

# Can Iowa keep up with what it needs to ship?

More freight will move through the state, meaning more strain on infrastructure

## TRANSPORTATION

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More stories from Matthew

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They are common sights for Iowans. Trucks driving down the highway, two or three at a time, pulling grain, chemicals, the occasional blade for a wind turbine. Railcars passing through town on their way to chemical or cereal-making plants.

If agriculture and manufacturing are the historic drivers of Iowa's economy, the state's freight network — a mix of roads, highways, rail, airports, pipelines and waterways — is certainly its backbone.

It's that network that moves more than \$260 billion in products a year — corn and soybeans from Iowa fields to ethanol plants or overseas consumers, steel to machinery makers such as [Kinze Manufacturing](#) in Williamsburg, Canadian lumber to Suburban Lumber Co. in Cedar Rapids, and everyday products to households in Iowa and elsewhere.

## Iowa, the producer state

"We're a producer state, which means the vast majority of what we make, we do not consume. We actually move it in the state, we move it to other states, and we move a lot of it out of the country,"

said Paul Trombino, president of McClure Engineering Co. and former director of the Iowa Department of Transportation.

What Iowa ships, where it goes and how it moves won't change drastically, according to a state freight plan the Iowa DOT released last year. How much Iowa ships, though, is expected to grow greatly.

While that's good for Iowa's economy, it also means the state's freight network needs to stay in good enough shape to handle the growth.

"Agriculture and manufacturing, those two things require shipments of goods. Without a network that can tap into the national network, that keeps Iowa from being competitive," said Amy Homan, director of carload marketing for Iowa Northern Railway Co.

Iowa's freight shipments are expected to grow more than 30 percent by 2040, to just under 600 million tons annually. And that doesn't take into account the freight that moves through Iowa but isn't produced here.

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***[Cedar Rapids' new freight hub](#)***

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As shipments grow, so will strain on the state's freight system and the need for Iowa to maintain its infrastructure or find more efficient methods to move those products, experts and industry professionals said.

For example, the amount of freight moved by truck — the dominant transportation method in Iowa — is estimated to increase by more than 32 percent by 2040, causing more congestion and pavement deterioration, the DOT noted in its 2016 report.

State and federal regulation, technology changes and trouble filling jobs also can put pressure on the freight network and the companies that use it.

CRST International President David Rusch said the trucking company has not grown organically in recent years because it can't find enough drivers.

“At the end of the day, in the last four years, five years, CRST’s operating companies have not grown. We have grown as a company from acquiring other companies,” Rusch said.

## **Better funding, better connections**

Iowa’s DOT has released multiple studies on how freight moves in an attempt to identify bottlenecks and potential optimization areas.

The state received [a \\$26.5 million grant in 2016](#) to build a logistics park and intermodal hub in Cedar Rapids.

Two years ago, state lawmakers approved a 10-cent gas tax increase, which puts \$200 million more per year into Iowa’s road fund.

But even with these steps, state officials and industry watchers said funding and infrastructure upkeep will remain a concern.

The state [already ranks among the worst in the nation](#) for the condition of its roads and bridges, according to several reports.

“With transportation needs outpacing revenues, Iowa’s multimodal freight system will be subject to more widespread deterioration, which may eventually lead to loss of access to needed services and goods,” the DOT noted in its 2016 plan.

Connecting different parts of the freight network, such as through the intermodal facility, also is necessary.

“The more efficient we make the movement for a product to move from one mode to another, the more efficient and effective we are in a competitive marketplace,” Trombino said.

Some specific spots or corridors will need more attention than others, such as Interstate 80 from Iowa City to the Mississippi River, said Garrett Pedersen, planning team leader with the Iowa DOT.

“Certainly that stretch of Iowa can’t handle that type of growth in truck traffic,” Pedersen said. “Spot locations certainly are going to need some attention to deal with that growth in freight traffic.”

Damaged infrastructure and a lack of connection points for freight transfers can increase transportation costs.

“The maintenance costs on our equipment when you’re running a bad road system, or rough system, obviously is elevated because of the springs, the shocks, the beating that the tractor takes running up and down the road,” CRST’s Rusch noted.

The more those expenditures go up, the more an Iowa-made product or commodity can cost, potentially pricing it out of the market. That’s because transportation costs make up between 20 percent to 25 percent of final product cost,

explained Craig Markley, director of Iowa DOT's office of systems planning.

"It's a big deal because if you can save on the freight, that can give you more of a competitive edge," said Jamie O'Connell, operations manager for Suburban Lumber Co.

## **'What's inside the box'**

In addition to funding, another solution lies with data collection.

If Iowa can better identify how freight moves and what's moving, it may not need to spend as much money on infrastructure, Trombino and others argued.

"Traditionally in transportation it's count the number of boxes in the system. What's more important is what's inside the box," Trombino said.

For example, refrigerated trucks carrying frozen food have different needs than trucks with more durable freight.

Data can include highly detailed maps that show road conditions, traffic congestion and weather patterns in real-time.

"Once you start doing that, freight companies want to start operating here. They know that once they get here, they're going to be able to just glide through here," said Dan McGehee, director of the National Advanced Driving Simulator at the University of Iowa.

Better data, Trombino said, can help the state make better decisions about what to improve. A crucial

roadway 100 years ago may not serve the same need today.

“Being on a farm-to-market road 100 years, you didn’t survive as a farmer if you didn’t have good connectivity on a farm-to-market system. That market was maybe 60 or 100 miles away. Today, it can be an ocean away,” he said.

That same information, Trombino and McGehee said, also will be needed as more autonomous driving technology comes online.

“Without the map and the data, you don’t have driverless vehicles, you don’t have fluid freight movement,” Trombino said.

## **Cedar Rapids’ new freight hub**

### ***\$47 million facility will shift, store loads***

State officials announced last year Cedar Rapids would be home to a new intermodal facility — essentially a hub to transfer freight from one transportation method to another.

The project is expected to cost about \$47 million, with \$26.5 million of that covered by federal funding.

The remainder will come from private companies, including Alliant Energy, which has taken the lead on the intermodal facility.

The hub will tap into the Cedar Rapids and Iowa City Railway, or CRANDIC, which is a subsidiary of Alliant. Once complete, it’s expected to have three main components — facilities to transfer freight from truck to rail and vice versa; a cross-dock area

to transfer from truck to truck and consolidate shipments; and a bulk freight storage area.

The facility, officials said, will help make freight movement in Iowa more efficient and help cut down on shipments that have to go to larger facilities in Chicago, Kansas City and other cities

Council Bluffs has the only other similar facility in Iowa.

“If you were just looking across the land to say, ‘What’s the best place in the Midwest to build large logistics and intermodal connectivity between all modes of freight,’ you would not put it in the middle of 10 million people in Chicago,” said Paul Trombino, president of McClure Engineering Co. in Clive and the former director of the Iowa Department of Transportation.

He likened the hub to an “inland port.”

Cedar Rapids was the perfect spot for the hub, DOT and CRANDIC officials said, because of the amount of freight moved within and near the city.

“There’s a lot that goes on from a freight perspective within an hour-and-a-half of Cedar Rapids,” said Jeff Woods, manager of marketing and business development for CRANDIC.

CRANDIC has selected a 75-acre site just south Highway 30 and Edgewood Road SW.

Construction may not begin until early 2018, but officials with CRANDIC and the Iowa DOT hope the intermodal facility is moving freight by early 2019.

While they have hailed the project, not all are happy about it.

David Rusch, for one, president and CEO of trucking company CRST International, said he's "very upset with it" since the federal government appears to be subsidizing his competition.

He also questioned whether the intermodal facility would improve the efficiency of freight movement. Trucks, he argued, already can move those products.

"If you've got to build a \$50 million terminal to support the Iowa freight network, I would question whether there's a break-even on it," he said.

Amy Homan, director of carload marketing for Iowa Northern Railway Co., said the company is in "wait-and-see mode" on the intermodal facility.

"There's a lot of stuff leaving Iowa and not a lot coming in on the intermodal perspective," Homan said. "I don't think it's going to have a huge effect on our business."

## **What about water and air?**

While most of Iowa's freight moves by truck and rail, state officials also are worried about how Iowa ships products over water.

Barges are used to ship those products in bulk and help it get to other markets. The used to move those barges, though, is well past its prime.

"It's nearing a point with a lot of that where it's many, many years beyond its useful life. You start to run into concerns with reliability on the lock-and-dam system," said Garrett Pedersen, planning team leader with the Iowa DOT.



Of the 11 locks in the Mississippi River that border Iowa, the state DOT identified all of them as potential bottlenecks for freight transportation.

Bottlenecks are points where freight shipments and vehicle movement may be delayed due to traffic congestion, a decline in speeds, flooding or a bridge needing to be raised.

For comparison, the department identified 94 bottlenecks along Iowa's 114,000 miles of roadways and 36 along the 3,800 miles of railway. There are 491 miles of navigable waterways in Iowa.

The lock-and-dam system can be a "single-point of failure," Pedersen said. If one location goes down, it affects all movement upstream and causes freight delays. More freight would have to move by land, shifting the burden to road and railways.

The only transportation mode with no bottlenecks: air.

Iowa's airfreight system, which includes Des Moines International Airport and The Eastern Iowa Airport in Cedar Rapids, have excess capacity. Air cargo shipments have declined in recent years as companies turn to trucks and rail.

While the lack of bottlenecks is a benefit, the decline in shipments has affected the local economy. UPS announced earlier this year it would move a second-day sorting facility from the Des Moines airport to Illinois. The company has a larger sorting facility in Rockford and it's closer to markets.

"We're sorry to lose it. I understand why we're losing it, and it will have an economic impact on the airport," Airport Executive Director Kevin Foley said.

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