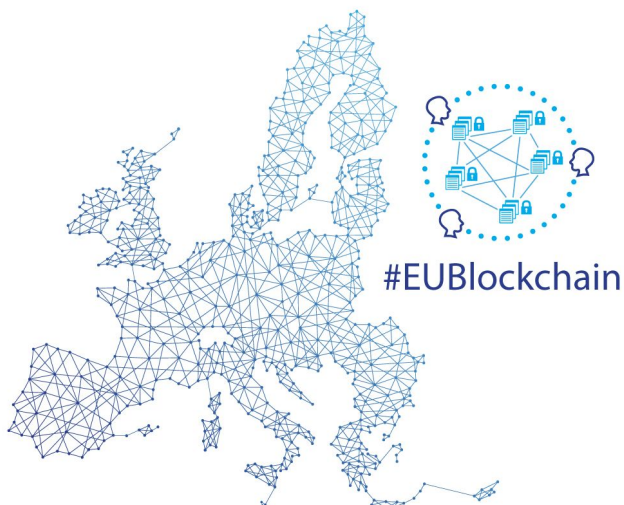


# EU BLOCKCHAIN OBSERVATORY & FORUM

## Workshop Report - Digital Assets – Brussels, 24 May, 2019



*By the European Commission, Directorate-General of Communications Networks, Content & Technology.*

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Author: Tom Lyons

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Comments and inquiries may be addressed to the following email: [info@eublockchainforum.eu](mailto:info@eublockchainforum.eu)

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## Introduction to the day

*Pēteris Zilgalvis, Head of Unit, Digital Innovation and Blockchain, Digital Single Market, DG CONNECT; Co-Chair, FinTech Task Force, EC, gave the welcoming remarks.*

- There are a number of important EU blockchain initiatives. These include:
  - The EU Blockchain Observatory & Forum, which is designed to raise the level of knowledge about what is happening in blockchain in Europe.
  - The European Blockchain Partnership, now 29 European countries and soon to be 30, which is working to build a European Blockchain Services Infrastructure as part of the Connecting Europe Facility. It is at the moment a Member States initiative, but is intended to eventually be a public/private cooperation. Early use cases are in RegTech, diplomas, document certification and self-sovereign identity.
  - The International Association of Trusted Blockchain Applications (INATBA), which is the newly formed association of private blockchain stakeholders. INATBA will also be helping the EC in setting up a World Blockchain Congress in the fall that will include a regulatory dialogue.
  - The AI and Blockchain investment fund that DG CONNECT is starting that will be distributing EUR 100 million in equity investments through the European Investment Fund mechanism.
- Zilgalvis also pointed out that the information gathered by the Observatory, including at workshops like this one, can help provide information that could help the new European Parliament as they make decisions on the upcoming legislative agenda.

*Ludovic Courcelas, project manager of the Observatory, then set the scene and introduced the objectives of the day.*

- There are many potential advantages to digital assets in terms of reducing risk, cost and transaction times. Specifically these advantages include:
  - Reducing clearing & settlement time
  - Reducing infrastructure cost
  - Simplifying management of rights
  - Allowing for the development of new applications (programmable assets through smart contracts)
  - Single version of the truth (asset provenance and full transaction history on a single shared ledger)
  - Cryptographic security
- Today in Europe and around the world we are beginning to see regulators taking some decisions about how to classify cryptoassets. Generally we can see three broad categories: utility, security and payment tokens.

- The objectives of the day are too:
  - Share best practices around the issuance and management of digital assets (creation, custody, exchange, usage...)
  - Identify the most promising use cases for digital assets
  - Define how Europe could foster innovation with a tailored regulatory framework and precise support to use cases

## Panel: Issuance of digital assets: how to proceed, how to succeed?

### *Participants:*

- *Mathieu Cottin (Tokeny)*
- *Simon Polrot (LGO)*
- *Mike Hoffman (Southampton University)*
- *Ken Timsit (Consensys)*
- *Susan Poole (Moderator)*

### *Highlights from the panel:*

- There are a number of significant potential benefits to digital assets, including:
  - **Programmability:** the ability to program functions into a digital asset, such as conditions on its transfer or its behavior, automating dividend payments and corporate action communication. This can open up new use cases around complex products and could lead to new, unexpected use cases.
  - **Transparency and assurance:** By deploying auditable smart contracts you can provide strong transparency into the asset and its behavior and assurance that it will behave as advertised.
  - **Community building:** you can use tokens, as was done to a large extent by early ICOs, to help build a community around your product or service. Such tokens can also reach a more distributed, diverse and engaged investor base than with traditional financial instruments.
  - **Fractional ownership:** most crypto tokens are divisible to 18 decimal points. Tokenisation can make fractional ownership of assets more viable/easy to do.
  - **Automation:** smart contracts can bring a high degree of automation. Not only can you program complex behaviors into assets, you can make them self-executable. Automation can also make it easier to issue globally by allowing you to program in the requirements of the individual jurisdictions. If the asset “knows” where it is, it will “know” how to behave.

- This said, we must keep in mind that for now many of these benefits are promises only, and have not yet been realised. Nor do all the technical benefits automatically translate into realised benefits: tokenisation can for instance help make certain assets more easily tradable on secondary markets; that doesn't automatically mean there will be a demand for them.
- There are many things to be considered when it comes to issuance.
  - Issuers should be clear about what exactly they want to tokenise, what the token represents and what the benefits and revenue rights for investors are. They need to ensure that their operation is compliant in all jurisdictions where they target investors. They should also make sure they choose the right blockchain and ecosystem for the needs of their particular project.
  - Along with the legal, issuers need to pay attention to the technical aspects of issuance. This often gets neglected. There are however significant cyber and other security risks in token issuance. You need to be sure your issuance platform is battle tested and audited.
  - You need to make sure you do sufficient AML/KYC checks in all jurisdictions.
  - It is important to adhere to prevailing standards appropriate to the type of token you are issuing. This can help provide assurance to investors.
  - You will need good legal advice as to the classification of your token and the regulatory regimes to which it must adhere. This can help both with compliance risk and with how to best position the token with investors.
  - There are developments in terms of privacy, with advances in both open and closed source projects resulting in different types of tokens that allow the transfer of tokens in a private way.
  - As important as the tech underlying the asset is the interface that allows people to interact with the taken. User experience is key.
- In terms of timelines, if you are issuing a utility token, you generally need to have some form of live version of your platform available, so issuance can only come when this is done. If you are issuing a security token, the purpose is generally to raise funds to build the platform or product. Here you issue before you develop, and the timeline is not much different than for traditional financial assets.
- As of now very few tokens are issued as utility tokens because a) there is significant regulatory burden and risk, and b) tokens today generally fluctuate in value for various reasons, and often their value rises the more the platform or service gets used, which is counterintuitive to what is generally expected: most services get cheaper the more they are used. Stable coins can help minimise this volatility and they will be an important element in creating viable utility tokens.

## Panel: Considerations around custody, exchange, management, and usage of digital assets from a technical, economical and legal point of view

### *Panelists:*

- *Brian O'Hagan (Coinhouse)*
- *Alexandre Barrat (AMF)*
- *Simon Seiter (Commerzbank)*
- *Ken Timsit (Consensys)*
- *Susan Poole (Moderator)*

### *Highlights from the panel:*

- When it comes to managing digital assets on chain, one of the most important tangible benefits is likely to be cost reduction for clients through reduced depository and custodian fees.
- A recent Commerzbank project showed it was possible to settle a transaction electronically almost immediately instead of the usual two-day wait. That meant no counterparty risk for those two days plus the ability to free up the capital that otherwise would have been locked up while the transaction settles.
- Both primary and secondary markets can be disrupted if clients are able to issue, trade and settle themselves. That doesn't mean there is no role for intermediaries. KYC, for example, is a service that it makes sense for a third party to carry out, as opposed to each counterparty separately.
- In the new world of on-chain custody, the entity that holds the digital asset legally will be the one assuming the risk. Here we can ask if clients/individuals really want to assume this risk, or if here too it makes sense to have a professional intermediary. There will be custody business for digital assets.
- Wherever custody is done, cyber-security will remain a huge concern and priority.
- All this said, in the short term custody will not be that complicated or that much different than today. In most cases the issuer will be self-custodian of the registry of ownership, but no transfer of security will be possible without the confirmation of the issuer, and there will be the ability to overwrite any transfer transaction if there is a mistake or an issue of some kind. The issuer will have a lot of responsibility to maintain the registry, and a lot of providers of software and services who will help end investors safeguard their private keys. But these will mostly be authentication mechanisms that provide investors the ability to trigger transactions. They will have to be countersigned by the issuer.

- When it comes to implementing and monitoring the rights given by a digital asset, for example property rights, rights to a dividend, voting rights, etc. in the experiments and transactions being done now these are all handled through off-chain legal contracts. The smart contracts at the moment are simply means of automating these processes. As people become more comfortable with smart contracts, we will see them become increasingly autonomous.
- The question was asked to what extent, in the panelist's experience, existing regulations are sufficient to handle the issuance and trading of digital assets, and where there are gaps. Issues often arise because securities laws are national, with different sets of rules. In various securities frameworks there are rules that make it difficult for DLT-based digital asset trading, for example for the form securities can be issued in (in Germany they must be on paper) or where they can be traded (MTFs und MiFID II) or where they must be stored (CSDR requirements/reform).
- Another hurdle to mass adoption of digital assets is the fact that, considering the technology and infrastructure are so new, it can in some cases right now be more costly, either because, lacking a legal standard you need recourse to special legal opinion and counsel, or because of the high cost of on-boarding to a new system.

## Panel: Overview of implementations and use cases for tokenization

### *Panelists:*

- *Ivan de Lastours (BPI)*
- *Baptiste Saint-Martin (Mata Capital)*
- *Gerd Hartung (Deutsche Boerse)*
- *Guido Stroemer (HQLAx)*
- *Ken Timsit (Consensusys)*
- *Susan Poole (Moderator)*

### *Highlights from the panel:*

- HQLAx is a financial technology innovation firm that leverages distributed ledger technology to deliver liquidity management and collateral management solutions for institutional clients in the global securities lending and repo markets. It is among other things using blockchain technology for wholesale trading among banks in the collateral upgrade/downgrade market.
- PBI France is a state-owned investment bank supporting French industry. It lends to and invests in French companies to support their expansion. It currently has a €100 million fund to invest in blockchain firms.

- Mata Capital is a real estate investment firm with the mission to help its clients outperform the real estate market, including through alternative investments and new technologies. The firm is currently exploring the use of blockchain technology and intends to among other things tokenise the shares of a real estate SPV.
- Panelists generally agreed that financial assets are likely to be the first wave of tokenisation on a large scale. These markets are already digitised and "de-materialised" and involve asset transfers and ledgers, the kinds of things that are native to blockchain. It is not surprising that they can "open the party".
- Most of the promise of digital assets is in efficiency gains, but there are other potential benefits too for financial markets, for example transparency and availability of data. It is very difficult today in the existing framework to answer simple queries of the kind "which broker held more than USD 1 million of Apple stock two years ago." On a DLT-based platform this would be simple.
- Panelists thought most traditional liquid financial markets, like equity, bond and derivatives markets, would be good candidates for tokenisation. When it comes to new issuance of blockchain companies in particular, STOs would likely be a major theme over the short and mid term.
- We can expect a lot of activity around registration activities and custody.
- There are also promising use cases around less liquid financial assets like private equity, venture capital investing or real estate, where there are large amounts but smaller numbers of investors, and where processes today tend to still be manual.
- Such markets also tend to be illiquid: private equity and VC exit cycles are getting longer and longer, so these investors are looking for liquidity, and tokenisation could help. Similarly, tokenisation could help bring liquidity to non-listed instruments like employee shares in private companies.
- Over a longer term horizon a very promising use case involves the "digital twins" of physical objects, like luxury goods. In future these will have a digital existence alongside their physical one – objects that we wear and use will be connected to an electronic network with a unique digital identity and can be used and traded, for example in virtual reality environments.
- One problem right now is that it is still expensive to implement these solutions.
- Blockchain is at a moment where it really has to prove its value. The first step in creating digital assets is to find and then confirm the real value proposition.
- A lot of this is also dependent on legal and regulatory developments and clarity, and that is not 100% there yet. This can be expensive and difficult to achieve, as right now, along with many open regulatory questions, there is scarcity of legal and regulatory expertise in this domain.
- Another challenge is to be able to integrate with existing systems.
- Tokenisation and DLTs could be very helpful with reconciliation tasks in the back office through a "what you see is what you get" principle for data.



- Digital assets could also provide more transparency for regulators through things like observer nodes, providing a "birds-eye" view of transactions in the market that regulators do not have today.
- Exploring blockchain and DLT for capital markets could also be important for Europe by supporting the goal of making Europe more of a capital markets innovation center.

## Working Session: Priorities and way forward at the European level

*The day ended with a working session involving all participants. The focus was on discussing recommendations for European policy makers, to be included in the thematic report coming out of the workshop. Highlights of the discussion included:*

- One reason that the digital assets market today is small is because of lack of penetration of the institutional market. Pension funds are a challenge because of strict legal requirements.
- What has been missing from today's discussion up to now has been identity as an asset; not as an asset that can be bought and sold but one that can be transferred for identification purposes in a GDPR-compliant way.
- Stable coins are very important here. They can greatly facilitate atomic swaps of assets. They are not likely to happen however without support from regulators. We can either wait for central bank digital currencies or use stable coins created by third parties, but either way it has to be compatible with the regulatory framework. One way could be through the e-money directive in Europe. But either way, as the bulk of financial markets are secondary markets. We need tokenised money for robust digital asset markets.
- Another use case not mentioned so far is using tokenisation to measure, value and trade things that today traditionally are not: for example environmental impact. Such externalities have been recognised as having important economic and societal properties - think carbon credits. Tokenising such currently non bankable assets could be very useful and should be a priority for Europe.
- Regulatory harmonisation around blockchain is also important.
- Banking continues to be a problem for blockchain startups. Regulators could help facilitate better coordination between banks and the blockchain startup world.
- Stable coins might also be a way for blockchain startups to deal with their banking industry issues, by providing a hedge against cryptocurrency volatility.
- There were several members of the Directorate-General for Financial Stability, Financial Services and Capital Markets Union (DG FISMA) at the workshop. They encouraged all participants and anyone else to approach them bilaterally to discuss any problems they are having with EU regulations, including what hurdles they may be having issuing security tokens.

- User experience of blockchain-based dApps and platforms is a major issue. Generally users won't know – and need not know – that there is blockchain "under the hood".
- That said, the users will also not want to use anything that is overly complicated. They will also need to understand the special properties of digital assets and how to handle them. Educating them should be a priority for Europe too.

## Appendix

### Workshop slides

- [Full day presentation](#)

### Workshop videos

- Videos from this and all other workshops can be found on the [EU Observatory website under reports](#).
- Videos specific to this workshop:
  - [Digital Assets workshop, 24 May 2019, Brussels Part 1 Introductions](#)
  - [Digital Assets workshop, 24 May 2019, Brussels Part 2 Morning panels](#)
  - [Digital Assets workshop, 24 May 2019, Brussels Part 3 Afternoon panel](#)
  - [Digital Assets workshop, 24 May 2019, Brussels Part 4 Working session](#)

### Official agenda

Time	Activity
9:15	<b>Registration &amp; Welcome Coffee</b>
9:50	<b>Introduction of the day - Agenda and objectives of the day</b>
10:10	<b>Panel: Issuance of digital assets: how to proceed, how to succeed?</b> Mathieu Cottin (Tokeny), Simon Polrot (LGO), Mike Hoffman (Southampton University), Ken Timsit (Consensys)
11:20	<b>Panel: Considerations around custody, exchange, management, and usage of digital assets from a technical, economical and legal point of view.</b> Brian O'Hagan (Coinhouse), Alexandre Barrat (AMF), Simon Seiter (Commerzbank), Ken Timsit (Consensys)

<i>12:30-13:30 Lunch break</i>	
13:30	<b>Panel: Overview of implementations and use cases for tokenization</b> Ivan de Lastours (BPI), Baptiste Saint-Martin (Mata Capital), Gerd Hartung (Deutsche Boerse), Guido Stroemer (HQLAx), Ken Timsit (Consensys)
14:40	<b>Working Session: Priorities and way forward at the European level</b>
16:00	<b>Conclusion</b>
16:30	<b>End of the day</b>