PTOLEMUS Consulting Group

UBI and other trends in insurance

Presentation to FIA members

Vienna, 8th November 2017

The consulting & research firm for the connected world

Consulting services

Strategy definition	Investment assistance	Procurement strategy
Innovation management	Business development	Deployment

Market research publications

Fields of expertise

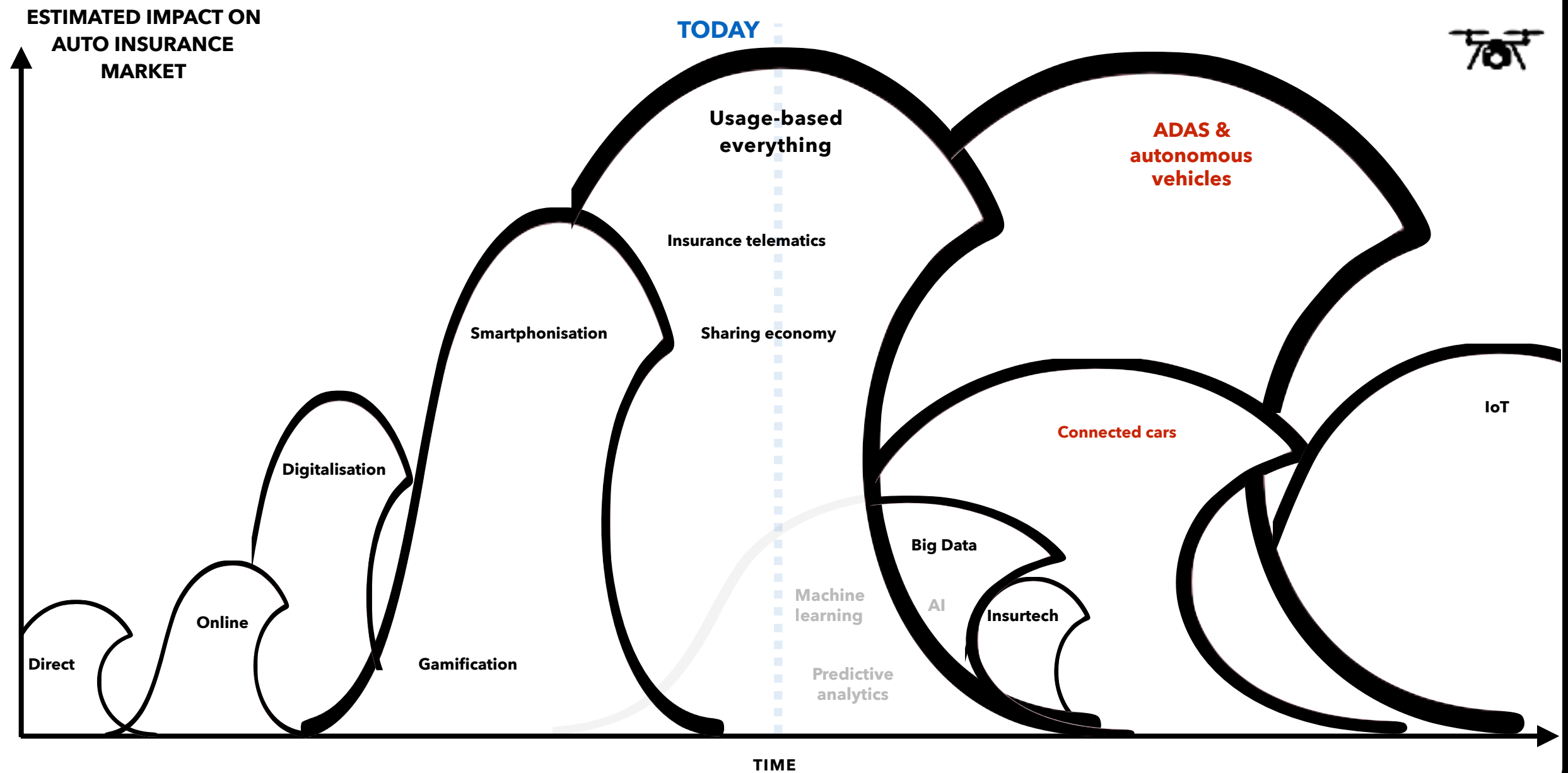| Mobility services	Car pooling Car sharing Smart parking	Multimodal mobility Ride hailing	Road side assistance Tax refund
Vehicle services & telematics	bCall eCall FMS SVT / SVR	Tracking VRM In-car Wi-Fi Fuel cards	Parking Navigation Speed cameras Traffic information
Usage-based charging	Car As A Service Electronic Toll Collection	Mobility-as-a-Service Road charging	UBI / PAYD Vehicle rental Vehicle leasing
Vehicle data & analytics	AI CAN-bus Crowd-sourcing Data protection	Driving behaviour OBD Predictive analytics	Remote diagnostics xFCD
Vehicle automation	ADAS	Autonomous cars	Autonomous trucks
Enabling technologies	Positioning (GNSS / WiFi / cellular)	M2M / connectivity Smartphones	Telematic devices V2X

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No signs that the sea is getting quieter...

The waves - Major trends affecting the auto insurance business

ESTIMATED IMPACT ON AUTO INSURANCE MARKET

TODAY

Usage-based everything

ADAS & autonomous vehicles

Insurance telematics

Smartphonisation

Sharing economy

IoT

Connected cars

Digitalisation

Big Data

Online

Machine learning

AI

Insurtech

Direct

Gamification

Predictive analytics

TIME

UBI and other trends in insurance

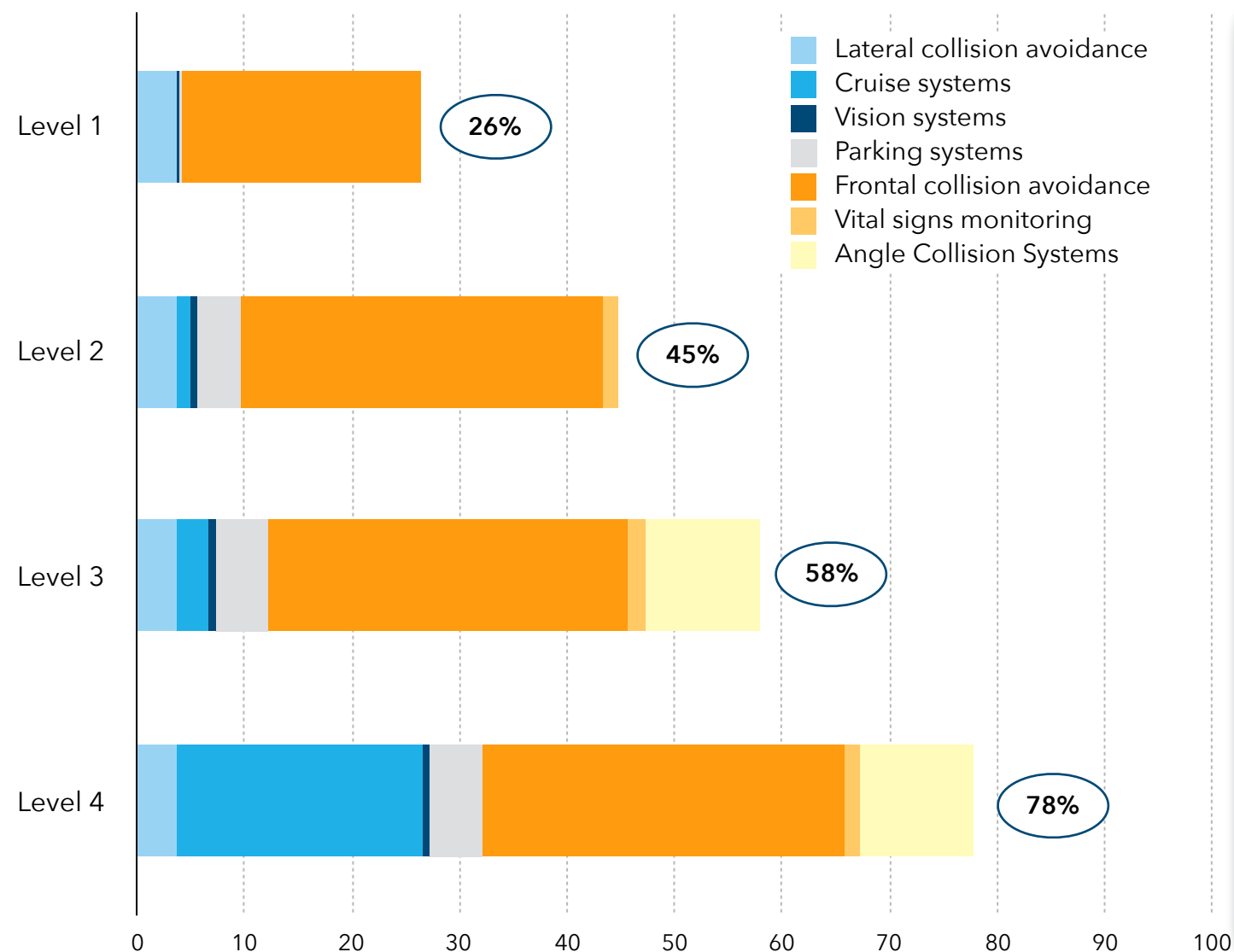| 1	**Automation will affect everyone, later**
2	Mobility will change the role of the OEM
3	UBI is the first step in connected insurance

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Fully autonomous vehicles are not expected this decade

	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 4 DRIVERLESS	LEVEL 5
Example	*Ford Focus 2016*	*Tesla Model 3*	*Mercedes E Class*	*Navya Arma shuttle*	*Rolls-Royce Vision Next 100*
Launch date	**2010**	**2017**	**2021**	**2021**	**2030?**
Enabling technologies	Sensors (Camera, radar)	3D / HD maps	Lidar, V2V, V2I	Lidar, V2V, V2I	Full AI HA GNSS
Defining application	ADAS	Advanced Cruise Control	Autonomous car	Driverless car	Driverless car
Regulation change required	Type approval	Highway code	UNECE R79	City mandate	International transport laws
Driver responsibility	Full liability	Full liability	Partial liability	No liability	No liability

ADAS can mitigate nearly half of the addressable claims

Addressable claims cost mitigated by ADAS in the UK

Legend:
- Lateral collision avoidance
- Cruise systems
- Vision systems
- Parking systems
- Frontal collision avoidance
- Vital signs monitoring
- Angle Collision Systems

Level 1 — 26%
Level 2 — 45%
Level 3 — 58%
Level 4 — 78%

- Based on UK crash patterns
- Applicable only to **at fault collisions**
- **Frontal collision** is the most impactful ADAS
- **Parking** crashes occur when leaving. ADAS only assists parking
- Less human driving **makes risk more predictive**
- **Scoring** should apply to cars

The autonomous trip starts with ADAS features

Improves	Alerts	Assists	Decides & executes	Fully controls

Lateral collision avoidance
- Construction Zone Assist
- Lane Keeping Support
- Lane Change Assist
- Lane Departure Warning Assistant

Cruise systems
- Highway Chauffeur
- City chauffeur
- Cooperative Adaptive Cruise Control
- Traffic Jam Assist
- Adaptive Cruise Control
- Intelligent Speed Adaptation

Frontal collision avoidance
- Predictive Emergency Braking System
- Predictive Pedestrian Protection
- Emergency Brake Assist
- Pedestrian Detection System
- Forward Collision Warning

- Adaptive Front Lights

Vision systems
- Night Vision System
- Mirror Replacement
- Rear View System

- Road Sign Recognition
- Heads Up Display

Parking systems
- Parking Assistance
- Automatic Park Assist
- Parking Aid
- Remote Garage Parking

Vital signs monitoring
- Driver Monitoring System
- Cognitive Distractions Detection

UBI and other trends in insurance

1	Automation will affect everyone, later
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3	UBI is the first step in connected insurance

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Car makers, leasers and aftermarket service providers offer the largest range of mobility services

Current presence of different stakeholders in mobility services

	OEMs	Leasers / Renters importers	After-market TSPs	Line-fitted TSPs	RSA	Insurers	Toll chargers	Energy comp.	City planners	Nav. suppliers
Car sharing	●	●			●				●	
Car pooling	●								●	
Car rental		●	●							
Navigation	●	●	●	●					●	●
Wi-Fi hotspot	●			●						
SVT / SVR	●	●	●	●	●	●		●		
eCall	●	●	●	●	●	●		●	●	
UBI	●	●	●	●	●	●				●
Remote diagnostics	●	●	●	●		●				●
bCall	●	●	●	●	●	●				
Car leasing	●	●	●							
Electronic tolling		●	●				●	●	●	
Fuel card services	●	●	●				●	●		●
Fleet telematics	●	●	●		●	●	●	●		●
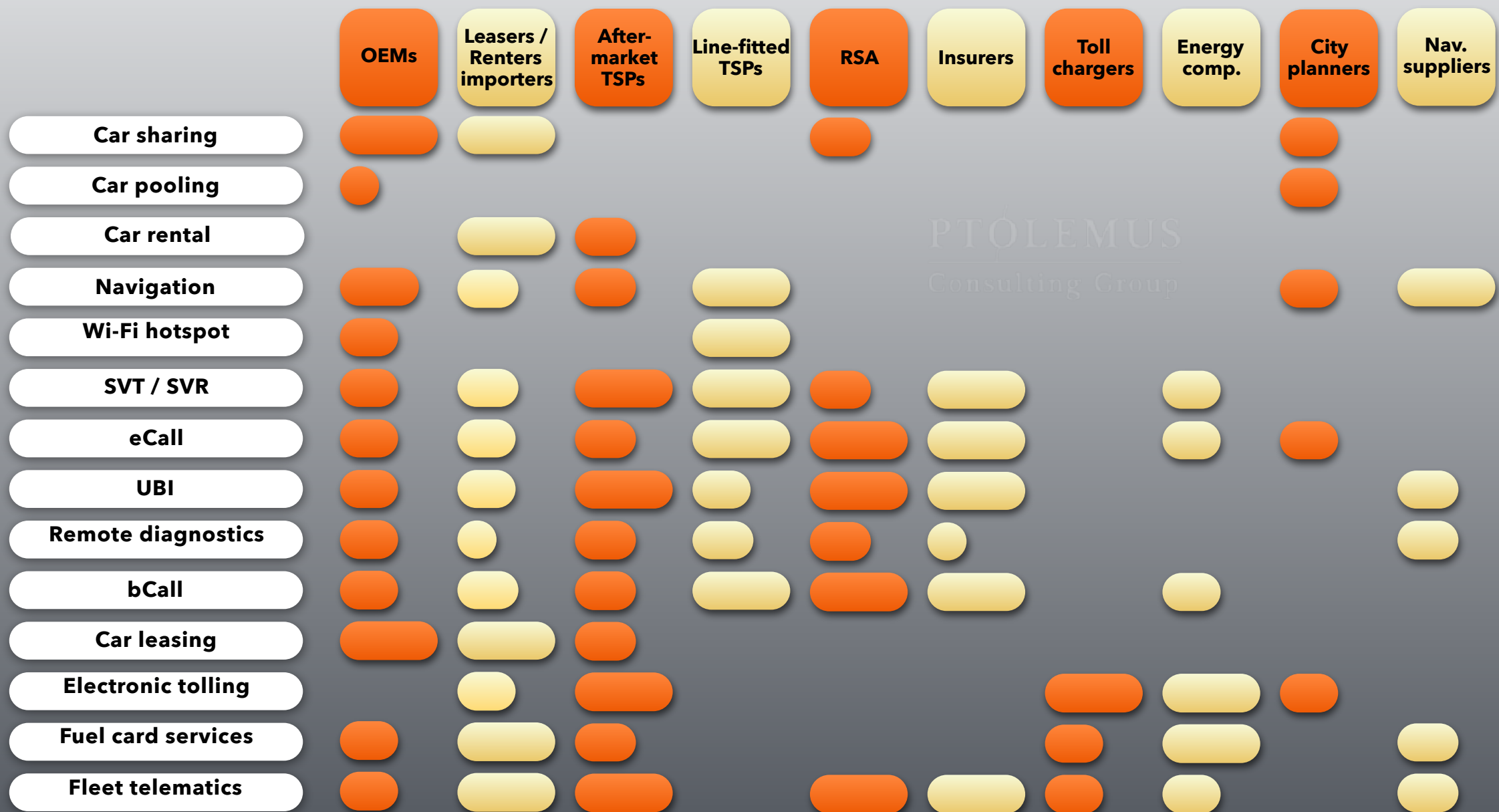
And these new players will enter the insurance business, directly or indirectly

OEM have all invested in mobility
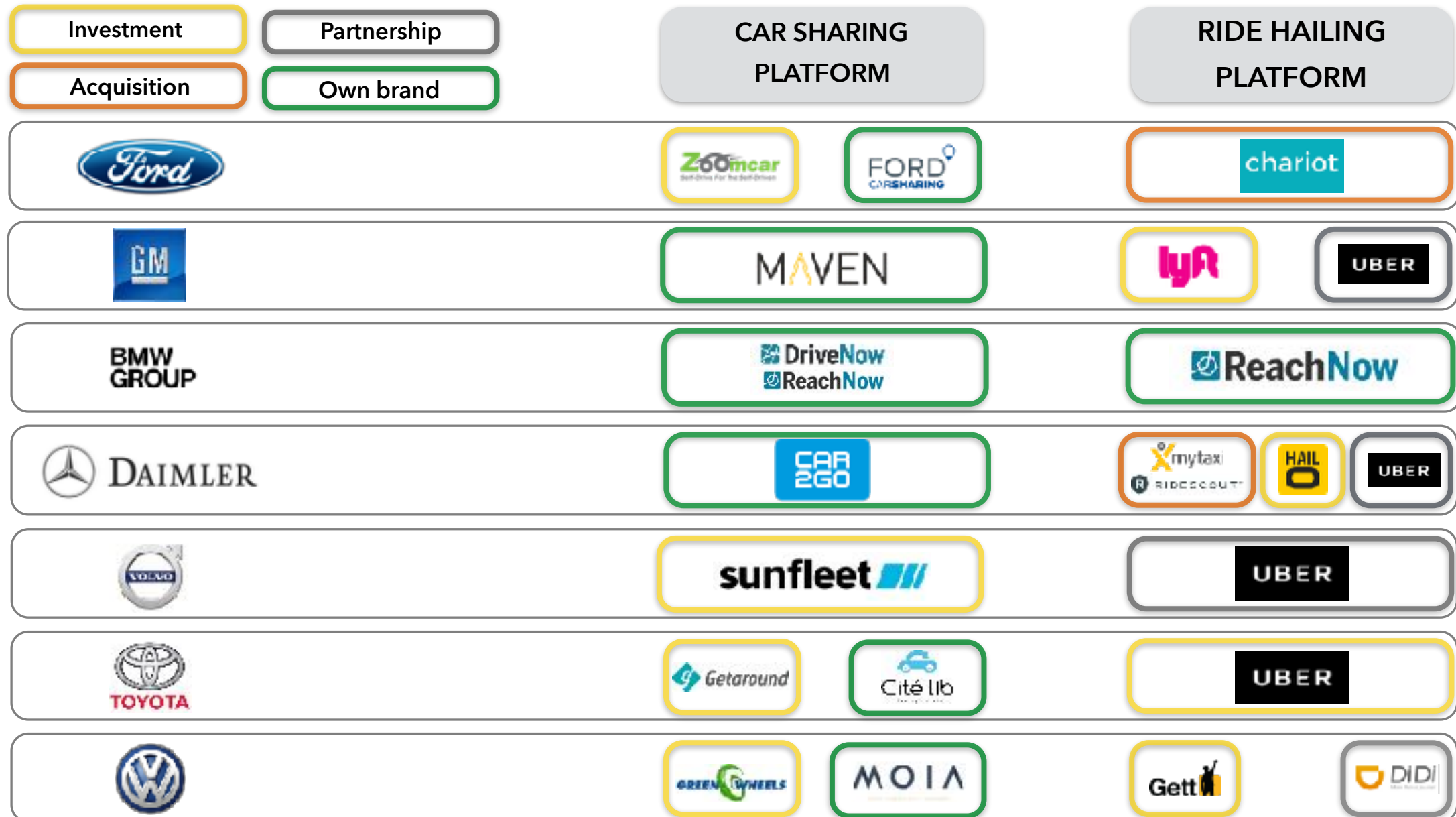
OEMs are already among the biggest leasing players

Largest leasing companies in Europe (number of cars)
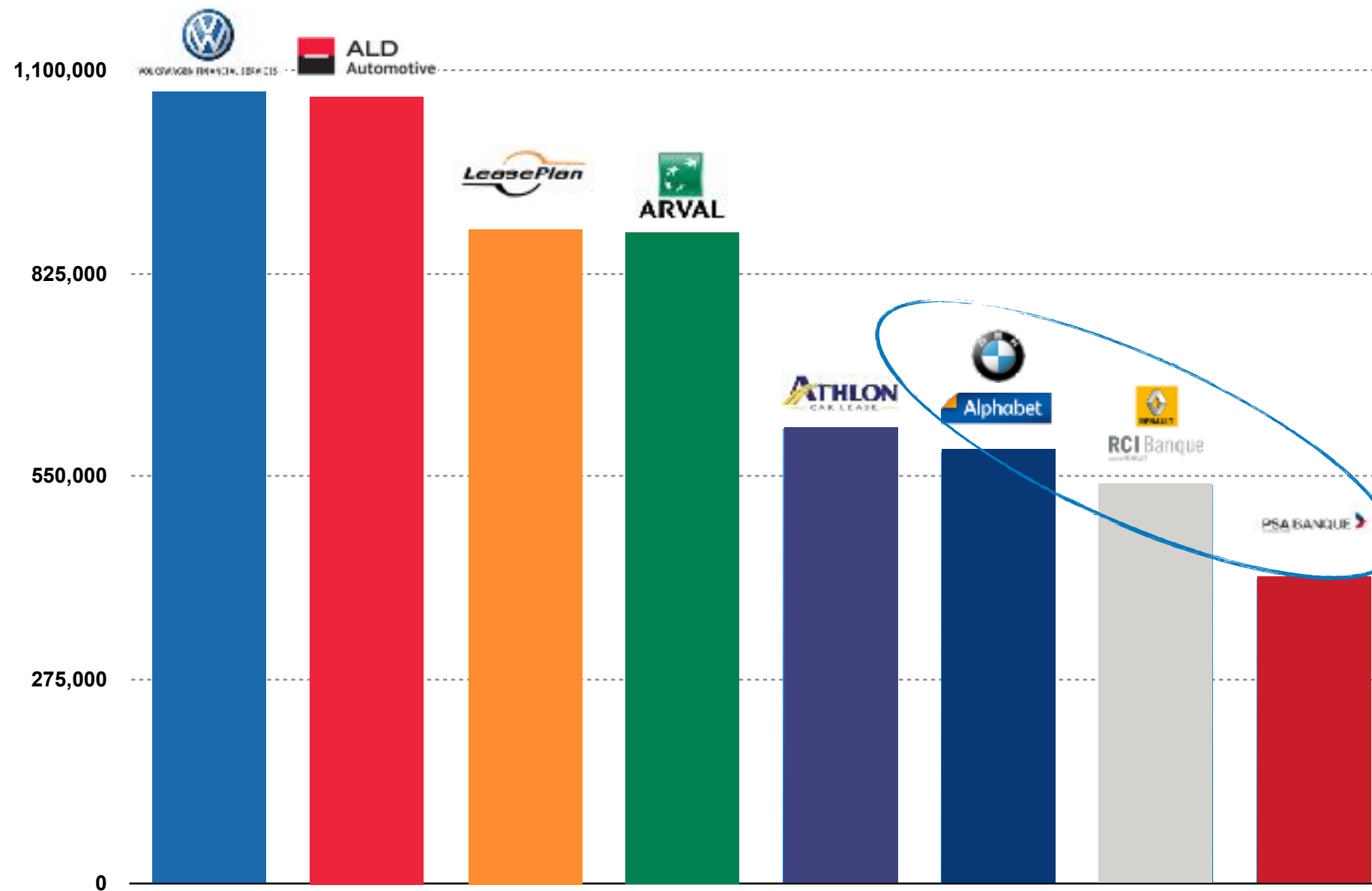
- Leased cars will be equipped by the OEMs connectivity platform.

- Sharing, renting leasing will become different offer from the same companies

Source: PTOLEMUS

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UBI and other trends in insurance

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What are UBI and telematics insurance?

Its basic principles

- **Most current insurance policies use static / statistical criteria to evaluate drivers' risks** - Age, vehicle make & age, place of residence, occupation, etc.

- The **historical claims profile** is also taken in account

- Statistical criteria are being contested: **gender** was the first one to be forbidden

- **Usage-based Insurance programmes provide policies** based on these criteria and **5 new dynamic parameters**

The driving risk star

Distance

Statistical criteria

Time

Historical claims profile

Place

Context

Driving behaviour

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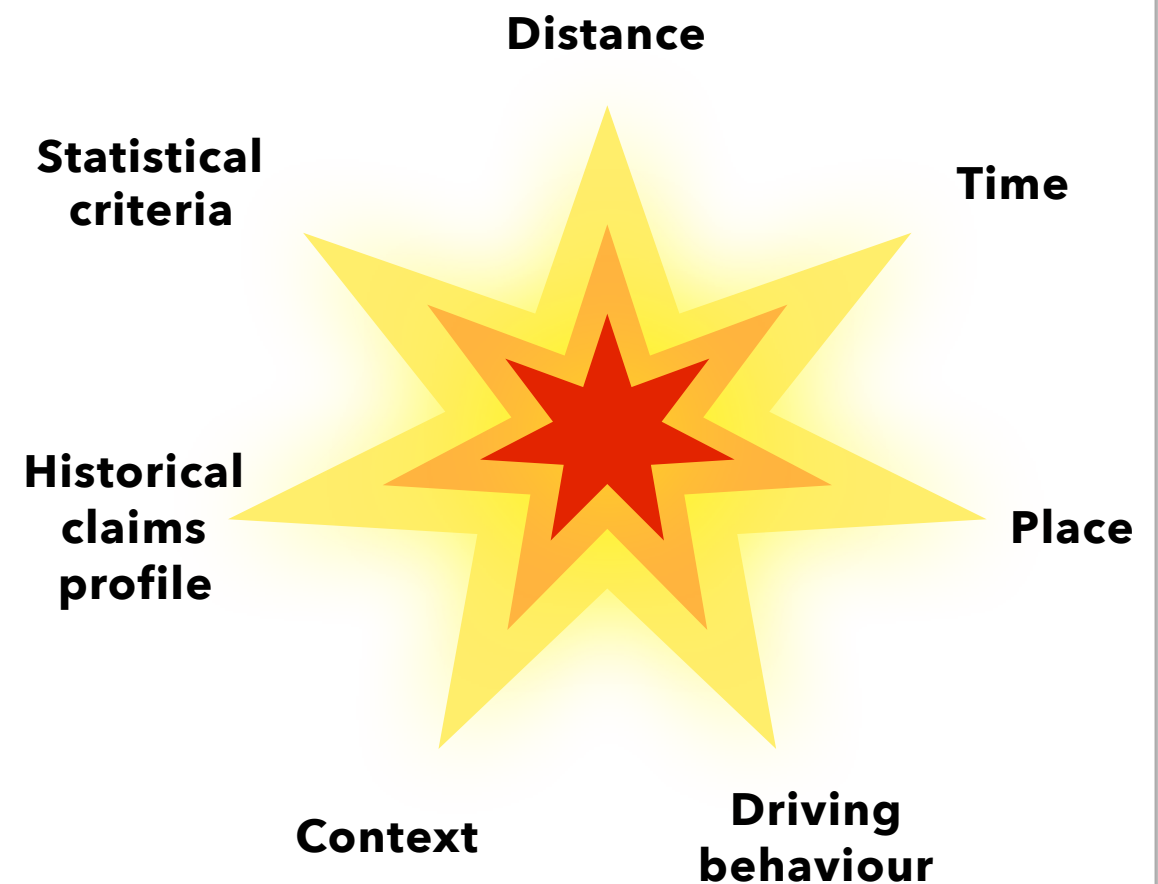
Unipol designed its model to solve a problem

Unipol, the pioneer

- Unipol started to incentivise drivers to have their car equipped with a **black box**

- Started with **pull model** to validate claims

- Added push alerts later to actively reduce **FNOL delay**

- The reduction in claims cost balanced the **cost of the device**

- **Mostly PAYD,** no risk management until much later

- Biggest UBI programme in the world with **3 million policies**

In 2 years, OBD dongles has become the leading technology to provide telematic insurance

PROGRESSIVE®

Share of UBI policies by technology worldwide
(% of total market personal line policies)
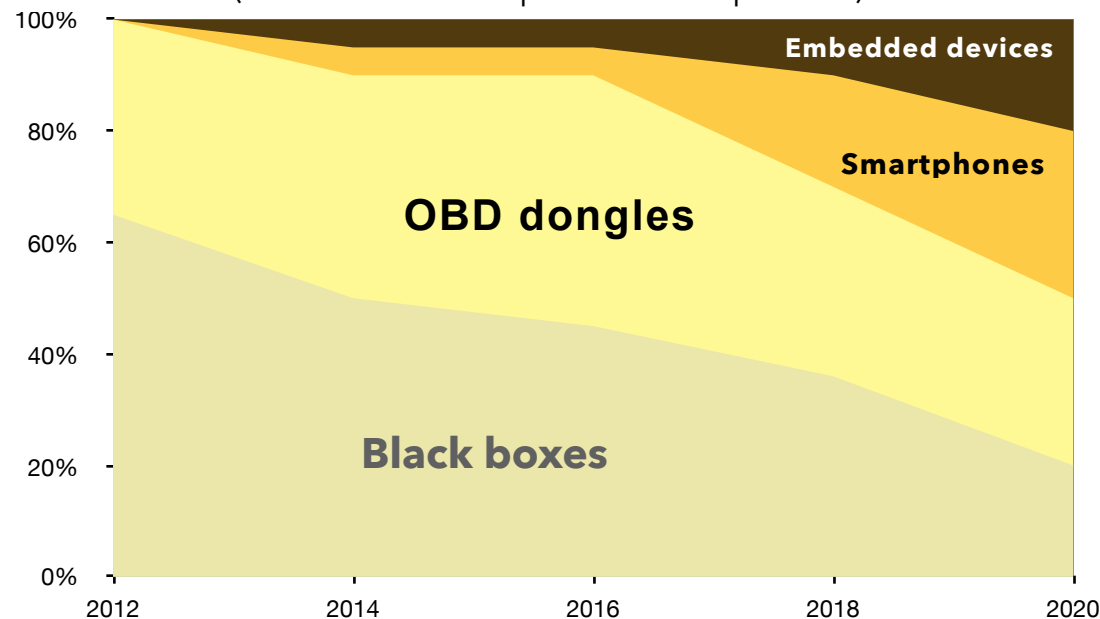
- Progressive launched *Snapshot* in 2008
  - The OBD dongle is installed by the driver
  - The snapshot is taken over the course of 3 to 6 months only
  - Location data is not collected

- The programme is accessible for **all drivers**, not just high risk

- Progressive only uses **3 parameters**: harsh braking, mileage and night driving

- It is now the 2nd biggest UBI programme worldwide with **2 million policies**

- We expect it will **switch to smartphones** in the next 2 years

OBD dongles can collect different datasets, adapting to the insurer's business model

Starting with a simple proposition can lead to success

	Permanent	Embedded connectivity	Bluetooth	Accelerometer	GPS	Gyro
PROGRESSIVE / XIRGO TECHNOLOGIES		✓		✓		
Allstate / DANLAW	✓	✓		✓		
Direct Assurance YouDrive / META SYSTEM	✓		✓	✓	✓	✓
amaguiz.com / Scope Technologies	✓	✓		✓	✓	
Allianz / TomTom	✓		✓	✓		

Number of subscribers

Several programmes now put more emphasis on rewards

Reward-based programmes

- **Giving a premium discount might not be financially sustainable for all drivers**

- **Benefits**
  - ✓ Many options for the insurer: Fuel, repair, everyday treats
  - ✓ Shared cost through partnership model - Sometimes no variable cost for the insurer
  - ✓ More complex to set up, but harder to copy

- **Drawbacks**
  - ∗ Not sufficiently attractive for high premium segments
  - ∗ More adapted to big insurers with large customer base
  - ∗ Some customers with little time will not fully benefit from the scheme

Vitality drive
(South Africa)

Drivewise Mobile
(US)

(UK)

Car clubs have a lot to provide to insurers

RSA searching for the perfect business model

- RSA have a **dedicated channel** to sell insurance

- The club's benefits can include a device

   ✓ **DLG** tried to have it send information to **Greenflag**

   ✓ **RAC** initially offered the device to its members then added UBI insurance. BUT no crash or diagnostics

   ✓ **AXA, Allianz, Generali** all trying to find a model to monetise car data from their assistance partners.

   ✓ **AAA** now provides car sharing/ ride hailing

- **OEM data is the next step for many**

   ✴ OEMs are all building their own data cloud

   ✴ Quality, frequency and data sets will vary

- **Crash data can be sold in a transaction based model**
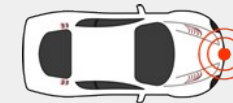

FNOL - Collision Alert   **RAC**

Policy:	06/02/2014 10:06:40_LM61XOP	**Road:**	M4
Vehicle Reg:	LM61XOP	**Speed Limit:**	70
Make:	FORD	**Location:**	Reading
Model:	GALAXY ZETEC TDCI AUTO	**Postcode:**	RG10 0

Impact Location: Front

Time: 11:56:06
Date: 03 July 2015

Confidence: High

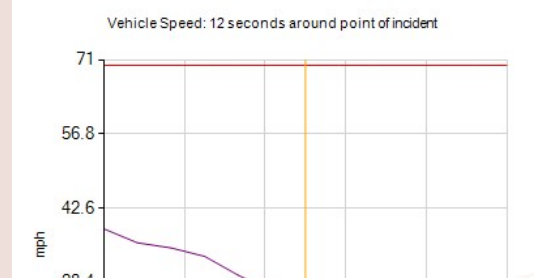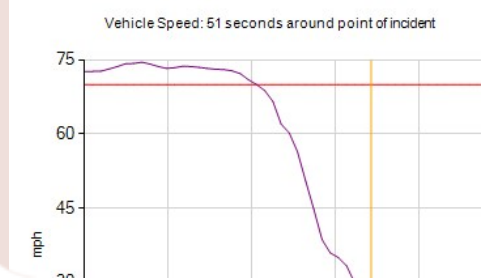The following feedback suggests that there has been a collision:

- Confidence value was greater than 95%

Severity: High

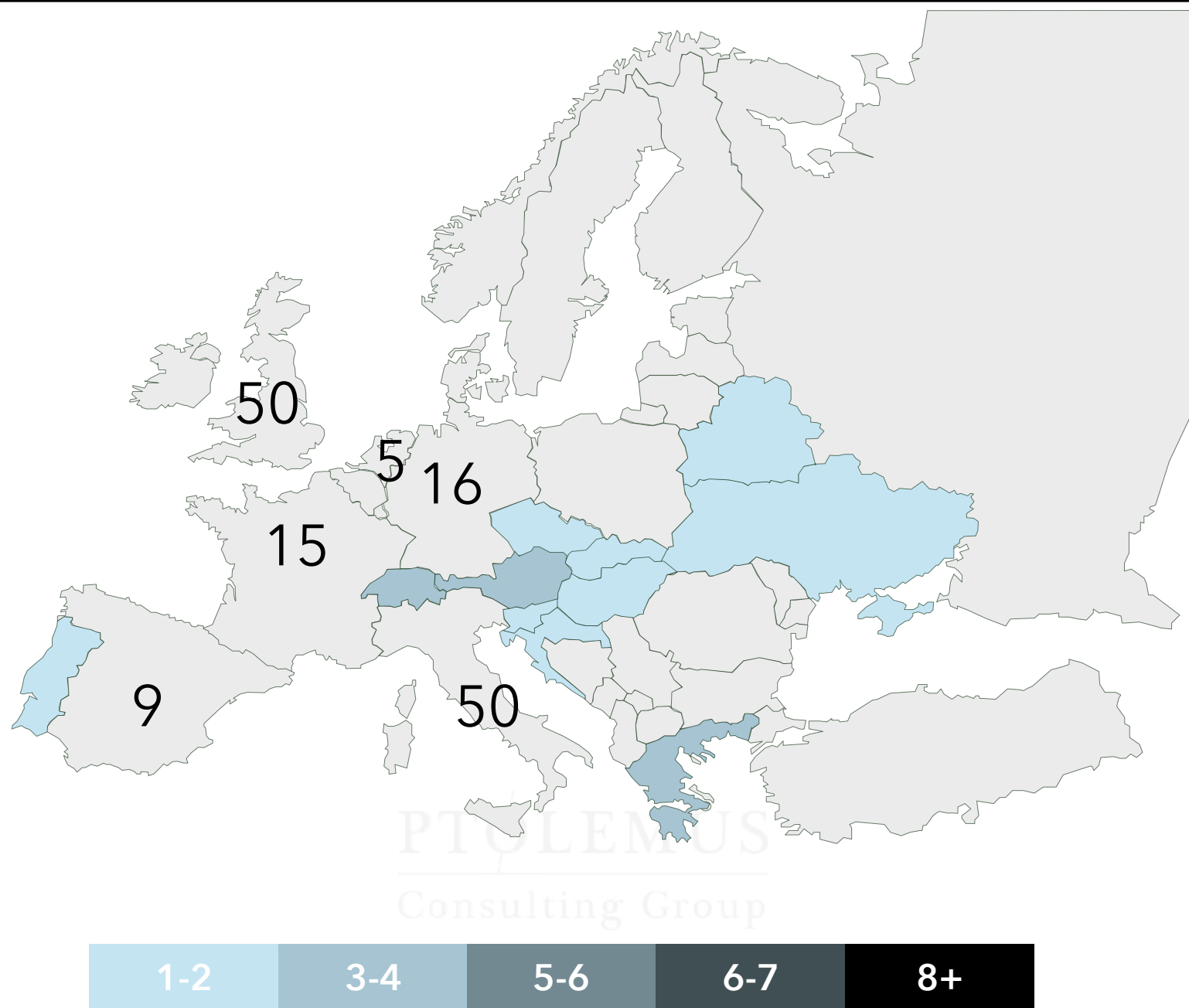The following feedback suggests that the severity of the collision is High:

- Severity was 4g or greater

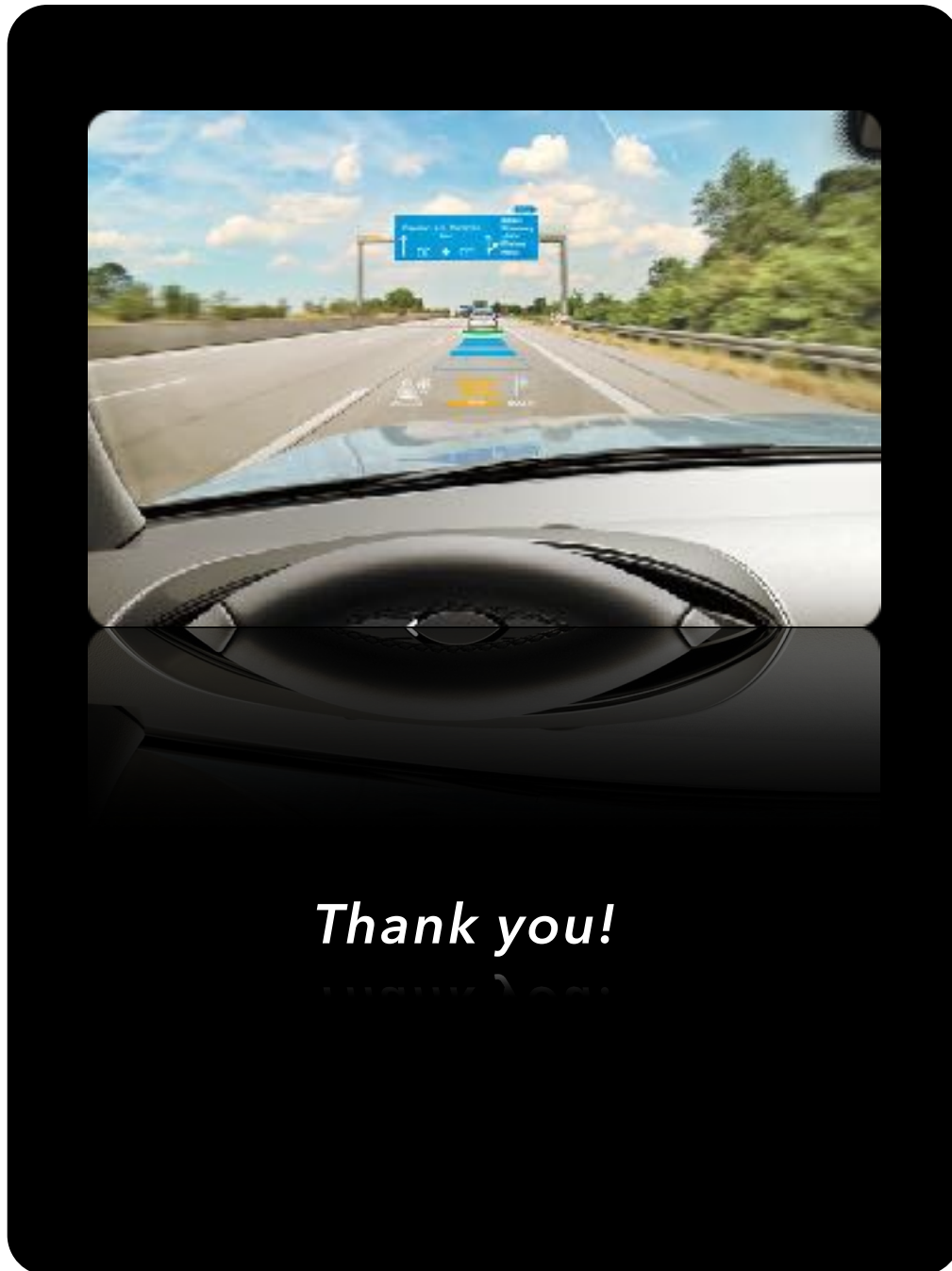**Collision location and speed graphs:** Click here to view in Google Maps.

Vehicle Speed: 51 seconds around point of incident

Vehicle Speed: 12 seconds around point of incident

Most European markets have started

Active UBI programmes in Europe

| 1-2 | 3-4 | 5-6 | 6-7 | 8+ |

Source: PTOLEMUS - Note: Analysis restricted to the countries in the UBI dashboard scope

From a drop in the ocean to a teaspoon

Thank you!

- Insurance is becoming **assistance.** It needs car data to evolve. The same data can reduce assistance costs

- Crash data is a priority for insurers

- AV will not happen soon but ADAS already has an **impact on repair today**

- The RSA market will need to morph quickly:

  - Use of diagnostics data become key to improve RSA operations
  - With more shared vehicles, B2B assistance contracts will represent a bigger share of the market

- Insurers and assistance providers are best positioned to combine forces and share costs

Source: PTOLEMUS

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