

SM193 | 9.7.2024

Markets in Transition | Episode 1

Andrea Aranguren, CEO & President, Minehub Technologies

This week, we kick off our new series, *Markets in Transition*. The energy transition is changing global markets in natural gas, carbon, and battery metals. In our new series, we'll be discussing what these changes mean for our markets — and what smarter markets and market infrastructure we need to build to meet the needs of the energy transition.

We begin our *Markets in Transition* series with Andrea Aranguren, CEO & President of Minehub Technologies. SmarterMarkets™ host David Greely sits down with Andrea to discuss the transition from email and Excel to digital supply chains – and what it means for companies and markets.

Andrea Aranguren (00s):

I think there is a lot of different factors along that sort of transition journey, and I think it's gonna take quite some time. But my hope is that the transparency, the improved reporting will lead to hopefully a premium for a green metal incentivizing sustainable production through the energy transition. I think there is a lot of things that have to happen before we get there though.

Announcer (23s):

Welcome to SmarterMarkets, a weekly podcast featuring the icons and entrepreneurs of technology, commodities, and finance ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we examine the questions: are we facing a crisis of information or a crisis of trust, and will building smarter markets be the antidote?

This episode is brought to you in part by Abaxx Exchange, where trading in centrally cleared, physically deliverable LNG and carbon futures contracts is now underway, ready for SmarterMarkets.

David Greely (01m 06s):

Welcome to Markets in Transition on SmarterMarkets. I am Dave Greely, Chief economist at Abaxx Technologies. Our guest today is Andrea Aranguren, CEO and President of Minehub Technologies. We will be discussing making the transition from email and Excel to digital supply chains and what it means for companies and markets. Hello, Andrea. Welcome to SmarterMarkets.

Andrea Aranguren (01m 29s):

Thanks for having me.

David Greely (01m 30s):

Well thank you for being here. To kick off our series on Markets in Transition at Minehub you are working with metals and mining companies to transition to your digital supply chain platform for commodity markets to make their raw material supply chains more efficient, resilient, and sustainable. This is a big transition to make and a big transition for the commodities markets to make to help us better understand this transition I was hoping you could help us start with where companies are now. What is the status quo for how companies and metals and mining manage their supply chains?

Andrea Aranguren (02m 06s):

Yeah, absolutely. Most companies, whether they are mining companies or smelters or manufacturing companies, will have an ERP system. Most customers we see have SAP or Oracle Dynamics. We see those a lot and those systems allow them to manage data internally, but it creates incredible silos for data across the different business units and it creates complexities the second that data needs to either come into their ecosystem or their internal walls or needs to be shared externally. So that's why companies rely very heavily on Excel and email data entry is incredibly manual metals is notorious for having a tremendous amount of documents and just a huge volume of data to even manage one contract. And all of that is primarily done pretty much manually still excel and email. I often get the question, what's our biggest competitor and it's definitely Excel in Microsoft office, but that is changing very much so. So times are changing. There is a recognition of a need to digitize. Companies are starting to make it actually part of their corporate strategy initiatives in order to investigate and move towards leveraging digital tools in order to more effectively manage the way that data is shared and that they manage their supply chains.

David Greely (03m 25s):

So currently a lot of Microsoft Excel sounds a lot like working in banking, a lot of places it's still run on the same thing from a few decades ago. How do you transition companies from that current approach to a digitized supply chain and what does a digitized supply chain look like?

Andrea Aranguren (03m 41s):

The transition needs to be gradual. Our customers are a billion dollar companies. They have incredibly complex supply chains. They are sourcing multiple different types of raw material or selling multiple different types of commodities and so this isn't switch of, you know, you are switching a light switch and everything is just going to change overnight. Of course this needs to be a gradual change. And so we typically suggest and utilize a phased implementation approach where we start on one scope, whether it's one geography or one type of metal, one set of customers or one set of suppliers and we'll start with digitizing that portion of the supply chain and then move on from there. And that has been really effective in our ability to help manage that transition because it really is a slow transition given the complexity in many of these supply chains. In terms of your second question, what does a digitized supply chain look like?

Andrea Aranguren (04m 35s):

I don't think that we have fully seen that yet, but in theory would be a completely integrated wholly digital network where every node in the supply chain, whether it's a buyer, a seller, logistics provider, a bank and insurer are all seamlessly integrated into a secure digital platform and that allows all of those different nodes and stakeholders to manage what they need to do and to share data effectively in a secure manner and that will start with everything like pre-trade. So any transactions on an exchange like ABAC or whether it's request for quotes, which we see very often in the space managed completely digitally and then transition to sort of post-trade execution for the fulfillment of those contracts and then of course integrated with the financing of those transactions and the insurance of them.

David Greely (05m 24s):

I find it really interesting the way you start with, let's start in one aspect of the business, one supply chain, because these companies have so many, I am curious, is there a typical oh wow moment that can happen when this is going well where companies realize the benefit when they start working in one silo of taking the effort to move to a digital supply chain?

Andrea Aranguren (05m 44s):

Yes, there's the first, oh wow moment that we see is, this is not as hard as I thought it was gonna be. I think when people like, I need to get all of my suppliers sharing data to this one platform for all of my business, this is, we have been doing things the same way for hundreds of years and that's going to be hard and we actually have had a lot of success doing that and we have come a really long way from four years ago it was a heavy lift to start an implementation. Now most customers within 30 days, everything is up and running and that is very shocking to most of our customers. That's the first oh wow moment and then I think the oh wow moment, it's when you're doing things one way for so long, it's hard to imagine what it would be like to do something completely different, completely digital.

Andrea Aranguren (06m 31s):

Like what does that even feel like to walk in in the morning and open a portal and everything is up to date and reconciled for you and all the time that that opens up and all the insight that that opens up and so something that's really key about our face implementation approach is that we will pick either one whole facility or one entire type of material because when you get a 100% of one piece of the business, that's when you can really see those efficiencies and start running reporting and really leverage the impact of all of that digital data in one place.

David Greely (07m 03s):

Do you find that first adopter that you go to in a company ends up being the cheerleader and is the second one much easier to get?

Andrea Aranguren (07m 11s):

Yes. Oh yes, very much so. We were incredibly lucky with our lighthouse customer because they were willing to take a leap of faith in us and that made it so much easier for every other customer that came behind them for sure.

David Greely (07m 24s):

And you mentioned part of why, you know, I think people stay on Excel or stay with pen and paper is because it's not just transforming your own company's processes, but then all the suppliers you are working with and the folks you are selling forward to, how do you get the buy-in across the company lines for something like this?

Andrea Aranguren (07m 44s):

We always need a champion, right because this is innovative and different and not necessarily required yet, right, so we could talk about some of the forces driving digitization and a need for digital platforms, one of those being regulations. So I think that will change soon, but can you continue to operate in Excel and email today you could. Is it optimal and is it going to be sustainable in the long run no and so therefore it's about somebody believing in the need for change and being that internal advocate for us but also for all of their counterparties because as you mentioned the change management process will inevitably affect our customers' customers or our customer suppliers and will require at least some slight modification in the way that information is shared in order to drive those efficiencies. So it is not just about changing your own company, but it will impact the rest of your supply chain.

David Greely (08m 40s):

And how do you get the company's suppliers to get on board with it? Is it finding a champion there as well?

Andrea Aranguren (08m 46s):

No. So very early on we realized we are a small startup. How are we going to convince all these large mining companies or manufacturers to change the way they do things? And the reality is we are not right. So who are they actually gonna listen to is their customers. So we very purposefully went after the largest companies in the market because they are the ones that will drive adoption for us. So our first customer was a large manufacturing customer that help that required the use of the platform. If you wanted to sell to them, you had to use the platform and there were some suppliers that you know, were sort of resisting and they threatened to not do business with them anymore and so that level of commitment made this possible in a lot of ways and that early adoption was really critical for our commercial success.

David Greely (09m 36s):

We brought up a few times Microsoft and Excel and email is kind of the tools of the status quo. I think when people hear the phrase digitize supply chains, their minds often go to Blockchain and tokenization. And I am curious, there is a lot of technology in between there. What technology is required for what you do?

Andrea Aranguren (09m 55s):

I do not think Blockchain or tokens are required. I will say we do use Blockchain for one of our premium applications called the Assay Exchange because that was a customer requirement from a very large customer. Blockchain is not required. What's required is security. So our platform is AWS cloud hosted, but we invest a tremendous amount of time and effort in ensuring that the platform upholds the highest market standards as it relates to security. Data privacy is absolutely critical. So we would have zero engagement for the market if we didn't ensure that data wasn't just safe but private and then the other thing that's key from a technology perspective is interoperability open APIs to help facilitate data between systems because inevitably we will have to share data between a wide variety of systems. So definitely don't require Blockchain for you know, interoperability, APIs and security.

David Greely (10m 48s):

All well-known things probably used in other parts of the organization in some capacity. I guess

Andrea Aranguren (10m 53s):

That's right.

David Greely (10m 54s):

You brought up earlier when the first adopters go in and they can kind of look to their screen in the morning and see all the information about what's happening in their supply chain. It made me wonder having that different view into what's flowing through your supply chain after moving to a digital supply chain platform like yours, how does that change how companies think about and manage their physical supply chains?

Andrea Aranguren (11m 19s):

Yeah, it's a really good question. Our customers are obviously buyers and sellers in the market, but I will just for argument's sake, choose an example from a buyer perspective. But in the absence of tools like the mind hub platform buyers, they don't have great visibility into their incoming supply chain. So they don't know exactly when shipments are gonna arrive. They don't have great tools to manage their inventory and so they often end up holding excess inventory on site or overbuying metal in order to prevent plant shutdowns because plant shutdowns are very costly for them. And so we've seen our manufacturing customers be able to reduce inventory on hand pretty dramatically. One of our customers actually reduced from 15 days inventory on hand to five while also preventing five plants shutdown. So those are the benefits that we see from the improved visibility that the digital platform provides as well as the inventory management tools that are possible.

David Greely (12m 14s):

Those seem like really big changes. I mean cutting the inventories that you have to have on hand down to a third of what you had before I think, and not having stock outs and other supply chain disruptions, which we all became familiar with during the pandemic. When you look with those types of efficiency gains, how impressive is that to the customers you work with? How transformative is it for them?

Andrea Aranguren (12m 37s):

It's incredibly transformative and that's actually what helps our platform to be quite sticky is they really come to rely on it and see that value increases over time as the implementation expands and the volume of data that's digitized grows, enhances all of the value, whether it's around visibility or inventory or reporting, there is huge operational efficiencies and time savings that companies experience that they come to rely on. We have one customer that manages, they receive all of the trucks that arrive at their plants through our platform and they did a study to see how long it took them to manage receiving before and after and they save 12 days every two months from using our platform. And so that's just one small example but it becomes transformative and companies come to rely on it more and more.

David Greely (13m 30s):

I find that really intriguing. Like what does receiving a truck using your platform look like? Is there somebody out there with an iPad as the truck rolls into the bay?

Andrea Aranguren (13m 39s):

So sometimes there is iPads or sometimes there is a desktop at the gate when the truck shows up. So we pre-create the shipments because we will know they are in transit, we are tracking them so they can better manage capacity at the plant when it's going to arrive. The majority of the information is pre-filled out and then the truck shows up, they just basically weigh it on the way out and they put the gross in the net weight and market as received. So it really reduces the amount of information data they need to manually input and streamlines the whole process.

David Greely (14m 08s):

Makes it sound like the change is worth it and I wanted to ask you because change is hard, particularly in large companies that form many of your clients at Minehub, you work with some of the largest companies in metals and mining and I was curious what's driving these companies to make such a big change in how they manage their supply chains you know, you mentioned regulations that are coming and I also was curious how large a part is the increasing desire of stakeholders to understand the origin of the commodities in the supply chain playing for example, you know over recent years people not wanting material that came from Russia or certain ESG considerations of wanting to understand carbon footprints of the commodities in their supply chain

Andrea Aranguren (14m 51s):

Regulations is huge. Whether it's inflation reduction Act or sanctions, Russian sanctions on the metal was a big one, or ESG reporting. The regulations that we see out of Europe, increasing requirements around many of our customers that are selling to Europe, that is a huge, huge reason for change and we see that having a huge impact across the board. I would say it started a bit earlier post COVID we saw a huge shift in mindset and a huge increase in willingness and recognition of a need to digitize, not just to drive efficiencies but in order to mitigate all the risk that they were seeing in the market. So continued supply chain disruptions, disruptions in freight markets, we see labor shortages where it's getting harder to actually hire and retain workers to do all this manual Excel work. It just felt like COVID really aggravated a lot of that and companies realized they needed to change and then all of the regulations are just adding to that really increasing a momentum and a recognition for change. The need to understand origin is really critical for, we're very focused

on copper and aluminum. The focus there is really on brand and smelter because that from that you can see origin of course we track all of the shipments but also from an emissions perspective it's incredibly important for our customers to be able to track that and provide proof around data and report to maintain their operations. So I would say a lot of different forces sort of compiling it together, driving this need for digitization.

David Greely (16m 22s):

It's interesting because some of the things that you mentioned, it almost feels like from a retail perspective many of us have gotten used to having a lot of these tools available. You order something from Amazon, you can see how far away from your house the truck is and it's interesting, do you find like what's happening in the commodities industry needs to move to, you know, kind of some of the best practices that maybe we're used to seeing on the retail side?

Andrea Aranguren (16m 45s):

Yeah, it's funny you said that because when we co-founded Weybridge back in 2019 and we had our first investor meeting and we were doing our pitch, we said, how could it be that I'm buying a pair of shoes on Amazon and I know exactly where they are and when they're gonna arrive and the payment is seamless and you know, whatever type of shoe and you find a million different options and everything is just completely seamless and you're buying half a million dollars worth of copper and you have no idea where it is, you have no idea when it's gonna arrive. The documents are God knows where. And so how can this actually be reality? It's funny you said that because that was actually one of the, sort of the genesis of Weybridge was this like recognition of we take advantage of all these tools in our personal lives, yet this hugely important physical commodities market can't leverage any of these tools. So yes, I do think that is sort of the vision for us and the hope is this transition to this sort of seamless digital experience very similar to what we experience when we buy Domino's Pizza or something on Amazon.

David Greely (17m 43s):

But a much larger scale.

Andrea Aranguren (17m 45s):

Many more dollars.

David Greely (17m 47s):

And it's interesting, you know when you bring up the complexity and you mentioned earlier that Minehub is a smaller company and when thinking about how change is driven in these companies in these markets, I find it really interesting that it's increasingly smaller companies like Minehub that are developing the new technology and driving the innovation that then gets brought on board by large companies. Kind of reminds me of the old Skunkworks approach to driving innovation in a large company. But of course without the funding that a large company would provide to a Skunkworks division, what do you see as the benefits and challenges of this approach of like driving change from a small company?

Andrea Aranguren (18m 26s):

Small, absolutely. The biggest benefit is flexibility. Our customer's needs are constantly changing. The market's needs are changing as regulations evolve and different dynamics emerge. So our ability to be incredibly nimble and flexible to adjust and shift direction has been really critical. You know, four years ago if you looked at our product roadmap, it was pretty dramatically different to what our product looks now. And I think that ability to really listen to the customer's needs and adapt has been critical here. I think probably the biggest drawback is related to what we were talking about before, which is really around adoption. So you know, if you are a large multi-billion dollar company with an incredibly complex global supply chain, you know, are you gonna actually put all of your critical confidential data and transition your company to relying on a startup questions around financial stability or just ability to support a company at that scale?

Andrea Aranguren (19m 22s):

And so we have been, you know, fortunate to have a very strong balance sheet that has certainly helped us through this, but it's also related to what I mentioned before, which is our strategy has been to really partner with our customers to help a drive adoption and recognize that as a small company that is actually one of the drawbacks and we should just acknowledge that and partner with customers that will help us to really push their counterparties, their logistics providers, their warehouses to, to change their processes because as a small company we may not have the sort of power or the market position to do that.

David Greely (19m 58s):

I wanted to ask you a question about the data security piece because sometimes the reason companies give for staying with the way they do it is you don't want your information getting out there. How important of an obstacle is the data security piece to getting companies to change over their workflow to a more digital platform and how do you try to address it?

Andrea Aranguren (20m 20s):

I would say that's probably the number one most important piece. As I said, we invest a huge amount of time and effort in maintaining data security and upholding the highest standards and proving that we do so. So we are audited, we have a SOC two certification, we have regular pen tests, but that proves to be not enough for really large customers. Many of our large customers have hired external consultants, they have performed ethical hacking exercises on our platform. I mean I have filled out more 1000 line security questionnaires than I'd like to admit. Even free users of the platform vet the platform very, very intensely in a willingness to engage and share data. And so this has been the number one issue and not just security out data, but ownership of data, privacy of data. And so it's something that is at the forefront of everything that we do. It's top of mind in every single conversation and we're constantly managing that with customers and we spend a lot of time ensuring that we are not going to have any issues supporting customers as they build that confidence through their own processes.

David Greely (21m 23s):

And what do you think is the thing that gives customers the most confidence?

Andrea Aranguren (21m 27s):

The thing that gives the customers most confidence is seeing their peers in the market, managing their businesses on our platform. That is really important. We go to customers and say Codelco is managing a hundred percent of the refined copper sales via our platform. That gives a huge amount of credibility and comfort to the market.

David Greely (21m 46s):

And you had brought up something earlier that I wanted to go back to, which is you mentioned how your roadmap has adjust and, and you have the benefit of flexibility as client needs change and I wanted to ask you because of course there is the old thing of Henry Ford saying if you had asked the clients what they needed, they would say a faster horse and so how do you like in this kind of transformational transitional moment, how do you get a good feel for what the client's needs are and how you can help them?

Andrea Aranguren (22m 15s):

By doing broad discovery. So we can't just have a conversation with one customer, so critical to what we do is that this is not a custom built platform that meets one customer's needs, but the issue is all the customer's needs are different. So what is really sort of the market need. What is the problem we are trying to solve and how do we do that in a way that's more efficient for all taking into account all the different sort of unique considerations of the customers. So we invest a lot of time in discovery as we call it, just having discussions with customers, whether they are paying customers, their free users, their potential customers, their partners, just really ensuring that what we are building is not just based on one customer's perspective, but that it will meet the market need.

David Greely (22m 58s):

You can say if you don't want to divulge any of the IP here, but when you have kind of done some of this broad discovery, is there something you have learned about how the market works or what the market needs that was surprising to you?

Andrea Aranguren (23m 11s):

I was very surprised at how different every company's processes are from one company to the other. This is a really small, and maybe it's a bit of a dumb example, but you know, I was in logistics for many years and of course fundamental to everything we do is bills of lading and so when we were capturing shipment data on the system, like of course you were going to use a bill of lading number as a shipment identifier and I was shocked at how many warehouses and customers do not have bill of lading in their system and use some other form of shipment ID, which creates a lot of complexity for matching shipments that leave one place and arrive at the other place when they have different identifiers. So it's sort of like a small thing, but it's how is everybody not just using the same number to identify a shipment? That was very surprising to me.

David Greely (24m 00s):

That's fascinating. I mean there is so much that goes into that, right, of like just how do you identify these various pieces of information? How do you let them take on a life of their own and all the inherited processes I could imagine some companies they started at 100 and went from there.

Andrea Aranguren (24m 17s):

Exactly. One warehouse we deal with, they generate a bill of lading on a system that cannot digitally PDF it, they can only print it. So they need to print everything and then scan it before they can email it to everybody and their system reach the max of characters for the bills of lading. So now they hand write dash A, dash B handwritten on what they print before they scan it. I mean, I'm not even making this up.

David Greely (24m 41s):

I believe it's what you do, right? You make do you kind of take the next increment and then 10 years down the road you're kind of wondering how did we get here?

Andrea Aranguren (24m 48s):

Exactly.

David Greely (24m 49s):

And I wanted to ask you, change is often worth it, but you know, change is often hard and there is a lot of benefits that you have discussed about using digital supply chain platforms and I think there is a lot of benefit to using the same digital supply chain platform as the other companies in your network. I imagine the implication of that is that once you get companies to start changing over, there is a pretty strong network effect. There's a winner take all aspect that everybody wants to use the same thing, not uncommon in technology. I was curious if you agree with that and if so, what's your strategy to be the digital supply chain solution of choice?

Andrea Aranguren (25m 29s):

I 100% agree. Of course there is an incredibly strong network effect from our perspective. It's not just from an efficiency and a value perspective, but it's also from that credibility perspective. We were talking about our platform can handle is what we say material agnostic. So we could support any physical commodity on the platform, but we have been very deliberate to focus on copper and aluminum initially precisely because of our desire to optimize that network effect. And I will just give you an example. As part of our first customer implementation, we on boarded about 25 different suppliers. So 25 new companies that had to get comfortable with a new way of operating, with sharing data, creating automated reports for their customer. The second customer we signed, the second customer implementation, we only needed to onboard one new supplier. There was so much overlap and that's just a supplier perspective from a carrier, from a logistics partner perspective, the first time we on boarded like 35 different trucking companies. The second time it was like three new companies. So it really does speed up every implementation. It allows us to take advantage of the overlap in the market from a buyer and a seller and a logistics perspective. So for us, it's actually been incredibly core to our strategy and allows us to be lean and incredibly scalable in every new implementation that we do.

David Greely (26m 49s):

Well, thank you for coming in, sharing with us how you're transforming these supply chains. It's, to me, it's fascinating, but I was hoping before we go, taking a step back. If you imagine a future where metals and mining companies have made the transition to email and excel to more digital supply chains, how do you see that transition changing the nature of the data and information available to companies and to markets and changing the nature of how commodities are traded?

Andrea Aranguren (27m 19s):

It's quite a question. I think inevitably, of course there will be more transparency, more access to data, more proof around that data and confidence in the data that's being shared, whether it's ESG related or otherwise. I think there is a lot of different factors along that sort of transition journey and I think it's going to take quite some time. But my hope is that the transparency, the improved reporting will lead to hopefully a premium for a green metal incentivizing sustainable production through the energy transition. I think there is a lot of things that have to happen. Before we get there though.

David Greely (27m 55s):

Thanks again to Andrea Aranguren, CEO, and President of Minehub Technologies. We hope you enjoyed the episode. We will be back next week with another episode of Markets in Transition. We hope you will join us.

Announcer (28m 09s):

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