

# Research Report: Nesthome



# Research Report: Nesthome Mobile Application Development

**Product Strategy:** Construction Management Ecosystem ("Zomato for Tracking" + "Oyo for Quality")

**Target Market:** Tier 2 Cities (Starting Indore)

**Development Approach:** Cross-Platform (Flutter) |

**Team:** Hybrid/Contract (Indore-based)

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## 1. End-to-End User Journeys & Flows

To build a "Zomato-like" experience, the app must move away from static updates to a **linear, stage-based journey**.

### A. Plot Owner Journey ( The "Anxious Investor" )

- **Goal:** Remote monitoring without daily site visits.
- **The Flow:**
  1. **Notification Trigger:** Owner receives a WhatsApp/Push Notification: "*Day 45 Update: Plinth Beam Reinforcement Completed.*"
  2. **The "Zomato" View:** Opens app. Sees a vertical timeline (Excavation → Foundation → Plinth). The current stage "Plinth" is pulsing green.
  3. **Visual Verification:** Taps the stage. See 4 geotagged photos and 1 video uploaded by the contractor today.
  4. **Financial Check:** Scrolls down to "Payment Status". Sees "Next Payment Due: ₹2 Lakhs upon Slab Casting".
  5. **Action:** Clicks "Chat" to ask the Nesthome Engineer: "*Is the curing done?*"
  6. **Closure:** Engineer replies. The owner feels secure.

## B. Contractor Journey ( The "Busy Builder" )

- **Goal:** Get paid faster by proving work is done.
- **The Flow:**
  1. **Task Prompt:** Opens app at 5:00 PM. Sees "Daily Update Pending" alert.
  2. **Evidence Collection:** Clicks "Upload Update". App opens camera. He records a 30-sec video of the site.
  3. **Validation:** App auto-tags GPS location (Must be within 50m of site coordinates).
  4. **Material Log:** Enters inputs: "Used 15 bags cement, 100kg steel."
  5. **Submission:** Clicks "Submit". Status changes to "Pending Admin Approval".

## C. Admin Journey ( The "Trust Keeper" )

- **Goal:** Verify quality and approve milestones.
- **The Flow:**
  1. **Review Queue:** dashboard shows "5 Projects Updated Today".
  2. **Quality Check:** Admin views Contractor's video. Checks against "Oyo-style" checklist (e.g., *Are stirrups spaced correctly?*).
  3. **Approval:** If good, Admin clicks "Approve". This pushes the update to the Plot Owner's app.
  4. **Dispute:** If bad, Admin clicks "Flag Issue" -> Triggers mediation chat.

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## 2. Detailed SOW: Page-Wise Feature Checklist

This breakdown maps your 10-point requirement list to specific app screens.

### Module 1: Plot Owner App (Flutter - iOS/Android)

Screen / Page	Key Features (The "Zomato + Oyo" Experience)	User Story Reference
<b>1. Home / Dashboard</b>	<ul style="list-style-type: none"><li>• <b>Live Project Tracking (Feature #8, #10):</b> Visual stepper UI showing current construction stage (Excavation, Plinth, etc.).</li></ul>	<i>As an owner, I want to see stage progress instantly.</i>
	<ul style="list-style-type: none"><li>• <b>Daily Snapshot (Feature #1):</b> "Today's Activity" card with latest photo.</li></ul>	
	<ul style="list-style-type: none"><li>• <b>Notification Bell:</b> Alerts for payment dues or new photos.</li></ul>	

<b>2. Timeline &amp; Gallery</b>	<ul style="list-style-type: none"> <li><b>Live Photos/Videos (Feature #7):</b> Grid view sorted by date. Videos play in-app (buffered, not live stream).</li> </ul>	<i>As an owner, I want visual proof of work.</i>
<b>3. Financials</b>	<ul style="list-style-type: none"> <li><b>Work Completed Status (Feature #3):</b> Percentage bars (e.g., "Brickwork: 80%").</li> </ul>	<i>As an investor, I want to track my cash flow.</i>
<b>4. Material Log</b>	<ul style="list-style-type: none"> <li><b>Cost &amp; Timeline (Feature #2):</b> Pie chart showing Budget (Paid vs. Pending).</li> </ul>	<i>As an owner, I want to prevent material theft.</i>
<b>5. Document Vault</b>	<ul style="list-style-type: none"> <li><b>Milestone Tracker:</b> List of past and future payments linked to construction stages.</li> </ul>	<i>As an owner, I need easy access to legal docs.</i>
<b>6. Support Hub</b>	<ul style="list-style-type: none"> <li><b>Material Status (Feature #4):</b> Table view of daily material consumption (Cement, Sand, Steel).</li> </ul>	<i>As an owner, I want quick conflict resolution.</i>
	<ul style="list-style-type: none"> <li><b>Inventory Alert:</b> Low stock warning (triggered by Admin).</li> </ul>	
	<ul style="list-style-type: none"> <li><b>Document Store (Feature #5):</b> Folder structure for Agreements, Blueprints, Municipal Approvals.</li> </ul>	
	<ul style="list-style-type: none"> <li><b>Download/Share:</b> PDF viewer integration.</li> </ul>	
	<ul style="list-style-type: none"> <li><b>Chat &amp; Support (Feature #6):</b> WhatsApp-style chat interface with "Nesthome Official".</li> </ul>	

- **Mediation Button:** "Raise Dispute" button for Admin intervention.

<b>7. "Oyo" Quality Tab</b>	<ul style="list-style-type: none"> <li>• <b>Full Construction Mgmt (Feature #9):</b> Digital checklist (Quality Audit Report) signed off by Site Engineer.</li> </ul>	<i>As an owner, I want standardized quality assurance.</i>
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- **Change Orders:** Approval screen for extra work costs.

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## Module 2: Contractor App (Flutter - Simplified UI)

Screen / Page	Key Features	User Story Reference
<b>1. My Projects</b>	<ul style="list-style-type: none"> <li>• <b>Customers (Feature #2):</b> List of active sites assigned to the contractor.</li> </ul>	<i>As a contractor, I need to know today's tasks.</i>
<b>2. Update Studio</b>	<ul style="list-style-type: none"> <li>• <b>Work (Feature #1):</b> Daily task list (e.g., "Pour concrete at Plot A").</li> <li>• <b>Photos/Video Upload (Feature #3):</b> Custom camera UI. <b>Critical:</b> Blocks upload if GPS location = Site location.</li> <li>• <b>Material Entry:</b> Simple form to punch in daily usage.</li> </ul>	<i>As a contractor, I need an easy way to report.</i>

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## Module 3: Admin Panel (Web - React/Node)

Screen / Page	Key Features	User Story Reference
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<b>1. Master Dashboard</b>	<ul style="list-style-type: none"> <li><b>Project Unique Code (Feature #1):</b> QR Code generation for each site.</li> <li><b>Global Map View:</b> See all active sites in Indore on a map.</li> </ul>	As Admin, I need an eagle-eye view of operations.
<b>2. Mediation Center</b>	<ul style="list-style-type: none"> <li><b>Mediation (Feature #2):</b> Ticket system for disputes. Access to all chat logs between Owner and Contractor.</li> </ul>	As Admin, I need data to resolve fights.

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### 3. Technology Stack & Architecture

To keep costs low (Indore rates) and performance high:

- **Mobile Framework: Flutter** (Single codebase for Android & iOS).
  - **Backend: Node.js** (Fast, scalable for real-time updates).
  - **Database: MongoDB or PostgreSQL** (Flexible data structure for construction logs).
  - **Storage: AWS S3** (Cost-effective for storing photos/videos). *Note: We will compress videos before upload to save cost.*
  - **Maps: Google Maps API** (For geofencing contractor uploads).
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### 4. Development Quotation & Team Selection

**Strategy:** Utilize the specific Indore-based talent pool you provided. This leverages the "Tier 2 Cost Arbitrage" for investors.

**Selected "A-Team" from your list:**

1. **Tech Lead / Architect: Potti Amarendra** (7 Yrs)
  - *Role:* System Design, "Zomato" logic implementation, Team management.
  - *Availability:* Part-time (4.5-6 hrs). perfect for guidance.
2. **Lead Mobile Dev (Flutter): Umang** (7 Yrs, Flutter)
  - *Role:* Building the smooth, high-quality Owner App UI.
  - *Availability:* Full Day.
3. **Backend & API Dev: Nikunj** (3 Yrs, Node/Firebase)
  - *Role:* Chat system, Notifications, Database, Admin Panel.
  - *Availability:* Full Day.
4. **UI/UX Designer: Aishwarya Kulkarni** (3 Yrs)
  - *Role:* Designing the "One Page Summary" dashboard and wireframes.

- Availability: 1 Month contract.

## Estimated Cost Breakdown (Indore Market Rates)

*Investors Note: A similar team in Bangalore would cost 2.5x more.*

Resource	Duration	Est. Monthly Cost (Indore)	Total Cost (INR)
<b>Tech Lead (Potti)</b>	4 Months (Part-time)	₹45,000	₹1,80,000
<b>Sr. Mobile Dev (Umang)</b>	4 Months	₹80,000	₹3,20,000
<b>Backend Dev (Nikunj)</b>	4 Months	₹50,000	₹2,00,000
<b>UI/UX (Aishwarya)</b>	1 Month	₹35,000	₹35,000
<b>Server/Cloud Setup</b>	One-time	-	₹25,000
<b>Buffer (Contingency)</b>	10%	-	₹76,000
<b>TOTAL PROJECT COST</b>	<b>4 Months</b>		<b>₹8,36,000</b>

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**Total Ask from Investors for Tech MVP: ~₹8.5 Lakhs (\$10,000) (This delivers a production-ready Android & iOS app).**

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## 5. Third-Party Running Costs (OpEx)

- **Google Maps API:** ₹0 - ₹15,000/month (Pay-as-you-go).
  - **AWS S3 Storage (Video/Photo):** ₹3,000/month (for ~50 active projects).
  - **WhatsApp Business API:** ~₹0.50 per conversation.
  - **App Store Accounts:** ₹10,000/year (Apple + Google).
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## 6. Implementation Timeline (16 Weeks)

- **Week 1-3: Design Phase (Aishwarya).** Wireframes of "One Page Summary".
- **Week 4-8: Core Dev (Umang/Nikunj).** User Auth, Project Code logic, Basic Dashboard.
- **Week 9-12: The "Zomato" Features.** Timeline logic, Geotagged Uploads, Notifications.

- **Week 13-14: Admin Panel & Mediation.** Dispute resolution tools.
- **Week 15-16: UAT (Testing).** Field test with 1 contractor in Indore.

This report provides a clear, investor-ready roadmap that proves you are building a **High-Value Product at a Low Tier-2 Cost**.

# **Investor Technical & Strategic Addendum**



# Investor Technical & Strategic Addendum: Project Nesthome

**Document Focus:** Deployment Architecture, Data Monetization Strategy, Security Compliance, and The "Indore Advantage."

## 1. Deployment Strategy & Operational Expenditure (OpEx)

Philosophy: "Cloud-Native & Capital Efficient."

We will deploy on AWS (Amazon Web Services) Asia Pacific (Mumbai) Region. This ensures three critical things for an Indian PropTech startup:

- Low Latency:** Sub-100ms response times for users in Indore/MP.
- Data Sovereignty:** Compliance with India's Digital Personal Data Protection (DPDP) Act 2023 by keeping data within Indian borders.
- Pay-as-you-Go:** No upfront server costs; we pay only for what we use.

### Infrastructure Cost Projection (Year 1)

*Based on a projected user base of 50 Active Projects (Owners) + 50 Contractors + 200 Viewers.*

Component	Service Provider	Specification	Est. Monthly Cost	Function
Core Backend	AWS EC2 (t3.small)	Auto-scaling Node.js Server	₹1,200 - ₹1,500	Handles API requests & Logic.

<b>Database</b>	MongoDB Atlas	Managed Cluster (M0/M2)	₹0 - ₹800	Stores User Data & Logs. (Free tier initially).
<b>Media Storage</b>	AWS S3	Standard-IA (Infrequent Access)	₹500 - ₹1,000	Stores site photos/videos cheaper than standard storage.
<b>Content Delivery</b>	AWS CloudFront	India Edge Locations	₹300 - ₹600	Delivers photos fast to users in Tier-2 networks.
<b>Auth &amp; Chat</b>	Firebase / Zoho	Auth + Support SDK	Free Tier / ₹500	OTP Login & Support Chat.
<b>Maps API</b>	Google Maps Platform	Geocoding & Static Maps	₹0 (Under \$200 credit)	Verifies Contractor Location.
<b>TOTAL ESTIMATED RUNNING COST</b>			<b>~₹3,000 - ₹4,500 / Month</b>	<b>Extremely Lean Burn Rate</b>

*Investor Note:* Our infrastructure cost per active construction project is less than **₹100/month**, while our subscription/commission revenue is significantly higher, ensuring healthy unit economics from Day 1.

## 2. Data Strategy: The "Hidden Gold Mine"

Query: "What data max can we take and how can we use that?"

Nesthome is not just an app; it is a **Data Acquisition Engine**. By digitizing the chaotic construction process, we capture high-value data points that no one else has.

## A. Data Collection Points (The "Max Data" We Capture)

1. **Financial Behavior:** Payment patterns (Does the owner pay on time?), total spend vs. budget, liquidity flow.
2. **Construction Velocity:** How fast does a contractor actually build vs. what they promise? (Vendor Rating Data).
3. **Material Consumption:** Exact quantity of cement, steel, and sand used per sq. ft.
4. **Geo-Spatial Data:** Site location, plot size, and soil type (via soil test reports).
5. **User Intent:** Post-construction needs (Interiors, Furniture, Home Loans) based on project stage (e.g., when "Flooring" starts, we know they need tiles).

## B. Data Utilization & Monetization (How we cash in)

1. **The "Credit Score" for Construction:**
  - *Use Case:* Banks & NBFCs struggle to lend to individual home builders due to risk.
  - *Monetization:* We provide a "Project Health Report" to banks to validate loan disbursements.
2. **Hyper-Targeted Marketplace (High LTV):**
  - *Use Case:* When the timeline hits "Electrical Wiring," we automatically show ads/leads for *Havells* or *Polycab* to the owner.
  - *Monetization:* Lead generation fees from brands (higher conversion than Google/FB ads because the need is verified).
3. **Contractor Verification Engine:**
  - *Use Case:* We build a "Nesthome Score" for contractors based on timeliness and quality.
  - *Monetization:* Premium listing fees for top-rated contractors.

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## 3. Security & Compliance: Building Trust

*Query: "How securely data can be stored?"*

For a platform handling legal documents and financial milestones, security is our product.

1. **Encryption Everywhere:**
  - **At Rest:** All database entries and S3 documents are encrypted using AES-256 standards. Even if a server is stolen, the data is unreadable.
  - **In Transit:** All app communication happens over SSL/TLS 1.2+ (HTTPS). No data moves without encryption.
2. **DPDP Act 2023 Readiness:**
  - We implement "Consent Managers" in the app. Users explicitly agree to what data is shared.
  - "Right to Forget": A feature allowing users to delete their data upon project completion, keeping us compliant with Indian law.
3. **Role-Based Access Control (RBAC):**
  - Contractors *cannot* see the Owner's bank details.
  - Owners *cannot* edit the Site Engineer's quality report.

- Strict segregation of duties prevents fraud.
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## 4. User Experience: "Seamlessness & Swiftness"

Query: "Seamlessness, Swiftness"

Targeting Tier-2 cities (Indore, Ujjain) means dealing with spotty 4G networks. Our tech stack is optimized for this:

### 1. "Offline-First" Architecture:

- The Contractor App allows recording videos and logging data **without the internet**. The app auto-syncs in the background when the connection returns. *Crucial for remote sites.*

### 2. Video Compression Pipeline:

- We don't upload raw 4K video. The app compresses video locally (e.g., 50MB  $\rightarrow$  5MB) before uploading. This ensures **swift uploads** even on weak networks and saves massive cloud storage costs.

### 3. Flutter Performance:

- Unlike web-based hybrids, Flutter compiles to native ARM code. This guarantees **60 FPS (Frames Per Second)** animations, making the app feel premium and "buttery smooth" on ₹10k Android phones.

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## 5. The "Indore-First" Strategic Advantage

Investor Confidence Booster: Why here? Why now?

### 1. The "Growth Triangle" Opportunity:

- Indore is at the center of the **Indore-Ujjain-Pithampur** economic corridor.
- **Fact:** Indore saw **26,538 residential plot launches** in 2024—the highest among Tier-2 cities in India. This is our captive market.

### 2. Infrastructure Catalyst:

- **Metro Rail:** Property prices along the Super Corridor (Yellow Line) have appreciated by **40%**. High-value assets require high-quality monitoring (Nesthome).
- **Simhastha 2028:** The 4-lane expansion to Ujjain is triggering a massive wave of holiday home/rental construction. These absentee owners are the *perfect customers* for Nesthome's remote monitoring.

### 3. Cost Arbitrage (The "Burn Rate" Moat):

- **Dev Cost:** A Senior Flutter Developer in Bangalore costs ₹1.5L/month. In Indore, we are hiring top talent (like *Umang* from your list) for ₹80k/month.
- **Runway:** We can survive **2x longer** on the same seed capital than a Delhi/BLR startup.

## Conclusion for Investors

Nesthome is not a "resource-heavy" construction company; it is a "data-heavy" technology platform. We are deploying **metro-grade technology** (AWS, Flutter, AI Analytics) into a **booming Tier-2 market** (Indore/Ujjain) with a **lean cost structure**. We capture data that Banks and Brands are desperate for, while solving a burning problem for the plot owner.

This is a low-risk, high-reward entry into the digitization of Bharat's real estate.

# **STRATEGIC PARTNERSHIP PROPOSAL**



# STRATEGIC PARTNERSHIP PROPOSAL

**Project:** Nesthome Construction Operating System

**To:** The Board of Directors & Investors, Nesthome

**From:** Signimus Technologies Pvt. Ltd. (Indore)

**Date:** December 03, 2025

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## 1. Executive Summary: The "Indore-First" Arbitrage

The Indian PropTech sector is starved of **Execution Management** tools. Nesthome addresses the \$57B unorganized construction market's core failure: **The Trust Deficit**.

This proposal outlines the technical roadmap to build **Nesthome**, a "One Page Summary" mobile ecosystem. By leveraging **Signimus Technologies'** Indore-based development hub, Nesthome achieves a structural **Capital Efficiency Advantage**: deploying Metro-grade technology at Tier-2 operational costs, extending the seed-stage runway by ~60% compared to Bengaluru/NCR-based startups.

**Our Commitment:** To deliver a scalable, secure, and investor-ready MVP (Minimum Viable Product) in **16 Weeks**, enabling Nesthome to dominate the Indore market before expanding to MP and Pan-India.

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## 2. Market Strategy: The "G.T.A." Expansion Model

*Investors often ask: "Why Indore?" This section validates your Geographic Target Areas (GTAs).*

**Phase 1: The Pilot GTA (Indore Growth Corridor)**

Indore is currently the #1 market in India for residential plot launches (26,538 units in 2024), outpacing Hyderabad.

- **The Trigger:** The **Super Corridor & Ujjain Road** expansion. Thousands of NRIs and Metro-based investors have bought plots here but cannot visit them. They are "Remote Asset Owners" desperate for a monitoring tool.
- **The Tech Fit:** Our app solves their anxiety through "Daily Visual Proof" (Geotagged Photos) and "Milestone Banking" (Payments linked to progress).
- **Target:** Capture 5% of active sites in Super Corridor/Nipania within 6 months.

## Phase 2: The Regional GTA (Madhya Pradesh)

Once validated in Indore, the model scales to the **Indore-Ujjain-Pithampur** economic triangle.

- **The Trigger:** **Simhastha 2028**. The massive infrastructure push on the Indore-Ujjain highway is creating a ribbon of new housing.
- **The Tech Fit:** Our "Admin Mediation" layer allows Nesthome to manage sites in Ujjain remotely from an HQ in Indore, keeping operations lean.

## Phase 3: The National GTA (Pan-India Tier 2)

Scaling to cities with similar "High Growth, Low Trust" dynamics: **Raipur, Nagpur, Jaipur**.

- **The Trigger:** RERA regulations are tightening in these cities. Nesthome becomes the "Compliance-as-a-Service" tool for small builders to stay legal.
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## 3. The Solution: "Zomato for Tracking, Oyo for Quality"

We are not building a tool; we are building a **Digital Ledger of Truth**.

### A. The "One Page Summary" Dashboard (Investor View)

- **Seamlessness:** A single glass pane showing **Cost vs. Time**.
- **Swiftness:** No heavy reports. Just a "Green/Red" status indicator.
- **Feature: Live Project Tracking.** Just as you track a food order, the user tracks "Plinth Level" → "Lintel Level" → "Slab Casting".

### B. The "Geotagged" Contractor App (Workforce View)

- **Fraud Prevention:** Contractors cannot upload "fake" progress photos. Our system reads the **GPS Metadata** of the image. If the photo wasn't taken at the site coordinates, the upload fails.
- **Simplicity:** Big buttons, vernacular language support (Hindi/Hinglish), designed for non-tech-savvy site supervisors.

## C. The "Mediation" Admin Panel (Control Tower)

- **Dispute Resolution:** A dedicated "Mediation Chat" where Nesthome Support acts as the judge between Owner and Contractor, using the digital logs as evidence.
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## 4. Technical Architecture: Built for Scale & Security

*Addressed to Investor CTOs/Due Diligence Teams.*

Component	Technology Strategy	Investor Benefit
Core Engine	Flutter (Google)	<b>Velocity.</b> We build ONE codebase that runs on iPhone & Android. Reduces dev cost by 40% and speeds up launch.
Cloud Infra	AWS Mumbai Region	<b>Compliance.</b> Data stays in India (DPDP Act compliant). Low latency for Indore users. Auto-scaling to handle traffic spikes.
Data Security	AES-256 Encryption	<b>Trust.</b> User contracts, blueprints, and payment data are encrypted at bank-grade standards. Even developers cannot see them.
Chat System	Freshchat / Zoho SDK	<b>Stability.</b> Instead of building a chat server (risky), we integrate a proven global SDK. Reliable, zero-maintenance, and scalable.
CRM	HubSpot / LeadSquared	<b>Revenue Ops.</b> Automated lead capturing from Facebook/Google ads directly into the system for the sales team.

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## 5. The "Aggressive" 16-Week Execution Timeline

We are compressing a typical 6-month build into 4 months by using our ready-to-deploy modules.

- **Month 1: The Foundation.** UI/UX Design Freeze, Database Architecture, RERA Compliance Logic.
- **Month 2: The Core.** Contractor App (Photo Uploads, Geofencing), Admin Panel (Project Creation).
- **Month 3: The Experience.** Owner App (Visual Timeline, Payment Milestones), Chat Integration.

- **Month 4: The Launch.** UAT (User Testing) on 5 live sites in Indore, Bug Fixes, Play Store Deployment.
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## 6. Commercial Proposal (The Indore Cost Advantage)

**Investment Ask for Tech Development:** ₹8,36,000 + GST

**Resource Allocation (Full-Time In-House Feel):** We are not outsourcing; we are "insourcing". You get a dedicated pod:

1. **Sr. Mobile Architect:** *Umang* (7+ Years exp) - Ensures app is battery smooth.
  2. **Backend Lead:** *Nikunj* (3+ Years exp) - Handles logic, database, and security.
  3. **Tech Lead/PM:** *Potti Amarendra* (7+ Years exp) - Your single point of contact.
  4. **UI/UX Designer:** *Aishwarya* (3+ Years exp) - Ensures the "Zomato-like" look.
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## 7. Why Does This Win?

- **Validation:** We are building exactly what the Indore market is screaming for—transparency in a booming plot market.
- **Efficiency:** We are spending every rupee on *product*, not on inflated metro-city salaries.
- **Confidence:** The tech stack is proven (Flutter/AWS), the team is senior, and the timeline is locked.

**Next Steps:** We are ready to deploy the team immediately upon signing. Let's build the digital backbone of Indore's real estate.

**Divyesh Khamele** Founder, Signimus Technologies *Your Technology Partner in Indore*