**Distributed manufacturing interview-20240321\_123836-Meeting Recording**

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32m 1s

 **CHAUDHURI, ATANU** 0:03
The first question you already started talking little bit about it. So what has Nissan done to adopt digital technology across processes and any specific performance objective which your organisation is trying to improve through those digital technology adoption? It can be in, in multiple areas but you can talk about from your experience primarily within supply chain. But if you want to also talk about service that's fine, but it can be also in R&D and other areas. But you can talk about from your experience where you think?

 **CHAUDHURI, ATANU** started transcription

 **CHAUDHURI, ATANU** 0:35
The company has taken some efforts to adopt digital technology and what are some of the performance objectives the company were looking for when they went on that path?

 **Morrell, Rachael** 0:43
OK. So I'll speak more about supply chain.

 **CHAUDHURI, ATANU** 0:48
M.

 **Morrell, Rachael** 0:50
We.
We have been a team for coming up to three years now, so that's still fairly new for the supply chain transformation. So the efforts taken so far is we adopted 3 main Pro 3 main new technologies, which we don't need is support for.
**So we we're currently using RPA, Tableau and workflow.**And they've been the main focus to start with.

**Performance Objectives**

**Of exploring, where can we remove no value added NVA from the teams and use these automations to put automate automation or digitalization in place to reduce NVA within the teams**. The main performance objective behind that is we've had a mixture of We've been asked to see if X amount of hours so previously.
Over just over three years ago, there was a big round of redundancies made and there was a lot of heads lost within the department and people are doing NVA, **but also that they weren't in a position to necessarily pick up the experience that was lost as well at the time. So we were given X amount of hours to try and save, to take the pressure off the people who are still here.**And then we also have objectives of how many new automations can we put in a month in a year, year financial year? Sorry. So they're they're the objectives we've been faced at the moment, but it's also been based around the team that we've got didn't necessarily come from a development background. **So we've also been training and learning while while we pick up processes on behalf of people to automate and improve them**. So I think in the next year we're about to set the next round of objectives.

**Morrell, Rachael** 2:52
The them objectives will be different because we are a lot more skilled now. We're not necessarily serially fully able, but we're a lot more confident and skilled up and what we're using, what we're doing and then as we go along, if any new technologies are identified that could help us that we could take on, that wouldn't need our is support, we will explore them technologies and see if we can adopt them and introduce them to.

**Morrell, Rachael** 3:23
Supply chain.

 **CHAUDHURI, ATANU** 3:24
Yeah. And then so most of this work is still done in house by your team or the I, the information systems team. So when you identify your process and which has in VA and you want to improve it and automate it, currently you do it all in house or you also go to service providers or?

 **Morrell, Rachael** 3:41
So it's done in a most of it's done in house specific to our team. If we identify something that's beyond our capability and it needs IA support, it would be referred to them. Where they we have got vendors assigned to Nissan, who would do that work for us.

 **CHAUDHURI, ATANU** 4:00
Yeah.
Sure, that's fine. But it has always been, at least until the till now in these last three years, it has primarily be on productivity and efficiency improvement and then NVA reduction. So that that has been the primary objective.

 **Morrell, Rachael** 4:15
Yes.
Yes.

 **CHAUDHURI, ATANU** 4:20
So the next question is around challenges. Obviously none of these come without challenges, I will imagine. So what challenges have you faced till date in adopting the these digital technologies or automation across processes?

 **Morrell, Rachael** 4:33
The main challenges I would say are people.
**Getting buy in off them to understand that.**

**Challenges- getting employee buy-in
Morrell, Rachael** 4:42
It's almost like **it doesn't matter how much selling we do in we do to them to see we're trying to take away the no value added** to your job away from you.
So you can actually do what you're meant to be doing the good stuff.

 **CHAUDHURI, ATANU** 4:57
Oh.

 **Morrell, Rachael**

**Challenges- perception about job loss**4:59
A lot of people, I think it's a culture thing as well. See it as your take and the work away from them. And potentially does that put them at risk if you no longer need me?

 **CHAUDHURI, ATANU** 5:05
M.

 **Morrell, Rachael** 5:10
There's, there's a lot of that. And then also pressure of time.
Not sure how closely, and I'm sure you will be aware of it. You follow supply chain, but since COVID just before possibly Brexit, we have faced crisis after crisis. After crisis in supply chain.

**Morrell, Rachael** 5:31
And a lot of these people who work here are just.
In the firefighting, basically the the jumping from crisis to crisis and they haven't got time. I think people have forgot what business as usual looks like because so much has happened over the last so many years.

**Morrell, Rachael** 5:50
That.
Me as a citizen developer trying to get somebody's time, even though I'm trying to help them.
They they do not have the time to give me to then support them, and it's one of them catch 22 situations where you're trying to take away.
The Lord awake from them and save them time, but they don't have the time to help me understand what I need to do to take that away from them.

 **CHAUDHURI, ATANU** 6:17
Yes, very difficult, very difficult situation. I fully understand this change management generally, yes, any digital technologies sort of perceived as as taking jobs away from them or taking and there is a lot of as you said cultural. But at the same time as you said supply chains have been subjected to so much of disruptions recently and that you you have hardly time to even breathe and think what is happening it's it's almost.
On a day-to-day basis and then so your regular work should still continue at the same time we need to remove inefficiencies, respond to all these risk events, so it can obviously.
It shows that this cannot work like this, so there has to be a completely new way of thinking and that, but that change is such a painful process that it will take some time to come. I understood that.

 **Morrell, Rachael** 7:05
Yes.
Yes.
Definitely.

 **CHAUDHURI, ATANU** 7:14
So now given that what you are going through and maybe you already have a plan of what's going to come in the next years, what kind of digital skills will you need in in your organisation?

**Upskilling requirements
Morrell, Rachael** 7:26
We certainly **need to upskill staff to understand the new applications, technologies that are coming their way.**Again, Tableau for example.
A big change with that is I think people are so used to using the Excel spreadsheet and that's all that can visualise the can't. **They can't see how Tableau can benefit them in a visual way and when they ask for help with that.**
They pretty much ask for us to redesign the spreadsheet in another view of a spreadsheet on Tableau, so you may as well use Excel still. If that's the case, and I think we need to upskill people with that **understanding of how to communicate using different technologies as well.**

**Morrell, Rachael** 8:17
I think people are just in that Excel mindset and that's what they know. It's that moving on to how how you can use these other technologies.

 **CHAUDHURI, ATANU** 8:22
M.

 **Morrell, Rachael** 8:26
To help your D to D in a more visual way and not a spreadsheet kind of way.
And then it's understanding basically if if the various different applications we've got in, we need to make sure then people know how they work to their benefits, which one's the right one to use as and when.

 **CHAUDHURI, ATANU** 8:50
But has there been an internal training? I'm sure there has been some internal training on Tableau and other stuff where people actually were using it, right?

 **Morrell, Rachael** 8:57
So we've got a key team who are fully trained in Tableau. They've done it all. We have sent a number of users on the tablet training course and I know a large number of them have not gone on to use them, use that training.
It's almost become. Yeah, I've been on the course, but I don't know what I'm doing.
And I think it's that confidence and again it falls back on the time and having the time away from your day job to put this into practise.
And which is possibly another barrier.

 **CHAUDHURI, ATANU** 9:33
Hmm, but what was the again? The prime motive for that Tableau? It is for production planning quality or what what are what are the people supposed to do? Obviously in different businesses it is used for different purposes of dashboarding and reporting. And then so on.
But.
No.
Mm.

 **Morrell, Rachael** 10:06
Studied the spreadsheet behind the scenes.

 **CHAUDHURI, ATANU** 10:09
Hmm. Yeah, Yep, that's fine.
OK so.
He already answered a little bit of we have question for that. What if it's have you taken to upgrade this digital skills and what challenges you have faced but what you are given examples of Tableau but is there anything other than Tableau, any other digital application or maybe even say IoT devices or sensors for in process control or or quality control etcetera. So is there any other things of?

 **Morrell, Rachael** 10:43
The the possibly is with other things, but I'm not familiar with all of that, sorry.

 **CHAUDHURI, ATANU** 10:47
Hmm.
OK, that's fine.
Yeah. So you apparently, yeah, you're currently focusing on processes and then where it can be automated, primarily using applications like Tableau. Yeah, that's right, yeah.

 **Morrell, Rachael** 10:58
Yes, yes.

 **CHAUDHURI, ATANU** 11:02
No. Has there been effort to also recruit people to drive these digitalization efforts and or to recruit for future growth? What do you need? Are you currently recruiting for these kind of skills or is it purely your existing people who will be trained on that? But do you see hiring potentially new graduates, the younger workforce obviously a little bit more digitally savvy they are?

 **Morrell, Rachael** 11:16
Yes.
We've we've had, **we've had a number of job vacancies over the last two years and we have really struggled to employ someone.**

 **CHAUDHURI, ATANU** 11:33
Hmm.

 **Morrell, Rachael** 11:40
**We've actually gotten somebody trained in RPA with AWS experience, starting with us in the next couple of weeks**, end of May, possibly mid-May. I think she's starting.
And then we are all. We've also done a lot of work with Sunderland University this year where we're offering. **We've got two different things going on**. We've got an apprenticeship role and.
**A graduate role I think for to get a degree. We've got a couple of things ongoing there where I'm I'm specifically working on the apprenticeship**.
Where we're offering A5 year A3 year apprenticeship followed by the two year continuing to get your full degree.

 **CHAUDHURI, ATANU** 12:26
Hmm.

 **Morrell, Rachael** 12:28
This this is all new. We're currently recruiting for it.

 **CHAUDHURI, ATANU** 12:32
Hmm.

**Challenges- few applicants from North-East
Morrell, Rachael** 12:33
I can tell you that so far the latest update I received was **we've had approximately 150 applications for this role.
Most of them are down South, a very small minority are from the north**, which questions what does the South Mcnore.

**Morrell, Rachael** 12:51
More than what the north do?

**Morrell, Rachael** 12:53
And why are the North not applying**? Because it's such a good opportunity. It's a specific.
Data scientist apprenticeship role as well.**

**Morrell, Rachael** 13:06
So we are looking at at that. We've got a few job opportunities going, but whilst it doesn't matter where you are in the country, if you want to apply for the job and you will be considered, I have asked a lot of questions of why is it the North I do have.

 **Morrell, Rachael** 13:23
Some quest I have some personal thoughts on that being from this area.

**Challenges- negative perception about manufacturing
Morrell, Rachael** 13:29
And recent experience **I've heard in local school where it's almost like Nissan.
Is seen as factory work rather than. Actually there's a lot of opportunity and skill within Nissan** if that makes sense, and I think it may be how Nissan's portrayed.
Being in the northeast to how it's portrayed in the South, I'm not sure.

 **CHAUDHURI, ATANU** 13:52
Hmm.
No, this is exactly also what we are interested in. I I talk in every meeting that this is no longer Charlie Chaplin's factory, but people things still think it. It's dirty work and it is not just in UK almost everywhere in the world. This kind of misconception exists and it is high time and actually we need to go to schools as you said to bring these. This is not just factory work. Even if you do factory work, there's a lot of technology, lot of exciting data analytics and other things happening.

**CHAUDHURI, ATANU** 14:23
People possibly do not want. This is sad that even in notice, even if it's few months down or down the road, they don't know the companies. They don't know what happens there and they don't know the kind of and it is an opportunity for all of us, not just the companies and universities and schools. And we are also school going children to actually talk about these things. The companies in the area. And that's why I'm particularly passionate about this project that we can actually make a difference by by bringing.

I think this the school I've heard it from is actually, I feel that I've got a bit of mixed emotions. Not only am I someone who works for Nissan, but the school it came from is the school my son has just been accepted to go to.

 **CHAUDHURI, ATANU** 15:04
Hmm.

 **Morrell, Rachael** 15:05
And I'm really disappointed how a careers advisor put across Nissan in a negative way, because I'm also thinking you're going to be potentially teaching or speaking to my son in his future. And I don't want you to portray where his mum works.

 **CHAUDHURI, ATANU** 15:12
H.
Hmm.

 **Morrell, Rachael** 15:22
Negative light either.

 **CHAUDHURI, ATANU** 15:22
Oh yeah.

 **Morrell, Rachael** 15:25
And obviously I know different about the opportunity and it's actually made me really sad that I've got this connection and it's on the doorstep as well. This school that I'm talking about.

**Morrell, Rachael** 15:39
So yes, I think that needs to change.
Definitely.

 **CHAUDHURI, ATANU** 15:44
Yes, but I can also talk about my personal experience. So for my son's school, I I volunteer that I can take some sessions for them and I tell I told them that I can talk about supply chains. There was almost deafening response. I don't know what it is, the carrier said so. So they don't know anything. So. But then I thought, but they are more interested. They showed more interest in robotics and space and so on. So I brought in some speaker from from space industry, which is fine.

 **Morrell, Rachael** 16:00
Oh my goodness.

 **CHAUDHURI, ATANU** 16:13
But they don't seem to have any clue about supply chain. And The thing is just about moving goods.

 **Morrell, Rachael** 16:13
Uh huh.

 **CHAUDHURI, ATANU** 16:19
This is not what our our schoolchildren should know about, but I think I need a lot of work to explain to them how exciting supply chain is, what this is. This is not there.

 **Morrell, Rachael** 16:26
Yes.
Yeah. No, I think I I realise more the the more I'm getting further into this something needs to change and it needs to be looked at so.

 **CHAUDHURI, ATANU** 16:40
Hmm.
No, that's fine.
So then the next question is.
Obviously we we are all facing challenges in recruiting.
Will you like to get involved in in sharing these skills which are needed? First of all, people need to know one is to the regular recruitment channel. But I think since we are in the North East, this has to be much more continuous. I don't know. Obviously you might be doing participating in STEM Fest or other kinds of events, but this has to be like a.
Very regular continuous event. Can you for example go to the Fe colleges or go to this high schools and middle schools or actually tell people about what you do and the kind of skills you need and how exciting the jobs will be in the future? Will Nissan is Nissan already doing something or do you will you have interest? No.

 **Morrell, Rachael** 17:28
Yes.
Nissan already, I think Nissan would definitely look to support this. I am, I know myself and two other guys I work with in two different departments who are trying to get data scientists in digital in we've all talked a lot about being prepared to go to local schools and colleges and give more information because we recently did a day.

 **CHAUDHURI, ATANU** 17:44
Hmm.
Hmm.

 **Morrell, Rachael** 17:54
**An apprenticeship day at Sunderland University.
And only one student came along specifically say us.**Everybody was there for engineering.
So again, we we advertised there was a there was a data science science **apprenticeship going and only one person came to that data specifically speak to us where we are saying what can we do to advertise this more, make children more aware that these opportunities are here on the doorstep and how exciting they are to be involved in**. And the opportunity can bring bring you as an individual.

 **CHAUDHURI, ATANU** 18:15
Hmm.
Hmm.
Mm hmm.

 **Morrell, Rachael** 18:33
So I think there would, there would **definitely be involvement there and I'm sure Nissan would get like the wider Nissan Training Department, for example, who do the upskilling. I'm sure they would get involved as well.**

 **CHAUDHURI, ATANU** 18:39
Hmm.
Hmm.
Yes. Again, this is my personal thought. One of you are also discussing with few people I think partly it has to do with how we teach maths, you know, so we don't tell them where it is used. So they don't. They cannot make the connection to the mathematical equations or formulas to what is used in business and what is data science and how that data is used to create this kind of charts and take decisions. And this is very important that we also bring in the teachers. And so the teachers when they are teaching something something in maths they should give examples like what happens in the companies using that data.
Doing this, we have all been taught in the same old way of teaching maths. Somehow we we we we managed to do maths and become engineers but very few lot of people will completely lose interest when how we teach them to numbers because they people generally will not have. Not all of them will have aptitude to do anything with numbers. But if we tell them that this is how it helps companies or how this is actually used and this may be a job opportunity but we don't do this. Do you also see such?
Things happening.

 **Morrell, Rachael** 19:55
I think that would be brilliant. You've actually just triggered a memory to me.

 **CHAUDHURI, ATANU** 20:09
Hmm.

 **Morrell, Rachael** 20:09
Where they get them to dress up in a number and things like that, but also they do ask parents to send in. They're either invited in for the afternoon to speak about their jobs or send her in a slide about themselves and how maths is used in the in their workplace.

 **CHAUDHURI, ATANU** 20:28
Hmm.

 **Morrell, Rachael** 20:29
And I know that our trying, but it all depends on how and who goes in to which roles.
Which obviously you can't control other than you so happen to be the pair one.
Parents at that school. But I'm thinking more schools do get involved in number week. It is. It is a national thing, I promise.

**Opportunities- engagement with schools**
**That is, is that something that I'm I'm thinking just even from a Nissan perspective of how we reach out to schools with something that they can use as school material for this week, feel free to use it when you want. Someone would be happy to come in as well and tell you a bit more about Nissan and other opportunities.**

 **CHAUDHURI, ATANU** 21:01
Hmm.

 **Morrell, Rachael** 21:13
Something and that that could be a way of tapping into the schools, because then it all depends on the teacher's experience and how they would.

 **CHAUDHURI, ATANU** 21:13
No.

 **Morrell, Rachael** 21:23
Know how to use it outside of how they were taught in the classroom themselves. So.

 **CHAUDHURI, ATANU** 21:27
Yeah. Yes, absolutely. I mean, I'm. I'm also, as you speak, I'm thinking. So when they teach, when they're taught about averages, you know, or or that even even you can use the tag time and how many cars come out of the factory in a day or something you you need to give those examples not the not what is many averages and this many apples and so on. That's that's obviously fine. But if you bring in those it will stick. I'm sure it will stick more.

 **Morrell, Rachael** 21:51
Yeah.
Yeah, we were just doing averages more than medium with my son last night, so.
This is all relevant at home for me as well.

 **CHAUDHURI, ATANU** 22:05
Very good, yes.
Very good, that's.
Yeah. The other question I think is not so relevant, but but for example, we also see that in the Community.
Lot of our household products get broken and we need to be repaired. It's a whole. It's a dishwasher or a washing machine and so on. And mostly we are. We are searching for generic parts. Maybe it's a bracket or a hinge or or a knob or something. And we believe again, many of these things can be produced locally.
Two distributed manufacturing. So we're now using even 3D printing and other things. It may not be so relevant for Nissan, but Nissan, even Nissan spare parts. I do lot of work on 3D printing of spare parts, but do you think such generic sort of non proprietary parts can be produced?
Within the local community now by Nissan and suppliers, and so that we can actually deliver those things quickly. There are some ideas that even if you college students with some bit of training can actually do this.
And that will again help people to understand, OK, these things can be done locally and this is not happening in a far off place or call coming from China and so on.

 **Morrell, Rachael** 23:20
Yeah, I mean, I understand what you're saying and I'm sure it probably I personally don't know how to do it, but I'm sure it could be done more locally and sourced more locally, definitely.

 **CHAUDHURI, ATANU** 23:27
No.
No, that's fine. So the final question was our broader concept of that we wanted to bring manufacturers, technology, service providers, educational institutions, people within the Community to some kind of network or a platform. And it's not just a matchmaking platform. So some people wants to know about digital skills or 3D design or or CAD Cam or even data analytics. It's not just about telling them, OK, this is a place you can go. This is AV College which is training or Nissan is recruiting apprenticeship, but also making sure that it works. So we actually want to execute this.
And in some cases it may not be even a digital platform, let's say within Sunderland or within concert or T side, we actually run at a community level, bring companies together, bring.
This together and and decide what you what you need to know do actually at the local level and and make such pilot projects. So we'll listen, be happy to support such things either through the overall not just automotive alliance. I'm sure you do a lot of work, but let's say within Sunderland with you and some other companies and service providers and also bring the F ecologists and and the universities together and we actually do something and do pilot projects to bring all of this together. So you want to digitalise you need people you don't have skills.
You face difficulty and in also even.
Conveying those to your own employees and making a business case. So there is a lot of challenge happening, but if you take up a certain particular area and do or run a pilot, not just you yourself, but again with this broader community of different organisations, will Nissan be happy to support such a thing?

 **Morrell, Rachael** 25:14
Yes, Nissan definitely would be interested.

 **CHAUDHURI, ATANU** 25:20
So what the next steps are so right now we are talking to people. We have organised a small workshops to understand what people needs are sometime in end of May, June and that was my idea. If you can also host a workshop in Nissan and bring in some people together and sort of come out with the idea, what we really need to do, what is the so at the end of this project we need to submit a report on on what that platform or the what is the design or the framework of this platform which will bring people together.
And what we really need to know and what are the pilot projects which we can run so that we can potentially apply for future funding from whether it's a new not this combined authority or others?
Will there be a possibility to host such a workshop in Nissan? If not, we can also invite you wherever we are doing it, but I think if you do it in Nissan it can be a good idea. So I suggested some dates. Were you there in copied in those emails, right? Yeah.

 **Morrell, Rachael** 26:15
So I'm still trying to get.

 **CHAUDHURI, ATANU** 26:19
Mm hmm.

 **Morrell, Rachael** 26:19
A room.
I've been told we can't hold anything at all the week of the 20th of May.

 **CHAUDHURI, ATANU** 26:27
OK.

 **Morrell, Rachael** 26:29
I've got a room, potentially. So we have big main reception areas which can accommodate large amounts of people.
I can get one for from 12:00 o'clock on the 15th, so it would depend on how much time we need and if that would be suitable for an afternoon rather than a full day.

 **CHAUDHURI, ATANU** 26:52
It's the 15th.
No, it need not be a full day, so it's.
15th of May, right.
And when are you saying in the morning or afternoon?

 **Morrell, Rachael** 27:06
Afternoon.

 **CHAUDHURI, ATANU** 27:07
From 12 right?

 **Morrell, Rachael** 27:09
Yes, we're allowed the room from 12, but we would need to allow for setting up as well because I'm not sure who's in before us, so it's a big room, so it depends on if they had all the chairs though, for example, and things like that.

 **CHAUDHURI, ATANU** 27:14
Yeah.
No, no, no.
No, that that will actually be at least perfect for me. So we we don't need more than couple of hours you know, so it can be 123 or something.

 **Morrell, Rachael** 27:27
OK, right. I'll see if that room's still available. And so we can certainly put something on there. And then what would the requirements be from ourselves?

 **CHAUDHURI, ATANU** 27:30
Yeah.
Not a lot of people, so we can we want 20 maximum 30 people. So 20 people is actually good. 30 is sort of the upper limit. You don't need a lot of people. So one thing which you can do either through automotive alliance or maybe yours. So you bring in a few other manufacturing companies we and if you also know technology service word is fine but otherwise we will find out. So we want a mix of manufacturer service providers, some education companies and we will hand pick and send these this is by.
So it's not open to everybody if you if you want to restrict the numbers to certain levels. So you can tell us what is the maximum number you can accommodate.
Accordingly, you can invite some people, other people we will invite and we will bring them together. We you just. We just need the the facilities and and maybe a a Phillip flip charts a few flip charts and etcetera other things we can bring in. So it is more of a workshop more so we will present what we have learned you can tell us what you what you have been doing and what the challenges you are facing.
And exactly what we need to do together to make this work right. So that is the kind of brainstorming we will do so that we come up with a concrete idea that this is a kind of pilot project. We will do with Nissan and and its other companies in the in the in the area to make to support Nissan's digitalization efforts.

 **Morrell, Rachael** 29:09
OK, I'm just taking lots of notes.

 **CHAUDHURI, ATANU** 29:12
Mm hmm, no worries.

 **Morrell, Rachael** 29:16
OK.
That's fine. I'll get the room confirmed. And I'll speak with Sarah.

 **CHAUDHURI, ATANU** 29:23
Yeah.

 **Morrell, Rachael** 29:24
And then we can talk, pick up the next steps.

 **CHAUDHURI, ATANU** 29:28
Sure. Yeah, that will be most helpful. So 15th may if that is confirmed, I will be on annual leave from next week till 15th of April. But I can still check my emails sometime as long as soon as you confirm.

 **Morrell, Rachael** 29:37
Right. I should I should be able to get that confirmed today, so hopefully I'll get back to you today.

 **CHAUDHURI, ATANU** 29:41
That's brilliant. Fine. That will be brilliant. So we'll also block our calendars. So this is a project with four other universities, Durham, Teesside in North East and Derby and Loughborough in East Midlands. They're also doing that. So I will invite our colleagues from East Midlands to also join in and then I will, I will throw the broader network either through automotive alliance or engineering manufacturing network. I will invite a few other companies and that should be fine.

 **Morrell, Rachael** 30:10
OK.

 **CHAUDHURI, ATANU** 30:11
Brilliant.
Thank you so much.

 **Morrell, Rachael** 30:14
Right.
Is that everything for now?

 **CHAUDHURI, ATANU** 30:18
Yes, that's everything for today, yes.

 **Morrell, Rachael** 30:21
OK. Well, it's been lovely talking to you.

 **CHAUDHURI, ATANU** 30:24
And if we in our school we live. I live in Newcastle and in the vicinity, in the Gosford area. There are many schools I'm actually trying to see. I'm, as you see, I'm very passionate about manufacturing, data analytics, supply chain. I'm trying to see at least meet the people, teachers there and see if we can give a talk. But if you are also interested, I will let you know. I think we we need to get this message out at least in the Northeast. Otherwise we are we don't these children do not know, they think it's still.

 **Morrell, Rachael** 30:49
Definitely.

 **CHAUDHURI, ATANU** 30:54
Or every every job is outside and this is all TikTok generation. They don't really have seen and I struggle.

 **Morrell, Rachael** 31:01
I know. I just.

 **CHAUDHURI, ATANU** 31:02
As university professors also, we struggle when we teach operations or supply chain in our generation. All of us have visited and seen factories. Nowadays nobody has seen anything like this. It's very difficult to teach any operations or supply chain if you have never been even to a warehouse or a factory.

 **Morrell, Rachael** 31:11
Yet.
Yeah, yeah, I feel I feel like my the the quote of my week is, what does the South know that the north doesn't and that would be my opening line going into every school of why are you not taking up this opportunity? Because that's why they're ahead of us.

 **CHAUDHURI, ATANU** 31:33
I think this is just just more opportunities. You know, first of all, obviously in South there are not many factories, but still they know the children are more aware, possibly their science week and the schools are surely possibly doing something more.

 **Morrell, Rachael** 31:47
Yeah. Yeah. Oh, well, well, I'll look forward to working with you.

 **CHAUDHURI, ATANU** 31:49
Good. Thank you so much.
OK. Thank you so much. Bye. Take care. Bye.

 **Morrell, Rachael** 31:54
OK. Take care. Bye bye.

 **CHAUDHURI, ATANU** stopped transcription