

Operations Practice

Supply-chain resilience: Is there a holy grail?

Supply-chain disruptions cost the average organization 45 percent of one year's profits over the course of a decade. How can businesses manage risk and plan for a more resilient future?



In the McKinsey Operations Practice's first podcast, Sebastian Peters, senior vice president and head of logistics, planning, and digital value stream for Airbus, speaks with McKinsey's Daphne Luchtenberg and Knut Alicke on what it really means to have a risk-averse and resilient supply chain. An edited transcript of their conversation follows. Subscribe to the series on Apple Podcasts, Google Podcasts, Spotify, Stitcher, or wherever you get your podcasts.

Daphne Luchtenberg: We're here today to look at how the COVID-19 pandemic has rewritten the playbook for business and for life. It's affected everything from how we go about our day to how we work and how businesses operate. The term supply chain has become such a mainstream concept these days, considering that five years ago the average consumer paid it no mind.

Today, it's both a boardroom topic and a dinner-table conversation. Let's sketch out what has driven all this attention. I'm joined today by McKinsey's Knut Alicke and Sebastian Peters of Airbus, to talk about the future of supply-chain management and the opportunities available. Knut, tell us a bit about yourself and your role at McKinsey.

Knut Alicke: Thanks a lot, Daphne, for having me. I'm a true supply-chain enthusiast, and I've spent the past 25 years working in the field. Last year, I started to colead our work on supply-chain risk and resilience, and during the COVID-19 crisis I've helped a lot of clients master the disruption.

Daphne Luchtenberg: Can you talk about why supply chains have come so strongly into focus this year? What's driving all this attention?

Knut Alicke: If we look back, it was a function that was only recognized if something went wrong. For example, if you had a product availability problem, you'd next have a customer calling, saying, "Where's my stuff?" Then, they'd look at the supply chain and ask, "Why did you not deliver on time?" Now, in the pandemic and other supply-chain disruptions, a lot of things went wrong, and companies had to manage this massive disruption.

If you think about what happened over the past one-and-a-half years, we had a pretty good supply of food and other goods, right? So the supply chain did work, but for a lot of companies it meant struggling with in-bound logistics, their own sites, and distribution. They really needed to step up and make sure that the supply chain is flowing so we can deliver to our customers, and to your point earlier, the conversation made it to the boardroom. For example, we helped a couple of clients implement the business continuity management, and one CEO, who never talked about the supply chain before, even addressed it in his last two investor presentations.

The attention has shifted from it not only being a function that is valuable when something goes wrong but can really help us to be better. That client I mentioned, they increased their market share, because they did much better than their competition and could even sell more. And in a pandemic situation, that was an amazing result.

Daphne Luchtenberg: It does seem like we're having this conversation about supply-chain resilience, and you can't have that conversation without talking about supply-chain risk. I'd like to dig into what these two words, risk and resilience, really mean in practice. And Sebastian, you've experienced, I'm sure, your fair share of supply-chain disruptions at Airbus, even before the COVID-19 pandemic. Has the pandemic changed the way your organization views supply-chain risk and resilience?

Sebastian Peters: Our industry was one of the most affected, coming directly with the slump down in air traffic, and then the big question became: What is the right level of reduction of production and deliveries? In our case, it's a pretty complex thing, because you need really to simulate and to scatter. How do you cope with it? It's not only your internal network of factories, which you need to produce an aircraft, but it's also the ecosystem of your suppliers to anticipate, and to quickly react.

This capability was obviously not new for us. And one of the reasons we started a bigger supply

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transformation before the crisis is because we were already anticipating that we need this capability.

But the question for our supply chain remains similar: how to simulate, how to anticipate, and how to make the right decision—not only from a pure operations and supply-chain perspective but also taking into account the financial reserves of the company. Inventory, especially in our business, plays a decisive role, and it’s where you need to be cautious not to have an overrunning of inventory excess in your company.

Daphne Luchtenberg: Knut, you’re speaking to many leaders in organizations, who were trying to navigate this. What are you seeing in other industries and other organizations as they try to chart their course through these risks?

Knut Alicke: We did run a survey among supply-chain executives and wanted to understand what they did during the last one-and-a-half years and what they want to do going forward. One topic that Sebastian just mentioned was really high on the agenda. They want to have transparency, and want to be able to decide fast, and decide to do the right thing. What do we need for that? We need to invest in digital planning. Almost 80 percent of the participants said they need to improve, and to invest in digital planning to increase supply-chain visibility to make sure they have the ability to plan and to decide.

They also said they need to be more agile and plan more often. This means it’s not the monthly or quarterly planning cycles; it’s going from a monthly cycle to biweekly or even weekly cycles. What we also heard is that they need to increase resilience in terms of footprint. How do you create resilience from this? You need to increase inventory for the critical parts but also for everything. Because as Sebastian said, things can then die in inventory, and that’s not really helping your cash flow. So you need to increase the inventory for the critical stuff and you need to make sure that you are less dependent on critical suppliers; therefore, multisourcing and dual sourcing is very important. To do that, you need to invest in digital talent to be able to do the planning, understand all of the algorithms, and with this, come to a fast decision.

And the holy grail of supply-chain risk management is multitier transparency. What does that mean? It basically means that a lot of companies have visibility into their first-tier suppliers—their direct suppliers—because they have a contract with them. Often the problem is not with the first tier but with the first, fourth, and fifth tiers. And what everyone is now looking into is how to create this visibility when something is going wrong and have an early-warning system so they can do something about it. From a tech perspective, this is possible to solve today. You also need to create trust amongst the partners, and the ecosystem of the supply chain—this is still something to work on.

Daphne Luchtenberg: We see a lot of headlines, for a number of years, around the digital revolution. Time and again people are forecasting that the adoption of Industry 4.0 will accelerate all of that. Sebastian, I'd be quite interested to hear what's really happening. How are you taking advantage of some of these advanced technologies for Airbus?

Sebastian Peters: I think nowadays it's also a bit dangerous to use those kinds of buzzwords because, like Knut said, the problem is not so much that the technology is not available, the questions are always—what would you like to do better and how do you design the better way of acting? This is why I personally have a strong belief that you need to invest in having your processes clear.

We can talk about digital twins as an example. What is it? It's a mock up, for example, of your industrial system, your inventories, your industrial constraints, your assets. We believe that this simulation is where we can have a very interesting capability because you are able to have a closeness to planning, and especially in those disruptive events, it can help to answer the real question: What if?

What if consumption is now going up again soon? What is our reaction? What kind of possibilities do we have internally? And then also look at the reaction of our suppliers. This is where we need quick decisions and the capabilities to go from a simulation idea—or from different versions of simulations—to planning and then execution. A digital-twin perspective is really helping and enabling us to do better.

Daphne Luchtenberg: I'm sure that that also means that you're asking different things from your teams in terms of the skills and capabilities that they have. Can all of these skills be learned, Sebastian? Or will the shape of your teams also change? What do you anticipate will happen?

Sebastian Peters: There's obviously a shift of new skills needed. Before, the supply-chain capability was connecting the dots in the company to understand the sales perspective, as well as the production perspective because at the core of any kind of supply chain is the S&OP, sales and operations planning.

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But obviously nowadays, with the high input of digital needs, you need to understand coding. If you would like to know what's the right tool and translate it through the needed process perspective, software coding is a skill which is needed.

Knut Alicke: That is what we see in terms of the future of work in supply chain. We have the demand planner. Now in the future, we will probably have a combination of someone who knows the business very well, and then we also need to have a data scientist who is able to come up with an algorithm. But this data scientist also needs to have some kind of translator skills to understand the business. If you think about an order manager, for example, we now have someone who is architecting the part that entails robotic process automation. This means there are new roles and a lot of new skills necessary to define the future of the supply-chain planners and the future of the supply-chain organization.

Sebastian Peters: And I also still believe that enriching those skills for a successful supply-chain organization is really a kind of ambassador in translation between the two worlds—sales engineering on one end, and the production and operations world on the other. At the end,

supply chain is about the best plan for the company, and not for a specific function within the company.

Daphne Luchtenberg: That's a really great perspective, Sebastian, and sounds like a really interesting role. Also for new people coming into the industry, supply chain is getting even more interesting than it ever has been in the past. Looking at the future. Sebastian, how is Airbus going to anticipate demand spikes and dips going forward? Do you feel you're in a better place now to respond to those?

Sebastian Peters: We are confident that we already have increased our capabilities on planning. That really helped us a lot through the crisis last year. The starting point for us was a complete, new strategy within operations. In 2019, we implemented what we call a value-stream strategy combined within the value-stream organization to really make sure that we have this end-to-end view on our operations, and the necessity to try to think more toward the capabilities of a serious manufacturer. This means not investing so much in the workshop perspective but also thinking about flow principles, flow production.

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And again, to make it really successful, I strictly believe this process perspective is having it clear internally what the new process is, what it brings, and what is the added value. Then, go into the IT implementation. And that takes time to make it really sustainable. And that is our strategy, to go forth with sustainable change.

Daphne Luchtenberg: It sounds like you guys have been through a huge transformation and you're now seeing the benefits already emerge, Sebastian.

Sebastian Peters: You saw it last year, and the question was how quickly can we adapt our production rates? How can we quickly create the needed transparency to make the right decision and also to not harm the ramp-up? Now, we are all surprised positively that air traffic is coming back much quicker than some of us thought. And the value-stream approach, having an end-to-end perspective and a clear view on what is needed to anticipate the ramp-up and then mitigate, is really helping us.

When we talked before about supply-chain resilience, that is also now at stake in the ramp-up. So how can you ensure proactively production increases, not only internally but especially in our huge ecosystem, with thousands of tier-one suppliers, which need this visibility to know what they should prepare for? It's also important to anticipate where we have problems and where we have constraints to be aware of them now and not when we are already ramping up.

Daphne Luchtenberg: Knut, Airbus has been through a huge transformation, and the practice of supply chain has really matured, also through necessity as we've had to navigate through the pandemic. Do you think we're in a position to broadly claim that organizations now have the tools to be more resilient in their supply chain? And are we resilient enough?

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Knut Alicke: We are better. We are not yet there. We increased resiliency and started to implement the backbone, the processes and capabilities, so we see a lot of our clients improving, and with this, being more resilient. There will be some disruption around the corner, and the story is not yet over.

Daphne Luchtenberg: What do you think some of the bottlenecks are going to be going forward?

Knut Alicke: We currently see a lot of bottlenecks, and to resolve them will take some time. We see that some commodities are short, semiconductors are short, even containers themselves are short and vessels do not have enough capacity. Basically, everything is in short supply, and it will take a couple of months to get out of this. Then hopefully we will not go back to the super-efficient, just-in-time supply chain but more to a resilient one. There will be probably another natural disaster, which is what global warming tells us, and with this we could have a heat wave or flooding. We have the next disruption around the corner.

Daphne Luchtenberg: There are still more challenges that we need to attack as we move forward. Thank you, Sebastian, thank you, Knut, for making the time to talk to us today and shedding some more light on how to create operational change that sticks.

For our listeners, this is a program in the series of podcasts looking at separating the rhetoric from reality when it comes to achieving operational excellence. We invite you to join us for some other short, sharp discussions with McKinsey experts and industry leaders to expand on the art of the possible and how to create real change today. Thank you for listening, and we'll be back soon.