

# Understanding of Problem

## Problem Statement - 3:

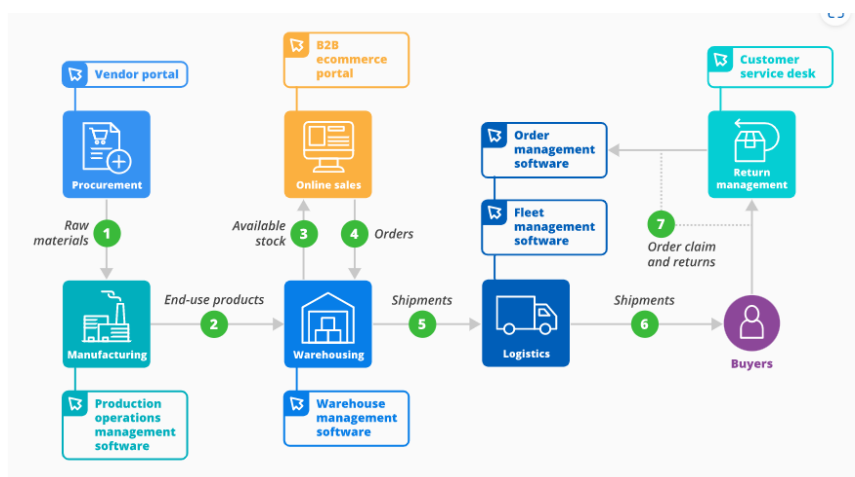
To solve problems of SCM Effective supply chain is a basic need of any business and providing a personalized marketplace to its product is an added advantage in the current market. Main purpose of this project is to implement effective SCM system and develop market trending E-commerce website Entities to be considered for implementation of AI and Data science based SCM

1. SCM module
2. E-commerce B2B site
3. Integration engine between SCM and Ecommerce site

## Supply Chain Management in E-commerce

E-commerce is about selling and buying goods over the internet and the movement of goods between two parties. The dispatch of the right quantity of products at the right time to the right person is essential and hence an efficient supply chain is required.

A quick, uninterrupted and secure supply chain is a critical aspect of the e-commerce business. Efficient supply chain management in e-commerce can reduce costs and enhance cash utilization. When a customer purchases a product from an e-commerce website, he/she wants the product in a short time. New e-commerce websites are evolving every day. But, customers prefer only those sites that have an efficient supply chain to deliver the right products at the right time, payment gateway, and [supply chain management](#). An efficient



supply chain accelerates e-commerce processes to meet customers' expectations.

# How Machine Learning Can Improve Supply Chain Efficiency

Integrating AI/ML in the supply chain process can automate various common and repetitive tasks. Applying an intelligent ML model can help organizations to select the best options and run their business efficiently. The large volume of data collected from warehouses, logistics, suppliers and transportation systems can be analyzed by AI solutions to predict the demand supply requirements and balance the entire ecosystem. The advantages of an AI-driven system can be found in every step of the chain, from inception, procurement, order processing, inventory through to logistics and end user delivery.

ML use cases in supply chain:

- **Inventory and Warehouse Management:** Inventory and warehouse management are key use cases for ML implementation. The inventory planning should be very efficient to balance the demand and supply cycle. ML algorithms can be applied on the data collected from various sources like historical data, seasonal demands, market movement (up and down), and promotions. And, the result can be used to improve the efficiency of inventory storage. Similarly, different ML models are also used to automate the warehouse processes.
- **Predictive Analytics:** Predictive Analytics is very important for demand-supply management. ML can help to predict the demand in advance. So, the inventory is always balanced and optimized. Investment can be proactively redeployed within the network based on demand sensing signals.
- **Delivery tracking:** ML is also used to track the delivery of goods at every stage. External data sources can be used to reduce the lead time prediction error rate. This has proven this by improving accuracy by up to 85% when a package will be delivered from overseas. So, the customer is always updated with the latest status. It enhances the customer satisfaction and controls the end-to-end delivery.

# What is to be done?

Integrating AI/ML in the supply chain process can automate various common and repetitive tasks. Applying an intelligent ML model can help organizations to select the best options and run their business efficiently. We will create an AI powered Web Application which will be used by organizations to manage their supply chain and help make supply faster and precise decisions

## Conclusion

As per gather prediction, 50% of the global companies will be using AI/ML by 2023, meaning supply chain efficiency must be increased manifold in the coming days. Ai driven supply chain management is the answer the industry must embrace.

In today's competitive world, an efficient supply chain is critical to business success. Disruptive technologies like AI and ML play an important role to make it better every day.