The world is changing as a result of technology and innovation...

...and so is transportation.
1999: “Don’t get in a car with strangers.”

2009: “Don’t meet people from the internet alone.”

2019: “Order yourself a stranger from the internet to get into a car with alone.”
What is the future of transportation?
CONSIDER SEGWAY SLIDES
What technology and applications should my agency invest in?
What do we need to do to be ready for connected and automated vehicles?
How can we take advantage of emerging technologies to help enable mobility in our community?
Intelligent Mobility

A new way of thinking about how to use innovation technology, and data to better connect people to other people, places, goods, and services and to reimagine how we plan, design, operate and maintain infrastructure across all modes of transportation.
Start by identifying needs and outcomes
Flexible

Maintain the ability to be nimble and to pivot when necessary
Actionable

Take advantage of existing technology while preparing for the future
Agency Activities

- Educate
- Conceptualize
- Plan
- Design
- Deploy
- Operate
Examples
Go-NV
Nevada Institute for Automated Systems

Collaborated with multiple agency stakeholders across Southern Nevada to hold a first of its kind event to promote intelligent mobility in the region by bringing in local, national, and local experts for engaging panel discussions, followed by demonstrations of emerging technologies, such as CV applications.
RoadX Bike/Ped Challenge
Colorado Department of Transportation

Held a global challenge to engage industry and innovators to develop and submit implementable solutions to enhance bicycle and pedestrian safety and efficiency.
Experiential Engagement
Boulder Highway Pedestrian Ideation

Developed and implemented a unique public engagement and ideation process to identify barriers to mobility and conceptualize innovative and technology based solutions to address these challenges.
CV/AV Scenario Planning
Colorado Department of Transportation

Developed various future scenarios through education and stakeholder engagement that describe with various transportation and land use impacts of connected vehicles and automated vehicles (CV/AV), for use in the state-wide travel demand model and transportation plan.
Plan

Mobility Roadmap
Regional Transportation Commission of Southern Nevada

Developed a vision and roadmap to help RTCSNV and their agency stakeholders achieve their mobility objectives for the Las Vegas valley and prepare/take advantage of emerging technologies such as CV/AV.
Signal Phase and Timing (SPaT) Infrastructure
Georgia Department of Transportation

Designed Dedicated Short Range Communication (DSRC) road side unit infrastructure to broadcast SPaT messages to connected vehicles operating on GDOTs roadways.
Deploy

Commercial Vehicle Signal Priority (CVSP)
Colorado Department of Transportation – Region 4

Deployed infrastructure to allow CDOT’s traffic signals to prioritize commercial vehicles approaching an intersection in order to improve safety, freight efficiency, and overall corridor efficiency.
North Avenue Smart Corridor
Renew Atlanta

Worked with the City of Atlanta and agency partners to design, deploy and operate connected and automated vehicle infrastructure and systems along North Avenue to test emerging technologies and to serve as a framework for future deployments of these emerging technologies in Atlanta.
Other Lessons Learned
Greater Charlotte Area ACV Roadmap Action Plan

- Fleet Management
- Modeling and Forecasting
- Transportation Planning
- Infrastructure Costs
- Land Use Planning
- State Policy and Regulations
RTC FAST Mobility Roadmap – Areas of Opportunity

• Data Management
• Data Driven Planning
• Traffic Signal Operations
• Multimodal Operations
• Emerging Technologies
i2a – Performance Metrics

- Reduce injuries and fatalities
- Reduce multi-car collisions
- Improve travel times on road
- Reduce per incident costs
- Reduce Road Ranger response times
- Reduce abandoned vehicle rates

- Reduce traffic violations
- Reduce pedestrian detection failures
- Reduce gap in real-time data and reported conditions
- Increase dedicated bike/ped facilities

- Increase number of connected users
- Increase transit ridership
- Better access to choices for all
- Improve modal-split
- Improve access to jobs/services for all
- Improve personal travel time

- Increase miles of CAV compatible
- Increase number of shared, discoverable data sources
- Increase number of agencies with shared communication infrastructure
- Increase number of innovative intersections
# i2a – Implementation Strategy

## IMPLEMENTATION STRATEGY

<table>
<thead>
<tr>
<th>THEME</th>
<th>DESCRIPTION</th>
<th>SAMPLE PROJECT</th>
<th>SAMPLE PROJECT</th>
<th>SAMPLE PROJECT</th>
<th>VISION</th>
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<tbody>
<tr>
<td>Mobility as a Service</td>
<td>Building on local efforts, Mobility as a Service should bring every mode of transportation together in a single mobile app. It seamlessly combines transportation options from different providers, handling everything from travel planning to payments.</td>
<td>The first MoSa solution will be based in one geographic area such as LUS in one of our other urban areas as the pilot location, we will implement a series of solutions based on the outcomes of the LUS workshop.</td>
<td>Develop business case, funding and full commercial strategy together with a MoSa based on the learning on the proof of concept.</td>
<td>Secure supplier and extend the MoSa solution across the region building on the foundations of the LUS proof of concept.</td>
<td>To provide a MoSa membership and value for the future region, it will include a MoSa payment system and be open and inclusive of all modes of transportation both public and private.</td>
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<td>Data Platform</td>
<td>The fusion and analysis of data from across the region brought together in one platform enables the maximum amount of insight to be collated and shared among all participating agencies.</td>
<td>Introduce a cloud-based data platform that is focused on road and transit data throughout the region and open to all public and private users.</td>
<td>Develop business case, funding and full commercial strategy together with a MoSa based on the learning on the proof of concept.</td>
<td>Secure supplier and extend the proof of concept to the new platforms and extend geographic coverage across the region.</td>
<td>To use big data to optimize mobility movement across the region, inform informed planning strategies and drive efficiency savings.</td>
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<tr>
<td>Re-Imagining Infrastructure</td>
<td>Applying the benefits of technology and innovation to our existing infrastructure in both fixed and variable assets, improve mobility, reduce cost, and increase efficiency.</td>
<td>Build on the Tampa Connected Mobility Plan by expanding further into the Tampa Bay region or platforms.</td>
<td>Develop a series of urban data clouds for ONV solutions that cover an area and extend to design for urban living in Florida on a complete streets approach.</td>
<td>Run a global competition to attract the world’s leading ONV companies to Tampa to address the user cases, enable the urban living lab and drive economic growth.</td>
<td>To be the world’s leading urban lab for the deployment of connected and autonomous vehicles and solutions that make a real difference to people live.</td>
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*Proof of concept to be selected at July 2018 workshop by Action Teams.*
Douglas County Intelligent Mobility Road Map

ROADMAP CATEGORIES

- Leverage existing technology
- Prepare infrastructure for vehicles with automated driving features
- Install CV roadside units
- Evaluate traffic signal operation and performance
What are the biggest mobility challenges you face?
Thank You

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