

Product Requirements Document (PRD): Localization, Insurance, and Monetization

Project: p2p-gear-rental Enhancement

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Status: Draft

Tech Stack: Next.js 14, TypeScript, Tailwind CSS, PostgreSQL/Prisma (assumed).

1. Executive Summary

The goal is to evolve the current gear rental application into a sustainable business model by introducing geographic restrictions, integrated insurance options, and a multi-tiered fee structure. This ensures that the platform remains relevant to local communities while providing a revenue stream for the author to cover hosting costs and profit.

2. Objectives

- **Localized Ecosystem:** Shift from a "global list" to a "local search" model.
 - **Risk Mitigation:** Provide owners with the option to insure their equipment.
 - **Sustainability:** Implement transaction fees to cover cloud costs (GCP/Vercel) and generate profit for the author.
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3. Feature Requirements

3.1 Geographic Localization

Currently, the app lists all gear regardless of location. The new version will treat location as a primary filter.

- **Owner Side:**

- **Location Pinning:** Owners must set a "Home Location" (City, State, or Zip) in their profile or per listing.
 - **Geocoding:** Use an API (Google Maps/Mapbox) to convert addresses into coordinates for distance-based searching.
- **Renter Side:**
 - **Location-Based Search:** A search bar on the homepage allowing users to enter a city or "Use my current location."
 - **Radius Filter:** Renters can filter results within a specific distance (e.g., 10, 25, 50 miles).
 - **Location Visibility:** Gear cards must clearly display the neighborhood or city of the owner.

3.2 Insurance Integration

To encourage owners to list high-value gear, the platform will offer an optional insurance layer.

- **Insurance Toggle:** Owners can enable/disable "Compulsory Insurance" for high-end items.
- **Pricing Logic:**
 - The insurance premium is calculated as a percentage (e.g., 5-10%) of the daily rental rate.
 - **Example:** Gear at \$100/day + 10% Insurance = \$110/day total (before platform fees).
- **Coverage Terms:** A static page or modal explaining what the insurance covers (theft, damage, etc.).

3.3 Monetization & Author Benefit

The platform must transition from a free tool to a revenue-generating marketplace.

- **Platform Service Fee:** A percentage-based fee (e.g., 10-15%) taken from the renter's total.
 - **Hosting Coverage Fee:** A small flat "Technology Fee" (e.g., \$1.50 per transaction) specifically to offset cloud infrastructure costs.
 - **Transaction Logic:**
 - **Renter Pays:** Base Price + Insurance + Service Fee + Tech Fee.
 - **Owner Receives:** Base Price + Insurance (minus any external insurance provider costs).
 - **Author Receives:** Service Fee + Tech Fee.
 - **Payment Provider:** Integration with Stripe Connect to automate payouts to owners and the author simultaneously.
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4. Technical Specifications

4.1 Database Updates (Prisma/SQL)

- **User/Listing Table:** Add `latitude`, `longitude`, `locationName`, and `zipCode`.
- **Listing Table:** Add `insuranceEnabled` (Boolean) and `insuranceRate` (Float).
- **Transaction Table:** Add fields for `serviceFee`, `hostingFee`, and `insuranceAmount`.

4.2 API Changes

- **GET /api/gear:** Update to accept `lat`, `lng`, and `radius` query parameters.
 - **POST /api/checkout:** Implement the new pricing formula: $\text{Total} = (\text{Base} * \text{Days}) + (\text{Insurance} * \text{Days}) + (\text{ServiceFee}) + \text{HostingFee}$.
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5. User Flow

1. **Onboarding:** Owner registers and verifies their city.
 2. **Listing:** Owner posts a camera, selects "Include Insurance," and sets a price.
 3. **Discovery:** Renter searches "Los Angeles" and sees only local gear.
 4. **Checkout:** Renter sees a transparent price breakdown (Rent + Insurance + Platform Fee).
 5. **Payout:** Stripe splits the payment; the Author's wallet receives the fees, the Owner's wallet receives the rent.
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6. Success Metrics

- **Net Revenue:** (Service Fees + Tech Fees) - (Cloud Hosting Costs).
- **Local Density:** Number of listings within a 20-mile radius of major metropolitan hubs.
- **Insurance Adoption:** Percentage of owners opting for the insurance feature.