PTOLEMUS Consulting Group

Global UBI market dashboard

Presentation and sample

London - 6th February 2018 - PTOLEMUS intellectual property

The consulting & research firm for the connected world

Consulting services

- Strategy definition
- Investment assistance
- Procurement strategy
- Innovation management
- Business development
- Deployment

Market research services

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

Our clients are across the mobility ecosystem

Analytics, maps & applications providers

AAA, BMJ Group, CCC Information Services Inc., Cognizant, Coyote, Dynamic Map Platform, ESRI, Google, here, Increment P, LexisNexis, PASCO, MOVELO, RMS, sas, TomTom, Towers Watson, tdf, TrueMotion, Verisk Analytics, wejo, ZENRIN

Device & location suppliers

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

Automotive manufacturers & suppliers

Airbiquity, AGC, Bosch, Bridgestone, Continental, Cox Automotive, Daimler, Delphi, Directed, Ford, Harman, Hino, Honda, intel, Isuzu, Mazda, Michelin, Mitsubishi Motors, nauya, Nissan, Pioneer, Qualcomm, Qoros, Scania, Sierra Wireless, Suzuki, Telit, Toyota

Telematics solution providers

Arkan, arvento Mobile Systems, Danlaw, DigiCore, drivefactor, drust, Eliocity, FleetComplete, Fleetmatics, LoJack, Mobile Devices, OCTO, HiMex, IMS, Lysanda, Meta System, SafeFleet, sMobil, Sistema, Orion, Quartix, Queclink, Scope Technologies, Viasat, Watchstone

Insurers, aggregators & assistance providers

AAA Insurance, Admiral, Agero, Aioi Nissay Dowa Insurance MS&AD Insurance Group, Allianz Global Assistance, Allstate, AXA, Baloise Insurance, carrot, Covea, Crédit Agricole Assurances, Desjardins, Europ Assistance, FIA, Generali, The Hartford, IAG Insurance Australia Group, Inter Mutuelles Assistance, Ингосстрах Ingosstrakh, Liberty Mutual, MACIF, Matmut, HUK, Menora Mivtachim, Mondial Assistance, Munich RE, Promutuel Assurance, OUT Surance, RAC, RSA, Sompo Japan, Swiss Re, smile direct, telesure, Tokio Marine, youi, Zurich

Mobile telecom operators

AT&T, SFR, SK telecom, Sprint, Telekom Austria Group, Telefónica, verizon, vodafone

Fleet & fuel, ITS & regulators

abertis, Aral, Arval BNP Paribas Group, autostrade per l'italia, bp, Brisa, CGI, DKV, Edenred, eni, Efkon, egis, Euromaster, ew, European Commission, Fleetcor, Kapsch, mouchel, Nomad Digital, Norbit, OMV, Routex, SICK, Sofico, Telepass, Thales, T-Systems, Toll Collect, Vitronic, wex, zipcar

Banks & private equity investors

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

PTOLEMUS brings unparalleled depth of knowledge in connected and autonomous vehicle services

The reference reports on UBI, quoted by The Economist, the Financial Times and the Wall Street Journal

The most comprehensive research on insurance analytics

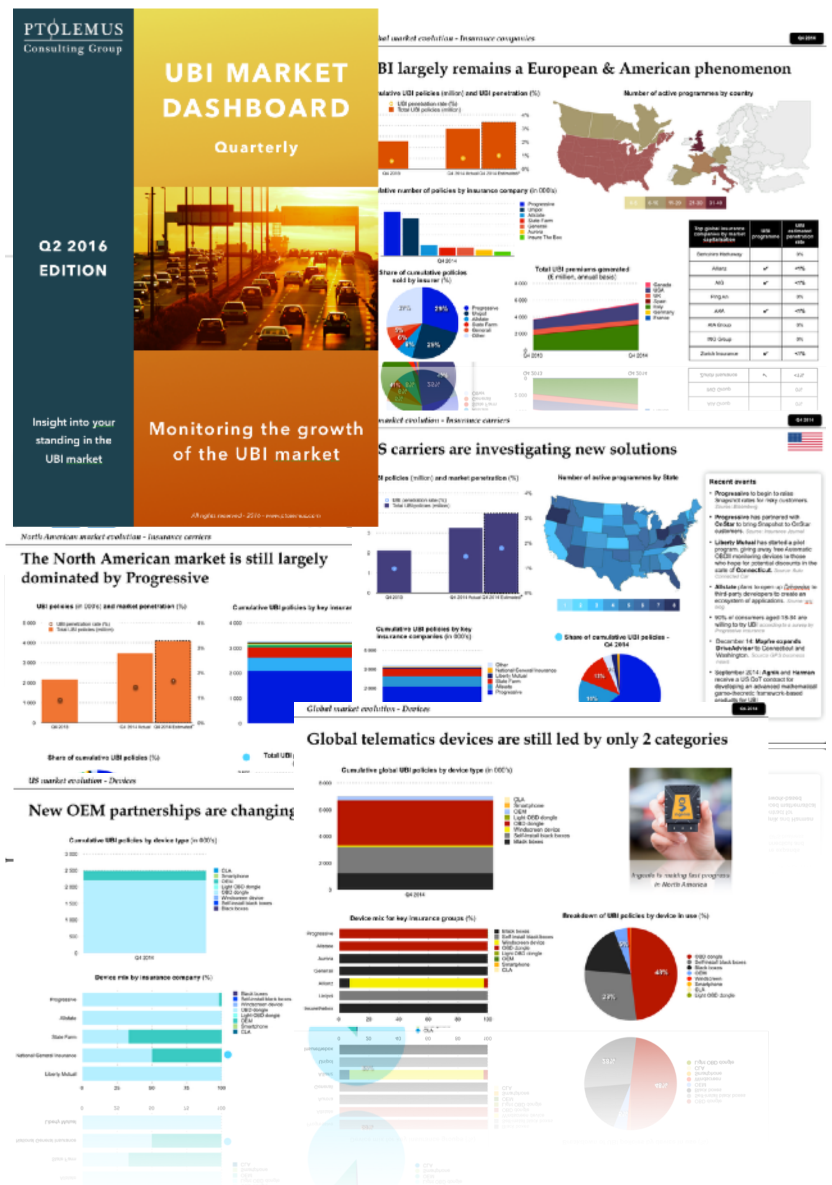
The most thorough analysis of ADAS and AVs

Referenced figures and forecasts for 14 connected car services

The reference on vehicle payment services

Reinventing fleet management

Our quarterly UBI dashboard monitors the market metrics every quarter in 17 countries/ areas

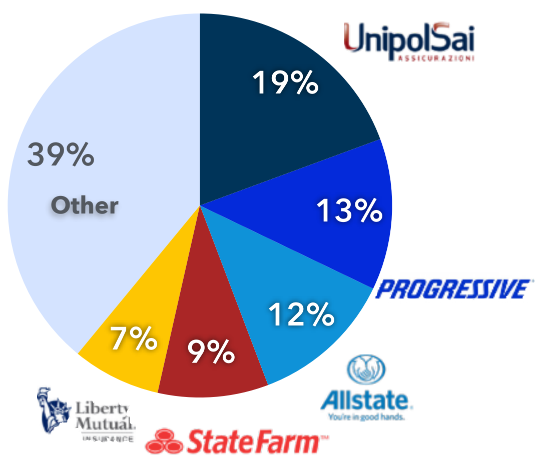


The metrics to shape your UBI commercial strategy

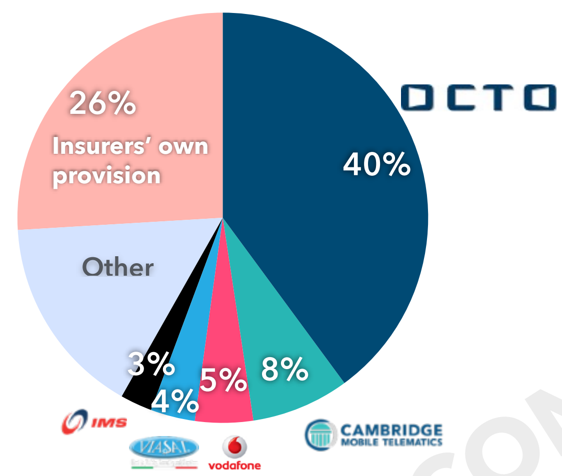
- **110-page barometer of the global UBI industry**
  - Covers 360 companies
  - Issued on a quarterly basis
  - 300+ charts, tables & figures
- **A global dashboard covering**
  - **Advanced markets:** US, Canada, France, Germany, Italy, Spain, UK
  - **Emerging markets:** APAC, Benelux, China, Latin America, Russia, the Nordics, other European markets
- **Leverages both public information and 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 the 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, apps, etc.)
  - Business line mix
  - Segment mix (Young drivers, mature drivers, etc.)
  - Channel mix aftermarket / OEM

The global UBI market grew 6% in Q4, capping off a strong year of steady growth

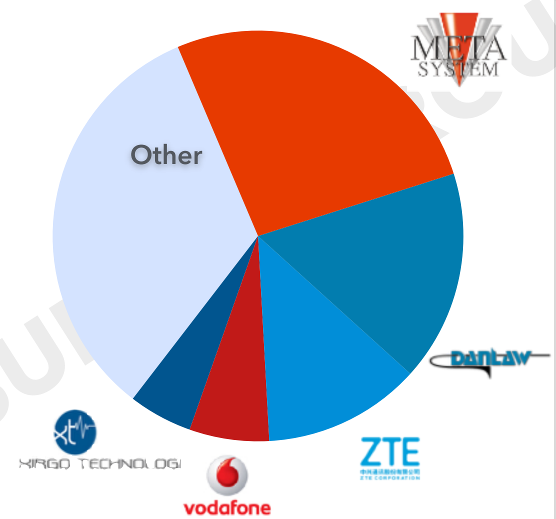
Breakdown of UBI policies by insurance group



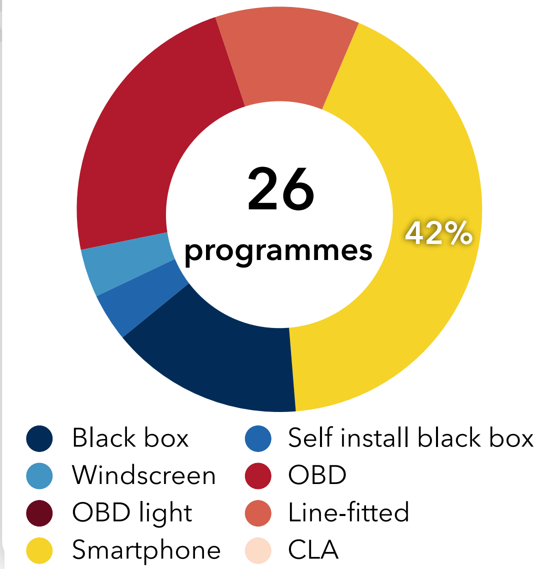
Market share of key TSPs active UBI policies



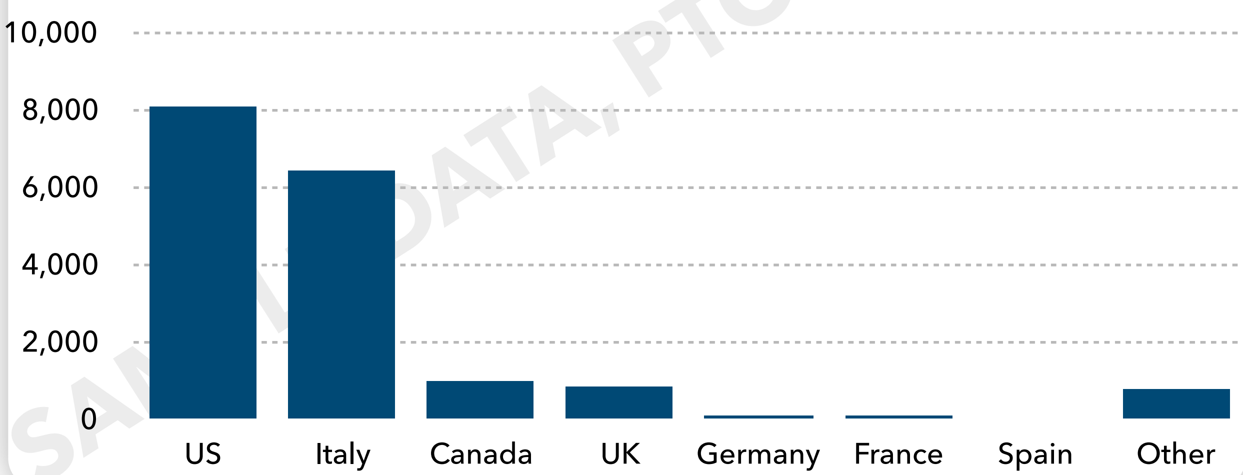
Market share of key TTPs active UBI policies



New programme launches (last 6 months)



Active UBI policies in key UBI countries (in 000s)



Global UBI indicators

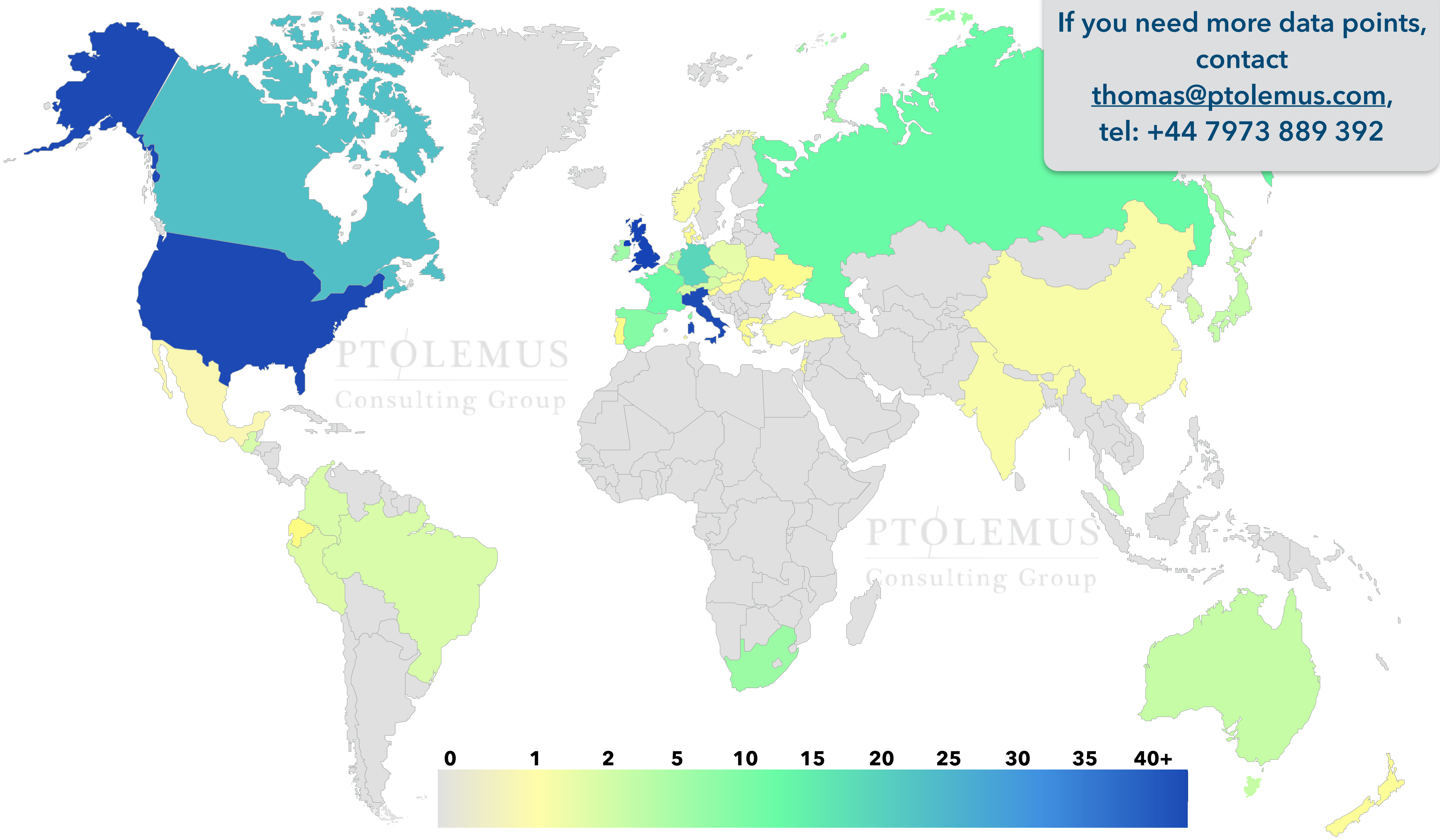
	Q1 2017	Q2 2017	Q3 2017	Q4 2017
UBI policies (million)				17.4
Active programmes*				353
Smartphone programmes**				67

If you need more data points, contact thomas@ptolemus.com, tel: +44 7973 889 392

Source: PTOLEMUS estimates

UBI growth is coming from a few Western countries but tomorrow it will driven by a multitude of emerging markets

Active UBI programmes by country



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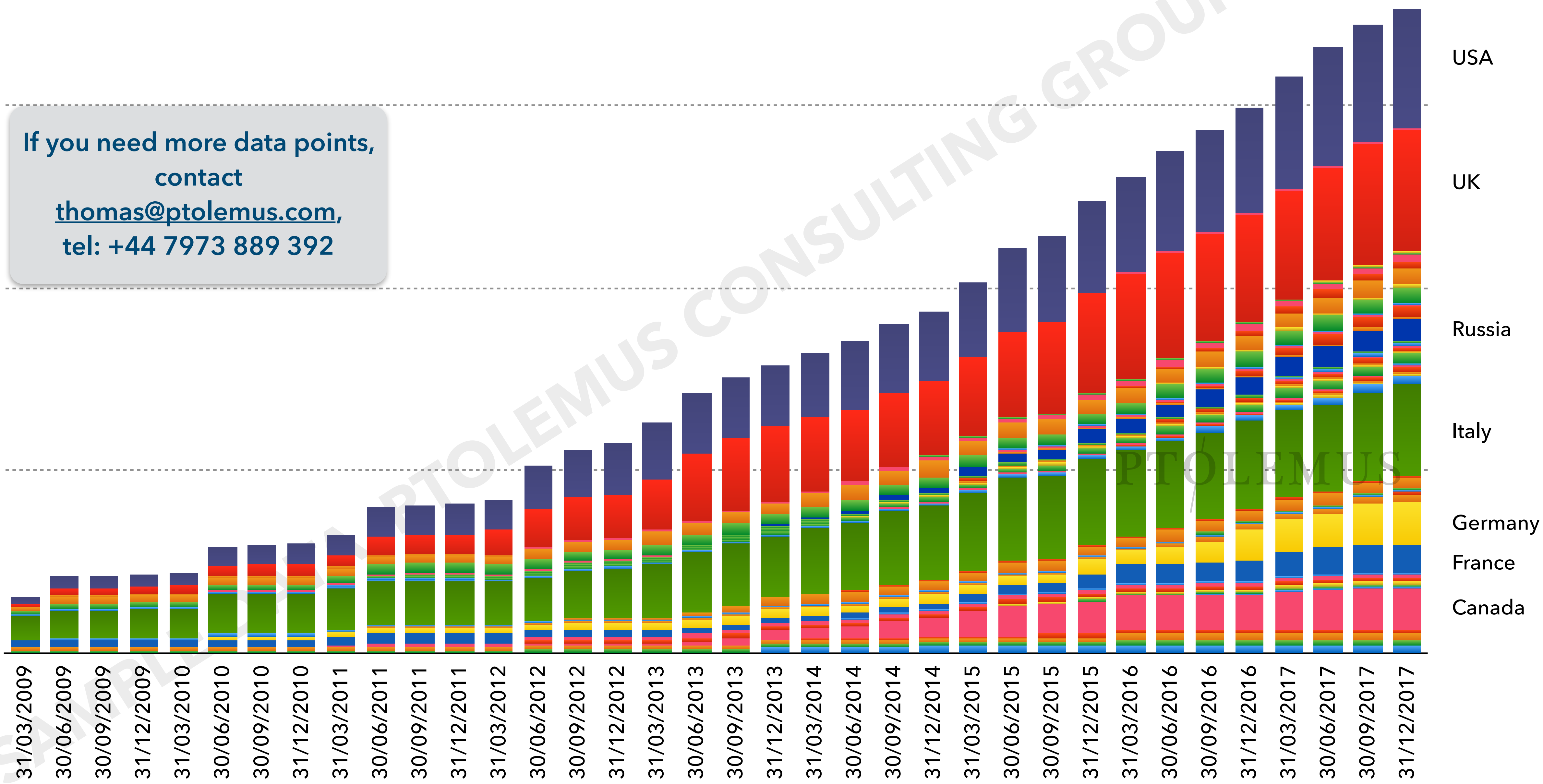
More than 350 UBI programmes globally

Number of active UBI programmes worldwide by quarter since 2009



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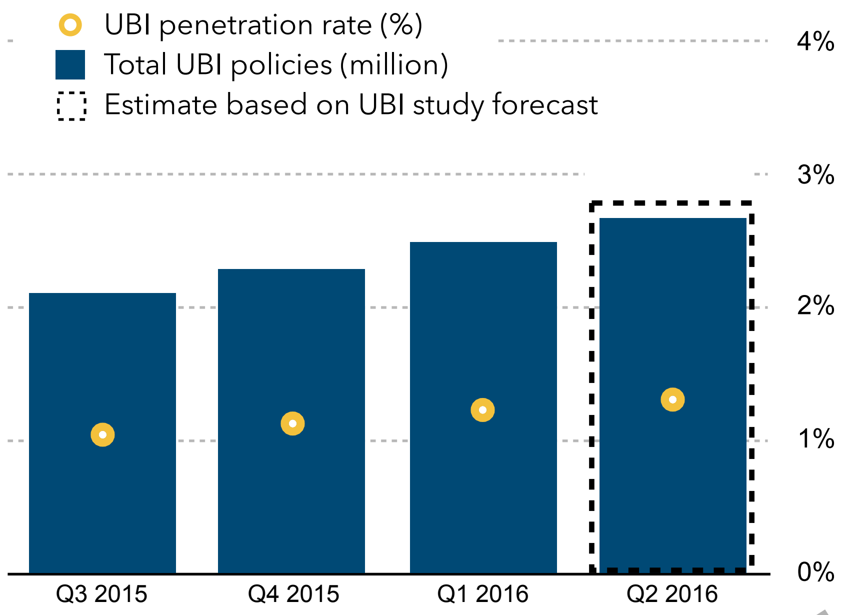
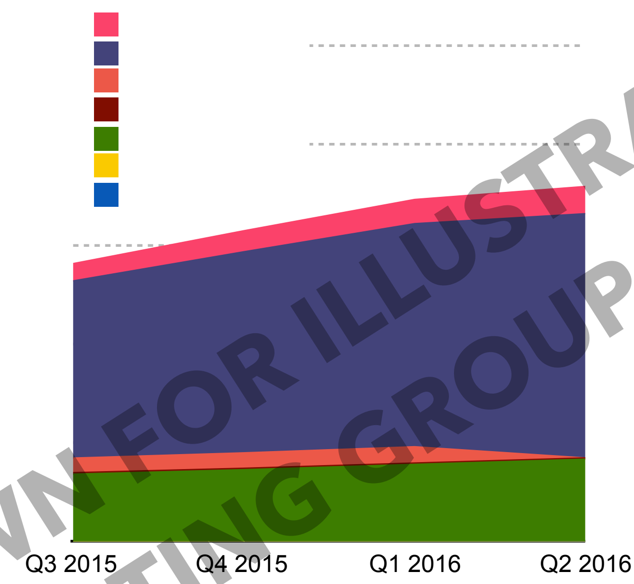
Source: PTOLEMUS quarterly UBI Dashboard

Progressive's rapid growth has impacted the whole market

UBI policies (000s), **quarterly growth and market penetration** (%)

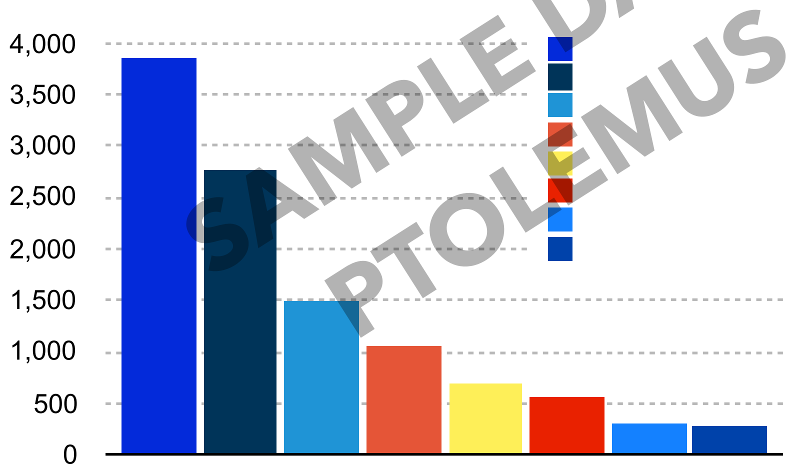


Total UBI premiums generated
(€ million, annual basis)

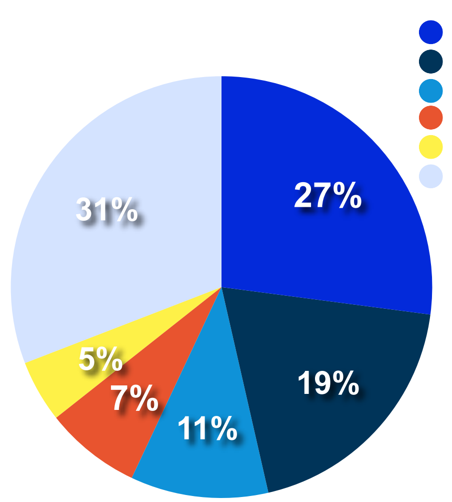


Top global insurance companies by market capitalisation	UBI programme	UBI estimated penetration rate
Berkshire Hathaway	*Trial*	x
Allianz	✔	x
AIG	✔	x
Ping An	*Trial*	x
AXA	✔	x
AIA Group	x	x
ING Group	x	x
Zurich Insurance	x	x

Number of active UBI policies by insurance company
(in 000s)



Share of active UBI policies by insurer
(%)

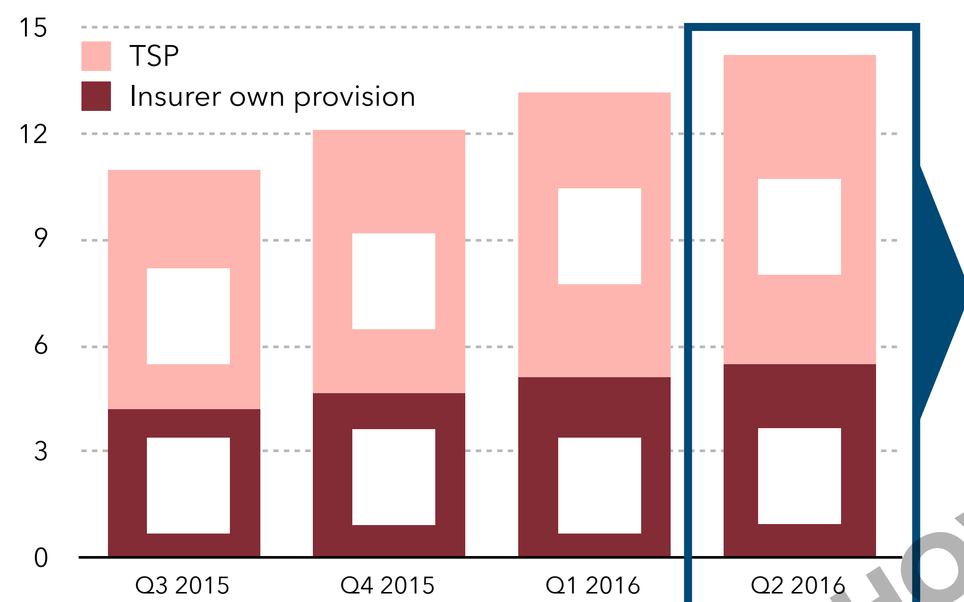


Leading UBI insurers	Country	UBI estimated penetration rate
Progressive	US	xx
UnipolSai	Italy	xx
Allstate	US	xx

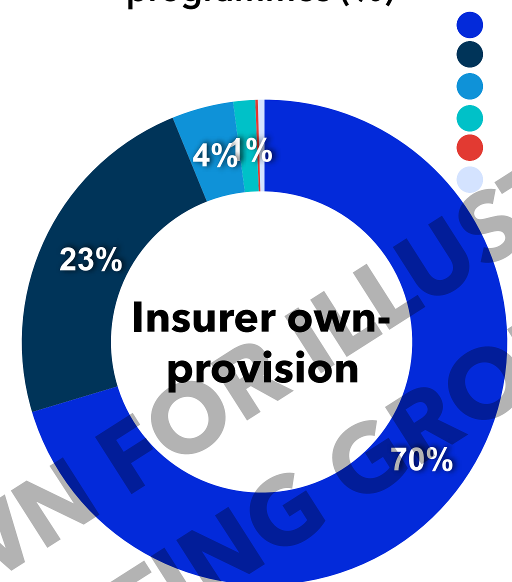
Source: PTOLEMUS.

Large insurers have stated their desire to insource, but the dominant model continues to be TSP-based

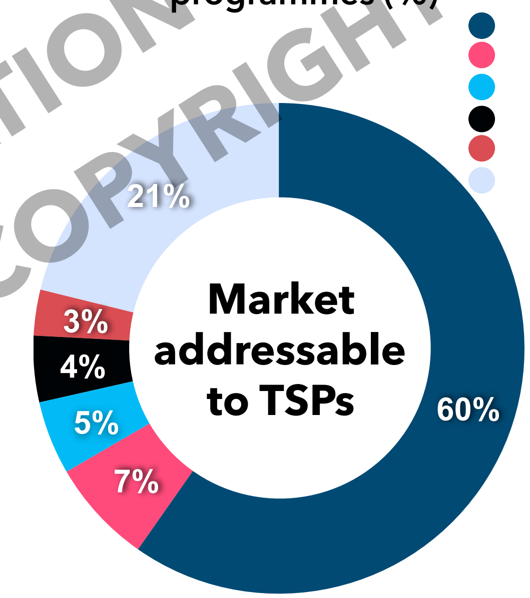
Active UBI policies (million)



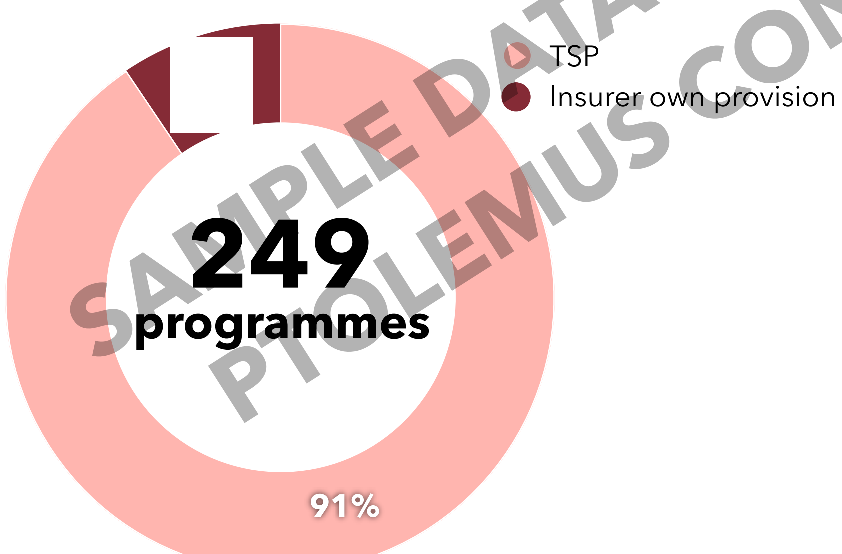
Active policies from in-sourced UBI programmes (%)



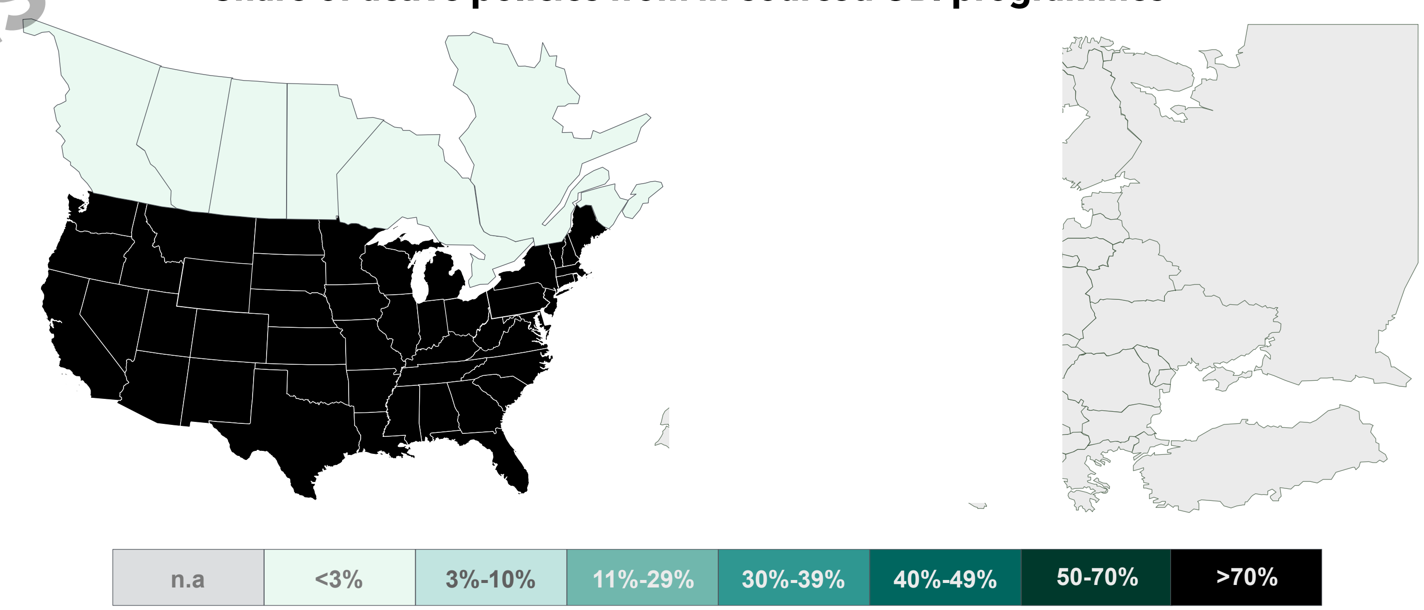
Active UBI policies from TSP-based programmes (%)



UBI programmes by type (%)

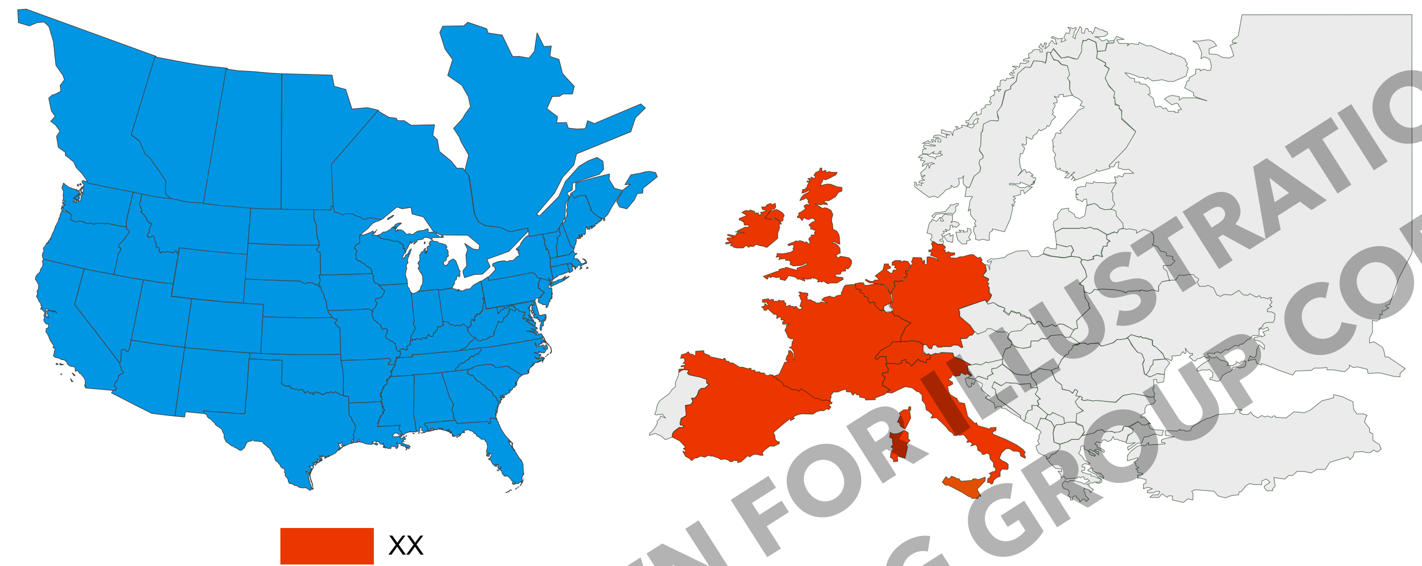


Share of active policies from in-sourced UBI programmes

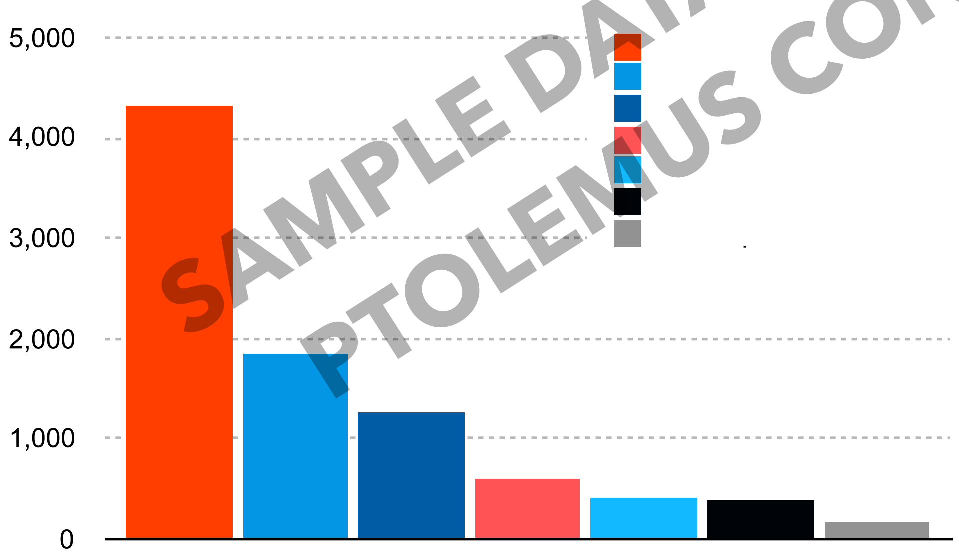


While Danlaw has overtaken Xirgo in North America, Meta System remains the dominant player in Europe

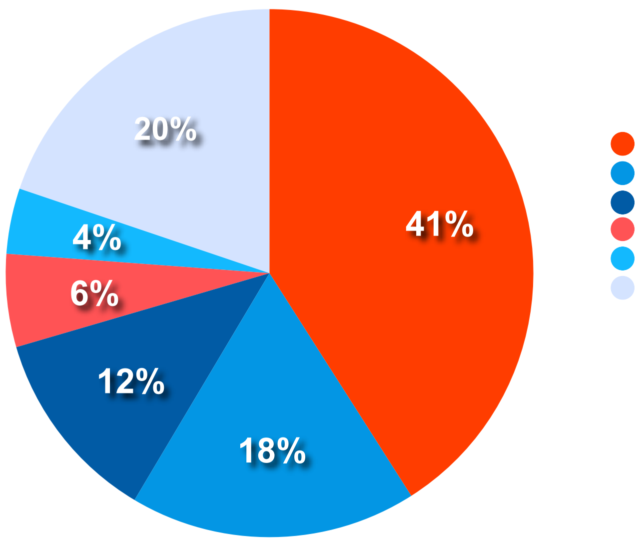
Top TTP market share holder in each country



Number of active UBI devices by TTP (in 000s)



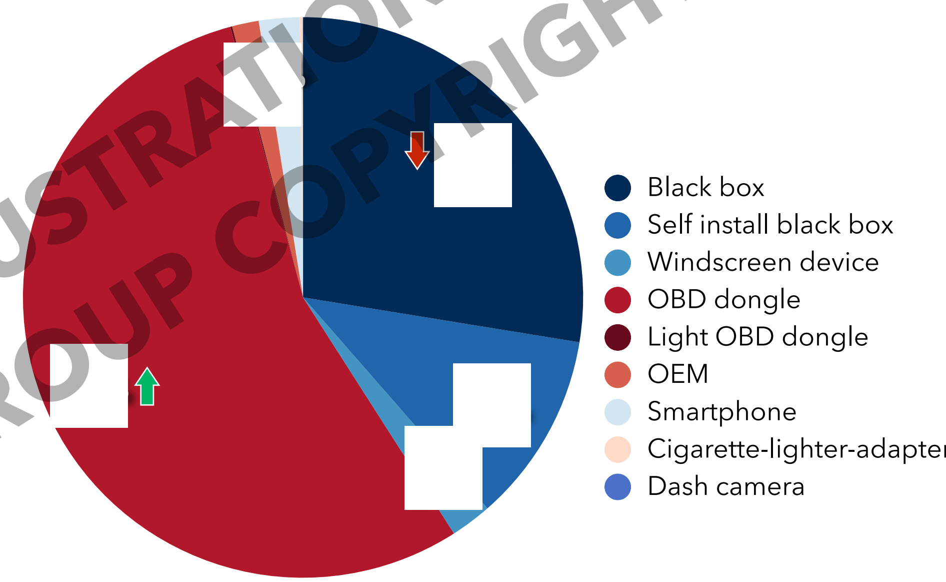
Share of active UBI devices by TTP (%)



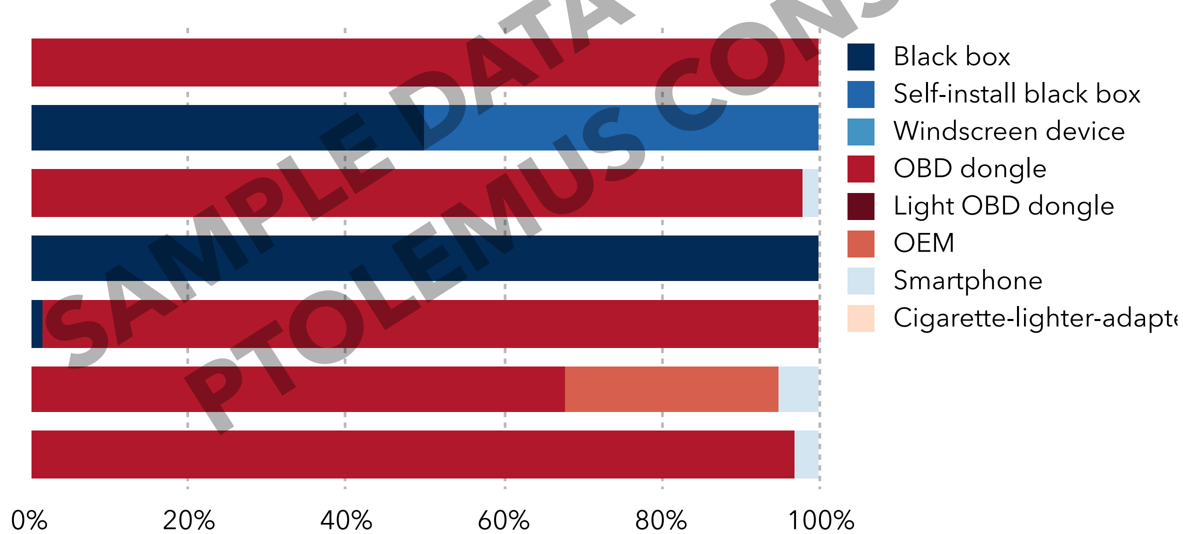
Leading insurers are adopting a multi-device strategy while TSPs mostly keep a single device approach

Active global UBI policies by device type (in 000s)

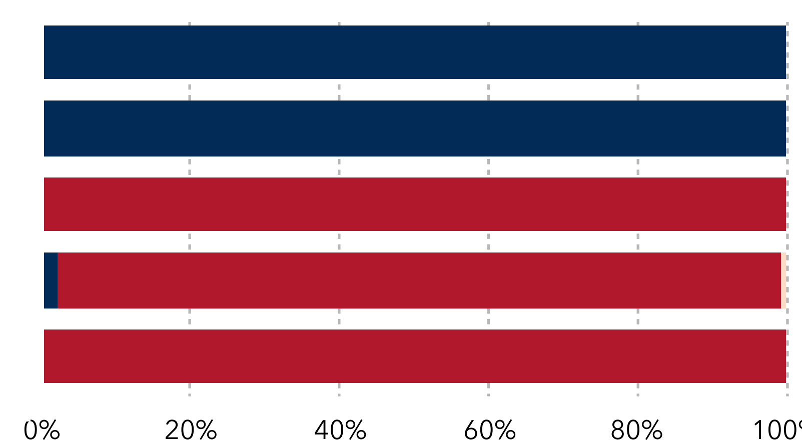
Breakdown of UBI policies by device in use (%)



Device mix for key insurance groups (%)



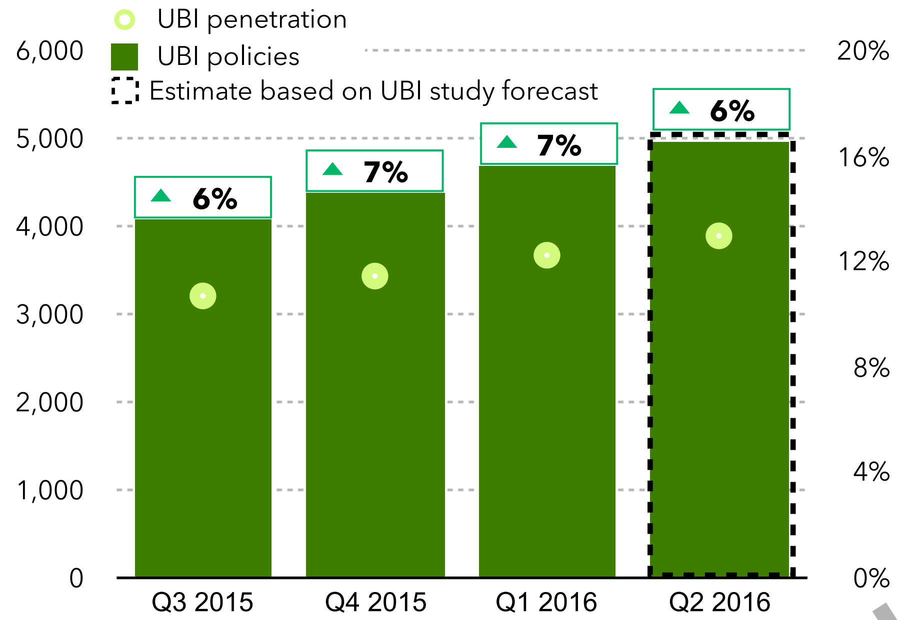
Device mix for key TSPs (%)



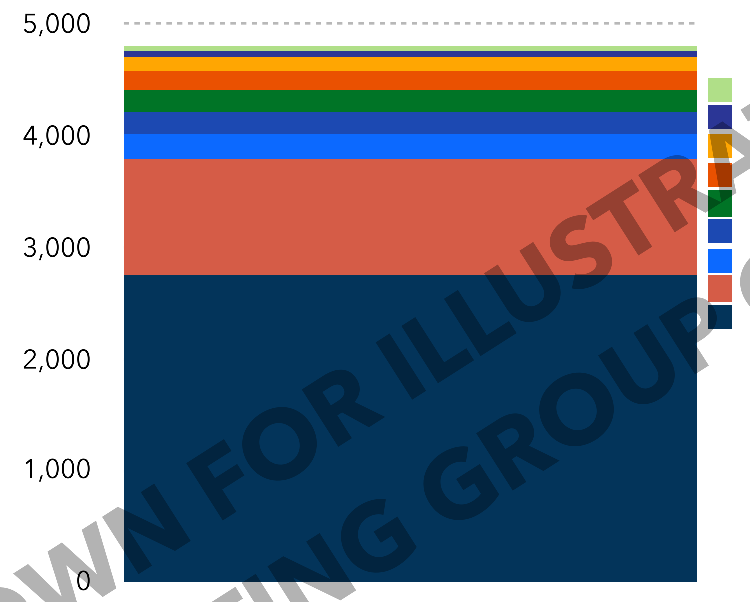
Source: PTOLEMUS

Quarterly growth remains consistent in Italy at 6%

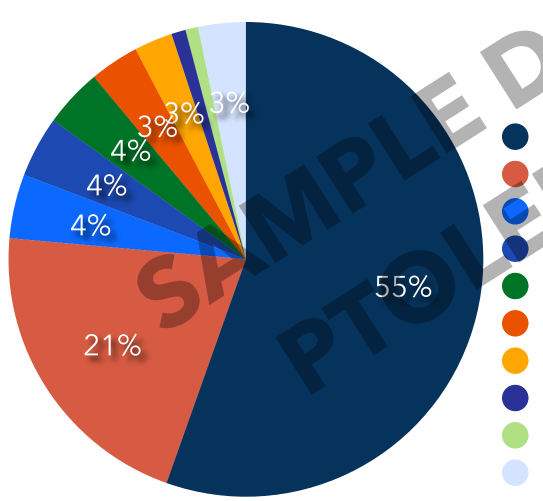
UBI policies (000s), quarterly growth and market penetration (%)



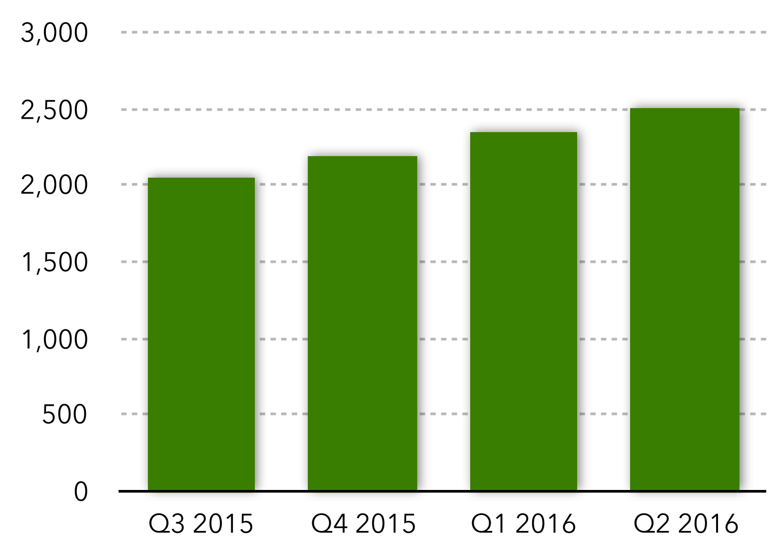
Active UBI policies by insurance company (in 000s)



Share of active UBI policies (%)



UBI premiums generated
(€ million, annual basis)



Recent events

2015

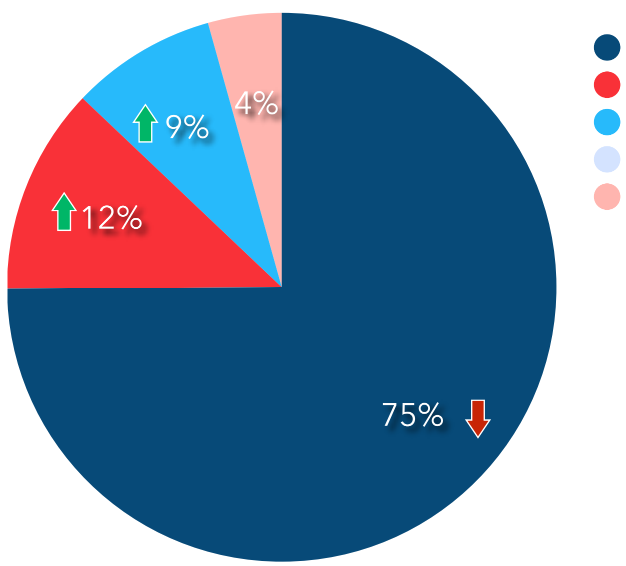
- October: **MAPFRE** acquires Direct Line in Italy and Germany
- November: Replacing the Monti law, the **competition bill** is now discussed in parliament
  Source: carrozzeriaautorizzata.com

2016

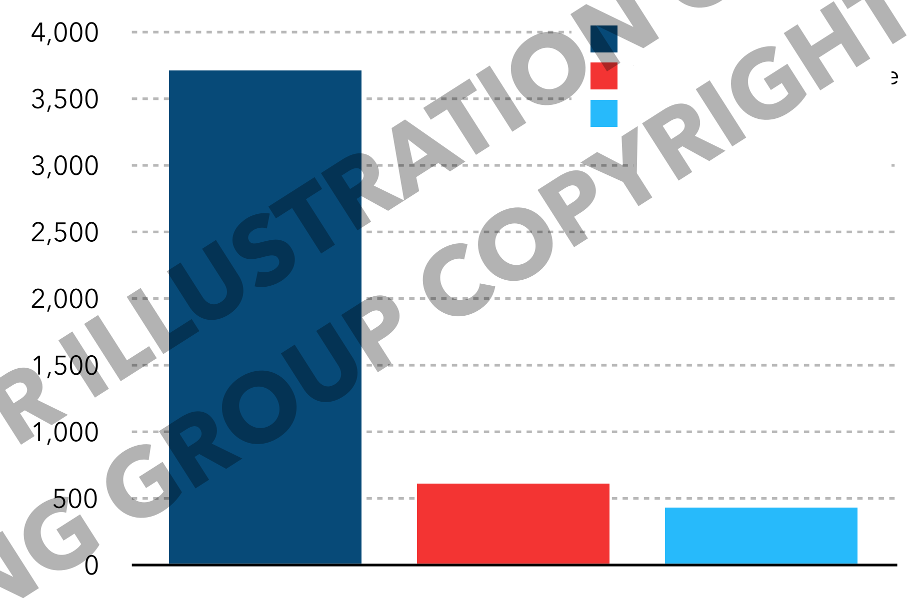
- April: **Infomobility** strengthen partnership with **Generali** for provision of telematics insurance and replaced Vodafone
- June: The **senate approved an amendment to the competition bill potentially mandating installation of the black boxes on all means of transport by 2017**. Public vehicles would first be impacted, followed by private vehicles. *Source: facile.it*
- September: **Generali** and **Progressive** announce a R&D agreements in order to improve their data analytics capabilities
  Source: Business Wire

The Italian market is dominated by local providers

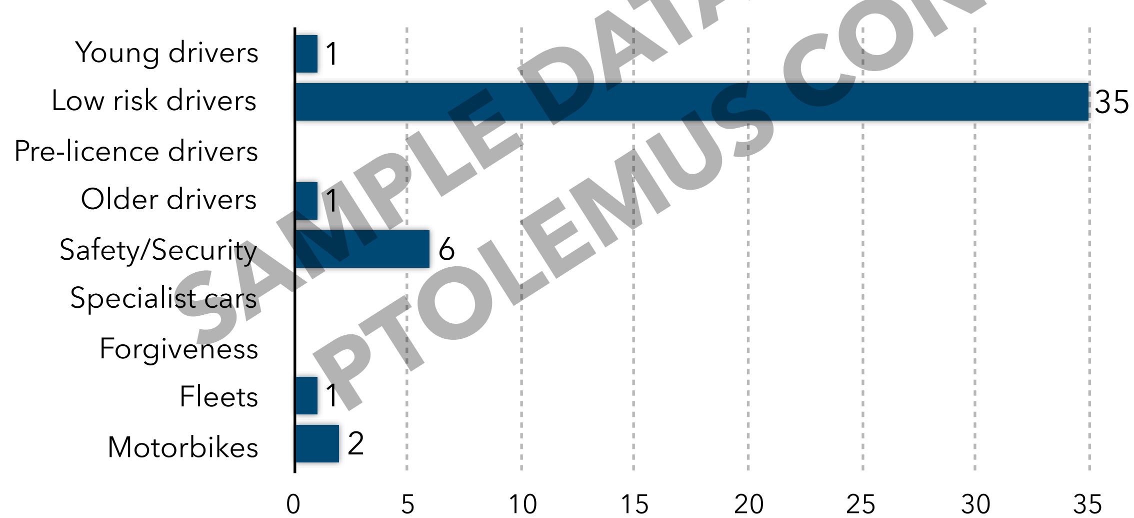
Share of active UBI policies by TSP (%)



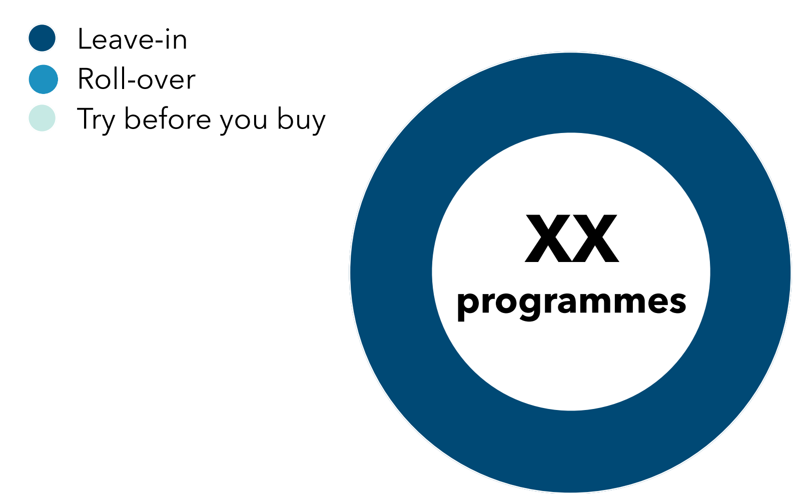
Number of active UBI policies by TSP (000s)



UBI programmes by target segment

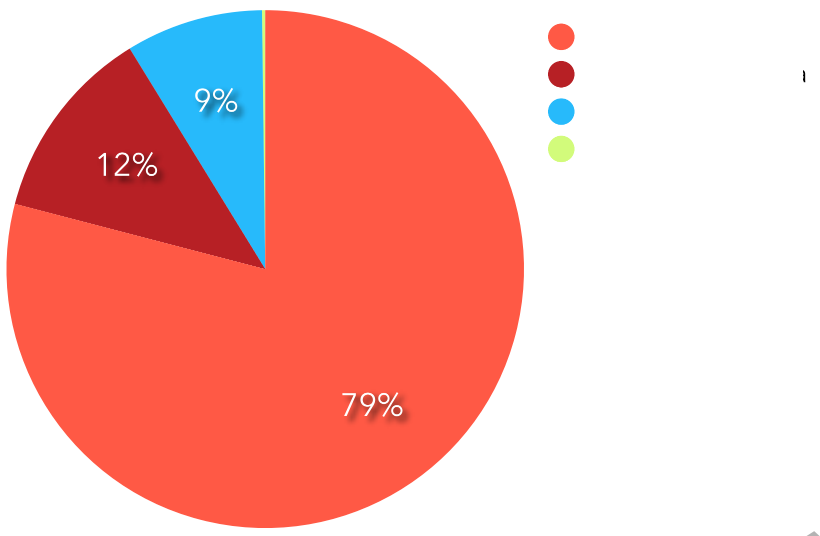


UBI programmes by model (%)

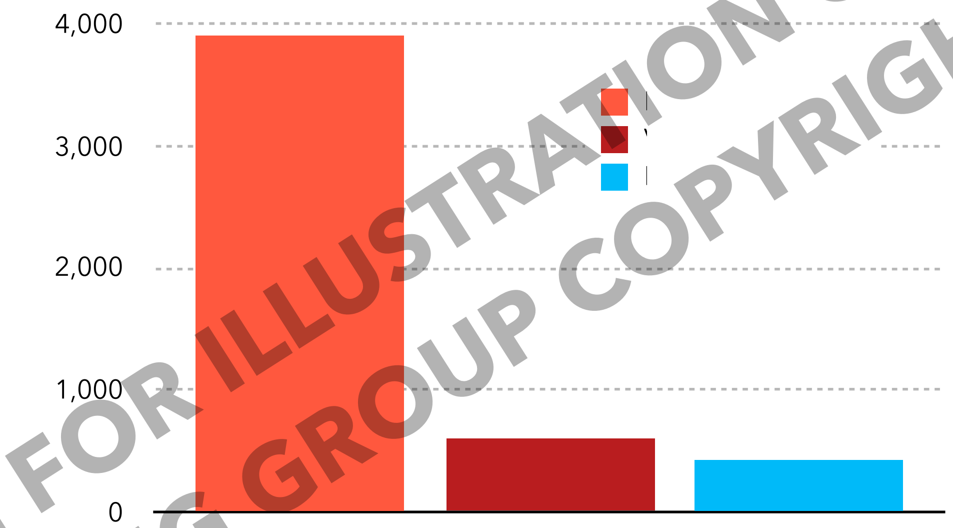


The device landscape remains highly concentrated

Share of active UBI devices by TTP (%)



Number of active UBI devices by TTP (in 000s)



Breakdown of Meta System devices (in 000s)

Breakdown of Vodafone Automotive devices (in 000s)

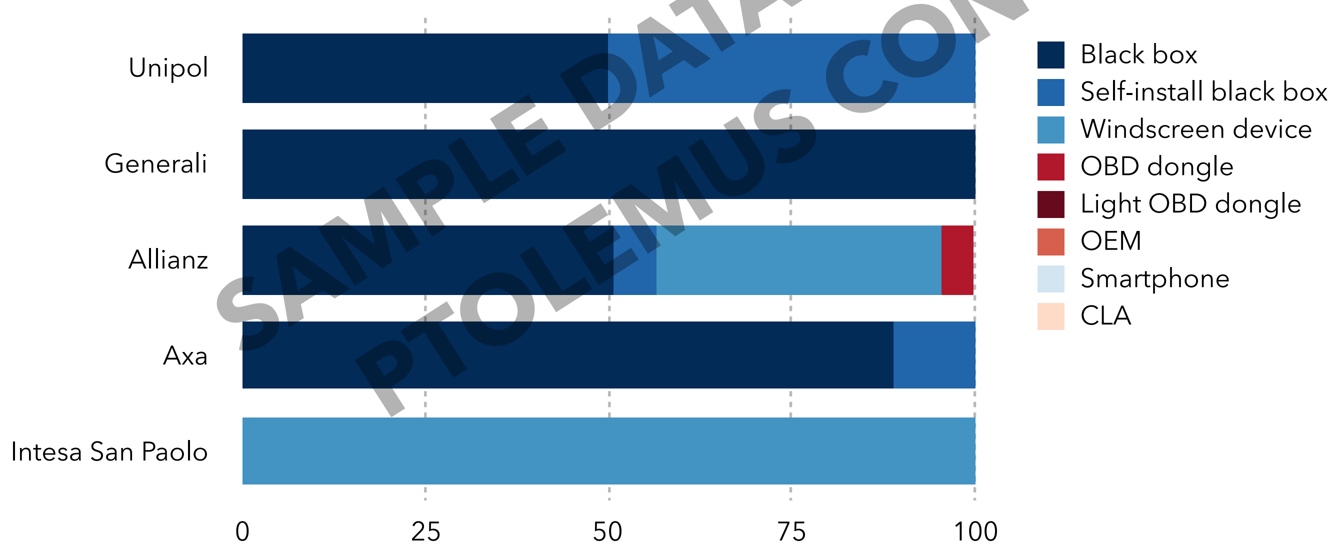
Despite a large market share, black boxes see growth in anticipation of the black box amendment beginning 2017

Active UBI policies by device type (in 000s)

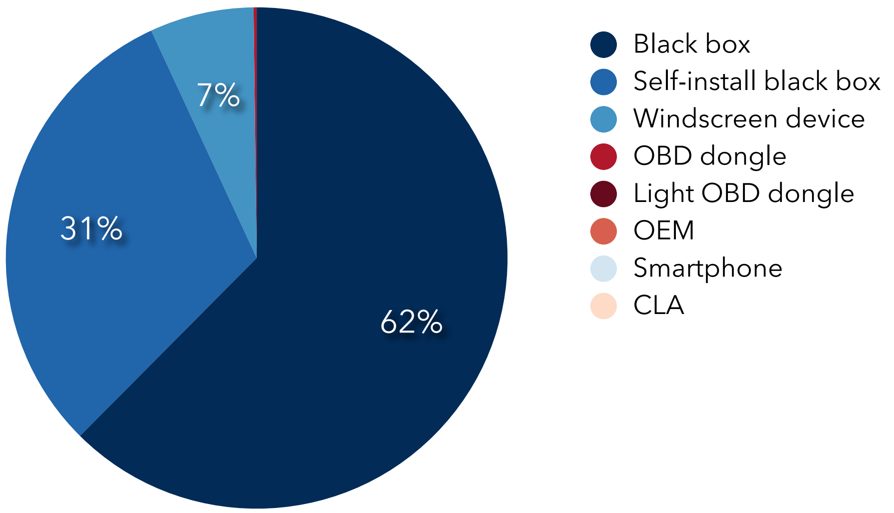
UnipolSai created a standalone telematics company, AlfaEvolution Technology, to support the telematics initiatives at Group level

Under this new model, UnipolSai would still consider outsourcing functions such as device installation, device logistics, SVR, private eCall, etc.

Device mix by insurance company (%)



Share of UBI device technology in use (%)



Source: PTOLEMUS - Note:* *Sesto Senso* is considered as a windscreen-based programme but it also includes a black box