Pricing Emerging Risks

CAS Ratemaking, Product, and Modeling Seminar
July 2020

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Agenda

1	**Introductions**
2	**Emerging Risks & Challenges**
3	**Rate Development Steps**
4	**Case Studies**

Introductions

The Bakers

- Sheri Scott, Milliman

- Andrew Williamson, Milliman

- Rob Mackethan, Lime

- Chin Chang, hippo

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Poll 1

What lines of business do you work in?

1. Commercial Auto
2. Commercial Liability
3. Commercial Property
4. Cyber Risk
5. Homeowners
6. Personal Auto
7. Surety
8. Workers Compensation
9. Other

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4	**Case Studies**

Emerging Risks

- Autonomous Vehicles

- Ride Services

- Smart Homes

- Internet Cyber Attack

- Rocket Transportation

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Emerging Risk Insurance Challenges

- Difficult to Get Relevant Insurance Coverage – Legacy Program Inertia

- Difficult to Get Reasonable Price – Conservative Pricing for Unknown

- Difficult to Find Experts to Underwrite, Adjust, Service

- Loss Data – Limited to None

- InsurTech Revolution

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Rate Development Recipe

Gather the Ingredients

- Loss Data
  - Actual data
  - Pieces of actual data
  - Similar risk data
  - Competitor filing loss costs
  - Advisory loss costs

- Rate Plan Factors

- Expense Loads

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Rate Development Recipe

Mix the Ingredients

- Set Base Rate Level
  - Competitive comparison
  - Rate offsets

- Draft Rule Manuals

- Draft Policy Form Language

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Rate Development Recipe

Bake and Present to Judges

- ## Final Insurance Product
  - Rate and Rule Manual
  - Underwriting Guidelines
  - Policy Forms

- ## State Regulatory Filings
  - Surplus Lines Desk Filing
  - Admitted State Filings
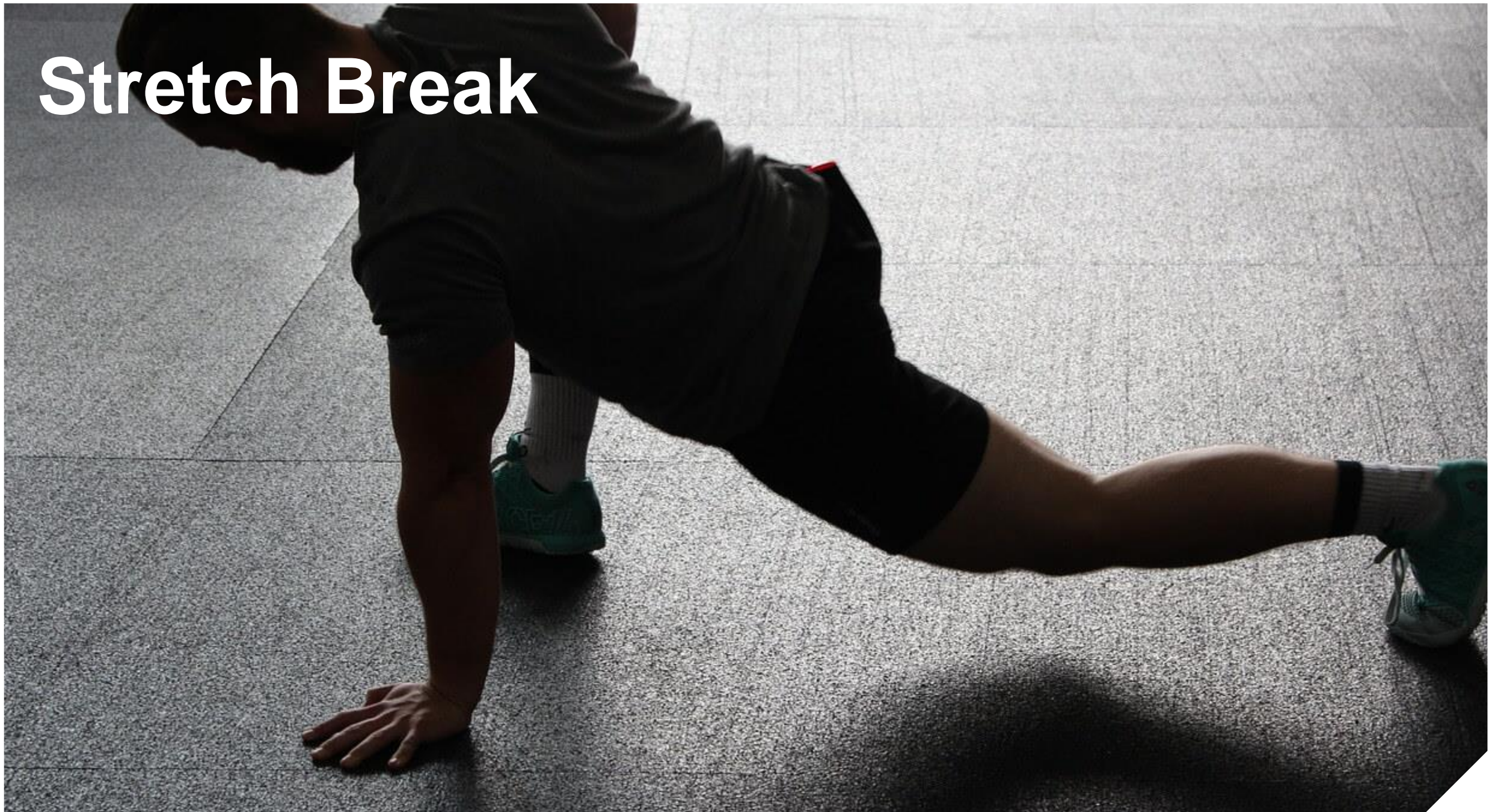 - Rate/Rule
  - Forms
  - Underwriting
  - Model

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Polls 2 and 3

Who has built an insurance product or rates for an emerging risk?

- Yes or No

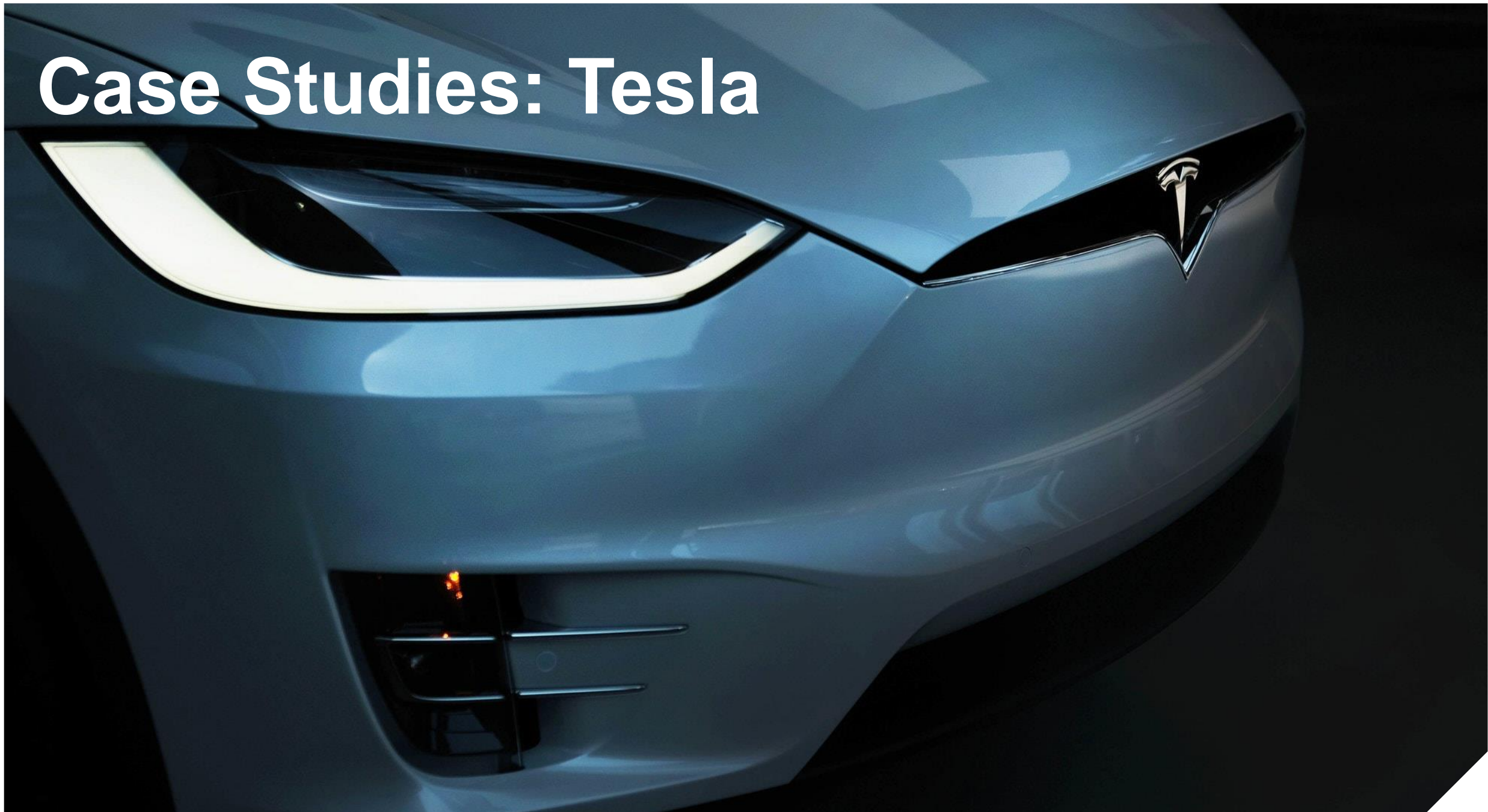What challenges did you face?

- Enter into chat box

Stretch Break

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Case Studies: Tesla

Case Studies: Tesla Insurance – Problem Statement

- Finding Insurance At Reasonable Rate

- Gaps in Coverage
  - Wall Charger, Trim, Paraphernalia Endorsement
  - Preferred Body Shop
  - Autonomous Shifting Crash Liability From Driver to Product Liability & Cyber Risk
  - Clear First Dollar AV Crash Coverage under PPA
  - Discount For Safety Features: Lane Assist, AV

- Data to Develop Rates for New Coverages and Exposures (AV)

- Sell With Cars

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Case Studies: Tesla Insurance - Design

- Loss Data - Nationwide's High Net Worth Loss Costs

- Rate Plan Adjustments
  - Accredited Body Shops Reduction To Severity
  - Tesla Data for Wall Charger & Key Replacement Costs
  - Estimate Cyber Risk and Product Liability Coverage Loss Cost   AV
  - Advanced Driver Assistance Discounts

- Expense Loads and Competitive Analysis

- File in California – Largest Market Share + Rigorous Regulatory

Case Studies: Tesla Insurance - Digitization

- Quoting & Policy Admin: Buy or Build

- Pre-Fill Data Vendors (Drivers and Records, Credit, etc.)

- Claims System: Buy, Build, TPA

- Underwriting reports

- Competitive analysis
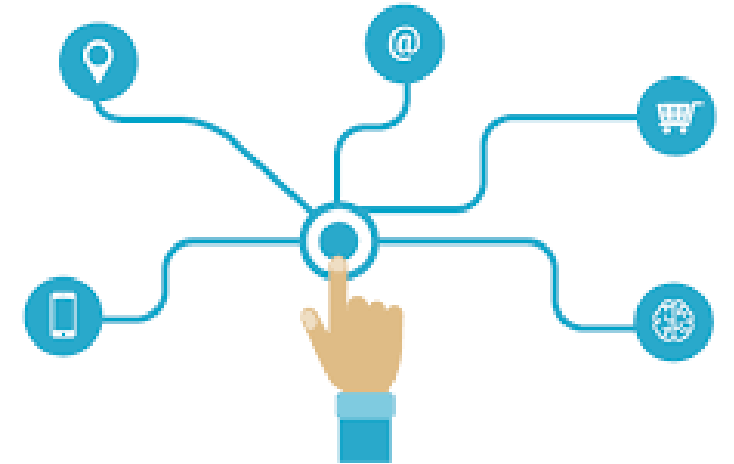
Case Studies: Tesla Insurance – Next Steps

- Connected Car Roadside Assistance & Claims Initiation

- Advanced Driver Assistance Systems (ADAS) Discounts

- File in Remaining 49 States

- International Insurance Solutions
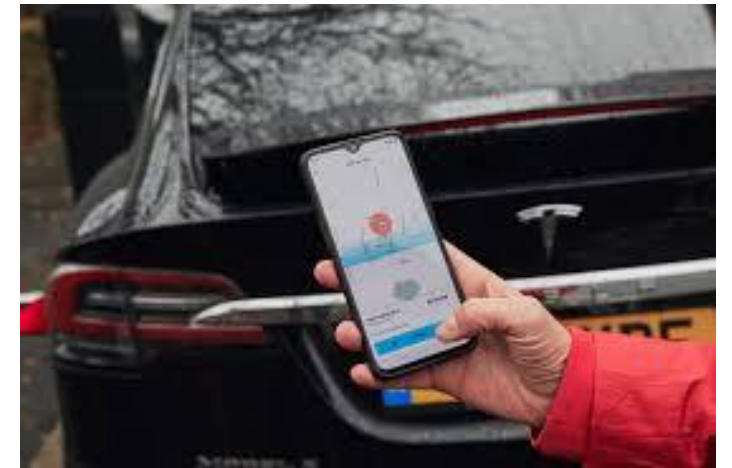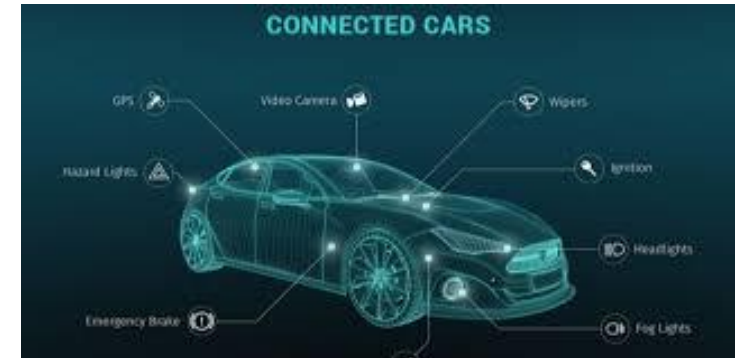
Case Studies: Lime

Case Studies: Lime - Opportunity

- Flexible transportation option growing in cities across the US

- International but no US insurance product for riders

- Unique coverage and underwriting needs
  - First and third party liability coverage
  - Issue coverage over smartphone app with Lime rental agreement
  - Price on a per mile basis so that price can be integrated with Lime rental rates
  - Provide education promoting safety (road or sidewalk), helmet

- US insurance product opportunity

Case Studies: Lime – Loss Cost Development

o No state specific data in state rate filings

o Lime has frequency data but lacks credibility

o Consider data from

  o National Association of City Transportation (NACTO)

  o North American Bikeshare Association (NABSA)

  o Other transportation sources

o Consider aggregating data with other micro-mobility transportation organizations

Case Studies: Lime – Insurance Product Design

- o Self insure

- o Find insurance partner
  - o Admitted or surplus lines
  - o Master policy with certificate to riders, or separate policy for each

- o Include cost in base rental price for everyone or make it an option for added cost

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Case Studies: Lime – Insurance Delivery Goals

o   Rider first and third party coverage

o   Easy to purchase as part of rental process

o   Easy to calculate premium and charge – rate per mile added onto lease rate

o   Keep track of coverage start time, end time, and insurance metrics for pricing analysis

o   Keep track of take up rate (if optional) for product design, rate, and delivery analysis

o   Work with reputable (re)insurance partner

Case Studies: Lime – Next Steps

- Insurance delivery goals

  - First and third party coverage for riders

  - Easy to purchase as part of rental process

  - Easy to calculate premium and charge – rate per mile added onto lease rate

  - Keep track of coverage start time, end time, and insurance metrics for pricing analysis

  - Keep track of take up rate (if optional) for product design, rate, and delivery analysis

  - Preferable to work with a reputable (re)insurance partner

- Next steps

  - Design insurance coverage and rates

  - Design insurance policy coverage forms and notifications

  - Find/work with (re)insurance partners

  - File new insurance rates, rules, forms (desk filing or state filing)

Case Studies: On-Demand Fleet Transportation

- Loss Data
  - Advisory Loss Costs

- Create Rate Plan Factors
  - Expense Loss Cost Multiplier
  - Introduce Vehicle and/or Driver Behavior Model
  - Other Adjustments With Base Rate Offset
  - Commercial Program: Schedule Rating, Experience Rating

- Competitive Comparison to Set Base Rate Level

- Surplus Lines or Admitted Commercial Program

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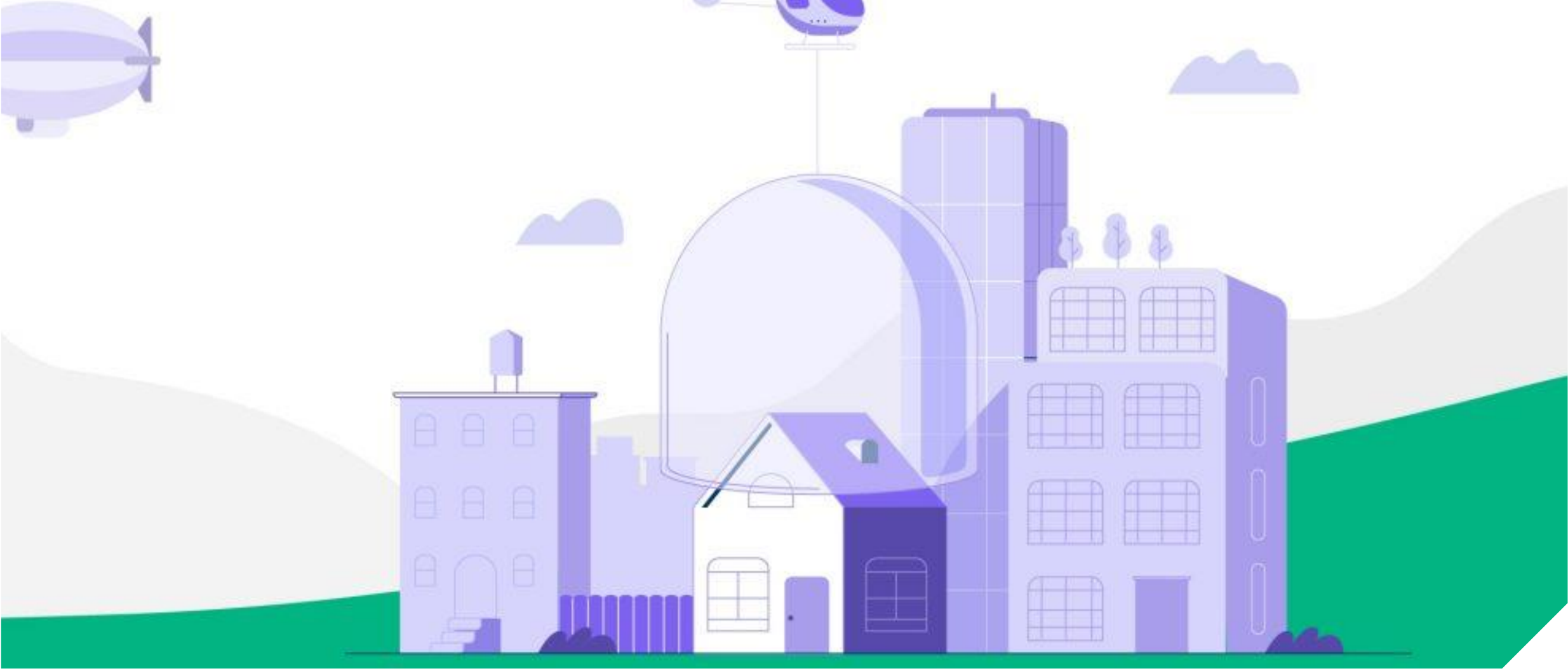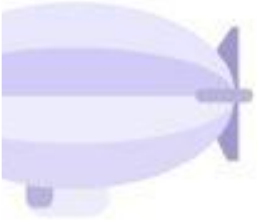
Case Studies: hippo

Case Studies: hippo Smart Home Rewards

- Traditional smart home and protective device programs offer discounts based on limited info.

- Hippo's program enhances these discounts to more closely align with what's available on the market:

  o **Risk Mitigation Partnership** – Provide Smart Home Connected Devices

  o **Precision** – Verified vs. Unverified

  o **Robustness** – Self Monitored vs. Professionally Monitored

Case Studies: hippo Smart Home Rewards

hippo

- Still, there exists difficulties in obtaining data:

  - o Credible loss data across customer segments

  - o Understanding how specific loss perils are mitigated

  - o Capturing benefit by device and/or placement of device

  - o Balance usage and privacy of data

  - o Understanding how "similar" Smart Home providers are.

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Case Studies: hippo Smart Home Rewards

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- Next Steps:

  o   Use data to get data

  o   Enhance discount through additional layers of segmentation

  o   Create a "smart home" score that customers can understand and help control.

  o   Connect insurers, smart home providers, and regulators to enhance technology

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Thank you.

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