

1. Core Features & Requirements

1.1 Interactive Map Interface

1.1.1 Map Visualization

1. Display all available billboards on an interactive map (Google Maps / Mapbox integration)
2. Color-coded markers indicating:
 - Available billboards (Green)
 - Partially booked (Yellow)
 - Fully booked (Red)
 - Premium locations (Star icon)
3. Cluster markers for dense areas with zoom-to-expand functionality
4. Satellite view and street view options

1.1.2 Location Filtering

Filter billboards by:

1. City / Region / Area
2. Billboard type (traditional, digital, LED, building wraps)
3. Size (small, medium, large, super large)
4. Price range
5. Availability dates
6. Traffic volume (high, medium, low)
7. Audience demographics

8. Save custom filter preferences

1.1.3 Billboard Information Cards

Quick preview on map hover showing:

1. Billboard image
 2. Daily impressions estimate
 3. Price per day / week / month
 4. Availability status
 5. Quick booking button
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1.2 Traffic & Analytics Dashboard

1.2.1 Location Analytics

A. Traffic Data

1. Daily / weekly / monthly vehicle count
2. Peak traffic hours heatmap
3. Average vehicle speed (dwell time indicator)
4. Traffic composition:
 - Cars
 - Buses
 - Bikes
 - Pedestrians

B. Footfall Analysis

1. Pedestrian traffic estimates

2. Nearby points of interest (malls, offices, schools)
3. Public transport connectivity
4. Parking availability

C. Demographic Insights

1. Area population density
2. Income level distribution
3. Age group distribution
4. Commercial vs residential ratio

1.2.2 Visibility Score

1. Proprietary algorithm calculating billboard effectiveness based on:
 - Traffic volume (40%)
 - Viewing angle and distance (25%)
 - Lighting conditions (15%)
 - Obstruction factors (10%)
 - Historical performance data (10%)
2. Display as a 1–10 score with detailed breakdown

1.2.3 Competition Analysis

1. Show nearby competing billboards
2. Category saturation index
3. Recommended billboard combinations for broader reach

1.3 Billboard Listing & Details Page

1.3.1 Media Gallery

1. High-resolution photos from multiple angles
2. 360-degree view (where available)
3. Video footage of location
4. Virtual mock-up preview
5. Day and night visibility photos

1.3.2 Specifications

1. Dimensions (width × height in feet)
2. Billboard type and material
3. Lighting type (backlit, LED, non-lit)
4. Resolution (for digital billboards)
5. Viewing distance and angle
6. Installation and removal timelines

1.3.3 Pricing Information

1. Base price per time period (day / week / month)
2. Volume discounts for multiple billboards
3. Seasonal pricing variations
4. Additional costs:
 - Design services
 - Installation / printing
 - Maintenance fees
 - Premium time slots (for digital)
5. Payment terms and deposit requirements

1.3.4 Booking Calendar

1. Real-time availability view
 2. Block multiple date ranges
 3. Recurring campaign options
 4. Instant booking vs inquiry-based booking
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1.4 Campaign Customization & Design Tools

1.4.1 Design Upload & Management

1. Support for multiple file formats (JPG, PNG, PDF, AI, PSD)
2. Design specification checker
3. Resolution and quality validator
4. Safe zone and bleed guidelines
5. File size optimization

1.4.2 Built-in Design Tool

1. Drag-and-drop design editor
2. Template library by industry:
 - Real estate
 - Retail
 - Food & beverage
 - Education
 - Healthcare
 - Events

3. Brand asset library (logos, colors, fonts)
4. AI-powered design suggestions
5. Text and image customization
6. Preview in actual location context

1.4.3 Design Services Marketplace

1. Connect with professional designers
2. Request custom designs
3. Review and approval workflow
4. Version history and iterations

1.4.4 Multi-Billboard Campaigns

1. Bulk upload designs for multiple locations
 2. Synchronized campaign timelines
 3. Consistent branding across locations
 4. A/B testing different creative versions
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1.5 Booking & Payment System

1.5.1 Booking Workflow

1. Add-to-cart functionality
2. Multi-billboard package creation
3. Date and duration selection
4. Design upload or creation
5. Additional services selection

6. Review and confirm

1.5.2 Payment Options

1. Credit / debit cards
2. Net banking
3. UPI (for Indian market)
4. Digital wallets
5. Invoice-based payment (for business accounts)
6. Installment plans for long-term campaigns

1.5.3 Pricing Models

1. Pay-per-day / week / month
2. Package deals (multiple locations)
3. Long-term contract discounts
4. Last-minute booking deals

1.5.4 Transaction Management

1. Secure payment gateway integration
2. Automated invoicing
3. Payment reminders
4. Refund processing (policy-based)
5. Payment history and receipts

1.6 Campaign Management Dashboard

1.6.1 Active Campaigns View

1. List of active, upcoming, and past campaigns
2. Quick status indicators
3. Campaign timeline visualization
4. Real-time updates from billboard owners

1.6.2 Campaign Monitoring

1. Installation confirmation with photos
2. Daily / weekly status updates
3. Issue reporting and resolution tracking
4. Weather impact alerts (for paper billboards)
5. Maintenance notifications

1.6.3 Performance Analytics

1. Estimated impressions delivered
2. Engagement metrics (digital / QR campaigns)
3. ROI calculator
4. Comparative analysis across locations
5. Downloadable performance reports

1.6.4 Campaign Modifications

1. Request design changes
 2. Extend or shorten duration
 3. Add more locations
 4. Upgrade to premium time slots
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1.7 User Account Management

1.7.1 Advertiser Profile

1. Company / individual information
2. Business category
3. Contact details
4. Billing information
5. Saved payment methods
6. Document uploads (GST, business registration)

1.7.2 Preferences & Settings

1. Notification preferences
2. Saved searches and favorites
3. Budget alerts
4. Campaign reminders
5. Email / SMS settings

1.7.3 Favorites & Collections

1. Save favorite billboards
2. Create location collections
3. Share collections with team members
4. Compare saved options

1.8 Billboard Owner Portal

1.8.1 Inventory Management

1. Add / edit billboard listings
2. Update availability calendar
3. Set pricing and discounts
4. Upload photos and specifications
5. Mark maintenance periods

1.8.2 Booking Management

1. Incoming booking requests
2. Approval workflow
3. Installation scheduling
4. Completion confirmation
5. Issue reporting

1.8.3 Financial Dashboard

1. Revenue tracking
2. Payout schedules
3. Commission structure
4. Tax documentation
5. Performance analytics

1.8.4 Customer Communication

1. Messaging system
 2. Automated notifications
 3. Review and rating system
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1.9 Search & Discovery Features

1.9.1 Smart Search

1. Natural language search (e.g., “billboards near Koramangala under ₹10,000”)
2. Voice search capability
3. Search history and suggestions
4. Popular searches and trending locations

1.9.2 Recommendations Engine

AI-powered suggestions based on:

1. Business category
2. Budget
3. Target audience
4. Past campaign performance
5. Seasonal trends

1.9.3 Browse by Category

1. Industry-specific recommendations
2. Trending locations
3. Best value options
4. Premium placements
5. New listings

1.10 Reviews & Ratings

1.10.1 Review System

1. Star ratings (1–5) for:
 - Location visibility
 - Owner responsiveness
 - Installation quality
 - Value for money
2. Written reviews with photos
3. Verified campaign badge
4. Owner responses

1.10.2 Trust Indicators

1. Owner verification badges
 2. Number of successful campaigns
 3. Response time metrics
 4. Satisfaction score
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1.11 Support & Help Center

1.11.1 Customer Support

1. Live chat support
2. Email ticketing system
3. Phone support for enterprise clients
4. FAQ and knowledge base
5. Video tutorials
6. Onboarding assistance

1.11.2 Dispute Resolution

1. Report campaign issues
 2. Refund requests
 3. Quality complaints
 4. Mediation service
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2. Technical Requirements

2.1 Platform Architecture

1. Cloud-based infrastructure (AWS / Google Cloud)
2. Microservices architecture
3. RESTful API design
4. Real-time data synchronization
5. CDN for media delivery

2.2 Technology Stack Recommendations

2.2.1 Frontend

1. React.js or Vue.js
2. React Native (iOS & Android)
3. Google Maps API / Mapbox
4. Responsive design

2.2.2 Backend

1. Node.js or Python (Django / Flask)

2. PostgreSQL
3. MongoDB
4. Redis
5. Elasticsearch

2.2.3 Third-Party Integrations

1. Stripe, Razorpay
 2. Twilio, SendGrid
 3. Google Analytics, Mixpanel
 4. AWS S3 / Google Cloud Storage
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3. User Experience Requirements

3.1 Onboarding Flow

3.1.1 Advertisers

1. Sign up (email / phone / social)
2. Profile completion
3. Guided tour
4. First campaign wizard
5. First-booking incentive

3.1.2 Billboard Owners

1. Business registration & verification
2. Document upload

3. First listing wizard
 4. Pricing guidance
 5. Approval & activation
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3.2 Mobile Experience

1. Full web parity
 2. Mobile-optimized maps
 3. Push notifications
 4. Quick booking
 5. Offline saved access
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3.3 Accessibility

1. WCAG 2.1 AA compliance
 2. Screen reader support
 3. Keyboard navigation
 4. High contrast mode
 5. Multi-language support
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4. Platform Design, UI & Experience Architecture

4.1 Design Philosophy & UI Standards

4.1.1 Design Principles

1. Premium, enterprise-grade visual language (inspired by SaaS leaders like Salesforce, Airbnb, Stripe)
2. Clean, minimal, data-first layouts
3. High visual trust for high-value transactions
4. Intuitive workflows with minimal learning curve
5. Consistent design system across web and mobile

4.1.2 UI Design System

1. Centralized design system (Figma-based):
 - Typography scale
 - Color tokens
 - Spacing & grid system
 - Component library
2. Reusable UI components:
 - Cards
 - Tables
 - Filters
 - Modals
 - Charts
3. Dark mode and light mode support
4. Brand customization layer (white-label ready for enterprise partners)

4.1.3 Platform UI Modules

1. Home discovery interface (map-first + list-first toggle)
 2. Advanced filter & comparison UI
 3. Campaign builder flow (step-by-step wizard UI)
 4. Analytics-heavy dashboards with visual charts
 5. Mobile-first UI for discovery and quick booking
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4.2 Inventory Holder Super Dashboard (Seller / Media Owner Portal)

A dedicated, powerful dashboard exclusively for inventory holders to onboard, manage, and monetize their assets.

4.2.1 Inventory Onboarding & Upload Dashboard

1. Self-serve inventory upload flow:
 - Location pinning on map
 - Asset type selection
 - Size & specification input
 - Media upload (images, videos, 360°)
2. Bulk inventory upload:
 - Excel / CSV upload
 - API-based inventory sync (for large media owners)
3. AI-assisted listing creation:
 - Auto-suggested pricing
 - Visibility score estimation

- Demand prediction
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4.2.2 Inventory Management Panel

1. Real-time inventory status:
 - Available
 - Booked
 - Blocked (maintenance)
 2. Availability calendar management
 3. Dynamic pricing controls:
 - Time-based pricing
 - Demand-based pricing
 - Seasonal pricing
 4. Inventory grouping:
 - By city
 - By route
 - By audience cluster
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4.2.3 Sales & Revenue Super Dashboard

1. Real-time revenue tracking:
 - Daily / weekly / monthly earnings
2. Inventory utilization rate (% occupancy)
3. Yield optimization metrics:

- Revenue per inventory
 - Revenue per sq. ft.
 - 4. Forecasting dashboard:
 - Expected bookings
 - Revenue projection
 - 5. Payout tracking & settlement history
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4.2.4 Performance & Demand Insights for Inventory Holders

1. Demand heatmaps by location
 2. Search frequency of their inventory
 3. Missed demand analytics (lost opportunities)
 4. Competitor pricing comparison (anonymous benchmarking)
 5. Suggested actions:
 - Increase price
 - Offer discounts
 - Bundle inventories
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4.2.5 Inventory Holder Controls & Settings

1. Commission & payout preferences
2. Tax & compliance documentation
3. Team access management (RBAC):

- Admin
 - Sales manager
 - Operations manager
4. Notification preferences:
- Booking alerts
 - Payment alerts
 - Negotiation requests
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5. Negotiation, Communication & AI Chatbot Layer

5.1 Advertiser–Inventory Holder Communication System

5.1.1 Direct Chat System

1. In-platform real-time chat between advertiser and inventory holder
 2. File sharing (designs, proposals, documents)
 3. Message history linked to specific inventory or campaign
 4. Read receipts and response time indicators
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5.2 AI-Powered Negotiation Chatbot

A smart assistant that enables scalable negotiation without human dependency.

5.2.1 Chatbot Capabilities

1. Answer inventory-specific queries:
 - Availability
 - Pricing
 - Specifications
 - Visibility score
 2. Campaign suitability suggestions based on advertiser goals
 3. Automated responses for FAQs
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5.2.2 AI Negotiation Engine

1. Dynamic price negotiation based on:
 - Inventory occupancy
 - Campaign duration
 - Bulk volume
 - Seasonality
 - Advertiser profile
2. Bulk discount logic:
 - Multi-location bookings
 - Long-duration campaigns
 - Repeat customers
3. Pre-defined negotiation boundaries set by inventory holder:
 - Minimum acceptable price
 - Auto-approve discount thresholds

4. Real-time counter-offer generation
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5.2.3 Human-in-the-Loop Controls

1. Inventory holder can:
 - Approve AI-negotiated deals
 - Override pricing
 - Step into live chat anytime
 2. Auto-escalation rules for:
 - High-value deals
 - Enterprise campaigns
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5.3 Negotiation Analytics Dashboard

1. Conversion rate after negotiation
 2. Average discount given
 3. Revenue uplift due to negotiation
 4. AI vs human close-rate comparison
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6. Platform Differentiation & Strategic Moat (Added Layer)

6.1 Why This Platform Wins

1. First true **two-sided OS** for offline advertising
 2. Inventory holder—first monetization tools
 3. AI-powered pricing, negotiation, and demand forecasting
 4. Map + data + transaction + analytics in one system
 5. Scales from single billboard owners to national media houses
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6.2 Future-Ready Extensions

1. Programmatic OOH buying layer
2. API marketplace for agencies
3. White-label dashboards for large media owners
4. Tokenized inventory / ad credits (future optional layer)

7. Customer (Advertiser) Super Dashboard

A centralized command center for advertisers to plan, execute, monitor, optimize, and scale offline advertising campaigns.

7.1 Customer Dashboard Overview

7.1.1 Unified Control Center

1. Single dashboard for:
 - Discovery
 - Booking
 - Campaign execution

- Performance tracking
 - Payments
 - 2. Role-based dashboard views:
 - Business owner
 - Marketing manager
 - Agency user
 - 3. Snapshot KPIs displayed on login:
 - Active campaigns
 - Total spend
 - Estimated impressions
 - ROI indicator
 - Campaign health score
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7.2 Campaign Planning & Discovery Dashboard

7.2.1 Smart Campaign Planner

1. Campaign objective selection:
 - Brand awareness
 - Store footfall
 - City-wide visibility
 - Product launch
2. Budget input & optimization suggestions
3. AI-recommended locations and inventory mix
4. Audience targeting summary:

- Geography
 - Demographics
 - Traffic intensity
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7.2.2 Saved Searches & Shortlists

1. Saved filters and search presets
 2. Shortlisted inventories with comparison view
 3. Campaign drafts (not yet booked)
 4. Shared access with internal team members
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7.3 Booking & Order Management Dashboard

7.3.1 Orders & Bookings View

1. All bookings categorized as:
 - Draft
 - Pending approval
 - Confirmed
 - Live
 - Completed
2. Order-level visibility:
 - Locations
 - Dates
 - Cost breakdown

- Owner details
 - 3. One-click rebooking for repeat campaigns
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7.3.2 Payment & Billing Dashboard

1. Spend summary:
 - Campaign-wise
 - City-wise
 - Time-period-wise
 2. Invoices & receipts repository
 3. Payment status tracking
 4. Credit notes & refunds
 5. Wallet / credits balance (if applicable)
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7.4 Live Campaign Monitoring Dashboard

7.4.1 Installation & Execution Tracking

1. Installation confirmation with geo-tagged photos
2. Timestamped proof-of-display
3. Daily status indicators:
 - Installed
 - Live
 - Under maintenance
4. Alerts for delays or issues

7.4.2 Real-Time Performance View

1. Estimated impressions delivered
 2. Location-wise performance comparison
 3. QR / URL / CTA engagement tracking (if enabled)
 4. Visibility score vs actual performance mapping
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7.5 Analytics, Insights & ROI Dashboard

7.5.1 Performance Analytics

1. Campaign-level analytics:
 - Reach
 - Frequency
 - Estimated impressions
 2. Comparative analysis:
 - Location vs location
 - City vs city
 - Format vs format
 3. Time-based performance trends
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7.5.2 ROI & Effectiveness Measurement

1. ROI calculator:
 - Spend vs exposure

- Cost per impression
 - 2. Offline-to-online attribution (where applicable):
 - QR scans
 - Website visits
 - App installs
 - 3. Brand lift indicators (proxy metrics)
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7.6 Campaign Optimization & Controls

7.6.1 Mid-Campaign Modifications

1. Extend or reduce campaign duration
 2. Add or remove locations
 3. Upgrade to premium slots
 4. Swap creatives
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7.6.2 Creative Management

1. Uploaded creatives library
 2. Creative performance comparison
 3. A/B testing results
 4. AI suggestions for creative improvement
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7.7 Negotiation & Communication Dashboard (Customer View)

7.7.1 Negotiation Panel

1. Active negotiations with inventory holders
 2. AI chatbot-driven negotiation interface
 3. View:
 - Offered price
 - Counter-offer
 - Final agreed price
 4. Bulk discount negotiation summary
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7.7.2 Communication Center

1. Unified inbox for:
 - Inventory holder chats
 - Support tickets
 - Platform notifications
 2. File sharing and message history
 3. SLA response time indicators
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7.8 Team, Roles & Permissions

7.8.1 Team Management

1. Invite team members
2. Role-based permissions:
 - Admin

- Marketing manager
 - Finance
 - Viewer
3. Activity logs and audit trail
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7.9 Alerts, Notifications & Automation

7.9.1 Smart Alerts

1. Campaign start / end alerts
 2. Budget threshold alerts
 3. Performance drop alerts
 4. Negotiation opportunity alerts
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7.9.2 Automation Rules

1. Auto-renew high-performing campaigns
 2. Auto-pause underperforming locations
 3. Auto-apply negotiated discounts
 4. Scheduled reporting
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7.10 Reporting & Exports

7.10.1 Reports Center

1. Downloadable reports:
 - Campaign summary

- Performance analytics
 - Financial spend
 - 2. Custom report builder
 - 3. Scheduled email reports
 - 4. Shareable report links for stakeholders
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7.11 Customer Support & Success Dashboard

7.11.1 Support Access

1. Live chat with platform support
 2. Dedicated account manager (enterprise)
 3. Ticket tracking and resolution status
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7.11.2 Success Insights

1. Campaign success score
2. Platform usage maturity score
3. Recommendations to scale spend efficiently

8. Inventory Holder Branded Dashboard & Marketplace Storefront

A dedicated, white-labeled dashboard and public-facing inventory storefront for each inventory holder (media owner), allowing them to showcase, manage, and sell their inventories under their own brand — while being distributed through the main platform marketplace.

8.1 Inventory Holder Branded Dashboard (Seller Central)

8.1.1 Dedicated Inventory Holder Workspace

1. Separate login and dashboard exclusively for inventory holders
2. Dashboard branded with:
 - Inventory holder company name
 - Logo
 - Brand colors (optional)
3. Acts as a **Seller Central** similar to IndiaMART / Amazon Seller Central

8.2 Inventory Upload & Management (Seller-Owned)

8.2.1 Inventory Upload Module

Inventory holders can upload and manage inventories including:

1. Billboard / OOH asset details
2. Location mapping (pin-based or address-based)

3. Asset specifications:

- Size
- Format
- Lighting
- Orientation

4. Media uploads:

- Images
- Videos
- 360° views

5. Availability calendar

6. Base pricing & discount rules

8.2.2 Bulk Inventory Management

1. Bulk upload via:

- Excel / CSV
- API integration (for large media houses)

2. Bulk pricing updates

3. Bulk availability blocking

4. Bulk discount application

8.3 Inventory Holder Branded Storefront (Public View)

A public-facing mini-website for each inventory holder, hosted inside your platform.

8.3.1 Seller Storefront Page

Each inventory holder gets a **dedicated branded page**, for example:

Platform.com/partners/adonmo

This page includes:

1. Inventory holder logo & brand banner
 2. Company profile:
 - About the company
 - Cities of presence
 - Years of experience
 3. Trust indicators:
 - Verified seller badge
 - Total campaigns executed
 - Ratings & reviews
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8.3.2 Seller-Owned Inventory Listings

1. All inventories uploaded by that seller displayed together
2. Filters within the seller page:
 - City
 - Asset type
 - Price
 - Availability
3. Inventory cards clearly showing:
 - Seller logo

- Seller name
 - Platform verification badge
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8.3.3 Dual Visibility Model

Each inventory uploaded by a seller appears in:

1. The **main platform marketplace** (global discovery)
2. The **seller's branded storefront page**

This ensures:

- Maximum demand generation for sellers
 - Strong brand presence (like IndiaMART suppliers)
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8.4 Seller-Level Pricing, Negotiation & Controls

8.4.1 Seller Pricing Controls

1. Seller-defined base prices
 2. Seller-defined discount slabs
 3. Seller-defined minimum negotiation price
 4. Time-based and bulk pricing rules
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8.4.2 Seller Negotiation Rules

1. Seller can enable / disable AI negotiation
2. Set negotiation boundaries:
 - Max discount %

- Auto-approve threshold
 - 3. Seller can:
 - Accept
 - Counter
 - Reject offers
 - 4. Escalation to human seller for high-value deals
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8.5 Seller Branding & Trust System

8.5.1 Brand Identity Layer

1. Seller logo visible across:
 - Inventory cards
 - Storefront page
 - Booking screens
 2. Seller brand attribution on invoices & reports
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8.5.2 Verification & Trust Badges

1. Verified inventory holder badge
2. Platform-certified partner badge
3. Performance badges:
 - High response rate
 - Top seller
 - Premium inventory provider

8.6 Seller Analytics & Insights Dashboard

8.6.1 Seller Performance Metrics

1. Inventory-wise performance
2. Booking conversion rate
3. Negotiation success rate
4. Revenue by:
 - Inventory
 - City
 - Time period

8.6.2 Demand & Search Insights

1. How often seller inventories appear in searches
2. Click-through rate on seller listings
3. Missed demand reports
4. Suggested actions to increase sales

8.7 Seller Discovery & Promotion Features

8.7.1 Featured Seller Program

1. Sponsored seller listings
2. Featured seller storefronts
3. Priority placement in search results

8.7.2 Seller Marketing Tools

1. Shareable seller storefront link
 2. Downloadable inventory brochures
 3. API access for agencies & enterprise buyers
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8.8 Platform Governance & Control (Admin Layer)

8.8.1 Platform Moderation

1. Approval workflow for seller onboarding
 2. Inventory quality checks
 3. Content moderation
 4. Pricing anomaly detection
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8.9 Strategic Impact (Why This Is Powerful)

This feature transforms your platform into:

-  **IndiaMART for Offline Advertising Inventory**
-  **A brand-respecting marketplace** (not a commoditizer)
-  **A distribution engine for large players like AdOnMo**
-  **A scalable onboarding system for:**
 - Single billboard owners
 - Regional media companies
 - National DOOH networks

Inventory holders don't feel "listed" — they feel **hosted and empowered**.

9. Data scrapping and upload

10. Real time geofencing feature for measurement.