

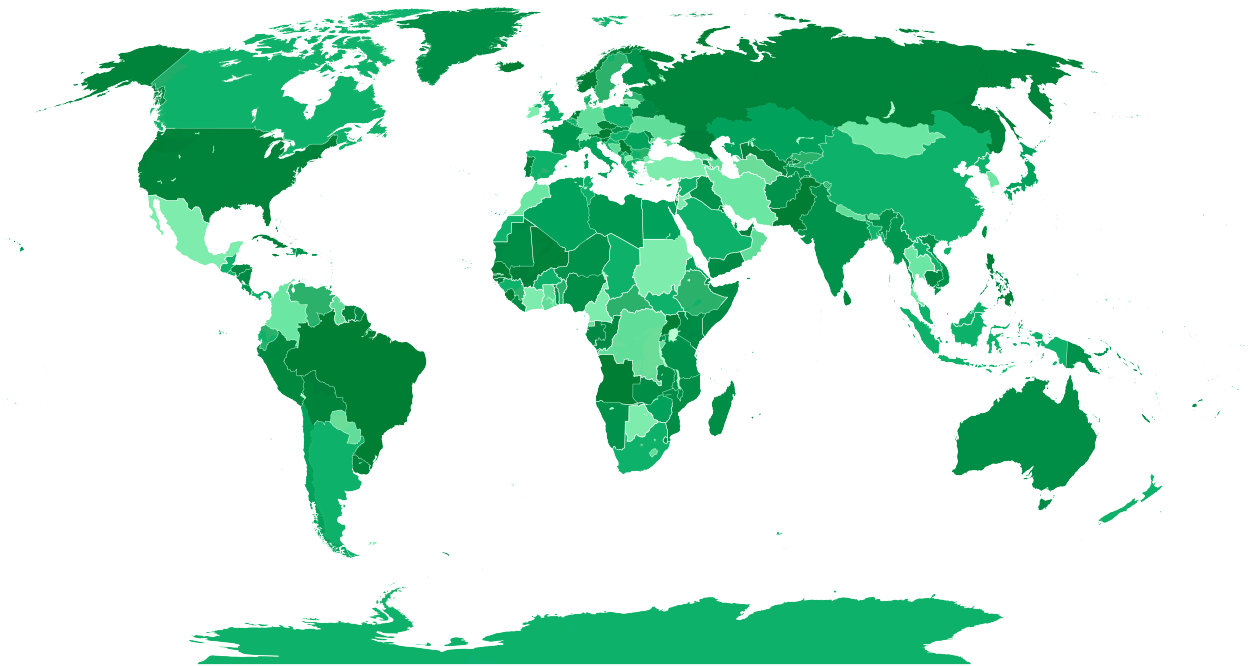


TOLLING. MOVING SMARTER.

# GLOBAL TOLLING & MOBILITY NEWSLETTER

A SCAN OF TOLLING & MOBILITY DEVELOPMENT AROUND THE GLOBE

SPRING 2017



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*Main Sources: IBTTA and IBTTA SmartBrief, ASECAP, World Highways, Traffic Technology Today, ITS America, Ertico – ITS Europe, Handelsblatt.com.*

## ABOUT IBTTA

The International Bridge, Tunnel and Turnpike Association (IBTTA) is the worldwide association for the owners and operators of toll facilities and the businesses that serve them. Founded in 1932, IBTTA has members in 20 countries on six continents. Through advocacy, thought leadership and education, members are implementing state-of-the-art, innovative user-based transportation financing solutions to address the critical infrastructure challenges of the 21<sup>st</sup> Century.

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## INTRODUCTION / EXECUTIVE SUMMARY

This IBTTA Newsletter comes with two innovations. First, we extended the title to “Global Tolling & Mobility Newsletter” as far more issues than tolling are covered. Second, we tried to make it easier for you to find relevant highlights and re-structured the newsletter. We introduced the following thematic chapters in which the most important highlights from all over the world are recapped:

1) Moving Smarter, 2) Tolling and Interoperability, 3) Technology, 4) Finance and Funding and 5) Policy and Legislation. Finally, the most important events for our industry in 2017 are summarized.

Four major highlights in this edition are: First, automatization is a very popular and intensely discussed topic, not only in highly developed regions like America, Oceania and Europe but also in Africa where transport development is lagging. Second e-mobility and alternative propulsion system innovations are upcoming topics. The third key issue are the success stories of tolling, like “EasyGo” in Europe and the alternative “thank you-fee” road toll in Africa. The last highlighted issue is the increasing need and success of start-ups to improve safety.

Looking closer to the topic of **Moving Smarter**, there are several different highlights. In Africa, the Council of Scientific and Industrial Research is conducting a technology assessment and driver experience on electric vehicles. Focusing on Asia and Oceania, New Zealand has launched an on-road research trial of a fully autonomous Smart Shuttle at Christchurch Airport. Australia has tested the drowsiness of drivers with special glasses which track eye movements. In Europe, the UK government has awarded US\$4.9 million in funding for technology and the European Commission launched the winners of the European Mobility Award 2016 and the Sustainable Urban Mobility Planning Award at the end of March 2017 (winners: Malmö and Brussels). Looking across the Atlantic Ocean, North America opens reversible express lanes at Interstate 75 and ITS America has released its public roadmap, providing policy recommendations. The development in mobile technology is also transforming the local transport in Brazil, South America.

**Tolling and Interoperability:** In Africa, the price hikes of toll road and e-toll, as well as the “thank-you fee” which motorists pay to pothole entrepreneurs are highlighted. In Asia, the Vietnamese have protested against high tolls by obstructing toll stations. In Australia, there is a new bid for toll roads – Transurban’s dominance over Australian toll roads is challenged by the private company Netflow. In Europe, the EasyGo system has its tenth operational anniversary and the German company Vitronic developed a gantry-less free flow tolling system, installed at the side of the road. Furthermore, in North America the Pennsylvania Turnpike Commission and The Port Authority of New York and New Jersey has introduced cashless tolling systems. In South America licenses will soon expire on three tolled highways and therefore the country plans to auction it off.

**Technology** has become indispensable in today’s transportation sector. The main focus of technology is automation. In Africa, the invention of self-driving cars is splitting the society’s opinion. The automotive industry is influenced by new rapidly growing technological advancements and is disrupting the traditions. Having a look on new technologies in Asia

and Oceania, the Far Eastern Electronic Toll Collection Company (FETC) has developed a new intelligent highway toll collection technology for Taiwan. In Melbourne, the Transurban Company plots a driverless future by applying vital learnings from the financial services, insurance and telecom sectors. In Europe, Germany's federal government has approved a draft allowing autonomous cars to be driven on German streets.

**Funding and Financing:** Several projects, for example highway constructions in Jamaica, bridge replacement in Venezuela, managed lanes in North America etc. are only feasible through funding and co-financing. In the European Country Slovakia revisions to a bypass project will help to reduce construction costs whereas in Montenegro the highway budget will be revealed. Another milestone in Funding and Financing are the new infrastructure plans of America's new president Trump.

The **Policy and Legislation** topic is mainly about road toll and road toll systems concerning the increase of tolls or a discrepancy between costs and values. In Africa, a dirty fuel memorandum may open doors to electric vehicles. In Oceania and North America increasing fee plans caused displeasure and in Europe, especially in Germany the implementation of a new toll system has received media attention.

# MOVING SMARTER

## AFRICA

### **SOUTH AFRICA READY FOR ELECTRIC CARS?**

[www.sabc.co.za/news/a/041e80804029daf99ba6fbf8e0b8bbd7/SA-not-ready-for-electric-cars:-Expert--20170222](http://www.sabc.co.za/news/a/041e80804029daf99ba6fbf8e0b8bbd7/SA-not-ready-for-electric-cars:-Expert--20170222)

Demand Response and Energy Efficiency Program Manager at the Council of Scientific and Industrial Research (CSIR), Dr. Peter Mukoma, says South Africa is not ready for an onslaught of electric cars from the infrastructure point of view.

The CSIR is currently conducting a technology assessment and driver experience on electric vehicles. Ten vehicles have been bought, which includes the four BMWi3s and six Nissan Leafs and has been incorporated into the CSIR vehicle fleet for use by the employees.

### **UGANDAN START-UP RIDE-SHARING APP AIMS TO IMPROVE ROAD SAFETY**

[www.itsinternational.com/sections/general/news/ugandan-start-up-ride-sharing-app-aims-to-improve-road-safety/](http://www.itsinternational.com/sections/general/news/ugandan-start-up-ride-sharing-app-aims-to-improve-road-safety/)

Ugandan start-up SafeBoda has launched a ride sharing app, which it claims offers 20,000 Boda rides per day.

Bodas are a common form of motorcycle taxi, providing a popular mode of transport in Uganda and Kenya where the transit infrastructure is less developed. Cheap and efficient, they are able to move around the traffic congestion. However, with little or no formal training required, many accidents and deaths are caused by unsafe Boda drivers.

## ASIA AND OCEANIA

### **NEW ZEALAND AIRPORT TO TRIAL AUTONOMOUS SHUTTLE**

<http://www.itsinternational.com/categories/location-based-systems/news/new-zealand-airport-to-trial-autonomous-shuttle/>

New Zealand's first on-road research trial of autonomous vehicles has been launched at Christchurch Airport, with the arrival of a fully autonomous Smart Shuttle which will begin testing in March.

Christchurch International Airport has partnered with the country's intelligent transport system (ITS) supplier, HMI Technologies for the trial, which will use a French manufactured NAVYA ARMA autonomous shuttle vehicle operating on private roads of the Christchurch International Airport campus. The Smart Shuttle will carry 15 people, has no steering wheel and is electric powered.

### **DRIVING DROWSY TEST BEING DEVELOPED**

[www.worldhighways.com/sections/general/news/driving-drowsy-test-being-developed/](http://www.worldhighways.com/sections/general/news/driving-drowsy-test-being-developed/)

Researchers in Australia are developing a roadside test that can determine whether drivers are too drowsy to be behind the wheel. The system uses special glasses that track eye movements and measure the length of blinks, which are factors thought to identify whether a person is fatigued. The system is being developed as research suggests up to 20 percent of Australians have fallen asleep while at the wheel and 33 percent drive while tired once a month or more.

## EUROPE

### UK GOVERNMENT AWARDS FUNDING FOR TRANSPORT TECHNOLOGY PROJECTS

[www.itsinternational.com/categories/parking-access-control/news/uk-government-awards-funding-for-transport-technology-projects/](http://www.itsinternational.com/categories/parking-access-control/news/uk-government-awards-funding-for-transport-technology-projects/)

The UK government has awarded funding of US\$4.9 million (£4 million) for technology projects that will cut congestion, speed up journeys and clean up the environment.

Nineteen councils across England will receive between US\$62,000 (£50,000) US\$374,000 (£300,000) each for their ideas to improve journeys through digital innovation.

The government money will be spent on developing cutting edge technology such as apps and sensors which can be used to cut congestion, improve parking in city centers and alert drivers when electric car charging points become available.

### EUROPEAN COMMISSION REVEALS SUSTAINABLE MOBILITY CITY CHAMPIONS

[www.itsinternational.com/categories/utc/news/european-commission-reveals-sustainable-mobility-city-champions/](http://www.itsinternational.com/categories/utc/news/european-commission-reveals-sustainable-mobility-city-champions/)

The European Commission has revealed the finalists of the European Mobility Week Award 2016 and fifth Sustainable Urban Mobility Planning (SUMP) Award on urban freight. The winners of the two awards were announced by Violeta Bulc, European Commissioner for Transport and by Daniel Calleja, Director General of DG Environment during an award ceremony held in Brussels on March 20, 2017.

Read more about the winners on:

<https://european-mobility-week.prezly.com/s/3cd7b17fd2fe232ca82681bfb3e68f00b0107bda#>

## NORTH AMERICA

### ATLANTA'S REVERSIBLE EXPRESS LANES PROJECT OPENS

[www.itsinternational.com/categories/charging-tolling/news/atlantas-reversible-express-lanes-project-opens/](http://www.itsinternational.com/categories/charging-tolling/news/atlantas-reversible-express-lanes-project-opens/)

The I-75 South Metro reversible express lane project In Atlanta, Georgia, US, are now open along almost 21km between Highway 138 and Highway 155 on the new double-lane addition to the I-75 median. The lanes will carry traffic northbound toward downtown Atlanta during the morning rush hour and southbound during midday and peak afternoon and evening traffic.

Parsons prepared conceptual design reports for the project, including lane configuration and access studies, as well as the environmental document. The Georgia Department of Transportation's (GDOT's) NaviGator software, a rebranded version of Parsons' Intelligent NETWORKS advanced transportation management system, will monitor the express lanes. In addition, Parsons' Intelligent NETWORKS has been installed at the State Roadway and Tolling Authority (SRTA) to display current toll rates on changeable message signs.

### ITS AMERICA UNVEILS FUTURE ITS ROADMAP

[www.itsinternational.com/sections/nafta/news/its-america-unveils-future-its-roadmap/](http://www.itsinternational.com/sections/nafta/news/its-america-unveils-future-its-roadmap/)

The Intelligent Transportation Society of America (ITS America) has released its public policy roadmap, *The Road Ahead: The Next Generation of Mobility*, providing policy recommendations on how to advance the research and deployment of transformational and intelligent transportation technologies.

In particular, the roadmap provides recommendations on the policy issues shaping the next generation of transportation driven by robotics, automation, artificial intelligence, wireless communications and cloud computing. Issues include cyber-security/privacy, looking for new and long-term funding and financing options around much needed transportation investment, issues around easing the transition to automated and connected vehicles, increasing integration of technologies that improve the operational life and efficiency of road networks and energizing new business models of passenger and freight mobility.

## SOUTH AMERICA

### HOW MOBILE TECHNOLOGY IS TRANSFORMING LOCAL TRANSPORT IN BRAZIL

[www.information-age.com/mobile-technology-transforming-local-transport-brazil-123464794/](http://www.information-age.com/mobile-technology-transforming-local-transport-brazil-123464794/)

Belo Horizonte is one of Brazil's largest cities, with a population of over two million. Bus travel is, along with personal transportation, one of the most common forms of travel.

BHTrans wanted to make an informed decision on how to react to and manage the capacity on the network in the short run. Mobile ticket provider Corethree responded to this, proposing a solution to BHTrans involving the use of iBeacons and mobile technology to capture data around congestion. This data is then sent back to update an established operations center on overcrowded areas by plotting the amalgamated data on a map. If the same areas repeatedly suffer from congestion, BHTrans can adjust the number of buses on the route and fix the issue.

### ELECTRIC VEHICLES VS. BIOFUELS

[www.ecowatch.com/electric-vehicles-vs-biofuels-2180416677.html](http://www.ecowatch.com/electric-vehicles-vs-biofuels-2180416677.html)

By 2040, the number of electric cars in the world could reach 150 million, or even, if more ambitious targets for emissions reductions are adopted, 715 million. So, said the International Energy Agency. Not only would this mean a drastic reduction in the demand for oil, it could also mean a drastic reduction in the demand for biofuels such as ethanol.

But the biofuel industry is not giving up without a fight. At the recent UN climate talks in Morocco, a consortium of 20 countries launched Biofuture, a platform designed to encourage the use of low-carbon biofuels, including the second generation of sugarcane cellulose-based biofuel. Brazil, the world's second largest producer of both ethanol and biodiesel (the U.S. is the largest) is leading the initiative.

## TOLLING AND INTEROPERABILITY

### AFRICA

#### SANRAL HIKES TOLL ROAD AND E-TOLL PRICES IN SOUTH AFRICA

<https://mybroadband.co.za/news/motoring/201586-sanral-hikes-toll-road-and-e-toll-prices-in-south-africa.html>

Sanral has increased toll rates on South African roads, according to a statement by the AA (Automobile Association). The adjusted toll rates came into effect on March 3, 2017, with select Sanral customers receiving the notification via email. The AA said Sanral did not adequately communicate the price increases to customers. "We warned last year that Sanral must try and win support from the public, but it seems its attitude to motorists remains arrogant and uncaring," said the AA. The increases cover tolls across South Africa, including the Gauteng Freeway Improvement Project.



**MOTORISTS PAY FEES TO ZIMBABWE'S POTHOLE ENTREPRENEURS**

[www.dailymaverick.co.za/article/2017-03-07-groundup-motorists-pay-toll-fees-to-zimbabwes-pothole-entrepreneurs/](http://www.dailymaverick.co.za/article/2017-03-07-groundup-motorists-pay-toll-fees-to-zimbabwes-pothole-entrepreneurs/) - .W051XIPyuM1

Potholes are a common and serious hazard on Zimbabwe's roads. But jobless youths have seized on the problem as an opportunity. They fill the potholes with rocks, broken bricks and soil, and ask motorists to pay a "thank you fee." "We thought – let's occupy the potholes and charge motorists a dollar each time they drive through," says John Gava, 25, one of dozens of young men who make a dubious business out of fixing potholes in Harare.

**ASIA AND OCEANIA****VIETNAM: PEOPLE OBSTRUCT TOLL STATION TO PROTEST 'HIGH' TOLLS**

<http://vietnamnews.vn/society/372765/people-obstruct-toll-station-to-protest-high-tolls.html> - CpTV63EkWbrs16jX.97

Residents in Tam Nông District used about 20 vehicles to block a Build-Operate-Transfer (BOT) toll station in the area to protest what they call unreasonably high tolls.

The Tam Nông toll station is located at km67+300 on National Route 32 that passes Tam Nông District in northern Phú Thọ Province. It aims to collect toll fees to pay for the BOT project to build a part of the Hồ Chí Minh Road and upgrade a section of National Route 32.

**NEW BID FOR AUSTRALIAN TOLL ROADS: CINTRA, PLENARY TEAM UP TO TAKE ON TRANSURBAN WITH NEW OZ ROAD COMPANY NETFLOW**

[www.afr.com/brand/business-summit/cintra-plenary-team-up-to-take-on-transurban-with-new-oz-road-company-netflow-20170213-guc8iz](http://www.afr.com/brand/business-summit/cintra-plenary-team-up-to-take-on-transurban-with-new-oz-road-company-netflow-20170213-guc8iz)

Transurban's dominance over Australian toll roads is being challenged by Spain's Cintra and infrastructure investor Plenary, which have created a private company, Netflow, to bid for new road projects including Sydney's \$16.8 billion WestConnex motorway.

Plenary chief executive Paul Oppenheim said the "shallow pool of competition" for Australian toll roads created opportunities for Netflow. "Whenever we talk to governments around the country there is no question that they would like to see more competition in the concession part of the market," Mr. Oppenheim told *The Australian Financial Review*.

Transurban already owns or operates most of Australia's existing toll roads, and is planning to bid for the rights to operate WestConnex, which will connect into its Sydney road network.

**EUROPE****EASYGO: A DECADE OF TOLL COLLECTION ACROSS EUROPE**

[www.asecap.com/images/News/PDF/EasyGo10yearspressrelease1march2017.pdf](http://www.asecap.com/images/News/PDF/EasyGo10yearspressrelease1march2017.pdf)

Twenty-four million transactions have been conducted in the 10 years EasyGo has been in existence. EasyGo is keen to recruit new partners and expects more countries to join the partnership in the years ahead. Throughout Scandinavia and across Austria drivers can use the same payment device for toll roads, bridges etc. The system that makes it all possible is known as EasyGo, a joint venture between toll collectors in Denmark, Norway, Sweden and Austria. On March 1, EasyGo will have been in operation for 10 years.

## VITRONIC DEVELOPS GANTRY-LESS FREE-FLOW TOLLING

[www.itsinternational.com/categories/charging-tolling/news/vitronic-develops-gantry-less-free-flow-tolling/](http://www.itsinternational.com/categories/charging-tolling/news/vitronic-develops-gantry-less-free-flow-tolling/)

German tolling and machine vision specialist Vitronic has developed a technology for free-flow toll collection and enforcement that uses an optical identification and classification method installed at the side of the road and does not rely on gantry infrastructure.

For easy installation, the new system is integrated in Vitronic's City Design housing, which contains the complete sensor array and processing technology including vehicle-to-infrastructure communication-based on EETS compatible DSRC or on RFID. Additional features include an electronic two-way locking system, video surveillance vandalism protection and a 4G-ready wireless connection and the system is compatible with Vitronic's Tollchecker 4 enforcement back office software.

## NORTH AMERICA

### THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY INTRODUCES ITS FIRST AET SYSTEM ON NEW BAYONNE BRIDGE

[www.trafficechnologytoday.com/news.php?NewsID=84007](http://www.trafficechnologytoday.com/news.php?NewsID=84007)

The Port Authority of New York and New Jersey (PANYNJ) has ushered in a new era with the 85-year-old Bayonne Bridge becoming its first all-cashless tolling facility.

The introduction of all-electronic tolling (AET) on the bridge's new elevated roadway went 'live' on February 20, 2017, and is part of the Port Authority's 'Raise the Roadway' initiative to provide navigational clearance for the larger container vessels now using the expanded Panama Canal, which are expected to arrive at all agency port facilities later this year.

The Bayonne Bridge is the fifth-longest steel arch bridge in the world, and was the longest in the world at the time of its completion in 1931. The bridge spans the 'Kill Van Kull,' a tidal strait between Staten Island, New York, and Bayonne, New Jersey, which is one of the most heavily travelled waterways in the Port of New York and New Jersey.

### CASHLESS TOLLING TESTED ON I-376 ON PENNSYLVANIA TURNPIKE

<http://wytv.com/2017/03/13/cashless-tolling-tested-on-i-376-on-pa-turnpike/>

With cashless tolling, all drivers will either use an E-ZPass or a toll by license plate system.

The Pennsylvania Turnpike Commission will introduce cashless tolling in April on the I-376 Beaver Valley Expressway (Toll 376), in Beaver and Lawrence counties.

The Pennsylvania Turnpike Commission has provided a fact sheet on what to do when you reach this point and a map of the Beaver Valley Expressway. This is the second location selected to test a cashless tolling system.

## SOUTH AMERICA

### BRAZIL HOPES TO LOWER TOLL RATES VIA ROAD AUCTION

[www.reuters.com/article/brazil-auction-infrastructure-idUSL2N1GK1Y7](http://www.reuters.com/article/brazil-auction-infrastructure-idUSL2N1GK1Y7)

Licenses will soon expire on three tolled highways in Brazil, and the country plans to auction off the rights to the roads. The current concessionaires will be allowed to bid in the auction, which officials hope will bring in \$14.43 billion, and the government would like to see lower toll rates.

# TECHNOLOGY

## AFRICA

### THIRTY-NINE PERCENT OF SOUTH AFRICANS INTERESTED IN SELF-DRIVING CARS

[www.engineeringnews.co.za/article/39-of-south-africans-interested-in-self-driving-cars-deloitte-2017-03-14](http://www.engineeringnews.co.za/article/39-of-south-africans-interested-in-self-driving-cars-deloitte-2017-03-14)

South Africans are divided on who they trust the most to bring self-driving technology to market, with half of consumers preferring tech companies and the other half choosing traditional car manufacturers, reveals the Deloitte Global Automotive Consumer Study, released in South Africa. “This is an interesting finding as a new ecosystem takes shape,” says Deloitte Africa Automotive chief of staff Adheesh Ori. The study also finds that 47 percent of South African consumers’ desire limited self-driving technology, with 39 percent interested in full self-driving vehicles.

### NEW ERA FOR AUTOMOTIVE INDUSTRY

[www.engineeringnews.co.za/article/new-era-for-automotive-industry-2017-02-10](http://www.engineeringnews.co.za/article/new-era-for-automotive-industry-2017-02-10)

The technology, media and telecommunications (TMT) sector is rapidly disrupting traditional ways of making and selling products across all sectors, including in the automotive industry, where technological advancement is radically influencing the way in which vehicles are manufactured and sold as well as the technology that is built-in, says advisory firm Deloitte Africa automotive leader Karthi Pillay.

## ASIA AND OCEANIA

### FETC INNOVATION FROM HIGHWAY TOLL TO ITS TAIWAN SMART CITY

[www.worldhighways.com/sections/irf/features/fetc-innovation-from-highway-toll-to-its-taiwan-smart-city/](http://www.worldhighways.com/sections/irf/features/fetc-innovation-from-highway-toll-to-its-taiwan-smart-city/)

Intelligent highway toll collection technology developed for Taiwan offers potential for export across Europe and Asia. The Far Eastern Electronic Toll Collection Company (FETC) has a bold vision for the future. FETC has achieved the most successful BOT project for ITS traffic management; it turns the traditional highway toll collection system into an integrated intelligent electronic toll collection (ETC) system for mobility management.

### TRANSURBAN PLOTS DRIVERLESS FUTURE

[www.theaustralian.com.au/business/companies/transurban-plots-driverless-future-on-digitised-road-network/news-story/7c1318f23adadb838dfd358b1ffefec8](http://www.theaustralian.com.au/business/companies/transurban-plots-driverless-future-on-digitised-road-network/news-story/7c1318f23adadb838dfd358b1ffefec8)

The transport sector can apply vital learnings from the financial services, insurance and telecoms sectors as it pursues the holy grail of digitizing the nation’s major road networks to cut travel times and revolutionize the experience for drivers, according to Transurban.

The toll-road giant is partnering with Audi and Range Rover in the US to enhance the interaction between the roadway and autonomous vehicles, ahead of piloting the latest autonomous vehicle technology — its flagship CityLink toll road in Melbourne.

## EUROPE

### DRAFT LAW ENABLES AUTONOMOUS DRIVING IN GERMANY

[www.itsinternational.com/categories/location-based-systems/news/draft-law-enables-autonomous-driving-in-germany/](http://www.itsinternational.com/categories/location-based-systems/news/draft-law-enables-autonomous-driving-in-germany/)

Germany's federal government has approved a draft law allowing for autonomous cars to be driven on German streets, says Germany Trade & Invest, the federal economic development agency. Crucially within the law, responsibility for mishaps continued to rest firmly in the hands of the driver, but allows for the driver to hand control the vehicle to its own control system in certain situations and for certain periods of time. The draft law also stipulates that the driver must be able to instantly override or deactivate the system at any time.

### ERTICO-ITS EUROPE LAUNCHES AUTOPILOT AUTOMATED DRIVING PROJECT

[www.traffictoday.com/news.php?NewsID=83849](http://www.traffictoday.com/news.php?NewsID=83849)

A new European Union-funded project has been unveiled in France, which aims to enable safer highly automated driving by making use of smart and connected objects and the Internet of Things (IoT). Over 100 stakeholders met in Versailles, France, for the public launch of the new European Autopilot project, with the audience representing a variety of mobility stakeholders, including public authorities, industry, service providers, users and research institutes. Financed by the European Union's (EU) Horizon 2020 research and innovation program, the Autopilot project will see IoT-enabled automated vehicles deployed at six pilot tests sites in France, Finland, Korea, Spain, Italy and the Netherlands. The pilot sites will generate data to evaluate the technical performance of the IoT to allow safer highly automated driving, as well as to assess the socio-economic impacts of the new technology.

## NORTH AMERICA

### TEXAS ALLIANCE DESIGNATED AS A US DOT AUTOMATED VEHICLE PROVING GROUND

[www.itsinternational.com/categories/utc/news/texas-alliance-designated-as-us-dot-automated-vehicle-proving-ground/](http://www.itsinternational.com/categories/utc/news/texas-alliance-designated-as-us-dot-automated-vehicle-proving-ground/)

The Texas Automated Vehicle (AV) Proving Ground is one of ten sites designated as an automated vehicle proving ground. Formed by an alliance that includes the Southwest Research Institute (SwRI), the Texas Department of Transportation (TxDOT) and Texas A&M Transportation Institute (TTI), other members are the University of Texas at Austin's Center for Transportation Research (CTR) and 32 municipal and regional partners.

### INTEL BUYS MOBILEYE IN \$15.3 BILLION BID TO LEAD SELF-DRIVING CAR MARKET

[www.nytimes.com/2017/03/13/business/dealbook/intel-mobileye-autonomous-cars-israel.html?\\_r=0](http://www.nytimes.com/2017/03/13/business/dealbook/intel-mobileye-autonomous-cars-israel.html?_r=0)

In the world of driverless cars, household names like Google and Uber have raced ahead of rivals, building test vehicles and starting trials on city streets.

But when it comes to what is under the hood, an array of lesser-known companies will most likely supply the technology required to bring driverless cars to the masses. And in a \$15.3 billion deal, Intel moved to corner the market on how much of that technology is developed.

# FINANCE AND FUNDING

## AFRICA

### UGANDA TOLL ROAD SECURES FUNDING

[www.itsinternational.com/categories/charging-tolling/news/uganda-toll-road-secures-funding/](http://www.itsinternational.com/categories/charging-tolling/news/uganda-toll-road-secures-funding/)

The European Union, International Finance Corporation, France's AFD and African Development Bank have committed to funding of up to US\$400 million for the US\$1.1-billion project to construct the 77-kilometer tolled highway in Uganda, according to *Engineering News-Record*. The private sector will provide an additional US\$300 million.

The road will link the capital Kampala to the industrial eastern city of Jinja and is designed to speed up freight flow to landlocked Rwanda, eastern Democratic Republic of Congo and Burundi from Mombasa port in Kenya.

### FOUR ANGOLA ROAD CONTRACTS AWARDED

[www.worldhighways.com/categories/road-highway-structures/news/four-angola-road-contracts-awarded/](http://www.worldhighways.com/categories/road-highway-structures/news/four-angola-road-contracts-awarded/)

Four road construction and repair contracts have been awarded in Angola by its road agency, Instituto Nacional de Estradas de Angola (INEA). The projects are all being carried out in the area around capital Luanda. The largest project will be carried out by Mota Engil. This is a \$192 million package of works to upgrade the Via Expressa/Camama/Avenida Pedro de Castro Van-Dúnem Loy route. Portuguese contractor Telhabel Construcoes will carry out the \$79.72 million project to improve access in the Boavista district, as well as to the port of Luanda. The firm will also carry out work on the Sonils road and will handle bridge improvements for the structure spanning the Soroca River. Meanwhile Portuguese company Omatapalo Engenharia e Construção is carrying out \$13.14 million contract to build the Sonils/Via Expressa/Kifangondo road.

## ASIA AND OCEANIA

### NEPAL ROAD TRANSPORT PLAN FINDS FUNDING

[www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/nepal-road-transport-plan-finds-funding/](http://www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/nepal-road-transport-plan-finds-funding/)

Nepal's Kathmandu-Tarai highway now looks likely to be built under an engineering, procurement and construction (EPC) contract. This is a revision from the build-own-operate-transfer (BOOT) model previously suggested. Nepal's Ministry of Physical Infrastructure and Transport has announced the change for the project, which had an estimated cost of US\$1.04 billion when put forward in 2015. The detailed project report (DPR) for the highway is likely to be set out by consortium, from India. The Nepalese Government has been evaluating options over the project. The DPR will be used as a reference document for the EPC tender and the winning contractor will then carry out a detailed engineering report to determine the cost of the work. Meanwhile, a loan worth US\$536.8 million is being provided by India for work to Nepal's road and bridge links.

### PAKISTAN HIGHWAY PROJECT COMMENCING

[www.worldhighways.com/categories/road-highway-structures/news/pakistan-highway-project-commencing/](http://www.worldhighways.com/categories/road-highway-structures/news/pakistan-highway-project-commencing/)

Construction work is due to commence on Pakistan's Hyderabad-Sukkur Motorway. The route will connect Sukkur and Hyderabad and will be 296km in length. This new stretch is costing US\$1.53 billion and will form part of the Peshawar-Karachi Motorway (PKM). The plans call for the project to be carried out under the build-operate-transfer (BOT) model, although the details have yet to be finalized.

## EUROPE

### SLOVAKIA BYPASS COST REDUCTION

[www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/slovakia-bypass-cost-reduction/](http://www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/slovakia-bypass-cost-reduction/)

Revisions to a bypass project in Slovakia will help reduce the construction costs. The Prešov bypass is now being built with just two lanes, which will cut the construction costs by some €200 million. The project was initially expected to cost as much as €900 million and was criticized for its expense. Further plans for a tunnel at the northern end of the bypass are being discussed at present. Meanwhile, revisions to the traffic system in Prešov are expected to bring further savings to the construction project.

### MONTENEGRO HIGHWAY BUDGET REVEALED

[www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/montenegro-highway-budget-revealed/](http://www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/montenegro-highway-budget-revealed/)

Chinese contractor China Roads and Bridges Company (CRBC) is spending €194 million to construct a key stretch of Montenegro's Bar-Boljare highway during 2017. The Exim Bank in China is providing a loan facility worth €889.3 million to Montenegro's Government to pay for the project. The loan is being provided over a 20-year period. This key stretch of the Bar-Boljare highway is 40km long and presents many technical challenges as it is one of the most complex sections of the route. This stretch will include 13 bridges, 16 tunnels, four interchanges and five viaducts.

## NORTH AMERICA

### FITCH: SMOOTH RIDE SO FAR FOR US MANAGED LANES

[www.itsinternational.com/categories/charging-tolling/news/fitch-smooth-ride-so-far-for-us-managed-lanes/](http://www.itsinternational.com/categories/charging-tolling/news/fitch-smooth-ride-so-far-for-us-managed-lanes/)

Actual performance is so far exceeding Fitch's rating case for the sector as a whole, with 95 Express in Northern Virginia and NTE (segments 1 and 2) in Texas proving to be notable examples. Also, boosting long-term prospects for managed lanes is the performance on the longest operating facility, SR-91 in Orange County, California. This state road is seeing strong compound annual growth rate (CAGR) post initial ramp-up despite numerous adverse developments.

### SENATE PANEL CONSIDERS HOW TO FUND TRUMP'S \$1T INFRASTRUCTURE PACKAGE

<http://thehill.com/policy/transportation/322977-senate-explores-ways-to-fund-trumps-1t-infrastructure-package>

Senators began exploring ways to pay for President Trump's \$1 trillion infrastructure package, taking up the biggest question hanging over his ambitious plans. Panelists and lawmakers at a Senate Appropriations subcommittee hearing seemed to agree that it's going to take a wide variety of funding tools to deliver on the kind of massive investments Trump has promised. "When I first heard the president's plan for a \$1 trillion infrastructure investment, I was extremely excited. But I started thinking about the financing, and the fact no one was really talking in specific terms," said Sen. Susan Collins (R-Maine), who chairs the subcommittee on transportation, housing and urban development.

## SOUTH AMERICA

### VENEZUELA BRIDGE REPLACEMENT PROJECT ANNOUNCED

[www.worldhighways.com/categories/road-highway-structures/news/venezuela-bridge-replacement-project-announced/](http://www.worldhighways.com/categories/road-highway-structures/news/venezuela-bridge-replacement-project-announced/)

Work to replace the Guanape Bridge in Venezuela is now commencing. The existing structure collapsed on January 24, injuring eight people, but is too severely damaged to be rebuilt. The bridge was built in 2011 so its collapse has been the subject of some controversy. Building the new two lane structure will cost an estimated US\$312 million and should be complete by the middle of 2017.

**JAMAICA HIGHWAY PROJECT FUNDING FROM CHINA**

[www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/jamaica-highway-project-funding-from-china/](http://www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/jamaica-highway-project-funding-from-china/)

A loan from China will help pay for work on a major highway project in China. The US\$326 million loan is being supplied by the Exim Bank of China. This will help pay for Jamaica's Southern Coastal Highway Improvement Project. The funding will also help pay for the extension of the tolled east-west highway from May Pen, Clarendon to Williamsfield, Manchester. In all the highway work is expected to cost \$384 million, with Jamaica paying for the remainder from its own budget.

## POLICY AND LEGISLATION

### AFRICA

**DIRTY FUEL CONUNDRUM MAY OPEN DOOR TO ELECTRIC VEHICLES IN AFRICA**

[www.engineeringnews.co.za/article/dirty-fuel-conundrum-may-open-door-to-electric-vehicles-in-africa-2017-03-03](http://www.engineeringnews.co.za/article/dirty-fuel-conundrum-may-open-door-to-electric-vehicles-in-africa-2017-03-03)

South Africa is fifteen years behind the rest of the world in terms of legislation regulating the quality of fuel available at the pump, says National Association of Automobile Manufacturers of South Africa director Nico Vermeulen. He says new clean fuel legislation should have been in place in 2017, but will now only, most likely, become available "in 2021, 2022."

**COST, RATHER THAN VALUE, STILL DRIVING SA'S TRANSPORT INVESTMENTS**

[www.engineeringnews.co.za/article/transport-2017-01-13](http://www.engineeringnews.co.za/article/transport-2017-01-13)

South Africa's transport procurement system is often driven by cost, rather than value, says Intelligent Transport Society of South Africa (ITSSA) CEO Dr. Paul Vorster. "We tend to look for the lowest-cost supplier of services and equipment and not always the best value. The problem with this is that the lowest-cost solution may not necessarily be the best solution."

### ASIA AND OCEANIA

**INDIA: TOLL OPERATORS YET TO BE REIMBURSED FOR LOSS FROM DEMONETIZATION**

[www.livemint.com/Companies/X9092fCHaQeXZl5TI88dcP/Toll-operators-yet-to-be-reimbursed-for-loss-from-demonetisa.html](http://www.livemint.com/Companies/X9092fCHaQeXZl5TI88dcP/Toll-operators-yet-to-be-reimbursed-for-loss-from-demonetisa.html)

Indian toll-road operators, which had been ordered to exempt all vehicles from paying toll for nearly a month due to the cash crunch created by the demonetization drive, are yet to be reimbursed for their losses, senior executives at road companies said.

The National Highways Authority of India (NHAI) is in discussions to reimburse the toll-based operational road projects for the losses caused by the halt in toll collection during November and December, but there has been a delay in doing this which could strain the companies' cash flows, the executives said.

**TRUCKIES FIGHT MELBOURNE TOLL ROAD FEE HIKE**

<https://au.finance.yahoo.com/news/truckies-fight-melb-toll-road-040512533.html>

Higher tolls for trucks on Melbourne's CityLink will force heavy vehicles into suburban roads and drive up freight costs, transport giant Linfox says.

CityLink operator Transurban plans to slug trucks a daily rate of \$26.70 to use the road from April 1, up from \$11.85, to pay for the CityLink/Tulla widening project, which is not due to be finished until 2018. Linfox said it was considering diverting more trucks off the route and onto arterial roads to ease the burden on its bottom line. Roads Minister Luke Donnellan said toll increases were announced in 2014 before the project began and were agreed to by the previous coalition government.

## EUROPE

### GERMAN HIGHWAY TOLL SYSTEM BEING PLANNED

[www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/germany-highway-toll-system-being-planned/](http://www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/germany-highway-toll-system-being-planned/)

Germany is pushing ahead with its plan to charge tolls for use of its national Autobahn highway network. The plans have attracted a high degree of controversy as Germany's Autobahn system, the world's first national highway network, has been free for use by car drivers since its inception in the 1930s. Truck tolling was first introduced some years ago on the Autobahn system and this latest development is intended to generate additional revenue that can be used to maintain and develop the network. With both traffic volumes and the repair backlog growing on the Autobahn system, more income is required to pay for the work needed.

### FINLAND REVERSES ITS PLAN TO IMPOSE USER-PAY ROADS

[www.worldhighways.com/categories/traffic-focus-highway-management/news/finland-reverses-its-plan-to-impose-user-pay-roads/](http://www.worldhighways.com/categories/traffic-focus-highway-management/news/finland-reverses-its-plan-to-impose-user-pay-roads/)

The Finnish government has axed controversial plans to privatize the operation of a large number of major roads and turn them into user-pay infrastructure. But transport Minister Anne Berner also announced that the government would now keep a tax on new car sales. The tax was going to be scrapped as part of the move to make road users pay tolls.

Berner had recently announced that the government would put the operation of major highways under a new stand-alone agency that would engage the private sector to maintain roads and recoup their costs through user-pay tolling.

## NORTH AMERICA

### IBTTA, ITS AMERICA RESPOND TO TRUMP'S INFRASTRUCTURE PLANS

[www.itsinternational.com/categories/utc/news/ibtta-its-america-respond-to-trumps-infrastructure-plans/](http://www.itsinternational.com/categories/utc/news/ibtta-its-america-respond-to-trumps-infrastructure-plans/)

The International Bridge, Tunnel and Turnpike Association (IBTTA) and ITS America have both responded positively to President Donald Trump's address to Congress, where he outlined his administration's priorities, including repairing and rebuilding America's transportation infrastructure. Trump said he will ask lawmakers to approve legislation that would see a US\$1 trillion investment in infrastructure, funded by a mix of direct federal investment and private financing, according to *The Hill*. Patrick D. Jones, executive director and CEO of IBTTA, commented that the transportation community welcomed Trump's vision for rebuilding US highways, bridges and tunnels, saying both Congress and the Administration appear to have found common ground on the need to make additional transportation investments.

### CONFLICT IN TORONTO OVER NEW TOLL ROADS

[www.theglobeandmail.com/news/toronto/wynne-says-relationship-with-toronto-not-broken-over-tolls/article33826201/www.theglobeandmail.com/news/toronto/wynne-tory-road-tolls-toronto-dvp-gardiner-confirmed/article33791347/](http://www.theglobeandmail.com/news/toronto/wynne-says-relationship-with-toronto-not-broken-over-tolls/article33826201/www.theglobeandmail.com/news/toronto/wynne-tory-road-tolls-toronto-dvp-gardiner-confirmed/article33791347/)



Toronto Mayor John Tory says he is tired of being treated like “a little boy ... in short pants” by the province, slamming Ontario Premier Kathleen Wynne for vetoing his proposal to put tolls on two city highways. Although insisting to reporters that “I’m not angry today ... I’m frustrated,” Mr. Tory grew increasingly testy as a long media availability went on. He called the provincial government “paternalistic” and “short-sighted” and repeatedly criticized it for downloading costs and then denying the city the ability to raise money. Ms. Wynne’s decision to nix Toronto’s tolls on the Gardiner Expressway and the Don Valley Parkway was accompanied by a promise to increase the amount of gas-tax money going to all municipalities. The current two-cents-a-liter contribution would eventually be doubled to four cents, starting in 2019 – assuming Wynne’s Liberal party is re-elected.

## SOUTH AMERICA

### TROUBLES DEEPEN FOR CONTRACTOR ODEBRECHT

[www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/troubles-deepen-for-contractor-odebrecht/](http://www.worldhighways.com/categories/auctions-equipment-supply-servicing-finance/news/troubles-deepen-for-contractor-odebrecht/)

Brazilian contractor Odebrecht is facing serious issues in Peru. There is increasing pressure on Odebrecht as the firm has been embroiled in a complex legal case. The company is facing the possibility that its troubled IIRSA highway contract will be revised. When the project was first envisioned in 2004 it was expected to cost \$1.43 billion but a string of revisions and extra works have seen the price tag spiral by a colossal 257 percent to \$4.14 billion. The Peruvian authorities are understandably less than satisfied over the situation. There are also concerns over apparent irregularities with the contract, which are currently being investigated.

### BRAZIL’S ARTERIS LOSES REGISTRATION AS PUBLICLY LISTED COMPANY

[www.reuters.com/article/arteris-delisting-idUSE6N1FM001](http://www.reuters.com/article/arteris-delisting-idUSE6N1FM001)

Brazilian toll road operator Arteris SA said in a securities filing its registration as a publicly listed company was cancelled on Wednesday after controlling shareholders delisted the company. Last year, Spain's Abertis, together with a unit of Canada's Brookfield Asset Management, spent 527 million reais (\$166 million) to delist Arteris.

## INTERNATIONAL INDUSTRY EVENTS CALENDAR

### 2017

#### **IBTTA Spring Board & Committee Meetings**

Jersey City, New Jersey, USA, April 21-22, 2017

[www.IBTTA.org](http://www.IBTTA.org)

#### **IBTTA Summit on Finance, Policy and VMT**

Jersey City, New Jersey, USA, April 23-25, 2017

[www.IBTTA.org/jerseycity](http://www.IBTTA.org/jerseycity)

#### **IBTTA Foundation Annual Service Project**

New Orleans, Louisiana, USA, May 21, 2017

[www.IBTTA.org](http://www.IBTTA.org)

#### **IBTTA Maintenance & Roadway Operations Workshop**

New Orleans, Louisiana, USA, May 21-23, 2017

[www.IBTTA.org/neworleans](http://www.IBTTA.org/neworleans)

#### **Intertraffic**

Istanbul, Turkey, May 24-26, 2017

[www.intertraffic.com](http://www.intertraffic.com)

#### **45<sup>th</sup> ASECAP Study and Information Days**

Paris, France, May 29-31, 2017

[www.asecap.com](http://www.asecap.com)

#### **12<sup>th</sup> ITS European Congress**

Strasbourg, France, June 19-22, 2017

[www.itsineurope.com](http://www.itsineurope.com)

#### **IBTTA 2018 Conference Planning Ideas Roundtable**

Dallas, Texas, USA, July 14, 2017

[www.IBTTA.org](http://www.IBTTA.org)

#### **IBTTA/TRB Joint Symposium on Managed Lanes & AET**

Dallas, Texas, USA, July 16-18, 2017

[www.IBTTA.org/dallas](http://www.IBTTA.org/dallas)

#### **IBTTA Fall Board & Committee Meetings**

Atlanta, Georgia, USA, September 8-10, 2017

[www.IBTTA.org](http://www.IBTTA.org)

#### **IBTTA 85<sup>th</sup> Annual Meeting & Exhibition**

Atlanta, Georgia, USA, September 10-13, 2017

[www.IBTTA.org/atlanta](http://www.IBTTA.org/atlanta)

#### **IBTTA International Summit of Rome**

Rome, Italy, October 15-17, 2017

[www.IBTTA.org/rome](http://www.IBTTA.org/rome)

**23<sup>rd</sup> World Congress on Intelligent Transport Systems**

Montréal, Québec, Canada, October 29 – November 2, 2017

[www.itscanada.ca/events/wc\\_2017.html](http://www.itscanada.ca/events/wc_2017.html)

**FORECAST 2018**

**TRA Transport and Research Arena 2018**

Vienna, Austria, April 16-18, 2018

[www.traconference.eu/about/governance](http://www.traconference.eu/about/governance)

## GLOSSARY

|                       |   |
|-----------------------|---|
| <b>AA</b>             | Automobile Association  |
| <b>AET</b>            | All-Electronic Toll   |
| <b>ASECAP</b>         | Association européenne des concessionnaires d'autoroutes et d'ouvrages à péage – European Association of Operators of Toll Road Infrastructures |
| <b>AV</b>             | Automated Vehicle   |
| <b>BOOT</b>           | Build-Own-Operate-Transfer  |
| <b>BOT</b>            | Build-Operate-Transfer  |
| <b>CAGR</b>           | Compound Annual Growth Rate   |
| <b>CCCC</b>           | China Communications Construction Company   |
| <b>CCR SA</b>         | Companhia de Concessões Rodoviárias   |
| <b>CEO</b>            | Chief Executive Officer   |
| <b>C-ITS</b>          | Cooperative Intelligent Transportation Systems  |
| <b>CRBC</b>           | China Roads and Bridges Company   |
| <b>CRT</b>            | Concessionária Rio Teresópolis  |
| <b>CSIR</b>           | Council of Scientific and Industrial Research   |
| <b>CTR</b>            | Austin's Center for Transportation Research   |
| <b>DDI</b>            | Diverging Diamond Interchange   |
| <b>DG Environment</b> | Directorate-General for Environment   |
| <b>DPR</b>            | Detailed Project Report   |
| <b>DOT</b>            | Department of Transportation  |
| <b>DSRC</b>           | Dedicated Short Range Communication   |
| <b>EBRD</b>           | European Bank for Reconstruction and Development  |
| <b>EC</b>             | European Commission   |
| <b>ECERDC</b>         | East Coast Economic Region Development Council  |
| <b>EETS</b>           | European Electronic Toll Service  |
| <b>EGNOS</b>          | European Geostationary Navigation Overlay System  |
| <b>EIB</b>            | European Investment Bank  |
| <b>EPC</b>            | Engineering, Procurement and Construction   |
| <b>ERF</b>            | European Union Road Federation  |
| <b>EP</b>             | European Parliament   |
| <b>ETC</b>            | Electronic Toll Collection  |
| <b>EU</b>             | European Union  |
| <b>FETC</b>           | Far East Electronic Toll Collection Company   |

|                 |  |
|-----------------|--|
| <b>FIA</b>      | Federation Internationale de l'Automobile                                      |
| <b>FHWA</b>     | Federal Highway Administration   |
| <b>GALILEO</b>  | European satellite navigation system   |
| <b>GDOT</b>     | Georgia Department of Transportation   |
| <b>GNSS</b>     | Global Navigation Satellite System   |
| <b>HOV lane</b> | High Occupancy Vehicle lane  |
| <b>IBTTA</b>    | International Bridge, Tunnel and Turnpike Association                          |
| <b>IIRSA</b>    | Initiative for the Integration of the Regional Infrastructure of South America |
| <b>INEA</b>     | Innovation and Networks Executive Agency                                       |
| <b>IoT</b>      | Internet of Things   |
| <b>ITF</b>      | International Transport Forum  |
| <b>ITS</b>      | Intelligent Transportation Systems   |
| <b>ITSSA</b>    | Intelligent Transport Society of South Africa                                  |
| <b>KFD</b>      | National Road Fund   |
| <b>KPC</b>      | Kuantan Port City  |
| <b>MOT</b>      | Ministry of Transport  |
| <b>NHAI</b>     | National Highways Authority of India   |
| <b>NTE</b>      | North Tarrant Express  |
| <b>OBE/OBU</b>  | On Board Equipment/On Board Unit   |
| <b>OECD</b>     | Organization for Economic Cooperation and Development                          |
| <b>ORT</b>      | Open Road Tolling  |
| <b>PANYNJ</b>   | The Port Authority of New York & New Jersey                                    |
| <b>PIARC</b>    | Association Mondiale de la Route – World Road Association                      |
| <b>PKM</b>      | Peshawar-Karachi Motorway  |
| <b>PPP</b>      | Public-Private Partnership   |
| <b>RFID</b>     | Radio Frequency Identification   |
| <b>RMS</b>      | Roads and Maritime Services  |
| <b>SRTA</b>     | State Road and Tollway Authority   |
| <b>SUMP</b>     | Sustainable Urban Mobility Planning  |
| <b>SwRI</b>     | Southwest Research Institute   |
| <b>TEN-T</b>    | Trans-European Transport Network   |
| <b>TMT</b>      | Technology, Media and Telecommunications                                       |
| <b>TRA</b>      | Transport Research Arena   |
| <b>TRB</b>      | Transportation Research Board  |

|              |  |
|--------------|--|
| <b>TTI</b>   | Texas A&M Transportation Institute                   |
| <b>TxDOT</b> | Texas Department of Transportation                   |
| <b>UN</b>    | United Nations                                       |
| <b>UNECE</b> | Economic Commission of the United Nations for Europe |
| <b>WHSD</b>  | Western High-Speed Diameter                          |