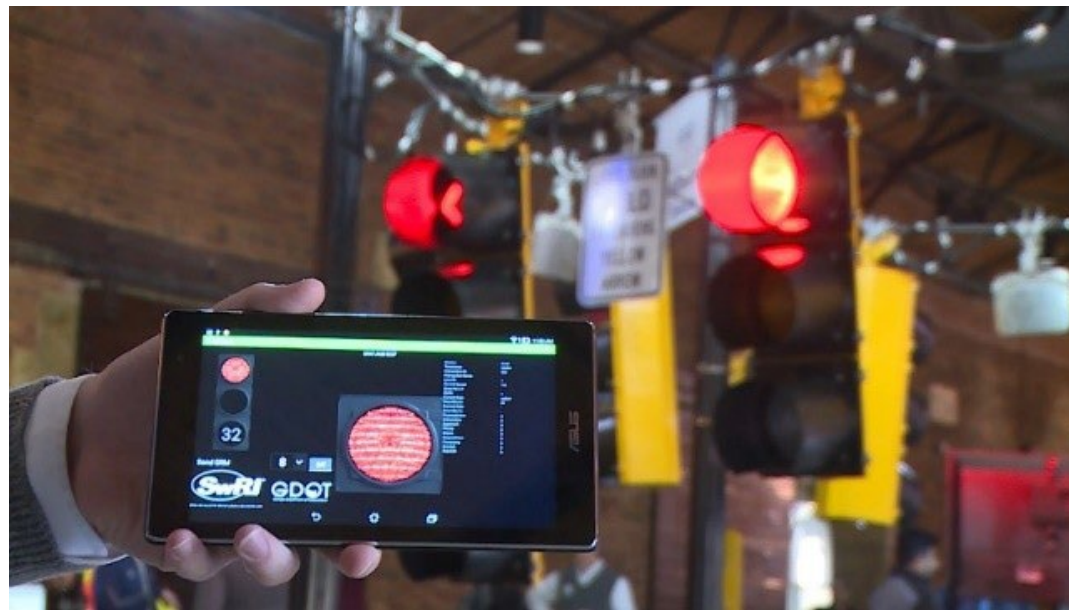




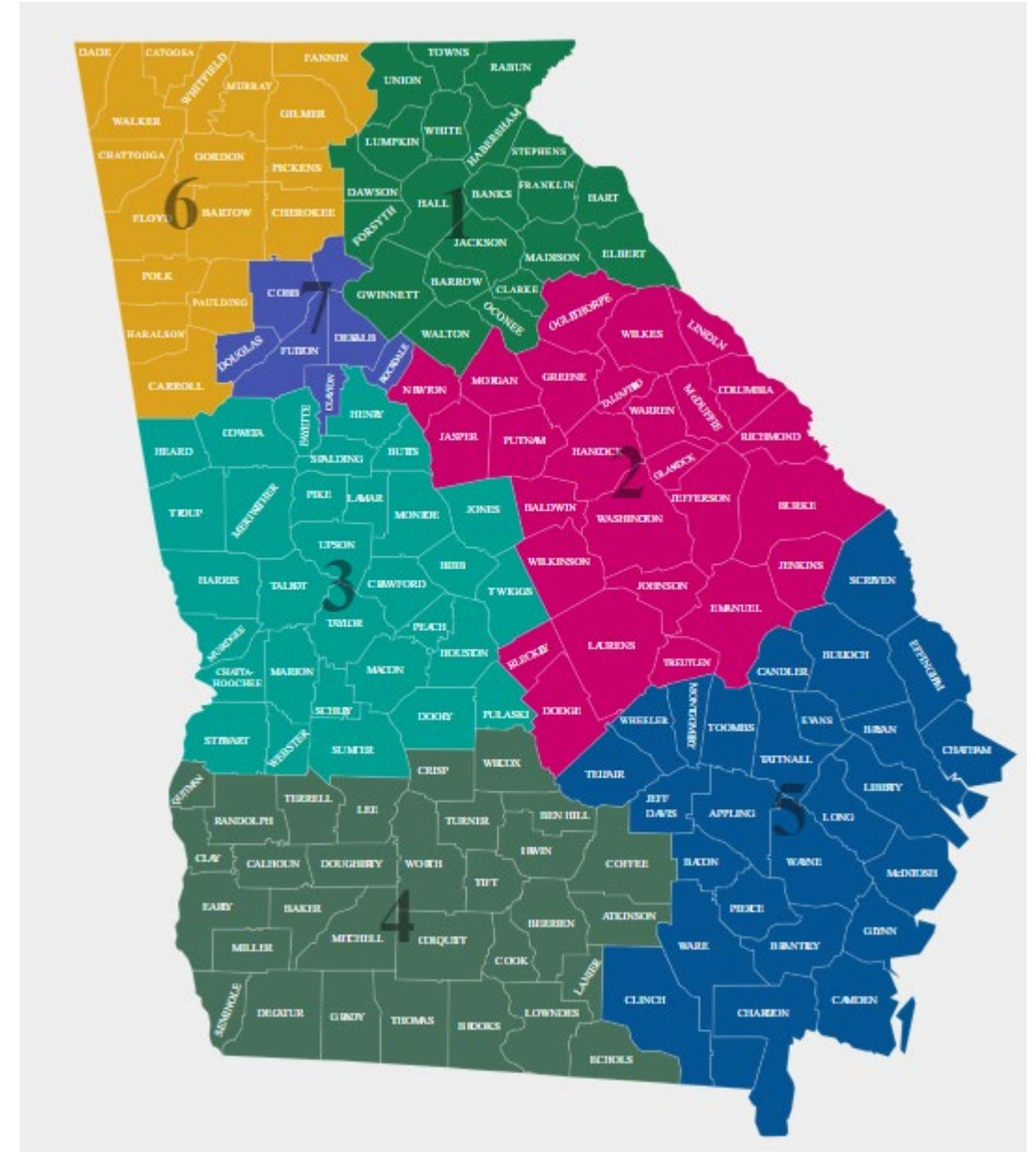
V2X – Where to Begin?

Alan Davis, PE, PTOE – State Traffic Engineer



About GDOT

- Pretty centralized: HQ in Atlanta
- Divisions, then Offices, make up HQ
- 7 Districts



V2X Basics

V2X for infrastructure – owner – operators is an added layer to existing traffic management goals and objectives.

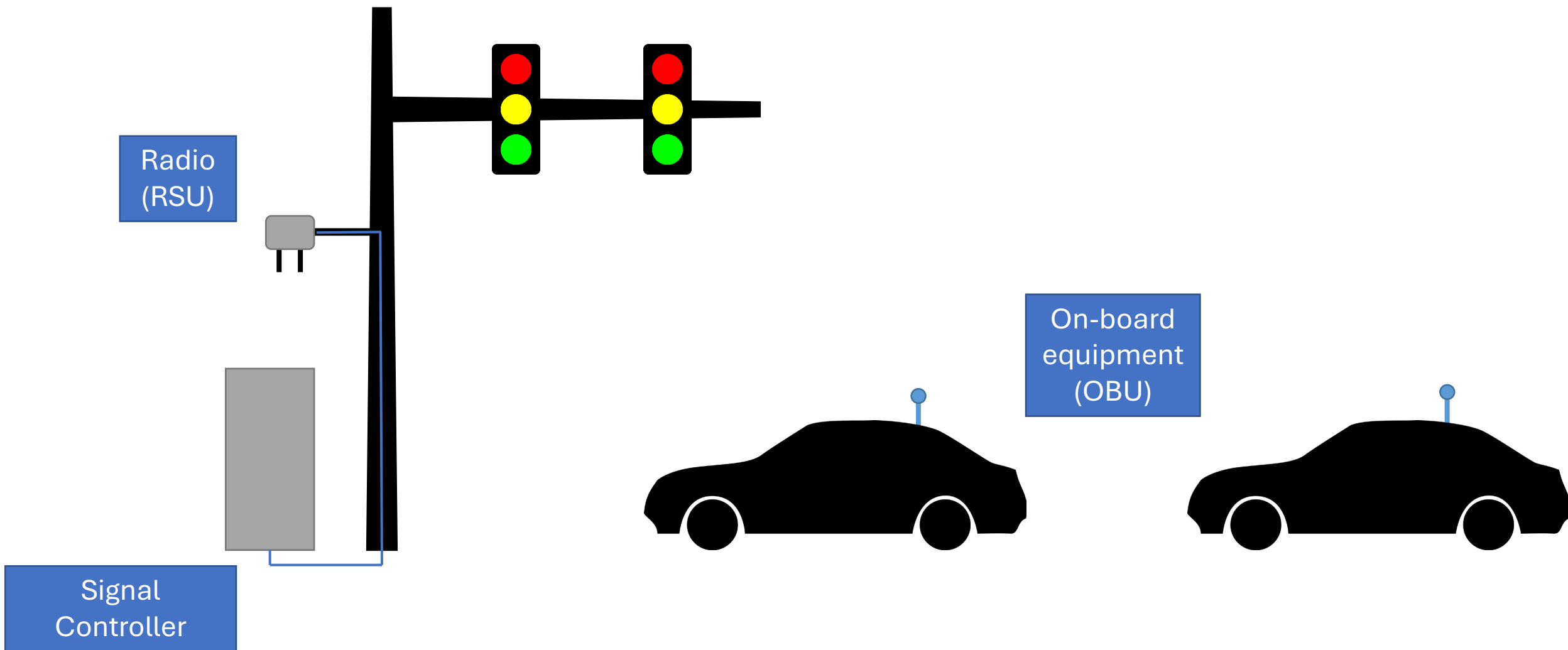
- Safety
- Mobility
- Traffic Management
- Traveler Information

The applications drive the deployment – and the technology.



V2X Infrastructure

What's Needed for Traffic Signals?



GDOT V2X Program

- Program history and overview
- Implementation and pilot applications
- Roadmap for the future



GDOT V2X Program Timeline

2017:
AASHTO
SPaT
Challenge

2018:
Regional
Operations
Expansion

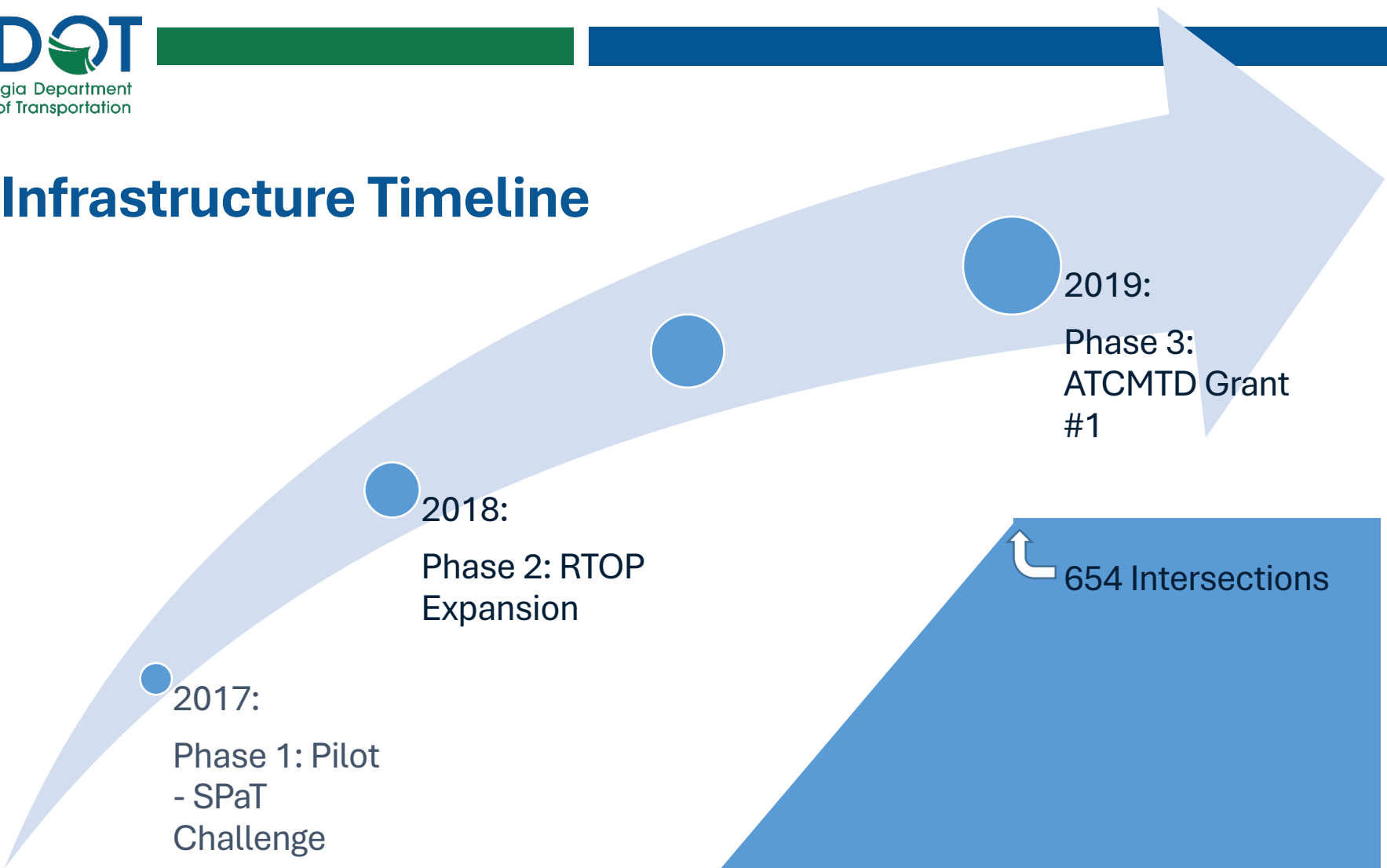
2019: USDOT
ATCMTD

2020: Atlanta
Regional
Commission
(ARC)
Partnership

2021: USDOT
ATCMTD #2

2022 –
Present: V2X
Roadmap

Infrastructure Timeline



November 2019:

FCC Action on Spectrum:

- Reallocate 45 MHz to WiFi
- Proposed use of C-V2X and obsolescence of DSRC

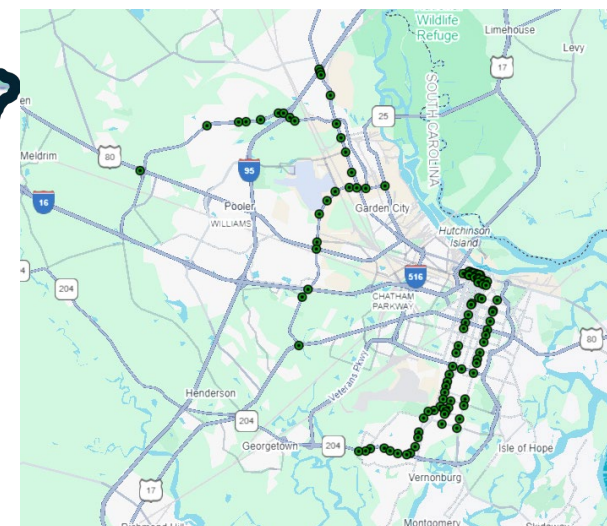
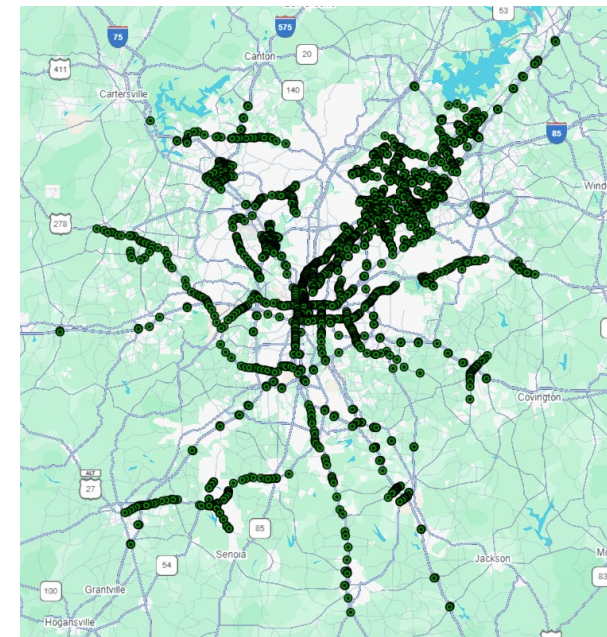
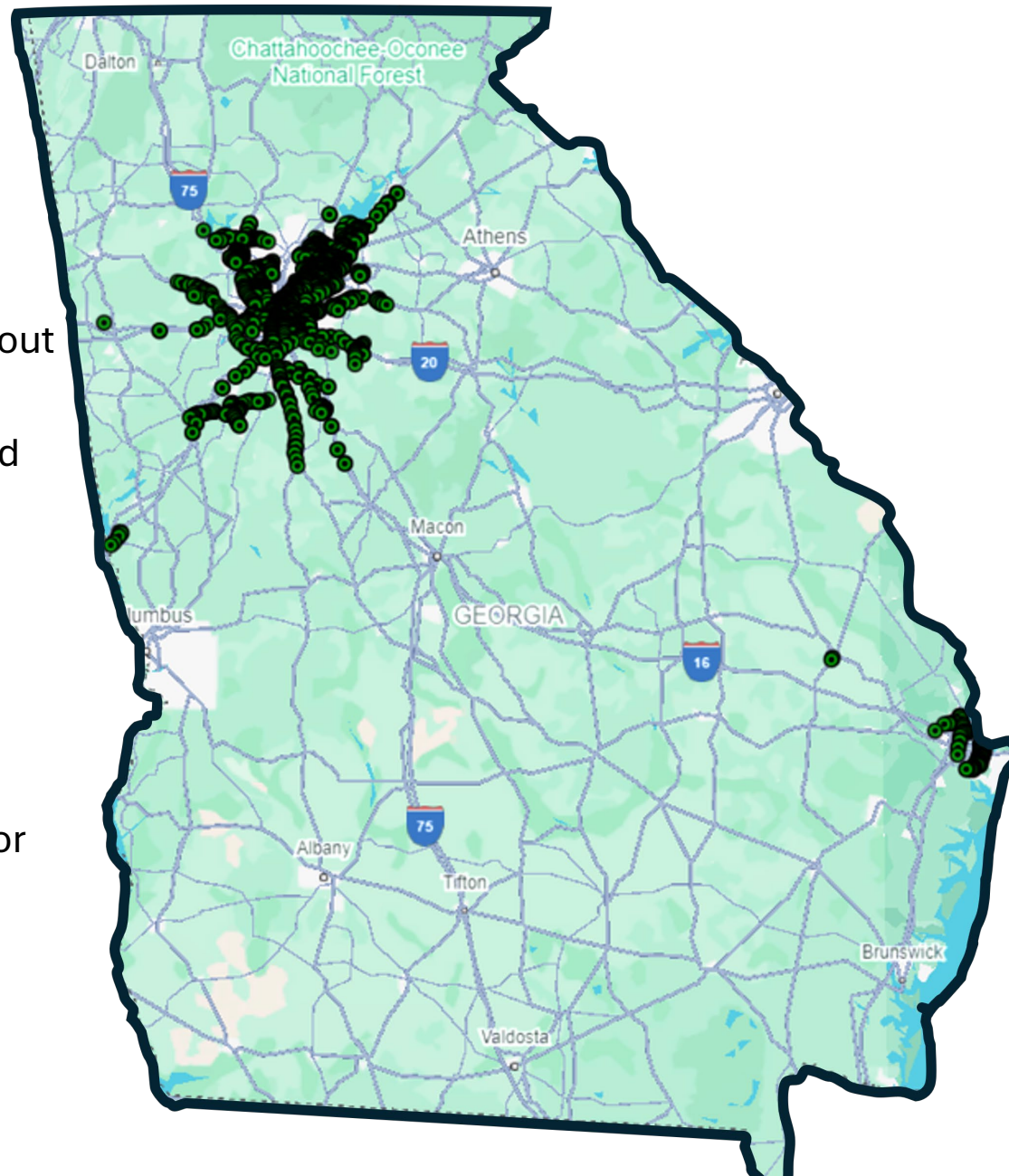
V2X Today

Over 2,262 RSUs deployed throughout the state.

Focusing on public sector fleets and intersection-based applications.

- Freight Signal Priority
- Transit Signal Priority
- Emergency Vehicle Preemption

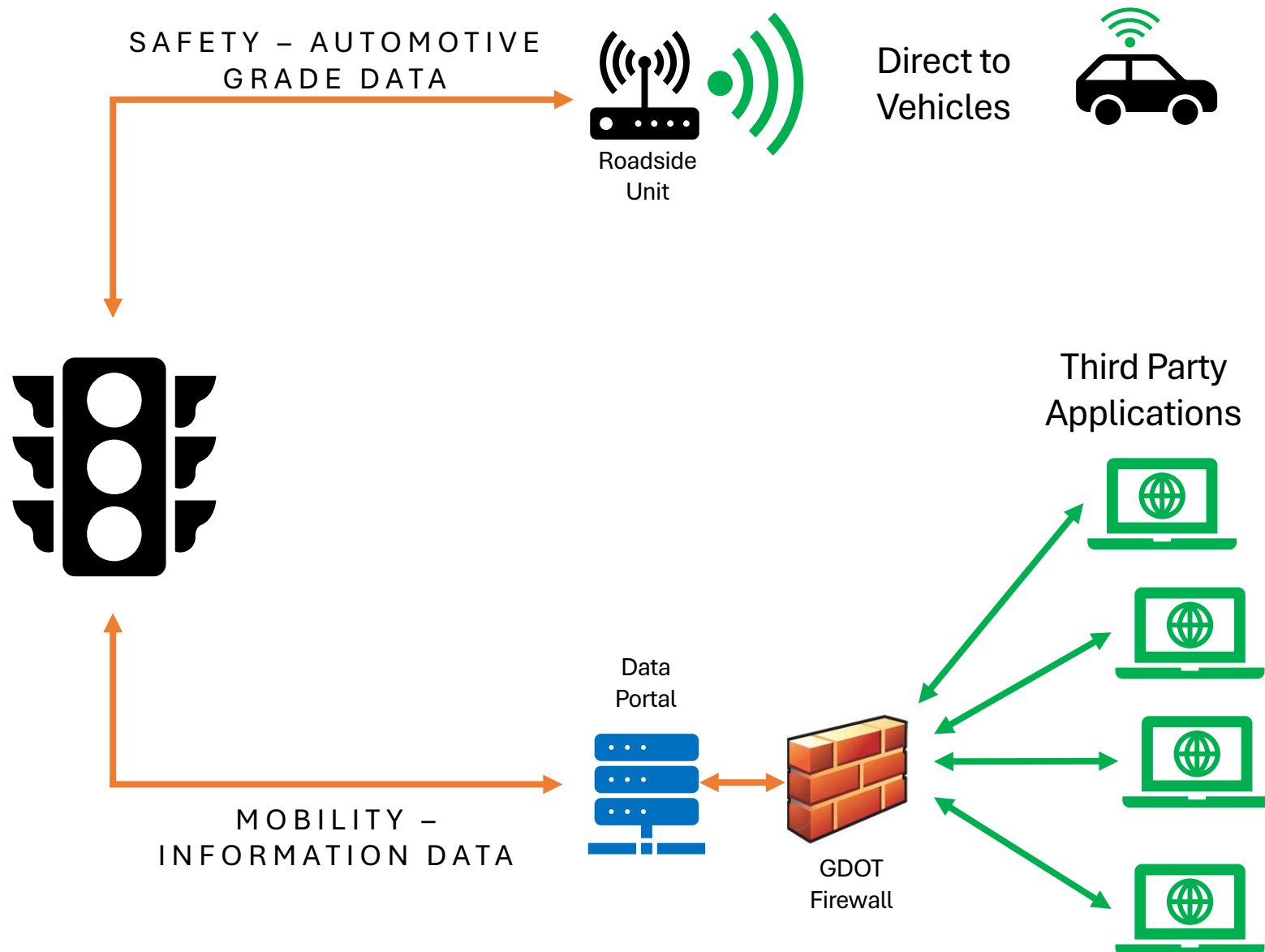
Application of safety applications for equipped vehicles.





GDOT V2X Framework

- Safety and mobility applications achieved through multiple means. The application drives the method the data arrives to a user.
- Close attention needs to be made to data quality, security, and accuracy - especially for data used for safety applications.



GDOT Day-One Applications Enabled

Emergency Vehicle Preemption

Demonstration in Gwinnett County of the use of V2X for emergency vehicle Preemption on a fire truck.

Transit Signal Priority

Pilot of Transit Signal Priority on Xpress buses in Midtown Atlanta using V2X.

Freight Priority and Information

Equipping freight vehicles in Savannah to request signal priority and receive information regarding blocked at-grade rail crossings.

Signal Phasing and Timing

Demonstration of red-light running and optimal green speed applications to inform drivers for improved safety and mobility.

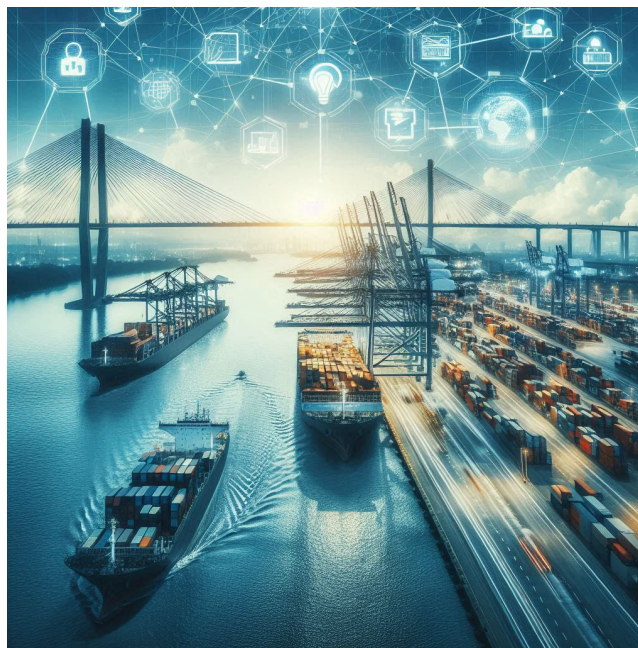
Lessons Learned

- Invest in the basics first
- Deploy with scalability in mind
- Consistency, accuracy, reliability, security
- Capacity and capability of staff



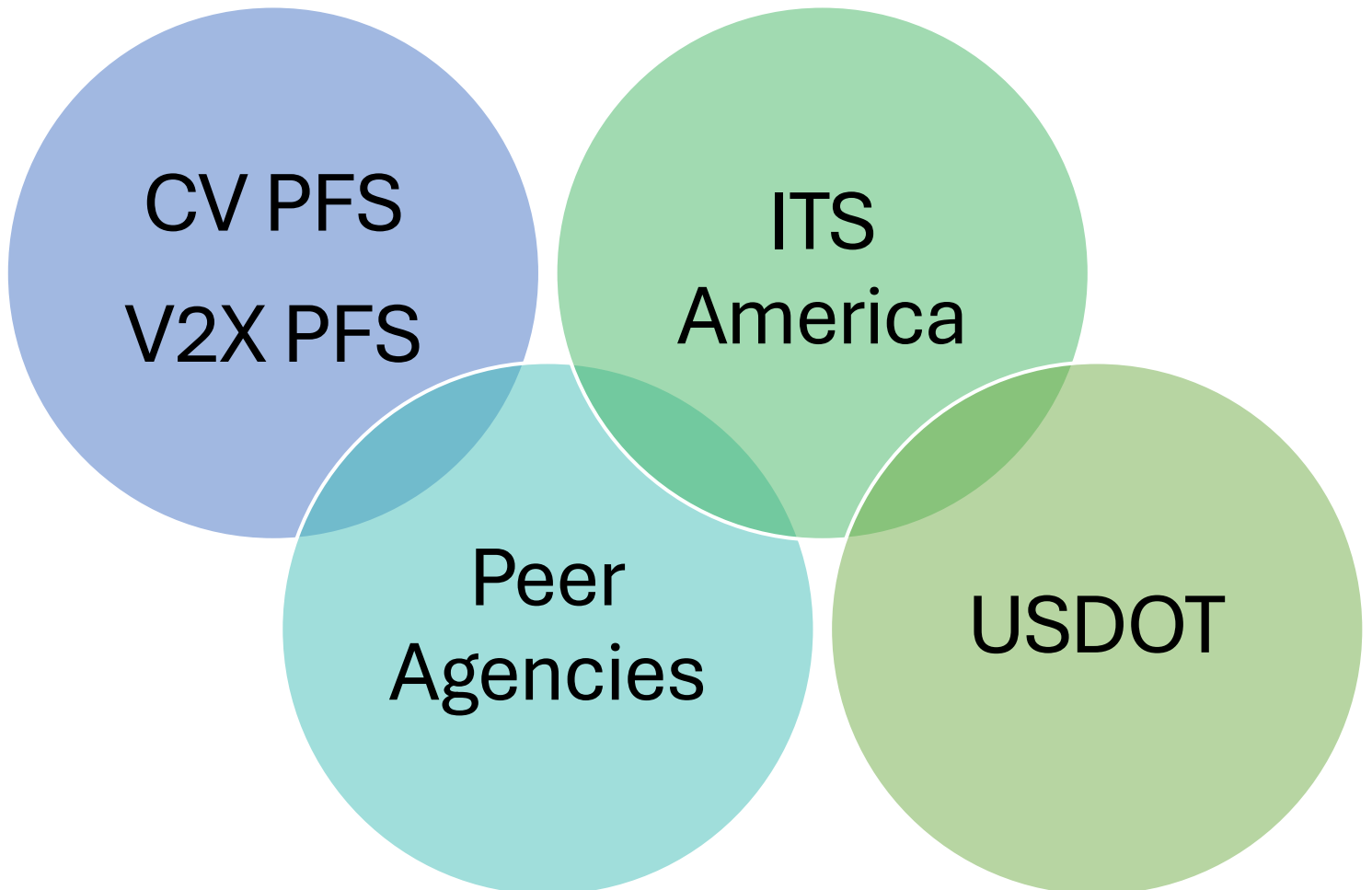
Why Deploy?

- Benefits now, benefits for the future
 - Leverage for public fleet applications today
 - Data
 - Safety and mobility to come – with OEM deployment
- Risk?
 - We'd rather be accused of trying.
- The Chicken or the Egg?
 - We're both.



V2X Deployment Resources

- CV Pooled Fund
 - <https://engineering.virginia.edu/labs-groups/cvpfs>
- V2X Pooled Fund
 - <https://pooledfund.org/Details/Solicitation/1615>
- V2X Cohort
- Funding
- 2025 ITS World Congress
 - In Atlanta!
 - Day One Deployment District



THANK
YOU



Alan Davis, PE, PTOE
State Traffic Engineer

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<https://cvprogram-gdot.hub.arcgis.com/>