

# Preparing Technicians for the Future of Work Podcast

## Episode 2 Transcript

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[music intro, then fades to background]

Al: What industry wants is quite simple: We want it when we need it. What that really means is: We want and need agility in our workforce.

[music intro, then fades to background]

Mike: From the Center for Occupational Research and Development, welcome to "Preparing Technicians for the Future of Work—The Podcast." I'm your host, Mike Lesiecki. In each podcast we will reach out to people who are actually on the frontline with the future of work and hear what they have to say. That means interviews with industry leaders, working technicians, and forward thinkers in the field. And in every episode, we will suggest action that you can take. We want to inspire you to take that action. This podcast is brought to you by the Center for Occupational Research and Development (CORD) with financial support by a grant from the National Science Foundation's Advanced Technological Education program. Opinions expressed in the podcast do not necessarily represent those of the National Science Foundation. You can find out more about our project and our approach at [PreparingTechnicians.com](http://PreparingTechnicians.com) (all one word) dot org.

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Mike: Today in our second episode we want to consider the skills gap and who owns it. Before we get to our interview, let's set the stage. The skills gap gets a lot of talk and a lot of press. In today's Show Notes we've linked several key references that give a good overview. They give a lot of data. And they express a lot of concern. Also, they suggest some pretty sound strategies to address this thing called the "skills gap." What do we mean by the "skills gap"? I suppose it's basically this: Employers struggle to find the workforce with the skills they need. That means everything from entry-level employees to their existing employees needing to level-up their own skills. One of the themes you will find is that, in spite of this national focus, the problem is inherently regional, and therefore the solutions are primarily local ones. But who owns this skills gap? Let's find out.

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Mike: Today our guest is Al Carlson. He's currently the Director of the University of Florida's Innovation Station. And just before that he was the CEO of Sun Hydraulics, an

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international company that focuses on electro-hydraulic systems. Hello, Al. Welcome to the podcast.

Al: Hello, Mike.

Mike: Thanks very much for joining us today. Tell us very briefly what you're doing now at University of Florida. And then I might ask you to talk a little bit about Sun.

Al: Sure. The initiative that I'm working on is now about two and a half years old, started in March of '16, about the time I retired from Sun Hydraulics. And I was working for the prior two years, working with University of Florida, on increasing the bandwidth of STEM students and engineering pipeline. Not only at the University of Florida, but just in general for the region.

Mike: Interesting. I like that term, "increasing the bandwidth." I know you have an engineering background, so that just sort of resonated there. What about your time as CEO at Sun? You were there... When did you take that position? Must have been the early 2000s, right?

Al: Yeah, I joined Sun in mid '96 as a senior marketing guy. And back in that time frame Sun was growing very rapidly, and the constraint for continued growth really had little to do with marketing. So, I spent most of my time as a senior marketing guy working in operations to improve and eliminate constraints that we had to grow. At the time we were about a \$50 million privately held company. About a year later, after I joined the company, we went public. And then about two years later, I became the CEO. So, my reign started on January 1 of 2000.

Mike: Right up through '16, right?

Al: Yes, right up through '16. I retired in March 31st of '16. As I like to say, my "born-on date" expired.

Mike: I see. [laughing] You know, I want you to think back to your time at Sun. I know it's several thousand employees, is that right, worldwide?

Al: Yeah, today it's about that many because there's been some acquisition growth that's added employees. But we really worked hard at avoiding additional hires. Employment was not, and it shouldn't be, the goal of a successful company. It's "how to do more with less." And that is a requirement, a way to think, that starts at the top and goes throughout the organization. So, a lot of companies think about that

on the shop floor: doing more with less. We dealt with that throughout the whole company.

Mike: You know, thinking back to those days at Sun, although, of course as you said, you'd like to do more with less, you still need those skilled technical workforce to make things happen. What were some of the challenges that you saw with finding and retaining that workforce? Not only then, but as you think forward into the future, what challenges will industry be facing?

Al: Yeah, I think this leads into the discussion about a term that everybody hears: the "skills gap." And so, what I would say to that is that, first of all, the workforce you have is what you need to grow. And it may not be exactly what you want. It may not be perfect. But you take what you've got, and you grow it. And you add to it. And so, you take your current workforce and expand the skills of that workforce. There's lots of ways to do it. But then you really work hard at recruiting and hiring. And generally speaking, we did not hire "skills." The "skills gap" term is commonly used. I believe it's a misnomer and way overused. When looking for new hires, rather than look at skills, I think you're much better off looking for attributes like problem-solving capability; curiosity; people who ask good questions; lifelong learners; ability to collaborate and work with others; communication skills; diversity, where the power of 1+1 equals more than 2. Skills, to me, are way down the list of important attributes. If you think you're going to hire somebody off the street that knows how to press every button, forget it. You're wasting your time. Focus on the attributes and the skills will come.

Mike: Al, you mentioned the "skills gap." Who owns the skills gap? Is that educators? Is it industry? Who owns that gap?

Al: Definitely the employers. And then, both existing employers and prospective new hires. And, when I say that, it's our education system as well, from K to gray. It's not K through 12. It's not the colleges. It's the whole spectrum of the education system. Why do I say employers, first? Well, it's a shared responsibility. Everybody has a part to play. But employers have the most to gain or lose. And they have the capacity to make a difference. We've all heard the old adage that employees are the most important asset. I think it's time for the employers to walk the talk.

Mike: Well, how do you walk that? I mean, if you don't necessarily look for skills, does that mean you offer extensive upfront training? New hire training? Or on-the-job training? How did you do it at Sun?

Al: It was a rather novel approach. We very seldom hired somebody to do a specific task. The first six months with the company, you float throughout the company. And, in fact, I did that myself as an incoming senior marketing guy. I spent a lot of time throughout the company in various locations before I assumed my active duty, if you would. And we do that throughout the company. And as a result, you find that typically the employees gravitate to a place that they like, and that they're comfortable with. And if they're comfortable and like it, they will excel. They'll do well, as opposed to "I don't like my job, I don't like whom I'm working with." The chance of that being successful is not good.

Mike: Hmm. That's an interesting approach. It's somewhat different, allowing the employee to essentially find their place in a company.

Al: Yeah. And, you know, the existing employees play a big part in that. So, when we hire somebody in the organization, the decision on the hire was made, not by the HR group. The HR group are the ones that facilitated and did the administration. The decision on the hire and the interviewing process was done by peers throughout the whole organization. So, if you are a senior marketing person, the people who would make the decision is the marketing committee. If you're in the manufacturing, it would be them. If you're in finance, it would be them. So, that's the way you get buy-in, so that when the group hires their peer, they are vested in making that person successful.

Mike: Interesting. What about on the education side? Do you have an expectation of your employees that they'll somehow continue along an educational path?

Al: Yeah, we do. Lifelong learners are very important. You've heard me use the term "K to gray" education. So, we look for employees that are motivated to continue their education. And they may come into the company with a bachelor's or master's degree, but they're expected to continue to learn. They may come in with a high school degree. They're expected to learn. We've hired people that didn't have a high school degree, and have done very well

because they had an attitude that it was important for them to continue to learn. We provided a tuition reimbursement, and we use things like MSSC and certification. We did a lot of in-house training as well. We promoted MBA programs and CEU short courses. And we expected the employees to map out their education initiatives and funded it with education tuition reimbursement. Education was their responsibility. You can't put a program, one-size-fits-all, for every employee in the company. They have to figure it out.

Mike: That makes sense. I like this concept of having an employee map their education, and also you standing up and saying, we'll do a tuition reimbursement. That seems like a really good strategy. You know, these educators are trying to help prepare technicians for this skilled technical workforce. What does industry want from us? So, if you had to answer this question, what are you and your industry colleagues really want from us educators?

Al: That's a very difficult, but simple, question. "We want it when we need it," is sort of the answer. And what that really means is: We want agility in our workforce. We want agility with the people that are coming in.

Mike: So, agility, that's your key factor?

Al: Well, yeah. It goes beyond the ability to have people coming in that have problem-solving capability, and are curious, and all the things that I elaborated on earlier. But which one is in first, second, third, fourth, fifth place depends upon the condition that we are operating in. And so therefore, you have to be able to shift gears. And the ability to move from first gear to third gear, or left field to right field, or to have utility infielders or whatever, moving the workforce around: agility is a key factor.

Mike: So, what's your overall sense then, about looking at the future, and how things are changing?

Al: Well, first of all, let me just say that the world is moving fast. I think we all know that. It's not possible to predict the future much beyond next week, perhaps not even this week. So, it's agility that is critical. For example, a decade ago we probably didn't even think about or even have on our radar screen Internet of Things. Artificial intelligence. Virtual reality. Artificial reality. Big data. 5G communication. Autonomous vehicles. These things were not even on the horizon. And today they're on the

forefront of technology! And many of them are on the factory floor! This is going to continue, but at a faster pace. So, in the next five years we'll be talking about technologies that are not even on our radar screen. Our education system needs to become much more agile. We'll be filling jobs in 2030. The number I heard was: somewhere around 80% of the jobs in 2030 weren't even thought of in 2019!

Mike: You know, that's a fascinating approach. I hope in this project, where we're thinking about preparing technicians for the future of work, that we can stress that "agility" as we help our educational colleagues work on their programs. I really appreciate your comments on that, Al. That's going to help take us forward.

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Mike: I want to thank you again for joining the Future of Work podcast, and I look forward to talking with you again, Al.

Al: No problem. It's exciting times. I look forward to the future. Take care.

Mike: Thank you again. Goodbye.

Al: Bye.

Mike: You heard Al. He says industry owns the skills gap, and what they really want, what industry really wants is agility. Well, here's your "take-action item" for today. I'd like you to add the "skills gap" to the agenda of your next advisory board meeting. Now I'm speaking to educators, administrators, industry members, people that are working on the area of preparing the skilled technical workforce. Make sure it gets on the agenda. And you might want to provoke a little. And maybe make that agenda item say quote "the skills gap—who owns it question mark" unquote. That will get people talking!

Mike: Our final thought comes from one of the references in the Show Notes. It comes from the National Association of Colleges and Employers. They say, "The potential corporate institutional partnerships hold the promise of resolving the relatively narrow and localized—but nevertheless harmful—skills gaps we currently face." So, in their point of view, and in ours also, the key is forming that strong, local, industry-education partnership. I think that makes sense. That's going to address the issue heads-on.

Mike: That's it for today: the skills gap. Our series is produced by John Chamberlain at CORD. Thank you, John. And we appreciate Al Carlson for joining us on our podcast today. Al is also a member of our project's Industry Advisory Board. Thank you, Al. And thank you, our listeners, for Preparing Technicians for the Future of Work.

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