Ramona Schindelheim, WorkingNation editor-in-chief:

You are listening to Work in Progress. I'm Ramona Schindelheim, Editor-in-Chief of WorkingNation. Work in Progress explores the rapidly changing workplace through conversations with innovators, educators, and decision-makers, people with solutions to today's workforce challenges.

Gardner Carrick, The Manufacturing Institute:

When we look at the jobs we currently have, they are much more highly skilled than the ones that we lost 20 years ago. They require an incredible level of technical skill. They require an incredible level of soft skills, of professional approach of problem-solving skip, so thinking on your feet of really being able to diagnose what is happening with complex machines and operate them effectively and maintain them effectively.

Ramona Schindelheim, WorkingNation editor-in-chief:

Gardner Carrick is Chief Program Officer at The Manufacturing Institute. He's one of the people I spoke with for WorkingNation's three-part series on manufacturing. In this episode, we'll look at what's at stake for smaller employers and how they can meet the demand for new talent. The Manufacturing Institute, the nonprofit arm of the National Association of Manufacturers, says that companies large and small are scrambling to fill current job openings, and one's about to come online. That's partly due to an infusion of federal money through the CHIPS and Science Act and the infrastructure investment in JOBS Act. A recent report shows that the industry will need nearly 4 million additional workers, many with digital skills, over the next eight years. Large manufacturers will take many of those workers, and hiring skilled people at that scale can be difficult, as we discussed in episode one. Smaller employers face additional challenges. Carrick says that not only do employers have to overcome the lack of awareness that these jobs and these companies exist in their communities, they have to convince job seekers to reconsider their perceptions of what a manufacturing job is.

Gardner Carrick, The Manufacturing Institute:

Those are really good jobs, and those are going to continue as we employ more technology, as we employ AI, as we employ more automation, more robotics. We're going to need more met and women to operate, maintain, and fix those machines. These are not the high-manual labor types of jobs that so many of us picture when we think of manufacturing. They really are knowledge jobs where you are interacting with a computer or an interface helping to operate the machines and then needing to understand the complexity of those machines in order to ensure that they run correctly. So I think these are really exciting new economy jobs that are in the forefront of technology.

Ramona Schindelheim, WorkingNation editor-in-chief:

Filling all of those jobs and helping people understand that there's a bright future for them in manufacturing is a challenge, especially for smaller manufacturers and smaller communities.

Courtney Silver, Ketchie :

You have to kind of create this ecosystem of solutions, and it's very important to work with your partners in the community, whether that's community colleges or your local EDC chamber, because really, I think a lot of these challenges we're not going to make much progress without working together and pulling all in the same direction.

Ramona Schindelheim, WorkingNation editor-in-chief:

Courtney Silver is president of Ketchie, a family-run business located in Concord, North Carolina. Ketchie makes precision industrial parts. I met Courtney Silver and other employers at the 2024 Manufacturing Institute Workforce Summit in Minneapolis. Silver says even though Ketchie is a very small shop with fewer than 30 employees, it's still a challenge to find talent to fill new openings. One way of finding up-and-coming talent is a paid internship with a national program called Opportunity Knox. Through Opportunity Knox, Ketchie taps students from the local high school to give them a sense of what to expect in the company and in small manufacturing generally.

Courtney Silver, Ketchie :

They have 1700 students. The population, 70% of the students there, do not go on to four-year degrees, so they're entering the workforce. It's job shadowing. They come for two hours a day, and they go right on our shop floor. We have mentors.

Andy Silver, Ketchie :

Then one day a week on Thursday, we go into our conference room and we go through the Craftsman with character curriculum, and that's where you'd find dignity and purpose in work. You slow down. It's a good chance for the students to reflect on what they've learned.

Ramona Schindelheim, WorkingNation editor-in-chief:

Courtney's husband, Andy Silver, is the sales manager at Ketchie. He explained that the key to Opportunity Knox is connecting students with a mentor.

Andy Silver, Ketchie :

They see that someone has made a career, and it's been a good career, and they're able to accomplish the same dreams that they have and build a life. The program digs into what's important in life and it boils down to relationships. It's not about making a lot of money, buying a lot of things. It's about building a life.

Ramona Schindelheim, WorkingNation editor-in-chief:

The company is committed to helping students see different aspects of manufacturing, whether they decide to apply to Ketchie or not.

Andy Silver, Ketchie :

Sometimes manufacturing is messy, sometimes it is dirty. So one thing that we do is I take the students on a sales call to one of our customers, and their facility is vastly different than our busy machine shop that's loud in a lot of moving pieces. Our customer, they do mainly more assembly and R&D. So the students were able to see the big difference between two manufacturing facilities, but it's in the same industry, and it was remarkable for their experience.

Courtney Silver, Ketchie :

Really, what we did with Opportunity Knox is we just said we're going to do something. I'm not just going to sit here and think about all the terrible ways and the ways that we don't have enough money to solve this problem or enough resources, but what could we do and how could we do this with working

with all the partners in our community and using those resources? So I would just say experiment. There's a lot of things that you can do that don't even cost a lot of money, so it's lower risk.

Ramona Schindelheim, WorkingNation editor-in-chief:

Programs like Opportunity Knox fill some of the gaps in manufacturing awareness. Carrick says the K-12 education system could do a better job in letting students know what careers are available to them.

Gardner Carrick, The Manufacturing Institute:

I don't think people know what's there. It's not that they believe that those are highly undesirable jobs. It's that they barely know that they exist because most manufacturers are not highly visible in a community. They're off the main road. They're behind a chain link fence. They're in buildings without windows. There's no TV shows that are highlighting the amazing work of robotics technicians. It's almost an invisible industry in some regards, which is ironic considering that everything that you and I are surrounded by is made by some. Yet very few of individuals in the American public probably understand how they're made, where they're made, or who makes them. High schools try, but I think a more concerted effort and a greater investment and greater focus on really helping those young boys and girls in their formative years or teenage years really understand what options are available.

Ramona Schindelheim, WorkingNation editor-in-chief:

Carrick says that opportunities such as FIRST Robotics and SkillsUSA, as well as vocational clubs, if a school has them, can help students explore opportunities in manufacturing, or at the very least, understand that opportunities exist. He urges employers in every community, no matter the size, to volunteer to work with these groups.

Gardner Carrick, The Manufacturing Institute:

Because you already have a group of students that have self-selected to participate in a robotics competition. So let them know that you are a part of this community and that you are supporting them in those efforts. It's a good way to introduce or reintroduce yourself to the schools to show that you have a level of commitment to support the students and will hopefully not just be the end of the relationship or all that amounts to a relationship, but the start of an ongoing relationship between yourself and the manufacturing community and the education system so that they view you as partners in this and that you are supporting them and their students through activities that they want. That ultimately then leads to a real partnership around teachers and the guidance counselors funneling students that they believe are going to be successful to you and really create a workforce source for you because you are now a trusted part.

If it's a company that has not done anything, I think that there are easy ways to start, and that could be a manufacturing day field trip. Invite them to come see you. It can be to offer to provide some equipment in, to come in and speak to the students, or to engage in FIRST Robotics or SkillsUSA. So I think that there are many first steps that manufacturers can take that do not require a significant level of commitment that may be beyond the capability of a 50, 75, or 100-person shop, but that then lead to even greater and deeper experiences and relationships between that company and the systems that help to support young people in the community.

Adam Barber, Texas State Technical College:

Everybody's in the same boat. They're looking for a skilled workforce, and unfortunately, there's just not enough of them. The supply can't keep up with demand, so we're trying to create innovative ways to supply those folks.

Ramona Schindelheim, WorkingNation editor-in-chief:

Adam Barber is executive director for Workforce Training at Texas State Technical College. He works with industry partners across the state to identify exactly what jobs they need to fill and how the college can help build that workforce. A lot of training he oversees does not take place in the classroom.

Adam Barber, Texas State Technical College:

We have some that we partner with for a full-fledged apprenticeship program, so it might be a 10 or 12-week program where they are hiring folks that maybe have little to no skills, and we are training them for that period of time, and then they go on the job for additional 10 or 12 weeks, and then they let them go. We have short-term programs, might be four to six weeks that are really focused on the skills needed. Then we obviously have the Heroes MAKE America program for transitioning veterans, so we've got kind of a mix of options there. It just depends on what the need is from industry. We really want them to set the conversation, the tone for the discussion, because it's not about necessarily what can we provide. It's what do you need. We will match your needs with our training programs, and in many cases, we're creating curriculum just for them to meet those needs. We don't want to just teach something for the sake of doing it. We want to make sure it's relevant.

Ramona Schindelheim, WorkingNation editor-in-chief:

Austin Rock is the HR manager for Acutec Precision Aerospace in Meadville, Pennsylvania, population 13,000. The company makes flight-critical parts for the aerospace industry. At just over 500 employees, they're the largest industrial employer in the community by far, with a concentration of manufacturers in the same area. They have a good talent pool, but a lot of competition. Acutec does have a machinist training program, but Rock says more people wanting to work in the industry would help.

Austin Rock, Acutec Precision Aerospace:

I think we're at an inflection point. Granted, we are in the tool and die capital of the world. Our Vo-tech, Crawford Tech Center, for our county, has some of the largest machining classes it ever has. That could be a variety of things. It could be the school doing a better job telling kids in ninth grade that they're going to have to have this thing called a career eventually. In ninth grade, I wasn't thinking about that. I would like to think it's partially Acutec, kind of like beating down the doors saying, "Hey, we want to talk to your kids. We want to make sure they understand what opportunities they have."

When I was in high school, I was told, "If you don't go to college, you're going to have much worse outcomes. You're not going to be able to live the way that you want to." And really, I think that notion has been dispelled time and time and time again. I have a history degree. It's served me very, very well, but I graduated with debt that really, at 18 years old, I probably shouldn't have made the decision to do. I'm very happy where I am. I really enjoy my job, but if I would've started in the trades, I would've been a lot further along, a lot earlier in my life.

Ramona Schindelheim, WorkingNation editor-in-chief:

Tina Caldwell also works in human resources for Acutec. She says, as at other small manufacturers, recruitment is a challenge, and part of that challenge is the misperception of what modern manufacturing is.

Tina Caldwell, Acutec Precision Aerospace:

People think of manufacturing as a dirty job. You come in and you're going to go home, and you're going to be filthy and dirty and gross, and that is simply not how it is in our organization. There was a trend where, "Oh, you have to go to college. You have to go to college. You have to go to college." And now that trend is starting to change where it's kind of like, "Well, what do you want to do? What kind of things are you looking to do and then let's go from there." But we're still on that tail end of that you've got to go to college, and then if you get a degree, what are you going to do in manufacturing?

There's a lot you can do in manufacturing with a college degree, or if you don't have a college degree, we've got a lot you can do then too. We are not the only machining game in town. There's a lot of manufacturing companies in our area, so we've had to get innovative. We've had to figure out how can we bring people in, train them, and get them so that they can run the machine or they can gain those skills to do the inspection or any of the other host of roles that are necessary.

Ramona Schindelheim, WorkingNation editor-in-chief:

Surveys have shown that Americans are increasingly reluctant to move away from their homes. 80% live 100 miles or less from where they grew up. That has implications for their careers and economic mobility and could be a positive if they're aware that a good-paying career in manufacturing is not far away. Austin Rock believes there's a role for the government, whether it's the city, county, or state, to build the talent pool in smaller towns where manufacturing companies are located.

Austin Rock, Acutec Precision Aerospace:

So the first thing you need is elected officials who understand the problem as it sits. There is rarely a person that comes out of a high school or a college or technical school that doesn't need further training. So does the county or the state or the city or whatever recognize that? Are they taking serious steps to bring stakeholders together to address it? In Crawford County, our board of commissioners is starting what's called a local industry's fundamental training program where they are assisting a lot of manufacturers and saying, "What are the skills that we need that we are uniquely positioned to go to the schools and say, 'This is what's going to keep students in this county.' What are the skills that we can teach and we can ask those schools to implement now?"

Instead of assuming that they know, they're bringing in industry, and it's one of those public-private partnerships, they're bringing in industry to really tell them. I think that's going to really change the calculus for a lot of kids that are coming out of high school and saying, "Pfft, I live in Meadville, Pennsylvania. There's nothing here. I got to go somewhere else." Because they'll be in demand.

Ramona Schindelheim, WorkingNation editor-in-chief:

As with Ketchie, Acutec finds ways to engage with the local community. It's a family-owned business, so they can open their doors to anyone who's interested in learning more about what is going on inside.

Austin Rock, Acutec Precision Aerospace:

We give tours to kindergarteners. We give tours to fifth graders. We give tours to college seniors. We give tours to high school juniors. Whoever wants to come see our facility, we open up the doors to. Of

course, we do a manufacturing day where we open up to the public and things like that as well. But having people come in and understanding that manufacturing is a really exciting place to be, the earlier, the better. On the flip side of that, we've all seen it. There's plenty of students who don't think there is a future until they're about two weeks from graduation.

In some ways, there's almost too much focus, especially from a vo-tech capacity, on kids making decisions of where they want to be and what they want to do in the trades in ninth grade. There is a significant portion of students, no matter how much education that we do, are going to put that off until they're a senior and they realize there's something after this thing called high school, and we need to make avenues for those individuals to be able to learn what they can, even if they can't be in a co-op program or a true vocational program to expose them because it's actually serious for them now.

Ramona Schindelheim, WorkingNation editor-in-chief:

You've been listening to part two of a special three-part series on the boom in hiring and manufacturing and how employers are working to fill thousands of jobs across the country. In the final episode, we'll explore how companies are reaching out to underrepresented groups, including veterans and women.

James Goppert, Smurfit Westrock:

Junior military members, they've been taught the skills of safety, quality, attention to detail, just the minor things that a lot of employers look for. They follow orders they understand. They also have the ingenuity to think outside the box.

Ramona Schindelheim, WorkingNation editor-in-chief:

I'm Ramona Schindelheim, Editor-in-Chief of WorkingNation. Thank you for listening.