Episode 166: Practical GenAI Use Cases in Supply Chain Planning and Execution with PwC's Moritz Kramer

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Richard: Hello, my name's Richard Howells, and this is The Future of Supply Chain, a podcast where we discuss [00:01:00] hot topics, best practices, and the latest innovations in today's global business. And I'm joined by my wonderful co-host Oyku.

Oyku: Hello everyone. I'm Oyku Ilgar, a marketer, blogger and podcaster in the supply chain in ERP area at SAP. In today's episode, we will explore the Gen AI use cases in supply chain planning and the real world value it's delivering in today's unpredictable world. And to do so, we are joined by PwC's Moritz Kramer.

Hi, Moritz, happy to have you on our podcast. Can you start by giving us an overview of your role in what you do at PwC?

Moritz: Absolutely. First of all, hi. Thanks for having me here. So my name is Moritz, I'm a director at PwC. I do work with executive teams across large scale supply chain and operational transformation projects. So this is generally focusing on the transformation across business process and technology. Then I think the hot topics as of today is resilience, transparency, performance, improvements in the end-to-end supply chain. There and in [00:02:00] particularly where I focus on is the demand and supply chain planning and rich somehow with the manufacturing forcing and fulfillment area. There, I support clients from the strategy to execution.

So that means we do so to say the objectives, what we're scaling for from operating models to business processes, enriching it with the digital capabilities, but also then breaking it down into the technical implementation services. Also enrich with the AI capabilities, which are there as of today.

I guess the biggest challenges we're currently seeing there is the complexity across the network which have dedicated constraints embedded where we need to get used to capabilities to optimize it and get it done. So maybe in one sentence to summarize it a little bit. My role is to enable supply chains to be future ready. I think that's key, agile data driven, and then particularly to support the growth of our customers in this [00:03:00] volatile environment, which we are currently in, which is crazy.

Oyku: Love it. So let's start with a question on top of many people's mind. What real value do you see generative AI is bringing to supply chain planning right now?

Moritz: That's a very good question. I think Gen AI is in the mouth of everybody's work. It's there. We cannot neglect that anymore, but what I call, say from a supply chain planning entity, it's not really about replacing anything. It's rather about the supporting the decision makers where currently I would say traditional systems and business process are falling short somehow.

And what I would like to highlight there is in particularly in four key areas I think the first, which is important in that sense is decision support in sense making. I think supply chain planning. Generates across demand and supply, enormous data sets, scenarios, exceptions, alerts. Gen AI helps us there [00:04:00] synthesizing, so to say, this complexity.

So to give it a little meaning to it, explaining why is it that way? What trade off do I really get out of it? What risks are in the market, how can I actually explain that? And this in our current world dramatically reduces the Times Planner is actually spending operationally interpreting those scenarios and outputs.

The second, I think this goes hand in hand a little bit into that one is the scenario exploration and responsiveness. I think those classical systems of planning, their calculating scenarios, their struggle to make data accessible, gen AI, it will give us rapidly that what if exploration senses in natural language, so it will give us back, I have a demand shock.

What is the impact? I have a supplier disruption. What is the impact? Whatever capacity, what is the impact? So it's getting more of that business related input,

clear decision implications, and particularly when we later [00:05:00] on also talk about a little bit about that SNOP. So that management process for that executive decision making, which I heavily discussed with the leaders of the firms we're discussing about. The third, the big one I think, but that's crystally clear, it's productivity uplift. And I think that's clear what we're asking for. Reduction of manual efforts. I think that's key to success. Getting rid of data validation, exception handling, parameter adjustment documentation, which is a pain in the ass for lots and lots of people. But also that communication purpose, getting that information gathered together into publicity publicate to the crowd.

This can be fully automated today. Also across Gen AI as of today from drafting those decision making, I call that the planning narratives into that really good management summaries. And lastly, the fourth one I think that's also the biggest one, which I actually want to emphasize. It's bridging a little bit between, [00:06:00] on one hand side you have the business people.

On one hand side, you have the it and the planning related people. And the biggest challenge isto come back them in somehow a translation layer. And I always love that, I'm there as a consultant to translate between A and b to translate between complex business processes and complex systems.

And even Gen AI is helping me to give the users and the participants the possibility to understand and not only in one particular field, but to have it horizontally. So across sales, operations, finance, procurement. So everything is all of a sudden getting transparent and Gen AI helps to understand and that's where value comes from.

And however, it's a little bit incremental as you might understand. It's not there. Just out of nothing. So organizations, they need to see results. They need to see that Gen AI is embedded into the existing world and not treating it, so to say, as a standalone setup, which is on the side, which is helping me.

So what we are also [00:07:00] aiming for from a PwC perspective, to combine both worlds, meaning there might be the business process, there's the technical solution to it, and the Gen AI set, it's got to be on top of that tech layer. Enabling the people and giving, so to say, the meaningful results out of it.

Richard: I was visualizing as you were talking that Gen AI is like the marriage counselor between business and IT. Making sense to the chaos sometimes.

Moritz: Absolutely. It's combining two things, which in my sense nowadays, they belong together as and it's not. That we don't want it. We just need to

understand how much we want it in what way, and in what speed we want to integrate it.

Richard: The other examples that I thought were really interesting is that people always see planning as a black box and that trust that the information that comes out at the end and how Gen AI and that. Getting your answers [00:08:00] in the native language can help you disseminate how we came to that conclusion or how the planning system came to that conclusion. Are you seeing that a lot of people looking to leverage AI to actually unravel all of the data that a planning system generates?

Moritz: Absolutely, so to give you a clear example on that one, we are currently conducting a big project, one of, one of our clients. And we're doing it with the technology layoff, SAP, in that sense. And it's about inventory optimization all across the network. So you got to imagine you got service level from one side, you got lead times from the other side, you got inventory parameters from the other side, and all this combined goes into a black box, which is the inventory optimization engine. And you got to imagine thinking of asking the question, if I would raise my service level by all 0.5, what's the direct impact?

However, it's not only one parameter, as we all know, influencing algorithms and an [00:09:00] optimization. But it's multiple wats. And to give you, so to say the possibility to chat with a chat bot, giving you a natural language, the results which you want to understand for, that's key even for us 'cause for us it's even also hard and I'm quite honest with you, for us we also need to understand how the engine works. And I guess we've got so much experience from our previous transformation projects, but every client is different, every parameter is different. So I think that's key going forward that natural interaction in German, English, French, whatever language in natural, what the people are used to, it's tremendously, yeah.

Richard: The other thing I wanted to talk about is when we start these processes, when we start a planning implementation, we've always gotta ensure that the data is accurate, and it's true when AI comes into it, it's even more important to make sure that the data is accurate to start with. So what should companies do to [00:10:00] get ready for rolling out Gen AI in their supply chains with that in mind?

Moritz: Yeah, so I think Gen AI only can be, so to say, utilized in a proper manner if you have that strong data foundation. So usually we tell the people, you got to ensure that the data which is going in where, so to say all the magic

is happening is there, is clear, is harmonized, and everybody understands it in a proper way.

So generally speaking, a preset of work needs to be done beforehand, before we actually start an initiative. But when I talk about one of my projects where we do that planning transformation as we start that project, as of day one, a master data harmonization, transactional data master and harmonization is constantly happening. So this is an ongoing process and you will never stop doing that and the people will understand. 'cause if they [00:11:00] want to leverage the best out of technology, they need to understand as in, as out. And the better the data is they give in, the better they will have it at the end of the day.

So data accessibility, we're talking also about data lakes, we're talking about ownership steward. So there are multiple layers all of a sudden coming into place, but without them you might not be successful.

Oyku: Follow up question we already talked about a little bit, but I wanna ask, are you seeing this AI being leveraged to help harmonize the data?

Moritz: It actually is. However, it's not the key solely to harmonize it. Yeah. So at the end of the day, what we are looking into is. As I outlined before that we are, for instance, getting a data lake in place where data objects, data products are coming together, which is, so to say, collecting all data which is required, but what is also feeding, so to say, [00:12:00] proprietary applications like a PS systems planning systems, which we are using for, so the harmonization will take place and it's necessary. However, most of the time though, the USP of most of the firms are within their data sets. So we will always have some custom data sets on the site, call it about variant configuration. They are having multiple variances. They have multiple so to say, assets, which they're asking for. And yes, it will be harmonized, but I think the foundation has got to be there on the basics where gen AI will be embedded up upon. However, on the sidetrack with, so to say, the additional attributes, we might not be as specific to harmonize them right away, but it's a way to go and it's so to say, as I said, a continuous process.

Richard: I was just reading a zero 100 research [00:13:00] report, and it says that by the end of 2026, they predict that 90% of companies will be piloting AI for supply chain master data management. So it's definitely our customers are definitely looking at AI as a way of ensuring accurate data. I wanted to move on a little bit about how AI will affect people. Because the fear factor is always there. Fear, uncertainty, and doubt. The FUD factor, we always, your AI will re will replace my job and one day it probably will, but not in a near term I don't

believe. But where do you see AI replacing people versus augmenting their work or really empowering them in supply chain use cases? 'Cause all of those are on the table and all of those are possibilities.

Moritz: That's a big, I can say that's a big question first of all, it can be answered in multiple ways. And maybe let's start out with that. So the [00:14:00] AI and supply chain and supply chain planning, it's not like a uniform topic. You got to imagine that as I outlined before, we have different kind of tasks, we have different kind of criticality across decisions. We need to understand the context behind this, but in practice, AI will absolutely do replacement of manual and operational task support, the roles to perform decision making and empower in my sense, the decision makers to perform their actions. And also in that sense, I think let's go a little bit into the topic of those highly repetitive rule-based task, which are mainly there. I guess you all know that it's from a forecasting manual, data cleansing, it's like that routine forecasting, which we are talking about parameter adjustments. You got to imagine you have forecasting methods and you are trying to manually [00:15:00] override parameters, whereas AI will support to give that meaningful updates all on an operational day-to-day level.

Richard: And nobody goes to work saying, I'm really looking forward to adjusting the parameters. Let if the system can do it, let the system do it.

Moritz: Absolutely. However, always in that sense, and now what I'm saying it's first of all about those manual tasks which are repetitive because I think in particular what you're talking about when we're also going into, I'm not looking into the parameters of forecasting, but when you adjust, it could have a huge impact because forecasting, as you generated demand planning and has huge impacts later on, on supply planning.

So always there's got to be that check mechanism where people interact once again. So AI and the machine learning, they will provide propose and then there might be still a decision making in place where the people are there. 'cause people is still in that sense, I think the dominant decision maker. As of now, not [00:16:00] maybe let's don't call out in 20 years.

I will not predict anything in 20 years, to be honest. But when we're looking into the near future, two to five years, where we're, I think the AI will help to explain, to generate those scenarios, to flag risk, to summarize trade offs across cost, service, working capital in the market. But it's.

Not that much more from a planner. I need to crunch into an Excel table. I'd rather have that problem on my stake. I want to make a data-driven decision making, and I want to be sure that the consistency of everything in the backend is there.

Oyku: And also it's going to free up so much time of those planners so they can use their knowledge to make more valuable decisions, just spending time on repetitive tasks.

Richard: That's the productivity uplift that you referenced right at the start. Your third example of use cases.

Moritz: And you got to imagine with [00:17:00] the entire world getting older and older. And you also know that people are, so to say, as soon as they're returning here from a German entity as of now 67 they stopped working. And we have that baby boomer generation all of a sudden, which is. Going out in this period, we will have lots and lots of tasks, which are still there, which are necessary for companies to be performed, but there are no more people to do them, and they're not affordable no more.

And then I think. It is really about that faster data supported decision making. It is telling also a story and giving you meaningful sense. Also for the xx. You got to imagine in that SNLP meeting, which we are there, this is gonna still be a meeting where people are sitting together from a C level making the decision. Am I willing to make an investment in the future on CapEx because the machine told me to do you got to imagine I'll give you an, a quick example from one of my clients. It's [00:18:00] they're asking, they have a big project in five to 10 years. And they are asking themselves, first of all, am I able to fulfill that within my given supply chain capabilities?

That's question number one. Second question, if I'm not capable of doing that, do I need to, so to say, make a new investment into a production side into. Machinery parks into people or will I simply outsource? And at what certain point do I make that decision? And that decision usually comes with risk. Risk associated to it. And I think what AI will do and will help is this is the scenario, this is the trade off. If you take that risk, that might be an uplift of your sales revenue by 40%. However, if it's not gonna come I am sorry for that, but that's the risk and the opportunity the firms take. But those decisions have been taken 20 years ago also by the leaders.

However, it's not data driven that in those days they have simply made a very good I'm not gonna say always gut feeling, it was also [00:19:00] data-driven

but then we give more meaningful insights and that supported process. So then I can simply say it's not gonna replace any of those people, they rather reshape and refocus in being an architect for decision making rather than I'm the planner crunching in some numbers,

Richard: And it'll help them make more info. Informed and hopefully better decisions and be more confident in that decision that they're making.

Moritz: but I'm only more confident in that decision if I get it explained what actually happened in the backend. So I want to understand, that's exactly where we're coming from. We have scenario A, B, and C. And what I'm deciding for is that only the financial factors. I also want to understand how did you come to that decision that you want to propose option B to me?

And I think that's where Gen AI will boost and give explanatory reasons to react exactly on those those problems which are there and which are happening on a day [00:20:00] to day basis. Yeah.

Richard: And it's also where we need to ensure that we remove the bias because it's gonna wait a decision somehow. Is it 50% on finance, 30% on this, 20% on this, or is it 80% based on a financial decision?

Moritz: I am fully with you. Yeah.

Oyku: Moritz I remember you mentioned earlier, before we start recording the podcast it's quite busy at work with the customer, sharing strong interest in Gen ai and asking lots of questions. So that's great news for us because we have content to share, but maybe not so good for you. But given all those conversations that you are having with the customers and the challenges that you are seeing, what do you think some. The biggest obstacles for companies facing when implementing gene AI and supply chain planning.

Moritz: Yeah. That's one of the toughest questions we usually get from the clients. How can I get started? And I want it fast. That's usually the comment. [00:21:00] I would've loved to start that a certain time ago. We talked about the first big point. It's data quality and fragmentation. So data is all apart.

First step, challenge, bring that stuff together. Align them, harmonize them and particularly in supply chain planning. I think it's about orders, it's about inventory capacity, information the regions, the locations, the dedicated systems. Do we have an ERP system in place? Is there also a PS systems in place?

So only window po those points are getting together. I think we're good. I think topic two which is I think one of the biggest ones, you got to have a use case, which is value driven. If there's no value behind this, more than happy to implement any AI set up, but it's not gonna give you anything, and the top management will not be convinced and not gonna spend no money on ai.

Just that we imp amplify AI and embedded somehow they want to [00:22:00] see improvements. automation, better decision making trust. And this is also an always toggled and combined with KPIs, which will be influenced, meaning top line and bottom line. But the challenge is if you have not defined those clear cases, what you're driving for, you are asking guys, go ahead, make that big bang, gimme some inputs.

And we rather say start small and don't look always to the North Star, even though that vision for the North Star needs to be there. And maybe a third one, which I would like to highlight in that sense is you got to imagine those existing planning systems, which people are having, SAP can access online employee you name them.

You can look into Guard by Quadrant and you will see all of those. They also have some of those AI capabilities currently in place. Everybody's pushing on it. [00:23:00] And the biggest obstacle, what or challenge for the people? C. Now I have such an a PS, what do I do next? All my use cases, which are there already embedded.

Do I need to have something else? And that's exactly where we, from an external point of view, come in place from a market perspective asking, we know those use cases. We know where to go, we know what to put on top of it, and there's not that one big shot. As I said, there might be an ecosystem out of AI use cases, which are driving value, and that ecosystem needs to be somehow combined.

Orchestrate it. Giving those firms those meaningful insights, what they're asking for.

Richard: That's great advice. I want us now, we're coming towards the end. So I want to start looking to the future. We are the future of supply chain podcast after all. What trends do you expect for AI and Gen AI in supply chain planning over the next couple of years? I'm not [00:24:00] asking 20 years, because you said you won't predict 20 years out, but what are you seeing on the horizon?

Moritz: I think when we're looking currently what we're doing, I think we are doing experiments a little bit with it, but when we're looking into the future, I think it's embedded capabilities all across, so it's not. Can we use Gen ai? Question mark is rather, how reliable is the decision I'm gonna make to a gen AI proposed solution and.

It's not about, I would say pilots no more. It's about co-pilot. So people helping me in that sense so that we do not have a standalone system somewhere saying something we need to be in harmony across. And this also comes in particular in place that the planners executing. They need to be the co-pilot next to a pilot, or they are the second co-pilot, I don't care how you want to call it at the end.

So asking questions. Why is my inventory spike in that [00:25:00] region as big? You get the answer from your copilot. Why is so to say a demand drop in Europe all of a sudden happening? You get an answer to that because the datas are there. So I would say one of those trends is particularly coming, so to say, into the conversation.

Back and forth. Back and forth. That's what I also do with co-pilot. That's what I do with J. I ask questions, I get back answers, and I continue on those. Maybe another big point, which I would like to give you looking ahead is in particularly that guided decision making. I think we also mentioned that all across those calls, I think it's important that human is still the decision maker in place.

However, gen AI supports this judgment giving you that meaningful insights. And therein, of course, as we said, the role of a planner will shift. But it will not disappear. And I think this is very important. A planner will still be there, but he's gonna be that guy looking into it, giving you the details, giving you say, I'm more [00:26:00] strategic, and a little bit thinker, and more business oriented rather than a data cruncher of Excel tables.

And maybe also, and I think this is the closing for that one, I think the expectations are tremendous as of now. To get quick benefits, and I think this also will normalize a little bit when we see that we have use cases with value. It's not so overhyped. Everything we have return on invests really on dedicated use cases, which were happening.

We will have successful companies which have embedded and are differentiating, and particularly due to Gen AI. Also, we, from a pwc, we want to be differentiating with our services. We are embedding Gen AI in a day-to-day business, helping our clients to accelerate. Absolutely. So I can simply say

it will be a booster in the future either. Pragmatic productivity quality. But at the end of the day, you got to [00:27:00] imagine quality and people still on the focus next to that AI-driven setup for the future.

Richard: Moritz, we're coming to the end of the podcast. It's simply flown by, which is usually a good sign that we've had a great conversation. But I'm really gonna challenge you now because how can you summarize everything that we've just talked about in a sentence or two? Because what, the final question is with supply chain planning and AI in mind, in a few sentences, what is the future of supply chain?

Moritz: That's not easy to answer, but I'm gonna try. Yeah. I think the future of the supply chain and supply chain planning, we are adaptive, we are flexible, we are an AI enriched and I think we are somehow decision centric. So we want to have those decisions where I think the Gen AI will help us to translate those data sets, drive them into [00:28:00] scenarios, give us recommendations, humans like you and me, we will retain the accountability for that trade off making A or B, and it will shift somehow from that currently static, iterative set into continuously periodic cycles, real time data sets, real time decisions which are resilient and which help you to orchestrate your end-to-end network.

Richard: Great summary and I'm ready for it. Hey, thanks for a great conversation. That was really interesting. I'm sure our listeners will love it.

Moritz: Very good. Thanks for having me.

Richard: And thanks for everyone for joining. Please mark us as a favorite, you can get regular updates and information about future episodes, but until next time from Moritz, Oyku and I, thanks for discussing the future of Supply Chain.