

# COMMERCIAL FLEET TELEMATICS Global Study



# Has the time come for vehicle OEMs to dominate fleet telematics?

All rights reserved - January 2022 - www.ptolemus.com

# FREE ABSTRACT

The reference report on commercial fleet telematics for onroad and off-road vehicles **Commercial Fleet Telematics Global Study - Introduction** 

# This is the most complete report on telematics solutions for commercial fleets of on-road and off-road vehicles



More than just market research.

A strategic analysis on the telematics business of commercial vehicle and heavy equipment fleets

- A 635-page analysis of the global commercial fleet telematics market based on:
  - 11 years of constant market surveillance
  - 26 interviews with key stakeholders
  - Nine months of desk research
- An in-depth introduction to the commercial fleet telematics market, with analyses into the telematics value chain, new technologies, benefits of telematics, and Covid-19 impact
- A Total Cost of Ownership (TCO) analysis
- Granular analysis of telematics in onroad, construction and agricultural industries that includes:
  - Cost structure, revenues and telematics needs of fleet operators
  - Supply and demand analysis of current telematics solutions
  - Major players in the telematics value chain and their strengths

- An in-depth assessment of 39 companies supplying fleet telematics (23 TSPs and 16 OEMs) analysing:
  - Their telematics business and corporate strategy
  - Their value proposition, pricing model, target segments, positioning and partnerships
  - A benchmark and gap analysis of their solution
- 2020-2030 bottom-up market forecasts encompassing:
  - The number of vehicles in use for both onroad fleet telematics and off-road fleet telematics
  - Subscriptions and revenues for the on-road telematics market, split by OEM and aftermarket
  - Subscriptions and revenues for the off-road telematics market, split by OEM and aftermarket
  - Regional projections for Europe, Americas, Asia Pacific, Africa and Middle East

## PTOLEMUS

Section 1.1. - Questions answered

# The study answers the following key strategic questions on the commercial fleet telematics landscape

What is the strategy of major OEMs in telematics?

What are customers' expectations to a fleet telematics service provider?

How can telematics improve the TCO of commercial fleet vehicles?

What will be the role of aftermarket devices in the future commercial fleet telematics market?

Will OEMs' telematics solutions challenge existing TSPs' business?

What will be the role of new and emerging players in the CFT\* value chain?

In which country will CFT\* grow the most by 2030?

 PTÓLEMUS
 COMMERCIAL

 Censulting Group
 FLEET TELEMATICS

 Global Study
 Global Study

VERSION

The reference report on commercial lest telematics for ce read and a/t-read



Has the time come for vehicle OEMs to dominate fleet telematics? What are the trends and drivers for commercial fleet telematics growth between 2020 and 2030?

What is the impact of government legislation on the commercial telematics industry?

What will be the size of the commercial fleet telematics market in 2030 by region?

Which suppliers are leading in the market?

What are the differences between on-road and off-road commercial fleet telematics?

## PTÓLEMUS

To order the study or enquire about our new subscription model, contact <u>fleet@ptolemus.com</u> \*CFT - Commercial fleet telematics

## The commercial fleet telematics market is growing strongly, and OEMs are on the path to overtake TSPs

Fleet telematics relies on various technologies to create, transmit, store, analyse and visualise data. Technological progress in areas like vehicle connectivity, geo-localisation and electrification opens for a potential shift in who the dominant players in fleet telematics are.

Since the mid-90s, the industry has been heavily associated with the aftermarket, with countless players providing both hardware and service solutions to meet the needs of commercial fleets.

Since the COVID-19 pandemic began, demand for last mile delivery services has been booming, with a big impact on delivery fleets. Examples of how this industry is being affected can be seen in organisations like **Hermes.** The company has had to **compress its five-year investment plan in just five months** as the level of parcel volumes being handled are at a level that was originally planned for in 2025.

### Old habits die hard...

The on-road\* commercial fleet market is still wary of telematics. There is general agreement that telematics, **if correctly implemented**, can yield significant benefits. However, there are still too many examples of data overload occurring, with fleet demands for more personalised insights being overlooked in favour of meeting the demands of the many. In the off-road\* segment, issues abound with respect to data privacy and vehicle ownership rights in regions like North America and Europe. However, big telematics drivers are the shortage of skilled operators, sub-optimal management of vehicle TCO,\*\* and inefficient operation of equipment stemming from excess fuel usage.

### ... but OEMs are responding

Aftermarket Telematics Service Providers (TSPs) currently dominate the commercial fleet telematics market. That dominance will increasingly be challenged during this decade. Other players, like telecom operators, now have the potential to circumvent TSPs and partner directly with OEMs.

Being present in the entire value chain, OEMs keep adding connectivity and app marketplaces with many specialist services to their vehicles. By 2024, we expect approximately 83% of all new vehicles to have embedded telematics. Almost all OEMs have adopted the strategy of offering free, often time-limited telematics solutions with the purchase of a new vehicle or machine equipment.

The connected, autonomous and electrified future for commercial vehicles will play into the hands of OEMs We expect that the shift to electrified powertrains, autonomy and connectivity will fundamentally strengthen OEMs' position. TSPs will lose ground as OEMs become a major source of data/insight to enable fleet operators to **monitor**, **maintain**, and crucially **compare**, their electrified products with existing fleet vehicles. As a result, OEMs' share of on-road telematics subscriptions will grow from 3% in 2020 to 46% in 2030. This will leave OEMs near parity with TSPs.

### A market that will multiply sixfold volumewise

The 2020 global fleet telematics market consisted of 23 million active subscriptions. **Nearly 70% of global subscriptions are accounted for by the on-road sector,** whilst the geographical concentration of subscriptions remains evenly balanced between Asia Pacific, Europe and North America.

However, over the next eight years, APAC is forecast to grow twice as fast as Europe and North America, resulting in 70 million active subscriptions in the region by 2030.

We expect active global subscriptions to commercial fleet telematics to surpass **154 million**, and represent a global market worth **€24 billion by 2030.** On-road telematics will dominate with 95% of the 2030 revenues, while the aftermarket will represent 73% of the global revenues.

## PTOLEMUS

Note: \* On-road commercial vehicles include trucks, coaches and vans while off-road vehicles include vehicles and equipment for agriculture, construction, mining and forestry. \*\* TCO = Total Cost of Ownership.

## Section 1: Introduction......5

1.1. Questions answered	6
1.2. Executive summary	7
1.3. Geographic segmentation	8
1.4. Selection criteria	9
1.5. Methodology	11
1.6. Companies interviewed	13
1.7. Companies mentioned	15
1.8. Glossary	18
1.9. Report authors	20
1.10. About PTOLEMUS	22

## Section 2: Introduction to commercial fleet

telematics.....

2.1. What is commercial fleet telematics	28
2.1.1. Overview of commercial fleet telematics	29
2.1.2. Who provides fleet telematics services?	
2.1.2.1. Telematics value chain	
2.1.2.2. What do OEMs offer?	60
2.1.2.3. What does the aftermarket offer?	72
2.1.2.4. What are the market growth barriers?	
2.1.3. Using telematics to improve TCO	97
2.1.3.1. An introduction to Total Cost of Ownership	
2.1.3.2. A breakdown of on-road commercial fleet TCO	
2.1.3.3. A breakdown of off-road commercial fleet TCO	123
2.1.3.4. The potential cost savings brought by telematics	134
2.1.4. How are these services connected?	142

.2. The evolution of the fleet telematics market173	}
2.1.4.2. Hardware connectivity standards160	)
2.1.4.1. Data connectivity standards14.	3

### 2. 2.2.1. Quantifying the regional markets and players

2.2.1.	Quantifying the regional	markets and	players	174
2.2.2.	The impact of COVID-19	on the indust	try	182

## Section 3: On- and off-road fleet telematics market assessment......192

## 3.1. The on-road commercial fleet telematics market.. 193

<b>3.1.1. The on-road fleet telematics market explained</b>	<b>194</b> 195
3.1.1.2. The on-road commercial fleet legislative landscape	203
3.1.2. The on-road value chain and its major players	209
3.1.2.1.The value chain and its major players	210
3.1.2.2. Aftermarket activity in the telematics value chain	215
3.1.2.3. OEM activity in the telematics value chain	225
3.1.3. The value propositions currently in the market	232
3.1.4. On-road customer needs & demands	251
3.1.4.1. Current needs and demands	252
3.1.4.2. Future needs and demands	260
3.1.4.3. Regional variances	271
3.1.5. Market forecast for on-road fleet telematics	280

### **PTÓLEMUS** Source: PTOLEMUS

## 3.2.The off-road commercial fleet telematics market..291

3.2.1.The off-road fleet telematics market explained	292
3.2.1.1. The construction fleet segment	294
3.2.1.2. The agricultural fleet segment	300
3.2.1.3. The mining fleet segment	308
3.2.1.4. The forestry fleet segment	314
3.2.2. The off-road value chain and its major players	318
3.2.3. The value propositions currently in the market	324
3.2.4. Off-road customer needs and demands	342
3.2.4.1. Current needs and demands	343
3.2.4.2. Future needs and demands	
3.2.4.3. Regional variances	368
3.2.5. Market forecast for off-road fleet telematics	377

## 

4.1.	Global	on-road	and	off-road	l market	concl	usions.387
	-				_	-	

4.2. Commercial fleet telematics services forecast.....395

### 

5.1. Aftermarket TSPs	
5.1.1. Actia Telematics Services	
5.1.2. Ag Leader	
5.1.3. CalAmp	
5.1.4. Cartrack	
5.1.5. ChainwayTSP	
5.1.6. Ctrack	
5.1.7. EROAD	
5.1.8. Fleet Complete	
5.1.9. G7	
5.1.10. Geotab	

### 

## PTOLEMUS so

Source: PTOLEMUS

# Extract of two TCO slides



PTÓLEMUS

Section 2.1.3.1 - An introduction to Total Cost of Ownership

# Track and trace, improving efficiency and reducing costs are important factors for adopting telematics in LCVs



## PTÓLEMUS

Source: Arval mobility observatory - 2020 research composed of 5600 interviews globally

# By applying fleet telematics, PTOLEMUS estimates an average % saving\* on TCO per vehicle is possible

## TCO for HGVs with FMS (UK case)



PTÓLEMUS

### TCO variation using FMS solutions

- Costs reduction thanks to telematics are most impacting on (read the full report)
- In the UK case previously explained, introduction of FMS solutions could save up to % of the TCO
  - The total cost per vehicle per year would be reduced from €\* to €\* , achieving savings of €\*
  - The FMS cost represents only \*% of the TCO
- Fuel and Driver costs could be improved thanks to routing and coaching features, reducing costs by \*%

- For instance, TX-FUELBOT from Transics, **uses Big Data analytics to optimise fuel consumption**
- Maintenance is the sector with the highest average TCO reduction, it can reach \*%;
  - In the future the savings could increase more thanks to predictive and prescriptive maintenance
- According to our primary research, in-cab cameras and driver coaching solutions, could reduce insurance costs up to \*%
- Telematics services can reduce the TCO by \*% on average

### Source: PTOLEMUS; \* Note : all data available in the full report



# Extract of two slides from the gap analysis of the market



Section 3.1.3 - The value propositions currently on the on-road market

# OEMs are ahead of TSPs in the development of predictive maintenance services

Availability of telematics services provided by OEMs



## PTOLEMUS Source

Source: PTOLEMUS

## OEMs target visibility and productivity services for offroad telematics, but few provide productivity consulting

Availability of telematics services provided by OEMs



## PTOLEMUS Source

Source: PTOLEMUS

# Extract of two market forecast slides



## Global active subscriptions are forecast to grow at X % per annum, with Y % of subscriptions based in APAC by 2030

Global subscriptions from on-road and off-road for embedded and aftermarket telematics (millions)



Section 4 - Commercial fleet telematics forecast

# Embedded subscriptions will grow at X %, reducing global aftermarket subscriptions to Y % by 2030

Global subscriptions for embedded and aftermarket telematics (millions)



# Extract of two slides from the conclusions



# TSPs currently dominate the on-road sector but OEMs will increase their share by controlling access to data

- Today, OEMs' telematics offerings are at a basic level when compared to aftermarket TSPs but will start to leverage the data ownership from their embedded devices
- OEMs are focusing on future market opportunities, for example Traton's RIO, which is focused on goods management rather than vehicle management. Other examples include:
  - Uber Freight, Sixth sense, Sendr\* and Project44\* are all initiatives integrating telematics with the transport of goods
- OEMs are investing in TSPs that serve specific verticals:

- Daimler acquired Science Platform, a fleet software platform focused on the logistics and transportation sector
- The platform acts as a marketplace and offers own services as well as third-party apps (e.g. Geotab is integrated into Science Platform On-road
- Isuzu Commercial Truck recently confirmed a longterm collaboration with Decisiv, the industryleading provider of dealer Service Relationship Management (SRM) software for the dealer network
- As a result, TSPs and other software platform providers will increasingly rely on OEMs' connected data to offer additional services

- Subsequently, partnerships between TSPs and OEMs will increase
  - OEMs are positioning themselves to be an open platform-enabling data exchange (e.g. Navistar's partnership with Geotab, Samsara, Cloudera)
- OEMs are also aware that the future market will move in their favour once electrified powertrains become mainstream:
  - Service maintenance & repair will be performed by the OEM
  - The TCO will radically change, putting TSPs at a disadvantage in favour of OEMs' integrated telematics value proposal
  - TSPs are moving to software provision only (c.f. Gurtam, Fleetcomplete, etc)







# PTÓLEMUS

# Off-road OEMs are leveraging telematics programmes to boost after-sales revenues for parts and maintenance

- Off-road OEMs currently hold a dominant position in the offroad market, accounting for approximately 78% of all active telematics services subscriptions
- The combined value of off-road telematics services from OEMs and aftermarket TSPs is estimated to be worth over
   €1.3 billion by 2030
- The proprietary nature of engine diagnostics has led OEMs, such as John Deere, to provide proprietary platforms such as WorkSight<sup>™</sup> and FarmSight<sup>™</sup>.
- The advent of **AEMP 2.0** has caused these OEM platforms to now open further, enabling improved mixed fleet service provisioning
- OEMs are predominantly leveraging turn-key TSP solutions to boost **after-sales revenues** in the form of **parts and servicing**

- However, PTOLEMUS predicts that the "opening-up" of vehicle diagnostics will give the aftermarket an opportunity to grow its customer base by leveraging OEMs' telematics APIs
- PTOLEMUS forecasts that active subscriptions in the aftermarket segment (including those connected to OEMs' linefitted devices) will grow at **32% annually through to 2030**
- This will be due to more equipment coming into the offroad area, pre-connected, and capable of providing a wider array of data directly to TSPs' platforms in a more standardised format
- In addition, machine owners, particularly in the North American agriculture sector, are pushing back against OEMs, claiming the right to repair:
  - The **Right to Repair (R2R)** movement is being heavily contested in the United States between farmers and agricultural machinery manufacturers

- End-users are demanding the legal right to choose how their machinery is repaired, without the invalidation of warranties or the denial of access to diagnostics data

- Furthermore, OEMs such as AGCO will increasingly move to a fully **open model** cooperating with as many TSP providers as possible to provide the best service/customer experience possible for end-users
- As a result of the technical and political forces at play, the need for third-party hardware will be negated, impacting TSP revenues, and enabling TSPs to focus on software provision, leveraging direct data feeds and providing competitive mixed-fleet services to endusers
- The outcome is that aftermarket revenues will grow with a CAGR of X% through to 2030, and account for €685 million (approximately Y%) of the global market



## PTOLEMUS Source: PTOLEMUS

PTOLEMUS Consulting Group

# About PTOLEMUS



Strategy consulting services

# The first strategy consulting & research firm entirely focused on augmented mobility & automation

### Car pooling **Micro-mobility Mobility** Smart parking Car sharing **Ride hailing** Tax refund services Procurement Strategy MAAS Shared mobility M&A advisory definition strategy **bCall** Tracking **Navigation** Vehicle eCall VRM **Speed cameras** FMS In-car Wi-Fi services **Traffic information** Innovation **Business** Project SVT / SVR Parking development management management BEV New Fuel cells PHEV **EV** charging energies Hydrogen Vehicle-to-grid **Fuel cards UBI / PAYD** Car As A Service Mobility-as-a-**Usage-based** Service Vehicle rental **Market research services Electronic Toll** charging Collection RUC Vehicle leasing AI **Driver safety** Remote Vehicle data **CAN-bus** OBD diagnostics & analytics **Crowd-sourcing** Predictive **xFCD** analytics **Data protection** Custom Vehicle **Off-the-shelf Subscription** ADAS **Robo-taxis** Autonomous market trucks **Shuttles** services automation Autonomous cars reports research Positioning (GNSS **Telematics** Enabling / WiFi / cellular) **Smartphones** devices technologies M2M / Sensors V2X connectivity

## **Fields of expertise**

## PTÓLEMUS

## We serve over 300 clients across the mobility ecosystem



## PTÓLEMUS

For more information on our services, please email <u>contact@ptolemus.com</u>

# Our team of consultants, experts & analysts consisting of 16 nationalities helps our clients worldwide



## PTÓLEMUS

# PTOLEMUS can help your organisation define and achieve its fleet strategy in fast-moving times

- Strategy definition
  - Strategic plan
  - Market entry assistance
  - Data strategy and analysis
  - Connected vehicle / telematics strategy
  - Decarbonisation strategy
  - Strategy orientation workshops
- Innovation strategy
  - Fleet services convergence strategy
  - Telematics product definition
  - Consent management
  - Data analytics & monetisation strategy

- Innovation delivery
  - Proof of concept design & launch
  - Architecture definition
  - Project management
- M&A advisory
  - M&A strategy
  - Commercial due diligence
  - Technology due diligence
  - Feasibility studies
  - Fleet services market sizing
  - Business case development
  - Cost benefit analyses
  - Post-merger integration

- Procurement
  - Definition of EV migration strategy
  - Assistance with tenders
  - Selection and sourcing of fleet telematics, software, data, platform, etc.
- Business development
  - Partnership strategy definition
  - Assistance to tender response
- Project management
  - Assistance in management of decarbonisation plan
  - Congestion charge project management

## PTÓLEMUS

# The study comes with a single, worldwide company licence

PTÓLEMUS         COMMERCIAL           Gensulting Group         FLEET TELEMATICS           Global Study         Global Study			Repo	ort ONLY	Additional market	FULL Report &
FULL VERSION			<b>Buy direct</b> (Invoice)	<b>Buy online</b> (Visa or MasterCard)	forecast	market forecast
The reference report on commende their telematics for car- rebuiles Payticles Autor and out of the out out out and out of the report fleet te	A sub- sub- sub- sub- sub- sub- sub- sub-	Contents	<ul> <li>A 635-page analysis commercial fleet tele on: <ul> <li>11 years of constant</li> <li>26 interviews with kee</li> <li>Nine months of desk</li> </ul> </li> <li>Granular analysis of the construction and agrices of the constructions.</li> <li>Major players in the the and their strengths.</li> <li>An in-depth assessment of the commercial fleet tele on: <ul> <li>An in-depth assessment of the commercial fleet tele on:</li> <li>An in-depth assessment of the commercial fleet tele on:</li> <li>An in-depth assessment of the commercial fleet tele on:</li> </ul> </li> </ul>	of the global ematics landscape based market surveillance ey stakeholders cresearch elematics in on-road, iculture, including: ues and telematics needs of analysis of current telematic elematics value chain ent of 39 companies cial fleet telematics	<ul> <li>Excel file with outputs and charts</li> <li>2020-2030 bottom-up market forecast encompassing:</li> <li>The number of vehicles in use for both on-road fleet telematics and off-road fleet telematics</li> <li>Subscriptions and revenues for the on-road telematics market, split by OEM and aftermarket</li> <li>Subscriptions and revenues for the off-road telematics market, split by OEM and aftermarket</li> <li>Regional projections for Europe, Americas, Asia Pacific, Africa and Middle East</li> </ul>	Includes all report and market forecast content as described
road	vehicles	Company-wide licence	<b>€ 5,990</b> Approx. \$8,200	<b>€ 5,990</b> Approx. \$8,200	<b>€ 1,490</b> Approx. \$2,330	<b>€ 6,990</b> Approx. \$9,365
			E-mail us to request an invoice	Available to purchase online		

For more information and to order the study or enquire about our subscription model, email fleet@ptolemus.com

## PTÓLEMUS

Source: PTOLEMUS Note: Prices in Euros excluding VAT (VAT only applicable to clients located in Belgium) - \* Conditions apply

## This report is licensed to BBBB under the conditions thereafter

## **PTOLEMUS** copyright

Published in January 2022

© PTOLEMUS

Avenue Louise 363

1050 Brussels

Belgium

contact@ptolemus.com

This report is subject to a detailed **limited licence agreement** between BBBB (XXAdDrEsSXX) and PTOLEMUS SRL (Avenue Louise 363, 1050 Brussels, Belgium), later named PTOLEMUS or PTOLEMUS Consulting Group.

This agreement was signed by **AAAA**, from BBBB.

This report can be uniquely identified and attributed to the licence granted to AAAA. If you have a doubt about the use of this licence, please refer to the licensee in your organisation as he/she could be held responsible for the infringement of this licence's rights.

### Disclosure

The recommendations and opinions expressed in this study reflect PTOLEMUS' independent and objective views. However, PTOLEMUS cannot provide any guarantee as to the accuracy of the information provided or the reliability of its forecasts.

### All rights reserved

All material presented in this document, unless specifically indicated otherwise, is under copyright to PTOLEMUS Consulting Group.

None of the material, nor its content, nor any copy of it, may be altered in any way, or transmitted to or distributed to any other party or published, without the prior express written permission of PTOLEMUS.

### These conditions apply to both digital or printed versions of the report, in whole or in part.

Employees, from BBBB are authorised to quote facts and figures from this Study provided they quotes PTOLEMUS Consulting Group as the source. Bulk release of facts and figures is not authorised. If in doubt, please contact IPR@ptolemus.com.

# PTOLEMUS

# PTÓLEMUS Consulting Group



fleet@ptolemus.com www.ptolemus.com @PTOLEMUS Andrew Jackson Research Director ajackson@ptolemus.com +44 7930 053 727