SESSION TOPICS

- Partnerships in V2X (Vehicle-to-Everything) Deployment

- Ensuring Interoperability

- Funding Strategies for V2X Infrastructure

- Current V2X Applications and Benefits

- Future Directions and Considerations

PARTNERSHIPS IN V2X DEPLOYMENT

COLLABORATION WITH GDOT AND ATLANTA REGIONAL COMMISSON

Importance of Collaboration
Collaborating with Georgia Department of Transportation (GDOT) and the Atlanta Regional Commission (ARC) ensures that transportation initiatives are aligned and effective.

V2X Initiatives
V2X initiatives require coordination to integrate technology with transportation infrastructure effectively.

Regional Coordination
Efforts must be regionally coordinated to ensure comprehensive transportation solutions that benefit the entire community.

STATE AND CITY COOPERATION ON INFRASTRUCTURE DEPLOYMENT

V2X Infrastructure Deployment

Coordination is crucial for the effective deployment of V2X infrastructure.

Joint Agency Efforts

State and city agencies work together to ensure that infrastructure supports both regional and urban traffic needs efficiently.

Traffic Management Solutions

The joint efforts help create solutions that enhance traffic management in both urban and regional contexts. More than 2,200 Roadside Units (RSUs) for freight, transit, and emergency vehicle preemption have deployed throughout the state.
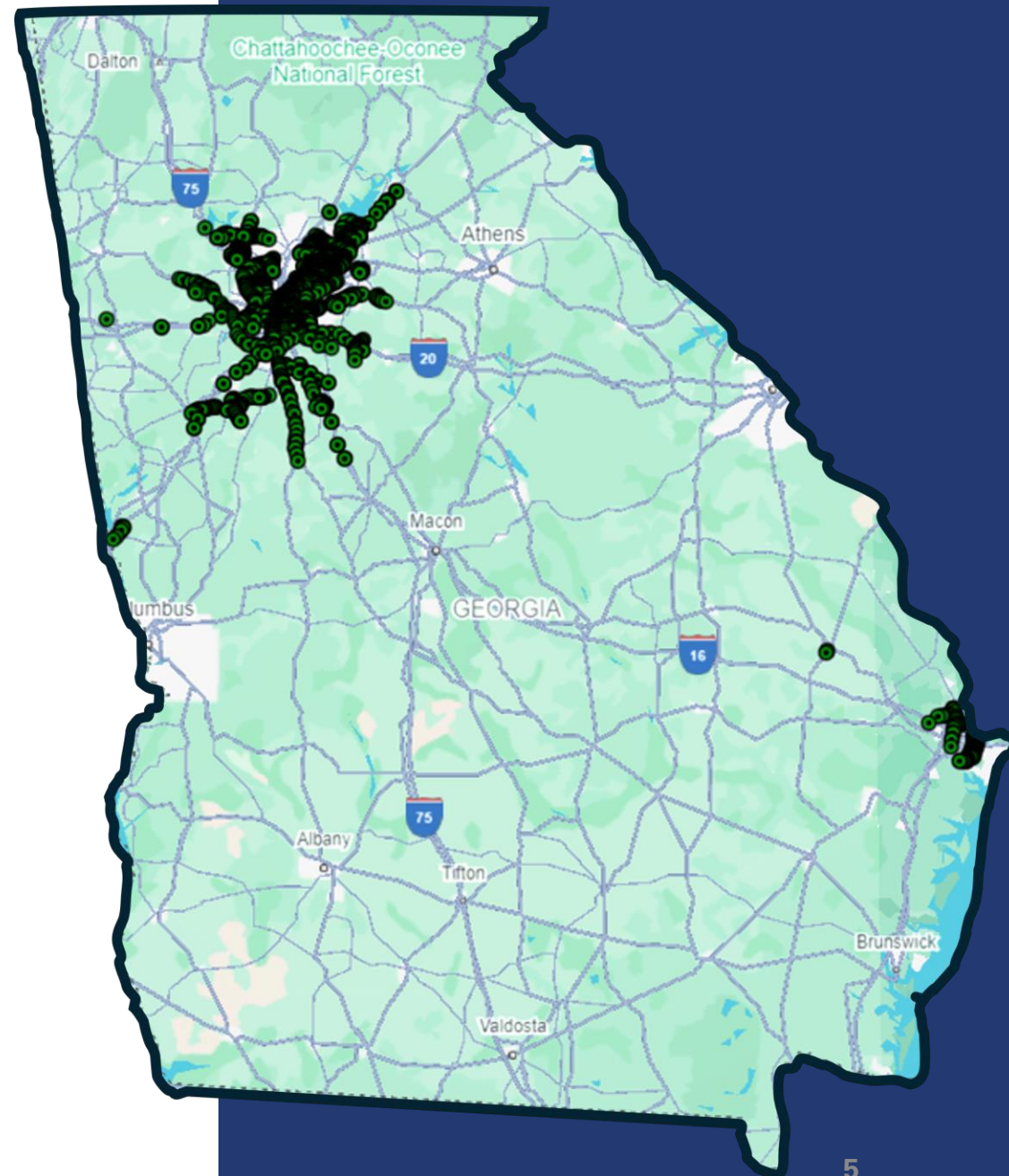
DEVELOPMENT OF A COMMON PLATFORM FOR V2X APPLICATIONS

Collaboration Among Developers

A common platform encourages collaboration among developers, enhancing innovation in V2X application development.

Seamless Technology Integration

Integrating various technologies on a common platform ensures seamless communication between vehicles and infrastructure, improving efficiency.

Enhanced Traffic Management

The platform aims to enhance traffic management by providing real-time data and insights, contributing to improved road safety.

ENSURING INTEROPERABILITY

COORDINATION WITH STATE PARTERNS

Importance of Collaboration
Effective coordination with local governments is essential for developing interoperability standards and enhancing V2X operations.
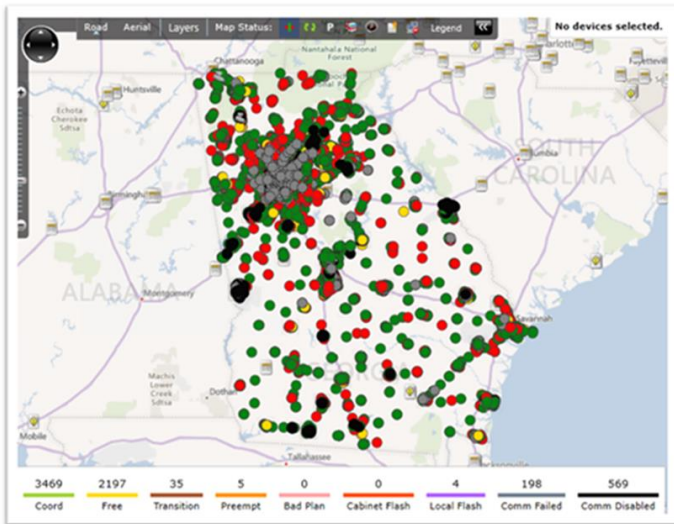
Establishing Standards
Collaboration helps in establishing interoperability standards that are crucial for seamless communication among various stakeholders.

Regional Coordination
Interagency cooperation aids in facilitating smoother Vehicle-to-Everything (V2X) operations for improved transportation efficiency.

REGIONAL TRAFFIC OPERATIONS MODEL

Standardized Operations

A regional traffic operations model standardizes traffic management practices across various jurisdictions, facilitating uniformity in operations.

Effective Data Sharing

The model promotes effective data sharing among agencies, allowing for timely updates and coordinated responses to traffic situations.

Improved Traffic Responsiveness

By implementing this model, cities can enhance their responsiveness to traffic conditions, improving travel times and safety for all users.

INTEROPERABILITY ACROSS SYSTEMS, NETWORK, INFRASTRUCTURE, AND APPLICATIONS

Importance of Interoperability

Interoperability is crucial for the seamless integration of V2X applications, enhancing communication and efficiency across systems.

Aligning Communication Protocols

Aligning communication protocols ensures that different systems can effectively exchange information, which is vital for interoperability.

Infrastructure Compatibility

Compatible infrastructure is necessary for supporting V2X applications, allowing for reliable interaction between vehicles and networks.

FUNDING STRATEGIES FOR V2X INFRASTRUCTURE

LEVERAGING STATE RESOURCES AND FORMULA FUNDS

Financial Support for V2X

Utilizing state resources ensures a significant portion of funding for V2X infrastructure projects, enhancing their implementation.

Broader Deployment

Effective use of formula funds facilitates broader deployment of V2X technologies, making transportation systems more efficient.

# COLLABORATION WITH MPOS FOR PROJECT FUNDING

Access to Funding Sources

MPOs provide access to additional funding opportunities for transportation projects.

Enhancing Project Financing

MPOs help facilitate easier financing of Vehicle-to-Everything (V2X) projects, promoting innovation.

Strengthening Urban Planning

MPOs help strengthen urban planning efforts by aligning resources and strategies effectively.
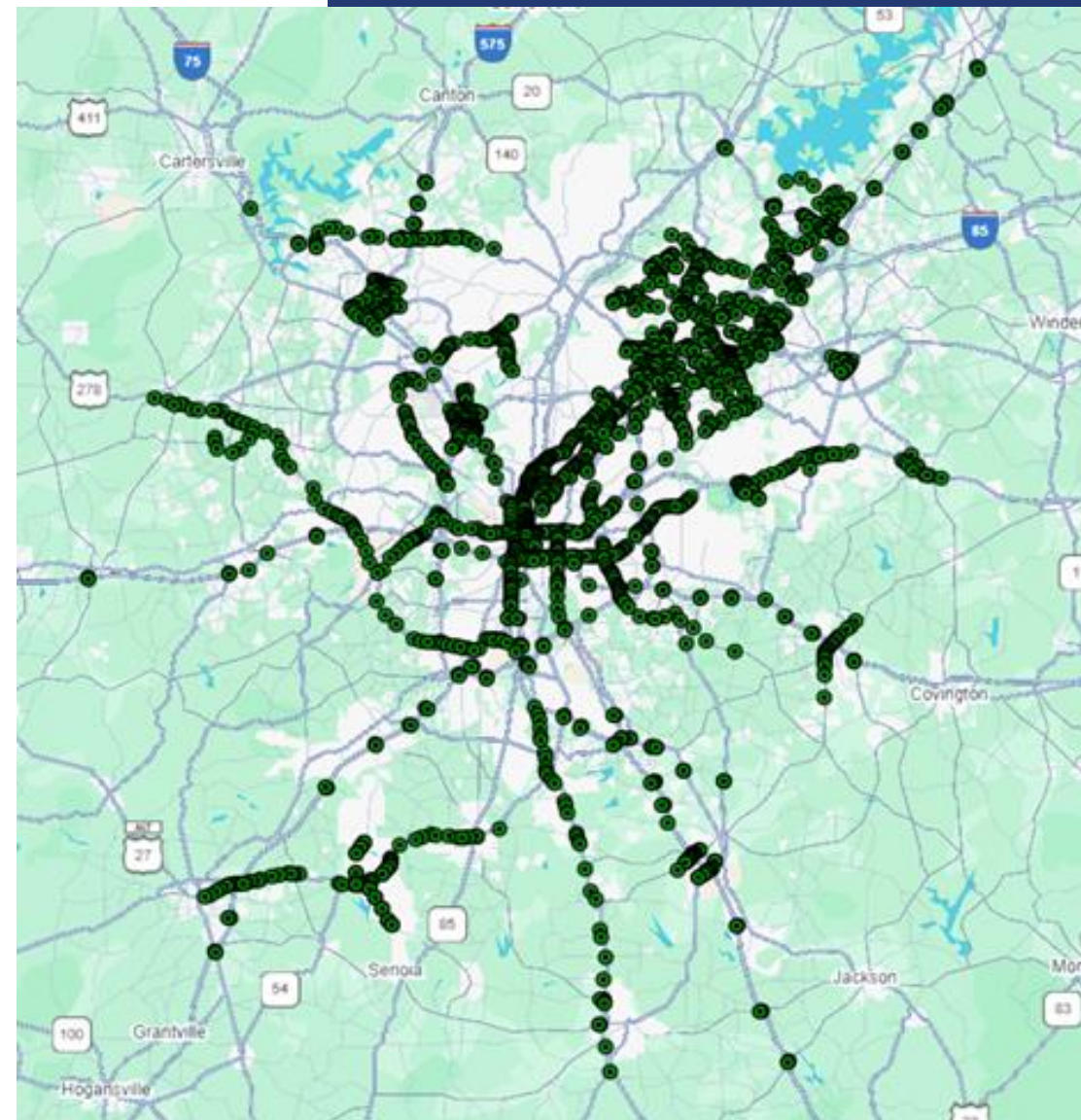
Pursuing Discretionary Grant Opportunities for V2X

Importance of Discretionary Grants

Discretionary grants at federal and state levels are vital for funding innovative V2X projects and initiatives.

Advancing V2X Technology

Funding from grants supports the development and advancement of Vehicle-to-Everything (V2X) communications technology.

Federal and State Support

Federal and state grants provide critical support for innovative technology initiatives, enhancing transportation systems.

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

CURRENT V2X APPLICATIONS AND BENEFITS

EMERGENCY VEHICLE PREEMPTION

Priority for Emergency Vehicles
Emergency vehicle preemption systems ensure that emergency vehicles receive priority at traffic signals, reducing wait times.

Improved Response Times
These systems significantly improve response times for emergency services, leading to faster emergency care and intervention.

Public Safety Enhancement
By prioritizing emergency vehicles, these systems enhance overall public safety and reduce the risk of accidents at intersections.
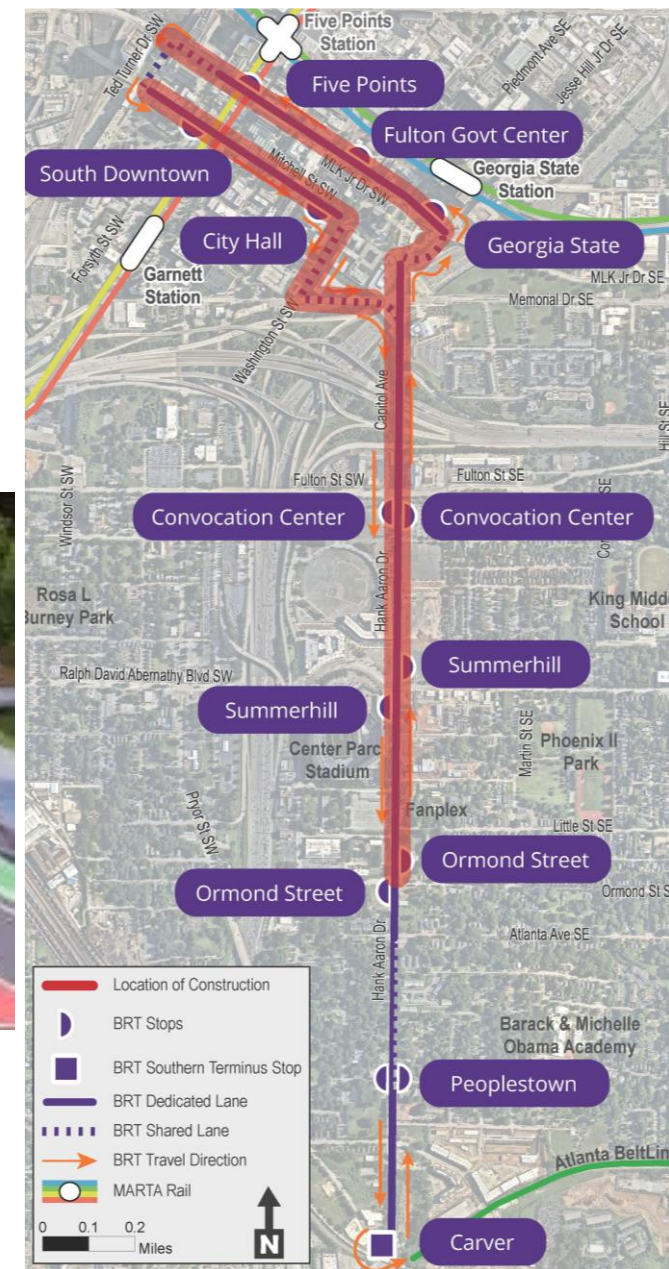
TRANSIT SIGNAL PRIORITY

Improved Service Reliability

Transit signal priority enhances the reliability of public transportation by reducing delays at traffic signals.

Increased Efficiency

Priority systems enable public vehicles to move more smoothly through intersections, making the transit system more efficient.

Video Tour: Rapid Summerhill BRT

TRAFFIC MANAGEMENT ALERTS

Real-Time Alerts

V2X applications enable real-time alerts to drivers regarding traffic conditions and incidents on the road.

Improved Traffic Flow

By informing drivers of changing conditions, V2X applications help in optimizing traffic flow and reducing congestion.

Accidents and Road Closures

Traffic management alerts provide critical information about accidents and road closures, enhancing driver awareness and safety.

18
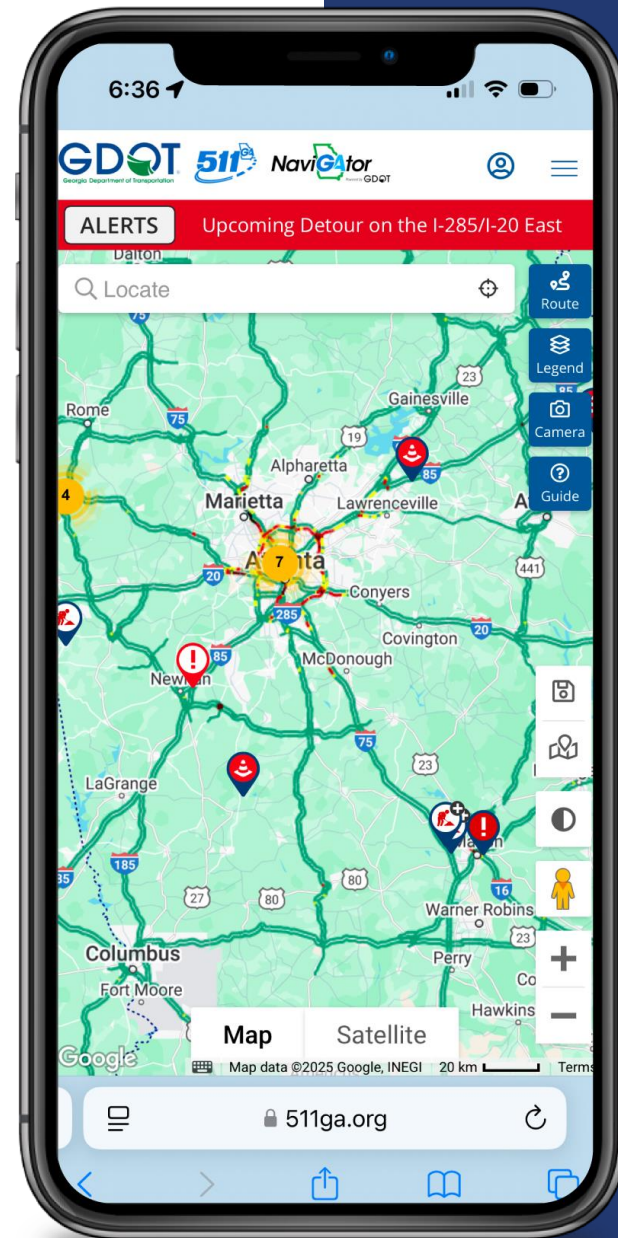
FUTURE DIRECTIONS AND CONSIDERATIONS

EXPANDING V2X READINESS ACROSS THE CITY

Infrastructure Upgrades

Upgrading city infrastructure is crucial for supporting V2X technology and ensuring seamless connectivity for vehicles and systems.

Community Engagement

Engaging the community is essential for understanding needs and fostering support for V2X readiness initiatives.

Stakeholder Collaboration

Collaboration among stakeholders, including government, businesses, and residents, is vital for the successful implementation of V2X systems.

ENHANCING INTEROPERABILITY FOR IMPROVED SAFETY

Importance of Interoperability
Enhancing interoperability is crucial for connecting diverse systems, leading to improved safety and efficiency in transportation.

V2X Technology Benefits
Engaging the community is essential for understanding needs and fostering support for V2X readiness initiatives.

Maximizing Safety Outcomes
By improving interoperability, we can maximize the safety benefits of advanced technologies, reducing accidents and improving response times.

INNOVATIVE APPLICATIONS AND LONG-TERM BENEFITS

Public Transportation Enhancements

V2X technology can significantly enhance public transportation systems by improving communication and coordination between vehicles and infrastructure.

Traffic Management Solutions

Innovative traffic management solutions enabled by V2X can lead to reduced congestion and improved safety on roadways.

Urban Planning Innovation

Integrating V2X technology into urban planning can create more efficient and sustainable city layouts, enhancing the quality of life for residents.

CONCLUSION

Insights from Atlanta

Atlanta's experience with V2X technologies provides valuable lessons for public agencies in deployment and integration.

Collaboration and Interoperability

Successful V2X deployment hinges on collaboration among stakeholders and ensuring interoperability between systems.

Funding Strategies

Innovative funding strategies are essential to support the implementation of V2X technologies in public sectors.

Innovative Applications

Innovative applications of V2X technologies will play a crucial role in enhancing urban mobility and safety.

CONCLUSION

Invest in the basics first

Deploy with scalability in mind

Consistency, accuracy, reliability, security

Capacity and capability of staff