



AI & IT AUDIT REPORT

Mohan Impex

Comprehensive IT & AI Audit

End-to-end process discovery, AI & automation opportunity mapping, ERP scope definition, cost & ROI model, and implementation roadmap across warehouse, supply chain, import-export, sales, manufacturing, HRM, NPD lab, and finance departments.

CLIENT

Mohan Impex (est. 1994)

Import-Export, Manufacturing & Distribution

PREPARED BY

EduBild Technologies LLP | erp.anvik.ai

ISO 9001:2015 | CMMi Level 3 | DPIIT Recognized

Confidential - prepared exclusively for Mohan Impex leadership

SAMPLE - Full report available upon audit engagement

Table of Contents

| | |
|--|-----------|
| EXECUTIVE SUMMARY | 3 |
| COMPANY OVERVIEW | 12 |
| BUSINESS PROCESSES | 11 |
| WAREHOUSE | 13 |
| SUPPLY CHAIN MANAGEMENT | 20 |
| IMPORT EXPORT..... | 28 |
| MSP | 32 |
| SALES DEPARTMENT | 34 |
| HRM..... | 41 |
| FACTORY | 46 |
| NPD LAB (NEW PRODUCT DEVELOPMENT LAB)..... | 59 |
| DATA COLLECTION AND ANALYSIS | 66 |
| TECHNOLOGY & SYSTEMS | 70 |
| CURRENT SCENARIO | 70 |
| RECOMMENDATIONS..... | 72 |
| IMPLEMENTATION PLAN | 82 |
| EXISTING SOLUTIONS | 82 |
| ANALYSIS | 89 |
| PROPOSED IMPLEMENTATION | 92 |
| COST | 94 |
| ANNEXURES | 96 |
| ANNEXURE A – REQUIREMENT SPECIFICATION FOR ERP | 96 |
| ANNEXURE B: REQUIREMENT SPECIFICATION FOR SALES MANAGEMENT APPLICATION | 100 |
| ANNEXURE C: MOHAN IMPEX VISIT NOTES BY DIRECTOR | 106 |
| ANNEXURE D: BATCHMASTER PROPOSAL..... | 120 |

Executive Summary

Mohan Impex, established in 1994, stands as one of India's prominent distribution houses, specializing in a wide array of food ingredients, chemicals, and other commodities. As the company commemorates its 30th anniversary, it is poised to embrace advanced IT practices and AI-driven solutions to scale its operations, enhance efficiency, and stay competitive in an increasingly digital marketplace.

The Need for a Comprehensive IT and AI Audit

Recognizing the critical need for modernization, Mohan Impex initiated a comprehensive IT and AI audit to assess its current technological infrastructure, identify operational bottlenecks, and recommend future-proof solutions. EduBild was entrusted with the responsibility of conducting this audit to align Mohan Impex's operations with contemporary digital practices and propel its growth.

EduBild's Mandate and Approach

EduBild was commissioned to undertake a thorough evaluation of the business processes at Mohan Impex's head office, factory, warehouses, and NPD lab. The mandate included providing insights and developing a roadmap for the integration of ERP systems and AI-powered tools, aimed at streamlining operations and enhancing customer service.

The approach included site visits to Mohan Impex's factory, warehouse, and office in Kolkata on July 5th, 2024. During these visits, EduBild's Director engaged with department heads, reviewed existing documentation and workflows, and gathered data to uncover inefficiencies and areas for improvement. The findings and recommendations are compiled in this report, which also outlines a detailed implementation plan for Mohan Impex's digital transformation.

Report Structure and Methodology

This report is meticulously structured to provide a comprehensive view of Mohan Impex's operations and the proposed technological interventions:

- 1) **Company Overview:** An introduction to Mohan Impex's history, business model, and the strategic need for this IT and AI audit.
- 2) **Business Processes:** This section provides an in-depth analysis of the current business processes across all departments, identifying inefficiencies and opportunities for improvement.

- 3) **Data Collection and Analysis:** This chapter details the methodology employed for data collection, including interviews, observations, and system reviews, and presents the analysis that informed our recommendations.
- 4) **Technology & Systems:**
 - **Current Scenario:** An evaluation of Mohan Impex's existing technological infrastructure and processes.
 - **Recommendations:** Strategic recommendations for the integration of ERP systems and AI tools to optimize operations.
- 5) **Implementation Plan:**
 - **Existing Solutions:** A market study of existing ERP and sales platforms, including a comparison of their features, costs, and suitability for Mohan Impex.
 - **Analysis:** A critical evaluation of these platforms, weighing their pros and cons against the specific needs of Mohan Impex.
 - **Proposed Implementation:** A detailed plan outlining the steps for implementing the recommended custom ERP and other technological solutions.
 - **Cost:** A comprehensive cost analysis comparing the implementation of a custom ERP solution with off-the-shelf platforms over a five-year period.

Methodology

EduBild's methodology involved a systematic approach, starting with the requirement-gathering phase, followed by detailed site visits, interviews with key personnel, and a review of existing reports, documents, and workflows. This extensive data collection enabled a thorough understanding of the current operations, which was crucial for evaluating existing market solutions and developing a tailored implementation plan.

Issues Observed and Existing Technology Systems

During the comprehensive audit of Mohan Impex, several issues were observed across various departments. These issues primarily stem from the current technology systems in place, which are either outdated, not fully integrated, or not aligned with the company's evolving needs. Below is a detailed overview of the key issues and areas of improvement identified.

1. Existing Technology Systems

Mohan Impex currently employs a range of technology solutions, primarily centered around basic software tools like Tally for accounting, Excel sheets for data management, and WhatsApp for communication. The company lacks a unified ERP system, leading to fragmented data management, inefficiencies, and manual processes that are prone to errors.

- **Accounting:** Tally is used for financial management, but it is not integrated with other operational systems, leading to redundant data entry and inconsistencies.
- **Data Management:** Excel sheets are extensively used for managing data across departments (e.g., inventory, sales, MSP tracking). However, this method is manual, time-consuming, and prone to human error.
- **Communication:** WhatsApp is the primary tool for internal communication, leading to unstructured information flow and difficulties in tracking important conversations and decisions.
- **Sales and Inventory:** There is no dedicated system for managing sales orders, inventory, and customer relationships, leading to inefficiencies in tracking and processing orders.

2. Issues and Bottlenecks Observed

The current state of technology at Mohan Impex has led to several operational bottlenecks that hinder efficiency and scalability. Key issues identified include:

- **Fragmented Data Systems:** Data is scattered across multiple systems (Excel, Tally, physical documents), leading to duplication, errors, and difficulty in accessing and analyzing information. There is no single source of truth for data, making reporting and decision-making challenging.
- **Manual Processes:** Many processes, such as order processing, inventory management, and data entry, are manual, resulting in inefficiencies, delays, and a higher risk of errors. This also makes it difficult to scale operations as the business grows.
- **Lack of Integration:** The absence of an integrated system means that different departments operate in silos, with little to no communication or data sharing between them. This leads to delays, miscommunication, and a lack of coordination across the company.

- **Inadequate Reporting and Analytics:** Due to the reliance on manual data entry and scattered data sources, there is also a lack of real-time data analysis, which hampers proactive decision-making.
- **Limited Use of Automation:** Automation is virtually non-existent across the company's operations. Tasks that could be automated (e.g., inventory updates, order processing, customer communications) are handled manually, leading to inefficiencies and increased workload for employees.

Recommendations

The detailed audit of Mohan Impex has led to the following key recommendations aimed at enhancing their operations through the integration of modern technology and AI solutions. These recommendations focus on streamlining processes, improving data management, and enhancing operational efficiency across all departments. Below is a comprehensive summary of the proposed solutions:

1) **ERP Implementation**

- **Centralized Data Management:** Implement a ERP system that will integrate all business processes across departments, including inventory management, production planning, supply chain, factory, warehouse, sales, and more. This system will centralize data, eliminate silos, and provide real-time access to critical information, improving decision-making and operational transparency.
- **Streamlined Operations:** Automate and streamline repetitive tasks such as inventory tracking, production scheduling, sales, HR processes, and import-export. This will reduce manual errors, increase productivity, and ensure that all processes are cohesive and well-coordinated.
- **Enhanced Decision-Making:** Utilize the ERP system's real-time analytics and reporting tools to monitor key performance indicators (KPIs) and make data-driven decisions. This will provide management with actionable insights to optimize operations and drive business growth.

2) **AI-Powered Solutions for Warehouse Operations**

- **Automated Inventory Tracking:** Implement AI-powered sensors and IoT devices to monitor inventory levels in real-time. This will ensure accurate inventory counts, prevent stockouts, and optimize inventory management.
- **Intelligent Storage Optimization:** Use AI algorithms to optimize the placement of goods within the warehouse, improving space utilization and reducing the time required for picking and packing.

- **Automated Quality Inspection:** Integrate AI-driven computer vision systems to inspect goods during unloading, ensuring only quality products are accepted into inventory.
- 3) **AI-Powered Solutions for NPD Lab**
- **AI-Powered Recipe and Formulation Development:** Leverage AI to assist in creating new product recipes and formulations. The AI system will analyze data related to ingredients and desired outcomes, suggesting innovative formulations and exploring cost-effective alternative ingredients.
 - **AI-Enhanced Product Testing and Feedback Analysis:** Utilize AI to analyze customer feedback and product reviews, identifying trends and common issues. This will guide product refinement and ensure alignment with customer preferences.
- 4) **AI Assistants for Mohan Impex Employees**
- **Department-Specific AI Assistants:** Implement multiple AI Assistants tailored to the specific needs of each department. These AI tools will assist employees with retrieving crucial information, drafting professional emails, generating reports, and creating documents, thus streamlining operations and reducing the administrative burden.
- 5) **AI Assistant Integrated with WhatsApp**
- **Customer Support and Product Information:** Deploy an AI Assistant connected with WhatsApp to handle inquiries from customers, retailers, and distributors. This assistant will provide product information, recipes, and support in multiple languages, including English, Bengali, and Hindi.
 - **Support for Sales and Marketing:** The WhatsApp bot will also assist in providing details on deals, offers, and customer support, enhancing engagement and operational efficiency.
- 6) **AI-Driven Marketing Automation Tools**
- **Cold Email Campaigns:** Implement AI-powered tools to automate cold email campaigns, personalize bulk emails, and analyze campaign performance. This will improve customer outreach, increase conversion rates, and foster stronger customer relationships
- 7) **On-Premises Cloud Storage Solution**
- **Data Security and Scalability:** Implement an on-premise cloud storage system using open-source technologies like Nextcloud. This solution will

provide secure, cost-effective data management, ensuring data sovereignty and reducing reliance on external storage providers.

These recommendations collectively aim to transform Mohan Impex into a more agile, data-driven, and customer-focused organization. The proposed technology solutions, especially the custom ERP system, will provide the company with the necessary tools to manage its growing operations efficiently, reduce costs, and stay competitive in a rapidly changing market environment.

Implementation & Costs

After comprehensively evaluating leading market solutions for ERP, Sales App, and other systems, and considering their costs, features, and alignment with Mohan Impex's business processes, we concluded that developing a custom ERP solution is the most suitable approach. The custom ERP will serve as a central platform, encompassing all necessary modules on a unified, open-source framework.

Challenges with Pre-Developed Market Solutions:

- **High Costs:** Both BatchMaster and BeatRoute come with significant recurring license fees, which escalate as more users are added to the system. Additionally, the customization required to tailor these systems to Mohan Impex's specific processes involves substantial costs, especially given their per-hour customization rates.
- **Complexity and Overhead:** These systems include a wide array of features, many of which are not necessary for Mohan Impex's operations. This not only adds to the learning curve for employees but also increases the complexity of day-to-day operations, leading to inefficiencies.
- **Integration Difficulties:** The systems are developed by different companies, making integration between them challenging. Moreover, future AI integrations or the need for data extraction would require costly and time-consuming efforts.
- **Lack of Data Ownership, Portability, and Interoperability:** With proprietary systems, Mohan Impex does not fully own the platform or the data stored within it. If the company stops paying the license fee, the platform becomes unusable, leading to complete dependence on the service provider. Additionally, migrating historic data into these existing market ERPs presents a significant challenge, as the data formats may not be compatible with the

systems, causing substantial disruption and effort in data conversion and upload.

Advantages of Custom ERP:

- **Open-Source Nature:** A custom ERP solution offers complete control over the software, eliminating the need for recurring license fees, which are common with proprietary systems like Microsoft Dynamics 365 and Zoho ERP. This ensures that Mohan Impex fully owns the final solution, providing long-term cost savings and independence from external vendors.
- **Customizability:** The custom ERP system will be tailored precisely to Mohan Impex's business processes, ensuring a perfect fit for each department—from factory operations and NPD lab management to sales, supply chain, and import-export processes. This customization ensures that the ERP aligns with the unique workflows and requirements of Mohan Impex, enhancing efficiency and effectiveness.
- **Integration Capabilities:** The custom ERP will be designed with open APIs, allowing seamless integration with other applications, AI-driven tools, and data analytics platforms. This integration ensures that all operations are unified and streamlined, enabling smooth communication and data flow across different systems.
- **AI and Data Analytics Ready:** Built on a Python foundation, the custom ERP system will be well-suited for integrating advanced AI functionalities and machine learning models. This will enable predictive analytics, process automation, and other AI-driven innovations, positioning Mohan Impex at the forefront of technological advancements.
- **Data Security and Ownership:** By hosting the custom ERP on Mohan Impex's dedicated server, the company can ensure that all data remains secure and within its control. This approach enhances data security, confidentiality, and compliance with data protection regulations, while also ensuring that Mohan Impex retains full ownership of its data and platform.

Mohan Impex IT Audit Report

Cost Comparison:

In comparison to proprietary solutions like BatchMaster and BeatRoute, the custom ERP offers significant cost savings—estimated at XX% less over a five-year period—while also providing superior customizability, integration capabilities, and data security.

| Cost Components | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total 5 Years Cost |
|---|------------------------|------------|------------|------------|------------|---------------------------|
| Batch Master ERP + BeatRoute App and addon HRMS, CRM, VMS, etc. | 30 users | 40 users | 50 users | 60 users | 70 users | |
| License Cost (30 users) | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX |
| Implementation Cost (Initial Setup) | · X,XX,XXX | | - | - | - | · X,XX,XXX |
| Customization Cost (Missing Modules and Reports - 2 months at · X,XX,XXX 1500/hr) | · X,XX,XXX | | - | - | - | · X,XX,XXX |
| Additional Modules (CRM, VMS, HRMS, etc.) | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX |
| Travel Expenses (BatchMaster Team) | · X,XX,XXX | | - | - | - | · X,XX,XXX |
| Total Cost | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX |
| Custom ERP with all modules | Unlimited users | | | | | Total 5 Years Cost |
| Development Cost (Including Sales App, All Modules, and Portal) | · X,XX,XXX | | - | - | - | · X,XX,XXX |
| Dedicated Resource Cost (· X,XX,XXX ar 1) | · X,XX,XXX | | - | - | - | · X,XX,XXX |
| Server Cost (· X,XX,XXX 2,40,000/year) | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX |
| AMC (15% of Development Cost from Year 2 onwards) | - | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX |
| Total Custom ERP Cost | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX | · X,XX,XXX |