap | Business Analyst | ✓ |   |   | ✓ | ✓ |
| Mayank Laddha | Project Manager  |   | ✓ |   | ✓ | ✓ |

|              |                  |  |   |   |   |   |
|--------------|------------------|--|---|---|---|---|
| Khushi Goyal | Development Lead |  |   | ✓ | ✓ |   |
| Riya Baheti  | QA Lead          |  |   | ✓ | ✓ |   |
| Shivam       | Business Owner   |  | ✓ |   |   | ✓ |

## 4. Introduction

### 4.1 Business Goals

The project is initiated to transform Ultratech Cement's slow, error-prone manual order process into a fast, accurate, and integrated digital system that improves efficiency, data visibility, and user satisfaction across all levels.

#### Need:

- Automation is needed to streamline operations and reduce turnaround time.
- Digital forms with validations reduce costly mistakes.
- A centralized system provides real-time status and reporting.
- A digital platform enables proper logging, traceability, and compliance.
- System-integrated stock validation prevents stock mismatch.
- Mobile/web-based dealer portal empowers dealers with direct access.
- Automation supports long-term business expansion.

### 4.2 Business Objectives

- Streamline the Order Placement Process
- Minimize Human Errors
- Enable Real-Time Tracking and Visibility
- Improve Dealer Experience
- Integrate Seamlessly with Existing Systems
- Improve Data Availability and Analytics
- Support Scalability and Business Growth

### 4.3 Business Rules

- Only authenticated users can access role-based dashboards
- Admin users can manage user roles and permissions
- API integrations require secure authentication
- Data retention policy: 5 years
- All system updates should be backward compatible

### 4.4 Background

“Ultratech Cement Ltd. has historically relied on manual methods for processing dealer orders, resulting in delays, errors, and inefficiencies across its supply chain. With rising order volumes and a growing dealer network, the limitations of paper- and email-based workflows became a significant business bottleneck. Recognizing the need for operational efficiency and digital transformation, the company has initiated a project to automate its order purchasing system. The goal is to implement a centralized, self-service, and fully integrated digital solution that improves speed, accuracy, visibility, and customer satisfaction.”

### 4.5 Project Objective

"To implement a centralized, real-time digital order processing platform within 6 months that reduces manual errors by 90%, decreases order processing time by 50%, and improves dealer satisfaction through a self-service portal integrated with Ultratech’s SAP system."

### 4.6 Project Scope

#### 4.6.1 In-Scope Functionality

- Dealer Self-Service Portal (Web & Mobile)
- Order Entry and Processing Workflow
- Approval Workflow Automation
- Inventory Integration
- Integration with SAP ERP
- System Testing & User Acceptance Testing (UAT)

4.6.2 Out-of-Scope Functionality

- Advanced Supply Chain Planning (SCP)
- Automated Vendor Purchase Order (Procurement) Module
- Custom Mobile App Development for Logistics
- Production Planning or Plant-Level Automation

5. Assumptions

- Timely collaboration and feedback from all stakeholders.
- Minimal change requests once the design phase is complete.
- SAP team is available for integration support.
- No major device/infrastructure investment is required.
- No funding constraints or mid-project budget cuts.

6. Constraints

- Budget cap of ₹15 lakhs
- Timeline limited to 6 months
- Platform must support legacy data without disruption
- Compliance with internal IT security policies

7. Risks

| Type          | Risk Description                         | Likelihood | Impact | Mitigation Strategy           |
|---------------|------------------------------------------|------------|--------|-------------------------------|
| Technological | Legacy system conflicts with modern APIs |            |        | Conduct compatibility testing |
|               |                                          | Medium     | High   |                               |
|               |                                          |            |        |                               |
| Skills        | Lack of expertise in new technologies    |            |        | Train internal team           |
|               |                                          | Low        | Medium |                               |
|               |                                          |            |        |                               |

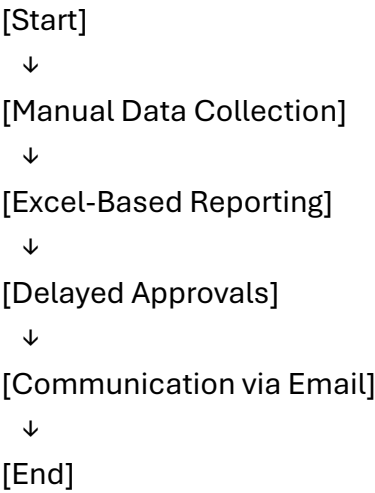
|              |                                               |        |        |                             |
|--------------|-----------------------------------------------|--------|--------|-----------------------------|
|              |                                               |        |        |                             |
| Political    | Change in business strategy mid-project       | Low    | High   | Lock requirements early     |
|              |                                               |        |        |                             |
| Business     | Delay in stakeholder feedback                 | Medium | Medium | Weekly progress syncs       |
| Requirements | Unclear or changing requirements              | Medium | High   | Use change request process  |
|              |                                               |        |        |                             |
| Other        | Unexpected system downtime during enhancement | Low    | High   | Schedule releases off-hours |
|              |                                               |        |        |                             |

8. Business Process Overview

8.1 Legacy System (AS-IS)

Steps:

- Manual Data Collection
- Excel-Based Reporting
- Delayed Approvals
- Email Communication



8.2 Proposed Recommendations (TO-BE)

Steps:

- Automated Data Capture
  - Real-Time Dashboard Reporting
  - Workflow-Based Approvals
  - In-System Communication
- [Start]
- ↓
- [Automated Data Capture]
- ↓
- [Real-Time Dashboard Reporting]
- ↓
- [Workflow-Driven Approvals]
- ↓
- [Integrated Communication via Platform]
- ↓
- [End]

## 9. Business Requirements

| ID     | Requirement Description                                                       | Priority | Category       |
|--------|-------------------------------------------------------------------------------|----------|----------------|
| BR-001 | Dealers should be able to place orders via a web/mobile portal                | High     | Functional     |
| BR-002 | System must validate product code, quantity, and pricing at the time of order | High     | Functional     |
| BR-003 | Approval workflows should be automated based on stock and credit rules        | High     | Functional     |
| BR-004 | Integration with SAP ERP for inventory, invoicing, and billing                | High     | Integration    |
| BR-005 | System must display real-time stock availability during order placement       | High     | Functional     |
| BR-006 | Orders must be tracked in real time by dealers and internal users             | High     | Functional     |
| BR-007 | Automatic notifications via SMS/Email on order updates                        | Medium   | Communication  |
| BR-008 | Digital generation of order confirmations, dispatch slips, and invoices       | High     | Functional     |
| BR-009 | Centralized storage of all order documents with version control               | Medium   | Non-Functional |

| ID     | Requirement Description                                                       | Priority | Category    |
|--------|-------------------------------------------------------------------------------|----------|-------------|
| BR-010 | Dashboard and reporting features for management                               | Medium   | Analytical  |
| BR-011 | Role-based access control for different users (dealer, sales, manager, admin) | High     | Security    |
| BR-012 | System should be mobile-friendly and responsive                               | High     | Usability   |
| BR-013 | Audit trail for all actions in the order process                              | Medium   | Compliance  |
| BR-014 | System uptime should be >99% during working hours                             | Medium   | Performance |
| BR-015 | Easy-to-use interface with minimal training required                          | High     | Usability   |

## 10. Appendices

### 10.1 List of Acronyms

| Acronym | Full Form                         |
|---------|-----------------------------------|
| UTCL    | Ultratech cement LTD              |
| API     | Application Programming Interface |
| KPI     | Key Performance Indicator         |
| UX      | User Experience                   |

### 10.2 Glossary of Terms

| Term                                 | Definition                                                                                                                                   |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OPS (Order Purchasing System)</b> | A digital platform that allows dealers and sales teams to place, track, and manage cement orders in real-time.                               |
| <b>Dealer Portal</b>                 | A web or mobile interface where dealers can log in to place and monitor their orders directly.                                               |
| <b>SAP Integration</b>               | The process of connecting the new system to Ultratech's existing SAP ERP to enable seamless data flow for billing, inventory, and invoicing. |
| <b>Inventory Check</b>               | A system feature that verifies product availability in real-time before an order is confirmed.                                               |
| <b>Approval Workflow</b>             | An automated sequence where orders are approved based on predefined rules such as stock availability or credit limit.                        |

| Term                                               | Definition                                                                                                                 |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>BRD (Business Requirements Document)</b>        | A document that outlines the business needs, goals, and high-level features expected from the system.                      |
| <b>FRS (Functional Requirements Specification)</b> | A detailed document describing the functions, inputs, outputs, and system behaviors.                                       |
| <b>UAT (User Acceptance Testing)</b>               | A final round of testing done by real users (dealers, sales teams) to confirm the system meets their needs before go-live. |
| <b>Dispatch Module</b>                             | A component of the system responsible for managing and tracking the delivery process after an order is approved.           |
| <b>Invoice Generation</b>                          | Automated creation of legal invoices for customer billing, post order approval.                                            |
| <b>Audit Trail</b>                                 | A system-generated log of all actions and changes for security and compliance tracking.                                    |
| <b>Role-Based Access</b>                           | A security model where system access is restricted based on the user's role (e.g., dealer, admin, sales manager).          |
| <b>Real-Time Tracking</b>                          | The ability to view the current status of an order (e.g., approved, dispatched) instantly via the system.                  |
| <b>Dashboard</b>                                   | A visual panel displaying key metrics, such as order volume, approval time, or delivery delays.                            |
| <b>Mobile Responsive Design</b>                    | A design approach ensuring the system interface works smoothly on smartphones and tablets.                                 |
| <b>System Downtime</b>                             | A period when the system is unavailable for use, often due to maintenance or technical issues.                             |
| <b>Data Migration</b>                              | The process of transferring existing data (dealers, products, price lists) into the new system.                            |
| <b>Cycle Time</b>                                  | The total time taken from order placement to dispatch or delivery.                                                         |
| <b>Error Rate</b>                                  | The percentage of orders that fail due to incorrect data or manual mistakes.                                               |
| <b>Integration Point</b>                           | A specific place in the system where data is exchanged with another system (e.g., SAP).                                    |

### 10.3 Related Documents

| Document Name                                      | Purpose / Description                             | Owner / Department                |
|----------------------------------------------------|---------------------------------------------------|-----------------------------------|
| <b>Business Requirements Document (BRD)</b>        | Captures high-level business needs and objectives | Business Analyst                  |
| <b>Functional Requirements Specification (FRS)</b> | Details system behavior, features, and logic      | Business Analyst / Technical Team |

| Document Name                   | Purpose / Description                                         | Owner / Department            |
|---------------------------------|---------------------------------------------------------------|-------------------------------|
| Use Case Document               | Defines user interactions and workflows                       | BA / UX Team                  |
| As-Is Process Document          | Describes the current manual workflow                         | Operations / SCM              |
| To-Be Process Document          | Visualizes the redesigned digital process                     | BA / Solution Architect       |
| System Design Document          | Outlines architecture, modules, and integration details       | Technical Architect           |
| Integration Plan                | Details how SAP, inventory, and dispatch systems will connect | IT Integration Lead           |
| Test Plan / UAT Test Cases      | Describes testing strategy and user validation scenarios      | QA / Business Analyst         |
| Training Manual / User Guide    | Step-by-step instructions for using the new system            | L&D / BA Team                 |
| Change Management Plan          | Outlines how the transition will be communicated and managed  | Project Manager / HR          |
| Risk Register                   | Tracks project risks and mitigation strategies                | PMO / Project Manager         |
| Project Charter                 | High-level project summary, goals, scope, timeline            | Project Manager               |
| Project Timeline / Gantt Chart  | Tracks project activities and milestones                      | PM / Planning Team            |
| Stakeholder Register            | Lists involved parties and their roles/responsibilities       | BA / PM                       |
| Data Migration Plan             | Details data cleansing and transfer strategy                  | Data Team / IT                |
| Compliance & Audit Requirements | Lists regulatory and internal compliance needs                | Legal / Finance / Audit Teams |