

SM155 | 12.30.2023**Holiday Special | Part Two****Josh Crumb, Founder & CEO, Abaxx Technologies + Guests from the Abaxx Team**

We close out the year with part two of our two-part Holiday Special. SmarterMarkets™ host David Greely continues his conversation with 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):

I just think we're in a completely new paradigm that sometimes we think, okay, well that's just Silicon Valley playing around with these new toys. But I think it's gonna affect our fundamental way we do business. It's gonna affect markets more than people think if we don't start changing some of that underlying trust infrastructure. So yes, I think 2022, 2023 will forever be known as sort of day zero in sort of a post-generative AI world. And we really need the tools to manage what's human content, what's been verified, what's been trusted versus the exponential growth of generative new information.

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 14s):

Welcome back to Part Two of our SmarterMarkets Holiday Special 2023. I'm Dave Greely, Chief Economist at Abaxx Technologies. We're continuing our conversation with Josh Crumb, Founder and CEO of Abaxx Technologies, and our colleagues, Dan McElduff, Joe Raia, and Ian Forester. We'll continue discussing where we are now and what's next in our mission to create the market infrastructure and financial technology needed to build smarter markets. We'll pick up now with where we left off last week with Josh Crumb.

Josh Crumb (01m 45s):

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 (02m 31s):

And I wanted to turn to you, Ian, because I think one thing we've heard many times on the podcast is that when it comes to infrastructure, most people think of it like plumbing. Like they don't think about it until it starts to leak or it breaks, and then you spend a whole lot of time thinking about it. And in some sense, being on the internet, being online, it's the story of the fish not knowing what water is because they're always swimming in it, right. I think you've told me that story a few times, and so I was hoping you could just help our audience, help us with what is it about the technology of the internet, the way it's structured now that leaves most of us accustomed to accepting surveillance and a loss of privacy as the price we pay for access to online services as just the cost of doing business.

Ian Forester (03m 15s):

Yeah, sure, I think the core of why things are structured the way they are, really comes down to a trade-off between sort of convenience and capability, right. I like to say everybody loves the features, but nobody reads the terms of service. And platform providers have

really leveraged this and listened to their customers, right, and said, Hey look, we are gonna make this super convenient for you, but the tradeoff is gonna be that we'll get to see everything you're doing. And again, this is just because of the way that it's architected. They're almost legally obligated to see everything that you're doing while you're using their platform. And so we really have evolved into an internet of walled gardens where you sort of walk into one garden, you get past the perimeter, and you're handed your ID card and your message interface and your bag where you store all of your user-generated content. And then when you leave, that remains the property of the platform.

Ian Forester (04m 19s):

I think that this is fine when we're dealing with an internet of cat videos, but when we start to move into markets and other pieces of critical infrastructure where there's real value being exchanged, the wages of that bargain change. And it's no longer okay to just hand all of your data over to the platform provider. You effectively, at scale, enough people doing that, it turns that provider through no expertise or savvy of their own into the most dominant competitor in the market because they're able to essentially harvest everybody else's information and leveraging their status as the panopticon perfectly predict the movements of a given market. So I think the bargain has changed, and as a result, we are compelled to change with it and specifically change that infrastructure so that we're no longer striking such a one-sided deal.

David Greely (05m 21s):

And what is the alternative infrastructure that we can use so that we don't have to be in an internet of walled gardens where you go into the walled garden of Google or the walled garden of Apple or Facebook or whatever it may be. What's the other vision for how this online interaction can be constructed?

Ian Forester (05m 41s):

Sure. So I think it goes back to distributed systems. You know, if you think of these walled gardens as, at the risk of mixing metaphors, boats on the water. And the more people climb aboard their boats, the bigger the boat has to get. And that's expensive, right. A boat is a big it's pretty capital intensive. So as a platform grows, that platform operator needs increasingly robust infrastructure that comes at an ever increasing cost. With a distributed infrastructure, you can really think of it as everyone has their own boat. And when a platform comes together, it looks a lot more like a flotilla. So, because everyone is sort of bringing the supercomputer that's sitting in their pocket as a resource to the network, it's able to have positive scaling effects as opposed to putting that burden on the service provider. And this is how we can fundamentally change the bargain because now platforms can compete on the access of privacy, and by creating that as a competitive access, you can now let the market decide what's acceptable as opposed to just having it rammed down their throats.

Ian Forester (06m 55s):

And I think part of creating a distributed infrastructure that can fulfill this promise is really recognizing that privacy and accountability are not at odds with each other. It's not that we need an invasion of privacy in order to enforce accountability in any kind of system. What we need is, and Josh says this all the time, we need identity skin in the game. We need to be able to have a mechanism for folks to publish certain details that will make them a more credible source than someone who hasn't. And again, let the market decide who's the more trustworthy actor. Again, right now, there's no mechanism for that. So in the internet of walled gardens, we do have that tradeoff between privacy and accountability. But in an internet where we can create, effectively create trust as a market mechanism, we can really elevate the signal and let the noise fade into the background.

David Greely (07m 57s):

You and Josh have brought up this phrase, the person behind the mirror, it's like the police station and the person's in the holding room and there's the police are watching them from the other side of the one way or two way mirror. I always forget which one you call it. And when it comes to just very practical business applications, much of what we do online can be seen, can be observed by someone else who's not a party to the transaction. And I don't know if that's something that many of us realize we choose to ignore when we click yes on terms of service, but when you think about these technologies, what are some of the specific things that you're trying to build to make them more secure and safe?

Ian Forester (08m 37s):

Yeah, well, I really have to hand it to Josh in terms of seeing this way ahead of everybody else. Prescient does not even begin to describe his vision for this going back years, frankly, before the technology was even available. The good news is that in the last five years call it, the technology has really come about. We have to put it together, but the ingredients are there. And the ingredients really

are things like end-to-end encryption, quantum resistant cryptography, the advent of zero trust architecture, the use of Merkle roots, distributed edge computing, peer-to-peer networking, pass keys instead of passwords, the W3C standards for decentralized identities, and the ability for those identities to live on tamper proof, proof of work blockchains like Bitcoin and Chia. We're at a moment where it's really up to us to put those technologies together in a way that makes sense for users and to build an internet that more honestly balances the needs of users with the needs of platforms.

Ian Forester (09m 46s):

You know, I think, as Josh mentioned, it is darkest before the dawn. We've been doing this same, the same sort of trust architecture that we're incorporating into the atomic level of ID++. It's the same routine that's used currently for SSL certs at its foundation. So the ability to do this is not the issue. It's the will and the incentives that have been so misaligned. When Josh says it's darkest before the dawn, like that darkness is gonna be what pushes us to be able to drive adoption. That's where I'm optimistic, right. I think in a few years, using the internet without strong identity is gonna be considered just as insane as using email without a spam filter. Partially that's gonna be driven by generative AI. Partially it's just gonna be because we have a better way.

David Greely (10m 38s):

That's great, and I would love to come back to something you mentioned earlier, Josh. You used the phrase de-commoditizing commodities, and this is something on the long horizon plan for smarter markets. It gets talked about in carbon circles as how do you allow for the pricing of a green premium for commodities that are produced in lower carbon or more ESG-friendly ways. And so I wanted to ask you about this idea of how do you start to build the technology to allow a better understanding of the characteristics of a commodity that can't be measured or weighed at an inspection point the way typically happens now with oil or copper or any other commodity. Things like where was it mined? How did that mine treat its workers and community? How much carbon was emitted in its production? And as you said, this is an information problem, it's a data problem. And I've heard you say that smarter data is a prerequisite for having smarter markets. And so I wanted to ask you to kind of go into a little bit of what do you mean by that, and how do you make smarter data available to markets?

Josh Crumb (11m 47s):

Thanks, Dave, and again, I think this is where some of our technology innovations converge with I guess the more traditional markets that we're focused on. That's the world that, that myself and most of our team comes from is from deep commodity markets. So we look at the applications of technology to solve some of our more maybe very niche problems rather than solving all the problems of the internet. But I think you have to break things down to those first principles to be able to get there. So pulling these threads back together. And so when I talk about smart commodities, again, the problem is before you price that difference between maybe the environmental footprint or the water footprint or any component of that commodity, first, you've got to have the data to be able to create that differentiation.

Josh Crumb (12m 31s):

And, of course, the commodity markets have been very, very good at finding that data difference in very technical specs, right? When you trade and you assay or you measure the product in the terms of the delivery and meeting certain specs. But that same data, I guess broader footprints than maybe just the specs itself, are not easily, that data's not easily brought to market. And I think there's a couple reasons for that. One is just the intense pressures and competition in the market to maybe obscure where maybe some of the lower quality raw materials or footprints come from. Of course, there's an incentive to blend that into maybe a higher quality just like you're blending technical specs. So this is something our supply chains have done for a long, long time. And there's a lot of pushback that, oh well, it's hard to track that data through a smelter or refiner or some sort of blending.

Josh Crumb (13m 25s):

And I actually don't know how true that is. Everybody has pretty advanced QA QC methodologies and they know very highly technical specs of mixing and blending and so forth. I think again, it's the incentives of the market, whether that information passes through the supply chain or not. So I think the bigger problem is the incentives of bringing that really origin footprint all the way through. And so getting very specific, we've had a couple conversations with mining companies that of course would like to get paid more for more effort and more CapEx and the cost that they incurred to make things cleaner. And there's two pieces of that. First is just the IT infrastructure. There are some very good tracking and tracing tools, but the mining company's like, why do I want to pay for this?

Josh Crumb (14m 10s):

Why would I pay for something and volunteer my proprietary data if no one's paying me for it? So if I don't get paid more, what, why should I volunteer this data for free? So that becomes one of the problems. And so on the buyer's side, same thing. Like, if no one's gonna make me pay more, why would I pay more? And if no one's gonna make me like, that sounds like a lot more work to handle that data. So right now, I just don't think there's currently the market incentives. Maybe there's government mandates, there's obviously a lot coming out of the EU on origin materials in agriculture and energy imports and so forth to try to harmonize with local markets or local carbon markets specifically. So there are a lot of these things that are gonna be driven by governments, but I actually believe that there can be ways to incentivize for investors, for the financial community to step in and maybe pay that cost of data, maybe pay for those systems, and maybe have some option on the ability to be paid more for that.

Josh Crumb (15m 07s):

So, but beyond the market incentive problem, you actually have to go back to again, some of the IT problems. A lot of this data has to be cleaned or summarized or put into some form or some report. Otherwise you've got to centralize the whole thing. You've got to dump a lot of proprietary information that can maybe give off a lot of information you don't want seen to be able to reconcile and check, and you don't want everybody looking at your data. Maybe the buyer and seller should be able to see each other's data. So you actually need infrastructure to get to that primary data. So yeah, I think it's a market incentive problem, but it's also a data infrastructure problem. And both of those ourselves and others are working on. But it's not as simple as paying a green premium. There's a lot of infrastructure that's gonna have to be there, and there's gonna be a lot of business models and incentives that need to bring that data to market.

David Greely (15m 57s):

And I want to come back to you, Ian, with the technology piece of that. Hearing Josh talk, like the first use case that comes to mind is naturally the carbon markets. That seems like an area where you would try to introduce this type of technology first. What do you see as some of the first technologies that would be useful to make markets smarter?

Ian Forester (16m 16s):

Yeah, I think that's, I think you're right. Carbon is a great place because at the end of the day, carbon is a data-driven commodity. Your guest from a couple weeks ago, Ken Newcombe, he laid it out pretty well. He was saying that in order to believe that this stuff has value, you have to believe that the way in which it's produced has credibility. So now we're not just valuing something based on what it is, but we're valuing something based on how it's made. And as Josh was saying, there's the only way to price that is by looking at the metadata, right. You can't just look at the thing coming through and what you can see and test and quantify once it's in front of you. But you have to look at the chain of everything it's been through before that moment.

Ian Forester (17m 04s):

The problem is that that metadata gets stripped out fairly early by existing network architecture. So retaining those initial claims really becomes a game of telephone that requires the end user off-taker to trust every other link in the supply chain to have refrained from transforming that metadata along the way. This is an unreasonable expectation because the way that data moves across network perimeters is through transformation. So if you're requiring the end user to trust that the data hasn't been transformed, and the only way that the data's gotten to them is through a transformation mechanism, you have a paradox. You're basically requiring that the off-taker trusts a hierarchy of relationships. And history has shown so many repeated breakdowns of those types of systems that I think the intuitive skepticism is entirely reasonable. So how do we fix this? And I think that happens when we replace the reliance on a hierarchy of relationships with a reliance on a hierarchy of information.

Ian Forester (18m 13s):

So to accomplish that, we need networks that can transport data without transforming it. And we need that transport layer to be built so that it can't be undermined or controlled by any single actor. Josh was saying, you're gonna put all of your data in a single repository. Well, who's watching the repository? Who's watching the watcher of that repository? You need to have a trust architecture that supports transparent verification by a third party in a way that's equally fair to platforms and users. Whereas the current architecture gives a sort of home field advantage to platforms. We can accomplish this, this is achievable using zero trust architecture and verifiable credentials and passkeys to build the triangle of trust as the atomic unit of that fabric. In the triangle of trust, you have three parties, none of whom are trusted any more than the other. So you have a holder, in our case, the user. We have an issuer, in our case that would be the platform. And then someone who can verify a claim made by a holder, so that would be a verifier.

Ian Forester (19m 19s):

The issuer trusts the holder, but doesn't trust the verifier. The holder trusts the verifier, but doesn't trust the issuer. And the verifier trusts the issuer, but doesn't trust the holder. Because everyone is trusted equally, the hierarchy of relationships is flattened and gets replaced with that hierarchy of information, where a piece of information, rather than an entity, maintains a senior or junior position, as well as retains a persistent coherent identifier as it moves across networks. The way it works now, the issuer is trusted by the verifier and the holder, and this gives them the ability to manipulate the information hierarchy in a way that gives them an unfair advantage. So I think this is gonna be crucial to our sanity, our survival, and the survival of our economies in this century and beyond.

David Greely (20m 10s):

And I want to bring that back to you, Dan and Joe, you know, because we often see commodity markets are very good at pricing differences, right. They can price differences in different specifications of crude oil, different types of gas, different crops, different places, different regions of the world. So I wanted to ask you if we take as a given that Josh and Ian and the technology accomplishes getting that data attached to the commodity, so it's a richer specification, what market tools do we have to draw on to allow for the pricing of differences once we have that information?

Dan McElduff (20m 44s):

I think the carbon market example is a good one, and as we're approaching it, step one is to identify that pool that's going to serve as the benchmark. Something that everybody has a common understanding for and can derive value from pretty easily. Carbon's interesting because quality is almost everything in terms of how one approach to mitigation is gonna be recognized as a premium to another. So we've positioned ourselves with our technology so that market participants, in providing information to us related to the hedges and the other obligations that they're hedging, they can share that information and create some feedback loops with us that are going to help us drive towards what are the emerging and unique solutions just to from a definition perspective. And then progressing those things and picking up on the trends of which of those solutions are taking root across the marketplace and the price signals that are coming along with it, right?

Dan McElduff (21m 47s):

The price can tell you a lot, but you do have to have some level of definition and some recognition of a common understanding of that definition. So the technology and having the trust that the parties are willing to share it with us, the data with us in a trusted environment and recognizing us as neutral in the transaction chain positions us to help set standards so that we can deliver the basic services that exchanges always had in terms of trade processing for the standard product. And then identifying those things that are unique and that are different in ways that they must be priced differently and that those prices can be understood by a broad and growing group of market participants.

Joe Raia (22m 32s):

Just to add to that point, I think some of the issues are how exchanges, current existing exchanges, have taken customer's data and have completely turned it around. And certainly there's nothing wrong with profiting on marketplace trades. But when you look at how the data, the customer's data, is used now, I think it's one of the biggest issues in that if you want to look at price signals, you actually almost have to go out and pay for your own data, pay for the data that you helped create. And I think that there's kind of a reckoning coming on that soon where the marketplace is gonna say, why am I paying for, I just made that trade in natural gas. Why am I paying for that same data that I just saw my trade go through that's coming back to me?

Joe Raia (23m 11s):

And I think certainly there are people that need data that haven't helped create it, but I think there's also a need for a rethink about that, how that data is used and how the exchange is in there. It's a big profit center for a lot of exchanges that I'm sure we'll get into that as we go down the road and develop Abaxx and how our data's distributed. But I think it really needs to be rethought as far as how the trading community uses those price signals, to your question, Dave, and what are those price signals and how do use them to create a more efficient marketplace. I think really it, needs to be there's a big day of reckoning coming there, for sure.

David Greely (23m 49s):

Well, first I want to thank you all for what's been a really great conversation so far. I know I've been asking you some pretty big questions that you could spend hours discussing, so I really appreciate the effort it takes to be as succinct as all of you have. But before we wrap up, I'd like to have a little fun. There's been a few big things that have happened in recent months. One that's been referred to a number of times throughout the conversation has been the rise of generative AI. And I wanted to just take a little time as people are

looking forward to what's coming in the new year, to ask some of your perspectives on a couple of the recent big developments, and what they may mean for smarter markets. Maybe we can stick first with the carbon markets as an example. And COP28 just ended with little progress on the Article 6 market mechanisms. Over the past year with the attacks on the voluntary carbon markets, I think many people were looking to Paris-aligned markets as the answer and the way forward. And many were surprised by how badly the Article 6 negotiations went. So I'm curious for people's thoughts on where do we go from here, and how does this affect what market infrastructure and financial technology we'll need. Maybe I'll ask Dan to start us off on that one.

Dan McElduff (25m 05s):

Yeah. In some ways, the results of COP28 were predictable and it's been a bit of a roller coaster, right? I think where we are and in our assessment in the market is that in identifying that core pool of liquidity that I mentioned before, we want to set a benchmark for global markets, whether they be compliance markets or not, to have a grounding from. And I think the events and, and the struggles in, in Article 6, kind of where we stepped away from that in the early part of the year, we being the entire marketplace not necessarily Abaxx, were able to turn back, I think, and focus on that principle first in establishing that baseline. And from there, drawing a common thread throughout all the different solutions for mitigations, we can dig more into how the solutions are emerging as each country works through its national plan and establishes its baselines.

Dan McElduff (25m 53s):

The more any maturing market's gonna seek that common ground or should, if it's gonna progress in its maturity. So somehow somehow everybody needs to quantify these mitigants so that we can get on with the business of making the investments and making them real and bringing the solutions to market. We know that wind and solar and forestry are not gonna solve the problem at the current level of demand. So we do have to price in the more expensive solutions and start sending those price signals. So the debate on what does or does not qualify must progress, and I think that's gonna be an important part of what comes in the next year. Some folks that have stepped back from the use of carbon offsets in their plans in meeting their net zero obligations, I hope and expect that they may be a bit more aggressive in coming out and saying that this may not be the whole solution, but it's an important part of the solution and we can at least agree to that baseline in valuation.

Dan McElduff (26m 55s):

You know, lots of folks have done work to push technology that matches buyers and sellers, but I think they've looked past the important parts of defining those important pools of liquidity and things that are gonna be lasting and persistent parts of the solution and filling up the supply of how we're gonna solve the net zero problem. And the market is yet to execute on a reliable and persistent benchmark. I keep putting that as step one so that the rest of it can emerge. So looking back at the events of COP28, I think it was a bit ambitious to think that the Article 6 solutions would've been resolved in that cycle. I think step one has to be taken care of at first, and whatever progress was made on Article 6 markets can be layered in in parallel. As we progress, hopefully people will come back and, you know, lick their wounds from what came out of Article 6 and 2024 can put us on a path towards delivering on real solutions to serve the market.

Joe Raia (27m 51s):

I think it's not only carbon, I think it's also other markets. I think looking ahead, going back to our original thesis on LNG, I think the thing that came out of COP was that LNG is now truly a part of the – it's not a transition fuel, it's a solution fuel. And it's something that is part of what we saw back five years ago almost, that it is gonna be an important part of a global economy that moves into lower carbon, but it doesn't have a benchmark for global pricing. And that's really where I think we fit in, and the opportunity for us specifically as a new exchange to help the marketplace with pricing signals, with risk management tools that doesn't exist right now. And I think that's something that is I think transformational for the energy business, for the trading community, and for the exchange infrastructure as a whole.

David Greely (28m 41s):

And I wanted to turn to another big development that we mentioned, which is the rise of artificial intelligence with Chat GPT and really that going mainstream. And I think Josh and Ian, you've alluded to this several times throughout the conversation, so I'd just love to dig into it a little bit deeper. How should the development and mainstreaming of artificial intelligence change the conversation around identity, privacy, and trust? Where do we go from here? Maybe we can start with Ian first.

Ian Forester (29m 09s):

Sure. You know, I think that generative AI, there's sort of two camps, right. There's those who say this is nothing but a sort of abstracted mechanical Turk that is doing an end run around intellectual property law. There's the other camp that says that there's a language model here. That language model translates into a world model, and therefore the AI has something approaching consciousness. Now, I'm pretty firmly in camp one because I'm a parent, and I've watched my 3-year-old daughter go from knowing zero languages to now knowing two languages. And her personality and how I've perceived her consciousness has stayed relatively fixed. She just has better tools to express her desires, not necessarily new desires. So I think from that perspective, looking at AI as something that there's always gonna be a human behind it.

Ian Forester (30m 02s):

It's really a tool and it's a very powerful tool, but I think it's a misdirection for people that say, oh, the AI wants to destroy all humanity like these AI doomers. So how will that AI be used in markets I think remains to be seen, but it does become a very powerful tool. However, it's dependent and its power is dependent on the data that it's fed. This is where I think a strong identity internet will be absolutely essential moving forward. We're gonna have to know, are you dealing with a human agent or an AI agent? And not only that, when you use a platform, is the content that you're generating while using that platform being used to train an agent behind your back, which is then sort of being recursively deployed at you in order to influence and affect behavior change, which is the economic model for the internet in its current structure. So I think AI just amplifies and accelerates the need for strong identity and for robust digital privacy.

David Greely (31m 14s):

And I'd love to turn to you, Josh, to finish off our conversation, maybe picking up on that point, is there some way in which some of these advances in the technology landscape with things like artificial intelligence, is that accelerating the need for these pieces, that second leg of the stool of strong identity and trust architecture? And how do you see that impacting that piece of the smarter market's journey from here?

Josh Crumb (31m 41s):

Yeah, well, I think what's different or what generative AI specifically, how it's gonna be a new sort of problem to deal with in markets and trusted data is it's not necessarily the same kind of deterministic compute system that we're used to as far as input and output. As data moves through these transformer models, it doesn't really come out the same way, deterministically twice, right. So that just creates all sorts of problems with how the underlying data ultimately ends up getting presented or intellectual property underlying it, and it's very hard to build safeguards from being able to maybe getting back to that source data or sort of jailbreaking some of these models to get information that you shouldn't have had to begin with. So this is where it's a big problem. So let's use a specific example of say a big platform in financial chat, right?

Josh Crumb (32m 38s):

So people, brokers, communicating with their clients over a chat system and all of that centralized data. So again, remember a chat system is very different than, say, an email system where your servers are much more decentralized. Chat system is very centralized communication data. So now all of a sudden we're giving some big market data player all of the nuanced conversations and market orders between, and probably an order on behalf of a client that doesn't know his information is going to a broker that's going into this platform, and then they use AI, and who knows what can come out and misconstrue. And so there's all sorts of, I think, market data privacy issues. Now, part of the circumventing of the surveillance of centralized chat platforms is more and more brokers or financial participants have tried to circumvent by going on to WhatsApp or sort of private consumer encrypted apps.

Josh Crumb (33m 29s):

And we all know how much trouble people have got in for for doing that in a regulated environment, using this end-to-end encryption. So the problem is markets need some level of surveillance for compliance, but the problem is you also don't want to give all that data when these types of tools now exist that can use your information and your words against you in kind of unique and scary ways. So again, this is where some of these problems converge and again, we need better trust systems, say, in market chat where there is a level of trust and surveillance, but there's not that level of sort of danger of information getting fed into these models and not only that, essentially getting fed into the models outside of your control, right. So, you know, I think there was some examples last year of coders at big organizations using some of these Chat GPT tools to fix code, and that code may be source code to primary market infrastructure, and now all of a sudden it lives in this big sort of un-reversible brain of a big centralized AI company and people can tease out the source code.

Josh Crumb (34m 32s):

So again, I just think we're in a completely new paradigm that sometimes we think, okay, well that's just Silicon Valley playing around with these new toys. But I think it's gonna affect our fundamental way we do business, it's gonna affect markets more than people think if we don't start changing some of that underlying trust infrastructure, like in a market-based chat as a specific example. So yes, I think 2022, 2023 will forever be known as sort of day zero in sort of a post generative AI world. And we really need the tools to manage what's human content, what's been verified, what's been trusted versus the exponential growth of generative new information.

David Greely (35m 10s):

Sounds like a lot of work to do in the new year. I wanted to thank all of you representatives of two legs of the SmarterMarkets stool for being here with us on the third leg, and just really wanted to thank you all. It's been a great year, looking forward to another year in 2024 where we can hopefully all come back together again at the end of it. And I am very curious and looking forward to what we'll be talking about then. Thank you very much.

Josh Crumb (35m 33s):

Thanks, Dave.

Dan McElduff (35m 35s):

Thanks, Dave.

Ian Forester (35m 36s):

Thanks, Dave.

Joe Raia (35m 36s):

Thanks, Dave.

David Greely (35m 37s):

Thanks again to Josh Crumb, Founder and CEO of Abaxx Technologies and our colleagues, Dan McElduff, Joe Raia, and Ian Forester. We hope you enjoyed our two-part Holiday Special 2023. From all of us at SmarterMarkets, we wish you a happy New Year and all the best to your friends and family. We'll be back next week to kick off a New Year on SmarterMarkets. We hope you'll join us.

Announcer (36m 00s):

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 (36m 49s):

That concludes this week's episode of SmarterMarkets by Abaxx. For episode transcripts and additional episode information, including research, editorial and video content, please visit smartermarkets.media. Please help more people discover the podcast by leaving a review on Apple Podcast, Spotify, YouTube, or your favorite podcast platform. SmarterMarkets is presented for informational and entertainment purposes only. The information presented on SmarterMarkets should not be construed as investment advice. Always consult a licensed investment professional before making investment decisions. The views and opinions expressed on SmarterMarkets are those of the participants and do not necessarily reflect those of the show's hosts or producer. SmarterMarkets, its hosts, guests, employees, and producer, Abaxx Technologies, shall not be held liable for losses resulting from investment decisions based on informational viewpoints presented on SmarterMarkets. Thank you for listening and please join us again next week.