TSMO Vision and Regional ITS Architecture Update

TSMO Workshop #3 – Transportation Technology

July 15, 2019

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Kimley»Horn

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Agenda

1. **Project Status Update**
   - TSMO Vision and Goals
   - Data Governance

2. **Regional Pilot Project Review**
   - Project Development
   - Project Screening Methodology
   - Project Prioritization Methodology

3. **TSMO/Pilot Project Evaluation Breakout Groups**

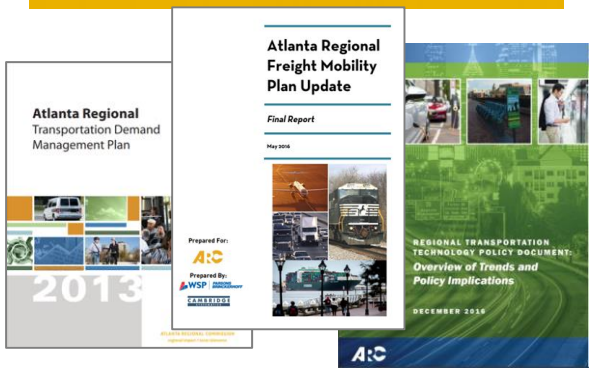
4. **ITS Architecture Status Overview**

5. **Local Agency Deployment Guide Framework**

TSMO Vision and Goals

Regional TSMO Vision Development

Regional "Win the Future" Vision and Supporting Plans



Stakeholder TSMO Survey

Input from over 100 respondents on strengths and challenges, and visions

TSMO Visioning Workshop

Held December 2018; participants from public and private sectors

Transportation systems across the Atlanta region are managed and operated to optimize safe, reliable, and efficient travel for all system users – people and freight – contributing to sustainable economic growth and a high quality of life.

Vision – Themes

TSMO Vision

Transportation systems across the Atlanta region are managed and operated to optimize safe, reliable, and efficient travel for all system users – people and freight – contributing to sustainable economic growth and a high quality of life.

Key Outcomes / Goals

Optimizing safety
Applying technology and context-sensitive approaches to achieve zero fatalities

Reliable travel times
Managing planned and unplanned disruptions to reduce unexpected delays

Efficient, seamless travel
Coordinated systems across jurisdictions and modes; accessible, real-time travel information

Equitable access
People of all ages, abilities, languages, backgrounds, and incomes have access to safe, reliable, efficient mobility options

Foundational Elements

Operations philosophy focuses on moving people and goods, rather than vehicles

Collaboration across jurisdictional boundaries, public and private sectors, and service providers

Data sharing across public and private data providers and users

Fostering a culture of innovation and adaptability to change

Data Governance Update

Discussion Questions

- **Question #1: What are 3 major challenges to your organization sharing data with other organizations today?**
  - Identify each challenge on a separate **blue** sticky note.
- **Question #2: List the 3 most important data sets that you need from other organizations today.**
  - Identify each data set on a separate **yellow** sticky note.
- **Question #3: Given projects under deployment, list the 3 most important data sets you expect to share in the future?**
  - Identify each data set on a separate **pink** sticky note.

“Best Practices for Data Governance” Report

Chapter 1 Introduction	• Scope • Background • Document Organization
Chapter 2 ARC Challenges and DG	• Challenges and Data Governance (DG) Benefits
Chapter 3 DG Overview	• Data Governance Defined • Data Governance Frameworks
Chapter 4 DG Framework: Business Strategies & Organization	• DG Goals and Objectives, Policies • Organization • Performance and Maturity
Chapter 5 Data Lifecycle Management	• Data Curation model • Data Business Plan and other Plans

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“Best Practices for Data Governance” Report, cont.

Chapter 6
Changing Needs in Transformative Transportation Environments

- General implications
- Specific program implications
  - Integrated Transportation Systems
  - Mobility on Demand
  - Automated Vehicles

Chapter 7
Getting Started with Data Governance

- FHWA Approach
- MnDOT Approach
- Challenge and lessons learned (FHWA report)

Chapter 8
ARC’s Role in a Regional Data Governance Framework

- Formal Process -- Recommendations for Establishing a Regional Data Governance Frameworks
- Ad Hoc Process -- Building Data Governance Framework through a Regional Project

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Recommendations – Formal DG Initiation Process

Step 1 Stakeholder Engagement	•Identify stakeholders (completed) •Develop stakeholder registry (completed)
Step 2 Data and Gap Assessment	•Confirm major challenges based on Workshops #1 needs and goals, and #2 data activities including challenges and needs •Scope initial data set by business or assessment areas •Assess level of maturity within assessment (business) area •Develop gap assessment
Step 3 Data Governance Framework	•Develop DG Charter •Establish organizational structure, roles, responsibilities •Generate and update principles, policies and MOUs
Step 4 Develop Enterprise Data Steward Strategies	•Establish EDS data working groups •Develop data, metadata and quality priorities and standards for each working group •Identify goals and performance measures by working group •Develop and publish Data Catalog by business area
Step 5 Develop 5-yr Data Steward Plan	•Each stakeholder develop 5-year plan for data based on EDS working group scope •Establish data management practices •Establish performance measures
Step 6 Implement 5-yr Data Steward Plan	•Implement 5-year data steward plan

Where do we go from here?

- **Mobility Data Business Plan workshop May 14**
- **Further discussions:**
  - Data Governance Framework Development
  - Roles and Responsibilities for the Framework
- **Motivators include:**
  - GDOT CDP
  - Multiple data repositories under development

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Regional Pilot Project Review

Pilot Project Development

- Call for projects
- Professional Organizations
  - ITS GA
  - ITE
- Stakeholder Outreach
- Workshop #3

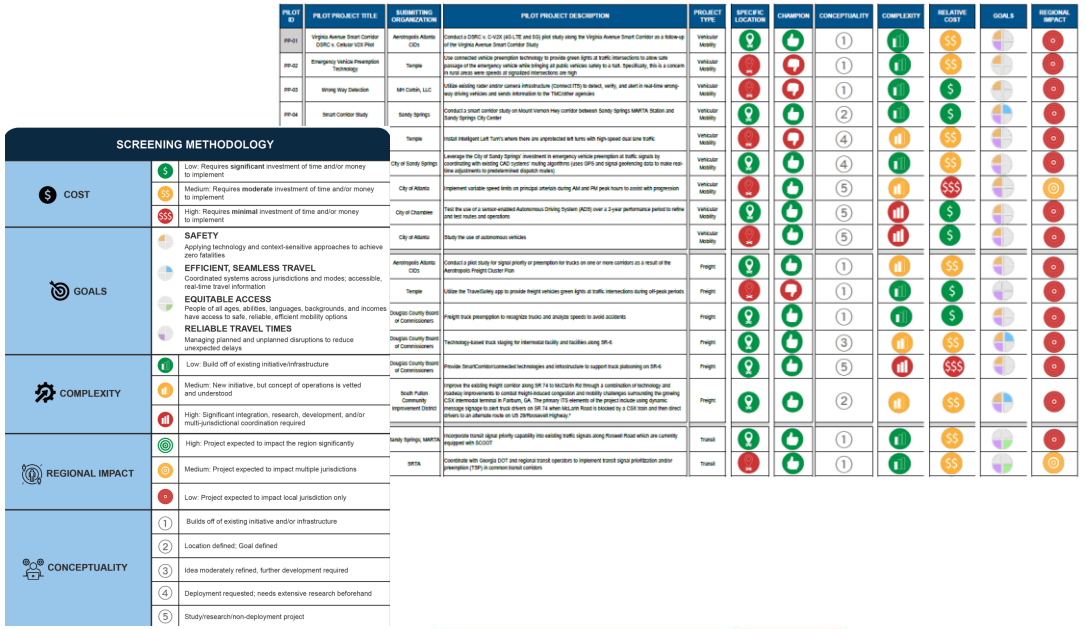
Pilot Project Review

- 56 Project Ideas Submitted

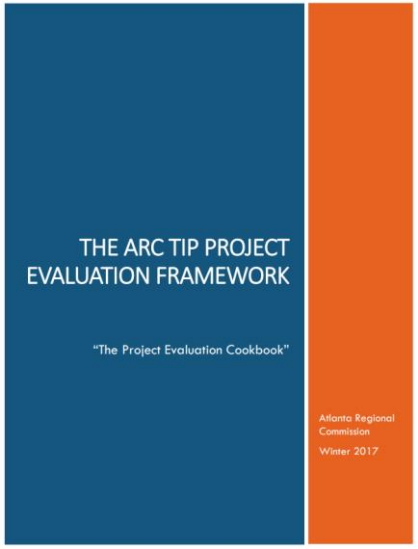
- Variety of Sources
  - State
  - County
  - Municipal
  - Consultants
  - Vendors

Pilot Project Evaluation Framework

- Screening Assessment



- Prioritization Framework



Pilot Project Screening Assessment

- Location 
- Champion 
- Project Type

 Vehicular Mobility

 Freight

 Transit

 Bike / Ped / Shared

 Parking

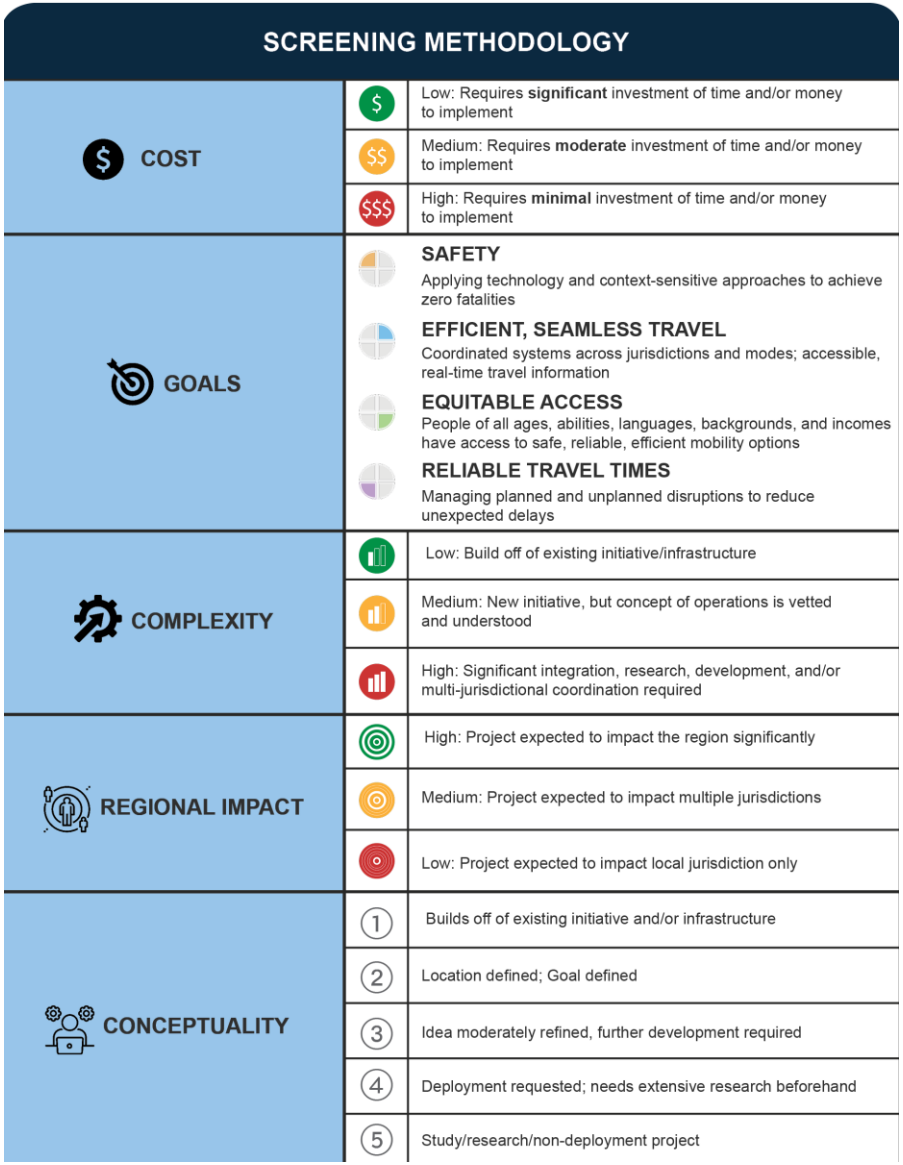
 Data

 App

 Smart City

Pilot Project Screening Assessment

- Screening Assessment Rubric



Pilot Project Screening Assessment

- Relative Cost

	High	Requires **significant** investment of time and/or money
	Medium	Requires **moderate** investment of time and/or money
	Low	Requires **minimal** investment of time and/or money

Pilot Project Screening Assessment

- Goals

Safety

Applying technology and context-sensitive approaches to achieve zero fatalities

Efficient, Seamless Travel

Coordinated systems across jurisdictions and modes; accessible, real-time travel information

Equitable Access

People of all ages, abilities, languages, backgrounds, and incomes have access to safe, reliable, efficient mobility options

Reliable Travel Times

Managing planned and unplanned disruptions to reduce unexpected delays

Pilot Project Screening Assessment

- Complexity

Low
Build off of existing initiative/infrastructure

Medium
New initiative, but concept of operations is vetted and understood

High
Significant integration, research, development, and/or multi-jurisdictional coordination required

Pilot Project Screening Assessment

- Regional Impact

Low
Project expected to impact local jurisdiction only

Medium
Project expected to impact multiple jurisdictions

High
Project expected to impact the region significantly

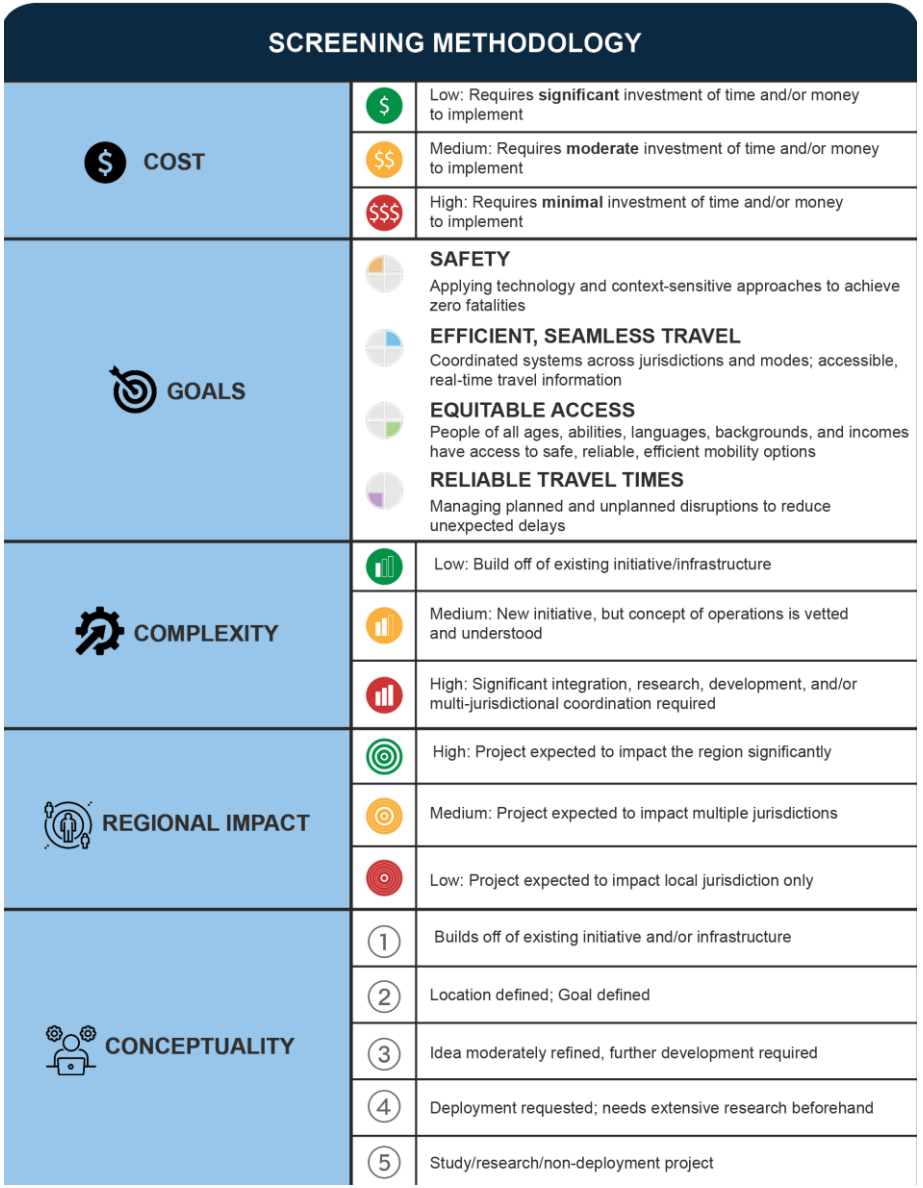
Pilot Project Screening Assessment

- Conceptuality

1. Build off of existing initiative and/or infrastructure
2. Location defined; Goal defined
3. Idea moderately refined, further development required
4. Deployment requested; need for extensive research beforehand
5. Study / Research / Non-deployment project

Pilot Project Screening Assessment

- QUESTIONS?



Pilot Project Screening Assessment

PILOT PROJECT TITLE	SUBMITTING ORGANIZATION	PILOT PROJECT DESCRIPTION	PROJECT TYPE	SPECIFIC LOCATION	CHAMPION	CONCEPTUALITY	COMPLEXITY	RELATIVE COST	GOALS	REGIONAL IMPACT
Virginia Avenue Smart Corridor DSRC v. Cellular V2X Pilot	Aerotropolis Atlanta CIDs	Conduct a DSRC v. C-V2X (4G LTE and 5G) pilot study along the Virginia Avenue Smart Corridor as a follow-up of the Virginia Avenue Smart Corridor Study	Vehicular Mobility			1		$$		
Emergency Vehicle Preemption Technology	Temple	Use connected vehicle preemption technology to provide green lights at traffic intersections to allow safe passage of the emergency vehicle while bringing all public vehicles safely to a halt. Specifically, this is a concern in rural areas were speeds at signalized intersections are high	Vehicular Mobility			1		$$		
Wrong Way Detection	MH Corbin, LLC	Utilize existing rader and/or camera infrastructure (Connect:ITS) to detect, verify, and alert in real-time wrong-way driving vehicles and sends information to the TMC/other agencies	Vehicular Mobility			1		$		
Smart Corridor Study	Sandy Springs	Conduct a smart corridor study on Mount Vernon Hwy corridor between Sandy Springs MARTA Station and Sandy Springs City Center	Vehicular Mobility			2		$		
Intelligent Left Turn Signals	Temple	Install Intelligent Left Turn's where there are unprotected left turns with high-speed dual lane traffic	Vehicular Mobility			4		$$		
Emergency Vehicle Response Time	City of Sandy Springs	Leverage the City of Sandy Springs' investment in emergency vehicle preemption at traffic signals by coordinating with existing CAD systems' routing algorithms (uses GPS and signal geofencing data to make real-time adjustments to predetermined dispatch routes)	Vehicular Mobility			4		$$		
Principal Arterial Speed Limits	City of Atlanta	Implement variable speed limits on principal arterials during AM and PM peak hours to assist with progression	Vehicular Mobility			5		$$$		
Shared Autonomous Shuttle Demonstration	City of Chamblee	Test the use of a sensor-enabled Autonomous Driving System (ADS) over a 2-year performance period to refine and test routes and operations	Vehicular Mobility			5		$		
Autonomous Vehicles	City of Atlanta	Study the use of autonomous vehicles	Vehicular Mobility			5		$		
Aerotropolis Signal Priority for Trucks	Aerotropolis Atlanta CIDs	Conduct a pilot study for signal priority or preemption for trucks on one or more corridors as a result of the Aerotropolis Freight Cluster Plan	Freight			1		$$		
TravelSafely Pro App	Temple	Utilize the TravelSafely app to provide freight vehicles green lights at traffic intersections during off-peak periods	Freight			1		$		
State Route 6/Thornton Road Freight Prioritization: Signal Priority	Douglas County Board of Commissioners	Freight truck preempption to recognize trucks and analyze speeds to avoid accidents	Freight			1		$		
State Route 6/Thornton Road Freight Prioritization: Truck Parking	Douglas County Board of Commissioners	Technology-based truck staging for intermodal facility and facilities along SR-6	Freight			3		$$		
State Route 6/Thornton Road Freight Prioritization: Truck Platooning	Douglas County Board of Commissioners	Provide SmartCorridor/connected technologies and infrastructure to support truck platooning on SR-6	Freight			5		$$$		
SR 74 Freight ITS System	South Fulton Community Improvement District	Improve the existing freight corridor along SR 74 to McClarin Rd through a combination of technology and roadway improvements to combat freight-induced congestion and mobility challenges surrounding the growing CSX intermodal terminal in Fairburn, GA. The primary ITS elements of the project include using dynamic message signage to alert truck drivers on SR 74 when McLarin Road is blocked by a CSX train and then direct drivers to an alternate route on US 29/Roosevelt Highway.[2]	Freight			2		$$		
Multimodal Efficiency Corridor: Transit Signal Priority and SCOOT	Sandy Springs; MARTA	Incorporate transit signal priority capability into existing traffic signals along Roswell Road which are currently equipped with SCOOT	Transit			1		$$		
Regional Transit Signal Prioritization	SRTA	Coordinate with Georgia DOT and regional transit operators to implement transit signal prioritization and/or preemption (TSP) in common transit corridors	Transit			1		$$		

Pilot Project Screening Assessment

PILOT PROJECT TITLE	SUBMITTING ORGANIZATION	PILOT PROJECT DESCRIPTION	PROJECT TYPE	SPECIFIC LOCATION	CHAMPION	CONCEPTUALITY	COMPLEXITY	RELATIVE COST	GOALS	REGIONAL IMPACT
Transit Signal Priority	Temple	Use Transit Signal Priority (TSP) to improve bus systems throughout metro-Atlanta	Transit			1		$$		
North Point Autonomous Shuttle	City of Alpharetta	Implement an autonomous shuttle in North Point	Transit			3		$$$		
Dynamic Bus Routes	MHP Americas	Offer bus routes that vary based on time of day and specific on-demand routes	Transit			4		$		
On-Demand Multimodal Transit Systems for Atlanta	Georgia Institute of Technology	Conduct a pilot study to explore the concept of On-Demand Multimodal Transit Systems (ODMTS) as it exploits advances in data and decision sciences to transform public transit in Atlanta and addresses accessibility, congestion, and parking issues	Transit			5		$		
Active Transport bundled Transit	MHP Americas	Include bikeshare into MARTA prices to incentivize transit and support first/last mile	Transit			5		$$		
Real time Transit Trip Coordination - Bus	Gwinnett County Transit	Develop an algorithm that allows bus coordination to be completed in real-time; the algorithm would make decisions on whether to hold a bus to make bus connections while evaluating the down stream impacts	Transit			5		$$		
Public Transit Equity Pricing	MHP Americas	Vary transit pricing based on household income, household size, and distance from nearest public transit	Transit			5		$$$		
Dockless Mobility Corrals	MHP Americas	Create strategic corrals for scooters, bikes, and mo-peds on sidewalks and public right-of-way	Bike / Ped / Shared			1		$$$		
TravelSafely App	Temple	Utilize the TravelSafely app which provides 20 connected vehicle applications to the user, with additional applications added with over-the-air software to avoid collisions, "get ready for green," red light turning and many more.	Bike / Ped / Shared			1		$		
Next Generation of Pedestrian Crossing Equipment Installation	Temple	Install the next generation of pedestrian crossing equipment (intelligent solar powered/connected vehicle devices) that will communicate to drivers and pedestrians when it is safe or unsafe to cross the road	Bike / Ped / Shared			2		$$		
Pedestrian Detection and TIM via DSRC and/or 5G	MH Corbin, LLC	Utilize cameras with analytics (Connect:ITS) to monitor pedestrians and alert oncoming motorists	Bike / Ped / Shared			2		$$		
Pedestrian Detection	City of Atlanta	Implement pedestrian detection systems into infrastructure at high ped volume intersections or midblock crossings	Bike / Ped / Shared			2		$		
Real-time On-Street Parking Vacancy Tracking	City of Atlanta	Utilize real-time on-street parking vacancy tracking to set the stage for dynamic parking pricing	Parking			2		$$$		
Curb Space Data Collection and Monitoring Tool	AECOM	AIVision has developed a Lidar-based data collection method that maps and tracks curb space occupancy, and for the ARC pilot, the goal is to digitally capture data for a small urban area to collect data and provide metrics for the curb activity	Parking			3		$$$		
Connected Data Platform Expansion	Georgia Department of Transportation	GDOT seeks to expand the utility of the Connected Data Platform (CDP) for additional users and applications by partnering with ARC to increase the user base and the number of data sets ingested by the CDP	Data			1		$$		
Smart Pavement Technology	City of Atlanta	Implement in-roadway censors/smart pavement technologies to provide data about roadway variables	Data			2		$		
Video-based Technology	City of Atlanta	Utilize video-based technology to quantify near misses	Data			2		$$		
Dockless Mobility Data Aggregation	City of Atlanta Office of Mobility Planning	Create a method of aggregating and analyzing data from all dockless scooter/e-bike companies that protects data privacy, tracks compliance with regulations, and analyzes data for planning functions	Data			2		$$		

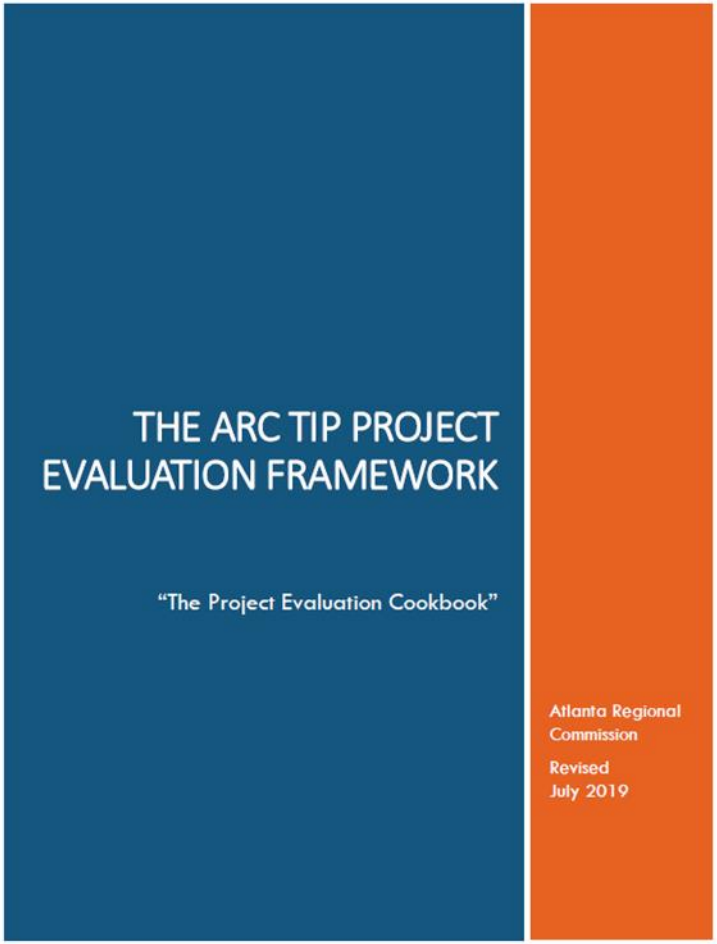
Pilot Project Screening Assessment

PILOT PROJECT TITLE	SUBMITTING ORGANIZATION	PILOT PROJECT DESCRIPTION	PROJECT TYPE	SPECIFIC LOCATION	CHAMPION	CONCEPTUALITY	COMPLEXITY	RELATIVE COST	GOALS	REGIONAL IMPACT
Shareable Dockless Mobility Device Study	City of Atlanta	Share dockless mobility device data (e.g. scooters)	Data			2		$$		
Gwinnett County Connected Vehicle Applications	Gwinnett County Department of Transportation	Building on the success of the first generation applications, the ARC pilot project concept will focus on additional applications that may include some or all of the following: • Transit, conditional priority based on transit schedule adherence • Transit, conditional priority based on bus occupancy • Transit/pedestrian, driver alert for pedestrian presence when bus or transit door is opened • Pedestrian, driver alert for mid-block pedestrians • Pedestrian, applications that support the visually impaired	App			1		$$		
Mobile Parking App	City of Atlanta	Implement a mobile parking app to assist motorists of vacant parking locations	App			2		$$		
Regional Mobility App	MARTA	Develop a mobile/web app that combines all existing public mobility functions/data in the region with the ultimate goal of supporting mobility as a service (MaaS)	App			3		$		
Mobility Planner App Function	MARTA	Develop a planning app/website that accepts multiple trips needed to be taken in a day/across days and outputs alternative multi-modal results for the best mobility plan to be taken	App			3		$$		
Regional Trip Planner (with Multi Variable Capabilities)	MARTA	Develop a single-trip planner that includes options for all possible modes of transportation and takes multiple variables into account	App			3		$$		
One App to Rule Them all	Gwinnett County Transit	Develop an app that allows users to plan and evaluate all transportation options in the metro-Atlanta area in one app	App			3		$$		
Bicycle and Pedestrian Trip Planning Application	Sandy Springs	Add onto smartphone apps to show options for trip routes per mode, ultimately giving safer and more travel options to pedestrians and bicyclists	App			3		$$		
GiveMeGreen	ARC - Transportation Access and Mobility Group	Utilize the GiveMeGreen app to improve bicycle and scooter safety while improving the travel experience for all modes of transportation. The app automatically detects bicyclists/scooter users and actuates traffic signals.	App			3		$		
Atlanta Transit Wallet	MHP Americas	Develop a mobile app to pay for all transit and mobility options outside of parking and tolls	App			5		$$$		
Multi-disciplinary Smart Cities Mobility Ecosystem	Aerotropolis Atlanta Community Improvement Districts; GDOT	Peds and two-wheel riders will use a smartphone app to receive audible warnings of pending collisions as well as alert drivers of peds in their path. AI Intelligent Mobility Traffic Device (IMTD) will be fit into all traffic cabinets in the district in preparation for CAV. Emergency vehicles, transit, and school busses will be fitted with AI on-board units. Intelligent school beacons will also be deployed.	Smart City			1		$$$		
MARTA WiFi Beacons	MARTA	Deploy WiFi beacons at various rail/bus/transit centers and stops	Smart City			1		$		
Black Ice and Surface and Sub Surface Temperature Alert System	MH Corbin, LLC	Utilize Connect:ITS and VX-21 (from MH Corbin) to alert motorists and traffic management centers in real time of black ice formation/any changes to the roadway surfaces	Smart City			2		$		
Autonomous Shuttle Study	Sandy Springs	Create a multi-use path, including autonomous shuttle service, between the North Springs MARTA Station and companies on Glenlake Parkway	Smart City			4		$$$		
Cherokee County Traffic Management Center	Cherokee County	Allow counties (Cherokee County) to remotely monitor and manage traffic signals	Vehicular Mobility			6				
Traffic Light Phasing	GCA, Inc.	Introduce a new traffic phase: a red/yellow phase (after the red phase and before the green phase) that alerts drivers of an upcoming green phase. This would help in reducing start up loss time at the start of the green phase	Vehicular Mobility			6				

Pilot Project Screening Assessment

PILOT PROJECT TITLE	SUBMITTING ORGANIZATION	PILOT PROJECT DESCRIPTION	PROJECT TYPE	SPECIFIC LOCATION	CHAMPION	CONCEPTUALITY	COMPLEXITY	RELATIVE COST	GOALS	REGIONAL IMPACT
Alternative Transport Benefits	MHP Americas	Provide tax benefits for lower car ownership/household size, bike ownership, and usage on Atlanta roads	Bike / Ped / Shared			6				
Bicycle and Pedestrian Detection and Automated Counts at Signals	City of Atlanta	Deploy ped/bike detection and automated counts at signals.	Bike / Ped / Shared			6				
ATL Transits Technology Integration	State Road and Tollway Authority (SRTA)	SRTA intends to create an ITS network based on the ARC-sponsored Regional ITS Architecture Update Study and ultimately allow other state agencies', cities', and counties' transit operators access to the new ITS network	Data			6				
Road Data Collection Technology	City of Atlanta	Create a technology that reports existing, future, and past constrained road information, especially useful for planning what roads are at or will be at LOS capacity	Data			6				
North Point WiFi/Small Cell integrated Art Installations	City of Alpharetta	Install WiFi/Small Cell infrastructure in North Point	Smart City			6				

ARC TIP Project Evaluation Framework



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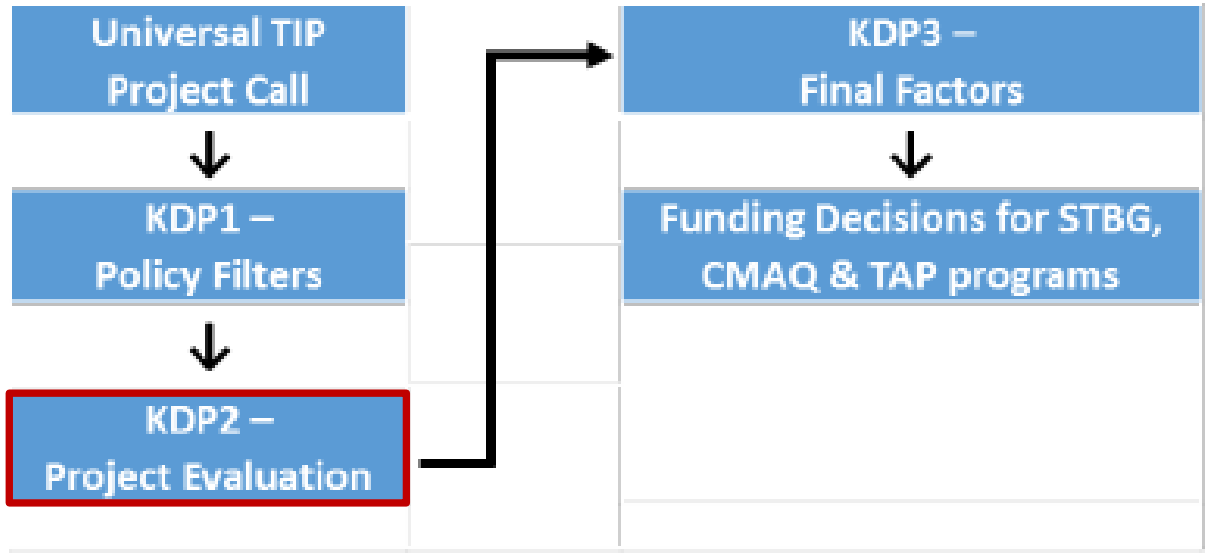
Project Prioritization Framework

Figure 01 – KDP Flowchart



Project Prioritization Framework

Table O2 – TIP Project Types and Key Criteria

Atlanta Region's Plan Vision	Performance Criteria	Project Types							
		Bicycle and Pedestrian	Trail	Roadway Asset Management & Resiliency	Roadway Expansion	Roadway Transportation Systems Management & Operations	Transit Expansion	Transit Asset Management and System Upgrades	Misc. Emissions Related Projects
World Class Infrastructure	Mobility & Congestion	✓	✓	✓	✓	✓	✓	✓	
	Reliability				✓	✓	✓		
	Network Connectivity	✓	✓	✓	✓	✓	✓		
	Multimodalism	✓	✓	✓	✓	✓	✓		
	Asset Management & Resiliency	✓[4]	✓[4]	✓	✓[4]	✓[4]	✓[4]	✓	
Healthy Livable Communities	Safety	✓	✓	✓	✓	✓	✓	✓	
	Air Quality & Climate Change	✓	✓		✓	✓	✓	✓[5]	✓
	Cultural & Environmental Resources	✓	✓	✓	✓	✓	✓	✓	
	Social Equity	✓	✓	✓	✓	✓	✓	✓	
	Land Use Compatibility	✓	✓				✓		
Competitive Economy	Goods Movement			✓	✓	✓			
	Employment Accessibility	✓	✓	✓	✓	✓	✓	✓	

Project Prioritization Framework

Table S2 – Criteria Weights by Project Type[13]

Criteria	Bike/Ped/Trail	Roadway Asset Management	Roadway Expansion & TSM&O	Transit Expansion	Transit Asset Management & System Upgrades[14]
Asset Management & Resiliency	-	14.9 %	-	-	24.4 % / 22.1 %
Mobility & Congestion	13.7 %	13.8 %	13.0 %	13.5 %	21.6 % / 19.6 %
Safety	14.5 %	14.4 %	13.4 %	8.5 %	13.6 % / 12.3 %
Network Connectivity	14.4 %	12.9 %	12.4 %	13.5 %	-
Reliability	-	-	12.1 %	12.0 %	-
Multimodalism	12.6 %	11.8 %	11.3 %	10.2 %	-
Employment Accessibility	10.4 %	10.2 %	10.3 %	11.6 %	18.6 % / 16.8 %
Land Use Compatibility	11.5 %	-	-	10.5 %	-
Social Equity	9.7 %	8.3 %	7.0 %	9.5 %	15.2 % / 13.8 %
Air Quality & Climate Change	6.3 %	-	7.3 %	6.5 %	0.0 % / 9.4 %
Goods Movement	-	8.1 %	7.8 %	-	-
Cultural & Environmental Sensitivity	6.8 %	5.5 %	5.3 %	4.1 %	6.6 % / 6.0 %

Project Prioritization Framework

Table RT1 – Roadway TSM&O Project Evaluation Scheme

Vision	Criteria	Measures
World Class Infrastructure	Mobility/Congestion	1) Corridor Congestion Intensity 2) Change in Congestion Extent
	Reliability	Worst Hour Travel Time Reliability
	Network Connectivity	Supports the Regional Policy Networks
	Multimodalism	Multimodal Accommodations
	Asset Management & Resiliency	Facility Vulnerability[20]
Healthy Livable Communities	Safety	Improved Safety
	Air Quality & Climate Change	1) Project Emissions 2) Near Road Emissions Exposure
	Cultural & Environmental Resources	Impact on Culturally and Environmentally Sensitive Land Uses
	Social Equity	Addressing Social Equity
	Land Use Compatibility	-
Competitive Economy	Goods Movement	Supporting the Freight Economy
	Employment Accessibility	Supporting Regionally Significant Locations

Project Prioritization Framework

Mobility/Congestion	1) Corridor Congestion Intensity 2) Change in Congestion Extent

Table RT2 – Metrics for Evaluating the Roadway TSM&O Mobility & Congestion Criterion

Measure	Metric	Nature of Metric	Sponsor Provided	Percent of Criterion Score
1) Corridor Congestion Intensity	Current project limit peak period travel time index (TTI)	Numerical; derived from real-world data	No	50%
2) Change in Congestion Extent	Absolute change in vehicle hours of delay (VHD) in the build vs no build scenario for the worst traffic time period	Numerical; derived from ARC's modeling[21]	No	50%

- Current TTI
- Change in VHD (ARC model or CMAQ calculator)

Project Prioritization Framework

Social Equity	Addressing Social Equity

Table RT19 – Metric for Evaluating the Roadway TSM&O Social Equity Criterion

Measure	Metric	Nature of Metric	Sponsor Provided
Addressing Social Equity	Does project serve a minority or low-income community?	Written; sponsor provides an assessment of how developing the project will support these populations. This information is used to screen projects to receive a score.	Yes; with supplemental ARC assessment of minority or low-income areas

Table RT20 – Scoring Scheme for the Roadway TSM&O Social Equity Metric

Social Equity Scoring	Points Awarded
Low	0
Medium-Low	25
Medium	50
Medium-High	75
High	100

TSMO / Pilot Project Evaluation Breakout Groups

Group 1
Vehicular / Freight

Group 3
App and Other

Group 2
Transit

Group 4
Bike / Ped / Shared

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TSMO / Pilot Project Evaluation Breakout Groups

What example projects were identified?

High-level concept considerations?

Regional Influence?

Project Evaluation?

ITS Architecture Update

ITS Architecture Update

- Architecture Workshop held 3/18/19
- Architecture updated based on inputs from workshop
- Draft Architecture Website created 5/24/19
- Request for comments on website distributed on 5/30/19
- Comments requested by 6/21/19

ITS Architecture Update

- Current draft update includes the following:
  - Stakeholders - 55
  - Elements - 210
  - Service Package Diagrams - 248
  - Interfaces - 531
  - Projects - 97

ITS Architecture Update – Comments Received

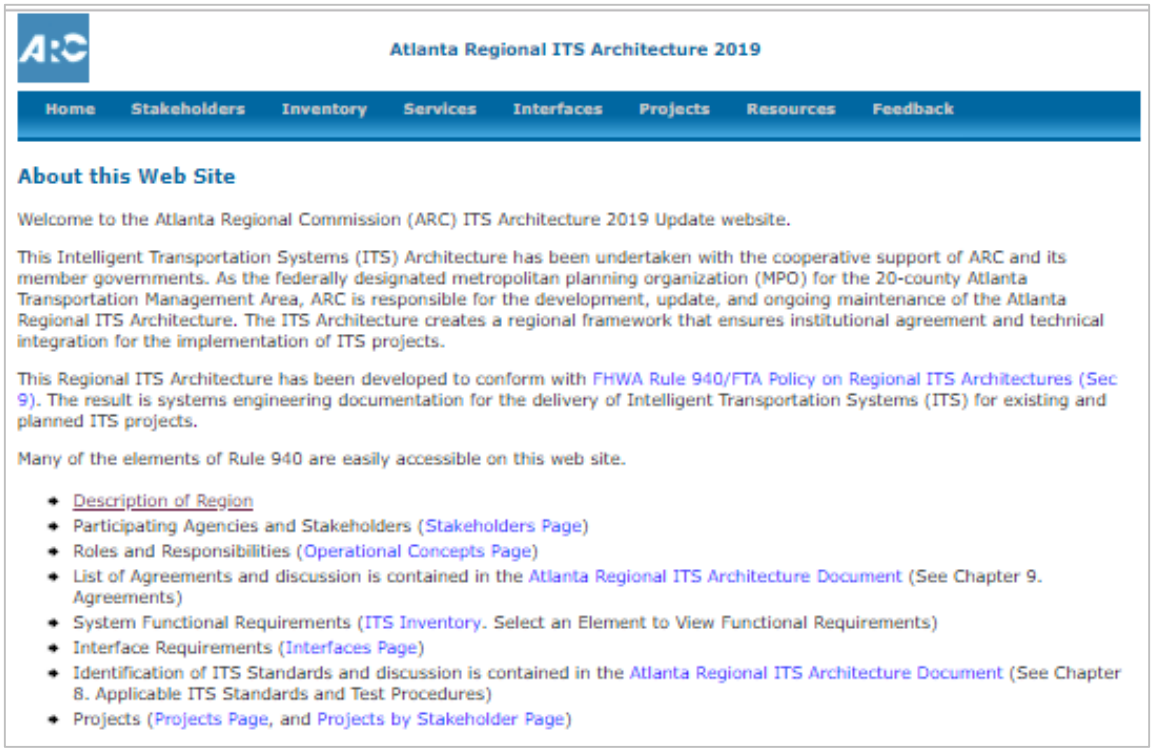
- Over 145 Comments received to date
- Comment spreadsheet developed to track comments and responses
  - Add projects
  - Edits to Service Package Diagrams – flow status, additional flows
  - Updates to descriptions and status
- Following up with specific stakeholders
- Specific comments
- Key stakeholders who have not provided comments

ITS Architecture Update – Additional Questions

- Agreements
  - •Collect list of agreements in the region.
  - •Examples: RTOP, mutual aid, data sharing
- General Questions
  - Is electric charging stations a regional initiative?
  - Who is using electronic payment for parking?
  - How is amber alerts distributed in the region?
  - Who is providing traffic/incident information to 511?

ITS Architecture Update – Web Site

- Web Site can be found at:
  - http://www.consystec.com/arc/web/index.htm

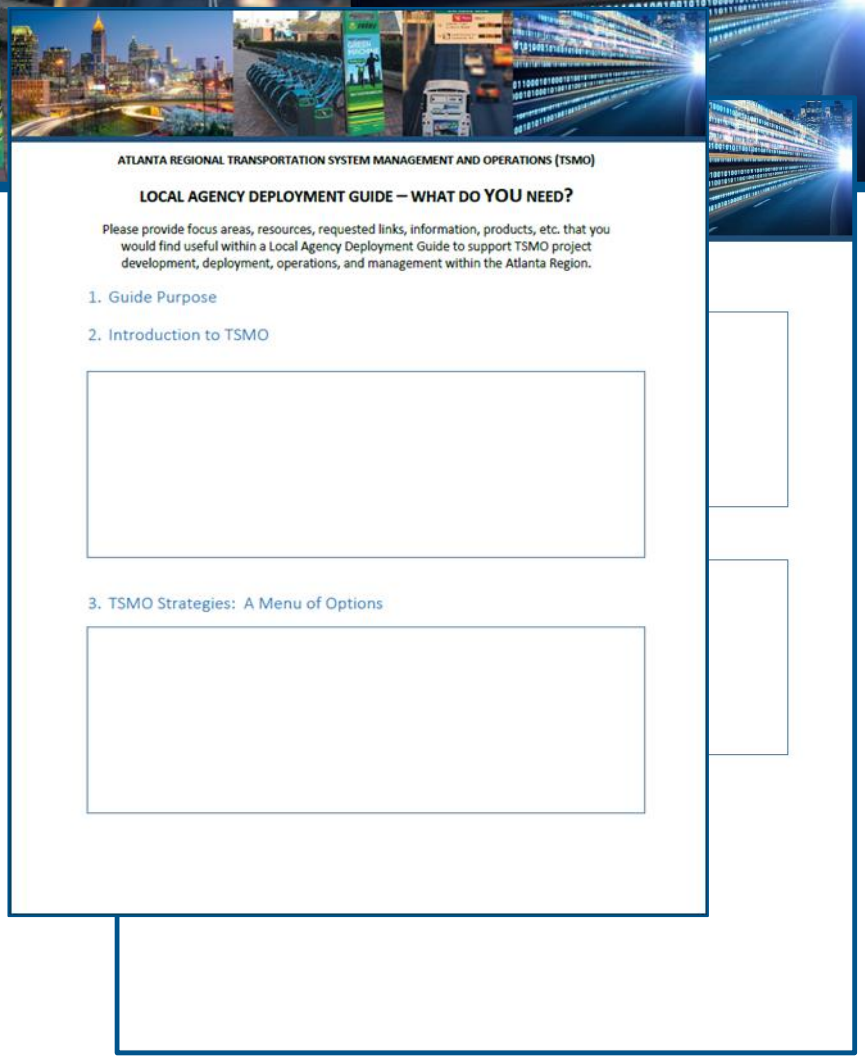


ITS Architecture Update – Web Site

- Update website contents after complete first set of stakeholder comments are received
  - August?
  - Draft Architecture document
- Update website contents with connections to the TSMO strategies once the strategies are developed.
  - November?

TSMO Local Agency Deployment Guide

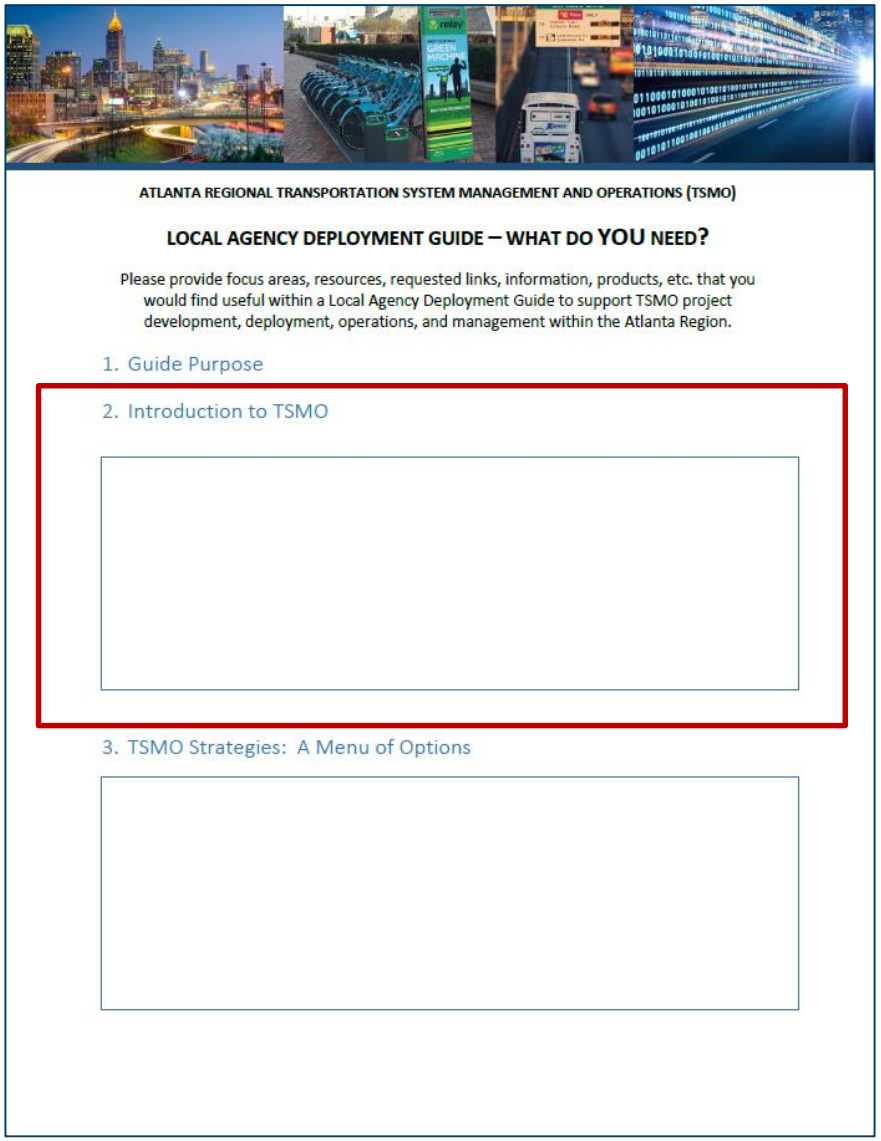
What do YOU need?



ICF Kimley»Horn Expect More. Experience Better. ConSysTec Lumenor Consulting Group

TSMO Deployment Guide – What do YOU need?

1. Guide Purpose
2. Introduction to TSMO
   - What is TSMO
   - TSMO Business Case
   - ARC TSMO Vision



ATLANTA REGIONAL TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS (TSMO)

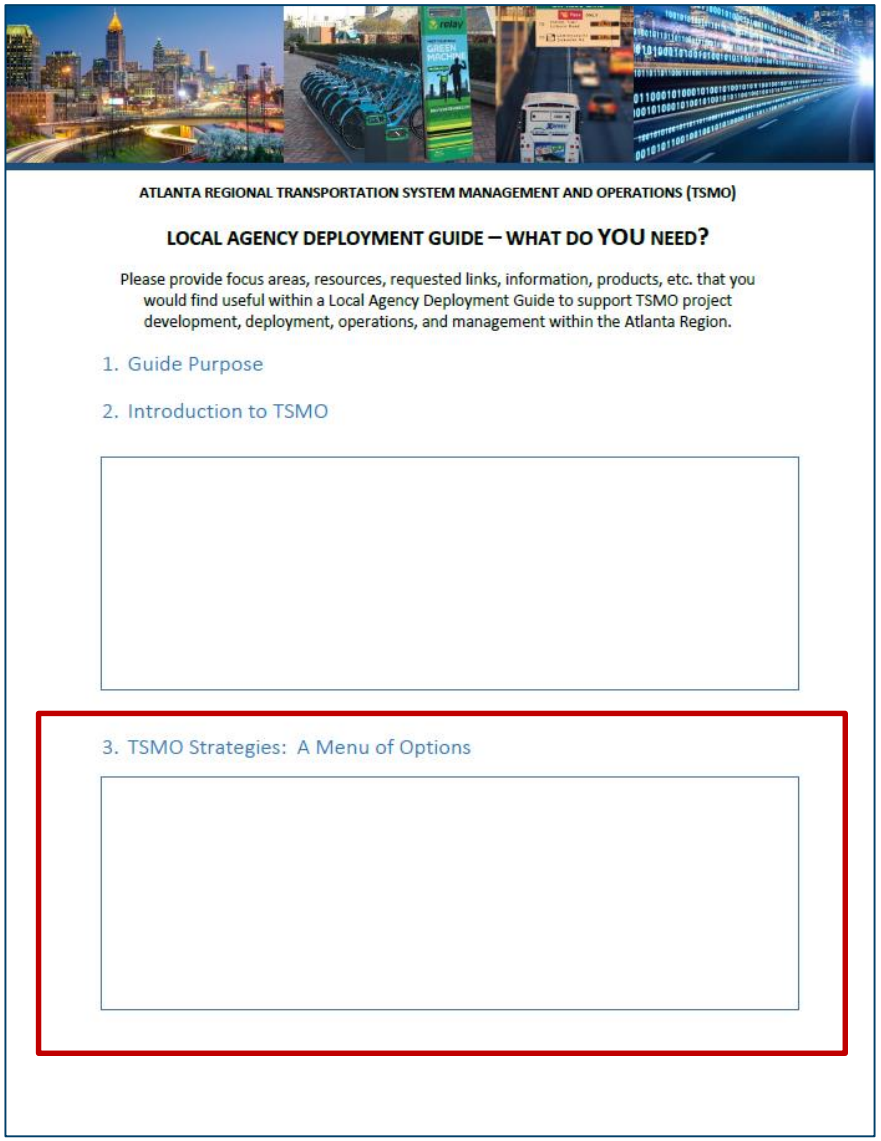
LOCAL AGENCY DEPLOYMENT GUIDE – WHAT DO YOU NEED?

Please provide focus areas, resources, requested links, information, products, etc. that you would find useful within a Local Agency Deployment Guide to support TSMO project development, deployment, operations, and management within the Atlanta Region.

1. Guide Purpose
2. Introduction to TSMO
3. TSMO Strategies: A Menu of Options

TSMO Deployment Guide – What do YOU need?

3. TSMO Strategies:
   A Menu of Options



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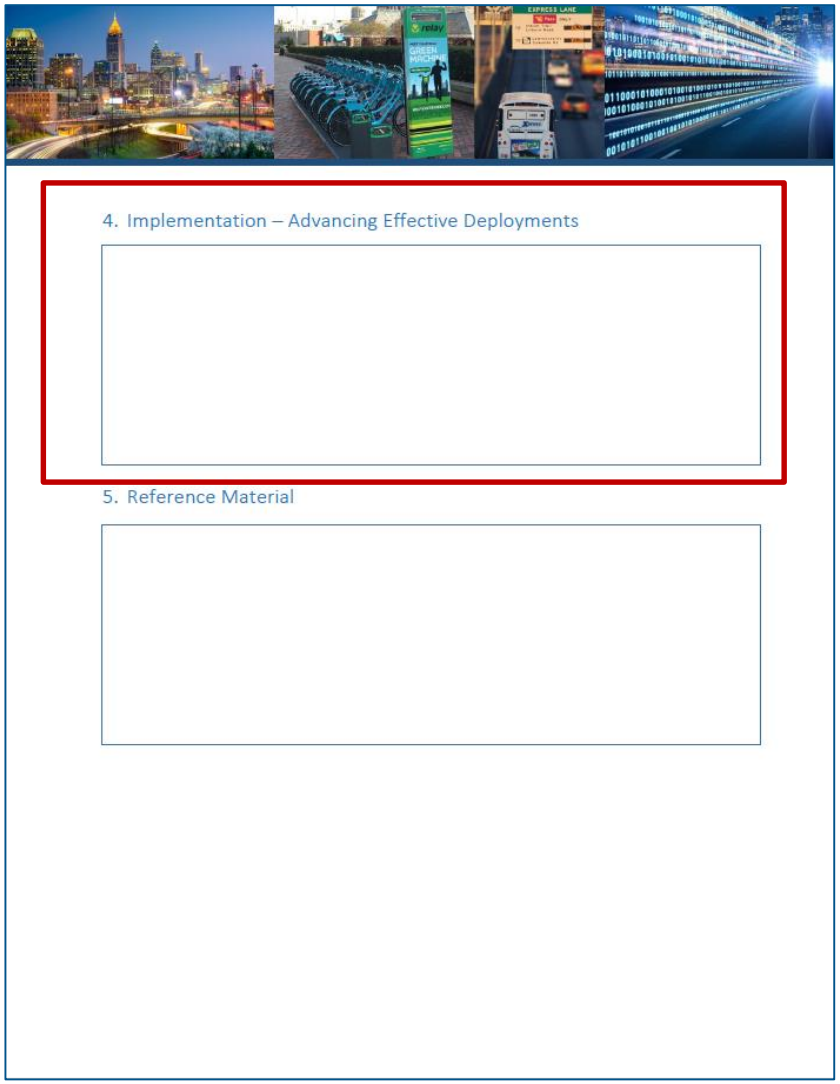
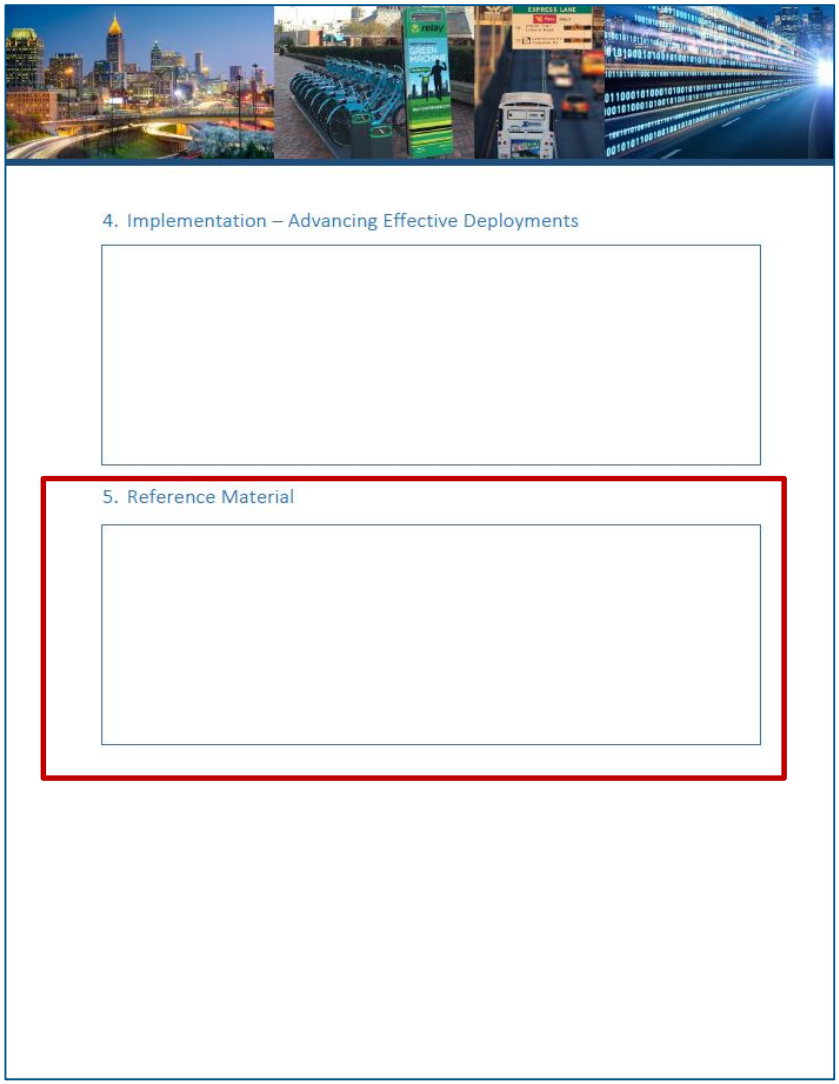
TSMO Deployment Guide – What do YOU need?

4. Implementation – Advancing Effective Deployments
   - Systems Engineering
   - Technology Considerations
   - Data
   - Funding



TSMO Deployment Guide – What do YOU need?

5. Reference Material
   - Specifications
   - Design Guides
   - FHWA TSMO Guide
   - ATDM Guide



Next Steps