SMART TRANSPORTATION

WHY DO WE NEED IT?

- Traffic is a growing problem
- New types of vehicles are impacting public safety
- Access to mobility is an equity issue
- Physical infrastructure is expensive, and not always the best solution
- Transportation affects the environment

SHARED, SAFE, SUSTAINABLE SOLUTIONS

Electrification: Communities can help drive electric vehicle adoption by purchasing EVs for government/public use; offering incentives to install charging infrastructure; marketing the benefits.

AV governance: Policy development starts with understanding the likely impact of autonomous vehicles on traffic, parking, and safety.

Avoiding the infrastructure trap: Which is cheaper? A new smart transportation project or a new parking garage? Consider.

Data management: Cities are beginning to examine new data sources and new smart city data management architectures. But these models are still under development.

SMARTER TRANSPORTATION TECH

Fiber connectivity: Fiber is critical for complex connected transportation deployments. So is figuring out how best to pay for the investment.

The DSRC debate: Dedicated Short Range Communications (DSRC) technology is the standard in the connected vehicle space, but there are equipment interoperability challenges. Spectrum concerns may also impact DSRC's use in the future.

Security: Security in connected vehicle environments is paramount – worker background checks and training, hardware security modules for roadside and onboard vehicle devices, virtual private networks, firewalls, and database encryption.

Autonomous vehicle sensors: AVs use radar both radar and lidar. Radar depicts the shapes moving around a vehicle. Lidar offers more visual detail, but depending on angles, can create shadows that distort imagery. Cameras help (literally) fill in the picture.

The role of 5G: If an AV is making realtime driving decisions based on communications from the surrounding environment, a 5G network is probably required. But today, AVs contain all data processing within the vehicles themselves. In the future? ¯_(ツ)_/¯