

Project Report: Raw Material Supplier Platform for Street Vendors

1. Project Overview

Objective: Build a web platform that connects street vendors with trusted raw material suppliers to streamline daily procurement, reduce costs, and ensure timely delivery.

Core Concept: Vendors place daily bulk orders for essential goods. These orders are aggregated, fulfilled by suppliers, and delivered by the next morning through centralized dark stores. The system ensures vendors receive quality goods at competitive prices, and suppliers access a large, predictable market.

2. Key Features

For Vendors (Buyers):

- Easy-to-use e-commerce-like interface.
- Browse raw materials catalog with search and categories.
- Add items to cart with quantity selection.
- Bulk order discounts automatically applied.
- Order confirmation and daily delivery scheduling.
- Order history and repeat order feature.
- Secure login and profile management.

For Suppliers (Sellers):

- Dashboard showing aggregated daily demand for items.
- Form to offer available supply quantities and prices.
- Real-time updates on remaining demand.
- Supply confirmation and payment tracking.
- Performance history and rating.

For Admins:

- User management (vendors and suppliers).
 - Inventory and supply-demand tracking.
 - Delivery scheduling and logistics tracking.
 - Payment handling: collect from vendors, pay suppliers.
 - Analytics: demand trends, supply gaps, delivery reports.
-

3. Workflow Summary

1. **Order Placement:** Vendors place daily orders using the platform.
 2. **Order Aggregation:** System sums total demand for each item.
 3. **Supplier Matching:** Suppliers see demand, commit quantities and prices.
 4. **Collection:** Items are delivered to central dark stores.
 5. **Sorting & Dispatch:** Orders are packed per vendor and dispatched before 6 AM.
 6. **Delivery:** Vendors receive their orders, system updates status.
-

4. Tech Stack (Easy & Beginner-Friendly)

Option 1: MERN Stack

- **Frontend:** React.js
- **Backend:** Node.js + Express
- **Database:** MongoDB Atlas

Option 2: Django + React

- **Frontend:** React.js or Django Templates
- **Backend:** Django REST Framework
- **Database:** PostgreSQL (via Supabase)

Deployment: - **Frontend:** Vercel or Netlify - **Backend:** Render or Railway - **Database:** MongoDB Atlas or Supabase

5. Implementation with AI Tools

a) UI/UX Design

- **Tools:** Figma + Uizard / Galileo AI
- **Features:** Auto-generate wireframes, UI components, and responsive layouts.

b) Frontend Development

- **Tools:** ChatGPT / GitHub Copilot
- **Features:** Generate React components, cart logic, responsive designs, form handling.
- **DALL-E / Canva AI:** Create banners, icons, product images.

c) Backend Development

- **Tools:** ChatGPT / Copilot
- **Features:** Generate API routes, database models, aggregation logic, authentication.

d) Testing & Debugging

- **Tools:** ChatGPT + AI test case generators
- **Features:** Generate unit and integration tests, auto-debug suggestions, simulate order flows.

e) Deployment

- **Tools:** ChatGPT + Hosting Platforms (Netlify, Render)
- **Features:** Generate deployment scripts, setup CI/CD, environment config.

f) Automation & Monitoring

- **Tools:** Zapier / Make for workflow automation; Notion AI for documentation.
 - **Optional AI Add-on:** Predictive analytics for demand forecasting using ML models.
-

6. Business Value Proposition

- **For Vendors:** Consistent, cost-effective, reliable supply of daily essentials.
 - **For Suppliers:** Access to aggregated, predictable market demand.
 - **For Platform Owners:** Revenue from transaction fees, vendor subscriptions, and supply partnerships.
-

7. Future Expansion

- Real-time delivery tracking (via GPS integration).
 - SMS/WhatsApp order confirmations and reminders.
 - Machine learning to forecast demand and optimize supply chain.
 - Mobile app version for wider reach.
-

8. Pitch Summary

"This platform digitizes and optimizes raw material supply for street vendors by connecting them directly to trusted suppliers. With AI-powered development and operations, we ensure seamless order aggregation, supply matching, and timely delivery through dark stores. Vendors get better prices and reliability; suppliers gain large-scale access; and we create a scalable, profitable supply chain ecosystem."