PTOLEMUS Consulting Group

Usage-Based Insurance Supplier Ranking 2016

Presentation of headline winners

27th June 2016 - PTOLEMUS intellectual property

The consulting & research firm for the connected world

Our consulting services

Strategy definition
Vision creation, strategic positioning, business plan development, board coaching & support

Investment assistance
Strategic due diligence, market assessment, feasibility study, M&A, post-acquisition plan

Procurement strategy
Specification of requirements & tender documents, launch of tenders, supplier negotiation & selection

Innovation management
Value proposition definition, product & services development, architecture design, assistance to launch

Business development
Partnership strategies, detection of opportunities, ecosystem-building, response to tenders

Implementati on
Deployment plans, complex / high risk project & programme management, risk analysis & mitigation strategy

Our fields of expertise

Car infotainment & navigation
Connected services (Traffic information, fuel prices, speed cameras, weather, parking, points of interest, social networking), driver monitoring, maps, smartphone integration, smartphone-, PND- or embedded navigation,

Usage-based charging
PAYD / PHYD insurance, road charging / electronic tolling, fleet leasing & rental, car sharing, Car As A Service, etc.

Telematics & Intelligent Transport Systems
ADAS, connected vehicle, crowd-sourcing, fleet management, eCall, bCall, SVR, tracking, vehicle data analytics (OBD / CAN-bus), VRM, V2X, xFCD

Positioning / Location enablement

M2M & connectivity

Clients across the mobility ecosystem…

Analytics providers

AAA, Cognizant, Google, here, LexisNexis, sas, Towers Watson, Verisk Analytics, RMS, Wunelli

Applications providers

BMJ Group, censio, CCC Information Services Inc., Commedi, Coyote, TomTom, ESRI, Movelo, tdf, RoadPilot, wejo

Device / location suppliers

Andrew, cnes, gmv, Deveryware, Location Smart, Navizon, Samsung, Nokia Connecting People, Thales Alenia Space, Telespazio, Sysnav Navigation Solutions, TruePosition, Vizio

Automotive manufacturers & suppliers

Agero, Airbiquity, cobra, Delphi, Directed, Danlaw, intel, Ford, Harman, Meta System, Michelin, Qoros, Qualcomm, Sierra Wireless, Telit, Toyota, Toyota Tsusho

Telematics solution providers

Arkan, arvento Mobile Systems, drivefactor, FleetComplete, Fleetmatics, Eliocity, Himex, IMS, Lysanda, LoJack, Mobile Devices, Octo, Sistema, Orion, Quartix, Queclink, SafeFleet, Scope Technologies, simobil, Watchstone

Insurers, aggregators & assistance providers

AAA Insurance, Admiral, Aioi Nissay Dowa Insurance MS&AD Insurance Group, Allianz Global Assistance, AXA, Baloise Insurance, carrot, covea, Crédit Agricole Assurances, Desjardins, europ assistance, Generali, The Hartford, Inter Mutuelles Assistance, Ингосстрах, Liberty Mutual, MACIF, Matmut, HUK, Menora Mivtachim, Mondial Assistance, Munich RE, Promutuel Assurance, OUT Surance, RSA, Société Générale, Sompo Japan, Swiss Re, smile direct, telesure, Tokio Marine, youi, Zurich

Mobile telecom operators

SFR, Sprint, SK telecom, Telefónica, Telekom Austria Group, verizon

ITS operators, regulators & fleets

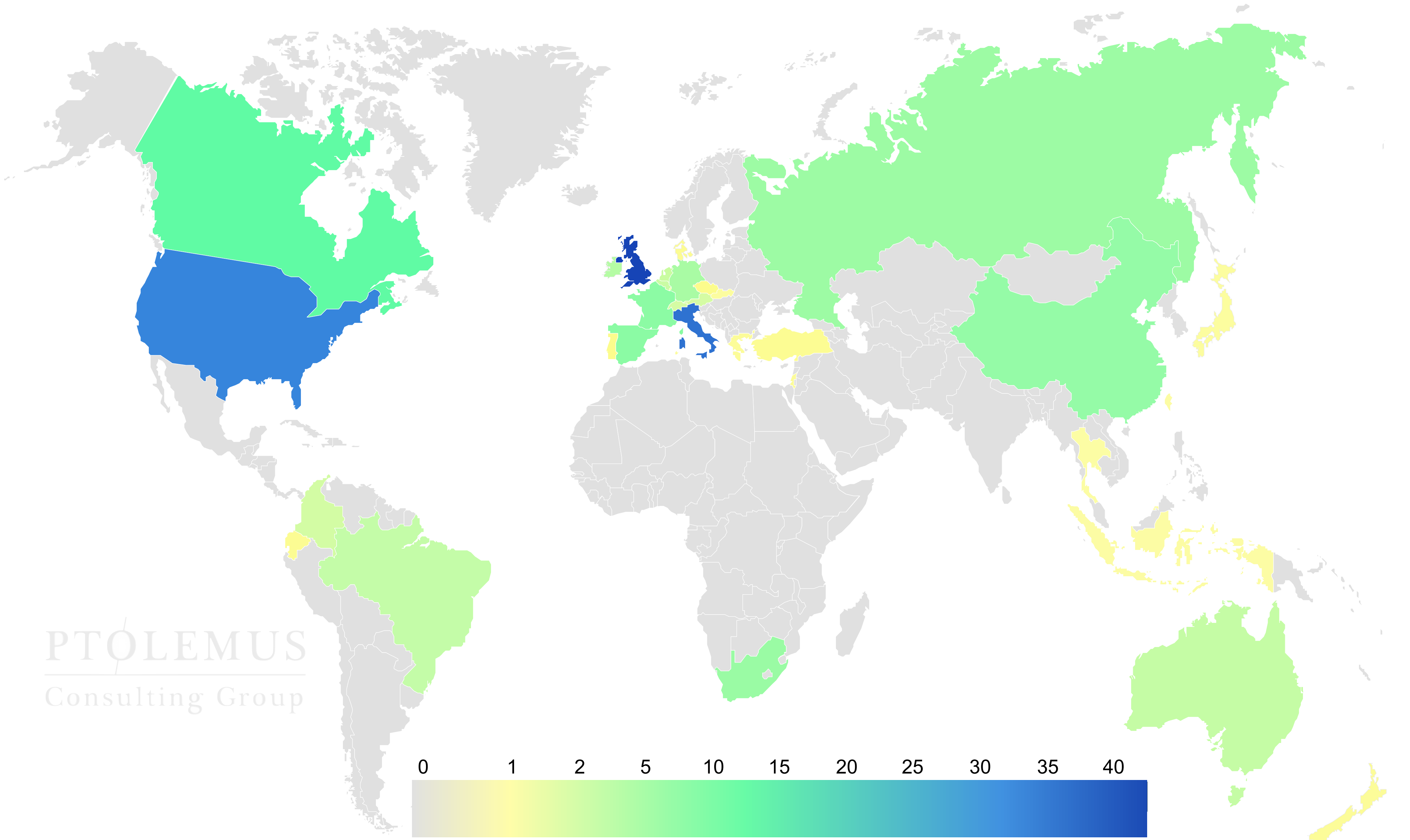
Arval BNP Paribas Group, autostrade per l'italia, Brisa, CGI, DKV, Edenred, Efkon, egis, Euromaster, European Commission, FleetCor, Kapsch, mouchel, ND Nomad Digital, Norbit, SICK, Sofico, Telepass, T-Systems, Toll Collect, Vitronic, Thales

Banks & private equity investors

Amadeus Capital, Bain Capital, Bank of America Merrill Lynch, Barclays, The Baupost Group, Cinven, citigroup, Hellman & Friedman, Investcorp, Disruptive Capital Finance, Goldman Sachs, Intek Group, Hutton Collins, J.P.Morgan, Leonardo & Co., Montezemolo & Partners, New Amsterdam Growth Capital LLC, Pamplona Capital Management, Nomura, Renova Group, Thoma Bravo

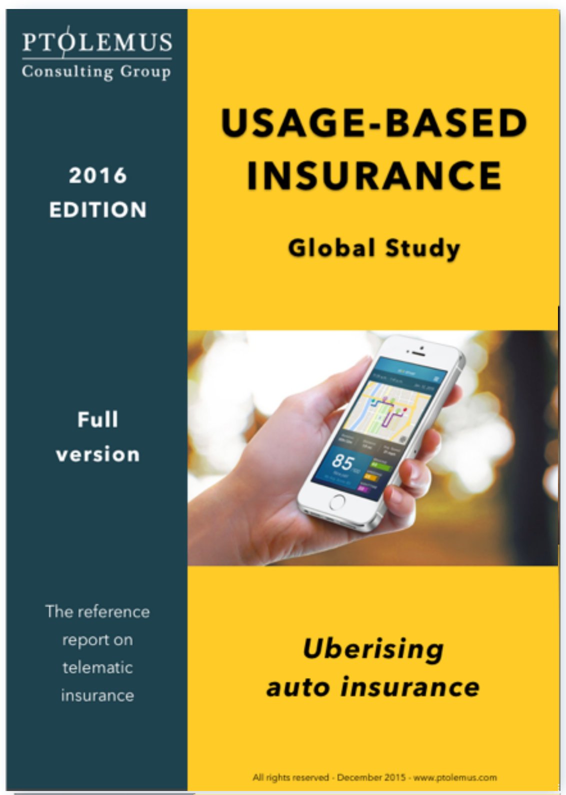
UBI has spread to the 5 continents

Number of active UBI programmes worldwide



Source: PTOLEMUS Consulting Group

The UBI Global Study has become the reference report



The reference report on the subject, quoted by The Economist, the Financial Times and the Wall Street Journal

- **1100 pages of research using:**
  - 286 interviews in 28 countries
  - 5 years of research performed by 6 consultants in 4 countries
  - Insights from 25+ consulting projects
  - Our experience & vision of the ecosystem incl. OEMs and TSPs
  - 422 figures (charts, tables, etc.)
- **42 case studies** including Allianz, AllState, Carrot Insurance, Vodafone Auto, Ingenie, OnStar- Progressive, Discovery Insure, Liberty Mutual, Octo Telematics, Renault Amaguiz, State Farm, Unipol, Zurich
- A **handbook of 69 suppliers' solutions** including our own evaluation and ranking
- **28 insurance markets profiled**
- **2020 & 2030 market forecasts**
  - Canada, US, Latin America, Europe, Russia, South Africa, India, Chinese and Japan
  - Personal line / commercial line
  - Aftermarket / OEM
- **Analyses of the disruptive forces at play**
  - ADAS and autonomous vehicles
  - The eCall & ERA Glonass mandates
  - The rise of smartphone apps
  - Big Data & analytics
- Targeted **recommendations** for insurers, regulators, TSP, OEMs and operators

PTOLEMUS

* Italy, the UK, France, Germany, Russia and the US

Based on interviews of more than 200 new companies in 30 countries including 86 insurers & brokers

Organisation	Cou
AAA Club Partner	
Achmea	
ADAC	
Admiral France - L'O Assurances	
Admiral Insuranc	
Ageas Continental Eu	
Agnik	
AIG	
Aioi Nissay Dowa Insu	
Airmax Group	
ALD Automotive	
Allianz	
Allianz	
Allianz	
Allianz	
Allstate Insuranc	
Altima Assurance	
Amadeus Capital Par	
Amaguiz (Groupan	
American Family	
AnyDATA Corporati	
Aplicom	
Arval	
Association of Briti Insurers	
Atos	
ATrack Technolog	
Audiovox	
Autoline	
Autosaint (Fresh! Insu Group)	
Aviva (formerly Norv Union)	
Axa Assistance	
Axa Belgium	
Axa Global P&C	
Axa Matrix Risk Consu	
Axa Re	
Axa UK	
Baseline telemati	
BGL Group Ltd	
Bird & Bird	
BluO Fund	

Organisation	Country
BMW	
Bouygues Telecom	
Cambridge Mobile Telem Inc.	

Company name	Country
AIG	UK
Aioi Nissay Dowa Insurance	Worldwid
Alcatel-Lucent	France
ALD Automotive	France
Allianz	Europe
Allianz Global Assistance	Europe
Allstate Insurance	USA
Alo@Assurances	France
Alpine	Japan
Altea	Italy
Altech Netstar	South Afric
Altima Assurances	France
Amadeus Capital Partners	UK
Amaguiz (Groupama)	France
American Family	USA
Amodo	Slovenia
ANIA	Italy
ANWB	Netherlanc
AnyDATA Corporation	USA
Aplicom	Finland
Apple	USA
ARM Holdings	UK
Arval	France
ASFA	France
Assercar	France
Assicurazioni Navale	Italy
Association of British Insurers	UK
Assurland.com	France
Atmel	USA
Atos	France
ATrack Technology	Taiwan
Audatex	USA
Audi	Germany
Audiovox	USA
AutoDirect Insurance	UK
Autoline	UK
Autoliv	Europe
Autosaint (Fresh! Insurance)	UK
Aviva (formerly Norwich Union)	UK

Company name	Country	Sector
Market IP	Belgium	
Marks & Spencer	UK	
Marmalade Group	UK	
Masternaut	Europe	
Matmut Assurances	France	
Mercedes Benz	Germany	
Meta System	Italy	
Michelin	France	
Mitsubishi Electric	Japan	
Mix Telematics	South Africa	
Mobile Devices	France	
Mobileye	Israel	
Modus	USA	
MOJIO	USA	
Money Super Market	UK	
Montezemolo & Partners	Italy	
Moody's	USA	
MORE TH>N	UK	
Motaquote	UK	
Movelo	Sweden	
MyDrive Solutions	UK	
Nationwide Insurance	USA	
Navteq / HERE	France	
navya	France	
ND a Islandi Ehf	Island	
NIS Glonass	Russia	
Nissan Europe	Europ	
Nissan Motor Corporation	USA	
No Nonsense Insurance	N. Ireland	
Nokia	Finland	
Norton Rose	UK	
Novacom Europe	Netherlands	
Novatel Wireless	Worldwide	
NTT DoCoMo	Japan	
NXP	Netherlands	
ÖAMTC	Austria	
OBD Experts	UK	
Octo Telematics	Italy	
OECD	France	

ADAS - MVCM
Broker
General insurance

Company name	Country	Sec
CLAL Insurance	Israel	General i
Clarion	Japan	In-car audic
CMA Claims	UK	Claims
CNIL (Commission Nationale de l'Information et des Libertés)	France	Data protect
Co-operative Insurance	UK	General i
Cobra Automotive Tech.	Italy	TSP
Cognizant	USA	Enterprise resc
Compagnie Générale d'Automatisme (CGA HBS)	France	Enginee
Comparethemarket.com	UK	Online com
Confused.com	UK	Online com
Continental	France	Tier-1 s
Corona Direct	Belgium	Brc
Corporate Vehicle Observatory	France	Research
Covea Group	France	General i
Coverbox	UK	Consumer
Coverhound	USA	General i
Coyote	Europe	TI
Crédit Mutuel Arkea	France	Consumer
cTrack (Digicore)	South Africa	TS
Cybit Masternaut	UK	TS
Daimler Fleetboard	Germany	TS
Daimler Insurance Services	Germany	OE
Danlaw	USA	TI
Data Tec Co Ltd	Japan	OD
Davis Instruments	USA	TI
DBV Winterthur	Germany	General i
Delphi	USA	Tier-1 s
Denso	Germany	Tier-1 s
Department of Transportation	USA	Gover
Detector	Spain	TS
Deutsche Telekom	Germany	MN
Diamonds	UK	Insuranc
Direct Line Germany	Germany	Consumer
Discovery Insure	South Africa	Consumer
Disruptive Capital Partners	UK	Private e
Diva	UK	Insurance broker
Dixon's	UK	Consumer electronics retail chain
Drive Power	USA	Data management provider

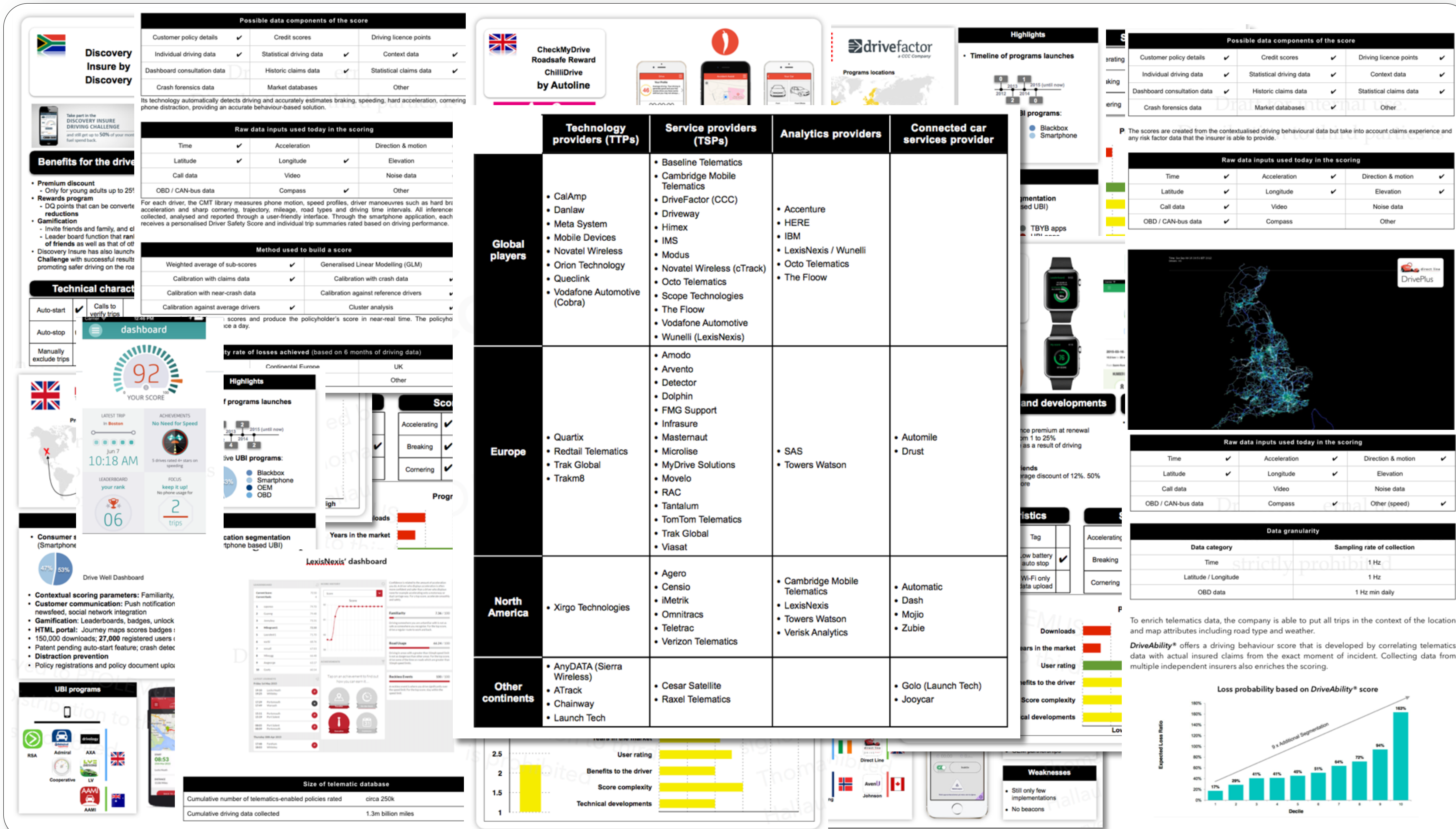
Company name	Country	Sector
Generali France	France	General insurance
Generali Group	Italy	General insurance
Genertel (Generali Group)	Italy	Consumer insurance
Geotab	USA	
GirlMotor	UK	
GMAC Insurance	USA	
gocompare.com	UK	
Good Technology	USA	
Google	USA	
Greenroad Technologies	USA	
Groupama	UK	
Grupo Nacional Provincial	Mexico	
Hannover re	Worldwide	
Harman	USA	
Hastings Direct	UK	
HDI Gerling	Global	
HERE (formerly Navteq)	Worldwide	
High Point Auto Insurance	USA	
Himex (Evogi Group)	USA	
Hitachi	Japan	
Hollard Insurance	South Afric	
Honda	Japan	
HopeRun Technology	USA	
HUK-Coburg	Germany	
Hyundai	South Kore	
IBM	USA	
ID Macif	France	
IDM Trucking	USA	
If Insurance	Sweden	
iGate	UK	
iGo4	UK	
iKube	UK	
IMA	France	
iMetrik Global	USA	
IMS	Canada	
Industrial Alliance	Canada	
ICO (Information Commissioner's Office)	UK	
Infrasure	UK	

Finland
Spain
UK

Organisation	Country
Telekom Austria Group	Austria
Telenor Connexion	UK
Telit	Italy
Telogis	USA
Teradata Aster	USA
Texa	Italy
The AA	UK
The Co-operative Insurance	UK
The Floow	UK
The Hartford	USA
TomTom	Netherlands
TomTom Business Solutions	UK
Touring	Belgium
Toyota	Belgium
Toyota Insurance Management	Belgium
Toyota Insurance Management	UK
Trac Global	UK
Tracker	South Africa
Traqueur	France
Trafficmaster	UK
Transics	Belgium
Travelers Insurance	USA
Trimble MRM	USA
TRL	UK
Uniqa	Austria
Uralsib	Russia
US Department of Transport	USA
Vehcon	USA
Verizon Telematics	USA
Viasat	Italy
Vivium (P&V Group)	Belgium
Vodafone	UK
Volvo Cars	Sweden
Wireless Car	Sweden
Wunelli	UK
Xirgo Technologies	USA
Young Marmalade	UK
Zurich	Italy
Zurich	UK
Zurich Financial Services	France

Source: PTOLEMUS Consulting Group

Complemented by 78 company and solution profiles



	Technology providers (TTPs)	Service providers (TSPs)	Analytics providers	Connected car services provider
Global players	• CalAmp • Danlaw • Meta System • Mobile Devices • Novatel Wireless • Orion Technology • Queclink • Vodafone Automotive (Cobra)	• Baseline Telematics • Cambridge Mobile Telematics • DriveFactor (CCC) • Driveway • Himex • IMS • Modus • Novatel Wireless (cTrack) • Octo Telematics • Scope Technologies • The Floow • Vodafone Automotive • Wunelli (LexisNexis)	• Accenture • HERE • IBM • LexisNexis / Wunelli • Octo Telematics • The Floow	
Europe	• Quartix • Redtail Telematics • Trak Global • Trakm8	• Amodo • Arvento • Detector • Dolphin • FMG Support • Infrasure • Masternaut • Microlise • MyDrive Solutions • Movelo • RAC • Tantalum • TomTom Telematics • Trak Global • Viasat	• SAS • Towers Watson	• Automile • Drust
North America	• Xirgo Technologies	• Agero • Censio • iMetrik • Omnitracs • Teletrac • Verizon Telematics	• Cambridge Mobile Telematics • LexisNexis • Towers Watson • Verisk Analytics	• Automatic • Dash • Mojio • Zubie
Other continents	• AnyDATA (Sierra Wireless) • ATrack • Chainway • Launch Tech	• Cesar Satellite • Raxel Telematics		• Golo (Launch Tech) • Jooycar

From this research we analysed and ranked UBI suppliers

Four categories of shortlisted suppliers

- **21 Telematics Technology Providers (TTP)**
  - TTPs provide the technology, typically the black box or the OBD dongle to insurance or service providers
- **28 Telematics Service Providers (TSP)**
  - TSPs provide solutions to insurers to deploy and run UBI programmes. Those solutions can include their own device or subcontract to a TTP
- **9 Smartphone Service Providers (SSP)**
  - While TSPs often also offer smartphone-enabled services and programmes, SSPs focus primarily on smartphone-only UBI solutions to insurers
- **9 Analytics Solution Providers (ASP)**
  - ASP are independent companies or TSPs that provide additional intelligence and solutions to insurers to improve their risk analysis and scoring

	Telematics Technology Providers (TTPs)	Telematics Service Providers (TSPs)	Smartphone Service Providers (SSPs)	Analytics Solution Providers
Global players	• Calamp • Danlaw • Meta System • Mobile Devices • Novatel Wireless • Orion Technology • Queclink • Vodafone Automotive (Cobra)	• Baseline Telematics • DriveFactor (CCC) • Himex • IMS • Modus • Novatel (cTrack) • Octo Telematics • Scope Technology • Vodafone Automotive • Wunelli (Lexis Nexis)	• Cambridge Mobile Telematics • Driveway • The Floow	• Accenture • HERE • IBM • LexisNexis / Wunelli • Octo Telematics • The Floow
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Other continents	• AnyDATA (Sierra Wireless) • ATrack • Chainway • Launch Tech • SinoCastel	• Cesar Satellite • Cobli • Location World • Raxel Telematics		

In each supplier category, we used 15 specific criteria (1/2)

Methodology

- We have endeavoured to make an **independent judgment** on the ability of the shortlisted suppliers to provide superior UBI technology and/or services today
- The analysis is based on
  - Our existing expertise of the market and key players
  - A questionnaire sent to participating suppliers
  - Internal research and analysis
  - In-depth interviews with the suppliers and their partners
  - Feedback from insurance companies
- We have ranked suppliers through a specific set of criteria for each supplier category
- When suppliers could be included in several supplier categories, we entered them into each of the relevant categories

Telematics Technology Providers

1. Competitiveness based on **price** vs. feature, quality and reliability
2. Ability of the device to provide various means of **internet connectivity**
3. Technical **specification** of the device including processing power, storage, positioning methods and power consumption
4. Ability of the technical platform to work with **3rd party applications** and be remotely **upgradeable**
5. Level of possible **customisation**
6. Capabilities of the device to handle **diagnostic** queries
7. Quality and scope of the **driving data** recorded and registered by the device
8. Device's **crash detection** capabilities and reliability
9. Technical solution ability to **ID the driver**
10. Geographical **footprint** of the company and its regional focus
11. **Focus** the company has placed on Usage-based Insurance,
12. Supplier's long-term **sustainability**
13. **Innovative character** of the solution & the supplier as a whole
14. Number of **active programmes** globally and by region
15. Number of **active devices** globally and by region

In each supplier category, we used 15 specific criteria (2/2)

Telematics Service Providers

1. Richness, depth and quality of **scoring** capabilities including use of OBD data, on/off board scoring and external data sets
2. **Range of data** used for scoring from on-board libraries to VIN
3. Range of **features** available to insurers (from FNOL to SVR to social media integration)
4. Ability to offer **Value Added Services** alongside UBI (from eco-driving to post-accident services to Wi-Fi hotspot)
5. Ability & experience to provide **claims & accident management**
6. Level of service and quality of **support** provided
7. Degree of possible **customisation and flexibility of proposed integration models**
8. **Control over the hardware** part of the solution
9. **Ability to offer a competitive smartphone only** solution **today**
10. Geographic **footprint** and regional focus
11. F**ocus** the company has placed on UBI and regionally, the share of its business coming from UBI
12. Supplier's long-term **sustainability**
13. **Innovative** character of solution and company as a whole,
14. Number of **active programmes** globally and by region
15. Number of **active subscriptions** globally and by region

Smartphone Service Providers

1. Ability to provide an **autostart** function and detect journeys accurately and consistently
2. Reducing the application's impact on the smartphone's **battery** when active as well as sleep mode
3. Capacity to **identify the driver** of the vehicle
4. Ability to differentiate between driving and being driven or traveling on another **transport mode**
5. Functionalities to minimise **driver distraction** embedded in the application
6. Solution including **image analytics** for accident management or/and registration and fraud prevention
7. Ability to detect & measure the severity of a **crash**
8. Ability to offer **Value Added Services** alongside UBI (from Points of Interests to navigation)
9. Ability to integrate with an **OBD** dongle as an option
10. Ability to integrate a Bluetooth Low Energy **beacon** as an option
11. Richness, depth & quality of the **scoring** capabilities including use of various sensors and external datasets
12. Experience of providing various **models** of UBI applications with different value propositions
13. **Innovative** character of solution and company as a whole
14. Number of **active programmes** globally and by region
15. Number of **active subscriptions** globally and by region

Source: PTOLEMUS Consulting Group

Global UBI supplier ranking 2016 - Technology Providers

Black boxes

OBD dongles

Global UBI supplier ranking 2016 - Telematics Service Providers

Black Boxes

1. OCTO
2. LexisNexis Risk Solutions
3. Vodafone Automotive

OBD dongles

1. OCTO
2. Scope Technologies
3. hubio, IMS

Smartphone apps

1. Cambridge Mobile Telematics
2. LexisNexis Risk Solutions
3. The Floow

Source: PTOLEMUS Consulting Group

North American UBI supplier ranking 2016 - Technology Providers

OBD dongles

North American UBI supplier ranking 2016 - Telematics Service Providers

OBD dongles

Smartphone apps

Source: PTOLEMUS Consulting Group

European UBI Supplier ranking 2016 - Technology Providers

Black boxes

OBD dongles

European UBI supplier ranking 2016 - Telematics Service Providers

Black boxes

OBD dongles

Smartphone apps

Asian UBI supplier ranking 2016 - Technology Providers

OBD dongles

Asian UBI supplier ranking 2016 - Telematics Service Providers

OBD dongles

The main document includes 810 pages of analysis, examples, case studies, forecasts and recommendations

6 ways connectivity will disrupt insurance analysed

1- Big Datanalytics: future scores & actuarial models

- How to leverage telematics with analytics
- Which data to collect and what factors to rate
- How to use contextual information
- 10 detailed analytics supplier profiles

2- The impact of autonomous safety functions on the motor insurance industry

- Present & forthcoming autonomous functions affecting risk
- Speed of technology evolution and market uptake
- Analysis and forecast of the effect on UBI

3- Benefits and (lost) opportunities of telematics in accident & claims management

- Internal and external forces affecting the claims management sector examined
- Case studies of successful implementations and best-in-class usage of data in claims
- Recommendations to entice the claims departments

4- The advent of smartphone UBI as a major proposition

- Detailed assessment of the current mobile UBI initiatives worldwide - Key solution providers analysis
- Range of business models assessed and compared
- Technical capabilities and remaining constraints studied

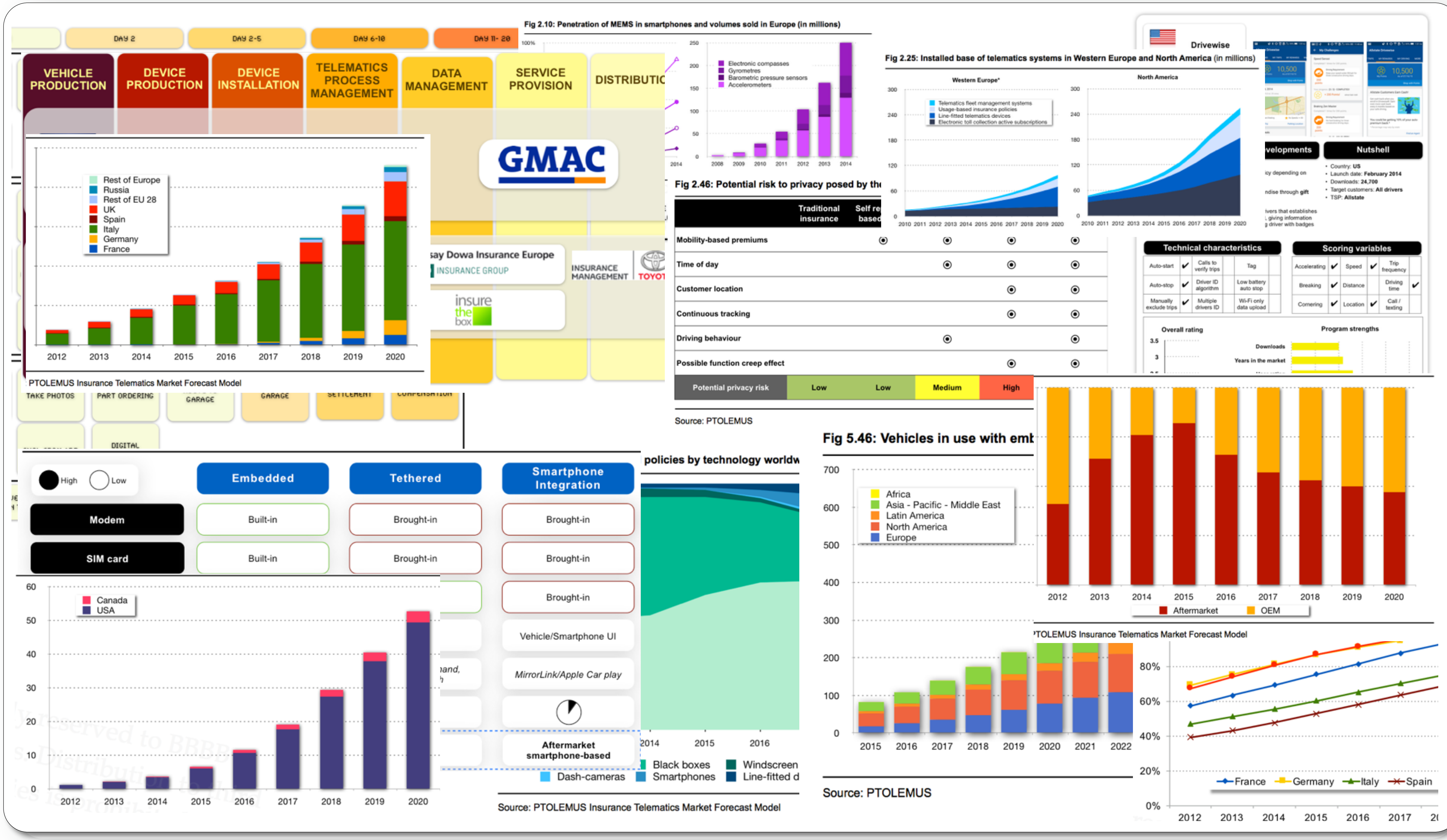
5- The present & future use of the OBD dongles and their data

- Overview of the OBD technology and its capabilities
- VAS and service augmentation opportunities explored
- Analysis of OBD data's main channels to market
- Assessment of the key independent connected car service providers

6- The fast changing role of car manufacturers

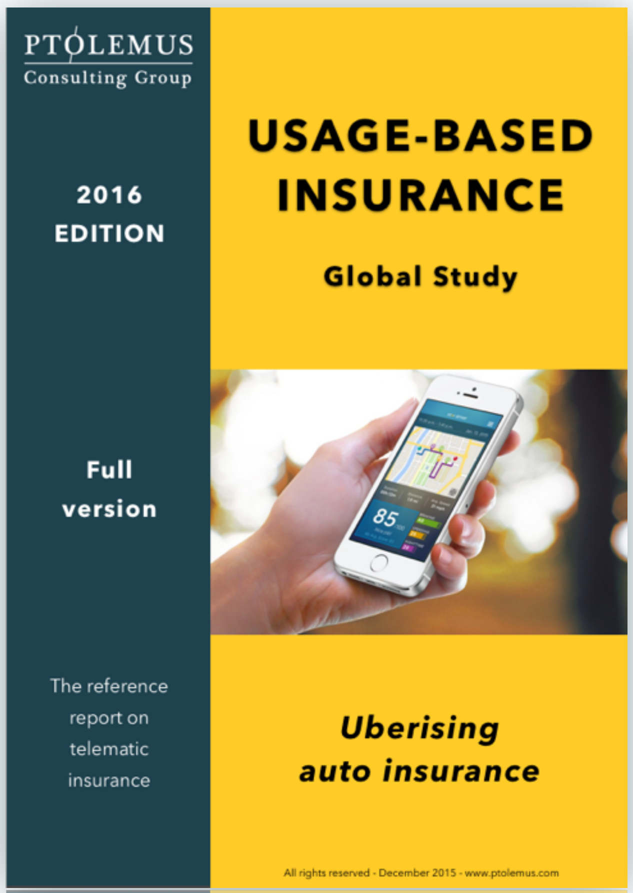
- Analysis of OEMs position on telematics services and UBI
- Assessment of the opportunities for insurers to use OEM data
- Likely models for insurance - OEM partnerships
- OEM data distribution strategy recommendation

Illustrated by 422 figures validating each statement



Source: PTOLEMUS Consulting Group

The UBI Study is a searchable PDF document that can be used by the whole company, worldwide



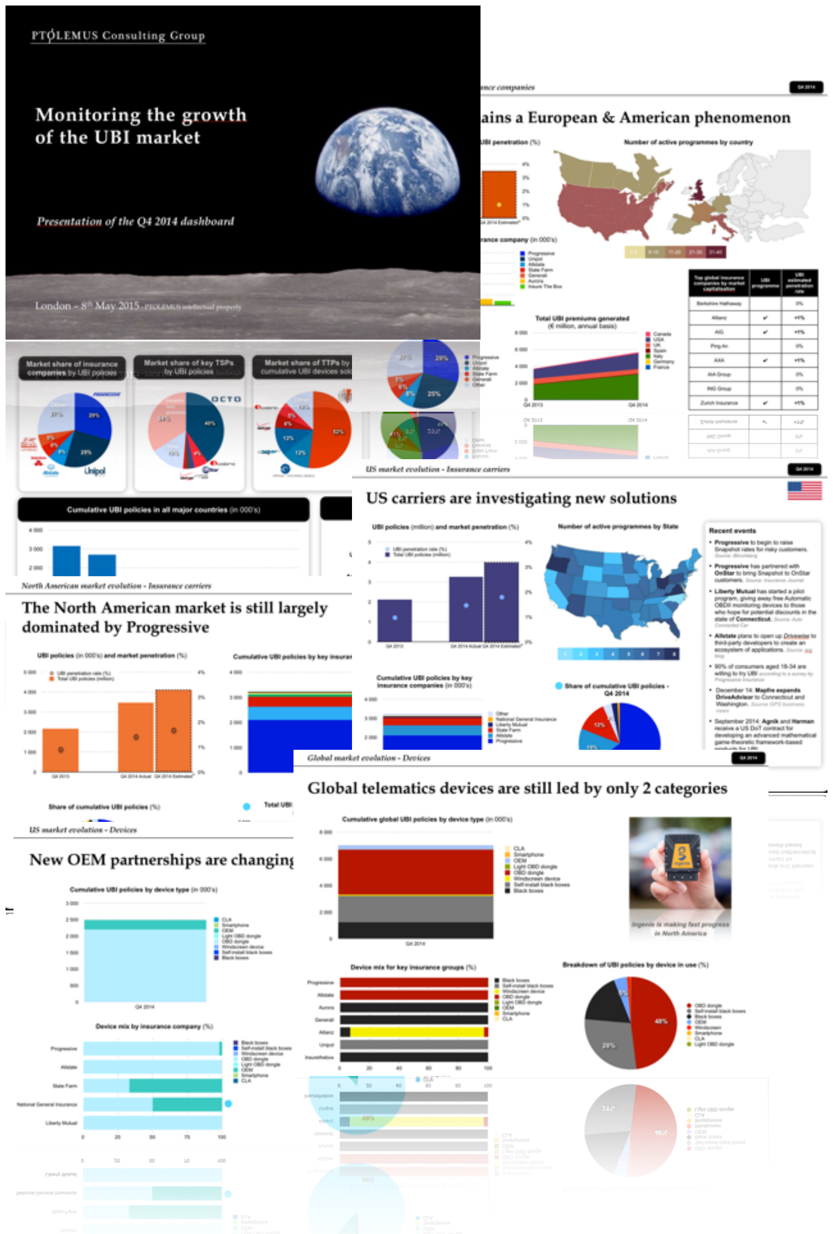
More than a report, a real strategic market analysis

Reports	Full Study	Full Study with 2020 & 2030 market forecasts
Contents	• 900+-page study (PDF format, password-protected) • 50 TSP and TTP company profiles • 30 country profiles	• 900+-page study (PDF format, password-protected) • Market forecasts outputs with graphs (Excel format, password-protected) • 50 TSP and TTP company profiles • 30 country profiles
Company-wide licence	**€ 6,995** *Approx. $7,685*	**€ 7,995** *Approx. $8,784*

For more information and to order the study, contact us at thomas@ptolemus.com

Notes: Prices in Euros exclude VAT (VAT applicable to clients located in Belgium)

We now issue a quarterly dashboard of the UBI market



All the hard data you need to define & adjust your strategy

- **60-page barometer of the global UBI industry**
  - Covers 170 companies
  - Covers the US, Canada, Benelux, France, Germany, Italy, Spain, the UK, Australia, China, and other Asian countries
  - Issued on a quarterly basis
  - 250+ charts, tables & figures
- **Leverages both public information & primary research**
  - A large set of public information collected from conferences, desk research, etc.
  - Supplemented and validated by primary research & data (Interviews, supplier questionnaires, own market forecasts, etc.)
- **Brings all key market news**
- **Estimates UBI volumes and sales for all main players**
  - Insurance companies
  - TSPs
  - Technology providers
- **Deciphers key market trends**
  - UBI penetration
  - Number of programmes
  - Mix by business model (PAYD, PHYD, TBYB, etc.)
  - Market share of all main insurers, TSPs and device makers
  - Technology mix (Black boxes, OBD dongles, apps, etc.)
  - Business line mix
  - Segment mix (Young drivers, mature drivers, etc.)
  - Channel mix aftermarket / OEM

PTOLEMUS Consulting Group

Strategies for Mobile Companies

Brussels - Boston - Chicago - Hanover - London
Milan - New York - Moscow - Paris

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