



Product Requirements Document [PRD] - Porter

Title/Initiative	AI-Enabled 3D Item Documentation System for Damage Prevention
Date & Version	21 October, 2025
Product - POC	Product Manager, Porter Core Experience
Design POC	Sr. Product Designer
Tech POC	Engineering Manager, Mobile & AI
Marketing POC	Growth Marketing Manager

Why? (Objective)

1. **For business** - Reduce damage-related churn among ad hoc movers by 40% within 6 months through instant, dispute-free damage documentation and claims.
2. **For users** -
 - Peace of mind: "I know my TV's condition is documented perfectly"

- No anxiety: "Even if damage happens, my claim will be instant"
- Trust building: "Porter uses technology to protect me, not just words"
- Empowerment: "I have mathematical proof, not just photos I could argue about"

How do we measure success?

1. Associated OKR/Goal

Company OKR (FY26 Q3):

Increase ad hoc mover retention from 35% to 45% by Q3 end.

Product OKR (This Initiative):

Launch AI documentation system and achieve 25% damage complaint reduction by achieving:

- 80% driver adoption of documentation system
- 90% completion rate on mandatory scans
- <24 hour average claim resolution time
- 4.5+ user satisfaction score for claim experience

2. Success Metrics

Metric	Measurement Method
Operational Efficiency	
Documentation completion rate	Backend: % of pickups with completed scans
Avg documentation time	App analytics: Timestamp difference
Photo quality pass rate	AI validation: % passing quality check
Claim Resolution	
Claim resolution time	Support system: Claim filed to payout date
Auto-approved claims	Backend: % approved without human review
Dispute rate	Support system: % of claims disputed
User Trust	
User satisfaction (claim)	Post-claim survey NPS

Re-booking rate (had damage)	Backend: Users who had damage claim and rebooked within 6 months
Documentation feature awareness	Post-booking survey: "Did you know about 3D scanning?"
Business Impact	
Support ticket volume (damage)	Support system: Ticket count with "damage" tag
Cost per claim resolution	Finance: Total support + ops cost / claims
Ad hoc retention (6-month)	Backend cohort analysis

3. **Guardrail/Do not disturb metrics (These metrics shouldn't be negatively affected)**

Metric	Why It Matters
Booking conversion rate	Documentation shouldn't scare users away
Pickup completion rate	Documentation shouldn't cause cancellations
Average pickup time	Extra 2-3 mins acceptable, not more
Driver earnings per hour	Documentation time shouldn't hurt driver income significantly
Customer acquisition cost	Premium positioning might increase CAC slightly
Overall app rating	New feature shouldn't frustrate users

Who are the users:

1. **Persona**

Neha - The Anxious Ad Hoc Mover

Demographics:

- Age: 27 years
- Occupation: MBA Student
- Location: Mumbai (currently), shifting to Pune
- Income: ₹25,000/month (stipend)
- Device: iPhone 13 (LiDAR capable)

Psychographics:

- Tech-savvy but not technical
- Budget-conscious but values quality
- Risk-averse with personal belongings
- High anxiety about moving expensive items
- Trusts technology over promises

Behavior:

- Uses Porter: 2-3 times per year (low frequency, high stakes)
- Compares prices across apps before booking
- Reads reviews obsessively
- Asks friends for recommendations
- Documents everything (photos of receipts, screenshots)

Moving Context:

- Items: TV (₹52,000), furniture, boxes
- Distance: 18 km intra-city
- Helpers: None at pickup/delivery, managing alone
- Experience level: First time using logistics app for big items

Goals:

- Move belongings safely without damage
- Avoid surprise costs
- Get help if something goes wrong
- Feel confident throughout the process

Pain Points:

- "What if my TV breaks during transit?"
- "How do I prove it was damaged by Porter, not me?"
- "Last time I had to call support 20 times for a refund"
- "Driver might blame me for existing scratches"

Quote: "I just wanted a smooth move, but instead I was left managing the movers myself and stressing about damage."

2. Problems we are solving [Needs, Problems, Jobs to be done]

Jobs to Be Done (JTBD):

When I'm moving my personal belongings using Porter,

I want to have scientific proof of their condition before and after transit,

So that I can get instant compensation without disputes if damage occurs,

And feel confident and protected throughout my move.

3. How do we know these problems exist (research)

From Porter Data (Last 6 Months):

- Damage complaints: 45 per 1,000 bookings
- Average claim resolution: 62 days
- Dispute rate: 30% of damage claims
- Support tickets (damage-related): 12,000/month
- Cost per claim: ₹4,500 (support time + ops)
- Ad hoc mover retention: 35% (vs 68% for SMEs)
- Churn reason "damage concerns": 23% of lost customers

Survey Data:

- 86.7% of the sample size reported damage and loss of goods
- 54% had no clarity whether helpers are included or not
- 82% would want Porter to fix the damaged goods issue
- 89% said "instant claim resolution would make me book again"

Solution:

1. Brief of the solution

Solution Name: Porter Verified™ - AI-Enabled 3D Item Documentation System

Core Concept: Replace unreliable basic photos with an AI-guided documentation system that creates a mathematically precise "digital twin" of each item at pickup and compares it at delivery using AR technology, enabling instant damage detection and auto-approved claims.

How It Works (Simple Explanation):

At Pickup:

1. The app gives an option to the user to scan, if the scanning isn't verified completely or the user doesn't want to scan, then the driver will do the rest of the part
2. Driver uses phone camera (AI-guided) to scan item from all angles
3. AI creates a 3D model capturing exact condition (scratches, dents, etc.)
4. System timestamps and locks the record (tamper-proof)
5. Customer reviews and confirms on screen

At Delivery:

1. Driver points camera at delivered item
2. AR overlays the pickup 3D model on real item
3. AI instantly compares and detects any new damage
4. If damage detected → Claim auto-filed and approved in seconds

Key Differentiators:

- AI-guided capture (not random photos)
- 3D digital twin (not flat images)
- AR comparison (not manual inspection)
- Instant auto-approval (not 2-month wait)
- Mathematical proof (not disputable)

Technology Stack:

- **AI Computer Vision:** Object detection, damage recognition, quality validation
- **AR (Augmented Reality):** Real-time overlay and comparison

- **Cloud Processing:** 3D mesh generation, AI analysis
- **Blockchain:** Tamper-proof timestamp verification
- **Mobile:** iOS ARKit, Android ARCore

2. Other alternatives are considered with prioritization metrics.

In-App Packing Tutorial Library	Empowers users to prepare better; scales infinitely with zero marginal cost
Smart Goods Assessment Quiz	Prevents problems upstream; highest impact-to-effort ratio

Product flow (Details of the feature/product):

1. Customer Journey

Immediate Post-Booking (1 minute after)

- Sees confirmation screen
- **Documentation Awareness Point:** "Your item will be 3D scanned at pickup"
- Optional prompt: "Want to pre-scan now? Get ₹20 off next booking"
- Neha thinks: "I have time, let me try this"

Customer Pre-Scan (Optional - Neha chooses YES)

- Taps "Pre-Scan Now"
- Reads simple instructions: "Take 3 photos - Front, Side, Any damage"
- Opens camera with AR guide
- Photo 1: Front view of TV (guided overlay helps alignment)
- Photo 2: Side/back view
- Photo 3: Asked "Any existing damage?" - Neha photographs small scratch on bottom
- Total time: 45 seconds
- Sees: "Your scan saved! Driver will verify at pickup"

- Feels: "I have my own record now. I feel protected"
- Receives SMS: "Your TV pre-scan saved. View: [link]"

Waiting Period (2 hours before pickup)

- Receives WhatsApp reminder: "Pickup in 2 hours. Your pre-scan is ready. Driver will verify on arrival."
- Can open app and view her 3D scan anytime
- Rotates the model, zooms into scratch
- Feels: "This is cool technology. I trust this"

Final Reminder (30 minutes before)

- Push notification: "Driver arriving in 30 mins"
- In-app: "What to expect: Driver will verify your pre-scan (20 seconds)"
- Neha prepares: TV ready, area cleared

Driver Arrival

- Driver Rajesh arrives at 4:30 PM
- Rings doorbell
- Greets: "Hi Neha, I'm Rajesh from Porter"

Driver Opens App

- Driver's app shows: "✓ Customer pre-scanned. Start verification"
- Driver to Neha: "Great! I see you already scanned the TV. Let me quickly verify"
- Neha feels: "He's professional and knows I prepared"

Driver Verification Scan (20 seconds)

- Driver walks around TV with phone
- Neha watches - sees AR overlay on driver's phone
- Driver's screen shows real-time comparison
- "Verifying... 78% complete"

- Driver's phone vibrates: "✓ Verified! Match confirmed"

12. AI Processing

- Driver's screen shows: "Processing... 15 seconds"
- Neha waits briefly
- Results appear

Results Review

- Driver shows phone to Neha
- Screen displays:
 - "Verification Complete"
 - "Overall condition: 94/100"
 - "Match with your pre-scan: 98%"
 - "Small scratch detected (bottom edge, 3.2cm)"
- Driver zooms 3D model to show scratch location

Pre-Existing Damage Acknowledgment

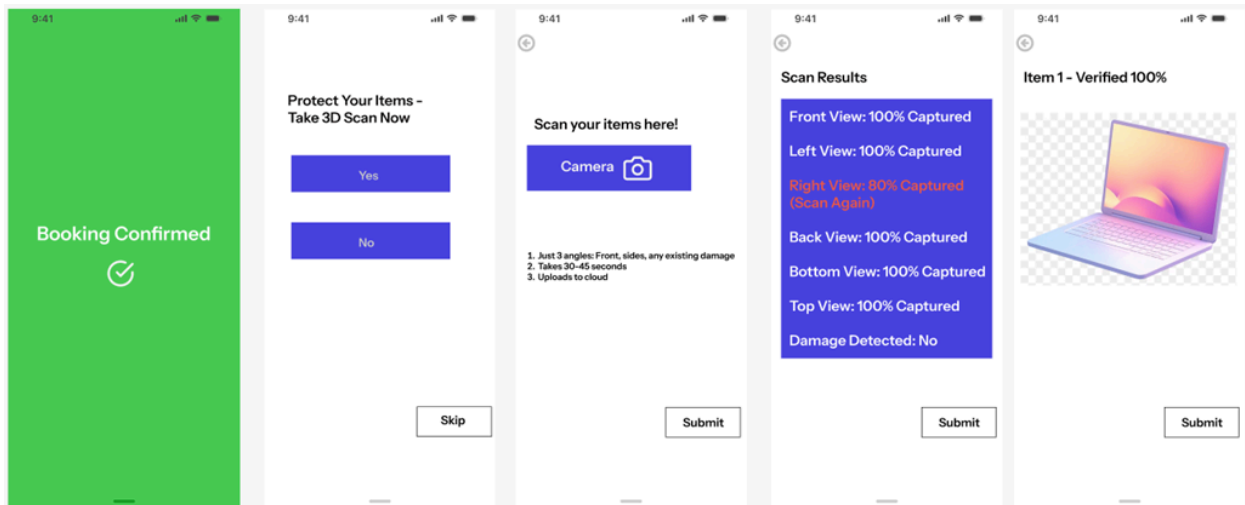
- Driver: "I see this scratch here. Were you aware of it?"
- Neha: "Yes! I photographed it in my pre-scan"
- Driver's screen shows: Neha's pre-scan also captured this scratch ✓
- Driver taps: "Mark as pre-existing, customer confirmed"
- Adds note: "Customer aware, photographed in pre-scan"

Customer Confirmation

- Driver: "Please review and sign to confirm this is accurate"
- Neha reviews on driver's phone:
 - Can rotate 3D model
 - Sees scratch clearly marked
 - Reads summary
- Neha: "Yes, this is correct"

- Signs digitally on screen with finger

2. Wireframes and Flow diagrams



3. User Acceptance Criteria

Documentation Quality:

95%+ of scans pass AI quality validation on first attempt

Average scan time: <90 seconds (pickup), <45 seconds (delivery)

Photo sharpness score: >0.85 average

Coverage completeness: >90% of item surface captured

Lighting adequacy: >80% of scans in acceptable lighting

User Experience:

Driver can complete documentation without training (intuitive UI)

Customer understands the process without explanation

Documentation doesn't cause booking abandonment (conversion rate maintained)

<5% of customers complain about "too much time at pickup"

Driver satisfaction with feature: >4.0/5

1. Edge cases

Edge Case 1: Poor Network Connectivity

- **Scenario:** Driver at pickup location with no/weak internet
- **Expected Behavior:**
 - App allows offline scan capture
 - Stores scans locally with queue indicator
 - Auto-uploads when connection restored
 - Shows "Will upload when online" message
 - Allows loading to proceed (captures timestamp)
- **Validation:** Upload success within 1 hour of connectivity restoration

Edge Case 2: Phone Battery Dies During Scan

- **Scenario:** Driver's phone shuts down mid-scan at pickup
- **Expected Behavior:**
 - Partial scan data saved to device
 - On restart, app prompts "Resume incomplete scan?"
 - Can resume from last captured angle (not start over)
 - If can't resume, start fresh but mark as "retry"
- **Fallback:** If phone can't be revived, allow manual photo upload via support portal

Edge Case 3: AI Processing Failure

- **Scenario:** Cloud AI service times out or errors
- **Expected Behavior:**
 - Retry automatically (3 attempts)
 - If still fails, show "Processing delayed, can proceed"
 - Store raw photos and process later
 - Send notification when processing complete
 - Don't block loading (but flag for manual review)

Tentative Timelines:

Task	Date
Leadership approval	22/09/2023
Design ready	
Prototype testing	
Development starts	
Beta Launch	

Dependencies:

1. Open Questions
2. Infrastructure requirements
3. Budget approvals
4. Partner Support (APIs, Partnerships)
5. Internal Dependencies (Tech, Design, Other Teams)

Related documents:

1. Tech planning document
2. Design planning document
3. Go to market planning