Transforming auto insurance thanks to telematics

Discussion with Philippe Marie-Jeanne & Gilles Mongis, AXA
Who we are

- The 1st international strategy consulting firm specialized in telematics, location-based services & mobility
- Strategy combined with real industry expertise and operational experience
- A focus on achieving results for our clients
- Close links with the mobility ecosystem
  - Advisory Board Member of EENA\(^{(1)}\)
  - Member of ERTICO's\(^{(2)}\) eSafety Forum and eCall HeERO Observers Group
  - Close connections to national ITS organisations, ACEA\(^{(3)}\), ASECAP\(^{(4)}\), GSMA\(^{(5)}\), etc.
  - Speakers at most leading industry events & conferences
  - Regular contributor to Telematics Update
  - Steering Committee Member of Mobile Monday (Brussels)

\(^{(1)}\) European Emergency Number Association \(^{(2)}\) ITS Europe \(^{(3)}\) Association of European Car Makers \(^{(4)}\) European Association of Tolled Motorways Operators \(^{(5)}\) GSM Association
PTOLEMUS is the first management consulting firm focused on telematics and geolocation

Our consulting services

- **Strategy definition**
  - New market entry, business plan development, board coaching and support

- **Evaluation of investment**
  - Strategic due diligence, market assessment, feasibility studies

- **Procurement strategy**
  - Specification of requirements, launch of tenders, supplier negotiation & selection

- **Innovation management**
  - Product & services development, roadmap definition, project management & launch, patent strategy

- **Business development**
  - Partnership strategies, response to RFPs, lobbying

- **Implementation**
  - Project & programme management, risk analysis & mitigation strategy

Our fields of expertise

- **Mobile content and social networking**
  - Application stores, crowd-sourcing, etc.

- **Navigation & location-based services**
  - Maps, traffic, fuel prices, speed cameras, parking, etc.

- **Usage-based charging**
  - PAYD / PHYD insurance, Road User Charging, PAYD car leasing & rental

- **Telematics & Intelligent Transport Systems**
  - Connected car, tracking, fleet management, eCall, bCall, Stolen Vehicle Recovery, Car As A Service, connected train, etc.

- **Positioning / Location enablement**

- **M2M & connectivity**
We help all players in the geo-connected mobility ecosystem

Telecom operators
- Vodafone
- O₂
- Bouygues Telecom
- BASE Freedom of Speech
- Orange

Telecom infrastructure providers
- Ericsson
- NTel Networks
- TeleBilling
- Orga Systems
- Alcatel-Lucent

Consumer electronics makers
- Nokia
- Vizio
- Motorola

Positioning solution providers
- TechnoCom
- Andrew
- CNES
- CSR

OEMs & telematics vendors
- Peugeot
- TomTom
- Magneti Marelli
- DANALOG
- Philips
- Qualcomm
- Octo
- Mtn Devices
- Gtn
- Citroën
- Cobra
- Sierra Wireless
- Coyote
- Telit

Content & application providers
- ESRI
- Oracle
- Commiss
- ArchiFiles
- BMJ Group
- Intermap
- NAVTEQ
- Cognizant

Insurers & assistance providers
- Agero
- Generali Group
- The Hartford

Financiers
- Amazon Capital Partners Limited
- Zouk
- CVC Capital Partners

PTOLEMUS in a nutshell

- Partners in Brussels, Paris, Munich, Milan and Boston
- +50 years of experience in mobile
- +100 years of experience in telematics
We bring a comprehensive understanding of the insurance telematics landscape
Our Insurance Telematics study is the most comprehensive report written on the subject

- 410 pages of analysis on the PAYD / PHYD market based on
  - 83 interviews in 18 countries
  - 230 figures (charts, tables...)
  - 2 years of research
  - Our experience & vision of the ecosystem incl. OEMs and TSPs

- Case studies & learnings from
  ALD Automotive, Amaguiz, Coverbox, Discovery Insure, GM OnStar, Hollard Insurance, Insurethebox, Liberty Mutual, MAIF-MACIF, Norwich Union, Octo Telematics, Progressive, Solly Azar, State Farm, Unipol, Uniqia, Zurich

- A handbook of suppliers' solutions including our own evaluation & ranking

- 10-year market forecasts
  - Country's readiness to telematics
  - Country forecasts for the US, Italy, the UK, France, Germany and Russia
  - Bottom-up estimates of the number of policies for each insurer in the US, the EU and in South Africa

- Insurer's telematics market model results in 4 markets*

- A complete set of recommendations to underwriters, TSPs, OEMs, MNOs and governments

- A strategic analysis of the value chain evolution including
  - The impact of eCall
  - The impact of the smartphone
  - The effects of the gender ruling

* Italy, the UK, France and Germany
PTOLEMUS has built one of the best UBI market models globally

- A 10 year market model (2010-2020)
  - Built bottom up (over 1,500 lines)
  - Using latest available market figures
- A comprehensive analysis & decision-making tool
  - 4 technologies (embedded OBUs, aftermarket OBUs, OBD, smartphones)
  - 8 areas: USA, France, Germany, Italy, UK, rest of EU, Russia, Rest of Europe
  - 2 channels (aftermarket / OEM)
  - 2 markets: personal / commercial line
- Provides market size (volumes & revenues) for insurers, TSPs, TTPs, OEMs and MNOs
We have also tracked all trials and launches

Global register of UBI /PAYD trials & launches

- Over 115 trials and launches currently listed (approx. 100 insurers)
- Europe, North America, South Africa, Japan
- 11 fields: Country, Company, TSP (when available or non-confidential), Trial / Launch, Status (On/Off), Target (Personal/Commercial), Type (PAYD, PHYD, Safety, Security), Device (OBD/Fixed, Smartphone, Embedded), Estimated customers, Start date
- Excel file

Global register of insurance telematics trials & launches - Subscription service

- Same features
- Excel file updated every 6 months with new trials & launches
- Minimum 3-year subscription
- Geographic coverage to expand to emerging markets
Our insurer PAYD business models are simple decision-making tools that can help find the right commercial strategy.

**Four PAYD insurer business models**
- UK, Germany, Italy & France -

- 12 year-customer lifetime
- With local inputs, outputs, calculations and charts
- Revenues, costs, cash flow & NPV per customer
- Hand-over session to client and availability for questions afterwards

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**The telematics customer NPV explained - Italy**

- Reduction in claims costs
- Additional VAS
- Telematics costs
- Decrease in written premiums
- Reduced investment income (due to lower premium)

**Customer lifetime cash flows for the insurer - UK**

- Average customer
- Telematics customer

**The telematics customer NPV explained - France**

- Decrease in written premiums
- Additional VAS
- Telematics costs
- Reduction in other expenses

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PTOLEMUS
Examples of relevant assignments

Assisted a major tier-1 automotive supplier in sourcing a driving behaviour database

- This tier-1 supplier needed to obtain a large driving behaviour database to develop its own service but wanted to preserve the confidential status of this plan
- **PTOLEMUS** identified and contacted several potential data providers in Europe and held close discussions with one Telematics Service Provider (TSP)
- Using a sample dataset, we evaluated the quality of its database and its relevance for our client
- We successfully negotiated the terms of a data licensing agreement for 10,000 vehicles
For 2 private equity firms, performed the due diligence of Octo Telematics (Europe)

- These 2 private equity firms were looking to acquire Octo Telematics, the leading provider of PAYD solutions worldwide
- In 2 weeks, we conducted a pan-European review of the PAYD insurance and PAYD solutions markets
- We assessed the trends affecting the nascent PAYD market in Europe, thanks to a detailed investigation of commercial trials / launches and interviews with leading insurers
- Evaluated the validity of the company’s business plan and proposed revised assumptions for a number of key inputs
- We recommended the investment, based on the company's differentiated product and strategic lead
Examples of relevant assignments

For Cobra Automotive Technologies, led the business development relationship with the Fiat Group

• For Cobra Automotive Technologies, led the business development relationship with the Fiat Group
• Designed and managed the development of a low cost Stolen Vehicle Recovery system for Fiat's Blue&Me navigation platform
• As a result, Cobra was qualified for receiving request for quotation in the parking sensor field
For Qualcomm, conducted a pan-European survey of the European PAYD / PHYD insurance market

- Qualcomm Enterprise Services is the world's largest provider of fleet management services
- Identified 15 target insurance groups in 6 countries
- Identified and contacted management level executives
- Obtained meetings to assess PAYD progress and needs
- Defined lessons to be learned to improve Qualcomm's PAYD system offering
Examples of relevant assignments

Assisted Magneti Marelli in developing its usage-based charging telematics business

- Managed different telematic businesses both in service provision and in hardware
- Supported the management in starting-up the business and setting-up the logistics platform to supply the insurance telematics business
- As a result, achieved the successful launch of an automotive grade black box
- Negotiated the contract with Octo Telematics, notably its technical, logistical and business terms
- Supported the adaptation process of the first supply to Octo Telematics
- Supported the initial business model for Autostrade
What is insurance telematics?

- Most current insurance policies use static/statistical criteria to evaluate drivers' risks - Age, gender, vehicle make & age, place of residence, occupation, etc.
- Insurance telematics is a policy based on these criteria and 4 new dynamic parameters.
- It requires the customer's acceptance to obtain this data through a telematic device installed in the vehicle.
In the current motor insurance market, good drivers are paying for... dogs

On the Internet, nobody knows you're a dog

In the car, neither...

“On the Internet, nobody knows you’re a dog.”
This is confirmed by the most advanced telematic insurers

Progressive’s experience in the US
Insurers are becoming more mature about PAYD

- 94 trials worldwide (67 in Europe)
- 54 commercial launches (40 in Europe)
- Success stories in multiple countries, notably Italy (Unipol), Spain (Mapfre), France (Amaguiz), the UK (Insure the box), Austria (Uniqa) and the US (Progressive)
- Overall, we estimate PAYD-equipped vehicles at over 2.5 million (worldwide)
European insurers have reached different stages of understanding and success
Telematics brings a new transparency to risk rating & pricing

**Probability of fault accident (%)**

<table>
<thead>
<tr>
<th>Driving DNA value</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16%</td>
<td>14%</td>
<td>12%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Average premium (in £)**

<table>
<thead>
<tr>
<th>Driving DNA segments</th>
<th>0-25</th>
<th>26-50</th>
<th>51-75</th>
<th>76-100</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before telematics</td>
<td>+200</td>
<td>0</td>
<td>+60</td>
<td>-95</td>
<td>0</td>
</tr>
<tr>
<td>After telematics</td>
<td>0</td>
<td>-165</td>
<td>-165</td>
<td>-165</td>
<td>-165</td>
</tr>
</tbody>
</table>

Sources: Wunelli, PTOLEMUS
With PHYD, customers can influence their level of risk and their premium
The case for insurance telematics

The telematics business case primarily relies on a reduction in costs that exceeds the premium discount.

**Customer lifetime cash flows for a French insurer (€)**

Assuming:
- Reduction in premium by 10%
- Reduction in churn by 15%
- Reduction in claims frequency by 20%
- Reduction in average claim by 15%

**Net present value**
- Average customer: €121
- Telematics customer: €282

Source: PTOLEMUS French motor insurer model
The time has come for insurance telematics
Telematics is the fastest growing segment of motor insurance

Motor insurance premiums from telematics - Personal line market (Euros in millions)

- USA
- EU
- Other Europe

Source: PTOLEMUS global market forecast model
PAYD will radically transform the auto insurance business... and its economics

**TODAY**
- Limited differentiation
- Frictionless tradeability
- Minimal relationship

**TOMORROW**
- Individual, reality-based tariffs
- Incentives to stay
- Tangible, personal service

**INSURANCE SERVICE PROVIDER**
The case for insurance telematics

The telematics war will also be won on technology...

Possible technologies to provide telematics

Aftermarket
- Black box
- OBD device
- FMS port-attachable box
- Self-energised modules
- PND
- Smartphone

Line-fitted
- Embedded system
- Semi-embedded system
- Vehicle keys

Fixed
Removable
Portable
Numerous players will offer connected car services

- Telematics service providers
- Car OEMs
- Handset vendors
- Mobile operators
- Tolling operators
- Maintenance firms
- Resource management
- Social networking
- Multimodal navigation
- Traffic & other services
- eCall
- Voice & messaging
- Mobile operators
- Oil companies
- Energy management
- Car sharing
- LBA / LBM
- Stolen vehicle recovery
- Road user charging
- Rainbow operators
- Power suppliers
- Financing
- PAYD / PHYD
- bCall
- Assistance providers
- Banks & leasing firms
- Insurers
- Telematics-based insurance

... And partnerships

LBA: Location-based Advertising; LBM: Location-based Marketing; PAYD: Pay As You Drive insurance; PHYD: Pay How You Drive insurance
It is now time for AXA to execute a global telematic strategy

- Insurance telematics has reached its tipping point
  - Gender ruling
  - eCall implementation start
  - New technologies & business models
  - Chain reaction in one market after the other

- **PTOLEMUS** is the most experienced consulting firm in insurance telematics
  - State-of-the-art responses to most challenges
  - A global vision to make each local case work

- **PTOLEMUS** can assist AXA in its strategy & implementation to reach success right from the beginning