MARS DIGITAL FACTORY JOURNEY
VIDEO TRANSCRIPT

Tracey Countryman:
Thiago, really glad to have you and thanks for making the time.

Thiago Veiga:
Oh, thanks for the opportunity to connect with you and the audience Tracy.

Tracey Countryman:
Okay so I've a handful of questions and Thiago, you feel free to answer these any way you would like. Just anything that you think would be helpful to your peers to help people advance their agenda. Maybe give us a little bit of insight into some of your learnings. So my first question for you is, what is your vision for digital manufacturing in Mars and what excites you about the vision?

Thiago Veiga:
So when we think about the future of manufacturing in Mars, there is a couple of things play really strong in our vision. First is efficiency. So efficiency is a big play, and we've got to get the most of our assets and get more efficiency happen in our manufacturing. We also need to think through flexibility and understand that the demand of our consumers for the future will be different from what they are demanding today. So being able to carry that flexibility across the entire supply chain, including manufacturer, is critical for us. And then the last component that, for me, is a big pillar as well, is the associate experience. So our operators and everyone working on our factories is becoming more tech savvy every day. And being able to offer an environment that attract and retain the talent in manufacturing is super critical for the

future of Mars manufacturing as well.

Tracey Countryman:
So I have a question, we started with you recently around digital twin, and I think this is a term that has been used a lot. Like what is digital twin? And who doesn't want it? I want a digital twin, of myself to help. But when you think about that, what does it mean when we say digital twin to you guys? And then why is it a focus for your minimum viable product that you're piloting?

Thiago Veiga:
You're spot on Tracey. So digital twin, there's a lot of buzz around it, this digital twin terminology. And people define that as a product. We've been defining that as a concept. You can use digital twin in a variety of approaches to get different outcomes. For us, what was important was to leverage the concept and really be able to do the virtual representations, the sort of digital avatar of our production lines so that we can think through changes. We can think through efficiency opportunities. We can think through different arrangements of our capital assets before we touch the physical assets. And that helps us avoid the disruption on the production lines and the production schedule versus wasting time on try and see type of approach and really getting to the heart of the changes that will propel the future of our business, without the big, heavy investment or disruption in the actual production lines and the actual day to day of the production associates.

Tracey Countryman:
In your mind, what is different now related to digital twin and getting advanced analytics

embedded into the manufacturing area?

Thiago Veiga:
Well, definitely the technology has allowed the data modeling to advanced tremendously. The ability for us to also get a lot of more data points and incorporate that in the model has grown exponentially through the past couple of years. When we look at our implementation, we see that we were basically going through historian and fixed sources of data, and they are just not enough. So the fact that now, on a very small level of investment, you can buy cheap IOT sensors, stick that at some point of your production line, read the data points that you were not able to read before, then incorporated that into a more sophisticated data model, which open up a tremendous amount of opportunity for us to do analysis on things that it was just too hard or too expensive to do before.

Thiago Veiga:
As we are looking forward, we're not only looking at analysis of what has happened in the past, but we're also looking at events prediction. And being able to see now, to the operator, what is about to happen or may happen in 15 minutes from now, then minutes down the line, will help them do the necessary adjustments and avoid a problem for helping what is as important as fixing something that has already been broken. Or even more important, I should say, than fixing something that has already broken.

Thiago Veiga:
The other piece that calls out big time for me on this subject is the education capabilities that we now have to really on board and to really make technologies like that. And insights generation like these available to people who have had very little exposure to technology in the past. So you think about our manufacturing facilities, we have thousands of associates, tens of thousands of associates working in every Mars plants around the globe. And the being able to make them tech savvy because technology has evolved and because that became more accessible, makes a big difference on the change management and incorporating those concepts on the way we operate.

Tracey Countryman:
Can you describe for us the scope of the value and the problem statement you're attacking digital twin at Mars?

Thiago Veiga:
Sure. We've decided to start with a packaging line in one of our confectionary plants. And the problem we were trying to solve was to reduce packaging giveaway at that specific lines, reducing the packaging waste. That's a problem that propagates across different plants within the confectionary environment. So it's a very likely scalable type of problem that we agreed to focus on.

Tracey Countryman:
It's interesting, because I remember when we were talking to your team early on about, the first key thing is figuring out the use case that one, has business benefit, and it's not technology for technology's sake because anybody can get data and model and do something. But if it doesn't deliver value, there's really no point doing it. The second thing though is really around picking one that can scale. Because if I think about our clients and what I've highlighted in our research is that, most of the industries is actually still at the early piloting and prototyping and they may have done a lot of them, but very few, if any, have actually been able to scale the solution across what in consumer goods is effectively, 50, 100, 200, 300 type plants right? And so picking the use case that can be repeatable and highly reusable to help with deployment, I think is super key. And I think you guys have managed to pick one that can do both. Both the benefits, but also enable scale.

Thiago Veiga:
Oh yeah. It's worth sharing Tracey, that the digital manufacturing journey at Mars hasn't started with these pilots or with these MPP. We've been doing the digital lighthouse concept for over two years now with some great deliverables, really some great deliverables. A lot of learnings, a lot of nice business solutions that solve real business problems. But we've been limited in our ability to scale those elsewhere. So what this is bringing in differently

for us is through the partnership, through the technology we're using, through the reference architecture that we are building, we are creating this one stop shop, looking at a scalable problem and solving that. With the scalability mindset in place as well as a specific problem statement in mind.

Tracey Countryman:
Yeah, good. And what has been the challenges, either ones you anticipated were going to occur while doing deployment, or you didn't anticipate and were a surprise when you launched the prototype?

Thiago Veiga:
Definitely the first one is access to data. We always thought that we had a lot of data just hanging there and ready to be used. And by the time that we started the project we realized that we just didn't have enough data or we just didn't have enough quality data to build on. And that on one hand was very important because they structured the team to seeing, okay how do we compliment, what we need to do next to solve through this problem? But definitely this was a big insight. The other one for us is, our production lines are ahead, or hit their agendas in terms of the technology that they use. So you could have choose three or four different machinery from different suppliers running in complimentary in the same line. And they do behave differently. So getting that layer that harmonizes all that income of data and make it available for the next set of technology to use that. And that was a big challenge to overcome as well.

Tracey Countryman:
Yeah. And I think Thiago, I'm yet to step into a consumer goods company that has not had this dialogue. We've got acquisitions, we have old plants, we have new plants, we have new lines, we have older lines, we have different MES packages and automation packages and OEM and machines. And so I do think the kind of design for scale around the platform you select is really important. Your data and your asset taxonomy that sits behind that's important. But also the flexibility in the platform to make sure

that you can plug in different types and different things to enable, right the scale piece is critical. Were there any pleasant surprises, as you've been going through this that you're excited about?

Thiago Veiga:
Well I think the first one is the collaboration among the people and how much our manufacturing associates were first keen, and second ready to jump in and help and make it happen. So it was not like we need to bring a big arm of external people to come and do the work that truly belongs to the manufacturing associates. They were on top of the technologies that they use. They were on top of the process that they run. And there was a very good increase in supplies as we go through this work.

Tracey Countryman:
So it sounds like you are planning to scale based on the use case that you selected and assuming that all the benefits do flow through, which all looks very promising. What do you see the things that you have to get right and the key successes to measure?

Thiago Veiga:
Well for us, potential next steps for this goes two ways. One is scaling this specific use case because as I said, there's a full opportunity within the North America manufacturer region to take the benefit of these exact same use case. The other one that I've been very keen on highlighting the importance to our partners and our internal team is, we've got to build a reference architecture that we can almost put in the box and go deploy elsewhere. Even if the use case, that will be using these reference architectural becomes different at the end of the day, but you've got to sort the times of, how we pull the trigger on the data, extract the data, do the data modeling. And there's a ton of sophisticated technology components that got to go with that. So being able to pack that and have that ready as a kit to go and deploy elsewhere in manufacturing is a key goal of mine through this piece of work, which will be later on scaled as we advance the relationship.

Tracey Countryman:
Yeah. I have another client that we work with and they kind of call it the playbook. So what's the playbook? You reference architecture and that can mean lots of things, technology, your own internal capability build. I mean, we love you guys, but we don't want to be working for you for the next five years on this program. So how do we build Mars capability, in data science, in technology, in data connectivity, in IOT and architecture and design so that you guys, after you do the first sets of use cases, build a template, you just keep going at pace. Well to do that, I think that's very good.

Tracey Countryman:
And I guess the last question, as you talk to your peers doing similar programs, and I don't know how often you get a chance to do that, but that is one of the purposes of the consumer goods forum, which is why we're here today. What are the three things you wish you had known? So things that you can share with them that maybe you wish you had known. Starting maybe even the two years ago when you started your digital program?

Thiago Veiga:
Well, first one is, this is a complex effort. And if we want to turn that into product it becomes a very complex program. So people cannot do that on the 20% of their time between 5:00 PM and 11:00 PM. It doesn't work. We've got to put a focus on that. Second is, we've got to have the right level of sponsorship. And I'm very fortunate to just say that we do have, at Mars, the right level of sponsorship to help us make it happen. Because you are touching production facilities, you are touching the day-to-day of the people who, at the end of the day, produce the goods and the core business of the company. So having that well agreed with the right level of sponsorship and top leadership is critical. Another piece is, and reinforce that again, is that the data piece. So there's a lot that we can do in terms of understanding the data that we have available, cleansing the data and getting that ready before we do any technology investment, or any process investments.

And the last learning that I want to offer to my colleagues is, don't underestimate the power of your current manufacturing associates or employees. Because they do have a lot of willingness. They all want to do the best for the company. They all want to make it happen. We just need to help the knowledge and experience flourish through the technology and through the new savvy works that digital brings to the table. But they do know better, so let's trust them because they know a ton of opportunities that we should be pursuing when we talk about the digital transformation in the manufacturing environment.

Tracey Countryman:
Yeah. Thiago, I love the last one. And I love that you've circled back to the people from our beginning question to, why you're doing it. For talent to the future and then now. I couldn't agree more, the last mile, the innovation happens on the shop floor. We in corporate can sit and can help and can give tools and enablement and skilling and investment in dollars in sponsorship. But at the end of the day, the rubber meets the road with the people who own the facilities. And by far the people who know that process and where the opportunities are for productivity efficiency, and new ways of working and a better experience day to day. And by the way safety I would add into that, are the people on the shop floor, and that really understand the process and how to best get after that. Our job is to help them figure out which technology is best suited and the best, most cost competitive to do that.

Thiago Veiga:
Absolutely.

Tracey Countryman:
That's excellent. Well Thiago, is there anything else you want to share before we sign off here and go out into our breakouts?

Thiago Veiga:
Just once more, thank you Tracey for the
opportunity, for the partnership with the whole
Accenture team who has been great to work with
in both my current role and my previous roles.
And I wish all my peers and my counterparts in
other industries a lot of luck, best of luck in their
endeavors in the digital manufacturing space
and feel free to reach me out in LinkedIn and
connect.
Tracey Countryman:
Excellent Thiago. We will thank you so much for
your time and for the opportunity to partner with
you.
Thiago Veiga:
Bye bye.