

New PRD

Assumptions

- **Timeline:** 4 weeks (1 month)
 - **Scope:** Broker-first MVP with lead management, basic AI assistance, and panoramic / virtual tours
 - **Team:** Ideally 2-3 developers + 1 product/UX working in parallel
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Week 1 – Product, Architecture, and Core Skeleton

Product & UX

- Lock final scope with **broker-first focus**:
 - Brokers as the primary entity
 - Properties discovered only through brokers
 - Controlled visibility (public / sneak-peek / private)
- Define end-to-end user journeys for:
 - Broker Admin
 - Broker Employees (manager, agent, viewer)
 - End users (renters/buyers)
- Create low-fidelity wireframes for:
 - Broker public profile page
 - Broker dashboard:
 - Employees
 - Properties
 - Leads
 - User broker discovery flow
 - Broker detail page with:
 - Public listings
 - Sneak-peek listings
 - Lead/contact creation flow
 - Property viewing (public and shared/private)
 - AI assistance entry point (broker side)

- Panoramic / virtual tour viewer

Architecture & Setup

- Choose tech stack:
 - **Frontend:** React / Next.js
 - **Backend:** Node.js (NestJS or similar)
 - **Database:** PostgreSQL
 - **Cache:** Redis
 - **Vector search:** pgvector (or equivalent)
 - **Storage:** Object storage for images and 360° media
- Set up:
 - Repositories and basic CI
 - Dev and staging environments
 - Authentication base (email + password, roles stubbed)
- Define initial data models & API contracts:
 - **Entities:**
 - User
 - Broker / Agency
 - Employee
 - Property
 - Property Privacy Level (Public / Sneak-Peek / Private)
 - Lead
 - Media (images, 360° tours)
 - Location
 - Activity Log
 - **APIs:**
 - Auth
 - Broker & employee management
 - Property CRUD
 - Lead creation
 - Broker public pages
 - Media upload & access

Goal (Week 1):

Clear UX flows, finalized data models, API contracts defined, and frontend + backend skeletons running with auth stubbed or implemented.

Week 2 – Core Broker & User MVP

Backend Implementation

- Implement models & migrations for:
 - Users, brokers/agencies, employees
 - Properties with privacy levels
 - Leads with basic statuses
 - Locations
- Implement core APIs:
 - Authentication (signup, login, session handling)
 - Broker creation and profile management
 - Employee invite, role assignment, and access control
 - Property lifecycle:
 - Draft → Pending Review → Published / Rejected
 - Lead creation and assignment to broker/employees
- Integrate geocoding:
 - Address → latitude/longitude during property creation
 - Store and index location data

Frontend Implementation

- Broker dashboard:
 - Employee management (invite, role view)
 - Property creation and editing
 - Property approval workflow
 - Lead list (basic)
- User flows:
 - Browse brokers
 - Broker public profile page
 - View public and sneak-peek listings
 - Contact broker form
- Access control:
 - Anonymous browsing with limits
 - Signup wall after limit exceeded

Goal (Week 2):

- Brokers can fully manage inventory and employees
 - Users can browse brokers and submit leads
 - Property approval and RBAC work end-to-end
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Week 3 – AI Assistance & Panoramic / Virtual Tours

AI Assistance (Broker-Focused)

- Implement embeddings + vector search over broker inventory
- Index:
 - Property title and description
 - Location text
 - Key attributes (rent, type, size, amenities)
- AI capabilities:
 - Match lead requirements to broker properties
 - Rank properties for a specific lead
- API:
 - **Input:** lead context or free-text query
 - **Output:** ranked list of broker properties

Panoramic / Virtual Tours

- Define minimal v1 support:
 - 360° images and/or external virtual tour links
- Backend:
 - Media upload and association with properties
 - Storage and access control for tours
- Frontend:
 - Integrated 360° viewer on property pages
 - View available tours for public and shared properties

Controlled Property Sharing

- Allow brokers to:
 - Share private properties with specific users
 - Track which leads can view which properties
- User can view shared properties only within the platform

Goal (Week 3):

- Brokers can shortlist properties using AI
 - Users can view panoramic tours for shared properties
 - Private property sharing works securely
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Week 4 – Hardening, Analytics, and Launch Prep

UX & Polish

- Improve validation and error handling
- Add loading and empty states
- Responsive layouts for mobile and tablet
- Refine broker public pages:
 - Branding
 - Public inventory
 - Contact actions

Security & RBAC

- Finalize permission enforcement for:
 - Broker Admin
 - Manager
 - Agent
 - Viewer
 - User
 - Platform Admin
- Security hardening:
 - Rate limiting
 - Input validation
 - Secure sessions and cookies

Analytics

- Broker dashboard metrics:
 - Leads received
 - Properties shared
 - Property views per lead
- Platform admin metrics:
 - Active brokers
 - Total leads
 - Active properties
- Activity/event tracking:
 - Broker profile views
 - Property views
 - Lead creation
 - Property sharing actions

Testing & Stabilization

- Unit tests for core services

- End-to-end tests:
 - Broker signup
 - Property approval
 - User contact flow
 - Private property sharing
- Manual QA across major devices and browsers

Launch Readiness

- Seed demo brokers and sample properties
- Document:
 - Known limitations
 - Technical debt
 - Post-MVP roadmap
- Prepare deployment and rollback plans

Goal (Week 4):

- Stable broker-first MVP
- All core workflows verified
- Ready for pilot users

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