

# Spalding County Freight Cluster Plan

## Best Practices Review Technical Memorandum

Prepared by



For



In cooperation with



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## 1. Overview and Purpose of Report

The purpose of this document is to present a snapshot of freight research, techniques and best practices that have been implemented recently throughout the U.S. that represent the state of the practice in their respective areas. The ideas and initiatives expanded on in this narrative are not all-inclusive, but have been chosen for their particular applicability to Spalding County and to understand the opportunity to leverage these best practices for potential implementation to ultimately improve logistics and freight transport efficiency, safety, optimization, and access throughout the study area. The following sections evaluate freight technology trends, freight-oriented land use and development impacts, and other ideas including rightsizing of transportation investments and the benefits of grade separation along heavy rail corridors.

## 2. Technology Advances and Trends for Goods Movement

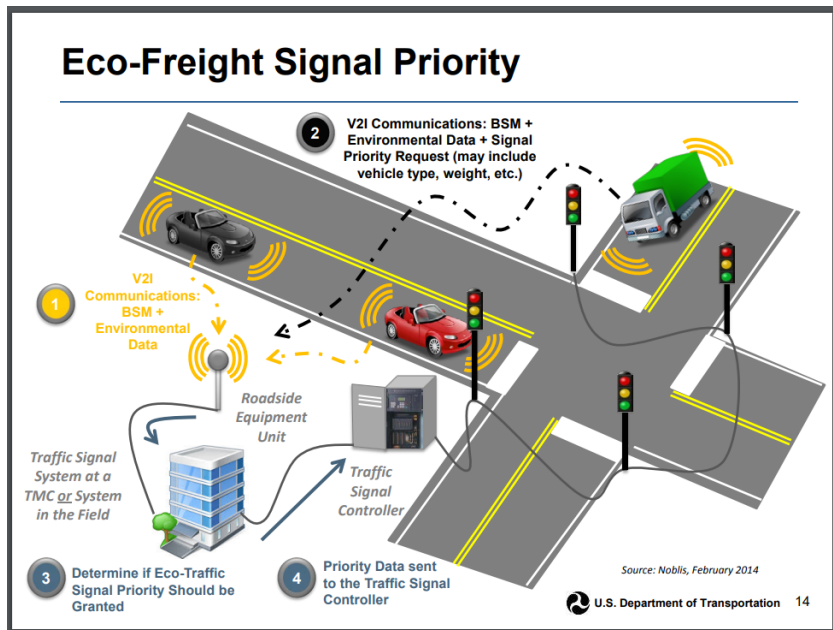
While the advances of technology have a wide range of applications, this analysis serves to identify and investigate aspects of goods movement technology most applicable to the policy makers of Spalding County. For example, while many real-time and freight tracking applications such as radio frequency identification (RFID) tags, PrePass weight enforcement, and complex urban delivery models are being advanced in the logistics industry, Spalding County officials and staff will have very little influence on development and implementation; and/or very little access to the proprietary data that it generates. Furthermore, Spalding County is a relatively undeveloped and uncongested freight environment and the region's current issues are related to operational deficiencies at specific locations and/or conflicts with at-grade rail crossings. As such, two of the primary goals of this Plan identified by the Plan's Stakeholder Committee were to develop industrial properties in the County in a planned, organized manner and identify strategies to mitigate potential truck bottlenecks as smart growth occurs. Two areas of technological advances that can advance study goals are:

- 1) Developments in traffic signalization – I-75 is a major freight corridor, but the most influential freight travel in Spalding County occurs along three primary state roadways - SR 16, US 19/41, and SR 155 or rail lines adjacent to those roadways. A key to maintaining freight mobility in the County is ensuring efficient first and last mile connections to and from the region's freight generating facilities.
- 2) Truck parking technologies – As the Spalding County industrial base continues to develop, the opportunities to provide truck parking can be a useful tool to assist in business recruitment and retention. Understanding the overall influences on truck parking presented by related technologies helps Spalding County and ARC better identify truck parking strategies for the future.

### 2.1. Freight Signal Priority

Freight Signal Priority provides precedence to freight and commercial vehicles traveling in a signalized network along a defined corridor. The goal of freight signal priority is to reduce stops and delays to increase travel time reliability specifically for freight traffic by improving on-time deliveries, enhance intersection safety, and increase overall network efficiency. Freight signal priority could be applied in conjunction with other intelligent transportation systems or integrated corridor management (ICM)

strategies in order to maximize operational benefits for trucks, perhaps near the entrance/exit of major freight generators or specialized industrial land use clusters throughout the study area.



As part of the Dynamic Mobility Applications program, the USDOT is exploring the possibilities for smarter traffic signal timing using vehicle-to-infrastructure (V2I) communications. The Multi-Modal Intelligent Traffic Signal Systems (MMITSS) is a bundle of applications that allows traffic signals to be monitored and adjusted in real-time to maximize traffic flows or to accommodate specific user groups, such as freight, transit, emergency vehicles, and pedestrians.<sup>1</sup>

A similar application is being explored under the USDOT ITS Joint Program Office's Applications for the Environment: Real-time Information Synthesis program. The Eco-Freight Signal Priority application gives signal priority to freight vehicles approaching a signalized intersection, taking into consideration the vehicle's location, speed, type, and weight. Signal priority decisions are based on real-time traffic and emissions data to produce the least amount of emissions at signalized intersections. Preliminary modeling results showed that freight signal priority provides up to 4 percent fuel reduction benefits for freight vehicles, which equates to up to \$649,000 annual savings for a fleet of 1,000 city delivery vehicles driving 30,000 miles on arterials each year. For a large fleet of 80,000 vehicles, this would result in annual savings of \$51 million.<sup>2</sup>

### Results – A Typical User Snapshot

**At about 3.5% savings in Fuel Consumption for 100% penetration, how would this benefit an average user?**

- Six mile corridor, average traffic congestion
- Average Medium Freight vehicle, ~8 mpg, diesel costs \$4/gallon
- Baseline conditions, vehicles spend **\$3** to traverse
- With Signal Priority, vehicles spend **~\$2.90** to traverse
- Driving 15,000 arterial miles a year → **\$250** savings/year/vehicle
- Fleet Operator (150 vehicles): **\$37,500** per year of savings

U.S. Department of Transportation 23

<sup>1</sup> U.S. Department of Transportation. *Dynamic Mobility Applications (DMA) Program – Multimodal Intelligent Traffic Safety System (MMITSS)*. Available online at: [https://www.its.dot.gov/research\\_archives/dma/bundle/mmitss\\_plan.htm](https://www.its.dot.gov/research_archives/dma/bundle/mmitss_plan.htm)

<sup>2</sup> USDOT, Office of the Assistant Secretary for Research and Technology, Combined Modeling of Eco-Signal Operations Applications, Applications for the Environment: Real Time information Synthesis (AERIS) Program

Freight signal priority is an innovative strategy that Spalding County could consider as part of their long-term vision for the implementation of corridor management strategies in the region, particularly if the SR 16, US 41, and SR 155 corridors continue to experience growth of heavy freight traffic. Although some technology applications may not be immediately implementable in Spalding County since it will take time for roadside infrastructure and freight vehicles to be equipped with V2I communication technology; the applications may offer an incentive for freight shippers as the technology will improve overall corridor efficiency. With less delay at intersections, drivers would be better equipped to make on-time deliveries, and fuel consumption and emissions due to idling at intersections could be reduced.<sup>3</sup>

## 2.2. Truck Parking

Truck drivers must follow Federal hours-of-service (HOS) rules that limit them to driving a total of 11 hours during a 14-hour period. However, driving is not permitted if more than 8 hours have passed since the end of the driver's last off-duty or sleeper-berth period of at least 30 minutes. In order to take these mandated breaks, drivers need to be able to find safe and legal parking spaces to rest. Several states have been successful in evaluating truck parking availability and distributing that information to trucking companies and drivers with advance notice to make routing and delivery timing decisions.

Currently, few systems exist for commercial drivers to access truck parking availability information. Although some private parking facilities offer parking availability information through mobile phone applications, these systems rely on cumbersome manual data collection and are not widely deployed. In addition, the National Association of Truck Stop Operators maintains a directory of private truck stop operators. However, these services do not provide real-time information on truck parking availability.

ITS-based truck parking systems are in operation in Minnesota, Florida, Michigan, and California, among others under development. As these systems evolve, they continue to strive to provide operational information directly to the truck driver, whether in response to an incident or congestion ahead on the driver's route; or by allowing the driver to interact with the truck parking application to reserve a parking space in advance of arriving at the parking lot. Directly providing this information to the driver before they need it may reduce instances where the driver violates HOS requirements. It may also contribute to improved efficiency since drivers could travel directly to the parking facility where spaces are available without having to venture off their routes.

### 2.2.1. Florida Truck Parking Availability System (TPAS)

Florida's truck stops experience overflow parking at some locations while others remain underutilized; demonstrating a need for stronger parking information management. In a proactive approach to address the issue of truck parking shortage, the Florida Department of Transportation (FDOT) initiated a research project with Florida International University (FIU) to determine the supply and demand characteristics for commercial truck parking in Florida. The research determined that a technology solution could be used to improve parking management. As part of the research, a test project was deployed to review rest area parking data and to test the technology and determine the feasibility of providing real-time parking availability information. The project tested in-pavement wireless detection sensors (WDS) at the I-10 rest area in Leon County, west of Tallahassee, and utilized closed circuit

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Summer Webinar Series, 25 June 2015. Available online at: [https://www.its.dot.gov/aeris/pdf/Eco-Signal\\_Operations\\_Combined\\_Modeling\\_webinar\\_final\\_062414.pdf](https://www.its.dot.gov/aeris/pdf/Eco-Signal_Operations_Combined_Modeling_webinar_final_062414.pdf)

<sup>3</sup> USDOT. *Integrated Corridor Management and Freight Opportunities*. December, 2015.

television (CCTV) cameras for verification of the availability data. A second test project deployment in a rest area in St. Johns County on I-95 south of Jacksonville tested the use of microwave vehicle detection sensors (MVDS) to count the vehicles as they entered and exited the rest area.

An embedded dynamic message sign approximately one mile ahead of the rest area notified commercial vehicle operators of the availability of parking spaces. In 2015, FDOT applied for and received a \$1 million Accelerated Innovation Deployment (AID) grant for a demonstration project on a Truck Parking Availability System (TPAS). The AID grant supplemented FDOT funding to deploy the TPAS at seven public parking sites located along I-4 and I-95 in FDOT District 5.

Additionally, as part of the initial AID project, the FDOT undertook project development to deploy TPAS throughout the entire Florida interstate system public parking areas: welcome centers, rest areas and weigh stations. The effort included concept plan development, cost estimates, environmental evaluation, utility coordination and right-of-way requirements. Leveraging the exhaustive efforts and the level of preparedness, an application for the inaugural FASTLANE grant application was submitted. In September 2016, FDOT was awarded an additional \$10.7 million in Federal funding for the full deployment of TPAS throughout Florida’s interstate system, in supplement of state funding.

2.2.2. Minnesota Truck Parking Information System

The American Transportation Research Institute (ATRI) and the Minnesota Department of Transportation (MnDOT) implemented a truck parking management system in Minnesota. The SmartPark system employs an automated network of cameras that uses software and vision algorithms to identify available parking spaces. Using pixel-level information, the system determines the presence or absence of a vehicle to create a dynamic count of truck parking availability which is then communicated through a series of distribution systems, including roadside variable message signs (VMS), a direct, in-cab data feed and the SmartPark4Trucks website. The SmartPark system was tested at three public rest stops along the I-94 corridor in Minnesota.<sup>4</sup>

The truck parking system in Minnesota is bundled with the USDOT Smart Roadside Initiative (SRI). For the SRI prototype, trucks have an onboard unit equipped with an application that monitors the driver's duty status and records driver HOS. Trucks enter a geo-fenced region that automatically exchanges information with the truck's on-board unit, notifying the driver that the remaining HOS have reached a predefined threshold and that there is available parking at upcoming facilities, designated by exit ramp numbers. At pre-designated distance points, the system automatically and wirelessly queries the truck parking server for local parking availability.



When a truck approaches a facility, the system provides a final notification regarding availability so that the driver can avoid entering and searching the facility if all spaces have been filled. When a truck enters a space, the system reduces the available count by one. When a truck exits a space, the system increases the space-available count by one. In each case, the

<sup>4</sup> USDOT. *Integrated Corridor Management and Freight Opportunities*. December, 2015.

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central server appropriately modifies the space-available calculation.

*Source: Minnesota Department of Transportation*

### 3. Freight-Oriented Land Use and Development

Given the amount of relatively undeveloped land with great potential for industrial development within Spalding County, sound practices for managing land use and development will be critical for creating a successful, sustainable business environment. The creation of clustered freight intensive businesses in the County supported by a coordinated land use and infrastructure development policy will catalyze regional economic development activity, improve the efficient distribution of goods, create new jobs, and promote efficient development of existing greenfields in the study area.

#### 3.1. Innovative Zoning

The following are examples of innovative zoning practices for consideration by Spalding officials to help develop freight-intensive industrial land throughout the County.

##### 3.1.1. Area Distinction - Rickenbacker District, Columbus, Ohio

Development around Columbus' Rickenbacker District, defined as a corridor along Alum Creek Drive from I-270 to a Norfolk Southern yard, began to occur in the 1970s and 1980s. The decommissioning of the Lockbourne Air Force Base led to its reuse as the freight-only Rickenbacker International Airport. Around the same time, the City of Columbus established the Rickenbacker District as a Community Reinvestment Area and provided tax abatements and utility hookups to help develop it. Logistics and warehousing activity began to shift to the Alum Creek Drive corridor south of I-270 from western Columbus. In 2007 and 2008, the Airport Authority and Duke Realty facilitated the development of Rickenbacker Global Logistics Park around the Airport and NS yard. Located in the southern half of the Rickenbacker District, the Park's four campuses offer over 40 million square feet of logistics space across 40 buildings. The Port boasts several major corporations, including Cardinal Health and the Limited, and 29 third-party logistics providers (3PLs). Logistics and warehousing development in the Rickenbacker area has had a major economic impact in the form of new investment and jobs. According to a study by the Airport Authority, the NS yard and firms in the Logistics Park directly and indirectly support 15,798 jobs, \$515.2million in annual payroll, and \$1.9 billion in total economic output. Most development has been custom built in large warehouses that reflect their function as distribution centers for a large section of the country.

##### 3.1.2. Legacy Manufacturing Districts - Indianapolis, Indiana

Legacy manufacturing districts in Indianapolis have faced sustained disinvestment and high rates of vacancy and underutilization. In an attempt to revitalize these districts, the city modified its existing zoning policy to allow for easier process for a zoning variance for vacant industrial properties. The revisions focused on incentivizing complementary uses to existing manufacturing firms, such as food production and artisan manufacturing. Advancing industrial redevelopment and retaining industrial uses in the city is a joint effort involving public, private and civic partners. For example, the City of Indianapolis, in partnership with the Indianapolis Chamber of Commerce and the economic development organization Develop Indy, is re-positioning its existing economic development incentive programs to advance equitable economic opportunity. Among the strategies that have emerged from

this process are establishing baseline criteria related to worker wages and benefits in order for projects to be eligible for tax abatement and other incentives.

### 3.1.3. Economic Development Precertification Program – Minnesota DEED

A “certified ready” industrial site program or “precertification program” can help expedite development and raise the profile of the region’s industrial properties. Certified site programs also give local governments a tool to direct development to places where they would like economic growth to occur in order to achieve public goals such as the creation of jobs in low-income neighborhoods, the reduction of truck mileage to achieve environmental objectives, the restoration of brownfields into productive land, or the realization of local land use plans. Certification or pre-certification programs help mitigate the flaws that many sites currently have, especially in older industrial districts, which make it difficult for private firms to redevelop them. Many of these sites, with proactive action, could return to the market as strong candidates. These include properties without clear ownership title, properties that are suspected of having or actually contain environment contamination, or properties fragmented into numerous small parcels. By establishing an inventory of certified ready sites, economic development officers can respond immediately to many corporate searches and other industrial attraction opportunities as they arise. Certification programs are becoming more popular as a tool for public agencies to cultivate and direct economic development. Minnesota’s Department of Employment and Economic Development (DEED) has certified over 30 sites statewide since 2009 through a program that includes planning, zoning, surveys, title work, environmental studies, soils analysis and public infrastructure engineering. Indiana and North Carolina, as well as other states also offer certified site programs. Class I railroads, including BNSF, have existing site certification programs; however, the focus of these programs is more narrowly defined for rail-served uses.

### 3.1.4. Public Private Partnerships - Will County, Illinois

Will County has experienced unprecedented growth in the freight industry. The County is now the largest inland port in North America, connecting west coast ports by rail to the Midwest, and serves a key role in the Chicago regional freight economy. While this has resulted in more jobs and a stronger economy, it has strained local infrastructure and resources. To ensure that future improvements reduce conflicts and support safe, livable communities, Will County and the Will County Center for Economic Development (CED) formed an innovative public-private partnership to develop a Community Friendly Freight Mobility Plan (Freight Plan). This Freight Plan identifies and provides guidance for local freight policies, programs, and investments, while also creating a mechanism for evaluating and prioritizing freight-related projects, recognizing six key areas: safety, mobility, preservation enhancement, workforce, economic competitiveness, and community livability. With support from state, county, and local organizations and input from the public and other stakeholders, this comprehensive Freight Plan provides recommendations to:

- Improve freight mobility and access
- Embrace new trends, such as e-commerce
- Grow the local economy and skilled workforce
- Enhance the quality of life for Will County residents Comply with federal rules to ensure funding eligibility



### 3.2. Identifying Potential Market Sectors for Development

The Albuquerque metro area, served by the Mid-Region Council of Governments (MRCOG) has access to regional, national, and international production and consumption markets through its connections via the junction of I-40 and I-25, access to the BNSF Railway Trans-continental line, and cargo and passenger service offered by the Albuquerque International Sunport. While the region does face challenges, such as an overall industrial base smaller than the national average, the region's research and technology sector- centered on multiple national laboratories and the University of New Mexico - is robust. To capitalize on these strengths, MRCOG commissioned this Transportation and Logistics Hub Study to more precisely assess the region's competitiveness and ability to attract freight-related industries and identify policies, projects, and strategies to improve the region's overall economic competitiveness and position it as an international transportation and logistics hub. This study included industry-specific assessments illustrating how corporate decisionmakers in four sectors: distribution, food manufacturing, aerospace and photonics might weigh locating in the MRCOG region versus competitor regions. The report identified near and long-term strategies to build on the area's competitive strengths, particularly the reliability of the transportation network, total land costs, shovel-ready land assets and robust labor force.

### 3.3. Industrial Development Practices

For many cities like Griffin that are located on the urban fringe, adopting smart-growth sprawl-containing strategies is associated with the conversion of relatively inexpensive industrial-zoned land to land zoned for mixed-use commercial and residential redevelopment. This can weaken the urban economic base, reduce the supply of good-job producing land, and contribute to industrial-sector suburban sprawl. Spalding County should consider local industrial policies, in coordination with local economic development and other agencies, to protect appropriate industrial growth while promoting smart growth solutions.

#### 3.3.1. Northern Stacks Industrial Park - Fridley, Minnesota

Beginning in 1940, the Naval Industrial Reserve Ordnance Plant (NIROP) and FMC Corp. (Fridley Plant) Superfund sites in Fridley, Minnesota, designed and manufactured advanced naval weapons. The two sites played an important role during World War II by supplying the U.S. Navy with weapons and equipment. Site activities contaminated site groundwater, surface waters and soils. Collaboration between the EPA, local government, and private industry resulted in the redevelopment of this facility into the Northern Stacks Industrial Park, which occupies the two sites plus additional land in between the two. The industrial park supports a variety of commercial and industrial businesses and includes LEED certified infrastructure to reduce utility costs for tenants.

#### 3.3.2. Murphy Warehouses - Minneapolis, Minnesota

Murphy Warehouses 12 warehouse sites in the Twin Cities area mix different approaches to sustainability, ranging from native gardens to solar panels to LED lighting to white roofs that reflect the sun. The company — which operates 2.7 million square feet and manages 120,000 trucks annually — incorporates sustainability into many facets of its business. These efforts have resulted in significant cost savings as well as reducing the environmental impact of the facilities. For example, by replacing the company's lawns with native prairie at one facility the company saved total of \$947,000 on fertilizer, watering, and maintenance. Retention ponds at the company's Minneapolis headquarters eliminated a \$68,000 city stormwater fee. The return on investment was seven years, after accounting for federal tax

credits. Another facility utilizes LED lights and a 40-kilowatt solar array, partially supported by a low interest Small Business Administration loan.

## 4. Other Relevant Best Practices

### 4.1. Engaging Private Sector Stakeholders in Freight Planning

The importance of engaging the private sector in freight planning is significant in order to understand the issues and context of the study area. The private sector can lend local knowledge of the systems and market in receiving inputs and distributing goods to serve local and regional markets. Early in the planning process the team with the lead public agencies should identify the representatives and existing partnerships to engage for the project and potentially an extended duration through implementation. This section describes those key perspectives to seek out when designing an outreach strategy and methods of engaging the private sector with examples of successful techniques.

#### 4.1.1. Who are Freight Stakeholders?

The stakeholders to consider are broad and comprehensive for a freight planning process. Government partners from local, regional, state and possibly federal scopes should be considered. Private sector stakeholders are much more extensive than the most obvious of participants. The National Academies Press<sup>5</sup>, the recommended parties to consider are:

- Private Freight Stakeholders:
  - Beneficial Cargo Owners
  - Logisticians
  - Motor Carriers
  - Railroads
  - Industrial Real Estate Developers
  - Chamber of Commerce and other business associations
- Additional Freight Stakeholders:
  - Economic Development Agencies
  - Ports and Airports
  - Local Governments
  - Transportation Agencies
  - Other Stakeholders – Environmental and community groups, general public

After researching successful examples and other recommendations, an additional important perspective to engage are the organized membership associations, such as the:

- American Trucking Association
- National Minority Trucking Association
- American Transportation Research Institute
- Council of Supply Chain Management Professionals
- National Association of Industrial Office Parks
- Georgia Motor Trucking Association

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<sup>5</sup> National Academies Press, *Integrating Freight Considerations into the Highway Capacity Planning Process: Practitioner's Guide (2013)*; Chapter 4: "Engaging Freight Stakeholders"

These organizations can assist in identifying active voices from the private sector and help to communicate the plan activities. The organization may also be able to provide guidance on high-level issues and concerns that the private sector has already identified for the region or state. As stated by the American Transportation Research Institute (ATRI):<sup>6</sup>

“Each state will have differing and scaled definitions of who makes up the “freight community” within any given region. For those states interested in producing an exemplary freight plan, it is not only a system’s physical infrastructure that must be inventoried, but also the state-specific people, companies, and organizations whose knowledge, work, and input are vital to the feedback necessary for a successful planning process.”

#### 4.1.2. Methods Used to Engage the Private Sector

Several engagement methods have been used successfully to bring the public and private sectors together to discuss freight. The most common are advisory committees, one-on-one interviews, focus groups, forums and surveys. The important factor to increase efficacy of any private freight stakeholder outreach is to begin early in the planning process and develop a custom outreach approach for the study area. The freight stakeholders can identify and prioritize needs to inform transportation improvements and economic development initiatives. The examples below outline which outreach techniques were used to engage the private sector.

- **Triangle Region Freight Plan (2016-2018)** was a collaboration of Durham-Chapel-Hill-Carrboro Metropolitan Planning Organization (MPO), Capital Area MPO and North Carolina Department of Transportation (NCDOT). The stakeholder outreach strategically utilized existing partners and relationship, as well as leveraging events organized by other parties external to the planning process. Outreach consisted of a Regional Freight Stakeholder Advisory Council, a Public Sector/Economic Development Officials Workshop, an Online Survey for Shipper/Receivers, Stakeholder Interviews, site visits to freight-intensive facilities and Strategic Freight Corridors Prioritization Workshops. The Council of Supply Chain Management Professionals (CSCMP) hosted a Raleigh Roundtable at their conference in 2016. Tompkins International organized and hosted a Supply Chain Consortium and in 2017 conducted a Business Outlook Survey that informed the study.
- **Florida DOT Freight Mobility and Trade Plan (2013)** sponsored by the Florida Department of Transportation (FDOT). The stakeholder outreach had an extensive industry-led approach statewide to include six Regional Listening Forums, the first Florida Freight Leadership Program and three Business Forums focused on scenario planning, plan development and plan review. The outreach objective was to be more proactive, responsive and streamline freight investments. The planning process and outreach took a few years to complete but engaged over 750 members of Florida’s private businesses and agency partners. Numerous industries, shippers, carriers, associations, and other private sector groups represented every geographical location in the state.
- **Iowa DOT Freight Advisory Council (2012-2019)** The Iowa Department of Transportation (DOT) created a Freight Advisory Council in 2012 consisting of private sector members with

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<sup>6</sup> American Transportation Research Institute (ATRI) for Identifying State Freight Plan Best Practices (February 2018)

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government representatives as Ex-Officio members. The FAC has met consistently three to four times a year since its inception to present day. Its mission statement is “Through education, discussion and review, the Freight Advisory Council will assist and advise the Iowa DOT on freight mobility policies, programs, and investments.”

These are a few examples of freight supportive private sector engagement methods. The strategy should be designed to fit the context of the study area and the types of industry, partnerships and network existing for that community in order to define the “freight community” for a freight planning process.

#### 4.2. Rightsizing of Infrastructure Investments

In 2019, the National Cooperative Highway Research Program (NCHRP) published its NCHRP 19-14 Guidebook: *Right-Sizing Transportation Investments: A Guidebook for Planning and Programming*. “Rightsizing” transportation infrastructure is repurposing, re-using or fundamentally re-sizing (either larger or smaller) an existing asset (or in some cases, plans for a future asset) for a newly understood economic function or purpose. As transportation and land markets have shifted over the decades, transportation infrastructure has often remained rigid — standing as long as a century or more but no longer generating the economic benefits which justified its construction. While transportation agencies have consistent investment cycles and processes for preserving existing assets, and for identifying and treating deficiencies through modernization and expansion, there are not processes in place to detect and evaluate opportunities to right-size assets that are no longer in alignment with changing needs over time.

The benefits of implementing rightsizing can include millions of dollars in life-cycle cost savings, enhanced land value and economic development from re-used land or assets, and delivery of more efficient overall system performance. Methods to identify and evaluate right-sizing opportunities can be applied within cyclical transportation agency processes such as asset management, programming, and long-range planning. Rightsizing methods can also be applied in project development when considering the purpose and need of projects or later when considering performance based practical design options. The rightsizing guidebook offers practical elements for an agency to include in a right-sizing policy as well as technical methods for identifying, evaluating and implementing right-sizing solutions.

Beginning in 2019, GDOT, ARC, and the Atlanta Beltline Inc. (ABI) will begin a joint effort over the next year to identify the most appropriate applications of rightsizing throughout the state and Atlanta region. In the interim, the Spalding County Freight Cluster Plan will look to serve the principles of rightsizing by:

- Developing a work program focused on minimizing the creation of new infrastructure (and, thus, minimize future life-cycle costs) during the development of the work program.
- Identify roadways and infrastructure that may need to be repurposed due to changing economics and travel demand
- Assess the overall benefits to the economy by the proposed work program and related strategies

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## 5. Major Findings and Implications

Through our research, the project team identified a strong correlation from several freight planning practices and their application to Spalding County. The team was able to identify several common themes and identify key overarching findings summarized below.

A coordinated corridor management approach along with a smart-growth focused infrastructure and land use development plan will lead to improved freight transportation operations in Spalding County. As congestion continues to grow and regional industrial development pressures intensify, local agency capability to expand the roadway network will be increasingly limited by both resources and right-of-way. Thankfully, freight technology and land use planning policies and tools can be utilized to maximize the capacity of existing roadway infrastructure through multi-modal, active asset-based management.

Private sector stakeholders can be reluctant to engage in public sector initiatives. It can be difficult to convince the private sector of their role in a public sector project or how they are benefited. Quantifying the benefits of participation can be difficult due to the varying time horizons under which public and private sector entities operate. Public sector agencies often evaluate projects on a continuum spanning 5-10 years, while a long-term outlook for private sector freight businesses may be 6-18 months. Perseverance, trust, and continuous relationship building are the key components to a successful private sector outreach program.

Freight technology applications are not currently widespread and projects that require accessing data from multiple private trucking companies can be difficult to implement. However, the cost for this data could potentially be split between public agencies and private sector businesses; and big data is driving private sector firms such as TomTom, HERE, INRIX, and others to evaluate opportunities to apply data to real-time navigation and dynamic routing software that could have significant impacts on incident avoidance, congestion mitigation, and emissions reduction in Spalding County in the future.