

Public Transport ITS in Europe and North America

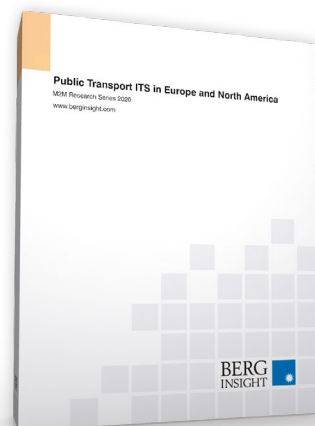


Public Transport ITS in Europe and North America is the seventh consecutive report from Berg Insight analysing the latest developments on the intelligent transportation systems market for public transport in these two regions.

This strategic research report from Berg Insight provides you with 300 pages of unique business intelligence, including 5-year industry forecasts, expert commentary and real-life case studies on which to base your business decisions.

Highlights from this report:

- **Insights** from 30 new executive interviews with market leading companies.
- **New** data on vehicle fleets and public transport utilisation in Europe and North America.
- **Comprehensive** description of the public transport ITS value chain and key applications.
- **In-depth** analysis of market trends and key developments.
- **Profiles** of 74 aftermarket ITS solution providers.
- **Summary** of OEM propositions from public transport vehicle brands.
- **Revised** market forecasts lasting until 2023.



Order now!

Please visit our web site to order this report and find more information about our other titles at www.berginsight.com

Berg Insight's M2M Research Series

What are the key business opportunities in the emerging wireless M2M/IoT market? Berg Insight's M2M Research Series is a unique series of 40 market reports published on a regular basis. Each title offers detailed analysis of a specific vertical application area such as smart homes, smart metering, fleet management and car telematics, or covers horizontal topics including IoT platforms, software, hardware, IoT connectivity statistics and the mobile operators' IoT strategies.

www.berginsight.com

See inside for further details →



Public transport ITS is key to enable sustainable smart mobility

The term Intelligent Transport Systems (ITS) refers to information and communications technology applied to transport infrastructure and vehicles. Berg Insight's definition of ITS for public transport includes systems installed in public transport vehicles as well as at terminals, stops, depots and similar. Included are also backoffice IT systems which ensure that public transport services can be planned, scheduled and managed to achieve efficient operations. An important part of ITS for public transport is further solutions providing travellers with updated information about routes, departure times, possible disturbances and connecting services. The history of these different types of solutions dates back several decades and current state-of-the-art solutions include for example real-time intermodal and multi-operator journey planners, automated fare collection systems using contactless cards or NFC-enabled handsets for account-based ticketing, and advanced mobility analytics software.

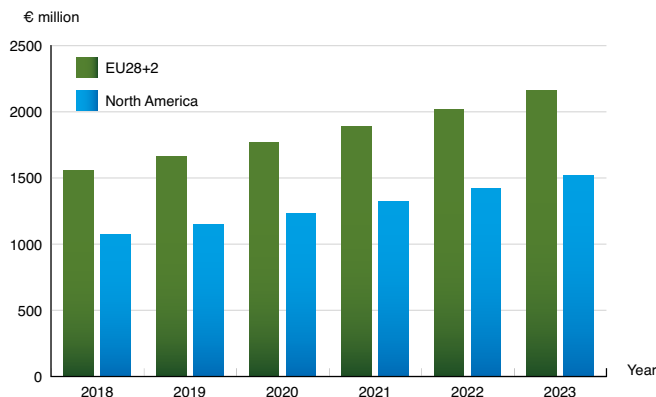
Public transport plays an increasingly important role in societies as a result of continuing population growth in cities and shifting consumer preferences. Approximately 60 billion and 13 billion public transport passenger journeys are carried out in Europe and North America respectively each year. Available modes include for example local and regional buses and trolleybuses, regional and suburban rail transport, metros and trams, and local waterborne passenger transport services. In 2017, the number of registered buses and coaches in Europe and North America reached 806,000 vehicles and 545,000 vehicles respectively, not including school buses. The economic value of public transport services in Europe is estimated to around € 155–165 billion per year, while the corresponding number in North America is around € 70–80 billion.

Berg Insight is of the opinion that the market for ITS in public transport will continue to grow in the coming years. Challenges such as urbanisation, climate change and traffic congestion continue to spur investments in public transport ITS, contributing to a positive market situation. Individual markets may however experience temporary fluctuations, depending on the political climate, austerity measures and local developments. The total market value of public transport ITS for buses and trams in Europe is forecasted to grow at a compound annual growth rate (CAGR) of 6.8 percent from € 1.56 billion in 2018 to reach € 2.16 billion by 2023. The penetration of on-board computers with GPS location functionality and wireless communications in buses and trams in Europe is estimated to increase from 85.7

percent in 2018 to 93.7 percent in 2023, however varying considerably between regional markets. In North America, the total market value of public transport ITS is forecasted to grow at a CAGR of 7.3 percent from € 1.07 billion in 2018 to reach € 1.52 billion in 2023 and the penetration rate is estimated to increase from 89.0 percent in 2018 to 96.0 percent in 2023.

A group of international aftermarket solution providers have emerged as leaders on the market for public transport ITS. Major providers across Europe and North America include Canada-based Trapeze Group and Germany-based INIT with significant installed bases in both regions. Clever Devices and Conduent hold leading positions on the North American public transport ITS market, and the latter is also an international provider of fare collection systems. Clever Devices is moreover about to expand into Europe, where the UK is the primary target. Additional companies with major market shares in North America include Cubic Transportation Systems and Avail Technologies. Examples of companies with major market shares on national markets in Europe include ENGIE Ineo and RATP Smart Systems which hold leading positions in France. Vix Technology, Flowbird and Ticketer are moreover major providers on the UK market, while IVU is a dominant player in the German-speaking part of Europe. Other significant players include the Spanish groups GMV, Indra and Grupo ETRA, French Thales, Atron in Germany, Scandinavian FARA and Consat Telematics, and the Austria-based companies Swarco and Kontron Transportation. Volvo Group is moreover a notable player from the vehicle OEM segment, while companies such as Scania, Iveco, Daimler and New Flyer also offer some conventional OEM telematics features for their buses.

The outlook for the public transport ITS market is positive, as several major developments encourage increased investments in such technologies. The ITS market is likely positively affected by international public transport-related initiatives such as the ITxPT Association as well as APTA's standards programs for public transport vehicles and ITS. The development of ITS has in recent years focused on increasing the level of integration and utilising technology advancements for fare collection purposes. Another major driver is the ongoing global developments related to the concept of smart cities, where ITS in general and public transport ITS in particular constitute key elements to enable sustainable smart mobility.



Market value of public transport ITS (EU28+2 and North America 2018–2023)

This report answers the following questions:

- How is public transport organised and managed?
- What is the geographical structure of public transport fleets in Europe and North America?
- Which are the leading international and regional providers of aftermarket public transport ITS solutions?
- What offerings are available from vehicle OEMs?
- What impact will the launch of standard factory installed on-board computers from the OEMs have on the market?
- Which drivers and barriers are affecting the market for public transport ITS solutions?
- How are the regulatory developments in Europe and North America affecting the public transport ITS industry?
- How will the public transport ITS industry evolve in the future?



Executive Summary

1 Public transport in Europe and North America

- 1.1 Modal split of passenger transport
- 1.2 Bus fleets and public transport utilisation
- 1.3 Market shares for bus and coach OEMs
- 1.4 Rail-borne public transport modes
 - 1.4.1 Trams and light rail
 - 1.4.2 Metro
- 1.5 Organisation and contracting in public transport
 - 1.5.1 Legal framework in Europe
 - 1.5.2 Legal framework in North America
 - 1.5.3 Organisational forms and regional differences
- 1.6 Major public transport operators

2 ITS technologies and solutions

- 2.1 Public transport ITS infrastructure
 - 2.1.1 Vehicle segment
 - 2.1.2 Roadside segment
 - 2.1.3 Backoffice segment
 - 2.1.4 Traveller segment
 - 2.1.5 GNSS segment
 - 2.1.6 Network segment
- 2.2 Public transport management
 - 2.2.1 Planning and scheduling tools
 - 2.2.2 Computer aided dispatch systems
 - 2.2.3 Traffic signal priority
 - 2.2.4 Depot management
- 2.3 Traveller management
 - 2.3.1 Passenger information
 - 2.3.2 Entertainment
 - 2.3.3 Fare payment
- 2.4 Driver management
 - 2.4.1 Driving data registration and analysis
 - 2.4.2 Eco-driving schemes
 - 2.4.3 Video-based driver monitoring
 - 2.4.4 Insurance risk management
- 2.5 Vehicle management
 - 2.5.1 Vehicle diagnostics and maintenance planning
 - 2.5.2 On-board security solutions
- 2.6 Business models and strategies

3 Market forecasts and trends

- 3.1 Market analysis
 - 3.1.1 Market value forecast
 - 3.1.2 Regional markets
 - 3.1.3 Major vendors
- 3.2 Market drivers and barriers
 - 3.2.1 Macroeconomic environment
 - 3.2.2 Regulatory environment
 - 3.2.3 Competitive environment

- 3.2.4 Technology environment
- 3.3 Value chain analysis
 - 3.3.1 ITS and telematics industry players
 - 3.3.2 Automotive industry players
 - 3.3.3 Telecom industry players
 - 3.3.4 IT industry players
- 3.4 Future industry trends
 - 3.4.1 Open architectures altering the ITS value chain
 - 3.4.2 Public transport stakeholders embrace integrated mobility to stay relevant
 - 3.4.3 Demand-led transport to grow in sparsely populated regions
 - 3.4.4 Mobile devices assume multiple important roles in the ITS infrastructure
 - 3.4.5 Public transport stakeholders invest in autonomous & electric vehicles
 - 3.4.6 Data analytics to drive service improvements

4 OEM products and strategies

- 4.1 Daimler
- 4.2 Iveco
- 4.3 MAN Truck & Bus
- 4.4 Scania
- 4.5 Volvo Group
- 4.6 New Flyer
- 4.7 Gillig
- 4.8 Alexander Dennis (NFI Group)
- 4.9 VDL
- 4.10 Van Hool

5 Aftermarket solution providers

- 5.1 International
 - 5.1.1 Conduent
 - 5.1.2 ENGIE Ineo
 - 5.1.3 GIRO
 - 5.1.4 INIT
 - 5.1.5 IVU
 - 5.1.6 Siemens Mobility
 - 5.1.7 Thales
 - 5.1.8 Trapeze Group
- 5.2 Germany and Eastern Europe
 - 5.2.1 Atron
 - 5.2.2 DILAX Group
 - 5.2.3 i-Cell
 - 5.2.4 ICOM
 - 5.2.5 Kontron Transportation (Kontron S&T)
 - 5.2.6 Nettropolis
 - 5.2.7 PSI Transcom
 - 5.2.8 R&G
 - 5.2.9 Radcom
 - 5.2.10 Reach Now (Your Now)
- 5.2.11 Ridango
- 5.2.12 Scheidt & Bachmann
- 5.2.13 Tri Star Group

- 5.2.14 UTI
- 5.3 France, Benelux and the UK

- 5.3.1 Actia
- 5.3.2 Comatis
- 5.3.3 Flowbird Group
- 5.3.4 GreenRoad
- 5.3.5 Hanover Displays
- 5.3.6 Journeo
- 5.3.7 Lumiplan
- 5.3.8 Maestronic
- 5.3.9 Masabi
- 5.3.10 MiX Telematics
- 5.3.11 Omnibus
- 5.3.12 RATP Smart Systems
- 5.3.13 Simpliciti
- 5.3.14 Ticketer
- 5.3.15 Vix Technology
- 5.4 The Mediterranean
 - 5.4.1 Efacec
 - 5.4.2 GMV
 - 5.4.3 Goal Systems
 - 5.4.4 Grupo ETRA
 - 5.4.5 Indra
 - 5.4.6 Leonardo
 - 5.4.7 Link Technologies
 - 5.4.8 Metatronix (Digigroup Informatica)
 - 5.4.9 PluService
 - 5.4.10 Swarco
 - 5.4.11 Tecmic
- 5.5 The Nordics
 - 5.5.1 Consat Telematics
 - 5.5.2 FARA (Ticketer)
 - 5.5.3 Hogia
 - 5.5.4 Icomera (ENGIE Ineo)
 - 5.5.5 Pilotfish
 - 5.5.6 Sagasystem
 - 5.5.7 Telia Company
 - 5.5.8 Thoreb
 - 5.5.9 Traffilog
 - 5.5.10 TriNorth Solutions
 - 5.5.11 Trivector System
 - 5.5.12 Vehco
- 5.6 North America
 - 5.6.1 Accenture
 - 5.6.2 Avail Technologies
 - 5.6.3 Clever Devices
 - 5.6.4 Connexionz
 - 5.6.5 Cubic Transportation Systems
 - 5.6.6 Ecolane
 - 5.6.7 Ford Smart Mobility
 - 5.6.8 ISR Transit
 - 5.6.9 Luminator Technology Group
 - 5.6.10 Moovit
 - 5.6.11 Routematch
 - 5.6.12 Swifty
 - 5.6.13 Synovia Solution
 - 5.6.14 Zonar Systems (Continental)

Glossary

About the Authors



Adam Björkman is an IoT Analyst with a Master's degree in Economics from the School of Business, Economics and Law in Gothenburg. He joined Berg Insight in 2019 and his areas of expertise include ITS in public transport.

Levi Östling is an IoT Analyst with a Master's degree in Innovation and Industrial Management from the School of Business, Economics and Law at the University of Gothenburg. He joined Berg Insight in 2018 and his areas

of expertise include smart metering, ITS in public transport and smart cities.

Berg Insight offers premier business intelligence to the telecom industry. We produce concise reports providing key facts and strategic insights about pivotal developments in our focus areas. Berg Insight also offers detailed market forecast databases and advisory services. Our vision is to be the most valuable source of intelligence for our customers.

Who should buy this report?	Related products
<p>Public Transport ITS in Europe and North America is the foremost source of information about this market. Whether you are an ITS and telematics vendor, vehicle manufacturer, telecom operator, investor, consultant, or government agency, you will gain valuable insights from our in-depth research.</p>	<ul style="list-style-type: none"> ■ Fleet Management in Europe ■ Fleet Management in the Americas ■ Smart Cities: Connected Public Spaces ■ The Global Commercial Building Automation Market

© Berg Insight AB - No. 222

Order form — TO RECEIVE YOUR COPY OF PUBLIC TRANSPORT ITS IN EUROPE AND NORTH AMERICA

You can place your order in the following alternative ways:

1. Place your order online in our web shop at www.berginsight.com
2. Mail this order sheet to us at: Berg Insight AB, Viktoriagatan 3, 411 25 Gothenburg, Sweden
3. Email your order to: info@berginsight.com
4. Phone us at +46 31 711 30 91

Choose type of format

- Paper copy 1000 EUR
- PDF 1-5 user license 1500 EUR
- PDF corporate license 3000 EUR

Family/Surname	Forename	Position	Company
Address		Country	Postcode
Telephone		Email	

VAT is chargeable on all orders from Sweden. Orders from all other countries in the European Union must include the buyer's VAT Registration number below in order to avoid the addition of VAT.

Your PO number	Your VAT/TVA/IVA/BTW/MWST number
----------------	----------------------------------

Please charge my credit card

- VISA Mastercard

Card number	Expiry date (MM/YY)	CV code
Cardholder's name	Signature	
Billing address		
Postcode	Country	

- We enclose our cheque payable to Berg Insight AB
- Please invoice me

Signature	Date
-----------	------

Reports will be dispatched once full payment has been received. For any enquiries regarding this, please contact us. Payment may be made by credit card, cheque made payable to Berg Insight AB, Viktoriagatan 3, 411 25 Gothenburg, Sweden or by direct bank transfer to Skandinaviska Enskilda Banken, 106 40 Stockholm, Sweden.

Account Holder: Berg Insight AB
 Account number: 5011 10 402 80
 BIC/SWIFT: ESSESESS
 IBAN: SE92 5000 0000 0501 1104 0280

