

The Future of Supply Chain, Episode 137: From Data to Decarbonization: How Product Carbon Footprints Are Transforming Supply Chains

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So there are still some barriers today, but in 10 years, we'll have solved this and probably as I mentioned also in this podcast, we try to influence our industry so that there is one common language when it comes to calculating carbon emission. I hope there will be an industry-wide standards that everybody will follow, like a more precise way of calculating than just ISO is requesting right now.

Richard: Welcome to the Future of Supply Chain, a podcast where we discuss hot topics, best practices, and the latest innovations in [00:01:00] today's global business. I'm Richard Howells and I'm joined as ever by my wonderful co-host Sin.

Sin: Thank you, Richard. Hello everyone. My name is Sin To and in today's episode we are once again placing the focus on sustainability because our guest is the world leading provider of carbide solution and has set itself the goal of taking a pioneering role in the field of ESG by 2025 through initiatives such as net zero targets and comprehensive recycling. So, a very warm welcome to our podcast guest, Philippe Strebler and Philippe, please can you introduce yourself to our listeners?

Philippe: Yes. Thank you. So we lcome to everyone. My name is Philippe Strebler, as you say. So I'm 15 years working for the company, Ceratizit based in Luxembourg. And I had different positions across the group starting with technical R&D positions. And I recently moved to head of sustainability for [00:02:00] Ceratizit group.

Sin: Perfect, then you're the right person to talk to today. The global supply chains are more complex and more vulnerable to disruptions today and more

heavily regulated than ever before. And while we have traditionally focused on efficiency and cost one issue inevitably comes into focus that is not only ethically required, but also become a crucial strategic imperative that is sustainability in the supply chain.

And when we talk about sustainability, one term is heard more frequently these days, it's product carbon footprint. So to have a better understanding of it, what does the term product carbon footprint means, Philippe?

Philippe: Yes. Okay. So indeed sustainability is not only about product carbon footprint, but today we decided to focus about PCF. So as we just said, so, PCF stands for product carbon footprint. And that means that for a [00:03:00] product we calculate the attached CO2 emission.

So basically in our world, we would count the total CO2 emission per kilogram of product, we are selling from raw material we use for it to finished products. So, in theory this includes scope one, two, and upstream scope three.

Still, a lot of companies are only focusing on scope one and two, but we are counting with also scope three in Ceratizit, and there's a standard way to calculate CO2 emission, which is dictated by ISO 14,067. Current version in place is 2019. And of course you need to comply with this ISO standard when you want to communicate your CO2 emission.

So basically what we do is first we calculate our [00:04:00] corporate carbon footprint. That means all the emissions that our group is creating. And then we allocate those emissions to the different products we are selling.

So in the end you make it work so that the total corporate carbon footprint we have to the sum of the product carbon footprint of all product we're selling .

Richard: Before we get into the details on carbon footprint we're seeing pressures from all angles to be more sustainable, whether its regulatory bodies, investors in companies, the customers that you're selling to, and even the employees. So from your perspective, what are the driving factors for tracking a product and company's carbon footprint?

Philippe: So basically what we see is that our customers, they demand transparency. This is what they are asking from us. And product carbon footprint [00:05:00] is part of the transparent element they want to have from us. Of course corporates like we or also our customers they have to comply with

corporate responsibility guidelines. And we need, and our customer needs to requires with regulations in place.

So in our case, so which is carbide industries, this is where we play, we decided to lead on this topic of sustainability and also carbon emission. And basically what we offer is transparency, which helps our customer to take better decisions. So they can compare different products. Some are better than others, and they can decide to purchase one or the other.

Sin: So while you mentioned carbon emissions and transparency, we all hear companies claiming to know that product or [00:06:00] to know product's carbon footprint. But when you look closer, it's actually not that simple. And when we talk about CO2 in products, how realistic is it to measure the footprint from start to finish in the whole product cycle? And where exactly do you see the challenges for companies or where do you usually run into trouble to?

Philippe: Yes. You are saying it's not that simple. I would say in some cases it's extremely difficult. The reason is, of course the supply chains in this modern world are sometimes really complex and you usually don't get all data. For most of our customers, which are building some equipments, some tools which are very complex and contains like thousands of different parts, it's extremely complex for them to have value or product carbon footprint for all the [00:07:00] components they are purchasing, okay. So, this is really really difficult in some cases. It's hard in the end to capture accurately the scope 3 emissions for them.

We believe, and this is what we are actively doing with our customers but we also with regulatory institutions and even with peers that we need standardization in product carbon footprint calculation.

And so this is why I mentioned earlier that an ISO standard has been developed and what we did the last, let's say five years. We did use this ISO to develop a very precise calculation methodology which is valid for our industry. Basically we are taking the emissions from raw material, which is extremely important for us, but also from finishing level. And we take that, enter it into a quite complex [00:08:00] calculation, and then we get a value. Our ambition is to make this becoming a standard for the entire industry so that our customers in the end, they can compare apple with apple.

Richard: I had like to focus on the scope three emissions because you mentioned that many companies are focusing on scope one and two, which is within their organization, but scope three emissions are the most challenging

because as you mentioned. You could have thousands of parts. You deal with a multi-tiered supply chain, so you may need to go down two or three levels, if not more of suppliers and contract manufacturers. So, but it's estimated that in some companies, those scope three emissions could represent up to 80% or more of a company's total carbon footprint.

So how do you work with and encourage suppliers and contract manufacturers and other partners to share their carbon footprint, and what's the role of a business system and [00:09:00] business networks in enabling that?

Philippe: So, in our case for our own carbon footprints, we have the chance that we have an integrated supply chain indeed, like our raw material supplier is just our sister company. So we have a very good insight on how much contains each of our products. This is probably easier for us than it's for our customers in some cases. But we take this as an advantage and try to bring this to our customers.

So this is our duty, let's say. And what we do is we developed a scaling system, which allows our customer to compare different products. We came with a very, let's say simple way of classifying our product with like an alphabetical classification and a gray scale classification that like, let's say every customer can understand.

And the goal is understanding [00:10:00] of product carbon footprints for our customers and enable them to take better decisions. But of course it has been quite an effort which we for most of it already spent. And we had to convince our customers that our system is a fair rating of all our products, and this is what we did.

We published white papers to show our customers how we did this calculation and scaling of different products. But also the ultimate goal is also to inspire them. We would like to inspire them that they are also running similar kind of classifying different products at their turn to enable their customer to take better decisions. So this is really our aim at Ceratizit.

Sin: Hey Philippe, you just spoke about classification of certain products or materials. Is it something that you also [00:11:00] give kind of advice to your customers or other companies that you work with that they have the same category or categorization like you?

Philippe: Yes. We trying to. We are spending efforts on that recently, so in 24 already. And we, let's say we published our way of calculating our carbon

footprint emissions, so corporate carbon footprint, and then product carbon footprint in order to let's say inspire the industry.

And I have to say that VDMA members responded very well to that. The industry is embracing the way we have developed our calculation and we hope to make it the next standard for calculation of CO2 emissions in the carbide industry.

Sin: Philippe, you just mentioned the acronym, VDMA, so it's the German engineering [00:12:00] federation group or association. Do you mind to explain what they actually do and what you are doing with them together?

Philippe: VDMA it's a German engineering federation, which is an association of different industrial companies which are collaborating together to develop standards and discuss many different topics. And in the case of carbon footprint, so company carbon footprint And product carbon footprint.

So however in order to run the calculation, so, as of today, it's not yet fully automatic and still requires some manual batch calculations. And at the moment we are looking to automatize it. So we are working with different companies in order to really run this quite heavy process of calculation fully automatic into our ERP system. So there's still a way to go even if everything is already consolidated in terms of [00:13:00] data.

Richard: It's great to hear that you already have the data available in your ERP and business systems, but the challenge that we're seeing all of the time is that regulations are still evolving and maturing and changing. So you might have different regulations region by region or country by country, or in the US even state by state.

So how do the business systems need to evolve, not only just having the data, but keeping up with that rate of change? How do business systems need to evolve to enable the tracking of emissions and carbon accounting? When we talk about an ERP or a supply chain, or business systems in general.

Philippe: So, big picture wise we have our own targets, which are coming from overall global regulations. And by the way, those targets, so, near and long-term targets have been recently validated by SBTI. We are [00:14:00] complying with , let's say global regulations.

And then, so, of course, as I explained before our really goal is to break down those targets into concrete measures. So this is what we do internally, which at

the end have a positive impact on our product carbon footprint. And we want to bring this impact to our customers, and we propose them and we encourage them to use our data into their scope three.

This is how we connect the dots with customers. And of course, this helps us to comply with our sustainability targets, but also this helps our customers and partners to set their targets, but also comply with their target.

Of course on the long run, it also enable us to differentiate if I could say less of our competitors, they are there yet. [00:15:00] And there's not a lot of them, which have today a very precise product carbon footprint for their products. And we try to differentiate with our customers thanks to this and to make the right choices.

Sin: But that also means that the companies need to make kind of strategy shift or something like this?

Philippe: Some of them, yes, of course. Some are more advanced than we are, some are less advanced. The thing which is sure is we are trying to inspire them. As soon as we can share our experience and share our methodology, how we tackle the topic internally we try to help them because we want them to move as well because we need them as well. If we want to reach our sustainability targets.

Richard: That's right. One, what your suppliers scope one and scope two emissions are your scope three emissions. So they need to track well. Yeah. And I would imagine [00:16:00] that a lot of your selection criteria for suppliers as you're looking for new suppliers would include the commitment to provide that data as part of the relationship.

Philippe: Yes, of course. In our case with our integrated supply chain for raw material, let's say we're fine. But what we see is some of our customers and probably especially bigger western companies which are target customers for us, of course yes, they are willing to get some transparency. And we are able to provide this transparency and carbon footprint emission which is a great advantage for sure.

Sin: Phillippe how can product carbon accounting enable companies to keeping up with governmental regulations, customer demands, and also corporate goals?

Philippe: Actually we set us ourselves [00:17:00] very ambitious targets. This is what we did and by the way which have been approved by SBTI recently.

And what we see now that we are in this sustainability journey for long years already we see that we need even more because we are quite already advanced into this, so we need more circularity in our supply chain.

And this is how sustainability and let's say our carbon footprint strategy helps us to comply with regulation and with governmental regulation. We in order to comply with regulation, we need to take stronger and stronger measures. And we aim in some years to reach almost a hundred percent of circularity, which means almost a hundred percent of our raw material will come from reprocessed carbide that we are collecting once it's [00:18:00] used at customer and that we are reprocessing into fresh raw material and reusing in our supply chain. And this is where this very good circle between governmental regulations and the true impact in our business with customers.

Richard: Phillippe, we're coming to the end of the podcast, it's been really interesting for me and you've started to touch on things like circularity and reuse as the future. But I want you to imagine 10 years out or even more, what is the perfect CO2 optimized supply chain look like? So what's the future of supply chain from a sustainability perspective?

Philippe: The future of supply chain in our industry is really to have a fully transparent, we call it cradle to gate carbon data for every product. So there are still some gaps where it's more complex to calculate some products.

So [00:19:00] in 10 years from now, if you are asking me, I would tell you, okay, all the gaps are tackled and we are the fully transparent supply chain. As I explained before, we will also have this effect of circularity in our industry by then in 10 years. So let me project myself.

We'll have, let's say 99% of circularity. So 99% of products we are selling will be based on raw material, which has been reprocessed and reinjected into our supply chain. So this is technically feasible. There are still some bridges to build between customer and us in terms of how we can collect the used carbide to make it fresh carbide. So there are still some barriers today, but in 10 years, Richard, we'll have solved this.

And probably as I mentioned also in this podcast, we try to [00:20:00] influence our industry so that there is one common language when it comes to calculating carbon emission. So in 10 years, I hope there will be an industry-wide standards that everybody will follow, like a more precise way of calculating than just ISO is requesting right now. Or maybe it could be a EU wide standard, maybe a

global wide standout for calculation for that everybody is speaking the same language. So this is what I see in 10 years and we are excited for it in Ceratizit.

Richard: Philippe, thanks for a great conversation. As I said before, this has been really interesting. It's great to see you and your company leading the way when it comes to reducing carbon emissions and tracking and monitoring carbon emissions. So I'm sure that our listeners will be, would've been very interested in the conversation.

Philippe: Thank you very much for inviting me.

Richard: And I'd love to have you back. And just for everyone listening, please mark us as a favorite you can [00:21:00] get regular updates and information about future episodes, but until next time, from Philippe, Sin and I, thanks for discussing the future of Supply Chain.