



Statement of

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On behalf of:

The Intelligent Transportation Society of America

BEFORE THE UNITED STATES SENATE
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

Winning the Race to 5G and the Next Era of Technology Innovation in the United States

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Testimony

Chairman Wicker, Ranking Member Cantwell, and Members of the Committee, thank you for the opportunity to provide the Intelligent Transportation Society of America’s (ITS America) perspective on “Winning the Race to 5G and the Next Era of Technology Innovation in the United States.”

My name is Shailen P. Bhatt, and I am the President and CEO of ITS America. Before joining ITS America last January, I served as Executive Director for the Colorado Department of Transportation (CDOT). In that role, I oversaw the launch of the RoadX program, which is focused on deploying innovative technology solutions—including connected vehicles—and teaming with the private sector to shape the future of transportation. While at CDOT, I also served as the national Chair of the Vehicle-to-Infrastructure Deployment Coalition and the Chair of the National Operations Center of Excellence. Before CDOT, I served as Cabinet Secretary with the Delaware Department of Transportation and Deputy Executive Director of the Kentucky Transportation Cabinet. I also had the pleasure of serving as Associate Administrator at the Federal Highway Administration under U.S. Department of Transportation Secretary Ray H. LaHood.

It is an honor to testify on behalf of ITS America and our members who have been researching, developing, testing or deploying intelligent transportation technologies. Founded as an official advisory board on road technology to the U.S. Department of Transportation, ITS America represents state and city departments of transportation, metropolitan planning organizations, automotive manufacturers, technology companies, engineering firms, automotive suppliers, insurance companies, and research and academic universities. Our Board Chair is Malcolm Dougherty, Senior Vice President and Practice Lead, Transportation, Michael Baker International, and former Director of the California Department of Transportation, and our Vice-Chair is Jennifer Cohan, Secretary, Delaware Department of Transportation.¹ Our members come to one table—ITS America—to shape the next generation of transportation and infrastructure driven by intelligent transportation technologies.

ITS America is united around a shared vision of a better future transformed by intelligent mobility that is safer, greener, and smarter. Our mission is to advance the research and deployment of intelligent transportation technologies to save lives, improve mobility, promote sustainability, and increase efficiency and productivity.

¹ The ITS America Board is represented by the following companies: AAA, AECOM, Arizona Department of Transportation, California Department of Transportation, California PATH UC Berkeley, Conduent, Central Ohio Transit Authority, Crown Castle, Cubic, Delaware Department of Transportation, District of Columbia Department of Transportation, Econolite, Ford Motor Company, General Motors, Gridsmart, HELP, Inc., HNTB, Iteris, Kapsch TraffiCom North America, MCity, Michael Baker International, San Francisco Bay Area Metropolitan Transportation Commission, National Renewable Energy Lab, New York City Department of Transportation, Panasonic North America, Pennsylvania Department of Transportation, Qualcomm, Southwest Research Institute, State Farm Insurance, Toyota, Texas Transportation Institute, Utah Department of Transportation, Washington State Department of Transportation.



For nearly 30 years, ITS America has been educating policy and decision makers at every level of government and in the private sector on policy that supports intelligent transportation technologies. Our focus is policy that accelerates seamless mobility technology, connected and automated vehicle technology, and smart infrastructure; policy that breathes new life into our transportation infrastructure by expanding investments in technologies that support smart communities; and policy that encourages new models and modes of transportation including micro-transit, rideshare, carshare, bikeshare, and unmanned systems. That said, our first and foremost priority has been, and continues to be, safety.

I want to take a moment and commend the Committee for its leadership, which made deployment of intelligent transportation technologies an eligible activity in the Fixing America's Surface Transportation Act (FAST Act). With FAST Act funding, commitments from state and local governments, innovative partnerships with the private sector and research institutions, we see firsthand how the deployment of technology is saving lives; reducing crashes; extending the life of transportation infrastructure; improving capacity; reducing the rate and growth in congestion; moving more people in fewer vehicles; improving travel times and reducing greenhouse gas emissions.

A Better Future Transformed by Intelligent Mobility: Introduction

In the mid-90s, I used to sell computers with a 2 GB hard drive. I told people that a hard drive could handle all the data they would ever need. I was wrong. It is estimated that an autonomous vehicle will generate four terabytes (TB) of data in about an hour and a half of driving.² The world is awash in a sea of big data. Fifth-generation wireless technologies (5G) have the speed and bandwidth to take all the data from cars and all transportation users, process it, transform into actionable information, and communicate it back at levels of speed that will enable us to reduce crashes, improve the choices we make, and operate our systems more effectively. That is why we believe 5G connectivity will be transformational.

Just as transportation was critical to the development of our economy in the 20th century, 5G will transform the way we experience transportation today. 5G and other next generation technologies will enable transformative transportation benefits in a wide range of areas. With data speeds of 100Mbit/s or more, ultra-low latency of a few milliseconds or less, extremely high reliability, and massive capacity, 5G, and other next generation technologies can spur the development of mobility innovations that will revolutionize the way people, goods, services, and information move in the 21st century. It could allow greater freedom of movement for those who have limited mobility access, such as people with disabilities and older adults, and can positively affect both the safety and operations of our transportation system. Moreover, most importantly, 5G and other next generation technologies can finally help us begin to reduce the epidemic of fatalities on our roadways.

A Better Future Transformed by Intelligent Transportation Technologies: Safety

Safety is the top priority of the nation's transportation system, and 5G and other next generation technologies can help us transform the current tragic state of affairs. According to the U.S. Department of

²Winter, K (2017). For Selfdriving Cars There's Big Meaning Behind One Big Number: 4 Terabytes. Intel Newsroom.

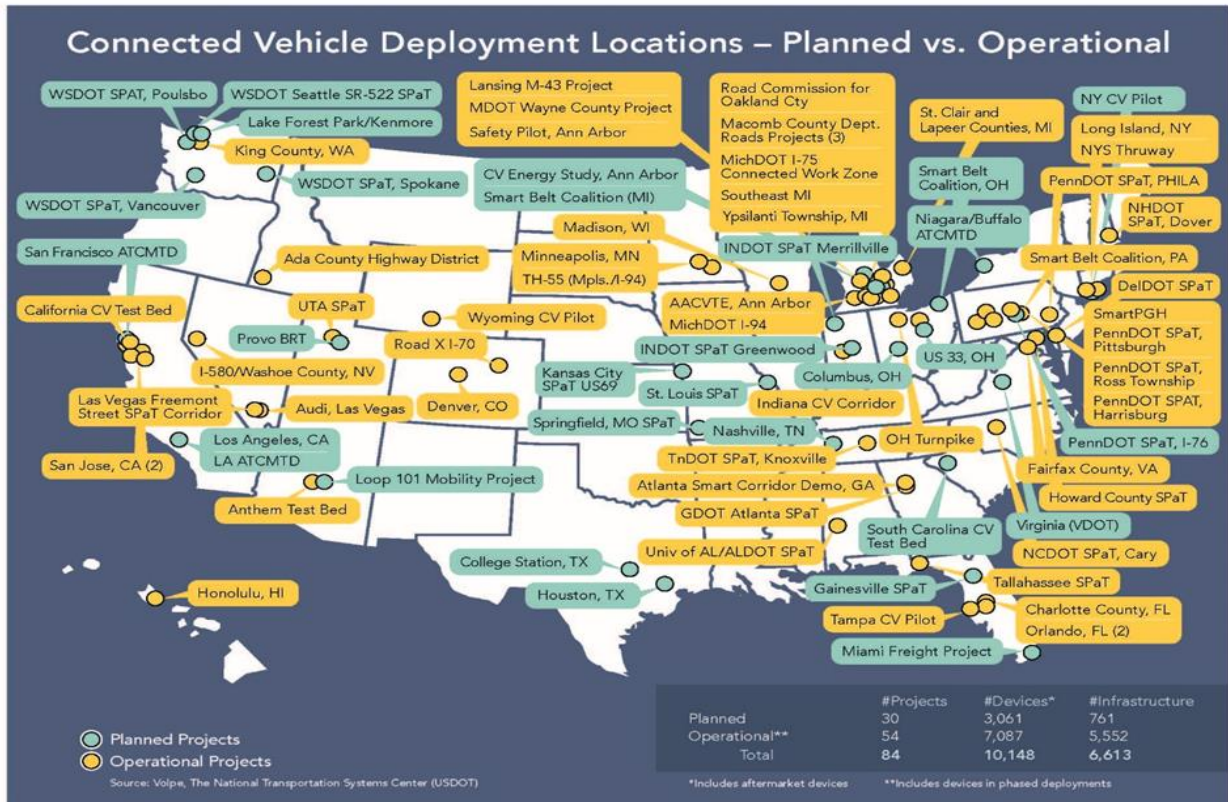


Transportation's National Highway Traffic Safety Administration (NHTSA), 37,133 people lost their lives in motor vehicle crashes in 2017, which roughly breaks down to just over 100 fatalities per day. Every year there are more than six million crashes, two million of which result in either an injury or, in the worst case, a fatality. Assuming around 30 percent of those are impaired crashes, that leaves 1.4 million crashes, of which Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2I) communications can address—more than a million fatality or injury crashes eliminated or mitigated every year. V2V and V2I communications are allowing us to finally address the scourge of lives lost and ruined on our nation's roads. V2V deployments available today include systems that provide emergency braking. Another benefit of connected vehicles is their ability to be the “eyes and ears” of other vehicles. Non-Line-of-Sight awareness means that drivers and vehicles will be able to see around corners and receive information about hazards in the roadway, even if they cannot see the hazard.

In addition to V2V communications, there are other examples of connectivity that benefit the transportation system. Vehicle to Infrastructure (V2I) communications helps move traffic more efficiently with demand responsive traffic signaling and allow emergency response vehicles to preempt signals. The concept of V2I is to provide the vehicle and the driver information about infrastructure operations -- weather and pavement condition, how signals are directing traffic, and even the location of potential hazards at intersections and other critical road safety hotspots. V2I applications include red light violation warnings, reduced speed zone warnings, curve speed warnings, and spot weather impact warnings. V2I soon may also support other applications that will disseminate the condition of the infrastructure, such as bridge integrity, and may even collect data from cars that describe pavement condition. According to NHTSA, V2I technology helps drivers safely negotiate intersections and could help prevent 41 to 55 percent of intersection crashes. Another connected vehicle safety application that helps drivers with left turns at intersections could help prevent 36 to 62 percent of left-turn crashes, according to NHTSA. In addition to the lives saved, just these two applications alone could prevent up to 592,000 crashes and 270,000 injuries each year.

Public sector agencies can also reap the benefits of V2I deployments. Increasingly, vehicles will rely on digital formatting of roadway information to process roadway rules. ITS America member Regional Transportation Commission of Southern Nevada recently became the first in the world to put roadway information into a digital format. As connected and automated vehicles drive over the actual roadway, they can pick up differences between the “digital” road and the actual road. This could eliminate the need for agencies to manually examine roadways for striping or automatically report potholes instead of waiting for enough drivers to incur tire damage before fixing them. These vehicles will also give an up-to-the-minute snapshot of the system – how it is performing, are there any incidents, live weather conditions, etc.

Millions of dollars have already been invested in this effort, including incorporating connected vehicle technologies into infrastructure by states and cities. Eighty-four communities in the United States are deploying or planning to deploy connected vehicle technology. Of that number, 54 sites are operational, and 30 are in development. Nearly every state has at least one connected vehicle deployment. V2I deployments include expansions of the Safety Pilot Model Deployment in Ann Arbor (MI), large pilot deployments in New York City, Tampa (FL), and Wyoming, and the Smart City Challenge in Columbus (OH).



5G and other next generation technologies will enable us to deploy safety solutions to protect vulnerable users of the system, which will be transformational. Vehicle to Pedestrians (V2P) is an extremely important component of communications. In Colorado, where the largest increase was in vulnerable users of the system, fatalities increased from 484 in 2014 to nearly 700 in 2017. By allowing vehicles to communicate with these users through sensors or vehicle to device communication, we can significantly reduce the number of pedestrians killed on our roadways.

Finally, Vehicle to Network (V2N) will be critical to operating the system more efficiently. Weather data or traffic conditions can be broadcast to the network allowing for better planning and dynamic routing.

These technologies can also enhance automated driving systems, which hold the promise to provide numerous economic, environmental, and societal benefits, such as decreased congestion and fuel consumption, and increased access for older adults and people with disabilities. Older Americans and people with disabilities are demographics that are impossible to ignore. According to the U.S. census, residents age 65 and over grew from 35.0 million in 2000 to 49.2 million in 2016, accounting for 12.4 percent and 15.2 percent of the total population, respectively; and nearly one in five people have a disability. They also represent a significant demand for transportation services, and with explosive growth in travel, should fully automated vehicles succeed in expanding mobility access. V2V, V2I, V2P, and



V2N – collectively referred to as Vehicle-to-Everything (V2X) – have incredible potential to dramatically improve the safety, accessibility, and operational performance of our road infrastructure and vehicle safety.

5G and other next generation technologies will help unlock the full potential of self-driving technology by serving as an additional source of data about infrastructure, traffic, construction, and emergency vehicles that will solve for some of the more challenging road interactions. 5G enables location data platforms (“maps”) to support the wide availability of fully autonomous vehicles by providing large capacity and ultralow latency data transmissions. Today, auto OEM’s are already using existing LTE networks to share sensor data on roadway conditions across auto brands through the use of neutral location platforms – human driver in Car A learns, for example, of icy road conditions ahead through sensor data collected by windshield wipers, temperature gauges and stability controls in Car B. In a future 5G environment, these types of data transmissions – and many, many others – will be massively crowdsourced and available in milliseconds, which – in an environment where cars are driven by machines – will lead to safer vehicles and a more efficient transportation systems.

A Better Future Transformed by Intelligent Transportation Technologies: Saving the Spectrum for Transportation Critical Safety Communications

ITS America strongly supports preserving the entire 5.9 GHz band for V2X. We also support Congressional oversight of the Federal Communications Commission (FCC) to ensure all phases of testing for the 5.9 GHz band are completed before the FCC rules on whether the spectrum can be shared between V2X operations and unlicensed devices like Wi-Fi. Continued Congressional oversight is beneficial to ensure that the FCC and the National Telecommunications and Information Administration continue to recognize the safety benefits of the 5.9 GHz band.

Any unlicensed use in the band should be done without harmful interference to the incumbent technology or other intelligent transportation systems technologies. With all the advancements and technology deployments, we are finally on the cusp of turning the corner to reduce deaths, but we need the spectrum to do that. These safety innovations require dedicated spectrum to ensure they work every time without signal interference.

The new world of connected vehicles is creating a massive amount of data that must be exchanged at low latencies. As more and more vehicles on the roadway begin broadcasting data with other vehicles, bicyclists, pedestrians, and smart infrastructure, 5G and other next generation technologies will be critical to ensure that the network can handle the data loads.

A Better Future Transformed by Intelligent Transportation Technologies: Mobility on Demand

5G connectivity will be critical as we move from the 20th century model of moving cars to the 21st century model of moving people, data and freight. The same data that helps us operate the system in a safer manner also helps us operate it more effectively.



New forms of mobility are being deployed even as others are being developed. A century ago with the invention of the car, Departments of Roads were created to deal with this new form of transportation. Those agencies became Departments of Transportation, having grown to include other modes of transportation. Now those same agencies need to evolve again to provide seamless mobility. Long-existing silos among cities, states, counties, and transit agencies are disappearing. The next generation of mobility is a collaboration of the public and private sectors. More choices exist now, but for travelers to fully realize the benefits of this new world of mobility, it must be easier to choose which option best meets their needs.

The way we travel in cities, suburbs, and rural areas are changing rapidly due to wireless communications and other technology innovations. New mobility concepts and solutions, from bike- and car-sharing systems to demand-responsive bus services, are providing travelers with flexible and convenient transportation options. From private, shared, and public transportation options, or a combination thereof, people want a transportation ecosystem where they can research, book, and pay for all parts of their daily journeys—no matter the form of transportation—on a seamless mobile platform accessible on request.

Developing the policy conditions for Mobility on Demand (MOD) to flourish will better enable consumers to identify and use the transportation options that best meet their mobility needs at any time. In addition, MOD promotes societal benefits such as a less congested, less costly, and more sustainable transportation system. Leveraging the insights gained from MOD data, new business models can be developed to enhance mobility and address unmet transportation needs.

The rapid development of 5G connectivity can offer new opportunities for MOD. Increased data throughput will bring many new possibilities for MOD, including better coverage, availability, and reliability. This will allow MOD to better reach underserved areas such as first mile/last mile and transit deserts.

Augmented Reality (AR) is another example of where the delivery of underlying real-time data could be enhanced by 5G connectivity to make MOD more useful. AR can be used to create interactive maps to help people navigate transit systems. By using the camera in a traveler's mobile device and superimposing digital information on what the camera is capturing, AR can make it easier for the user to make more informed decisions based on up-to-date information. Holding a mobile device on top of a subway map, for example, would allow you to see real-time movement of trains and buses near your location.

In cities, MOD offers convenient, affordable, and (in the case of bikeshare and rideshare) sustainable alternatives to driving within congested environments. For suburban areas, MOD offers first mile/last mile accessibility, alleviating/reducing the need for locals to park at a station or drive into the city.

MOD is seen too often as an urban/metro transportation solution, but it also presents opportunities for rural areas as well. It provides benefits to those living in rural or more remote communities by connecting them to a bus, train, or transit/commuter station. Fleet operated ride-hailing services, for instance, could help older adults age in place and improve general accessibility to long-distance transportation, car-pooling, groceries, and medical centers. Examples of rural MOD could include bikeshare (docked or



dockless) and scooter share deployments on college campuses, in both rural and urban settings. New and improved transit and paratransit services also can help rural America.

Tompkins County, NY, is an excellent example of a rural community pushing carshare (Ithaca Carshare), rideshare (ZimRide), and transportation network companies (TNC) (Lyft/Uber) services, and it received funding through Shared Use Mobility Center MOD On-Ramp Program. MOD examples could also include Waze Carpool / Scoop (app-based carpools), microtransit such as VIA, micromobility services like Lime, maybe even delivery services like DoorDash /UberEats / PostMates.

ITS America created the Mobility on Demand Alliance in 2018 to help determine what the future of mobility should look like, striving for a world that is safer, greener and smarter. The Mobility on Demand Alliance brings public, private, and academic sector stakeholders together to promote the benefits of MOD and address obstacles hindering its development. Focused on fostering an environment for a scalable, repeatable MOD model that allows for metropolitan and regional differences, the ITS America Mobility on Demand Alliance will: 1) address common challenges including defining terminology, data access, payment systems, accessibility and equity issues, privacy/cybersecurity, and legislative/regulatory outlook; 2) facilitate metropolitan and regional MOD efforts; and 3) educate policymakers and the public about the benefits of Mobility on Demand.

Regardless of where you live, MOD services and seamless integration of mobility platforms have the potential to better enable users to understand their transportation options and make personalized, efficient, and cost-efficient travel decisions.

Mobility on Demand Use Cases

Regional Bikeshare Programs: Increasing Mobility Within a Community: The City of Reno, City of Sparks, Reno-Sparks Indian Colony, University of Nevada-Reno, and Washoe County have worked together with the Regional Transportation Commission of Washoe County and Lime (formerly LimeBike) to launch Nevada's first dockless bikeshare program. This one-year pilot will eventually include nearly 1000 LimeBike bicycles and is the first bikeshare to launch on a Native American reservation. Bikes can be borrowed anywhere within the Reno-Sparks service area via the LimeBike app. Rides cost \$1 per half hour for standard users, and €50 per half hour for students, seniors, and low-income individuals. This collaborative effort aims to provide the Truckee Meadows region with a healthy and sustainable alternative for mobility.

Rideshare to Bus Stops: Filling Transit Gaps: Capital Metro (TX) has partnered with Austin-based rideshare service provider, RideAustin, to offer on-demand transportation to select bus stops following cuts to bus service in the Exposition area of west Austin. Through this six-month pilot program, individuals who live or work in an area that has lost bus service can request rides via the RideAustin app to/from one of two local Capital Metro bus stops. These rides are free of charge, so those who participate in the program do not have to pay any more than their usual bus fare to complete their commute. Capital Metro hopes that this partnership will help to efficiently fill transit gaps by serving as an innovative, effective solution to first/last mile needs.



Connecting Residents to Jobs and Healthcare: Delaware Transit Corporation (DART) has a contract with ITN-Southern Delaware to subsidize trips for older adults (55+) and those with visual impairments in Sussex County, Delaware, which is predominately rural. Their service is available 24/7 and provides eligible customers with access to local trips and to the DTC's (DART) transit network. This network includes three transit hubs in Sussex County (Rehoboth, Lewes, and Georgetown) that connect people to the largest towns and cities, including Dover and Wilmington. Wilmington provides connections to Amtrak and Greyhound. DTC will subsidize \$5 a trip up to \$12,000/year.

DART also offers three Flex Routes in Sussex County. These routes run a fixed route but also allow customers to call up to two hours in advance to schedule a deviation up to one mile from the fixed route. The deviation costs an additional \$1 (base fare is \$2) and helps close the first and last mile challenges or the rural area that lacks a pedestrian network. The fixed route alignments include key state facilities, shopping, medical offices, residential areas, and major employers.

Utilizing Ridesourcing for Special Needs: Connecting Users with Critical Services: Chesterfield County has partnered with Uber and Goodwill of Central and Coastal Virginia to launch a pilot program providing free, treatment-related transportation to individuals trying to overcome opioid addiction. Through this program, those undergoing treatment through the county's Mental Health Support Services Department who do not own a personal vehicle can take an Uber, free of charge, to any pre-approved location. Participants can reserve rides from 6 am- 6 pm, Monday through Saturday, by calling Goodwill. Goodwill contacts Uber and oversees trips taken. Rides can also be reserved in advance. The pilot was funded through a state grant and aims to make it easier and more affordable for recovering participants to seek treatment.

Improving/Supplementing Paratransit Service: The Regional Transportation Commission of Southern Nevada (RTC) in Las Vegas has partnered with Lyft to launch a six-month paratransit pilot program. Through this program, Southern Nevada Transit Coalition (SNTC) paratransit riders can opt-in to receive Lyft rides instead of their standard SNTC paratransit service. Unlike the existing service, participants can book Lyft rides not only in advance but also on-demand. The first \$3 of each ride is covered by the customer, and RTC subsidizes the next \$15. Rides can be booked via the Lyft app or by calling RTC Customer Care. Wheelchair accessible vehicles are also available. This pilot aims to provide an efficient, flexible, cost-effective travel option for RTC paratransit customers.

Mobile App/Multimodal Integration: Making Trip Planning and Travel More Seamless

The Pinellas Suncoast Transit Authority (PSTA) has selected the Transit app as the official trip planning application of Pinellas County, FL. The Transit app offers an easy-to-use, multi-modal platform, through which users can access real-time information regarding PSTA's transportation options and arrival/departure times. The application also integrates information on MOD services, so that transit riders can, for example, check local bikeshare availability or request an Uber ride as needed, from within a single app. As part of this partnership, PSTA will officially advertise the Transit app, and the Transit app will share anonymous data regarding users' trip behavior, which can help to inform PSTA planning and operations better.



A Better Future Transformed by Intelligent Transportation Technologies: 5G, the Cloud, and Transportation

In addition to the ability for 5G and other next generation technologies to enable and improve on V2V and V2I communications, the low-latency of 5G allows for computing on the edge and in the cloud. This provides a list of advantages to municipalities, states, and private companies that include cost savings, improved security, seamless data sharing, reduced congestion, reduced energy usage, and reduction of fatal crashes. Cloud computing continues to be the most secure means for enterprises to secure and safeguard data. Centralized monitoring, anomaly detection, and dedicated cyber intelligence resources continue to provide a more robust security platform than most organizations can provide for themselves. In addition to security, access to the cloud provides the ability for more robust applications and more complex analytics. Data can be mined and shared across platforms and regions, allowing rapid analytics that merges infrastructure, vehicle, and other sources in real-time.

The introduction of 5G cellular could speed live video and other sensor feeds from automated vehicles over cellular networks by orders of magnitude. As a result, remote automated vehicle operations centers could receive more accurate and detailed sensor feeds and real-time maps resulting in more immediate updates. Like V2X, 5G deployment will not necessarily determine when we might see large scale commercial automated passenger taxi/bus or parcel/freight delivery launches, but they could improve service and reliability levels. Such “tele-operation” could also reduce costs or autonomous systems. Similarly, 5G might evolve to support improved control and navigation of aerial drones.

The cloud also allows for transportation organizations and companies to seamlessly share data and develop more robust traffic modeling, traffic planning, and emergency response modeling. This can optimize traffic patterns, both within cities and among regions, resulting in less congestion, reduced travel time, and most importantly, fewer fatal crashes. In addition to the public benefits, private industry can use this data to personalize mapping based on behavior and need. For example, a commuter can find the quickest and safest route to work while picking up a cup of coffee and collecting dry cleaning. Although this may seem trivial, these types of applications lead to quicker user adoption.

A Better Future Transformed by Intelligent Mobility: Conclusion

I would be remiss if I did not strongly urge Congress and the Administration to identify long-term and sustainable funding for the Highway Trust Fund before the FAST Act expires in 2020 to ensure the law is reauthorized on time. Maintaining our infrastructure is vital. Funding for research examining the transition to a connected and automated vehicle environment and a “connected infrastructure” is also important. This kind of research requires funding.

To keep pace with these advances in technology that are transforming transportation, ITS America supports a FAST Act reauthorization that prioritizes federal policy and programs that make intelligent transportation deployment the rule rather than the exception and provides federal funding, financing, and grants that encourage the rapid deployment of intelligent transportation technologies on a large scale.



To increase investments in intelligent transportation technologies, we urge Congress to leverage existing FAST Act programs and create new emerging technology grants in an infrastructure package. Intelligent transportation technologies, including vehicle-to-infrastructure communications, are eligible uses of most FAST Act highway program funds. Specifically, we support increased funding for the Intelligent Transportation Systems Program, Advanced Transportation and Congestion Management Technologies Deployment Program, Technology and Innovation Deployment Program, and for the Surface Transportation Block Grant program, and Congestion Mitigation and Air Quality program – flexible programs that often fund intelligent transportation deployment activities.

An infrastructure bill provides a unique opportunity to create formula and grant funding programs for emerging technologies that support congestion relief in metropolitan and urban cores as well as heavily traveled regions and freight corridors. Eligible projects would include capital and operational investments that improve system safety and performance such as priced-managed lanes; transportation demand management programs; strategic transit investments; advanced parking, freight delivery, and incident management systems; and programs to support the deployment of connected and autonomous vehicles, including V2V and V2I infrastructure communications technologies.

Transportation is now the largest source of carbon emissions in the United States, and carbon emissions from cars and light trucks account for almost one-sixth of the nation's total emissions.

ITS America supports policies in the transportation infrastructure sector that will help reduce transportation emissions. Given that automakers are committing to alternative fuel vehicles that will reduce greenhouse gas emissions, ITS America supports standalone legislation and language in the reauthorization of the FAST Act and an infrastructure package that would provide increased federal funding, financing, and grants to rapidly build out alternative fuel vehicle infrastructure and new technologies such as inductive charging to speed the deployment of electric vehicles.

Last year, I spoke at the Beijing Auto Forum. An official from the Chinese Ministry of Industry and Information Technology made clear that China's goal was to dominate the information technology sectors and automotive manufacturing in the next five years. In the 20th century, people came here to marvel at our infrastructure and technology. If we want that to continue in the 21st century, we must be leaders in the 5G and artificial intelligence space. We must maintain our leadership in this space.

In conclusion, the future of mobility is happening today with ITS America members. From Mobility on Demand to connected and automated vehicles and infrastructure to delivery drones to the Internet-of-Things to When-I-Want-It/Where-I-Want-It-Logistics, our members are researching, developing, testing, and deploying technology that will create a better future.

Changes are happening today that will fundamentally affect how people interact with transportation in the months and years ahead. ITS America is helping states, cities, the private sector, and researchers as we work toward our vision of a better future transformed by intelligent mobility - one that is safer, greener, and smarter.



Thank you again for the opportunity to testify today, and I am happy to answer any questions you may have.

Please email ITS America Vice President of Legislative Affairs Ron Thaniel at rthaniel@itsa.org with testimony questions and comments. ITS America advances the research and deployment of intelligent transportation technologies to save lives, improve mobility, promote sustainability, and increase efficiency and productivity. For more information, visit <http://www.itsa.org/>.



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