

PRD:

Product Requirements Document (PRD)

Product Name: QuickGrocer (placeholder name)

Version: 1.0

Date: January 27, 2025

Owner: [Your Name/Team]

1. Objective

Build a hyperlocal quick commerce platform that delivers groceries and daily essentials to users in under 10 minutes. The platform will prioritize speed, convenience, and customer experience by leveraging dark stores, AI-driven logistics, and an intuitive mobile app.

2. Key Goals and Metrics

Goals:

- Fast Delivery:** Ensure deliveries are completed in under 10 minutes for 95% of orders.
- High Retention:** Achieve a monthly user retention rate of 70%.
- Order Accuracy:** Maintain a 99% accuracy rate for orders delivered.
- Operational Efficiency:** Optimize dark store inventory and reduce delivery costs by 20% within the first six months.

Metrics (KPIs):

- Average delivery time
 - Daily active users (DAUs)
 - Average order value (AOV)
 - Customer retention rate
 - Delivery success rate
-

3. User Personas

1. Time-Conscious Professionals

- **Needs:** Quick access to groceries without disrupting their schedule.
- **Pain Points:** Long grocery queues, traffic delays.

2. Urban Millennials and Gen Z

- **Needs:** Convenience, seamless app experience, personalized recommendations.
- **Pain Points:** Limited time and preference for app-based shopping.

3. Homemakers

- **Needs:** Reliable and fresh grocery deliveries for daily needs.
 - **Pain Points:** Managing family schedules and routine shopping trips.
-

4. Features and Requirements

Core Features:

1. User App (Mobile - iOS & Android)

- **Account Management:**
 - User registration via email/phone/Google login.
 - Profile customization and address management.
- **Product Search & Browsing:**
 - Search bar with autocomplete and filters (categories, price range, offers).
 - “Repeat Order” button for frequently purchased items.
- **Cart & Checkout:**
 - Dynamic cart with real-time price updates.
 - Multiple payment options (UPI, cards, wallets, cash-on-delivery).
- **Delivery Tracking:**
 - Real-time GPS tracking of delivery riders.
 - Accurate ETAs with notifications at key stages (order confirmation, dispatch, delivery).
- **Loyalty Program:**
 - Membership plans for free delivery, exclusive discounts, and cashback rewards.

2. Admin Panel (Web Dashboard)

- **Inventory Management:**
 - Manage stock levels across dark stores.
 - Automated low-stock alerts.
- **Order Management:**
 - Dashboard to track all orders, rider status, and customer interactions.
- **Analytics & Reporting:**
 - Reports on sales, delivery performance, and inventory turnover.

3. Rider App (Mobile)

- Route optimization for shortest delivery times.
- In-app earnings tracking and performance metrics.

4. Backend Systems

- **Dark Store Integration:**
 - API to synchronize inventory data in real-time across all locations.
- **Recommendation Engine:**

- Personalized product suggestions using past order history and regional trends.
 - **Delivery Assignment System:**
 - Automatically assigns orders to the nearest available rider based on proximity and workload.
-

5. Technical Requirements

Frontend (User & Rider Apps)

- Tech Stack: React Native, Flutter, or Swift/Java (platform-specific).
- Responsive UI with high-performance rendering.
- Support for push notifications.

Backend

- **Architecture:**
 - Microservices for scalability.
 - Real-time APIs for order processing and tracking (e.g., GraphQL/REST).
- **Database:**
 - PostgreSQL for transactional data.
 - Redis for caching frequently accessed data.

Delivery Optimization

- Integration with third-party APIs for mapping and route optimization (e.g., Google Maps, Mapbox).
- Machine learning model to predict peak hours and optimize rider availability.

Infrastructure

- Cloud-native (AWS/GCP/Azure) for scalability and availability.
 - CI/CD pipelines for rapid deployment and updates.
-

6. Non-Functional Requirements (NFRs)

1. **Performance:**
 - App load time: ≤ 2 seconds.
 - API response time: ≤ 200 ms.
2. **Scalability:**
 - Handle up to 1M daily active users and 50K simultaneous orders.
3. **Security:**

- End-to-end encryption for all transactions and user data.
 - Compliant with global data privacy regulations (e.g., GDPR, CCPA).
4. **Reliability:**
- System uptime of 99.9%.
 - Automatic failover for critical systems.
-

7. Dependencies

- **Third-Party Services:**
 - Payment gateways (Razorpay, Stripe, Paytm).
 - SMS and push notification services (Twilio, Firebase).
 - **Logistics Partners:**
 - Partnerships with last-mile delivery providers (if applicable).
-

8. Roadmap

Phase 1: MVP (3 months)

- Core app features (user app, rider app, admin panel).
- Pilot with 5 dark stores in a single city.

Phase 2: Expansion (6–12 months)

- Scale to additional cities and increase dark store coverage.
- Implement advanced features (recommendation engine, loyalty programs).

Phase 3: Optimization & Growth (12–24 months)

- Introduce private-label products.
- Expand to tier-2 cities and test drone deliveries or electric vehicles for sustainability.