Transportation Technology
Considering Our Future

**Citizens' Advisory Committee &
Technical Coordinating Committee**

April 20, 2021

Change is ...

According to a report published by Dell Technologies and authored by the Institute For The Future (IFTF) **85%** of the jobs that will exist in 2030 haven't even been invented yet.

"The pace of change has never been this fast, yet it will never be this slow again."
J. Trudeau

Advances in Transportation Technology

What's Here Now ?

- Camera Surveillance
- Dynamic Messaging
- Navigation Apps
- License Plate Detection
- Driver assist features

What's Coming ?

- Drone Deliveries
- Automated Vehicles
- Flying Vehicles
- Electric Vehicles
- Integrated technology
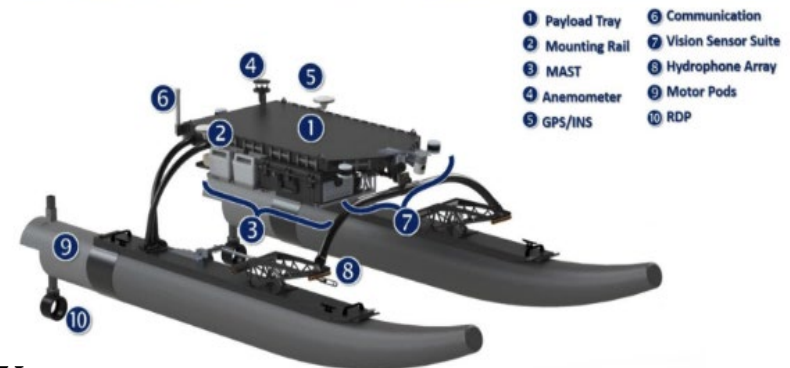
ROAD TO CHANGE

ACES

- Automated
  - 6 levels
  - Demo projects underway
- Connected
  - Vehicle to vehicle
  - Vehicle to infrastructure
- Electric
- Shared
  - Cars, bikes, other
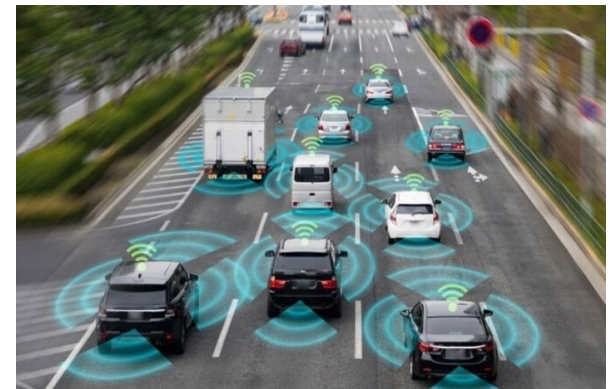
What Can Technology Offer?

- Improve safety

- Reliability (emergency management)

- Efficiency (reduced fuel consumption, improved air quality, parking availability)

- Cost Savings
  - Freight (parking availability)
  - Transit service
  - Optimize shipping routes & deliveries

- Marine applications (surveillance, bridge inspections)

- Aviation - predict & reduce flight delay

1. Payload Tray
2. Mounting Rail
3. MAST
4. Anemometer
5. GPS/INS
6. Communication
7. Vision Sensor Suite
8. Hydrophone Array
9. Motor Pods
10. RDP

Terms to Know

Artificial Intelligence (AI)	computer systems that are able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making,
Machine Learning	computer systems that are able to learn and adapt without following explicit instructions, by using algorithms and statistical models to analyze and draw inferences from patterns in data.
Internet of Things (IoT)	a system of internet connected devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

Smart City

An urban area that uses different types of electronic methods and sensors to collect data. Insights gained from that data are used to manage assets, resources and services efficiently.

What Are the Projects?

- Adaptive Signal Control Projects
  - International Speedway Blvd (US 92)
  - US 17/92
  - Granada Blvd (SR 40)
  - Dunlawton Avenue (SR 421)
  - SR 44

- ITS Events Management Project

- Connect 2045 Local Initiatives Funding

- Other Agency Projects

What Are We Working On?

- R2CTPO Intelligent Transportation Systems (ITS) Master Plan (2016)

- R2CTPO Transportation Systems Management & Operations Master Plan, Phase II (June 2018)

- R2CTPO Connected and Automated Vehicle Readiness Study Technology Transition Plan (June 2020)

- Regional Transportation System Management & Operations (TSM&O) Collaboration

What Else Do We Need to Think About?

- Land-use Design

- Policy

- Project Implementation

- Institutional Barriers

- Social Acceptance

- Partnerships

Questions/Comments