Project Proposal - INFO 5100 Application Engineering & Development

Group : 24

Automotive Supply Chain Management - Customer to Manufacturer

In Today's world, large automobile manufacturers face significant challenges in ensuring seamless coordination and transparency across its supply chain, which includes customers, automobile dealers, manufacturer and delivery services. Car Dealers struggle to effectively communicate with the customer requirements to manufacturers and track their order status. In some cases manufacturers face issues in managing dealer requests, forecasting demand, delivery and stock related problems. Moreover, customers often experience delays in their automobile order shipment, face transparency problems which include minimal visibility into the status of their vehicle purchase. The lack of real-time visibility and technological integration further hampers decision-making, making the supply chain vulnerable to disruptions and inefficiencies.

This Project aims to design and develop a full- fledged digital platform that integrates the stakeholders across the automotive supply chain which includes :
- Customer
- Salesperson
- Marketing
- Dealer
- Distributor
- Manufacturer
- Manufacturer - Body Shop
- Manufacturer - Painting
- Manufacturer - Technical
- Delivery Management (Logistics)

To address these issues, companies can adopt several innovative solutions. Diversifying suppliers and nearshoring production can reduce dependency on single sources and minimize transportation risks.By fostering collaboration across organizations in the supply chain, the industry can create a robust ecosystem that is efficient, sustainable, and adaptable. Proactive planning and investment in technology strengthen the network's resilience against disruptions. Enterprises and organizations working together can not only mitigate current challenges but also build a future-ready supply chain capable of addressing the evolving expectations of regulators, consumers, and stakeholders globally.

Enterprises involved :
- Customer Enterprise
- Distributor Enterprise
- Dealer Enterprise
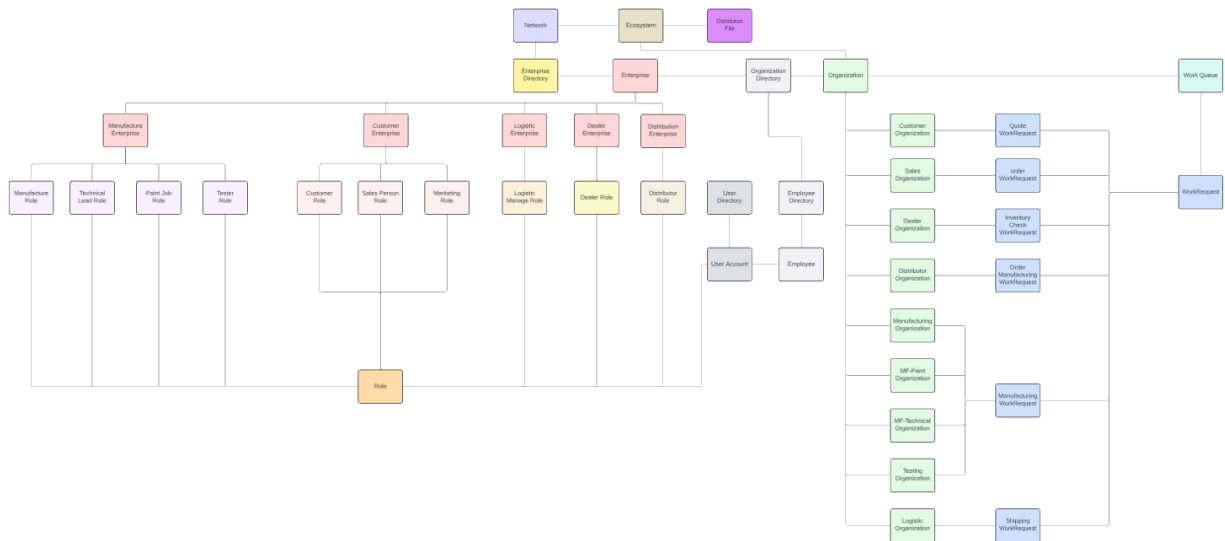- Manufacturer Enterprise
- Logistic Enterprise

Organizations involved :
- Customer
- Sales
- Distributor
- Dealer
- Manufacturer
- Manufacturer - Paint
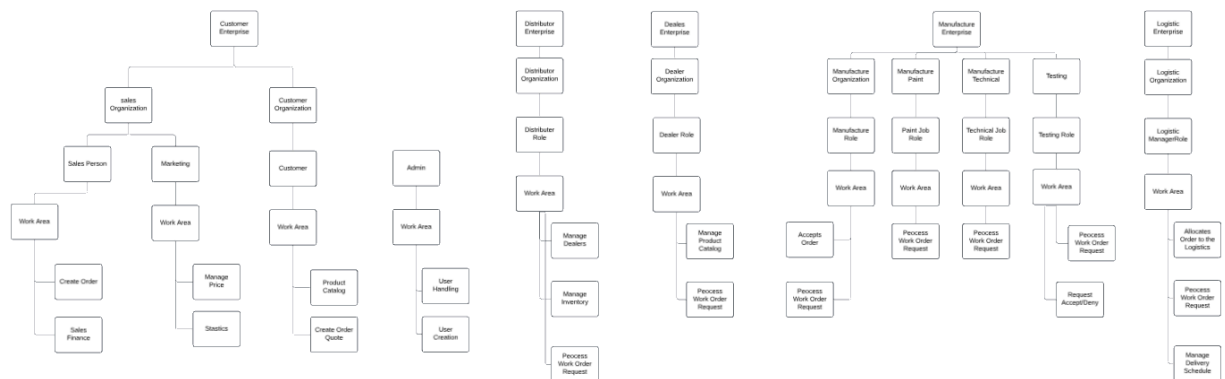- Manufacturer - Technical
- Testing
- Logistics

Roles Involved :
- Customer
- SalesPerson
- Marketing Person
- Dealer
- Distributor
- Manufacturer
- Paint Job
- Technical Head
- Tester
- Logistics Manager

High Level Component Diagram :

UI Level Diagram :

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