



TRANSPORTATION AND LOGISTICS ROUND TABLE ...

WHAT IS THE STATE OF TRANSPORTATION?

LATHROP We're coming to the crossroads, or a fork in the road, where we have these technological disruptors coming, and they're affecting the way people are living, how they're working, how they're commuting. One of the challenges for us is to deal with those and make the most of those as we make all our strategic decisions about transportation. You're talking about electric vehicles, autonomous vehicles, drones, big-data technologies that affect transportation. We are better positioned than a lot of states because we've been fairly diligent about our infrastructure. But we're at a point where we need to launch and take on these challenges so that we can not only maintain a position that we have but enhance it so that we can outcompete the rest of the world. We're becoming more urban. The transportation infrastructure is the key to connecting that economic opportunity to all areas of the state, from the ports all the way into the mountains.

WALDEN I think we may be facing the biggest changes in transportation since we moved from the horse to the automobile, and I think this will be a challenging and exciting time. Probably the short-run key question in transportation is financing. How are we going to finance transportation with, for example, new methods of fueling vehicles that are not producing gas-tax revenues or even with vehicles getting higher miles per gallon, which affects gas taxes? I think we will have to look at some alternative funding models in the future. We have to continue to think about how transportation fits in with economic development. Do we need, for example, a standalone agricultural port? Some have said yes. That would be very growth-enhancing. And the question is how you finance it. We are beginning to think about these issues and how we might plan for them. I think for most people in the state, the big





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CRYSTAL COLLINS

North Carolina Trucking Association

question regarding transportation in the future will be, "How do we fund it?"

JOHNSON I think there are two key words in this, and one is "connectivity," because I think transportation is all about the connectivity, both near and far, and the different modes of transportation are part of that. And the second word is "balance." Do people drive to work individually in a car? Do they get on a light-rail train? Do they get on a

train from Charlotte and ride to Raleigh? Do they get on an airplane and fly farther distances and do business that day? That part of it continues to be of great interest. I think it is interesting to see how technology will change our minds about what we should do and where we should put our emphasis.

LOYACK These investments that we're making lead to returns. A study from N.C. State showed something like





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\$15.4 billion in economic impact coming from the Port of Wilmington and Morehead City as well as the thousands of jobs that come from those type of investments. One of the groups I manage is our international-trade team. Surrounding states may not compete with us in a number of different ways, but when it comes to the ports, Norfolk, Va., Savannah, Ga., Charleston, S.C., are prepared for the largest ships coming out of Asia. We're getting there. We've done some really good things, and we need to continue to look at the options.

COLLINS For the trucking industry, funding is the No. 1 focus for us right now, as well as technology. Autonomous trucks are coming. Some think sooner rather than later, but they're on the horizon. But with the economy surging like it has, it's changing the way we do business every day. We are now in a pattern of where we used to touch a product three to four times before it arrived to the consumer. Because of the demand for freight now, we're touching it eight to nine times, which is a huge number. That means we're having to think more about warehousing, the logistics of it and even redefining that final mile every day. It really has been the Amazon effect that has really changed our industry. We're also really struggling with congestion. Right now, congestion is costing our industry \$74 billion a year, and Charlotte was in the top 100.

from a route perspective has been the use of intermodal, which is dependent on not just one means of transportation. It's dependent on strong ports and the strong trucking industry across the state. We're also seeing Wall Street pressures to lower capital expenses and improve operating ratios. The rail industry is capital-intensive. It can make growth in that infrastructure difficult and challenging. That's one of the advantages that



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TONY LATHROP

North Carolina Board of Transportation

North Carolina Railroad has: the freedom to make those investments in a strategic manner.

WHAT SORT OF NEW TECHNOLOGIES ARE WE SEEING, AND WHAT'S IN THE FUTURE FOR TRANSPORTATION IN THE STATE?

WALDEN Ride-sharing and autonomous vehicles are two big ones most people have heard about. Depending

on who you talk to, autonomous vehicles are just around the corner. I think one key question is will they cause us to travel more or less? You can find experts on both sides. We certainly don't want to be in a position where we're building miles of road and then, maybe 30 years down the road, find they're not used. That is going to be the trick for our transportation planners: how to have the resources and a plan that's flexible.

JOHNSON One of the things that airports have seen just in the last five years is a shift in terms of the numbers of vehicles that come to the airport and get parked and left for a day or two or three versus the number of people who get dropped off by Uber, Lyft and other providers. That puts a little more burden on the road system for that vehicle to come and go frequently and a little bit different growth curve on parking decks. That's a revenue source and a major capital project. It is interesting to think about what that will look like in the future. Another [new technology] is Amazon talking about launching drones from railcars to deliver packages along the rails as the train moves.

WHAT WORKFORCE ISSUES FACE THE TRANSPORTATION INDUSTRY?

COLLINS We've always had a driver shortage, but we really have a driver shortage now. We also have a shortage in technicians. We already have our truck-driving schools around the state, and the private sector has truck-driving schools. Technician schools are generating as many technicians as they can. We're still not meeting those demands. We worked with the community college to create an associate's degree, a one-year certificate or even offer some of the courses into continuing education so that we can expedite those that are interested in coming into our industry, especially those that are under 21. We are working on our image. We have an image campaign that was established a couple of years ago through the American Trucking Association to build awareness of what our industry offers in careers. You talk about the technology in a truck. We're hoping that gamers will want to come in and just take over the truck. It's just amazing how these trucks are built today.

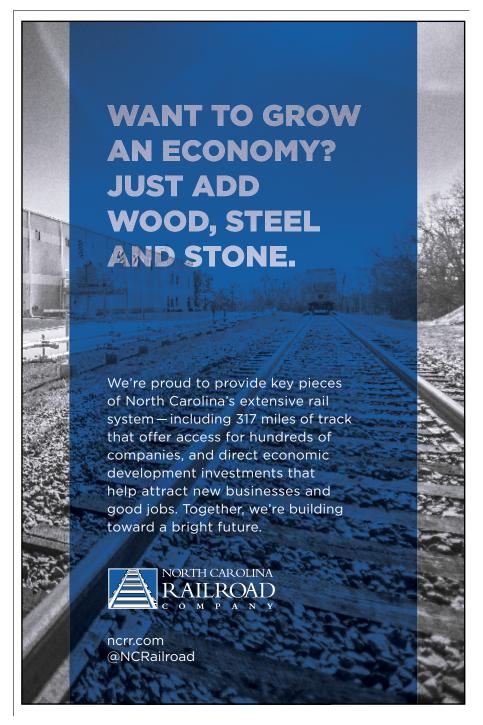
JOHNSON The opportunity is huge. As all these vehicles take on more technol-



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ROY JOHNSON

North Carolina Transportation Museum Foundation



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ogy, how is it maintained? Many of these jobs are serious professional jobs. When we had the class here last year for the first time, the [Federal Aviation Administration] sent three people to talk about air traffic control and what happens. The kids really respond to that. You could see them light up because that looked a lot like a computer game. It's a very serious game, but it's right up their alley.

WALDEN When you talk about transportation it spans many different kinds of occupations. You've got the construction component with roads and maintenance of roads. You have the manufacturing component. North Carolina, for example, is a leading state in transportation parts. You have management. You have logistics at the highest level.

LATHROP We have just under 300 auto-centric manufacturing-type businesses in North Carolina that employ over 20,000 people. In the [N.C. Department of Transportation] world, workforce is crucial. We've had to set up a special board committee to deal with the topic. There's a huge need for engineers, in-house at NCDOT and in the construction industry.

HOW DOES THE TRANSPORTATION INDUSTRY BRIDGE THE RURAL-URBAN DIVIDE?

WALDEN I'll divide it into three geographic groups: the cities, the surrounding counties that are linked to the cities and rural counties. Congestion in the cities and a lot of the surrounding counties is the big issue. In rural counties, it's a matter of access, upgrading road infrastructure so that businesses will consider sites and locate there.

TATE One of the things that we've seen in more urban environments is the successful implementation of the CATS light rail program on a portion of the North Carolina Railroad Corridor in the Charlotte area. We're seeing more interest in those types of people-mov-



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MICHAEL WALDEN N.C. State University

ing rail opportunities. In more rural areas, the railroad often was the connection to a global economy. It continues to serve that role, connecting both people and goods. A lot of the most significant economic development projects that we've seen out of [Economic Development Partnership of N.C.] over the last few years were rail-served projects in rural parts of the state.

LATHROP The transportation infrastructure is the key to economic opportunity when you're talking about connecting rural to urban. And to your point with the railroad, you have economic development opportunities along that infrastructure. Connecting urban to rural is one of the hugest challenges that we face, and it also helps leverage what's unique and good about rural areas, because it's not just one way.

JOHNSON One of the topics of conversation in the last couple years has been in the legislature to add some annual funding to airports throughout North Carolina. Many of those smaller airports, if they had a longer runway or a stronger runway, would be able to accommodate corporate aircraft. That often is one of the keys to a company being able to build a facility, whatever its role might be, in a more rural area and get to it easily. Connectivity between that location and home offices is big, and the airports are going to have a role to play in that.

LOYACK That is an area that I've seen a little bit of growth. Macon, Duplin and Stanly counties have all seen their runways extended. That is a meaningful advantage. That's something that will get businesses to take a second look there, and so we need to continue to look at opportunities like that. The major issue in economic development as well, especially when we start looking at attracting foreign direct investment, is the runways in Raleigh, Charlotte, Greensboro and other major areas. In order to get some of those Asian investment opportunities in, they're looking for direct flights.

WALDEN Another aspect of the importance of transportation is facilitating foreign tourists to come to North Carolina. That's an increasing part of our world economy. If we can bring those tourists in and facilitate them to go to our great rural areas where they can see nature and vegetation and a physical climate that's different from where they came from, that's economic development.

LATHROP From an urban-rural stand-point, we need to do better about collaborating regionally. There's a need for people to collaborate on transportation infrastructure so that they can all understand it and work together to get these projects regionally where everybody is going to benefit.



That's one of the advantages that North Carolina Railroad has: the freedom to make ... investments in a strategic manner.

ANDREW TATE

North Carolina Railroad Co.







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