

InsureApp Product Case Study: Reducing Motor Insurance Claim Inspection Time

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Part 1: Problem Analysis & Solution Design

A. Stakeholders and Constraints

 Key Stakeholders	 Top 5 constraints	 Success metrics
<p>Primary stakeholders</p> <ul style="list-style-type: none">Claimants(15k/month) seeking fast settlementField inspectors (150+) concerned about jobsClaims processing team needing efficient workflows <p>Secondary stakeholders</p> <ul style="list-style-type: none">fraud detection, technology, customer support teamsBusiness stakeholders focus on cost reduction, ROI	<ul style="list-style-type: none">Regulatory Compliance must adhere to IRDAI guidelines for damage documentationFraud Risk - must maintain fraud rate <2% despite self-inspectionTechnology Readiness - current AI accuracy is 82%, needs >95%Change Management - 150+ inspectors need clear redeployment strategyCustomer Trust - building confidence in AI vs. human assessments.	<div><p>Customer NPS (94%→97%)</p></div> <div><p>Fraud rate (<2%)</p></div> <div><p>Cost per claim (₹850→₹250)</p></div> <div><p>Self-inspection completion rate</p></div>

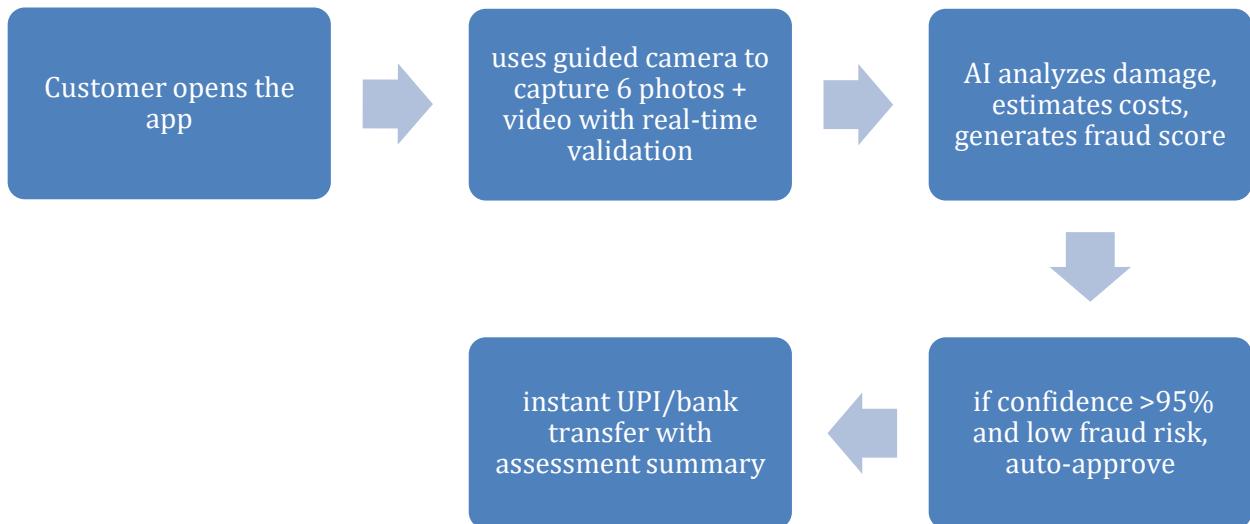
B. Solution Proposal: Smart Claims Platform

1. Solution Overview

Tier	Claim Type	Process	Target TAT
Tier 1 — AI Self-Inspection	< ₹25,000	Guided photos → AI damage detection → Auto-approval (if low fraud)	2 hours

Tier	Claim Type	Process	Target TAT
Tier 2 — Video Inspection	₹25k-₹75k	Live video call with inspector → AI-assisted scoring	12 hours
Tier 3 — Complex Claims	> ₹75k / ambiguous	Physical inspection → manual assessment	24 hours

2. USER JOURNEY



Total time: 2 hours vs. current 4.2 days

3.4 . MVP VS MLP COMPARISON

Phase	Timeline	Scope
MVP (Months 1-2)	Limited rollout (20% of claims < ₹10k)	<ul style="list-style-type: none"> • Guided photo capture • Basic AI (5 damage types) • Rule-based approval • Basic fraud checks

Phase	Timeline	Scope
MLP (Months 3-6)	Scale to 65% of eligible claims	<ul style="list-style-type: none"> Advanced AI (15+ damage types) Video inspection workflow Explainable AI dashboard Increase limit to ₹25k • Full analytics dashboard

5. Technology & Operational Requirements

React Native (mobile)

8 engineers, 2 data scientists, 1 PM

TensorFlow/YOLOv8 (AI)

Requires 50,000+ annotated training images and 2-day inspector workshop

WebRTC (video)

High-Fidelity Wireframes (Hero Screens)

Below are the primary user-facing screens for the Tier 1 self-inspection flow:

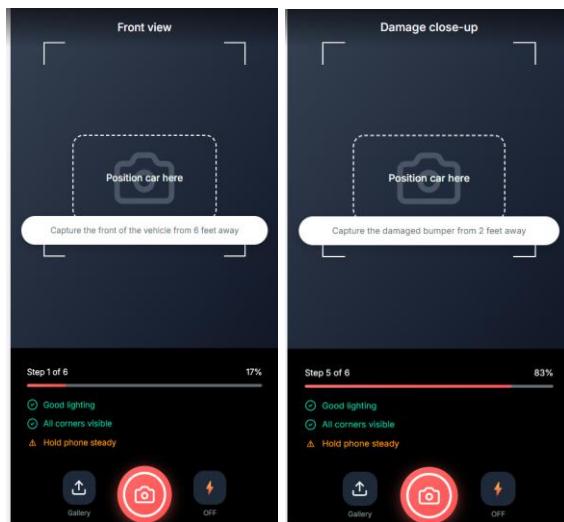


Figure 1 — Guided Capture Screen (Tier 1)

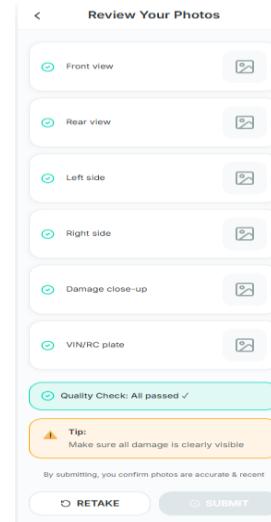


Figure 2 — AI Review & Fraud Check

****ALL WIREFRAMES ATTACHED IN THE ANNEXURES**

PART 2 — BUSINESS CASE & PRIORITIZATION C. IMPACT ASSESSMENT (12-MONTH PROJECTION)

Cost Savings	Revenue Impact	Investment
₹6.8 Cr	₹3.2 Cr	₹1.8 Cr
Inspector costs (5.2 cr), Support calls (0.8 Cr), Admin (0.8 Cr)	Retention (₹2.1 Cr), NPS Acquisition (₹0.9 Cr), Upsell (₹0.2 Cr)	Tech (₹1.2 Cr) AI training (₹0.3 Cr) Change mgmt. (₹0.3 Cr)
12-Month ROI: 450%		Net Business Benefit: ₹8.2 Cr

2. Top 3 Risks & Mitigation

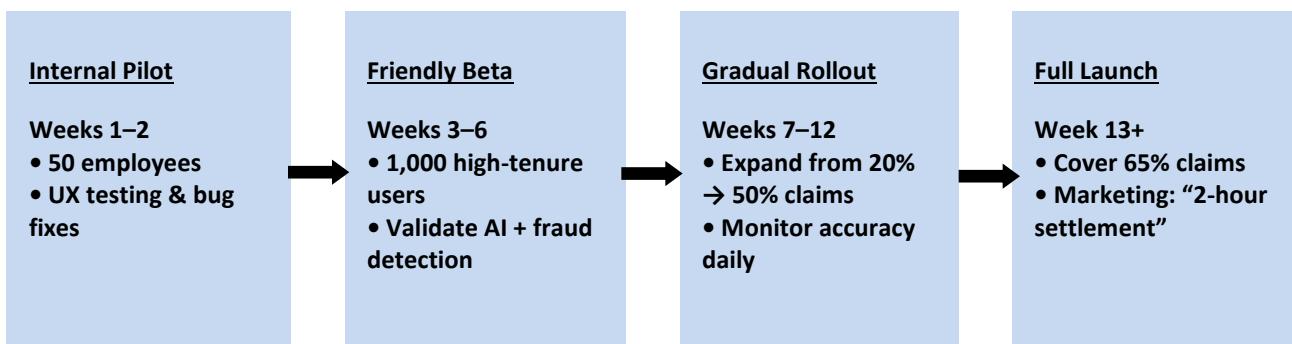
 1. Fraud Escalation- High Risk <ul style="list-style-type: none"> Multi-layer image forensics (EXIF, GPS, manipulation checks) 10% random audit of auto-approved claims Penalties + shared fraud registry 	 2. AI Accuracy & Trust — Medium <ul style="list-style-type: none"> Train model to >95% accuracy Visual overlays ("explainable AI") One-click Request Human Review 	 3. Inspector Displacement — Medium <ul style="list-style-type: none"> Upskill to "Claims Specialists" Redeployment to Tier-2/3 claims Manage via natural attrition
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D. FEATURE PRIORITIZATION (RICE FRAMEWORK)

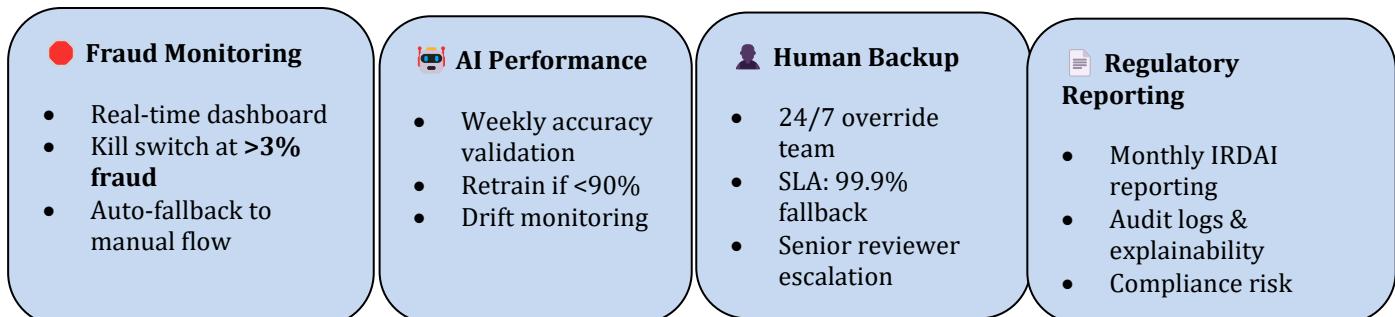
Feature	Reach	Impact	Confidence	Effort	R × I × C	RICE Score	Priority
AI Self-Inspection	450,000 users	0.9	0.75	4	303,750	112.5	P0
Instant Settlement <₹25k	600,000 users	1.0	0.85	5	510,000	153.9	P0

<u>Feature</u>	<u>Reach</u>	<u>Impact</u>	<u>Confidence</u>	<u>Effort</u>	<u>R × I × C</u>	<u>RICE Score</u>	<u>Priority</u>
Real-Time Fraud Detection	400,000 users	0.8	0.75	4	240,000	97.1	P0
Video Inspection	200,000 users	0.7	0.7	5	98,000	73.5	P1
Progress Tracker	550,000 users	0.9	0.85	3.5	420,750	142.5	P1
Explainable AI	120,000 users	0.4	0.7	4	33,600	17.1	P1
Smart Document Validator	220,000 users	0.5	0.8	3.1	88,000	28.4	P2
Inspector Live Tracking	150,000 users	0.5	0.6	3.5	45,000	21.6	P2

E .GO-TO-MARKET PLAN



2. RISK MONITORING



F. Success Metrics Dashboard

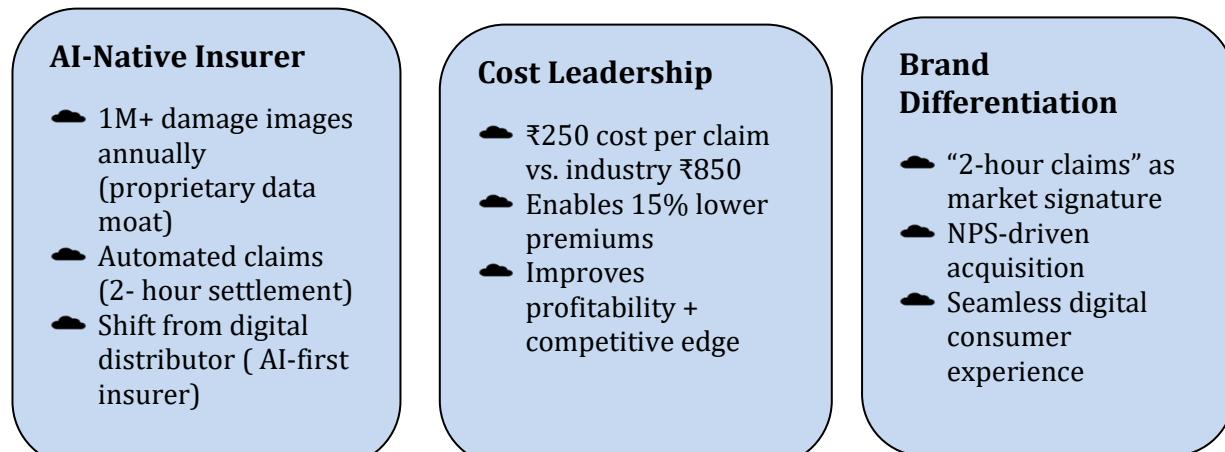
Category	Metrics
North Star Metric	% Claims settled <24 hours → Target: 50% by Month 6
Primary Metrics	Avg TAT (4.2 to 2.5 days) , Self-Inspection Adoption (0% → 65%) ,AI Auto-Approval (→75%) , NPS (94 → 97)
Guardrail Metrics	Fraud <2% , AI Accuracy >92% ,Complaints 18% → <12%
30-60-90 Milestones	30 days: 6h TAT, 88% acc. 60 days: 4h, 91% acc. 90 days: 2h TAT, 94% acc. NPS 97

30-60-90 A VISUAL GRID

Milestone	30 Days	60 Days	90 Days
Claims Processed	1,000	3,000	5,000 (33%)
Average TAT	<6 hours	<4 hours	<2 hours
AI Accuracy	88%	91%	94%
NPS	—	—	97%

G. Future Vision

1. ALIGNMENT WITH DIGITAL-FIRST STRATEGY



2. ADJACENT PROBLEMS UNLOCKED

Dynamic Pricing

- Use AI at renewal to assess vehicle condition
- Offer 10% discount for good upkeep
- ₹15 Cr revenue impact

Predictive Maintenance

- Detect minor wear during inspection
- Prevent 8–12% claims
- Lower loss ratio

Instant Policy Issuance

- Apply self-inspection at purchase
- Reduce underwriting from 24h → 10 min

Cashless Repair Optimization

- AI estimates sent to garages instantly
- Reduce TAT from 5 days → 2 days

3. MOONSHOT VISION

Autonomous Claims Ecosystem (10-year horizon)

- ➔ IoT detects accident → auto-opens claim
- ➔ AI calls customer, guides capture
- ➔ Fully automated → **30-minute settlement**

AI Claims Concierge

- ➔ Voice activation → “Alexa, file my claim”
- ➔ Auto-book garage + Uber
- ➔ Full WhatsApp updates
- ➔ No Human involvement

Predictive Prevention + Blockchain

- ➔ Predict accident risk by weather, route
- ➔ Push alerts; rewards for safe driving **20% reduction** in claim frequency
- ➔ Blockchain-based fraud network
- ➔ Industry-wide savings: **₹500 Cr**

SECTION: Additional POVs (Bonus)

1. Additional Data Points Needed

- a. Customer behavior data (claim rejection reasons, demographics, repeat patterns, preferred channels)
- b. Operational data (inspector utilization, fraud detection false positives/negatives, exact claim value distribution, competitor TAT benchmarks).

2. Handling Self-Inspection Fraud

- a. **Detection** - AI image forensics analyzes EXIF data and metadata, GPS location verification, vehicle history cross-check, pattern analysis (e.g., claim within 48h of purchase).
- b. **Response** - flag for manual review → physical inspection + interview → if confirmed: reject claim + legal notice + IRDAI report + blacklist customer.
- c. **Long-term** - continuously improve AI with fraud cases, quarterly model retraining.

3. Competitor ₹500 Instant Rewards Response

- a. **Philosophy** - compete on experience, not gimmicks (₹500 cashback costs competitor ₹9 Cr annually, unsustainable).
- b. **Short-term** - monitor churn (if <5%, do nothing), PR campaign emphasizing "Speed > Cash."
- c. **Mid-term** - launch claims loyalty program (points for smooth claims), partner benefits (free car wash).
- d. **Long-term** - product superiority through predictive maintenance, ecosystem integration with garages, wait for competitor cash burn while building defensibility.
- e. **Key Insight:** Our ₹600 savings per claim funds better long-term features.

Conclusion & Recommendation

The Smart Claims Platform is a transformative initiative that will deliver significant value to both customers and the business. With a projected **450% ROI in the first year** and a clear path to reducing TAT by 65%, this solution will solidify InsureApp's position as a market leader.

Recommendation: Proceed with the phased rollout, starting with an MVP in the first month. This approach will balance speed-to-market with rigorous risk management, ensuring a successful launch that delivers on our promise of a fast, fair, and transparent claims experience.

Annexures:

AI Tool Usage Disclosure

Overview

In preparing this case study, I used AI tools selectively and intentionally, following a **systems-thinking workflow**. Instead of relying on a single tool, I leveraged each AI system according to its unique strengths, while ensuring all core analysis, synthesis, decisions, and final writing were human-led.

1. Research & Analysis Workflow

I adopted a **curated research pipeline** combining multiple tools:

a. ChatGPT – Project-Based Deep Research

- I created a dedicated **ChatGPT project** with all background documents (problem statement, competitor info, raw notes).
- All “deep research” was run *inside this project* so responses stayed contextual and grounded.
- Any AI-generated research summaries were manually reviewed and uploaded back into the project to build a **persistent knowledge base**.
- I used ChatGPT to produce early drafts of buyer profiles, strategic recommendations, and structured analyses, but **final judgment and edits were done manually**.

b. Perplexity – Source-Curated Factual Research

- I used Perplexity to collect **up-to-date information** on competitors, claims benchmarks, and insurance market trends.
- I specifically prompted Perplexity to return **URLs only**, ensuring I could manually verify sources before using them.
- This ensured accuracy and mitigated hallucinations.

c. NotebookLM – High-Fidelity Synthesis

- I imported selected articles, reports, and Perplexity URLs into a **NotebookLM notebook**.
- I assigned the notebook a **persona** (e.g., “insurance market strategist”) to ensure responses stayed analytical.
- NotebookLM was used to synthesize research into structured outputs like:

- Opportunities and risks
- Competitor messaging analysis
- Market insight reports
- I did **not** use NotebookLM to generate any final narrative or recommendations—those remained human-authored.

2. Strategic Visualization Workflow

a. Gemini (Canvas Mode) – Infographics & Visual Structuring

- I uploaded select research summaries into **Gemini Canvas** to explore visualization options (flow diagrams, strategic pillars, claim journeys).
- Gemini was used only for **visual ideation**, not conceptual decision making.
- All diagrams and visual elements were manually recreated or edited in Word/Figma.

b. Claude – Higher-Level Strategic Visualization

- Claude was used for **precision-driven visualization concepts**, specifically dashboards or structural layouts.
- I also tested Claude's **SVG artifacts** feature to generate editable vector diagrams, which I manually refined in Figma.
- No numerical or strategic decisions were delegated to Claude(only formatting support)

3. Human Oversight & Ethical Use

To maintain academic and competition integrity:

- I did **not** use AI for end-to-end writing.
- All numerical assumptions, prioritization logic, business frameworks, and conclusions were personally derived.
- All AI-generated content was **fact-checked, edited, validated**, and aligned with the case's constraints.
- AI was used as an **assistant**, not a substitute for analysis or judgment.
- No proprietary or confidential company data was uploaded into any AI tool.

** Wireframes of the prototype Insure APP

File New Claim

Claim Amount: ₹18,500

Choose Inspection Method:

- Self-Inspection**
 - Instant (2-4 hours)
 - No inspector visit
- Physical Inspection**
 - 2-3 days
 - Inspector visits

SCHEDULE

For claims <₹25k, self-inspection is faster!

1.Choose 2.Capture 3.Review 4.Result 5.Track 6.

Front view

Position car here

Capture the front of the vehicle from 6 feet away

Step 1 of 6

Good lighting
All corners visible
Hold phone steady

1.Choose 2.Capture 3.Review 4.Result 5.Track 6.

Review Your Photos

- Front view
- Rear view
- Left side
- Right side
- Damage close-up
- VIN/RC plate

1.Choose 2.Capture 3.Review 4.Result 5.Track 6.

Assessment Complete!

Approved Amount: ₹18,500

Claim #CLM45678

Detected damage

Damage Breakdown

- Front bumper replacement ₹8,500 (Parts + Labor)
- Paint work (2 panels) ₹6,000
- Headlight alignment ₹4,000

Total: ₹18,500

1.Choose 2.Capture 3.Review 4.Result 5.Track 6.Discuss 7.Schedule

My Claims

Claim #CLM45678 Maruti Swift | ₹18,500

Photos AI Approve Pay

Currently: Under Review

Timeline

- 10:15 AM Photos received
- 10:18 AM AI assessed
- 10:45 AM Human review in progress

Questions? CHAT SUPPORT

ENABLE NOTIFICATIONS

1.Capture 2.Review 3.Result 4.Track 5.Discuss 6.Schedule 7.

Dispute Assessment

AI Estimate: ₹18,500

Why are you disputing?

- Damage is more severe
- Missing parts in estimate
- Other reason

Explain your concern:

Describe the issue with the assessment...

Upload additional evidence:

PHOTOS VIDEO

Human reviewer will respond within 2 hours

SUBMIT DISPUTE

1.Capture 2.Review 3.Result 4.Track 5.Discuss 6.Schedule 7.

Schedule Inspection

Inspector: Rajesh Kumar ★ 4.8
+91 98765 43210

Select Date & Time:

Nov 15

- 10:00 AM - 12:00 PM
- 2:00 PM - 4:00 PM ✓
- 5:00 PM - 7:00 PM

Inspection Location:

- Home (123 MG Road) ✓
- Office
- Partner Garage

Inspector will arrive at your doorstep

Avg. inspection time: 1 hour

1.Capture 2.Review 3.Result 4.Track 5.Discuss 6.Schedule 7.



Scan for the figma link :