

eCommerce & ERP Integration Platform

Business Requirements Document

Executive Summary

This document outlines the "*Business Requirements*" for the project "**eCommerce & ERP Integration Platform.**" It provides a comprehensive overview of the business needs for integrating a client's eCommerce store with their Enterprise Resource Planning (ERP) system. The goal is to enable seamless, bidirectional synchronization of Products, Customers, Orders, and Inventory data. Additionally, this document specifies requirements for customer-specific pricing, a top-selling products report, and a high-value order approval workflow. It includes the overall description, project scope, system features, business requirements, process flows, and use case scenarios. Assumptions, constraints, and risks associated with the system are also defined.

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1 Introduction

This document defines the "Business Specification" for the project "**eCommerce & ERP Integration Platform.**" It details the business requirements, feature list, and process flows necessary to achieve seamless integration between the eCommerce store and the ERP system. The purpose is to automate data flow, reduce manual entry, minimize errors, and provide real-time business insights, thereby enhancing operational efficiency.

2 Business Objective

The primary business objectives for the "**eCommerce & ERP Integration Platform**" are:

- To automate the synchronization of core data entities (Products, Customers, Orders, Inventory) between the eCommerce store and the ERP system.
- To implement customer-specific pricing rules to ensure accurate and personalized pricing on the eCommerce store.
- To provide actionable business intelligence through a report of the top 10 selling products on a monthly basis.
- To establish a controlled workflow for the manual review and approval of high-value orders before they are processed in the ERP.

3 Project Stakeholders

- **Product Owner**
- **Project Manager**
- **Business Analyst**
- **Development Team**
- **Quality Assurance Team**
- **eCommerce Manager**

- **ERP Administrator / Operations Team**
- **Sales Manager**
- **Customer Service Representative**

4 Project Background

Currently, the client manages their online sales and backend operations as separate silos. Data such as new orders, customer registrations, and inventory changes are manually transferred between the eCommerce platform and the ERP system. This process is time-consuming, prone to errors, leads to data inconsistencies, and causes delays in order fulfillment and inventory updates. This integration project aims to automate these processes, creating a single source of truth and streamlining operations from online sale to fulfillment.

5 Project Scope

In-Scope:

- **Product Sync:** Bidirectional synchronization of product information (SKU, Name, Description, Price, Weight) between ERP (as master) and eCommerce.
- **Customer Sync:** Synchronization of customer data from eCommerce (new registrations) to ERP. Updates from ERP to eCommerce for existing customers.
- **Order Sync:** Automatic creation of sales orders in the ERP for new orders placed on the eCommerce store.
- **Inventory Sync:** Near real-time synchronization of stock quantity updates from ERP to eCommerce.
- **Customer-Specific Pricing:** Application of custom pricing rules from the ERP to logged-in customers on the eCommerce store.
- **Top Products Report:** A monthly generated report accessible via the eCommerce admin panel, displaying the top 10 selling products by revenue or quantity.
- **High-Value Order Approval:** A workflow where orders exceeding a predefined value are held in a "Pending Approval" state in the eCommerce system and must be approved by an authorized user before being sent to the ERP.

Out-of-Scope:

- Integration with third-party logistics (3PL) or shipping carriers.
- Synchronization of marketing data (e.g., coupons, campaigns).
- Financial and accounting reconciliation beyond order data.
- Real-time product image and rich content synchronization.

6 System Features

6.1 Data Synchronization

- Configure synchronization frequency and direction for each data entity.
- View synchronization logs and error reports.
- Manually trigger sync for specific records.
- Handle sync conflicts with predefined rules (e.g., ERP data overrides eCommerce).

6.2 Customer-Specific Pricing

- Define customer groups or individual customer pricing rules within the ERP.
- Display custom pricing automatically when a qualified customer logs into the eCommerce store.
- Hide standard retail pricing for customers with special pricing.

6.3 Reporting & Analytics

- Schedule automatic generation of the "Top 10 Selling Products" report.
- View the report within the eCommerce admin dashboard.
- Filter the report by month and year.
- Export the report in PDF and Excel formats.

6.4 Order Management Workflow

- Define the monetary threshold for a "high-value" order.

- Route high-value orders to a designated approval queue.
 - Notify approvers (via dashboard and/or email) of pending orders.
 - Allow approvers to "Approve" or "Reject" orders with a reason.
 - Upon approval, automatically release the order to the ERP for processing.
 - Upon rejection, notify the customer service team and optionally, the customer.
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7 Business Requirements

Sr. No	Description
BR-1.	The system shall synchronize product information (SKU, name, description, price) from the ERP to the eCommerce store.
BR-2.	The system shall synchronize new customer registrations from the eCommerce store to the ERP.
BR-3.	The system shall create a sales order in the ERP for every new order placed on the eCommerce store.
BR-4.	The system shall synchronize inventory levels (quantity) from the ERP to the eCommerce store to reflect accurate stock.
BR-5.	The system shall apply customer-specific pricing rules from the ERP when a registered customer logs into the eCommerce store.
BR-6.	The system shall generate a "Top 10 Selling Products" report on a monthly basis, accessible from the eCommerce admin panel.

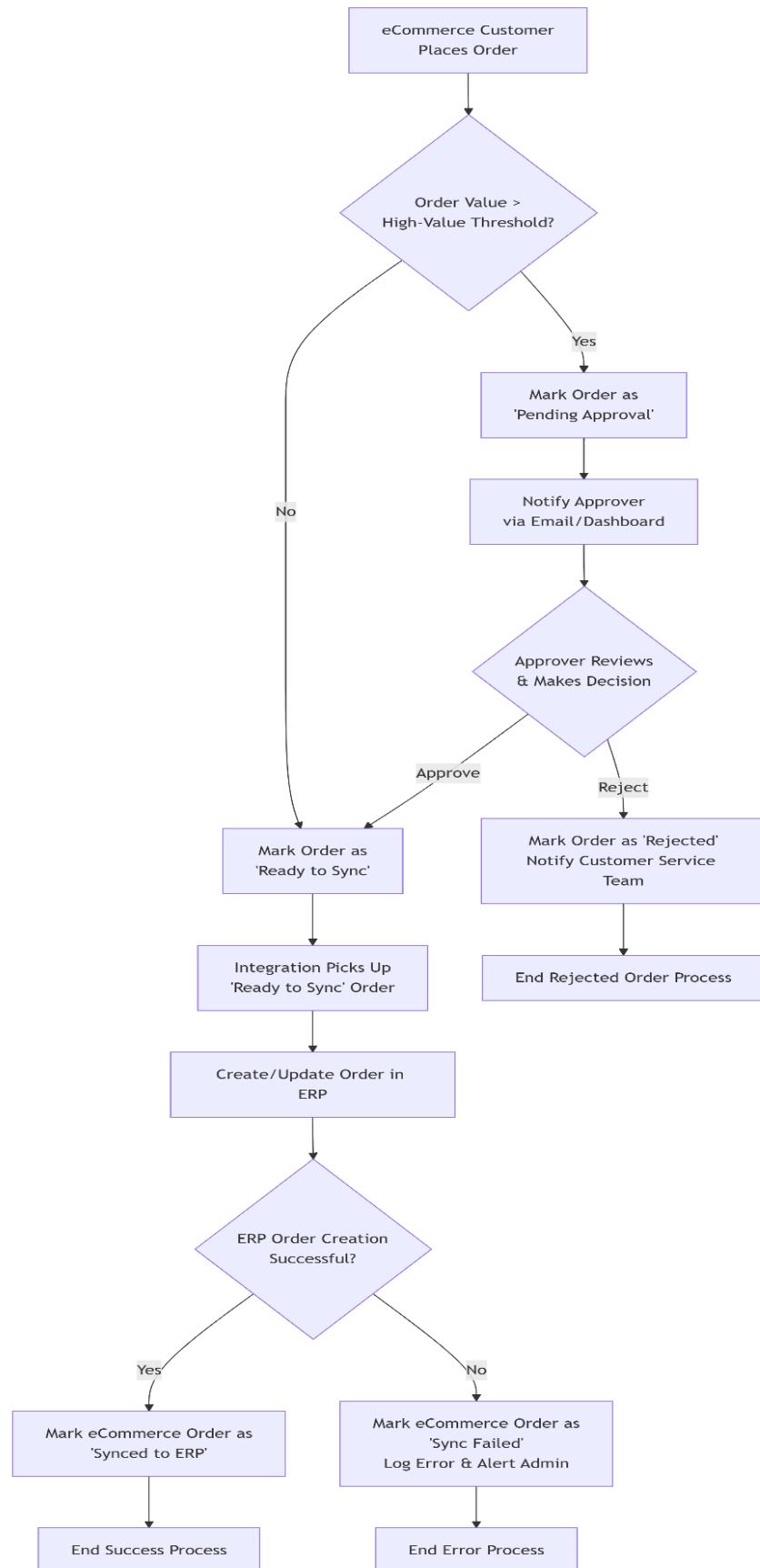
Sr. No	Description
BR-7.	The system shall identify orders exceeding a configurable value as "high-value" and place them in a pending approval state.
BR-8.	The system shall notify designated approvers when a high-value order requires review.
BR-9.	The system shall allow an approver to approve or reject a high-value order, capturing an optional reason for rejection.
BR-10.	The system shall only synchronize approved high-value orders to the ERP for further processing.
BR-11.	The system shall log all synchronization activities and errors for auditing and troubleshooting purposes.

8 Process Flow

8.1 End-to-End Order Synchronization Flow (eCommerce to ERP)

The following diagram illustrates the complete process for order synchronization, including the high-value order approval workflow.

Diagram created to illustrate the end-to-end order sync process, including the approval workflow.



9 Use Case Scenario

9.1 High-Value Order Approval Workflow

Name	High-Value Order Approval	
Priority	High	
Actor	Approver (e.g., Sales Manager), System	
Description	This use case describes the process where a high-value order is held for review and must be approved by an authorized person before being sent to the ERP for fulfillment.	
Pre-Condition	An order exceeding the predefined value threshold has been placed on the eCommerce store. The approver must have system access.	
Actor Actions		System Responses
1. The System identifies a high-value order and changes its status to "Pending Approval".		2. The System adds the order to the approval queue and sends an email notification to the Approver.
3. The Approver logs into the eCommerce admin panel and navigates to the "Orders Pending Approval" list.		4. The System displays the list of orders requiring approval, showing key details like Order ID, Customer, Total Value, and Date.
5. The Approver selects the order to review detailed information (customer history, items, etc.).		6. The System displays the complete order details.

Actor Actions	System Responses
7. The Approver clicks either "Approve Order" or "Reject Order". If rejecting, they enter a reason.	8. The System prompts for confirmation and, if rejecting, for a reason.
9. The Approver confirms the action.	<p>10. The System processes the decision:</p> <ul style="list-style-type: none"> - If Approved: Changes order status to "Ready to Sync". The integration service will pick it up for ERP sync. - If Rejected: Changes order status to "Rejected", logs the reason, and notifies the customer service team.
Post Condition	The high-value order has been either approved and is progressing to the ERP, or rejected and handled accordingly.

10 Assumptions

ASM-01: The eCommerce platform and ERP system have stable, accessible APIs for data exchange.

ASM-02: The ERP system is considered the master source for Product and Inventory data.

ASM-03: The eCommerce store is considered the source of truth for new Customer and Order data.

ASM-04: Users designated as approvers will have reliable internet access and will check their notifications regularly.

ASM-05: The client will provide all necessary credentials and access to their eCommerce and ERP systems for development and testing.

11 Constraints and Risks

Constraints:

C1: The integration must not negatively impact the performance of the live eCommerce store or ERP system during synchronization.

C2: All data transfers between systems must be encrypted using secure protocols (e.g., HTTPS, SFTP).

C3: The integration must be designed to handle API rate limits imposed by the eCommerce and ERP platforms.

Risks:

R1: Data Mapping Complexity: Inconsistencies in data models (e.g., field lengths, mandatory fields, data formats) between the two systems could lead to sync failures.

R2: Network Reliability: Intermittent internet connectivity could cause synchronization delays or data loss.

R3: Scope Creep: The client may request additional sync entities or features not covered in the initial scope, impacting timelines and budget.

R4: Approver Bottleneck: If the approver is unavailable, high-value orders may be significantly delayed, leading to poor customer experience.

12 References

- **eCommerce Platform:** Shopify, Amazon, Flipkart
- **ERP System:** NetSuite, SAP Business One
- **UI/UX Design:** Figma