



THE FUTURE OF SUPPLY CHAINS: Episode 6

Asif [00:00:00] Welcome to the Art of the Impossible. A Podcast for the design and manufacturing industry that explores how you can leverage technology, processes and people to make the impossible possible. I'm Asif Moghal, senior industry manager at Autodesk. And each week I'll be joined by two experts from the design manufacturing world to discuss their perspectives on the challenges our industry faces and share what they're doing to overcome. From smart products, mass customisation, digitisation, supply chain resilience and the convergence of once diverse industries. This podcast is for anyone that runs the design and manufacturing business who's interested in making things possible. You can subscribe by follow us on Apple, Spotify or via your favourite platform.

Asif [00:00:54] Hi, welcome to the podcast. So today's topic is supply chains, a real hot potato. I have several that seem to be bouncing around the industry. Now, for as long as civilisation has existed, we have thrived and survived in our ability to get access to stuff that we need further and further and further away from our homes or more complex things to allow us to work and play in the way we've become used to. Now, it seems like supply chains have been ticking over almost invisibly in the background, just kind of getting us the things that we need to do our jobs and live our lives. But due to recent events, some would say that the fragility of our supply chain structure has been brought into sharp focus. And that's kind of made a lot of people think about how can they build greater resilience into their business. So today we're going to be debating the future of supply chains and what resilience looks like. To help us have that conversation, I've got another two fantastic guests, and the first is Rachel Eade MBE and Rachel spent more than 20 years working in the auto and transport manufacturing supply chain, and is currently supply chain lead at the University of Birmingham Centre for Rail Research and Education. And joining her is Barry Leahey, MBE, Managing Director of Playdale Playgrounds and an honorary teaching fellow in entrepreneurship strategy and innovation at Lancaster University Management School. So a big welcome to you both. Thank you for joining us.

Barry [00:02:26] Thank you, Asif.

Rachel [00:02:27] Thank you.

Asif [00:02:28] Great. So why don't we just dive in? So, Rachel, maybe I could start with you. We hear the term used a lot - the fragility of the supply chain leading to this kind of focus on it. In short of your your sort of view and opinion. What was it about the current setup, the way we'd set our supply chains up currently that kind of made it so fragile in the face of something like Covid? Have you got any kind of thoughts on that?

Rachel [00:02:53] I think if we look at and understand what a supply chain is made up of, that will help to understand that fragility. So a supply chain is made up of many different types of companies and suppliers, all supplying goods, products and services into a larger key product that could be a piece of play equipment or it could be a car or a train or a house. So let's put that into context. When we buy one of those key products, we are buying it from the OEM - the original equipment manufacturer or its agents. But the reality is the

door handles, the wheels, the bits inside that make the engine turn, the nuts and the bolts come from a whole range of different suppliers, along with the services that support that; the design, the engineering, the oils, the filming, the recording, the communications, the print, the work where, the sandwiches for the workers. Yeah, all those together make the supply chain.

Asif [00:04:11] That's a really interesting perspective you just given. It sounds like I think a lot of people might think about supply chains as like literally the nuts and bolts.

Rachel [00:04:17] Yeah.

Asif [00:04:18] You know, I've got my I got my logtech mouse here at, buy it off Amazon, it's arriving this afternoon. I think it's just physical products, but the services to support the support of the people who are behind it. And it's made me think what you said, actually. And I'm just wondering how many people view it in that kind of bigger holistic view. I think maybe that's people where one of our problems are coming from. Do you think do you think people look at it, too, in a too narrow way?

Rachel [00:04:41] I think lots of people, particularly in the transport manufacturing sector, think about the metal bits that go onto vehicles or the plastic bits, but a supply chain and its fragility, going back to your question, is about the whole community and also the lower down the supply chain we get, so the guy that makes the nuts or the bolts that hold the door panels together, that then hold the door onto the car, he is so far away from the car manufacturer, the brand, that he'll be supplying nuts and bolts to hundreds of people, maybe doesn't even know which vehicles or which houses or which products they're ending up on. And he won't know that until he loses those customers or they reduce their volumes. And I think that level of understanding and communication across that broader supply chain is what makes it fragile.

Asif [00:05:40] So that you sort of not knowing where your widgets or services can ultimately end up. And then I guess, therefore, not being able to put strategies in place to insulate against that. So that level of the unknown.

Rachel [00:05:52] And you don't have a direct relationship with the end user or the end customer because you're, you'll be supplying your your component to somebody else who maybe coats it, finishes it, looking at your mouse, puts it inside who then send it somewhere else. The processes around your product or process end up out of your control.

Barry [00:06:17] I was just going to say there must be some relationship, though, also when it, talking about how fragile it is, is how specialist it is. You know, the more specialist it is, the greater propensity to be fragile because of, there's gonna be in that chain, those key individuals, if it's specialist or those key processes, you know, broader the process or less specialist the process or less competitive the process, less the chance of it being fragile. But, saying all of that, there could be one key process in a very uncompetitive unspecialised process that disappears, which then leaves you wide open. But..

Rachel [00:06:59] Leaves a gap. Yes. And there's lots and lots of experiences like that. And I think, so it's really hard to explain and define a supply chain because for different sectors, they're different. But the concepts of fragility, I think there's the common theme that the complexity makes them fragile and a little bit is that unknown. Be it a specialism, or something that's much more generic. It's still complex.

Asif [00:07:29] And I guess, Barry, I'm interested on your view on this, if we sort of take Rachel's definition, this kind of actually very holistic and broad definition of supply chain, it's not just the widgets. And add to it the sort of specialist nature of some of the things that we do. We're hearing a lot in the news about the many manufacturers response to the shock that the pandemic has put on their businesses as a lot groundswell about let's bring everything back onshore. Now, whether that's back to the U.K. or back to North America or globally, a lot of people are saying, let's reshore everything. But given the complexity of the supply chain, that Rachel has just described. And the specialist nature of some of the things that we need to get done. Do you actually think that's a realistic option or do you think it's a blend of some stuff back onshore and leaving the specialist stuff to the people that are able to do it? Well, what's your view on that?

Barry [00:08:24] I'll be honest. I have mixed views around it because I think you've got to be careful what you wish for, is my, is probably my global perspective on, you know, we as the UK, to come out of any kind of global recession, we need to trade out of it. And therefore, we need people from other countries to buy something for their supply chain from ourselves. And if everyone creates this culture of will reshore and will create everything our own, you know, I sell the majority of my equipment outside of the UK. Well, if every country had a supply chain that they could make it, play equipment in their country, then that would kill my business, you know, overnight. However, I'm also very passionate of, well, what has the UK got so that if we just took the UK as an example, you know what have we, what do we truly own? You know, what are we truly great at? You know, as an island, we're a small island, we're, we've got the number one financial markets in the world still, just, and how much more of it are we, number one? You know, I was talking to a business minister recently and I asked the question about, are we really, are we going in the right direction around productivity, manufacturing? And he said, you must remember we're still the ninth biggest in the world, you know, as a manufacturer. My reply was, well, yeah, when we had the Olympics, I'm sure we were targeting to come ninth in the medal table, weren't we? But it's if we could bring all our specialist services in and we actually got smart and I was actually speaking to someone else, which I thought made a very obvious point not so long ago. And they said when the pandemic struck, we're looking at what we didn't have and we're going to have lots of jobless over the next couple of years. And why don't we start the industries that were importing stuff? You know, we know what we import into this country. So why wouldn't the government target funding to set up what is being imported into this country? You know, let's make it ourselves. So I've got really mixed passions around it because I think we should be a global economy and because there is specialisms, and to be competitive, you've got to go out there and find the best and be at the best quality or best price or both. But we also want to make the UK great. I think the knee-jerk reaction, I think it's made the media and the press and people don't really understand what reassuring is or, you know, we say it and think that's the right thing to say. I don't know if it is.

Asif [00:11:15] I mean, it certainly is a soundbite, isn't it? Let's reassure everything. But I'm thinking about, again, taking Rachel's definition of supply chain. I'm thinking about some of the customers that I know who have got relationships with manufacturers overseas who have both the capacity and the capability to get stuff done at a level of quality and cost that they for whatever reason, they can't do onshore. And I just wonder if it is really that easy to throw that relationship away overnight and then find, how do I find another manufacturer just 50 miles from me? I think that there's going to be some challenges in doing that. I think that certain things, as you say, the non specialised stuff, we could probably do a bit of it, but it just feels like it's a balance or a blend of the two. That would probably be the more sustainable future proofed route moving forward. Rachel, would you agree or would you think it's different?

Rachel [00:12:12] I think I'd agree with Barry's view that trade, we're an island in the UK, and trade is global and reciprocal. And a lot of, particularly in manufacturing engineering, we trade on designed and made in the UK and England and quality. And we can't make all and everything. And if we want to globally trade, I think there's give and take. We will always want to, need to buy some items from overseas, either because of volume, cost, capability, time, and similarly, we want other people to be buying from us. So there is some pitching and I think, you know, not going political, but the government's current industrial strategy is trying to pick out those areas where we do have expertise. I'm going to bring another word in here, which I think is important for the discussion later - skills. We need to look at the skills that we have in manufacturing and engineering. We consistently, for as long as I've been doing this, working this arena, we've always talked about an engineering skill shortage circa between 35-50,000 people is always needed, has always been needed. And whether you are in automotive, nuclear, rail, aero, marine, we're all fishing in the same pool of engineers. So there's a big job. And when we compare ourselves to other countries and their skills levels and the amount of people they are bringing into the learning environment, there's a big job to be done there. And you may say why are you talking about skills, Rachel? But that's about competitiveness and the ability in this fragile world to adapt and change; to become agile.

Barry [00:14:08] I think you've definitely got something, though, where you're going with it, though, because I think it's more than the engineers. It's leadership skills, it's management skills. Because reshoring which, I think is a knee jerk, it's resilience. People should be saying we're going to look at putting greater resilience into our supply chain and maybe we've just got complacent over the last few years. We may plan for a global pandemic, but I imagine the majority people don't. You know, we've got Brexit coming up. How many companies have robust risk registers in around their supply chain? How many people review it monthly or even daily? And that's what hopefully the lessons learnt from Covid, from preparation for Brexit is actually to put resilience in. And I think it's the skills, you know, it's the, it's the specialist procurement that we probably just don't have or it's never been stressed before. So it's not being stressed, it's not tested. And if you're not stressing and testing something, you're not fit, are you? Not match fit and now hopefully there are the lessons we've learnt and we're going to add resilience to our supply chains, rather than we're going to reassure. We're going to look for different solutions.

Asif [00:15:37] And I think there is I think resilience is, personally a much better term, isn't it? And so, Barry, I know you've got, you've created over 23,000 play areas in nearly 60 different countries. And so let's kind of little deep dive into that topic of resilience. What would resilience look like in your supply chain of the future or if this was a fantasy football league, the fantasy supply chain? What would resilience look like to you?

Barry [00:16:04] We really strive into the future. My resilience would be I'd make everything out of dust on big printers there and then and that would be great. But then I'd need a supply of dust, though, wouldn't I? We're gonna be looking at as we grow, we're very much a, we're still an SME, we're a UK based manufacturer and we're shipping goods all over the world, like you said, to nearly 60 countries now. And that isn't the most efficient way of doing it, is it? Because I would be dividing it up or what I've got, it's a tipping point volume until I can do that, you know. And so my resilience would be to almost segment or twin the manufacturing in different places around the world with different supply chains. So then if there was an issue in one of those countries, I could, you know, double the capacity in another factory, in another region. Probably would be, it would cause a lot of pain at that moment in time, but it would give me resilience. At this moment in time, everything comes through one centre. Well, three centres in the UK. But.

Asif [00:17:16] So as an example, if you've got like a rotor moulded product that's being supplied from Germany. A strategy could be to build up a potential standby twin in Manchester or something like that, that you could do the same sort..

Barry [00:17:35] Or in Asia, yeah, there is supply in the Asian market.

Asif [00:17:39] Or an Asia. Right, OK.

Barry [00:17:40] If the Asian market went down or that factory went down for any reason, well, I'd turn on the German machine, you know, which bigger industries have, they have the luxury of having. So, you know, I'm behind that answer. You know, there's, and that's where my resilience will grow, where I've got several suppliers around the globe supplying different markets. But I'm only replicating what the norm is now for big manufacturers.

Asif [00:18:08] And Rachel, from the conversations you must have with companies, you must see on a sliding scale of one to 10, one being not resilient, 10 being super resilient. What are some of those really resilient supply chains? What do they look like? What is it that they're doing that perhaps we can all learn from?

Rachel [00:18:29] I think for the companies I'm talking with, am working with, there's the whole range of factors, one to 10, included in that as there is in in all life avenues. I think those that I would say are showing stronger resilience are those that have a mixture, are a sort of a list of words and topics. Skills, which I think we've already discussed, and that isn't just shopfloor skills, but does distinctly include the leadership and the management skills that tend to, in particularly small manufacturing companies, get forgotten or put to one side for later. I think something about culture, the company which comes out of the leadership, a

company has a culture of team working, striving together along with continuous improvement. Quite often, and when I go into companies and particularly factories and you do the factory tour and you walk around, one of the cultural things I look for is; will the workers, whatever they're doing, look you in the eye and say hello? Those, there are numbers where people don't. And I hate to say that gives me a view of culture. So leadership I've mentioned. As Barry said, I think your supply chain and your localising, if appropriate, or your globalising as appropriate, but also the partnership basis of that supply chain and therefore the communication that you invest with your supply chain and partners.

Asif [00:20:04] Can you be a bit more specific - what you mean by the partnership between?

Rachel [00:20:08] That if you are buying, let's talk about components, but it could be anything, you are just not doing that on a transaction or one off basis. That's not a supply chain relationship. That is just a transactional purchase. If you want to be developing your product, your market, your penetration of that market and hopefully upping your volumes, you need your suppliers, your partners to be coming with you. So communicating with them about the sensitivity of price, the sensitivity of timing, the sensitivity of product and quality, the need to look at innovation and work with you on designing new versions, new products, using different materials. And a really good example of that is lighter weight materials, strong materials - just different materials. And, you know, in terms of environmental. And it is very easy to see companies that are in a supply chain where they are being forced, bullied, rather than being involved in those conversations in a partnership way, in a development way, to get the best out of both sides of that partnership. So that's sort of the cultural, if we all work together we will get a better result. And even in a transactional purchasing procurement basis, those attributes still apply rather than just Googling to find I need 10 of those or a thousand of those and buying them. That isn't a long term sustainable partnership.

Asif [00:21:53] So have the right skills, have the right culture and have the right relationship. And from that sort of like try and embrace more of a strategic partnership with your suppliers as opposed to you were just there for me to buy stuff off at, you know, 50 p a unit kind of thing.

Rachel [00:22:07] Couple of other ones I'd add on to that. But whatever you are doing within both your supply chain, your partnerships, but as a business, you're adding value. Now, that would depend on what your business is. But you have to be adding value, otherwise you don't have a business. Couple of other things are really important for me is the one about diversification of your customer base. So you are not, you haven't got all your eggs in one basket. And I did a lot of work supporting the MG Rover supply chain when MG Rover closed unexpectedly and in the Midlands, there was a high percentage of manufacturing companies that were overdependent on that one customer. So that was a real shock to them. But that lesson continues to be reminded to people; don't, just because they sound wonderful and it's a large order. Yes, take it, but don't let that be your only customer and your only order, because when it stops or it fails or we have a pandemic, what else have you got? So diversification of customer and the other one that backs all of that up, which is a huge topic zone, right, is access to finance. But if you can pull all those together

with your strong leaders and management team. That's, I think that's a good base to be resilient.

Asif [00:23:34] What's great about listening to that description of resilience - we're actually defining lots today on this call, aren't we, sort of - is that we haven't mentioned technology once yet, which I'm really very excited about, because it seems to be it's more about the people and the culture. And so, again, you know, we do hear about technology, it's really important to the future of supply chains, and technology can automate our supply chain relationships. But I guess there's a balance of you could go too far down that route and maybe technology might help us stay in the transactional world. And we're not really thinking about strategic partnership because we just for some reason feel like, you know, the tech will sort it out, I don't need to invest in the relationship with my partners. What have you- have you seen examples where the tech has being taken too far and it's kind of like killed the relationship? But, Barry, from your point of view. What's your view of them?

Barry [00:24:26] I don't think tech has being taken too far. I think when we're not utilising tech as much as we should. But, you know, let's go back to basics in that we don't want to digitise or technophy the wrong process. You know, the process has got to be right. So, if you're going to, I'm Rachel, I think it's all about the culture. You know, it's a collaborative culture. And I think there's, maybe that is one of the things around our productivity puzzle in the U.K. because of our supply chain relationship. We're very much a general comment, but we can be in the U.K. very much like I'm the customer therefore, you will do for me. You know this, whereas if you've got this collaborative approach of how we're going to work together. Alright, we can have service level agreements if we measure out if, but I'm adamant if you were to work closer together in collaboration with your key stakeholders, your key partners. As Rachel said, the partners, you suppliers, that you will be more productive. And then if in that collaborative relationship, we've got the culture right and we all know which what direction, we were both pointed in the same direction, then we introduced the tech, and we then make another quantum leap forward, because, you know, we're digitizing the correct culture and process. And that's when we'll both find gains, you know, hopefully for the supplier. You know, it's about developing your supplier as well. You know, you're talking about skills. I, 18 months ago now, I put the MD of one of our suppliers through a year's university course on, you know, advanced manufacturing and in getting more from people, because if my supplier is performing better, therefore we will perform better. And everyone thought I was nuts. They're your supplier, what you doing developing them for? You know, it's because it will help us, it's just this collaboration. I just think we get it wrong at times.

Asif [00:26:33] And it's that word comes up so often in even different conversations we had. We had a conversation on the podcast this morning about bringing education and industry together to kind of take a look at the skills gap, to your point, Rachel. And collaboration came out as, you know, it's not about the tech it's not about, it's just about the people and our attitude. And that's what's really kind of heartening to me in terms of we have the power and control to fix this problem. We're not beholden to a wonderful piece of technology. It's all down to us as human beings. And that's great. But why is it so hard? Rachel, the conversations you've had with people, why do people struggle with

collaboration so much? You know, on the face of it, logically, it seems a no brainer. But when it comes down to the practicalities of it, we do tend to struggle, I think.

Rachel [00:27:24] I think it's some of the key elements of relationship building and trust and lots of small companies that maybe don't have the experience of both business and leadership find that hard. And particularly if they've had a bad or a poor experience, that makes it even harder for them to trust people. And I can, I see MDs who don't necessary trust their own management teams. If you're an owner-managed business and it's your house, your kids, your car, your family, trust is a hard thing. Not just to earn, but to keep. It's a hard area. It's about communication, along with, and I always, any MDs I work with, I say, but you need not just to listen to what people are telling you, you have to invest the time to go away and research it so that you can validate and verify. If somebody's saying you "the demand for this product is going to be ten thousand a year" - is that just because they're trying to get you to gear up and they want you to reduce the price? Or is that genuine and is there potential? But it's beholden on you to go and do your own research. And there's lots of examples where those volumes and that forecast has just been an incentive. It's a hard one. It takes time. It's based on experiences, your skills, your learning, your understanding. And also, interestingly, the use of technology. Because that helps you explore. It helps you create some relationships that maybe you wouldn't have, you know, even if they're online ones. But I also think the pandemic has shown us, and we're all sitting doing Google all day, but the use of technology can add value into your business operations. But doesn't really remove the need for people to people contact.

Asif [00:29:28] Do you mean technology like sort of Google Hangouts, Zoom, Teams that that kind of, you know, collaborative tech or are you looking at, are you referring to a specific tech?

Rachel [00:29:36] No, I'm talking about the collaborative tech, but also the whole Industry 4.0, the digitisation in the manufacturing world as well, that requires more investment in by companies and time to understand. It's not about automating everything. And I think there is still a fear that people think when we talk about digitalisation or technology that's going to automate everything and remove jobs.

Asif [00:30:05] Yeah.

Rachel [00:30:05] The reality is it will enhance jobs, make the hard jobs easier to do and upskills people, and therefore their potential to earn will be increased. But that has to be communicated and come in a trustful environment that we're not trying to remove people. It's a really hard, it's part of that cultural scenario. It's a hard one to describe.

Asif [00:30:30] It feels like, you know, we've got a lack of clarity of what supply chains really are. You know, it's not just a widget. A lack of clarity what good looks like in terms of resilience. I mean, are there any benchmarks out there that, you know, if I'm a manufacturer, like a 250 person size company, I think I need to go see what good looks like. Where are those examples that I could go and have a look at? I mean, do we have any. And if not, what on earth do we need to do to get them?

Rachel [00:30:57] I think, and I'm sure Barry will know different ones, but I think for every company in their local area, there will be examples of good. It will depend on your sector and what you're looking for good in. Because a company may be good in its manufacturing process or its procurement process or its people process, but that doesn't make everything they do good. There's lots of ways you can access those. The easiest one is via trade associations where you can meet other people. Quite often they'll open up their premises and you know, what we call industrial tourism. So you can look, go see. And usually good companies are proud and want to do that because they want to share. But trade organisations, chambers of commerce, those sorts of people are. If you were looking for access to that sort of activities where I would recommend you go.

Asif [00:31:58] And Barry, how about you? So from what you've described, you're already doing some kind of like that very sort of forward-thinking sort of things. Where do you go to get kind of your inspiration of what good looks like and you know, what might be possible for you?

Barry [00:32:10] Exactly what Rachel just said. It's industrial tourism. You know, I am a big believer in, you get out what you give is. For example, what played out, we call ourselves tourists, tourist guides. We should charge for the amount of tours we do around Playdale. But, what that means is we get invited to other places as well. You know, we do it for a reason. We learn an awful lot from it. And it's this trying to break the barriers down of collaboration, because I don't believe there is a benchmark on what, you know, the good guide. I think the more you get out, the more you know, you increase your knowledge and a good leader should be able to actively listen and have a good set of eyes on them. And I must visit or spend time now on webinars or something like that. And I'll write one thing down from every hour that's invested, you know, and they'll get that back, you know, 100 times, hopefully over the next few years. And it's time well invested. And I think if we are to get anything out of the crisis or crises that come in, you know, we've got the pandemic and hot on the heels of that, or mixed in the middle of it is gonna be Brexit. And we've got some momentum going of people actually asking for help. You know, then the numbers of people attending events online are greater, I believe, than what we were getting people to go to drive a few hours to go and look round a business. You know, it's made people hungry for answers. So let's not waste the crisis and keep that momentum going. And hopefully that will bring more collaboration, that will bring more benchmarking or competition, which then will it, you know, people will increase their game and productivity will increase and competitiveness will increase and we'll go on there. But, you know, we've made our biggest improvements at Playdale over the last 15 years is by networking. By getting out and it's go and seeing what other people do without doubt, and then returning the favour as often as we can.

Asif [00:34:22] And that brings me very nicely into this last part of the discussion that I wanted to have you both is - that imagined the entire community of SME manufacturers in the UK is listening to us talk, or listening to the two of you talk, I should say - if there was one, two or three maximum three practical bits of advice you could give them to start

adding resilience in the way that we've described to their existing supply chains. What would they be? Rachel, let's start with you.

Rachel [00:35:03] Okay. My top two would be, following on from the discussion we've just had around the networking, join your chamber or a trade association or even if it's an academic organisation, seek one out, seek some references, usually they'll let you go visit as a guest. There are a large number of those networking organisations that you can look at - join. You have to invest time and effort. But you will, as Barry said, you will learn from them over a period of time that will help you implement and increase your strategic thinking. So, take benefit of that networking before the industrial tourism. But that's the nice bit. The second key one, I think, is around skills and in particular young people. So in manufacturing, we have an ageing workforce with many over 50. Young people currently, we all know, are going to struggle to identify careers and get jobs. But I think it's beholden upon any company, whatever their size, in terms of thinking about the future and young people and their skills, both for the community, but also for the longevity of their business. And I think the other third one I would add in is innovation. Innovation for everybody is different. It could be looking at new customers if that's new. So that's innovation for your company. It could be looking at your processes; updating them; adopting technology - that is innovation for that company. Or it could be being purely inventive and coming up with new products, new processes. So innovation in whatever way is appropriate for your company. To those would be, my top three.

Asif [00:36:54] Fantastic. So network, invest the time to network and connect, and really think about skills and bringing young people into the organisation and then expand your view of innovation to products, processes, business models. It's not just a laser focussed view of it. Great sort of three tips there from you, Rachel. Barry, same question to you. What would be the advice, the practical advice you would give to any of your peers or colleagues or customers who are maybe in a similar business to you?

[00:37:23] Similar business or in a better position or a worse position, I'd say you've got to change. Because if you think you were up to date yesterday, you're already out of date today. All right. And if you change slower than the world around you, you may be changing but you're already going backwards. And that means your processes that you're doing. So you've got to get change in, you know, this continuous improvement culture. That is how you're gonna build your resilience because otherwise, you're going to start going backwards. So change and then it's don't bury your head and hope the problem is going to go away, hit those problems head-on. And that's usually around, like Rachel was saying, is building knowledge. And investing time in training and developing individuals, and that will keep your culture current. And then my third one, which I went on about earlier, was get out there. We talk about management by walking around, well management by going visiting, you know, like let's bring let's pinch with pride. Let's not reinvent the wheel. Not, that's not innovation. Reinventing someone's already doing. Just let's go and borrow the idea. You know, and then we'll have more time to change bigger things.

Asif [00:38:45] So get comfortable with change and sort of build a culture of change in your company, develop the people around you to try and solve the problems yourself and bury



your head. But perhaps to invest in the people around you and develop a team that can solve those problems with you and get out there and talk to as many people as possible. Network. OK. So, wow, there we have it. So supply chains clearly much more complex than just buying widgets off somebody from a different country. It seems to involve suppliers to services, the support of those services. It sounds like it's much more of a community. Maybe that's our first thing that we need to think about. Perhaps if we start thinking of supply chains as a community, not a linear process, but more of a holistic community and accept the fact that right now a lot of people in the communities that we work with are unknown. So perhaps what we should be bringing to that is the right leadership skills, just business leadership skills, design and manufacturing skills, other skills. Building the right culture, as we've heard a lot about on this session today. Culture is so important, it just keeps coming to the top of almost every conversation we have. And investing time in turning your transactional relationship with unknown, unseen faces into more known relationships and strategic partnerships. So I hope that some of the things that we've discussed on this podcast today have inspired you to go out there and try some of the things that you've heard Rachel and Barry talk about and start adding some of that resilience into your business. So all I'd like to do now is give a big thanks to Rachel and Barry. So thank you very much both for being a guest on this really fascinating conversation today.

Barry [00:40:34] Thank you.

Rachel [00:40:35] It's a pleasure.

[00:40:36] Thanks very much. See you next time.