

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

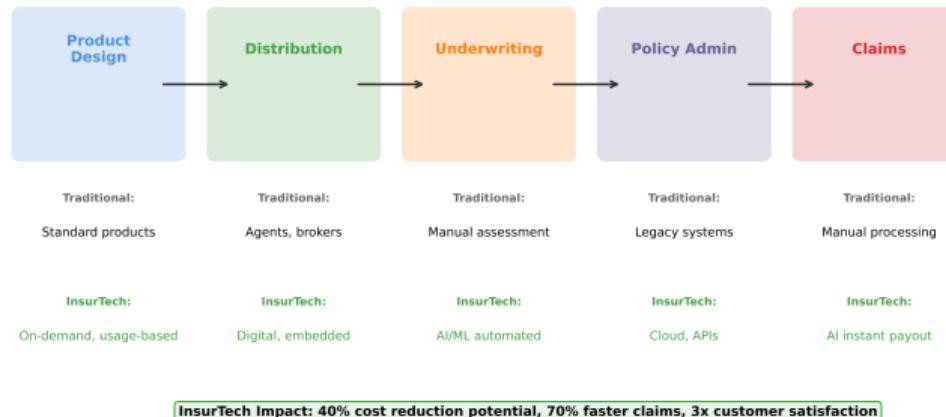
Distribution

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

(INDUSTRY ANALYSIS)

Insurance legacy systems struggle with 25-30% operating costs—InsurTech disrupts every step.

InsurTech Disruption Across the Value Chain



Source: McKinsey Insurance Practice (2024)

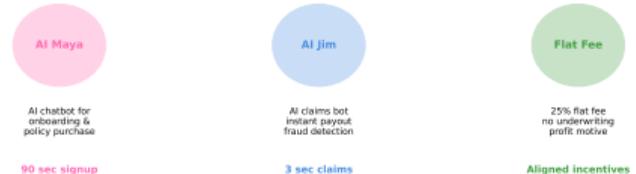
InsurTech companies target specific pain points—from underwriting to claims to distribution.

Lemonade Case Study

AI-First Insurer

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

Lemonade: AI-First Insurance Model

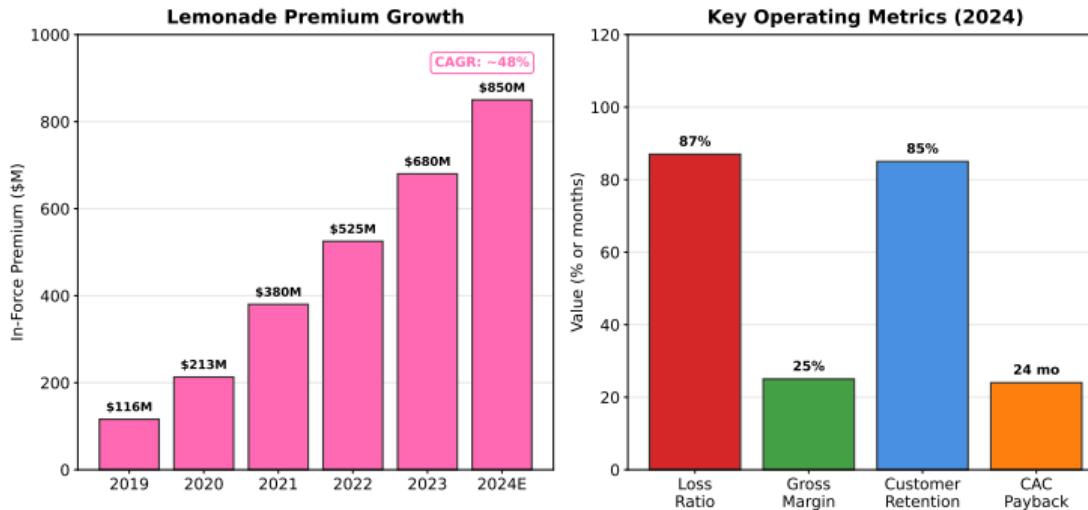


Founded: 2015 | IPO: 2020 | Products: Renters, Home, Pet, Car, Life | Markets: US, EU

Source: Lemonade company filings (2024)

Lemonade offers 90-second policy purchase and 3-minute claims—AI-first from day one.

Lemonade Business Model



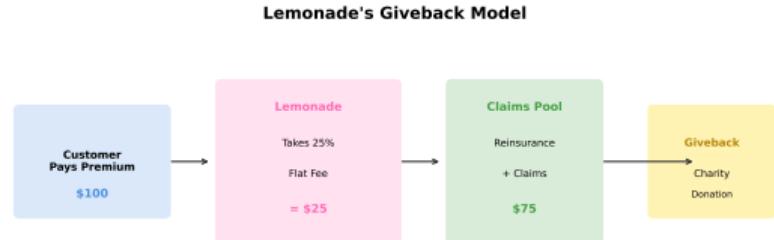
Source: Lemonade SEC filings, Q3 2024 earnings | Note: Not yet profitable, targeting 2025-2026

Flat 25% fee model with Giveback charity donation—reduces fraud incentive through alignment.

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

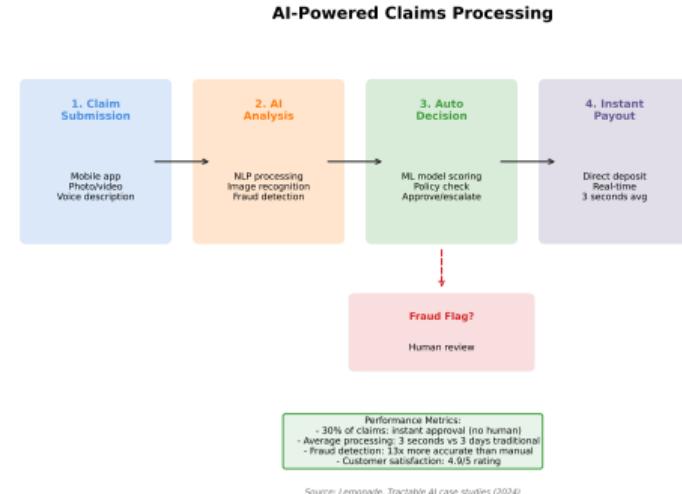
Source: Lemonade Giveback Report (2024)

Behavioral economics: customers donate unclaimed premiums to charity—reducing fraudulent claims.

AI Claims Processing

AI Jim

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

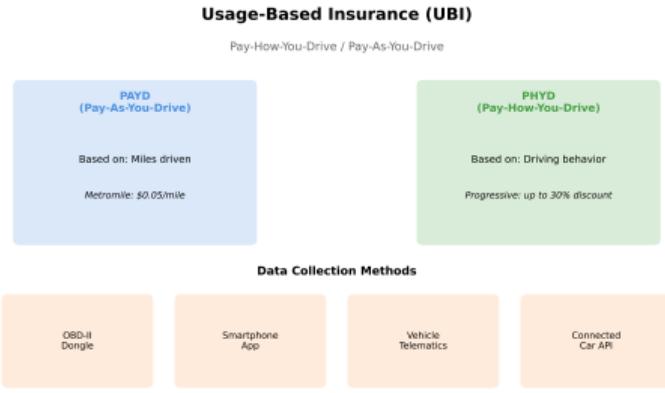


AI Jim approves 40% of claims instantly—computer vision and anti-fraud detection automate the rest.

Usage-Based Insurance (UBI)

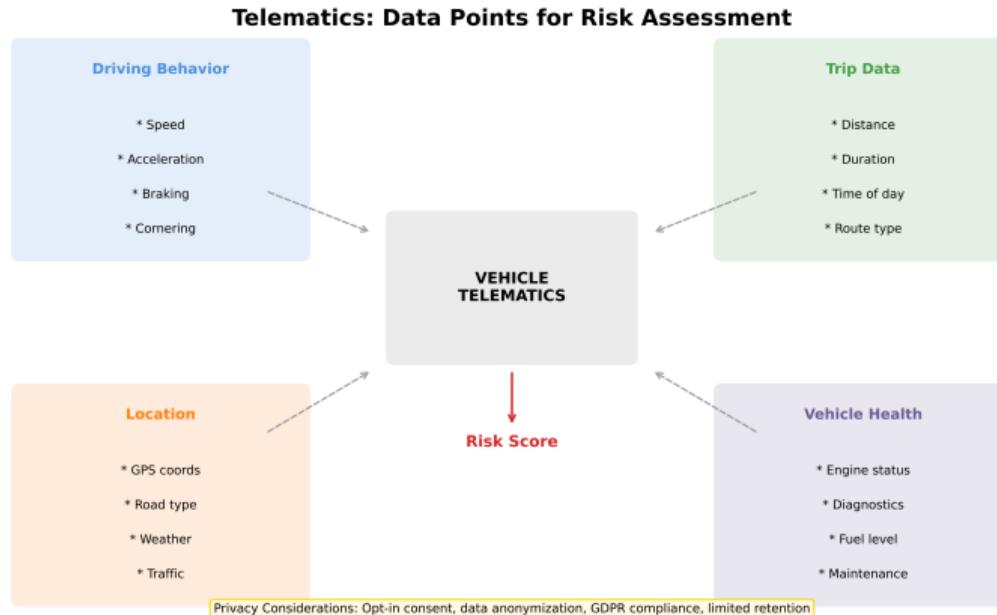
Telematics Revolution

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



Source: Ptolemus Consulting, Allied Market Research (2024)

Telematics-based pricing offers 30-50% savings for safe drivers—IoT sensors track behavior.



Source: LexisNexis Risk Solutions, Verisk Analytics (2024)

Hard braking, acceleration, speed, and mileage data determine personalized premiums.

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 (2014):	
- 35M drivers	at program launch
- Average discount: 15%	
- Best drivers save: up to 30%	
- 25% fewer accidents among participants	
- \$1B+ in customer savings	

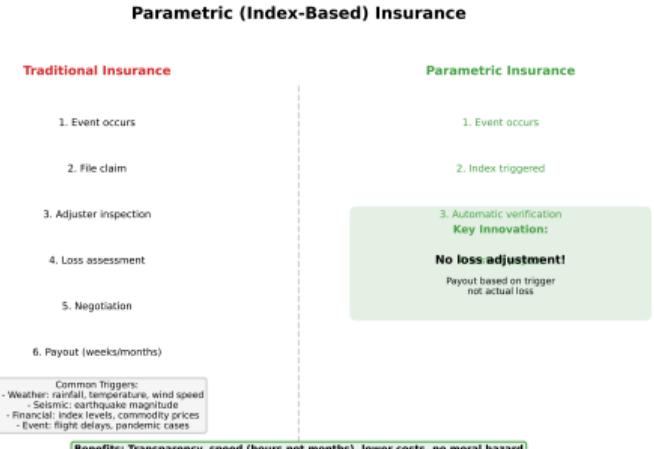
Source: Progressive insurance annual reports, company website (2024)

Progressive enrolled 14M drivers—average 16% discount through behavioral monitoring.

Parametric Insurance

Index-Based Payouts

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



(CONCEPTUAL DIAGRAM)

Index-based triggers eliminate claims adjusters—predefined events trigger instant payouts.

Parametric Insurance Examples

Parametric Insurance: Real-World Examples

Caribbean Hurricane Trigger: Cat 4+ hurricane Payout: \$50-200M <i>CCRIIF (Caribbean)</i>	Crop Weather Trigger: Rainfall < threshold Payout: Per-acre coverage <i>ACRE Africa</i>	Earthquake Trigger: Magnitude > 6.0 Payout: Tiered by severity <i>Global Parametrics</i>
Flight Delay Trigger: Delay > 2 hours Payout: \$50-500 instant <i>Revolut, Blink</i>	Solar Radiation Trigger: Solar output drop Payout: Revenue protection <i>kWh Analytics</i>	Pandemic Trigger: WHO declaration Payout: Business interruption <i>World Bank PEF</i>

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

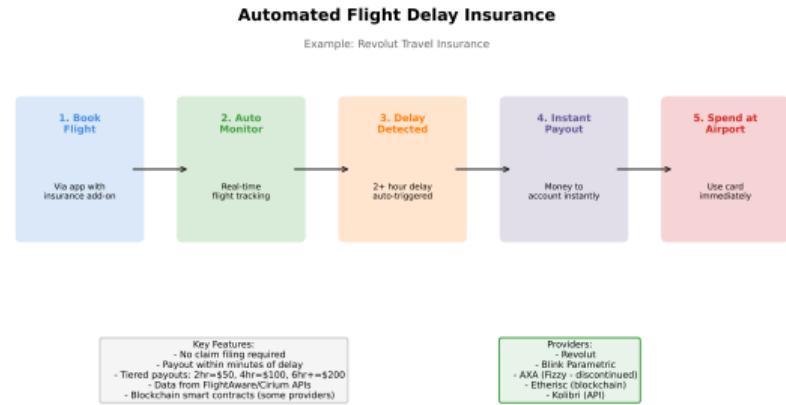
Source: Swiss Re, Munich Re, Aon parametric reports (2024)

Weather, earthquakes, flight delays, and crop yields all enable parametric products.

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)

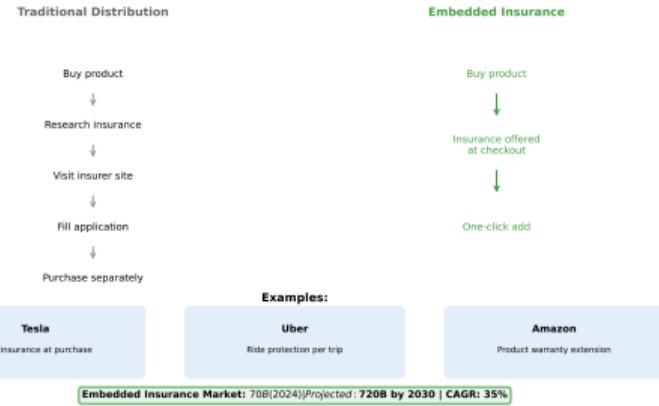
2+ hour flight delay triggers automatic payout—no claim form, instant API-based processing.

Embedded Insurance

Point-of-Sale Integration

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

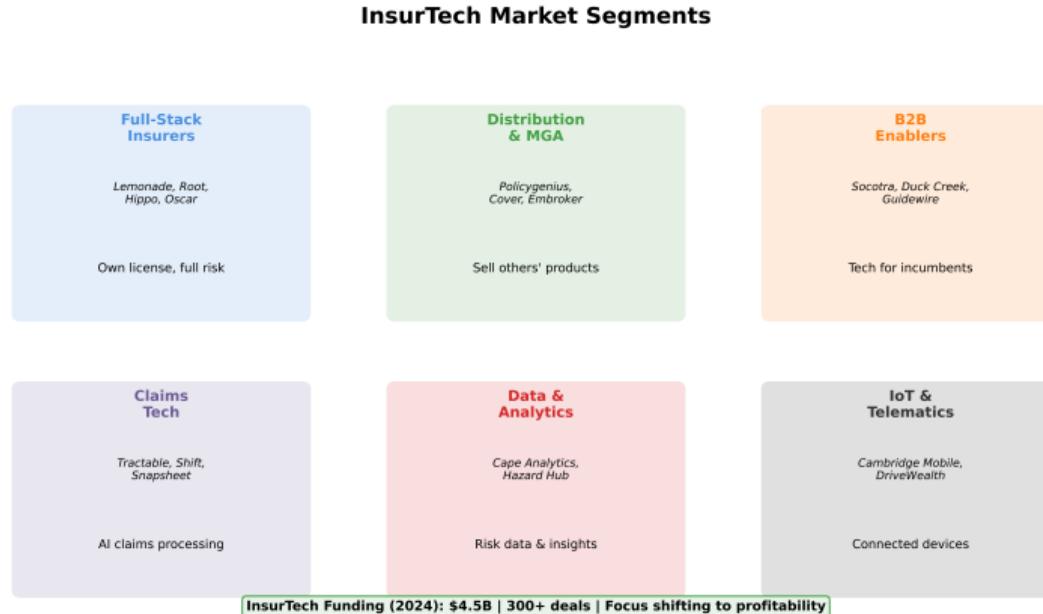
Embedded Insurance: Insurance at Point of Sale



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

Point-of-sale insurance captures the moment of need—integrated into e-commerce and travel.

InsurTech Market Segments



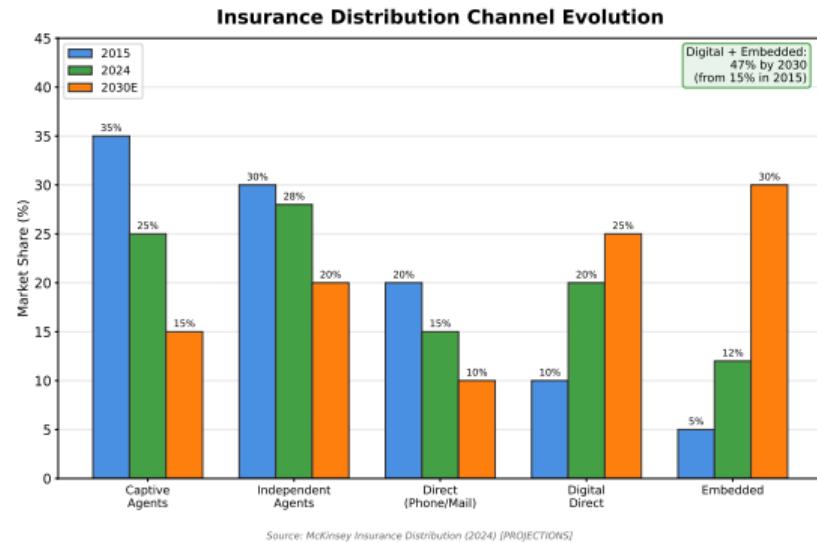
Source: CB Insights, Gallagher Re InsurTech report (2024)

Personal lines, commercial, life, and health each have specialized InsurTech disruptors.

Distribution Innovation

New Channels

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

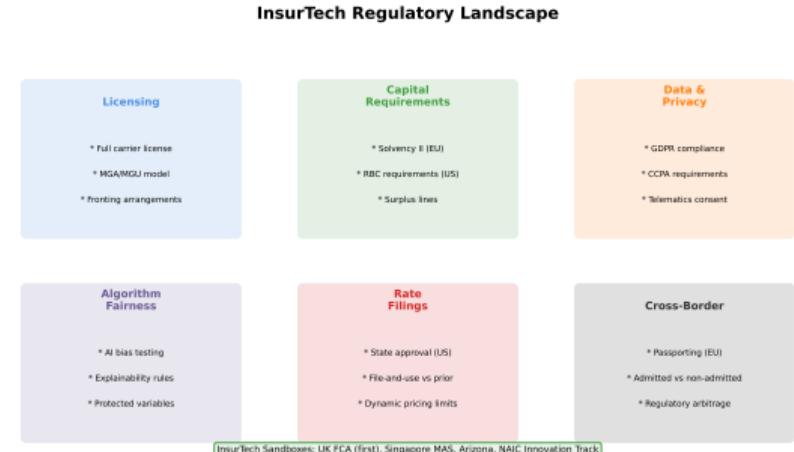


Digital brokers and aggregators bypass traditional agents—API-first enables embedded distribution.

Regulatory Challenges

Compliance Burden

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



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

State-by-state licensing and capital requirements slow InsurTech expansion—compliance is costly.

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

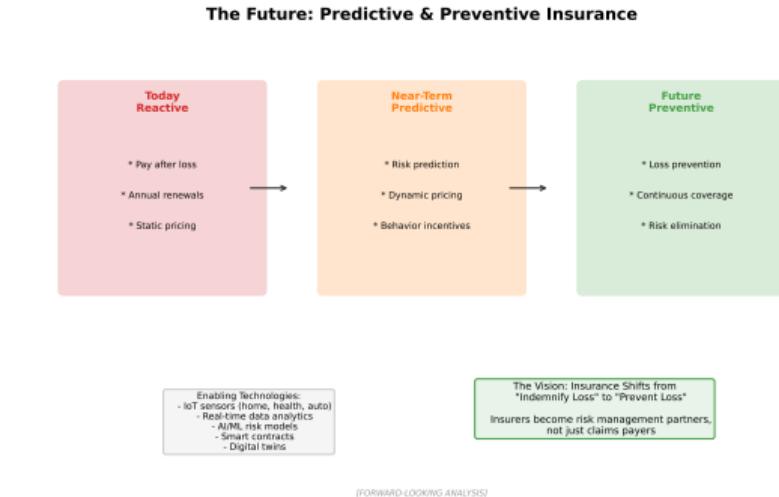
Source: Deloitte Insurance Outlook, Accenture Insurance Technology (2024)

Traditional insurers partner, acquire, and build innovation labs—digital transformation accelerates.

Future: Predictive Prevention

From Reactive to Proactive

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



IoT and wearables enable prevention over coverage—from reactive claims to proactive risk reduction.

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

InsurTech transforms insurance from reactive claims processing to proactive risk prevention.