

MEGA TALKS with Gary Cantrell - Part 2

Ajay says: Today we have with us, Gary Cantrell. Gary has more than 30 years senior executive experience across Information Technology, manufacturing and financial services, including ten years with companies like Honeywell, Bank of America, Textron, Jabil. He's a dynamic, cross-functional executive who's held leadership roles in program management, finance and supply chain, including close to two decades in the role of a CIO. He's led the Information Technology and business process transformation on a global scale and is a strong supporter of diverse talent development. When I look at the next five years in manufacturing, a lot of questions come to my mind as to what's going to be the nature of work that is being performed, what, how and who are other people who are going to be doing it. You know, I want to give you the soothsayers hat and try and figure out what the future looks like, Gary.

Gary says: So, yeah, I mean, if I try to narrow it down, I think it's going to be a period of rapid change. I think you're going to see kind of a fragmentation and you'll see it recall less. I think you're going to see a lot of, I'll say, advanced automation, hyper automation that will have the AI component come into it. We talk a lot about Artificial Intelligence, but we, in my personal opinion, we haven't really leveraged AI to an extent that we're getting the true value out of it. There's bits and pieces, but not a lot. I think the tools are going to change dramatically, not only on the analytics side of the equation, but also on the collaboration side of the equation. And I think you'll start to see over the next five years that we, how we design products and transition those products to the manufacturing environment is going to change, I'll say, dramatically. And I think it's going to result in lower costs and a lot better quality. You know, we get into things like digital twins and some of that for not only modeling process but what we're doing on the design side and some of the opportunities that a lot of companies have been playing with on 3D printing or additive manufacturing, if you will. I think that is going to really make its way into the manufacturing process and you'll be doing a lot more remote management, I think that's going to be the other big changes will be hyper automated, remote management and we're going to have a lot of artificial intelligence assistance and help them to manage all that and we're going to be designing and transitioning to manufacture, transitioning to production better than what we've done historically and won't be done in five years but I think we'll be well down the path and you'll have some really good examples of companies that are going down that path and are several companies who are or have been started down that path and I think they'll be the leaders in the space.

Ajay says: Right, and you know, I think when you look at self-driving cars for example and you know, we've been talking about those happening in real time for a while now. Yes. There was a time, at least I would say 5 to 7 years ago when I thought my son, by the time he graduates, he wouldn't need a driver's license. I can tell you right now he does need a driver's license. He's a junior and he's on his way to get it. What you know, when we look at these technologies and you know, really becoming mainstream, do you see them happening over the next five to ten years and you look at a self-driving car? Are they likely to be mainstream in the next 5 to 10 years?

Gary says: I'm still trying to get adjusted to the electric cars, I'm a Motorhead by background and passion. I'll get there, but I'm not there yet. But I think that, you know, if I look at what's going on in manufacturing, I think it's very much like what's going on with the autonomous driving or the self-driving cars issue, I think we'll get there do I think, there'll be self-driving, completely autonomous self-driving cars in five years? Honestly, I don't. I think it'll get a lot better. I think it'll be a huge amount of

driver assist but I don't think it'll be a get in your car, go to sleep in it, drives you cross-country. Manufacturing, I see very much the same way, I think you're going to see a lot of the increased automation, I think you're going to see a lot of machine learning and artificial intelligence applied to that to where and remote management to where the factories have less demand on physical resources, on people being in process. But I don't see in the next five years, even seven years, I don't see the lights out scenario coming in the factories, there's just a lot of complexity.

Ajay says: You know, interesting point when you talk about dark factories and, you know, there's obviously a lot of driving jobs that are there and we're talking about autonomous cars, etc. Would definitely want to understand what in your mind, Gary, happens to the kids? What are they going to do?

Gary says: Yeah, I think they're going to be a lot different. So and I think if you take the example we used before with the self-driving cars or self-driving semis, that's going to cause a displacement to some degree of skill sets. And I think what you're going to see, let me give you two perspectives on this one, that's the one I think we have in the factory and then one from an IT perspective, just because I can't get those glasses off. In the factory, I think you're going to see less, less people in the factory, but you're going to see people that have much more capability and the tools they use instead of tablets and ledgers and stuff they're going to be using iPads and you know, digital tools that allows them to access the information they need in a format that is useful to them real time. And this gets back into some of our previous conversations about back-end systems and all the work and everything. Well that's, that daisy chain just keeps going in order for that to really be valuable. In order to achieve that next generation of manufacturing worker, you're going to be able to have to get all that information, that data, get it assimilated, get it into a device or into a form that individual can use that to make decisions as they go through the factory. I think from the IT perspective, if I look at what my manufacturing partners are going to look like, they are going to start looking a lot more like a knowledge worker than a manufacturing team and you know historically, we've always kind of separated, hey, we have to do these things for the manufacturing organization and the manufacturing employees. We have to do these things for knowledge workers. I think those are going to blend and look very, very similar five years down the road. I think the tools we're going to be providing, the level of demand that they have in terms of ease of access and user friendliness and all that is going to be very similar. And I think it's going to be a put and take. I mean, there's going to be benefits and there's going to be costs and I think that's part of the challenge. What we have to figure out over the next five years.

Ajay says: Makes sense. So Gary, when you look at the knowledge worker that you just talked about, right, and it probably, you know, do we have the skills is what I'm going to ask. Right? And if you don't have the skills, how does one get to have knowledge workers with that kind of skill in the market?

Gary says: Yeah, I think that we don't. I mean, and even if we do, we have a shortage. So, I'm not going to say we don't have them, we don't have enough of them.

Ajay says: That's right.

Gary says: I think we also have folks that are not comfortable with digital and comfortable with some of the new tools that are coming out there. But we can't afford to lose them, that's our knowledge base of people that understand the process and they understand the existing tools. So, I don't think there's any silver bullets to this thing. It's going to take some time and it's going to take some effort but I do think there's a couple of things that a lot of companies are doing that they need to accelerate and then there's

a new approach that I've been reading about more and more here lately that seems to be that makes perfect sense to me. So with respect to developing that future workforce, there's been a lot of effort that has been put on partnering with trade schools and community colleges to get the right skill sets and I think we should continue to do that. Communicology are very helpful in terms of trying to cater to businesses and develop the right skill sets for businesses. And so I think having a clear curriculum or a clear set of skill sets that we want them to have their graduates come out of and we communicate that to them. I think we should do that, they will do that. They will deliver that and that'll help us bring in new employees and build the existing base. The other thing I've seen that I think is really intriguing and it's a great idea and I don't think there's a lot of folks doing it, but it was put under the banner of contextualized learning and so what this does is it takes people from the manufacturing world and takes the tools and the processes that they're using and they train them on how all that works from a digital standpoint so that they understand. So they're bringing half of the knowledge to the game, they know what the process should do, they know exactly what they're trying to get out of that process. Now we're training them on the tools, how to take that to the next step. Right. And not only how to interpret it, but also how to transform it into a better process. So now they've got the tools they need and you can start and that lets us leverage the workforce we got and to me, it just seems like a logical step that is relatively quick and easy for us to do.

Ajay says: So Gary, you've been in this pocket long enough to know that one of the biggest challenges that we deal with is really the legacy systems, they're cumbersome, they're unwieldy and you know, one of the biggest challenges to digitization is basically these systems that are still there, dinosaur systems, call them whatever they are, how and what needs to be done to address them well to make it easy for making this transition.

Gary says: Yeah. That's probably one of the toughest problems that we have to solve and also especially around on the IT side of the house. Part of the issue is these legacy systems still work very well in a lot of cases and it's hard to build a business case to completely replace them. But I think that, if I think this is where a couple of things take place and I'll pull in just the high level strategy that I'd like to see but if you're trying to digitize your business, you know, having that vision, having that in state that you're that you want to get to, becomes critical and having the business partners buy into that and that really has to be driven by the business partners and they have to say, we want to be this type of company ten years from now and I do think it's a 5 to 7 maybe, in some cases, ten year thing, it's a journey. I think if you get that, then you can start having a dialogue around the business case and what the cost is and all that stuff, because it's going to be tough to build a business case around that. It's the timing alone is problematic in a lot of industries. Some of the jobs I've been in, we had the luxury of having, we could have a three year payback. Most of them I've been in, they want to pay back in less than a year so I think that getting it, that is the first big problem. When you get down to the how, that's an area where I think you have to really get creative around how you're going to tackle it. And I think that this is where we talked a little bit earlier about partners and having people come in that can help you and it could be one it could be several partners. But having folks come in who have done other integrations or transformations and integrations between IT, OT type of systems, those things, they can be invaluable and I think that they can help you develop a roadmap that gets it right the first time. They can go through and alert you on pitfalls, help you with business cases, help you with resources and that resource thing, I don't want to skip over on too easily, too quickly because resources is a big deal. I mean, everybody's short staffed and especially now where we've had the job growth and everything

else and we've got low on employment, it's really difficult to get and retain people that know your legacy systems. So being able to leverage your legacy systems knowledge, leverage partners' expertise and again it can be any one of a number of partners leverage their expertise to pick up some of the routine activities that have to be done but you don't want your team to do can be incredibly helpful but it's tough sloggng. I'll go back to what we said earlier, if you can start with some small projects, get some wins, prove out your business case, you'll get latitude. And then I think, the key part of that is speed. You've got to have speed of getting those smaller things done so that people have a chance to build confidence. And the last thing that I'll throw out there is and this is always the toughest one, just because of nobody likes to be the bearer of bad news, but you got to have absolute transparency with the executive team and your business partners. If you surface issues early, you can get a lot of help solving the issues. If you surprise folks, it's just really, really painful.

Ajay says: Yeah. Yeah, I totally understand. But I think we, all of us, still try and make sure that you're trying to do the best and we don't end up hiding things at that point of time. We're just trying to be hundred percent transparent.

Gary says: Yeah, absolutely. And I think a big part of it is, this is why I keep going back to the partner thing, because I always had a high value for partners and again, I mean, it goes across the board software partners, integration partners, implementation partners. I think that those folks who bring exposure and experience to the equation because of the frequency that they've done it, that can really help get you out of trouble. It's not bulletproof, but it certainly is an extra layer of protection and I think it also, if you get the right partner, they'll also become a good advisor. Right. And they'll keep you out of trouble and they'll say, hey, here's what we've seen before we've seen this issue crop up in this situation and I mean, especially when you're talking with large enterprise systems that you're upgrading or replacing, as you know, the tentacles go everywhere.

Ajay says: That's right.

Gary says: And that's well before you get into the retraining of the team members to use the new systems, which has also been a pain point.

Ajay says: Absolutely. So, Gary, you know, we talked about, a bit about how manufacturing is getting influenced, we talked about IT and OT convergence as this IT, OT convergence, what really happens to the people and the leaders? How do they really, you know, yes the convergence of technology convergence, but how does a manufacturing company make it happen in the real world where there's a separate leader for the OT part of the organization and a separate leader for the IT part of the organization, how does the convergence really happen.

Gary says: Yeah, it's interesting because I've seen a bunch of different approaches and I've actually been involved in that and even at my time at Jabil, we experimented with this a little bit of having them converge, having them separated. I think at the end of the day, what we found really drove progress was not organizational structure per se, but what drove progress was being clear on the goals and objectives that we had for that transformation activity. Okay, so we wanted to digitize and I'll use an example, we were trying to, on the optical inspection, we wanted to take data from manufacturing line, be able to do analytics with it, combine it with some of the back-end systems, and then use that to improve that process and I think when we finally got traction with that was when we put common metrics out there, common measurements, and we held the team members to that, and they either all succeeded or they

all failed. And I think that's the key, not just in IT, OT, I mean IT, OT, I think it just, they had different missions and objectives historically. Well, those are merging and so now they have common objectives and missions where they're trying to digitize process to be able to move faster and get more autonomous, more automation in the system. So I think, that key will get them working together and I think that the, if you hold them jointly accountable for making progress and you hold them jointly accountable for not making progress, you'll get them working together. You don't have to necessarily change the organizations. I've seen some organizations go down a chief digital officer route. I think what I've seen work there as chief digital officers, I've seen do really good things on strategy but if you don't give the resources, put the resources behind it, it seems to run into problems. It seems like, you know, because you just don't have the wherewithal to get it done. I think if you take the two organizations that have resources, you're going to get graded same and here's what you got, here's the business output we want, the business outcome we want. This is what you've got to deliver, if you deliver, great. If you don't.

Ajay says: Yeah, I hear you. I think the only thing that, I when I look at, you know, I want to go back and for many of us, it's like you know, we have heard that at age, right. Success has many fathers that failure has none. So the problem here is obviously having a common goal is as long as you're succeeding, it's great. But when you fail, you really want to say, I failed because of somebody else or failed because of that and that becomes a challenge if you're not directly accountable for the outcome.

Gary says: Yeah, and I think, that's I've been in organizations with some very exceptional leaders, I think a strong leader takes care of that. I mean, it's clarity. It's clarity of objective, clarity of mission that team is being given and clarity around how they're going to be measured if you achieve this goal and it doesn't matter who did what, if you didn't collaborate, you didn't work together, you didn't achieve the goal, you're going to be held accountable. And I think that, there's always going to be some situation where you get some of the finger pointing stuff and strong leaders don't, they just don't accept it. You know, and this gets back to the transparency thing that I was talking about earlier. You make it clear to the team that and give them access that if they have problems or if they have issues, that they need help on and direction on, they've got access to get that. Don't make them guess, give them the direction from a business or leadership executive standpoint and then expect them to go execute, that's what they're getting paid for and I think teams, historically teams have responded exceptionally well to that because it places a high level of trust on them and when you do that and then they may take, you may have some examples where you have to hold things accountable. So guys look, we just didn't cut it.

Ajay says: That's right.

Gary says: But it's not individual. It's all or nothing.

Ajay says: So Gary, you've obviously a lot of experience, you know, there are a lot of youngsters there who are, you know, trying to rise up to what you've done in your life. You've done a lot. What would your advice be to them at this point of time?

Gary says: To be smarter than I was, going to be the first thing. I would just coach them and I'll put this maybe in three bullets. Okay, number one, never stop learning, be inquisitive, keep learning because things change so fast and I'll say the last ten years of my career changed that. The last ten years of my career, things changed faster than the first twenty combined.

Ajay says: Right.

Gary says: And I think that's going to happen even faster going forward. The next thing is there's no substitute for just hard work. You know, there's been times when you have long weeks, times you have short weeks, but when the time comes and you've got a big project and you've got stuff, you just have to step up and drive for it. And the way you get that done is through teamwork and collaboration. If you build your relationship with the teams and this is one of the things that I think has helped the last couple of jobs I've had immensely. The leadership team bonded incredibly well and they were, I don't want to stress too much the friends thing but we were work friends and we tried to help each other and that's a good sign we see them help each other, so don't be afraid to help your partners and then they flow that down to their teams and our team members will mimic what they see from the top. So be a good team member and as you rise up in the ranks, be a good leader. So walk the talk and you know, we spend a lot. I was trained early in my career, oddly enough, before it was fashionable to be servant leader because at the University of Dayton that was something, that was kind of drilled into us. But, its absolutely perfect for the environment that we're in and when you're trying to get teams and you're trying to get young kids to grow up, just never quit. Don't stop learning.

Ajay says: Great advice for the youngsters. And Gary, thank you so much for being here.

Gary says: Thanks for having me, I really enjoyed it.