

The Future of Supply Chain Podcast

Episode 1: 2023 Predictions with David Vallejo

Richard Howells: Welcome to the Future of Supply Chain Podcast from SAP. My name's Richard Howells, and I'm the Vice President for Thought Leadership for SAP's ERP, Finance, and Supply Chain solutions. And I'm joined by my co-host Nicole Smythe. Nicole, please introduce yourself.

Nicole Smythe: Hi everyone. I'm Nicole Smythe, and I'm a blogger, marketer, and now podcaster in the supply chain area here at SAP. So today we're joined by our guest, supply chain expert, David Vallejo. So welcome David. Thanks so much for joining us today, and it's really great to have you on. So if you could just take a moment to introduce yourself to our listeners, give a little insight into your role now, and how you've gotten to where you are.

David Vallejo: Absolutely. And thanks so much for having me. So, Dave Vallejo, I'm the Vice President and Global Head for our Go-To-Market for Supply Chain Planning, Manufacturing, as well as Logistics. And we are seeing great synergies of looking at these different disciplines within supply chain together. So when I say Go-To-Market Solution Management, we're really looking at sort of the strategy, the telescope, right, of where we're going in the future and working closely with our colleagues in product and innovation to develop the products to support the businesses, not just what they need today, but what they may need in the future.

So I'm very happy to join this podcast. What brought me actually to SAP was that SAP was really developing supply chain software, from scratch, in the cloud and rethinking how processes need to evolve for different, you know, companies and different industries. And I found that extremely fascinating. I've been in supply chain essentially all my career, but putting sort of the horsepower of SAP behind business innovation was really intriguing to me. So I'm really excited to talk about supply chain.

Nicole Smythe: Awesome. Well, you're on the right spot for it. So, as you can tell from the title of our podcast, you know, we're talking about the future of supply chain and you've been working in the industry for so many years now, like you said. So now as we move into 2023, what are you seeing as the top priorities for supply chain executives?

David Vallejo: Yeah. So, I mean, there's no way to ignore what happened in the last two or three years, of course. And some may say we are now in a post-pandemic world or post-disruption world, right? There were many, many supply chain disruptions that we had over the last two or three years. And that also compressed, I think, the level of awareness and also the level of focus for companies to really rethink the way they are running their supply chains. They've been focusing a lot on firefighting and really reacting.

For example, to you know, transportation shortages, all of a sudden, containers were short. You know, truckers were not available to actually move those containers. And all of a sudden, we had to respond to this, and how do we still get the goods to the consumer? And, now that we're coming essentially out of this, there's sort of a light at the end of the tunnel. I think that most are seeing maybe we're, you know, can avoid a major recession.

Inflation is still a topic. But it's not as severe as we have perhaps predicted a few months ago. Energy prices are flattening out a little bit. I see that certainly here in California at the fuel pump, where I'm very happy that it's not like \$7.50 anymore, right? It's closer to \$4.00.

So, I think there's this glimmer of hope that we're coming out of this now focusing a lot more on being proactive because disruptions will continue to happen, and they will continue to happen also going into next year. But now companies, I think, have more breathing room to actually rethink some of the supply chain approaches, to take out risk of the supply chain and reduce the impact of those disruptions. And really moving more into a risk-resilient supply chain, being more proactive. And, I see a lot of companies now looking at different approaches and also investing into digital technologies, in case they haven't done so before. And I think that will be a big priority going into next year.

Richard Howells: It's interesting, David, because I was reading a report recently from the UK and the word of the year in the UK was voted as perma-crisis, which means that you are always in some sort of crisis. And having that risk resiliency to be able to address whatever is next, whatever comes up next, is going to be critical moving forward.

David Vallejo: Absolutely. And this perma-crisis, it's an interesting term. So, I mean, the first thing that companies have already done, but now doing more and more, is actually looking at the structural risks that they have in their supply chain. Because you cannot predict where and how the next disruption or event will come about.

I mean, it was completely unexpected, when was it? Two years ago... Texas was all of a sudden frozen. So, all of a sudden, some suppliers were calling force majeure and they couldn't produce anymore. All of a sudden, a major bridge between Canada and the U.S., which is a major transportation way, was blocked by some strike of truckers. Who had predicted that? And, so you don't know where the next level of disruption will come. So, the first thing you need to understand is the structure of your supply chain, not just your own manufacturing facilities or just maybe your direct suppliers, or transportation providers, but more also upstream in the supply chain. Because a lot of companies were caught off guard that a disruption was actually hitting them in tier two, tier three in their supply chain. So, I think the first step is understanding that, and we are looking at technology to take in, structural, logistical risk information to actually create an awareness. It's sort of the diagnostic of the structure of your supply chain, where you then can proactively put in place, like mitigation plans. What if something would happen in this location, then, would I be able to rebalance? And, so, resiliency is a lot about being prepared, and being prepared requires that structural knowledge.

And then the other aspect is that consumer have also changed. We're thinking a lot about just risk from a supply perspective - will I be able to produce and transport? But consumer demand has also changed. And so there is also a trend for companies to look at digital technologies to take data from today - influencing factors, consumer behavior that's happening today into their forecasting environment, to forecast better the demand, and not just look at the shipment history. What consumers have done two years ago, one year ago, is maybe not how they will be demanding products in the future. They will buy it perhaps, you know, from hundred percent online, maybe they want to go back to the store, right? So there, there will be changes where companies will also look at the demand planning, predicting, also the consumer behavior in a much more prudent fashion.

Nicole Smythe: That's great. Thank you. And I completely agree, especially when you speak about resiliency, I think there's so many things that can come to mind with that, and there's so many different ways it can go. But speaking more on the risk resiliency with trying to bounce back from the pandemic but trying to predict what could come in the future - could you drill down a little bit even more into risk resiliency and what that means to you? I know you already explained what it looks like, but giving some customer examples because I think that is such a hot topic in our industry, and just in the world, in general.

David Vallejo: Yeah, no, absolutely. As I said, the first layer is sort of, I call this, the awareness layer, right? You cannot be risk resilient if you don't know what could pose a potential risk. You can't be prepared for what you don't know. And there, what is very important is to leverage an ecosystem. And you know, at SAP, we've done huge investments of what we call a Business Network. Having, you know, being digitally connected, right? A lot of companies think about like onshoring to reduce the risk. I'm calling this the digital onshoring, being very close to your ecosystem in a digital way to understand if there is a potential risk that is developing.

For example, in the automotive industry, one very big element in building a car is the wire harness as it's a huge very foundational, sort of the arteries that connect everything in the car. And as we know, a car is more like a computer on wheels, so everything is wired, right? And those wire harnesses actually were, and are, still produced in Western Ukraine. And a lot of these companies actually we're not really aware of this, right? Because it's further upstream where there's a supplier that goes into, you know, the powertrain and it, it's sort of a multi-tier, vertically integrated supply chain. So, now, it's very important to stay in very close contact. They're still okay, they're on the western side of Ukraine, right? So not hit by very active war activities. But you have to be constantly in contact. So, this is where a Business Network can help, and a Business Network can help them to, essentially, react immediately, also provide help. A lot of times the brand owner, the O.E.M., is the large company that has funds actually to help a supplier who gets into a crisis. Because if that one small supplier has a problem, guess what? You stop shipping. And you can only help if you know that there is a problem. So, leveraging real-time data, leveraging a Business Network is essential for this awareness layer.

And then the second layer is using intelligence, taking that awareness to use modern technology, for example, like artificial intelligence, that can help detecting patterns. Detecting patterns of, here's a trend of, for example, transportation lead times are getting ever so slightly longer. Well, maybe there is a trend. Maybe there's a trend of continuous delays. Maybe there's a trend of a capacity problem of a supplier. Maybe there's a trend of a transportation issue.

And I give you another example - I talked to one of our customers, they're called Blue Diamond Grow. They're actually one of the major companies that grow and sell almonds, that you can, you know, buy in like a trail mix. And their business was actually going very well during Covid because a lot of people were going out hiking, and when they go out hiking, they want to buy some nuts. But guess what? A lot of, all of the almonds are actually predominantly coming from California. They're grown on the West Coast of the United States, but I think more than 60% of the consumers are sitting on the East Coast. So, you have a huge transportation across the United States. And initially we're all doing this by trucks, by scheduling, you know, moving pallets of almonds with trucks during the pandemic. But there was a trucker shortage, so all of a sudden, it wasn't actually that possible to get the trucks across the United States. So, they put everything back on rail, which of course, also from a sustainability perspective,

which we're hopefully coming to, is a much better way to do. And so they were staying very close to this, how much volume am I pushing with trucks? How much am I putting with rail? But, then all of a sudden, there was a rail strike looming. Right? So, this is the real-time aspect. You're waking up in the morning, you're reading the news, and, all of a sudden, you have to change your strategy.

So, now guess what? You're leveraging our solutions with Integrated Business Planning, Transportation Management, to actually be able to switch much faster, making these decisions much faster. So, it's not a very big structural strategy pivoting away from something you've done before, but you can pivot any time. And I think this is something that will be, very, very important.

And then, also, this sort of on-demand supply chain, I think could be a good term to be used and moving really from just-in-time, with a very rigid structure of the supply chain, to like a just-in-case. I have multimodal transportation already in place. I can find essentially freight for waters very, very quickly to still get my goods over on time because I don't know if there is another hurricane coming. I don't know if there is going to be a strike. I don't know if, you know, in certain parts of the world, I have an earthquake. We just had a major earthquake again here in California, 6.5, up on the coast. So, we don't know. You cannot control this, right?

And this is where some of the technology that we're also investing in and helping customers with can dramatically help. So, my prediction for next year is enterprises will now turn to being better prepared because the pain that they have suffered in the last two or three years. I've talked to some chief supply chain officers that said the biggest risk that they have is actually turnover of their personnel because they've been in war rooms, they've been constantly fighting off the next crisis, right? The semiconductor shortage, it was just going on and on and on and now I think this investment into being proactive will be probably the biggest trend going into next year.

Richard Howells: I love that simple term, David, of being better prepared, of having that visibility to know that there's a problem or know that there's an opportunity. Having the tools to be able to re-plan and respond to that situation, and then having the processes that are adaptable to be able to actually make those changes. Because there's no point knowing that you've got a problem if you can't do anything about it.

David Vallejo: Right.

Richard Howells: You mentioned during that as well that we hope we talked about sustainability a little bit. So, in my opinion, if resiliency has been the mantra for supply chains for the past two years, sustainability is up there with it moving forward - both sustainability and risk resiliency become equally important. But we've seen lots of companies with sustainability goals and mission statements, but they're finding it difficult to actually execute on those sustainability goals, and to monitor and measure those sustainability goals. And supply chain's right in the middle of that. So what are you seeing from sustainability perspective in supply chain?

David Vallejo: Yeah, so I mean, first of all, I fully agree, right? So, I mean, every leading enterprise has a sustainability mission and there's a reason for it. Like BlackRock, right? Leading assets management firm has put their firms and their portfolio on notice if they don't have a strategy that is environmentally sound, that has great social governance, transparency, right? So, this isn't just about greenwashing a message, like some may say. This is actually very, very real. And it also means hard dollars, right?

There is a changing consumer group, the new generation. They've actually made a study that, you know, 50 to 70% of those are willing actually to pay a premium for greener products. And that requires transparency also where these products are coming from. And, you know, you have a legislation that is now mandating that - like in Germany we have the famous Sustainability Supply Chain Act. In Germany, it's called, Lieferkettensorgfaltspflichtengesetz (LkSG), I'm very fortunate to be able to say that word. It is the consumer behavior demanding greener products, demanding transparency. You have leading consumer brands now also posting what they call the 'Product Stories' - where does this product come from? Has it been locally sourced, or does it come from all over the planet? Who touched this product? Am I sure that there was no child labor involved? Does it come from sustainable resources? And you have companies actually looking at this and being very, very successful because there is a benefit. If you are more sustainable, then you are reducing the amount of resources that are needed, and with that, oftentimes, actually also reduce cost, believe it or not.

I'll give you an example - Costco, for example, looked at the packaging of eggs. And moved essentially, away from the regular packaging and moved towards, you know, a hundred percent recycled packaging. So it's, a hundred percent of P&T water bottles that got recycled and moved into the packaging of eggs and it's actually 40% lighter than pulp-cart cartons. And you get now 50% more eggs fitting on a truck, right? So, this whole investigation that started with let's be greener, let's be sustainable, can be combined with very hard-dollar business goals.

So, I think a non-green supply chain is often times is a lazy supply chain. If you are just lazy, you are polluting the environment, you just go with the old way of doing it, and oftentimes these initiatives actually yield something that is good for the environment, good for the business, and good for the consumer.

So, there's absolutely, also, digital transformation that has to go with it. The Business Network is an important component of that - understanding who is in my ecosystem, exchanging sustainability data to create that transparency. And there's a big push in innovation, also in standardization, certification. This law that we're enacting in Germany, for example, is all about we need to have some standards - not everybody can just go their own way and there's different shades of green, we have to agree on different standards, right? Just like energy consumption standards - how can I rate the energy consumption of one product over the other? There are standards on how to do this. So, I think digital technology can help to create that transparency, to create, to add, essentially that additional currency into your supply chain environment, next to just volume, cost, revenue. To also have, for example, the carbon footprint, to have social justice and transparency, all essentially coming together. And also plan that into the future.

So, we've included sustainability footprint, also, into a forward-looking business plan. So we've included that into our Integrated Business Planning environment that dramatically helps, then, companies to not just see how were we performing in the past, but how are we projecting to perform in the future? And that also helps then with optimizing resources in the future, right? We should not send a truck that is half empty. Nobody wants to sit in traffic behind a truck that is, you know, has one pallet in there. I want to make sure this is full and is fully utilized. So, these are some of the approaches where software can dramatically help optimizing, creating that transparency, and helping companies actually advance their sustainability agenda with not just a message on their webpage, but with more sustainable product design, more sustainable tracking, and more sustainable planning, and more sustainable execution. And

I think companies that are doing that will be the companies of the future and companies that are not doing that, I think we will stop seeing in 10 years from now. That is my prediction.

Richard Howells: I fully agree. I love the way you described it at the end. Sustainability can't be an afterthought, it's got to be embedded in all of your processes of how you design products, how you manufacture products, and how you move products, and how they're actually used.

Nicole Smythe: I actually just recently read a study, it was done by First Insight and the Baker Retailing Center at the Wharton School of Business at UPenn. And it was more geared towards retail, you know, clothing and other products, but it dove into Gen Z's buying habits and how sustainability was more important to them than the brand name. This generation has really been the most vocal about the health of the planet, and companies are starting to see that they can gain loyalty from this generation and maybe even new customers by, you know, having this stronger focus on sustainability.

And as you mentioned earlier, David, consumers are becoming more aware of these practices and are asking those questions: what is this made from? Where is this made? How are the working conditions of these manufacturing sites? Like you said earlier. And top executives are really seeing how this strong focus is directly correlating to these consumer buying trends.

So, as companies are utilizing different technologies to see this - you spoke about digital tech, like business networks, AI, and trend forecasting, but which technologies, specifically, do you believe will help enable these risk-resilient supply chains or sustainable supply chains moving forward? Especially for ones who are putting this at the forefront of their strategies and are predicted to become these trailblazers.

David Vallejo: Yeah, I mean, I think I talked about the Business Network because I think it's such a foundational enabler, right? Because supply chain is an ecosystem - it's not just data that sits magically in your own ERP that will help you in making all these very important decisions. A lot of the data sits outside of the four walls.

The other, I think, enabler is using more real-time data. Real-time data, also market economics, using GDP data, using weather data, traffic data. We've seen actually great results of companies using these external real-time data feeds to correlate with their own supply chain operation to actually get, sort of, an early warning system of influencing factors, right? And some of these are sometimes even surprising. Microsoft is also a big customer of our digital supply chain solution, and they were experimenting with weather data for their cloud environment. And they were taking weather data to see if there was a correlation with the consumption in their Azure Cloud and there was a strong correlation actually. And then drilling down into it, and see when there is bad weather then the Xbox gaming was going up, right? Because then the kids were playing more at home.

So, some of these data science experimentation projects then actually turn into real, business opportunities to use data actually to create better predictions and be better prepared. Right? And I think that's another aspect of resiliency.

And then the other is, in terms of data is, that we're also a very open ecosystem of partnering also with other technology providers, with partners, which is I think very, very important. So, for example, on the risk side, we're partnering with Everstream. They're focusing specifically on logistics risk data and correlating that risk data with, for example, our Logistics Business Network, correlating that with

Integrated Business Planning, helps companies actually to be much more risk aware. Going away from a deterministic supply chain where everything is based on static assumptions to have something, like risk scores, that I can use in my planning environment to see: what is my revenue at risk? What is my service at risk? Which is a whole new dimension, if you think about traditional sales and operations planning. I'm just trying to predict a volume and making sure that the resources are there. But what about the risk that it may or may not happen, on the supply side, as well as on the demand side, right? Like we're moving into the holiday season, just in the next few days, and everybody wanted to predict: will consumers have the same spending habit, like they did perhaps a year ago? Because maybe they're afraid of inflation.

So, I have to now look at sort of a low-side prediction and a high-side prediction, sort of a funnel, and that makes me better prepared to not being left with inventory, and not being left without inventory. Both of those are very toxic for a business. I always say inventory is sort of like the cholesterol - there's the good and the bad. And the good is something that you want to have because you want to be prepared to make business and sell, and the bad is that you're stuck with and you have to then mark down and sell it off, and it hits your margin.

So, some of these intelligent techniques of more range planning, probabilistic planning, I think is very important. And my prediction is companies will be doing that a lot more and going away from the classic deterministic planning. Plus, powering this with real-time data from the Business Network, as well as external data sources, and combining these, I think, will give companies an absolute edge in their supply chain; to turn this away from just a cost center that is exposed to risk to really a profit center, to something that actually powers your company, powers your brand, together with the service that you are providing.

Richard Howells: David, I can't believe this, but we've probably been talking for about over 25 minutes now, it's gone really, really quickly. Hope everyone listening agrees. So, we're obviously coming to the end of the podcast and the title of our series is The Future of Supply Chain. So, as a few closing remarks from you, could you summarize in a few sentences, what do you see the future of supply chain is?

David Vallejo: I think the future of supply chain is going away from looking at it as a linear system. Supply chain sounds like I'm moving product from point to point and is a chain. I think the future of supply chain is looking at it as a real-time ecosystem that becomes a key value driver for every product company's success. The best brands in the world are actually led by people that understand operations and supply chains very well, and have turned their brand into a powerhouse. And if you partner with SAP to drive your supply chain, you'll be also on the forefront of the digital innovation to power your supply chain.

For me, that would be probably the summary of the supply chain of the future: an ecosystem driven with real-time intelligence and turning that into essentially the engine for your brand.

Richard Howells: David, this has been a great conversation and as you know, this is our first-ever Future of Supply Chain podcast, so you've set the bar high for everyone else, so thank you for doing that. And thanks everyone for listening. Please mark the series as a favorite and you can get regular, updated information about future episodes.

But until next time, from Nicole and I, thank you for discussing the Future of Supply Chain.