GOWLING WLG

BLOCKCHAIN MANDATES 2.0: OVERVIEW

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Transcript

Usman: Good morning and welcome. I apologize for a little bit of the delay. We wanted to give people a little bit of time due to this weather outside, with the rain. Wanted to thank all of you for joining us here today. My name is Usman Sheikh. I am the National Head of our Blockchain and Smart Contract practice group. We're thrilled to have you all here today. Just a little bit about our group here at Gowlings. We've actually managed to create something quite special at the firm. We, as a group, our Blockchain and Smart Contract group, is now probably about 70 to 80 practitioners strong throughout Canada

and throughout our foreign offices. We represent some of the largest financial institutions, probably about 9 to 10 of the largest cryptocurrencies in the world, and do an extensive amount of thought leadership. Whether it's speaking at the IMF, or the Monetary Authority of Singapore, the European Commission, we see that as a critical function, as our task as lawyers, to be able to educate and to keep our fingers on the pulse of the capital markets and developments in this space.

So, we are absolutely thrilled to be able to share and impart with you, to you, some of the knowledge that we've gathered in our mandates, working extensively in this space, and to also feature a number of terrific, terrific guests that we have. I wanted to give you a sense of the outline for today. All of you should have a little brochure on your seat and on the first page is the agenda. Let me give you a little bit of a highlight as to what is to come. Although we're aware that many of you are quite knowledgeable in Blockchain we're going to assume, for the purposes of this conference, that you know nothing. To that end we're going to start off with a Blockchain 101, a very quick overview, as to what is the technology, how does it work, what are some use cases that we're seeing and what are some key regulatory developments that you should be aware of. Then what we're going to do, that's the first panel, we're then going to move into how to identify use cases. Where does a Blockchain work best versus a data base? What are some risks and rewards that come through Blockchain technology. That's really the first panel. Sorry, the second panel. Then we're going to move into the legal issues. What are some common legal issues that arise when you, or your businesses, or companies that you're advising, are looking to pivot into the Blockchain space? And then finally, we wanted to end off with a number of other issues that you should be considering if your company is looking to pivot into the Blockchain space, including among other things, accounting issues, insurance issues, security issues and others. That's really the flow of the day. We're planning to aggressively cover all of that within a few hours so hang onto your seats.

Let me start off with introducing you to Hilary Carter. Hilary is a managing director at the Blockchain Research Institute and she's going to lead us off with Blockchain 101 and some use cases as well. So, Hilary Carter

Hilary: Thanks Usman. How's my sound? Can everyone hear me? Great. Good morning. It's an honour and a privilege, always, to have this opportunity to present. I want to thank Gowling, our charter members. Gowling is a member of the Blockchain Research Institute. Through their support and collaboration we're able to bring forward deep research at the intersection of Blockchain and regulation. Really thrilled to be working with Usman Sheikh who we believe is the top practitioner in Blockchain and the practice of law. He's authoring our research study on Blockchains Impact on the Chief Legal Officer. It's

always a great opportunity to work in collaboration with Gowling, and to tell you this morning a little bit about the work that we're doing at the Research Institute, more importantly about the transformative impact of Blockchain technology and how it will really change business models. Not just in financial services but across a whole host of different industries. We're going to pull up my deck, momentarily.

I'll tell you a little bit about myself. My name's Hilary Carter. I'm the Managing Director, and formerly the Director of Research, at the Blockchain Research Institute. It's my job to recruit the global subject matter. Experts like Usman Sheikh and others, the leading practitioners in Blockchain technology, to bring forward non-technical research that helps our community of members better understand Blockchain transformations as they impact government, society and enterprise. The Institute, just very briefly, was founded in 2017 by Don Tapscott and Alex Tapscott, authors of the global bestselling book, "Blockchain Revolution". Upon the success of the book they realized that there were a number of questions still to be answered. That there was a deep need for further investigation as to who was using Blockchain technology. How were they using the technology? What were the findings, what were the use cases? So that's what we're here to do. That's our mission, is to produce research as to how Blockchain is being applied across a dozen different industries, not just financial services. Our reports are non-technical. They're designed to be consumed by anybody. So you don't need to be a computer scientist to derive value from our research. We're here to tell stories and to help further the understanding of the technology in a way that's extremely accessible.

What I want to do today is to describe a little bit of these applications in more detail and to help this audience better understand how the technology is actually transforming business models. Not just the world of payments. But to do so I think it's very important to begin with the very first use case of Blockchain which is Bitcoin. Why Bitcoin emerged, the problems that Bitcoin solves and what it actually doesn't solve, and more importantly, the technology and the transformation that Bitcoin ignited. The underlying architecture of Bitcoin is the fundamental element that is transforming so many different business models.

We're located right here in Toronto. We just moved to our Peter Street offices but we do work with individuals all over the world. We have colleagues in Switzerland and Brazil and New York and a host of other places. This is the purpose of why we exist at the Blockchain Research Institute, why we find the technology so incredibly inspiring. We think there's a higher purpose to this technology. That it's more than just a payments network.

Consider this. What if every person had a portable and secure digital identity that would give them access to citizen services? Give them access to health care, to education, to a

passport and other services. Right now there are millions of people all over the world who do not have an identity, approximating around 2 billion people. What if diaspora workers didn't lose 50 billion dollars, collectively per year, when they transferred funds back home, to their home countries to help feed their families back home? What if people could certify the life story of a product? If we knew exactly where our fish came from, how long it was in a shipping container and what time it took between coming from the sea to coming onto our plates at home? What if people all over the world lived without fear of land appropriation by corrupt actors as has happened in countries like Honduras following natural disasters? There's no documentation of land ownership and suddenly the land that you and your family lived on for hundreds of years is now in the hands of the governments, the president's first cousin or best friend. 30% of the value of our services that we consume didn't actually go to Silicon Valley. This is the essence of the centralized web. What if we were able to keep more of the value that we create in our communities, we keep that value in our communities, what would that translate in to for improving the lives of every day citizens? What if patients controlled and could potentially monetize their health date? These are the kinds of initiatives that are being pursued by institutions, health care, organizations all over the world. The Mayo Clinic, the Cleveland Clinic and the UHN. UHN here in Toronto is also a member of the BRI and they're looking at precisely these kinds of applications. To improve patient care through better access to information, more patient controlled data, so that if a patient falls sick in China they can immediately and quickly get their health records into the hands of the treating physicians while overseas. These are really exciting opportunities. And finally, foreign aid. What if it were to reach its destination without having to pass through intermediaries and lose 30% of its value along the way? Through this kind of disintermediation, that's enabled by Blockchain technology, we can immediately see the value, the economic value, if we take out the chunk that intermediaries invariably take in various kinds of transactions.

An artist. The internet really killed a lot of business opportunities, specifically for recording artists, where files were copies and transferred and no longer could artists monetize the content that they were creating. They have had to instead transition their business to performing live concerts where you can't copy a live concert the way you can copy a live file on the internet. These are some of the exciting developments for the creative industries as well.

So what is Blockchain technology very basically? We liken it to the second generation of the internet. Where the first generation of the internet represents the internet of information, the technology that facilitated the instantaneous transfer of information through email, being the first application of the internet. But also websites and we've got

price transparency. We see what the internet did to industries such as print and publishing and postal services and so no. Highly, highly disruptive. We believe that Blockchain technology is the second generation of the internet and that it will disintermediate other industries like financial services. Like supply chains and so on. Essentially, it is the first time ever that we've had a digital mechanism to transfer value. It works like, very much cash, where cash is a bearer instrument. If I give Usman five dollars and now Usman has that five dollars I no longer have that five dollars. The internet was not able to facilitate that, without intermediaries, that is. Blockchain tokenization is a digital form of a bearer instrument. We must relinquish our rights to that bearer instrument on a Blockchain in order to have effectively sent it. Just as I give Usman a five dollar bill, I no longer have that five dollar bill, that's essentially how token economics and Bitcoin and cryptocurrencies work. We relinquish our rights to those assets when we transfer them across a digital platform like a Blockchain.

How does it work? If I wish to send Usman some Bitcoin I use my mobile application, and I ignite a transfer of, I'm going to give Usman one Bitcoin today. That transaction of my intention to send Usman a Bitcoin creates an identifier. It's called a hash. It means that this person is intending to transfer that person X number of Bitcoin. The network picks that up and gives it its own identifier. My transaction, along with all the other people who intend to send Bitcoin at roughly the same, are all pooled together. And nodes all around the world who are participants on the Bitcoin Blockchain are actively verifying that I actually have the Bitcoin that I intend to send and that I'm not trying to send the same Bitcoin to somebody else at the same time. They verify that the transactions are indeed authentic and that they're operating with integrity in accordance with the terms of the protocol and they validate our transaction. Whoever it is in the network who successfully validates a transaction is given an economic reward. Right now, whichever node around the world validates the pool of transactions, receives twelve and a half Bitcoin. That is the private incentive that sustains a network that is otherwise very publicly accessible. Private gain and public accessibility is what makes this network function and what makes it work. The block of transactions, which include my sending Usman one Bitcoin, they're all pooled together in a block and they're cryptographically linked to all the previous blocks in the chain. Then my Bitcoin is officially in the hands of Usman. So he's a happy guy except for the price of Bitcoin is imploding, but that's okay. This is about more than price. This is about higher purpose. What's interesting, in spite of market correction, here we are in a room eager to learn about the technology because it's about so much more than price and bubbles. It's about business model transformation and we are still at the very early stages. It's great to see such enthusiasm in a crypto bearer market, but really, it's all about the bigger picture. It's all about the technology and not speculation.

Why was this technology created? I believe that the words of Plato hold true for Bitcoin and Blockchain technology. That it was about necessity of creating a different financial system. A different way to exchange value without going through intermediaries. There's some evidence that leads me to believe that there were three fundamental needs which led to us living in this new paradigm led by Blockchain technology. The first is financial inclusion. The fact that we have two and half billion adults who are not currently part of our financial system. It's not because they don't have assets. It's because they don't have a digital identity which allows them to get a bank account. They don't have documentation. What they do have is a telephone, or a mobile phone, and that tool will now give them an opportunity to exchange value peer to peer through Blockchain. The need for a different way of doing things or perhaps a parallel financial system. The global financial crisis of late 2008 is very much believed to be a motivator for the design and creation of this new technology. The very first Bitcoin block, that was mined, includes this headline from The Times on the third of January, 2009. I don't think it's entirely coincidental that whoever it is that created Bitcoin used this headline as a sort of time stamping piece to embed in the genesis block of Bitcoin. If you go back to the very first block you'll see this headline as a link in the very first block. The fact of the matter is there is a huge community who believe that the excesses of our current system, the ability to print money, is not a long term solution. That we really haven't learned a ton from the Great Recession. That we're still highly in debt and that old patterns are repeating themselves. This new framework, this new paradigm, provides an alternative monetary system that's not subject to the control of central banks. And, finally, efficiencies. I know, having spent a big chunk of my career in financial services, that while it works very well there are lot of pain points and inefficiencies; high costs, delays, T+2 settlements. At the Blockchain Research Institute I'm not able to pay our vendors in the United States, with certainty, using a US dollar denominated cheque that's drawn on a Canadian bank. This is 2018 and our financial institution is not trusted by their financial institution in spite of the fact that we have trusted relationships that have lasted decades. That's just an example, some of the friction in international payments and a peer to peer mechanism solves this problem.

I think beyond peer to peer payments Blockchain has really evolved. We're now in what we call a more mature Blockchain landscape where we've got applications by enterprise. What we're seeing now is the convergence of this technology that emerged as a peer to peer electronic cash system, a payment system. Now it's converging with all of the other technologies that define the fourth industrial revolutions. Converging with autonomous vehicles and bio-tech and AI and really we see that Blockchain technology is now the underlying transactional platform that will capture the data and the value that is generated by these technologies of the new digital age. That autonomous vehicles and the IOT are

sending out all of this incredible data and that data can be stored and captured and that's valuable data. We all know that Facebook finds data pretty valuable. If you're able to capture our social data, and I'll give you an example of that, that could become our data to trade. Not Facebook's data. And Blockchain has that underlying transactional platform that gives us the security and functionality to trade digital assets of many, many kinds. Not just currency but data. As a great example, health records, supply chain information and so on.

Here's an example of converging technologies and Blockchain. Moog is a US based precision parts manufacturer. They serve the aircraft and air defense industry. They also create precision parts in health care. What they were witnessing was the disruptive potential of 3D printing. They realized that 3D printing was going to wipe out their business. They made machined metallic parts and 3D printer capacity was making better parts. They had to pivot. They had to do something to transition their business to survive in this new technological paradigm. So they bought a 3D printing company and deployed 3D printers at the various assembly points. So that their parts could be printed on demand. Where Blockchain comes into the picture is that it's the transactional platform that secures the intellectual property of the design, the computer aided design files, to be tokenized and securely transferred, and in a highly regulated industry like health care or aerospace or air defense, the manufacturers know and the regulators know that the parts that are going into that aircraft are indeed certified Moog parts and it's all captured on this immutable digital ledger called a Blockchain. That's one example of the convergence of 3D printing with Blockchain technology.

I think another important shift that we're experiencing now is the movement away from the centralized web to the decentralized web. I don't think anybody 20 years ago would have realized that these players, particularly Google which was around 20 years ago, was going to actually change our businesses to the extent that they have. Or that Amazon began at selling books online would become the world's largest company. This is where we are with Blockchain technology. It's hard to predict how this new architecture, how these new companies that are being built on Blockchains, are going to transition our businesses and change our businesses. But we do see that the giants, the digital conglomerates from the first generation of the internet, are poised to be very much disrupted by Blockchain. If we're able to create an environment around keeping more value in the area in which it's created, I'll give you an example, a decentralized ride sharing company that will disrupt Uber. Another social media application, built on a Blockchain, that could disrupt Facebook. Why? Because it disintermediates the aggregator, the data aggregator, or the commission aggregator. It's on its way. It's really quite profound and

exciting at the same time.

Here's an example of centralized ride sharing. We all know Uber. Hands up who has used Uber in the room. Okay. So we all get how Uber works. Up to 50%, sometimes a little bit more, of any commission of any ride goes to Silicon Valley. The City of Toronto doesn't get anything even though this City is responsible for police services and traffic flows and so on and so forth. All that value is gone from our community. It's great. It's a terrific coordination technology but it defines the extraction economy. Decentralized ride sharing, on the other hand, is enabled by Blockchain as a coordination technology. This ride sharing program is called Eva. It's based in Montreal. It's that same coordination technology used by Uber that allows passengers to pay slightly lower fare than they might pay for a ride on Uber. The Eva driver keeps the majority of the value that they create. And yet, there's still an opportunity for the municipality to take its share and to have a circularly economy where Uber drivers and riders and passengers in Montreal have this new incentive to use this new service where 50% doesn't go to the Valley. That's the exciting opportunity for communities. The same thing is happening with applications that incentivize us to shop local or to incentivize us to book our hotels locally. If we book a hotel on Expedia, anybody who books to come to Toronto using Expedia, that's a game changing proposition. That value doesn't come back to the City of Toronto. Blockchain applications will help change that economic model.

Data privacy. This is an application that I research at the Blockchain Research Institute. It's called the Akasha Project. It is Blockchain based social media network whereby my identity, my profile on Akasha, is like a bit of a digital wallet where I own my identity, not the network. The activity that I generate, the data that I generate, is my data. I can choose whether to monetize that data or not. That creates economic opportunities for me. What I can see down the road is if I voluntarily release my data, or volunteer to a brand, to engage with that brand, I can say, "Look. If you'd like me to review an advertisement, or complete your survey, or if you'd like me to comment on your ad I'd be glad to do that. You can just send me a micropayment of cryptocurrency or micropayment of some kind of reward, that would be great." That money is not going to Facebook, and treating me like a target, I'm now having a much more direct relationship with the brand and that's a disintermediating advancement. We're seeing applications like this emerge in a number of different forms. Not all of them are going to survive. They're slow and clunky and cumbersome and there are all kinds of challenges associated with them. But this is what is being built and that's why it's being built. It's changed the relationship between consumers and brands and to keep individuals at the center of their data. That's the new landscape.

Enhancing product life cycles. Here we are. Nobody can eat lettuce right now. It's

because we don't know where the problem is coming from. So we can't pivot and find a new chain. In fact I was talking to people in Dallas and LA. They can't eat lettuce either. So it's not just a Canadian thing. Nobody in North America. I don't know what the problem is but the opportunity is to be able to trace our food quickly and to be able to solve a problem fast. So that if we have multiple sources of a product we know immediately that there's a problem here so we can go there and limit the damage. This is how this works. How do we enhance product life cycles using Blockchain? Well, fish are harvested from the sea and they're bagged and tagged using IOT enabled sensors. The data from those sensors is being captured and recorded on a Blockchain software. The sensors continually transmit that data about the fishes location. There might be other data points at play; the temperature of the containers that the fish are stored in, the time it takes to ship those fish from point A to point B, all of that information is captured and it's readily accessible, will be readily accessible for consumers. It's certainly readily accessible for the people who are buying that product in order to sell it on to their customers. All the distribution points. The transfer conditions, whether the regulators showed up, or didn't show up, at the inspection plant. All of that information is being captured. It cannot control anybody lying but it will provide an immutable record of that lie. The incentive to act honorably and with integrity is heightened. Nobody wants to lie in a Blockchain. You really can't erase it. It's there forever. I think it actually encourages the right sort of actions that we need and that higher level of trust. Then consumers, eventually, will be able to scan that product and find out exactly where it came from and that will add value to individuals who are really curious about buying things from certain markets.

Of course, anybody on the chain, right now Walmart and I'll go into this a little bit more, is requiring everybody who will be supplying them their lettuce to be a participant on their Blockchain network. Because it's so effective. Here we are. Walmart, world's largest retail store, ran 2 pilot projects. One related to mangos. The other related to pork, in China. It was so successful in being able to, within seconds, determine the origin of a product that they have since rolled it out to hundreds of other products and they have, as I just mentioned, required producers of certain products like all lettuce products, to be participants on this chain. If you're not going to use the Blockchain network, you're not going to sell to Walmart. That's how powerful it is. 2.2 seconds to trace spinach or mangos or whatever product it may be. The problem as we see with contaminated lettuce is that without certainty of where goods are coming from everything is taken off the shelves and it's not needless waste and it's millions and millions of dollars of losses. These are economic reasons to use a network such as Blockchain and supply chain management because there's economic value in doing so.

Strength in democratic institutions. We studied two institutions. The Rock & Roll Hall of Fame in Cleveland and the National Radio Hall of Fame in Chicago and how they were conducting fan elections using a Blockchain based application. While there's a ways to go yet we're starting to see that this is an exciting technology and it's been used in Virginia for absentee ballots in the recent US mid-term elections. This is an exciting development. We hope that the technology can strengthen legitimacy in government, can encourage more people to participate in the elections process and that we can have higher levels of legitimacy in government.

Perhaps, most exciting of all is the ability to have real impact on the environment and to incentivize environmentally friendly behaviour through token economics. So that if I, as a consumer, choose to buy a carbon neutral product, let's say I'm going to buy the carbon friendly peanut butter, that I should have a reward easily transferred to me when I make that purchase that I can use on public transit. So you have self-reinforcive behaviour. People actually given an economic reason to make a sustainable choice they will do it because human behaviour is driven by incentives. If we, you know loving the planet is just not enough, ultimately we are creatures who need to survive and we accumulate resources for the survival. If we can harness that, which is what's taking place now in token economies, if we can tokenize and incentivize good behaviour through economic rewards we're going to see that behaviour be more sustainable. I was thrilled to participate in a work shop in the UK with a major beverage company who's using precisely this kind of model when it comes to beverage packaging. Where it sees its beverage packaging as an asset and incentivizing the community to clean up that asset from beaches and streams and streets and be given an economic reward for keeping that plastic out of the ocean. You need to bring in that incentive. So Blockchain is the mechanism that will facilitate that and do so very efficiently.

Implementation challenges. These are early days and there are many, many hurdles before all of these ideas materialize and transform. Here are just a few of the hurdles that industry has to overcome. I spoke about remittances and sending money back home to diaspora countries. How does that jive with AML and not funding terrorism? That's an important problem to be solved.

Venture finance through initial coin offerings. How do we finance and sustain innovation and still protect investors? There's much work to be done. 2017 was a deplorable example of venture finance and best practices were not plentiful. So there's plenty of work to be done that can improve the process and protect investors without being too heavy handed.

Taxation treatment. How do authorities collect their fair share? How do we collect capital gains? If I wish to use Bitcoin to buy coffee am I going to be charged capital gain to do that? That's a barrier to adoption.

Immutable record keeping. In Europe we've got this new GDPR regulation and that's difficult when you've got immutable Blockchain. What about my right to be forgotten? How does the technology reconcile regulatory environments like the GDPR? It's very challenging.

Health identities. What happens if I forget my password and I can't get my records to my physician in China because after all we're human beings and we forget stuff. That's what's really handy. I can call my bank and say, "Ha. It's me. Remember me? Here's my date of birth and all that stuff." There's someone on the end of the phone. The user experience and ability to protect against human folly needs to be developed in some of these applications.

How do we scale this technology? We found that one application really clogged the ethereum Blockchain. It was about digital cats called Cyrptokitties. It shut the ethereum Blockchain down for the better part of several hours over a course of several days. So we know that we have to address scalability for the technology to really mature and add value to businesses.

And of course there's a negative perception of this space. I'm not going to deny it. If I own Bitcoin does that make me a criminal or am I buying drugs? We've got to, I think, move beyond the dark web and the association with criminal activity in this technology. It would be to do it a disservice if we don't move beyond the negative perception of some of the early adopters. After all the criminals have historically been the first to adopt any new technology. Whether that was the automobile or the cell phone or the internet.

Just to conclude, I hope that I have conveyed the notion that this is more than a payment network, but rather this is about disintermediation and this is about a business model change. And how we engage with our customers. How we position our organizations for success in the second generation of the internet. Because we're seeing incredible developments in this space. I encourage you to keep exploring and dig in. That's it for me. Thank you very much for your attention.

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pleased to discuss resolutions to specific legal concerns you may have.

Related Blockchain & Cryptocurrency

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