Good morning and thank you so much for having me here today to talk about a subject that is so fun, exciting and a true game changer for mobility. However, before we do that let me tell you a little about me and my background that may give you some context... I am a long time resident of Las Vegas, I am a airport planner with extensive experience in ground and air transportation management. I am a pilot. I am transportation leader for Southern Nevada and most importantly I am a technology champion.

Through my experience in each one of these roles, I have become more passionate than ever about creating a sustainable and efficient transportation system to improve the quality of lives and mobility experience for Southern Nevada residents and visitors.

But the one thing I think we can all agree upon in this room is that technology is transforming transportation and that our future is unclear in terms of how we are going to implement such technologies across our communities. As I continue to learn more, it is very clear that as we live through this transformation –government together with manufactures, automotive tier suppliers and infrastructure suppliers – are going to have to work together now more than ever to ensure that we are developing policies, building infrastructure and creating cars that can accommodate the technology and the advancements that will redefine transportation and mobility options creating smarter, safer and more efficient communities.

It's amazing that in a very short period of time, the connected car market has come to the forefront of conversations and media attention, proving what is possible in in-vehicle communications, navigation and advance safety functionality.

The auto industry and organizations like GENIVI are building more advanced transportation platforms that are making travel from point A to point B a safer, more productive and enjoyable experience.

The computing power and integrated communications in vehicles continue to transform how drivers and passengers spend time in their cars.

So let me be the first to say thank you to GENIVI for making me a much safer driver. Because of advanced technology I no longer have to hold my cell phone to talk to my kids or colleagues while driving – thank you Bluetooth; I no longer have to text my kids while I am driving for them to order dinner, I can just activate my voice text messaging feature and its done, and when I am distracted and driving to close to a car don't you worry, you smart people in the room developed a beeping senor that reminds me to pay attention.

And while much has been accomplished in developing more connected vehicles, we as transportation leaders now have an opportunity and need to focus outward on our cities, streets, rail lines, bike lanes and walkways that serve the residents and visitors in our communities.

Creating Connected Communities

It's not enough to just have connected cars, we need to be building connected communities. We need communities that are easy to navigate, nimble in their design and flexible enough to accommodate multiple forms of transportation to accommodate growth for years to come.

And speaking of growth, let me tell you a little bit about what I'm focused on each and every day.

At the Regional Transportation Commission of Southern Nevada (RTC), we are responsible for the region's transportation planning and funding, public transportation and traffic management. We also are responsible for the implementation of Southern Nevada Strong, a regional plan that builds complete communities centered around quality education, affordable housing, good paying jobs and reliable public transportation.

We have spent the last several years forging partnerships in our community and investing time and resources into helping ensure we are at the forefront of transportation technology. Our objective remains focused on not just maintaining, but enhancing our infrastructure to accommodate existing and future growth.

HISTORY OF TRANSPORTATION SYSTEMS
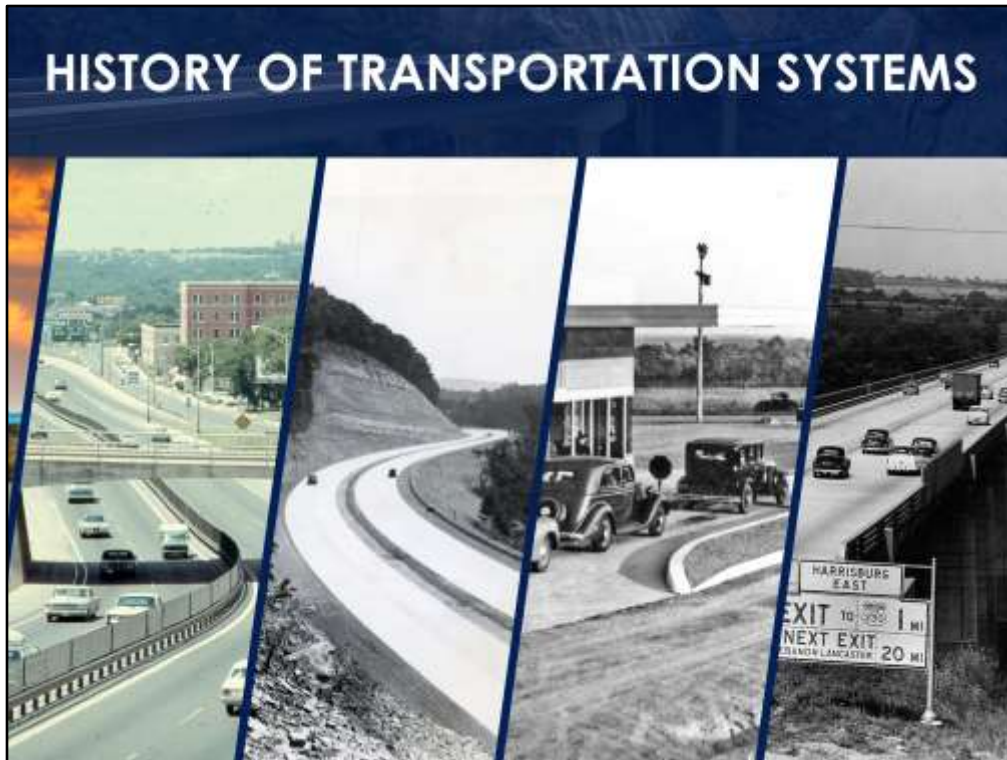**1940 - THE PENNSYLVANIA TURNPIKE**

The nation's first superhighway, the Pennsylvania turnpike, opened in 1940.

Fifteen years later, President Dwight Eisenhower signed into law the Federal Aid Highway Act, which authorized construction of 40,000 miles of limited access roads creating the interstate highway system.

HISTORY OF TRANSPORTATION SYSTEMS

As you can see from these photos, our transportation infrastructure hasn't changed much in the last 80 years or so. In the early 20th century, streetcars allowed people to range farther within the time limit, leading to suburbs. The new highways of the mid-20th century gutted downtowns and created a schism between privately owned cars for the relatively wealthy and public transit for the not-so-wealthy.

We design infrastructure around the automobile, and it's common for families nowadays to have on average two cars per household. Too many people own too many cars – an estimated 1.2 billion vehicles globally. Too many cars create congestion, and building more roads won't help – it simply encourages people to drive.

The car ownership model that has dominated the past several decades isn't sustainable. We can't build enough asphalt to accommodate people and projected population growth. That only leads to more cars, more highways, more traffic and more sprawl.

This is LA traffic and the state of our current transportation network centered around congestion and safety issues.

Today, we have just over 2 million residents in Southern Nevada (2,147,641 in 2015), and by 2025, Clark County's population is expected to grow to 2.7 million (about 552,000 more people will be calling Southern Nevada Home)

Update 9/20/16

You may all know Nevada from your annual travel to CES in January – an event that now involves some 178,000 visitors. While CES in one of the biggest events of the year, Southern Nevada is host to more than 42 million visitors each year (42,312,216 visitors in 2015), and that number is expected to grow to 53.1 million visitors by 2025.

So developing a progressive and sustainable transportation infrastructure is vital to the ongoing growth and development of our region.

That growth and development includes advancements in transportation manufacturing, autonomous vehicle/truck testing and now we have the country's most progressive UAV testing area.

As a leader for a major transportation organization, I want to take a few minutes to share our highest priorities and how that maps to potential pilot/implementation projects with organizations such as GENIVI. Simply put, at the RTC similar to other cities we are laser focused on how to enhance our transportation infrastructure to address safety, capacity and congestion for our current population and for future growth.

Let's start with safety.   We have a real challenge with an increased number of vehicle to pedestrian accidents. Las Vegas is reported 2nd traffic fatalities according to the National Safety Council.   In just last year we've seen a 32 percent increase in serious injuries or fatalities occurring between vehicles and pedestrians. This is a trend that can't continue. We need to find way to utilize advanced vehicle technology to better detect pedestrian crossings and design roadways and city areas with more crosswalks and pedestrian friendly walking areas. We're also dealing with more distracted drivers, navigating two ton vehicles through highly congested areas of our city, providing even another safety risk to other drivers/pedestrians and the surrounding area.

As for capacity and congestion, we simply can't pave more roads and hope that this activity will keep pace with our current growth in Nevada and other growing markets across the country. We need to take another look at how we move millions of people through out cities each day. How can advancements in connected vehicle technology impact how we choose routes from point A to point B? How can connected vehicles better communicate with city infrastructure such as traffic lights, transit and traffic cameras to identify better routes and modes of transportation between two points on the map? Perhaps a car is not the only answer to get to where we need to go but instead, a piece of the broader menu of transportation options.

We in Nevada believe that potential solutions to our challenges lie within emerging technology in the areas of autonomous vehicles, connected vehicles, shared mobility and intelligent infrastructure. As a result we are collectively working to create an environment for added transportation and smart and connected city projects.

Know Your Product: Before you even approach government - know the problem/challenge that you are trying to solve and why your technology. Is it safety, is it capacity or congestion . This will let us know 1. Why do we want to work with you and what are the benefits that we can sell to our board of elected officials or to the public.

Get Smart About Government: I strongly suggest that before you approach any city or county that you understand the political framework and government structure that you are seeking approval from? Understand what the approval process looks like. Do I need approval just from the state, or the 6 cities or 30 counties? What is the most effective way to get these approvals? Are there any political sensitives that you need to be aware of?

Identify Roles and Resources: Be clear on what you need in order to operate and what your expectations are from the state, city or county? What are asking us to do? What do you need from us? What are you responsible for and what are we responsible for? What resources are needed to make it go and what else in the 'system' is it impacting. Basically do your homework as no one in Government has the time to educate you.

Realistic Timeline and Expectations: As I said before, unlike the private sector, there are many obstacles that a government needs to go through in order to implement projects. Many government agencies such as the RTC legally have to go out for a request for proposals or information when we want to engage in work with private companies. Just to give you an idea, at the RTC alone, a standard request for proposals takes a minimum of 90 days. If we can put out a request for a proposal on a specific service and award this to a winning company within 90 days this is considered fast. Just remember since we are taxpayer funded we have to be transparent and fair when selecting which companies we want to invest in and why.

A few successes that I'd like to highlight include:

- The Tesla and Panasonic battery factory is quickly coming on-line in the Reno/Sparks area bringing with it 6,500 NEW JOBS to the region.

- Faraday Future recently broke ground on their EV manufacturing factory in North Las Vegas, which will bring an additional 4,500 NEW JOBS to Southern Nevada.

- And Hyperloop One is testing their very high speed transit system.

Meanwhile, we continue to host multiple autonomous vehicle and truck tests for companies such as Daimler, Freightliner, Volvo and others.

In addition, team RTC recently worked with AUDI to provide them with traffic signal data that will alert drivers of how fast he or she needs to drive to continue to get a green light or what their anticipated wait time at the red light would be. According to Audi, they are testing this technology right here in Southern Nevada because, unlike like other cities, they were able to work directly with our regional traffic management center avoiding to have to work with multiple local governments.

While we had success we also have opportunities.

We recently issued a request for information to address pedestrian safety that calls upon technology companies for creative approaches, technologies and products to improve pedestrian safety in Southern Nevada.

In addition Nevada also issued request for information for a P3 Living Lab this solicits public, private partnership models and execution strategies to take advantage of the changes occurring in the transportation industry, maximize the resources Nevada has to offer and support the concept of a Nevada Living Lab. Nevada Living Laboratories (Living Labs) allows the testing of synchronized mobility solutions and technology in complex urban environments. This real life environment would provide the capability for industry, academia to research, commercialize, develop, showcase and deploy ranges of new mobility technologies required to succeed in this fast emerging new market.

So before I end I wanted to quickly give you 5 reasons why you should consider doing work in Nevada?

Nevada's elected leaders and local governments understand the need to create deployment-friendly policies with common sense approaches when attracting emerging technological industries to our community. In fact, the state's Department of Motor Vehicles (DMV), with the help of the Nevada Department of Transportation (NDOT), was the first in the county to implement the testing, licensing and regulating of autonomous vehicles. We are one of only nine states that have passed legislation addressing the testing of autonomous vehicles. The city of Las Vegas has also adopted a resolution that identifies their downtown urban area as an innovation district.

Southern Nevada has a diverse population and visitor volume base like no other city in the country; we are easily accessible to Utah, California and Arizona; our urban areas are dense with traffic conditions that accommodate all modes including pedestrians, cyclists, motorists and transit riders;

Southern Nevada understands traffic management and the use of technology. The RTC's Freeway and Arterial System of Transportation (FAST) is one of the first truly integrated Intelligent Transportation System (ITS) organizations in the country. FAST keeps vehicles flowing as smoothly as possible through an integrated technology system of cameras, dynamic message signs, ramp meters and traffic flow detectors on freeways and arterials throughout Southern Nevada.

The Governor's Office of Economic Development (GOED established the Nevada Center for Advanced Mobility (NCAM) to serve as the single point of contact for leveraging and coordinating opportunities and assets within the state of Nevada. Whether it be licensing your autonomous vehicle, installing technology at the Innovation District in the City of Las Vegas, demonstrating technology for an event or accessing traffic signal data, Nevada CAM is charged with fostering opportunities and a progressive business and regulatory environment advantageous to the emerging industry.

Nevada can lead the way in developing transportation technology with its unprecedented collaboration that is occurring here between public and private sectors. Much like competitive businesses, it is not uncommon for local government agencies to build silos of their information. In my 27 years of service in local government, I have never experienced the cooperation that I am witnessing on this effort. We receive feedback regularly from outside parties and international consultants that confirms our regional collaboration is unlike any other. It is refreshing, effective and frankly, makes work a lot more fun. There is nothing more fulfilling than being part of a team that has a strong, common goal and respect for each other.

IN A NUTSHELL

- To build communities with connected and autonomous vehicles (CAV), we need to work together to ensure that regulations, city infrastructure and CAVs are delivering on its promises of increased safety, mobility and efficiency.
- When working with government 4 best practices are to know your product; get smart about their policies and framework; identify roles and resources; and manage your timelines and expectations.
- Team Nevada will continue to collaborate globally with public and private partners to create advanced mobility opportunities for our citizens and the industry.

To truly build connected communities with autonomous and connected vehicles (CAV), we need to work together to ensure that regulations, city infrastructure and CAVs are delivering on its promises of increased safety, mobility and efficiency.

When working with government 4 best practices are to know your product; get smart about their policies and framework; identify roles and resources; and manage your timelines and expectations .

Team Nevada will continue to collaborate globally with public and private partners to create advanced mobility opportunities for our citizens and the industry.