



happiest minds

The Mindful IT Company

Born **Digital** . Born **Agile**

# BUILDING A DIGITAL WORLD

## FOR A LEADING US-BASED INDUSTRIAL SUPPLIES COMPANY

A US-based company that distributes industrial, safety and construction supplies and offers services including third-party logistics, inventory management, manufacturing and tool repair. They have stores spanning all 50 U.S. states, Canada and Mexico, including locations in Central and South America, Europe and Asia – each striving to be the best industrial supplier in the market it serves. 1.4 million products, 14 Distribution Centers, \$6.0 billion in revenue, featured in Forbes list of top 50 most innovative companies.



# CUSTOMER CHALLENGES



The client was looking for a solution to improve their customer experience. But there was a challenge of extensive data redundancy with no single source of truth for the customer. To assist in meeting the demands of the customers, client's employees needed to have access to accurate customer information. This included information relating to the identification of the customer throughout the enterprise and information which allows the client to better understand and anticipate the needs of their customers.



The customer faced challenges in maintaining an optimal inventory in each branch. Overstocking and understocking were leading to loss of business and overhead costs. To solve this problem, customer wanted a robust forecasting model to forecast product demand for stores and provide recommendations on optimizing store inventory levels. Along with that, they wanted a web application for stores to display the stocking dashboard and manage the stocking level of products at stores and branches.



The customer's core business unit had multiple systems supporting various parts of their business processes related to managed inventory solutions. This led to technology silos and challenges in scaling up the platform to support and meet business needs with respect to - Higher sales, differentiated customer experience, innovation, visibility, and integration.



The branch POS engineers wanted a quicker response to the queries raised to them by their customers. The existing bot had accuracy and adaptability issues. It was not synchronized and not real-time. The customer needed a platform to increase the accuracy of the bot response through a better-trained knowledge base for different categories (e.g., Safety, Abrasives etc.) They also wanted to simplify the re-training of the knowledge base to help SMEs identify correct responses, add new responses, or add new knowledge questions and responses.



# HAPPIEST MINDS' SOLUTION

Happiest Minds' journey with the client started by conducting a comprehensive analysis of the problems and their current state to prioritize the requirements & needs. To ensure an effective transformation of the client's digital journey, we proposed a mindful approach to resolving each challenge they faced with a personalized solution. And by leveraging our deep knowledge of critical business components in a manufacturing and industrial supply environment, we helped them build a robust technology strategy to scale & reduce time to market significantly and make operations efficient.

## CUSTOMER DATA SERVICES PLATFORM

The Platform is a system that will provide a data perspective encompassing the whole customer rather than an account-based viewpoint. Currently, customer information is spread across many disconnected teams, locations, & systems. which makes it too hard to get a complete and accurate picture of the customer. By contrast, the Customer Data Platform is a single, centralized resource of accurate customer data and distributes that data wherever it is needed. Its eventual aim is to improve business processes around the below key business capabilities:

BUSINESS CAPABILITIES			
Customer Sales Cycle Management	Customer Experience Management	Marketing	Supply Chain
<ul style="list-style-type: none"> <li>• Customer Acquisition</li> <li>• Customer LTV Management</li> <li>• Customer Profile Management</li> <li>• Customer Sales History</li> <li>• Customer Interaction History</li> <li>• Account Termination</li> <li>• Returns Management</li> </ul>	<ul style="list-style-type: none"> <li>• Unified View of Customer</li> </ul>	<ul style="list-style-type: none"> <li>• Targeted Marketing Campaign</li> </ul>	<ul style="list-style-type: none"> <li>• Product Placement</li> <li>• Product Procurement</li> </ul>

The MDM platform comprises of 3 major components:



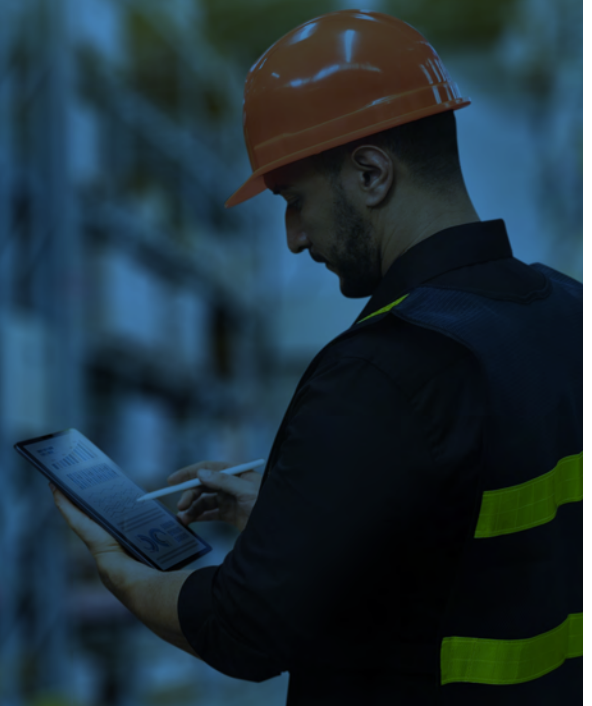
**Customer Information Management (CIM)**



**Data Governance Portal**



**Customer Data Platform**



## MANAGED INVENTORY PLATFORM

Happiest Minds was involved in consulting and led workshops with customers' business and technical SMEs to uncover needs/wants related to business processes and architectural constraints. The customer already had Kafka-based data integration and MuleSoft-based integration capabilities. We proposed a platform-based approach leveraging existing technologies coupled with PaaS services of Azure for compute/data and storage and custom .NET development. Salient features included event-based micro-services to package business capabilities like customer agreements, customer implementations, user management etc.

### FUNCTIONAL BENEFITS

- Creating a centralized enterprise dataset and UI experience will reduce redundant technical capabilities and data
- Provide a more effective foundation for future enhancements, device/capability expansion, and an improved end-user experience
- Provide better reporting capabilities and improve supportability
- Single source of truth – Enhance data accuracy and consistency
- Maintain Agreement groups and Customer accounts

### TECHNICAL BENEFITS

- Rationalize application landscape (reduce redundancy)
- Improve business capability to technical systems alignment.
- Improve technical supportability
- Consolidate customer facing application landscape.
- Reduce IT costs
- Enhance security, provide a platform for growth, and increase scalability
- Reduce IT time to market
- Increase data accuracy and data governance

## STRATEGIC INVENTORY MANAGEMENT

We developed a web-based solution on the Microsoft Azure platform using the Azure Synapse (DW), Azure Data Factory (ADF), Azure SQL, Azure Web Jobs, Azure Webapp, Web API, With Angular 10, developed in .NET Core, Power BI. We employed Azure Databricks for Forecasting Model, Azure DevOps for CI/CD, OneLogin for SSO, and Azure DevOps for Issue Tracking. The Product Demand Forecast Web Application supported two types of users: Branch personnel and Support personnel. And the application was used by more than 2000 branches.



## CHATBOT FOR FRONT DESK SALES AGENTS

We designed a web-based chat interface on Microsoft bot framework and web admin portal using Azure cognitive services QnA Maker, LUIS, Azure Databricks, Azure Stream Analytics, Azure SQL, Azure Web Jobs, Azure Webapp, Web API, With Angular 8, developed in .NET Core, Power BI. We also provided them with reports on various metrics that will help administrators measure the bot's efficiency. More than 3000 branches used the Application.



## HOW OUR SOLUTION IMPACTED THE BUSINESS VALUE & EFFICIENCY OF OUR CLIENT

1

Enterprise-wide single customer repository

2

Enabled the client to identify the footprints of the customer throughout the enterprise

3

Visibility into the businesses at different levels of customer hierarchy

4

Enabled the client to expand into international business

5

Enterprise-wide single source of truth for domain datasets

6

Provided a Micro-services-based platform to abstract business capabilities and enabled re-use

7

Accelerated cloud adoption by phasing out legacy systems and/or building integration capabilities

8

Unified, simplified user experience for customers as well as internal teams

9

Digitized manual business process tasks, with increased visibility for business users as well as operations, and support teams, thus leading to productivity gains

10

Helped the customer to optimize the product inventory level by suggesting max & min quantity for each store & product combination based on Leadtime, Source, EOQ (Economic Order Qty)

11

Four years of consumption data were used to build forecasting models and to forecast the product for the next Three months

12

Automated the build and release process in a repeatable and reliable way using Azure DevOps

13

Quick turnaround time for expert technical advice

14

Built a highly customizable & self-learning analytics model for a chatbot

15

Designed a solution that will eventually serve as a platform to enable 60% of company sales by 2025.

16

Increased sales by \$18 million in 2024 by reducing returns by 1,200 machines

17

Reduced additional labor investment of 13 FTE or \$600k per year to support Solutions Implementation & Support workload

# ABOUT HAPPIEST MINDS

Happiest Minds Technologies Limited (NSE: HAPPSTMNDS), a Mindful IT Company, enables digital transformation for enterprises and technology providers by delivering seamless customer experiences, business efficiency and actionable insights. We do this by leveraging a spectrum of disruptive technologies such as: artificial intelligence, blockchain, cloud, digital process automation, internet of things, robotics/drones, security, virtual/augmented reality, etc. Positioned as 'Born Digital . Born Agile', our capabilities span digital solutions, infrastructure, product engineering and security. We deliver these services across industry sectors such as automotive, BFSI, consumer packaged goods, e-commerce, edutech, engineering R&D, hi-tech, manufacturing, retail and travel/transportation/hospitality.

A Great Place to Work-Certified™ company, Happiest Minds is headquartered in Bangalore, India with operations in the U.S., UK, Canada, Australia and Middle East.



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