

Episode 162: Circumventing Geopolitics with SAP's Ralf Hierzegger

Ralf: [00:00:00] The future of the supply chain will be a very collaborative and interoperable, way of working. It'll digitalize the logistics industry along with the manufacturing and retail and other industries. And while logistics is keeping up and while the entire network of supply chain partners will digitalize jointly, I believe that we can benefit from a higher utilization, lower rate of empty trucks and empty rights. And so in a very thoughtful way AI within a network can contribute to be more economy and ecologically friendly.

Richard: Welcome to the Future of Supply Chain, a podcast where we discuss hot topics, best practices, and the latest innovation in today's business. I'm Richard Howells, and in this week's episode I'm joined by Ralph [00:01:00] Hierzegger to discuss network intelligence and how network intelligence is reshaping logistics team's response to disruption. Ralph recently published a great article in SAP Insider that we will share in the show notes, and today we're going to delve into that article a little bit. Ralph, great to have you here. Maybe you could quickly introduce yourself and your role at SAP?

Ralf: Absolutely. Thanks Richard for having me. My name is Ralph. I am based out of Germany. I'm in the logistics space since 30 plus years. Majority part at SAP, but before that I used to work as a forwarding agent. Currently I'm in the role of Chief Product Owner for Business Network for logistics.

Which is SAP Business Network application as the name already says. And what we are trying to do here is to link reality with backend plans. And yeah, my career focus basically is that I wanna provide benefit to [00:02:00] logistic companies as well as support supply chain of the shippers of this world in order to run better and smoother. And yeah, from what I have seen in the past I would say it's time to move outside of the business boundaries and to rather expand the point of view into a network kind of thing.

Richard: I'm looking forward to a great discussion. There's a lot I'll just say there's a lot of gray hair on this call at the moment because we've both got more than 30 years experience, and I'm sure you'll agree that. Nothing has been as bizarre as the last four or five years as far as the rate of change and the challenges that we faced from a supply chain and a logistics perspective. So what's making things so challenging right now that you are seeing in the space.

Ralf: I think the disruptions that we can see become more and more constant. We cannot rely anymore on constant regulations, on [00:03:00] constant supply chains, on constant logistics. We do see a lot of impacts that come from outside and that have significant disruption potential for companies. And I compare it a bit with the chaos theory where very small causes, can have very huge downstream impacts. And this is what we are seeing in the past few years, more and more often. I do believe that as we see these disruptions being more constant and being more often than also, we need to have responsive measures that are more constant and that can be repeated.

Richard: I think we've seen that with disruption certainly in the last few years and continue to see it on a daily basis because that butterfly effect the chaos theory that you mentioned is. It just ripples through the, across the whole world and outside of supply chains to stock markets and everything else. Once something is [00:04:00] affecting business. I think in the article you mentioned the challenges and problems in supply chain now tend to be more structural than incidental. So why is that?

Ralf: Yeah, what we see is due to the higher rate of digitalization, we also have a higher rate of dependencies. And if then an enter or an an industry such as logistics is lagging a bit behind. Then it's always very hard to connect the chains again. And that is where we are right now. So on the one hand side, we have the high volatility. On the other hand still we have a bit of an un digitalized logistics industry and this is where things are clashing, I would say. So that means the old planning the long-term planning that we have seen in the past. Is going away. We are rather moving from, let's say, freight agreements to a more spot market related tenders. And this is then bringing in so much [00:05:00] volatility that companies need to deal with it. And then you have robotics inside the warehouses and you have a high digitalized internal logistics.

And this now needs to cater for such external effects. Now, if we also look at it from a rather non-company related aspect, then we also see that external effects like the climate change can have a significant impact. If you think for instance of let's say. Dry periods where the water level in, in rivers is going to decrease, then that might block an entire fleet of barges and domestic vessels that one of a sudden cannot sail anymore.

And you need to replan and these impacts, this is what we will see more and more often as such climate changes or regulatory changes kick in, like [00:06:00] banning parts of the seas trades, we see it right now in the situation in Iran. This comes in, this is a change and how to respond how to reroute cargo that is deemed to depart from a blocked region or vice versa that is deemed to

get into such a region. And yeah this is a third dimension I would say, which is adding up to the complexity that we have right now.

Richard: Absolutely. You mentioned right at the start when you were doing your introduction about logistics having outgrown the enterprise or needing to look outside of the enterprise now, so maybe you can explain a little bit what does that mean in simple terms.

Ralf: Yeah. So the internal processes, they have been optimized now since decades. Since we have seen ERP software coming in. We have seen planning, we have seen optimized planning, we have seen predictive planning. So all of that has been done and that has helped us to become much more efficient inside the [00:07:00] company's borders.

Now the business performance today especially with regards to logistics also depends on areas outside of the border of the company. And this is now where the next step of digitalization and optimization needs to kick in. This is where we need to collaborate with partners. We cannot only look at internal optimized processes.

We also need to think. One step ahead and how can we optimize the supply chain and logistics is sitting in the middle of the supply chain. This is the glue of companies where the cargo flow is being administered. And so therefore what we see is we need to have a kind of a shared signal logic that is helping.

Three ends of a trade to understand what is going on. That is the the center of the goods, the transporter of the goods, and then the consignee. And I think this is now where the classic planning and the classic optimization is [00:08:00] outgrown.

Richard: Yeah you mentioned that example of making those decisions and that all relies on accurate data. And having the right information, whether that's from your own systems or from your third party providers, suppliers, contract manufacturers, et cetera, logistic service providers in your case. So maybe you can walk us through an example of how AI can leverage this data to automatically react to something like a port delay or a blockage of a trading lane that we're seeing at the moment, for example.

Ralf: Yeah, exactly. So AI is a very broad term. So we have a lot of different aspects within ai. So one aspect, for instance, would be the machine learning part of ai. And I think this is exactly what is not helping us here because this is learning from the past and extrapolating it into today or into the future.

And as we see that a lot of things are changing so heavily, [00:09:00] then we need to have much more responsive AI capabilities injected into the flow. So that means we need to understand patterns, we need to understand real-time information. We need to combine this and by assistance that are probably interpreting such information and by agents that are connecting different results into an process flow, into an end-to-end understanding. We would have some good examples as of how to respond. And my belief is that take for instance blank sailings that are happening for whatever reason. And then you are sitting on the cargo. And what would you do in the end? There needs to be a human in the loop who is taking a decision, but in order to take these decisions this human needs to receive proposals and probably also simulations. And this is where AI can help because if you think of a network, we have a lot of [00:10:00] information, we don't only rely on company internal data. We have cross company data on a network. Plus we can reach out with the agents to external information that is not structured on the software itself but that is available out there, like weather forecasts or other information. And this is where I believe that combining all of these things together and by that simulating decision proposals that have a value and that have also some positive impact for the supply chain. This is what is helping humans then to focus on the right way of work and to take educated decisions based on AI derived information from a network.

Richard: I often look at the Gartner hype cycle of for technology, but at the moment I think it's safe to say that AI is right up at the top level as far as [00:11:00] hype is concerned. And many people think that AI can fix everything, but is AI by itself good enough to solve all logistics problems?

Ralf: I don't believe so because we still do have the physics we have available capacities. We have available restrictions and limitations that are out there. We cannot just simply reroute a vessel just because one of our containers needs to be rerouted. So we have to rely on the reality. And therefore, I believe AI can do the best in order to interpret the information that we have from both planning and real time execution. But decision needs to still be taken by humans and especially in the logistics. I believe the dispatcher. I think the job will change along with introduction of AI capabilities, but the job will remain at the same time because the dispatching itself that is most probably a [00:12:00] decision by an expert who also needs to not only rely on a software network, but also on his business network, his relation to carriers and his relation to his counterparts in the logistics be it brokers or other parties. And all of that in my belief cannot be automated and solved by AI. But AI will help finding out the right information at the right point in time in the given situation. And suggesting more educated proposals to the human that is taking the decision.

Richard: Let's talk a little bit about the value of the business network when it comes to AI. So let's take the worst case situation. What happens if a company invests in AI but doesn't invest in connecting with partners and sharing the data across the network?

Ralf: Yeah, I think then this company can still get some benefits out of it because they can probably optimize their already [00:13:00] pre-optimized processes. But it would still stay within the boundary of the own company. And then we are coming back to what we discussed earlier then what if other players in the trade would not play as expected by AI, would not be as reliant as the machine anticipates them to be. And at the same time how valid and how valuable is the anticipated optimization by AI if the reality outside is just simply not complying to it. And therefore, I do believe if we want to have a real benefit, which is cross-company, then we need to think through it from a network point of view where we do have different players, we do have a lot of information of the connected companies we do know, which patterns are out there and without breaking data privacy, of [00:14:00] course, without breaking GDPR rules, AI can still help to bring much more sophisticated results, which is then rather a global optimum across the entire partners that are involved in supply chain instead of being a local optimum which probably cannot be reached because of the just mentioned aspects anyway.

Richard: Yeah I think that whenever we talk about a business network or a partnership it's gotta be a win-win for all parties. And you share data with your suppliers and they share data with you, for example, or your logistics providers, and they share data with you. So how does sharing data make things not only fairer, equitable, more efficient and help you optimize the greater business network?

Ralf: Yeah. So I think different types of data can be shared. And I think what is very important to be [00:15:00] shared is the information of where's my box. So provide insights into the execution, provide real-time data information about the location of a container or of a truck. Such information that is being shared by the partners. This is helping very much to preplan things be it in an inbound process. It might be required to preplan the production or the storage warehouse in an outbound process. It's, of course, important to let the customers know, to provide them with the same insights, and by doing so. And by sharing this information, we rely on external parties.

No company by itself would know what is going on. You need to connect, you need to collaborate on a network. You need to exchange, you need to trust, of course. But I said before, the same needs to go along with a [00:16:00]

compliant way of data exchange, with a compliant way of data interpretation and therefore also security. And yeah, data protection related restrictions need to be considered and I think this is what is then making the best out of a network, connecting partners, receiving data from trusted partners and exchanging data with trusted partners.

Richard: So we've given lots of advice and lots of examples of the value of a business network. If somebody listened to this, wanted to get started with improving their network intelligence and leveraging AI across the network, where should they start with this approach? What's the first steps that you recommend?

Ralf: I would really recommend to start working on the mindset. So doing AI without having an AI mindset is probably not the right [00:17:00] thing to do. You need to make clear for yourself what is the value I wanna derive out of ai. You need to also make yourself familiar with. AI capabilities. As mentioned machine learning is rather looking backward and making decisions based on past experience, whereas other AI technology and tools will be looking forward, it can help you to look backwards. It can help you to look forward. You need to make up your mind what is it that you really wanna reach? What is the value prop that you are after? And if you have that, and if you think about a network related ai, then my suggestion would be look at one end to end flow first.

So don't overdo, don't overstretch yourself. Don't overstretch technology, but also don't overstretch your partners. But as we [00:18:00] are talking network such an end-to-end process should be set up with a number of partners, not with all, but at least with some, because else you are still in a peer to peer collaboration.

And that is not the network thought would be a bit broader. And if we are talking logistics and if we are talking connectivity within the logistics, then it would be good to have trusted carriers to have trusted. Three pls or four pls with whom you are collaborating. And if you are focusing on these trusted partners first, then you can learn, the organizations can learn, and I think by the growth of the experience, you can then go on to the next level. I do think that a big bang where a company tries to solve too much with too many partners at the same time is too much of a stretch. So my recommendation would really be focus on the value, [00:19:00] start with the AI mindset, and collaborate with your trusted partners in the first step.

Richard: Ralph, we're coming to the end of the podcast. It's been an intriguing discussion. And I'm gonna ask what most people find the hardest question to

answer because I'm gonna ask you to summarize everything we've just talked about in a sentence or two. When it comes to leveraging network intelligence and AI to manage uncertainty, what is the future of supply chain?

Ralf: The future of the supply chain will only partially change. It'll still be logistics. It'll still depend on the physics, on the availability of transporters that are able to carry goods. But at the same time, I believe that the future of the supply chain will be a very collaborative and interoperable , way of working.

It'll digitalize the logistics industry along with the manufacturing and retail and other industries. [00:20:00] And while logistics is keeping up and while the entire network of supply chain partners will digitalize jointly. I believe that we can benefit from a higher utilization, lower rate of empty trucks and empty rights. And so, in a very thoughtful way AI within a network can contribute to be more economy and ecologically friendly.

Richard: Great summary. Hey, Ralph, thanks for a great conversation, it's being really interesting.

Ralf: Yeah. Thanks again for having me. It was my pleasure.

Richard: No problem. And thanks everyone for listening. Please mark us as a favorite and you can get regular updates and information about future episodes. We'll also share a link to the article that we referenced earlier in the podcast in the show notes. But until next time, from Ralph and I, thanks for discussing the future of Supply [00:21:00] Chain.