



# RCOC Current ITS Initiatives

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# RCOC's ITS/Connected-Vehicle Background

- Early adopter of ITS technologies with creation of FAST-TRAC program in 1992.
  - Ali-scout
  - Video detection
  - Tours
- First adaptive traffic-signal system in the nation (SCATS).
- One of first local agencies involved in connected mobility in early 2000s.
- Extensive experience in ITS field installations.
  - Maintain signals for most cities & MDOT
- We have been a partner in more than 20 C-V projects.



# Leading in Technology

- 2<sup>nd</sup> largest “smart”/adaptive traffic-signal system in the nation – 800 plus signals, planning additional 450 in the near future.
- Added wireless cameras at over 200 locations – signal sent to Traffic Operations Center via cellular.
- Saves RCOC staff from travelling to intersections to monitor signal operation or program detection
- One of few local road agencies in the nation involved in connected-vehicle technology.



# Adaptive System, Communications & Detection

- Biggest user of Adaptive Signal System in North America
- Challenges of running an Adaptive System
  - Communications
    - AT&T Virtual private network
    - Excellent Reliability/ quick response to trouble shooting
    - Safe from external attacks, part of “First Net”
    - Unique replacement to expensive fiber
    - Low maintenance
    - We are one of the biggest one in the country using this technology
    - Public private partnership for the last 25 years
      - Potts lines, ISDN and currently cellular modems
    - Waiting for what true 5G has to offer
  - Detection
  - One of the oldest users of video detection in the country
    - Video cameras (Econolite, Grid Smart and Iteris cameras)
    - Wireless sensors
    - Radar

# CCTV Cameras / Detection Cameras

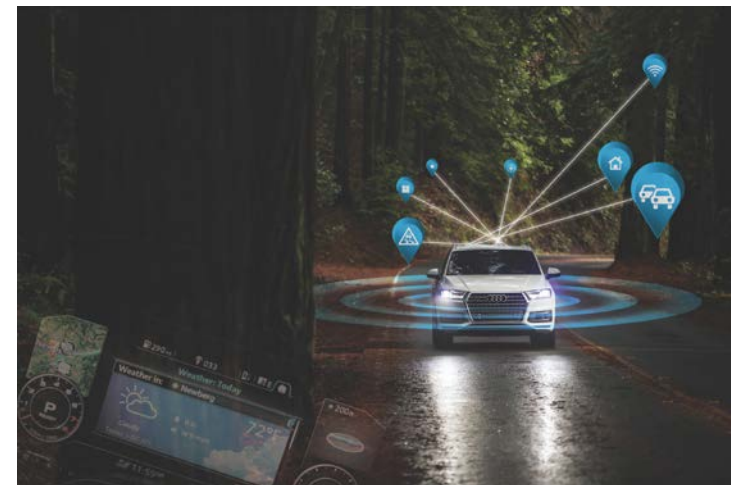
- Started as a side benefit to bringing Signal Information back
- It has been a successful endeavor
  - ▣ Helps staff effectively monitor traffic from office.
  - ▣ Helps with construction projects
- Currently we have over 200 CCTV cameras and plan to add approximately 100 more in the next Fiscal year
- Bring detection cameras back to the TOC
  - ▣ Ability to program from the desk top
  - ▣ Currently bringing back 571 cameras (156 intersections)
  - ▣ Verify all the information in case of a change

# RCOC CV Current Involvement

- Partners with MDOT in all Oakland County DSRC Installs
- Currently designing 7 intersection for CV to X Corridor along 14 Mile Road
- Waiting for a federal mandate to make it a county wide deployment standard

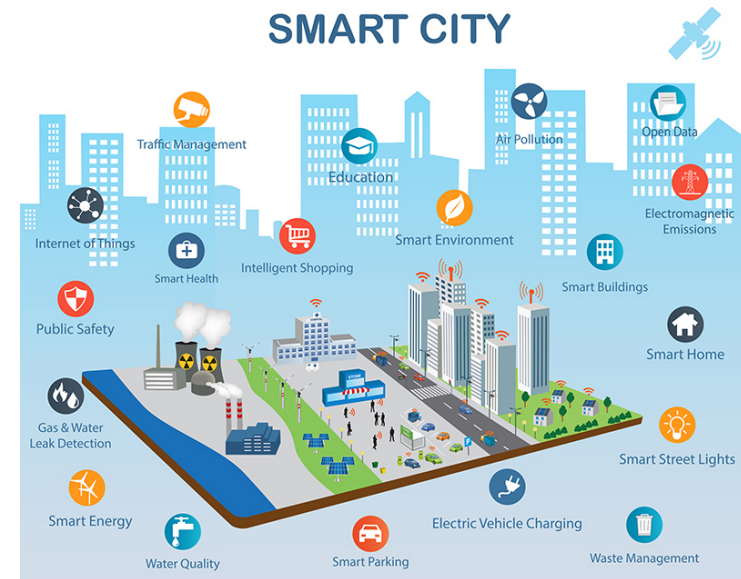
# Connected-Vehicle Involvement

- RCOOC is involved in connected-vehicle projects with:
  - Federal Highway Administration (FHWA)
  - Michigan DOT
  - Most auto companies
  - Top-tier auto suppliers
  - Connected/autonomous-vehicle companies
  - Top academic institutions
  - Foreign partners



# RCOC's Connected-Vehicle Projects

- Chrysler (Stellantis) HQ campus
- Proof of Concept Novi/Farmington Hills
- Partnering with MDOT Test beds
- Local and national committees
- Oakland County Connected-Vehicle Task Force





# What is Our Goal?

- Operate to the best of our abilities with the given resources
- Stay on top of what is being offered by the industry
- Test the latest and greatest technologies
- Be open and welcoming to the inventors and entrepreneurs
- Adopt and implement the latest consolidated technologies
- Move towards Connected Cities environment with maximum forward and backwards compatibility

Thank you!

QUESTIONS?



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