Innovation

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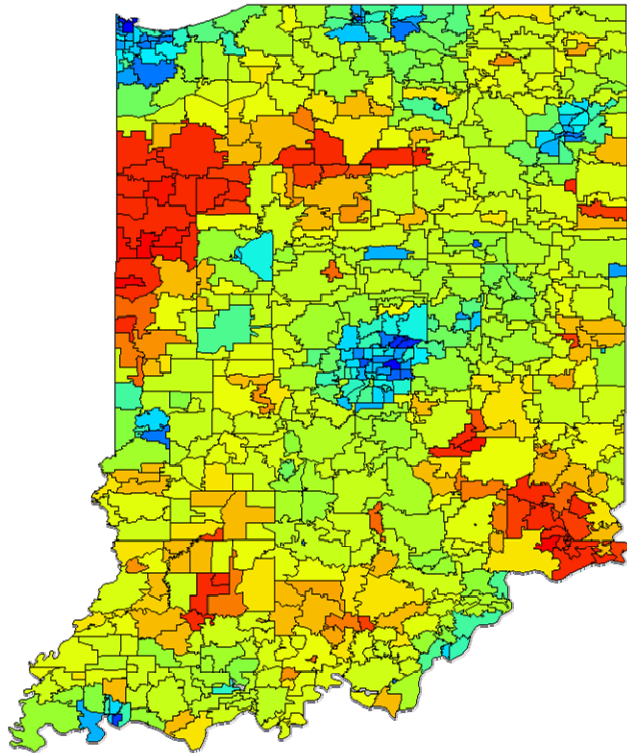# Past and current innovations helped industry leaders

- Credit
- Territory refinement
- Vehicle Symbols
- Homeowners
- External Data
- Optimization
- Usage Based Insurance
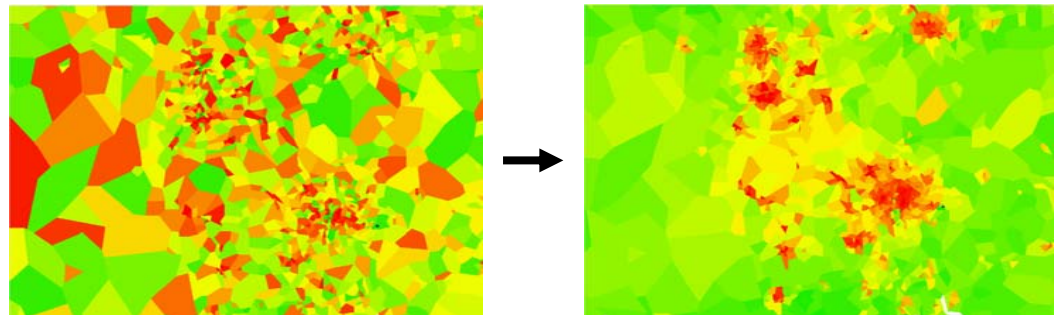
Insurance Scores

- Insurance scores based on credit proved to be very predictive
- Early adopters created huge adverse selection for others
- Consumers don't understand the relationship to insurance losses
- Under attack by regulators
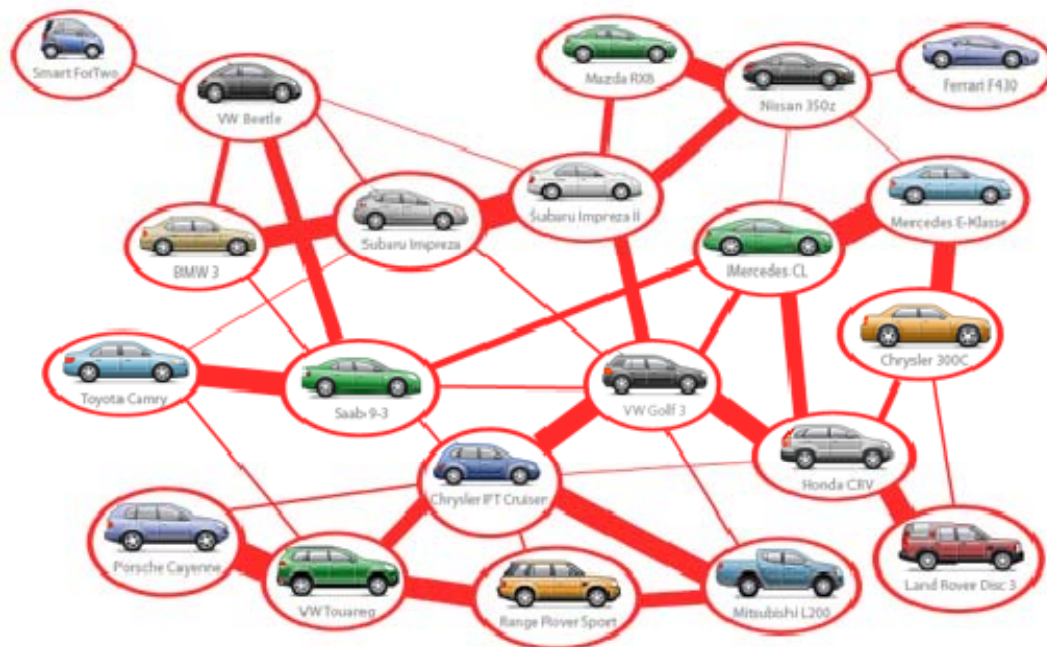
Territorial ratemaking

- Location is one of the main drivers of risk
- Treatment of area differs significantly between insurers
- Significant competitive advantage can be attained
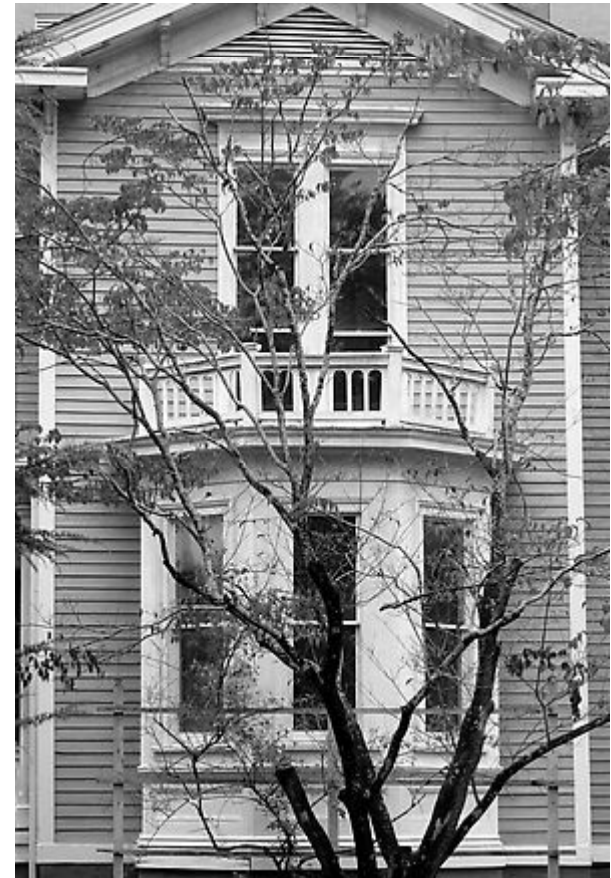- A wide variety of methods are used

Vehicle grouping has been rich ground

- Simplest approach uses third-party symbols principally driven by MSRP
- Large insurers have used specific make, model, and model year loss data
- Modeling vehicle characteristics directly has provided significant competitive advantage
- Nearest neighbor improving credibility
  - Similar to geographic analysis
  - Use adjacency relationships of vehicle dimensions

Homeowners Insurance

- Lagged Auto in adopting changes
- Catching up
  - By-peril rating
  - Focus on occupant
  - Supporting product info
  - External data
  - House characteristics

External Data

- Increased use of both public and private information
- Manipulation may be required to convert into predictors
    - Census data
    - National Highway Traffic Safety Administration
    - Auto maintenance, repairs, and sales
    - Detailed property characteristics

Price Optimization Integrates Business Knowledge

- Price elasticity models dramatically improve understanding of policyholder behavior

- Price optimization models systematically pull all relevant information together to determine the best prices to support company goals
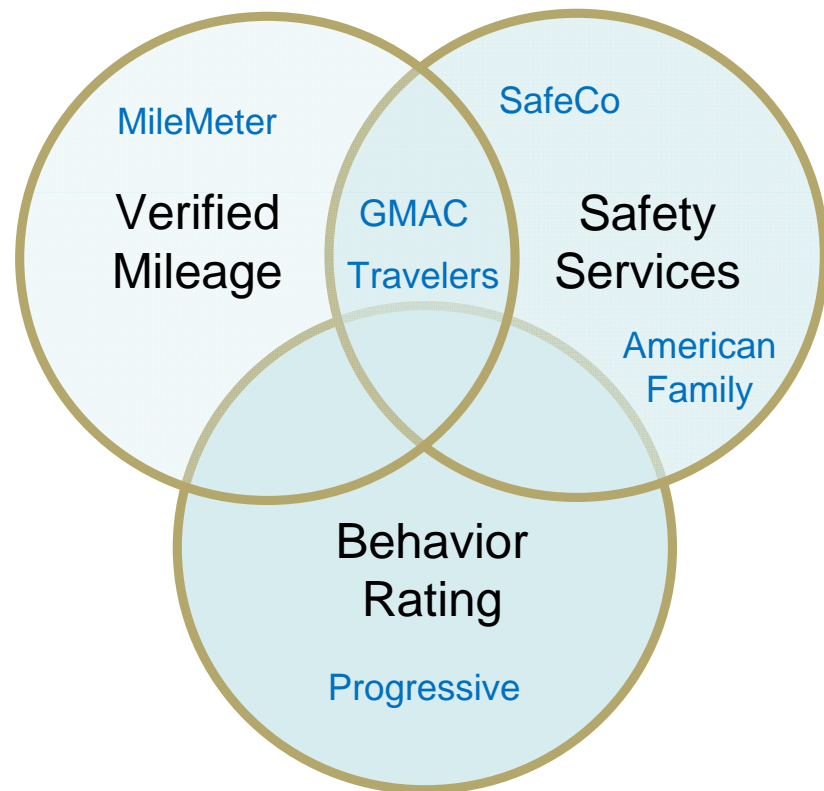
USAGE BASED INSURANCE

The real game changer

What is usage-based insurance (UBI)?

- UBI programs collect data on driving behavior from telematic devices and use that information to modify insurance premiums or to provide useful feedback to policyholders, or both
- Companies have UBI programs around the globe
- Many other companies, including small companies, are moving toward implementation

Notable US Programs

Levels of Monitoring

- **How far?**
  - Simple mileage rating
- **How?**
  - Driving behavior
- **Where?**
  - Location data with GPS
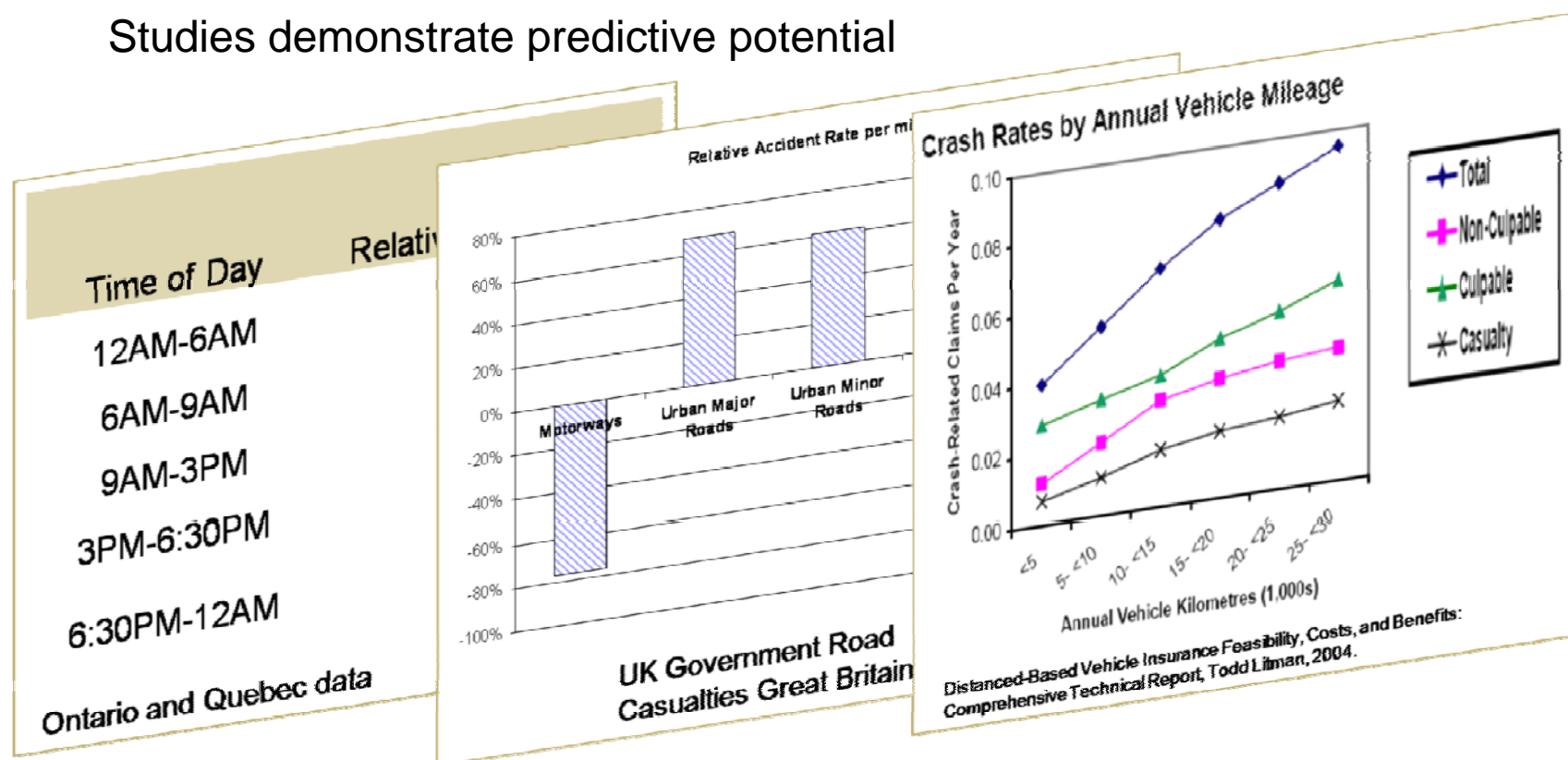- **Who?**
  - Driver specific

Why now?

- There a numerous reasons why UBI is gaining momentum
- Technology costs have dropped
- Predictive power significantly enhances accuracy of prices
- Participating consumers love it
- Accident frequency reduced
- Retention dramatically increased
- Politically accepted
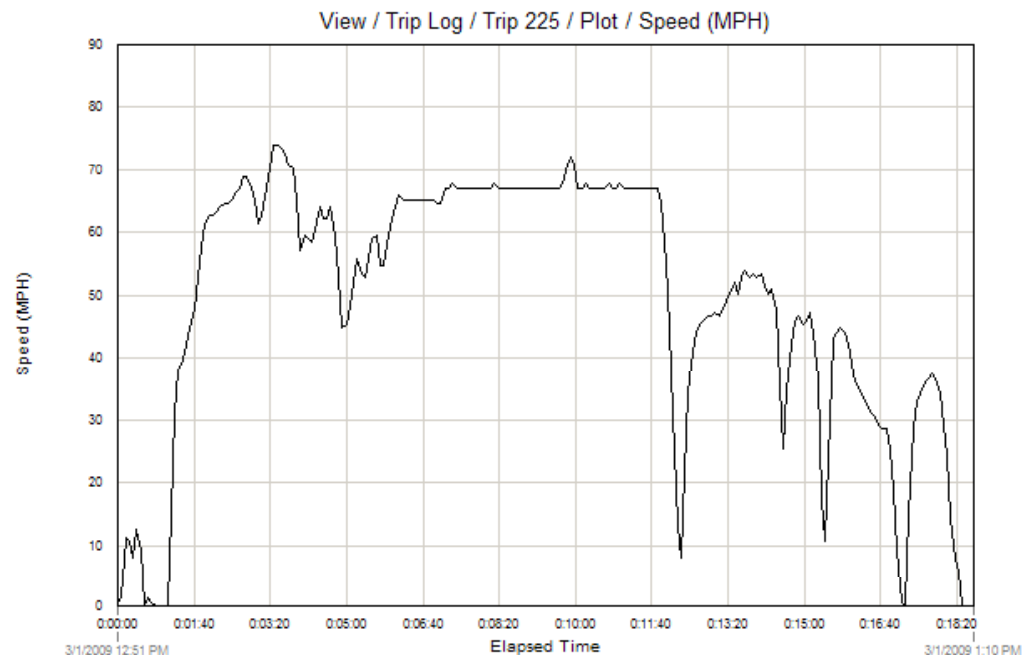
Predictive power

Studies demonstrate predictive potential

- Companies gain competitive advantage through better segmentation
- Elimination of cross-subsidization is more "fair"
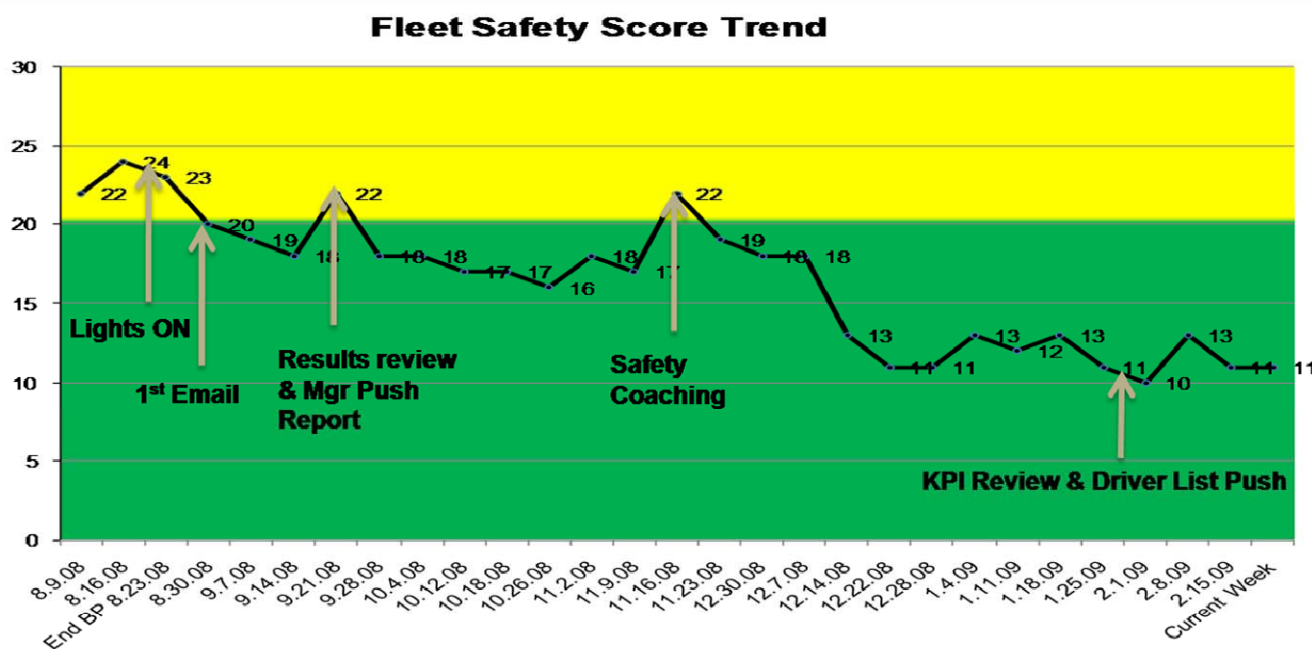
Appeals to participating consumers

- Once educated, UBI appeals to consumers
  - Makes sense
  - Controllable
  - Side benefits
- As it is causal, reduces reliance on risk proxies
  - Insurance credit scores
  - Driver assignment
  - Charges for relatively rare accidents, convictions

View / Trip Log / Trip 225 / Plot / Speed (MPH)

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Elapsed Time

3/1/2009 1:10 PM

Improves driving and reduces accidents

UBI experience significantly better

- Norwich Union: 30% frequency reduction
- GreenRoads consistent improvement in fleet performance

Fleet Safety Score Trend

UBI advantage for early adopters!

UBI premium with driving behavior will identify the best drivers in each current group

UBI programs will drop loss cost for average participants

Challenges

1. Building customer proposition
2. Technology
3. Collecting and storing data
4. Translating data into risk exposure
5. Integration with existing systems
6. Customer interactions
7. Business risks

The Actuarial Profession
making financial sense of the future

THANK YOU

Presenter

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