

Freight Planning and Regional Cooperation in the Piedmont Atlantic Megaregion

A Regional Models of Cooperation Peer Exchange Summary Report

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Date: January 31 and February 1, 2017

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Cartersville-Bartow Metropolitan Planning Organization (CBMPO)
Chatham County-Savannah Metropolitan Planning Commission (CORE MPO)
Gainesville-Hall Metropolitan Planning Organization (GHMPO)
Georgia Department of Transportation (GDOT)
Greensboro Urban Area Metropolitan Planning Organization
Greenville-Pickens Area Transportation Study (GPATS)
Memphis Urban Area Metropolitan Planning Organization (MUMPO)
Regional Planning Commission (RPC) of Greater Birmingham
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Foreword

This report summarizes the presentations, key themes, and recommendations identified as a part of the Regional Models of Cooperation initiative. The peer exchange was held on January 31 and February 1, 2017 in Atlanta, Georgia. The Atlanta Regional Commission (ARC) hosted State Department of Transportation (State DOT), and Metropolitan Planning Organization (MPO), and Regional Planning Agency (RPA) peers from the Piedmont Atlantic Megaregion (PAM), which included five states: Alabama, Georgia, Tennessee, South Carolina, and North Carolina. The purpose of the peer exchange was to share best practices in working across multiple jurisdictions to improve freight movement and transportation planning at a megaregion scale. [Regional Models of Cooperation](#) is a program of the FHWA [Every Day Counts \(EDC\) 3 initiative](#).

Introduction

Regional Models of Cooperation

Regional Models of Cooperation is a focus area of Federal Highway Administration's (FHWA) Every Day Counts Initiative. Through this initiative, FHWA works with State DOTs, MPOs, and other stakeholders to identify innovative technologies and processes that are deserving of accelerated deployment nationwide. Regional Models of Cooperation was selected for accelerated deployment in the third round of Every Day Counts for calendar years 2015-2016.

Regional Models of Cooperation describes enhanced processes for effective cooperation and communication between State DOTs, MPOs, transit agencies, and other transportation planning partners working across jurisdictions or traditional disciplines. When implemented, these techniques can improve collaboration, policy implementation, technology use, and performance management. Regional Models of Cooperation reaches beyond traditional borders and brings together entities from multiple jurisdictions and disciplines to support common goals in transportation planning, such as congestion management, safety, freight, livability, economic development, scenario planning, emerging technologies, and project delivery and efficiency.

Successful implementation of Regional Models of Cooperation can improve decision-making, save time and money through the sharing of resources or data, and help agencies achieve more by working together. Examples of regional cooperation include jointly developing transportation plans and programs, cross-jurisdictional corridor studies, and project planning across MPO, and State boundaries. It also includes collaboration between State DOTs, MPOs, operators of public transportation, and private stakeholders on activities such as collecting, storing, and analyzing transportation data.

One way in which the U.S. Department of Transportation/FHWA is supporting States, MPOs, and their partners to help them implement Regional Models of Cooperation is through peer exchange workshops. These workshops bring representatives from multiple jurisdictions within a region or megaregion together to share experiences and best practices with peers. In addition, these workshops can move specific, locally-driven priorities forward. The Regional Models of Cooperation implementation effort also hosts webinars and documents case studies and techniques to promote notable cooperation practices in a variety of topic areas.

For more information, please visit the [FHWA Regional Models of Cooperation website](#), the [FHWA Regional Models of Cooperation Handbook](#), and the [EDC-3 initiative summary page](#).

Report Organization

This report is a summary of the Regional Models of Cooperation peer exchange workshop on freight planning and regional cooperation in the Piedmont Atlantic Megaregion (PAM) that was held on January 31, 2017 and February 1, 2017 in Atlanta, Georgia. It is organized in four sections:

1. **Workshop Overview:** An overview of the peer exchange goals, format, and a summary of the presentations.
2. **Key Themes and Strategies:** A synthesis and discussion of 6 key strategies for improving freight planning and transportation planning at a megaregion scale that emerged during the workshop.
3. **Next Steps for Continued Cooperation in the PAM:** A discussion of next steps for megaregion-scale cooperation in the PAM, including specific action items.
4. **Conclusion:** A summary of lessons learned and next steps.

Workshop Overview

Peer Exchange Description

This workshop focused on cooperative planning to improve freight movement and transportation planning within the PAM. Workshop participants included representatives from several MPOs and State DOTs in the PAM, Georgia Tech's Center for Quality Growth and Regional Development (CQGRD), and private sector participants from airports, freight railroads, trucking firms, and multinational retail corporations located in the megaregion. The presenters and participants discussed accomplishments, challenges, and lessons learned from a variety of planning initiatives and projects that required cross-jurisdictional cooperation.

The FHWA Office of Planning and the Atlanta Regional Commission (ARC) worked together to identify transportation agency peers in the PAM with an interest in megaregion-scale cooperation on freight and other issues. The goals of this workshop were to discuss best practices to improve freight movement and overall transportation planning in the megaregion and to determine next steps to support ongoing cooperation at a megaregion scale. This report summarizes this event.

Format and Agenda

The two-day peer exchange consisted of five sections, described below:

- **Global and Regional Freight Industry Trends:** The peer exchange began with an overview of the workshop agenda and goals. Freight movement at the megaregion scale was examined in two panel discussions about first and last mile freight connection challenges and global to regional trends, which featured private-sector freight stakeholders.
- **Freight Infrastructure Changes in Piedmont Atlantic Megaregion:** The keynote address introduced transportation infrastructure challenges and freight impacts on megaregions, followed by a panel discussion and a presentation on airport planning in the megaregion.
- **Regional Cooperation in Freight Planning and Other Topics:** This section included presentations of federal perspectives on the benefits of megaregion planning and regional cooperation, and a roundtable discussion on how agencies in the PAM can better collaborate.
- **Applied Research Projects Relevant to Megaregion Cooperation:** This section focused on ARC's recent work implementing scenario planning and performance management research products, with a discussion of how these topics may lend themselves to a megaregion approach.
- **Moving Forward Together:** The peer exchange concluded with a breakout session and group discussion, where participants identified next steps for ongoing planning cooperation in the megaregion.

The list of event participants can be found in [Appendix A](#) and the workshop agenda can be found in [Appendix B](#)

Summary of Presentations

The following section provides brief summaries of the workshop panel discussions and presentations. Please note that the [Key Themes and Strategies](#) section provides additional detail on examples delivered in the presentations. More information on the location of presentation slides are available in the [Additional Resources](#) section.

Overview of Workshop Agenda and Goals

- *James Garland, FHWA Office of Planning*
- *Dr. Catherine Ross, Georgia Tech CQGRD*
- *John Orr, ARC*

This presentation provided a brief overview of regional cooperation and freight planning on a megaregion scale.

Coordinating transportation activities across jurisdictions can lead to increased efficiencies in the planning and programming processes, as well as more comprehensive solutions to widespread transportation issues. Regional cooperation can benefit freight movement by improving communication between public agencies and the private sector, as well as by providing a forum for agencies to combine efforts to improve their shared transportation networks.

Some challenges that agencies face when working together include:

- Understanding the baseline of the megaregion's infrastructure
- Funding freight infrastructure across agency jurisdictions
- Identifying obstacles to advancement
- Exploring built and maintained partnerships
- Identifying new partners
- Determining the level of coordination needed for success

A megaregion can be defined using several different characteristics: metropolitan centers, transportation networks which link geographic areas together, shared environmental concerns, and social, cultural, or economic ties. Megaregions are sometimes referred to as building blocks of the national and global economy. Megaregions provide a new way of approaching transportation planning at a broader scale, reflecting the increasing interconnections of metropolitan areas.

ARC and FHWA previously hosted a prior peer exchange on megaregion freight planning in November 2013: [Megaregions Freight Movement Peer Exchange](#). This event explored ways to enhance organizational capacity for addressing freight issues at the megaregion scale within existing planning frameworks by leveraging data resources, partnerships, and peer planning experience. The peer exchange concluded that planners should be proactive in responding to freight planning challenges and should aim to address private sector needs in the planning process. Along with the economic benefits of planning for freight movement at a megaregional scale, the peer exchange participants recognized cross-disciplinary benefits, including addressing the connections between freight movement and health, safety, resilience, and livability.

ARC's desired outcomes for this second peer exchange included continued dialogue, increasing understanding of emerging practices, and brainstorming ways to work together as a megaregion moving forward. The workshop was designed to build on the 2013 event, to gauge interest in working together as a megaregion, and to establish a core group to coordinate activities. The workshop hosts encouraged participants to explore areas of common ground and identify areas where collaboration would be beneficial. They encouraged private sector participants to share their perspectives and identify areas in need of improvement and common linkages. Federal perspectives and other elements, such as Aerotropolis Planning, provided additional insight into the megaregion's transportation system across modes.

Panel Discussion: Freight Movement at the Megaregion Scale: First/Last Mile Challenges

- *Frank Morris, United Parcel Service (UPS)*
- *Tim Brown, Georgia Tech Supply Chain and Logistics Institute (SCL)*
- *Jeff Short, American Transportation Research Institute (ATRI)*
- *Moderator: Jannine Miller, Georgia Center of Innovation for Logistics*

This panel of private sector freight firms and researchers explored freight issues and the challenges of the first mile and last mile connections in freight logistics. The discussion converged on three topics, which include:

- Alternative uses of traditional infrastructure;
- Challenges related to regulation; and
- Private sector cooperation to improve freight infrastructure

The panel stated that many companies are looking to improve service by reimagining the use of traditional infrastructure in alternative ways.

- Bicycle Delivery: Residents in dense, urban areas increasingly want fewer motor vehicles on streets and improved bicycle lanes; therefore, UPS and several other companies involved in shipping have explored bicycle delivery options and mobile centers with designated areas to assist bicycle delivery. This effort is currently piloted in international communities. Companies have also investigated the use of electric bicycles for delivery.
- Locker Systems: Companies like UPS have experimented with lockers to securely store packages at convenient locations for customer pick-up.
- Repurpose Parking Garages: Delivery companies have considered repurposing unused or underused parking garages to create strategic delivery operation points for customer pick-up or bicycle delivery pick-up.

The panel also identified some challenges related to regulation.

- Restrictive Hours: Often, cities have many different commercial deliveries that are time sensitive and are forced to deliver during small windows of time each day. Noise during the early morning and overcrowded streets during travel times are both seen as a problem for residents, which has created time limitations for delivery. Delivery services may have limited or no access to specific roads; often, this access is negotiated with cities/municipalities.
- Limited Truck Parking: Trucking regulations require truck drivers to rest for specific periods of time, but limited truck parking can create difficulties for drivers to find overnight parking and adhere to these requirements.
- Truck Driver Shortage and Retention: Truck driver restrictions have created driver shortages and negatively impacted driver retention. Recently, there has been a 50 percent decrease in drivers between the ages of 25 and 34. A potential solution is lowering the age restriction of 21-years-old to 18-years-old, which could make truck driving a potential career path after high school

graduation. **The panel discussed the private sector's willingness to cooperate to improve freight infrastructure.**

- **User Fees:** Many companies involved in freight movement see a need to improve transportation infrastructure and to address congestion. Many trucking companies want an increase in the diesel tax to increase the number of roadway maintenance projects.
- **Advances in Mobile Technology:** New technologies may make it possible to analyze all individual trips for passengers and goods on the transportation system. These new technologies could include mobile technology or the *Internet of Things*, which is the interconnection of computing devices in everyday objects to send and receive data through the internet. The use of this data can be analyzed to identify where important linkages occur and highlight the economic incentives of transportation improvements.

Panel Discussion: Freight Movement at the Megaregion Scale: From Global to Regional Trends

- *Brock Toole, Walmart*
- *Gerald McDowell, Aerotropolis Atlanta Community Improvement Districts*
- *Blaine Kelley, CBRE, Inc.*
- *Moderator: Dave Williams, Metro Atlanta Chamber of Commerce*

This panel discussed transportation and logistics trends that impact the punctuality of delivery services. Panelists identified that businesses often operate and move freight on a larger regional scale.

Industry experts explained that if one delivery is not on time, several other deliveries can be affected. Delivery service punctuality may be challenged by imprecise site selection and lower speed limits.

- **Site selection:** Site selection is crucial for freight movement, because it must consider sites based on proximity to customer base, supply of labor, and efficiency of the transportation system.
 - For example, Atlanta's Fulton Industrial Boulevard District is an older industrial district that dates back to the 1940s. Particularly with the last mile delivery, these warehouses are advantageous because they are close to population centers. However, many of the older developments in this area do not meet current design expectations, creating the need to redevelop parts of the corridor. A Community Improvement District (CID), like the Fulton Industrial Boulevard CID, can lead local planning efforts, market the district to developers, serve as the voice of property owners, and seek transportation funding from local, state, and federal sources,
- **Speed:** There is an expectation for speed in the delivery of goods. Several factors affect the speed of freight vehicles, including speed limits, traffic congestion, quality of infrastructure, etc.

Aerotropolis planning focuses on establishing a city within and around an airport, as well as maintaining a transportation system that considers regional and national implications.

- **CIDs are often an important part of Aerotropolis planning:** CIDs represent property owners and aim to beautify, increase public safety, improve passenger transportation systems, and help businesses in their districts.

- Long-range planning is a part of a CID's work: Usually, CID plans consider transportation needs at local, regional, and national levels.

The panelists discussed the need for innovation in several fields that affect transportation, such as technology, freight transportation models, land-use planning, and real-time traffic data.

- Technological innovations: Safety issues and inefficiencies can be addressed with technological innovations. For example, navigation and rerouting can often introduce safety challenges, because it can cause driver distraction. Improved technology can help drivers make better delivery and navigation decisions.
- Freight transportation models: Alternative forms of transportation, such as bicycles, should be incorporated into freight transportation models with the use of cargo bicycles for freight delivery, mainly within urban areas. In addition, freight transportation models may promote passenger travel with transit, bicycling, and walking to lessen congestion on major freight corridors.
- Strategic land use: Integrating warehousing, distribution centers, residential property, and retail into strategically located areas benefits last-mile delivery. This approach has been successful for smaller warehousing operations because the supply of goods is located closer to retail stores and population centers. For example, Amazon has a distribution center on Camp Creek Parkway, located just outside of I-285. This is in relative close proximity to Downtown Atlanta, Midtown Atlanta, and Buckhead, all of which are major population, office, and retail centers.
- Real-time data: Truck driver decisions can be improved by real-time data paired with mobile technology. Often, this can help operations avoid or prevent conflicts rather than reacting to them.

Keynote Address: Introduction to Transportation Infrastructure Impacts on Megaregions

- *Dr. Catherine Ross, Georgia Tech CQGRD*

Communities in the PAM face several challenges, including the loss of industry, underinvestment, pollution, poor travel time reliability due to traffic congestion, and unsupportive land uses. The PAM's strengths include adaptability, technologies, innovative companies, universities, competitive history, and access to cheap energy. Population in the PAM is projected to grow in the next few decades. Academia, private industries, and the public sector must aim to understand and predict the characteristics of this growth, in order to create more opportunities and take advantage of this growth.



Figure 1: Dr. Catherine Ross presenting on the impacts of transportation infrastructure on megaregions (Source: FHWA)

Within the PAM there are 6 states, 534 counties, and more than 4,000 cities, so working effectively across the megaregion requires a lot of coordination. **Cross-jurisdictional coordination is challenged by managing diverse interests in the transportation industry:**

- Trucking: Estimates have found that trucking corridors will see high increases in traffic volume by 2040. Locations of truck trip origins and destinations can help identify areas that will experience freight traffic increases. While most of the areas where truck trips begin and end have small residential populations, nearby residential areas many experience negative externalities from increased trucking in their communities.
- Ports: Investment in ports can improve employment and jobs. Discussion around investment must occur with politicians and citizens. The Panama Canal expansion can present many opportunities for economic improvement through more connections to global markets.
- Airports: Airports are complex global gateways to and from the PAM. Planners must focus on airports as a critical aspect of national and international freight movement.
- Railroad: Many railroads are operating under-utilized and not at full capacity, while truck volume on the interstate is increasing; this is an opportunity that can be incentivized by the federal government.
- Warehousing: Growth in warehousing is expected to increase in the coming decades. Many companies prefer to rent or lease warehousing property because the industry changes rapidly. This is a flexible supply chain that changes around every 6 months, requiring policy framework which can adjust to rapid changes.

Panel Discussion: Transportation Infrastructure Impacts on Megaregions

- *Griff Lynch, Georgia Ports Authority*
- *Elliott Paige, Hartsfield-Jackson Atlanta International Airport*
- *Craig Camuso, CSX Railroad*
- *Moderator: Dave Williams, Metro Atlanta Chamber of Commerce*

The freight rail industry within PAM has many opportunities to explore with partners. At times, the rail industry is seen at a disadvantage because it has high infrastructure costs in comparison to the trucking industry.

- **Rail Capacity:** CSX and Norfolk Southern Railroads mainly have single track rail lines in the southeast, which creates operations problems when trying to send trains in opposite directions. In comparison, the northeastern part of the country typically has dual track lines, while most of the western part of the US commonly has single track lines with lower volumes, preventing these regions from experiencing the same operational challenges.
- **Passenger Rail:** Freight railroads are willing to work with States to expand passenger rail service in the PAM, including high speed rail. However, passenger rail brings with it difficult safety and financial challenges.

Airport planning must consider infrastructure development within and around airports as crucial in building business. Because air freight is used for speed, the efficiency of parking, loading/unloading, and delivery is a focus of planners. Technology can be used to support these efforts.

- **Capital Improvement Program:** Hartsfield-Jackson Atlanta International airport has a Capital Improvement Program that involves a new terminal, extending gates, adding a hotel, a new mixed-use facility (retail and office space), and modernizing terminals.
- **Air Cargo Truck Staging:** The Atlanta airport identified truck parking for air cargo as problematic. Trucks were commonly parking on the side of roads while waiting for access to pick-up/drop-off at air cargo facilities. Delays associated with this unauthorized parking resulted in conflicts between truck drivers while they waited. The airport recently completed construction of a truck parking lot where trucks can wait until there is an available dock at the air cargo facility. The airport's air cargo operations staff will contact the waiting truck drivers via their cell phone to let them know when to proceed to the air cargo facility.

The port in Savannah, Georgia, is growing rapidly and there are plans for multiple improvement projects worth billions of dollars over the next 10 years. **Port planning must consider the ship traffic and vessel size, as well as the trucks and rail that bring cargo inland.**

- **Panama Canal Expansion:** The expansion of the Panama Canal has allowed larger ships (43% increase in vessel size) to travel through the Panama Canal to Georgia ports at a lower cost per container. The Savannah port is improving its facilities to accommodate the larger Post-Panamax vessels.
- **Trucking Routes to Port:** Long haul trucking routes that connect the Savannah port to freight facilities further out in the megaregion, such as Nashville or Chattanooga, are already occurring and facing challenges related to parking and truck rest stops. Freight planners want to parse these long hauls to avoid drivers traveling extremely long routes in one trip.

Presentation: Aerotropolis Planning: Air Passengers and Freight in the Megaregion

- Jon Tuley, ARC

Airports are a central piece in a region's economy, and aerotropolis planning is a combination between urban planning and logistics. There are several examples inside and outside of the US. Atlanta's Aerotropolis has a large amount of acreage and is located in several different jurisdictions, although it is run by an independent authority. In this presentation, **ARC discussed the need for a regional plan that focuses on the redevelopment, regional and global impacts, and integration with the surrounding communities for this aerotropolis:**

- Redevelopment: The area around the airport does not reflect the increased growth and redevelopment of the entire city and holds great potential for redevelopment with the roads and rail that connects this area to the megaregion.
- Regional and Global Impacts: Aerotropolis planning does not stop at county and municipal boundaries, because the airport has regional and global impacts. The development of the airport and its surrounding communities should be an important part of planning at all scales.
- Integration with surrounding communities: Multiuse trails can be included in aerotropolis planning to better integrate airport transportation with the needs of surrounding communities. The regional plan should connect the aerotropolis to the parks and other networks of the region.

Presentation: Federal Perspectives on Megaregion Planning and Regional Cooperation

- James Garland, FHWA Office of Planning
- Jody McCullough, FHWA Office of Planning

Megaregion planning and regional cooperation helps transportation agencies address mutual goals and challenges which impact a larger region or megaregion. The Regional Models of Cooperation initiative has provided resources, such as webinars, peer exchanges, and a handbook to assist State DOTs, MPOs, transit agencies, and their partners in finding ways to work together across jurisdictions. When discussing these efforts with different states, infrastructure and congestion were common challenges related to freight, environment and air quality, economic vitality, and safety. Megaregion planning and regional cooperation has been practiced in a variety of ways around the country, including:

- Corridor Coalitions: Cross jurisdictional cooperation can also include corridor coalitions, which can focus on freight and operational efficiencies of a specific corridor. For example, FHWA supported a peer exchange for the I-10 corridor coalition. The peer exchange included participation of Chief Executive Officers from four State DOTs and resulted with a signed coalition charter and a concept for operations.
- Peer Exchanges: Other megaregion peer exchanges were held by the Delaware Valley Regional Planning Commission (DVRPC), the MPO in the Philadelphia metropolitan area, and the Mid-South Megaregion in Memphis, Tennessee. The DVRPC peer exchange led to action items that include establishing megaregion liaisons, creating regular communication forums, and the coordination of statewide freight plans and projects, such as electronic screening of trucks. The Mid-South Megaregion peer exchange identified opportunities to strengthen regional freight planning, include transportation funding considerations in corridor planning studies, continue

participation in megaregion scale coordination forums, programs and workshops, and to further consideration of truck parking needs and related safety considerations across the megaregion.

The recently-released [Regional Models of Cooperation Handbook](#) outlines a variety of practices for cooperation and twenty case studies in which these practices are exemplified. Successful regional cooperation in transportation planning can take a number of forms and have different focuses, but there are some central themes that form the foundation for cooperative planning efforts:

- Relationship Building;
- Mutual Benefits;
- Flexible Formality;
- Culture of Cooperation;
- Diversity of Opinions; and
- Equal Participation

Presentation: Strategic Highway Research Program 2 (SHRP2) Transportation Visioning for Communities and Performance Measures for Highway Capacity Decision Making

- *Haley Berry, ARC*
- *Shayna Pollock, ARC*
- *David D'Onofrio, ARC*
- *John Orr, ARC*

Transportation Visioning for Communities

The Atlanta Regional Commission (ARC) presented their work from a 2015 SHRP2 grant for scenario planning and visioning. As a component of Atlanta's plan, the Regional Transportation Plan integrates freight transportation planning into the entire planning process. ARC used exploratory scenario planning to test the effects of multiple trends on many outcomes, including transportation and land use, in order to adopt the most resilient strategy. This technique assigns potential disrupters, analyzes their influence in the future, and results in actions to make a city or region adaptable and successful in relation to these disrupters.

ARC detailed the exploratory scenario planning process:

- External Factors: The STEEP (Social Technology Economy Environmental Policy) tool facilitated the choice of external factors that could affect the region. Some drivers included the aging population, autonomous vehicles, climate change regulations, transportation finance structure, intelligent infrastructure and technology, competition for natural resources, port traffic, social equity, and ride-hailing and car-sharing.
- Quantitative Forecasting: ARC used the *Impacts 2050*, a socio-demographic modeling tool developed by National Cooperative Highway Research Program (NCHRP) as the framework for the Atlanta region's four scenarios. By combining a variety of assumptions about each of the key drivers, ARC created four alternate futures for the region that mirrored the scenarios put forth in *Impacts 2050*. Once the four scenarios were created, ARC used the Regional Strategic Planning Model (RSPM), a sketch model, for quantitative analysis.
- A Spectrum of Outcomes: The scenario planning process produced a spectrum of outcomes based on the disrupters and the proposed actions or strategies.

- Realizing the Vision: The ARC board and other stakeholders were involved in discussions on how to realize the vision over a long period of time. These discussions were rich, helping to build relationships and an understanding of converging visions, goals, and objectives.
- Visualization Tool: ARC developed a scenario visualization tool, [Winning the Future: Sharpening Our Focus](#), to adjust the scenarios and inputs. Going forward, users can build place-specific scenarios, using a similar process.

Performance Measures for Highway Capacity Decision Making

ARC presented their work from a 2015-2016 SHRP2 grant. ARC uses performance measures to inform decision making and project selection. Similar to many other MPOs, ARC's Regional Transportation Plan (RTP) is based on a performance-based planning approach, but the performance measures do not directly inform project selection. ARC gathered information on the methods that their peer regions use to carry performance management into the programming process, including metrics and weights, and creating funding buckets.

A Project Evaluation Task Force, organized by ARC, analyzed where key decision points are in the planning and programming process. ARC's project evaluation process takes into account different levels of decisionmaking that uses performance metrics and also preserves a local understanding of transportation needs. The different levels of decisionmaking include:

- Policy Requirements: This initial step analyzes roadway, transit, bicycle/pedestrian and other project types by their applicability to regional and national priorities and their alignment with ARC policies.
- Technical Evaluation: Projects are evaluated on a four-tier system that prioritizes projects by technical merit.
- Local Decisionmaking: ARC's process acknowledges that some projects fall outside a ranking system; there is a need to preserve opportunities for local decisionmaking in the programming process.

Key Themes and Strategies

During the course of the workshop, six themes and strategies for collaborating across jurisdictional boundaries, and between the private and public sectors, were discussed.

1. Adapt to a changing freight industry

Similar to other regions in the United States, the PAM is experiencing dramatic changes that impact the freight industry, including the increase in residential land use and traffic congestion in the transportation system. **Peer exchange participants identified three strategies that could help the PAM freight industry adapt, such as the following:**

- **Use of the Multimodal Network:** Envisioning freight transportation networks as multimodal networks can create stronger, more efficient outcomes for all users. The private sector is interested in using alternative transportation modes for last mile delivery. This could involve mobile centers that can be parked to assist bike delivery. Private sector stakeholders expressed support for working with municipalities to develop improved bike lane networks for last mile freight movement.
- **Flexible Warehousing Locations:** In addition to transportation infrastructure networks, the logistics and freight industry includes warehousing and industrial property. Participants identified that this industry's need for warehousing and logistics centers requires flexibility in a rapidly changing market. For example, many companies want to rent or lease warehousing property, because the industry is fluid and centers of demand may change with technology or population. Because warehousing locations are changing rapidly, the long-range planning approach may be less effective in forecasting necessary transportation facilities in relation to warehousing.
- **Transportation User Fees:** Participants discussed the need for well-maintained, transportation infrastructure and in some cases transportation network expansions to relieve traffic congestion and improve roadway conditions. Private sector participants expressed support for a diesel user fee (increased tax on diesel fuel) to be dedicated for projects that improve transportation infrastructure and congestion, because congestion leads to a major cost in the logistics industry.

2. Leverage advances in mobile technology

Peer exchange participants acknowledged that advancements in mobile technologies and communications can have profound social, political, and economic effects in the PAM. **The PAM partners recognized an opportunity to leverage mobile technology in the freight industry on a regional and megaregional scale, to address issues of traffic congestion, parking availability, and to identify problem areas in regional corridors.** Leveraging these technologies will likely require collaboration between public agencies and private companies to build and share comprehensive datasets.

- **Network Data Analysis:** Data produced by mobile technologies will provide more insight into all trips that occur on transportation networks for passengers and goods. This will allow for the freight industry to prioritize transportation infrastructure improvements with better and more comprehensive data.
- **Real-time Data:** Advanced mobile technology paired with real-time data updates can improve freight movement; truck drivers or other freight movers can receive real-time updates on transportation network congestion, parking availability, routing information, or alternative multimodal options to create faster and more efficient movement of goods.

3. Create policy to incentivize innovation in the freight industry

Peer exchange participants discussed the need to propose new policies that address common challenges in the transportation and freight industries. Federal, state, and local governments can create policies that benefit the freight industry and incentivize their involvement in policy discussions; public agencies should strive to include the private sector and other transportation industry organizations in these discussions.

- Economic Benefits of Innovative Policies: Policy innovations can often lead to cost-effective solutions that improve the efficiency of the transportation system. For example, federal regulations require commercial truck drivers to be at least 21-years-old to drive across state borders; this regulation excludes young people from entering this career path after high school. Workshop participants suggested that a policy that lowers this age limit within the state borders of the PAM could act as an innovative policy, addressing an industry challenge of establishing a sustainable workforce. The PAM states and metropolitan areas can work together to identify barriers to freight innovation and then coordinate action at the State and local levels throughout the PAM.
- Include the Private Sector in Policy Discussions: Workshop participants suggested that government agencies should strive to more consistently involve private sector representatives in local, regional, and megaregional meetings, inviting private sector representatives to share industry updates and issues. Acknowledging the importance of the private sector's voice may act as an incentive for private companies to communicate valuable insight into policy decisions.

4. Recognize the value of diverse partnerships

Peer exchange participants acknowledged **the need for diverse partnerships in order to approach transportation challenges within the megaregion, comprehensively.** Participants stressed that cooperation is key to building successful projects and networks at the megaregion scale. Megaregional transportation projects benefit from diverse partners, because they give insight and expertise on their localities or regions that may highlight issues in new ways, bringing alternative and innovative solutions to the table.

- Create PAM Transportation Consortium: Peer exchange participants proposed the creation of a PAM consortium (or working group) of State DOTs, MPOs, non-profit organizations, private sector representatives, and other relevant partners to meet regularly to discuss transportation planning research, policy, and projects of regional interest. This working group would establish megaregion points of contact that act as champions in promoting transportation cooperation. State DOTs and MPOs at the workshop agreed that the consortium should be diverse, including partners outside of public agencies. A list of participants for future PAM consortium meetings include:
 - U.S. Department of Transportation agencies
 - State DOTs and other state agencies
 - MPOs and RPAs
 - Local governments and municipalities
 - Private sector firms involved in freight and transportation
 - Transportation advocacy groups
 - Community Improvement Districts
- Value Partners Equally: Workshop participants noted that in order for partnerships to be successful the input of each partner, no matter their agency or company size, should be given equal consideration.

5. Maintain regular communication with partners

Peer exchange participants discussed how successful megaregion cooperation and project collaboration requires regular communication between partners. Efforts in communication often involves many different considerations:

- Assign Responsibility to Individuals: Megaregional partners should be assigned responsibilities, which could include establishing megaregion liaisons within agencies and companies, creating subgroups on key issues, and consortium with a rotating chairperson
- Create a Communication Network: Megaregional partners should explore different forms of regular communication; this could include conference calls, informal in-person meetings, websites, newsletters, and social media. These partners should establish the ownership and audience of websites, newsletters, and social media initially.
- Organize Events for Information Exchange: Bringing several megaregional partners together under one roof on an annual or bi-annual basis can facilitate information exchange and maintain relationships. These meetings could include peer exchanges or social events related to large conferences.
- Focus on Topics of Mutual Interest: Focus on relevant and multijurisdictional projects or planning efforts to maintain participant interest and involvement

6. Identify shared priorities and focus cooperation efforts

Peer exchange participants recognized the importance of identifying shared goals, but stated that aligning all goals across jurisdictions may be challenging. Instead, **megaregion partners should identify potential projects that are high priorities for multiple partners**. Focusing on joint high priority projects can allow for constructive collaboration across the megaregion.

- Build Support at Different Scales: Identifying projects that can be combined and implemented across a network, corridor, or megaregion can help build both regional and local support, since more stakeholders at different scales are involved and have a sense of ownership.
- Cost Efficiency and Funding: These efforts can help agencies save time and money through sharing staff resources and not replicating the same efforts. In addition, cross-jurisdictional projects are often considered more competitive projects, when applying for discretionary funding. These projects are more competitive, because the collaboration required for the project demonstrates its high regional priority among agencies and stakeholders.

Next Steps for Continued Cooperation in the PAM

Participants engaged in roundtable discussions at the end of both days of the peer exchange to discuss how best to work together on a megaregion scale moving forward. The group defined two main goals of this megaregional collaboration effort: continuing communication and identifying potential areas of collaboration; these efforts will be led by ARC and Dr. Catherine Ross. Participants also recognized that collaboration on this scale creates challenges that should be acknowledged and understood from the outset.

Communication

Successful communication efforts on a megaregional scale may benefit from strong organization, assigned responsibilities, motivated participants, and intuitive or easy-to-use forms of communication. Table 1 outlines the components of this goal.

Table 1: Strategies for continuing communication in the PAM

Goal	Strategies
<i>Continue Communication within the Megaregion</i>	Establish a megaregion consortium or working group with a rotating chairperson
	Assign responsibility to individuals in each agency to act as megaregion liaisons or points of contact
	Arrange subgroups to focus on key issues and establish a point person for inquiries
	Explore different types of communication networks, such as websites, newsletters, and social media; and implement an appropriate communication network that defines ownership, transmittal, and participants
	Consider regular conference calls, where participants give brief updates
	Organize peer exchanges or events for information exchange
	Focus on specific projects or planning documents to maintain participant interest
	Identify and involve partners in consortium <ul style="list-style-type: none"> • Federal Highway Administration and other USDOT agencies • Freight Advisory Committees • Georgia Tech's CQGRD • Non-profit organizations, such as research groups, data clearing-house creators, etc. • Topic-specific experts, such as technology, sustainability, parking, etc.

Potential Areas of Cooperation

Peer exchange participants identified potential projects that are high priorities for several different partners across the PAM. Specific projects that cross boundaries can reveal widespread issues that can be improved or solved with collaboration in the megaregion. Table 2 summarizes the initial ideas for megaregion cooperation discussed during the workshop.

Table 2: Ideas for megaregion cooperation discussed during the workshop

Goal	Potential Areas of Cooperation
<p><i>Identify Potential Areas of Cooperation</i></p>	<p>Data sharing</p> <ul style="list-style-type: none"> • Pool funding to share data (IHS TRANSEARCH data for freight planning) • Share in-house data between states, MPOs, RPAs, organizations, etc. • Identify data useful at different scales, different industries, and across boundaries • Seek data that addresses common performance measures • Share goals, objectives, performance measures, and targets
	<p>Corridor coalitions</p> <ul style="list-style-type: none"> • Focus on major corridors in the PAM • Consider potential corridors, participants, level of commitment, and meetings
	<p>Truck parking</p> <ul style="list-style-type: none"> • Determine where truck parking is located along key corridors between states • Consider rest stop closing, intermodal connectors, heartland corridor, Transportation Investment Generating Economic Recovery (TIGER), and railroad involvement • Determine locations and/or corridors of truck parking availability issues
	<p>Other potential topics</p> <ul style="list-style-type: none"> • Tolling • Incident clearance and emergency response • Rural engagement • Rail freight capacity • Aerotropolis planning • Economic development related to freight

Challenges

Peer exchange participants identified some challenges associated with transportation cooperation across the PAM. Challenges may include effective communication, staying focused on mutually beneficial projects, balancing the use of finite funding resources, and relating local issues to a megaregional scale. Partners should acknowledge and attempt to overcome challenges, including the following:

- Communicating the importance of megaregional collaboration in order to bring partners onboard for the PAM consortium
- Maintaining communication and coordination across public and private sectors
- Funding the expansion of rail freight capacity projects despite their high costs
- Cooperating despite competition for funding or for business between agencies or firms
- Establishing, maintaining, sharing progress through performance measures
- Establishing common goals across the megaregion
- Scalability of scenario planning to the state and megaregion level

Conclusion

This peer exchange explored the viewpoints of different stakeholders on the benefits and challenges of cooperation related to freight movement and transportation planning in the PAM. Coordinating transportation projects across jurisdictions can lead to increased efficiencies in the planning and programming processes, as well as more comprehensive solutions to widespread transportation issues. Businesses often operate and move freight on a larger regional scale. Regional cooperation can benefit freight movement by improving communication between public agencies and private sectors. At the peer exchange, private sector panelists discussed alternative uses of traditional infrastructure and novel cooperative efforts to improve freight infrastructure. They also discussed challenges the industry faces related to regulation and deteriorating transportation infrastructure. Often, addressing these issues requires balancing multiple modes and aspects of the transportation industry, such as trucking, ports, airports, railroad, and warehousing. Megaregion planning and regional cooperation can help transportation agencies identify mutual goals and address challenges which impact the megaregion.

ARC presented its two efforts in exploratory scenario planning and performance-based planning which could be extended to the megaregion scale to inform vision planning and future project selection. First, exploratory scenario planning envisions the effects of multiple trends on many outcomes, including transportation and land use, in order to adopt a resilient strategy. This technique assigns potential disrupters, analyzes their influence in the future, and results in actions to make a city or region adaptable and successful in relation to these disrupters. Developing a favorable vision for the megaregion requires stakeholder discussion; these visioning efforts help build relationships and an understanding of converging visions, goals, and objectives. Second, performance-based planning can help to inform decision-making and project selection by fulfilling policy requirements, evaluating projects with performance metrics, and accounting for local knowledge and decision making on project programming. Project selection processes on a megaregion scale could take into account different levels of decisionmaking to identify megaregional priorities.

Participants identified key themes that affect transportation planning and freight movement in the PAM, including changing demands on the transportation network and land use, fast-paced advancements in mobile technology, and capacity issues within freight modes. A cooperative approach informed by a diverse group of stakeholders can be used to cope with these external forces and to identify joint high-priority projects.

Moving forward, the participants agreed to establish a megaregion consortium or working group, which will focus on issues and projects of mutual interest to agencies and stakeholders across the megaregion. Forming the consortium will help participants maintain regular communication and focus cooperation efforts on their shared priorities.

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FHWA's Transportation Planning Capacity Building Program, in conjunction with the EDC-3/Regional Models of Cooperation initiative thanks the Atlanta Regional Commission and Georgia Tech's Center for Quality Growth and Regional Development for hosting the peer exchange. In addition, the program thanks the workshop participants from the Piedmont Atlantic Megaregion for their presentations and valuable contributions to discussions of how to improve transportation planning cooperation at a megaregional scale.

Appendices

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B. Workshop Agenda

Tuesday, January 31, 2017

8:30 am	Welcome and Introductions (breakfast on-site for peers/panelists at 8:00am)
	<i>Global and Regional Freight Industry Trends</i>
9:00 am	Overview of Workshop Agenda and Goals
9:45 am	<i>Panel Discussion</i> Freight Movement at the Megaregion Scale: First/Last Mile Challenges
10:45 am	Break
11:00 am	<i>Panel Discussion</i> Freight Movement at the Megaregion Scale: From Global to Regional Trends
12:00 pm	Lunch Served
	<i>Freight Infrastructure Changes in Piedmont Atlantic Megaregion</i>
12:30 pm	<i>Keynote Address</i> Introduction to Transportation Infrastructure Impacts on Megaregions Dr. Catherine Ross, Georgia Institute of Technology
1:15 pm	<i>Panel Discussion</i> Transportation Infrastructure Impacts on Megaregions
2:15 pm	<i>Presentation</i> Aerotropolis Planning: Air Passengers & Freight in the Megaregion
2:45 pm	Break
	<i>Regional Cooperation in Freight Planning and Other Topics</i>
3:00 pm	<i>Presentation</i> Federal Perspectives on Megaregion Planning and Regional Cooperation
3:30 pm	<i>Roundtable Discussion</i> Regional Models of Cooperation
4:45 pm	Wrap Up Discussion
5:00 pm	Adjourn

Wednesday, February 1, 2017

8:15 am	Welcome and Announcements
	<i>Applied Research Projects Relevant to Megaregion Cooperation</i>
8:30 am	<i>Presentation and Roundtable Discussion</i> SHRP2 C08 – Transportation Visioning for Communities SHRP2 C02 – Performance Measures for Highway Capacity Decision Making
9:45 am	Break
	<i>Moving Forward Together</i>
10:00 am	<i>Breakout Session and Full Group Discussion</i> Ongoing Planning and Coordination in the Piedmont-Atlantic Megaregion
12:00 pm	Next Steps Discussion
12:15 pm	Adjourn

C. Additional Resources

Peer Exchange Presentations

[Presentation Download](#)

Regional Models of Cooperation Initiative

[Regional Models of Cooperation](#)

[Regional Models of Cooperation Handbook](#)

[Every Day Counts](#)

PAM Statewide Freight Plans

[2016 Alabama Statewide Freight Plan](#)

[Mississippi Statewide Freight Plan \(2015\)](#)

[South Carolina Statewide Freight Plan \(2014\)](#)

[Georgia Statewide Freight & Logistics Plan \(2010\)](#)

[Statewide Logistics Plan for North Carolina \(2008\)](#)

[Tennessee Statewide Multimodal Freight Plan](#)

PAM MPO Freight Plans and Resources

[Atlanta Regional Freight Mobility Plan Update \(2016\)](#)

[Chatham County-Savannah Metropolitan Planning Organization Freight Transportation Plan](#)

[Memphis Urban Area MPO Freight Planning Webpage](#)

[Regional Planning Commission of Greater Birmingham Freight System Planning Webpage](#)

[Gainesville-Hall Regional MPO Freight Study Documents Webpage](#)

D. Acronyms

ARC	Atlanta Regional Commission
CID	Community Improvement District
CQGRD	Center for Quality Growth and Regional Development
CSX	CSX Railroad
DOT	Department of Transportation
DVRPC	Delaware Valley Regional Planning Commission
EDC-3	Every Day Counts
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
MPO	Metropolitan Planning Organization
NCHRP	National Cooperative Highway Research Program
NS	Norfolk Southern Railroad
PAM	Piedmont Atlantic Megaregion
PBPP	Performance-based planning and programming
RPA	Regional Planning Agency
RTP	Regional Transportation Plan
STEEP	Social Technology Economy Environmental Policy
TIGER	Transportation Investment Generating Economic Recovery
TIP	Transportation Improvement Program
UPS	United Parcel Service
SCL	Georgia Tech Supply Chain and Logistics Institute