

SM154 | 12.23.2023**Holiday Special | Part One****Josh Crumb, Founder & CEO, Abaxx Technologies + Guests from the Abaxx Team**

This week, we present part one of our two-part Holiday Special. SmarterMarkets™ host David Greely is joined by Josh Crumb, Founder & CEO of Abaxx Technologies, along with colleagues Dan McElduff, Joe Raia, and Ian Forester. Together, they discuss where they are now – and what’s next – on their mission to create the market infrastructure and financial technology needed to build Smarter Markets.

Josh Crumb (00s):

That’s always been a core of Abaxx is try to kind of build ahead of the storm, and I can say pretty unequivocally we hit sort of a terminal threshold for some of the problems of trust on the internet over the past year. It’s only gonna accelerate from here, but we’ve always been trying to get ahead of two problems at once. One is the very specific commodity market infrastructure problems, but also the IT infrastructure problems. And I think we’re really at the end of about a five year build in both and really looking forward to getting some of those solutions into market early next year.

Announcer (30s):

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, bringing you better benchmarks, better technology, and better tools for risk management.

David Greely (01m 10s):

Welcome to our SmarterMarkets Holiday Special 2023. I’m Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Josh Crumb, Founder and CEO of Abaxx Technologies. He’s joined by our colleagues, Dan McElduff, Joe Raia, and Ian Forester. We’ll be discussing where we are now and what’s next on our mission to create the market infrastructure and financial technology needed to build smarter markets. Hello, Josh. Welcome back to SmarterMarkets.

Josh Crumb (01m 39s):

Hi, Dave.

David Greely (01m 40s):

You know, it’s becoming a tradition here on SmarterMarkets to sit down with you at the end of each year to discuss where we’ve been and where we’re going in this journey to build smarter markets. And I’m glad to sit down again with you this year and be joined by three of our colleagues, Dan McElduff, Joe Raia and Ian Forester. And this is a really wonderful group to discuss the role of market infrastructure and financial technology in building smarter markets. But before we bring everyone else into the conversation, Josh, I was hoping you could help start us off by just taking a step back and sharing your thoughts on what are smarter markets, why do we need them, and where are we right now in this journey to build them?

Josh Crumb (02m 20s):

Thanks Dave, and thanks for pulling this together. I also look forward to making this an annual tradition, both a reflection on the year past and some ideas for the year ahead. And as you know smarter markets, it’s not an outcome, it’s not a solution. Smarter markets is, is a question. It’s a never ending journey to improve market infrastructure and improve information and coordination because we all share the belief that the best way to solve problems is through markets. Not heavy top-down central planning, but the open sourcing of ideas, and not just ideas in a narrative sense, but how that translates to people putting skin in the game and how that affects price, volume, and volatility. We think market infrastructure always needs to be improved. So when we think about smarter markets in the Abaxx context, and as you know, this is not a podcast that’s supposed to be about any single company, but again, about that idea and about the network of clients and investors and market ecosystem participants that are part of Abaxx and our vision of smarter markets.

Josh Crumb (03m 22s):

So I think we can talk about a little bit of some of the things that were happening in our primary objective of SmarterMarkets, things that are happening in the macro sense inside or outside of Abaxx, and of course we can talk a little about some of the milestones and some of the goals for what Abaxx is doing specifically in our little piece of this market world. So happy to talk about both this year. One way that I also maybe can kick it off – a lot of people ask about the name Abaxx itself. You know, what is Abaxx and why are you called Abaxx? I guess as an engineer and a little bit of a history nerd, essentially look at Abaxx, the Abaxx as sort of the first calculator if you, if you'll or the first computer or planning tool.

Josh Crumb (04m 07s):

So an Abaxx was really just a sand table, sort of the predecessor of the abacus, where students would sit around and make calculations and make plans on really a table of sand. And a lot of times we think about that also in the military planning context. I think we are all familiar seeing in movies, you know, people drawing battle plans in a sand table and really that's kind of how I think about Abaxx as well. We do have a very long horizon, a very big goal. It's really about this idea of de-commoditizing commodities in many ways. Our view is that the only way that we can really attract the capital needed to solve these very big problems in commodity infrastructure investment, we need more granular prices. We need people that are doing things better to be paid more for their commodities. Now that's a hard challenge because to some extent we also rely on commodities from a fungibility perspective to attract the liquidity and the price discovery and scale.

Josh Crumb (05m 03s):

So it is a hard problem. How do we de-commoditize while keeping a lot of the benefits of consolidated liquidity and fungibility? So that's the hard problem, long problem that we're ever focused on, and that really takes kind of, as we've always said, there's sort of three areas that Abaxx has been investing in. One is the core market infrastructure, regulated exchange and clearinghouse where we're able to develop new products with the industry and really just add another venue to try new things and work on new contracts. Part of the role of an entrepreneur or a challenger is to challenge the great companies that are out there, the great companies like ICE and CME and the Singapore Exchange and the London Metals Exchange. We want to add new competition, w products, but also push the entire market forward.

Josh Crumb (05m 54s):

So that's sort of one leg of the stool if you will. The other is really investing in cutting edge information technology and a lot of the revolutions that are happening in artificial intelligence and generative AI. I'm sure we'll talk a lot about that, but broadly I would call that bucket trust infrastructure. Beyond the market infrastructure, really the IT trust infrastructure and the investments that we're making there. And then of course the third is SmarterMarkets itself, right. Continuing to expand again, the open sourcing of big ideas and big challenges and all that that entails. So anyways, I'm sure we can reflect on all of these pieces and framing as we go, but maybe I'll turn it back to yourself.

David Greely (06m 34s):

Well, I really appreciate that because I think that's a great way to think about it with the three legs of the stool. So I'd like to kind of bring the other fellows into the conversation to talk about some of those legs. Obviously on the exchange and clearinghouse side, the first big piece of market infrastructure, Abaxx Commodities Futures Exchange and Clearinghouse in Singapore received its RMO and ACH licenses from the Monetary Authority of Singapore on December 7th. That's a big milestone in the journey to make smarter markets, having a licensed exchange and clearinghouse. And to put that in perspective, I don't think there's been a newly licensed futures exchange and clearinghouse in commodities in well over a decade. So it makes it part of a very small club and a big milestone. And Dan and Joe, you've been a big part of that piece of the journey, and so I'd like to bring you in to talk a little bit about what comes next. An exchange and clearinghouse certainly doesn't exist on its own, it doesn't succeed on its own. As Josh was saying, it's part of a much larger ecosystem consisting of traders, brokers, clearing members that are all necessary to work together to build smarter markets. And I know, Joe, you had to help build that ecosystem when you were at ClearPort and launching ClearPort. What did you learn from that experience about the role of all these participants that they play in launching new markets and building that ever important liquidity, and what role are they playing with your next steps at Abaxx?

Joe Raia (08m 01s):

Yeah, thanks Dave. It's an important part of the foundation and the build of the markets that we're seeking to change and to bring better innovation, which clearly from what we keep on hearing from the marketplace is lacking right now in the marketplace. So I think that the difference between what we did then and what we're doing now is that we started this from the ground up, right. We were

fortunate back in the day of the early days of the OTC clearing platform, which wasn't even called ClearPort for probably a year after we launched it, in that, we had a clearinghouse that existed. It was involved in energy markets and metals markets, it had clearing members associated with it. It had all a lot of the infrastructure that you'd sometimes take for granted that we had to engage with here, even given our relationships that we have in the marketplace, which helped that.

Joe Raia (08m 48s):

But still, you're still engaging it from the ground up. And to your point of something not being licensed in over a decade. I would argue that one hasn't been built from the ground up in more than that period of time. So that aside, you know, the hard work is, is building it, getting the investment in to sustain us for over four and a half years, and also to come up with products that the market needs. And so I think in the very beginnings of this, the products that we've looked at in the LNG markets, which then led to carbon, which then led to nickel sulfate, all are we're addressing inadequacies in the marketplace right now that we're seeking to solve for. So it really starts with, with that, it starts with building the relationships or grabbing the relationships that we had in the past, both from the clearing side, whether it's clearing members or brokers, and then ultimately most importantly, the traders that will help bring liquidity to the exchange and to the clearinghouse that will help solve that risk management piece.

Joe Raia (09m 40s):

They're not gonna come trade here because they like me or Dan or Josh or anybody else, they're gonna come here because we're solving for an issue in risk management that they have, just like back in the day when we built the OTC clearing platform, which ultimately became ClearPort, that was after Enron defaulted. So there was a distinct need in the marketplace for an exchange structure, clearinghouse risk management structure to take all these over the counter products that didn't exist on exchange at all, on a futures exchange, and bring them into the clearinghouse and use those risk management tools of the clearinghouse to help counterparties manage each other's risks so that the marketplace can continue to grow. And so I think we're taking a lot of those lessons that we learned back then, but yet we're building something completely new, completely different that really is going to really service the marketplace in a lot better way than for these products that don't exist right now.

David Greely (10m 31s):

And Joe, you spent a lot of time in shoe leather, you know, kind of putting these groups together and I think your relationships and experience go a heck of a long way. In addition to the work, I think it also takes a lot of enthusiasm to get diverse groups of people to want to work together on something new, something hard. Where do you see the enthusiasm coming from in the conversations that you have, whether it's clearing members, traders, brokers?

Joe Raia (10m 55s):

I think the enthusiasm comes from the products first, right. So we didn't build these products that we're going to launch with in a vacuum or in a closet somewhere. You know, we engaged with the marketplace from day one to really find out what was missing, what's changing in the marketplace. Why hasn't there been a physical LNG futures contract that reflects the waterborne molecule? Why hasn't that happened? And the marketplace has changed in its structure, right. It went from a term contract marketplace in LNG to now a lot of optimization of term contracts in addition to spot market. So that's really where the enthusiasm is coming from in LNG markets. In carbon markets, it's the same thing. There's a product there that maybe isn't designed the right way. So how can we design something that's gonna be better serviced in the marketplace? The clearing members that are always very skeptical and very conservative, once we got our licenses, you know, they kept telling us they were gonna come and be part of it, but you really never know until they fill out the application and submit it to us.

Joe Raia (11m 51s):

So by getting applications from clearing members, that's a definitive statement that they're with us and they want to help build their business. They want to go through the efforts of getting all the internal approvals, which believe me, is not easy to get tied up to a new clearing house and an exchange. So that, that really is a major statement that I think is a point of enthusiasm, not from me, but from them that they see that their customers need our tools for better risk management in the marketplace.

David Greely (12m 19s):

Glad to hear there's enthusiasm for smarter markets.

Joe Raia (12m 22s):

There sure is.

David Greely (12m 23s):

And Dan, you were instrumental with Joe in launching ClearPort, but you know, I wanted to ask you about a different thing, which was, you were at NYMEX during the early days of the Henry Hub Natural Gas futures contract. And as an economist, now people look at Henry Hub and see it as like a textbook example of what a large liquid competitive market looks like. But it wasn't always that way, and I think you were around back when it most definitely wasn't that way. So I wanted to ask you, how did the Henry Hub market grow from its launch to what it is today, and how does that experience inform how you see the Abaxx futures markets and as Joe said, LNG, carbon, and nickel sulfate developing in the period after launch?

Dan McElduff (13m 07s):

When I started my career at NYMEX, Henry Hub was nine months old. And like any emerging market, it was characterized by participation from commercial players. The design structure that NYMEX always put into place that we also at Abaxx will put into place is to focus on physically delivered futures contracts that will share convergence in pricing. So it's logical that in the early days, the commercial players are there. What was striking then was that both producers and consumers and intermediaries, the trading companies were represented from the early days, and that's, that's a good indication of the commercial need for a product to serve price discovery and hedging functions. The liquidity served those participants amongst each other, but was only able to improve when new parties came in and liquidity begets liquidity. We hear that throughout our industry in every sector.

Dan McElduff (14m 01s):

And the fact that those early participants used a product that they became comfortable with that was effective, and, you know, in the event that they did take it to delivery and use it for more than hedging and price discovery, that gave people more confidence to come into the market, including participants who didn't want or need to or even able to take on delivery risk. And they're the liquidity providers that in the beginning stages, it's back in those days, it was floor traders who would come in and buy and sell all day and provide liquidity that was never apparent to natural gas commercial players. And that extended to professional traders all the way up through very sophisticated hedge funds. And the more the liquidity grew, the greater the depth and diversity of the market in those categories to the point where it's accessible for almost anybody willing to invest and or to hedge in that marketplace. So in the early stages and across the first 10 years, all classes were represented at some point as the market grew and people became more comfortable with liquidity. And then of course it, it just took a bigger, more important place in the economy, both in North America and if not the world as it grew and up to the present day and where, you know, it's seen as somewhat of a model.

David Greely (15m 16s):

So Dan, how does your experience with the growth of the Henry Hub market inform how you're thinking about the likely development of the Abaxx futures markets in LNG, carbon, and nickel sulfate after launch?

Dan McElduff (15m 28s):

So our Abaxx product slate has solid parallels to the Henry Hub experience. If you consider the emerging commercial need for hedging and price discovery in the LNG, carbon, and battery metals markets. It's apparent, there's a very solid number of and depth of level of participation in those markets. And each of them, you know, as we've been on this journey, the need has grown significantly over time. The products are also they're similar with respect to the depth, the diversity, the enthusiasm of the participants. They, in some cases, like in the case of battery metals, they came to us and that just establishes very clearly that there's a commercial need to serve. The thing that we have to do, and this is something that, that NYMEX did, is that we have to recognize emerging commercial needs and adapt to them.

Dan McElduff (16m 21s):

So an example of where Henry Hub ended up, when the effort was underway, the first delivery location was a place called Katy Interchange, and it really wasn't a solution that could be adapted to commercial needs where buyers and sellers could be brought together in an efficient way. And just by being persistent and having a finger on the pulse of commercial needs in the emerging natural gas industry, NYMEX was able to recognize an opportunity in infrastructure and service provision that necessitated the change over to the Henry Hub. So we have to learn from that lesson and apply the same. You know, we think we're, you know, the solutions that we have that we want to introduce at launch are very much in line with commercial practice, but we always have to have our head on the swivel to continue to meet commercial needs as they emerge and evolve.

Dan McElduff (17m 11s):

And I think that those lessons, if we look at the product silos that we're looking at LNG, carbon, and nickel, I would say that from a maturity perspective, LNG is a bit more advanced in its market practices. So applying this principle is gonna be really important in the case of carbon and nickel. Carbon simply because the definition of quality is something that's been elusive, and at the baseline level is, you know, a carbon offset is something that can and should be considered in somebody mitigating emissions. You know, we got to get through that debate and with that set, we have to go even further and determine what qualifies as a useful solution in the drive towards net zero and quality is the key element of how carbon markets are going to operate and distinguish themselves.

Dan McElduff (18m 01s):

And in the case of nickel, the nickel market is quite old. The battery metal use of nickel is quite new, and that's, you know, from a maturity perspective, there's two reasons. One, that nickel sulfate is important and is indeed an emerging market. One of them is, you know, the battery use case. Our economies around the world are being electrified, and we're going through the electrification of our energy grids, and battery metals and other metals in building out the network are gonna be so important. And that use case is growing every day and the velocity of that and then the forecast for it are enormous. So while delivering nickel sulfate is a simple thing, right. It comes in bags and containers on ships, that's the simple part. What's not simple is that the distribution lines are changing dramatically because of national security interests and the desire for nations to be able to onshore some capacity so that they can meet their goals for their citizens. So we have to be very aligned with the practices there so that if a change in a contract term is necessitated because of the patterns that are evolving there in this emerging market, we're positioned well to do that.

David Greely (19m 11s):

Yeah, it's such a great point because these are such dynamic and changing and in some cases, new markets that success isn't about having the perfect plan. It's about being responsive when the situation changes and the plan needs to be rewritten or when the shortcomings of the plan are revealed by the marketplace. I think it was Mike Tyson who said "everybody's got a plan till they get punched in the face," and so maybe I can turn to Joe, not talking about getting punched in the face, but how do you build that responsiveness into the process, into working with all the other participants who are gonna have to also be responsive as markets evolve and situations change?

Joe Raia (19m 53s):

I think it's through interaction, Dave. I think it's through knowing who your customer is, knowing who to reach out to. I think the success that we had back then, it wasn't linear. It was certainly, there were a lot of ups and downs back in our days, and building ClearPort was based on the total interaction with the marketplace and spending a lot of time with customers understanding what their needs are and that's no different here at all. Whether it's the three verticals that we're gonna launch with or even the products that we know will be coming down the road, the more interaction you have with the marketplace, the more inbounds you get for new ideas and new products. We've seen it already just in our short lifespan here at Abaxx as far as the interaction with working groups, with FCMs, with brokers, with trading firms across all three asset classes that Dan mentioned.

Joe Raia (20m 40s):

You know, the firm that came to us to help develop the nickel sulfate market, we weren't their first call, right. They went to others first, and the other guys just didn't see it as an important part of their model to help the marketplace with a new product. And we saw it eagerly, certainly as an upstart and a new exchange and new kid on the block, it was an opportunity for us to show that we understood how to build markets, how to interact with customers and bring these new tools and technologies to what they need.

Josh Crumb (21m 07s):

I would also say sometimes it's important to continue to focus on that long horizon. Particularly in markets, we're very, very attuned to looking at the liquidity or the problems or the trades right in front of us, and so maybe we miss building new markets because we're not really looking what life could look like five years from now, ten years from now. And that has been a problem that we've seen, or has been told to us by our customers that it's one of the problems with some of the other exchanges is they're not really innovating on those long horizons for products. We've heard some feedback from one of the commodity exchanges that they weren't sure if there's a need for a nickel sulfate market, which first off, the customers came to us.

Josh Crumb (21m 49s):

So we have a pretty strong understanding of the need. But also, you just look at the electrification needs, not just today, but five, ten years from now, that nickel sulfate, that battery nickel supply chain market is gonna be dramatically larger. And we even got some of

that information coming out of COP this year, positioning natural gas and LNG as an important transition fuel, but also just the needs to remove coal from the marketplace. So maybe just to, again, focusing on the horizon, let me, you know, read out a couple statistics here. At the end of the day, demographics, you know, drives all in economics. And so reading across East Asia, Southeast Asia, Tokyo, 39 million people, coal 25% of the grid, that's the most advanced of getting rid of coal. Jakarta, 34 million people, coal 62%. Delhi, 32 million people, coal 80%. Seoul, 26 million people, coal 40%. Shanghai, 25 million people, coal 62%. Manila, 24 million people, coal 47%. And 14 other Asian coal powered cities of greater than 10 million people.

Josh Crumb (22m 59s):

So when you hear some of the rhetoric out of here in Canada, you know, British Columbia and Alberta, we don't know if there's a strong business case for LNG. Well, that's a population of 10 million people between Alberta. So I would say demographics of most of Asia still powered on coal is a very, very big long horizon for needing more LNG physical infrastructure and more LNG market infrastructure. So for us, that's the kind of horizon that defines it. And is one survey assessment, illiquid survey assessment of the price broadly of LNG in Asia, is that market infrastructure? Not at all. So our view is keep that horizon, focus on the demographics, focus on those first principles and the needs for these products. I think the same thing with the lithium market. It's very rare to see a market growing 20% a year for more than a decade, that's gonna happen in the lithium market. So again, is one illiquid survey assessment gonna set the price of global lithium? It just doesn't make any sense. So we need to focus on trying new things and building new products and evolving because it's inevitable that these markets need to progress if we're gonna actually take those large, just one of those cities to get them off of coal is an enormous task. All of Asia, it's impossible without better markets.

David Greely (24m 17s):

I'd like to turn back to you Dan. Josh has rightly pointed out the need to focus on the long-term horizon and the massive need that's out there, social need, commercial need for these markets. How do we go from where we are now to that long horizon? How do we think about that scaling up of going from start to hopefully a long horizon finish?

Dan McElduff (24m 41s):

Yeah, well we've discussed the importance of depth and diversity in the market. We've discussed the importance of tapping that enthusiasm to create the community where folks are interacting in this marketplace. And the capacity for markets to adapt to these principles and use of these tools has advanced through time. I think back to the Henry Hub experience, there were probably hundreds of people that were schooled in the practice of market risk management in the commodity space and, of course, over 30 years, that number has grown dramatically. If it's not in the tens of thousands, it's certainly in the thousands. So that's another reason for enthusiasm from our perspective because people can take those lessons learned, they can take the principles that are now part of curriculums in colleges and advanced studies and apply them and help improve the velocity of the use of these markets to get us to necessary levels of price discovery, necessary levels of the ability to mitigate and transfer risk, and really the necessary levels of liquidity so people can achieve their business goals in serving these markets.

David Greely (25m 46s):

And I wanted to turn to you next Ian, because as we talk about building smarter markets and the products and the infrastructure, that also requires a great deal of technology. And under the hood of the exchange and clearinghouse is leading edge financial technology. It isn't often that any business, let alone an exchange and clearinghouse, gets a clean slate for building its tech stack. Typically businesses are encumbered with the legacy of what came before and how much do you want to change and we've all gone through that. So I wanted to ask you, what were some of the key aspects and features that you wanted to see built into that tech stack to make it ready for a smarter market's future?

Ian Forester (26m 24s):

Sure, and thanks Dave and thanks for having me on the pod. The real key is the use of distributed systems. And I think this expresses itself in two ways in terms of our tech stack, and really I think none of this is able to happen without the forward thinking stance on responsible innovation from our regulator, the Monetary Authority of Singapore. Distributed systems for markets and market infrastructure makes a lot of sense. Markets themselves are distributed systems and use the distributed intelligence of market participants to discover the price of an asset or a commodity. So the core principles between that distribution of markets and distributed computing architecture are highly congruent. And the first way this expresses itself is in the use of clustered compute to build the exchange and clearinghouse rather than the legacy technology.

Ian Forester (27m 22s):

You're right, Dave, tech debt is real and it can absolutely just leave you stuck in the mud. The use of clustered compute really improves our resilience and greatly lowers our mean time to recovery, which is a core measure of any systems resilience and makes it much harder for advanced persistent threats or, you know, we call them APTs like the LockBit attack that ION suffered to gain a foothold in the system. The nature of clustered applications is you have less downtime because the workload, the computing that's done, is abstracted away from any single machine and this lowers the cost to effectively zero to move that workload to a new machine whenever a problem pops up. It's kind of like when you call tech support, your computer's not working and the first question they ask you is always, well, you know, have you tried turning it off and turning it back on again.

Ian Forester (28m 12s):

The cluster lets us do that without interrupting the flow of the markets for both exchange and clearing, and makes it much harder for APTs to gain a foothold, as the environment is constantly being reset while it's running. I think the second part, the second aspect of distributed systems is the integration of the ID++ trust fabric into the trade entry stack for block trades and EFRPs, especially given the impact we anticipate that ID++ can have in the bilateral commodities markets, the spot markets that Joe referred to. I'll leave it to my expert colleagues in terms of why bridging two bilateral markets is accretive to the futures business, but in terms of how we build that bridge, our number one concern has got to be that we do it in a way that preserves the privacy and agency that are so essential to these markets continuing to function as they currently do. That privacy and agency, allowing that, really runs counter to how the internet and particularly SAAS platforms are organized.

Ian Forester (29m 12s):

Currently, the incentives are such that platforms and developers are almost forced to give up user privacy to preserve the operation of the platform at scale. These markets that we're serving are of such consequence that the risk of adopting tools that could covertly undermine the formation of price discovery is too great. So current best practice remains the use of expensive high friction infrastructure that nobody likes. I mean, this is how these markets are currently running. Unfortunately that's the only available option for maintaining trust. Trust is the basis of all transactions, but it comes at a high cost. If we can lower that cost, you make transactions cheap, and you probably get more of them, and more transactions are probably better for everyone.

David Greely (29m 55s):

And I'd love to use that as a transition back to you, Josh, in that, I feel like often even on the podcast, there's this sense of many folks of like, well, you can either talk about markets or you can talk about technology, but it's hard to talk about both. But in your mind, and in your smarter markets approach, you've always seen technology and markets as intertwined with one another and like they're two legs of your three legged stool. And so I wanted to ask you, why is using technology to protect identity and privacy and create trust that second leg of the stool, why is that so important for your smarter markets vision?

Josh Crumb (30m 32s):

Yeah, well I think about commodities and markets the same way as information in many ways. And so that theme of trust that Ian just touched on, just like any other market that's in a supply or demand deficit, markets and innovations come in to balance the market. And I think it was readily apparent to myself and many others as much as ten years ago, but certainly the last few years that I guess our institutions are increasingly running at sort of a trust deficit. And I actually think that comes back to some of the fundamental problems of some of our internet IT infrastructure. But that said, I do think that the way financial markets have handled trust, the way that it's distributed and you create all these separations of agency and conflict, I think our securities industry overall has done a great job on both the IT side as well as the business practice side of created trusted systems.

Josh Crumb (31m 31s):

And so some of the problems that we see in a broader consumer internet sense, I think haven't probably until recently maybe affected the financial markets as well because they had such robust business infrastructure for maintaining trust. But where I think that's becoming a problem is just the speed of the way these markets are moving globally, as well as something else that Ian touched on. This data infrastructure and the efficiencies you get by centralizing data, whether it's a B2B or a consumer sort of SAAS application, or if it's market infrastructure. Data in all one place can be a good thing. But depending on the technologies, increasingly that can also be a problem, right? When people don't want to share quotes because they feel like they're doing business in front of a two-sided mirror to use one of Ian's analogies that he allowed me to borrow, that is a problem.

Josh Crumb (32m 26s):

And I think our minds can't even get our head around some of the things that are gonna happen as a result of generative AI. And the fact that these centralized data models, as much business trust architecture as you can put in place, it's gonna disrupt things sort of incalculably at this point. So I think we always kind of had that vision that we needed to really go down to the first principles and really think about trust infrastructure both from a business infrastructure and workflow, as well as the actual IT systems that support that. That's always been a core of Abaxx is to try to kind of build ahead of the storm. And I can say pretty unequivocally, we hit sort of a terminal threshold for some of the problems of trust on the internet over the past year. It's only gonna accelerate from here, but we've always been trying to get ahead of two problems at once. One is the very specific commodity market infrastructure problems, but also the IT infrastructure problems, and I think we're really at the end of about a five year build in both and really looking forward to getting some of those solutions into market early next year.

David Greely (33m 35s):

We hope you enjoyed this first half of our special holiday conversation with Josh Crumb, Founder and CEO of Abaxx Technologies and our colleagues, Dan McElduff, Joe Raia, and Ian Forester. We'll continue the conversation next week in Part Two. We hope you'll join us.

Announcer (33m 51s):

This episode was brought to you in part by Abaxx Exchange. Market participants need the confidence and ability to secure funding for resource development, production, processing, refining, and transportation of commodities across the globe. With markets for LNG, battery metals, and emissions offsets at the core of the transition to sustainability, Abaxx Exchange is building solutions to manage risk in these rapidly changing global markets. Facilitating futures and options contracts designed to offer market participants clear price signals and hedging capabilities in those markets is essential to our sustainable energy transition. Abaxx Exchange: bringing you better benchmarks, better technology, and better tools for risk management.

Announcer (34m 40s):

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