

# Short-Term Stays Marketplace MVP

Comparable to: Airbnb / VRBO

A lean two-sided marketplace for short-term stays in entire homes or apartments. Launch in one operator-configured city or metro area with Instant Book for approved listings.

Estimated MVP cost

**\$22,950**

Estimated effort

**405 hours**

## Key Features

- Host listings with photos, availability, nightly pricing, cleaning fees, and Instant Book eligibility
- Operator review of listings and Stripe Connect host onboarding before Instant Book listings go live
- Guest search, listing details, upfront total pricing, booking flow, and basic host-guest messaging
- Full guest payment at reservation, Stripe Connect host payouts after check-in, reviews after stays, and an admin operations area
- Guest cancellations governed by one operator-configured policy for all listings

## Out of Scope for This MVP

- US-only hosting, payments, and compliance
- Initial launch is limited to one operator-configured metro area
- Hosts offer entire homes or apartments only

## Full Cost Breakdown

| Item                                                                                                                                                                    | Hours | Cost  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| The system shall allow visitors to search available entire homes or apartments within the operator-configured launch metro area using dates and guest count.            | 8     | \$440 |
| The system shall display search results for eligible listings that match the selected location, dates, and guest count.                                                 | 7     | \$390 |
| The system shall display listing details including photos, property information, availability, nightly rate, and cleaning fee.                                          | 6     | \$330 |
| The system shall calculate and display the total reservation price before booking, including nightly charges, cleaning fees, and the platform service fee.              | 7     | \$390 |
| The system shall allow guests to create accounts, sign in with email and password, reset passwords, and manage account information.                                     | 10    | \$550 |
| The system shall allow authenticated users to request in-app deletion of their account and associated personal data in accordance with applicable privacy requirements. | 6     | \$330 |
| The system shall allow a guest to book an eligible listing through Instant Book when the listing, dates, and guest count satisfy marketplace rules.                     | 12    | \$660 |
| The system shall process the full reservation amount through Stripe and record the payment status for each reservation attempt.                                         | 12    | \$660 |
| The system shall confirm a reservation only after successful payment and reservation confirmation processing.                                                           | 9     | \$500 |

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|                                                                                                                                                                 |            |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|
| The system shall allow guests to cancel reservations and apply one operator-configured cancellation policy to all listings.                                     | 8          | \$440           |
| The system shall allow hosts to create listings for entire homes or apartments with property details, photos, availability, nightly pricing, and cleaning fees. | 12         | \$660           |
| The system shall allow hosts to complete Stripe Connect onboarding and track onboarding status for payout eligibility.                                          | 9          | \$500           |
| The system shall prevent listings from becoming live or Instant Book eligible until required host onboarding and administrator approval are complete.           | 7          | \$390           |
| The system shall allow hosts to manage listing availability, nightly pricing, and cleaning fees, subject to marketplace validation rules.                       | 9          | \$500           |
| The system shall provide basic host-guest messaging associated with a reservation or other marketplace activity.                                                | 9          | \$500           |
| The system shall allow guests to submit reviews for reservations after the associated stay is completed.                                                        | 6          | \$330           |
| The system shall allow marketplace administrators to review and approve host listings and control Instant Book eligibility.                                     | 8          | \$440           |
| The system shall allow marketplace administrators to oversee reservations, payment statuses, payouts, cancellations, and reviews.                               | 12         | \$660           |
| The system shall provide users with status information for account actions, listing approval, reservations, payments, cancellations, payouts, and reviews.      | 8          | \$440           |
| The system shall enforce role-based access for visitors, guests, hosts, and marketplace administrators.                                                         | 7          | \$390           |
| Planning                                                                                                                                                        | 45         | \$2,480         |
| Project Management                                                                                                                                              | 36         | \$1,980         |
| Testing                                                                                                                                                         | 21         | \$1,160         |
| DevOps                                                                                                                                                          | 18         | \$990           |
| Design & Frontend Build                                                                                                                                         | 54         | \$2,970         |
| AI Tokens                                                                                                                                                       | 0          | \$600           |
| Security                                                                                                                                                        | 21         | \$1,160         |
| Risk (10% Contingency)                                                                                                                                          | 38         | \$2,090         |
| <b>Total</b>                                                                                                                                                    | <b>405</b> | <b>\$22,950</b> |

## Estimate Assumptions

- Hours are base development effort per requirement and exclude NFR implementation overhead, project management, design, and dedicated QA.
- Shared authentication, data models, UI components, and authorization foundations are allocated across the requirements where they provide the clearest primary effort.
- Stripe-hosted or tokenized payment flows and Stripe webhooks are used; card data is not stored by the marketplace.
- Basic notification channels and messaging behavior use marketplace defaults without real-time enhancements, attachments, or advanced moderation.
- Photo handling assumes metadata and standard managed storage integration rather than advanced image processing or content moderation.
- One global cancellation policy, one launch metro area, English-only UX, and a single currency are assumed.

## Risks That Could Change This

- Stripe payment and Connect webhook behavior may require additional reconciliation and retry work during implementation.
- Availability and payment concurrency edge cases could increase reservation and confirmation effort.
- Privacy deletion requirements may expand if legal retention, export, or regional compliance rules become more specific.
- Administrator workflows may grow if operational reporting, disputes, fraud controls, or broader user management are added.

## User Stories

### US-1 - Visitor

As a visitor, I want to search available entire homes or apartments in the launch metro area so that I can find suitable stays.

### US-2 - Visitor

As a visitor, I want to view listing details, photos, availability, and pricing so that I can decide whether a stay meets my needs.

### US-3 - Guest

As a guest, I want to see the total price before booking so that I understand the full cost of my stay.

### US-4 - Guest

As a guest, I want to create an account and manage my account information so that I can use marketplace services securely.

### US-5 - Guest

As a guest, I want to book an eligible listing and pay the full reservation amount so that my stay is confirmed.

### US-6 - Guest

As a guest, I want to cancel a reservation according to the marketplace cancellation policy so that I understand my available options.

### US-7 - Host

As a host, I want to create a listing with photos, availability, pricing, and cleaning fees so that guests can discover and book my home.

### US-8 - Host

As a host, I want to complete Stripe Connect onboarding so that I can receive payouts for eligible reservations.

### US-9 - Host

As a host, I want to manage my listing availability and pricing so that guests see current booking information.

### US-10 - Host

As a host, I want to communicate with guests about a reservation so that I can coordinate the stay.

### US-11 - Guest

As a guest, I want to message my host about a reservation so that I can coordinate details of my stay.

### US-12 - Guest

As a guest, I want to submit a review after my stay so that I can share feedback with the marketplace community.

### US-13 - Marketplace Administrator

As a marketplace administrator, I want to review and approve host listings so that only suitable listings become available to guests.

### US-14 - Marketplace Administrator

As a marketplace administrator, I want to oversee reservations, payments, payouts, cancellations, and reviews so that I can operate the marketplace effectively.

## Requirements

### FR-1 - Search

The system shall allow visitors to search available entire homes or apartments within the operator-configured launch metro area using dates and guest count.

### FR-2 - Listing Discovery

The system shall display search results for eligible listings that match the selected location, dates, and guest count.

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**FR-3 - Listing Details**

The system shall display listing details including photos, property information, availability, nightly rate, and cleaning fee.

**FR-4 - Pricing**

The system shall calculate and display the total reservation price before booking, including nightly charges, cleaning fees, and the platform service fee.

**FR-5 - Account Management**

The system shall allow guests to create accounts, sign in with email and password, reset passwords, and manage account information.

**FR-6 - Privacy**

The system shall allow authenticated users to request in-app deletion of their account and associated personal data in accordance with applicable privacy requirements.

**FR-7 - Reservations**

The system shall allow a guest to book an eligible listing through Instant Book when the listing, dates, and guest count satisfy marketplace rules.

**FR-8 - Payments**

The system shall process the full reservation amount through Stripe and record the payment status for each reservation attempt.

**FR-9 - Reservation Confirmation**

The system shall confirm a reservation only after successful payment and reservation confirmation processing.

**FR-10 - Cancellations**

The system shall allow guests to cancel reservations and apply one operator-configured cancellation policy to all listings.

**FR-11 - Host Listings**

The system shall allow hosts to create listings for entire homes or apartments with property details, photos, availability, nightly pricing, and cleaning fees.

**FR-12 - Host Onboarding**

The system shall allow hosts to complete Stripe Connect onboarding and track onboarding status for payout eligibility.

**FR-13 - Listing Approval**

The system shall prevent listings from becoming live or Instant Book eligible until required host onboarding and administrator approval are complete.

**FR-14 - Availability and Pricing**

The system shall allow hosts to manage listing availability, nightly pricing, and cleaning fees, subject to marketplace validation rules.

**FR-15 - Messaging**

The system shall provide basic host-guest messaging associated with a reservation or other marketplace activity.

**FR-16 - Reviews**

The system shall allow guests to submit reviews for reservations after the associated stay is completed.

**FR-17 - Administration**

The system shall allow marketplace administrators to review and approve host listings and control Instant Book eligibility.

**FR-18 - Administration**

The system shall allow marketplace administrators to oversee reservations, payment statuses, payouts, cancellations, and reviews.

**FR-19 - Notifications**

The system shall provide users with status information for account actions, listing approval, reservations, payments, cancellations, payouts, and reviews.

**FR-20 - Authorization**

The system shall enforce role-based access for visitors, guests, hosts, and marketplace administrators.

**NFR-1 - Performance**

The system shall target an API response time of less than 200 milliseconds for standard requests under expected launch-area load.

**NFR-2 - Scalability**

The system shall use a managed database architecture capable of scaling with marketplace users, listings, reservations, messages, and reviews.

**NFR-3 - Observability**

The system shall provide application performance monitoring and operational diagnostics for critical user journeys and backend services.

#### **NFR-4 - Security**

The system shall protect credentials, personal data, payment-related data, and role-restricted marketplace information in transit and at rest.

#### **NFR-5 - Reliability**

The system shall prevent duplicate reservations and inconsistent payment states when requests are retried or third-party callbacks are delayed or repeated.

#### **NFR-6 - Privacy and Compliance**

The system shall support privacy-compliant account deletion, data access controls, and retention of only necessary personal information.

#### **NFR-7 - Data Integrity**

The system shall maintain consistent reservation, availability, pricing, fee, cancellation, payment, payout, and review records.

#### **NFR-8 - Usability**

The system shall provide a clear, responsive, English-only user experience for the initial launch scope.

## **Requirements Assumptions**

- The initial launch supports one operator-configured metro area and listings located in the United States.
- The marketplace supports entire homes or apartments only; shared rooms and partial-home stays are out of scope.
- Stripe is the payment processor and Stripe Connect is used for host onboarding and payouts.
- The reservation payment is for a real-world accommodation service consumed outside the application, so third-party payment processing is assumed appropriate.
- One cancellation policy applies globally to all listings and uses an operator-configured deadline.
- Instant Book is the only booking flow in the initial scope; manual booking requests are out of scope.
- Availability validation and concurrency controls are required to prevent overlapping confirmed reservations.
- Hosts must complete Stripe Connect onboarding and receive listing approval before Instant Book activation.
- The platform service fee is a simple configured fee; taxes, discounts, coupons, deposits, and multi-currency pricing are out of scope unless added later.
- Email and password authentication is the initial account-access method; social login and multifactor authentication are out of scope.
- Basic host-guest messaging is reservation-associated; real-time chat enhancements, attachments, and off-platform communication controls are out of scope.
- Administrator scope excludes disputes, advanced analytics, broad user administration, and automated fraud tooling.
- No integrations other than Stripe, Stripe Connect, Supabase managed database services, and Firebase Performance Monitoring are assumed.
- The requirements rules specify an API performance target below 200 milliseconds, Supabase for managed database scalability, and Firebase for performance monitoring.

## **Technical Specification**

#### **TS-1 - Frontend Web Application**

Build a responsive English-only marketplace website using Next.js, React, TypeScript, Shadcn UI, and Tailwind CSS.

#### **TS-2 - Authentication**

Use Supabase Auth with email/password authentication, JWT sessions, password reset, account management, and privacy-compliant account deletion.

#### **TS-3 - Authorization and RBAC**

Enforce role-based access for visitors, guests, hosts, and marketplace administrators using authenticated server-side authorization and record-level access controls.

#### **TS-4 - Backend and API**

Implement backend services with Supabase-managed PostgreSQL, REST APIs, and optional edge functions for reservation, payment, payout, notification, and administrative workflows.

#### **TS-5 - Data Storage**

Use Supabase PostgreSQL as the system of record for users, listings, photos metadata, availability, pricing, reservations, payments, payouts, messages, reviews, and audit records.

#### **TS-6 - Payments and Payouts**

Integrate Stripe for guest payments and Stripe Connect for host onboarding and payouts; store payment and payout statuses without storing card data.

#### **TS-7 - Reservation and Availability**

Implement Instant Book eligibility, date and guest validation, atomic availability checks, reservation state transitions, cancellation refunds, and retry-safe payment confirmation.

#### **TS-8 - Host and Listing Management**

Provide host listing creation and management for entire US homes or apartments, including photos, property details, availability, nightly pricing, and cleaning fees.

#### **TS-9 - Administration UI**

Build an administrator panel with Next.js, React, TypeScript, Shadcn UI, and Tailwind CSS for listing approval, Instant Book control, reservation oversight, payment and payout status, cancellations, and reviews.

#### **TS-10 - Messaging and Notifications**

Provide reservation-associated host-guest messaging and status notifications for account actions, listings, reservations, payments, cancellations, payouts, and reviews.

#### **TS-11 - Hosting and Environments**

Host the website and administrator panel on Vercel, use Supabase managed services for backend infrastructure, and maintain separate development, staging, and production environments.

#### **TS-12 - CI/CD and Testing**

Use GitHub Actions for linting, type checks, automated tests, database migration validation, and deployment workflows; include unit, integration, and end-to-end coverage for critical journeys.

#### **TS-13 - Security and Compliance**

Use HTTPS with TLS 1.2+, encrypted managed storage, secure secret handling, Supabase row-level security, least-privilege access, auditability, and privacy-compliant data deletion and retention.

#### **TS-14 - Observability and Operations**

Provide application performance monitoring, structured operational logging, error tracking, health diagnostics, and alerts for critical marketplace and payment workflows.

## **Technical Assumptions**

- The initial product is a responsive web application; a native mobile application is not included.
- The launch serves one operator-configured metro area and supports entire homes or apartments located in the United States.
- Supabase managed PostgreSQL, Supabase Auth, REST APIs, and optional edge functions are the baseline backend stack, consistent with the reference specification.
- Next.js, React, TypeScript, Shadcn UI, and Tailwind CSS are the baseline website and administrator-panel technologies.
- Vercel is the baseline hosting provider for websites and administrator panels, and GitHub Actions is the baseline CI/CD platform.
- Stripe is the only payment processor in the initial scope, and Stripe Connect is used for host onboarding and payouts.
- Instant Book is the only booking flow; manual booking requests, disputes, advanced analytics, broad user administration, fraud automation, taxes, discounts, deposits, and multi-currency pricing are out of scope.
- One operator-configured cancellation policy applies globally, with full refunds before the configured deadline and no refund afterward.
- The platform service fee is a simple configured fee, and pricing calculations are consistent across discovery, checkout, and reservation records.
- Email/password authentication is the initial account-access method; social login and multifactor authentication are out of scope.
- Basic reservation-associated messaging is required; real-time chat enhancements, attachments, and off-platform communication controls are out of scope.
- Development, staging, and production environments are estimated, with managed secrets and separate third-party credentials per environment.
- Data residency is assumed to follow the selected Supabase, Vercel, and Stripe regional configurations; a specific jurisdiction has not been defined.

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- Firebase Performance Monitoring is the baseline application monitoring solution, as specified in the approved requirements.