PTOLEMUS
Consulting Group

LEAFLET

The latest reference report on ATMS in North America and Europe

TRAFFIC MANAGEMENT
Market Study

From traffic lights to automated traffic management

This report is a detailed analysis and forecast of the Traffic Management (TM) landscape in North America and Europe

- A **116**-page analysis of the current and future road TM landscape in **the world's 2 largest markets** based on:
  - PTOLEMUS' consulting experience with more than **60** ITS client assignments
  - **6** months of research and analysis including interviews with many industry stakeholders
  - Covering both urban and roadways traffic management markets

- **An assessment of traditional and emerging TM technologies & models**
  - Sensors (cameras, connected vehicles, etc.)
  - Equipment (cabinets, controllers, etc.)
  - Data (AI, demand management, etc.)
  - Sub-systems (move towards software, etc.)
  - Agency-level supervision systems

- **An analysis of key evolutions in the TM value chain**
  - Key sectors and sub-sectors

  - Key customer categories
  - Types of contracts
  - Regulatory evolutions
  - Technology disruptions
  - Demand & supply-side market trends

- **Impacts of these evolutions on the market development in North America and Europe**
  - Effects of these changes on market growth
  - Our vision of the TM market in 2032

- **A detailed analysis of the supply**
  - Profiles of **18** suppliers, from Be-Mobile to Yunex Traffic
  - Competitive positioning by region and domain
  - Estimated market shares of key suppliers by region

- **2020-2032** market forecast outputs
  - Current size estimated bottom-up
  - TM solutions market revenues in North America and Europe

PTOLEMUS Consulting Group

TRAFFIC MANAGEMENT
Market Study

FULL VERSION

The latest reference report on ATMS in North America and Europe

From traffic lights to automated traffic management

The reference report for all industry stakeholders to understand and prepare the future of ATMS

This report's 6 sections cover both the supply and the demand

The report leverages PTOLEMUS' ITS experience and the expertise of its senior mobility consultants

Frederic Bruneteau
Managing Director

Alberto Lodieu
Senior Manager

Experience | **27** years

15 years

Biography

The founder of PTOLEMUS, Frederic has accumulated 27 years of experience of the mobility and transport domains and 17 years of strategic and financial advisory.

He has become **one of the world's foremost experts of connected mobility** and is interviewed on the subject by publications such as the Financial Times, Forbes, the Wall Street Journal and The Economist. He has also spoken at over 40 conferences on the subject.

He has **led over 180 consulting assignments and helped many world leaders define their strategy and implement it.**

Clients he has served include A-to-Be, Abertis, AETIS, AGC Automotive, Allianz, Axxès, BP, Bridgestone, BRP, CNH Industrial, Danlaw, DKV, Egis, Emovis, the European Commission, Edenred / UTA, Ferrovial, Kapsch, the Netherlands' Ministry of Transport, Neology, OMV, MPTC, Neology, Q-Free, Scania, SkyToll, ST Engineering, Switzerland's Ministry of Transport, Telepass, Telit, TotalEnergies, Toyota, Transurban, T-Systems, and WEX.

Frederic has led nearly 50 assignments related to ITS.

Frederic directed the work, contributed to and reviewed this report.

Alberto has more than 15 years of experience in strategy consulting.

He has specialised in **mobility, location-based services and smart road infrastructure** in projects related to corporate and competitive strategy, operations excellence and business analytics.

He has performed more than 30 consulting assignments for clients such as Abertis, Abertis Mobility Services, Advent International, AGC Automotive, Bain Capital, CNES, the French space agency, Edenred / UTA, Emovis, Ferrovial, Neology, SkyToll, Telepass, Telespazio, Transurban and UnipolSai.
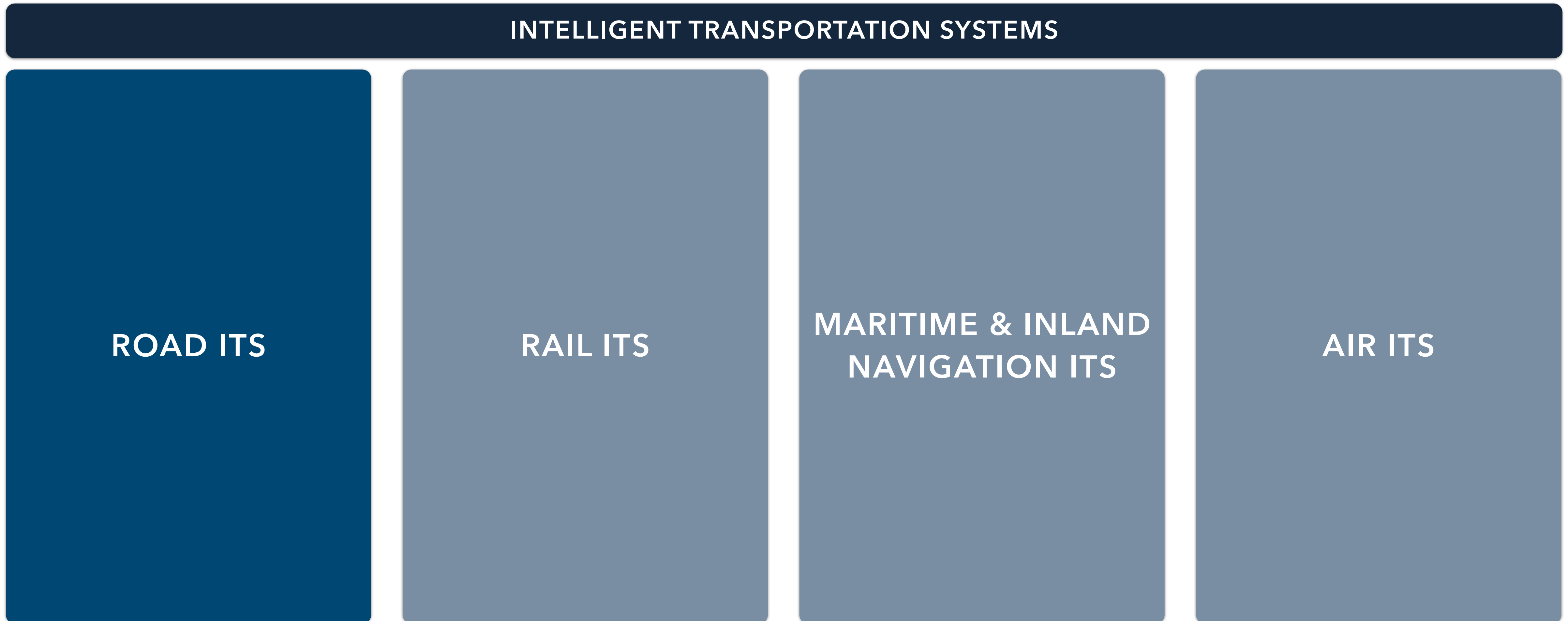
One of the key projects in road infrastructure includes assisting a **major provider of RUC solutions in defining its international expansion strategy** in the Road Usage Charging, Congestion Charing and Low Emission Zones markets, including identifying & recommending business as well as acquisition and partnership opportunities.

Alberto holds an MBA from HEC Paris and a BSc in Industrial and Systems Engineering from the Tecnologico de Monterrey.

Alberto contributed to the writing of this report alongside Frederic.

We have focused on the road component of the ITS market

ITS taxonomy - Level 1

INTELLIGENT TRANSPORTATION SYSTEMS			
ROAD ITS	RAIL ITS	MARITIME & INLAND NAVIGATION ITS	AIR ITS

Source: PTOLEMUS

PTOLEMUS

Within the road ITS market, we focus on 3 markets

Scope of PTOLEMUS ITS forecast

ROAD INTELLIGENT TRANSPORTATION SYSTEMS						
Advanced Traveller Information Systems (ATIS)	**Advanced Traffic Management Systems (ATMS)**	**Emergency Management Systems (EMS)**	**Curbside Management Systems (CMS)**	**Road Public Transport Systems (RPTS)**	**Multi-modal land transport ITS**	**Enforcement services**

• Covering motor vehicles
• **Inform users about the driving conditions** and any useful information through **radio forecast** in highways for example or variable message signs
	• **Traffic signals and corridor management** (including Adaptive Systems)
	• Control the network through different means to smooth traffic flow and increase safety in the roads
	• Highway management and access to the city
		• **For operators to control roads, tunnels, highways from a potential risk or incident**
		• It uses **CCTV cameras, advanced sensors to automatically detect events** and advanced systems that include decision reports to trigger automatic response plan
		• Help **detect incidents as quickly as possible**
			• Allow users to [...]
			
			• Guidance
			• On-street and off-street parking
			• Pedestrians & crossing infrastructure
			• Bicycles and micro-mobility infrastructure
			• Accessibility for the disabled
				• Covers all systems for buses and coaches
				• Includes:
				  - Scheduling,
				  - Tracking,
				  - Ticketing,
				  - Traveller information systems
				  - Etc.
					• Covers the use of multiple transport modes (MaaS)
					• Includes:
					  - Mobility-as-a-Service platforms,
					  - Mobility-as-a-Service apps,
					  - Route planning
					  - Ticketing & billig across all transport modes and stakeholders
					  - Etc.
						• Red light enforcement
						• Automated speed enforcement cameras
						• LEZ enforcement
						• HOV Lane enforcement
						• School intersection enforcement

3 markets covered in our ITS forecast

We included the following glossary of key traffic management and transportation abbreviations (1/2)

Acronym	Definition
AASHTO	American Association of State Highway and Transportation Officials
ADAS	Advanced Driver Assistance Systems
ADM	Active Demand Management
AID	Automatic Incident Detection
ALPR	Automatic Licence Plate Reading (= ANPR)
ANPR	Automatic Number-Plate Reading (=ALPR)
ATIS	Advanced Traveler Information System
ATM	Active Traffic Management
ATMS	Advanced Traffic Management System
AV	Autonomous Vehicle
BEV	Battery Electric Vehicle
BTS	Bureau of Transportation Statistics
CAGR	Compounded Annual Growth Rate
CalDOT	California Department of Transportation
CalTrans	California Department of Transportation
CAM	Commercial Account Manager
CAN	Controller Area Network
CAPEX	Capital Expenditure
CAV	Connected/Automated Vehicle
CBO	Commercial Back Office

Acronym	Definition
CCPA	California Consumer Privacy Act
CCTV	Closed-Circuit Television
C-ITS	Cooperative ITS (using V2X)
CP	Corridor Pricing
CPI	Consumer Price Index
CSC	Customer Service Centre
CV	Connected Vehicle
DATEX	Data Exchange standard for traffic information (EU)
DCS	Data Collection System
DIASER	DIAlogue Standard pour Equipements de Régulation de trafic (French standard)
DMS	Dynamic Message Sign
DMV	Department of Motor Vehicle
DOL	Department of Licensing
DoT	Department of Transportation
DSRC	Dedicated Short-Range Communication
EC	European Commission
EPA	Environmental Protection Agency
ERP	Enterprise Resource Planning
ETC	Electronic Toll Collection

Acronym	Definition
EV	Electric Vehicle
FAST	Fixing America's Surface Transportation
FCD	Floating Car Data
FED	Federal Reserve Board
FHWA	Federal Highway Administration
FMS	Fleet Management Service
FTE	Full Time Employees
G&A	General and administrative expenses
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GHG	Green House Gas
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GSM	Global System for Mobile communications
HB	House Bill
HDOT	Hawaii Department of Transportation
HEV	Hybrid Electric vehicles
HGV	Heavy Goods Vehicle
HiRUC	Hawaii Road Usage Charge program

We included the following glossary of key traffic management and transportation abbreviations (2/2)

Acronym	Definition
HOT	High Occupancy Toll
HTF	Highway Trust Fund
HUF	Highway User Fee
HV	Heavy Vehicle
HVUT	Heavy Vehicle Use Tax
IBTTA	International Bridge, Tunnel and Turnpike Association
ICE	Internal Combustion Engine
IIJA	Infrastructure Investments and Jobs Act
IOP	Interoperability
IRI	International Roughness Index
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation System
ITS	Intelligent Transportation System
LIDAR	Light Detection and Ranging
LEZ	Low Emission Zone
LV	Light Vehicle
MIDAS	Motorway Incident Detection & Automatic Signaling
MIR	Manual Image Review
MBUFA	Mileage-Based User Fee Association
MLFF	Multi-Lane Free Flow (equivalent to ORT)

Acronym	Definition
MPO	Metropolitan Planning Organization
NHTSA	National Highway Traffic Safety Administration
NTCIP	National Transportation Communications for Intelligent Transportation System Protocols (USA)
O&M	Operations & Maintenance
OBO	Operational Back Office
OBU	On-Board Unit
OCIT	OCIT (Open Communication Interface for Road Traffic Control Systems) (Germany)
OEM	Original Equipment Manufacturer
PHEV	Plug-in Hybrid Electric Vehicle
PKI	Public Key Infrastructure
PPP	Public-Private Partnership
PTO	Public Transport Operator
RCU	Road Controlling Authority
RFID	Radio Frequency Identification
RSU	Road Side Unit
RTMS	Real-Time Traffic Management System
RWIS	Road Weather Information System
SaaS	Software as a Service

Acronym	Definition
SCATS	Sydney Coordinated Adaptive Traffic System
SCOOT	Split Cycle Offset Optimization Technique
STSFA	Surface Transportation System Funding Alternatives
TC	Transportation Commission
TLC	Traffic Light Controller
TM	Traffic Management
TMA	Traffic Management Agency
TMC	Traffic Management Center
TMP	Traffic Management Plan
UTC	Urban Traffic Control
UTMC	Urban Traffic Management & Control (UK)
V2X	Vehicle-to-Everything communication
V2I	Vehicle-to-Infrastructure communication
V2V	Vehicle-to-Vehicle Communication
VMS	Variable Message Sign
VMT	Vehicle Miles Traveled
VSL	Variable Speed Limits
VRU	Vulnerable Road User (pedestrian, cyclist, etc.)
WIM	Weight-In-Motion system

The study comes with a worldwide company license

For any question on the report, email contact@ptolemus.com

*You can purchase the report by requesting an invoice or buying online** (Visa or MasterCard) on our web site*

	Report contents	Terms
Contents	• **116-page, password protected pdf report** of the current and future traffic management market in North America and Europe including: - An assessment of traditional and emerging technologies & models - An analysis of key evolutions in the TM value chain - Impacts of these evolutions on the market development in North America and Europe - A detailed analysis of the supply including 18 supplier profiles - 2020-2032 market forecast outputs in each region	• Perpetual license for unlimited internal use • License available globally • Access restricted to employees and Directors of the client
Company-wide license	To obtain pricing details, please download the reports' free abstract	

Note: Specific conditions apply for universities, students, consulting firms and associations

PT**O**LEMUS

This leaflet is licensed to the Reader for its internal use

Published in January 2024
© PTOLEMUS
Avenue Louise 363
1050 Brussels
Belgium
contact@ptolemus.com

PTOLEMUS
Consulting Group

contact@ptolemus.com

www.ptolemus.com

@PTOLEMUS

Frederic Bruneteau
Managing Director
fbruneteau@ptolemus.com
+32 487 96 1902