

TECHTalks | EPISODE 11 | Tokenization Transformation

With [Tim Davis](#), Principal, Global and US Advisory Leader, Deloitte & Touche LLP, Blockchain and Digital Assets Practice and [Raquel Look](#), Senior Manager, Deloitte & Touche LLP, Blockchain and Digital Assets Practice

Raquel Buscaino: Welcome to Deloitte TECHTalks. I'm your host, Raquel Buscaino and I lead the Deloitte US Novel and Exponential Technologies team where we sense and make sense of emerging tech. Today, we're diving into the fascinating world of tokenization where Blockchain technology meets asset management. And I'm very excited to talk with our guests today, Raquel Look, Senior Manager and Tim Davis, Global and US Advisory leader both from Deloitte and Touche LLPs' Blockchain and Digital Assets practice.

We'll discuss what tokenization is, what is driving its market adoption and how you can better prepare for the future changes tokenization might bring to your industry. Raquel, Tim, welcome to the show. It's so great to have you.

Tim Davis: Great to be here, Raquel.

Raquel Look: Very excited to share this episode with you, Tim, and the audience.

Raquel Buscaino: Me, too. To kick things off, why don't we start at the very beginning? So, Tim, as simply as you can possibly define it, what is tokenization?

Tim Davis: Yeah, it's a great place to start. So, maybe just sort of making it very basic to begin with, and sort of almost sort of making it age independent. Everyone will remember playing a board game right? And you've got it might have a token on a board, and that was really there to represent you as a player on the board. Tokenization is kind of the same way, it's really something that represents something else. And it's a digital representation of something like a security, something like a bond, it could even be a piece of art, it could be a piece of property.

In the context of how we, as a society use tokenization, it is a digital token that sits on a blockchain, and the reason that, it having be on a blockchain is important. There are actually 5 key reasons to keep in mind in terms of why blockchain really makes tokenization something quite useful and distinct.

The first is standardization, basically make sure that as we're producing these things, they all come in the same way, the same shape. So just think about when containerization became a topic for global shipping, it just revolutionized how global shipping work because of that standardization.

Second is, it ensures that what you have is authentic, that it's not fake right? No one else has been able to copy it. So that's number 2.

Number three is that it's unique, that it's not a copy of something else, right? Which is, just thinking back to what I just said: authenticity is different than uniqueness, right? Authenticity is something is actually issued by someone else you trust, uniqueness is that it hasn't been copied.

The fourth one is related to uniqueness, which is that it can only be held by one person at a time. So the Blockchain enforces this. It cannot be held by 2 different people at the same time, and this is really important, because when it comes to the amount of human effort that goes into reconciling these various systems, it's fairly significant. And it's effectively the Blockchain does away with that because it controls it can only be with one party at any one time.

And then, finally, which is probably one of the most important attributes, but also one of the most I guess, unknown at this point, in terms of where it will lead us is this ability to program these tokens. And that means basically you can put these smart contracts on blockchains where, if you want to participate, you have faith that no one can go in and change that arrangement. It's fixed on the blockchain. You can go look at it, make sure you're happy with how it's coded and what it's going to do, and then, you can have confidence that you can actually rely on that automation. And it's always going to work that way.

Raquel Buscaino: Wow, I'm just going repeat those back, because I think it's a helpful frame: standardization, authenticity, uniqueness, held by one person, and programmable.

Tim Davis: Yeah, exactly.

Raquel Buscaino: And you also mentioned something that I thought was interesting which tokens can really represent a lot of different assets. It could be something that we're used to financial data, could be digital identity, could be art. Is there any limit to what you could tokenize, Tim?

Tim Davis: No, really not. Even to give you one other example that just sort of stretch our audiences' thinking here, the other thing that you can tokenize is your identity.

I know we were talking about it as being a thing, or a thing issued by someone else, but, you know, banks and financial institutions spent a lot of time and money doing "Know your customer" work to validate that you are who you say you are, but in today's financial systems that authenticity of who you say you are really doesn't travel very well. It's only when the bank representing you. So that this is why this is such a transformative technology is that it gives you the ability to basically carry your own identity in these systems and then to actually trade on that identity, associated with the tokens that may be also on these blockchains.

Raquel Buscaino: Raquel, I know that you've been working in this space for quite some time, what are some of the impacts and advantages of tokenization that you're seeing in market? And why are private and public markets trying to tokenize funds and other assets, increasingly so?

Raquel Look: I just want to take the audience back on a journey help connect the dots. I think most of us here remember Web 1.0, 1990s, when the Internet was still a novel concept, right, when wide-leg jeans were a fashion statement, and the era of that web, was described as read-only, right? We were able to only read content, it was basic HTML pages with basic text and hyperlinks to more static pages.

Then, following in the late 1990's, we shifted from the static Internet to this more dynamic, social, and interactive Internet, known as Web 2.0, or the read and write web. I could post a video of my cat doing

magic tricks on my social media platform for you and Tim to like it, comment it, repost it and share it with your network.

And what Tim just described here is the advent of Web 3.0, this new revolution of web interaction that's known as the "Internet of value". So this web 3.0 can be described by that internet of decentralized networks, where ownership is enabled, and it facilitates that issuance, training and transfers of assets through tokenization. And as Tim mentioned, anything intangible or tangible could be tokenized: money, stocks, bonds, securities, digital identity, copyright, patents, music. Thanks to this blockchain technology, different creators, for example, can use these blockchain based platforms, upload their music, their books, their artwork, and that musician or author can earn a digital token every time a user streams or reads their book within that platform, right. And these artists will now have the medium to earn more fair earnings, and they have a new way to engage with their fans.

I think the impact is that industry sees these emergent technologies as concepts to quicker, near-instant and even atomic settlement where payment and cash assets are exchanged simultaneously. Once upon a time back in 1817, when stock exchanges began to formally trade, the industry relied on the physical delivery of stock certificates. So Wall Street was often closed on Wednesday, just so that they could settle, manually settle, and reconcile. So imagine being in that stockroom and digging through all this paper, and beginning in the 1970's, dematerialization of physical securities was introduced, with the use of fax machines and the founding of a major clearing and settlement platform.

And today, what we're seeing is this emerging technology with blockchain and tokenization is changing that dynamics again, with how we trade, how we clear it, how we authenticate it, how we settle it! And again offering that instantaneous settlement.

Raquel Buscaino: There's a quote that I like that says "Futurists, are often secret historians". And so I love that you've walked us across the breadcrumb of how we got to where we are, because it is important context to understand the future, and you mentioned a couple of things there. You mentioned the new railways, that is, you know, blockchain and also so many different advantages of using this. So just a couple of them that I caught, you know, increased transparency, increased liquidity, ownership and the ability for fractional ownership, quicker and cheaper, lower management costs, and the ability to make settlements that much faster.

Raquel Look: Yeah, absolutely.

Raquel Buscaino: Tim, out of all those different impacts and advantage areas that we just listed out, what are some of the key things that you think are really driving adoption in this space?

Tim Davis: It's probably initially a couple of things. I mean, I think the thing that you know Raquel had highlighted is just the simple efficiency that this brings right, that all of that effort that goes into now that we're largely dematerialized, we don't deal with paper, but we still deal a lot with reconciling records between counterparties. So that's one, it's just the simple efficiency of just not having to have people or have systems take the time to do that.

There is other benefits as well: security, credit risk. So, for instance, in that window, while you're waiting to settle a trade, you've got some risk that your counterparty may not be able to because something may happen, so that's one benefit of shortening that settlement time.

Security, right? And that it's going to be a lot less likely that you're going to have fraudulent instruments that are available for trade. I mean, there is a fair amount of transparency today, but blockchains give you a controllable transparency.

So, it's not like everything is available to everyone, you can control who sees what, but really importantly, just going back, also being a bit of a secret historian myself, one of the major causes of the 2008 financial crisis was that these structured mortgage products were being bought and sold between financial institutions, and there was not the level of visibility to the actual underlying assets in many of these structured products. Hence the trust came from a credit rating agency's evaluation.

Now, with tokenization, you can go and look at every single individual asset that makes up a bundle of assets that you might be buying and selling.

Raquel Buscaino: I think that's huge. We talk about AI a lot and security, and trust in an age of decreasing trust is ever more important. So I think that's a huge piece of it too.

Tim Davis: You have touched on AI, just another example. If you've got these 2 disruptive technologies that are sort of coming into each other like 2 massive icebergs colliding, and they do directly interact with one another. Now, it's still very early days, but AI really likes to have information and systems that follow a certain structure, right? It is learning how to deal with our unstructured world, but it much prefers the kind of structure that tokenization would bring.

There is a future we at Deloitte see is possible where AI is going to play a role in being more effective in these tokenized systems than they would be in the systems that we use today.

Raquel Buscaino: Okay, So Raquel, we've gone through what tokenization is, some of the examples, advantages, you have worked in emerging tech long enough, you know that there's always challenges. And so maybe you could share some of what those challenges to mass adoption are for tokenization?

Raquel Look: I would say, one common challenge is the lack of regulatory clarity, at least global standardizations around this don't yet exist. Not all countries today regulate digital assets in the same way. Under German law for example, securities in an electronic form have the same legal implications as securities represented by physical form. Under other jurisdictions, that yet does not exist.

Another example alright that we're seeing some regulatory clarities is the European Union. They publish a set of regulations on these markets and crypto assets which is set to be the legal framework regulating crypto assets across the European Union.

I think the other real challenge here in implementing this technology is, folks just, you know, are not really understanding the incremental or net-new risks associated with this technology. There are a lot of idiosyncratic risks as they relate to, not just the blockchain network, but everything associated with this

new technology: the APIs, you have to do vulnerability testing, you have to do cyber security testing, functional testing. Smart contracts are typically embedded and baked in right under the protocol to carry out the business logic and that also needs to be tested right?

You also mentioned AI, which I think is important because a lot of institutions are also operating under legacy rails, right, or their processes are still manual, and with digital assets, the ecosystem, I mean, it's fast, the payments are instantaneous. So you also have to build the mechanism so that you could almost identify your risks in real-time. If you're talking about atomic settlement, you have to have the means to onboard and then also monitor those clients and those activities in real time. So AI can help facilitate and enable that so that financial institutions and other organizations can more readily identify and escalate and report on their risks.

Tim Davis: And just to maybe add a little bit to what Raquel is saying. She started on the legal frameworks that we have and the regulatory guidelines, and this is really a key point, because your first legal question is: "Is the legal token the thing? Is it the security, or is the security something else, and the legal token is a representation of that something else?"

This is a fundamental question, and it has all sorts of implications on how things get accounted for, how they get taxed, how they get legally treated and these legal frameworks are emerging.

In fact, the United States, through some of the work it has done of the last couple of years, and it's particularly in what's known as Article 12 of the uniform commercial code - that is basically a United States framework that facilitates trade between States - it actually accommodates these blockchain based tokens as a means to facilitate tokenization and payments.

Raquel Buscaino: It is interesting, because I think all of the challenges that were mentioned are so connected. Between, the need for regulatory clarity, or the risk tolerance profile, or the infusion of AI and needing to make sure that risk assessments are done in real time. So it does sound like there's quite a few challenges towards mass adoption, but that over time we expect clarity to come on several of those fronts as it progresses.

Tim Davis: I think that's right Raquel, while in some cases all of those challenges might be true, all of the types of blockchains are improving. And so, you know, it's kind of like just being careful about not betting against innovation, because I'm fairly confident that we will figure this out, and in time, these networks will be very credible alternatives to the systems we use today.

Raquel Buscaino: I think that's very well said. So then, turning an eye towards the future, what excites you both the most when we think about the future of tokenization? When I think about tokenization, a big winner is fractional ownership, and the idea that people who might not have traditionally had access to certain asset classes like real estate or like art, might now be able to invest in those asset classes via tokenization.

Raquel Look: I think it empowers everybody. I could have music, or I could, directly engage with an audience through a tokenized asset. I think it's, when we think about this and how it applies for the life, I

could see it just capturing every aspect of our lives, the personalized, the financial, what it is that we want to create.

And being part of this! Another technological revolution, I mean, how cool is that? So to be at that forefront, and to be on that journey, with folks that are looking to scale this, looking to adopt this, looking to update the regulatory guidelines around this. It is very exciting to me, both on the professional front and the personal front.

Tim Davis: Yeah, I got to say, I agree with Raquel. We're in a moment which is hard to perceive in the moment we're in now, but it really is a transformative moment in history. I mean a thousand years, they'll look back to this time when these technologies of blockchain and AI were created. And it's almost like the invention of the printing press or the introduction of the Internet, and it may even be bigger than those technologies.

So, we we've got so much that this can bring us. And I'm probably most excited by the same example that Raquel gave, which is this introduction of a creator economy. We have billions of people around the world that do not participate in the global economy, because, although they can consume media, they can't monetize their work, they've no way of actually taking control of what's theirs and actually earning a return on it. This gives them that opportunity. So in some ways it's of a tremendous social good, right?

That being said, you know, tokenization is seen, as also means that will increase what we call the velocity of money and we need to have the kind of systems that can be prepared for that and maybe AI has a role in that. So, yeah, it's certainly very exciting times.

Raquel Buscaino: I agree. It's a world I want to live in. So, as our guests are listening, hopefully they want to learn more about tokenization, how tokenization will play a role in their industry. Do you have any advice for our listeners on how they can help get ready and prepare for this future?

Raquel Look: Yeah, Raquel. I mean, there's so many ways for our audience to stay informed. They could start by looking at some of these different Blockchain technology courses.

Also, you know, I would encourage the audience to check out Deloitte center for regulatory strategy, where a whole host of topics across the industry is regularly published. There are a lot of different industry leading reports. So I would encourage the audience to just look through those.

Tim Davis: Yeah, I think universities have begun to offer programs in this now. Regulators have been and will continue to be, putting out points of view and requests for comment. We have many countries around the world actually introducing proposed legislation to bring this, so, there's many ways that you could start to just simply pay more attention to this shift that's happening around the world. But those are a few of them.

Raquel Buscaino: Awesome! Tim, Raquel, thank you both again, tokenization is a complex topic. So being able to break it down so easily is a gift. So thank you for joining us on this podcast episode and to all our tech savvy listeners out there. If you enjoy this episode, please share and subscribe. And if you'd like to learn more about blockchain and digital assets, you can follow myself, Tim or Raquel Look to stay up to

date. Our socials are listed in the episode description. So thanks for tuning in. And I'll see you on our next episode. Until then, stay savvy.

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