



EMB

Data Gathering

Product Development Workshop

RPM Seminar

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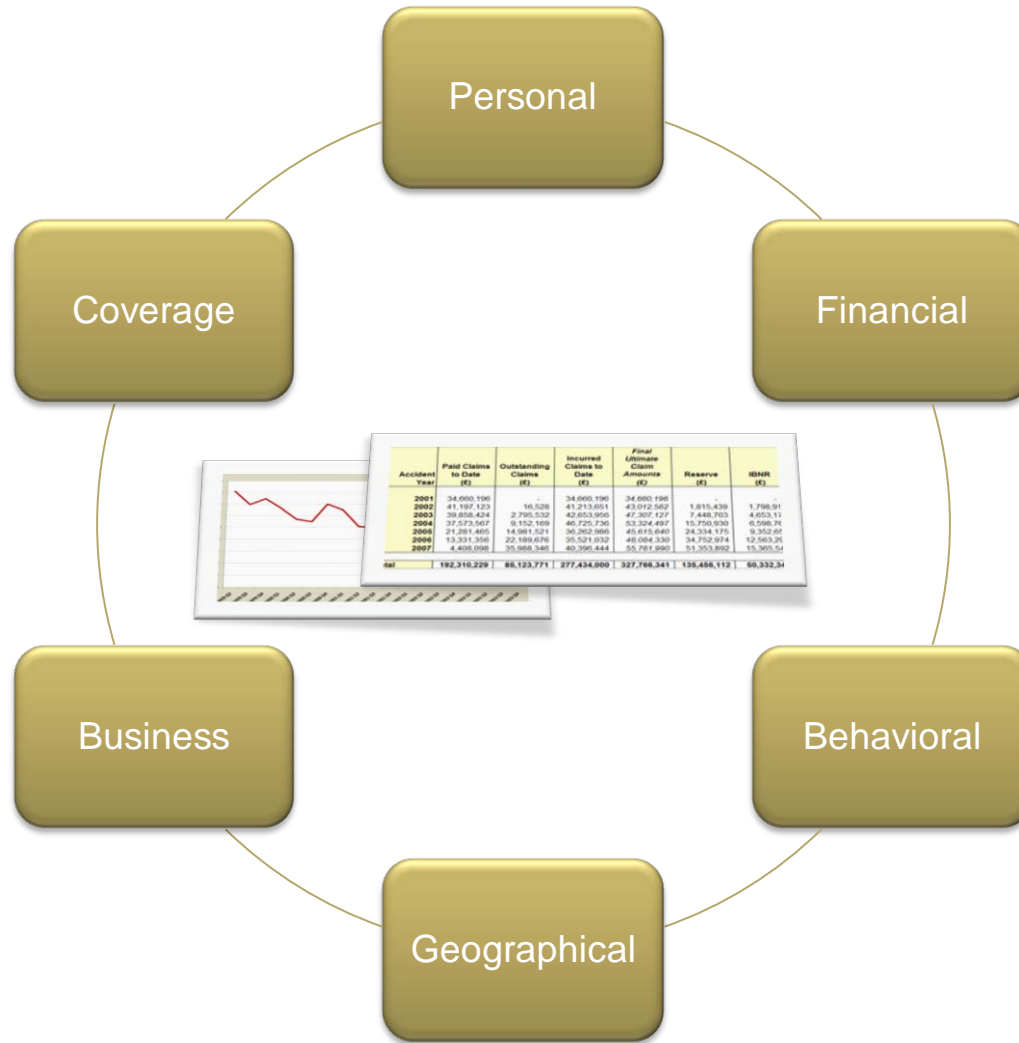
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- What are the actual risk drivers?
- What are some personal and commercial lines external data sources? How do they overlap?
- What do these sources offer?
- What are some implementation and other considerations?



What Drives Risk?



Pay or Not to Pay

- Sweat Equity Data Sources
 - Policy forms hard copies
 - Internal systems
 - Partner sales data
 - Partner consumer profile
 - Scientific data



- Personal Lines
- Commercial Lines

Sources

U.S. Census

National Highway Traffic Safety Administration

Experian Mosaic®

Applied Geographic Solutions

Carfax

Highway Loss Data Institute

FireSafe

PerilVision

Personal credit

Commercial credit

Occupational Safety & Health Administration

NCCI/ISO

Safety and Fitness Electronic Records

GPS tracking

U.S. News

Geo-demographic

➤ U.S. Census

- Publicly available
- Manipulation required
- Potential predictors:
 - Median income
 - Education level
 - Average age
 - Occupation



➤ National Highway Traffic Safety Administration (NHTSA)

- Fatality Analysis Reporting System (FARS)
 - Fatal accidents nationwide
 - County level
- Potential predictors:
 - Hit & run frequency
 - Drug and alcohol-related accident frequency

Geo-demographic (cont'd)

- Experian Mosaic ®
 - Segmentation based on population, household, income, labor force and metro area characteristics
 - Zip code level
- Applied Geographic Solutions
 - Models results from publicly available data
 - Data and map point files available
 - Databases include
 - Climate & Air Quality
 - WeatherRisk & QuakeRisk
 - CrimeRisk
 - Potential predictors
 - Average temperature
 - Precipitation
 - Air quality
 - Expected damage relativities
 - Indexes for hurricanes, tornadoes, wind and hail



Vehicles

➤ Carfax

- 20,000+ public and private sources, including DMV
- VIN level
- Potential predictors:
 - Severe problem indicator
 - Potential damage indicator
 - Number of owners
 - Average annual mileage
 - Odometer reading



➤ Highway Loss Data Institute (HLDI)

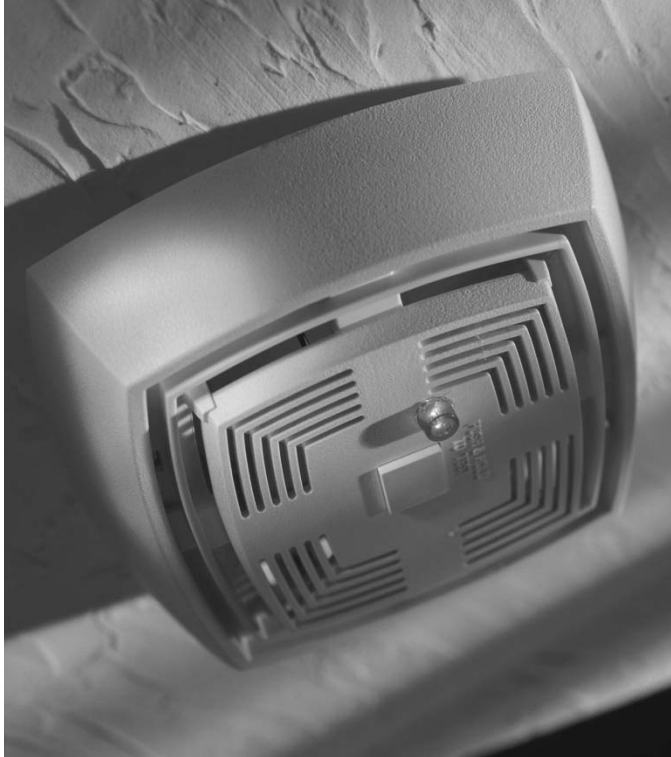
- Relative average loss payments derived from historical data compiled from sponsoring companies
- Make and model level
- Potential predictors:
 - Injury, collision and theft score
 - Crash protection ratings

Vehicles

- Safety and Fitness Electronic Records System (SAFER)
 - Safety performance of motor carriers
 - Based on data collected from state and federal systems
 - Potential predictors:
 - Federal safety ratings
 - Carrier crashes
 - Inspection summaries
 - Safety/Compliance reviews



- Vehicle operation using GPS tracking
 - Fleet tracking services
 - Validate radius of operation
 - Ensure driver safety
 - Monitor driving style



- Marshall & Swift/Boeck Peril Vision
 - Construction score by peril
 - Enhances peril rating
 - Addresses damageability and reparability
- Explore FireSafe
 - Refined fire peril scoring
 - Fire protection and weather related information based on data received from fire stations
 - Captures signal above Protection Class
 - General characteristics reflected:
 - Drive distance between home and fire station
 - Proximity to municipal boundary (water source)
 - Fire Station type

- Personal credit
 - Industry standard
 - Business owner
- Commercial credit
 - Business credit risk and profiling
 - Additional data elements as predictive if not more than the score itself
 - Potential predictors:
 - Number and amount of lines of credit
 - Bankruptcies
 - Years in business
 - Trade lines with debt beyond terms



Industry

- NCCI
 - Workers Compensation
- ISO
 - Personal & Commercial
- Supplier Relations
 - Manufacturing sub-sector
- Closed claims history for physicians
- SIC and/or NAICS
 - Refinement of commercial classes
- MarketStance





- US News
 - Educational institute ranking
- Professional organizations
- Licensing and certification history

- OSHA
 - Occurrence of workplace injuries
 - Compliance and enforcement information available nationwide
 - Inspection detail
 - Violation history
- Oxxford Life Cycle
 - Reflects status of business growth
- Better Business Bureau
 - Complaints



Other Considerations

- Overlap of various sources
- Level of detail
- Applicable lines
- Frequency of updates
- Historic data
- Lead time
- Assembly of data
- Matching
- Geographic coverage
- Cost



Implementation Considerations



- Extent of intelligence willing to disclose in public filings
- Level of underwriting sophistication
 - Scorecard
 - Selection of accounts for manual review
- Prioritizing marketing

- Various non traditional insurance data sources available
- Value of sources dependent on current state of competitive advantage/disadvantage
- Predictive characteristics usually implemented through a combination of pricing, underwriting and marketing

