AUGMENTED MOBILITY 2030 Global Study



From transport to user-centric multimodal mobility

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2019 EDITION

Price list

The first quantified analysis of 18 transport modes worldwide **Strategy consulting services**

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

Micro-mobility Shared mobility Car pooling **Mobility Ride hailing** Car sharing Smart parking Investment Procurement Strategy services Roadside MAAS Tax refund assistance definition assistance strategy **bCall** Parking Tracking Vehicle eCall VRM Navigation services & Innovation **Business** Project FMS In-car Wi-Fi **Speed cameras** telematics SVT / SVR **Fuel cards** Traffic information development management management **UBI / PAYD Car As A Service** In-vehicle **Usage-based** payments Electronic Toll Vehicle rental charging Collection Road charging Vehicle leasing **Market research services** AI Driving behaviour Remote Vehicle data **CAN-bus** OBD diagnostics **Crowd-sourcing** & analytics Predictive **xFCD** analytics **Data protection** Vehicle Custom Autonomous Autonomous **Subscription Off-the-shelf** ADAS cars trucks automation market services reports research **Smartphones** M2M / Enabling **Positioning (GNSS** connectivity **Telematic devices** / WiFi / cellular) technologies **New energies** V2X

Fields of expertise

Our clients come from across the mobility ecosystem



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120 consulting assignments to help our clients innovate in the mobility domain

Assessed the global trends and built forecasts of 14 connected mobility services	Leading Telematics Service Provider	Identified market opportunities & defined strategic plan in connected mobility services	Road & infrastructure operator
Defined its future vehicle connected services global strategy	Global roadside assistance group	Evaluated the market potential of HD maps for autonomous vehicles	Consortium of OEMs & map makers
Conducted a survey of 15 OEMs worldwide on their connected mobility solution needs	Tier-1 automotive supplier	Conducted the due diligence of VTraffic, a leading traffic information provider	💭 Leonardo & Co.
Defined connected vehicle data strategy for innovative telematics services provision & monetisation	Vehicle data aggregator	Advised on the optimal structuring of its upcoming tolling scheme	Ministerie van Infrastructuur en Waterstaat
Built 5-year strategy & go-to- market plan in EU mobility services market	Global electronic tolling supplier	Defined our client's strategic positioning in the field of connected vehicle services	@egis
Detected opportunities from connected & autonomous vehicles for the space industry	cnes	Defined its global data & analytics strategy to predict incidents	Major road operator

This study is the first research to analyse the global shift from transportation to mobility



The first quantified analysis of 18 transport modes worldwide

A rigorous, in-depth analysis...

- Over 400+ pages, the report measures the combined impact of mega-trends on the mobility ecosystem
 - Assesses the **underlying driving factors** defining the importance of each trend on mobility
 - Analyses the key trends' impact on **market volumes**
 - The result is a **demand forecast** for 18 different land transport modes and the evolution of their market shares

• Based on 10 years of experience in strategy consulting in mobility, it leverages:

- **Over 40 interviews** with OEMs, cities, mobility service providers, infrastructure providers and big data service providers
- Desk and primary research by a team of 8 consultants and analysts
- Insights from 120 consulting assignments on mobility markets, technology and strategy
- For each market, the report provides:
 - Driving factors
 - Triggers and inhibitors
 - Value chain
 - Case studies from **best practice** demonstrators

... that combines many firsts:

- The combined impact of 12 mega-trends on
 - 16 stakeholder categories
 - 18 transport modes
 - 18 regions
- A true user-centric, multimodal approach, combining a qualitative and quantitative methodology
- **18 real world case studies** demonstrating best practices in each mobility markets
- A deep-dive assessment of the evolution of core **mobility markets** and their effect on the demand
- **Strategic guidelines** on withstanding the upcoming trends

2018-2025 global mobility demand forecasts

- Excel forecast outputs
- 18 transport modes forecast
- Global volume forecasts in passenger/km
- 18 countries / regions
- AVs and EVs volume projections

The report responds to the most pertinent strategic questions

How will the change in city will affect th	n mobility behaviour in one e overall car market?	esent and future trends company's strategy?	How will the combined impacts of key changes impact mobility		
	How will each of the 17 transport modes evolve in my market?		How will the connected car	stakeholders?	
Will UBER kill the taxis and perhaps more importantly, will electric scooters kill UBER?	What will be the share of private car in "mobility 2030"?		platform evolve in the face of smartphonisation?	What will be the nature and volume of AVs in 2030?	
	mobility services plat	form?	Will AVs replace or grow the total number of urban trips?		
What is the role of cities and governments in the new mobility value chain? Who will bill for mobility, insurance or tolling in 2030?					

A. EXECUTIVE SUMMARY

B. INTRODUCTION

C. ANALYSIS OF THE TRENDS SHAPING MOBILITY

- 1. Methodology and definitions
- 2. Connectivity
- 3. Smartphonisation
- 4. Artificial intelligence
- 5. Usage based charging
- 6. On-demand & shared services
- 7. Electronic payments
- 8. Smart infrastructure
- 9. Automation

10. Mobility as a Service

11.Electrification

12.New road vehicles

13.New air vehicles

D. IMPACT ON PLAYERS AND THEIR STRATEGY

- 1. Methodology and definitions
- 2. Automotive OEMs
- 3. Cities
- 4. Energy companies
- 5. Fuel card operators
- 6. Insurance companies
- 7. IoT technology suppliers
- 8. Leasing & rental operators
- 9. MNOs
- 10.Mobility platform providers
- 11.Parking operators

12.Payment

13. Public transport operators

- 14.Road operators
- 15.Roadside assistance companies
- 16.Tech / web players (Amazon, Apple, Google, Facebook, Uber, etc.)
- 17.Tier-1 suppliers

E. GLOBAL MOBILITY PROJECTIONS

- 1. Methodology and definitions
- 2. Global mobility demand forecast
- 3. Electric vehicles
- 4. Autonomous vehicles

F. CONCLUSIONS

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Augmented Mobility 2030 is the first *holistic* analysis of future mobility



We considered a wide array of factors that have an impact on the future of mobility



Behavioural

- Smartphone development and massive adoption
- High mobile engagement
- Rapid adoption of shared service models
- Increasing vehicles underutilisation

Car business transformation

- Car data monetisation
- Proliferation of connected & traceable transportation
- Rise of OEM data hubs
- Fleet electrification

Infrastructure

- Increasing penetration of smart urban infrastructure
- Adoption of wireless sensors in road infrastructure
- Rise of edge computing and 5G technologies
- Network technologies rapid development
- Increase in data transfer speed via new wireless networks



External factors

- Environment regulations and incentives
- Increasing traffic and congestion in growing cities
- Global population growth
- Waves of increase in car safety requirements

Technological advances

- Data processing and storage's increasing capacity
- Low-cost and efficient sensors
- Improvement in GNSS positioning
- Al and machine learning used for analytics and prediction
- Lower battery and EV production costs
- Open APIs

New delivery model

- New fair pricing models
- Smartphone as a channel to mobility services
- Shared & open data
- New cashless payment options
- Rise of cashless payment and mobile banking platforms

PTOLEMUS Source: PT

We identified the 12 mega-trends shaping future mobility



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We analysed 18 transport modes, from metro to e-bicycles

3 TRANSPORT MODES



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We then analysed how each trend will impact 16 categories of mobility stakeholders

4 IMPACT ON KEY PLAYERS



The study bring the first ever bottom-up forecast of 18 land transport modes in 18 regions until 2030

4 MOBILITY DEMAND

- Timescale: 2018 2030
- Unit of volume: million passenger km

Transport modes projected:

- Passenger cars
 - Own vehicles for personal use
 - Car sharing
 - Ride hailing
 - Car pooling
 - Car rental
 - Taxi
- Coaches, buses & trams (incl. sub-categories)
- Rail
- Two-wheelers (incl. sub-categories)
- Bicycles
- New vehicles

Also included:

- Global new electric passenger car registrations
- Electric passenger cars in use (5 key markets)
- Autonomous passenger car registrations (L2, L3, L4)
- Autonomous cars in use (L2, L3, L4)

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Each transport mode is forecast over 3 time horizons: from 2018 until 2020, 2025 and 2030

10		Graph	Onnes		
3	Passenger cars		Millions of passenger km	x %	x %
۲	Own vehicles for personal use		Millions of passenger km	x %	x %
ŝ	Car sharing		Millions of passenger km		
â	Ride hailing		Millions of passenger km		
Â	Car pooling		Millions of passenger km		
Å	Car rental		Millions of passenger km		
	Taxi		Millions of passenger km		
D	Motor coaches, buses		Millions of passenger km		
	Rail		Millions of passenger km		
	2-wheeler / shared e-		Millions of passenger km		
	Shared bicycles		Millions of passenger km		
5					
ð ≱	New vehicles			ā	
¢	New vehicles - Mode	Graph	Units	CAGR 2013 - 2017	CAGR ^{2017 - 2030}
⊅ ≱	New vehicles Mode Motor coaches, buses & trolley buses	Graph	Units Millions of passengers km	CAGR 2013-2017	CAGR ^{2017 - 2030}
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Geographic scope

France Germany Italy Spain UK Rest of EU **Rest of Europe** Russia North America USA Canada Latin America Asia Pacific China India Japan Australia **Rest of APAC** South Africa **Rest of Africa** Global

The first comprehensive analysis of the global mobility market is now available as a single, worldwide company licence

2019 AUGMENTED MOBILITY 2030 Global Study		Augmented Mobility 2030 Global Study		Forecast	Mobility strategy
EDITION The first quantified range of 18 range of 18 r		Buy direct (Invoice)	Buy online (Visa or MasterCard)	Torecast	workshop
The first quantified analysis of 18 transport modes worldwide		 500-page analysis of the mobility market through the key factors and trends impacting mobility An assessment of the future strategies of each stakeholder type Global mobility demand projections to 2030 All-in-one searchable and interactive document (PDF format, password-protected) 		 Forecast of mobility passenger km by country and transport mode through 2030 Autonomous Vehicle volume forecasts through 2030 Electric Vehicle volume forecast through 2030 	 The full study presented to your board or strategy team Half-day workshop in your offices*
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