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# CENTER FOR TRANSPORTATION STUDIES

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## Freight and Logistics E-News March 2017

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## Mobility, labor, and competitiveness drive discussion at annual freight symposium

How does the ability to move freight affect the economic health of a state, region, and even a city? How are the supply chains of businesses impacted by freight flow? And what challenges and opportunities does Minnesota face when it comes to leveraging and strengthening its freight modes? The 2016 Freight and Logistics Symposium examined those questions and explored other topics related to improved mobility in Minnesota, including congestion, regulation, labor shortages, and the value of all freight modes to the state's economy.



How does the ability to move freight affect the economic health of a state, region, and even a city? How are the supply chains of businesses impacted by freight flow? And what challenges and opportunities does Minnesota face when it comes to leveraging and strengthening its freight modes?

The 2016 Freight and Logistics Symposium offered a thoughtful examination of those questions, and explored other topics related to improved mobility in Minnesota, including congestion, regulation, labor shortages, and the value of all freight modes to the state's economy.

*Patrick Murray, George Schember, Jim Carver, and Bruce Abbe*



In the symposium's first presentation, speaker Chuck Clowdis focused on the power of freight flow data in attracting industry to a location and ways to use data in making a compelling case for businesses to invest. As managing director of transportation with IHS Markit's economics and country risk sector, Clowdis helps connect public and private organizations to data that maximizes their opportunities for success—whether that involves finding the optimal location for facilities, better leveraging supply chains, identifying future prospects, or attracting businesses.

“If you are wanting to attract investors, if you are wanting to attract that person who wants to put a plant or needs to put a plant in the Upper Midwest to your county or city in Minnesota, then you need reliable data,” Clowdis said.

Following Clowdis, a panel of representatives from Minnesota-based organizations provided a variety of perspectives on moving freight. Participants included moderator Justin Johnson of Bay and Bay Transportation, Bruce Abbe of the Midwest Shippers Association, Jim Carver of Land O'Lakes, Patrick Murray of Cambria Company, and George Schember of Cargill.

Minnesota offers many advantages, Schember said, though the state does need to do better in attracting greater diversity in talent to the industry.



*Jason Craig*

“It’s wonderful doing business in Minnesota,” he said. “We have laws. We have labor talent. We have trustworthy partners. We have data and information-exchange systems so that we can actually run our businesses. We have infrastructure that is competitive on a global scale. We’re a long way from a lot of markets, but we can get there in a fairly efficient manner.”

Jason Craig, director of government affairs for C.H. Robinson, and Margaret Donahoe, executive director of the Minnesota Transportation Alliance, concluded the symposium with insights into the changing federal and state political landscape due to last year’s elections.

According to Craig, infrastructure investment is important to trucking and will be a topic for discussion at the federal level. “This was a big campaign promise,” Craig said. “But I have some healthy skepticism about an infrastructure bill at the federal level.”

For Minnesota, Donahoe emphasized the importance of a united front among freight community stakeholders when approaching legislation. “If we can get everybody working together to really push legislators to increase the investments to improve the strength of the roads and bridges, we could have a real win-win for everybody,” she says.

The symposium was sponsored by CTS in cooperation with the Minnesota Department of Transportation, the Minnesota Freight Advisory Committee, the Council of Supply Chain Management Professionals, the Metropolitan Council, and the Transportation Club of Minneapolis and St. Paul.

**Related resource:**

- Symposium proceedings and selected event presentation slides

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## **Coda receives CTS distinguished service award**

Vanta Coda II, executive director of the Duluth Seaway Port Authority and president of the Minnesota Ports Association, has received the 2017 William K. Smith Distinguished Service Award from the University of Minnesota Center for Transportation Studies. The award recognizes professionals in the freight transportation and logistics field for leadership and contributions to the education of future leaders in private-sector freight transportation.



*Vanta Coda II with CTS director Laurie McGinnis*

Coda has more than 20 years of experience in multimodal transportation and logistics including marketing and sales, pricing, and financial analysis. He also serves as a member of the Minnesota Freight Advisory Committee.

The University of Minnesota Center for Transportation Studies is nationally renown for developing, fostering, and spreading innovation in transportation.

The award is named in honor of William K. Smith, who served on the initial committee to establish the Center and on many CTS research and education councils until his death in 2001. While Smith served for many years as a state and national leader at General Mills, he also taught classes in the Carlson School of Management and influenced many others with his passion for learning and teaching.

The first recipient of the William K. Smith Distinguished Service Award, established in 2002, was Gary Eikaas, Executive Vice President, Dedicated Logistics, Inc. Brad Emch, Vice President of Sales and Marketing, SAV Transportation Group, received the award last year.

**Related resources:**

- CTS William K. Smith Distinguished Service Award
- Duluth Seaway Port Authority

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## **U of M researchers join new Freight Mobility Research Institute**

University of Minnesota researchers at the Minnesota Traffic Observatory (MTO) will work to improve the mobility of people and goods across the nation as part of the new Freight Mobility Research Institute, a Tier 1 University Transportation Center funded in 2016.

Led by Florida Atlantic University (FAU), the Institute will receive \$1.4 million per year from the United States Department of Transportation for five years. A combined match from state and private-sector sources will bring the award to more than \$10 million in total. In addition to FAU and the U of M, Institute members include the University of Florida, Portland State University, Hampton University, the University of Memphis, and Texas A&M University (College Station).

With the primary goal of strengthening U.S. economic competitiveness, the Institute will address critical issues affecting the planning, design, operation, and safety of the nation's intermodal freight transportation system. Initial work will focus on improving freight mobility through information technology, freight network modeling and operations, intermodal logistics, and freight and supply-chain sustainability.

“Efficient and safe freight movement is inextricably linked to the economic vitality of a local area, state, region and even beyond,” said FAU’s Evangelos I. Kaisar, Institute director. “We are motivated to embrace innovative research projects, to train current and future transportation leaders and workforce, and to engage with industry to enhance collaboration between agencies.”

U of M researchers John Hourdos, MTO director, and Chen-Fu Liao, senior systems engineer, will lend their expertise in freight demand forecasting, freight operations, modeling and simulation, intelligent transportation systems, and sustainability and planning to the Institute.



Hourdos will also serve as the Institute’s assistant director for research. In this role, he will be responsible for the Institute’s overall research activities and serve on the executive committee.

Hourdos and Liao will join other experts from the Institute’s partner universities in efforts to promote smart cities, improve multimodal connections, improve system integration and security, conduct data modeling, and develop analytical tools to optimize freight movements that improve efficiency.

Several of the Institute’s proposed research activities draw on the expertise of MTO researchers and on projects previously conducted at the U of M. These activities include investigating freight signal priority for intermodal facilities in urban areas, identifying potential causes of truck bottlenecks, and developing a multimodal/intermodal freight transportation performance metric.

U of M researchers have been participating in the University Transportation Center program since 1991, when the Intelligent Transportations Systems (ITS) Institute was established at the U.

**Related resources:**

- Minnesota Traffic Observatory
- U.S. Department of Transportation Awards FAU Millions (December 14, 2016, Florida Atlantic University News)

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## Truck Parking Availability Study report published

University of Minnesota researchers published in January a report about the system they developed to identify available truck parking spaces and communicate the information to drivers—helping them determine when and where to park, and improving safety for them and all other drivers. In *A Comprehensive System for Assessing Truck Parking Availability*, the researchers explain that the system has proven to provide 24/7 around-the-clock per-space parking status. In addition, field tests demonstrated the feasibility of the system and its potential to help drivers and carriers to plan stops and improve trip efficiency.



For commercial truck drivers, finding a safe and legal place to rest isn’t simple. Along busy corridors, parked trucks may overflow onto the shoulders of rest area ramps and adjacent roads, creating safety concerns. If they continue driving, truckers may risk becoming dangerously fatigued or violating federal hours-of-service rules

The research project team includes the Minnesota Department of Transportation, the University of Minnesota, and the American Transportation Research Institute. MnDOT and the Federal Highway Administration funded the study.

## Related resources:

- *A Comprehensive System for Assessing Truck Parking Availability*
  - Truck Parking Availability Study project page
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## CTS Catalyst stories

- **Transportation spending: How does Minnesota compare with other states?**  
Transportation funding continues to be a contentious issue in Minnesota: Are we spending enough, too little, too much? One way to help answer that question is to compare spending with other states. U of M researchers developed a cost-adjusted approach to systematically compare highway expenses among states. They found that while Minnesota spends more than average on highways, its spending level actually ranks low in cost-adjusted measures. [Read More](#)
- **Warning system aims to save lives in highway work zones**  
For highway workers, work zones can be dangerous or even deadly. Each year more than 20,000 workers are injured and more than 100 lose their lives in U.S. highway work zones; most of those injuries and almost all of those fatalities are caused by either construction vehicles or passing traffic. U of M researchers are investigating one way to help reduce these numbers: by alerting the operators of heavy construction vehicles, as well as drivers in cars passing by work zones, that construction workers are present. [Read More](#)
- **How can governments promote and prepare for automated driving?**  
More than 90 percent of motor vehicle crashes are caused at least in part by human error. For the transportation community, this is a key motivator to encourage automated driving. However, despite its life-saving potential, automated driving has seen its share of pushback; in fact, some states have passed laws restricting it. So what role should government play in promoting this promising technology? [Read More](#)

## Related stories:

- [Policy perspectives on connected and autonomous vehicles](#)
  - [How can local cities become the ‘cities of tomorrow’?](#)
- 

## More news and information

### Video: U of M Research Puts Blowing Snow in Its Place

University of Minnesota researchers have partnered with the Minnesota Department of

Transportation to keep more winter roads drift-free by finding better ways to trap snow, involving more landowners and farmers, and developing key online tools to support those efforts. Watch at <https://youtu.be/p7Os5wMnWUc>.

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### **ATRI technical analysis uses truck GPS data to assess truck parking**

In February, the American Transportation Research Institute (ATRI) published a technical analysis that uses truck GPS data to assess truck parking capacity at four Minnesota rest areas. This first-of-its-kind research, completed for the Minnesota Department of Transportation and the Federal Highway Administration, assessed truck parking supply and demand by time-of-day and day-of-week by cross-referencing truck GPS data to identify truck activity at several state-run rest stops. The study demonstrates new approaches for identifying where additional truck capacity is needed and how delivering real-time information on parking availability to commercial drivers can improve their operational efficiency.

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### **MAFC report evaluates use of vacant urban land for truck parking**

A new Mid-America Freight Coalition (MAFC) report published in February examines the potential value of vacant urban parcels of land for truck parking. MAFC researchers established a methodology to identify potential parcels and examine whether they are suitable for parking. In the cities studied, the authors found that affordable, accessible parcels are available. In many cities, demand for truck parking spaces exceeds supply. These shortages jeopardize public safety when truckers resort to parking on highway ramps and shoulders, parking in unsecure areas, or violating rules around maximum hours of service. The report explains that, when used in conjunction with other policies, adaption of urban sites could help reduce the frequency and severity of truck parking shortages.

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### **Humphrey School research links economic development and transportation planning**

A newly published article in the journal *Community Development* highlights work on transportation and economic competitiveness conducted by Humphrey School researchers. Article authors Lee Munnich, senior fellow, and Frank Douma, director of the State and Local Policy Program, outline how their team worked with the Minnesota Department of Transportation (MnDOT), Minnesota Department of Administration, and University of Minnesota Extension to develop and implement a unique approach linking economic development and transportation planning. Their work has focused on getting manufacturers' perspectives on transportation issues as part of regional transportation decision making.

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### **FHWA 'Talking Freight' seminars**

"Talking Freight" online seminars from the Federal Highway Administration (FHWA) provide transportation practitioners a way to broaden their freight knowledge base and develop new job skills. Seminars typically are held from 1:00 p.m. – 2:30 p.m. (Eastern) on the third Wednesday of each month. Please check the Talking Freight Seminars website for the latest information. Recorded sessions of previous seminars are available from the Talking Freight Archives.

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## ***Transportation Research Board (TRB) freight-related research***

- [\*Using Commodity Flow Survey Microdata and Other Establishment Data to Estimate the Generation of Freight, Freight Trips, and Service Trips: Guidebook\*](#)  
This report provides policymakers with improved establishment-level models that estimate the Freight Trip Generation, the number of vehicle trips produced and attracted at a given establishment; the Freight Production, the amount of cargo produced by the establishment; and the Service Trip Attraction, and the number of vehicle trips that arrive at the establishment to perform a service activity. These models, estimated with the best data available, provide tools to assess the various facets of the overall Freight and Service Activity that takes place in urban and metropolitan areas. The models will allow transportation practitioners to conduct sound curb management, properly size loading and unloading areas, support traffic impact analyses, and improve transportation planning and management efforts.
- [\*Guide for Conducting Benefit-Cost Analyses of Multimodal, Multijurisdictional Freight Corridor Investments\*](#)  
This non-edited, prepublication report explores how to conduct benefit-cost analyses (BCAs). A BCA is an analytical framework used to evaluate public investment decisions including transportation investments. BCA is defined as a collection of methods and rules for assessing the social costs and benefits of alternative public policies. It promotes efficiency by identifying the set of feasible projects that would yield the largest positive net benefits to society.
- [\*Guide for Integrating Goods and Services Movement by Commercial Vehicles in Smart Growth Environments\*](#)  
This non-edited, prepublication report describes policy, planning, design, and operations practices considering the coexistence of moving goods and services in smart growth environments at both the design and implementation stages as well as retroactively improving existing conditions. This report will help readers understand common issues and conflicts pertaining to Smart Growth, how those issues and conflicts manifest themselves in different environments, and the types of strategies and actions stakeholders can take to better integrate goods and services movement by commercial vehicles in smart growth environments.

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*CTS Freight and Logistics E-News* is published three times a year by the Center for Transportation Studies at the University of Minnesota.

### **Center for Transportation Studies**

Director: Laurie McGinnis

Associate Director, Engagement and Education: Gina Baas

Director of Digital Information and Library Services: Arlene Mathison

### **Freight and Logistics E-News publications staff**



Editor: [Michael McCarthy](#)  
Contributing Editors: Christine Anderson, Pam Snopl  
Contributing Writer: Megan Tsai  
Web Team: Savannah Brausen



Center for Transportation Studies

University of Minnesota

200 Transportation & Safety Building

511 Washington Ave SE

Minneapolis, MN 55455

Phone: 612-626-1077

Fax: 612-625-6381

Email: [cts@umn.edu](mailto:cts@umn.edu)

### [Location & Contact Information](#)

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