

Lesson 9: InsurTech

Module 1: FinTech Fundamentals

Digital Finance

Insurance Industry Challenges

Legacy Problems

- Manual underwriting
- Slow claims processing
- High operating costs (25-30%)
- Customer experience gaps

Traditional Insurance: Key Pain Points

Complex Products

- * Difficult to understand
- * Hidden exclusions
- * Over-insurance common

Slow Processes

- * Lengthy applications
- * Manual underwriting
- * Paper-heavy claims

Poor Experience

- * Infrequent contact
- * Adversarial claims
- * Limited transparency

High Costs

- * Agent commissions (15-20%)
- * Legacy IT systems
- * Fraud losses (5-10%)

Risk Assessment

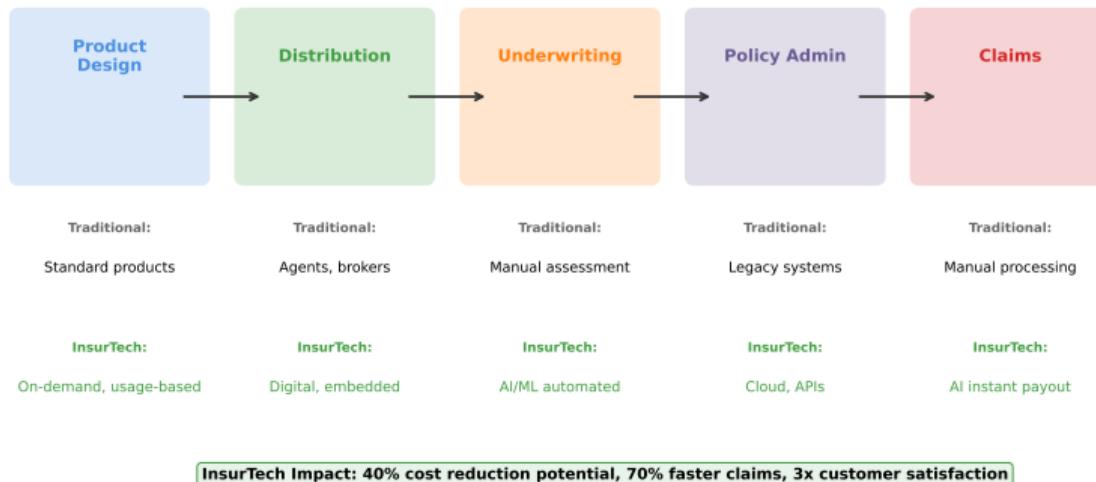
- * Limited data points
- * Static pricing
- * Cross-subsidization

Distribution

- * Agent dependency
- * Limited digital reach
- * Channel conflicts

[INDUSTRY ANALYSIS]

InsurTech Disruption Across the Value Chain



Source: McKinsey Insurance Practice (2024)

Lemonade Case Study

AI-First Insurer

- Founded: 2015
- 90 second policy purchase
- 3 minute claims (simple)
- Behavioral economics model

Lemonade: AI-First Insurance Model



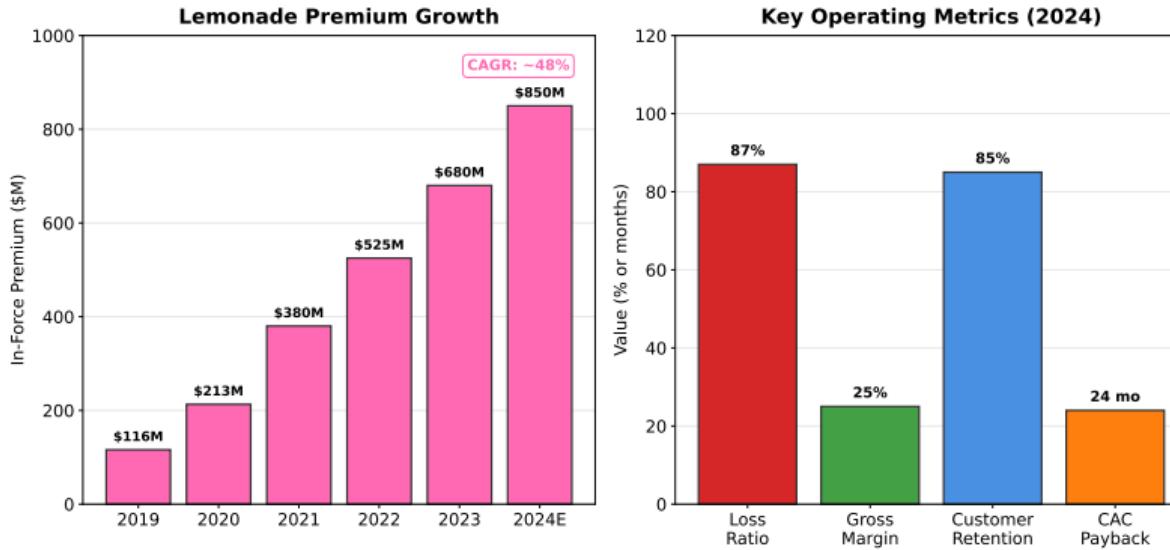
Giveback Program

Unclaimed premiums donated to charity chosen by policyholder
Removes adversarial relationship - Lemonade profits same regardless of claims

Founded: 2015 | IPO: 2020 | Products: Renters, Home, Pet, Car, Life | Markets: US, EU

Source: Lemonade company filings (2024)

Lemonade Business Model

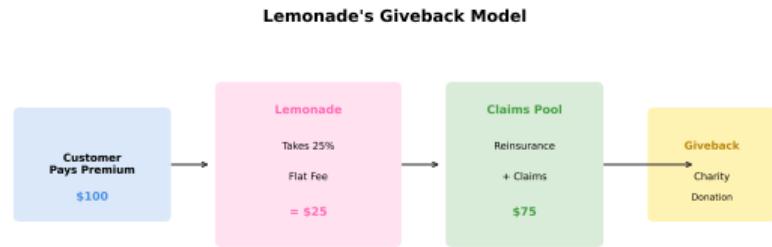


Source: Lemonade SEC filings, Q3 2024 earnings | Note: Not yet profitable, targeting 2025-2026

Giveback Program

Behavioral Innovation

- Flat 25% fee
- Remaining to causes
- Reduces fraud incentive
- Community alignment



Why It Works:

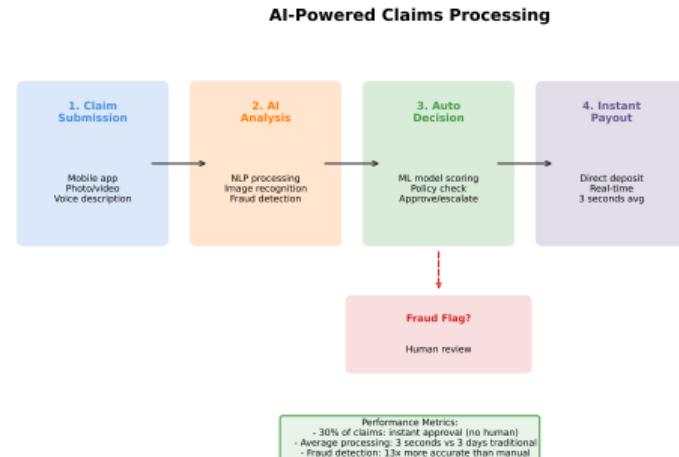
1. Removes conflict of interest - Lemonade earns same fee regardless of claims
2. Reduces fraud - customers less likely to defraud their chosen charity
3. Creates community - policyholders grouped by charity preference
4. Social impact - \$10M+ donated since 2017

Source: Lemonade Giveback Report (2024)

AI Claims Processing

AI Jim

- Computer vision analysis
- Anti-fraud detection
- Instant approval (40%)
- Human escalation



Source: Lemonade, Tractable AI case studies (2024)

Usage-Based Insurance (UBI)

Telematics Revolution

- Pay-per-mile models
- Driving behavior tracking
- 30-50% savings potential
- IoT sensor integration

Usage-Based Insurance (UBI)

Pay-How-You-Drive / Pay-As-You-Drive

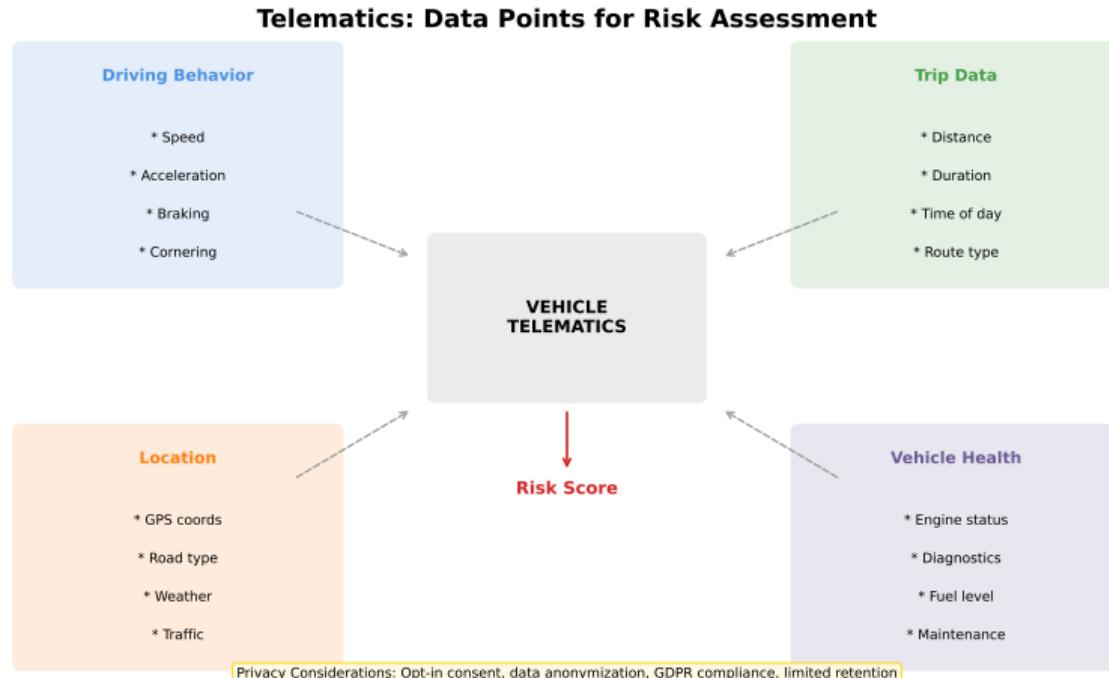


Data Collection Methods



UBI Market: \$35B (2024) | Growth: 25% CAGR | Adoption: 20% of US auto policies by 2025

Source: Prolimus Consulting, Allied Market Research (2024)



Source: LexisNexis Risk Solutions, Verisk Analytics (2024)

Progressive Snapshot Program

UBI Pioneer

- 14M enrolled drivers
- Average 16% discount
- Hard braking penalty
- Mileage-based pricing

Progressive Snapshot: UBI Pioneer

Launched 2011 - First major US telematics program



Scoring Factors:

* Hard Braking	High Impact
* High-Speed Driving	High Impact
* Night Driving	Medium Impact
* Miles Driven	Medium Impact

Program Results (2024):
- 35M+ drivers enrolled since launch
- Average discount: 15%
- Best drivers save: up to 30%
- 25% fewer accidents among participants
- \$1B+ in customer savings

Source: Progressive Insurance annual reports, company website (2024)

Parametric Insurance

Index-Based Payouts

- Predefined trigger events
- No claims adjuster needed
- Weather derivatives
- Instant payout automation

Parametric (Index-Based) Insurance

Traditional Insurance

1. Event occurs

2. File claim

3. Adjuster inspection

4. Loss assessment

5. Negotiation

6. Payout (weeks/months)

Common Triggers:
- Weather: rainfall, temperature, wind speed
- Seismic: earthquake magnitude
- Financial: index levels, commodity prices
- Event: flight delays, pandemic cases

Parametric Insurance

1. Event occurs

2. Index triggered

3. Automatic verification
Key Innovation:

No loss adjustment!

Payout based on trigger
not actual loss

Benefits: Transparency, speed (hours not months), lower costs, no moral hazard

(CONCEPTUAL DIAGRAM)

Parametric Insurance: Real-World Examples

Caribbean Hurricane

Trigger: Cat 4+ hurricane

Payout: \$50-200M

CCRIF (Caribbean)

Crop Weather

Trigger: Rainfall < threshold

Payout: Per-acre coverage

ACRE Africa

Earthquake

Trigger: Magnitude > 6.0

Payout: Tiered by severity

Global Parametrics

Flight Delay

Trigger: Delay > 2 hours

Payout: \$50-500 instant

Revolut, Blink

Solar Radiation

Trigger: Solar output drop

Payout: Revenue protection

kWh Analytics

Pandemic

Trigger: WHO declaration

Payout: Business interruption

World Bank PEF

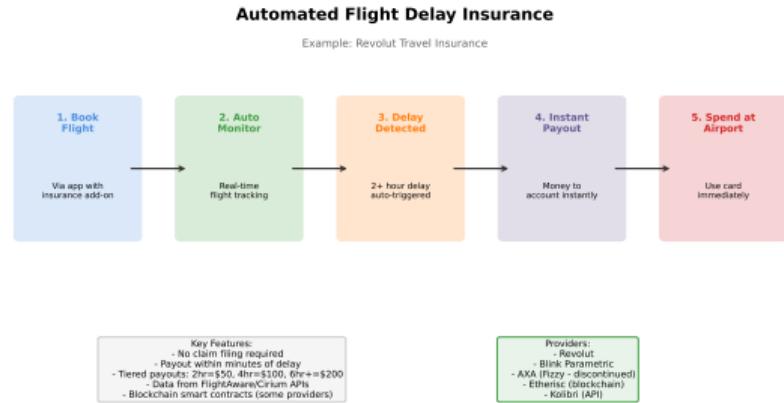
Parametric Market: \$15B+ (2024) | Growth: 15% CAGR | Climate risk driving adoption

Source: Swiss Re, Munich Re, Aon parametric reports (2024)

Flight Delay Insurance

Automated Payout

- Delay > 2 hours = trigger
- Flight data API integration
- Instant payment via app
- No claim form required



Source: Revolut, Blink Parametric product documentation (2024)

Embedded Insurance

Point-of-Sale Integration

- E-commerce checkout
- Travel booking sites
- Ride-sharing apps
- Device purchases

Embedded Insurance: Insurance at Point of Sale

Traditional Distribution

Embedded Insurance



Examples:

Tesla
Auto insurance at purchase

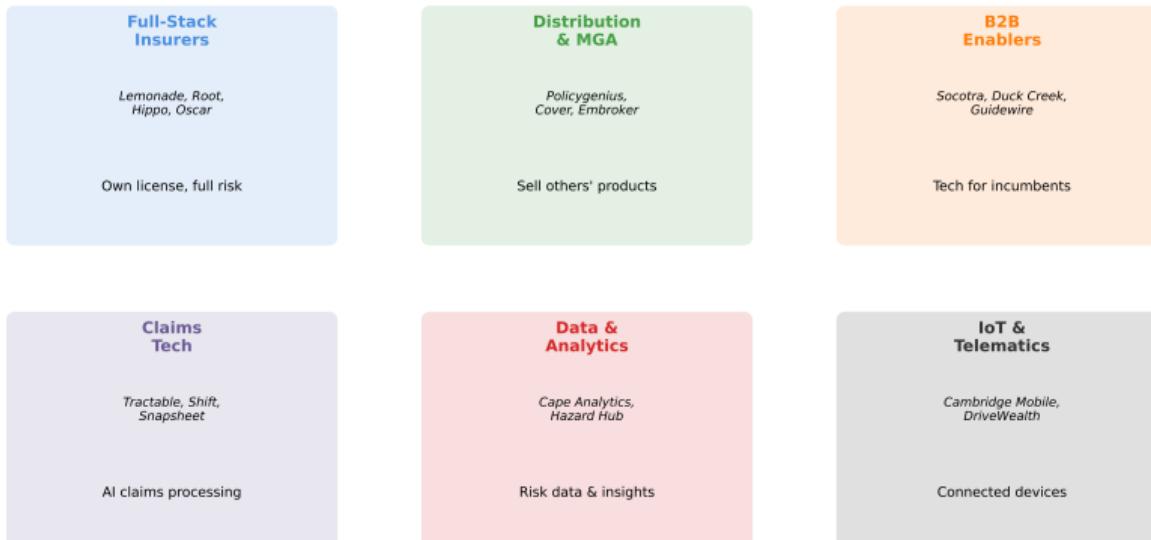
Uber
Ride protection per trip

Amazon
Product warranty extension

Embedded Insurance Market: 70B(2024) | Projected: 720B by 2030 | CAGR: 35%

Source: InsTech London, Simon-Kucher embedded insurance report (2024)

InsurTech Market Segments



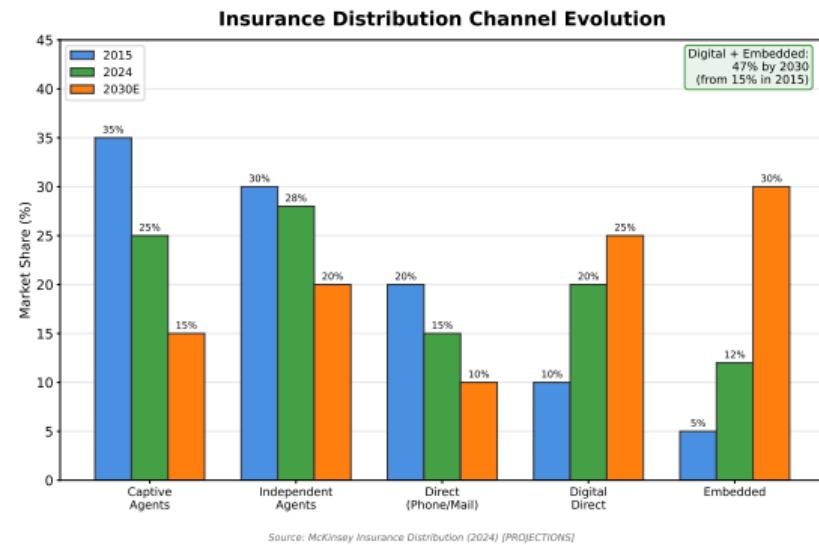
InsurTech Funding (2024): \$4.5B | 300+ deals | Focus shifting to profitability

Source: CB Insights, Gallagher Re InsurTech report (2024)

Distribution Innovation

New Channels

- Digital brokers (PolicyGenius)
- Aggregators (Compare.com)
- White-label platforms
- API-first models



Regulatory Challenges

Compliance Burden

- State-by-state licensing
- Capital requirements
- Rate approval process
- Data privacy constraints

InsurTech Regulatory Landscape



Source: NAIC, EIOPA, Lloyd's regulatory guidance (2024)

Incumbent Response

Digital Transformation

- Partnerships with startups
- In-house innovation labs
- Acquisitions (MetLife → Versicherix)
- API platform development

Incumbent Response to InsurTech Disruption



Incumbent Digital Investment (2024):
- Global insurers spent \$15B+ on digital transformation
- 70% have dedicated innovation labs
- 50%+ use AI in claims processing
- Average IT spend: 3-5% of premiums

Source: Deloitte Insurance Outlook, Accenture Insurance Technology (2024)

Future: Predictive Prevention

From Reactive to Proactive

- IoT risk prevention
- Health wearable integration
- Smart home monitoring
- Dynamic pricing

The Future: Predictive & Preventive Insurance



Enabling Technologies:
- IoT sensors (home, health, auto)
- Real-time data analytics
- AI-powered models
- Smart contracts
- Digital twins

The Vision: Insurance Shifts from "Indemnify Loss" to "Prevent Loss"
Insurers become risk management partners, not just claims payers

(FORWARD-LOOKING ANALYSIS)

Key Takeaways

- **Lemonade:** Behavioral economics + AI reduces costs to 25%
- **UBI:** Telematics enables 30-50% personalized discounts
- **Parametric:** Automated triggers eliminate claims process
- **Embedded:** Point-of-sale integration captures moments
- **Future:** Predictive prevention over reactive coverage