

Testimony by Los Angeles Department of Transportation General Manager Seleta Reynolds

**United States Senate Commerce Committee
Subcommittee on Surface Transportation, Merchant Marine Infrastructure, Safety,
and Security**

**How The Internet of Things (IOT) Can Bring U.S. Transportation and Infrastructure
Into the 21st Century
June 28, 2016**

Good morning Chairman Fischer, Ranking Member Booker and committee members.

I am Seleta Reynolds, General Manager of the Los Angeles Department of Transportation. I am also President of the National Association of City Transportation Officials, also known as NACTO. It is an honor to be here to discuss the internet of things transportation, at the city level. I would like to describe where we are, where we are going, and the challenges that we face.

The City of Los Angeles is investing millions of dollars into promoting a modern, multimodal transportation system; to evolve from our infamous, 20th Century reputation as the car capital of the U.S. toward the most sophisticated, modern transportation system in the world. Technology doesn't just change the outcome in our cities and country; it changes those who use it as well. We must be smart and focused on people first in order to achieve the best of technology's entry into transportation.

From ridesharing to micro-transit, new products emerge daily. Therefore, the city is making a home for current, future and evolving modes in the mobility marketplace. In the marketplace the city will not pick winners or losers, but create an incubator that nurtures the best and safest ways to travel. We are not wedded to what exists today, but seek to be prepared for what is coming tomorrow. The menu of travel options also ensures that should one mode become disabled, travelers are not paralyzed.

Safety, environmental quality, equity, affordability, efficiency and quality of life all have benefits to achieve from technology.

If we rely solely on the private side, these benefits may only land where they benefit the wealthiest among us. Our role to play in making sure the rising tide lifts all boats.

Yesterday and Today

Los Angeles made an effective first pass at using technology in transportation management in 1984 when it hosted the Summer Olympics. In the era of floppy disks L.A. pioneered a system called ATSAC that used algorithms to optimize the movement

of vehicles through streets. Today L.A. IS looking to upgrade that network to provide digital services to private, commercial, and public vehicles and include recommended speeds and safety data. Today we rely solely upon painted signs along the streets to tell drivers how fast to drive, tomorrow this information will be communicated directly to a vehicle from the infrastructure. These digital interfaces between the city's infrastructure and the passenger's vehicles will improve the safe flow of people and goods, light and heavy rail, and even equestrians across THE City.

Today more than 2 million people in L.A. are using apps to navigate the streets. Earlier this year we launched a "Go LA" app. This app shows travelers the many options for moving across Los Angeles organized by whether the user is trying to get somewhere faster, cheaper, or greener. For example, I can select a destination and be provided with detailed options that include walking, biking, transit, taxi, TNC and driving information. It may take me 25 minutes to walk, but I'll burn 100 calories and it won't cost me a dime. Another option presented might be a carpool trip of 5 minutes, \$4, 10 pounds of carbon emissions, and burning 15 calories. We give all modes an equal opportunity and allow the consumer to decide. The next step is to provide seamless payment—one way to pay for any transit mode including bike share.

We are currently launching electric vehicle car sharing the heart of our city. While car-sharing markets have evolved in some areas, we are deliberately making this accessible to people who stand to benefit the most. We are investing public dollars and securing private sector investment as well. City government has a powerful role to play in offsetting risks and promoting investment in traditionally underserved or low-income areas. We have an obligation to ensure that new services are understandable, legible, and accessible to people. This includes considering those that are older, unfamiliar with smartphones, or that may not have a bank cards. We also have to partner with community groups to help people navigate possible language and cultural barriers.

We are also preparing a pilot of on-demand public transit and requesting funds to upgrade signals and streets to, for example, hold a signal at red if it detects a driver about to run the light, turn signals green for transit and emergency vehicles, and alert transit operators to the right speeds to get a green wave. And we are requesting proposals to develop what we call Mobility Hubs throughout the city at major transit stops to bring bikeshare, carshare, and real-time transit information to travelers. Our interest is to use technology to treat people with hospitality and convene as many choices as possible for them.

Older technologies are also re-emerging in new and interesting ways. City buses are getting Wi-Fi and real-time location updating, as well as becoming even safer and more convenient. Bicycles are being increasingly electrified and app-ified to be an easier,

safer, healthier, and even more fun way to travel. Signals are becoming smarter to help emergency responders and transit be more efficient than ever before.

The Future and the Role of Government

I would like to underscore that the technologies of today are not static nor should we become overly wedded to one mode or ignore very real equity issues. For example, autonomous vehicles may reduce the number of human errors occurring, but also have the potential for increased traffic, emissions from additional driving, on-street congestion and could be very expensive to own. Technologies such as alternative fuels and shared use mobility will change the funding framework. Federal regulators should be encouraged to approach the future with these considerations:

- Initiative Funding and Direct Aid to Cities. Direct aid significantly reduces the overhead and administrative costs often associated with federal funds. We especially appreciate the acknowledgement in recent grants that federalized procurement requirements will slow down rapid pilots and partnerships. US DOT and DOE have been terrific pioneers with the Smart Cities and ARPA-e NEXTCAR programs. These, along with the recommendations from the White House PCAST report published earlier this year on urban development districts, will greatly help American cities move with technology changes. They help cities come to the table to create partnerships with private companies.
- Realigned and Flexible Funding. The tradition of using gas taxes and parking revenues to fund transportation initiatives will become obsolete. Connected autonomous vehicles may not need to park. Electric vehicles don't use gas. Instead, we expect to see digital services provided to users with fees for levels of service. Additionally, new modes like electric powered, shared automated vehicles require regulatory and funding streams that are convoluted under current programs.
- Require tech to be built into transportation at the most fundamental levels. Infrastructure to vehicle communication capability should be required in all transportation construction from Bus Rapid Transit and roads to bike lanes and freeway construction.
- Pivot from expansion to modernization and management to account for the impacts of automated vehicles. Existing roadway space will be used more efficiently through connected technology, making new capacity irrelevant in the near future. Transportation planning at all levels should refocus on modernizing existing expressways with instrumentation for new technology for traffic

management. Traffic management will remain a public sector function even in a future dominated by private mobility providers.

- Data sharing: the need for accurate and timely data underlies everything that is changing, especially in the digital world. Our access to the data needed for planning and operating cities is increasingly siloed. The Federal government can be a strong proponent of open data, data sharing and storage, and, of course, data standards. Data-sharing requirements can substantially reduce the millions of dollars spent annually on technologically primitive data collection, both from regular traffic operation and from traffic crashes.
- Ongoing investment into mass transit like high-capacity rail. One of the most precious resource in cities is space. Even if automation allows us to be more efficient and move more vehicles, we will not have the curb space to accommodate continuous pick-ups and drop-offs. We will always need an urban network for people and possibly, for goods in the future.
- Preparing our workforce- We must proactively give people the skills to be able to consume and understand data and technology for better planning, management and project evaluation.

As you can see, L.A. is an exciting place to be right now. We are on the cutting edge for implementation and regulation of technology in infrastructure. We have an important role to play in protecting our residents and businesses and to support the mobility marketplace. We must be at the table in planning for an increasingly automated future. Future visioning for automated vehicles should begin from the inside out, from the centers of our economy, looking at land use as well as transportation. Theories of automation that focus simply on fitting more vehicles into an expressway lane every hour are beginning from the product of the economy rather than the motor of the economy. Great cities generate traffic; traffic does not generate great cities. Technology has the power to help communities achieve their visions both for transportation and for land use, taking public space back from congestion, traffic and parking.

I want to again thank Chairman Fischer, Ranking Member Booker and the committee members for the opportunity to testify today. Our cities are changing, perhaps nowhere as quickly as Los Angeles, and we need the Federal government to work with us on funding, standardizing, and exploring the future.