

THE FUTURE OF ERP

Industry AI for ERP: From Generic Models to Domain-Specific Intelligence with Frank Ruland

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[00:00:16] **Richard:** Hello, I'm Richard Howell, and this is the future of ERP, a podcast where we discuss hot topics, best practices, and the latest innovations in today's global business. In today's episode, I'm joined by PWC's Frank Ruland to discuss industry AI for ERP, how to move from generic models to domainspecific intelligence. Frank, I know we know each other, but maybe you could introduce yourself and your new organization.

[00:00:43] **Frank:** Richard, it's so nice to be back in the ERP world. And thank you for hosting me today. My name is Frank Ruland. I joined PWC in September last year after a bit of work with SAP in the past. At PWC, I have the. Leading [00:01:00] innovation and industry topics in the context of our partnership with SAP. And as you can imagine, innovation includes AI these days for sure, and is based on ERP and settled in industries.

[00:01:13] **Richard:** By now, I'm pretty sure that everyone listening to this podcast and everyone talking on this podcast has dabbled with different AI tools, but why do the generic one-size-fits-all AI tools and models often struggle to deliver value in an enterprise ERP environment?

[00:01:29] **Frank:** Excellent question, because it's not about technology, it's about context. And you can go back to Clay Christensen, the well-renowned professor. And this context comes with industry and business acumen in a sense, sales forecasting differs if you do it for FMCG as a fast-moving consumer goods, or if you're doing it in a pharma context. That's why just dabbling with a technology, it probably will lead to hallucination, or at least not the right [00:02:00] context information.

[00:02:02] **Richard:** Great answer. So what makes industry-specific intelligence, you said, the difference between CPG and other industries, so critical for ERP, and how does it enable more meaningful business outcomes?

[00:02:14] **Frank:** We can stick to the example before and use this sales forecasting as an example, right? We have customers in FMCG who tell us that seasonality and regional preferences, personal taste, are very important. But there's even more specific industry examples or aspects if you think about utilities meter to cash, or my favorite topic when I stumbled into utilities many years back, especially with our friends in the US, they always talked about this thing called vegetation management. I'm like, vegetation management, what is that? Vegetation management is what happens when you are cutting trees and infrastructure along a set grid line that is above the surface. [00:03:00] So, what is vegetation management? It can be viewed as a part of asset management because you're talking about the grid lines, the power lines. It could be an element of field service management because you're sending out crews, and they have to cut the trees effectively. But then it integrates with workforce planning, it integrates with procurement, it integrates with finance, and the overarching topic of budget planning, because how many trees are there, when's the right time to cut them? So plenty of those industry-specific elements that in an EOP world all come together nicely.

[00:03:37] **Richard:** In that example as well. It relies on weather patterns and rain forecasts because plantations will grow quicker in different parts of the country than others at different times of the year.

[00:03:48] **Frank:** Absolutely, absolutely. And at the same time, you're having restricted resources, so you can't send every crew out the same day. And therefore, understanding those weather patterns or seasonality is [00:04:00] important, if you're not operating only in a single jurisdiction, but you're really cutting across a vast global environment.

[00:04:08] **Richard:** And that's the first time I've heard of vegetation management as an issue for utilities. But it makes perfect sense when you describe it as well. Yeah. Can you share some more practical examples of how AI is transforming processes in the manufacturing space? For example, you touched on predictive maintenance a little earlier, and also in the retail space, whether it be around customer buying patterns or whatever. Maybe you could share a few examples from different industries.

[00:04:32] **Frank:** It's very timely, actually, Richard, because we had the big industrial manufacturing fair, Hannover Messe, here in Germany. SAP was there with a large booth. Many of the competitors, the hyperscalers, and PwC were happy to be part of the SAP presence as well. One of the use cases we had there was around shift handover. Because again, it's data that's inside the SAP ERP [00:05:00] system. It's data that comes from other sources, and all of that needs to converge and have an agent that prepares the shift manager when they come in. To actually see what has happened in the previous shift and what he or she should actually focus on for the next one. What are some of the tasks that are pending? What influence could they have on their specific next shift? How does that all refer them back to maybe even customer orders or other things that are included in this vast thing, or, hey, maybe the past shift? Recognize something on a machine and would suggest predictive maintenance, but the next shift had that predictive maintenance already scheduled. You can imagine all kinds of complexities arising out of that, and hey, yes, the human in the loop will have a lot of experience, but hey, it's contrasting or contextualizing all the vast amount of information and giving the worker something in their hands. That's, [00:06:00] in my opinion, where AI can do a lot.

[00:06:02] **Richard:** That's a great example as well, because that's usually the most frustrating part of somebody who's done a 12 hour shift, wants to go home, if AI can help prepare all of that information so that handover can not only happen quicker but with more accuracy and not miss things that you may have missed because you're tired after that 12 hour shift.

[00:06:24] **Frank:** Absolutely. I think really it's something where AI is not just augmenting, but also the human and the business process. And then retail, the forecasting topic, we touched on it, or the consumer products topic, but hey, think about the opportunities with trade promotion management, or revenue growth as you would call it, right? We talked about customer behaviors and seasonality. In the Americas, or now we are approaching, something that is universally applicable in the world, right? The FIFA World Cup is coming to the US in the summer, or, hey, imagine the amount of data that you can look into [00:07:00] and analyze for. Hey, what team is playing in my country? What team is actually playing in the city, or which retail outlets will be most used, or where are the patterns of people as they work to a stadium and from a stadium? That's amazing. Opportunities where an individual would have to digest all that data, put it into an Excel spreadsheet, and I don't know how many lines of data they can analyze. I would prefer the button and then get a good recommendation without hallucination because it uses all the context information that I know for

my product portfolio as a retailer. And then just go on to the differentiation elements, or maybe just do the final decision based on a good recommendation from the tool.

[00:07:47] **Richard:** That's another great example because that data is applicable to many different companies in many different products, and they'd all have to do the same first step, pulling all that [00:08:00] information together. If they're leveraging AI again, hopefully that can get automated and more accurate and timely and having that real time visibility as well, and realtime data at the day of the event because oh, 5,000 more Germans have turned up in than we were expecting because they're not going to the game, but they're gonna go to the watch party. 'cause they just want to be in the city.

[00:08:21] **Frank:** Exactly. Exactly. Is the mood positive because they won the last game, or did they lose it, and they're up for relegation, or hey, did one of the players, the favorite players, actually bite into that candy bar that everybody loves so much, or have they actually had an energy drink to get excited?

[00:08:39] **Richard:** Something goes viral because they're wearing a certain sneaker, going

[00:08:42] **Frank:** Yeah, exactly. Exactly, exactly. One of the younger German players actually was caught on camera while being injured with this very fancy pink dress, and all of a sudden, all the kids are following this on TikTok, trying to figure out where this pink dress is [00:09:00] coming from. I mean, it's not something for you and me, Richard, to wear, but hey, some of the others will probably like it.

[00:09:06] **Richard:** Yeah, I just wish that AI could make the ticket prices cheaper for the World Cup. It's ridiculous.

[00:09:11] **Frank:** So I hear, so I hear absolutely.

[00:09:13] **Richard:** I'm sure that AI is helping with the pricing algorithms for supply and demand.

[00:09:18] **Frank:** Yes. Yes.

[00:09:19] **Richard:** working against me at the moment, though.

[00:09:22] **Frank:** Oh, wow. I hear that. Also, the NY Transportation Board is increasing the prices for getting to the stadium.

[00:09:29] **Richard:** I live in Boston and there's a lot of complaints about the cost of the train from Boston to the stadium 'cause it's outside of the city.

[00:09:34] **Frank:** Amazing. Amazing.

[00:09:36] **Richard:** Again, AI is probably determining that price based on supply and demand. Moving on a little bit, how important is it for ERP teams, and I think I know the answer to this one, to understand industry terminology, the regulations that affect it, and the workflow involved when building or adopting AI solutions for their particular company?

[00:09:58] **Frank:** The short answer is [00:10:00] yes, absolutely. It is important, right? I mean, context information, the importance of industry terminology, what specific regulations do you have, and what do those regulations also impact from a workflow perspective? With your background in supply chain. I don't need to talk to you about GXP, right? The pharma and life science world is full of that regulation, but you can see the same in other contexts. You also add the integration challenges or the integration opportunities in that array, right? I mean, there's a lot of non-SAP system data that's out there that is highly relevant in an industry context. We talked about. Manufacturing, we talked about retail, where data is in different formats. Probably there are some legacy systems that you need to include, and maybe at this point in our talk, right? If you really wanna do one of the fancy things with [00:11:00] AI of this forward-deployed engineering, I hope the engineer you're getting is actually one who understands your business processes and the industry you're operating in. Otherwise, forward-deployed engineering is a nice concept, but will it then create the value that our customers are really looking for? And I think that's something where if you have the ERP knowledge and at the same time you have that appetite for innovating your business processes, right? The best practices of an industry, but you also know what role AI can play in creating the future best practices, that's the perfect combination.

[00:11:39] **Richard:** Yeah. Yes. Pulling together that know-how of the individual with the technology is critical. And, you're absolutely right. You have to have that domain expertise from a product standpoint, but also from an industry perspective or a company perspective sometimes as well, because some companies are very unique within their [00:12:00] industries. You started to touch on this question a little bit, but I want to delve a little deeper. What are

some of the biggest integration and implementation challenges, whether it's, as you mentioned, working with legacy systems, leveraging APIs, or managing change? How can organizations address them when deploying industry AI in their ERP or embedding it into their ERP system?

[00:12:21] **Frank:** On the one hand, the implementation challenges or the integration challenges vary widely by industry and certainly also by the system estate that the customer has picked. I think it is important not to focus on the challenges arising out of that, but more on the opportunities, and actually create a bit of a heat map or priority map to ensure that you're focusing also on some of the low-hanging fruit when you're deploying industry AI. There's a huge opportunity to just, quote, unquote, activate or implement the embedded AI capabilities. And that will lead to a [00:13:00] lot of value already because it helps with some of the data challenges that we talked about, the integration of business processes into a universal system. Enabled workflow, for example. And then you can actually work on those custom AI scenarios, those differentiating capabilities that need the integration between a quality management system and a laboratory information system in chemicals, for example, to then figure out if your golden batch, your best possible batch, is actually repeatable and scalable, for example, right? And hey, all of that is complemented with the right approaches for change management because, hey, change management definitely varies. If you're talking about a very SAP-centric or ERP-centric estate, or whether you have to include the operational technology side, the engineering teams as well, and then also making sure that that. Universal [00:14:00] holistic change management leads to the right user adoption because ERP is no longer just for the back office, but there are many more that start touching your ERP and touching the agentic results from the ERP data. So again, adoption is not just for the sake of adopting a technology called AI, but for changing and innovating the business process.

[00:14:26] **Richard:** I think that a very important point is that AI is not a technology looking for a solution. It's it. You need to start with the business, challenge the business problem, and then work out what technologies are required to solve that problem. I say that a lot on this podcast, but it still remains.

[00:14:42] **Frank:** One other point that we've seen consistently and I know we probably might have talked about that in the past, Richard is customers in an industry maybe today. But we see this business model reinvention. We see, and that's also something we saw at Hivona Method this week. Industrial [00:15:00]

manufacturing component manufacturers that start having digital products. They don't know what a software subscription means until they actually venture into digital products, right? Are the full elements of a drilling company going for hydrocarbons, or am I an energy provider of the future? Those things where business model reinvention or industrial change will still happen and keep our customers busy, will also be something that influences how you use it in concert with ERP quite a bit.

[00:15:32] **Richard:** There are lots of examples where industry lines are becoming blurred. As companies move in, as you say, with new business models, with new offerings that pretty much every company's a high-tech company now in one way, shape, or form.

[00:15:45] **Frank:** And at the same time, that requires them to be agile and adaptive. And if your modernized ERP, embedded with AI, is leading to that. Hey, win-win.

[00:15:56] **Richard:** Yes, if your business system can evolve with you as a [00:16:00] company. Not fight against you as you evolve,

[00:16:02] **Frank:** Yes.

[00:16:03] **Richard:** It's a win-win, as you say. We're coming towards the backend of the podcast, so I want to start forward, and we are the future of ERP, so I want to have a forward-looking view. So looking ahead, where do you see industry AI and ERP heading over the next few years, and are there any emerging use cases or competitive trends that our listeners should keep an eye on and be aware of?

[00:16:26] **Frank:** I think we are gonna see even more integrated systems because of that need for further digitalization automation and agentic use cases across. The business processes, Richard, that's one thing. And hey, take one example. The world of physical AI and real-world models of human and robot integration scenarios. Just think about the effects it has on warehouse management, for example, right? And further to that, production planning. Hey, are you planning for a human? Are you planning [00:17:00] for a humanoid robot? Are you planning for both of them to work together? That's an interesting scenario, and again, to our previous point about business model reinvention, we might not even know exactly where the road is going. I would argue that. If you have a robust modern agile ERP, those emerging use cases are a true

opportunity, and you can create and enhance the capabilities from there. Competitive landscapes, I truly believe that vertical AI is continuing, right? I mean, again, we talked about so many examples. Do you have to specifically spell them out, or are they just part and parcel of somebody's industry ERP, or are they an outside add-on complement? That's something hard to judge. We will see innovative niche [00:18:00] solutions popping up, and we see them within our broader ecosystem already, right? There are great solutions out there that complement the bigger ERP, and then, hey, at one point in time, they become core as well, and we're part of the discussion. That's what I would be looking for in the evolving trends of industry AI in ERP.

[00:18:23] **Richard:** It's obvious that from this conversation, PWC has its finger on the pulse as far as how things are changing, how things are evolving, the role of industry-specific solutions, especially when it comes to AI, but for people listening who wanted to learn more, how can the partnership between SAP and PWC help, and where can companies learn more?

[00:18:46] **Frank:** We have plenty of opportunities in the various countries where you can meet up with PWC and SAP experts in industry events, in other customer settings we are doing, dedicated roadshows on the topic of AI, and the future of ERP as well. We would just be very happy, Richard, to invite the audience of this podcast into some of those formats and just engage also with us through any of the digital channels, right? We're active on LinkedIn. We are active everywhere, nearly. It's more, the appetite of each individual listening to this podcast and seeing how and where they want to engage with us.

[00:19:45] **Richard:** I'll make sure we include the appropriate LinkedIn channels and also PWC's web pages on the show notes as well, so that you can click to get more information. But as we come to the end of the podcast, Frank, you know what I'm [00:20:00] going to ask next. I really wanted to summarize the conversation that we've had in a few sentences. So in a sentence or two, what do you see as the future of ERP, especially in relation to industry AI?

[00:20:13] **Frank:** The digital core of ERP isn't outdated. I would say it's the bedrock. It's the premise of AI and the future of innovation that if you allow those one to two sentences, that's what I would like the audience to actually take away, not outdated, and use it as a bedrock for AI.

[00:20:32] **Richard:** Great summary. Thank you very much, Frank. This has been a great conversation. I didn't expect anything less, but thanks again.

[00:20:37] **Frank:** Thanks for having me, Richard, and hopefully we'll speak soon in the future.

[00:20:42] **Richard:** I'm sure we will. 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 the appropriate links in our show notes to get more information about Frank and PWC. But until next time, from Frank and me, thanks for discussing the future of [00:21:00] ERP.