

Mathieu (00:02.04)

All right, first question, what is empowerment tech? It may be good ground setting for the listeners here to just get your definition of what empowerment tech is for customers and what it encompasses.

Jamie (00:15.21)

What a great place to start. So I think before I answer it, I think one of my observations is that the language around identity and privacy and security is kind of static, right? You can look at it from all sorts of angles. You can get very academic about it. And on its own, it's interesting, but it doesn't necessarily help. It doesn't go in a direction. And I think the language of empowerment is helping us go somewhere.

It's helping us improve things in a specific direction. And for me, empowerment tech are tools that start on the customer side, right? I could do identity from the organization's perspective. I could say, well, I have identified a customer and therefore I can onboard them and so on. Even with privacy, we could say, well, we're not going to collect as much data. Maybe we were going to do our consent flow in a different way.

So we could do privacy and security and identity from the organization's perspective. And what sets empowerment tech out as something different is it begins and ends on the customer side, begins and ends on the patient side, begins and ends on the individual side. So it's tools that live and breathe that exist on the customer side to help them get things done. And a really good litmus test is, you know, a recommendation that comes from the customer side might be, don't buy the product, you can't afford it, or you don't need it. And it feels very unlikely an organization would make that recommendation.

So that's really what empowerment tech is about. It's about starting on the customer side and helping individuals make better decisions, get things done. That's how I see things.

Mathieu (02:01.18)

Does empowerment tech really help realign incentives? Because based on what you're describing, if it's being driven from the organization or at least not the customer or the patient, the incentives are maybe not always properly aligned to it, the customer or the patient or whoever wants. So does empowerment tech at the core just realign the incentives?

Jamie (02:23.11)

I think so. And I think it's an and, not an or. I think organizations can look out for customers and can help customers. But when it comes down to it, businesses are going to optimize for their own, you know, they're going to be profit maximizing entities, largely. Enterprises, organizations that may be not for profit and so on, will still maybe have the consumer, the citizen at the center, but, Truly, they'll be organized, they'll be optimizing for themselves.

And I think what we're looking for is an and, not an or. It's about, well, how do we optimize for the individual's outcomes, which might be not buying the thing or not doing the thing, as well as

optimizing for the organization. So it's the two together. So the important word you just use is alignment. And I think once we can align the incentives for both people and organizations and businesses and governments And I think we get healthier and more sustainable outcomes for everyone.

So yeah, alignment of incentives. And I think if, you know, a lot of people point to the difficulties we've had with web two and there's sentences like, you know, if you're not paying, then you are the product. And I think that kind of mindset tells us that businesses are optimizing for their own outcomes and Maybe there's data being produced on the customer side that is being, you know, some people might say harvested or surveilled. And I think really it's saying, how do we think about what the outcome should be for the individual and therefore create tools and digital experiences that help us do what we need to get done as people. And if we can align that with the organizations, then we get more sustainable symbiotic, you know, more long -term, frankly valuable relationships between people and businesses. And that's a good thing. And that's, as we're probably going to come onto this in the rest of this conversation, but it should become clear that a customer that is...

Jamie (04:33.17)

trusting of an organization because of those incentives is going to do more with that company, is going to share more with that company, is going to help that company.

Mathieu (04:41.14)

I guess there are multiple types of stakeholders involved in different types of digital interactions. We could think about innovators, technology providers, there's incumbents, existing technology providers, there's citizens, customers, governments, regulators. It seems like we're having a difficult time digitally today solving the problems of all of these different stakeholders.

Is there a way through empowerment tech to get alignment or at least solve their problems together? Cause they probably all have different incentives as well for what they're trying to do. So how do you look at the whole ecosystem of these different types of entities that are involved and does it make it more difficult to push these things forward when they all have different wants and needs?

Jamie (05:35.12)

It's a really great observation. I think on one hand, introducing another stakeholder, as you put it, you know, the individual into the mix, then we're creating more complexity. But I think actually over time, it's going to simplify things greatly. One of the reasons we get these conflicts of incentives and frankly, these broken customer experiences is because there are different organizations stewed around the individual trying to interact with the individual across a single customer journey. So a simple one to think of might be buying a house, right? I've got multiple entities all kind of tugging on me, pulling on me, interacting with me, trying to help me along the journey. And back to the alignment of incentives, they've all got a slightly different interest in helping me through that process of buying a property or even finding a rental property.

Jamie (06:35.01)

And so we get these broken customer experiences and misalignment of incentives because these different organizations are kind of acting around me at different parts of the journey and trying to do different things. So trying to secure the payment and the mortgage versus trying to secure utility providers once I've moved in, trying to think about the agents who are helping me decide where, when to place, when to make an offer. And so we've all got all these different things pulling on us.

And when they're all kind of fragmented like that, that's when things get broken and they feel broken. Once you add the individual, in some ways it's a bit more complicated, but in other ways, you actually get this organizing function. Suddenly we can organize the information around the individual.

Because a lot of those entities, the agents, the lawyers, the maybe two different, two or three different banks I'm dealing with, the utility providers, the removals, once they can all organize themselves around me, then several things happen. One, we can all start to reuse information in a much more sensible way. So I don't have to repeat and share the same information over and over again.

Jamie (07:57.09)

Secondly, if I can not only share that information, but verify that it's me acting, or if I can make assertions about me, that it's me interacting with these organizations, then trust can go up and those organizations can have a much better flow of information between me and them because they know who they're dealing with just as much as I know who they're dealing with. But lastly, we can stitch together a whole new customer journey that wasn't possible before.

because in the old world, my customer journey was with that bank and that broadband provider and that energy company and that legal firm. And they were all lots of mini customer journeys. And once we can organize it around me, which frankly hasn't really been possible before because those digital experiences have all been digitized bit by bit. And so the idea behind Empowerment Tech is to stitch them all together as a single customer experience that we can now see the whole thing for the first time.

And we can align incentives. We can create better customer experiences. We can reuse data, trust should go up. And, you know, again, later in the conversation, we're going to wade into topics like digital wallets and verifiable credentials. And those are part of the empowerment tech stack on the customer side. That's going to make these things possible, but it just means assurance is going to go up. Fraud is going to go down. Risks can go down. And I think by adding the individual, in some ways, yes, we have to rethink things. It's going to become more complicated. But net-net, it's going to create much more value for organizations and much more value for the individual. And things are going to be much smoother, I think, as a result.

Mathieu (09:39.21)

What's the role of the regulator in promoting empowerment tech? In the European market, there's different regulations that have been approved and are at different stages in their life cycle of being enforced. You have a revision of eIDAS that came recently and got approved. There's another regulation altogether called the EU's Digital Market Act, which is more around data portability, less around digital identity and signatures like eIDAS.

But how do you look at, I guess, these advancements from regulators and the European Union towards pushing forward empowerment tech? Is it getting in the way? Is it going to slow it down? Is it actually an enabler? It would be interesting for folks listening, even folks in the EU and a lot of our listeners who aren't in the EU as well, just to understand how you perceive these things.

Jamie (10:37.10)

And the regulatory side and the policy side is a really important part of this. If you think about what regulators, well, the policymakers are trying to define these outcomes. Like we want to protect consumers and citizens, but we also don't want to stifle innovation. And it's this kind of seesaw of like, well, we need to protect individuals and not share their data, but we also don't want to be too overbearing and step in too far. And then they set these regulations like GDPR.

Which say, well, you can do this and you can't do that, but they don't define technologies. They're defining outcomes. These are the kind of things you should be able to do or not able to do. And then the regulators are there to spend taxpayer money, making sure those things are complied with. And of course the large companies, I'm going to point to the usual suspects, the web2 kind of data majors, the Metas and the Googles and so on. They have armies of lawyers.

Armies of them, whose job it is to make sure they're compliant with, but also just finding the edges of where they can press the boundaries. And that's a good thing, right? They shouldn't be too curtailed by regulators saying you can't do this. We need innovation, we need data to flow, we need to create new growth in the economy. And this is a long way around of me saying, there's a kind of gentle, productive tension between regulators saying don't do these things and organizations trying to innovate and push the boundaries of what's possible.

Jamie (12:12.07)

The problem with all the regulations so far and the policy making is that it's done with this idea of organizations doing stuff and data subjects and individuals being done too. Even the GDPR casts these actors as processors and controllers and subjects. That's how it's framed.

The idea that the individual could be an active participant isn't contemplated. So I think it's going to be net positive when we start to say, well, what if there were digital fools on the individual side that could empower the individual to decide what they were sharing, to have transparency about what data they shared? The GDPR would say, you've got to collect consent for processing.

Jamie (13:02.04)

And the individual must be able to revoke that consent as easily as they give it. And right now, if I asked you to write down the list of the last 10 places you gave consent for something, I mean, I certainly have no idea. I might have been involved at that moment in an exchange within a business who needed something, I want a free cheeseburger, I'm giving away my email address, or maybe it's for performance of a contract and they need my delivery address, I don't really remember or have a record of those things.

Jamie (13:37.11)

And so my data is all over the place in a way that I can't remember because I've got a small brain. And with empowerment tech, we're going to give data tools to individuals that can remember this stuff. And we're going to know what we shared with whom and when and why it was shared.

And so I think if I can then not only have a record of it, then I think two or three things are gonna happen. One, regulators are gonna have this really interesting ability to receive flags from the individual saying, hey, I was asked for this information in this process. I was opening a bank account, they asked for all this stuff. That feels a bit too much. So we might get this kind of automated reporting from individuals.

Jamie (14:24.16)

But secondly, the very recording of it, I believe is going to start to change behavior on the business's side. Because if they know that there's an auditable, secure private record of everything that's been asked for, I think businesses are going to start to change the way they behave and when they're asking for things. Because they know that there's that record of it. I mean, if you go a bit further out, you might say, this is a bit more of a stretch. We start to get real time regulation because actually, once we're into governance frameworks of who gets to share what and why, then maybe we know what's a reasonable request for certain transactions. If I'm buying a pair of shoes, if I'm opening a bank account, if I'm applying for a job, those governance frameworks are gonna describe what's reasonable or what a pattern might look like.

Jamie (15:21.15)

And so my empowerment tech - So I think let's be specific - I think digital wallets, personal agents, so AI tools that can live on my side. So instead of large language models, we're going to get small language models, SLMs that sit on my side. They might sit on my device. They might sit in my cloud. The point is that those tools are going to start in real time to say, well, actually that's a bit of an overreach. Why are you asking for that? So long answer, but I think empowerment tech is going to change the way regulators think about enforcement. It's going to change the way policymakers who are deciding what GDPR 2 is going to look like, who are thinking about the implementation of PSD 3. And as the DMA, Digital Markets Act, and DSA, Digital Services Act, as they start to be regulated, I think we're going to start to see changes that reflect the fact that individuals can be active participants, not just passive subjects.

Mathieu (16:21.09)

I think I probably gave consent 5 or 10 times this morning on different websites that I visited as I was just doing whatever I was doing. And that's a total mess. No one really knows what they're consenting to. It's not human friendly and like no one's reading these things anyways. And you're right. It's like the record keeping happens on the organization that is running the website side. If they have to comply to specific regulation. Um, and that that's maybe where like a regulator helps promote empowerment tech is that you could imagine it would be a pretty big liability for an organization to have the data instead of just sitting within their records for record keeping and audit purposes that every single individual that they've interacted with now has a copy of whatever pertains to their interaction with them as well.

Mathieu (17:23.00)

You could start thinking about maybe the incentives aren't there for a business to want to do that, but then maybe that's where regulation comes in. And then that always gets me going down the like, all of these things ultimately are going to create more jobs for lawyers and folks and those professional services. So that's my only fear always is like you need regulation to promote the good of citizens and consumers and protect them and stuff like that. My fear is always that it just stifles innovation because it just creates more more barriers. And like you mentioned earlier, you have these big organizations that are able to fund armies of lawyers that are just going to be the only ones able to keep up with it.

Jamie (18:14.10)

Yeah. There's a really interesting point there about where the data is. You know, I think there's a really big misconception that once individuals can hold data, they should and will. And actually, you know, I'm going to have all my data on my side and I'm going to selectively share it with these organizations and they can delete all their data now. And that's not going to happen for like, five or six reasons. But the first of which is for regulatory reasons, organizations have to keep records and they can and will and should and Banks, for example, have to keep them for between five and seven years when they're collecting, for example, KYC data, depending on the jurisdiction.

And so that's not going to change. So me sharing data with an organization is going to carry on, and those organizations will have to be good stewards of that data and look after it and secure it and so on. They might start to minimize some of the data they collect because they can now trust the source of it and, you know, the classic over 21 versus collecting my data birth. But actually, you know, they're going to need business records, they're going to need transaction records, transaction records. And that can and should be kept on the business side. And they can use that to create value and find patterns and insights and make recommendations. That's a good thing.

Jamie (19:29.23)

The difference is, I'm now going to know what's being held and what I shared and be able to request things to be deleted when I need to.

And that example of the right to be forgotten or the right of deletion, that's a bit of a game changer in the sense that right now I have to send an email in or a form or fill out a form and go in and that organization responding has to do commercially reasonable or go to commercially reasonable lengths to delete it. If my data is now buried inside a training data set for an LLM, good luck asking them to delete it.

But my point is I'll know what data I shared. And honestly, I think this is less about what's happened in the past and more about what's going to happen in the future. What's going to start to be shared. So the data that's in the past, you know, all the stuff I've shared, you know, that's under GDPR land that, okay, they have it now. They can look after it. They got consent for processing. They're going to use it for now. Once individuals are empowered, have this empowerment tech, for example, the digital wallet.

Jamie (20:40.19)

Then I'm going to start sharing new data sets with the individual, with organizations, but I'll also have a record of what I've shared. And I think that's the, that's the paradigm shift that things can be interesting. And I'll also be able to interact with the business in a new way. And we can get onto that later, but you know, I think we, I think the mistake to make is that this is about data, even verifiable credentials, because actually this is about the new customer relationship. This is the new endpoint that I'm going to interact with the business and they can ask me things and I can respond. But also I could use it as a little audit record of all those messages. And maybe we start to use it as a new, I wrote about this last year, the size of a customer account. It's a record of all the interactions I've had. You know, my preferences, my needs, my account numbers, all that information. Right now that sits inside the firewall. Well, guess what? I can now have a copy of that outside on my side. And that's useful for me just to have but also we can have this new interaction channel with the individual that's trusted, it's this secure endpoint. And we can move beyond apps and email and SMS and all those kind of clunky, broken and untrustworthy channels.

Mathieu (21:50.20)

I'm curious about this because there's, again, depending on where you are in the world, you could take advantage of this in some areas. At least in the Canadian market, there seems to be a push now. It's pretty much non-existent today, but the whole concept of open banking or user-controlled banking. It's obviously more advanced in other places than Canada, but there's a big push for this now.

I've been wondering, is this going to be an enabler for empowerment tech? It seems like a big time opportunity for some of the fundamental pieces behind empowerment tech to be used to safeguard consumers, citizens, to actually enable better types of financial services and access to financial services to happen. I'd be curious to, and I know you've done a lot of thinking and have experience in this area where you see those two kind of crossing paths.

Jamie (22:49.09)

Yeah, I definitely think open banking and then open finance is this broader shift. And then arguably open data beyond that. I think finance is going to be one of the trigger points. And actually, it's worth spending a bit of time as to where it came from. And if you go back to the early 2010s, Financial innovation was horrible. We come out the back of the financial crash. There was very little trust in banking institutions generally, worry about the whole banking system. And so some countries, UK was one of them, said we need to inject, we need new competition. We can't just have these big old organizations running the show or being the only show. So we need to inject innovation. How do you do that? You get data to flow. And so this idea of open banking, creating APIs so that banks can share data about the customer as long as the individual has consented. Say, hey, can you give me the last three months of bank transactions, for example? That should unlock this whole new wave of innovation.

Jamie (23:59.11)

Now, what it does is it means banks got stuck in front of the whiteboard for five years debating, is it day, day, month, month, year, year, or month, month, day, day, year, year? What is the exact format? What are the calls? to be able to move customer data around. And actually in open finance, open banking rather, it's a relatively narrow data set. Now it, guess what? It's triggered a load of new digital banks that have washed into the market. And that's been great. It's driven competition. The UK is an example. A bank called Monzo is now the seventh largest bank. It was born, you know, they started as a prepaid card in 2015, I think, maybe around then.

It took them a while to get a banking license. But now they've got 9 million customers. So there is no website banking. It's just an app. There are no branches. It's just an app. 9 million customers, seventh largest bank in the UK. And it's a digital bank, ground up. And there's a few others, a Starling and so on. All because we could start to have a regulatory environment that's going to push open banking.

Jamie (25:12.22)

So that individual can share data and it's what powered groups like Klarna. Because rather than just saying, hey, okay, we can move money around in a faster way, but we can make much better lending decisions. And buy now pay later because we can look back at the last 90 days or 180 days of transaction information, your bank account and say, you know, how much money is in there? Are you making regular payments? Are you overdrawn?

Are you are the very large lump sums coming in and out and as their stability and they can make lending decisions based on that. So open banking has been a fantastic shift and the reason I told this long kind of backstory is because ultimately it becomes about sharing data. You know, but look closely and it's about two organizations sharing data between themselves and There was a like a five or ten year arm wrestle about what the data profile would be what the data schema and so on?

And I think what's going to turbo boost it is once that data can be given back to the individual, instead of the API being between banks, it's the API back to me. So if bank number two wants

my information, they come and get it from me. Now, until now, they couldn't trust that it was me. They couldn't trust the data hadn't been tampered with. They didn't know where the data had come from. And this is the breakthrough of verifiable credentials. Because now when the data is starting to be moved by the individual, rather than I could give consent for company A to move the data to company B. It's now coming via me, back to this idea of me being the active participant rather than the data subject.

Jamie (26:50.09)

So empowerment tech means the individual can be the API, the data comes via me. And so guess what happens? Not only does bank B or company B get a new data set, but they could have all sorts of other information about me that the bank doesn't have. My other shopping habits, you know, other enriched data around KYC. Because right now we do KYC once at the beginning, we say, is it really JMA? Yes. Is he a person of interest? No. What's the risk profile? Okay, this level. And then they forget about me and maybe recheck me in a year or two. In this new world where I'm in the middle, well, we could start to do real -time KYC every time the data is shared.

Jamie (27:39.19)

And so I think Empowerment tech is going to enhance, extend and accelerate open banking, but also that's going to flow into pensions, mortgages and all the other parts of open finance. And then of course, open data, once you start to say, well, look, what are others Jamie's preferences needs and that whole moving journey I mentioned earlier, because it's not just the mortgage, it's all the legal information. It's also the home move logistics that might be valuable to help me with in that part of the customer journey. So again, I think empowerment is going to touch every sector and open finance and open banking is going to be one of the first places it's going to be impactful. It's going to take regulators probably a while to accept it, but that's just the journey of our financials. And I know that there's loads of really interesting banks, certainly in Europe, in Germany, in Austria who are being pretty progressive and thinking about not just open banking, but using a digital wallet to reframe what open banking could look like.

Mathieu (28:47.08)

It's really moving from direct trust to transitive trust models. And I really enjoyed Timothy Ruff put a blog out a few days ago, just describing how blockchains really don't help with transitive trust. Ultimately, that's what it comes down to because they're their platforms in their own. And it's a similar model here, right? Like there are these different platforms, these different financial institutions and maybe they're choosing to interact with each other, but I don't have true interoperability. Like I can't actually pull out of one and go to another one and just be able to access services without them being able to interact with each other.

Mathieu (29:29.11)

And so at the time, like some years ago, having spent a lot of time around blockchains got quite excited about the idea of a verifiable credential because I thought, well, hey, if let's say I had certain assets sitting on a blockchain, blockchain one.

Blockchain 2 has no way of knowing that I have those assets on blockchain 1. So I maybe I'm not able to do certain things that I would be able to do. Like, I don't get a loan, get a better interest rate, get whatever type of financial service that I'm looking to get there because they don't know about the other one. So open banking is like looking to solve that, but you're still missing that transitive trust. And until you unlock that, that's where you're going to get just like the crazy amount of innovation that happens.

Jamie (30:13.22)

Exactly. And I think one of my perspectives, I thought it was a great post on Timothy, is that we kind of forget the BLT sandwich, right? Because what we're talking about in so much of the time is the tech. And we're figuring the B, the business and the L, the legal. You talked about regulators. You know, we need the business, the legal, the technology layers. The tech is like maybe 20, 25 % of a shift.

And that's been true of all new technologies that come in. We've got to think about the commercial models. We've got to think about the incentives. We've got to think about the customer experience. We've got to think about the regulatory environment. And you know, what blockchain, you know, Bitcoin was solving a double spend problem. Identity doesn't have a double spend problem.

You know, it doesn't have a real time settlement of money with two entities who don't need to know each other with no intermediary. That's not a problem statement that identity has. In fact, largely it's almost the opposite. And, you know, I kind of think if we just stay on the T for a second- the technology side.

Jamie (31:28.21)

You know, Bitcoin gave way to blockchain, blockchain kind of gave way to decentralized ledger technology, DLT, and that kind of gave way to cryptography. And it kind of got hijacked the narrative around crypto and tokens, but actually the cryptography underneath it is what gets the identity community excited because it's the new cryptography that allows us to move data in a much more trusted, reusable way. So I can now know where the data came from.

I can know if it's been tampered with. I can know if it was given to Jamie and only Jamie, and Jamie's not given it to his brother to be passed off as someone else. So it's the cryptography that's underneath it that is the powerful bit. And it's really down in the weeds. And really when you get into the religious fights about verifiable credentials, they're really fighting about the cryptography and what the signature schemes are. And whether you can do selective disclosure or zero knowledge proofs. Once that shakes out, Once we can move data, you talked about transitive trust, transitive trust. Really it's that technology breakthrough that allows us to move data and know where the data came from, kind of is it authentic, has it been tampered with and so on. But that is like a fifth of the story. We need the B and the L, the regulatory environment. We need to know the commercial model. Because if I start sharing the data with party B, does party A get recompensed for that? Is there a kickback?

But you know, or is it now just the data is everywhere and can be used and the data is now free flowing because there are markets here, capital M, you know, of data is creating value with lowering risk, it's improving on boarding or creating new experiences. There's value there and people are going to pay for that. Otherwise the data won't be issued in the first place. So we have to start thinking about the new commercial models and it's not all just going to be open source and free for all for everyone.

Jamie (33:24.15)

you know, that will work for the infrastructure layer, but the application layer, the services layer for individuals at the experience layer, values can be created and organizations can and should be working on those in a commercial way. And I think we forget the B and the L. And honestly, I think the wallet credential, self -sovereign identity communities have just necessarily been focused for a long time on the tech because that was the breakthrough bit. But now I think the next wave is going to be the commercialization of this technology that's now stabilizing. And blockchain was the narrative between 2016 and I'd say 2001. And I think now, maybe 2002, now we're moving to all the application layer and what's now possible and what are the commercial models. And that, I write about this at Customer Futures. I think it's about being above the waterline.

For too long, we've been below the water line having frothy debates about signature schemes. And now it's like, what can we do? And that's the, how are we going to create new value and who's going to pay? Those are the thorny questions that I'm working on at the moment and where I think the exciting action is.

Mathieu (34:39.01)

The way I look at it ultimately is like a blockchain network or platform is, could be very good for settlement use cases where I'm looking for a place to settle transactions based on a different governance model than things that exist today. Whereas when you start talking about like wallets and credentials, they're really solutions trying to solve an attribution problem. So it's less about settlement, but it's more about like making claims and attributing a claim to an identifier or an identity, that type of thing. And then when you ask like the secondary questions, then you really get into like, how do you have the digital trust infrastructure and the governance and the stuff behind so that you could actually trust the attribution that's happening. But the attribution needs to happen independently of a specific platform, whether it's a blockchain or an organization, it's four walls or just a database doesn't matter, it needs to happen independent of that.

Mathieu (33:42.03)

So we've kind of, we've elevated that and some of the work that's happening in the EU under eIDAS is saying, hey, we're trying to solve some attribution problem by just putting a claim inside of a wallet on the person's device saying that this identifier represents this EU citizen type of thing, maybe some other claims based on the type of credentials that are being issued. But then how do you actually put that to practice?

And one of your other pieces or the core fundamental pieces of your empowerment tech is the personal agents. And I personally think that's where you're going to see a lot of the business cases develop. Cause now if you think about data sitting on the device, you talked about a small language model being on the device. I think that's definitely the way that things are going is that you're going to have AI on your device. Things are going to be running on there. And then, so then how do you leverage that asset now that I have here?

And the intelligence that can be generated on that to interact with the world and create value there. So it might be worth just taking a step back on personal agents and just discussing your vision of where we're going in that space. And then if you agree with my point that that's going to be one of the key places where value will be able to be created and business models and will drive incentives and so forth.

Jamie (37:05.13)

I think that's exactly right. And the reason I think it's exactly right is how are we creating value? If you think about digital wallets, partly in large part because of the great work by the community working on digital wallets, and there's a lot of open source, open standards, it's commoditizing. Why on earth would you build a wallet when you can rent one?

And I think that's going to be true of governments, you know, the value of identity rather. If you think about where identity has been, we kind of do these gymnastics for holding up cards and, you know, our driving license and taking photos and selfies and smiling and moving our heads. Those are all workarounds to try and scrape the data in our existing documents. And so for a short time, let's say the last 15 years, businesses have stepped in to say, we'll use AI and machine learning to do a really good match of a face to a document. And this was, it's a little bubble because it's trying to digitize the stuff we've already got, but it's, it's gonna, there was value created those businesses of multimillion dollar businesses because there was no other, it was the least worst way of trying to get an identity document verified. And it's not bulletproof, it's just saying we're gonna give you a risk score that it probably is Jamie's document.

And it probably is Jamie's face standing next to the document. But once governments can issue that data natively as a blob of data, and it doesn't need to look like a card anymore, right? The driving license isn't your identity document. It proves I can drive. It was just a good society hack for proving I'm over 21, even though it wasn't issued as that. It was a driving license. You know, I don't carry my marriage certificate around or my passport unless I have to.

So I'm crossing borders. So these kind of hacks we've been using to scrape, you know, I wrote the other day, the founder of Spruce, whose name now escapes me, he wrote, you know, it's like ripping CDs back in the day. You get a CD and you rip it and you take a copy of it. We're kind of ripping our IDEC, NC documents at the moment. Forgive me, I've forgotten his name. David Keltz, I think. Anyway.

Jamie (39:35.07)

It's an accident of time and so that stuff's going to commoditize. I'm going to get to personal agents. Wallets are commoditizing, the infrastructure is commoditizing. I think the identity is going to commoditize because it's going to come, you know, our root identity information is going to come from organizations we trust, like organizations, our employers, hospitals, governments. Those are going to be identifiers given to us, but they're going to be able to help us prove who we are. It's going to commoditize. So where's the value left now?

And so your intuition that even AI is going to commoditize or is commoditizing, right? I can take an LLM off the shelf now. I can train it. So the values in the data, the value is in authentic, trustworthy, rich, deep data about a specific topic. It might be on an LLM train for legal cases, bounded, not just hallucinating on previous case law. It's saying, no, no, no, we're bound on the last 35,000 cases we did. Or it might be trained specifically in a Tesla of the millions and millions of miles they've driven.

Right, so they'll have an LLM based on that particular specific thing. I'm gonna have an LLM trained on me. And it's logical if it's authentic data that's come from me, it's not infinitely bounded. We can't just keep training and train and train. It's gonna be narrowly on me and my needs once - health, money, finance, travel.

Jamie (41:04.08)

That's where the value is going to come from. The value is going to come from the data. And not in a big data way, in a small data way. And how are we going to make sense of that? Because I can't hold all that data, not all of it on my device and not all of it in my brain. So I'm going to need digital tooling, which I think could be personal agents, that may well operate in a cloud that I control and pay for, maybe - or on my edge devices, plural, that will be synced between them. That feels like the logical place where value is going to be created. There's another thread of this conversation we'll talk about where AI is going in terms of agents acting autonomously. But before we get there, I mean, that's coming. That's going to be the next 24 months. But even just now, making sense of my life and seeing patterns that I can't see. You know?

Jamie (41:57.09)

Your friends might point out to you, hey, have you noticed you've been doing this recently? Like, no, I haven't. I haven't noticed it about myself. The people closest to you make those observations and try and help you. Well, I can have an agent doing that for me. And would I pay three bucks a month, maybe? Because the values can be in the data, not this commoditizing wallet identity space. So that's where I think AI agents are going to create value and therefore where I think the commercial interest is going to come from, personal AI.

Mathieu (42:26.08)

I mean, we pay \$15 a month to Netflix to get recommendations on content to consume. So I would imagine if you had your financial data available or your health data available, you would pay a decent price to get a good ROI on that better than just getting content recommendations.

Jamie (42:45.10)

Right, and think about the incentives there, right? Because it's a perfect little example. You know, I'm gonna look at it from different angles. Would I pay Spotify for pension advice? No, because they're world class at streaming the distribution bit, but also recommendations. Sometimes they inject a song and I'm like, oh, what is that? That's cool. And I go down the rabbit hole and find a new artist.

Jamie (43:10.04)

There's no reason why we couldn't have specialty advisors in our life. But the very first question you asked in this conversation was about alignment of incentives, right? Spotify are injecting new artists on what basis, right? They make or break, breakthrough artists because they've got distribution, they've got our attention. You know, that 10 bucks, if I could divert that to an LLN that's trained on me and my health information or my risk profile, my legal status, my job, my wills, my estate, my personal situations, my travel. That feels like, it's not just saying, oh, look, there's another 9.99 subscription in my life.

I think it's saying this could be genuinely transformative to helping people make better decisions, which by the way could be, don't buy the thing. Like I said, right at the beginning, you know, I might pay 10 bucks a month because that's going to save me spending 400 bucks on something I don't need and shouldn't buy. Right. So now we're into trust and business models and so on. But I think this is the fertile ground for the next wave of innovation. I think it's going to be the layer above wallets and credentials.

Jamie (44:34.10)

And by the way, wallets and credentials are going to be like a foundation stone. Like the AI bit untethered to wallets and credentials won't work because we'll have no idea what data came from where, we won't know who we're dealing with, we don't know if we can trust the sources, we don't know if the data been revoked, we don't know if the data's, if it really is Jamie acting in this AI. So we're going to have to have the, you know, it's arguably public digital infrastructure.

We're going to have to have the wallets and credentials that are trusted and governed like eIDAS so that this new AI layer can emerge above it. Without it, it's going to be on shifting sands and it's going to be chaos. And I think those organizations that build AI models for consumers that sit on top of wallets and credentials are going to be those that survive.

Mathieu (45:22.01)

Yeah, just having something telling you like not to do something would be the most valuable thing. Like that seems to be the biggest success factor is just avoiding mistakes. If something's able to tell you to perhaps avoid a mistake that has the most value possible in your life. And if I bring a couple of points together, I want to set you up on this one. If the value is in the data, which I would agree, we're seeing like, Companies pay a lot of money to be able to access private data stores of other companies to be able to train their models, create competitive advantages, differentiators, offer more value to their own customers. So that seems to be a trend.

Mathieu (46:05.12)

And so there was that saying years ago that data is the new oil, data remains to be, like it remains the most valuable thing. And if you have high integrity data based on strong governance, strong roots of trusts, um, eIDAS is one example of this for a government identity. But if you start amassing a lot of this stuff, if you, if you go into the financial services world and you're pulling your financial data, if you go into your health monitoring and you're pulling that data, it's all signed. It becomes highly available. There's a lot of value in that data. Where is that data sitting ultimately? Like it may be sitting, we're calling them wallets.

Mathieu (46:53.20)

but to my knowledge today, there's two major companies that sell phones - more than two, but if we just simplify it, it's like there's Google Android devices and there's Apple iPhones throughout the world. And anytime we're talking about personal identity, we're talking about it sitting on those devices.

And so at the same time, I've been hearing discussions of companies like Apple or at least their iPhone sales are feeling saturated within the markets that they've captured as much market as they can. Is that the evolution for them? And should we just, should we forget about wallet solutions on the mobile phones? Like ultimately, will it just be the devices themselves that are these data vaults, these data stores that hold this high integrity information? Yeah, a bunch of different thoughts there, but I wanted to throw you that.

Jamie (47:48.13)

No, this is a great conversation. I've not yet written about it, but there's a post coming about just the fantastic writing by a guy called Sandy Paul Chowdhury. And maybe I'll send you the links you can stick in the show notes if you like. I'm gonna bring up his exact name.

Jamie (48:18.15)

Sangit Paul Chowdhury, C -H -O -U -D -A -R -Y. And he wrote a book called The Platform Revolution. I think it's all about platform economics. And he's just one of the smartest thinkers about why platforms grow, why they've been so dominant. And this is not just a, hey, look at 2010 and why Facebook happened, but actually about the economics of growth and what's happening with AI right now. The reason I point to it is he wrote a really important post about why some protocols win and some protocols don't. Because there are these open protocols like SMTP, right? We have the ability for anyone to stand up an email provider right now. But how many email providers are there really? Right? Hotmail, Yahoo, Google, Outlook. And the reason is if you look, - this has really been baking my brain recently. - If you look at not just having an open protocol, which is what Timothy will write about, Timothy will say, we don't want platforms, we want protocols, correctly. But look at why certain protocols win, why they create the ecosystems we want, like HTML, and why other protocols or TCP/IP, why other protocols have condensed power, they centralized it.

Jamie (49:39.18)

And it's actually it's not the protocol itself, it's the economics at the edge of the protocol. So think about email, email itself being able to send an email to and from, I can send it from Outlook, you can receive it in Gmail, it just works. But there are economics at the edges that shape this. And one of the economics around email is storage and filtering, like spam management.

So, having a protocol is not enough. The economics of what happens at the edge, what happens at the edge of this thing is going to matter. So in email, we ended up with two and a half email providers because it was the organizations that could provide unlimited storage, brackets Google, and the best spam filtering. Now, Microsoft also, because they had storage and spam filtering, but they could also manage the company firewall and global address lists and Active Directory. That's where the economics are.

Jamie (50:38.22)

So take KARI and DIDcom,, we're gonna have this fantastic open ecosystems, but what are the economics of wallets, credentials and AI at the edge? It's gonna be the processing power, it's gonna be the storage, it's gonna be the value of the ecosystems just at the edge of the protocol. And so to your point about Apple and Google, I think they're inevitably going to dominate because they have the storage, they have the device, they have the processing power, they have the, what I think will be SLMs, the small language models at the edge.

And so the differentiators can be those organizations that can get access to the individual's data or have the individual, you know, grant access to that data so that the individual can be helped. This is the empowerment tech story. So that's one angle about the Google Apple thing and also, you know, how this might shake out in terms of, in terms of agents. But I think access to quality data and trust, and if you're not already looking at, a company called IF, their website is called projectsbyif.com. And it's a design agency, you specialized in AI ethics, but design patterns for trust. Like what does what does trusted onboarding look like? They've mapped it all out and they've created the design patterns. So if you're launching a new bank or a music streaming service or shoe company or e-commerce website, they have the design patterns for what digital trust looks like. It's all free, it's all open.

Those organizations that can get trust right, are going to be able to interact with the customer in a way that means the data is going to flow. And I think organizations that have the storage and the capabilities and the SLMs but don't have trust are going to fail to get individuals to share data. And the example is, you know, would I give, I don't know, would I kind of Google my health history for an SLM on my device to help me manage my medical condition? I think in developed nations, there might be a question mark there because of their advertising model, back to the alignment of incentives. For those countries, global south, where there is nothing right now, and having a doctor in your pocket, where I can go from having no doctor to better medical healthcare than those in the US get right now, instantly from a device, then I think the data and the trust conversations are very different one.

Jamie (53:10.17)

But for those in developed nations, I think there's a question mark about which organizations are gonna be positioned, which brands are gonna be positioned for trust. That was a kind of deep multi-dimensional answer, but I think the protocols are only part of it. I think the economics of who's gonna win are gonna be related to the processing power of the device, storage, and the email.

The email protocol thing's really woken me up to that. And before it was like, yeah, well, you just need to open protocol in a community. It's like, well, no, you also need the economics of making it out of school.

Mathieu (53:46.06)

I think that's a great point you made around why the email clients or email providers one for storage or just filtering out spam. I remember visiting Google headquarters some years ago and talking to the product team actually behind, it was a product team just managing spam and Gmail. And it was like incredible, just the percentage of emails that are exchanged that are spam, basically like 99% of them.

So being able to properly filter those out, it's just, it's a whole complex product of its own. So that just gives you a reason why it becomes one interesting feature, why someone would want to use that over others. And I'm, I'm, I'm facing similar problems on the mobile device now where I've been most of the calls that are coming into my mobile device are our spam. And, uh, I don't know who solves that. Maybe there's a play for the telcos there, just like there was a feature built by the, the email providers.

Mathieu (54:43.07)

I also feel like there may be a play for the telcos and the personal agents. Cause if the telcos are facilitating, at least traditionally facilitating just interaction with the network and communication, well, you could kind of extend that same model or that same thinking that, well, what's going to be the next kind of level of communication that we need. They may be well suited to do that.

but back to my Apple and Google. One, one way is if they're able to offer these types of things and they're obviously all getting into AI and they're making acquisitions, they're making investments themselves. One way in a saturated market to continue growing is to increase the prices of devices, which they, Apple and Google have two different strategies on that. But another one is for them to get into data services and really start adding a different type of value or opening up a different kind of line item that they don't have today. So do you see them entering the data services space and being able to monetize that?

Jamie (55:48.22)

I think it's inevitable because of the footprint they've got. And as you see, they've gone up the S curve and there's diminishing returns now on, people are buying fewer and fewer, the refresh cycle is slowing down for handsets. And also having a 47 megapixel camera versus a 13

megapixel one, like for most people, it doesn't make a difference. I think the data services, it can be the most obvious thing for them to do. It's also the most high margin thing for them to do. So once they can get the chipset and the storage nailed on the devices, I think it's an obvious thing to do in the same way that iCloud has kind of locked individuals into the Apple ecosystem. That's where my data lives. So they can start to run, you know, SLMs over that data, all my photos, all my transactions, all my files. I think that's an obvious thing for them to do. So I think you're right there.

Jamie (56:47.10)

There is one other element here which is, I talked about the identity scraping, right? The IDV, identity verification providers, I'm not sure it's a kind of bubble, but it's a kind of time limited thing, right? From 2005 to probably 2030, right? 2025, like that's a, it's gonna be a valuable business while people need to transition off these documents. I think the same thing's a little bit true of our devices.

And people complain about steering the black, you know, the whole black mirror thing and staring this thing is kind of, it's getting in the way it interrupts our flows. You know, once we have conversational UI, and I can just ask my personal agent for stuff, and it knows it's me, except for my voice pattern, I've authenticated and whatever, and I don't need the real estate of this kind of five and a half inch device that kind of gets in the way of things. Or I'm pinching to zoom to choose movie tickets. Like do I want, you know, L44 and L45? It's crazy. I think it's an imperfect, it's super helpful on mobile, but it's an imperfect UI for lots of things. There was a really great talk by a guy called Phil Libin.

Jamie (58:09.14)

Phil Libin, was the founder of Evernote back in the day. And he, when the smartwatch came out, there was a big thing saying, how are you gonna put Evernote onto a watch? Because you can't look at documents and that shit. And he said, it's not about screen real estate, it's about session length. You have a big screen at your desk for like two or three hours at a time. Then tablets, I might use 30 minutes or an hour at a time. My phone, but that 30 minutes on my tablet, I might use it four times a day. My phone, I'll use for three minutes at a time, you know, 50, 100 times a day. On my watch, I might use for 10 seconds, 300 times a day. And so it's what are you trying to do in the session you're interacting with? And I think we look at devices as these kind of portable computers that we make phone calls with, but I think the UI, having a conversational interface out of to chat, I'm not convinced chat is going to be the green bubble, blue bubble thing. I'm not sure that's going to be the predominant UI model for interacting with our wallets and agents. And I think having something that just about fits in your hand and just about fits in your pocket might be good for certain things, the browsing the web and the infinite scroll for consumption.

Jamie (59:39.09)

But I think there's going to be new models for UI and it might be the pin that I talk into. It might be my watch I talk into. But you asked about where the data is going to be. I think it's going to be in a whole range of places. We use credentials to authenticate who's interacting and where

the data is flowing. I always talk about the MRI scan. That's just the hospital. I don't need that in my iCloud account, where it's costing me 15 bucks a month. We can use credentials to make sure it's permissioned access to it.

So some stuff's going to be local, some stuff's going to be in the clouds, some stuff's going to be where it needs to live. And we can use these new empowerment tech tools like verifiable credentials to manage access and permissions and consent. But I think the UI format, the new UI model is going to be fundamental to how we think about the devices. And I don't just mean like in 10 years time and there's flying taxis. I mean, I think it's going to happen quickly that we don't need these big clunky devices.

Jamie (01:00:39.05)

There are people who are getting a bit bothered by it, like he goes for dinner and there's like six devices on the table. And it feels like it's not quite right. I think, actually personal AI is going to help us fade some of that into the background a bit. And the Phil Libbon thing about session length, we're going to change the way we interact and a screen this size doesn't give me the right format for improving things. I could say, you know, the, especially by the way, when I've got an audit trail of who's asked for what. I can just start to automate things. I've got my AI respond on my behalf, and I've got an auditory of what's been shared and what's been consented to, and I can revoke it if I need to.

Mathieu (01:01:16.04)

Yeah, very interesting. Just the value of a session versus the value and the length of a session is an interesting concept altogether. And then it makes you think too, if you're going to have a lot of sessions where maybe the interaction doesn't happen through visual means, then it makes you start to think also about some of the trust signals that we get when we're doing stuff via visual means to avoid fraud, abuse, spam, and then how that will need to be served if the medium of interaction is no longer that.

Jamie (01:01:49.06)

One other just little thought is, you know, there's a generational aspect to this as well, or that maybe a segment way of thinking about it. I did some research with some students a while back, kind of, you know, let's say 16 to 21 year olds. And most of them don't know the phone numbers. Like, they don't know or need to use phone numbers because they have each other's handles. Right. Or their email address. You know, you send email because your work forces you to. Right. You don't use email. And phone numbers are something you need to activate WhatsApp. But WhatsApp is really only for the family group that you have to like WhatsApp's dated now, right? It's only for those groups who you've got, you're managing your shifts at work. Your aunt wants to keep in touch with you, right? The social fabric of these tools are not email and phone numbers anymore. And by the way, you know, the identirati are thinking about identifiers like cookies and mobile phone numbers and email addresses. And actually the next wave of digitally native young people entering the workforce, leaving education, they have very different expectations about what a UI looks like, very different expectations about what

interaction looks like. We know that they're spending less and less time together as individuals, that they're spending more and more time digitally connected.

Jamie (01:03:15.10)

But I think these things, for such a long time, we've talked to an identity community about needing a multidisciplinary approach. We have technologists driving things and I'm saying, well, we need to be in the L. We also need designers, psychologists, sociologists, and those thinking about what is a good connection feel like? What does a digital relationship mean? And how should we be surfacing that for individuals?

Jamie (01:03:44.12)

not just what does consent look like and what is onboarding and how to get rid of the form. But how do we think about these new models for interaction? I think these are really deep questions that very few people are thinking about right now that I'm excited to start exploring as these new digital wallet credential kind of tools become possible. It's not just gonna be, so many of the wallets have the ID card shape in the UI and I've got a stack of them, and that's good, because it's familiar, just like with Windows and PCs, we had trash cans and folders and desktops.

There's no reason to have any of those things. They were skeuomorphic. They were familiar. We've done the same things. We're digitizing tickets and we're digitizing our ID, our driving license. Looks like that little card. I think very quickly we're going to get over that, and there's a really interesting new paradigm for what a digital relationship means when, number one, it's not on this (the phone) anymore. And number two, my agent can intermedate it. I think that's where the next wave of value is going to come from.

Mathieu (01:04:49.11)

Jamie, let's do this again at some point throughout the year. I always really enjoy these conversations and it's, yeah, always so much fun for me to talk with you about this stuff. So I really much appreciate you doing this again. And I think folks are gonna get a lot of enjoyment out of this and yeah, thanks again. Really appreciate it.

Jamie (01:05:09.05)

I love having these conversations with you, so I really appreciate being invited on and looking forward to collaborating for the rest of the year.