

Podcast Transcript

The Lion's Den: Demystifying Artificial Intelligence - Episode 5 The Impact of AI in the Shipping and Logistics Industry

[Rupert Lion](#), Managing Partner, [Boyden United States](#)

Rupert Lion (00:01.966)

So welcome back and we are very excited today to have Daniel Kraus on with us today. He is a bit of a titan in the tech industry and he's worked for over 20 years in sort of a bunch of different executive roles in high growth companies. He's got deep experience across products and technology in a range of different sectors. He's currently the VP Product at Shippabo, which is a machine learning platform focused on integrated freight services.

And amongst his previous roles, he's been Director of Product at map tech business Here, which you might've known before as Nokia Maps, Chief Product Officer of Social Bakers, which is an Index Ventures backed marketing tech business, CEO of Threshold 360, which is a tech platform for immersive visual tools and metaverse type content. Although I'm sure you'll correct me on that or give me more direction on that, Daniel. And for years, he's been building and shipping generative AI-

based products coupled with deep expertise in a range of different market sectors. So super excited to be speaking with you. I appreciate that probably wasn't the best intro in that it didn't talk about all of the things you've done and all the things you can do, but hopefully we can expand on that a little and great to have you here and welcome.

Daniel (01:18.968)

Thanks so much for the opportunity and actually that's the best summary of my history I've ever heard. So thank you for that. I may actually use that at some point.

Rupert Lion (01:25.198)

Okay, good. Well, that's always good to hear. There's always a little nervousness that pops something in there that either didn't happen or couldn't have happened. But on that, I guess, is there maybe anything you wanted to just talk a little bit about just as an introduction to yourself and your background just to help the kind of listeners get a feel for you?

Daniel (01:46.328)

Sure, thanks. So maybe just to frame things a little bit in terms of what I'm doing now and sort of the genus of this discussion is the work that I'm doing at Shippabo. So as you mentioned, Shippabo is a growth state software startup and digital freight forwarder focused mostly on the Asian import markets. And I joined the company a couple of years ago to lead the design and the development and launch of their next -gen SaaS platform, which has been a really exciting process. And part of that specifically was to work with the team there on

the first implementation of a Gen .AI visibility system that could be really used to help customers with real -time decision making and on transcontinental shipments and things like that and truly understand delivery dates and things like that with great precision. So the context here is we shipped our first version of that last year. It's been really successful. And the company was actually awarded Forbes Best Overall Supply Chain Management Platform last year. So we were very excited about that. And it's been a great 18 months. And that's really one of the things that sort of brings me here

for the conversation today.

Rupert Lion (02:47.406)

Great, great. Well, I mean, it's funny you talk about that because I think one of the things that AI, from my understanding, is starting to have a real impact on is those industries that we might think of as just a little bit more traditional, right? We like to talk about AI when it comes to super high tech environments, but perhaps when it comes to logistics and

shipping, maybe people don't have such a good feel for that. So I wonder whether maybe, you know, you can talk to the kind of the work that you've been doing and how...

the modern approach to AI and ML is really impacting the kind of more traditional industry that you're in.

Daniel (03:21.976)

Yeah, absolutely. I mean, in a sense, AI is, I think for shipping and logistics in general, it is really the next great leap. AI is a technology that shares commonality with a lot of others. I think it's going to start very powerfully in vertical segments and then kind of make its way over to the horizontal segments. And the companies, especially in shipping, that are going to be the most successful with that are going to be the ones that use it for specific use cases and then expand.

It's interesting because in a sense, shipping is almost twice removed from where AI is today.

For most shippers for most of the same most importers. you know, the ultimate goal is really not technological not to logical technological prowess so much as profitability for shipments. So they pay a lot of attention to predictability to know what's going to happen because that's important. The resilience of your supply chain. So preventing bad things from happening and then recoverability. So essentially, you know, getting back on your feet when something does go when something does go wrong, when there is congestion at a port or when, you know, a truck breaks down or something like that. So in a sense, AI has a little bit of a natural

place in shipping because I think shipping companies would see any kind of, they sort of regard shipping as a cyclical variable cost. There's a lot of unpredictable sides to it, as we'll talk about. There's the economic side, there's the terrestrial side, the political side, the environmental side, and so anything like this technology that helps them accurately predict and optimize and ultimately simplify their business really can have significant value.

Rupert Lion (04:51.758)

And are there any specific touch points today that AI has with either the platform or the software that's helping to make those things you've just talked about better? Specific examples, I mean, for example, let's take a, I don't know, you'll maybe have one, but let's take a specific example of the capacity management or something like that. Is there something that AI is doing to help you really look at that in a much more granular way than you've been able to do in the past?

Daniel (05:20.376)

I think capacity management is a great question. I think capacity management is one of the next steps. I don't think we're there yet with that. I think there's really two general areas where AI is starting to have an impact. The first one of those is really prediction, which is going to lead us to capacity prediction, which is a major thing. I think the first...

The first example of that is really active transport prediction. So being able to improve end-to-end visibility of where things actually are. So Shippabo has always developed a technology that we call Foresee in this area. Being able to understand regional events and issues and how those factor into.

the delivery time frame for it for a shipment. And it's important to say that's a really difficult thing to do. Even with AI, it takes a really powerful gen AI implementation to actually get there. And a lot of the challenge in shipping, actually, is that the problems that occur aren't problems on the water or really necessarily on the truck. They're really things that sort of happen at the transfer point. So figuring out how to predict those the right way takes a lot of data, and it's actually a big challenge. But I think, to your question, I think the transport prediction is the first step.

I think...

Aligned with what you asked on capacity, I think demand forecasting is one of the next things. Historically, companies use historical data to do that, but there's a lot of external factors that also influence that. So that has an immediate and tangible effect on company revenues. I think demand forecasting is going to be big, as well as freight planning, a kind of understanding. There's a lot of cyclical factors in this industry, so understanding what's probably going to happen and planning the right ports and then also planning for

Daniel (06:58.858)

what you expect, as you said, capacity to be will be a factor there. And of course, that's partially an economic question. So I think prediction and decision support, if you would, is big. A lot of folks, a lot of shippers, a lot of employers, spend a lot of time really focusing on decisions. That's a big part of it. The second big piece that I see happening right now is really around optimization.

and incremental improvement. And there's, you know, on the hardware side when you think about warehouses and stuff, there's a lot of opportunities, of course, inside the warehouses to improve.

things like just -in -time management for item retrieval and stuff like that. So AI integrating with robots is a huge area of research and development right now. I'm sure some of the big companies like Amazon have already invested or sort of way down the road on that internally. But there's also things like predictive maintenance. So at scale understanding, you know, and doing better analysis of sensor data to understand, you know, what's going to need to be repaired and mitigate that first. So there's a whole physical layer to where AI has a benefit.

And then there's the software side for optimization. So, you know, inventory management, which is a big thing and enabling things like just in time shipping, as well as supplier management. You know, a lot of importers have.

tens, hundreds, or even thousands of partners. So being able to track and understand how well each one is performing, identify the risks involved in each relationship, given their physical implementation, and propose improvements and stuff, I think is a big thing. And then lastly, I'd say, and this is kind of my favorite, is this dynamic route planning. It traces back to my time with Nokia and with Here But I think AI for dynamic route planning can kind of pick up where traditional

Daniel (08:42.586)

map data sort of gives out, not just considering real-time traffic data, which we've been doing in the location industry for years and years, but considering things like fuel and delivery constraints factoring in the time that the loading dock is open. And a lot of these delivery factors, which are just historically impossible to generalize. Now, some companies have built their own proprietary systems to kind of handle those things, but being able to build a system that can actually encapsulate those times, balance those with availability and capacity and stuff could be

absolutely magical from an operational efficiency perspective. So I think there's a lot that can be done there.

Rupert Lion (09:18.702)

Yeah. And it's interesting because a lot of what you just talked about is probably not visible to a client or a customer. It's actually magic that's happening in the background. And I think actually that's one of the things that we talk a lot about on this show is that, you know, know, people seem to think of it from a kind of an interpersonal relationship that you have with chat GPT or something like that, right? They're kind of like, what can I ask it and can it do for me? But really what we're talking about is a lot of what you discussed in terms of optimization.

and efficiency and all these things, which are just things that are built into the backend that make things work better. Now, I guess that moves us on to the moves us on, I guess, more to the kind of like the tactical and the kind of daily operational stuff that's going on within

most industries. And I guess, regardless of the logistics and freight piece, have you seen other implementations of AI that are just really helping to supercharge

daily operations in any of those businesses you've been involved.

Daniel (10:24.12)

Most of the implementations that I've seen that are moving the needle for customers are planning and prediction oriented software systems to date. The industry as a whole, I think, is still getting its head around GPT versus just traditional machine learning. So that, as I was mentioning earlier, that itself is kind of a, that is kind of the leap. In the recent term, I definitely would say that that's starting to...

a gently realigned time spend for folks who work with shipping on a day -to -day basis, which again is a tremendous number of decisions. I think one of the first things it's doing is reducing the paper count. It's fair to say they're not chasing as much data, because that's their traditional problem. They're not chasing data as much, and the data is much more correct. They're still chasing partners, they're still chasing containers, they're still chasing truckers, there's a lot chasing them, but they're not chasing the right data. And historically, that was

You know, we as an industry in shipping have spent the past, I'd say, five or seven years kind of getting the data story straight. One of the traditional problems is just not having accurate data, not just having the right documents in your average trans -oceanic, you know.

container transport, you're probably looking at, I don't know, 30 to 50 pieces of paper or different communications going back and forth. But the data supporting the transport itself from the different sources, the different modes of transport has never been particularly accurate. So there's a number of vendors that have emerged in recent years that have several, which are startups, which are doing an ever better job of

gap filling the data, which does use some AI as well, I think, but also providing really good API level data that we as a platform can use to provide good results to customers. So that's kind of been the first step. And that's helped, again, provide good data. So shippers don't have to chase that.

Daniel (12:12.024)

AI is starting to become a more trustworthy partner. There's a lot of research going on. And I think overall the confidence in online prediction is growing. And in a sense, there's an opportunity, I think, in shipping to make a leap not just to vastly complex SaaS interfaces, but rather to recommendations and to summaries that will really help drive decisions in a much more simple and elegant manner.

Rupert Lion (12:39.918)

And I think the one thing that I've noticed with the way in which people interact with AI on a personal basis versus a business basis or professional basis is that they are concerned about data they're putting in and data that they are exposing them or how they're exposing their data, I should say. So I don't really care if I tell Chat GPT about my holiday, right? But I sure as heck do

care if I am a shipper and I'm giving important information about my shipping manifest or something. But that data, I imagine, is incredibly useful for powering the AI engine that's going to think about other future predictions. So how do you square those things off?

Daniel (13:22.936)

That's a good question. I mean, I think the context here, and one of the few things that perhaps makes AI and shipping a little bit easier is the duration of the average shipment, which in trans -oceanics is, let's say, 35 to 45 days. And at that point, the data becomes either irrelevant or at least significantly less important in our time. So I think that's a factor.

Most of the vendors out there who are looking at AI right now are pulling as are we on their historical shipments to be able to tune and build and tweak the models that they use in

order to do predictions and things like that. So it's not just, to your point, it's not just a war of data, but data is a major factor. It's not just, I think...

Someone said data is the new oil, which I only partially agree with because having lots of data doesn't necessarily help you as much as having the right data. And that's especially true when you're working with GPT and building and aligning and tuning, transformers, keyword being tuning, in order to really solve consumer -facing and business -facing use cases. You do need a lot of data to do that. And we as all companies keep that data completely private.

But in a sense, the more accurate data you have about shipments that align with your customer needs, the better job you're going to be able to do in order to help customers both predict in real time what's probably going to happen with the shipments they have on the water, as well as what may happen in the future, as you said, in terms of capacity or in terms of ideal modes of shipping for the work that they're planning to do.

Rupert Lion (15:01.134)

Yeah, I think one of the difficult things here is obviously a lot of this is prediction, as you talked about earlier. And, you know, I can't but look back on the time when AI became in its current guise, which was around 2019 in terms of models and transformers. And then obviously a fairly significant black swan event of COVID. And meshing those two things together, I can't help but look back and go, if we had

the predictive models working as they should do back in 2019, would we have been able to, based on the data that we had already gathered, predict that something like this could happen? And by the way, it might not just be like, historical trends have turned into, yes, we're going to have a pandemic, right? Now, of course, that's harder to do. But what you might have is, you know,

indicators of different things that are happening within the market when that pandemic hit, which could have been very quickly integrated and could have avoided what was, I think, a

pretty significant impact on the shipping industry, for all the reasons we know. So I guess, again, the question there is, how powerful is the AI in its prediction?

Daniel (16:17.752)

good question and unfortunately it's hard to give a very direct answer that because it really depends it really depends what you're talking about shipping is obviously an immensely an immensely complex area but let me come back to your to your example for COVID I think I mean you can certainly accurately trend track any transformer you know is taking in real - time data it's merging that with other things and it's a mathematical question frankly as to whether that's possible that is well beyond me but I would say that it's it's in terms of predicting black swan events

Rupert Lion (16:21.614)

Hehehehe

Daniel (16:45.912)

It would take such a gargantuan number of inputs and such a cross -vertical perspective on things. It would be, to me, it seems a very, very difficult thing to ever do. What we found in terms of predicting status of shipments and stuff is that the more precise we can make the data, the more specific we can make the question, the better result we're going to get vis -a -vis the data that we actually have. So I think predicting, I'm sure there's socioeconomic...

implementations of GPT that could predict things with relative accuracy at a macro level. I think it would have been difficult to predict the impact that actually did have on the shipping industry. But what I will say is that a lot of companies, I think, you know, took, including us, took advantage of that period.

to really to build out their AI models, to build out the technology that's necessary to build and protect, build and predict change. And we're now working actively to extend that not just to sort of the real time case of the boat that's on the water, but also what's gonna happen in the next couple of periods. The period for a shipper.

can be anywhere between 30 days to a year. The bigger the company, obviously the bigger the scope of what they're looking at. But I think when we look at things like capacity and risk and other elements like that, being able to do a 90 day to 180 day period would already be tremendously useful.

Rupert Lion (18:13.358)

Yeah. And look, by the way, you know, the nature of it being a black swan event is it's a black swan event. You can't predict it. That's kind of the point, right? But I guess it's the reaction to that event and how quickly you can kind of get stuff back on track. And hopefully that is supported by these new models, et cetera. I want to just go back to one thing you were talking about. And you mentioned, you know, tuning the transformer. And obviously that's something we know that's very important. And, and obviously, you know, there's this blend of certainly with large language models in themselves.

You're defining the training with a broad gamut of data from whoever's built or designed those large language models. And then either whether it's built internally or whether it's been brought on into an enterprise, you then have a kind of closed, walled garden type of environment where you've got your proprietary data you're tuning with as well. I guess my question here is that tuning that you're doing,

Is there oversight on that, like human oversight, or is it just feed it our data in a walled garden and hope it comes out, spits out better stuff as a result?

Daniel (19:17.582)

there's a tremendous amount of oversight. That's actually the biggest challenge with it is harmonizing, frankly, harmonizing the output of our efforts with the gut sense of our top customers. Because when you've been shipping products between five ports,

in Asia and five ports in North America for 25 years. You have an incredible sense of what's gonna happen in every level of boat. So we had an amazing test case in terms of sort of

throwing that against all of our customers' expectation and understanding sort of how it worked and where the danger points were and things like that. That factored into the tuning. I'd say AI is one of those, GenAI is one of those areas.

like a lot of visual technology where it's super easy to build the demo. You get 93 % of the way there in a month, and the last 7 % takes you four years. It's very much one of those. Part of that is just the challenge of where to start. There's so many things, there's so much data, there's so much inaccuracy in the data at times. There's so many custom processes per client that folks want to use. It can very quickly turn into whack -a -mole.

just as a function of the dependency graph. So you really have to build, you have to do a careful analysis of the goals and then work progressively to kind of generalize that, which is really what we did. Shipping is vastly complex and

all the different actors, if you would, in the chain, which can be anywhere from 10 to 50 people, and they'll control at different points in the shipping process. All of those have different priorities. So your shippers, your packers, your carriers, your air freight providers, your 3PLs, your forwarders, and your customers are all looking at different indicators at different times. And so kind of harmonizing all that together is a little bit of a challenge. But yeah, we used our own, as a freight forwarder, we have a

Daniel (21:07.128)

a very experienced team internally at really best in the industry in terms of freight forwarding and freight management. And so we had on the product side, we had easy access to it to a great reference basis for how things should be performing and handling. And that drove us to a couple of things, one of which is when I first came into the industry and shipping, which was totally new to me about two years ago, I heard people using.

certain words, three or four basic words like carriers, like the big things, right? Carriers add data and risk, where it's all about, you know, risk. And what we discovered as we worked on building Foresee this model, is that when we started to show risk to people, it...

It got very confusing when we just showed the risk because there was a lot of risk and you know Sometimes it was small sometimes it was big but there's a lot of red what we realized was that it made a lot more sense to show people the health of the shipment and so one of the benefits of working with customers and working with our internal team was we turned that into what we call a health score and when you start a lot of our customers will look at you know hundreds of shipments at a time if thousands and Being able to understand things in a simple number

in terms of the likelihood of arrival, if you would, that's driven by Gen .AI, which had to be a much, much better way. So back to your question, yeah, we found that the litmus test was really the gut sense of our customers and of our team. And that's how we really helped boil it down to a reality.

Rupert Lion (22:33.326)

Okay, and is there a feedback loop with the customers? Like, as in, does it genuinely iterate what you're doing internally?

Daniel (22:36.696)

website.

It actually does. We have a constant dynamic conversation going both internally and externally. Part of that is model refinement, of course, and a lot of that too is data accuracy because there's a lot of folks in the chain.

between the carrier and the screen in front of the customer, right? And our model is, and our own platform is just one piece of that. So we have to validate the data that's coming in, which of course we do. And that data, even if it's validated, may not actually be accurate and things like that. Plus there's refreshes and how often that data is refreshed from different sources, which is also a function, for example, of where a ship is actually on the

water, because refresh doesn't happen constantly at the same speed, because refreshes cost money to the data tracking company.

and things like that, so there's a lot to balance there.

Rupert Lion (23:30.318)

It's interesting, you touched on another point which we get into a lot here, which is cost versus benefit when it comes to artificial intelligence and particularly generative because, you know, know, -threaded processes, you're using up a lot of compute power you know, it it a lot of money to do this stuff well. And sometimes the incremental benefit of running that particular model in a particular way is far outweighed by the prohibitive cost of running that compute power. Have you come across that in your current

business and have you seen that being an issue or is actually you're still able to just run whatever you need to without worrying about the cost.

Daniel (24:08.167)

We've certainly run the numbers on it and we actually did look at that at the beginning of designing the product, but in the way that we've implemented Foresee to date, it hasn't been too much of an issue. Part of the thing that is also sort of in our favor there is that there's a lot of money on the shipping side of stuff here, right? And that accuracy is worth a lot because a single, of course you have...

You have just the cost of a shipment delay. You also have the cost of containers sitting at the yard, at the port, or at the customer detention and to merge charges and things like that, which if you're talking about one container, isn't a big deal, but a lot of our customers ship hundreds of containers or thousands of containers a year. And so that can, a 50 container shipment that sits five days too long is well into the double digit thousands of dollars typically. So that accuracy is absolutely worth the investment, both for us and for them.

Rupert Lion (25:01.006)

That's interesting because there are a lot of industries where that accuracy is not so valuable, yet it sounds like it's exciting. And I think that's, I guess the point here is that there are some much larger, more traditional, more established industries that are so big in volume and have got so much money flowing through them that AI is a great candidate. Sorry, they are a great candidate for AI to really create these efficiencies. So let me shift gears a little bit onto, we talked about kind of what you're doing and what you've done. What about the future?

Where do you see the next five years going in terms of how AI will influence, and I'm using AI broadly, of course, AI will influence the shipping market specifically, but also kind of more broadly, do you see any impacts across other industries and things like that?

Daniel (25:45.08)

Yeah, absolutely. So I mean, certainly the use cases that I mentioned, so things like demand forecasting, freight planning, and warehouse optimization, and route planning, hopefully, I think will certainly, those are a little bit the low hanging fruit because they fit into existing processes and make incremental improvements pretty seamlessly. I think the...

big leap is really with automation, which has been the long-term goal in the shipping industry for a long time. Certainly, package systems like FedEx, UPS, DHL, the big ones of course have done that, have easily definable proprietary networks and partners and stuff, and so they can do that with much more fluidity than typical carriers and shippers. So ultimately, automation is, in a sense, the step.

beyond what I mentioned earlier with optimization. And it's really, I think, the key technology that sort of bridges the gap and takes a first step towards what we like to think of as the truly autonomous supply chain, that kind of balances its own supply and demand. Unique to AI, and particularly to GPT, is the fact that the transformer structure itself really ultimately lends itself.

to automation thanks to the way that meaning is assigned internally. I'm sure that's true across a lot of different industries. The first piece of this we actually already see.

which is just in sort of back office automation. So the first emerging example is being able to, I mentioned the number of documents that you have in shipping, you know, it can be 30 to 100 documents across those 45 days. So being able to use AI to just OCR things accurately and make use of that data and enable complex decision making against the barrage of data that you receive, which is often duplicate. It's often sometimes even wrong or inaccurate or what have you. So being able to consolidate that data, recognize

Daniel (27:39.578)

from different systems and produce a result, that's already sort of starting, particularly just the OCR side of that, which makes shippers' lives just a lot easier, because they're not scanning things in and faxing things and stuff like that. So I think that's one piece. Compliance is a natural next step there too. Import and export, control, monitoring, adhering to regulations. And ultimately, this idea of, as I mentioned, sort of harmonizing the supply and demand. A lot of that goes back to partner communication, because there's a tremendous

a loop between shippers and containers and partners and things like that and communications around, you know, around individual shipments. What needs to go where.

for whom, by when, and things like that. So as we start to bridge this gap, as we start to bring real meaning into the data, as we start to drive decisions at both an API and at the UI level, UX level, that'll start to really keep the transportation and warehouse systems in sync. That'll reflect back on supply and demand management. And ultimately, really, I think, become a really key tool for warehouse and logistics managers that just sort of underpins their work. I don't think it's going to be,

replacing jobs anytime soon, back to your ethical question there, I think AI manifest itself is a series of very powerful engines that really help shippers and help constrain the shipper of the containers and also the receiver of the material or the products to work more harmoniously and spend their time much more on business optimization.

than on shipping itself. And so ultimately in a way, I think these systems will merge into ERPs with great fluidity and start speaking to ERPs the way ERPs want to be spoken to, which is with business information rather than this just flurry of kind of shipping, you know.

Daniel (29:35.896)

shipping KPIs and things like that that are very difficult to understand and make use of unless you're actually in the shipping department itself. So I guess to summarize that, like in the short term, it's really, I think, going to be around location, around delivery prediction, around documentation. In the longer term, it's going to be around communication management, enabling partners, and optimization for supply and demand.

Rupert Lion (29:59.886)

I was going to ask exactly that about the ERP systems, or even just the financial systems. That strikes me as an immediate connection point, which as I understand it, isn't entirely conjoined by any means these days.

Daniel (30:15.416)

Yeah, it actually happens. There is integration and it's in that integration just in my experience is very particular to each company. It can be faster or slower depending upon the need. It can be spreadsheet based, CVS based, EDI based, which is another protocol more like FTP, or it could be a full on API based for an advanced implementation. It really depends on the volume and the.

the scale and speed of the overall pipeline. But one of the things is certain, that's that ERP systems that I've seen anyhow don't have that much insight into the real world shipping situation. And again, since the CFO and a lot of companies and the business folks sort of

regard, perhaps regard shipping as like this variable cost structure that delivers a value, but it's certainly never gonna be a profit center. The more we as shipping technologists can deliver

certainty and business facts to that ERP, the better it's gonna be. Like if you look in most ERP systems that I've seen, usually you've got incredible richness across the different panels and all sorts of reports and stuff like that. Usually the shipping panel is kind of just the shipping KPIs, which are a little bit left of center versus everything else. So hopefully over time we can start to translate.

some of these shipping specific things into business measures that help the business folks also make better decisions.

Rupert Lion (31:43.502)

makes perfect sense. And I think people probably would be surprised how little that is done at the moment to some extent. And I guess it relates to things like, I don't know, maybe you have a stat on this, but how much of the shipping industry is still based on paper?

I mean...

Daniel (31:57.592)

That's a great question. I'd say it's probably divided. I hesitate to give a percentage, but I can say in my experience, I think there's still a lot of communications on paper. Most of the analysis is still done in spreadsheets. And there's whole areas like...

and others that are wholly spreadsheet based still. So there's a lot that is partially electronic, but where the source data is coming in from paper. And the source data on paper may not change sort of in the short term, that really depends on the individual company, but it's certainly, the cost to individuals isn't perhaps even so much the fact that

it's on paper, it's the change of mode between things. So going from paper to spreadsheets and then to this platform and things like that. So.

I think we as vendors, we and also the competitors we have in the industry are working very hard to get as much of that electronic side as makes sense into platforms to make it super easy for people. And again, leveraging the OCR and the import things that I mentioned there to bring things into the digital realm as efficiently as we can to start to drive those decisions.

Rupert Lion (33:11.886)

Yeah, no, it makes sense. Well, look, I guess I always ask one question before we wrap up, which is what's the one key takeaway that you'd give to our listeners about what they should be remembering or thinking about AI over the coming years or anything else for that?

Daniel (33:28.12)

That's a great question. I'd say for me, whether it's from a shipping company perspective, implementing an AI enabled platform for the first time, or for an individual startup company that's starting to implement AI in a vertical, I'd say don't boil the ocean. Focus really hard on one single area. Assume that the demo is the easy part, but...

Look to prove whether you're creating it or whether it's being created for you. Look to prove out the robustness of the solution for a case, for a business case or for use case that has a value you can measure. Get that working and then from there, sort of move on. The real world challenge is in the data and the data accuracy.

the real world challenges and the variants, whereas we say in shipping the exceptions. So make certain that those things work really well, get that going, measure it, make sure it goes, and then expand it to corollary cases to expand the influence across the business.

Rupert Lion (34:30.382)

Yeah, now that's great advice. And I love the point about measurement. You'd be surprised at how many times we speak to people or speak to people and they say, we're doing this, this, this and this. And what's the outcome? we think it's this. And I think it's so important. Otherwise we are really just, I won't use the phrase, but we're throwing things away, I'll say, rather than actually doing it for important measures. So that's sage advice for sure. But look, it's been great

chatting to you, Daniel. I really appreciate your time and I think your insights are fascinating. I love the idea of technology by any means kind of renovating more traditional industries. So super exciting to hear about this shipping logistics piece. And I think also really enjoyed your kind of perspective just on how to think about the kind of predictability, the kind of capacity planning and all those things and movement from a fairly old, old school way of doing things into.

much more predictive environment. But hopefully one day we will get to be able to predict Black Swan events. But for now, probably a little out of reach, I suspect.

Daniel (35:35.608)

We're gonna keep working on it. But thank you, Rupert, so much for the opportunity. It's been a great conversation.

Rupert Lion (35:40.142)

Good. Well, that's a real pleasure and thanks for coming on. We'll see you soon.

Daniel (35:43.864)

Take care, thanks again.