



**Wolfgang Lehmacher:** Of course. The most surprising thing for me was the fact that entire countries were suddenly shut down, with half of the world's population on lockdown. Just imagine you have a few factories across Spain and Italy. You think you're safe but COVID-19 taught us that this is not at all the case anymore. COVID-19 is a global crisis and it hits us wherever we may be. Whether in Chengdu or Chennai, Paris or Pittsburgh. So operating a diverse manufacturing network or moving factories from one country to another is hardly a risk mitigator in a global pandemic situation. So rather, communication and collaboration are in need. The current crisis calls for coordinated action across the supply chain corridors and between governments. And that is probably another surprise that we haven't seen that much of, this cooperation across borders.

**Terence Foo:**

Yes, I agree with Wolfgang. It's definitely unprecedented times and it is very unlike the previous crisis that we had, like you mentioned, whether it's the 2008 financial meltdown or the 2011 Japan tsunami or even the US-China trade war. Basically, like what Wolfgang said, COVID-19 has broken the global supply chain. Both on the demand and supply side. Whether it's the transportation and hospitality industry, the retail and food services, global oil trade, food supply chain, the list goes on. This is definitely unprecedented and it has really given us a wakeup call towards the supply chain risks and the types of collaboration that we need, across countries and across industries.

To your question, on the most significant and the most unexpected, I do have two points of views. For the most significant, I think we will definitely accelerate the decoupling of supply chain from China, as a factory of the world. But there's the "China, plus one" model out there. There's a "China for China", and there needs to



be a rethink of the supply chain strategy. Like what Wolfgang said, having some factories outside of China, or within China, you think you're safe, but you're not. So you have to rethink how you can create a more resonant supply chain, being closer to demand, being able to balance between cost and speed. Also with being able to balance the risk moving forward.

From an unexpected angle, I think COVID-19 is going to pivot us more towards digital technologies in supply chain. The technologies have always been there, just that the adoption has not been. I think COVID-19 is going to push us to this new, or the next normal. I believe clients will start to look at digital, not just as an innovation, but digital as an essential tool for survival moving forward.

**Deeshraf Elias:** Given the complexity of the pandemic, there is reason to believe that the recovery phase will require unprecedented levels of orchestration and coordination during a challenging and potentially protracted

recovery period. Considering learnings from China, as you've mentioned, who has pivoted into the recovery stage. What are some recommended actions leaders can take during this still-turbulent recovery period to start positioning themselves for long-term success?

**Wolfgang Lehmacher:** I think that the bundle of actions leaders can consider is fraught. We have also seen public and private sector leaders being brought to the test by this situation. Some of the measures are more general, and some depend on the specific industry and country situation. Let's look at what we are talking about when we talk about supply chains and logistics.

Supply chains are material in motion, which is another way of saying cash in motion, as Tom Linton, the former chief procurement and supply chain officer for Flextronics phrases it, this makes supply chains the bloodlines of business and economy. So we are really going to the bottom here. Cash is needed during the entire procure-to-pay cycle for buying material,

for producing, moving, and selling goods. If the cycle is disrupted, cash is just drying up. Potentially causing a breakdown of an organisation, or a country.

Furthermore, supply chains carry a lot of inventory. However, as the crisis continues and inventories make their way through the supply chain, channels risk drying up as well, and companies might face the clear to build problem. That means that the product cannot be made because not all parts are available to complete the work order. Hyundai reported, for example, that the company temporarily stopped production lines at factories in South Korea due to shortage of parts from China. That is the complexity we are dealing with. Political leaders should support companies in their efforts to keep inventories moving. Politicians can raise their understanding by thinking in the context of supply chains. I think about thinking in a systemic way. Supply chain leaders know that they are only as good as their suppliers and that they depend on their customers.

Today, manufacturers support their suppliers by extending payment terms, by providing loans or by buying in large quantities, which allows their partners to get financing against these commitments. I think that is a way of thinking. Politicians and governments can also adopt and see what they can do for their neighbours. The private sector leaders should focus on their business ecosystem closely following what the governments and the relevant markets are doing. The different crisis we have been going through like the Kobe earthquake in 1995, the Asian Financial Crisis in 1997, the 9/11 attacks in 2001, the Fukushima tsunami and the Thailand floods disaster in 2011 and the great recession in the late 2000s, taught us the importance of supply chain visibility and knowledge. Everybody knows that I'm a big supporter of knowledge, of the need for data, analytics,

around the various levels of the supply chain. So managers need to know what to observe, what to pay attention to.

A supply chain breaks from down below and not from the top. Collapse is caused by disruptions deeply rooted in the system, so people need to know what is the importance of a specific raw material or chemical product. For me overall, keeping inventories moving and raising the understanding about risks should be the key focus of leaders today.

**Deeshraf Elias:** Terence, building on what Wolfgang just mentioned, do you have anything else to add?

**Terence Foo:** Definitely. I agree with Wolfgang, that the recovery phase is going to be very complex and like you mentioned, there's learnings from China. It's the best indication of whether we will be able to recover once the health crisis is under control. However, the impact will be different across. Differing by countries and the respective governments. The recovery will be challenging and potentially over a projected period. It's not a light switch where supply chain can be turned on just like that. So leaders need to be well prepared. There's no proven playbook for such an unprecedented crisis but what we believe in a typical crisis is, it plays out over three timeframes.

There's the response phase, the recovery and the thrive. I think a lot of companies are in the midst of sorting out the response of what is the present situation and how to manage business continuity. They will have to start to think about the recovery of what they have learnt in the supply chain and how to emerge stronger and finally, the thrive. To maybe, relook at the whole supply chain strategy to reshape for the new next normal. So the priority of leaders has been mainly on response, however as leaders,

we have the responsibility to nimbly consider all the other two timeframes of, recover and thrive. Some of the things that I think leaders can consider for actions will be, as they manage to have a Crisis Central Command, that should lead to a recovery-focused central orchestration across their supply chain and to monitor signals for economic rebound as each market is different. Last but not least, to strengthen their cross-functional and cross-enterprise collaboration, in terms of risk management, business continuity and of course cash flow, which is very important. About the inventory, about how to restart and resynchronise their supply chain moving forward.

**Deeshraf Elias:** Although it may be difficult to balance the current firefighting mode, it is essential for resilient leaders to embrace the long view. Looking ahead, what rebound indicators should leaders be looking for, to help time the launch of their recovery efforts?

**Wolfgang Lehmacher:** Information about country openings and local developments are key areas to watch. But most vital is that companies stay in close contact with stakeholders across the supply chain ecosystem.

The continuous exchange helps to create collective intelligence, such as deep understanding about governmental intentions, about the situation of critical suppliers, about customer requirements and so on. These conversations also yield inputs to the response and recovery plans. Due to the uncertainty about the duration of the current COVID-19 crisis, we should be learning to operate in times of pandemics. How to keep borders open and factories running while protecting the people. The solutions require model and process reengineering and the use of existing and new



technologies. For instance, of computer vision to ensure physical distancing in factories. Governments should consider regular testing to isolate the infected and protect the other workers. Data, information and analysis are key in a crisis, but they remain without any value if no action is taken. Companies need to set up multiple communication channels that raise understanding and drive action.

COVID-19 is primetime for corporate affairs. Whether merchandise is classified as essential or not, can be influenced. As governments might lack specific information about the product or the potential impact on the economy and society. CEOs and other executives should support the effort. They should also contact customers and suppliers to ensure alignment during response and recovery. Communication beyond the direct

suppliers, the tier one suppliers, is essential. CFOs should get involved, to gauge the financial situation of business partners and discuss solutions where needed. The impact of COVID-19 outbreak calls for communication and collaboration to build intelligence and relations as means for survival and preparation for the future.

**Deeshraf Elias:** As mentioned earlier, COVID-19 has significantly affected the demand side, so it is only fitting that we take a moment to focus on the consumer right now. In your opinion, how can logistic leaders work with different stakeholders to drive consumer trust and kick-up demand?

**Terence Foo:** Yup it's definitely not easy to be a logistics or supply chain leader in these times. The good thing, like you said, is that there is going to be a need to reach out to different stakeholders, especially with the upstream, in terms of sales, marketing, in terms of customers, to really understand what the consumer demand is, moving forward. So I think the bright side is that this is time to really extend collaboration with all these stakeholders like never before.

Some of the areas of collaboration could be, prioritising which is your most loyal and important customers to serve. Because you may have a situation of a limited supply. Who's important for us to know when we restart the supply chain? Where is my supply? Where is my inventory? How do I make sure my most loyal and important customers are being served as a priority? It's one area of collaboration that you need to do. Another area, is looking at constant reforecasting of demand, to do demand sensing, to really understand what is going to be a demand pattern. Is it going to be a V-shaped recovery? Is it going to be a U-shaped recovery? Or even an L-shaped recovery? What

is the reality out there? Doing a lot of simulation, a lot of scenario planning, it's important, like never before.

Then of course based on the demand, it's important to try to influence the demand if possible, through marketing, through campaigns, or through promotion or even through public corporate affairs with the government, to ensure that your demand is matched with your ability to supply. You do not want a situation where the demand picks up, you're not able to supply. So with that, it's important to start to discuss with the people in the trade, what sort of priorities are there in terms of your product portfolio, what sort of skills you want to have. As the saying goes, "you can have any colour of Ford Model T, as long as it's black". So we have to make sure that we have the right product, minimize the complexity in supply chain, to ensure that you have the right supply moving forward to meet the demand.

Lastly, it's important if possible, to look at the pricing of your product and also customer contracts because there needs to be a fair sharing of costs. The whole cost of supply chain is, for lack of a better word, "out of whack". Because the traditional way of transportation, of storing everything, has changed. Make sure that it's fair pricing and not built as price gorging and of course there could be technologies, like what Wolfgang said earlier, that we can use. We are also helping some clients for example, in Thailand, to put in place an AI demand sensing, to really understanding what will be the impact to hire manufacturing. With car sales being impacted, what will happen? With people being locked at home, with less driving, what will happen? These are some of the things that technology can help with. Technology can help look at demand as well.

**Deeshraf Elias:** COVID-19 may just be the black swan event that finally emphasizes how organisations, and entire industries, need to rethink and transform their global supply chain models. How then, can leaders look to leverage technology that is within their organisations, as well as across their extended supply chain partners?

**Wolfgang Lehmacher:** Technology is the core component of a company's future supply chain. Navigating through a global supply chain without technology is like flying a plane without instruments. This works well on a clear and sunny day. It is unclear to me what the impact of the COVID-19 storm on supply chain thinking will be.

However, I strongly believe that we will see much more black swan events going forward. They are a property of our modern times. Connectivity, visibility and intelligence are the table stakes of the 21st century supply chain management. Advanced technology, such as artificial intelligence and natural language processing, have made 24/7 supply and monitoring widely accessible and affordable. Pay-as-you-go, Internet of Things, space, as a tracking and shipment monitoring solution, provide real time visibility. Digital platforms are on the rise as they ease collaboration across large groups of stakeholders. More suppliers can be plucked, more customers can be served. COVID-19 is expected to further accelerate digitisation with two opposite effects. On the one hand, the supply and demand network will be more and more globally connected. On the other hand, digitisation will ultimately drive unlimited distribution of everything. The shopping malls are entering our homes in the form of ecommerce, the cinemas do the same with Netflix. With the coronavirus outbreak, work is now following. Banks have gone digital. Expected to be next, are doctors and schools.

E-society and e-economy are unstoppable trends and so is the e-supply chain. That's what is my vision. Business models turn digital. This requires digital supply chains. So this relentless march of digitisation is what will be accelerated through this current crisis and needs to be supported by the governments and I believe that the barriers we have seen put up by some governments will now fall, because governments have understood that digital is the new way of doing.

**Deeshraf Elias:** Now, I want to wrap up our discussion with this question to you, both of our guests today, can you share with us what supply chain innovations you are most excited about?

**Wolfgang Lehmacher:** This is the hardest question for me because I am excited about anything. Any kind of supply chain innovation. We have entered the era of connectivity, within three to five years, there will be a trillion connected devices. So many things will become connectable and intelligent. Our homes, our streets, public buildings and so on. we will know the state of almost everything and we will control much of our world remotely. That's hyper exciting and the massive data generated will push artificial intelligence, bringing more descriptive, predictive and prescriptive analytics.

I am also deeply passionate about the circular supply chains, which requires lots of new knowledge and technology. This is the beginning of exponential digitisation. COVID-19 will drive unprecedented change in the economy and in the supply system, but this crisis may also trigger some totally new societal and economic visions. I would like to share one of these possible futures.



I imagine a world where many of today's physical activities were moved to the digital space. Where a large part of our work is about managing the digital interfaces with the tangible spheres, where permanent office work is a thing of the past, saving time and rent. Where mobility is largely, automated. Reducing accidents caused, raising the level of convenience. Where people are mostly engaging virtually. Where hospitality, travel, tourism, sports and arts and of course nature, are providing spaces for digital human interaction and recreation. Where we spare a large part of our physical resources by disentangling them from our digital doing, de-stressing the physical system. I am conscious that digitisation also consumes a lot of energy, something we need to work on. I'm speaking about the world of shared abundance and sustainability, about the transition to a digital-first system, as Navroop Sahdev, CEO of The Digital Economist, names it. Digitised and automated supply chains are central to this potential future. I'm conscious that it may sound a bit like fiction, but as we are just grasping the magnitude of the implications of the forced industrial revolution and as the consequences are unstoppable, we should, also begin envisioning our future within the new context of technological development beyond our current boundaries.

**Deeshraf Elias:** And Terence, what keeps you up at night on the future of supply chains?



**Terence Foo:** First, let me touch on a little bit of what Wolfgang said. I think what he said is a very interesting. A very exciting vision which really excites us all in supply chain practice. I think COVID-19 is a reboot of the computer systems for us to upgrade the system, because there's always been the excuse, "don't fix what is not broken", but clearly supply chain is broken and I think it's a good time for us to rethink and reimagine the future like what Wolfgang said. So what keeps me awake, I think it's not the lack of any supply chain innovation in terms of technology, in terms of the ways of doing things, it's all fantastic. But I think it's adoption. I always feel that what keeps me awake is, how do I help

my clients? How to convince their management to invest in this new way of doing things in supply chain? How do we, even if they have got through the hurdle of getting that capital investment or the management approval, how do we drive adoption? Because it is human ways of doing things that allows hands to be up against, that is impeding innovation and supply chain.

What I really hope can move forward after COVID-19 is adoption of a new digital way of doing things in supply chain. I think a lot of us are very familiar with the Sprawl model, that was made popular by APICS that was developed

in 1996 by PRTM and a lot of people use that, the buy, moves, the make, the deliver, all the good things. But it's a very linear traditional way of doing supply chain and we, at Deloitte, have been working with ASCI, formerly APICS, to look at the new way of doing supply chain, which is the Digital Capabilities Model (DCM) for Supply Networks. I think we can accelerate the adoption of such a model, coupled with the adoption of technology innovation. That will really allow me to sleep better at night.

**Deeshraf Elias:** Well it's been amazing hearing both of your perspectives on how businesses can respond and recover from the global supply chain disruption. I would like to thank both our guests once again, Wolfgang and Terence for joining us today and that's it for today's episode of Thriving in Volatile Times.

If you want to comment on this podcast or the topics covered, you can send us an email. The address is [seapodcast@deloitte.com](mailto:seapodcast@deloitte.com) or head on to our website Thriving in Volatile Times. Don't forget to subscribe to our podcast to get the latest episodes – we are available on Apple Podcast, Google Podcast, Spotify, Soundcloud and Stitcher. I am Deeshraf Elias and until next time.