

# Insurance Analytics Provider/Automaker Partnerships

Paving the Way for Better Telematics  
Data and Analytics



verisk  
Insurance Solutions

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# Introduction



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# Agenda

- Telematics data collection methods and constraints
- Challenges to insurers and automakers
- The telematics data exchange solution
- Predictive analytics of the exchange
- Benefits to automakers, insurers, and consumers



# Telematics Data Collection: Methods and Constraints





# Evolution of Telematics Data Collection and Constraints





# Complex Challenges

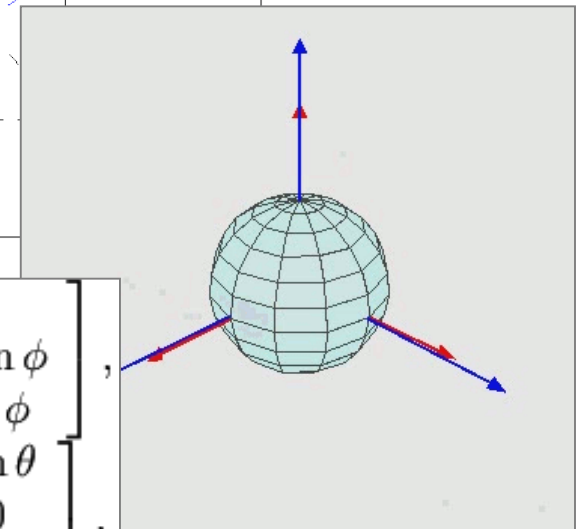
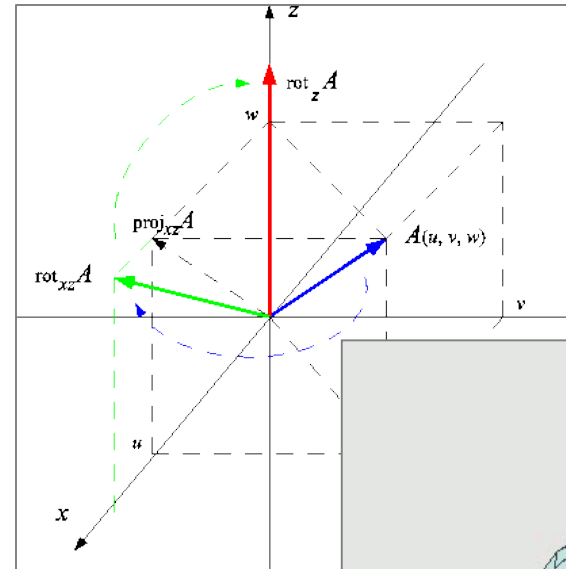




# Challenge #1: Telematics Data

Telematics data is categorically different from other insurance data sets.

- Insurers are staffed by underwriters and actuaries, not engineers
- Requires entirely new skill sets
- Big data and advanced predictive analytics, including machine learning



$$\mathbf{A}_X = \begin{bmatrix} 1 & 0 & 0 \\ 0 & \cos \phi & -\sin \phi \\ 0 & \sin \phi & \cos \phi \end{bmatrix}, \\
 \mathbf{A}_Y = \begin{bmatrix} \cos \theta & 0 & \sin \theta \\ 0 & 1 & 0 \\ -\sin \theta & 0 & \cos \theta \end{bmatrix}, \\
 \mathbf{A}_Z = \begin{bmatrix} \cos \psi & -\sin \psi & 0 \\ \sin \psi & \cos \psi & 0 \\ 0 & 0 & 1 \end{bmatrix}.$$

# Challenge #2: Technology

Insurers are financial institutions, not technology companies.

- Hardware
  - Dongles
  - Smartphones
  - Embedded systems
- Software
  - Dongles—firmware-compatible with every auto manufacturer by model year and model
  - Smartphones — applications must be compatible and up to date with every OS
- Wireless communications
  - Coverage
  - Bandwidth







# Challenges #3: Logistics

Insurers are not logistics companies.

- Distribution of hardware and software
- Technical maintenance and support of customers
- Regulatory and compliance





# Challenges #4: Consumer Behavior

Traditional telematics data collection methods require consumers to work.

Consumers have to:

- Volunteer their participation
- Install devices and/or software
- Troubleshoot any technical problems
- Maintain working hardware and connections
- Update hardware and software as needed

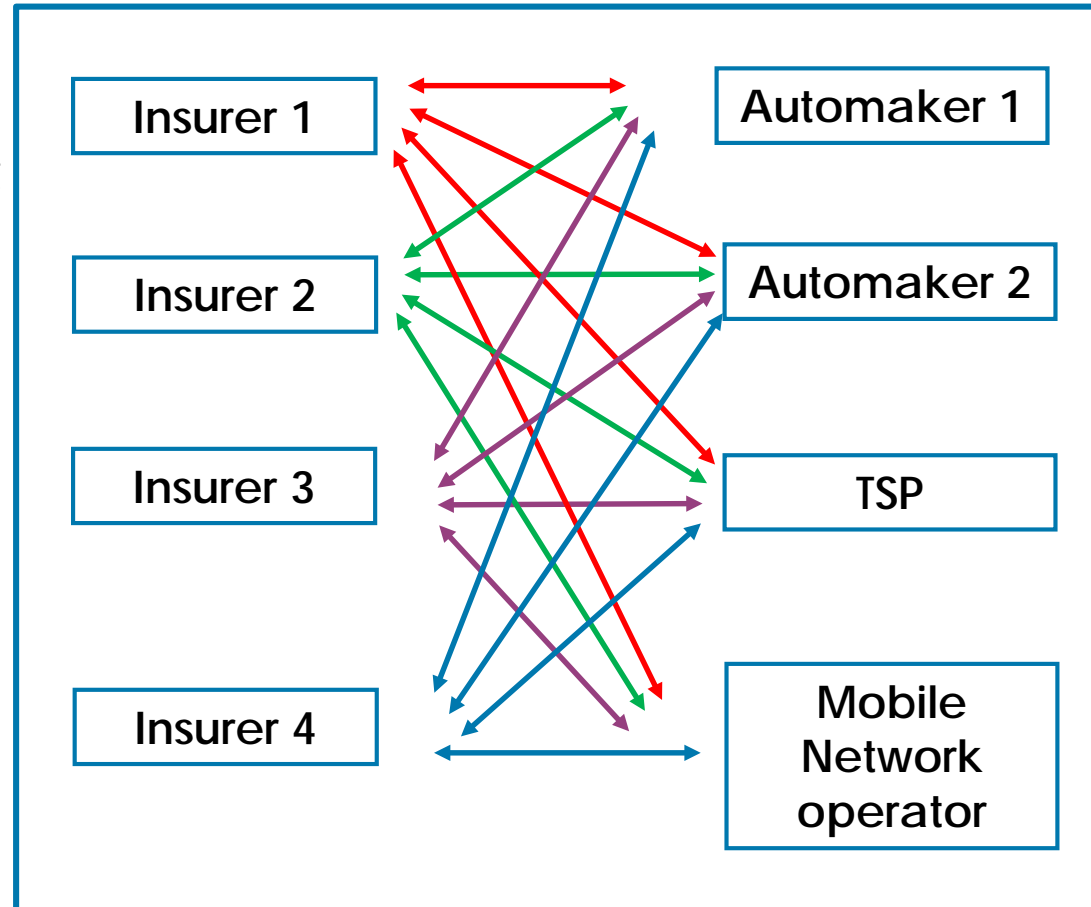




# Challenges #5: “Many-to-many” Problem

Automakers’ direct partnerships are not scalable.

- Contract negotiation
- Data specification
- Infrastructure development
- Data integration
- Project management
- Relationship management
- Multiple API calls for data inquiry





# The Telematics Data Exchange Solution



# Telematics Data Exchange

Automakers/TSPs/IoT providers



Insurers



## Solves the “many-to-many” problem

- Insurers now have a single, efficient access point for driving data
- OEMs, TSPs, and IoT providers can all connect with insurers through the platform
- Will serve as an IoT platform for the insurance industry
- With customer consent, insurers get driving history at point of sale and renewal

## Verisk to launch first-of-its-kind telematics data exchange in Q3 2016

- Will complement insurers' existing solutions
- Verisk developed an experience-based UBI model based on OnStar data specs.
- An underwriting rule derived from the model is being filed with most state regulators in the U.S.
- Insurers can bring their own model or leverage other third-party models



# Verisk Telematics Data Exchange™: From connected-car data to predictive model





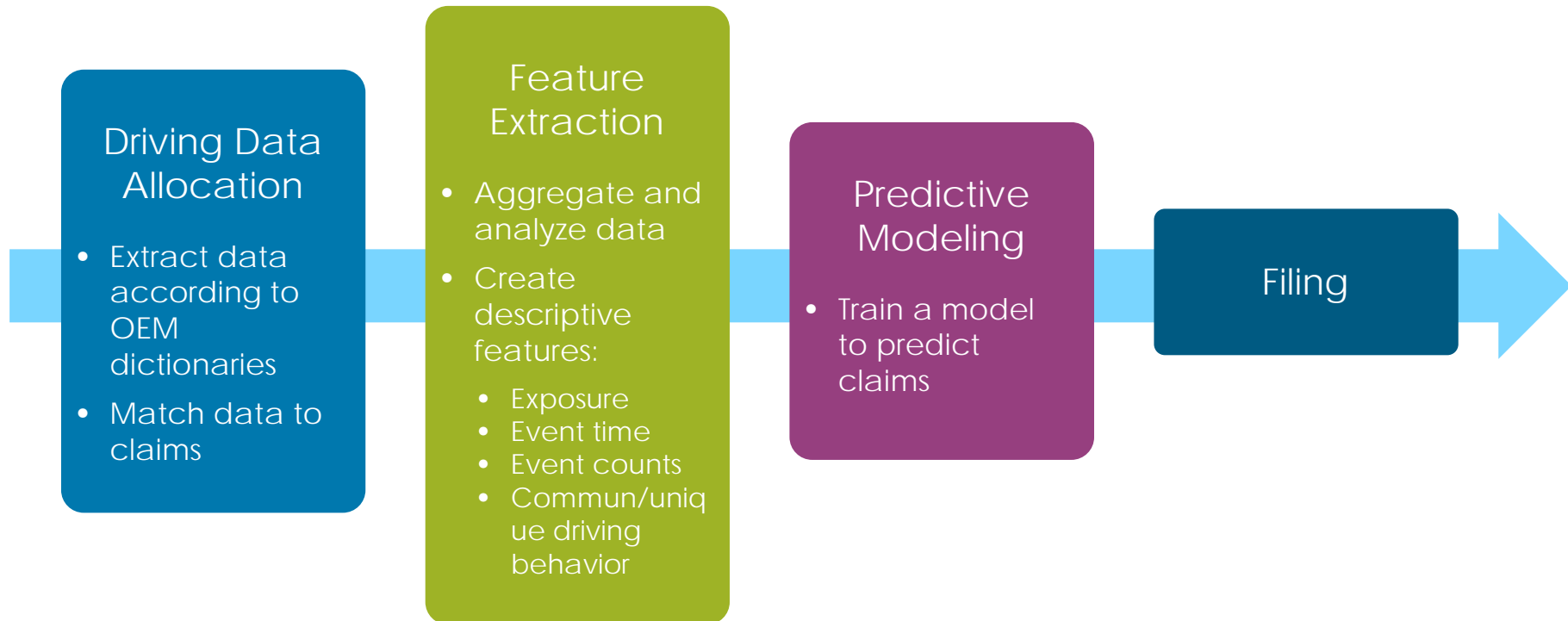
# Characteristics of Powerful Scoring Models

- Predictiveness
  - Differentiation of safe drivers from risky drivers
  - Accurate grading of risk levels
  - High lift achieved
- Robustness
  - Stable scoring over time
  - Tolerance with minor changes to driving behavior
  - Adaptability to new population





# Building Process of the Exchange's Scoring model







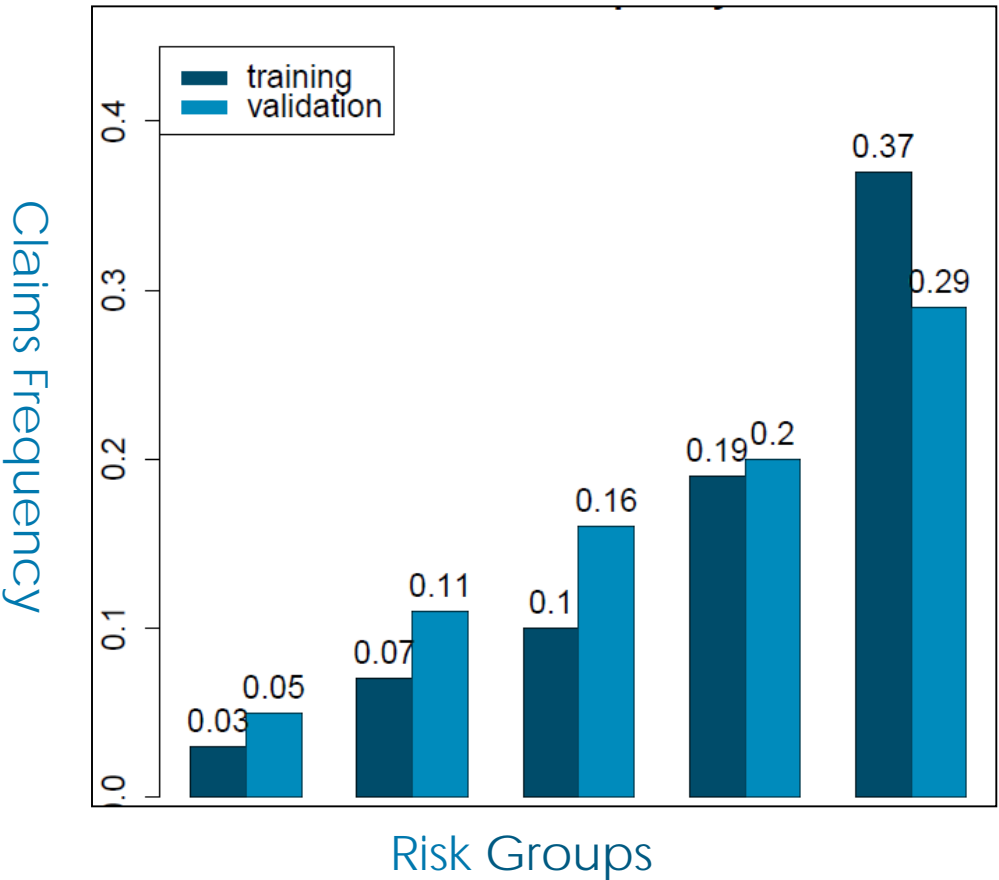
# The Exchange's Scoring Model

- GM OnStar data dictionary
  - Duration of trip
  - Speed
  - Hard braking and acceleration events
  - Date and time
  - Distance driven
- Historical claims data from multiple sources





# Results of the Exchange's Scoring Model



### Predictiveness

Indicates a 6x differential between the most and least risky groups in validation data

### Robustness

Differentiate risks by claims frequency in both training and validation data



# Benefits





# Benefits of the exchange

## Benefits to OEMs

- Potential for additional use cases and value delivery
- Additional consumer engagement opportunities
- Lower total cost of vehicle ownership
- Avoidance of entry barriers to service multiple insurers

## Benefits to Insurers

- Easy access to telematics data without investment in technology and logistical support
- Fast, informed quotes at point of sale and renewal
- Acquisition of millennials and safe drivers
- Retention of safe drivers
- New customer engagement opportunities

## Benefits to Policyholders

- Discounted insurance for drivers with lower risk
- Reduced cost of vehicle ownership
- Promotion of safe driving



Thank You!

