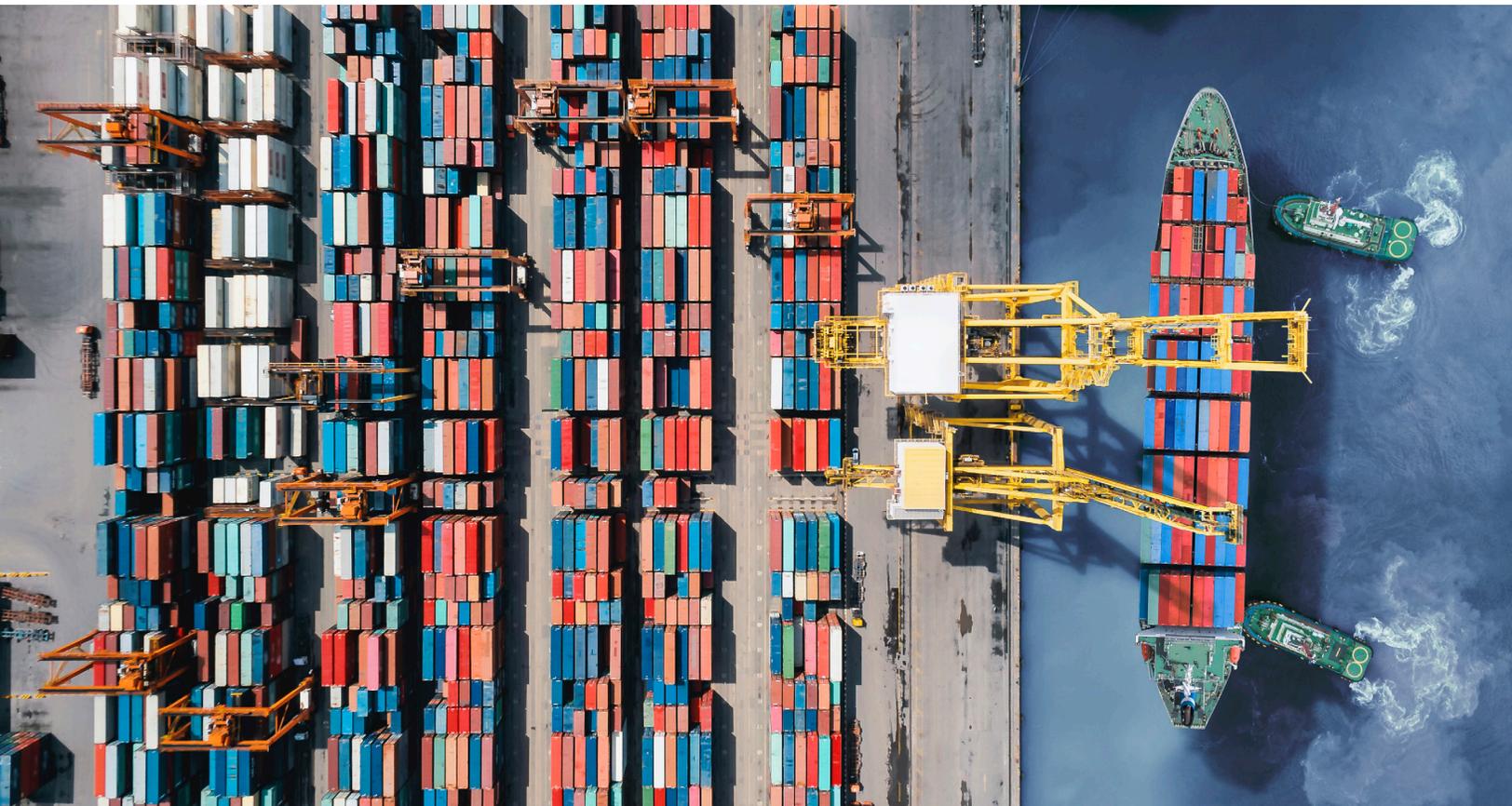


Operations Practice

# Diagnosing the pain in your supply chain

The COVID-19 pandemic has knocked global supply chains off their axes. But CEOs and other leaders can build resilience into their operations and reset supply chains for the next inevitable disruption.

*by Knut Alicke and Dan Swan*



**Product shortages** and supply-chain disruptions continue to drive headlines. On this episode of *The McKinsey Podcast*, Knut Alicke and Dan Swan, partners in McKinsey's Operations Practice, describe the key cost, labor, and transportation issues facing CEOs and supply-chain managers. In their conversation with McKinsey executive editor Roberta Fusaro, they also suggest ways executives can build resilience into their supply-chain strategies—for when the next major shake-up eventually comes. An edited transcript of the conversation follows.

After that segment, hear from early-tenure consultant Oscar Viyuela Garcia, who left academia for a career at McKinsey.

*The McKinsey Podcast* is cohosted by Roberta Fusaro and Lucia Rahilly.

## A scary environment

**Roberta Fusaro:** Dan and Knut, thanks for being here today.

**Dan Swan:** Thanks for having us.

**Roberta Fusaro:** So how are supply-chain executives feeling these days?

**Dan Swan:** I heard one senior executive say this is basically the scariest environment imaginable from a supply-chain perspective. Inbound material costs are going up exponentially; some categories or some commodities are up 50, 60, 70 percent year over year, which obviously has major implications on the cost structure.

Executives are having real challenges finding labor. We're also seeing major challenges from a transportation perspective—not only with inbound containers from Asia, but also with finding trucks to carry products. The common refrain is, "I can't get people. And then I can't get the product out to my customers." It's a scary environment for leadership.

## The worldwide labor challenge

**Roberta Fusaro:** So, what's driving the labor challenges?

**Dan Swan:** It's most acute in the US right now, although we see it in other forms across the globe. I think there's a bunch of underlying factors to this. The job-openings rate is about 50 percent above prepandemic levels. These are literally open jobs that people are having a hard time filling. Finding people to work in your manufacturing plant or your distribution center is a real challenge.

We've had millions of people actually leave the labor force since COVID-19 started. On top of that, the pandemic has accelerated a bunch of trends that were already happening in terms of technology and automation, which just creates a further gap between the capabilities that some people have, and the capabilities they need to be able to work successfully in this new environment.

The other layer that I would add to it that's very interesting is, pay matters; it's necessary but not sufficient. So what we've seen is that there's a real mismatch between what employers think their people value and what the employees themselves value. This notion of finding the right purpose aligned with the company that they're working for? It matters.

**Roberta Fusaro:** How's Europe doing, Knut?

**Knut Alicke:** We have also a labor mismatch. We did a survey among supply-chain executives, and nearly all of them said they like digital talent. They need this digital talent for planning—for demand planning, supply planning, inventory management, production planning.

They want to build up significantly in this area. They are basically doing it in two ways. One is that they have their existing labor force, and they want to reskill. That means teaching existing employees advanced analytics, machine learning, all of this new, cool stuff. Then they're looking for talent outside the organization. This is clearly where we see a big gap.

So, there's just no one available who could fill these roles, especially in the planning functions.

**Roberta Fusaro:** Dan, what role would you say the pandemic has played in this talent mismatch?

**Dan Swan:** It's been massively exacerbated through the pandemic. Think about things like the demand for e-commerce. That leads to a totally different supply-chain requirement in terms of warehouse labor, in terms of transportation labor.

At the same time, people have questioned, "What are we doing? And what's the purpose in my life?" I would think of this as more of a trend and a trajectory that we were on that just got put on a massive accelerant, and we weren't necessarily ready with the infrastructure of solutions. The companies that were further along on that dimension, before the pandemic, have weathered the storm much more effectively than those that weren't, even though everybody has had challenges.

**Roberta Fusaro:** Are any companies successfully addressing the talent gap?

**Dan Swan:** There's been a shift from people thinking about talent and capability building as an enabler to people viewing it as a strategy in and of itself. I think this is a really important mindset shift for leaders to think about as they try and get this piece right. But there are a couple of things we'd call out. One is getting much more scientific and analytical around why are people leaving.

At each company, there's a specific capability required. There's specific talent that is helpful to be successful over the medium to long run. What we saw, when people weren't intentional about that, was just massive attrition.

One of the things people are doing is getting much more analytical with their HR capabilities and considering the priorities for both attracting and retaining talent—and what really matters to their people. The second thing is that people are

getting more aggressive with capability building. How they're prioritizing supporting the frontline workforce, upskilling them, having clear career pathing as part of their value proposition.

One of my clients built a formal digital academy that was focused on capability building. They've been driving this organization-wide transformation at every level, whether that's infrastructure and technology to actually upskilling the frontline workforce. They've seen output of 75 percent in terms of labor productivity. So there's no silver bullet out there, but people need to be thinking about this problem holistically. Everything from who they attract, how they retain, and how they build the capabilities of their team to be more productive going forward.

## Supply chain becomes a CEO priority

**Roberta Fusaro:** Knut, what are CEOs doing differently in the face of supply-chain challenges?

**Knut Alicke:** That's an interesting question, Roberta. What we saw from our client work over the past 18 months is that supply chain got to the CEO agenda. Before, it was always like supply chain was seen as yes, necessary, but not really sexy. It's only visible if things go wrong. Now that is different.

We had one client that was quite interesting. In his investor briefings, he started to mention supply chain. Due to the pandemic, it's on their agenda. He mentioned that this makes sure that we get the stuff to our customers.

They were even able, as they manage the pandemic better than others, to increase their market share, which was just amazing. So CEOs need to think about supply chain as a clear enabler for their success. They need to think end to end; they need to pay attention to supply chain. For all the issues we saw, and for the issues going forward, they need to make sure that they invest in resilience to make sure that the supply chain can deliver as it's meant to do.

**‘Oftentimes in the past supply chain was what I would call a necessary evil. You needed your supply chain there to get product to your customer. And now, I think we see it more and more as a real differentiator for companies.’**

—Dan Swan

**Dan Swan:** Knut and I have joked that we’ve never been more popular in our lives than we’ve been over the last 12 months. But I think we’ve seen a real CEO mindset shift. Where oftentimes in the past supply chain was what I would call a necessary evil. You needed your supply chain there to get product to your customer. And now, I think we see it more and more as a real differentiator for companies. I think one of my CEO clients said, “You know, availability is this year’s innovation. If you have product on the shelf, that’s better than any new product introduction that’s coming along.”

The second reason why I think supply chain has become more and more important is because it’s the most cross-functional part of your business. It involves sales and marketing. It involves finance to understand some of the trade-offs you make. It involves manufacturing. It involves procurement.

To really get the end-to-end supply chain, you need the whole organization working together. When you have that mindset that it’s a potential strategic differentiator, the role of the CEO and helping the entire organization and the entire leadership team to mobilize around that is quite different.

### **Productivity versus growth**

**Roberta Fusaro:** How are you advising CEOs in terms of productivity versus growth? What are the key messages for CEOs there?

**Dan Swan:** It’s an age-old dilemma of how you think about growth versus productivity. However, I think there are a couple of things that are unique about this environment. Before COVID-19, we were talking about currency fluctuations. We were talking about trade and tariff challenges. We were talking about Brexit and the implications that it would have on the global supply.

We’ve had a cargo ship stuck in one of the largest canals in the world. All of that to say, some of the challenges we’re seeing with supply chain that make product delivery on productivity more and more complicated are things likely here to stay.

What that implies for our leadership is that people need to think about productivity with a slightly different mindset, which isn’t, “How do I build a supply chain that’s the absolute lowest cost, assuming that everything goes right?” and instead, “How do I build a supply chain that has the right productivity levels for the resilience, in the speed that I want my supply chain to deliver on?” We’ve done some research through McKinsey Global Institute that suggests that every ten years there’s 40 percent or so of one year’s profit that gets lost to supply-chain disruption.

On average, that’s 4 percent a year. The challenge is that it never happens like clockwork, 4 percent a year. It’s spiky, and it’s very hard to predict. And so what we’re really encouraging people to think about from a productivity perspective is thinking about it

holistically, and assume you're going to have some challenges. Try to understand what are the high-risk places in your supply chain and build the capabilities around that so that you have a better opportunity to actually deliver on the productivity that your organization needs.

**Knut Alicke:** I would agree with Dan. Productivity will be redefined. The productivity we looked into in the past was always, "Hey, we can improve by 5 percent per year?" Now, we take into account that we will see the next disruption around the corner. It will not be a pandemic; it will be something different.

So we need to make sure that we have a resilience setup that is meeting our productivity goals. At the same time, we see a lot of industries that have a lot of growth these days. So, basically, you need to manage both. But you need to manage it with the availability in mind. You need to manage it with a resilience in mind.

It's also interesting that we see a lot of companies these days that are maximizing their margin because they can utilize the productivity they have. They don't need to give discounts because of the availability. They will also change in the future, which will be a very interesting discussion going forward.

**Roberta Fusaro:** What are some ways that CEOs can lead that discussion or think about being more resilient, particularly in supply chain?

**Knut Alicke:** First of all, you set up something like a nerve center. You'll make sure that you fix your supply issues. You have a couple of people in a room, and they all have phones, and they talk to the suppliers and make sure that stuff is available. This is good to bridge a short-term issue.

Then we need to also make sure that we have a midterm solution. So here, business continues. Management comes into play. And what you do here is on a weekly basis; you think about, "Hey, what are the scenarios that we need to solve for?"

It might be a plan that is not able to work. It might be that we are in a lockdown. It might be that the supplier is not able to deliver, and you'll come up

with, let's say, scenarios to evaluate: "Should we increase inventory? Should we move production orders? Should we fly over stuff?" So, that might come with a higher cost and then you'll decide, "What should we do?"

There's also a structural resilience. You look into, "What is our sourcing strategy?" You need to make sure that you also talk to R&D. You need to design components in a way that you can use them in a different setting.

You even might want to talk to your customers—do demand shaping. Be more flexible with this on how you execute. As Dan said, this is where you really need to involve the end-to-end supply-chain sales, procurement manufacturing. You need to have everyone together to make sure that you define this resilience.

**Dan Swan:** The one thing I would say is that every supply-chain executive knows that growth is your biggest friend for driving productivity. It is much more complicated to drive productivity in an environment where you've got demand declining versus in an environment where you've got increasing demand. So I think we would kind of challenge the notion that there's a trade-off between growth and productivity.

When you're actually set up to drive productivity, you can often reinvest in the things that are required to drive growth and having top-line performance actually helps you to build a more sustainable productivity platform within your supply chain.

## Scenario planning is critical

**Roberta Fusaro:** How will this pandemic period affect the way people do their scenario planning?

**Knut Alicke:** In terms of scenario planning, you want to look into your supply and then you come up with different scenarios to solve. You want to evaluate those scenarios from a financial perspective to be able to decide. Now you could say, "This scenario planning is something that we in supply chain talk about for years." The reality is that it was not implemented to the extent necessary. So we also see companies that were early adopters of end-

to-end planning processes, thinking in scenarios, also thinking in probabilities, that are doing better because they now have the options to compare different scenarios. Whereas other companies have struggled to even calculate a scenario and then have no alternative.

**Roberta Fusaro:** Are there examples of companies that are making these shifts or managing supply chains differently as a result of what's gone on?

**Knut Alick:** Yeah. We had one company where we started with the weekly process of looking into how to make sure they had the production capacity available. One important element was the test equipment. And this test equipment needed to have a lead time of something like eight to ten weeks to shift it between the different plans. So we calculated a scenario: "What happens if we shifted to another plant? What would happen?" And another scenario would be, "No, we don't shift it."

So, we leave it where it is and then evaluate the availability, the service, the financial implication of shifting it over and then decide.

**Dan Swan:** And Roberta, I think one of the things we've seen is people take a much more aggressive look at their supply base. We talked to a client of mine early in the pandemic, and they were very excited because they had gone around and said, "Look, we're in really good shape with all of our suppliers in terms of inbound materials."

And they called a week later and said, "Whoops, actually, almost all of our tier-two packaging companies are in the same region of the world, and they're having a real challenge." So this visibility into your tier one—but also tier two, and potentially further upstream—and trying to build more resilience where we make sure we've got at least a couple qualified suppliers, versus having all of your eggs with a single supplier. The second thing we're seeing is, I think we had a survey early in the pandemic that said something like 60 percent or 70 percent of companies were thinking about shifting manufacturing capacity around. Only about 10 percent or so of them have gotten around to doing it so far, just because those aren't things you do in days and weeks.

A company I know has shifted a meaningful portion of their manufacturing base from Asia to North America. The idea being that they're not going to put 100 percent of their capacity in North America, but to have the flexibility, when things go wrong, to have more of their production in the same region as their customer base. And then the third thing we're clearly seeing—Knut hit on this—was this notion of real transparency. How do we have real-time visibility to what's actually happening with our supply chain?

There were companies that would do monthly or even quarterly reviews of their supply-chain performance. And now our people are moving to daily or even hourly reviews of performance, because a week and months are too long in this environment that we're living in, given all the variability.

## The role of inflation in supply-chain challenges

**Roberta Fusaro:** I did want to turn our attention now to this topic of inflation. In what ways is inflation playing a role in supply-chain pain?

**Dan Swan:** This is very simple and very obvious, but when inflation happens, the cost of the input materials goes up meaningfully and creates real pressure on the P&L [profit and loss]. And some companies have a better ability to pass on price than others.

So you see, how much of your cost increases can you cover by passing through pricing to your customers? And how much are you left holding the bag on, and then what can you do about it? I think it's very simple and very obvious, but it has real, meaningful implications on overall company performance.

The second thing we see from an inflation perspective is it can lead to really interesting decisions. When the Texas freeze happened, you had a major implication on production of polyurethane in the US. Typically, it's a product that can regulate the pricing discrepancies across regions.

But what we've seen is, for that product, massive increases in price in the US and relatively stable pricing in China. In traditional times, we'd fix that by bringing product from China to the US. Companies would shift decisions around how they think about sourcing. Well, the reality is, in an environment where you can't get containers of anything from China, and it's really expensive to get stuff over, it's led to an actual discrepancy in terms of the cost between the different parts of the world, which is a really unusual phenomenon, in terms of a global supply chain.

**Roberta Fusaro:** Are we seeing different sorts of impacts in different parts of the world or is this just sort of a common thread across all countries and sectors?

**Dan Swan:** The short answer to your question is yes. What I mean by that is, everybody knows about semiconductors shortages or steel challenges. Basically, transportation costs are up across the board and then there are places where there are pretty meaningful differences across the globe.

And then there are places where even in one part of the country, there can be major differences in terms of the inflation of individual products. So for food products and commodities, what's happening for row products? Row crops are very different than fruits and vegetables. How it actually manifests itself is a pain for everybody, but it's varying levels of pain depending on what products you make and where you're based.

## Leveraging lessons of the pandemic

**Roberta Fusaro:** When we look back on this time, will this mark the point when people started to manage their supply chain differently?

**Knut Alicke:** I hope that we will look back and say, "There—we finally understood it." To give you an example, we've had crises before. Fukushima was ten years ago. When we prepared to help our clients, we basically took the stuff that we developed ten years ago, and we found that, "Hey, this is still valid." So why did companies not apply this on an ongoing

basis? And it's very clear, you kind of manage the crisis; the crisis is over and you go back to normal. This is what we also see here. Now we have a boost of digital. We have the boost of resilience.

In ten years, hopefully we look back and say, "This was really the start of our accelerated digital journey to significantly improve the performance of our supply chain."

**Dan Swan:** Ten years later, what I think will be interesting is, will people follow through on some of the bigger structural changes that will set them up more strategically going forward? Things like product design. You can design a product that's much easier to source and have much more resiliency.

Also, more sustainable products from an environmental perspective. There's a whole bit of, "Are we actually going to redesign our new products to be much more resilient, much more sustainable, much easier to operate from a supply-chain perspective? Are we going to build our networks, whether it's manufacturing or distribution, to have much more resiliency?"

Think about the trade-offs of the absolute lowest costs, conceptually, versus the practical costs that you'll pay when you have disruptions or you have to expedite things across around the world. Things like strategically, what is the role that supply chain will play in terms of productivity, like what we talked about earlier.

I'm quite confident that some of the specific things in the more short-term actions that people have taken will manifest and continue to live on. I'm really hopeful that the rubber will also hit the road on the bigger structural changes that people are talking about.

**Roberta Fusaro:** Thank you both for joining today.

**Dan Swan:** Thanks so much for having us.

**Knut Alicke:** Thanks a lot.

**Lucia Rahilly:** Now it's time to hear from Oscar Viyuela Garcia, a consultant based in Boston.

**Oscar Viyuela Garcia:** I did a PhD in physics before joining the firm five years ago. I spent almost three years working as a researcher and faculty member, first at MIT [Massachusetts Institute of Technology] and then at Harvard. My topic was quantum computers. In trying to find practical applications of this technology, there have been many times where I've arrived at a client and I've said, my background probably doesn't align perfectly with what these guys are doing.

Many times our clients have industry experience of around 20 years. I think the more I've done it, what I've realized is that what I'm bringing to the table is the ability to solve problems fast and communicate those findings in a way that people can understand and that is meaningful.

For instance, I did this project for a big retailer in the US to build a loyalty program from scratch. Part of the work that I did was to understand when a customer purchases something at a very specific time, what are the elements that make that customer come back again? How long does it take? How valuable is that customer? All that information is a lot of data. Now it's problem solving with the entire team and also with our client. And another piece of it was predicting or forecasting—what was going to be the financial impacts? And that's

something that first of all, coming from a scientific background, is not super hard to learn, and you can actually be good at it.

The tricky part is to be able to work with different teams and to be able to communicate well. For instance, I was serving a client in telecom company where we're developing a new app for them. There had been a previous version of that app that a business unit had owned. I needed to work with one of the leaders in that business unit and basically to learn the key elements of what they have done and eventually transition the tool to a different business unit.

I noticed a lot of pushback and not trying to help from the client. The bottom line was not that the client was not a nice person and didn't want to help. But probably the clients felt threatened because something they owned was going to leave that business unit and go somewhere else.

We seemed to be the bad guys who were going to do that. So, just understanding that, which took me a little bit, allowed me to approach the problem in a different way. Because then it's more about, where's the person that I'm talking with coming from? Empathy. Because if you fail to understand the human side, the personal side, then it can be tough for you at times to make progress. At the end of the day, it's all about people.

**Knut Aliche** is a partner in McKinsey's Stuttgart office; **Dan Swan** is a senior partner in the Stamford office and global coleader of the Operations Practice; **Oscar Viyuela Garcia** is a consultant in the Boston office; **Roberta Fusaro** is an executive editor in the Waltham, Massachusetts, office; and **Lucia Rahilly**, global editorial director of McKinsey Global Publishing, is based in the New York office.

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