LEND ACADEMY

PODCAST TRANSCRIPTION SESSION NO. 107-ALEX TAPSCOTT

Welcome to the Lend Academy Podcast Episode No. 107. This is your host, Peter Renton, Co-Founder of LendIt and Founder of Lend Academy.

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Peter Renton: Today on the show, we are talking all about blockchain. I'm delighted to welcome Alex Tapscott who has literally written the book on blockchain. He is the co-author along with this father, Don Tapscott, of “Blockchain Revolution”, how the technology behind bitcoin is changing money, business and the world. Now it's a fascinating read and it really is amazing to me how far blockchain has come in a very short time. So I wanted to get Alex on the show to really talk about firstly, what blockchain is, why it's important and how, in particular, it's impacting financial services. We go into that in some detail and Alex provides a couple of excellent examples on that. Also, we talk about the blockchain consortia that are emerging and we focus on what really are some of the barriers and the challenges that can hold this adoption back. It really was a fascinating interview, I hope you enjoy the show.

Welcome to the podcast, Alex!

Alex Tapscott: Pleasure to be here.

Peter: Okay, so why don't we get started by giving the listeners a little bit of background about yourself, just sort of how you came to where you are in your career today.

Alex: Sure, so my roots to blockchain and cryptocurrencies has been circuitous and I think that's probably true of a lot of people in this industry. I started my career in investment banking working in Toronto and New York right out of university and in that role was spending a lot of my time focused on technology companies and eventually fintech companies when they became more mature and actually came into their own a little bit. It was in that role in call it 2013/2014 that I began to pay attention to what was going on in the world of Bitcoin. This was well before blockchain entered the vernacular, so to speak, and it was a new asset class and something that I thought was kind of fascinating and spent some time reading up on it, I read the white paper, started trading a little bit of the cryptocurrency and just became more and more interested by it.

Around the same time, quite coincidentally and conveniently my father, Don Tapscott, was leading a major research initiative at the University of Toronto and over a steak and a bottle of wine, he and I were discussing what's new, what's hot and we got to talking about Bitcoin and he basically asked, you know, this looks quite like an interesting technology, would you want to write a report for this project that I'm conducting? And I basically said, sure, sounds great. So that was in February of 2014 and I spent the better part of the summer while I was still working in investment banking writing this report and that led to other projects which we did together, which eventually led to us collaborating more profoundly on the book "Blockchain Revolution" which was released in May of 2015, quite well timed as right around the time that I think a lot of

people in the world were really starting to pay attention to what this technology really meant. Right around the time too that many of the current predictions that we had been making were beginning to come true and over the past year and a half that's obviously accelerated quite a bit.

Peter: Right, right, and so then you have a company, Northwest Passage Ventures, what does that actually do?

Alex: So around the time that we were writing the book, I began interviewing lots of different companies that were trying to use this technology to solve really big business problems in many different industries everything from financial services to energy to media and creative industries, to even government and public service and while they had a lot of enthusiasm and great technical knowledge, what they lacked was experience in many respects dealing with large corporations, dealing with investors. And so I found a niche, essentially, to work with those companies and help steward them through a lot of those big decisions that they had to make.

That was also a function more of my own time because when you release a book you end up spending a lot of your time on the road. Over the past nine months, I visited 15 different countries and have given 85 talks so every single continent except Antarctica and Africa. When you're in that kind of a role demanding so much of your time really the only thing you can do, aside from that from a business capacity is work as an advisor so I was doing a lot of advisory work for those kinds of companies, but at the same time, Don and I, so my co-author and father and I launched a project called the Blockchain Research Institute which is a multi-million dollar think tank that is doing the definitive investigation into blockchain strategies for big businesses and the enterprise.

We count as our members companies like IBM, Accenture, NASDAQ, Pepsi, FedEx, Thomson Reuters, Tencent and about a couple of dozen others. The goal of that project is to provide clarity and provide expertise for business leaders in the C-suite who have to make really big decisions about how to use this technology, when to use this technology and what it actually means for their enterprise. And then the final thing that I do is that now that the book marketing has kind of died down a little bit, I am going to focus my attention on the project that I've been most passionate about the whole time which is to invest directly into this ecosystem. So I'm launching an investment company that will deploy capital, making decisions, both in traditional venture capital private equities opportunities and also in the crypto asset space itself.

So for the people who are listening to this podcast, they may not be aware that there's more to this world than Bitcoin or even Bitcoin and Ethereum and in aggregate the whole universe of opportunities that is over $110 billion in size. It's growing exponentially and there's really a dearth of professional portfolio management in that part of the marketplace and so that's an opportunity we see for us and one that we think we can fill.

Peter: Sure, sure, I imagine so. Let's just back up a little bit because I know that there's going to be listeners to the show that don't really know much about blockchain obviously, most people…pretty much everyone in business I imagine has heard of it by now, but most people

might just equate it to Bitcoin so why don't you just give the listeners your definition of what the blockchain actually is.

Alex: Yeah, well they might be wondering why I would quit a comfortable life as an investment banker (Peter laughs) to pursue this crazy, wild and brand new industry and what excites me about it, right.

Peter: Right.

Alex: And that's quite simply that I think this technology represents the second generation of the internet. For 30 years or so, we've had the internet of information and it's been a great tool for changing how we communicate and how we access information, but it hasn't had as big an impact on the world of business and on the economy. I think there's a lot of people who thought when it originally...the idea, and that's for a very simple reason which is that it's designed for moving information, not value. So when you send an e-mail, you can send the same e-mail to someone else or you can send the same e-mail to a million other people so that's great for an e-mail, but imagine that e-mail was $20. If you send $20 to someone it's pretty important that that person knows that they have it and you don't so it's like having a printing press for information which is good, but when it comes to money, we don't want to be giving everybody a printing press because that would make the money worthless.

So as a result, even with the first generation of the internet, we've still had to rely on intermediaries so banks, government, PayPal, Visa, but also big social media companies like Google, Facebook, digital conglomerates like Amazon, Apple, to sit in the middle of transactions and perform a whole bunch of really important roles; everything from validating the identity of parties to creating trust to performing the transaction in business logic so clearing and settling to record keeping. Because of the proliferation of the internet, a lot of the value that's been created has actually been captured asymmetrically by those intermediaries. So with blockchain, the internet is entering it's second era from an internet of information to an internet of value and it's based on this technology which is simple in what it is, but profound in its implications.

A blockchain is basically a distributed public ledger of transactions. It originated with the Bitcoin blockchain, but since has spawned a whole ecosystem of new technologies...and on this platform not just information, but anything of value, so money, financial assets like stocks & bonds, titles & deeds, IP. Even votes in an election can be moved, stored and managed securely and privately peer to peer which is the key innovation not with an intermediary creating trust, but rather a network creating trust through a combination of collaboration, cryptography and some clever code.

And it's quite profound what has happened over the few years that this technology has been around...it started with Bitcoin, but it has since spread like wildfire and basically captured the imagination of technologists certainly but also business leaders, government leaders, people in civil society, journalists, the media, you name it.

Peter: Right, okay, so I get that certainly and it's great that we have an example that is pretty widespread with Bitcoin out there, but it seems to me, and I know you go through this in your book in some detail, but it seems to me it's quite a leap from saying anything of value...it can move value around. How do you go from that statement to saying it's the second generation of the internet because that is….I mean the internet is obviously very well established. You can get internet access in pretty much every country in the world and it feels like such an established utility right now so how do you go from moving value around to being the actual second generation of the internet?

Alex: It's a great point and quite honestly if you'd asked someone in 1993 to predict what they thought the internet could do, they might not be completely correct. They might not know about the pervasiveness of the mobile web or geolocation or cloud computing or social media or interaction of the internet and internet of things and these other innovations. It's hard to predict what's going to happen 20/30 years down the road; we always say we're not in the prediction business because the future is not something to be predicted, it's something to be achieved.

I think a lot of people forget that the first e-mail was sent in 1969 and the internet didn't get commercialized until 25 years later. It's been 25 years almost since then and now we're beginning to see the internet as this ubiquitous technology that's having a really profound impact on a lot of our lives. Bitcoin and blockchain technologies are eight years old, really about five years in earnest since it ever became more widely used, more than just a science experiment that was bouncing around discussion forums and things like that. So I think that the rate of change that we've actually seen in this ecosystem has been faster than any we've seen in the past.

In the book we said that within five years of when we wrote it, that the world of venture capital would be unrecognizable because blockchain technology allowed companies, entrepreneurs anywhere to issue tokens that represented the value in the project they were building to a massive global network peer to peer without the need for brokers and agents and clearing houses and escrow agents, lawyers and the like. We were wrong in that prediction because it ended up happening in one year, not in five years.

Today, the vast majority of companies that operate in the so called blockchain industry raise money this way. They don't go knocking on doors in Sand Hill Road in Silicon Valley, they do these crowd sales which have been dubbed recently ICOs, Initial Coin Offerings, and the amount of money they've raised is quite staggering. In the first half of this year alone, it's been over half a billion dollars, which far outstrips any traditional VC investment that's been made over that same period of time. So when we talk about...you know, you mentioned Bitcoin is the first example and it's certainly true, but now we're talking about tokens that represents everything from loyalty points to digital cloud storage to API keys that allow developers to program something on top of the platform to even attention and this is just a fascinating example.

There is a company called Brave that did one of these crowd sales and they sold a token called the Basic Attention Token. Essentially, the way it works is that the token is applied to content that ends up paying the creator directly and it's financed by advertisers that want to run ads on top of content. What that means in effect is we now have a monetization system for making sure content creators get paid fairly on the internet and making sure that advertisers don't spam users. That company raised $30 million selling this made up token in 30 seconds.

Peter: Wow!

Alex: So things are happening much faster actually than we thought they would so I agree, I would never say that this is a mature industry. I'd say that we're probably halfway through the first inning of the first game of a seven game series (Peter laughs) if we use a baseball analogy.

Peter: Okay.

Alex: I don't know what the analogy is in cricket or anything else (Peter laughs), but it's still pretty early here and already we're seeing this have a pretty big impact which is really exciting and encouraging for us because it validates a lot of what we said in the book.

Peter: Right, right, I know these initial coin offerings, I feel like I read about a new one almost every day, it feels like now. I know there was one recently...I'm trying to remember the name of it but I was listening to a podcast recently that mentioned it...I think it was about a company that instead of going out to the venture community, they just raised money as if they would from a venture or an angel investment community, I think they raised $10 million and it was all just done through this token that now has value. It is fascinating, we could talk about that for the whole rest of the show, but I do want to get on to some other things. I can see though it really has the potential, particularly...I mean, raising money is one way that I could see how…like the JOBS Act has tried very hard to democratize the raising of capital but it hasn't really succeeded and I could see something like this has probably more potential in the long run.

Alex: Well just one point on that. I do think there's a lot to cover here, but this is pretty interesting. So just because there's a new funding mechanism which has transformed venture capital doesn't mean that the ventures getting financed are any good, point number one.

Peter: Right, right.

Alex: It doesn't mean that they're bad, what it means is that a lot of these companies or projects, however you want to define them, will probably succeed at the same rate that most normal early stage companies succeed which is to say not often so maybe six or seven out of ten will not work out. Maybe one or two will perform okay and maybe one will do very well, but it's out of this new funding mechanism that the next Google or Facebook or Amazon or Apple will emerge and they might not be private companies like those ones I just named; they could be a new type of organization. But the most valuable organizations of the next era of the internet will come out of this process.

The second point is that a lot of this is happening in a legal gray zone, regulatory gray zone, and I think there is going to be a reckoning at some point where we need to reconcile what's going on which I think on balance is very good with the fact that there are laws and they must be respected. Those are questions that will have to wait for another day and maybe another podcast.

Peter: Right.

Alex: Ask me in a year.

Peter: Anyway, I want to get back to some of the details here about the blockchain and I know we've got...Ethereum has been receiving a lot of press right now and I think it was a Canadian that actually started Ethereum. I mean, most people understand now what Bitcoin is and Ethereum was sort of created what I've read in response to some of the shortcomings of Bitcoin...can you explain what those shortcomings were and what really is the big difference with Ethereum?

Alex: Sure, so from its very start Bitcoin was designed to be a single purpose technology, it was designed to be a way to move value in Bitcoin peer to peer in the same way that you might move value in cash peer to peer by handing someone a $5 note. So there wasn't anything like this that had existed before, cash for the internet and what was amazing about it is that it works, right, but it was never designed to handle more than just Bitcoin and a lot of developers have been trying really hard to not reprogram it but to make it work for other kinds of assets.

The person who you're referring to, his name is Vitalik Buterin and he was big in the Bitcoin community, but saw these limitations. He thought the technology could be used for more than just moving Bitcoin, he thought it could be used to move lots of different kinds of assets and maybe even to program applications that ran on top of the blockchain. The word that he used to describe this was called a smart contract and for your listeners who aren't aware, a smart contract is basically what it sounds like, it's programming language software that mimics the logic of a contractual agreement that would guarantee the execution, enforcement and payments where you don't have to rely on intermediaries to create trust like lawyers and escrow agents and brokers and courts and the like.

So if you think about it, the world of business or even financial services....every financial asset is a contract; a stock is a contract, a bond is a contract, a futures contract is a contract entitling the bearer of that instrument to some economic benefit right, coupon payments and the principal or what have you. So the idea of a programmable blockchain that could be used for any kind of asset class in any industry is a pretty ambitious idea, especially coming from a 19 year old University of Waterloo dropout with a big brain but not a lot of experience in the real world.

But Ethereum had a great following and they raised $18 million in one of the first major ICOs. $18 million sounds like a lot, but these days it's chump change in the world of blockchain. But he launched it a year later and today Ethereum is this global juggernaut worth $35 billion and people often struggle with the question...why on earth is this thing worth $35 billion? For the

simple reason that whereas Bitcoin is still confined to this one use case of moving money, Ethereum has attracted developers from all over the world from many different industries. So the developer community for Ethereum is many orders of magnitude larger than it is for Bitcoin and I think it's fair to say that most of the best and brightest computer scientists in the world are working on this which is pretty exciting. And then another thing is that Ethereum has become almost sort of involuntarily or not intentionally has become the foundational platform on top of which new organizations are getting built.

So going back to ICOs, 75% of ICOs are tokens that are issued on top of the Ethereum blockchain so in terms of network effects it's what Union Square Ventures calls the Fat Protocol. Basically, the protocol itself, the Ethereum protocol, because it has a denomination of value, can be traded, is going to be worth many hundreds of billions or trillions of dollars because every time someone does something on top of it, it increases the value of the network itself. It kind of captures a lot of people's imaginations and gotten them very excited.

So one example of that is the Enterprise Ethereum Alliance which is this huge consortium of some of the largest organizations in the world like Microsoft and Toyota and JP Morgan, but also lots of startups as well like Consensus Systems and NewCo and Cosmos and others and this massive sort of multi-stakeholder organization is racing ahead with applications that can be applied to major industries. Pick an industry and I can point to half a dozen projects in each of them. It doesn't mean they're all good, but there are developers using this technology to solve problems in energy markets, carbon trading, digital rights management, diamond trading, art tracking, financial services, you name it.

Peter: Let's talk about that. Let's talk a bit about financial services because your book mentions the Golden Eight. I know you also mentioned this in your LendIt presentation, sort of eight ways that the financial services sector will be impacted by blockchain. I don't know if we have time to delve into all of the eight, but can you at least talk us through some of these changes you see coming?

Alex: Sure, well we already covered one and that one was called Fund & Invest so how companies access growth capital and I think ICOs are already completely revolutionizing that. The other seven I think are going to be equally transformed and I'll walk through a couple of them. So I think the first one is foundational to a lot of financial services is identity which we call authenticating and attesting to value. For a bank, if they can't do KYC and AML on their customer then that person is not going to become a customer. Doing that takes a lot of time and is very cost prohibitive and oftentimes certain people don't have the ways to attest to their identity and then they become part of the unbanked, the 2.5 billion people in the world who don't have access to identity.

So with blockchain, the way it will work in the future is that rather than large firms having to do their own due diligence on each individual customer, that customer will have an identity which is made up of information that everyone can trust is true because it was recorded on this immutable system. There are real world examples of this happening today so there's a company

called uPort which is based in New York that is working on a sovereign identity system; another one in San Francisco called Civic which is itself doing a $100 million ICO that is very far along in how it will address this issue and even today there was an announcement that Microsoft and Accenture are working on a similar project. So rather than the virtual you living out there on the internet as a bunch of fragments owned by intermediaries, it will be something that you control inside a digital black box and you decide how it's used, but it also means that the end user can trust that information is valid. And that's going to be good for a lot of reasons, it will improve privacy for the individual, it will also reduce cost and friction for companies that are looking to onboard new customers; Civic estimates it will mean 90% cost reductions. So that is just one small example.

A couple of the other ones, there's Transferring and Storing Value so the moving of money and the storing of money is basically the nuts and bolts of retail banking. I think blockchain is making it pretty clear that those two aspects of the industry will probably be free utilities that companies won't be able to make money on and so they'll have to do higher level services on top of that. There are lots of reasons for that, but the simple one is that the transaction costs of moving money through the way the financial system works today will not exist in the future because we'll have a new digital medium for value.

I'm not going to go through all of them, but I'll give you a couple of examples. One is accounting and auditing and this is one that I think could actually be the most profound. So today accounting is done with the cycles of the moon every three to four months or every year and for an accounting firm looking at the financial statements of a company or even for an investor, you're not really seeing the whole picture, it's kind of like looking at someone dancing in front of a strobe light which is to say you see bits and pieces and you try to make out an image of what the whole picture is. So blockchain is basically like going into the dance floor and turning all the lights on so instead of a company recording debits and credits, they would automatically register every transaction to a distributed ledger blockchain that could be accessible by regulators, investors, auditors and others and it would be a real-time living, breathing picture of the financial health of a company rather than a facsimile that we see every few months.

That will mean big changes for the audit function of the firm, it will mean big changes for the role of the CFO, it will certainly mean big changes for the Big Five, the audit firms who do make a lot of money doing this. It doesn't mean that their industry is going to change for the worse, it will just mean that it will change and they might have to focus on other higher value services like advisory work, investment banking work, consulting and tax. I think that that shift is already underway. If you were to talk to anybody at PwC or EY or Deloitte or any of these companies, they'll tell you that they're preparing for this new future.

So that's four or five of eight that I think are going to be deeply and profoundly affected. You know, if you're listening to this and you work in a bank and you're wondering how do I avoid becoming obsolete, you have to change the way you think about new technology. By the way, I don't think that this means the end of intermediaries, it just means that intermediaries need to re-think their role.

Peter: Right.

Alex: So instead of just thinking opportunistically how can a technology allow me to trim fat from my business which is really what a lot of people are still talking about when it comes to blockchain....how can it allow me to cut clearing and settling costs out of my public equity business or something like that. Rather than just thinking opportunistically, you have to think strategically because if you say blockchain can allow me to cut costs from my public equity sales & trading business, what does it mean if five years from now there is no such thing as a public equity market because all assets are traded bilaterally on distributed exchanges and there aren't clearing houses or escrow agents or investment bankers or brokers who are needed to facilitate the exchange of financial assets. You know, is that a question that people are asking and if not, it's one that they certainly should.

Peter: Right, right. I mean, my mind is just ticking over here thinking of all the potential different implications of this. I think one thing is for certain, the future is going to look very different to the past, I think we could all agree on that. So I want to talk a little bit about...a lot of the big consortiums have been in the news and I want to get your take on…there is R3 which had some banks leave but they've raised quite a bit of money then there is Hyperledger and a newer one called Digital Asset. What is your view on...I guess which ones of these consortiums are going to really get traction?

Alex: Well I can't say for sure because I don't have a seat at the table at some of these groups. What I can tell you is the fact that all these large organizations are coming together to try and figure out this technology I think is a good thing. I do question the consortium model as a way to achieve change quickly. But if you were to look at a consortium that's got a hundred different members, many of whom are in overlapping industries and many of whom compete directly with one another and many of whom are in totally different stages of development, certain ones are very advanced, others are new, what incentive does that create?

All those things I just mentioned, what incentives does that create to share information and share insights and cooperate, and what incentive does it create to hoard information or to not cooperate. And so I'm cautiously optimistic that these consortia will produce something of value, but I question whether or not it will be as effective as if these companies were to go it on their own or to work in smaller groups where there are clearer, complimentary interests.

The counterpoint to that is that when it comes to financial technology, network effects really matter. If you're the only person in the world with a Bloomberg terminal it's not as effective as if everybody's got a Bloomberg terminal because it's not just a way to access information, it's a communications tool and I think that's the same for common standards around financial technology, especially blockchain. So I think it is necessary that industry participants can agree on certain sets of standards, whether or not it's going to come out of these kinds of groups, I'm not sure.

There are other groups that I think are going to be very effective. I think that the Enterprise Ethereum Alliance is going to be effective because it is a very diverse group of players, you know, banks, manufacturers, technology companies and startups who aren't looking at industry specific solutions so much as they are looking at basic technical standards for how to scale the Ethereum blockchain and it's corresponding ecosystem. I think that those basic technical standard conversations are the ones that need to be happening right now and I think Hyperledger which is a project of the Linux Foundation is in the same boat on that front. So that's all to say that in the end I think it's all good, basically I think it's all R&D and whether or not one is more effective than the other is not of so much concern to me because I think that eventually whatever the best technology or best solution that arises from this will become dominant.

Peter: Okay, we're almost out of time, but one more question I really want to get to.

Alex: Yeah.

Peter: It's around the barriers because you've painted a world that is vastly different to the one we live in today or certainly the one that we lived in five years ago. So what do you think are the main barriers that may end up hampering the widespread adoption of blockchain technology?

Alex: Well that's a question that we kept asking throughout the research for the book and it's frankly one that I continue to ask almost every single day. In the book we actually came across so many of these challenges that we dedicated an entire chapter to it, it's called Show Stoppers: Reasons Blockchain Might Fail. That was written a year ago. I think we're past the point of why blockchain might fail, but I think we can certainly still ask the question, what might cause blockchain to not reach its potential or to leave this better future sort of unfulfilled, so to speak. And there are lots of reasons, there are still technical questions. You know, Ethereum is $35 billion, but it's still a new technology. Someone described it as a $30 billion gorilla on roller skates holding a tray of champagne glasses.

Peter: (laughs) That's great.

Alex: It's big and it's powerful, but shit like things could go wrong. Sorry, I shouldn't swear (Peter laughs). You know, things could go wrong as it continues to scale and those are questions that I think are really important. What will industry incumbents do, how will governments react to it, what will regulators' response be to this technology, what are the social consequences of a technology that's a big disintermediator? Does it mean job loss, does it mean dislocation in labor markets?

There are a lot of reasons why the technology might not reach its potential, but you have to ask yourself, are these reasons that it's a bad idea or are they implementation challenges to be overcome? I think they're all implementation challenges because we've got another kick at the can here, basically, to reinvent the economic power grid, the old order of human affairs and maybe create a slightly more democratic financial services industry and more democratic economy and I think that's probably good for everybody. It's really not a question of whether or

not blockchain will create that better future because it won't. Technology is just a tool, it doesn't have moral agency, it's not right or wrong; it really depends on how it's wielded so my hope is that people take it seriously and wield it responsibly.

Peter: Okay, we'll have to leave it there, Alex, much more to talk about, but I really appreciate you coming on the show today.

Alex: Yeah, thanks a lot and will I be seeing you in China?

Peter: Yes, you will, I will be there.

Alex: I'm looking forward to that.

Peter: Great, thanks, Alex. See you.

Alex: Thanks, take care.

Peter: Alex certainly does paint a fascinating future of how blockchain can really impact the financial world. Seriously, if even some of this comes to pass or even if it takes a lot longer than he thinks, the world is going to be a very, very different place, particularly the financial world. It's going to be a very different place and in some ways much more democratic than it is today. I sometimes feel sorry for the regulators because the world is changing so fast and they simply...I don't know how they're going to be able to keep up with some of these changes because it takes a while to craft these laws and legislators find it difficult to agree on just about anything. I imagine there's going to be some challenges up ahead where that's concerned, but it's an exciting future. I think we're going to have some massive changes that are going to happen as a result of this blockchain technology.

As Alex said, he is going to be in China, he spoke at LendIt 2017 in New York. There will be a link in the show notes to that from the last LendIt but he will also be speaking at LendIt China in Shanghai, July 15th & 16th. If you haven't got a ticket yet, you still can get one.

Anyway on that note, I will sign off. I very much appreciate you listening and I'll catch you next time. Bye.

(closing music)