

# Product Requirements Document (PRD)

## Restaurant OS - Phase 1

**Version:** 1.0

**Last Updated:** December 2024

**Target Market:** Bangalore Restaurants & Cafes

**Team Size:** 5 (AI-Assisted Development)

**Timeline:** 6-9 months to MVP

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## 1. Executive Summary

### Vision

Build India's most comprehensive restaurant operating system that combines:

- **PetPooja's strength:** Hardcore POS + restaurant operations
- **Explorex's strength:** Modern QR ordering + customer experience

### Mission Statement

Become the single software that runs an Indian restaurant end-to-end, starting with Bangalore's cafe and QSR segment.

### Success Metrics (Phase 1)

- **20+ paying restaurants** within 6 months of launch
  - **95%+ retention rate** after first 3 months
  - **₹2-4 lakhs MRR** by month 9
  - **100+ orders/day** across all restaurants
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## 2. Market Analysis

### Target Customers (Phase 1)

#### Primary Segment:

- Cafes (20-50 seats)
- Quick Service Restaurants (QSRs)
- Ice cream parlors, bakeries, bubble tea shops

- Breweries and casual dining with QR needs

## Geographic Focus:

- Bangalore (Indiranagar, Koramangala, HSR, Whitefield, MG Road)

## Pain Points We Solve

- 1. Menu Management:** Reprinting costs ₹5,000-15,000/year per outlet
- 2. Staff Shortage:** Hard to find reliable waiters, high turnover
- 3. Order Errors:** Manual orders lead to 15-20% mistakes
- 4. No Data:** Don't know which items sell, when peaks happen
- 5. Customer Wait Time:** Long waits = bad reviews + lost revenue

## Competitive Landscape

Competitor	Strengths	Weaknesses	Our Advantage
PetPooja	Strong POS, inventory	Outdated UI, complex onboarding	Modern UX + faster setup
Explorex	Beautiful QR ordering	Weak on operations, expensive	Operations depth + better pricing
Dukaan/Shopify	Easy setup	Not restaurant-specific	Purpose-built for F&B
Manual/Excel	Free	Error-prone, no real-time	Automation + insights

## Pricing Strategy

### Mid-market positioning:

- **Starter Plan:** ₹999/month (1 outlet, basic features)
- **Pro Plan:** ₹2,499/month (1 outlet, all features)
- **Multi-outlet:** ₹1,999/outlet/month (3+ outlets)

**Lock-in:** 6-12 month contracts with 15% discount on annual payment

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## 3. Product Overview

### Core Value Proposition

"Run your entire restaurant from one modern dashboard. Let customers order via QR. Get insights that actually help you make money."

### Feature Set by Phase

#### Phase 1: QR Ordering + Menu Management (Months 1-6)

## **MVP to get first paying customers**

### **Must-Have Features:**

1. Digital menu system with photos
2. QR code generation per table
3. Customer ordering interface (mobile-first)
4. Basic order dashboard for staff
5. Restaurant branding customization
6. Multi-outlet support (architecture only)

### **Business Value:**

- Reduces printing costs
- Reduces dependency on waiters
- Photos increase order value by 20-30%
- Real-time menu updates

## **Phase 2: POS + Kitchen Operations (Months 7-12)**

### **Becoming core to restaurant operations**

#### **Features:**

1. Full billing system (dine-in, takeaway, delivery)
2. Kitchen Display System (KDS)
3. Table management with status tracking
4. Payment gateway integration (UPI, cards)
5. Basic sales analytics
6. Staff roles & permissions

### **Business Value:**

- Restaurant can't operate without you = sticky
- Full visibility into operations
- Reduced payment friction

## **Phase 3: Profitability Tools (Year 2)**

### **Features that directly impact bottom line**

1. Inventory tracking & alerts
2. Recipe costing & contribution margin
3. Staff attendance & fraud prevention
4. Customer CRM & loyalty programs
5. Online ordering website (bypass Swiggy/Zomato)
6. Advanced analytics & reporting

#### **Phase 4: Enterprise & Scale (Year 3)**

##### **Moving upmarket to chains**

1. Multi-outlet central management
  2. Franchise billing & royalty tracking
  3. API for third-party integrations
  4. White-label options for large chains
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## **4. User Personas**

### **Persona 1: Rajesh - Cafe Owner**

#### **Demographics:**

- Age: 32
- Business: 1-2 cafes in Bangalore
- Revenue: ₹30-50 lakhs/year
- Tech-savvy: Medium

#### **Goals:**

- Reduce staff dependency
- Know which items are profitable
- Professional online presence
- Scale to 2nd location

#### **Pain Points:**

- Staff turnover is killing him

- No idea which items to push
- Menu changes are expensive
- Can't afford PetPooja (too complex + expensive)

### **How We Help:**

- QR ordering = less staff needed
  - Analytics show bestsellers
  - Update menu in 2 minutes
  - Affordable + easy setup
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### **Persona 2: Priya - Restaurant Manager**

#### **Demographics:**

- Age: 28
- Role: Manager at 3-outlet QSR
- Reports to: Owner/franchise head
- Tech-savvy: High

#### **Goals:**

- Smooth operations across all shifts
- Accurate inventory tracking
- Staff accountability
- Meet revenue targets

#### **Pain Points:**

- Can't track inventory properly
- Staff mistakes with manual orders
- No real-time view of all outlets
- Reporting takes hours

#### **How We Help (Phase 2+):**

- Real-time dashboard for all outlets
- Inventory auto-updates on orders

- Staff actions are logged
  - Auto-generated reports
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### **Persona 3: Customer - Arjun**

#### **Demographics:**

- Age: 24-35
- Occupation: IT professional
- Dining frequency: 3-4x/week
- Tech-savvy: High

#### **Goals:**

- Order quickly without waiting
- See photos before ordering
- Split bills easily
- Contactless experience

#### **Pain Points:**

- Long wait for waiter attention
- Menu descriptions unclear
- Can't see what food looks like
- Payment takes forever

#### **How We Help:**

- Scan QR → order immediately
  - Photos of every item
  - Clear add-ons & customization
  - (Phase 2) Pay via UPI instantly
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## **5. Feature Requirements (Phase 1 Detailed)**

### **5.1 Admin Dashboard**

#### **5.1.1 Authentication & Onboarding**

##### **User Stories:**

- As a restaurant owner, I want to sign up with email/phone so I can create my account quickly
- As an owner, I want a guided onboarding flow so I understand how to set up my restaurant

##### **Requirements:**

- Email + OTP or Phone + OTP authentication
- No complex password rules (friction reducer)
- Onboarding wizard:
  - Restaurant name, logo, address
  - Operating hours
  - Basic settings (currency, tax %)
- Multi-step form (max 3 screens)

##### **Acceptance Criteria:**

- User can complete signup in < 2 minutes
  - Email verification sent within 5 seconds
  - Onboarding completion rate > 80%
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### **5.1.2 Menu Management**

##### **User Stories:**

- As an owner, I want to create menu categories so I can organize my items
- As an owner, I want to add items with photos so customers see what they're ordering
- As an owner, I want to set variants and addons so customers can customize orders

##### **Requirements:**

##### **Categories:**

- Name, description, display order

- Show/hide toggle
- Drag-and-drop reordering
- Support for subcategories (optional)

## Menu Items:

- Basic fields:
  - Name (required)
  - Description (optional, 200 char limit)
  - Category (required)
  - Base price (required)
  - Veg/Non-veg/Egg indicator
  - Image upload (max 5MB, JPEG/PNG)
- Advanced fields:
  - Spicy level (1-3 chilis or none)
  - Preparation time estimate
  - Tags (Bestseller, New, Seasonal, etc.)
  - Allergen warnings

## Variants:

- Name (e.g., "Size", "Base")
- Options with individual prices
  - Example: Small ₹120, Medium ₹180, Large ₹220
- Single-select or multi-select
- Required or optional

## Add-ons:

- Organized in addon groups
- Example groups: "Toppings", "Sauces", "Extras"
- Each addon:
  - Name
  - Price (₹0 or paid)
  - Single/multi-select

- Max selections limit

### **Item Availability:**

- Mark as "Out of stock" (temporary)
- Time-based availability (e.g., Breakfast 8-11am)
- Outlet-specific availability (Phase 1 architecture, Phase 2 feature)

### **Acceptance Criteria:**

- Owner can add 50 items in < 30 minutes
  - Image upload works on mobile admin
  - Changes reflect on customer QR app within 2 seconds
  - No bugs when toggling availability
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## **5.1.3 Table Management & QR Generation**

### **User Stories:**

- As an owner, I want to create tables/sections so I can organize my restaurant layout
- As an owner, I want unique QR codes for each table so customers can order correctly
- As an owner, I want to download/print QR codes so I can put them on tables

### **Requirements:**

#### **Table Setup:**

- Table name/number (e.g., T1, Patio-3, Counter-A)
- Section assignment (Indoor, Outdoor, Rooftop, Bar, etc.)
- Capacity (seats) - optional
- Table status (Active/Inactive)
- Unique URL generation per table

#### **QR Code Generation:**

- Format: `https://yourapp.com/order/:restaurantSlug/:tableId`
- QR image formats: PNG (print), SVG (scalable)
- Bulk download option (ZIP file of all QRs)

- Customization:
  - Restaurant logo in center
  - Brand colors on border
  - Table name displayed below QR

### **QR Management:**

- Regenerate QR if needed (security)
- Preview before download
- Print-ready format (A4 template with multiple QRs)

### **Acceptance Criteria:**

- Generate 50 table QRs in < 1 minute
  - QR codes work on all phone camera apps
  - Download as single PDF with 6 QRs per page
  - QR codes remain valid permanently (unless regenerated)
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## **5.1.4 Order Management Dashboard**

### **User Stories:**

- As a manager, I want to see all incoming orders in real-time so I can manage kitchen flow
- As staff, I want to update order status so customers know their food is coming
- As owner, I want to see completed orders so I can track daily sales

### **Requirements:**

#### **Live Order View:**

- Real-time updates (WebSocket or 3-5 second polling)
- Order cards showing:
  - Table number
  - Items ordered
  - Special instructions
  - Time since order placed
  - Current status

- Total amount

### Order Statuses:

1. **Pending** (just received)
2. **Preparing** (kitchen started)
3. **Ready** (ready to serve)
4. **Served** (delivered to table)
5. **Completed** (bill settled) - Phase 2
6. **Cancelled** (with reason)

### Filters & Views:

- Filter by status
- Filter by table/section
- Search by order ID
- Today's view vs All orders
- Sort by time or table

### Actions:

- Click to change status
- Add internal notes
- Call waiter button (Phase 2)
- Print KOT (Phase 2)

### Acceptance Criteria:

- Order appears on dashboard within 2 seconds of customer placing it
- Staff can update status in 1 click
- No orders get lost in the system
- Works on tablets at restaurant counter

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### 5.1.5 Basic Analytics (Phase 1)

### User Stories:

- As an owner, I want to see today's sales so I know how business is doing
- As an owner, I want to know bestselling items so I can optimize my menu

## **Requirements:**

### **Dashboard Widgets:**

#### **1. Today's Summary:**

- Total orders
- Total revenue (order value, not paid)
- Average order value
- Busiest hour

#### **2. Bestsellers:**

- Top 5 items by quantity sold
- Top 5 items by revenue
- Category-wise breakdown

#### **3. Table Performance:**

- Orders per table
- Avg time per order by table

### **Date Filters:**

- Today, Yesterday, Last 7 days, Last 30 days
- Custom date range

### **Export:**

- Download as CSV
- Basic charts (bar/pie)

### **Acceptance Criteria:**

- Data updates every 5 minutes
  - Charts load in < 3 seconds
  - Owner can understand report without training
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## **5.2 Customer QR Ordering App**

### **5.2.1 Table Landing & Session**

#### **User Stories:**

- As a customer, I want to scan QR and see my table number so I know I'm ordering correctly
- As a customer, I want a clean menu interface so I can browse easily

#### **Requirements:**

##### **Landing Experience:**

- Instant load (< 2 seconds on 4G)
- Welcome screen showing:
  - Restaurant logo & name
  - Table number/name
  - Section (if applicable)
- No login required
- No app install required (PWA)

##### **Session Management:**

- Auto-start session on first scan
- Session persists for 3 hours or until reset
- Multiple people can scan same QR = join same session (Phase 2)
- Clear "Order for Table X" indicator always visible

##### **Acceptance Criteria:**

- Works on any smartphone browser
  - Loads on slow 3G connections
  - QR scan to menu view in < 3 seconds
  - No crashes on old Android phones
- 

## **5.2.2 Menu Browsing**

#### **User Stories:**

- As a customer, I want to see all menu categories so I can find what I want
- As a customer, I want to see photos of food so I know what I'm ordering
- As a customer, I want to filter by veg/non-veg so I find relevant items quickly

## Requirements:

### Layout:

- Mobile-first design
- Categories in horizontal scrollable tabs OR vertical list
- Item cards showing:
  - Photo (if available)
  - Name
  - Description (first 50 chars)
  - Price (base price or "From ₹X")
  - Veg/Non-veg indicator
  - Tags (Bestseller, Spicy, etc.)
  - "Add" button

### Filters:

- Veg/Non-veg toggle
- Search by name
- Sort: Popular, Price (low-high), Price (high-low)

### Item Detail View:

- Full description
- Full-size photo (zoomable)
- Variants selection
- Addons selection
- Quantity selector
- "Add to Cart" button
- Estimated prep time

### Acceptance Criteria:

- Scroll performance is smooth (60fps)
  - Images lazy-load
  - Filter applies instantly (no loading spinner)
  - Works with no images (fallback to placeholder)
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### **5.2.3 Cart & Order Placement**

#### **User Stories:**

- As a customer, I want to add items to cart so I can order multiple things at once
- As a customer, I want to customize items with variants/addons so I get exactly what I want
- As a customer, I want to see order total before placing so there are no surprises

#### **Requirements:**

##### **Cart Functionality:**

- Floating cart button showing item count + total
- Cart summary shows:
  - Each item with variants/addons
  - Quantity controls (+/-)
  - Remove item option
  - Subtotal
  - Tax breakdown (CGST/SGST) - Phase 2
  - Total amount
- Special instructions field (per item or order-level)

##### **Order Placement:**

- "Place Order" button (prominent, sticky)
- Confirmation screen:
  - "Ordering for Table X"
  - Order summary
  - Confirm/Edit buttons
- Success screen:

- "Order received! Kitchen is preparing."
- Order number
- Estimated time
- "Order More" button
- "Call Waiter" button (Phase 2)

### **Order Status Tracking:**

- Show current status (Received → Preparing → Ready)
- Progress indicator
- Push notifications (if permissions granted) - Phase 2

### **Acceptance Criteria:**

- Add to cart animation is smooth
  - Cart persists during session
  - Order submits even on flaky network (retry logic)
  - Success rate > 99%
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## **5.3 Marketing Website**

### **5.3.1 Landing Page**

#### **User Stories:**

- As a restaurant owner, I want to understand what the product does in 10 seconds
- As an owner, I want to see if this works for my type of restaurant

#### **Requirements:**

#### **Structure:**

##### **1. Hero Section:**

- Headline: "Smart QR Menus & Ordering System for Indian Restaurants"
- Subheadline: "Let guests scan, order & pay from their table. No hardware. No hassle."
- CTA: "Get Demo" (WhatsApp) + "Start Free Trial"
- Hero image: Customer scanning QR + restaurant dashboard side-by-side

##### **2. How It Works (4 steps with icons):**

- Add your menu (10 minutes)
- Generate table QR codes
- Guests scan & order
- Manage everything from dashboard

### 3. Features Grid (6 features max):

- Digital QR Menu
- Custom branding
- Real-time menu updates
- Multi-language support (coming soon)
- Order management dashboard
- Basic analytics

### 4. Social Proof:

- "Trusted by 20+ cafes in Bangalore" (update number)
- Logos of partner restaurants (get permission)
- Testimonial: 1 video + 2 text testimonials

### 5. Use Cases (who it's for):

- Cafes & Coffee Shops
- QSRs & Cloud Kitchens
- Bakeries & Dessert Parlors
- Casual Dining & Breweries

### 6. Pricing Teaser:

- "Simple pricing. No hidden fees."
- "Plans starting at ₹999/month"
- Link to "See Pricing"

### 7. FAQ (5 questions):

- Do customers need to download an app?
- What if internet goes down?
- Can I update menu anytime?
- Do you charge per order?
- How long does setup take?

## **8. CTA Footer:**

- "Ready to modernize your restaurant?"
- WhatsApp CTA + Signup button

### **Technical:**

- Responsive design
- < 2 second load time
- SEO optimized (meta tags, schema markup)
- Mobile-first

### **Acceptance Criteria:**

- Conversion rate > 5% (demo requests)
  - Bounce rate < 60%
  - Works on all devices
  - Page speed score > 85
- 

## **5.3.2 "For Cafes & Restaurants" Page (Sales Page)**

### **User Stories:**

- As an owner, I want detailed information so I can make a buying decision
- As an owner, I want to see pricing clearly

### **Requirements:**

### **Structure:**

#### **1. Opening Section:**

- Pain points list:
  - "Menu reprinting costs ₹10,000/year"
  - "Staff shortages during rush hour"
  - "Order mistakes frustrate customers"
- "Here's how we solve it..."

#### **2. Detailed Benefits (with visuals):**

- Update menu in real-time (show before/after)

- Reduce staff dependency (show stats)
- Increase order value with photos (show uplift)
- Get insights you've never had

### 3. Feature Deep-Dive (with screenshots):

- Menu management UI
- QR ordering flow
- Order dashboard
- Analytics dashboard

### 4. Onboarding Process:

- "Setup in 3 Easy Steps"
- Step 1: Sign up (2 minutes)
- Step 2: Add menu (15 minutes)
- Step 3: Print QR codes (5 minutes)
- "Start receiving orders same day"

### 5. Pricing (detailed):

Plan	Price	Features	Best For
Starter	₹999/mo	1 outlet, basic features	Small cafes
Pro	₹2,499/mo	1 outlet, all features	Growing restaurants
Multi-outlet	₹1,999/outlet	3+ outlets	Chains

- Annual discount: 15% off
- No setup fee
- Cancel anytime (but 6-month lock-in)

### 6. Comparisons:

- vs PetPooja (price + ease of use)
- vs Manual process (time + errors)
- vs Explorex (features + value)

### 7. Case Study (1 detailed):

- Restaurant name (with permission)
- Problem they had
- How we solved it
- Results (numbers)

## 8. Strong CTA:

- "Book a 15-minute Demo Call"
- "Start Free 30-Day Trial"
- WhatsApp button

### Acceptance Criteria:

- Conversion rate > 10%
  - All CTAs trackable
  - Demo calls booked within 24 hours
- 

## 6. Non-Functional Requirements

### 6.1 Performance

- **Page Load:** < 2 seconds on 4G
- **API Response:** < 500ms for standard operations
- **Real-time Updates:** < 2 second latency for order notifications
- **Concurrent Users:** Support 100+ active sessions per restaurant

### 6.2 Reliability

- **Uptime:** 99.5% (Phase 1), 99.9% (Phase 2)
- **Data Loss:** Zero tolerance for order data
- **Backup:** Daily automated backups
- **Recovery:** < 1 hour RPO, < 4 hour RTO

### 6.3 Security

- **Authentication:** JWT with 24-hour expiry
- **Data Encryption:** At rest and in transit (TLS 1.3)
- **Multi-tenancy:** Complete data isolation between restaurants
- **API Security:** Rate limiting (100 req/min per user)
- **PII Handling:** Minimal collection, no customer data storage (Phase 1)

### 6.4 Scalability

- **Phase 1:** 50 restaurants, 5,000 orders/day

- **Phase 2:** 200 restaurants, 20,000 orders/day
- **Database:** Designed for 10,000+ restaurants
- **Architecture:** Horizontal scaling ready

## 6.5 Usability

- **Admin Dashboard:** Staff can learn in < 15 minutes
- **Customer App:** Zero training required
- **Mobile-First:** 80%+ of usage will be mobile
- **Languages:** English (Phase 1), Hindi + Kannada (Phase 2)

## 6.6 Compliance

- **GST Ready:** Tax calculation fields (implementation in Phase 2)
  - **Data Privacy:** Basic GDPR/DPDPA compliance
  - **Accessibility:** WCAG 2.1 Level A (minimum)
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# 7. Success Metrics & KPIs

## Business Metrics

- **MRR Growth:** ₹50,000 in Month 6 → ₹2,00,000 in Month 12
- **Customer Acquisition Cost:** < ₹10,000 per restaurant
- **Churn Rate:** < 5% monthly
- **Net Revenue Retention:** > 100%

## Product Metrics

- **Onboarding Completion:** > 80% of signups complete setup
- **Daily Active Restaurants:** > 70% of paying customers
- **Orders per Restaurant:** > 20 orders/day average
- **Customer Reordering Rate:** > 30% of QR scanners order again

## Technical Metrics

- **System Uptime:** > 99.5%
- **API Error Rate:** < 0.1%
- **Page Load Time:** < 2 seconds (95th percentile)

- **Bug Escape Rate:** < 5% of releases
- 

## 8. Out of Scope (Phase 1)

**Explicitly NOT building in Phase 1:**

- Payment gateway integration (demo flow only)
- Kitchen Display System (hardware)
- Thermal printer integration
- Inventory management
- Staff attendance/payroll
- Customer loyalty programs
- Swiggy/Zomato integrations
- Delivery management
- Advanced reporting
- Mobile apps (native iOS/Android) - PWA only

**Reason:** Focus on core value proposition, get customers fast, iterate based on real feedback.

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## 9. Risks & Mitigations

### Technical Risks

Risk	Impact	Probability	Mitigation
Team lacks coding experience	High	High	AI-assisted coding, simpler architecture, clear docs
Real-time sync issues	Medium	Medium	Use proven libraries (Socket.io), polling fallback
Multi-tenancy bugs	High	Medium	Extensive testing, clear data isolation patterns
Mobile compatibility	Medium	Medium	Progressive Web App, broad testing

### Business Risks

Risk	Impact	Probability	Mitigation
Low restaurant adoption	High	Medium	Pilot with 5 friendly restaurants, iterate fast
PetPooja/Explorefx pricing war	Medium	Low	Focus on better UX + faster setup, not price
Feature creep delays launch	High	High	Strict scope adherence, defer everything to Phase 2
Support burden overwhelms team	Medium	High	Excellent docs, WhatsApp support, video tutorials

## Market Risks

Risk	Impact	Probability	Mitigation
QR adoption fatigue post-COVID	Medium	Low	Value is operations, not just contactless
Internet connectivity at restaurants	Medium	Medium	Offline-capable PWA (Phase 2)
Restaurant budget constraints	Medium	Medium	Flexible pricing, longer trials

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## 10. Launch Strategy

### Phase 1 Launch Plan

#### Month 1-2: Development Sprint

- Core features build
- Internal testing

#### Month 3: Alpha Testing

- 3 friendly restaurants (no charge)
- Bug fixes based on real usage
- Onboarding process refinement

#### Month 4: Beta Launch

- 10 paying restaurants (₹499/month beta price)
- Feedback collection
- Feature polish

#### Month 5: Limited Public Launch

- Bangalore soft launch
- Pricing: ₹999 and ₹1,999 tiers
- WhatsApp-based support
- Referral program (get 1 month free)

#### Month 6: Full Public Launch

- Marketing push (Instagram, local food bloggers)
- Target: 20 paying customers
- Case studies published

- Pricing finalized

## Go-to-Market Channels

### 1. Direct Outreach (Primary):

- Visit 100 cafes in target zones
- Free setup for first 20 customers
- In-person demos

### 2. Partnerships:

- QR/print vendors
- Restaurant equipment suppliers
- Co-working spaces with cafes

### 3. Digital Marketing:

- Instagram: target cafe owners
- Google Ads: "QR menu system Bangalore"
- Food blogger partnerships

### 4. Community:

- Restaurant owner WhatsApp groups
  - Food business forums
  - F&B events sponsorships
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## 11. Appendix

### 11.1 Glossary

- **QSR:** Quick Service Restaurant (fast food)
- **KDS:** Kitchen Display System
- **KOT:** Kitchen Order Ticket
- **POS:** Point of Sale
- **MRR:** Monthly Recurring Revenue
- **Churn:** Customer cancellation rate
- **PWA:** Progressive Web App

### 11.2 References

- PetPooja: petpooja.com
- Explorex: explorex.app
- Market research: F&B India reports

### 11.3 Document History

Version	Date	Author	Changes
1.0	Dec 2024	Product Team	Initial PRD for Phase 1

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## 12. Approval & Sign-off

**Prepared by:** Product Team

**Review Required:** Founder, Tech Lead, Business Lead

**Next Review Date:** After alpha testing (Month 3)

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**END OF PRD**