
https://qctimes.com/exclusive/insight/planes-trains-automobiles-and-barges-the-quad-cities-plays-a-key-role-as-commercial-shipping/article_39088758-22dd-5728-a051-6ac1ae0875be.html

Planes, trains, automobiles and barges: The Quad-Cities plays a key role as commercial shipping increases

Cara Smith
Dec 9, 2021



Alanna Wallace looks at the model airplanes at the Quad-Cities International Airport Thursday, July 22, 2021, in Moline.

MEG MCLAUGHLIN

Cara Smith

By 2050, freight transportation is projected to increase by 40%. Thanks to its location on some of the key thoroughfares in the country, the Quad-Cities is ideally located to capitalize on that.

With air, rail, land and water transportation available, businesses can tailor their supply chains to the product they are transporting and their business goals, a perk that gives the Quad-Cities an edge. Companies can use several modes of transportation to minimize transportation costs, make deliveries on time, and limit the amount of carbon emissions in transport.

“(Transportation is) usually a pretty good chunk of your overall cost to operate so access to transportation is a big deciding factor for different companies,” said Samuel Hiscocks, freight planner for the Iowa Department of Transportation. “When there are multiple options that means there’s competition, and you have options that keep different modes honest and makes it more affordable for you to ship your products.”

To manage increased demand and optimize the longevity of our modes of transportation, the Quad-Cities tries to maintain each mode’s piece of the total pie of system usage, said Denise Bulat, executive director of the Bistate Commission.

“Quite a bit of our traffic is going by trucks,” Bulat said. “We are definitely interested in whether each of the modes for the rail, the barge, even air, be able to maintain its percent of the total movements, different types of freight moving, so that we don’t over utilize the roadway system.”

Doug House, deputy secretary of the Illinois Department of Transportation, said an absence of one form of transportation would overrun the existing infrastructure of other modes of transportation trying to cope with the increased usage, so the maintenance of all four modes is essential.

Here's a look at how the Quad-Cities serves as a commercial transportation hub.

Air

Commercial freight by plane is under utilized in the Quad-Cities, but the emergence of e-commerce may change that.

Ben Leischner, executive director at the Quad-Cities International Airport, said with more people shopping online and expecting a delivery within days, there's an opportunity for air freight.

“Air cargo is something that's popping up quite a bit, especially with the quickness of, ‘Hey, we've got to get something there in two days,” Leischner said.

Most air cargo serves smaller, high-demand goods, like technology. As the most expensive form of cargo transportation, it is used sparingly by most commercial organizations.

But it also acts a final resort for broken supply chains on tight timelines.

Leischner said when cargo freight transportation numbers increase, he worries about local manufacturers' supply chains, even though it brings in extra revenue for the airport.

“When that happens in our market and quantities, which are a lot of manufacturing for agriculture and John Deere, it typically means they have a major disruption to the supply chain,” Leischner said. “It's always going to be more affordable for them to send those parts over rail or on a truck.”

For organizations like ImpactLife, which collects and delivers blood to medical centers, air travel is essential — a break in a hospital's supply chain can mean life-or-death situations.

“When we ship them, they may have as few as 24 hours of shelf life remaining,” said Mike Rasso, director of sales and inventory. “It's critical, we get them to where they can be transfused.”

Due to the high rate of blood donations in the Quad-Cities, ImpactLife accumulates a surplus of blood that surpasses the needs of local hospitals. To eliminate waste, the blood is transported to hospitals across the country that need it.

Air transport enables ImpactLife to maintain their reputation as a reliable source of blood products.

“Patients are the only ones there waiting for these products,” Russo said. “It is critical that they maintain timeliness with low cancellation rates or delays.”

Truck

Truck commercial transport has a major advantage that sets it apart: Roads are everywhere.

Businesses take advantage of that convenience. The trucking industry transports over 70% of the nation's freight, more than double all other modes combined, according to Matt Hart, executive director of the Illinois Trucking Association.

“Not every town has a railroad and not every town has a pipeline and not every town has an airport, but what every town does have is a highway,” Hart said. “That's why the trucking industry is such an important part of our economy, an important part of our lives.”

Truck freight traffic in the Quad-Cities is served by four interstates, five federal highways and 10 state highways. Interstate-74 bisects the metro area and creates north/south movement. Interstate-80 connects the area nationally with the east and west coasts and surrounds the Quad-Cities along with the I-280 bypass.

“Interstate-80 is a freight and trucking vital artery of America,” Hart said.

According to the Bistate Commission, sections of I-280 and all of Interstate-80 in the Bistate Region average more than 5,000 trucks per day. Some sections see over 12,000 trucks per day.

Heather Dohrn, vice president of sales & marketing of Dohrn Transfer Company, said the interstate's accessibility is why it is relied on to transfer essential goods.

“Anything that you see on a shelf moves in a truck like ours,” Dohrn said. “We have to keep everything moving or the products that you're used to buying every day wouldn't be there.”

But it's far from a perfect system.

Poor road maintenance and infrastructure can upend businesses' supply chains that rely on trucks. Regulations limit the number of hours drivers can travel, so delays from traffic or infrastructure issues might slow the trip to the final destination.

Concrete and asphalt road maintenance, bridge capacity and parking for truckers are essential in maintaining efficient commercial freight transportation. But due to the high usage of roads for freight and passenger transportation, maintaining roads can be challenging.

House, deputy secretary of the Illinois Department of Transportation, said Interstate-80's high traffic poses a challenge to maintenance efforts.

“It's literally almost door-handle to door-handle and bumper-to-bumper,” House said. “It creates safety challenges for the workers on the road for our highway maintainers who have to either do the snow removal, have to mow, or have to do minor repairs. Any disruption for maintenance causes enormous backups and disruptions in the supply chain.”

The average annual cost to maintain one mile of the U.S. National Highway System is \$28,020 per mile, according to the Reason Foundation, a libertarian think tank.

In Illinois, a 2018 amendment to the state constitution ensures that all transportation-related tax revenue is invested back into the state's transportation system. In Iowa, all vehicle registration fees, license fees, and motor vehicle fuel taxes are constitutionally mandated to be spent for the maintenance of the public highways. The use tax on motor vehicles and equipment is exempt from the constitutional mandate.

“The people that are actually using the road should be paying for the roads and the trucking industry is willing to make that investment,” said Brenda Neville, president and CEO of Iowa Motor Truck Association. “We have to constantly look for ways to reinvest in our roads, because it really is the lifeline of our economy.”

The 47,000-mile Interstate Highway System is over 60 years old and either has been rebuilt or needs to be, according to Hart.

“In order to keep this vital pipeline available to move freight, we have to invest back into our roads and invest back into our bridges,” Hart said.

Rough roads aren't the only challenge commercial trucking faces. The industry faces a shortage of drivers. Trucking companies were short 60,800 drivers as of late 2018, according to the American Trucking Association. Without intervention, the shortage could expand to 160,000 drivers nationally by 2028, severely disrupting supply chains.

“There's not enough drivers to move the freight,” Dohrn said.

Limits on the mileage truckers can safely drive per day, combined with the shortage and delays due to traffic or road repairs, can cause some shipments to be delayed.

“The entire truck could get held up, which would mean we would have approximately 15 to 20 shipments that wouldn't make service on time,” Dohrn said.

Rail

Rail commercial transportation can meet the demand for those struggling to find sufficient truck transportation, if they have access to it.

A single railcar can hold three to four truckloads. A typical freight train, which connects 200 rail cars or more, can carry up to 900 truckloads with only two to three conductors to direct the trains. Each truckload would need one truck driver to deliver a smaller quantity of products.

Rail takes longer for transport, but its cost-effectiveness motivates companies to use it when they can.

“It comes down to, ‘is there a speed element?’” said David Panjwani, director of corporate logistics for John Deere.

Panjwani said open deck rail transportation in the Quad-Cities allows Deere to move large machinery that wouldn’t fit in a van trailer. A flat car provides sufficient density and volume to transport products going to a single location.

Despite using the railway available in the Quad-Cities, Panjwani said Deere’s transportation is limited without direct access to some major rail lines.

“That’s an investment that is not in place right now so we have a little bit less options to actually have rail come straight into the Quad-Cities,” Panjwani said.

Deere ships and receives international goods by rail in Chicago and then transports it to the Quad-Cities.

House said the Illinois DOT is actively assessing what “the best investment for state dollars” would be for the state’s railroad system, but no official plans were confirmed.

Barge

Despite the longest shipping times, barges are the most efficient way to move large quantities of goods. The lower shipping costs and energy efficiency provides significant cost savings to bulk material shippers.

“In terms of timing, you get more tonnes quicker with less energy,” said Dave Muteing, plant superintendent of Linwood Mining & Minerals Corp. “It’s easiest because you can take the material farther for less money.”

Barges also produce the least carbon emissions of any other mode of commercial transport.

Deb Calhoun, senior vice president of Waterways Council, said one standard 15-barge tow moves the equivalent of 1,050 trucks.

“You can imagine the amount of congestion,” Calhoun said, “the amount of wear and tear on the bridges and the roads from the truck weight, and all of that emissions pouring into the air.”

And they are also key to the green industry. Despite moving about 30% of the nation’s coal, barges increasingly transport wind turbines.

“It’s very challenging to move those by road,” said Bob Sinkler, chief operating officer of Streamside Systems, Inc. “We’re seeing a big increase in wind power and to support the wind industrial power industry on the Illinois River.”

Barge commercial traffic is predicted to increase by 23%, with 942 million tons valued at \$871 billion by 2045, according to the National Waterways Foundation.

The Corn Belt Ports, officially the Mississippi River Ports of Eastern Iowa and Western Illinois (MRPEIWI), are positioned to help meet that increased demand.

The MRPEIWI, officially designated in 2020, was created to promote the usage of the Mississippi River for shipping goods. The area consists of preexisting terminals along the Mississippi from mile 361.5 in Keokuk, Iowa to river mile 580 in Dubuque, Iowa. Fifty existing barge terminals in Iowa and 20 existing terminals in Illinois are covered by the designation.

Sinkler said having the MRPEIWI on the U.S. ports map leverages the Quad-Cities for future development.

“It makes a huge difference when it comes to supporting decision-making when it comes to direct and indirect investment into the region to the multimodal transportation infrastructure,” Sinkler said.

Even with the Corn Belt Ports' designation, Samuel Hiscocks, freight planner for the Iowa Department of Transportation, said it is difficult to improve a "chronically underfunded" system.

"The inland waterway is the one that does have excess capacity at this point but it's also hindered by the lock and dams, and some of the other infrastructure pieces to the river," Hiscocks said. "They're starting to get older and deteriorating."

Many U.S. locks and dams were developed in the 1930s and are showing their age, according to Calhoun, of the Waterways Council.

"Concrete is going in some areas and breaking apart and falling into water creating an unsteady platform for the lock itself in the chamber," Calhoun said.

Old lock chambers were designed to accommodate older models of steamboats which only needed 600-foot locks. Modern boats need 1,200-foot lock chambers.

"Some of the [lock chambers] are not operational and not working as they should and are not efficient," Calhoun said.

Currently, one 1,200-foot modern lock in Keokuk, Iowa serves Iowa and Illinois. In order to use the smaller locks, a tow has to break into two to fit through the lock. This process can take up to two hours. Disassembling tows to fit in older locks on ice in the winter can be a potential safety hazard.

Sinkler said Congress has approved construction permits for two new locks on the Illinois side of the Mississippi and five new locks on the Iowa side. The funds may be allocated in the bipartisan infrastructure bill.

SIDEBARS/PULL-OUTS

General freight data, Bistate Commission, 2007:

INBOUND FREIGHT: 37,374 tons, \$39,284 million

Truck: 28,123 tons, 75% of all inbound traffic, \$39,945 million value, 94% of revenue

Railroad: 8,207 tons, 22% of inbound traffic \$1,154 million value, 3% of revenue

Water: 354 tons, 1% of total inbound traffic, \$50 million value, 0% of revenue

Intermodal: 690 tons, 2% of inbound traffic, \$1,135 million value, 3% of revenue

OUTBOUND FREIGHT: 28,542 tons, \$42, 877 million

Truck: 21,998 tons, 77% of outbound tons, \$39,414 million, 92% of revenue

Railroad: 3,275 tons, 11% outbound, \$1,722 million, 4% of revenue

Water: 2,051 tons, 7% outbound, \$261 million, 1% of revenue

Intermodal: 1,218 tons, 4%, \$1,480 million, 3% of revenue

Air data, Quad Cities International Airport:

Enplaned:

Freight enplaned increased by 26% from June 2019 (64,729 pounds) to June 2021 (81,775 pounds).

Deplaned:

Freight deplaned increased by 183% from June 2019 (34,747 pounds) to June 2021 (98,438 pounds)

Barge data:

Locks & Dam 15

Year and Annual Tonnage:

2017: 23,268,394

2016: 23,803,628

2015: 19,148,356

2014: 16,453,426

2013: 13,705,556

2012: 16,835,910

2011: 17,250,083

2010: 17,923,333

2009: 18,274,953

2008: 15,635,867

2007: 20,880,043

2006: 21,942,068

2005: 20,991,007

2004: 20,948,490

2003: 25,019,206

2002: 28,829,063

2001: 24,708,731

2000: 28,753,278

1999: 31,209,760

1998: 27,168,117

Annual Commodity Tonnage, 2017:

Coal, Lignite, and Coal Coke: 1,536,324

Petroleum and Petroleum Products: 199,400

Chemicals and Related Products: 3,947,084

Crude Materials, Inedible, Except Fuels: 2,101,347

Primary Manufactured Goods: 1,343,496

Food and Farm Products: 14,073,438

Manufactured Equipment & Machinery: 57,505

Unknown or Not Elsewhere Classified: 9,800

Rail, Association of American Railroads, 2018:

Railroads account for roughly 40% of U.S. freight but only 1.9% U.S. transport-related greenhouse gas emissions.

Moving freight by trains instead of truck reduces greenhouse gas emissions up to 75%.

Trucking in Illinois, Illinois Trucking Association, 2020:

70.2% of communities depend exclusively on trucks to move goods.

66% percent of the state's total tonnage is transported by trucks.

1,472,610 tons are transported by truck per day.

Lockbox Amendment

The 2018 amendment stipulates that any transportation taxes and fees collected in Illinois must be reinvested into the state's transportation system. It puts the tax revenue in a "lockbox" for future use.



Celebrities Who Passed Away In 2021

As rough as 2020 was for all of us, hasn't been much of a friend to u

sponsored by: Definition

AdChoices 

Sponsored

Cara Smith
