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The discussion, hosted by Dixon Hughes Goodman in Winston-Salem, was moderated by *BUSINESS NORTH CAROLINA* publisher Ben Kinney. The transcript was edited for brevity and clarity.

MAKING PROGRESS

Education, attitude and technology lead manufacturing in N.C.

NORTH CAROLINA IS A MANY-FACETED MANUFACTURING STATE. But it faces 21st-century challenges that come with attracting high-tech companies along with educating and training a talented workforce for those jobs. *BUSINESS NORTH CAROLINA* magazine gathered a diverse panel to discuss these issues.

HOW'S BUSINESS IN GENERAL?

CRUSE Business is good. We're facing the challenges of any small company trying to grow. We can't keep bags on the shelf. We can't hire people fast enough. We can't find enough trained [staff] or people in our area to grow our business fast enough to keep up with demand. So I think we're in a really good spot. I'm still looking at the reports saying, "Is this true?" for this year's financial increases, because of the new tax laws. That's exciting for us. We'll be able to put much more back into what we're doing with things that are happening right now in the political landscape.

PEDLEY Ours has been good. Obviously, in the robotics world, we do mostly automotive things. I think, in 2018, we'll maybe see just a little flattening out in the automotive industry. It's still good, but I don't see the growth that we saw over the last five or six years. Automotive is

important, but we also have some medical-device companies for whom we're doing some assembly machines. So our business continues to grow, and I think manufacturing is very strong right now.

SAGE Business couldn't be better, quite frankly. Competitors are strong. But North Carolina is pretty much the worldwide source for skid-steer loaders — a couple of hundred a day are shipped out of Sanford. It's just fantastic. But we have the same challenges that other folks have: Finding qualified candidates and students who are interested in the manufacturing world. Manufacturing is not the same as it was. We're running robotics and doing a variety of other things. There's some manual labor to it, but one of the things we need to work on is changing the perceptions of what the jobs are, what they are not, the types of earnings and living you can make holding one of

those positions, and the opportunities beyond that.

LEATHERWOOD When business is good for you all, we have the challenge to try to get not just the workforce that you need but one that is trained and has the transferable skills that each of you need in a manufacturing environment. So we find that when business is good for you, it's a challenge for us, but we rise to the challenge. More important than ever is our customized training that we do for our industries. GF Linamar has come into Henderson County, making a \$217 million investment in our community. We were able to come in early on and actually build a high-pressure die-casting training cell just for their company. That's one of the reasons that they chose to locate in Henderson County.

WOOD From a public accounting standpoint right now, there's a lot of movement going on in business as a



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PHIL MINTZ
N.C. State University

whole. Right now, there is not a client or a potential client who generally won't accept a meeting from us when we say, "Can I talk to you about tax reform?" Almost everybody, whether they want to talk to you or not, will, because of that. For the most part, the corporate reform is going to put some money back in businesses' pockets. And what I'm hearing the most is, "Help me think through, where do I invest those dollars?" Is it in the capital expenditures that we've desperately needed over the years? Is it in research and development, because manufacturing as a whole is changing so rapidly, if I don't do this I'm falling way behind? So I'm seeing a larger and larger percentage of dollars being spent on research and development just to keep up, let alone get ahead.

MINTZ We're exposed to a diverse set of manufacturers across the state, so we see a little bit of it all. There are lots of successes out there, but there are also

challenges in some areas. Some smaller companies are struggling a bit. We're involved heavily in some military manufacturing programs. They're subject to government spending. So we're dealing with them in terms of diversification and challenges like, what happens if the contract goes away?

WHAT CAN WE DO TO RETRAIN THE WORKFORCE?

MINTZ With the challenges of the workforce, we're having discussions with smaller companies about what they can do in terms of industrial automation. It's what they need to keep functioning. And then at the same time, we're reaching out to community colleges to make sure that the workforce is in place to operate these machines. This is necessary, but there's still some apprehension in some areas about what the investment would need to be and what kind of return there is. So we are having discussions and sessions about

what's viable. There's opportunity for smaller companies.

PEDLEY Automation is not eliminating jobs. On the contrary, it's creating higher-paying jobs. Companies that are automating are hiring more people. It's a proven fact. You can see it in the companies that are investing in it. It's important for us all to understand that our community colleges and universities in this state have the best training systems ever. Many companies don't understand that, and they might say that people aren't there. But I'm going to use Caterpillar as an example. We have an apprenticeship program in Lee County where high-school juniors are getting paid by Caterpillar in their apprenticeship program. It's the only program in the state like that.

LEATHERWOOD This is where I get really excited. In Henderson County, we built what's called an innovative high school on our campus, in which we have an early college. We have two hundred

early-college students, and we have two hundred what we call career-academy students, and they're all in one building. It's an economic catalyst for our next generation of workers for our manufacturers. We're exposing those students to careers like welding, mechatronics, advanced machining, robotics, high-pressure die casting, plastics and injection moldings.

MINTZ We have a statewide relationship with the community-college system through the customized training program, and there's a lot of successes with the colleges across the state. It's our job to make sure companies know that those resources exist. It's surprising to me that companies do not know what the community college can offer.

PEDLEY I remember an economic-development meeting in the 1990s in Sanford, and they used to put up a sign that said, "Education equals economic development." I thought, "What the

heck are they talking about?" Well, it's true.

LEATHERWOOD Here's an interesting number for you: The community colleges across the state have done customized training that served more than 34,000 people in one year.

SAGE One of our three priorities is called intentional development, and one of the priorities inside that is to train people to do the work of today and tomorrow, because we know what we're doing today will not be done the same way tomorrow. At the very least, it makes workers marketable. We use full-time, contract and all kinds of different workers — what we call workforce architecture. We engage community colleges or large universities in a variety of ways. We want to be a great steward to all of the people who come work for us. The whole point was that community colleges have been

fantastic in tailoring what is needed for the local businesses, and we need to do a better job as a company in sharing some of ourselves and resources with those folks.

**HOW CAN WE CONVINC
YOUNG PEOPLE TO WORK
IN MANUFACTURING?**

PEDLEY Program a robot doing it.

CRUSE Before we thought about making handbags, we targeted a specific community that was largely underserved. There were 95,000 unemployed military spouses all across the country, and I estimated that to be a \$1 billion problem for the federal government. My business partner and I agreed we had to do something about this. We decided to make something, a product. We took a very antiquated business model, and we targeted this population. We're seeing a whole group who want and need work,



mainly flexible work. But they want administrative jobs. They want marketing jobs. They want marketing jobs. It's that idea that, "I don't want to work with my hands. I don't want a job in manufacturing, because that is not something that I ever grew up thinking about," myself included. How do we reprogram what it means to be in manufacturing? How do we celebrate it, glorify it, and from a very young age start to teach kids that yes, it's exciting work, it's necessary work, it's fulfilling work? It's almost a generational shift that has to happen.

MINTZ There's a challenge — even with all of the resources we've been talking about, the numbers are still not enough. That's the problem. And I think one of the things we continue to suffer from is what I call the legacy challenge, where parents have worked in manufacturing and lost jobs, so they would not encourage their kids to go into manufacturing because, "Look what happened to me." I think that's one of the biggest barriers we have.

PEDLEY We have an employee who has a four-year degree who went back to a community college. But you can also have a young person who went to work at a place like Caterpillar, maybe with a two-year degree, and he can still advance his education online. He can get his four-year degree while he's working. Opportunities exist for everyone in every level of education.

LEATHERWOOD I addressed some high-school students and wondered how could I talk to them about manufacturing? How could I make it cool? So I said, "Do you enjoy computer games?" And especially with young men, "Do you enjoy cars? Well, guess what? If you came to the community college and went into our automotive or advanced machining, it's technology. It's like playing a game. You get to run a robot, and you can do cars at the same time." I said, "That's the automotive industry."

SAGE I was talking to a young guy, and he said, "Why would I want to come

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LAURA LEATHERWOOD
Blue Ridge Community College



work at Caterpillar? I work on school cars." I said, "How many autonomous cars do you see running around the road today? We've been building autonomous equipment for years." Part of it is just getting folks to understand what we do and what we don't. I tease my kids about Xbox. We build wheel loaders that can pick up 20 tons at a time, and you do it with a joystick. We have people designing and building them. We still have problems finding folks that are attracted to our business.

WHAT CAN THE STATE DO BETTER TO RECRUIT MANUFACTURERS?

MINTZ I think sometimes our success is our loss — from the failures of the state in landing larger companies. Lots of

smaller companies continue to come to the state. We're an attractive location for manufacturing. People like Cameron may start their businesses right here in the state, they're the ones that are growing, and that's where the jobs are. We get too focused in bringing in a large number of jobs and don't see what's being home-grown. One of the challenges of losing the Toyota-Mazda automotive deal is the lack of our developed supply chain. Sometimes we're just victims of a diversified state of manufacturing. That's some work we need to do.

SAGE North Carolina is a state of "haves" and "have nots." If you look at the Piedmont area, the Research Triangle Park or Charlotte, we can compete with anybody. We like to tout the shiny parts

of the state, which are really cool and we should be proud, but that has to expand if other businesses want to come here or we're all going to be fighting long-term over the same talent. If you drew circles where you wanted to build a plant, you've got to look at a 60-mile radius for the workforce, and only certain places in the state right now would look advantageous to a business looking to locate here. So we've got work to do.

LEATHERWOOD We serve Transylvania County, which is a rural community, and they just don't have the infrastructure and capacity to recruit large businesses. While understanding the Economic Development Partnership of North Carolina is doing a good job, our small rural counties are getting left behind. Brevard is an area with lots of national parks, so outdoor recreation is huge. SylvanSport — they make the GO

camper — just expanded into 30,000 square feet in Brevard, and of course the county came to the table to provide funding to do that. They're now exporting those campers. Small communities are so innovative and they are reaching out for help to grow and actually start up new businesses.

ARE NONTRADITIONAL MANUFACTURING FIRMS EMERGING?

MINTZ Amazingly enough, we work with aerospace and aviation manufacturers. And there are certifications and specialty quality programs for which workers need training to make sure these companies are maintaining focus. A lot of projects come across my desk in the aerospace industry, and they're smaller companies all over the state. It's exciting to see that industry as something that's strong in our state.

WOOD There are a lot of customized products. If you're making stuff before, whether you're making textiles, it's really narrowed the scope. Everyone wants to fine-tune it. And if you're able to dive in and figure out how you can fine-tune that product for exactly what the client wants, then they're willing to pay for it. And your margins are different, which attracts your ability to make more money and hire more talent. The high level of customization is where we're going with manufacturing.

MINTZ That type of customization and focus is what has kept our textile industry alive. And now they're starting to thrive again.

PEDLEY One of the largest exporters in North Carolina was a company in Sanford, and they're making textiles, and they're doing it with very few people nowadays. They can produce that quickly.

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WHAT MORE COULD THE STATE DO TO HELP MANUFACTURING?

LEATHERWOOD I'm not afraid to answer that question: Technology and state-of-the-art equipment, so we can stay up and ahead of what they need. You see manufacturers advancing their technology and innovation, yet your training entities like the community colleges don't have the funding to keep up with state-of-the-art equipment and technology to keep the workers trained. Investing in our colleges and universities with this equipment and technology is essential or we're going to fall behind very quickly.

PEDLEY We can have robots in high school. There is no reason these kids aren't using that. We have the STEM labs everywhere. They're building robots,

these high-school kids. Wake Tech needed some collaborative robots, and it's always hard for them to get them. It shouldn't be. They're becoming a way of life, and we should all understand them.

CRUSE Being a small start-up manufacturer is not for the faint of heart. We've paid a lot of money to learn some lessons, and I don't know where we would be without our relationship with the Sandhills Community College. And they connected us with N.C. State University. Things like OSHA will throw you for a loop. We had no idea what we were getting into. So we worked directly with N.C. State, and we had a representative come down and walk through our facility and show us the basics, because we were headed in the wrong direction.

SAGE We have to be proactive and continue to make investments in where we want to be five and 10 years from now. We can talk about being competitive in the U.S., but the bottom line is 50% of our products go outside of the U.S. So while the U.S. market is near and dear to us, and one we never want to lose, for us to be successful long-term, we have to do it on a global basis. If you want to bring textile jobs or manufacturing jobs back, you've got to invest in community colleges. You've got to dive back in. Introduce girls to STEM. It's a big thing for us. In Sanford, 30% of our workforce is female; it's 18% in Clayton. And while we're pretty proud of that, we have a plant in Georgia where 50% of the population building that product is women. It's not a woman's job. It's not a man's job. It's a talented workforce. ■

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JASON SAGE
Caterpillar



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MATT WOOD
Dixon Hughes Goodman



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