Telematics & Data Analytics

Securing profitable growth in motor using smart data

Orsolya Hegedus
Swiss Re Automotive Solutions
Motor is the most important P&C line globally ...and it’s undergoing changes

- Motor provides liquidity and access to customers
- >40% Share of motor in global non-life premiums
- 15x increase in telematics based premium volume expected by 2025
- Automated vehicle technology is already in use
- Abundance of data: Rapid expansion of data availability

Sources: Swiss Re, Ptolemus 2016, Osservatorio Connected Insurance 2016 Bain & Company and ANIA
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15x increase in **telematics** based premium volume expected by 2025

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**Abundance of data**
Rapid expansion of data availability

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Data availability enables additional business insights

...risk drivers and market potential can be

**Highly granular input data** representing risk factors:
- Road network
- Population
- Weather
- Night light density
- Elevation
- Land use

**Detailed risk predictions**
- Accident frequency
- Accident severity

**Open source data**
- Census, car market, competitors, ...

**Actionable business insights**
- Portfolio steering
- Marketing strategy
- Performance benchmarking
- Market potential view
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Tech trend I: Car connectivity growth

Number of connected cars sold annually by connectivity type (Millions)

Source: IHS Trax, 2014
# Motor Telematics Market Snapshots

Telematics set to play a relevant niche role in several markets

<table>
<thead>
<tr>
<th>Market size</th>
<th>USA</th>
<th>UK</th>
<th>Italy</th>
<th>China</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7% market penetration, telematics is the new growth engine</td>
<td>1.1M telematics-based policies, 3.4% market penetration</td>
<td>7.1M telematics-based policies; 20.5% penetration</td>
<td></td>
<td>Motor insurance detariffication creates opportunity for UBI. Already implemented in 3 test provinces, but by end 2019 extended to the whole country</td>
<td>Several insurance companies have started telematics pilots, however, telematics market penetration so far rather low</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use cases</th>
<th>USA</th>
<th>UK</th>
<th>Italy</th>
<th>China</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main use cases are risk selection and behavioral change</td>
<td>Risk selection and behavioral change</td>
<td>Large discount on tariff, separate fee for device/services + top-up commission for agents. Important to share the generated value across the value chain</td>
<td></td>
<td>So far limited to MOD as Compulsory MTPL (OSAGO) not yet liberalized (telematics features within OSAGO in the future?)</td>
<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Device</th>
<th>USA</th>
<th>UK</th>
<th>Italy</th>
<th>China</th>
<th>Russia</th>
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</thead>
<tbody>
<tr>
<td>1/3rd mobile-app solutions the market, 2/3rd mainly OBD-II</td>
<td>TBYB approach is more developed than in other markets. Smartphone-based solutions account for &gt;10% and growing</td>
<td>Almost the entirety of offerings is based on hardware devices. Self-installed black boxes have become the mass market ones</td>
<td></td>
<td>Smartphone-based solutions are dominating the UBI market</td>
<td>So far rather hardware device based</td>
</tr>
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<table>
<thead>
<tr>
<th>Other</th>
<th>USA</th>
<th>UK</th>
<th>Italy</th>
<th>China</th>
<th>Russia</th>
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<tr>
<td>Telematics technology introduced since many years, 2 different approaches: “roll-over” or fixed which is the more popular</td>
<td>High churn rate makes loyalty steering an important factor</td>
<td>First movers in telematics can improve their LR by 18% (risk selection and claim frequency reduction) Main data use case: Claims management and broad catalogue of value-added services. Scoring and customer engagement angles not developed, due also to little access to data (TSP do not share with insurers)</td>
<td></td>
<td>Very dynamic marketplace, with players from different industries doing trials to enter this space</td>
<td></td>
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DATA

Existing and newly collected

What data sources are you using to grow your motor business?

- a) Historical claim information
- b) Market analysis/studies
- c) Open source data
- d) Telemetry data
What data sources are you using to grow your motor business?

- Historical claim information: 12
- Market analysis/studies: 8
- Open source data: 6
- Telemetry data: 5
What can you do with data?

DATA

Existing and newly collected

Data Analytics

Pay-As-You-Drive (PAYD)

Telematics

Pay-How-You-Drive (PHYD)
Swiss Re Motor Market Analyser supports your profitable growth

Data excellence for portfolio performance and strategic growth

Swiss Re model
Swiss Re’s predictive model for accident frequency and severity provides a highly granular view of a country’s risk landscape and acts as a sound basis to identify business opportunities

Your data
We use your portfolio data to understand your book’s exposure to geographic accident risk and to benchmark its current performance against its potential performance

External data
Swiss Re motor experts and data analysts use external data to offer you business insights and a 360° view on the motor insurance markets you target

Innovative use of external data, risk modelling and cutting-edge analytics to increase your profitability
A client story: Enabling profitable growth with Swiss Re’s MMA
Swiss Re identified new provinces to enter by rating risk exposures and benchmarked branch performance to enable portfolio steering.

Data Analytics

Overlap of catchment areas

Benchmarked performance

Growth and portfolio steering

Recommendation: Branch A is a closing candidate
The catchment areas of branches A and B have substantial overlaps and are well penetrated by sales via phone and web, they are underperformers given their geographical risk.

Looking at the catchment areas of branch D, we identify favourable and unfavourable areas in terms of risk. Growing in favourable areas by 30% and shrinking in unfavourable areas by 10% allows to improve the branch’s LR by 2%.
Research shows shift in motor risk modelling and pricing
Telematics is the first step in helping insurers transition to new business models

- **Traditional risk pricing model**
  - Age
  - Driving years
  - Territory
  - Vehicle data
  - Previous claims

- **UBI pricing model**
  - Driver behaviour
  - Context of driving
  - Surrounding information
  - Comparison to other drivers

- **Automated vehicles model**
  - UBI pricing model
  - Advanced driver assistance systems assessment
  - Usage of autonomous features
  - Vehicle “behaviour”

**Deliver added value to today’s consumers**

**Risk proxy**

**Behavioural rating**

**Behavioural & vehicle rating**
### Why telematics?

Telematics is creating benefits for consumer and insurer along the value chain

<table>
<thead>
<tr>
<th>Increasing safety</th>
<th>Telematics</th>
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<tr>
<td>- Safer driving through driver coaching</td>
<td></td>
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<tr>
<td>- Stolen vehicle recovery (black box only)</td>
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<tr>
<th>Convenience</th>
<th>Telematics</th>
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<tr>
<td>- Easier and quicker claims handling</td>
<td></td>
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<table>
<thead>
<tr>
<th>Customer experience</th>
<th>Telematics</th>
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<tbody>
<tr>
<td>- Gamification</td>
<td></td>
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<tr>
<td>- Driver rewards</td>
<td></td>
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<tr>
<td>- Value-added services (e.g., location-based services, theft recovery)</td>
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<thead>
<tr>
<th>Adequate premiums</th>
<th>Telematics</th>
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<tr>
<td>- Satisfying demand for risk-adjusted insurance premiums</td>
<td></td>
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<tr>
<td>- Transparency on, and ability to influence insurance premiums</td>
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<tr>
<th>Distribution/Sales</th>
<th>Telematics</th>
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<tr>
<td>- Customer engagement</td>
<td></td>
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<tr>
<td>- Customer interaction/loyalty</td>
<td></td>
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<tr>
<td>- Cross-selling opportunities</td>
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<th>Product Development</th>
<th>Telematics</th>
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<tr>
<td>- Product suite e.g., PAYD, PHYD, Pay Per Trip</td>
<td></td>
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<tr>
<td>- Analytics skillset to assess ADAS/AV</td>
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<th>Underwriting/Pricing</th>
<th>Telematics</th>
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<tr>
<td>- Risk selection</td>
<td></td>
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<tr>
<td>- UW accuracy</td>
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<th>Claims/Accounting</th>
<th>Telematics</th>
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<tr>
<td>- Duration of claims process</td>
<td></td>
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<tr>
<td>- Claims cost</td>
<td></td>
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<td>- Fraud (and theft)</td>
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<th>Operations</th>
<th>Telematics</th>
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<td>- Admin efficiency</td>
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What keeps you most from implementing Telematics?

a. Converting data into useable insight

b. Sales channel

c. Big Data

d. Telematics Service Providers Management

e. Cost$

f. Creating value to the customer
What keeps you most from implementing Telematics?

- Converting data into usable insight: 4
- Sales channel: 2
- Big Data: 2
- Telematics Service Providers Management: 2
- Cost: 8
- Creating value to the customer: 5
Swiss Re’s modular, end-to-end personal telematics solution
Customisable to meet your changing needs

1. **App + platform**
   - App (white-labelled app or SDK) + Device-agnostic IoT telematics platform

2. **Scoring + actuarial support**
   - Dynamic, machine learning-based scoring platform developed by data scientists and actuaries

3. **Go-to-market support**
   - Support in product roll-out from client segmentation and product definition, through incentive design, to positioning

4. **Reinsurance**
   - Swiss Re shares the risk and helps insurers deploy telematics solutions
A client story: New Usage-Based Insurance (UBI) product for growth
Swiss Re deployed white-label telematics app, IoT platform, scoring & analytics and supported go-to-market to launch innovative motor product on the market for growth.

Ansvar is a Dutch insurer interested in growing through an innovative UBI product offering.

Challenges
- Creating an engaging app and insurance product to attract customers
- Launching a telematics product with minimal IT integration efforts and in line with GDPR regulation

- Safe driving app developed by Swiss Re is on the market since summer 2018
- IT integration was minimal
- GDPR compliance
- Scoring & analytics for quarterly cash backs and rewards
- No gamification
Using data in a smart way helps you to grow

- Expanded data availability and new technologies can help you boost profitable growth in motor if used well
- Swiss Re’s Motor Market Analyzer and Telematics App/expertise can help you do so
- Companies that have the capabilities to use these new data sources in their risk assessment and improve customer experience are ahead of the game ... others will lag behind