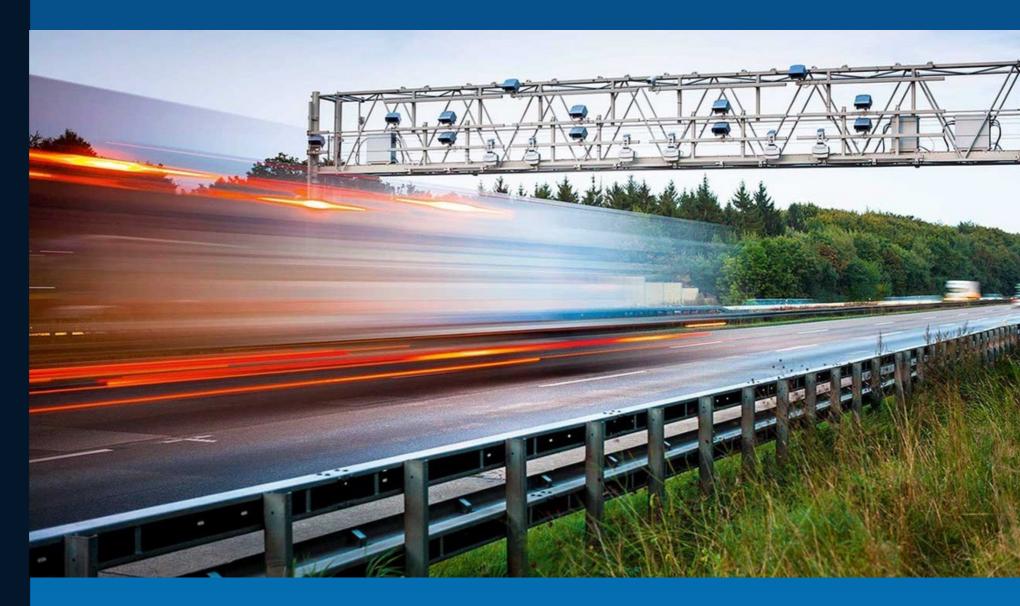
PTOLEMUS Consulting Group

ELECTRONIC TOLLING Global Study

2019 EDITION

The updated reference report on electronic toll collection



Towards connected vehicle payments

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

Strategy consulting services

Strategy definition

Investment assistance

Procurement strategy

Innovation Business development

Project management

Market research services

Off-the-shelf reports

Subscription market research

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

How PTOLEMUS can help you beyond this study

• Strategy definition

- Road policy strategy assistance
- Market entry assistance
- Data strategy and analysis
- Mobile tolling strategy development
- Multimodal mobility design and planning
- Future vision of vehicle payments

Investment assistance

- Due diligence
- Feasibility studies
- Market forecasting
- Cost benefit analyses

Procurement

- Definition of road charging schemes
- Assistance to tenders
- Selection and sourcing of ETC technology

Business development

- Partnership strategy definition
- Assistance to tender response

• Project management

- Assistance in management of road pricing projects
- Congestion charge project management

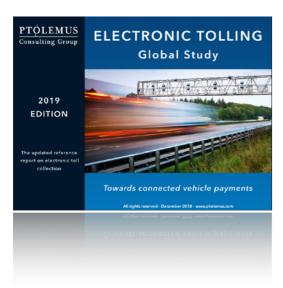
The Electronic Tolling Global Study is the go-to report for the entire road charging ecosystem





Source: PTOLEMUS

The most comprehensive report on electronic tolling and road user charging



More than just market research A strategic analysis on the future of ETC as a connected mobility service

- An update to our 2015 Electronic Toll Collection Global Study providing an all-encompassing overview and outlook on the electronic tolling market. It includes:
- 750-page analysis of the global electronic tolling landscape based on:
 - 7 years of constant market surveillance
 - 50 interviews with key stakeholders
 - 6 months of desk research by a team of 7 consultants
 - 20 strategy consulting assignments
- An in-depth review of the 40 biggest toll domains worldwide with traffic volumes, technology, model, size and revenues projections
- A comparative assessment of all tolling technologies:
 - Deployment models and impacting trends for ANPR, DSRC, Infrared, GNSS and RFID
 - Forecast of the technology mix
- An impact analysis of interoperability in tolling:
 - Forces and models shaping interoperability
 - Review of current projects in Europe, US and Colombia
 - Impact of the different models on toll chargers and service providers
- 12 EETS service providers profiled, analysing:

- Strategic position
- Service breakdown
- The study is a strategic tool for service providers and toll chargers worldwide
 - Effectively promote tolling as a funding mechanism
 - Defining and outlining a sound communication strategy
 - Lessons learned from best practices around the world
 - Learn how the competition for toll service provision will transform the ecosystem
 - The role of vehicle manufacturers, technology giants, fleet telematics providers and mobile wallets
- Strategic recommendations to service providers
 - Best practices for winning market share in future tolling markets
 - How to ensure control of the future toll payment interface
- 2015 2025 bottom-up market forecast
 - Global scope: 40 countries investigated in details
 - Regional and global projections of the toll and electronic toll market: toll revenues, subscription volumes, share of ETC, key influencing factors
 - 1,500-line Excel file with subscription volumes by technology and vehicle type, devices sold, total revenues collected and ETC only revenues collected



The study will answer the key strategic questions

What technology and model will be used in my geographical market in 2025?

What toll technology should I invest to future-proof my business?

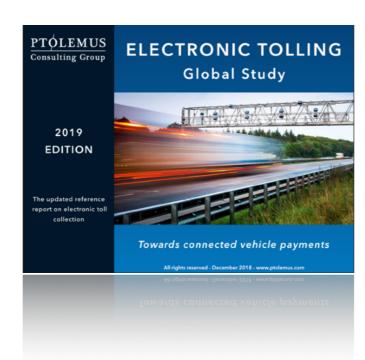
What toll technology should I invest to future-proof my business?

How is AliPay changing tolling in China?

Will new technologies help drivers accept tolling?

Who in the new value chain will own the end customer?

Will toll devices disappear?



As competition explodes, how to gain market share in the future tolling market?

What is the impact of interoperability programmes on toll chargers and service providers?

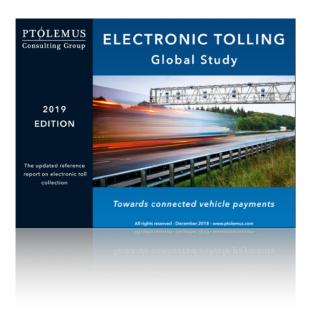
Will the tech giants take over toll payment processes?

Will OEMs manage customer interface and service delivery in the future?

To what extend smartphones will supplant existing tolling devices?



The study comes with a single, worldwide company licence



The reference report on ETC and road user charging

	Full Study		Additional market	Additional
	Buy direct (Invoice)	Buy online (Visa or MasterCard)	forecast	workshop
Contents	 750-page study with 40 country profiles, including qualitative, competitive and value chain analysis Service provider best practices Interoperability models analysis Smartphone-based tolling model analysis 12 profiles of EETS service providers 		 1,500-line Excel file with outputs and charts Estimates of the subscription volumes by technology and vehicle type Devices sold, total revenues collected and ETC-only revenues 	 The full study presented to your board or strategy team Half-day workshop at your office*
Company -wide licence	€ 5,995 Approx. \$6,445	€ 6,300 Approx. \$7,400	€ 2,000 Approx. \$2,350	€ 2,000 Approx. \$2,350
	E-mail us to request an invoice	Click here to purchase online		

For more information and to order the study or enquire about our new subscription, contact <u>contact@ptolemus.com</u>



PTOLEMUS Consulting Group



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