Logistics Management in the Mid-Market with SAP's Till Dengel

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Richard: i'm Richard Howells, and this is The Future of Supply Chain, a podcast where we discuss hot topics, best practices, and the latest innovations in today's global business. In today's episode, we'll be discussing all things logistic and how best to leverage logistic management solutions. And to do so i'm excited to be joined by my friend and colleague Till Dengel. Till, great to have you on the podcast. If you could quickly introduce yourself and your role at SAP.

Till: Hi Richard. Very happy to be here. Yes, I'm Till Dengel and I run our Product Marketing at SAP for our [00:01:00] Logistics Business and also our Asset and Service Management Business.

Richard: Okay. So I know you're a repeat offender on this podcast. You've been a guest before, so, hopefully we'll have a good time. So let's start with a baseline question. In this rapidly changing global environment, we see companies revisiting their supply chain strategies to boost delivery speed and strengthen resilience, which seems to be the key word still around supply chains. But how are these challenges impacting logistics processes?

Till: Yeah. Interesting question as a foundation, right? I mean, what interesting from the angle of logistics is that in the past, logistics was always about efficiency, right? It was always about driving costs out of the supply chain, and that fundamentally changed when COVID hit.

And now of course, what we've seen after COVID the many changes in the market. The latest with tariff changes that impacted value chains all over the globe forced [00:02:00] companies to produce in other countries and things like that. So we're seeing that fundamental shift from efficiency more towards agility. And of course you don't wanna lose that efficiency, but you want to be agile as possible if you go forward here.

And what we're seeing also from our customers is that customers wanna gain more control. In the past, logistic was many times outsourced to save costs. But as they are now driving their supply chains more and more directly, they really try to gain more control. Still outsourcing, but they wanna tell the third parties they work with a lot more what they have to do. And we do see significant changes here as well. If you look at outbound and inbound, right? So on the inbound side, receiving, for example, from China to then produce something in the US or sell it in the US.

We do see there, there's more and more consolidation happening as things come in, but we also see that it's more and more being [00:03:00] decentralized on the incoming side, right? On the sender side. And we do see the same thing on the outbound side. So in distribution models that many of our clients are trying to get closer to their customers so they can increase the speed of delivery and deliver on time. And with that, have happy customers.

So all of that has been changes that we've seen in the last couple of months and actually years. And they all contribute to that agility and that efficiency and that speed that you alluded to in the question.

Richard: It's interesting because you talked about initially or traditionally, it's been about efficiency and cost and now agility and control, but it's not. It's moved from that to that. It's efficiency and cost plus agility and control.

And the other thing that you mentioned is the concept of getting closer to the customer, getting the inventory closer to where the demand is and decentralizing warehousing. So what are the key benefits and [00:04:00] operational trade-offs of decentralizing warehouse management compared to a much more traditional, centralized model?

Till: Let's maybe start with the centralized model, right? And that's really inventory being stored and managed from a single or just very few large distribution centers. And the benefits of that, just because sheer economies of scale is that you have lower operating costs because you have fewer facilities, fewer warehouses fewer expenses for rent and staffing and things like that. You can also automate a lot more.

And the second thing that's important in that regard is that it's also much simpler to manage the inventory because you have one large facility and all the inventory you have is in that one large facility, or maybe two or three facilities, but it's not distributed and spread out, right?

So inventory management is also much simpler. I mentioned already the economies of scale that you're also receiving in bulk, right? And that you're shipping in much larger quantities because you can consolidate shipments. That's another [00:05:00] big benefit. And then lastly, which of course we hear a lot as a technology provider, it's the technology integration, right?

If you have one big warehouses, or even if it's three or five big warehouses around the world it's five integration points, right? It's not hundreds of integration points. So that's definitely also a benefit of a central warehouse.

The trade-offs as we talked about earlier right, are longer delivery lead times because you have to cover that distance to your end consumer. And usually it's also a higher downstream stream shipping cost because the customers are just further away and you just have less flexibility. If one of these big warehouses, has an issue or doesn't have inventory, it's not it easy to swap to another warehouse that sits maybe in another region of the world or in another continent even to then cover for that. That's one thing on the central side.

If we then look into the decentralized businesses. So decentralized, meaning that inventory is spread across multiple regional and local warehouses, right? And the customers we work with, some of [00:06:00] the multinational customers, they have hundreds of these warehouses around the world, right? So it's really spread out. The benefits of that model is much faster delivery times because you're much closer to your customers.

And with that goes the improved customer satisfaction because you can deliver. As we all know from our private life in a day or less than a day the costs are reduced because you don't have long distances. You're very close to the customer at least the cost for the transportation. The last mile you do, of course, have a higher cost for managing all these facilities, and it's of greater resilience, right? If you have more warehouses with similar stock. If one of them breaks down or if one of them is out of stock, you can deliver from the next one that is just a few miles away. So I think that's the benefits of decentralized and the trade-offs here. Like I mentioned, higher facility cost, higher operational cost because you have a lot more facilities, it's much more complex tracking the inventory just because you have so many touch points in so many locations.

And then it's also sometimes I think the other thing is that you have imbalances [00:07:00] of stock across the locations, right? So we may have redundant stock in the same locations, which contributes to the logistics cost overall. And maybe if that's why a lot of companies don't go to the extremes of very centralized or very decentralized we also see a lot of hybrid models or blended models that,

for example, customers have like one big distribution center in Europe, one in the US. Then they have a few regional distribution centers, and then they have some smaller ones in the different countries. Right? So it depends really on the business model and the industry. But we do see blended models.

Richard: That's another example of the increased complexity because it's not centralized or decentralized. It's centralized and decentralized. And one of the things that I think. You shared some interesting facts with me a little earlier when we talked about the challenges of decentralized warehouses.

'cause we're not only decentralizing warehousing, we also need to digitize all of these [00:08:00] warehouses. So why do many small and mid-sized logistics facilities struggle to achieve full digitization? And what practical steps can help address these pain points?

Till: Of course there's different ways on why companies have these small warehouses. Some of them are really, by strategy, by company strategy because a company decided I wanna be closer to my customer, I want to be quicker to deliver. So I think if you look at these models, then they are streamlined. But many times it's not this way. Many times a company acquired a smaller company in a country, and that came with a number of warehouses. So they've not been in the network of warehouses. They were just added as the through an M&A, for example.

The other thing that we see many times is that these local warehouses are sometimes just, put up for one or maybe multiple customers just to please them and to make sure that you fulfill your KPIs. And then they're rapidly brought up, but they're never fully digitized.

And then the other thing is also, if you look into these [00:09:00] warehouses. It's not like they have an IT department or anything, right? It's local warehouse workers, maybe there's, of course there's a supervisor, but there's not like an IT person now, that could actually bring in IT systems and run these IT systems. So that's why many times they're still working on spreadsheets. Sometimes they're working completely paper-based. They're not even on any IT at all.

And then I think the last one is obviously cost. So logistics is as we talked earlier about efficiency and cost. So I think many times it's not clear if that customer will stay, if that contract will be long enough that you really wanna invest and digitize such a warehouse and in order to save cost you rather, sacrifice some efficiency but not digitize the business and rather do it manually. So I think those are a couple of examples that we see.

What can companies do to address these pain points? On one side they can of course look at this more strategically, right? And that's what we see in our customer base that [00:10:00] they say whenever we get a new warehouse in our system this is the template that we are using and this is the processes that this warehouse should be adopting. So they're standardizing on the process side, but they're also standardizing on the IT side with templates that they're rolling into these warehouses to get them into a digital world as quickly as possible.

And what comes with that is, like I said, that there is no IT department. So it needs to be super simple that even if they have an issue, and let's say they are somewhere on the other side of the world, if they have an issue in the morning, they need to be able to overcome that issue on their own. So the ease of use of the system, the simplicity of the system is important.

And the other thing that's important is that the implementation of let's say IT technology should be non-disruptive. Meaning that if you bring in that technology, the warehouse shouldn't be down for a couple of days. It maybe can be down for a few hours to [00:11:00] bring such new technology in, but then it should be up and running and continue to do the business because every hour and every day that you're losing will cost you money.

So I think having these templates and standardized approaches and systems that can be non-disruptive is very important if you wanna implement such a network model.

Richard: We've all seen the rise of e-commerce, especially since the pandemic, when it became a necessity and the Amazon effect of, I want this delivered to me tomorrow, if not today. And that has increased the micro fulfillment centers. So how are micro fulfillment centers transforming underutilized spaces and supporting blended fulfillment strategies for retailers?

Till: Yeah. As you say, Richard, right, we all feel it, right? When I order something online, I always expect it to be there tomorrow, right? And if it's not, I'm getting nervous and I'm asking why is it not there? So I think companies. [00:12:00] It's just the norm these days, and companies have to adjust to that model.

And one way to adjust is to create these micro fulfillment centers, which is basically bringing the inventory very close to the client. And many of our customers have done this that they just using the back room of one of their stores as one small micro fulfillment area where they can store a limited amount of stock but if they do that, they're super quick.

And on the other side a lot of the stores now also accept that you, for example, receive returns from your customers. They return goods and then the micro fulfillment side delivers that back to a larger distribution site, for example in the returns process. So, we see that quite a lot, especially in the retail industry. As you said, e-commerce is a big topic also that customers can directly order to a store and then go to the store and pick it up or try it on, and if it doesn't fit, they send it right back. So we see those in fashion quite a bit.

We also now see this spreading more into food and beverage, of [00:13:00] course. But also the pharma industry is a big driver of these multi fulfillment businesses. And of course the spare parts business, where if something breaks down, you wanna have the spare parts as close as possible so you can fix your machines as quickly as possible.

And that proximity of being close to the client, significantly cuts the delivery times and also the transportation cost. But again, you have a store, right? And in the store you have personnel that is selling the retail goods. They are not trained IT people, and they are not trained warehouse personnel. So it needs to be super simple and very straightforward for people in these micro fulfillment locations to handle.

Richard: You mentioned that as companies bring up newer, smaller warehouses or micro fulfillment centers, many times they're still using spreadsheets or paper-based systems in those facilities, even though they may have a warehouse management system that is being leveraged in [00:14:00] their larger facilities and their centralized distribution centers. But they're losing out on visibility of leveraging the benefits of the full inventory of the system, I would imagine in that case. So what does a connected inventory system provide for those companies and help businesses respond rapidly to shifting demands and uncertainties across multiple locations?

Till: Let's look an example f ashion retailer, right? I'm ordering something online. And when I order during the time of the order process, I want to know if these goods are available. And I wanna know in which location these goods are available so I can actually maybe go there tomorrow or order the product online and go there tomorrow to try it on. And if it doesn't fit, I'll just leave it there.

So, if you don't have that visibility of these micro locations, what inventory sits in the store you cannot determine if you have to ship it there. Or maybe I can just accept the order because it's already sitting there and the client can go there and [00:15:00] basically check it out and try it on.

You need to have that interconnectivity between your global, your regional and your local fulfillment destinations to see what is, where to determine what you have to do. Do you have to do anything? Maybe nothing because it already sits at the location that the customer wants to go to. Or do you have to deliver it from the regional or maybe even have to deliver it from a global or maybe from another micro location to this micro location, right? So there's a lot of coordination that needs to happen. But before this coordination can happen, you need to have the stock level.

And the other important thing is if you don't have the stock level, if I'm taking an order and I don't have visibility as an end customer, if the stock is available or not, I might not even place that order i'd rather go to my competitor that shows me if they have stock available. Right? Because I want that order tomorrow I'm not patient.

So I think that inventory visibility is very important of doing the order taking process. And or also when you do that, that [00:16:00] available to promise, that you promise the customer Yes. If you go there tomorrow, the goods will be there because if they wouldn't, they would be very unhappy.

So it's on one side where are the goods and can I confirm that order and then once you have that inventory visibility, the next step is then really, okay, what do I need to do? Do I ship it? And if I ship it from, where do I ship it? Do I ship it from my central warehouse? Do I ship it from another micro location into this micro location? And that's then a trade off again about shipping costs, right? So the inventory is basically the foundation for any next step that you would have to take.

Richard: This approach of decentralization we've talked about it can increase the customer service and customer satisfaction levels, but it also can increases the complexity of your network and your own network and requires coordination and collaboration. So what challenges do companies face in managing this multi-tiered distribution network? How does this, the process [00:17:00] coordination between warehousing, transportation and also third party logistics providers improve resilience?

Till: I can just do give you the negative example myself, right? So I just ordered something for the garden. And online it says, well, the product is available you can order it and it will arrive in the next few days.

And I was already, well, it's a few days. I would rather know when exactly the right spot. Anyways, I'll order it. So I ordered it. And then I get the order

confirmation. I eventually go online. I get a tracking link, and I see that the product is moving from somewhere in France through multiple different steps and locations, eventually to a shipping hub close to my house, which is like 20 miles away. And I'm like, okay, now I can see it's 20 miles away. It's gonna be shipped tomorrow. And then nothing happened for a week, right.

And I go in every day and I'm checking and eventually I'm calling that company and I'm saying well, I'm seeing online that the product is sitting there. When will it be delivered? Oh, we cannot tell [00:18:00] you because it was cross border, right? One was in France, the shipping company. The three PL was in France. And this was the German affiliate, which was not even their own company and the German three PL didn't actually have access to the system of the French three PL that they were working for.

So completely broken process chain. And eventually I ended up returning the product, right? Because I said, give me my money back. I don't know when this is coming, if it's will ever be coming. And eventually they couldn't even trace it back themselves. So long story.

But what that shows you is , if you don't have connected systems from the inventory all the way to the transportation that happens between these different entities. So this example, it was from, distribution center in France to another distribution center also in France, then to a local regional distribution center in Germany, then to a local warehouse in Germany that should have delivered to me. And there was no connectivity between these systems.

There was a tracking on top of it that somehow delivered some information, but even underneath that [00:19:00] tracking, these systems were not connected. So it's on one side, the process connection, but on the other side it's also the system connectivity between inventory transportation with expected arrival times and also the end-to-end tracking that you, in this case that I described, that even, gave me access to that tracking so I could follow it which eventually didn't lead to me being a happy customer, but it basically they delivered that tracking or they tried to deliver the tracking end to end.

So all, these systems need to interplay and they need to have the same underlying information to deliver the right results on one side to the customer service agent that was on the phone with me, but on the other side, maybe directly to me as an end consumer. So I don't even have to have to take up the phone and call a customer service agent because that it incurs the cost at t hat company and it incurs a, a time effort on my side. So that connectivity between the systems is super important.

Richard: That example is even more frustrating because you [00:20:00] know that the data is digitized because you have visibility of where it is.

Till: Exactly, but then the chain broke in the end. I had visibility until the last step, and that raised my expectation. Well, it sits close by and it's delivered tomorrow, and then it didn't happen, right?

Richard: Till we've made it 20 minutes and we haven't mentioned AI, so I'm going to buck that trend because AI is the hottest topic that anyone's talking about with business systems without any doubt, from a technology standpoint at least. So with the rise of Agentic AI how important is interoperability between different supply chain systems? The point that you were just making and what future opportunities does it create?

Till: Yeah, I would see AI on multiple levels. . And before we get to AI, let's talk about the underlying data layer, because AI can only be as good as the data that it's fed with and that it's trained on. So if you have a good underlying data layer in all of these different warehouse systems that we talk [00:21:00] about, no matter if it's a micro fulfillment or a large distribution center, that data layer is the foundation, and then AI comes in at different levels.

What we see on one side is we see that companies are establishing an orchestration layer using AI to fetch data out of one system, use AI to get the data translated and then feed it into another system so they stitch together that layer that I tried to describe earlier in that example using AI. And those are early steps that we are seeing from these companies, but some of them are using AI to establish such an orchestration layer.

Of course my background with SAP, I think it's a different perspective. We integrate these systems tightly end to end. So you always have that one data layer that you then can use AI on top of to basically get the insights and I think the next step from using AI now AI is very much used to retrieve information. AI is [00:22:00] used also for transactions, right? That the system can start to help you create an order in the warehouse, for example, or to optimize your travel time in the warehouse or to optimize your workforce that you have available.

I think going forward more into the Agentic AI we will see that we have different agents, like the example earlier, a customer service agent, when I call that service agent, it retrieves me information and maybe triggers another agent to, ship the goods maybe from somewhere, right?

So, AI is definitely a big topic coming into the logistics space. Still early stages. We are seeing, like I said, a lot of good examples across warehouse and transportation with AI. And I think this agent AI topic will be the next big thing triggering different actions in the warehouse, in transportation, and then agents interoperating with each other. Again, the underlying data is going to be important.

And what's [00:23:00] also going to be important, because we talked earlier about these, some of the warehouses, that are not yet digitized. No AI agent will help you if there's not a digital system that can ,you know get the trigger from the AI agent and cannot execute on it because there's no API to receive the information, and there is no digital process to actually execute the information that it gets from the agent. So if that's still manual and paper based that's just not going to help in the age of AI.

Richard: Absolutely. Well, we're coming towards the end of the podcast, so I want to ask the question how SAP can help how does SAP's new logistics management solution support a transition to smarter multi-tiered fulfillment and what innovations are now available to enable that resilient supply network?

Till: Yep. So we just announced actually on October 6th a new logistics solution called SAP Logistics Management. And that solution is actually targeted [00:24:00] on small and more remote and satellite operations, logistics operations of larger enterprises, because we've seen exactly what we talked about before.

Many of our existing clients already run today our extended warehouse management or our transportation management in their large scale distribution centers and facilities for many years. And it's really large scale operations, highly automated.

But what the feedback we got from customers over the past years was that a lot of their smaller operations and more remote sites are not yet fully digitized. And that's why we said this is an interesting area for us to go into. And that's why we developed our new logistics management solution and the thing with the logistics management solution.

And it brings together warehousing transportation, and it comes with a built-in carrier network. So that smaller operations and these remote facilities [00:25:00] basically have all the logistics capabilities that they need and the system is also designed in a way that it on one side can be brought up within a

few days. So very simple in order to bring it up. It can be implemented with just a very few steps, just a few configuration steps.

And at the same time, it interoperates directly with our S4 based logistics application and transportation management and extended warehouse management. And with that you can then build these warehouse and distribution networks that we talked about earlier, right? That you have large facilities running S4 based extended warehouse management and transportation management, and maybe even the regional facilities run that. But all the hundreds of the smaller facilities, they would run logistics management but it interoperate, they interoperate.

So you have that visibility, the inventory visibility, but also the visibility on the transportation layer and on the freight [00:26:00] collaboration layer with your carriers and three PLs. You could also go as far as to use the system and provided to your three PL, that the three PL could basically run on your system on SAP logistics management in their warehouses.

So even though you have outsourced the business, you would still have full control over inventory and not just inventory, but also the transactions that are happening in the warehouse. So this was just released.

We are very excited because we do see quite some interest in the market for this, for the reasons that we actually talked about in this podcast, right? It's more and more the trend to be agile and in order to be agile you need to digitize some of the business that's not yet fully in a digital way.

Richard: So to be clear, the new logistics management solution is not replacing extended warehouse and transportation management, it's complimenting it.

Till: Correct.

Richard: And enabling a company to digitize a hundred percent of their facilities with a much more [00:27:00] simplistic solution, where required.

Till: Exactly, yeah. It's fully complementing our existing products that have been in the market for so many years. Like I said, targeted really for these smaller, more remote locations that many of our companies of our customers have.

Richard: And we'll share a link in the show notes to get more information about that new offering as well. Till, I always ask the same question to my

guests, so, uh looking for your point of view from a logistics perspective, but what is the future of supply chain?

Till: We talked about AI before, right? So I have to mention AI and I did mention that when we talked about the logistics management. Logistics management also uses, for example our intelligent agent, Joule, for example, to retrieve information, but also to transact and also to help the user when they configure the system. So Joule is really one of the agents that comes into play here.

But in general we talked earlier about AI. So [00:28:00] AI is definitely a topic that's moving rapidly into this space AI Agents. So one is the AI, like mentioned right, to retrieve the information, then there's the AI agents really triggering processes and completing actions, and orchestrating different parts of a logistics business, right? So I think we will see a lot more of this orchestration done by intelligent agents because they fetch information in some area. Then they provide you different alternatives. They can simulate different alternatives and then provide the user with the best alternative and a recommended action, right? I think this is something that, that we already see on the horizon very closely.

And then the other thing I definitely wanna mention in this field is robotics. We've really seen a strong pickup in the robotics space, robotics in the warehouse, it's becoming more and more mainstream and more and more affordable. That you don't have to have static warehouse [00:29:00] automation infrastructure, but that you can really work with different robots and cobots that are supporting the warehouse personnel for picking right for trend shipments and things like that. And I think the two of them actually go together. As AI gets more and more intelligent, it can then trigger activities directly with the robot and automate the warehouse even more.

All of that requires what we talked about before that you have a digital infrastructure, right? So, and that's, I think the fundamental step that many customers have to do they need to digitize their business as much as possible. Also bringing smaller and remote businesses into a digital format and establish that data layer that then AI needs to work on. and I think that's that's the future that, that at least I see in logistics and it's not far out, right?

So I think it's maybe three to five years out for mainstream adoption with AI and AI agents. We already see the first clients pick up AI use [00:30:00] cases and starting to work on that and already see the first benefit.

Richard: Till, thanks for a great conversation. It's been as ever, really interesting and informative.

Till: Thank you, Richard was good fun.

Richard: And thanks everyone for listening. Please mark us as a favorite. You can get regular updates and information about future episodes. Also go to the show notes and we can provide more information about SAP's new logistics management solution. But until next time, from Till and I thanks for discussing the future of Supply Chain.