INNOPAY

Book of Insights 2023

January 2023

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Foreword

Dear reader,

This Book of Insights is a compilation of our articles, blogs, interviews, videos and podcasts from 2022. We hope you enjoy this recap of what was yet another eventful year in the digital transactions community.

Happy reading!

The INNOPAY team

Table of Contents

Blogs

Interviews

Table of Contents

BLOG

Should CBDCs be renamed 'Collaborative' Bank Digital Currencies?

2 February 2022

Vincent Jansen

Douwe Lycklama

ORIGINAL BLOG

GET IN TOUCH

There has been strong acceleration in the interest among central banks and governments in Central Bank Digital Currencies (CBDCs) in recent years. This has occurred in parallel with the adoption of private stablecoins by various regulated (e.g. USDC, GUSD) and unregulated (e.g. UST, DAI) providers. These CBDCs will need to adhere to the same 'fundamental market laws' as all other platform businesses that serve a two-sided market. Central banks and governments can learn from other two-sided markets, especially on the importance of collaboration, ecosystems and governance in getting adoption.

In recent stablecoin initiatives, ecosystem building has been an important driver to achieve adoption by payers and payees. That goal is achieved by being present in as many as possible transaction moments, such as exchanges, lending and payment services. And the use of open standards and governance is an essential element here.

Meanwhile, in the platform and Big Tech world, we see that the network effects are key, and that all platforms seek to build ecosystems in which they facilitate direct interactions and transactions between various actors. One of the early strategic questions for CBDCs should therefore be whether they will be 'the platform' or whether the CBDC infrastructure will be 'the network' of platforms.

Read more, and download the full report.

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CBDC Collaborative Bank Digital Currency

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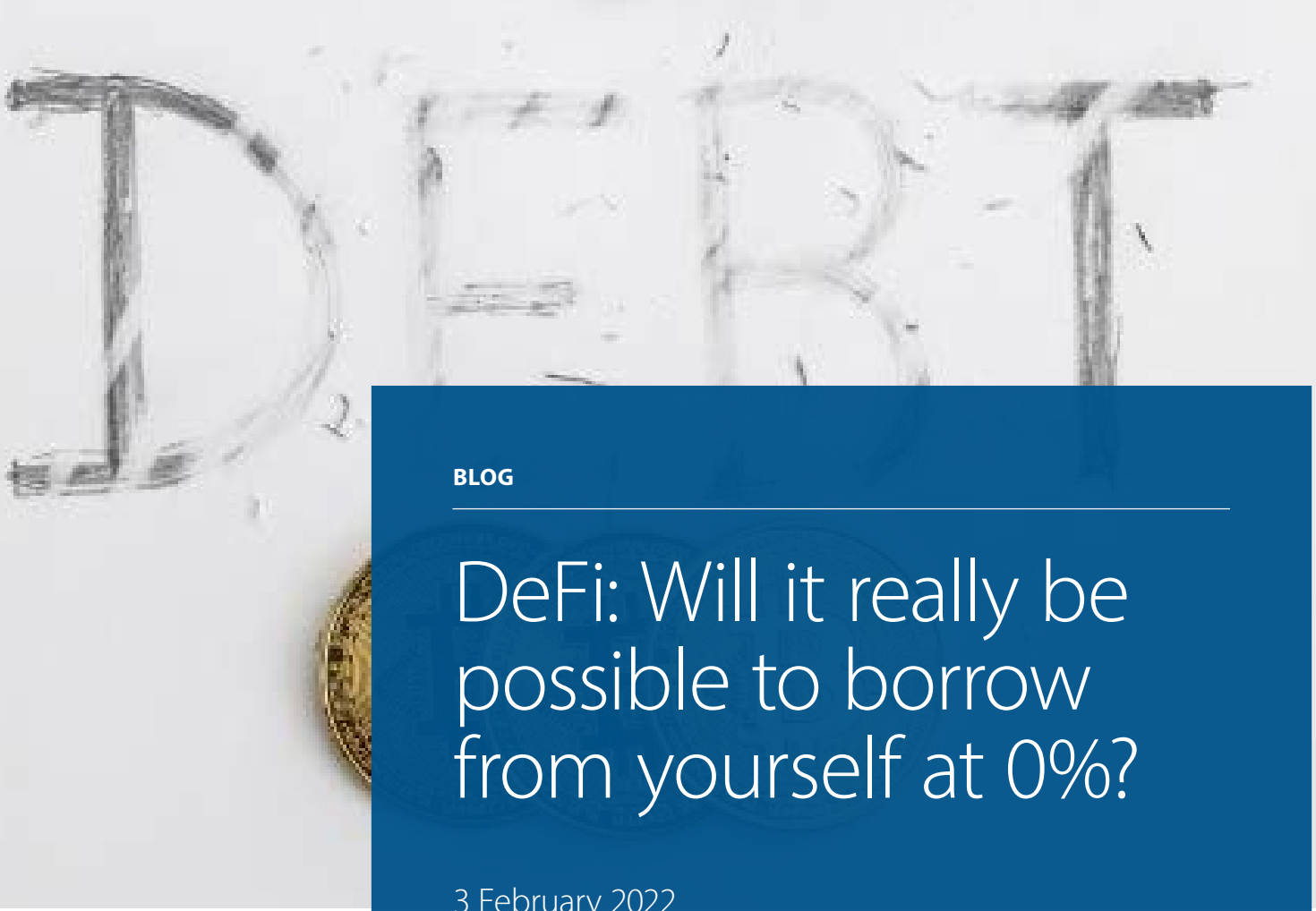
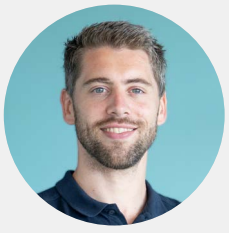


BLOG

DeFi: Will it really be possible to borrow from yourself at 0%?

3 February 2022



Daniël den Boer

Douwe Lycklama

A recent offer in the realm of Decentralised Finance (DeFi) caught our attention: "Borrow money with your bitcoin. At 0% interest". Expected to launch at some point in Q1 of this year, this could serve as an accelerator for DeFi in the bitcoin ecosystem and potentially also for DeFi as a whole, as the interest-free borrowing protocol introduces new ways to monetise digital assets.

The offer comes from Sovryn, a relatively new DeFi stack built on bitcoin. It is a non-custodial and permissionless smart contract-based system on the bitcoin sidechain RSK, which is a layer 2 bitcoin smart contract protocol. It's built to enable lending, borrowing, margin trading and more for bitcoin on RSK (rBTC), which is currently only available on a few exchanges. Sovryn recently announced that it will soon be releasing Zero, a subprotocol that will promote the adoption of bitcoin-backed stablecoins.

Issuing a loan with bitcoin serving as collateral is nothing new. The innovative part is the 0% interest for an undefined period. After all, fixed-interest loans are highly unusual in DeFi. In other words, if you take out a loan using protocols such as Aave, Maker or Compound, the interest rate will fluctuate over the course of the loan depending on market dynamics. This is not the case with the Zero protocol.

Achieved through a combination of stablecoins and liquidation mechanisms

Critical to the concept is the soon-to-be-introduced fully programmable Zero USD (ZUSD) stablecoin that is pegged to the US dollar. The Zero protocol enables borrowers to take out ZUSD loans against bitcoin (rBTC) collateral. A minimum of 110% collateral coverage ratio is required to be able to take out a loan. The ZUSD is kept stable through an automated market of buying and selling.

If the collateral coverage ratio falls below the 110% threshold (e.g. when the price of bitcoin tanks), the collateral and the loan are liquidated automatically. The likelihood of that happening is a function of the collateral ratio at any given moment and the value of the collateral. The latter can fluctuate considerably due to the price volatility of bitcoin. In the event of such a liquidation, the borrower effectively incurs a 10% cut on their collateral. This incentivises the borrower to keep the collateral coverage ratio well above the 110% threshold. Borrowers need to keep the price volatility in mind when deciding on the maximum size of their loans relative to their collateral.

The longer the loan, the cheaper

One-time fees are due for the borrower for initiating the loan. Other costs can be found in the conversion from ZUSD into rBTC, plus there are transaction fees for moving out of the Sovryn ecosystem into exchanges. As a last step, there is the conversion of rBTC into fiat and bringing the fiat into a regular bank account for spending in the real economy. These are all one-time fees, so the Zero protocol loans aren't for short-term loans. The longer the duration of the loan is, the lower the costs will be. That in itself is a unique property.

Zero could spark increased interest in defi in the bitcoin ecosystem

With the Zero protocol, it will be possible to take out cheap loans (via a stablecoin) against bitcoin and spend them in the real world. For example, instead of arranging a mortgage for a house or a loan for a car, people will be able to take out a loan against their bitcoin and then use the money to buy a house or a car. Collateralised trading is today's killer application in DeFi lending, and that will probably be a similar story with Zero.

For people and organisations who believe that the price of bitcoin will continue to go up in the long term, lending against bitcoin at 0% can be an interesting value proposition. It preserves the long-term upside of their bitcoin while allowing them to enjoy the liquidity of their bitcoin in the short term. In the positive event that the value of their underlying bitcoin increases over time, their debts will decrease proportionally. Additionally, as their collateral coverage ratio will have increased, they will be able to take out additional loans against their bitcoin.

Conversely, in the worst-case scenario, the value of their underlying bitcoin could fall below the 110% collateral coverage ratio, resulting in their entire collateral being liquidated. They will incur a 10% fee on their loan and will also have to repay the loan instantly.

Nonetheless, if the Zero protocol is successful, it could spark increased interest in DeFi on top of the bitcoin stack. To date, there has been little DeFi activity in the bitcoin ecosystem due to the lack of smart contracts. Meanwhile, there has been an increase in usage of wrapped bitcoin in DeFi on other smart contract chains such as Ethereum.

Defi is not risk-free

All of the above sounds attractive, but as we know there is no such thing as a free lunch. DeFi is not risk-free and zero-cost. The nascent DeFi ecosystem is still under development and there are many unknowns. The risks include protocol bugs, liquidations and the functioning of the stablecoin markets. For example, the high volatility of crypto assets may lead to loans being under-collateralised and getting liquidated as a result, further increasing the selling pressure. This could create a domino effect in the entire DeFi ecosystem. The exact dynamics in which this unfolds depend on the complexity and interconnectedness of any particular DeFi ecosystem. Similarly, the drop in crypto markets in January 2022 led to instability in the LUNA DeFi ecosystem. The volatility resulted in an imbalance between loan demands and deposits in borrowing protocol Anchor, causing the protocol reserves to rapidly evaporate. Similar risks may be present in the Zero protocol and they will emerge over time as the protocol rolls out. But as we've already seen during several crashes, the market unravels in an orderly fashion; the risks fall where they are supposed to fall and no 'central intervention' is needed.

In the coming months, we will closely monitor the introduction of the Zero protocol, as this novel proposition could be one of the first lending protocols in the relatively non-existent DeFi ecosystem on the bitcoin stack.

Authors

Daniël den Boer, Douwe Lycklama

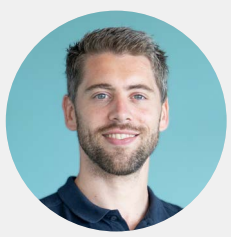
ORIGINAL BLOG

GET IN TOUCH

BLOG

Mandatory EU Digital Identity Wallets: enforced hassle for your business or a welcome solution?

4 February 2022



Daniël den Boer

Christian
van Ramshorst

In June 2021, the European Commission published a proposed revision of the existing eIDAS regulation aimed at increasing availability and adoption of digital identity, curbing the increasingly dominant role of platforms, and meeting changing user expectations. While the revision is still at the draft stage and the specifics are currently being discussed, the potential impact on citizens, businesses and digital identity in Europe cannot be overlooked. This article provides an overview of some key eIDAS developments and their potential impact on the private sector.

What is eIDAS?

eIDAS is the EU regulation on electronic identification and trust services for electronic transactions in the EU, which entered into force in 2014. It was created as a means to facilitate secure and seamless electronic transactions within the European Union. eIDAS is seen as a key enabler for the Digital Single Market in Europe to facilitate the flow of commerce.

The original eidas falls short

Currently, only 14 EU member states have made their national digital identity solutions available for cross-border use within the EU through a process called 'notification',

covering roughly 59% of the EU population. With the annual number of cross-border authentications only in the thousands, compared to millions at domestic level, the cross-border usage of the national solutions has been low. In addition, the role of platforms in online authentication has grown substantially in recent years. With the eIDAS revision, the EU aims to mitigate the risk of further market dominance of large online platforms, user lock-in and loss of control over data. The European Commission also acknowledges that the existing user-friendliness is poor. The lack of a common user interface, redirections in the authentication process and denial of service situations are all examples of a service that does not meet high user expectations on security and convenience.

Mandated availability and acceptance of wallets should drive the use of digital identity

The most significant change in the proposed eIDAS revision is the introduction of EU Digital Identity Wallets, which must be made available for all EU citizens. In contrast to the current situation under eIDAS, in which notification of an eID scheme by member states is voluntary, it will become mandatory for member states to provide EU Digital Identity Wallets to their citizens free of charge. Not only does the draft revision contain such a measure for providing EU Digital Identity Wallets, but it also extends mandated acceptance of such wallets beyond the public sector to private sector relying parties:

"Where private relying parties providing services are required by national or Union law to use strong user authentication for online identification, or where strong user authentication is required by contractual obligation, including in the areas of transport, energy, banking and financial services, social security, health, drinking water, postal services, digital infrastructure, education or telecommunications, private relying parties shall also accept the use of European Digital Identity Wallets issued in accordance with Article 6a". (proposed new article 12b pt. 2 in eIDAS revision)

In addition, the draft mentions that very large online platforms – i.e. online platforms that reach at least 45 million monthly active users in the European Union (which represents 10% of the 450 million consumers in the EU market) – will be mandated to accept the wallets at the user's request. They will also have to respect the minimum attributes necessary for the specific online service for which authentication is requested, such as proof of age. Very large online platforms include marketplaces like eBay, Amazon and Zalando, and social media such as Facebook, YouTube, Twitter and Reddit, to name but a few.

Private sector may face major changes in digital identity implementation

If the above aspects of the draft revision proposal remain unchanged and the EU succeeds in realising its ambitions with the EU Digital Identity Wallet:

- All of the 27 member states will have to offer at least one wallet to their citizens
- Government-issued attributes (such as name, date of birth or a unique identifier) will be available for these wallets
- Mandated acceptance means that many public and private sector services will be accessible using these wallets.

Needless to say, this will create both opportunities and challenges for the private sector. The full impact for private sector is not yet entirely clear but relying parties should be aware of a number of points, as outlined below.

Standardisation efforts in the eu will determine the complexity of relying parties integrating with all wallets

Each member state is required to notify wallets. Three options exist: they can decide to do so by providing a wallet issued by the member state's government, by the private sector or both. To foster competition and freedom of choice for citizens, it is likely that some member states will notify multiple wallets from private-sector providers. This means there will be multiple wallets (more than 27) available in the EU for relying parties to accept. To prevent a heavy integration burden for private sector relying parties, it is likely that current EU discussions on technical architecture will result in a single connection interface for relying parties. It remains to be seen how complex this connection interface is and how it will affect the integration efforts for private sector relying parties.

Without eu harmonised legal conditions, contracting between wallets and relying parties will be cumbersome

The second big obstacle for acceptance of wallets by private sector relying parties is contracting. Will numerous bilateral contracts be required between wallet providers and relying parties, or will the EU converge to a single or standardised legal contract that covers acceptance of all wallets? This is an important point to watch out for in further publications.

Exact scope of impacted relying parties is still uncertain as legislative wording leaves room for interpretation

It is still unclear which private relying parties will ultimately be subject to the mandated EU Digital Identity Wallet acceptance, since the scope of the revision refers only to relying parties that are required by national or Union law or have a "contractual obligation" to use "strong user authentication". While legal obligations that follow on from existing EU laws and regulations like GDPR and PSD2 are usually pretty straightforward for those parties involved, the scope of the

term "contractual obligation" still requires clarification. For example, does a SaaS accounting product that applies strong user authentication than is contractually agreed with the client need to accept all EU Digital Identity Wallets for authentication? Such an interpretation would mean that a huge number of businesses would be impacted by the eIDAS revision.

Without harmonised business models for wallets, relying parties can be confronted with unknown transactional costs

Another key point that will have to be clarified in the final regulation is the business model for wallet providers within eIDAS. As the wallet must be made available free of charge to citizens, wallet providers will likely turn to relying parties for generating revenue. Combining a mandatory acceptance of all wallets by relying parties with unrestricted business models (and pricing) for wallet providers is definitely not a desired situation as it will only result in high prices.

Keep an eye on the upcoming developments

For many relying parties, the eIDAS revision will have an impact on how they currently approach the digital identity of their customers. The topics covered in this article are some key examples of the current eIDAS discussion that could strongly impact relying parties. The exact extent of the impact depends largely on choices that still need to be made.

Although the eIDAS revision itself is still at the draft stage, the European Commission has set an ambitious timeline for the implementation of the revision. The current deadline for publishing a toolbox for a European Digital Identity Framework – which should include the technical architecture and reference framework, common standards, guidelines, and best practices for EU Digital Identity Wallets – is in October 2022. This new initiative is highly likely to affect the business of relying parties in due course. Therefore, they should monitor the possible impact of the revision closely to avoid being blindsided by its implications.

With INNOPAY's experience in bringing digital identity to life and our clear view on the current eIDAS revision, we are ideally placed to help relying parties prepare for the upcoming regulation which is set to change the identification and authentication landscape in Europe.

Authors

Daniël den Boer, Christian van Ramshorst

ORIGINAL BLOG

GET IN TOUCH

BLOG

Collaborative data sharing drives digital transformation

20 February 2022

Mariane ter Veen

Open and collaborative exchange of data between organisations, their partners, customers and competitors is increasingly being powered by trusted data sharing networks. And as with every paradigm shift, this new reality heralds both opportunities and risks for players in all sectors.

Mariane ter Veen – Director, Lead Data Sharing – discusses INNOPAY's focus on helping customers to formulate strategic responses to an ecosystem increasingly based on collaboration.

Data sharing in a world where everything's transaction

"Data sharing is in INNOPAY's DNA," says Mariane. "We see a world where trusted data exchange is the key to unlocking new business models and reducing costs. Companies are presented with a choice about how they see their future. They can evolve, adopt a more open outlook, collaborate across their ecosystems, and maximise new opportunities. Or they can remain siloed, reject opportunities to share data in trusted environments, and gradually calcify into irrelevance. The regulated financial world with e.g. payments and securities is an early manifestation of this ecosystems thinking. We believe that digitisation will drive much more of this or we'll end up in a fragmented services world. For transaction services this is not practical and holds back the potential of the digital economy.

"We believe our customers are ready to embrace a new way of doing business. Our role is to help them articulate their data sharing vision, and guide them through the journey."

Working together is the way forward

A common response to the data sharing challenge has been the platform-based approach; organisations develop their own proprietary platforms or engage in bilateral agreements with key suppliers or partners. This approach can be expensive, time-consuming, difficult to scale, and ultimately leads to data isolation. Mariane proposes a fundamentally different solution.

"In a world where everything's transaction, companies need to play a more active and inclusive role in their data ecosystems. We serve our customers by helping them achieve the required level of openness whilst always ensuring that their own customers remain in control of their data. Real business opportunities come from working together, even with competitors and previously unknown parties.

Trust is the key to unlock data sharing opportunities

Mariane believes that "trust" is the essential ingredient to ensure effective data sharing. "Trust will be the driver for collaborative data sharing. In our view, the creation of a scheme or trust framework will enable our customers to exchange data more easily, and reap their own specific benefits and competitive value from within the broader ecosystem. There is a real space in the market for soft infrastructures; sets of agreements enabling data sharing. These will create a more equitable power balance between users and platform owners in both the control of data, and also in the value which can be realised from that data."

Organisations are presented with both opportunities and risks by the transition to trusted data sharing. New and innovative business models will be enabled by a greater capacity to drill into extended data sets shared with suppliers, partners and even competitors. Increased trust will also deliver cost efficiencies by lowering transaction management costs. If trust is established between parties, it will be easier, faster and cheaper to do business together. Outlays on technical infrastructures and legal agreements will be lowered. On the reverse side, failure to act now could leave companies increasingly out in the cold.

Ishare is a scheme which will facilitate openness across multiple sectors

iSHARE is a tangible example of INNOPAY's ability to support customers in making this transition. It is a set of agreements which enables players across the logistics industry to share data with each other on the basis of mutual trust; irrespective of type, size, modality and jurisdiction. It is not a technology solution, instead the shared agreements provide all the essential functional, technical, legal and operational standards that are needed for organisations within the iSHARE community to share data.

Mariane sees iSHARE as a template which will be used to unlock effective data sharing across a wide variety of industries. And INNOPAY is uniquely qualified to help organisations to sidestep the challenges of developing this type of collaborative soft infrastructure.

"We've dealt with many challenges such as the involvement of a wide variety of stakeholders with their own specific interests. When we facilitate projects, we focus on very tangible goals and objectives, and agree what needs to be delivered to unlock business value for each stakeholder. We listen carefully to their objectives, and take them on a journey which reveals common interests across the community as well as their own local aims. This is how we make data sharing schemes successful. It's a model we want to deploy to help new customers."

Now is the right time to get ahead of the game

"The opportunity is here now," concludes Mariane. "If you don't act, someone else will. This is all about your future position in your value chain. And whether you take this opportunity to improve your business for both yourself and your customers by sharing data more effectively."

If you would like to discuss how INNOPAY can help your organisation to articulate and implement a future-proofed strategy based on collaborative data sharing, Mariane would be delighted to hear from you (mariane.terveen@innopay.com).

Author
Mariane ter Veen

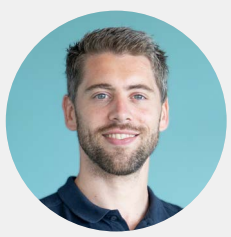
ORIGINAL BLOG

GET IN TOUCH

BLOG

Web 3.0: How decentralisation and incentives will create alignment on the internet

4 March 2022



Daniël den Boer

There have so far been two major 'phases' of the internet, which are now retrospectively referred to as Web 1.0 and Web 2.0. Opinions differ on the precise beginning and end of these two phases, so the periods are not clearly defined – and the burgeoning Web 3.0 phase is no different.

The first two phases of the internet

Although there are many ways to look at the evolution of the internet, the two perspectives that seem most relevant in light of Web 3.0 are functionality and decentralisation.

During the first phase, internet services were built on open protocols that were controlled and governed by internet communities, meaning that the internet was chaotic and highly decentralised. Equitable access led to an explosion of creative innovation and competition. There was one important challenge, however: commercialisation. A lack of financial incentives slowed down the development of open protocols.

The user-generated content resulting from the ability for everyone to both read and write was effectively commercialised in the second phase of the internet. This commercialisation allowed tech companies to build software and services more quickly, eventually outpacing open protocols. This gave rise to a plethora of centralised (social) services. Accelerated by the explosive growth of smartphones, mobile social applications came to account for the majority of internet use. This 'Social Web' onboarded the world onto the internet as it gave people access to amazing technologies, many of which were free to use.

In short, the absence of commercialisation of open protocols in Web 1.0 led to commercialisation on centralised platforms. However, this came at a cost – most importantly in terms of diminished competition and misalignment between the platforms and their users.

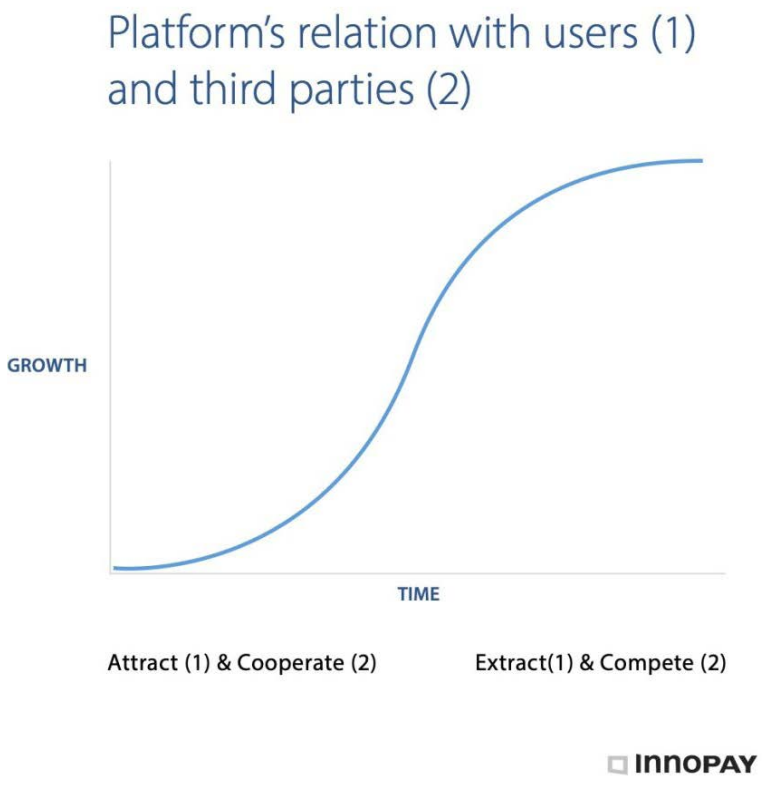
The predictable flaws of centralised platforms in web 2.0

Centralised platforms follow a predictable life cycle. It typically starts out in a positive-sum situation for the platform, its users and third parties, but it ends up as a zero-sum situation with misalignment between them.

Since platforms are systems of multi-sided network effects, the main challenge is to bootstrap the network. This typically requires the subsidisation of a particular side of the market. In the case of social platforms, this tends to be the users and third parties developing/building businesses on top of the platform. The money to fund these subsidies is raised in large venture capital rounds. Initially, these platforms enjoy positive feedback loops that create a network effect. As the platform grows, however, frictional effects can slow down the growth rate. This creates the typical S-curve of adoption.

This is the point where the company's shareholders come in. Ultimately, the company has a fiduciary obligation towards its shareholders. It is expected to put the welfare and best interests of the corporation above their own personal or other business interests. Platforms will inevitably choose to extract more value from users' data and start competing with third parties that build services on top of their platforms to increase market share and profits.

As a result, in Web 2.0 both users and third parties began to distrust centralised platforms. It became increasingly hard for startups, innovators and creators to build and grow their business on top of centralised platforms without having to worry about the platforms starting to compete with them or abusing their power to stifle innovation. Users felt robbed of their data and the value they provided to the platform, and started demanding compensation. The root of this misalignment is a separation of financial benefit and utility. The financial benefit is attributed to venture capitalists and shareholders, while users only benefit from the utility of the platform. This only became apparent as the platforms and their markets matured beyond their initial success.



Enter web 3.0, A stateful (re)decentralised internet that aligns all participants

The term Web 3.0 went mainstream in 2021, although it had actually been floating around in the crypto community since Ethereum co-founder Gavin Wood coined the term in 2014. The Web 3.0 community aims to (re)decentralise the internet to counter the increasing power of centralised platforms – much like in Web 1.0, only this time with stateful protocols instead of stateless protocols. State-what? The protocols underpinning today's internet are incapable of maintaining what computer science refers to as 'a state'. In simple terms, they cannot maintain the status of who is who, who owns what, and who has the right to do what. And if you can't maintain a state, you can't transfer value using the internet as a transaction medium and will therefore have to resort to centralised platforms and institutions to act as transaction intermediaries. The fact that internet protocols were stateless was the core reason that centralised platforms were an inevitability in Web 2.0.

However, Web 3.0 is built on the premise of stateful protocols based on blockchain technology and other distributed ledger technologies. It means that the internet gets a built-in settlement layer, or rather multiple layers to be more precise. This enables P2P transactions to take place almost instantly without requiring any centralised intermediaries.

Incentives and alignment

Web 3.0 can realign all stakeholders on the internet and restore the imbalance that centralised platforms have created. Decentralisation is a big part of that, because it prevents the extraction of value from platform users and boosts competition and creativity as discussed above. But Web 1.0 protocols were decentralised too, so what's different this time around? Well, the secret sauce that Web 1.0 lacked was incentives.

Web 3.0 protocols have a native token that is used to incentivise and align all stakeholders to contribute to the shared goal, which is network growth and appreciation of the token's value. These incentives draw in developers, entrepreneurs, investors and users. This alignment of all network participants results in network effects that are even stronger that those of Web 2.0 social platforms. It's the main reason that causes people – even sophisticated technologists – to consistently underestimate the potential of decentralised platforms. So, incentives are what make these stateful protocols different from their stateless Web 1.0 and Web 2.0 counterparts. A 'tokenised network' with correctly engineered 'tokenomics' (which is a fancy word for incentive structure) solves a lot of the bootstrapping issues that existed in both previous phases of the internet. In Web 1.0, internet protocols were community-governed and decentralised, but there was no commercial model behind them, leaving them completely dependent on the contribution of volunteers.

In Web 2.0 platforms have to fund the entire bootstrapping process through venture capital funding, which isn't easy! First, they have to hire a lot of developers to build the product, and bearing in mind that developers are expensive, a lot of funding has to be raised. Then they have to bootstrap a multi-sided network and attract users. This requires subsidising some sides of the network (typically by offering the product for free) to bootstrap it, which once again calls for substantial funding. If they make it through those challenges, they usually still don't make a profit for a long time (if ever), largely due to the heavy subsidising. These dynamics introduce high barriers that make it very hard for Web 2.0 platforms to be successful, but when they do overcome these barriers and garner enough network effects, they typically become very successful, up to point where they become monopolies.

Because of the built-in incentives, tokenised networks provide a better alternative to bootstrapping. They have a significantly more attractive value proposition for both developers and entrepreneurs. If they see value in the protocol, their participation in growing the network is rewarded. The same goes for users. Through token airdrops or token sales, early users can be incentivised to start engaging with the protocol at a really early stage, providing valuable input to the developers of the protocol. Users who want to see the project succeed are incentivised to become ambassadors. This is in stark contrast to the way things were done in Web 2.0.

Thanks to these built-in incentives, even if Web 3.0 protocols start out half-baked without any use cases, the developer community and entrepreneurs can be relied on to finish the products and build use cases on top of the protocols.

As a result, the decentralisation and tokenisation of Web 3.0 protocols has drawn in – and will continue to draw in – incredible creativity. The pace of innovation is staggering and continues to increase, to the point where it is now almost impossible to keep up with the latest developments.

No one knows where Web 3.0 will eventually end up, but in view of the massive amount of talent and creativity that is coming to the space it will undoubtedly continue to surprise us. It's an exciting journey that we are all going on together. Join us for the ride!

Author
Daniël den Boer

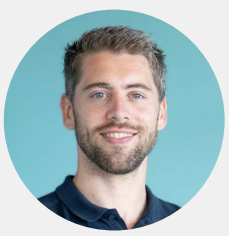
ORIGINAL BLOG

GET IN TOUCH

BLOG

Will China's Central Bank Digital Currency ever have its Olympic moment?

18 March 2022



Daniël den Boer

Pieter Schuurmans

The Winter Olympics in Beijing were not just a showcase for the world's best athletes. The event was also an international testing ground for China's new digital currency – the digital yuan (or e-CNY) – and reinvigorated the interest in its Central Bank Digital Currency (CBDC) plans. Rather than focusing on the functional payment aspects of China's CBDC, in this analysis we review the key dynamics influencing its adoption.

Over the past year, the race for CBDCs has intensified. There are now 87 countries that are exploring a CBDC in some shape or form. China's central bank, the People's Bank of China (PBoC), has been leading the development of a digital currency for quite some time now. In fact, China is poised to further widen the gap, as the PBoC is currently running large-scale pilots in 12 major Chinese cities and regions, plus the digital yuan was presented to the world during the Winter Olympics. In contrast, most countries are still at the research stage with their CBDC, including the USA with the Digital Dollar and Europe with the Digital Euro.

China first began exploring the concept of a sovereign digital currency back in 2014, following the success of mobile payment and digital wallet solutions like WeChat and Alipay. With the first small-scale trials having taken place in May 2020, it has been piloting its digital yuan for almost two years now.

This year, though, China has been stepping up its efforts to create a digital currency. At the beginning of the year, the PBoC released a pilot edition of a mobile wallet application for its digital yuan. More recently, China seized the opportunity to showcase its digital yuan on a global stage and assess its foreign appeal during the Winter Olympics 2022 in Beijing. Throughout the event, international athletes and teams were able to use the digital yuan as one of three available payment methods – besides cash and Visa cards – in and around the Olympic Village.

Even though very few overseas visitors were able to attend the Winter Olympics due to COVID-19 restrictions, which limited the opportunity to test the digital yuan's foreign appeal on a significant scale, its availability at the event still attracted a lot of international attention. It also triggered some concerns and criticism from the global community related to privacy and domestic competition. Although more than US$300,000 worth of the digital currency was spent daily according to the PBoC, it did not result in the widespread adoption that many were hoping for. This begs the question: which hurdles does China need to overcome to achieve widespread adoption of the digital yuan?

Chinese consumers have little reason to switch to using the digital yuan

Domestically, the PBoC faces fierce competition from the two dominant mobile payment systems in China: Tencent's WeChat Pay, and Alipay (which is run by an Alibaba affiliate called Ant Group). These widely adopted payment systems already offer a fully digital payment experience for Chinese citizens. Therefore, there is little reason for them to download and switch to the PBoC's mobile wallet application in order to use the digital yuan, especially since it doesn't offer an improvement in terms of the user experience.

It was recently announced that, just like Alipay, Tencent will now also support the digital yuan in its WeChat Pay app. This will create a possibility to bypass some of the friction in the user experience and provide a large user base with access to the digital yuan. Nonetheless, as of now, there are few incentives for consumers and merchants to use the digital yuan instead of the existing payment methods, as it does not provide a superior user experience relative to these existing solutions.

China could mandate adoption of the digital yuan

If the adoption of the digital yuan were to be left entirely up to the market, it would face significant hurdles such as the user experience friction as described above. However, we should also consider the fact that the digital yuan is run by the Chinese central bank, so the typical private-sector rules do not fully apply. The Chinese government could mandate companies to accept and use the digital yuan, leaving these companies no choice. Also, many of China's largest organisations are state-owned and therefore may also be mandated to use the digital yuan. Such actions would not only lead to domestic adoption of the digital currency, but could also impact on non-Chinese companies that operate in China or conduct business with Chinese vendors and suppliers.

One reason why China could likely go down this path of mandated adoption is that a broadly used digital yuan would provide the Chinese government with rich data on the flow of money via the Chinese central bank, resulting in very granular insights into economic activity. On top of that, the digital yuan will be 'programmable', providing additional levers for more granular fiscal and monetary policies. This programmability attribute could allow the attachment of expiration dates to individual currency units, restrictions on spending possibilities associated with specific units and individuals, or freezing of digital currency linked to criminal activity and non-compliance. Therefore, the digital yuan may be more about data and control than it is about currency.

Privacy issues could be the single biggest impediment to adoption of the digital yuan

The idea of the Chinese government collecting data across the country's entire payment flow may not go down well with democratic nations that have strict privacy laws. China's central bank has expressed plans for what it calls "controllable anonymity" with the digital yuan, meaning that transacting parties can remain private, while the central bank can still observe and monitor transactions.

This has created concerns within the global community that the digital yuan may be used as a tool to closely monitor the financial activities of Chinese citizens and even international citizens. In this context, some foreign athletes at the Winter Olympics were explicitly forbidden by their country's officials to use the digital yuan due to privacy concerns. Chinese citizens and the Chinese private sector have expressed similar concerns. Addressing these concerns and building trust among digital yuan users that their data is private and well-protected will be

crucial for widespread adoption, both on a domestic level and on an international scale.

Regardless of the outcome, China's leading efforts in the development of a sovereign digital currency is pushing other central banks around the globe to keep pace. As a result, a cashless world with digital currencies seems like an almost inevitable future.

Innopay is closely monitoring the evolution of cbdcs

Based on our rich experience and vision of the evolution of the payments market, INNOPAY can help you in preparing for the future impact of CBDCs. Reach out if you are interested in finding out how you can ready yourself for the future impact of CBDCs.

Authors

Daniël den Boer, Pieter Schuurmans

ORIGINAL BLOG

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BLOG

The Future of Payments: How to avoid 'Uberisation'?

7 April 2022

Josje Fiolet

The 2022 edition of Euroforum's annual conference on the future of payments was held in Amsterdam on 31 March. It was the biggest edition so far, attracting over 250 attendees. INNOPAY's Josje Fiolet was among them, and she has written a blog to share the key insights from the conference. The focus was clearly on the future, looking at how both existing and new technologies are taking shape and finding their way into consumers' daily lives.

As I entered the beautiful venue – the Beurs van Berlage, Amsterdam's historic former stock exchange building – I realised that this was my first live event since the Annual Payment Conference in September 2021. Time flies! And while the world of payments might never go back to the 'old normal', the world of events seemingly will, since the attendees were obviously enjoying shaking hands, sitting and standing close together again, and just generally interacting in real life at long last.

Source: site Toekomst van Betalen

Disruption is coming

The event got underway in style at 9 a.m. with a keynote titled 'Disruption is Coming' by Johan Pauwelse, associate professor at Delft University and director of the biggest blockchain lab in Europe. He made no bones about it: we can do way better than our current performance in terms of KYC effectiveness or instant global payments, for example. His key message was that the financial industry needs to take urgent action to avoid experiencing similar disruption as has occurred in the taxi industry with Uber and the travel industry with Airbnb. As a solution, he stressed the need for a shared, fully decentralised trust infrastructure that is used by everyone but owned by no one.

The European Payment Initiative (EPI) acknowledged the need for European financial players to innovate and to guard against the dominance of the (non-European) card schemes and Big Techs. Martina Weimert, CEO of EPI, mentioned that the eight local card schemes are all losing market share, especially in e-commerce due to strong competition.

Visa and Mastercard have a quasi-monopoly, particularly on European cross-border transactions, which raises concerns about control, transparency and sovereignty. With the roll-out of instant payments not yet materialising in Europe, 22 shareholders decided to join forces and invest in EPI. After some setbacks caused by shareholder banks withdrawing, they have been forced to assess alternative scenarios.

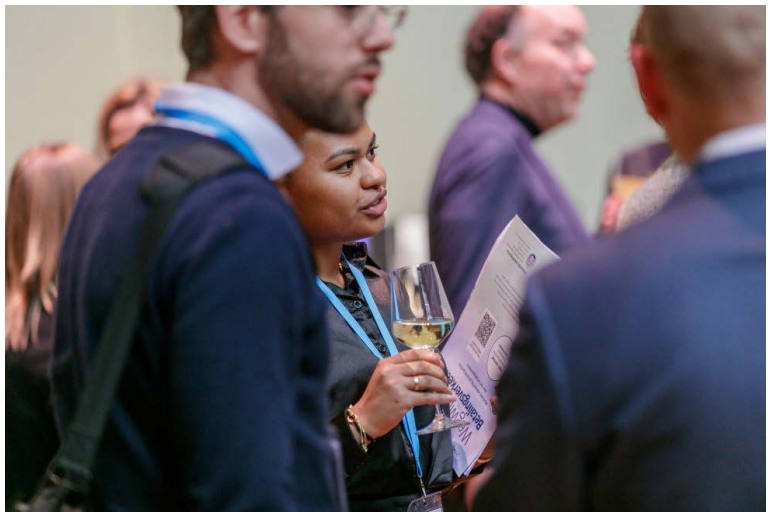
Going forward, EPI will focus on building a multifunctional wallet encapsulating a digital payment solution based on account-to-account (A2A) SEPA Credit Transfer (SCT) Instant, where cards are included. The focus will be on merchant readiness for instant payments, narrowing the gaps in the rulebooks in close collaboration with merchants. What merchants want above all is one interface, a one-stop shop, instead of local integrations. With a €50 million innovation budget, EPI is willing and able to help merchants solve the challenges.

As another response to the dominance of the big players, over a hundred central banks are currently working on developing Central Bank Digital Currencies (CBDCs). During the on-stage panel discussion, CBDCs were likened to cash, just in a digital format; whereas money in your bank account gives you a claim at a commercial bank, a CBDC gives you a claim at the central bank. With cash circulation decreasing, central banks are keen to retain control of the monetary system and safeguard financial stability.

The panel members had varying opinions about how this should be done. Does the technology need to be blockchain?

Do you need a bank account? And are we focusing too much on the risks rather than the opportunities to provide a better consumer experience? Although these questions are still the topic of much debate, compared to last year's edition of the event there is a clearer overriding message: digital currencies are here to stay.

The dominant (non-European) card schemes are not resting on their laurels either. For example, Visa and Crypto.com are building bridges between the 'old' and 'new' worlds, while Mastercard and Visa are also entering the domain of debit payments and instalments in response to customer demand.



Source: site Toekomst van Betalingsverkeer

The optimal payment mix: balancing consumer and merchant demands

With payments being a two-sided market, payment providers and financial institutions need to follow (and shape) both consumer demand and merchant demand. On the consumer side, the core issue appears to be speed and simplicity of payments, and the dominant trend driving new payments behaviour seems to be embedded payments. Whereas one-click payments were the ambition at the previous event, things have now advanced towards invisible payments; after presenting their payment card upon entering a supermarket, for example, consumers can simply shop for all the groceries they need and walk out – no cashier/staff required. Another key driver from the consumer perspective is payment flexibility, which is stimulating the trend towards Buy Now Pay Later (BPPL) solutions.

These trends mean that merchants need to constantly re-evaluate the optimal payment mix. Whereas flexibility, speed and simplicity are the top priorities for consumers, merchants deem price, risk and reach as essential when selecting a payment method. In terms of reach, merchants at the conference indicated that they would like iDEAL, for example, to have broader European coverage. This would also reduce the integration complexity. Currently, merchants have to integrate payment solutions in every market they are active in, and this was mentioned as one of the key headaches in a survey of merchants conducted by EPI.

Source: site Toekomst van Betalingsverkeer

From psd2 to psd3?

Needless to say, as one of the key regulatory developments and still under review, PSD2 was also on the agenda. The revision is taking place in parallel with the regulatory proposals on Open Finance, Open Data, Digital Euro and Instant Payments. The expected outcome towards the end of this year is that specific parts of PSD2 will be changed, that additional regulations will potentially be introduced and/or that the Level 2 regulations (EBA Regulatory Technical Standards) will be adjusted. Due to the lack of radical differences, there are some reservations about calling it 'PSD3'.

The agenda also included the revision of eIDAS, presented by our own Vincent Jansen. He explained the developments in the EU Digital Identity wallet and how to prepare for its impact. The overall idea is that a 'common toolbox' will be developed to achieve interoperability of wallets across Member States. The EU Digital Wallet will come with mandated acceptance and will place significant restrictions on digital identity and/or data custodian services. The deadlines for implementation could be somewhere in 2024 but the timelines appear very ambitious. Nevertheless, work is well advanced and should be followed closely by financial institutions, not only because they will be impacted but also because they themselves could become recognised digital identity wallets, which, moreover, would not have to be limited to Digital Identity only. Opportunities..!

Sometimes it's difficult to pinpoint the direct improvements following regulation, but this was not the case during the Financial Intelligence Unit's session on the role of financial institutions as gatekeepers. Multiple cases showed that major

crimes can be prevented by analysing the data effectively. For example, a PSP who had a number of customers selling flowers analysed the data looking for outliers, and found one: a customer who seemed to earn their revenue at night, whereas all others generated sales during the day. Further investigation revealed this to actually be a drug operation. Another case illustrated how a major terrorist financing network had been uncovered. Both of these cases started with the investigation of a single transaction. There was consensus among the audience that a different mindset is needed, and that this should also be stimulated by the supervisory bodies. Above all, data science and analysis is key!

Source: site Toekomst van Betalingsverkeer

New applications of tech to attract people across the generations

It was inspiring to see the presentation of some new technologies and their applications. In particular, augmented reality and virtual reality now seem to be really taking off and could significantly change the commerce and payment experience. The Metaverse was mentioned more than once, with H&M as one example of a retailer opening a fully functioning online shop in this virtual space. These developments will be especially relevant for the 'Zoomers' (the successors to the millennial generation) and 'Silver Surfers' – the over-55s who used to be referred to as 'Boomers'. Apparently, the name of this generation has changed to reflect the fact that they are much more tech-savvy than they are given credit for – so businesses should not overlook them, as they are a potentially lucrative target segment. Speaking on stage, Wijnand Jongen's key message was that rather than trying to bring the consumer into the organisation's world, companies should bring their organisation into the consumer's world.

Still on the topic of generations, it was my great pleasure to moderate a session with young payment professionals towards the end of the day. All aged under 30 and each with approximately two years of experience in payments, high potentials from Worldline, ABN AMRO Bank and Enigma Consulting took the stage to reflect on their key takeaways from the event. They were optimistic about the future, seeing Open Banking as providing new revenue opportunities, and Instant Payments – based on one click and seamless checkout – spreading throughout Europe to meet the need for speed and a sublime customer experience.

I would like to encourage young professionals to not only continue to participate in these types of events, but also to share their views throughout the year.

Source: site Toekomst van Betalen

Source: site Toekomst van Betalen

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Josje Fiolet

ORIGINAL BLOG

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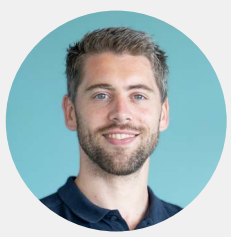
Will the European Commission succeed in harmonising the current fragmented digital identity landscape in Europe?

19 April 2022



Daniël den Boer

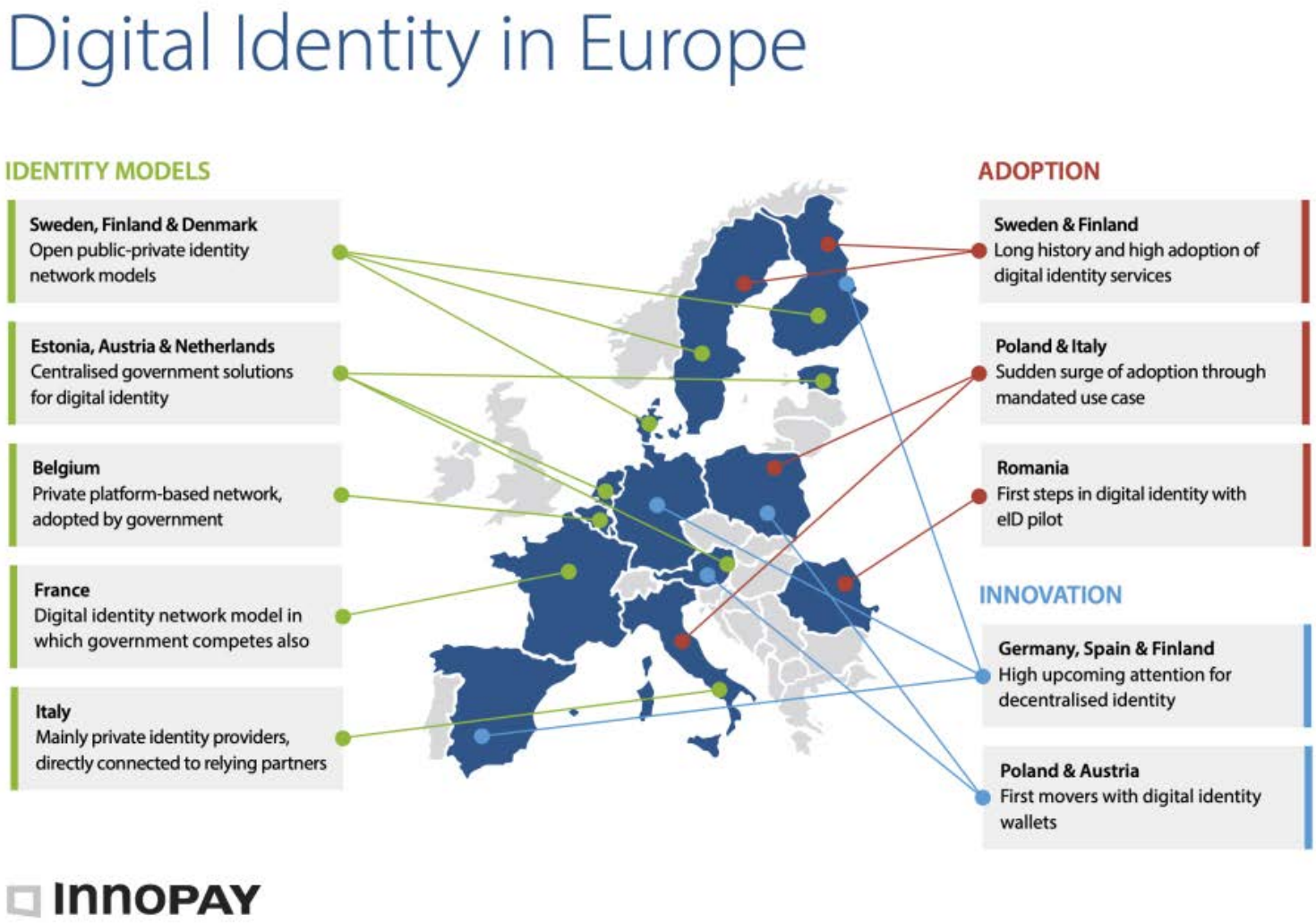
Christian
van Ramshorst

With the upcoming revision of the European eIDAS regulation and the introduction of EU Digital Identity Wallets, the European Commission is pushing for harmonisation of the digital identity landscape in Europe. Over the last fifteen years, member states took individual approaches to digital identity. This lack of a harmonised European approach to digital identity has thus far led to a divergent and fragmented landscape in identity solutions. In this article, we take a closer look at how divergent the current digital identity landscape in Europe is and highlight some examples regarding digital identity in individual member states.

Digital identity is a key enabler of europe's digital single market initiative

One of the European Commission's 6 political priorities is to get the EU ready for the digital age, including the ambition to create a Digital Single Market. This knows many facets, such as removing virtual borders, boosting digital connectivity, improving access to online goods and services across Europe, driving online growth, and many others. The European Commission sees digital identity and trust services as key tools for providing trust and security in this Digital Single Market.

However, over the last few years, we've seen very different implementations of digital identity emerging across member states. Some member states are not even actively developing digital identity at all. According to the European Commission, *"this divergence deprives people and businesses of the benefits of the Single Market, as they cannot use secure, convenient and uniform identification systems across the Union to access both public and private services".*



Harmonisation of the market for digital identity is key to establishing trust and security across the Union. to get a view of the need for harmonisation, we need to understand how divergent the existing European landscape is. Here to illustrate the differences in digital identity in Europe, we discuss some member state examples on three different aspects of digital identity:

1. Identity model
2. Level of adoption
3. Level of innovation

The identity models in europe range from platforms to networks and from public to private

Member states in Europe have chosen very different identity models. nordic countries have the longest history in digital identity and have been frontrunners for a long time. Most Nordic countries have converged to a model of close public-private cooperation in a trusted network. Sweden and Finland are particularly good examples of this, where the governments developed a regulatory trust framework and private identity providers offer various solutions in compliance with the framework. The government is explicitly not involved in offering digital identity solutions but leaves this entirely up to the private sector.

This public-private network model is the complete opposite of models chosen by, for example, Estonia and Austria. In these member states, a centralised public solution is offered to all citizens.

Open, public-private networks and centralised public solutions can be seen as two opposing ends of the spectrum, and

many variations exist in between. Italy has a similar model of public and private providers to the Nordics but offers relying parties the choice to connect to identity providers directly or via aggregators. France has put a public platform in between providers and relying parties to simplify connectivity. At the same time, the French government is starting to compete with providers by offering a new public identity solution. A final perspective to mention is Belgium, home to a platform solution initiated by private sector parties and now seeing government investment and adoption by public services.

The level of adoption of digital identity varies from nationwide to non-existent

The degree to which digital identity solutions have been adopted by citizens is determined by many underlying factors such as track record, mandated usage, stimulation of competition in the private-sector, and priority on the political agenda, name but a few.

Nordic member states have by far the highest level of adoption in Europe, with the majority of the population both in possession of digital identity and using a multitude of public and private services. Then there are countries like Germany, where the majority of the population has an eID card, but usage of this eID for accessing digital services is still very low. Some member states have seen recent spikes in adoption because of mandated use, for example to access child-related government benefits in Poland or specific coronavirus-related financial support in Italy. Lastly, some member states like Romania have only just begun piloting eID cards, so adoption is non-existent.

Upcoming innovation may introduce new frontrunners

To understand the digital identity landscape in Europe, we must also look ahead to what is coming. While Germany and Spain are currently not considered frontrunners with their existing digital identity implementations, there is a lot of identity buzz in these countries. Big consortia are emerging, revolving around decentralised identity and Self-Sovereign Identity (SSI), and are aspiring to become leading on digital identity. Finland, a long-standing frontrunner, is also reinventing itself in the field of decentralised identity.
And looking ahead at wallet-based identity interactions, Poland and Austria have already launched new wallet-based solutions ahead of the curve in Europe.

Exciting times lie ahead

We can conclude that the current digital identity landscape is very divergent. the upcoming eIDAS revision will introduce a more harmonised, interoperable digital identity model for cross-border use cases, but the European Commission will have a big challenge in bringing full harmonisation to the Union. The revision will enforce the availability of digital identity products across the Union for citizens and the required acceptance by many relying parties, but whether this is enough to drive actual usage and adoption remains to be seen. And lastly, upcoming developments will drive innovation across the Union. All member states need to take action in the field of digital identity, so perhaps in a few year's time we will be surprised by new frontrunners in the field of digital identity.

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ORIGINAL BLOG

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BLOG

Is the EU Digital Identity Wallet an implementation of Self-Sovereign Identity?

19 April 2022

Jorrit Penninga

Vincent Jansen

In June 2021, the European Commission announced its plans for a framework for Digital Identity Wallets. Additionally, the concept of Self-Sovereign Identity (SSI) – a new way of thinking about digital identity – has emerged in the market over the past few years. This raises the following question: To what extent is the EU Digital Identity Wallet an implementation of SSI?

Eu proposal to introduce a digital identity wallet

In June 2021, as part of the revised eIDAS regulation, the European Commission announced its plans for a framework for Digital Identity Wallets for everyone in the European Union (EU). The Commission proposed that each member state will be required to make at least one wallet available to its citizens. The wallets must be free of charge for citizens, and mandatory acceptance is expected to apply in both the public sector and some parts of the private sector. Moreover, to ensure pan-European usage, each member state must accept the wallets of all other member states. There are multiple and diverse possible use cases for the EU Digital Identity Wallet including, for example, onboarding, sharing attributes (e.g. age or address), signing and authorisations/mandates.

The European Commission and member states are currently working on the development of the necessary common standards for the EU Digital Identity Wallet. The aim is to test these standards in pilot projects from October 2022 onwards. The intention is to develop a solution which is decentralised, privacy-preserving and secure, thus putting the user in control of their digital identity.

Self-sovereign identity: users in control

Over the past few years, a new way of thinking about digital identity has emerged: Self-Sovereign Identity (SSI). SSI is based on the principle of putting users in control of their digital identity and the related data. It is difficult to give a clear and unambiguous definition of Self-Sovereign Identity (SSI) – There is still no market consensus on the exact definition of SSI, with current interpretations ranging from the principles (Christopher Allen)1 to decentralised solutions based on blockchain2.

By design not all ssi principles can be fulfilled by eu digital identity wallet

SSI and the EU Digital Identity Wallet share some common ambitions around putting the user in control and creating a decentralised, privacy-friendly and secure identity solution. But will the EU Digital Identity Wallet be fully SSI? For the purpose of this article, we have analysed the EU Digital Identity Wallet based on the ten original principles from Christopher Allen's vision on SSI (Figure 1). As the precise details and technical architecture of the EU Digital Identity Wallet are still unknown at the time of writing, we have based our analysis on what is currently known or can be assumed.

	1	Existence	Users must have an independent existence
	2	Control	Users must control their identities
	3	Access	Users must have access to their own data
	4	Transparency	Systems and algorithms must be transparent
	5	Persistance	Identities must be long-lived - as long as user wishes
	6	Portability	Information and services about identity must be transportable
	7	Interoperability	Identities should be as widely usable as possible
	8	Consent	Users must agree to the use of their identity
	9	Minimalisation	Disclosure of claims must be minimised
	10	Protection	The rights of users must be protected

Figure 1: SSI Principles by Christopher Allen, 2016

The EU Digital Identity Wallet is likely to fulfil the SSI principles of existence, access, interoperability, consent, minimalisation and protection. It will allow citizens to have an independent existence. It is likely that the wallet will give users access to all its claims and data and that users can retrieve the claims and other data within their wallet. Data will be stored decentrally in the user's wallet. The intention of the European Commission is to allow – or even force – acceptance in a wide range of sectors in the public and private domain and thereby ensure that identities are as wisely usable as possible (interoperability). The principle of consent will also be met, as it is already fulfilled with current eID solutions notified under eIDAS and other EU regulations, such as GDPR and PSD2. One of the explicit requirements of the proposal is selective disclosure, in line with GDPR's rules on data minimalisation. The rights of users will be protected, as the proposed regulation includes multiple explicit statements about privacy, security and protection of personal data.

The principle of transparency could be fulfilled, although this is still uncertain. The principle requires systems and algorithms to be free, open-source, well-known and as independent as possible of any architecture. The principle also requires management and updates to be transparent. The generic technical framework as described in the proposal will likely be transparent, but since it is intended to also allow for market parties to deliver their services, it remains to be seen whether systems, algorithms, management and updates of all individual wallets will be fully transparent.

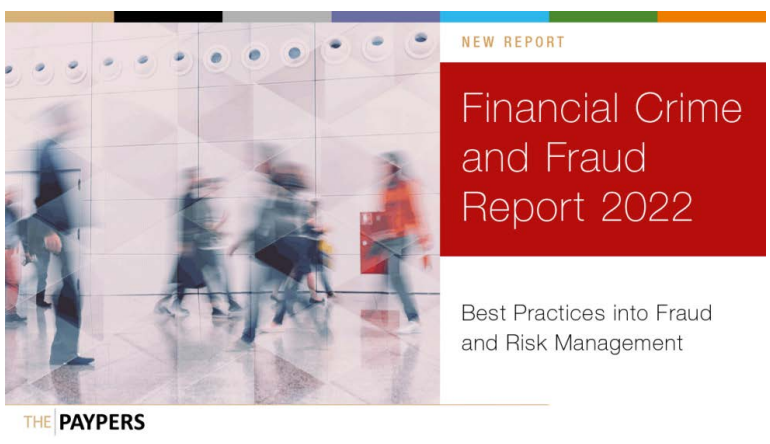
The degree to which the principles of portability will be fulfilled by the EU Digital Identity Wallet also remains to be seen. The principle requires information and services about identity to be transportable and requires that identities must not be held by a singular third-party entity. The proposed regulation allows member states to develop and implement their own government-operated EU Digital Identity Wallet, or to select an external organisation to develop and implement the EU Digital Identity Wallet on behalf of the government, or a combination of both. This freedom in implementation could make it impossible to transfer information and services to other wallets, as alternatives might not exist in a single member state. Within a member state, the digital identity can still be locked down to one single solution.

The principle of control cannot be entirely fulfilled by the EU Digital Identity Wallet. The principle requires the user to have the ultimate authority over his/her identity, including the ability to hide his/her identity. In several public or compliance-heavy use cases, this is impossible. For example, in circumstances such as submitting a tax declaration, pressing charges, registering as a donor or opening a bank account, the verifier requires a certain level of assurance and the user will not have control over which attributes he/she provides. Many European countries have a central register of persons that is used for many such cases. There are also legal provisions in place for these use cases that do not allow the user to have the ultimate authority over his/her identity.

The principle of persistence will not be entirely fulfilled either. The principle requires a user to be able to dispose of an identity if he/she wishes claims to be modified or removed as appropriate over time. This requires a firm separation between an identity and its claims. In many use cases in a public setting, such as submitting a tax declaration, this is impossible. The tax authority needs to know who did the specific tax declaration. Disposing of an identity should be within legal constraints. A user cannot undo a criminal record because he/she wants to be forgotten. Such use cases do require a connection between an identity and its claims.

Balancing 'user in control' with 'public administration realities'

By design, the EU Digital Identity Wallet cannot fulfil all SSI principles. In a public setting, users have an obligation to provide identity attributes to relying parties, and legal constraints make a firm separation between an identity and its claims impossible. Because of that, the EU Digital Identity Wallet requires the ambition to put the user in control to be balanced with public administration realities. It remains to be seen how exactly this will be balanced as it depends on choices that still need to be made in the eIDAS revision. However, the fact that the revision seems to be an attempt to move towards putting the user in control can be regarded as a positive change compared to the current situation.



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ORIGINAL BLOG

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3 reasons why banks need to understand the impact of the EU Digital Identity Wallet

20 April 2022

Jorrit Penninga

Vincent Jansen

3 reasons why banks need to understand the impact of the EU Digital Identity Wallet

The 2022 edition of Euroforum's annual conference on the future of payments was held in Amsterdam on 31 March. INNOPAY's Vincent Jansen was one of the keynote speakers at the event. In his presentation called The 'battle of the wallets' reignited, he outlined how the upcoming EU Digital Identity Wallet regulation will not only create some challenges for the financial sector, but can also open up new opportunities. Here are his three reasons why banks need to start understanding the development of the EU Digital Identity Wallet and preparing for its impact.

What is eIDAS?

eIDAS is the EU regulation on electronic identification and trust services which entered into force in 2014. It was created as a means to facilitate secure and seamless electronic transactions within the European Union. eIDAS is seen as a key enabler for the Digital Single Market in Europe to facilitate the flow of commerce. With the revision of eIDAS (eIDAS2), the EU aims to mitigate the risk of further market dominance of large online platforms, user lock-in and loss of control over data. The most significant change in the proposed eIDAS revision is the introduction of an Digital Identity Wallet, which must be made available for all EU citizens.

Reason 1: the eu digital identity wallet puts significant restrictions on digital identity and/or data custodian services

So far, eIDAS has not delivered the intended results, basically because there have not been enough digital identities, relying parties and (cross-border) usage. The eIDAS2 proposal introduces a EU Digital Identity Wallet, which makes the eIDAS regulation relevant for many different sectors – including the payments sector.

In eIDAS2, Member States will be mandated to provide citizens with a common EU Digital Identity Wallet. The wallet will be based on a harmonised/common user interface, built on consumer consent and maximum privacy, and open for various types of credentials/attributes, but it will allow freedom in terms of its set-up and implementation. Deadline for implementation could be somewhere in 2024. The timelines are very ambitious, but progress is advancing well. The introduction means that, in the future, digital identity in Europe will be organised by the EU Digital Identity Wallet.

Each member state has three options for offering the EU Digital Identity Wallet: 1) Government-operated, 2) Outsourced, and 3) Recognition of market solutions. This approach will likely result in a fragmented landscape, due to different national perspectives. And will significantly impact the EU landscape for digital identity and/ or data custodian services. Market players can still play a role in the digital identity landscape in countries with a recognition approach, but the terms and conditions of the recognition are determined by the member states. A toolbox, architecture and reference framework will provide a certain level of harmonisation and interoperability of wallets across member states, but will leave room for member state-specific choices and options.

Reason 2: the eu digital identity wallet comes with mandated acceptance

During last year's edition of Euroforum's conference on the future of payments, INNOPAY introduced the concept of a bank as an identity & data provider: the Data Custodian. This approach enables banks to move towards a position as a trusted Data Custodian in the data economy, facilitating identity and data-sharing transactions, on top of their current role as trusted Money Custodian. The Data Custodian requires the key building blocks of digital identity, consent management and data exchange services.

With the introduction of eIDAS2, the EU Digital Identity Wallet will provide the digital identity building block needed by the Data Custodian. Moreover, the proposed eIDAS2 regulation states that, to stimulate adoption, sectors and platforms in the private domain (including the financial sector) will be mandated to accept the wallet for authentication. It is still unclear what 'acceptance' means in the context of banking & financial services. What will be the impact on Data Custodian-related bank propositions such as onboarding as a service or digital signing? Will the Data Custodian concept still be relevant when digital identity is taken care of by the EU Digital Identity Wallet?

Reason 3: the eu digital identity wallet is not limited to identity

In view of the rise of digital assets and central bank digital currencies (CBDCs), a next step in the transition of banks could be the step towards an 'Asset Custodian'. There could be a role for the bank app or crypto wallet to become a recognised EU Digital Identity Wallet. In this sense, the EU Digital Identity Wallet does not have to remain limited to identity, but could also include services related to data sharing, assets and CBDCs.

These three reasons make it clear that organisations in the financial sector need to start understanding the development of the EU Digital Identity Wallet and preparing for its impact, and not just because acceptance of the wallet will be mandated for banks. Even though the wallet puts significant restrictions on digital identity and/or data custodian services, it can also open up new opportunities for the financial sector – especially since the EU Digital Identity Wallet is not limited to identity. INNOPAY can help you to prepare for the future impact of the EU Digital Identity Wallet. Reach out if you are interested in finding out how.

Authors

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ORIGINAL BLOG

GET IN TOUCH

BLOG

Why corporate treasurers need Open APIs

24 May 2022

Mounaim Cortet

Sabine Zucker

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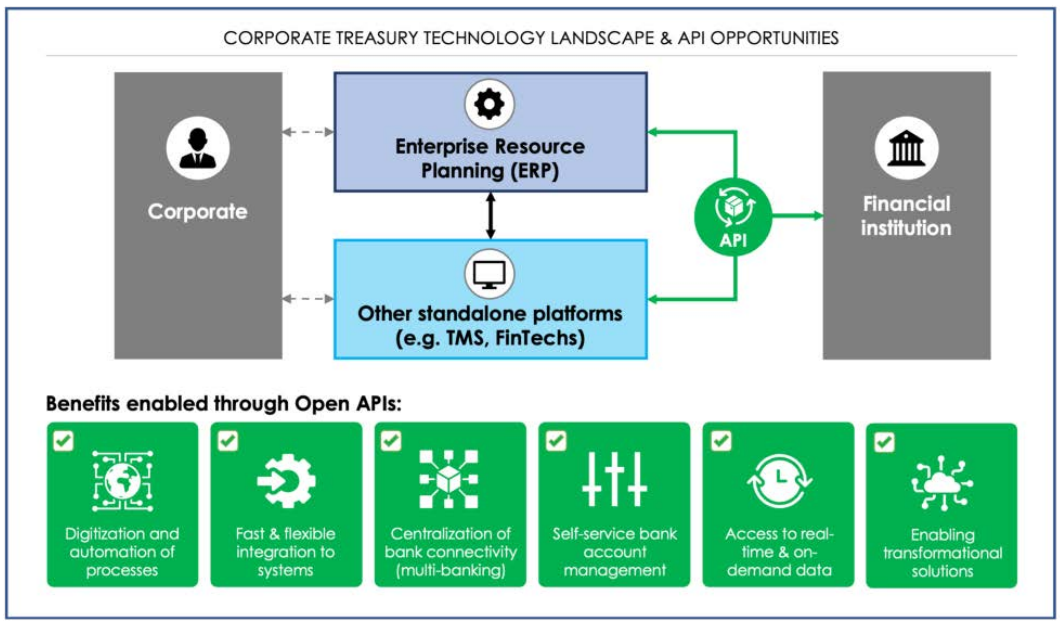
Philipp Höfer

Björn Zaksek

INNOPAY

The COVID-19 pandemic has accelerated the ongoing digital transformation process globally. This has also caused corporate treasurers to explore opportunities to digitise their business operations and look for possibilities to accelerate and optimise their decision-making. However, traditional digital channels are not equipped for real-time, on-demand access to data and other digital capabilities. In this blog, we explain why Open API technology is well suited to meet ever-evolving treasury needs in the digital era.



Open APIs provide opportunities across all treasury service domains and enable corporate clients to consume banking services directly via their ERP or other relevant standalone platforms. APIs simplify and improve how treasurers work together with their transaction bank(s) thanks to:

- Digitisation and automation of processes
- Fast and flexible integration to systems
- Centralisation and embeddedness of bank connectivity (multi-banking)
- Self-service bank account management
- Real-time and on-demand information to drive data-based decision-making
- Enabling transformational solutions

APIs help to reinvent how corporate clients manage payables and receivables, access account reporting and execute FX trades, for instance. Other use cases include electronic bank account management (eBAM), liquidity optimisation and financing (lending, trade finance, supply chain finance).

While initial Open Banking API solutions focused primarily on the retail segment (driven by PSD2), the corporate segment is rapidly catching up. This is evidenced by corporates increasingly buying into Open API-enabled solutions to improve their treasury operations.

However, although APIs are likely to play a growing role in shaping 'real-time, on-demand treasury', an API in itself has no intrinsic value. Corporates, transactions banks and technology providers therefore need to work together to address key challenges, including:

1. Establishing a fit-for-purpose operating model to support API provision and consumption
2. Collaboratively building value-adding propositions based on customer pains and gains
3. Creating a 'plug-and-play' experience based on clear API documentation, standardisation and integration partnerships

We are convinced that collaboration is essential to unlock the full value of APIs, increase adoption at scale and meet ever-evolving treasury needs in the digital era.

Download the whitepaper written by rbi & innopay

Raiffeisen Bank International has worked together with INNOPAY to coproduce a white paper titled 'The New Frontier in Transaction Banking, unlocking the value of Open API technology'.

Download
Whitepaper: A New Frontier in Transaction Banking

Authors

Mounaim Cortet, Sabine Zucker, Susanne Prager, Philipp Höfer, Björn Zaksek

ORIGINAL BLOG

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BLOG

Outlining European legislative proposals to modernise the AML/CFT regime

25 April 2022

Josje Fiolet

Over the past three decades, the European Union has steadily improved its framework to fight money laundering and terrorist financing (AML/CFT). So far, the EU's action has focused on the prevention, investigation and prosecution of these harmful practices. This article elaborates on the potential effects of the EU's legislative proposals on industry players, and suggests that the EBA's draft guidelines could serve as a first stepping stone to future legally binding measures.

In July 2021, the European Commission (EC) presented a package of legislative proposals constituting an ambitious set of measures to modernise the AML/CFT regime over the coming years. They are divided into six pillars (see Figure 1), of which three require legislative actions and the other three are already being implemented.

There are two key focal points for these legislative actions. The first is a proposal to turn parts of the existing AML Directive (AMLD) into a regulation which will therefore become directly applicable in the member states. The second is to implement EU-level supervision with an EU-wide AML authority, which will develop regulatory technical standards to improve harmonisation. The poster on the left summarises the key components of the legislative proposals and the surrounding context.

Figure 1: The six pillars of the EC's legislative proposals for modernising AML/CFT.

Key changes of the legislative proposals

Single EU rulebook introduces AML Regulation for sake of harmonisation

Pillar 2, establishing a single EU rulebook on AML/CFT, is reflected in legislative proposals 1, 2 and 3 (see Figure 2), also referred to as 'the single EU rulebook'. The EU single rulebook on AML/CFT is changed by introducing an AML Regulation alongside the existing directive. This means there will now be a harmonised set of rules applying to all private parties in all EU member states, whereas the directive contains provisions (e.g., on national supervisors and FIUs) that subsequently need to be transposed into national law.

This change fits with the overall trend of harmonising rules to establish an EU digital single market and to minimise fragmentation that hinders ML/TF being tackled effectively. It is no surprise, therefore, that its content is aligned with the eIDAS Regulation and with the directive on combating money laundering through criminal law (implemented in June 2021). Additionally, with legislative proposal 3 (see Figure 2) the Regulation on Transfer of Funds has been revised to include crypto assets and crypto-asset service providers (CASPs). This is in line with the activities covered in the proposed Regulation on Markets in Crypto Assets (MiCa).

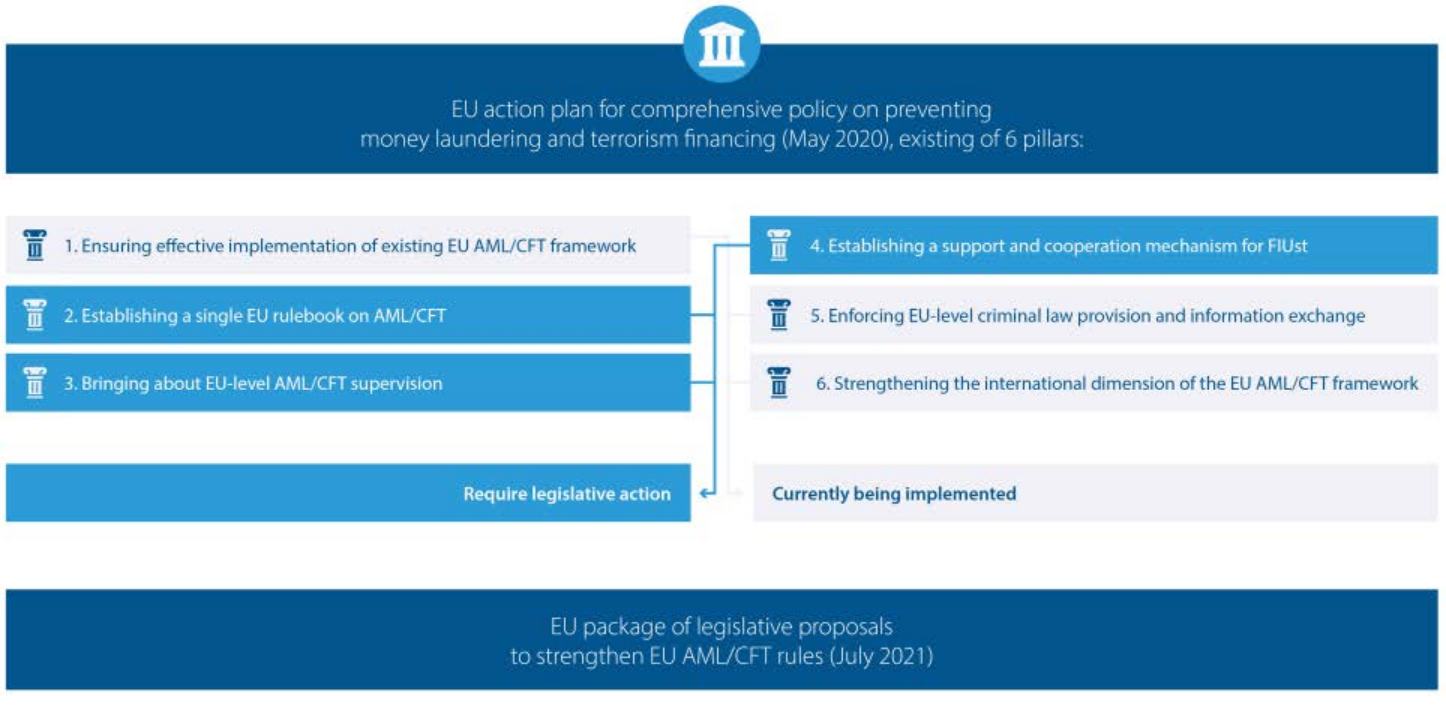

Figure 2: EU package of legislative proposals.

Figure 2: EU package of legislative proposals.

Support and cooperation mechanism & supervision

Bringing about EU-level AML/CFT supervision and establishing a support and cooperation mechanism (legislative proposal 4, see figure 2) for FIUs is embodied in the new EU AML/CFT authority called AMLA. This new authority will be fully effective in 2026 and will:

- harmonise and ease implementation of the regulation by developing regulatory technical standards (RTS) that provide, among other things, for standard datasets required for identification, simplified CDD measures and criteria for suspicious transactions and PEPs
- supervise selected high-risk entities directly, replacing national supervisors
- enhance cooperation of FIUs.

The full rulebook, including the technical standards developed by AMLA, is expected to be in place and apply by the end of 2025.

Eba guidelines on remote customer onboarding

In the meantime, the EBA Guidelines on Remote Customer Onboarding (2022) seem to serve as a first steppingstone to

the future legally binding Regulatory Technical Standards on CDD measures. The draft EBA guidelines were published in December 2021 and were open for consultation until 10 March 2021. When exactly the guidelines will enter into force depends on the feedback, iteration and translation process, but a rough estimate is late 2022/early 2023. Although the guidelines will not be legally binding, every competent authority and financial institution must make every effort to comply.

The guidelines set common EU standards on:

- the steps that financial operators should take to comply with AMLD obligations when performing the initial customer due diligence to onboard new customers using remote channels
- policies, controls and procedures that financial sector operators should put in place in relation to CDD when the CDD measures are performed remotely
- the steps financial sector operators should take when relying on third parties.

More specific details can be seen in Figure 3.

Impact on the industry: save time and money and be more effective

Financial institutions currently face differences in local implementations, as the AMLD has no direct applicability in the member states. This leads to confusion on the requirements, resulting in costly cross-border compliance processes, and making oversight complex for competent authorities.

Although it might require changes to current processes and solutions, this harmonised package of legislative proposals and guidelines will give industry players more clarity, ultimately making life easier and (cross-border) compliance less costly for them. Equally importantly, it will make the fight against money laundering and terrorist financing more effective.

This article was originally published in the Financial Crime and Fraud Report 2022 of The Paypers

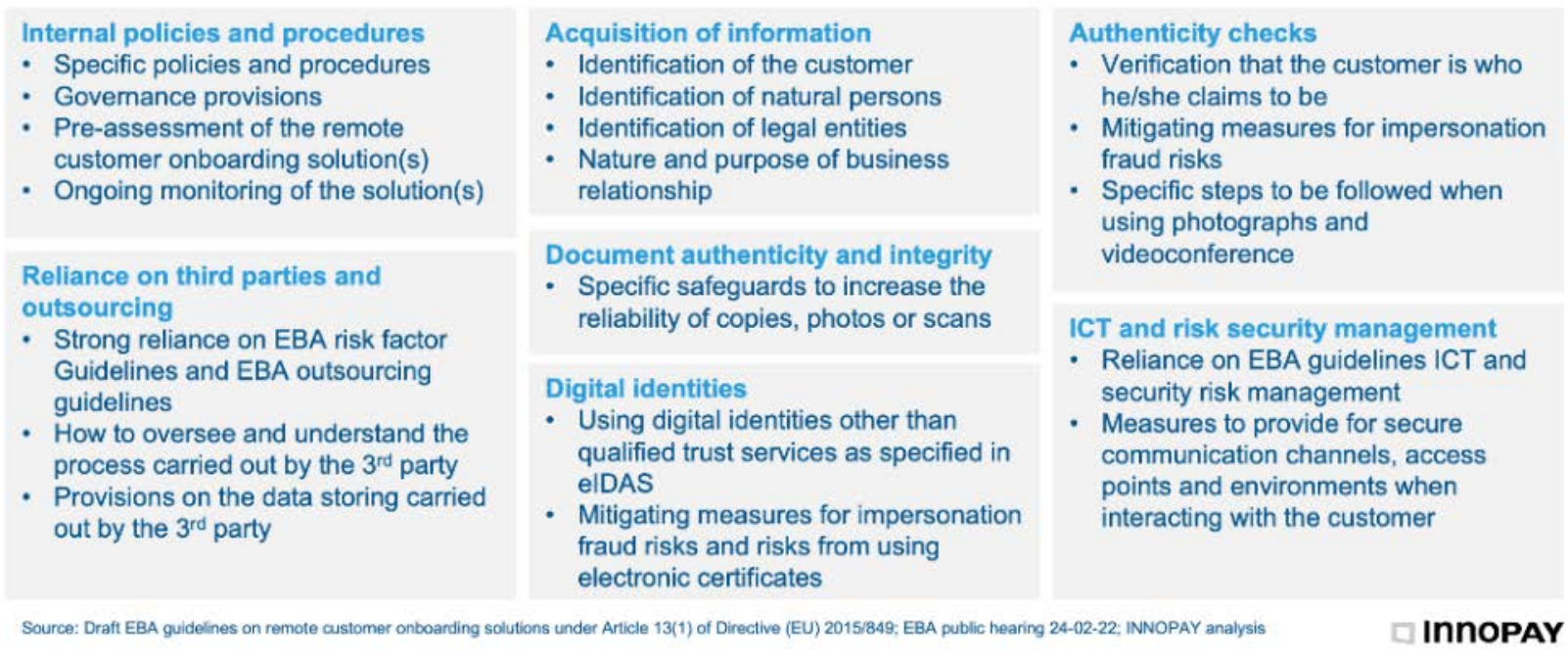

Figure 3: Details of the standards in the draft EBA guidelines.

Author
Josje Fiolet

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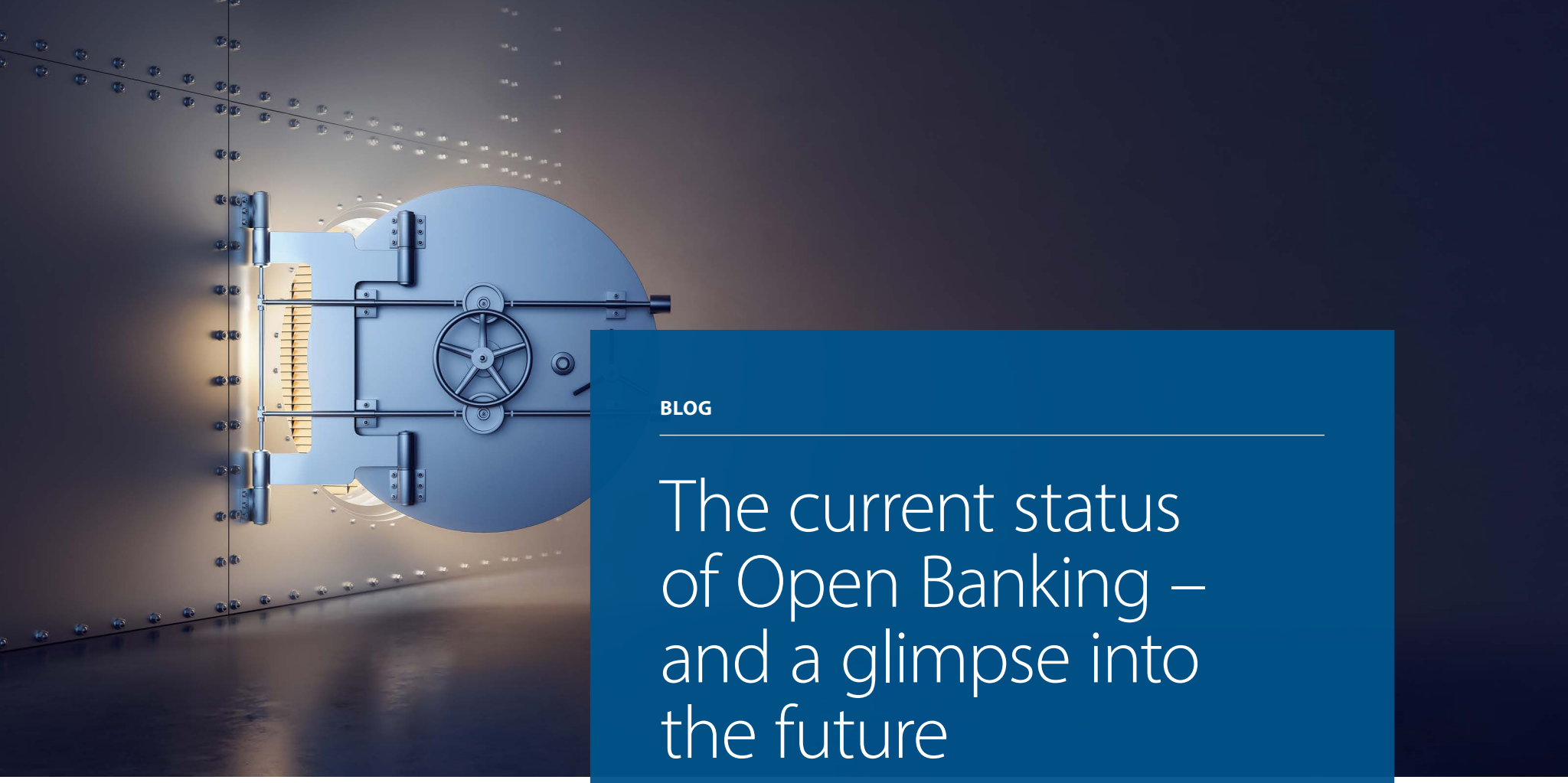


BLOG

The current status of Open Banking – and a glimpse into the future

7 June 2022

Mounaim Cortet

In this guest blog that Mounaim Cortet has written for Nordea - a leading Nordic universal bank -, Mounaim shares the key findings from INNOPAY's most recent Open Banking Monitor, with a special focus on Nordea as well as the future of Open Finance.

INNOPAY's Open Banking Monitor shows the efforts banks are making in expanding their API product offering (the 'Functional scope' axis) and in improving the experience for API consumers (the 'Developer experience' axis). The latest edition of the Open Banking Monitor shows that existing players are stepping up their game and providing interesting Open Banking product propositions. Meanwhile, new banks are entering the arena.

*Grey logo indicates limited portal accessibility, thereby complicating full assessment.
**Banks with an Open Banking offering limited to regulatory requirements (e.g. PSD2 required services) are not included in this assessment.

INNOPAY *Open Banking Monitor (OBM) – Developer Portal benchmark (update Q4 2021)*

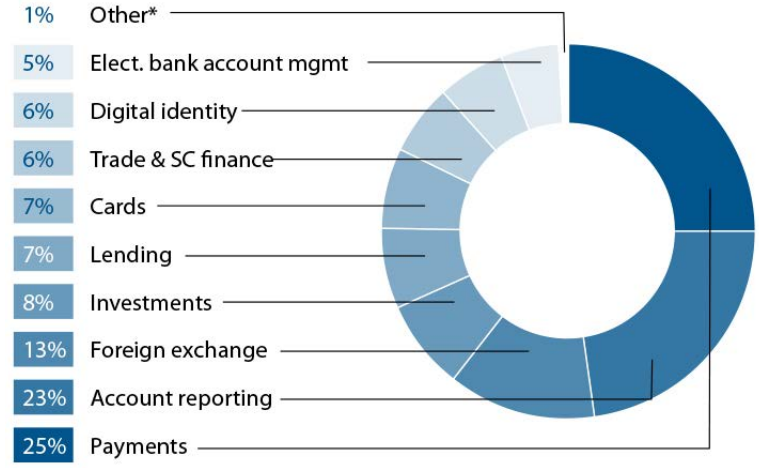
INNOPAY

Growing api product offering

Notably, there is a trend towards banks offering more APIs, indicated by a 17% increase in APIs offered per bank. The APIs now cover a broader variety of common banking functionalities, but account information (for various account types), payment initiation (for various payment instruments) and payment management (for various user-initiated actions around the payment) still top the list. These are followed by customer information APIs (enabling the controlled sharing of selected data attributes), which have increased considerably. Similarly, a variety of corporate APIs have hit the market, further driving efficiencies and improved customer experience in transaction banking operations (e.g. trade finance, electronic bank account management (eBAM) and real-time cash pooling capabilities).

"Notably, there is a 17% increase in APIs offered per bank."

While Open Banking APIs still focus on core functionality, adoption is accelerating and spreading to other products and services, as shown in the image visualising our analysis of APIs in the developer portals of 15 large multinational banks.



Source: INNOPAY analysis, Developer portals various banks (March 2022)
Note: *Other: Domain overview is not exhaustive. APIs are also being developed in other areas such as sustainability, cashpool management and virual account managment. The share of live APIs in those domains is however very low at the moment the analysis was concluded

APIs per domain based on INNOPAY's analysis of the developer portals of 15 large multinational banks.

Improved developer experience

The average developer experience score has increased by 11%. This raises the bar, meaning that competition is intensifying and banks need to step up their game to avoid falling behind their peers. The improvement in developer experience is mainly driven by:

- Community Development: 22% increase in banks actively investing in community development efforts through news articles, blogs, events or partnership programmes. This indicates that banks are picking up on the importance of establishing an Open Banking community to drive innovation.

- Developer Usability: 21% increase thanks to additional – or optimised – development tools such as dynamic sandbox functionalities, detailed 'getting started' guides or more comprehensive application and credential management features, contributing to a better developer experience by making life easier for API consumers.

- API Documentation: 3% increase in features such as information on API business context, API versioning & changelogs and conciseness of the API specifications, all of which improve the overall readability of the API documentation and related content.

"Open Banking is not all about exposing and consuming data and functionalities, even more so it is about exploring new possibilities enabled through open business models."

Three open banking trends to enhance the developer experience

We currently observe three trends that play an important role in enhancing the experience of API consumers:

1. Consistent developer experience across countries and markets

   API solutions solve a wide array of challenges for a variety of API consumers across multiple verticals and markets. A key differentiator for banks is being able to retain a consistent and intuitive experience, to ensure interoperability of their solutions, through a unified approach.

2. Collaborative solutions through "Partner APIs" or "Mash-ups"

   Open Banking is not all about exposing and consuming data and functionalities, even more so it is about exploring new possibilities enabled through open business models. Banks with a collaborative mindset can establish a key position within new digital ecosystems by co-creating new mutually beneficial products in complete user journeys.

3. Flexible API solutions catering for diverging needs

   There is no one-size fits all solution and the needs of specific API consumers might differ in terms of security and authentication requirements or API formatting preferences. With this in mind, API solutions that cater for flexibility increase overall robustness and stimulate adoption at scale.

Open banking and nordea – the frontrunner in developer experience

Nordea was one of the first banks in Europe to take a proactive approach to Open Banking back in 2017 and is therefore a familiar face in the Open Banking Monitor. When it comes to the developer experience, Nordea has ranked among the top players ever since the start of our ranking and this year it took the leap to become the frontrunner in this area.

So what is it about Nordea that makes it so successful in this respect? Well, to start with, Nordea is the top-performing bank regarding developer usability. Developers are supported by a wide array of information, tutorials and 'how-to' guides. App management features include organisation and certificate management capabilities. Sandbox functionalities include dynamic data and test-user management.

"When it comes to the developer experience, Nordea has ranked among the top players ever since the start of our ranking and this year it took the leap to become the frontrunner in this area."

Secondly, community development and engagement activities are well represented at Nordea, with active participation in the Open Banking market, for example through internal and external events, participation in different forums, blogs, customer cases, newsletters and social media interactions. In addition, community-developed tools and projects are frequently highlighted and promoted, stimulating others to participate. Nordea is deeply involved in community management activities, for example by inviting API consumers to help develop new APIs and by collecting feedback from third parties to drive API management improvements. Right from the start of its Open Banking journey, Nordea has continuously used the knowledge gained from the PSD2 API scope to benefit the creation of its commercial APIs.

Thirdly, when it comes to API documentation, Nordea makes a clear distinction between business and technical documentation to take different types of visitors on their

developer portal into account. Nordea's developer portal has recently undergone a transformation into 'Nordea API Market'. It still caters for all the required technical elements considered in the OBM Capability model, but now also fulfils the needs of business users by presenting API use cases and offerings, a library of recent newsletters and a display of awards and rankings.

Three functional aspects of open banking to consider

When it comes to the functional scope of the Open Banking Monitor, three aspects are considered when comparing API functionalities:

1. Comprehensiveness of the API product
2. The value enabled through the API
3. The complexity of the API.

Nordea's FX Trading API product is a good example of where these aspects come together. It covers a multitude of APIs across the complete trade chain (i.e. from access to real-time FX rates, to executing FX spots and swaps and retrieving post-trade reports).

It's time to act – open finance is just around the corner

For everyone in the Open Banking space, regardless of whether they are frontrunners like Nordea or taking a more reactive approach, there is now a new challenge on the horizon: 'Open Finance'. In this emerging paradigm in the financial services industry, value creation will come from sharing, providing and leveraging access to even more banking data and products through APIs. Open Finance is designed to support the development of more compelling, 'embedded' value propositions and experiences for customers and partners in digital ecosystems.

"Open Finance is a game changer that challenges financial institutions to rethink their business models and get involved in order to unlock business value and secure their relevance."

Besides the compliance challenges of Open Finance, financial services providers and other actors need to cope with an ever-changing competitive landscape. Emerging players are disrupting traditional value propositions and business models while simultaneously also presenting new opportunities for collaboration. We see a broad shift towards value creation happening in ecosystems, facilitated by seamless digital customer journeys and data flows. Organisations that execute ambitious Open Finance strategies are likely to come out on top in this data-driven economy.

Open Finance is a game changer that challenges financial institutions to rethink their business models and get involved to unlock business value and secure their relevance. It is safe to say that Open Finance is the key building block for financial service providers who wish to compete and collaborate in digital ecosystems. It is time for them to act.

Download the open banking monitor report in full

Download
Open Banking Monitor Report 2022.pdf

Author

Mounaim Cortet

ORIGINAL BLOG

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INNOPAY Open Banking Monitor: existing players step up their game and new players enter the arena

7 June 2022

The latest edition of the INNOPAY Open Banking Monitor shows that existing players in the financial industry are stepping up their game and providing interesting Open Banking product propositions. Meanwhile, new banks are entering the arena.

In response to the rising demand for open, embedded finance, financial institutions are increasingly offering white-label and (co-)branded financial services that other companies can integrate into their value propositions for their customers. This is also known as Banking as a Service (BaaS).

This year's edition of the Open Banking Monitor provides strategic insights into how financial institutions have progressed on their BaaS journey and product offering.

The key findings at a glance:

1. Competition is intensifying

Existing players are stepping up their game by providing a comprehensive developer experience and API propositions. Meanwhile, new banks are entering the arena.

2. Growing API product offering

There is a trend towards banks offering more APIs across various products and services, indicated by a 17% increase in APIs offered per bank.

3. Improved developer experience

The average developer experience score has risen by 11%, indicating that banks offer more features to improve the developer experience for integrating with their APIs.
Banks that want to stay ahead of the pack and create sustainable value with Open Banking will need to get 7 key building blocks right.

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ORIGINAL BLOG

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True digital innovation in the education sector can only be achieved with data sovereignty and interoperability

4 July 2022

Mariane ter Veen

Edu-V

Simple, secure and trust-based data sharing in education

INNOPAY's Mariane ter Veen has just got back from the MyData Conference 2022 in Helsinki. The MyData Conference is the leading international conference on human-centric personal data management. It is organised by MyData Global and brings together stakeholders from all over the world. This year's theme was all about technology in education. In this blog, Mariane looks back on an inspiring week.

It was my pleasure to attend this year's MyData Conference last week at the beautiful Wanha Satama venue in Helsinki. I'd been invited to participate in a panel discussion about creating a fairer data economy and I also represented Edu-V, a data-sharing scheme for the Dutch education sector. During the conference, I explained why data sovereignty and interoperability must be two essential considerations for the education sector during its digital transformation journey. Besides being a great platform to share this message, the MyData Conference 2022 was a valuable opportunity for me to exchange thoughts and ideas with other experts on some of the challenges facing the education sector, particularly in terms of children's digital rights and consent.

Pushing for a better approach to children's data

The conference paid a lot of attention to children's digital rights. MyData4Children – a working group within MyData Global – and UNICEF have joined forces to boost the digital rights of children and to make this topic a top priority among policymakers and business leaders for the coming years. The key message is that children are less able than adults to understand the long-term implications of consenting to the collection of their data.

MyData4Children is therefore pushing for better government regulation on the one hand, while also calling for companies to take more responsibility for implementing children's rights by design rather than placing the burden on children to protect their own data. "When we talk about 'data' and 'education', people immediately think we mean children's data literacy. This is important, but our ambitions are more profound; we want fair data governance in which children's rights with regards to their data are guaranteed within the education setting," said Jasmina Byrne, Chief of Foresight and Policy at UNICEF.

Two sides of the coin: protection and usage

While UNICEF and MyData are focusing on children's digital rights from the point of view of protecting their data, that's only one side of the coin. After all, 'privacy' is not only about protecting your data from being collected, but also about having agency over how any data you generate is subsequently used so that you can share in the benefits. This is what we at INNOPAY refer to as 'data sovereignty'. During the panel discussion, we were all in clear agreement on the importance of data sovereignty for children and/or their parents.

The digital transformation undoubtedly offers exciting opportunities in terms of personalised learning paths for children. But if the education sector wants to be truly innovative, it will be necessary to ensure that children (or their parents/guardians) retain control over their data, i.e. data sovereignty, and that the systems are interoperable. Interoperability will have the added benefit of making the use of digital educational materials easier and more seamless. For example, teachers will save time on helping pupils to log in, or on double data entry (e.g. of grades) into multiple stand-alone systems, will gain better visibility into individual pupils' or students' progress towards their learning goals, and will be able to utilise digital applications in a safer and more privacy-friendly way. These are all important pillars of flexible and future-focused education.

Achieving data sovereignty and interoperability

During the MyData Conference 2022, my underlying message was that it is definitely possible for the education sector to achieve the necessary data sovereignty and interoperability. The key prerequisite is the involvement of all ecosystem participants in order to formalise mutual, uniform agreements about the functional, operational, legal and technical aspects of data sharing.

This approach is being supported by the European Union, which – in order to help organisations to share data – has introduced the concept of 'data spaces' to facilitate the development of such agreements. In fact, data spaces are already being created for various sectors and ecosystems. One example is the preparatory work currently being done for the 'skills data space'. This is aimed at creating a secure and trusted environment where skills-related data can be shared and accessed for various purposes – ranging from analytical and statistical purposes to policy development or re-use for innovative applications. This data space, like all the others, is based on uniform agreements covering the various aspects of data sharing.

Edu-v: towards an ecosystem for digital learning resources

Another promising example of a data space is the Edu-V programme in the Netherlands – and as the manager of this 'EdTech' programme, I was happy to explain more about it during the conference. In this project, Dutch schools and suppliers of digital learning resources have taken the initiative to jointly develop agreements about the legal, technical, functional and operational aspects of information exchange. This will support the creation of a data space for education: an ecosystem that will facilitate the simple, safe and trust-based access to – and use of – digital learning resources for primary, secondary, vocational and special educational needs schools. Since the programme has only just got underway, there are still many questions to answer. Thankfully, there is a lot of focus, willingness and determination to solve these issues from both the public-sector and private-sector parties in education. And the MyData Conference 2022 was a valuable opportunity for me to exchange thoughts and ideas on some of the challenges with other experts as we move forward into the facilitation process for Edu-V. Innovative and exciting times lie ahead for this EdTech data space!

Author
Mariane ter Veen

ORIGINAL BLOG

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BLOG

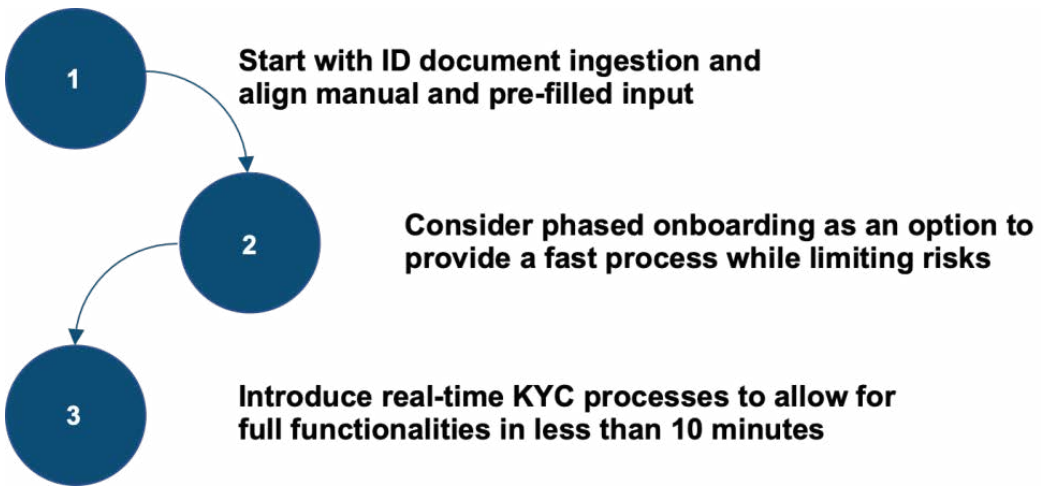
How to optimise your customer onboarding journey: align your modular building blocks

20 July 2022

Josje Fiolet

David Mintjes

Our Digital Customer Onboarding Benchmark reveales a large disparity in performance. Newer, smaller banks are onboarding much better than their larger, more established competitors. Why? By zooming in on four banks within the benchmark sample, we see that the higher performing banks are able to better position and align their different modular building blocks. Aligning these blocks results in a "low effort / high response" process that is customer-centric.



These improvements are best understood by breaking up the total customer journey into building blocks which represent different phases of the onboarding process. In one of our earlier articles, we introduced the onboarding building blocks and showed that these should be built modularly. They can be implemented or skipped depending on the country, the product or customer specific requirements.

Here we are focusing on the building blocks used by four banks from the benchmark sample. Analysing these building blocks helps in understanding how some banks are outperforming others when it comes to customer experience. Figure 1 shows the building blocks of the four banks, including their lead time. In total, there are six modular building blocks (each shown in a different colour). The blocks are implemented differently across the four banks. Some banks offer similar building blocks but use different techniques. The lead time per technique varies, resulting in smaller or larger blocks.

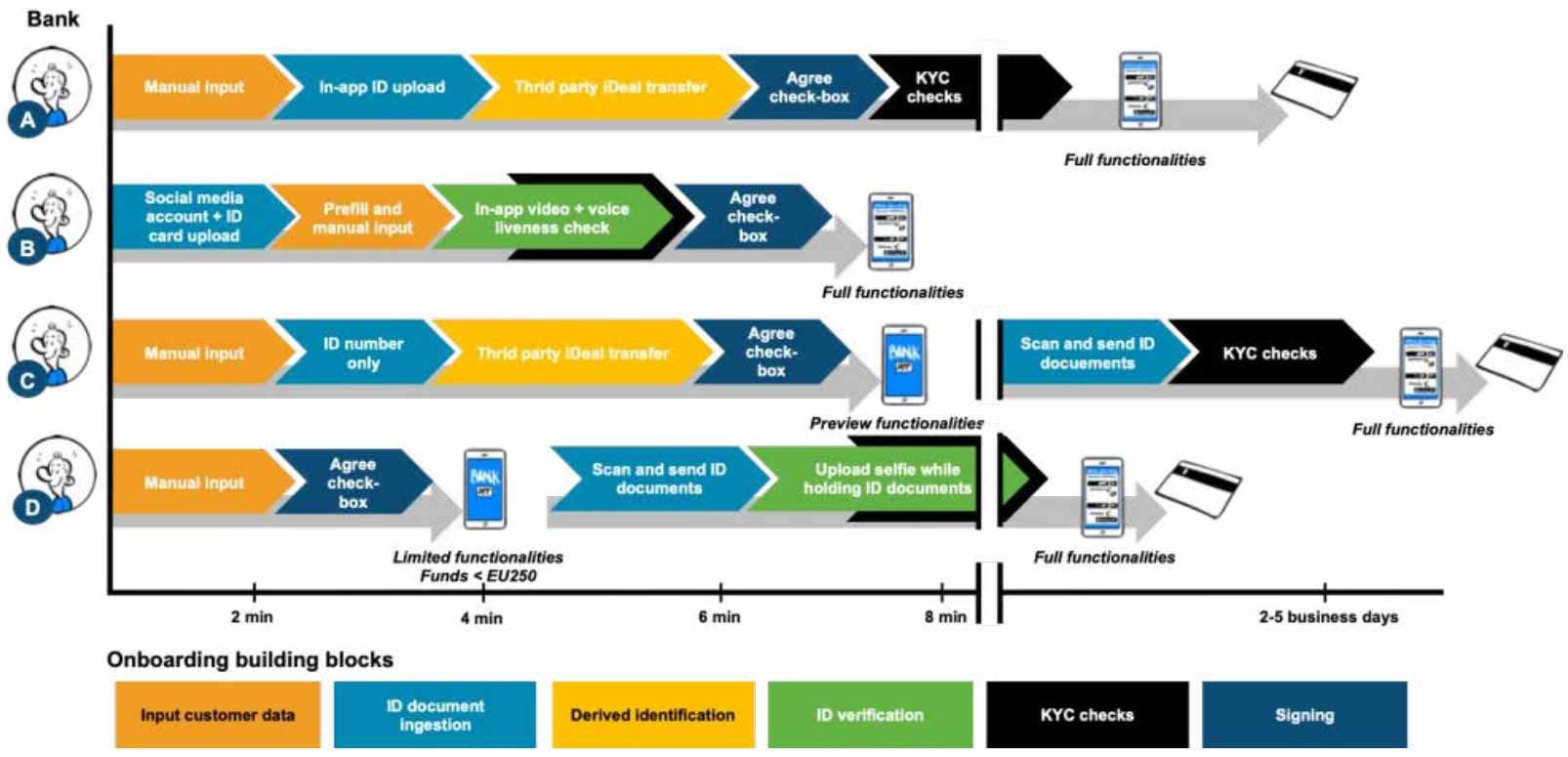


Figure 1: Customer journeys during the onboarding process of four Dutch or EU retail banks. Source: INNOPAY analysis

Bearing this in mind, let's now consider how the three main improvements can be realised.

1. Start with ID document ingestion and align manual and pre-filled input

Most banks start with a manual input of customer data (e.g. Bank A). Usability tests show that people tend to be more committed to finishing the process once they have manually entered data. However, this manual input is time-consuming and can include errors. In the benchmark sample there are some banks that perform better by aligning the 'document ingestion' and 'manual input' building blocks. Aligning these blocks means that customer data is extracted from the document, which decreases the amount of manual input required, and hence decreases the lead time.

Bank B performs well because it starts with the option to log in with a social media account. This enables the customer to skip the first manual data input. After the option to log in with a social media account, the document ingestion at the start of the process allows for reading and pre-filling additional data such as gender, date of birth, nationality and

social security number (SSN). This significantly lowers the lead time, smoothens the process, and increases the accuracy of the data.

As a side note, many banks offer in-app ID uploading, but most of the techniques offered by solution providers are not yet sophisticated enough to provide accurate data. Often the data needs to be corrected manually by either the customer or the bank's employees. In the end, this could result in the customer being rejected.

2. Consider phased onboarding as an option to provide a fast process while limiting risks

Customers are likely to be more satisfied when they are rewarded for their onboarding effort by gaining access to the service as soon as possible. If the onboarding process takes too long, this immediately leads to a loss in conversion. To achieve a fast onboarding process and reward the customer early in the process, we see banks in our sample offering "phased onboarding".

Bank C and Bank D are good examples. Bank C engages customers by immediately revealing all the online functionalities which will be available once the onboarding process is completed. This significantly increases the response from the bank's side. Alternatively, Bank D makes available almost all the functionalities as soon as the customer has provided limited input. Once customers reach a certain account balance, they are required to undertake a second phase onboarding during which the bank asks them to upload an ID document and a selfie holding this document.

Phased onboarding helps to increase the conversion rate because the customer can use some services either directly after the first phase process or even immediately during the process. However, think carefully before introducing phased onboarding. It will be inconvenient for customers if they are subsequently rejected at a later stage in the process. And it may be annoying for some customers to be asked for additional information every time they want to use extra services. So your aim should be to ensure that the process is optimised throughout. When the entire onboarding process is as smooth as possible, you should be able to achieve optimal conversion.

3. Introduce real-time KYC processes to allow for full functionalities in less than 10 minutes

Banks perform all kinds of background checks before they accept and offer full services to their customers. Lower performing banks follow a static approach, whereas high-performing banks are able to align and overlap the KYC building block with other blocks, resulting in a lead time of less than 10 minutes (e.g. Bank B). Once the customer has been recognised, real-time KYC processes can get underway while the customer moves through the other building blocks. Choosing the right technology and cooperating with the right solution providers will definitely give you a competitive advantage here.

Taking the first steps to optimise your onboarding process

The INNOPAY Digital Customer Onboarding Benchmark shows large differences in the onboarding performance of retail banks. High-performing banks intelligently position and align their building blocks, resulting in a "low effort / high response" process. The market for online identification is evolving rapidly, with solution providers offering more and more sophisticated techniques which enable major process improvements. We advise you to keep track of these techniques and look at what your peers and competitors are offering. In the short-term, banks could consider taking two immediate steps. First, start by critically evaluating your current process because small UX improvements can significantly improve response rates (e.g. manage the prospect's expectations by explaining the steps and showing a progress bar, or explain the purposes for which the data will be used). Second, consider phased onboarding to improve both effort and response.

Are you interested in optimising your process by learning more about dynamic and modular onboarding processes? Get in touch! INNOPAY can help you develop the right onboarding strategy, identify suitable technology and solution providers, and jointly redesign your process.

Authors
Josje Fiolet, David Mintjes

ORIGINAL BLOG

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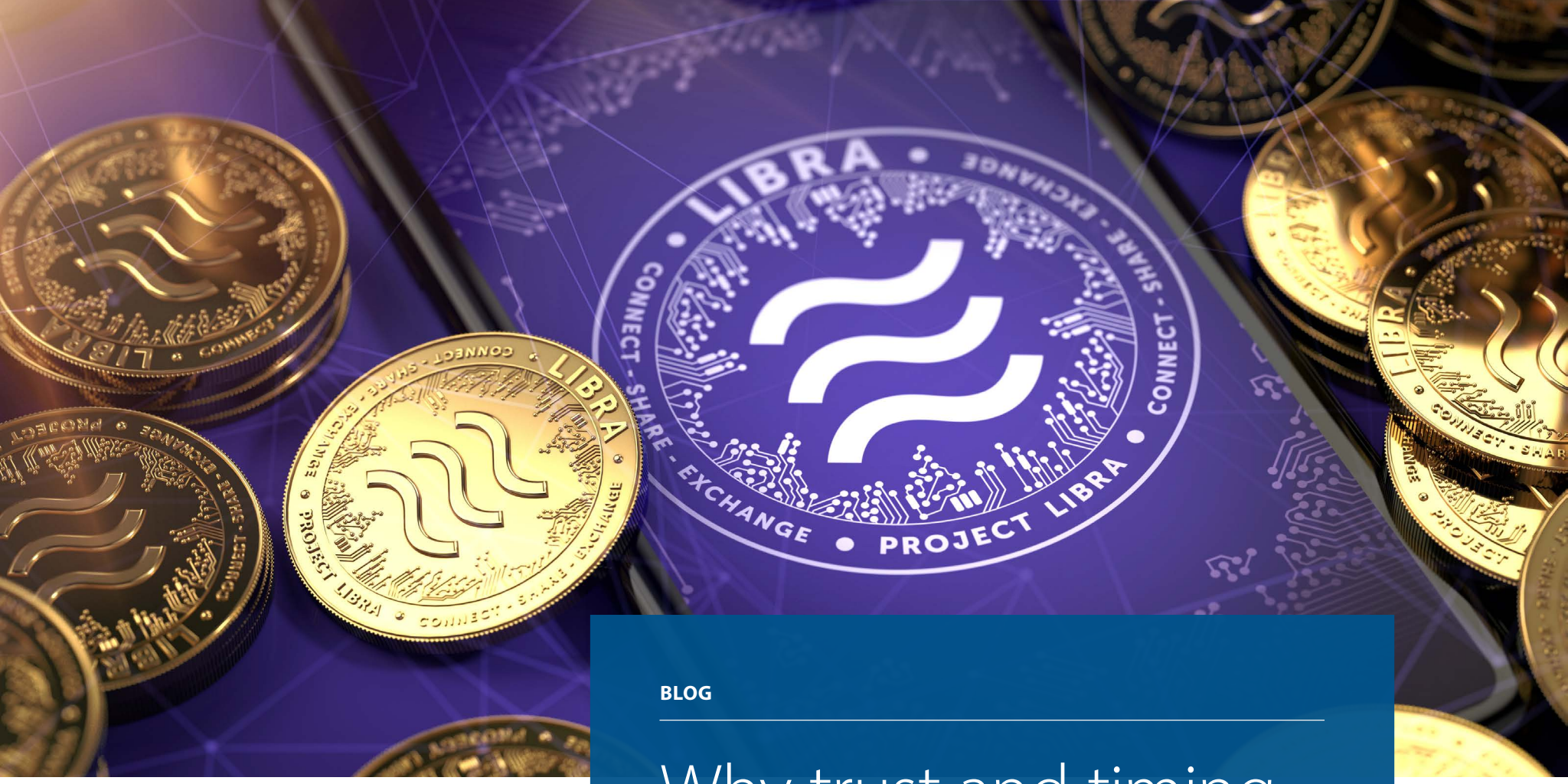

BLOG

Why trust and timing were key in Libra's downfall

29 August 2022

Shikko Nijland

Douwe Lycklama

The following article is an excerpt from the book Everything Transaction.

Facebook caused quite a stir back in 2019 when it announced plans to launch a global cryptocurrency called Libra. But gradually everything went quiet and it now seems that the project has been scrapped completely. What went wrong?

On 18 June 2019, Facebook along with 27 other founding members of the Libra Association announced their intention to introduce Libra: a simple global currency and financial infrastructure to empower billions of people. The announcement certainly caused a stir; within seven days Libra had made it onto the agenda of the G7, another week later several US congressmen sent a letter to Facebook urging it to stop Libra, and within a month Facebook had been called to a congressional hearing about Libra – and all based on the mere intention to introduce such a concept.

Political backlash

The hearing did little to mitigate the politicians' and regulators' distrust and Libra suffered a severe political backlash. In the autumn of 2019, a number of founding members including PayPal, Visa, Mastercard and Stripe pulled out. The whole idea of Libra was overshadowed by the strongly perceived Facebook signature. After all, Facebook was taking the initiative. The effort to build trust failed, mainly because the very basic governance was questioned by public authorities and politicians – and their support was essential, because Libra would be a regulated activity.

From then onwards the effort was focused on finding ways to make at least something work, strongly diluting the original plan. For instance, the name was changed from Libra to Diem at the end of 2020, and it was decided to limit the currency to USD instead of a basket of global currencies. The next scaling back happened when the Swiss head office was closed down and all operations were moved back to the USA. Diem entered into partnership with Silvergate, a bank that had all the necessary licences and experience for issuing stablecoins, but even that was not enough to secure the Federal Reserve Board's approval for the first pilot. The whole project was eventually dismantled in late 2021.

Failed manifestation of the transactional internet

Libra was a serious attempt to take the transactional internet to the next level. However, the initiative failed for the following reasons:

1. Politicians and policymakers lacked trust in the originator, making the quality of the actual idea irrelevant.
2. Governments and central banks around the world did not have a clear and unified view of how the heavy involvement of such a dominant market force (Facebook) would impact on the financial system in the longer term. This prevented them from moving decisively and giving clarity to market parties.

Timing is often crucial, and it seems that Libra was just ahead of its time. Since the announcement of Libra's intentions, governments and central banks worldwide have stepped up their own efforts to realise Central Bank Digital Currencies (CBDCs), which can be seen as trust-based payment infrastructure with centralised governance. The transactional internet with a scope that extends beyond payments alone is now likely to come from Web3 initiatives.

Want to know more?

If you are interested in knowing more about trust-based infrastructures, the transactional internet and Web3, order the book called 'Everything Transaction' which is available in Dutch and English.
Order here

A German edition of the book will be published shortly. Let us know if you'd like to receive a notification when the German version becomes available.
Notify me

Authors

Shikko Nijland, Douwe Lycklama

ORIGINAL BLOG

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BLOG

Crypto Monitor: 88% believe crypto will change the payments industry

24 November 2022

Douwe Lycklama

Mirela Ciobanu

The first edition of our INNOPAY/The Paypers Payments Industry Crypto Monitor contains some revealing findings. For example, 88% of the respondents expect crypto to have an impact on the current payment infrastructure, which is why some are already 'testing the water'. But strikingly, many respondents are not yet offering crypto products or services due to unclear regulations and AML/KYC challenges.

Although some organisations are now offering services based on crypto technology, they are still in the minority (24%). Our study shows that the majority of the respondents see various crypto-related opportunities and are keen to pursue them but are still very much at the exploratory stage: reading and researching the crypto opportunities (53%), talking with customers (43%), or preparing decision-making for usage or going to market (26%).

Drivers of crypto products

The biggest reason for already offering crypto products is the fact that crypto enables innovation of current services and offerings (62%). Other key reasons are the changing demand from customers (55%) and opportunities for new business models (55%), followed by the reduction of costs (44%) and the increased ease of processing – both in terms of settlement (43%) and possibilities for cross-border payments/ remittances (42%). The respondents regard the possibilities of no chargebacks (26%), the possibility to make the yield on balances (12%), and no negative interest rates (9%) as less important.

Barriers to crypto products

Unclear regulation (71%) is by far the most important reason why respondents are not currently offering crypto products. This is followed some way behind by AML/KYC challenges (53%). Both reasons imply that the payments industry's use of crypto is being held back by trust issues.

Fast, secure, and low cost

It comes as no great surprise that most respondents (88%) expect crypto to have an impact on the payment landscape, but it is interesting to examine the underlying reasons: predominantly the security, speed, and low cost of crypto in comparison with today's payment infrastructure. However, many respondents recognise the friction point of crypto in terms of AML/KYC and that the tipping point is still some way off. Others only see very specific benefits in terms of use cases (e.g. digital custody transactions). Most of the 12% who do not expect crypto to have an impact on the payment landscape seem to see little added value in a 'parallel' system, while a handful believes that CBDCs will outrun crypto.

How will crypto have an impact?

When it comes to the impact areas of crypto infrastructures, respondents expect cheaper and fast settlement (78%), faster innovation (71%), more financial inclusion (55%), and more liquidity options for merchants and corporates (47%). No one in the study indicates that they expect merchants to offer their services for free, and only a few respondents expect cash to disappear (25%) and IT costs to decrease (15%).

Regulation, competitive forces, and geopolitical developments

Regulation, competitive forces, and geopolitical developments are seen as the three most important drivers in the adoption of crypto. Improved operational risk regulation has proven to be highly needed in 2022, with the meltdown of some prominent exchanges and investment firms including FTX, Celsius and Tree Arrows Capital. The war in Ukraine is a very topical example of a geopolitical event in which the incumbent financial infrastructure has been weaponised by excluding Russia from global payment networks. This has contributed to increased awareness about the possibilities of crypto-based decentralised infrastructures. Meanwhile, central banks worldwide are studying and experimenting with Central Bank Digital Currencies, eyeing an alternative global currency and payment infrastructure.

The future of crypto in the payments industry

Members of the payments industry seem willing to offer crypto products and services and are preparing their organisations by gaining more knowledge about the technology and customer demands. While regulatory issues in particular appear to have been holding the industry back so far, new regulations in the foreseeable future (e.g., MiCA) are likely to change this. Besides hopefully giving the payments industry more trust in crypto, this will also help organisations to build resilient, compliance frameworks to counteract the regulatory curve (e.g., digital onboarding, screening, operational risk management).

Download the Payments Industry Crypto Monitor report in full below.

Download
Payments Industry Crypto Monitor

The survey was conducted between June and September 2022 among a cross-section of the worldwide payments industry (merchants, banks, fintechs, regulators, consultants, etc.). More than 100 respondents provided insights into their understanding of crypto and their views on its key aspects and relevance.

Authors

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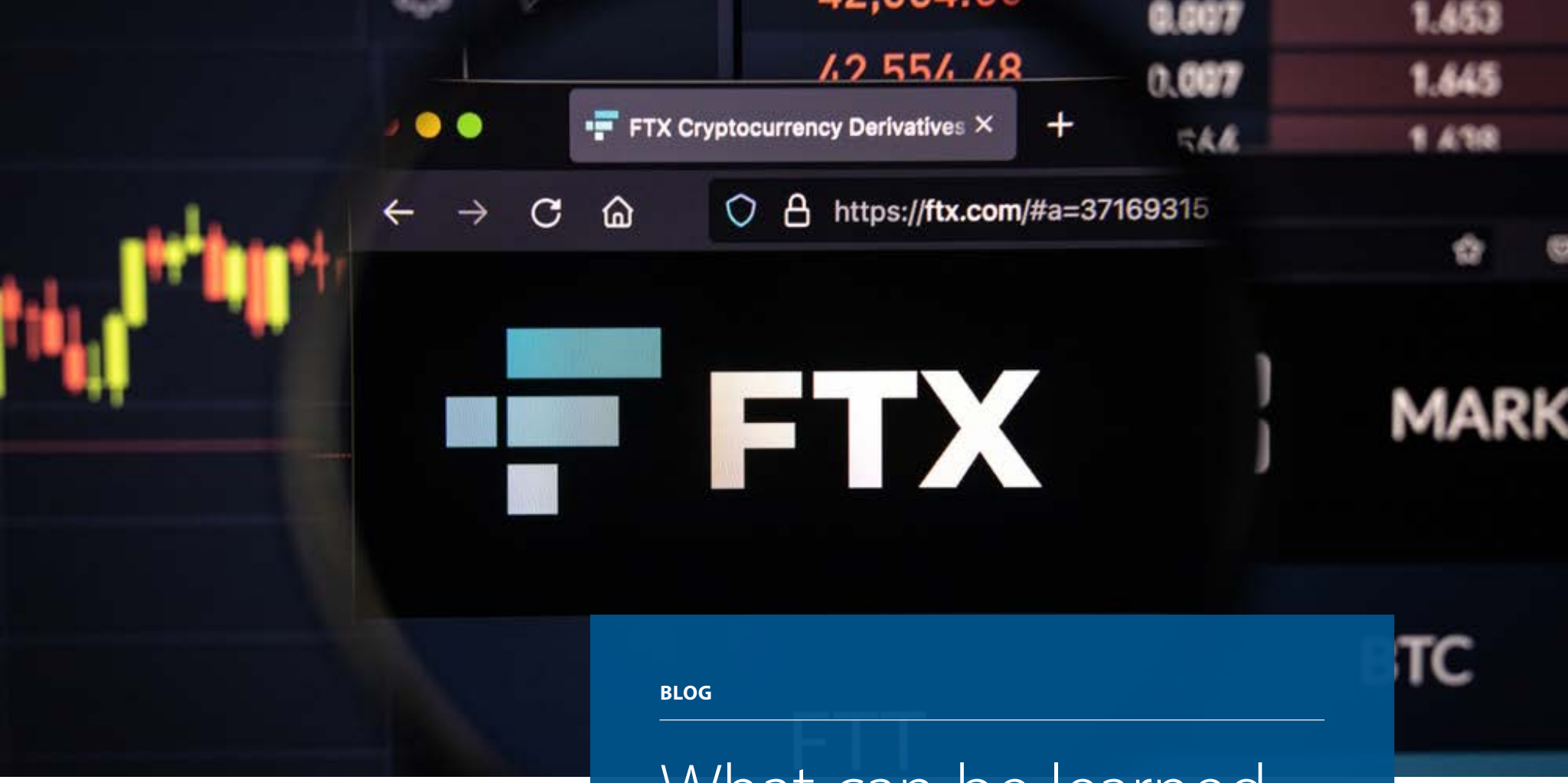

BLOG

What can be learned from the FTX collapse?

7 December 2022

Douwe Lycklama

Douwe Lycklama, founding partner at INNOPAY, formulates a lucid analysis of the context that led to the FTX collapse, while detailing the important lessons that the crypto and broader economic markets should learn and act on in the future.

The FTX collapse is the latest in a line of crypto failures in 2022 and the biggest so far, with billions missing and 1.2 million account holders turned into creditors. It will take years to settle this bankruptcy and the clients' outlook for recovery is bleak. We are unlikely to see a similar scenario as with MtGox, which went bust in 2014. The Bitcoin that remained there appreciated in fiat value during the bankruptcy to such an extent that creditors can soon expect to be paid out handsomely in fiat, making up for the fiat value of their holdings back in 1994. FTX probably doesn't have such a 'nest egg' as its assets were largely self-created tokens or lost during trading operations. The initial reports are unsettling.

In the case of FTX, customer deposits were used for speculation on the account of FTX's sister company, trading firm Alameda. This is a banking practice from the 1920s. It was prohibited by the 1933 Glass Steagall Act which forbade banks to use customer funds for own speculation. However, the act was repealed in 1999 and this is often associated with the global financial crisis of 2008.

Then there was FTX-leveraged trading, using self-issued tokens as weak collateral. The self-issued tokens were 'mark to market' by trading a small amount publicly and using that price for the whole stock of tokens. This also pumped up the balance sheet, easily misleading high-profile investors who – due to fear of missing out ('FOMO') – were queuing up for the latest FTX investment round with a valuation of USD 30 billion. Hardly any due diligence took place. FTX's spectacular growth numbers and high-profile marketing campaigns (including Super Bowl ads) mesmerised investors, regulators and the general public.

Amazingly, there was no oversight board. But even more astonishing was the absence of basic financial and operational controls, which John Ray exposed within a few days of becoming FTX's bankruptcy CEO. For example, three FTX board members had huge personal loans with their company (approx. USD 1.5 billion in total). He had never seen anything like this in his 40-year career as a bankruptcy specialist – not even while working on the high-profile scandal, fraud and subsequent bankruptcy of energy conglomerate Enron at the end of 2001.

Political donations also seem to be part of the FTX fact mix. Sam Bankman-Fried and other wealthy FTX executives donated at least USD 40 million to the Democrats' election campaign and possibly also to the republicans. More dubious facts will no doubt emerge in the coming years. For now, it is more than clear that FTX was a scam, with crypto as conduit.

How could this happen? The broader regulatory context

There is no definite answer for now. However, there are some explanatory facts. FTX was based in the Bahamas with a US professional subsidiary, while mass marketing its services globally. Regulators have a habit of focusing their energy on companies located domestically because coordinating with regulators globally can be a murky affair, certainly when new topics such as crypto are involved.

From the Bahamas, FTX was actively marketing its services in the US, yet US citizens could not officially buy on the platform. VPNs probably helped out there, and it would be interesting to know just how many US customers there were in reality. For sure, heavy marketing made investors, politicians, regulators and the public feel that FTX was trustworthy. In the space of three years, FTX became the world's third-largest crypto service provider after Binance and Coinbase.

FTX did not seem to face heavy regulatory scrutiny. Although the regulator in the Bahamas eventually pushed back on this sentiment, it was too little, too late. There was a complete lack of operational oversight. FTX was able to offer services (e.g. certain derivatives) for which US-based crypto providers were constrained by their regulator. It was not a level playing field.

Learnings and opportunities

So how could this have been prevented? The answer is actually not so complicated, because the very basic hygiene factors of operational management were not attended to. The basics apply for every company, but especially for financial institutions. Such a large-scale business failure is not specific to crypto and not specific to regulators. FTX probably completely outpaced the regulators' ability and willingness to act, partly because they were lured into believing that FTX's intentions were bona fide. Moreover, Alameda probably fell under other jurisdictions, as it is headquartered in Hong Kong despite being heavily financially intertwined with FTX.

In traditional finance, international coordination has taken shape through international bodies such as the BIS's Financial Stability Board, OECD and IMF. For crypto, this has been in the works for a decade and there have been numerous papers and conferences. Nowadays, the KYC/AML part is well aligned with global AML provisions. Recently, both IMF and FSB published new consultation papers and it appears that convergence and clarity are near. Regulators want to apply the same rules for crypto as for fiat as much as possible, which makes sense as many of the risks (operational, legal, sanctions, KYC, etc.) are similar to the ones associated with traditional financial services. At the same time, crypto has some other characteristics (e.g. transparency of blockchains, bearer instruments, smart contracts, no middlemen, user control of data) which may require different or perhaps even less regulation. After all, less human intervention is involved in decentralised finance (DeFi) versions of lending, exchange and payments.

Time and time again, centralised entities led by humans prove to be prone to FTX-like 'accidents'. Greed, egos and animal spirits are often in play as well. Over the past ten years, crypto has evolved from being purely decentralised (upon the advent of Bitcoin) to various shades of centralisation in which a limited group of people call the shots around the protocols, coins and organisation. Despite the incidental implosion of centralised companies such as FTX, Celsius and Three Arrows Capital, the underlying decentralised services and protocols have been shown to keep on working. Once a smart contract is deployed

in an irreversible way, the risk tends to be technological rather than human.

The specific properties of blockchains offer unprecedented possibilities for transparency for users and authorities alike. Assets and liabilities could be followed in real time 'on the chain' instead of producing quarterly or yearly reports for regulators. This creates a true RegTech opportunity in which innovators and regulators could – and should – work hand in hand.

At the same time, the public and the authorities need to become more aware and informed about the opportunities and caveats of the peculiarities of crypto and decentralised infrastructures. Additionally, the public must wise up to the dangers of dealing with centralised entities in general. These risks are not exclusive to crypto because traditional entities can present similar risks, but these are better controlled. Crypto will catch up again eventually, but not before a prolonged 'barren' period in which the sector must carefully rebuild trust. To achieve this, the sector players must join forces more strongly to educate themselves, regulators, politicians and the general public.

For sure, crypto assets have suffered another huge setback in terms of image and trust in 2022. But let's not forget that the underlying infrastructure itself proved to function well and should therefore be regarded as a separate topic. In this area, innovation will continue to advance as stablecoins and possibly CBDCs will become new carriers of fiat value. End-users will not perceive much of this behind-the-scenes innovation, just as telecom users were largely unaware of the VOIP revolution of the early 2000s, which ultimately resulted in 'more for less'. In payments and financial services, we may discover a similar development in the decade ahead. And although the innovative future is bright, we have probably not seen the last bump in the road yet…

This article was originally published in The Paypers

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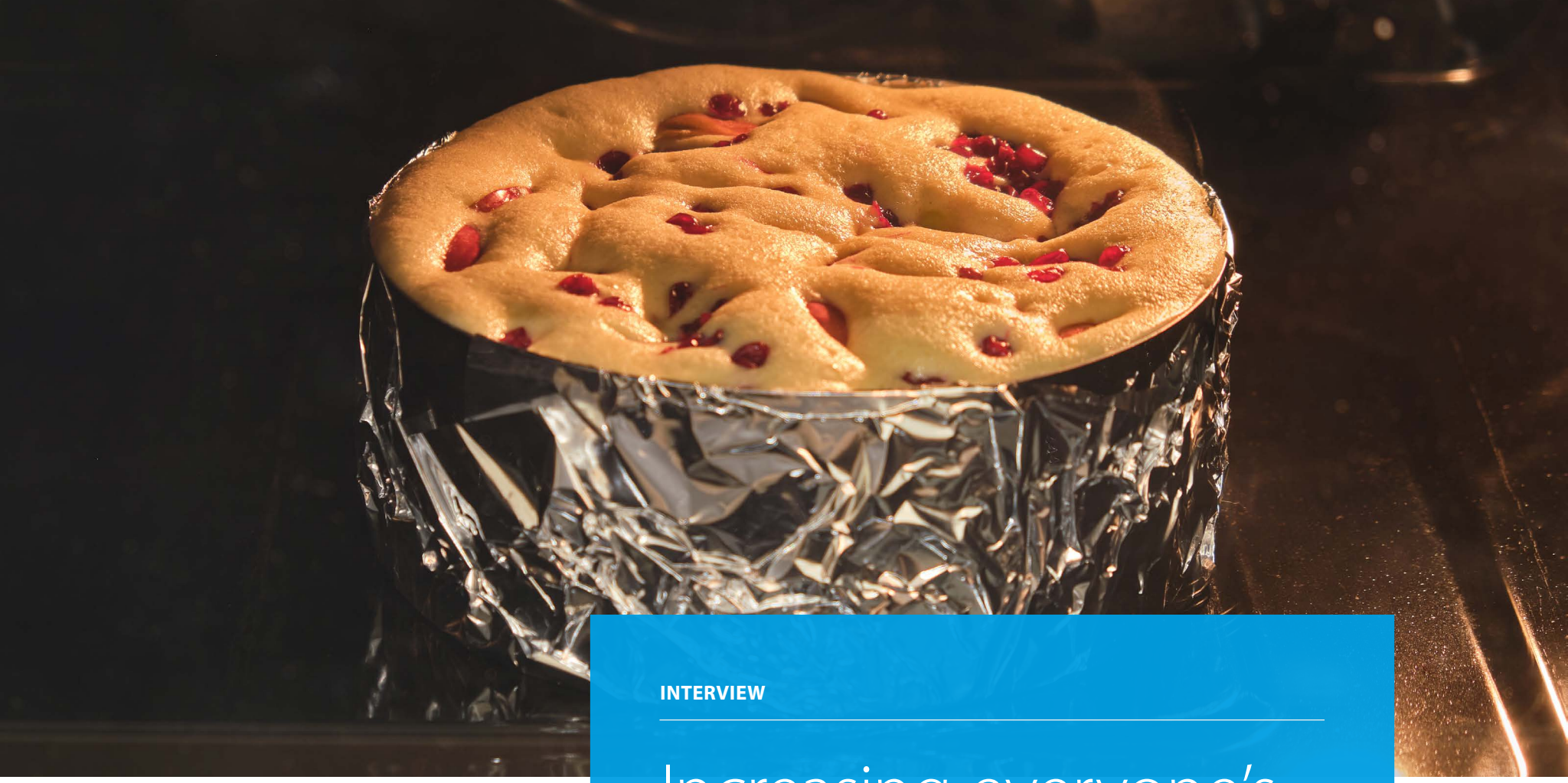

INTERVIEW

Increasing everyone's piece of the pie

14 February 2022

INNOPAY is regularly asked to facilitate co-creation in complex projects, including in countries such as Australia, Switzerland and Luxembourg, and of course in the Netherlands. This has already led to many successes such as iDEAL, iSHARE, and the development of the next-generation public transport card (OV-chipkaart). So how can you benefit from our unique collaborative approach?

To answer these questions, INNOPAY consultants meet regularly with different parties across different sectors. They provide both one-on-one advice and utilize a process of co-creation based on a 'collaborative approach'. CEO and managing partner Shikko Nijland answers our questions so we can discover what differentiates INNOPAY from the rest and sheds light on the secret behind their unique collaborative approach.

What differentiates INNOPAY from other consultancy firms?

"If you are working on innovations in the field of digital transactions, it is crucial to understand all aspects of this world well. This knowledge concerns three domains. You must understand how the technology works; you must have business accumen and you must understand what the legal and regulatory implications are. Picture these three domains as three circles that partially overlap. If you are a only specialist in one domain, you do not have an overall picture of where the circles overlap. That is why we find it extremely important at INNOPAY that our consultants are highly competent in all three areas. This is how we train them as well. Of course, one consultant knows more about legislation and the other has more knowledge of technology, but our consultants all advise on the same level in the field of digital transactions. That is quite unique for a consultancy firm."

And what makes your method distinctive?

"Our working method stems from 'digital maturity'. The operation of an organization must move along with the developments in the digital domain. Many companies believe in the 'win or lose' (zero-sum) mentality. They often work within

their own organizational boundaries, adopting the 'competitive advantage' as the vantage point. Within the digital domain and in innovation, there are almost no borders left. Digital maturity therefore also says something about the extent to which an organization is truly able to operate without the traditional organizational borders and is able to actually embrace open business models and leverarage the total wisdom of their ecosystem. The starting point in our approach, is the creation of 'collaborative advantage' in which the manner and depth of cooperation in the ecosystem ultimately determines individual success. Take blockchain as an example: you cannot do anything useful with it alone. Boundless and non-zero-sum game thinking is in the DNA of INNOPAY and this has led to the 'collaborative approach' where the focus is on creating opportunities and possibilities for cooperation in the ecosystem. We are convinced that this is the only way to get the most out of digital technology."

Can you expand on the collaborative approach?

"In our world of digital transactions, the speed and degree of adoption of the solution or service determines who will be the winner. The goal of the collaborative approach is to let companies work together intensively to guarantee adoption at an early stage. We do this in a process of co-creation. An important aspect of this is that people have to learn by experiencing that nothing comes of cooperation if everyone puts their own interests first. I usually explain this using a cake metaphor. Everyone can do their best to get the largest possible piece from a small cake. You can achieve much better results if you first jointly determine how to make the cake as large as possible. For this, it is essential that all parties adopt the common interest as a vantage point instead of pure self-interest. If everyone believes in cooperation, then it will be a success. In other words, sufficient support and commitment from all parties is crucial."

How do you ensure sufficient support?

"For this, it is important that the parties involved come to the right conclusions themselves. Our job is to make this happen. We can tell them how they can create the largest possible cake, but then the parties will not necessarily come to the right and shared insights. Then there is also a tipping point in the process where individual interests re-emerge. At such a moment, we refer to the cake again. Sometimes it takes a while for the parties to realize the importance of putting their self-interests aside, but at some point, a critical number of people within the group do come to this realisation. They then typically correct and convince others. This, of course, has a much more powerful effect than when we try to do this, as a facilitator. Other consultancy parties may keep a much tighter hold on this process. We tend to let the process take its course to a larger degree, creating more room for joint further exploration and in-depth discussions. Based on 20 years of experience, we know that the effect is much greater when people come to these insights themselves."

How do you ensure that parties come to the right conclusions?

"We can let people come to conclusions themselves because we understand all three domains of digital transactions so well. This enables us to point out the implications of certain choices. That is why we always give our opinion on the content in discussions. So, this is not about guidance or process management, but about us speaking their language and understanding what the outcome should be. That is why we dare to allow much more flexibility in the way of co-creating. After all, this helps the group to come to the right insights. This in itself ensures that all parties believe in the outcome and that the co-created content will also be used."

What are the most important success factors of the collaborative approach?

"It is very important that we work with decision-makers. After all, if they continuously need to consult their own stakeholders to reach a decision, it would cause enormous delays in the process. It is also important that people have sufficient knowledge. Moreover, we demand a bit of commitment from all involved. It is important that they free up enough time to attend all sessions. The process ultimately takes a lot of time and is not without obligation. These are hard requirements that we set in advance because they are the most important factors for a successful outcome. In addition, it is important that parties are open to achieving digital maturity. We do point out in advance that, it's to be expected that there will be a

point where, different visions will clash. For us this is a natural development and is necessary for the cooperation process. Everyone understands that you sometimes have to diverge before you can converge. Therefor we always put a lot of efforts in establishing convincing willingness of the participants to commit to this process."

Can you give an example of the outcome of the collaborative approach?

"iSHARE is a good example of a typical INNOPAY project. We were asked by Topsector Logistic to develop and realise a Scheme via our collaborative approach. In iSHARE, we have actually built up a network around data sharing, bringing together different parties who do not yet know each other today, but want to be able to do business in the future. It is not a platform for sharing data; we have ensured that every organisation can build and implement the connector box to the network themselves and can start sharing the access to their data. People then manage and control access to their data via a user-friendly toolkit. Via our collaborative process, a representative group of logistical companies came to agreements on all major topics, by co-creating all required technical and functional standards, the business model and a legal model that describes the rights and obligations of members. These agreements are the core of a framework and as such, every participant must adhere to them.

There is a lot of demand for Trust Frameworks or schemes. We currently do projects like this in the construction, energy, financial, insurance and mobility sector. As far as we know, INNOPAY is the only consultancy firm in the world that has been involved in the realisation of so many trust frameworks and schemes. That is why INNOPAY, a relatively small Dutch firm, was asked to create a trust framework together with the seventeen largest banks in Australia."

This interview first appeared in Dutch on consultancy.nl

ORIGINAL INTERVIEW

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INTERVIEW

Cash is king. Long live collaborative partnerships!

19 February 2022

Cash is king. In fact, the COVID-19 pandemic has shown that cash – and particularly how it is managed – tightens its grip on the throne during uncertain economic times. Collaborative partnerships enable businesses to save costs, especially those related to the budget-hungry development, maintenance and adoption of digital products and services. However, reaping the financial benefits of a collaborative partnership calls for the right strategic choices and the right capabilities. In this interview Shikko Nijland, CEO of INNOPAY, explains how businesses can achieve this.

The idea of collaborating in projects with partners who may also be competitors can seem counterintuitive. However, the digital transformation has made it imperative for organisations to adopt a more collaborative approach. This is the only way for them to retain their market relevance, reduce the TCO of projects, de-risk investments, drive consumer adoption and raise the barriers of entry for new competitors.

"It's certainly true that a more traditional, 'individual' track is sometimes the right strategy to pursue. But in the right circumstances, you can reap significant financial benefits from working in partnership with appropriate players in your ecosystem, particularly in the digital sphere," says Shikko.

The benefits

"The collaborative approach reduces your investments 'by design', because you can spread them across multiple partners," explains Shikko. "This can be very significant for big-ticket topics like innovation, where you can either share the costs among the partners or you can get access to existing technologies which you would otherwise have had to build yourself."

"Collaboration enables you to shorten your time to market compared with competitors. By teaming up with other players in your ecosystem, you minimise the risk of fragmentation, increase consumer satisfaction in the product, and decrease your market's

vulnerability to entry by the Big Techs. Adoption rates will be higher if you have multiple partners involved at launch, and the ensuing network effect will help your product to reach critical mass more quickly. Additionally, marketing investment costs can be shared across your ecosystem."

Shikko also anticipates a positive impact on operational costs: "By design, the collaborative approach should reduce the level of running and maintenance costs due to the higher adoption rates when other partners are involved, plus these costs can also be shared among the partners. Moreover, higher user numbers should also indicate a better rate of success for projects, meaning that the impact of ongoing operational costs are de-risked."

The right strategic choices

Champions of the collaborative approach may initially face resistance. Others may question whether the collaborative partnerships are too large, too complex and too difficult to control, or how the company itself can win if it is sharing the initiative with partners – especially if they are competitors. Shikko believes that the answers lie in learning how to make the right decisions, adopting the right mindset and starting at a scale which suits your organisation's maturity level.

"It's fair to say that collaboration can be more complex than taking the individual track, and in some areas like governance the costs might be increased. That's why it's important to make the right strategic choices and select the right projects in which the benefits outweigh the extra overhead."

"Products or services that are at the end of their life cycle or in a fragmented market – which is increasingly common in the digital world – offer opportunities to save costs, and the best way to be successful is to collaborate. Other examples of favourable circumstances for collaboration include when government regulation means that an entire ecosystem has to comply with new laws or standards, or when it is important to keep new competitors out of the market (such as the EU's creation of European data spaces)."

The right mindset and capabilities

"Apart from making the right strategic choices, you need to move away from a traditional 'zero sum game' mindset. Particularly in the digital environment, we can create more value by collaborating. Many organisations believe they are already doing this, but the scope of their collaboration tends to be restrictive. I'm talking about something deeper and more sustainable. You have to truly want to do it together. That means having to relinquish control to the collaborative partnership and having to deal with uncertainties. You must be prepared to adjust involved processes, products, services, people, etc. of your organisation, all based upon the outcome of the collaborative partnership. You also need to make people who have the right knowledge and expertise part of the collaborative partnership and give them a mandate."

"For a lot of organisations that's a bridge too far, which is why we recommend starting small, in a non-competitive domain such as a shared HR system. Alternatively, you could start collaborating with partners from adjacent sectors who have similar needs and are done with competitors."

Start small and learn by doing

Shikko summarises: "It's a common misconception that collaborative projects are large-scale and complex. We know from experience that this is not the case. Whilst it's true that possible benefits increase with larger network sizes, organisations are wise to start with smaller projects which are easier to manage, less complex, less risky and involve a limited number of partners. It's usually sensible to begin with a pilot and learn as you go."

"The key thing is to develop the right capabilities so that you can make the right choices and then execute them effectively. But this cannot be achieved overnight. We advise organisations to begin with a three-step approach which will give them the tools to start making the right decisions," continues Shikko, referring to the following three steps:

1. Familiarisation with the unique aspects and benefits of co-creation
2. Fit-gap analysis of current opportunities with collaborative approach
3. Exploration of possibilities in a collaborative pilot-project

"If a collaborative project is set up and implemented properly, it will deliver significant benefits in terms of optimising investments and reducing costs," he concludes.

If you are interested in attending a free-of-charge personal introduction session about Collaboration in which we go through the 3-step approach so you can identify potential financial benefits and make the right strategic choices related to collaboration, get in touch with us.

Yes, I am interested in a free-of-charge personal introduction session about collaboration

SIGN UP

ORIGINAL INTERVIEW

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INTERVIEW

Digital Sustainability: What Is It and Why Does it Matter?

28 March 2022

Meeco is a tech company from Australia with operations in Europe, and co-founder of the Data Sovereignty Now campaign. The company's products are used by data custodians to give users control over their data. We asked Katryna Dow, founder and CEO of Meeco, to share her views on digital sustainability.

Making the data owners directly part of the digital sustainability value chain always leads to better mutual outcomes.

What does digital sustainability mean for your company?

Data is so powerful because it holds the key to better decision-making and trust building. And we are all contributing to the collection of data every day, often without realising it. But without having access to that data, or if it is being monetised without our consent, the value is being created but we are not directly or fairly benefiting from it.

There are strong links to data sovereignty here – give people and organisations access to and control over their data so that they can make better decisions and more trustworthy relations. Additionally, it's also about getting a fair share of the 'data benefit balance'. We call this digital equity – but importantly, equity doesn't necessarily imply a monetary value. Equity is about transparency and about ensuring that people and businesses understand the trade-off they engage in, when in return for their data they are provided with access to services or product offers. And increasingly, it's about ensuring that everyone is aware that there are viable alternatives to the non-explicit trade-off that a few large technology platforms have helped us become accustomed to. Most recently, consumers have voted with their feet (or rather with their fingers and screens) and have started to reject this trade-off as it becomes more explicit.

Digital sustainability is about generating long-term value, transparency and equity for both parties. Most data is currently held by individual organisations – from governments to insurance companies, from airlines to retailers, and from restaurants to nail salons. It's time to put that data back into the hands of customers rather than locking it away in all those separate databases and platforms. In addition to making it easier for customers to control their data, it would also enable them re-use it for a whole range of different purposes – whether that's for travel, insurance, enrolling

their child at school, managing their credit rating or arranging a mortgage.

So digital sustainability is actually very much like 'regular' sustainability; it cuts down on waste and reduces 'data pollution' by avoiding over-collection and data proliferation.

What should be considered when thinking about digital sustainability?

From an organisation's viewpoint, the minute you take your physical operation and make it digital – when you move into what has become known as the 'phygital' world – it presents a whole range of new considerations such as security and data privacy. Increasingly, and thanks in part to data privacy regimes and data breach penalties, organisations understand that collecting customer data comes with significant responsibility. Digital sustainability gives them the tools to build in 'privacy by design' and 'security by design'. It enables them to provide customers with the benefits of convenience, without compromising on transparency and equity. Ideally, data sustainabilty should be supported by solid regulatory frameworks. And if we're talking about 'recycling' data in order to minimise over-collection and maximise its value, then we need to ensure that the data remains accurate and is reusable. The key to this lies in reliable verification of the credentials – such as a driver's licence, passport, employment records – in a cryptographically secure manner.

But how can we build a network of trust that not only enables the data source to protect and manage the data, but also enables other parties in the ecosystem to access, use and share that data in a secure and trusted way? This requires what we often refer to as a 'soft' infrastructure for data, which is similar to the 'hard' infrastructure that we're all familiar with such as roads, railways, data centers and cables. As a data owner, this soft infrastructure enables you to rely on your data rights and privacy, and manage access by giving permission for how, when, why and by whom your data may be used. This is what's needed to provide the right foundation for digital sustainability.

What is the current state of play in terms of the shift to digital sustainability?

The lines between our physical self and digital self are becoming increasingly blurred; in today's 'phygital' world, almost everyone and everything has a 'digital twin'. The latter is scattered over many different service provider, who all have 'a part of you'.

Technologies such as distributed ledger, personal clouds, mobile technology, artificial intelligence and the Internet of Things have converged with regulations such as Open Banking, the GDPR and new Data Governance Act. Moreover, there is growing awareness among consumers about privacy issues and the misuse of data and, increasingly, people will expect to receive a fair share of the digital equity.

The concepts of Web 3.0 and the metaverse may feel distant and academic for many of us but, through popular games such as Minecraft and Roblox, today's youngsters are already completely immersed in an online world of tokens, incentives, bartering and trading. It's an imaginary world, but they are already exercising some of their data rights and influence.

They're also learning about fraud, theft and cybersecurity the hard way, so they are becoming very digitally sophisticated – and many members of this generation will become adults within the next decade! As they shift from the digital world to the physical world, they will expect service providers in banking, mobility, learning and other aspects of life to offer them an equally great digital experience, while also taking account of their rights. So, this will have huge implications for business models sooner than we realise.

In terms of momentum and expectations, we cannot ignore the coronavirus pandemic which, according to a 2020 report by McKinsey, has accelerated digital adoption by seven years. In the health sector, for example, the COVID-19 outbreak accelerated the move to telemedicine, digitalisation, and data sovereignty – and is rapidly filtering down to GP level. So, all of these aspects are creating a 'perfect storm' that makes digital sustainability both possible and necessary, and the legislative situation is now starting to catch up.

In terms of the current status, this varies in different parts of the world and in different sectors. For example, the EU has the Data Strategy and nine data spaces for specific industries, such as health, mobility, agriculture, energy and so on. The financial services sector was already a step ahead due to Open Banking regulations.

In Australia, the Consumer Data Right Act is like the EU Data Strategy. While it will eventually be economy-wide, it currently covers three sectors: banking, telecoms and utilities. In North America, while the market is much more fragmented, there are various examples of companies working together and creating momentum in specific industries in which it's relevant to have access to things like credit records, for instance.

All the factors I just mentioned, plus the efforts of the Digital Sovereignty Now campaign, make it easier to have meaningful conversations about digital sustainability with governments and organisations. I'm not sure that we're at the tipping point yet but we're definitely a lot closer; people are definitely starting to understand the need, the value and the urgency.

Which indicators can be used in conjunction with digital sustainability?

One of the very important takeaways from the first Data Sovereignty Now Monitor report is that lots of organisations and service providers are now aware of the need for digital sustainability, but don't know how they can adapt their business models accordingly. In this context, it comes back to digital equity again, and the understanding that – while business models are obviously important – there are also other byproducts of value. For example, we did a pilot with an employer in Queensland, Australia, to monitor the business value of remote employee onboarding. By enabling employees to use a decentralised wallet to prove their identity remotely using verifiable credentials such as a driver's licence, the overall onboarding process was reduced from three days to just 30 minutes, generating huge value for the employer in terms of efficiency gains. Additionally, the employee waiting time was reduced from 48 hours to 30 minutes, so the employees benefited from greater convenience and time-saving. Making the data owners – whether they are employees, patients, students, consumers or citizens – directly part of the value chain always leads to better mutual outcomes. So, when thinking of indicators, it's important to measure digital sustainability in terms of other types of value, besides just financial.

How does your company put digital sustainability into practice?

At Meeco, we build enterprise tools that data custodians deploy to enable their customers to access, control and securely exchange personal data. Our platform of integrated tools is built on open standards. Made by developers for developers, our tools are used across a range of sectors, including finance, identity, multimedia content and life management in general. In addition to the employee onboarding solution I mentioned, another example is the digital vault inside Belgian bank KBC's mobile app, which is powered by Meeco. We also provide a platform for financial and wealth management organisations and a 'privacy and security by design' app offered by a partner called My Life Capsule, which makes family administration and connection easier across multiple generations. And with the privacy of the youngest generation in mind, we developed and co-designed mIKs-it: a safe multimedia app for children and their trusted grown-ups to safely connect to daily life through photos, videos and audio, always with complete privacy.

All of these solutions enable data to be created, collected, verified and/or reused in a data-sovereign way to create mutual value and support long-term success, which – in a nutshell – is what digital sustainability is all about.

ORIGINAL INTERVIEW

GET IN TOUCH

INTERVIEW

Companies must contribute to a digitally sustainable society by ensuring fair use of data rather than focusing on tick-the-box consent

4 May 2022

As a globally renowned expert on data privacy and cybersecurity, Lokke Moerel spends much of her time helping some of the world's most complex multinational organisations to confront their global privacy and ethical challenges when implementing new technologies and digital business models. Besides her role as private practice lawyer in the global privacy & security team at Morrison & Foerster, she is also a professor of global ICT law at Tilburg University and a member of the Dutch Cyber Security Council. Here, Lokke explains why recent proposals to compensate consumers for the use of their data undermine digital sustainability.

Concerns about the excesses of the new data economy are widespread and lead to calls for new privacy legislation. The growing sentiment is that Big Tech companies disproportionally profit from consumers' data and that consumers should 'share the wealth' that these companies generate from their data. To address the yawning economic gap, especially in the US, proposals are being launched to grant consumers a 'data dividend' and to create 'data unions' to negotiate payment terms on their behalf.

You strongly believe that these proposals are not the right solutions. Why?

The thinking behind 'sharing the wealth' is that giving individuals control over their data (by introducing privacy consent requirements) will enable them to leverage this power to gain a better economic return on it. Although these attempts are commendable – after all, who can be against fair compensation? – the proposals are actually counterproductive. They will not address the excesses of the current data economy. The remedy here is worse than the ailment. To illustrate

the underlying issue, let's take the example of misleading advertising and unfair trade practices. If an advertisement is misleading or a trade practice unfair, it is intuitively understood that companies should not be able to remedy this situation simply by obtaining the consumer's consent. In the same vein, if companies generate large revenues with unfair data processing practices, the solution is not to ensure consumers get their fair share of the illicitly obtained revenues. That would just sustain those practices!

You also believe that putting a 'price tag' on personal data is ultimately to the detriment of consumers. Why?

The 'share the wealth' proposals measure the value of data by its value to the company. But this value may have little correlation with the privacy risks to the consumer. The value to consumers is based on the potential impact if their data is lost or misused. For example, the search history of someone still exploring their gender identity may have no value to a company, but it could cause significant distress to that person if this data becomes public.

The impact also depends on the combination of elements: an email-address in itself is not sensitive, but if it is leaked in combination with a password it may lead to fraud or identity theft, especially because many people still use the same password for multiple accounts. And in one recent case, email addresses suddenly became very sensitive when they were leaked from a website that helped students to cheat in their exams.

But even setting one valuation method for the value of data to a company has proven impossible – and believe me, the experts have tried! The value of data to a company depends on the relevant use, which may well differ between companies. Health data will be relevant for a pharmaceutical company, but less so for a company that wants to sell new TVs.

Furthermore, the real value is not in the raw data, but in the insights derived from analysing the combination of data elements or insights across all customers. For example, analysis of a consumer's food purchases can lead to predictions of who will get diabetes in 10 years' time – but how do you price that? The bottom line is that there are too many variables. There are so many combinations of data elements, so many use cases, so many potential future use cases and so many possibilities of potential harm, that any price tag on data is bound to be to the detriment of the consumer. All of this illustrates that privacy protection should not be thought of as a right that can be traded or sold, and that consumers will be short-changed by any proposals to compensate them for the use of their data.

Isn't that why the GDPR was introduced in Europe? To ensure that data is only used with the owner's consent?

Yes, that was the idea. However, the realisation has set in that the consent-based model of privacy protection, including under the GDPR in Europe, also has its flaws. The assumption of the consent model is that as long as you tell me what data you collect from me and for what purposes, I can make an informed decision.

The underlying logic of data processing operations and the purposes for which they are used have now become so complex that they can only be described by means of intricate privacy policies that are simply not comprehensible to the average citizen. Furthermore, the incentives for online service providers to obtain your data are so high that they use all kinds of tricks to 'encourage' you to give consent (or make it difficult to opt out).

I think we've all clicked on 'accept all cookies' because it is simply too much effort to find out how to reject consent (which is bizarre if you think that the company needs your consent, so why would you have to reject consent in the first place?). Many of these techniques can be seen as unfair trade practices. And it's not just rogue traders doing this – even very reputable companies are 'tricking' people into consenting to use of their data in a similar manner. It's as if all morals have flown out of the window in the digital environment!

So how can we create a fair digital society?

Our data protection laws have resulted in what I have coined 'mechanical proceduralism'; organisations go through the mechanics of notice and consent without any reflection on whether the relevant use of data is actually legitimate. We even see this reflected in the highest EU court having to decide whether a pre-ticked box constitutes consent (surprise: it does not).

Privacy legislation needs to regain its role of determining what is and what is not permissible. We need to have the difficult discussion around where the red line for data use should be, rather than passing the responsibility for a fair digital society to individuals to make choices they cannot fully comprehend. That's the essence of digital sustainability.

How can digital sustainability be beneficial for companies as well as for consumers?

The media industry is a good example. For a long time we have heard that the end of cookie walls (forcing users to accept tracking cookies) would be the end of 'free' online news, which has been financed by personalised advertising facilitated by the global ad-tech ecosystem.

Now that cookie walls are no longer allowed in the EU, we suddenly see that the online news sites are shifting to contextual advertising instead of personalised profiling. This means that the advertising is aligned with the content you are reading rather than your personal profile. And guess what? The Dutch public broadcaster, for example, actually saw its advertising income increase by 30%. To be honest, that doesn't surprise me.

The boundaries between private life and business life are becomingly increasingly blurred, and most of us have probably experienced seeing online advertisements based on our search history in unexpected and sometimes inappropriate settings. That makes us feel uneasy. Is that the basis on which you want to build trust among your customers in today's data economy? I think not! Privacy really pays.

Do any examples spring to mind of organisations that are already putting digital sustainability into practice successfully?

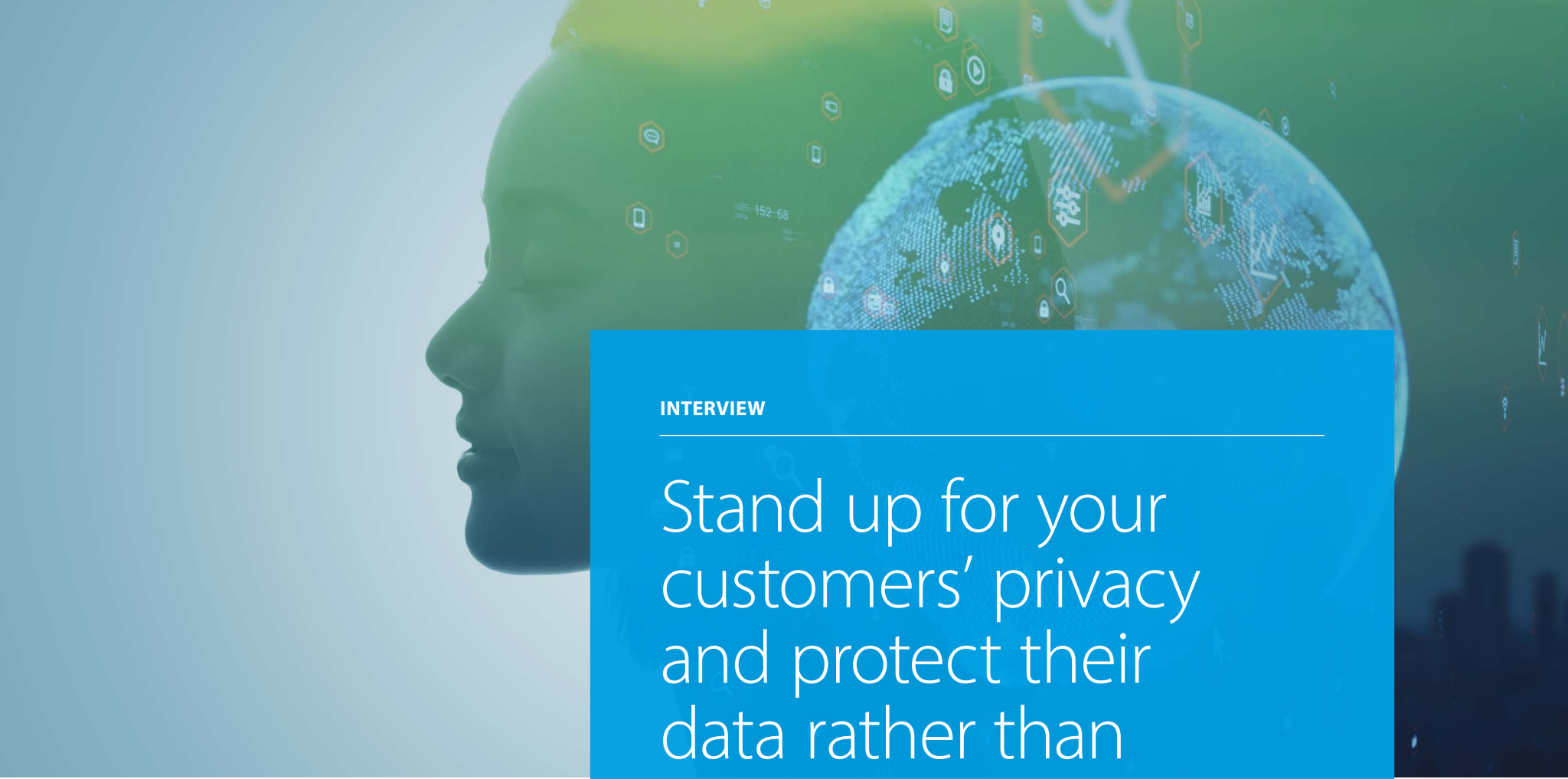
A number of high-profile organisations – such as the Dutch newspaper NRC – have changed their business models and shifted away from tracking cookies to AI-supported contextual advertising. This didn't happen overnight because they had got used to having their advertising automatically delivered to them by the ad-tech system, so they first needed to develop their own technology and new sales expertise and regain their closeness to the market.

But it's definitely more beneficial in the long run and is more digitally sustainable too, because they have cut out the middleman and are no longer dependent on third-party data. In fact, NRC is now generating more advertising revenue than before! Again, this demonstrates that the end of tracking cookies doesn't necessarily mean the end of free news, it just means that companies have to be more creative. And that actually holds true for all companies, not just media businesses.

A digital sustainability mindset means building that all-important trust by being open and transparent about your intentions and ensuring users share the benefits. Users can spot self-interest from a mile away, which undermines trust. Even in the face of new European regulations and initiatives such as the EU Digital ID Wallet, which will make it harder for businesses to gather and combine data, digitally sustainable companies will succeed in obtaining consent if the opportunities they create are really also in the interest of the customer.

ORIGINAL INTERVIEW

GET IN TOUCH



INTERVIEW

Stand up for your customers' privacy and protect their data rather than harvesting it

10 June 2022

Simon Lelieveldt is a leading regulatory consultant for payments and fintechs with wide-ranging experience in the banking world – from ING to a supervisory role at the Central Bank, and subsequently as the head of the Bank Supervision department at the Dutch Bankers' Association. Here, he explains why it's time to stop infringing on human rights and start building a sustainable digital future.

How would you define 'digital sustainability'?

The concept of sustainability is linked to taking care of all life on Earth. Since 1948, how we take care of ourselves as the human race has been enshrined in the United Nations Universal Declaration of Human Rights. So to me, digital sustainability means being equally able to protect fundamental human rights in the digital world as we are in the physical world. Therefore, digital sustainability is essential for the future of humankind, democracy and life in general.

What is the current state of play in terms of the shift to digital sustainability?

In my view, the impact of digitalisation on human rights is an area that is still being largely overlooked by the majority of public-sector and private-sector organisations. Although technology – and the world in general – has changed dramatically since the 1950s, the human rights framework has been updated to reflect today's digital reality; in early 2019, the Resolution on the Right to Privacy in the Digital Age was adopted by the UN General Assembly on Human Rights. This is an internationally binding resolution to ensure digital sustainability. It calls on governments to "refrain from requiring business enterprises to take steps that interfere with the right to privacy in an arbitrary or unlawful way, and to protect individuals from harm, including that caused by business enterprises through data collection, processing, storage and sharing and profiling, and the use of automated processes and machine learning". However,

unfortunately it seems that governments and organisations around the world aren't paying sufficient attention to this resolution.

We're all aware of the risks associated with digital tools when they fall into the wrong hands. But what we widely condemn in nations like China – where government bodies are using and abusing the power of digital tools and technology – is actually already happening here too; there have been several recent cases of racial profiling and discrimination based on the large-scale analysis of personal and financial data by governments in the EU. These are clear infringements of basic human rights and the current approach is allowing governments to do exactly what we don't want them to be able to do in a democratic society.

It pains me to say it, but the financial sector is actually complicit in this. This all started in the late 1980s/early 1990s, when the regulators started pushing the Financial Action Task Force (FATF) standards to prevent money laundering (AML). This mass surveillance of payments intensified following the 9/11 attacks in an attempt to counter the financing of terrorism (CFT). But now, over 20 years later, this so-called temporary 'project' – because it is still not actually a legal entity – means that banks and other financial institutions have been skewed into ignoring people's basic right to privacy and intruding into their private dealings. It's a simple fact: in the world of payments – whether cash or digital – transactions should be a private matter. But the lure of efficiency facilitated by digital transactions means that the right to privacy has gone out of the window and Dutch banks are now called on to report any unusual transactions to the relevant authorities. As a result, numerous legitimate customer groups – from charities to jewellers – are viewed as 'guilty until proven innocent' and have their access to the financial system blocked due to these over-zealous measures – all under the guise of preventing money laundering. There are other, much more effective ways to tackle this problem… which in my view is not the worst offence someone could commit, by the way! It should be a job for the police, not the banks! How is this being used to justify such an infringement of people's privacy? So in the financial sector, the current state of play is that we have a non-legally recognised standard-setting organisation encouraging governments and financial institutions to engage in mass surveillance and intrusion on the one hand, and a UN charter protecting human rights on the other. The 'mass snooping club' currently has the upper hand – but thankfully, I believe the tide is turning!

What should governments, organisations and companies pay attention to in the context of digital sustainability?

This is an opportunity for governments, organisations and companies to make the right decision and to steer a path towards a sustainable digital future. We're fighting the good fight and the law is on our side! Perhaps it helps to take a step back and think about human rights in the historical context, and to consider where we might be in ten years' time if things don't change. I would recommend everyone to read the UN Universal Declaration of Human Rights with digital sustainability in mind, and also to read – and act on – the Resolution on the Right to Privacy in the Digital Age as well as the broader UN Guiding Principles for Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework (HR/PUB/11/04). These guiding principles are grounded in recognition of states' existing obligations to respect, protect and fulfil human rights and fundamental freedoms, and they apply to all states and to all business enterprises, regardless of their size, sector, location, ownership and structure.

Which indicators can be used in conjunction with digital sustainability performance?

There are various signs that the balance is starting to shift in favour of digital sustainability. The topic of human rights related to data is receiving increasing attention in the mainstream press, for example, such as a recent article in the Dutch newspaper *De Telegraaf* referring to a national privacy watchdog's concerns about mass surveillance by banks. Additionally, the European Data Protection Board (EDPB) has sent several letters to the relevant European institutions expressing strong concerns that the AML-CFT legislative proposals could have a disproportionate negative impact on the rights and freedoms of individuals and could lead to significant legal uncertainty. I get the feeling that the EDPB's patience is wearing thin.

For me, another key indicator is the growing number of successful lawsuits. In 2020, a coalition of NGOs won a court case which ruled that, in its attempts to detect social services fraud, the Dutch government must cease using the algorithm-based System Risk Indication (SyRI) system for profiling citizens on the basis of large-scale data analysis. The court concluded that SyRI is in violation of the European Convention on Human Rights since it impinges disproportionately on the private life of citizens. Specifically in the financial sector, a relatively small company in the crypto space is the only one who has so far fought – and won – against the Central Bank's requirement to conduct mass surveillance. So even though the supervisors didn't extend their ruling to the rest of market, it is clearly possible to take the regulators to court successfully – and more companies should be doing it.

What advice do you have for organisations when it comes to data sharing? What action could and should they be taking?

My advice is simple: refuse to keep snooping for the government without proper legal title, refuse to keep sending information that is in violation of the Human Rights charter! Instead, stand up for your customers' privacy and protect their data rather than harvesting it.

Companies need to stop treating digital sustainability separately from corporate social responsibility. Human rights is not just about preventing slavery and child labour in faraway countries, for example. How can you say you comply with ESG principles if you're not taking

action to protect your own customers' privacy? And the argument that 'the customer consented' doesn't hold water because that's ill-informed consent at best, and customers often don't even have a choice nowadays. In fact, it's pretty bizarre that the data economy and incentive system has become accepted as 'normal' in return for access to better services. There are of course some good examples in which data sharing can be very useful, but we're largely ignoring the fact that enslaving consumers with short-term benefits is unsustainable from a societal perspective.

It's as if data is the 'forbidden fruit'; now that governments and businesses have had a bite of it, they're hooked. But – especially as we move towards the metaverse and Web3 – it's time to exchange the short-term gains for long-term relevance and therefore survival. That's why digital sustainability needs to be integrated into your business strategy along with all the other ESG aspects. This starts with being open and transparent: inform your customers how you treat data their data, what you do with it, and make any possible side effects of sharing their data clear to them. There are lots of tools in the box to help you, not only in terms of data storage, protection and encryption, but also anonymity techniques, privacy-sensitive biometrics for identification purposes, temporary/single-purpose use of data and of course blockchain for transparency. Privacy by design is of huge importance in this context.

Showing your true colours takes courage and you might even risk a fine from the anti-money-laundering supervisors. But digital sustainability is your weapon against those on the 'dark side': the Big Techs, dictators, seemingly respectable governments and shady regulators who are all prying on citizens and taking their data, data sovereignty, money – and sometimes their livelihoods and even their families – from them. Therefore, the message 'Your data remains private with us' is the strongest business case you can have.

ORIGINAL INTERVIEW

GET IN TOUCH

INTERVIEW

Companies should ask themselves how they could go a step further to truly embody the values of GDPR

6 July 2022

Julia Janssen is an artist, designer, public speaker and tutor at ArtEZ University of the Arts in Arnhem, the Netherlands. Through her creative installations and performance art, she strives to make the digitalisation of society – including concepts such as digital identity and data sovereignty – tangible in the physical world. Here, she explains why and how businesses can benefit by taking proactive steps to improve their digital sustainability.

You describe your mission as "to inspire and empower people to access better fundamental rights in the digital world". How do you go about that?

Since my days at art school, I've been fascinated by the relationship between humans and technology. Why are people willing to give away so much information about themselves on the internet? Why do certain fundamental principles from the physical world not seem to apply in the digital world? For example, there are ingredient lists, cooking instructions, health warnings and disclaimers on food to keep us safe, but in the digital world there are no warnings about the potential risks and impact of sharing your data. So how can we safeguard concepts such as fairness, equality, autonomy, freedom and democracy in a data-driven society?

First of all, it's important to make people aware of all these issues. But the beauty of art is that it also helps you to create movement. So for me, it's not just about helping people to understand what's going on, but also about making them want to become part of the movement towards change… towards enjoying the benefits of the internet and connectivity without having to abandon our autonomy. Therefore, it's important for my creations to have multiple layers; the overall message needs to be clear, accessible and easy to grasp for a broad audience in a matter of seconds. But it must also be possible

for consumers, professionals and politicians to dive deeper and think more closely about the underlying implications if they want to.

Privacy and data sovereignty are pretty dry and dense topics, so I try to introduce a touch of humour or irony into my work. And of course an interactive element helps people to experience the digital world in a real-world context. For example, I discovered that one click on 'Accept all' (taking just 0.0146 seconds) was enough to accept 835 different privacy policies. So I've printed them all out in a huge book and I ask members of the public to read them out loud in interactive performances – which would take over 400 hours in total.

The contracts are endless sentences of legal jargon that are almost impossible to understand, which make a mockery of the idea of 'informed consent'. In another interactive performance at a conference, I sold the book with a note next to it saying 'By buying this book, you automatically agree to being tracked for the rest of the day' but none of the customers seemed to care – until they realised I had hired people as 'Trackers' to literally follow them around all day, taking notes and photos. It was a great way of giving a physical impression of today's very opaque online consent systems, and showing that we tolerate things in the digital world that we wouldn't tolerate at all in the physical space.

What does 'digital sustainability' mean to you? And how does that fit in with your work?

I think there are several angles to digital sustainability. Firstly, there seems to be an unstoppable hunger for data because organisations think that more data always means better results or insights. This is resulting in an ever-growing mountain of data which on a very basic level has an environmental impact due to all the servers needed to store it. As an extension of this, the infrastructure for processing and sharing all that data is overly complex and inefficient, so lots of data is being collected unnecessarily or wasted, which of course doesn't fit with the 'sustainable' use of resources.

On another level, I think that today's debate about people's online rights is too often reduced to 'privacy', but for me that's not the right word to describe the real issue. It's not just about whether a person has anything to hide, but also about associated values such as autonomy, freedom of choice, equal opportunities and democracy.

So digital sustainability is about ensuring that the collection, processing and exchange of data does not interfere with any of these values. Much of the problem stems from how data is being combined to build detailed profiles of people for personal targeting purposes – and then algorithms are let loose which can influence people's choices at both an individual, commercial and societal level… to the extent that even elections can be manipulated. The problem with this is that the system is so opaque that you don't know what information the algorithms are preventing you from seeing.

We tend to think that artificial intelligence is inherently objective and neutral, but the fact is that algorithms are trained based on traditional or historical patterns – plus humans are part of that process, so human bias can become built into them. For example, LinkedIn uses an algorithm to target job vacancies towards potentially suitable candidates based on personal profiling as a predictor of future success. If the algorithm has been trained using one-sided datasets, people who don't have the 'right' profile – whether due to their age, gender, appearance, background or whatever – won't even get to see the vacancy.

This is just one example of how personalised reality can result in hidden discrimination that can have huge consequences for a person's future. Facebook is another example; it drags endless amounts of data into its system from way beyond its own platform, either by placing pixels, through third-party authentication or simply by buying up companies like it did with Instagram.

To make people more aware of this, I'm working on a new art installation called "Dear Data, how do you do decide my future?' based on my analysis of the Facebook profiling structure. I'm visualising this infrastructure using over 3,500 ping-pong balls, with each one representing one item of data. The whole installation will be at least 4 metres long when it's finished and I will display it at the Lowlands music festival later this summer. It will be part of an interactive installation where people can also play games relating to how the categorisation and classification of datasets can influence life choices and chances.

On a third level, in order to gather data and build profiles so that they can target people more specifically, most websites and apps are designed to maximise the amount of time spent on them. That's bad for the physical health of human beings, but I also feel that it's making people mentally obedient to the technology; we're becoming less

mindful of our own autonomy and less able to think for ourselves. Humanity is degrading as a species, which of course is not a sustainable outlook for the human race as a whole.

What is the general level of awareness of digital sustainability and how is this changing?

I found it interesting to see that the government-led COVID-19 apps sparked such concerns about privacy and surveillance issues. It's great that people are starting to think about these issues, but it was as if they didn't realise that they should have the same concerns about every app they've been using for years. And it's not so much the government they should be concerned about, but the capitalist Big Techs who are harvesting data purely to satisfy their own commercial interests.

But awareness definitely seems to be growing; more and more people tell me they are uneasy about simply clicking 'Accept' but feel trapped into giving their consent because the only alternative is not to use the service. There are some options, such as using Signal instead of WhatsApp; it's not really the answer, but if enough people switch it will send a clear message to the industry about what they want.

And on the upside, most people I meet – whether consumers or professional organisations – are eager to enter into discussion about the themes expressed through my work. It's good that the European Commission is now taking steps to introduce legislation giving people more control over their data, but this will take some time and isn't the only solution. In fact, I believe that companies really stand to benefit by showing that they are taking a different approach and proactively offering fairer and more transparent alternatives. I think they will win people's loyalty and gain a big fan base.

What are the biggest challenges for companies and organisations that want to take a more digitally sustainable approach and how can they overcome them?

I think many companies feel suppressed by how the current system is set up and trapped by their existing revenue models, partnerships and contractual obligations. It takes courage and effort to strike out and do things differently, plus it's not without risk, so it's often easier to just mimic what everyone else is doing.

However, there is growing regulatory and societal pressure for companies to adopt a more digitally sustainable approach and the technology and infrastructures are increasingly available to facilitate this. Companies can start by taking small steps, such as looking at how they ask for consent. Are users manipulated into clicking on the big, bright green 'Accept all' button instead of the more subtle (or non-existent) 'Change/Reject' button? If so, change it!

And companies should be honest with themselves and re-evaluate precisely what data they gather and process and why – do they really need to profile people so deeply in so many segments? And should they be sharing that data with third parties? My own personal recommendation is to immediately stop tracking live location data if you don't actually need it.

By the way, many companies justify what they do by saying that they are in compliance with GDPR. Firstly, they often aren't – because GDPR stipulates that consent must be freely given, specific, informed and unambiguous… on a voluntary basis. As I've already mentioned, there are many cases in which the privacy statements fail on some if not all of these points. And then there's a difference between what is 'legal' and what's 'ethical'. Even if companies are loyal to GDPR on paper, they should ask themselves how they could go a step further to truly embody its values in practice.

Which companies or organisations have caught your eye by putting digital sustainability into practice successfully?

I'm impressed by the Dutch start-up called Pacmed, which against the backdrop of staff shortages and the rising demand for healthcare is using machine learning to support decision-making by medical professionals. In anticipation of GDPR, the system has been designed from the ground up with a sustainable approach to the data assets in mind, so the solution revolves around providing access to the data rather than ownership of it. There are a growing number of other systems in other industries that work in a similar way so that the data owner retains control.

Meanwhile, in the media sector, I'm encouraged to see a number of outlets including Ster (which sells advertising on behalf of the Dutch public broadcaster NPO) and the New York Times replacing personally targeted advertising with contextual advertising – and it seems that their revenues have actually increased, which proves that it can be worthwhile for businesses to explore alternatives.

Lastly, there is still a lot of work to be done to make technology and algorithms less discriminatory by design. In this context, I'm very excited to be working on a new creative project commissioned by the Dutch Ministry of the Interior. Together with a team of lawyers, my task is to visualise how technological discrimination influences people, and I hope that the result will play a part in raising awareness and inspiring action to overcome these challenges in the future.

ORIGINAL INTERVIEW

GET IN TOUCH

INTERVIEW

5 Questions to our partner Maarten Bakker

4 September 2022

Maarten has been at INNOPAY since 2018 and became a partner in 2021. We were lucky enough to get the chance to ask him about his career so far, what it's like to be a partner at INNOPAY, and his advice for students who are considering a career in consultancy.

Can you tell us a bit about your background?

I actually have a background in applied physics. I loved the intellectual challenge of it, but I also learned that the research profession is not for me, so I decided to make a move towards management consultancy. I joined the Accenture Strategy Consulting group in 2006, where I learned the art of consultancy and how to apply those skills in ever-changing and challenging client engagements. I aligned myself to the Financial Services practice and more specifically to Insurance. This also resulted in me acquiring new knowledge about the inner workings of a bank or insurance company from a financial, operational, technology and legal perspective.

When platforms started to emerge and tech companies entered the Financial Services sector, FinTech became an important part of the work I did for my clients. But it also led me to question a lot of efforts by incumbents when pursuing a 'winner takes all' platform strategy. INNOPAY's vision gave me the answer I was looking for and so I decided to join the company.

Did you always want to be a consultant?

No, consultancy was not my end game when I started working. But it grew on me, and now it has become a part of me and I never want to leave this line of work. The combination of new projects and clients, thought leadership, intellectually challenging engagements and highly motivated and skilled colleagues creates a great atmosphere to work in.

Why did you choose to work for INNOPAY?

It was a logical place to continue my management consulting journey as it gave me some answers I was looking for. But, even more importantly, INNOPAY is known and respected by its clients for cutting-edge thought leadership and expertise, entrepreneurship and flawless project execution. And because our people are not 'one of many' but are truly treated as our greatest asset, there is a lot more focus on personal personal development. These are all INNOPAY traits that really suit me. And as I know from experience, you don't find this in the same way at the large integrators – but it's what makes all the difference in how much fun you have doing your job.

How has becoming a partner at INNOPAY changed things for you, and what are your key goals and ambitions?

Working at INNOPAY means that you have responsibilities towards your clients, for our internal operations and for the personal development of yourself and your colleagues. This applies to people at every level in our organisation, from junior consultants to the partners. So while the focus of my day-to-day job has changed, the core of my responsibilities hasn't. I am still working on client projects, on new thought leadership and on my own and other people's development.

My ambition is to grow INNOPAY for our people and our clients. Our Everything Transaction thought capital in combination with our high-end consulting skills is relevant for a large group of international clients. I want us to be big enough to matter while still remaining small enough to care. That will enable us to realise our vision.

What advice do you have for students who are considering a career in consultancy?

Don't assume that your career prospects will be better at a large integrator like Accenture, Deloitte or Capgemini. At INNOPAY we are proof that this isn't true. We work on the most challenging projects I have ever experienced; I see tremendous personal and professional growth in our people. And our alumni have gone on to work at many other great companies and have great careers. Choose the right fit for you.

ORIGINAL INTERVIEW

GET IN TOUCH

INTERVIEW

Digital sustainability is about more than just data protection

9 September 2022

Emma Day is a human rights lawyer specialised in children's rights and technology. She is a senior consultant at UNICEF, where she works for the Office of Global Insight and Policy in New York. Here, she explains why, in today's digital age, all governments and businesses should remember that children have rights too – and they extend beyond online safety and data protection.

What does 'digital sustainability' mean within UNICEF, and why is it so important to you as an organisation?

Although we don't actually use the term 'digital sustainability' within UNICEF, we are definitely very involved in this. UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential. We work with all our partners towards the attainment of the Sustainable Development Goals (SDGs) and the realisation of the vision of peace and social progress enshrined in the Charter of the United Nations from the perspective of children. As children's lives are increasingly becoming entwined with technology – and at an ever-younger age – it is imperative we ensure that the SDGs are also applicable in the digital environment. However, the current process of digitalisation is associated with power imbalances between those who develop and run digital platforms and children who use these technologies. Current digital government and data government regimes do not account for children sufficiently. Children account for a third of all internet users, so this obviously affects children too. Moreover, children are more vulnerable than adults and are less able to understand the long-term implications of consenting to the collection of their data.

But for us it's not only about data protection. Besides ensuring that digital technologies are used in a rights-respecting way that minimises any harm caused to children either in the short or long term, as UNICEF we also want to maximise their benefit to children; access to the internet can empower children, provided that the right safeguards are in place. So in a nutshell, digital sustainability underpins UNICEF's work to harness digital technology and data for good to help to solve some of the world's most pressing development and humanitarian problems, and to enable this to continue into the future. We have recently received extra guidance in this by the General Comment on children's rights in the digital environment, which was published by the Committee on the Rights of the Child (CRC) in 2021. This explains how all of the child rights contained

in the CRC also apply in the digital environment. Without digital sustainability, it will be difficult to advance the rights contained in the CRC around the world.

What is the current state of legislation relating to digital sustainability from the perspective of children?

Many countries still lack legislation regulating how companies should work towards digital sustainability. This is partly because the technology is developing faster than the policy. Therefore, UNICEF is working with governments to improve regulation and self-regulation. One example of this is the manifesto on good data governance for children that we released last year. We are also working with Sitra, a Finnish think tank, to conceptualise what a fair data economy would look like for children. One key aspect of this would be the idea of giving children greater agency or 'sovereignty' over the use of their data, in accordance with the evolving capacities of the child in terms of their age and maturity – which is a very important principle for us. Besides this, it is important that children have data literacy and a better understanding of how the data economy works and the implications of data sharing and processing. This would allow children to make truly informed decisions and would strengthen the all-important foundation of trust. Much of the data governance work is being done in the EU and other high-income countries, but UNICEF is an international organisation with offices in more than 130 countries. Therefore, we're keen to also involve thought leaders from the rest of the world to co-create a fairer and more sustainable digital economy for children everywhere, especially in what we call the 'Global South'.

What is the level of awareness among commercial organisations?

Meanwhile, because governance can be a long, slow process, we are also encouraging companies to take more responsibility for implementing children's rights rather than placing the burden on children to protect their own data. On a positive note, this is a rapidly moving space. Whereas the focus used to be mainly on online safety, which is extremely important, it seems that technology companies are now starting to become more aware of the need to also protect children's rights to privacy and other rights affected by data processing. This is partly thanks to the growing number of children's codes, such as the Age-Appropriate Design Code in the UK, and similar codes in Ireland, France and the Netherlands. In fact, some of the BigTech companies have recently adapted their approach to reflect these codes. In April, I chaired a panel discussion at the International Association of Privacy Professionals (IAPP) Global Privacy Summit in Washington DC. During the event, Apple explained that it had introduced heightened protections for children relating to device processing, transparency & control and data security, and was minimising the collection and use of data. There was a really strong turnout, including from private-sector organisations, so more and more companies seem to be realising that they need to start grappling with this.

Which indicators can or could be used to monitor a company's level of digital sustainability?

For companies to be truly digitally sustainable, they need to be environmentally responsible and respect human rights. There are some existing indicators to help companies to do this by carrying out a child rights impact assessment as part of their human rights due diligence, and by complying with ESG indicators. Additionally, the European Data Protection Board is due to issue guidance on the protection of children's data rights in the next couple of years. Although this won't be binding, it will reflect the common position and understanding with which the authorities agree to apply.

Do you have any good examples of how digital sustainability has been put into practice?

UNICEF recently took part in the MyData 2022 conference. The MyData Global non-profit organisation has many members who are building digital services that allow users to have more control over their own data and greater data portability. MyData4Children, which is a thematic group within MyData Global, is working on helping its members understand the importance and specific requirements regarding the use of children's personal data. In turn, this understanding helps service providers and developers to tailor their services for children, such as for use with EduTech products in schools or so that children can provide their age or other identity credentials to businesses or governments in the least privacy-intrusive way.

Edu-V

Schools and suppliers of digital learning resources in the Netherlands have taken the initiative of jointly developing further agreements that will contribute to simple, safe and trust-based data sharing. The 'Edu-V' programme will result in a scheme – afsprakenstelsel in Dutch – that will reduce the effort and risk associated with using digital applications for teaching purposes and will help schools to offer future-proof education that gets the best out of pupils and students. INNOPAY is facilitating the co-creation process.

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5 Questions about Digital Sustainability to… Johan van den Neste, Univé

6 October 2022

Johan van den Neste is CEO of Univé Schade N.V., a cooperative insurance company that was founded by Geert Reinders and some other Dutch farmers over 200 years ago and now has 1.6 million policyholders. Here, he explains how digital sustainability fits into Univé's long-term vision and the importance of retaining a personal touch, even in today's data-driven era.

"We need to learn to think in terms of opportunities rather than risks"

What does 'digital sustainability' mean to you?

I think 'digital sustainability' is a very useful term to sum up what has been on my mind for several years. Around a decade ago, years before I arrived at Univé, it became increasingly apparent to me that the way we were treating data was potentially dangerous – so dangerous that I'd tell people 'data is the new smoking'. That often fell on deaf ears back then, but I'm pleased to see that the discussion is now gathering pace. Even so, when data is mentioned in the context of the three P's of sustainability (People, Planet and Profit), the knee-jerk reaction is usually to zoom in on the 'People' aspect in terms of privacy and protection. This is all very important, of course, but data is also relevant from the perspective of the other two P's: Planet and Profit. Think of all the carbon emissions caused by mining bitcoins, for example, not to mention the effect on the landscape when massive new data storage centres need to be built. And even though – as a mutual insurance company – we redistribute all our profit to our members, data will unquestionably play a key role in our future business model so that we can safeguard our company's long-term future and ensure that our grandchildren and great-grandchildren will still be able to obtain insurance. The concept of 'digital sustainability' helps us to think about data more broadly across all three of these pillars.

Why is digital sustainability so important to you as an organisation?

A strong sense of corporate social responsibility is in our nature as a mutual insurance company, and we believe that this approach

will only become even more popular over the coming decades in line with the rising importance placed on sustainability, especially by the younger generations. Consumers are increasingly choosing 'meaningful' companies that give something back to society rather than just to shareholders. When I joined Univé as CEO of Univé Schade in January 2021 after having been at another insurance company for more than 18 years, I felt like a kid in a candy store! After all, Univé is a very long-standing company with a strong brand, we're financially robust which means we can invest in our future, and the focus on doing our bit for society is a really good fit with my own personal motivation. Plus we don't have the sustained pressure from shareholders to achieve double-digit growth and cut costs, but instead we really are customer-centric and focused on sustainability. Against this backdrop, it's only logical that digital sustainability is important to us too. Within Univé, we often say that 'Software eats the world'. Focusing on digital sustainability can help us in our efforts to prevent that from happening. We want to retain our personal touch, even in today's digital era.

How are you making your organisation more digitally sustainable?

Earlier this year, supported by a number of external experts, we conducted research among our management team to try to define what 'doing business meaningfully' actually entails. We asked for everyone's thoughts on how could make the concept of sustainability tangible in their everyday work. This resulted in the strategic decision to primarily concentrate on SDG3: Good Health and Well-being, and secondarily on SDG13: Climate Action. In the digital domain, this is now helping us to sharpen our focus on the fact that our members' data belongs to them, not us, and that we should only use it to make things better for them. Additionally, we are focusing even more firmly on protecting them against data-related risks. One example of this is our initiative to insure our members against cybercrime, which is a relatively new but ever-increasing digital risk. If any of our 1.6 million members come into contact with any form of cybercrime, they can call our 24/7 Cyber Helpdesk for free advice and – if necessary – technical support, which gives them tremendous peace of mind. And from a financial perspective, they can also submit a claim for a certain amount of money to replace their IT equipment.

As far as I know, we're unique in the world in rolling this out to all our existing policyholders free-of-charge. But above all, we're running an ongoing awareness campaign to educate people about these modern-day risks. We will soon be extending this service to cover cybercrime through channels such as WhatsApp, and we're also developing a CyberFit programme to raise awareness among our business customers. In another example, because inclusiveness is a very important aspect for us, we are exploring how we can broaden our offering to include people who are currently being excluded from taking out insurance – perhaps because of their age, previous payment problems, bankruptcy, fraud and so on – due to today's data-driven systems. Is it constructive, not to mention fair, to punish people for so long? Plus in recent years, there have been some high-profile cases of how algorithms can have inherent biases. This is definitely not 'sustainable' from a societal viewpoint. On top of that, excluding whole groups of the population purely because the algorithm tells you to do so could be bad for your business model. Therefore, we are now asking ourselves how we can make optimal use of all the available data to ensure that everyone in the Netherlands can have fair access to insurance, albeit based on slightly different payment terms or conditions if necessary.

Which indicators have you developed to monitor your digital sustainability?

Needless to say, we fully comply with the GDPR to protect our members' privacy and ensure their data is only used with their consent, including honouring our members' requests to access to their data or to be forgotten. We also have an Ethical Code of Conduct which covers various aspects related to data, including what data may and may not be used for. A core team called the Ethical Committee check and monitor that everything we do is in line with that code. But the Ethical Code of Conduct is focused on the 'People' aspect of the three P's, so the next step is to look at how our approach to data impacts the planet. What is the environmental footprint of sending an insurance policy to a customer in digital format, including the use of servers and so on? And from the perspective of 'Profit', we have developed a Data Maturity Model to track our progress from being a data-using company to being an ethical and sustainable data-driven

company. On top of this, we have set up another core team called the Data Value Board. Over the coming year, we will be asking our data departments for their input on how they contribute to our progress towards the SDGs. The Data Value Board will analyse the findings and share them with the board to identify areas for further improvement. The aim is to develop a digital sustainability scoreboard based on quantifiable KPIs. One example in line with making ourselves more inclusive could be a target that helps us to reduce the percentage of applicants we refuse.

What has been the biggest challenge for your organisation when adopting digital sustainability policies?

I think the biggest challenge for us as a financial services provider is to open our minds and use our imagination when thinking about how to use data and technology effectively to solve current and future problems. It comes down to being clear on which problem you want to solve and how data will actually solve it, rather than just using data for the sake of it. So we've now asked ourselves which processes we should offer on a self-service basis to really add value for our members. But in order to retain our personal touch, we're also keen to ensure that customers are automatically offered personal support during those online processes if we notice that they need it. Additionally, it's in our nature as an insurer to be risk-averse, but we need to learn to think in terms of opportunities rather than risks. The book 'Everything Transaction' inspired me to dive deeper into the implications of the digital economy and how we can move from the traditional world of insurance into the new world of Open Insurance. This has given us some strategic pointers for our future direction and also set us thinking about how we can play a new role in ecosystems. For instance, we have our roots in farming and we're still big supporters of the Dutch agricultural sector today. Many farmers have asbestos in their roofs, so in conjunction with Rabobank and GreenChoice we developed a proposition to help them not only replace their roofs, but also to make them more sustainable by installing solar panels. This was done free of charge in exchange for us having rights to the electricity supply for the next 20 years. We're now looking at how we can feed that energy back into our membership base, such as to power their electric cars. I think this is a great example of how we've played a role in a future-oriented business model based on ecosystem thinking. And now we're not only a financial services provider, but also the Netherlands' eighth biggest supplier of solar energy – who would've thought that?

ORIGINAL INTERVIEW

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DeNederlandscheBank

EUROSYSTEEM

INTERVIEW

5 Questions about Digital Sustainability to… De Nederlandsche Bank (DNB)

4 November 2022

As an independent central bank, supervisor and resolution authority, De Nederlandsche Bank (DNB) works alongside national and international partners to contribute to sustainable prosperity in the Netherlands based on stable prices, smooth and safe payments, and robust and reliable financial institutions. Here, Patrick de Neef (Chief Innovation Officer) and Coen ter Wal (Strategy Advisor Tech) provide their perspectives on digital sustainability and the importance of data-mobility policies for the financial sector.

"PSD2 and Open Finance are two pieces of the puzzle, but data mobility must be set up across sectors based on meaningful data sovereignty for consumers"

What does 'digital sustainability' mean to you, and how does this fit in with DNB's mandate?

Patrick de Neef (PdN): "The digital transformation is a fundamental change for everyone – for industry, for us as a supervisory body, for society and perhaps ultimately for the human race – but it is not a process that can happen overnight. Fully integrating data into our lives requires lots of decisions to be made and the journey is lined with countless pitfalls such as privacy problems, data leaks and the risk of computers with artificial intelligence (AI) making undesired decisions for us… or, to put it in Hollywood terms, taking over the world. 'Digital sustainability' is about ensuring that each step in this transition takes us closer to creating a world in which we can benefit from the positive outcomes – such as innovation and greater efficiency – while avoiding the negatives. Unlike environmental sustainability, which is a race to preserve planet Earth for future generations against the backdrop of a finite supply of natural resources and raw materials, there is no limit to the required digital resource: data. In fact, its volume is growing all the time. That's why it's so important to manage this process to ensure the proper use of these 'data resources' based on a long-term horizon and a holistic vision. So digital sustainability relates to issues such as security, privacy and fairness as well as ethical considerations about the role of humans versus computers within tomorrow's digital society."

Coen ter Wal (CtW): "DNB's mandate is specifically focused on the sustainable development and stability of the financial system, and data is a very important part of that. After all, as we see BigTechs and non-financial entities enter the market, the structure of the financial sector is changing and the lines are blurring. On top of this, consumers have ever-higher expectations in terms of speed, convenience and personalisation. In order to continue to meet those needs in the long term, access to different types of data will become increasingly key to the financial sector. That's why the ability to share and access data, or 'data mobility' as we call it within DNB, will become increasingly essential. But it is important that this is done in a digitally sustainable way, based on the interests of consumers."

How can companies and organisations in the financial industry become more digitally sustainable? What are the biggest challenges facing them?

PdN: "As supervisors, we always say that success is about managing the risks. So in the context of digital sustainability, companies need to start by looking at their business models in light of their own environment. The speed at which the digital transformation is accelerating adds an extra dimension, because new risks are emerging all the time. Organisations can't afford to wait and see what happens; they need to not only understand and properly manage the existing risks, but also be agile enough to adapt rapidly to changes. Scenario-based thinking is key to staying responsive. Besides this, it is important to think about what kind of people and skillsets you will need in the future. As the financial sector becomes increasingly dependent on the use of data, advanced algorithms and AI applications, more programmers, risk managers, auditors, managers and supervisors possessing such digital skills will be needed. The future availability of this kind of talent is often overlooked but it will be essential for a sustainable digital transformation. Lastly, privacy and security will further grow in importance because more data is combined from a growing number of increasingly interconnected data sources. This added complexity makes it even more difficult to ensure that data is only used for the intended goal. It's important that the financial ecosystem – the financial supervisors, regulators, businesses and consumers – finds a way of managing that complexity effectively, and legislation can certainly help in this respect."

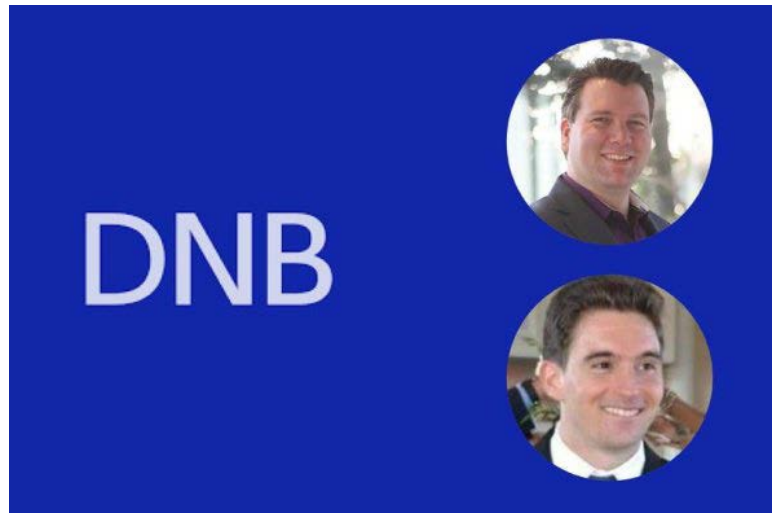
How is digital sustainability linked to Open Finance?

CtW: "For Open Finance – i.e. the sharing of financial data – to be possible, financial services organisations need consumers to be willing to share their data with them. This forms the very foundation for meeting rising consumer expectations, fair competition and innovation in the financial sector. However, despite legislation such as PSD2 dictating that personal data many only be shared with the owner's permission and consent, many consumers have trust issues. Moreover, consumers are not always aware of the potential impact of their data being used. For example, besides the risk of privacy losses, consumers may also face price differentiation based on the data they provide, or they may suffer exclusion if they are unwilling to share data. Therefore, for Open Finance and data mobility to realise its full potential – and for it to develop in line with AFM's and DNB's mandates of keeping the financial system stable and protecting consumers – the data-receiving parties must also take some responsibility for using the consumer's data in a digitally sustainable manner. They should recognise their duty of care and develop formal policies outlining how they will or won't use a consumer's data. Only then can we start building 'meaningful data sovereignty' in which consumers are in the driving seat, have control over their own data and have confidence in sharing their data."

In collaboration with the Autoriteit Financiële Markten (AFM), DNB has published a discussion paper on 'Data Mobility and the Financial Sector'. What is the aim and key message of this paper?

PdN: "As DNB, we are keen to engage in dialogue with all stakeholders in the financial services ecosystem in order to pool our knowledge and expertise so that we can shape and manage the digital transformation and develop an effective data-sharing framework together. In that context, our main aim with this discussion paper is to trigger constructive debate, both among policymakers and also within the broader industry."

CtW: "As the starting point for the discussion paper, we set out to explore how data-sharing regulation can support a financial services sector that is sustainable, competitive, innovative and fair. We took a step back to consider what the various EU legislative developments such as the Data Sharing Initiative, the Digital Markets Act and the Data Act all mean in this context. This led to us to form a preliminary vision for data mobility in which policy enables trusted, innovation-enhancing and equitable data mobility. We then identified three core policy priorities to achieve this vision: 1) Safeguarding data holders' interests, 2) Enabling data-related innovation, which means ensuring access to sufficient volumes and varieties of data, and 3) Creating a level data playing field for competition. Because data can be used to enhance so many different processes and areas of the economy, we believe it is important that the sharing of data is not limited too strictly to particular use cases, because that prevents the data from reaching its full potential for adding value. For example, non-financial



data – such as BigTech data, IoT data, infrastructure data and energy data – is becoming increasingly relevant in financial products and services. Therefore, for a level playing field, we need to ensure that different types of financial services companies can have equitable access to non-financial data in addition to financial data. Otherwise, data incumbents will continue to have better access to data than new entrants, which potentially stands in the way of competition and the development of innovative, beneficial and value-adding products. We concluded that the regulatory framework for data sharing can certainly help to broaden access to data and support the sustainability of the financial services sector, but only if it takes a cross-sectoral approach to enable the sharing of all kinds of data between different industries. PSD2 and Open Finance are two pieces of the puzzle, but the key is to take a holistic approach to data-sharing regulation rather than thinking in silos."

How is digital sustainability already being put into practice?

PdN: "Supervision itself is going through a digital transformation. We're currently mainly working on getting all manual steps into a digital workflow with modern tools. Innovative techniques such as AI can be very useful to better assess risks and reduce time for certain supervisory processes, but these advanced techniques require a robust digital basis. Importantly, when we use things like AI at DNB, we subject ourselves to the same rules and expectations as we set for the sector. One of the things we struggle with is the connection between our long-term digital strategy and the end uses as the supervisor. In this respect, we are no different from many other organisations and therefore we spend time on both the technology and the human side of our digital journey. After all, in IT it's not about the product itself, but about its impact. Unless the product has the desired effect, you won't achieve a sustainable improvement. The question of data sharing is also relevant for DNB, as one of our core tasks – to provide national statistics – is all about data sharing. Besides that, we also consider other possibilities for sharing data, such as in benchmarks."

CtW: "In the broader industry, I am pleased to see that some financial entities are already becoming less 'possessive' of data. There are signs of a mindset shift towards 'ecosystem thinking' as organisations realise that enabling consumers to share their data with other parties can create more value for those consumers, which increases the value of the whole ecosystem and ultimately benefits the organisation itself too. It's an interesting journey and regulation can definitely play a part in accelerating this shift towards a digitally sustainable future, as long as it is approached holistically."

The AFM-DNB Discussion Paper on Data Mobility can be found here. The deadline for responding to consultation questions is 11 November 2022.

ORIGINAL INTERVIEW

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5 Questions about Digital Sustainability to… Peter Eikelboom, SIDN

5 December 2022

SIDN is responsible for managing the registration of .nl domain names in the Netherlands – but that's not all. Here, Peter Eikelboom, Business Developer Online Identity, explains how the non-profit organisation is contributing to digital sustainability, including by promoting growth in the field of online identity in support of a better and more secure internet for society as a whole.

"Digital wallets will contribute to innovation and data sovereignty, increasing the opportunities for all"

What does 'digital sustainability' mean to you, and why is it so important both for your organisation and more broadly?

I think 'digital sustainability' can be summed up as 'how digital solutions can add value for society as a whole'. As things currently stand, people's data has 'no fixed abode' – it's locked away in all kinds of vaults controlled by the BigTechs. Sometimes you're allowed to peek inside but then the door is closed again, and you definitely don't have control over your data.

Moreover, in the BigTech-dominated Western world, the '3 Ms' reign supreme: data is being Measured, Manipulated and Monetised. The question is whether this is a sustainable model. In other parts of the world, such as China, the M for 'Monetised' has been substituted by the M for 'Model citizen' based on the social credit score. But when this can be used to restrict people's freedom of movement and financial freedom, I think we can agree that it's not the ideal way forward. Thankfully, in the EU we are seeing the emergence of a new mindset; it is time to organise things better to safeguard values such as privacy and safety of the individual.

At SIDN, as a non-profit organisation, we see it as our role to think about how we can reduce the concerns associated with the digital domain while also increasing the opportunities for all. After all, as the internet has become the medium for information exchange, social interaction, cooperation and commerce, it is now vital to all levels of development: to the economic and democratic development of

nations, and to the personal development of individuals. But there are also growing risks, not least in the area of cybercrime.

Against that backdrop, it's essential that people can be confident in the quality, security and privacy of the internet. As a non-profit organisation, SIDN is based on three pillars of impact: economic growth, safe and stable internet, and digital inclusion. In this context, we are keen to promote the creation of effective solutions that add value for society as a whole by making data-sharing processes safer and more efficient, so that ecosystems can work together to open up opportunities for new and beneficial services.

Which factors need to be considered in the context of digital sustainability? And how does IRMA contribute to this?

There's no question that sharing data can create extra convenience, but besides enjoying that benefit, people should also have control in their digital lives. This starts with privacy by design, which means it must be clear deep down in the technology who can access which data and where. Secondly, we need decentralised solutions to avoid risks such as concentration of power, monopolies and the possibility of surveillance associated with data being stored centrally.

To stimulate digital innovation on a global scale, data must be able to flow freely rather than businesses and organisations having to ask the BigTechs for permission to use 'their' data. Additionally, to encourage the necessary ecosystem collaboration and drive future growth, new solutions should be interoperable rather than everyone developing their own stand-alone solutions.

Lastly, to avoid the 3 Ms, transparency is very important – and this is a particularly sensitive issue when it comes to sustainable digital solutions for online identity and personal data. That's why at SIDN we have developed a digital wallet for mobile phones called IRMA, which stands for 'I Reveal My Attributes'.

Aimed at giving users confidence in their digital world, it is based on all the factors I just mentioned, and we actively offer it as an open-source solution for everyone to use and adapt for their own purposes. It enables organisations to give users easy, secure and privacy-friendly access to all their online services – not only login, but also ID calling, data verification, authorisation and digital document signing – and also to choose to share their data with connected services.

There are also benefits from the perspective of avoiding cybercrime, phishing and even the recent rise of deep fakes. So as a digital identity solution, IRMA offers endless possibilities. Additionally, although the underlying technology is very complex, once it has been installed the app itself is very user-friendly, even for older people and other demographic groups that are sometimes excluded or disadvantaged. As a result, it can help to overcome some of the social inequalities that currently stand in the way of certain people benefiting from the digital transformation.

What is the current level of awareness of digital sustainability in the market and how is this changing?

Public and private-sector organisations seem increasingly aware of the issues related to data privacy and control – i.e. data sovereignty. Therefore, when we tell them about the benefits of IRMA, they understand where we are coming from, even if they are not quite ready to implement it. So I see it as not really a matter of 'if', but 'when'.

However, right now, the majority of organisations seem hesitant to ask people to install yet another app onto their phones. Don't they have enough already? What I find striking is that most consumers seem to have come to accept that today's digital world requires them to have a huge number of online accounts, each with a different password. And they have become used to having to repeatedly submit the same information to numerous authorities, such as if they move house, apply for a mortgage or submit an insurance claim, for example.

But a digital identity solution can offer them another way; we're able to make those kinds of data-driven processes much easier for them, and much more secure too. Sometimes people need a little help to get started. For example, in response to a study showing that 20-25% of citizens needed help with digitalising, the municipality of Amsterdam launched a kind of buddy service to support people when downloading and installing the IRMA wallet. Various pilot projects have shown that once people discover there is a different

and more convenient way to do these things, they are more than willing to download and use the IRMA app. So as more people experience the benefits, I'm sure this shift will quickly gather pace.

How is this change being accelerated by new European legislation

The introduction of the Electronic Identities And Trust Services (eIDAS) regulation last year means that – after many years of talking about adoption – things are now moving at EU level. This regulation stipulates that all EU citizens and businesses must be able to use their national electronic identification schemes to access online services in other member states.

In other words, it means that every EU citizen requires a digital identity. Each member state is responsible for implementing its own wallet system and are different stages of adoption. Belgium is one country where the adoption level is already quite high; around six million citizens have already installed a digital identity app on their smartphones.

This has been stimulated by many businesses there developing their own apps including digital-ID functionality, as an alternative to customers having to log in and access services using their Google or Facebook IDs. And now, there's a vision and a blueprint for a European Digital Wallet based on data availability, security and cross-border interoperability – the things that have so far been standing in the way of such a project, and which will also contribute to innovation and data sovereignty. We're delighted that IRMA is being seen at EU level as an example of how such a wallet solution could work. Here in the Netherlands, a number of front runners and early adopters are already involved in some very exciting pilot projects – including local governments, healthcare organisations, educational institutions and private-sector businesses such as insurance companies.

Eventually, there will be enough data sources, enough wallets and enough use cases of data services for all the pieces of the puzzle to fall into place and drive the large-scale shift towards a digitally sustainable future.

What do you personally regard as good examples of how digital sustainability has been put into practice?

In terms of the three main pieces in that 'digital sustainability puzzle' I just mentioned – data sources, data wallets and data products and services – Estonia is a front runner when it comes to the availability of data sources; digitally speaking, it's much further than many other countries. When it comes to wallets, there are lots of examples of good attempts but I'm not yet aware of a perfect solution that manages to combine open-source with decentralisation and interoperability.

Even our own wallet still needs further development, because while it is open-source and decentralised, not everything has been standardised for interoperability. Besides that, there are still key questions that need to be answered, such as should a digital wallet have a profit model or just break even? At SIDN, we think a break-even model suits wallets best, because the real business value is on the use-case side.

But besides the EU-level impetus to develop an effective system within a clear framework, there are some other great initiatives such as the Open Wallet Foundation to support the development of compatible open-source digital wallets, so the situation is changing and improving all the time. Last but not least, in terms of data services, I have already mentioned various projects in all kinds of sectors, from government to education to business, aimed at simplifying complex processes and making the user's digital journey more seamless.

As a result, new ecosystems are continuing to emerge. The current challenge is to ensure that we develop an effective digital ID solution based on the right underlying agreements and the right design principles. But this is a very exciting time and I think we will eventually all be surprised by how much is actually possible.

ORIGINAL INTERVIEW

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INTERVIEW

Financial institutions can move towards a position as a trusted ‘data custodian’ in the data economy

6 December 2022

The internet has reached its third stage of development: after ‘information’ and ‘interaction’, it is now time for ‘transaction’. An important prerequisite for this is the building of trust and the transition from ‘institutional trust’ to ‘infrastructural trust’. In this new online world, people and companies will have more control over their data and will be given a greater share in the benefits, which currently go to ever-larger monopolies. The latest edition of our award-winning book ‘Everything Transaction’ (‘Alles Transaktion’ in Germany) goes into more depth about digitalisation and how the internet offers ever more far-reaching possibilities for building infrastructural trust. In an interview, Mounaim Cortet, Country Manager for the DACH region at INNOPAY, and Douwe Lycklama, one of the authors of the book and co-founder of INNOPAY, talk about what this means for banks and other financial services companies.

Digitalisation and the internet offer a growing number of far-reaching opportunities. New technologies are changing people’s lives, companies’ business approaches and how information is exchanged. Businesses are increasingly connecting with customers and partners online, and vice versa. As the digital transformation accelerates, every interaction is becoming a transaction, and new types of added value – such as personal data, access rights, obligations, attention and reputation – form an important basis for new business models. Trust and the certainty that systems work reliably, truthfully and securely are elementary to realising the full potential of the digital age.

Interview with mounaim cortet and douwe lycklama

I spoke with Mounaim Cortet and Douwe Lycklama about this development and the implications for the financial industry. Douwe Lycklama is one of the authors of the book ‘Alles Transaktion’, which was published earlier this month, and Mounaim is Strategy Director and Country Manager for the DACH region at INNOPAY.

‘Alles Transaktion’ examines the relationship between transactions, the buying process, markets, platforms, data and trust, and explains it based on case studies, background information, models and illustrations. The book also discusses a vision of the future in which people and companies take control of their data. This could accelerate the transition from ‘institutional trust’ to ‘infrastructural trust’.

What does 'Alles Transaktion' mean exactly?

Douwe Lycklama

It refers to the global trend in our increasingly digital society towards every interaction in our daily lives becoming a transaction, or in other words a digital exchange of value. It is like breathing – something you do all day, without thinking about it. And that we are increasingly being enabled to have control over our own data. The financial sector is pioneering this trend, initiated by regulation. Eventually, we expect this trend to reach all sectors, and individuals and organisations will gain more control over their 'digital selves' over time.

Mounaim Cortet

In an increasingly digital world, these transactions consist of a series of interactions which go well beyond the exchange of money in return for a product or service. In fact, exchanges based on data are increasingly becoming the norm for transactions in the digital world. Think about sharing your data in return for access to a digital service. Exchanging your data will become a more conscious and transparent activity, as opposed to today when you are the 'product' and the situation surrounding 'free' services is more opaque. These data-driven transactions are becoming relevant across industries, but especially in financial services in the shape of Open Finance. In this new world, the number of transactions is increasing exponentially, often without us even realising it.

The book is about data, trust and the unprecedented possibilities of the transactional internet. What does this mean for the financial industry?

Mounaim Cortet

Sir Tim Berners-Lee, an English computer scientist best known as the inventor of the World Wide Web, is quoted as saying: "The data we create about ourselves should be owned by each of us, not by the large companies that harvest it". This quote basically sums up the challenge that financial institutions have to address to empower their customers. At the level of the individual organisation, there is a window of opportunity for financial institutions to establish themselves as the trust anchor in the digital economy and thus to secure their future relevance and future business. This involves making informed strategic decisions about two specific elements:

1. Which data should we as a financial institution share – with the explicit consent of our customers – to be present at the point where value is being created?
2. Which data from potential partners can we as a financial institution effectively use to improve our own value propositions for our customers?

Banks can lay claim to the role of 'data custodian' in their customers' daily lives by engaging in emerging digital ecosystems where data-driven digital transactions take place – and where digital trust is required in the same way as it is for facilitating transactions in the payments domain.

On a collaborative level, financial institutions must realise that data sharing in financial services (i.e. Open Finance) is another two-sided market. For two-sided markets to function effectively, efficiently and at scale, collaboration is required to create the necessary trust. This trust is enabled by collaborating on a 'soft infrastructure' in which agreements are made about the business, legal, operational, functional and technical requirements of data sharing. Various initiatives are already underway (e.g. the Berlin Group and the SEPA API Access Scheme) and financial institutions should monitor these initiatives and make informed decisions about whether to participate.

Which developments do you foresee related to the digitalisation of financial services in the near future?

Mounaim Cortet

In the near future, one key trend that will impact the digitisation of financial services – in line with the European push towards an Open Finance Framework in 2024 – is the concept of 'embedded finance'. Embedded finance enables the seamless integration via API technology of a financial product or service in a non-financial platform to support the related customer experience. Demand is already growing beyond embedding payments to a range of other financial products such as payment accounts, card issuing, lending and insurance products.

For financial institutions, embedded finance provides an additional distribution channel to reach customers beyond their own platforms. In essence, the distribution of financial products via platforms is nothing new, but the next generation of embedded finance is different due to the seamless integration of financial products into digital interfaces that users interact with daily. This enables financial institutions to safeguard their presence at the point where value is created. Similarly, non-financial businesses (e.g. merchants, digital marketplaces, business software vendors) with sizeable client bases with high-touch interactions can act as 'distributors' to strengthen their core customer journeys and client relations (by additional data that is obtained) and to move to adjacent revenue streams without incurring the overhead of a regulated financial institution.

Other noteworthy digitalisation trends that will impact on financial services in the short term include developments in the 'infrastructure layer' and 'experience layer'. These developments will also reinforce

each other to enable next-generation financial services. In the infrastructure layer, we will witness accelerated adoption of instant payments (SCT Inst) driven by the European Commission's new regulatory proposal. This will create a new track that will power new value-added services in the experience layer in the shape of new solutions for instant, account-to-account payment initiation, request to pay, and buy now, pay later.

Central Bank Digital Currencies (CBDCs) are another relevant infrastructural development that is gaining momentum with most likely medium to long-term implications. While the monetary objectives of such solutions seem evident, there are still many unknowns regarding the exact customer needs and use cases such solutions seek to address and regarding the potential role(s) of incumbent financial institutions. Nevertheless, CBDC is such a big development that financial institutions cannot afford to ignore it in the short term and they must start thinking about and exploring strategies and scenarios now.

You explicitly talk about trust being a basic prerequisite for successfully tapping into the various digitalisation opportunities. So where do banks stand on trust?

Mounaim Cortet

Banks have established themselves as trusted money custodians by keeping money safe and facilitating the secure transfer of funds. Using payments as an anchor product from which to conduct the cross-selling and upselling of other products, such as savings, lending and insurance, banks became indispensable in their customers' everyday financial lives, both in the physical world and in the digital realm. Today, however, competition in the payments and banking space is intensifying and banks therefore risk losing their long-held trust position in the sector. In addition, as a result of the ongoing digitalisation of financial services, data is becoming the new battlefield for banks and other players. To respond to this, financial institutions can move towards a position as a trusted 'data custodian' in the data economy, facilitating identity and data sharing transactions on top of their current role as trusted 'money custodian'. Banks have the credibility, experience and potential to facilitate data-driven digital transactions at scale, but they need to start reconfiguring those capabilities to become resilient in the data economy.

How does digital trust differ from that in the analogue world?

Douwe Lycklama

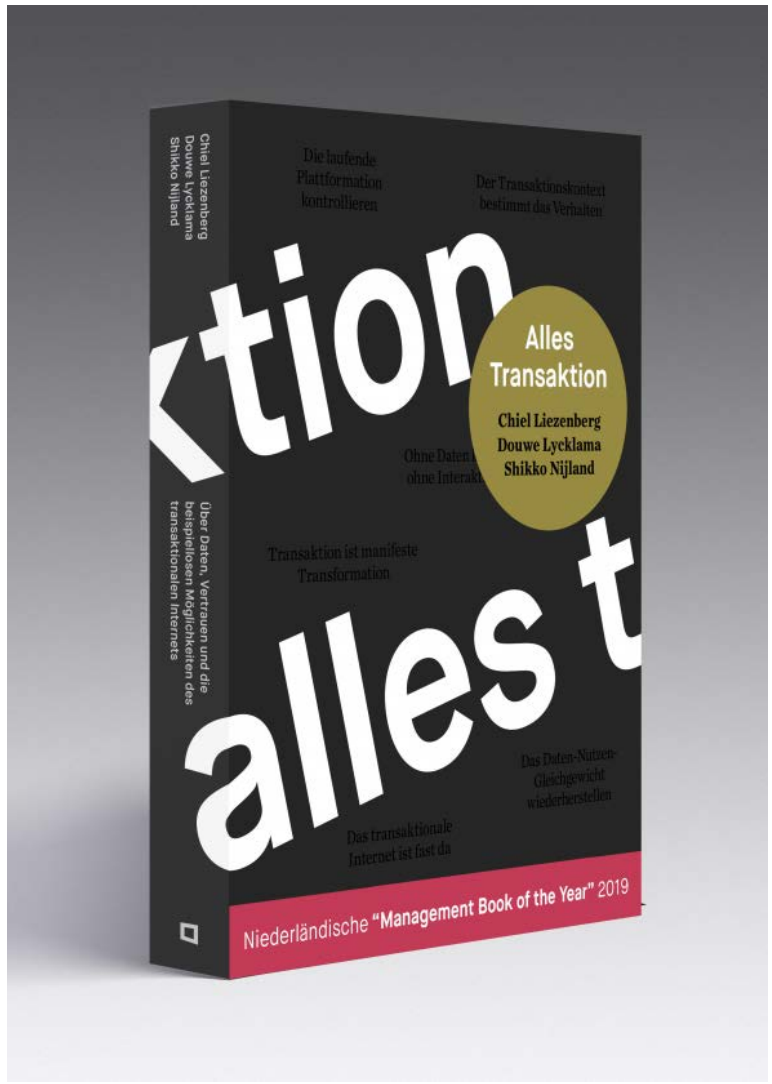
Trust in the analogue world is built over time. Interactions are mainly physical, augmented with paper-based information exchange – think of meetings, letters and faxes. Digital trust is instant and remote, which is exactly the opposite. The availability of data enables trust. For example, Airbnb can broker a transaction between two unknown people – the traveller and the host – because Airbnb collects and maintains data about both parties. Parties who own data can charge a fee for providing trust.

From the customer's point of view, data, privacy and data security are elementary prerequisites. How do new technologies such as IoT, big data or augmented reality affect the opportunities and risks in this regard?

Douwe Lycklama

Privacy is top of mind in every private and public – or, in other words, political – discussion about data. At the same time it is an ill-defined concept because privacy is contextual. For instance, when you are ill, you may be less concerned about sharing your medical data because that will increase your chances of recovery. Risks related to terrorism, the climate and health can improve people's willingness to share data for the greater good.

In Europe the GDPR has given people a lot of legal rights. However, it does not give them practical tools to exercise those rights. The only tool so far is the ability to click to accept or decline cookies. Apart from that, people have no idea about how to control and monitor their data. In the 'Everything Transaction' world, users will gain control over their data. As a result of this 'data sovereignty', users become part of their transactions and will be able to share in the proceeds; the 'data benefit balance' shifts in their favour. Data sharing – and therefore privacy – will become a more conscious activity. This will not



happen overnight, as it calls for more awareness and capabilities from all the end users. However, we know that it is possible, because we have seen that people are able to learn all sorts of digital skills such as texting, online messaging and other social media-related behaviour.

How does the rise of platforms – which has also affected banking – relate to the developments behind 'Everything Transaction'?

Douwe Lycklama

Over the past decade, large platform companies (better known as 'BigTechs') have gained a strong foothold in e-commerce, payments and other financial services driven by the development of the 'interactive internet' – or in other words, the use of the internet for interaction in addition for publishing and reading information. These platform players have created a trust mechanism in their platforms to support secure transactions. In parallel, these players have built a monopoly position based on the data they generate from the transactions performed on their platforms, and how they leverage that data for their own purposes and monetise it. While there has been some improvement, most customers remain in the dark when it comes to how these companies are collecting and using their personal data.

You say that the next phase of the internet will be about moving from institutional to infrastructural trust, and getting a grip on your own data. Can you elaborate on that?

Douwe Lycklama

As explained, the internet started as an information medium and evolved into an interaction medium. This was a window of opportunity for platforms to step in and organise the much-needed trust to enter into a digital transaction. And the rest is history… These platforms have managed to build and scale their business model globally due to the internet. However, the next phase of the internet, which is referred to as the 'transactional internet', offers a new window of opportunity to reorganise how we create trust around digital transactions. In this case, trust is organised on an infrastructural level instead of being placed in large institutions with their closed-loop platforms. A key design principle of the transactional internet is that you own your own data and that you are provided with the tools to decide who has access to it and for what purpose. We refer to this as 'data sovereignty'.

Do we control digitalisation or does it control us? What are our chances of controlling the further evolution of digitalisation?

Douwe Lycklama

Unless the digital space is organised based on data sovereignty as a core principle, it remains to be seen who will control whom. However, several market developments imply that we are moving in the right direction. For example, in essence the reforms and proposed regulations by the European Commission aim to create digital spaces called 'data spaces' where data can be made more available. In addition, they aim to empower customers using digital services to stay in control of their data. Besides that, we expect that customers will become increasingly aware of the value of their data and will look for ways to make their data work outside of the organisations holding that data. This is expected to spark new two-way value exchanges within open digital ecosystems, which are cross-industry networks of actors who interact online to create value in new ways.

Mounaim Cortet

As a result, there is an emerging need for 'data custodians' to enable the seamless exchange of data in open digital ecosystems. The role of a data custodian offers new ways to remain relevant in the domain of personal data sharing and access rights. We strongly believe that financial institutions can lay claim to the role of data custodian in their customers' daily lives by engaging in emerging digital ecosystems where data-driven digital transactions take place – and where digital trust is required, in the same way as it is for facilitating transactions in the payments domain.

This interview was originally published in Der Bankblog, 28 November 2022.

ORIGINAL INTERVIEW

GET IN TOUCH

INTERVIEW

Teamwork makes the dream work

12 December 2022

In this 'Behind the scenes' series, we introduce to you the people behind our organisation. This month, we proudly present Shikko Nijland, our CEO and Managing Partner.

Before joining INNOPAY just over a decade ago, Shikko was a partner at Accenture, where he played a key role in significantly growing the strategy consulting practice in the Netherlands. Alongside his work for clients, he co-authored the book 'Everything Transaction', which was awarded the title Netherlands' Management Book of the Year in 2019. Shikko holds a master's in business administration from Rotterdam School of Management at Erasmus University Rotterdam and post-graduate CFM/CMA qualifications. He is married with two children and lives in Amsterdam IJburg, not far from the INNOPAY offices.

INNOPAY has such a strong focus on working together that you have even given it a name: 'Collaboration by INNOPAY'. Why is this so important to you?

I am a firm believer in collaboration as the only way to create value and generate growth. To achieve success, you need everyone to pull together, particularly during times of change – and things are certainly moving ever-faster in this age of digital transformation. It is often assumed that digital transformation is about technology, but it isn't – it's about transforming the way you work, from the inside out. It's about reinventing your whole business, your portfolio, your processes and your culture. Therefore, digital transformation can't be siloed and allocated to individual teams; it requires a holistic, interdisciplinary approach. 'Teamwork makes the dream work,' as the saying goes! And in our industries often you also need to work with

other parties – perhaps even your competitors – or outside of your industry. That's why we developed the 'Collaboration by INNOPAY' approach. It is our own proven co-creation process which generates opportunities and makes cooperation seamless, secure and attractive for not just some, but all parties involved.

How would you describe the INNOPAY culture?

If we truly want to facilitate collaboration for our customers, we have to practice what we preach. Therefore, collaboration is strongly anchored in our own company culture. You won't find silo-based thinking within INNOPAY. Our people achieve the best results by working together internally. This also enables them to get the best out of themselves, and that's important for us because – despite all the technological advancements and innovative IT solutions – data sharing is in our business of digital transactions ultimately about connecting people. That starts with ensuring that our own people are happy and motivated. Therefore, we have a flat hierarchy and an open culture in which everyone works very hard, but there's plenty of time for fun too. We also give our consultants maximum freedom to pursue new opportunities and work together with customers to co-create innovative solutions to today's and tomorrow's challenges. They thrive on making meaningful contributions to complex projects in which they realise value for individual organisations and also for society as a whole. Living our values has enabled INNOPAY to get where we are today, and it's also what forms a rock-solid foundation for our future growth.

It's nearly Christmas, which means we're approaching the end of another year. Looking back, what have been the proudest achievements in 2022?

I am proud of many achievements, large and small, but first and foremost I am proud of how well the INNOPAY team coped with the whole Covid period. I was particularly pleased to see how the team members pulled together to help each other through what was a very difficult time for some people. Needless to say, I am delighted that we're now back to 'normal' and undeterred in our enthusiasm. In fact, we have won a number of major projects this year and we have many more in the pipeline. And last but not least, I'm proud of the recent launch of the German version of our award-winning management book, which has been translated as 'Alles Transaktion'. The official launch during the Payments & Banking Association's TRX22 event in Frankfurt was attended by hundreds of professionals from the payments and banking industry, which was a very encouraging start.

What are your goals for 2023?

We are strongly committed to continued growth and strengthening our brand position as a thought leader across all three of our domains – Data Sharing, Digital Identity and Payments - over the coming year and beyond. The introduction of 'Alles Transaktion' is a not-so-subtle hint about one of our main short-term goals: to further intensify our growth in the DACH region. We see many opportunities in the payments industry there, especially in relation to our Open Finance propositions supporting financial services providers with their business and operating model transformation. In fact, we expect Open Finance initiatives to rapidly accelerate all around the world. Besides that, we are keen to seize new opportunities in our other domains of data sharing and digital identity. To facilitate this growth, we will of course continue to build and expand our strong and capable team in which our employees feel valued and supported, so that they can continue helping and inspiring our customers and partners.

Where do you see INNOPAY in 2030?

As we find ourselves in the next phase of the internet, in which everything is a transaction, people are becoming increasingly aware that their data has value. Therefore, they are starting to expect to receive a share of that value. This doesn't always have to be in monetary terms, it can also take the shape of better value-adding services, but it is driving a shift in the 'data benefit balance'. Fast-forward to the end of this decade, and companies and organisations that fail to integrate the concept of data sovereignty – i.e. empowering people and organisations to keep control over their own data – into their business models will run the risk of losing their relevance and therefore their competitive position in the data value chain or, even worse, their right to exist. Open Finance holds the key for banks and other financial service providers to keep pace with this development. Using open APIs, they can leverage their financial services infrastructure and make customer data available – with the customer's consent, of course – to other parties as the basis for new and customer centric financial services embedded at the point of need. This requires them to adopt a collaborative mindset but, in my opinion, it is the only way for them to be able to keep on innovating and growing. We are already seeing signs that some front-running companies are responding to this by developing new data-sovereign products and services in collaboration with carefully curated strategic partners and this trend will gain momentum over the coming years. Besides that, we anticipate some very interesting developments in the area of digital identity now that the EU has introduced plans for a European Digital Identity Wallet. It remains to be seen how this will be translated into national solutions over the coming years. But by 2030, I expect the various wallets to be up and running and they will no doubt open up countless opportunities for new – and currently unimaginable – digital products and services that help to further improve people's lives in all kinds of ways. This is a very exciting time for INNOPAY because we are well positioned to help shape these developments, while ensuring that data sovereignty is safeguarded within any future solutions. As we continue to move forward in today's era of the transactional internet, we will of course remain on hand to advise and guide customers as we all work to create a more sustainable digital future.

And lastly, can you tell us something people might be surprised to learn about you?

Well, I am actually a DJ in my spare time, under the pseudonym Glamourboyz (www.mixcloud.com/glamourboyz). I am specialised in melodic techno, trance and house music. I host weekly livestreams every Friday and Saturday. In fact, I was recently asked to perform at the renowned Burning Man festival in the US for a whole week, which was a huge honour and a unique experience, of course. I found it strangely liberating to go 'off grid' for a few days and enjoy complete data privacy. The festival takes place in the middle of the desert with no mobile and internet reception, there are no shops and no money is allowed. For a whole week, you rely completely on your own resources and have make do with what you brought along with you. Without collaboration and willingness to give freely, nobody would survive for a week, let alone have a good time. But it's the fact that you don't have to worry about anything for a whole week – you can do and say whatever you like and dress however you like – that makes it such a great and addictive experience. In my opinion, you get to see humanity at its best as it shapes a mindful, inspiring and creative environment in which self-sovereignty and collaboration go hand in hand. And in a way, that's not so different from our approach at INNOPAY; we also combine collaboration with freedom for out-of-the-box thinking, albeit in a slightly less extreme way. For me, Burning Man is a fantastic real-life demonstration of co-creation and 'everything transaction' in its purest form!

ORIGINAL INTERVIEW

GET IN TOUCH

PENSIOEN FEDERATIE

PODCAST

INNOPAY participates in podcast on the necessity of cooperation on sharing personal financial data for pension funds

20 January 2022

Maarten Bakker

Many people dislike managing their personal finances because it demands concentration and focus without providing short-term rewards. Fortunately, digital tools such as apps are making life easier and it has become commonplace for financial institutions to support these tools by offering quick online access to financial data.

In fact, new upcoming European directives stipulates that organisations which hold personal financial data must make customers' data available to them on request. This applies in the pension domain too, so pension funds are now turning their attention to what participants expect from them and how they can ensure that the necessary information is readily accessible.

The Dutch Pension Federation (Pensioenfederatie) recently released a series of podcasts on 'Valuable Digital Services'. In the broadcast on 'Collaboration', INNOPAY's Maarten Bakker talks about the usefulness and necessity of further cooperation on this topic for pension funds.

ORIGINAL PODCAST

GET IN TOUCH

INNOPAY

PODCAST

Podcast about why we need to make the digital world more sustainable

29 March 2022

Douwe Lycklama, founder of INNOPAY, has contributed to a podcast about digitalisation and digital sustainability. In the podcast hosted by Kitty Koelemeijer, Douwe talks about the downside of digitalisation. He highlights the urgent need for decentralisation, interoperability and data sovereignty in order to build a sustainable digital world for the future.

Kitty Koelemeijer is a professor of marketing at Nyenrode Business University and director of the Center for Marketing & Supply Chain Management in the Netherlands. In her podcasts, Kitty interviews entrepreneurs and thought leaders about topics related to technology, innovation, management and business.

ORIGINAL PODCAST

GET IN TOUCH

INNOPAY

VIDEO

How should the retail sector react to the power of the Big Techs?

29 January 2022

Retail is one of the industries that has been most dramatically transformed by the digital revolution in terms of the rise of e-commerce. Over the past two decades, there has been spectacular growth in online shopping which has changed the face of the retail landscape. This shift has been further strengthened and accelerated by the lockdowns introduced as part of the anti-COVID-19 measures.

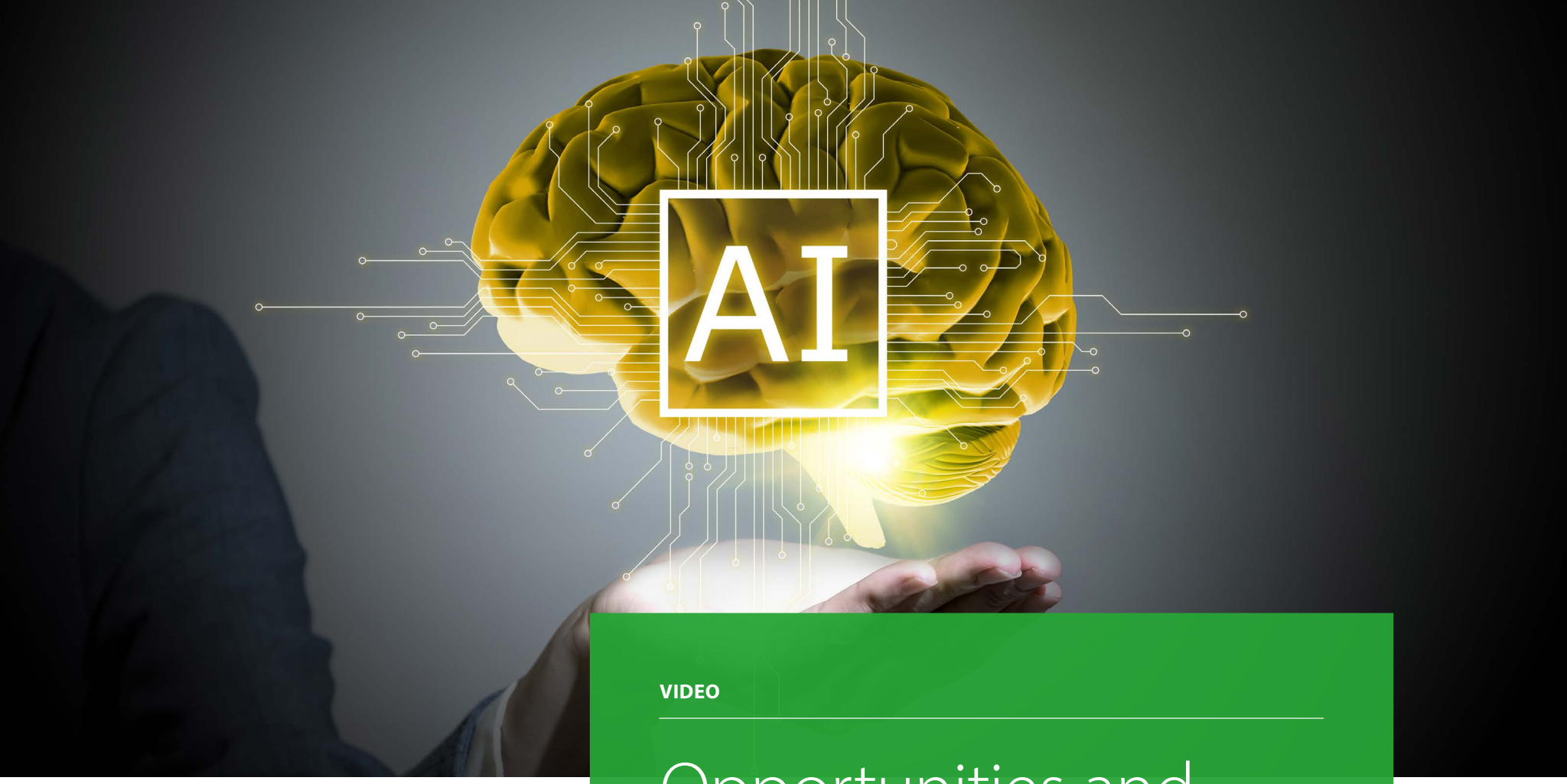
In Q1 of 2021, Amazon's profits rose by 220% to US$8.1 billion and Etsy reported a net profit of US$143.8 million, representing a year-on-year increase of 1,048%. At the same time the profit of Shopify, the software company that makes it easy for vendors to open a web shop, grew by 110% to US$988.6 million.

In this latest broadcast available through De Nieuwe Wereld's YouTube channel, journalist and philosopher Ad Verbrugge discusses the impact of these developments on the retail industry with three experts: Michiel Vos (CEO and founder of Zupr), Wouter Seinen (partner at Pinsent Masons) and Douwe Lycklama (founding partner at

INNOPAY). What's going on exactly? What are the pros and cons of the growing power of e-commerce platforms from a retail perspective? Are there alternatives to the platforms? And how important is the sustainable use of data in this context?
This broadcast is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

ORIGINAL VIDEO

GET IN TOUCH



VIDEO

Opportunities and threats of artificial intelligence

25 February 2022

What is artificial intelligence? What are the associated opportunities and threats? And how important is the sustainable use of data? In our talk show on 'Opportunities and Threats of Artificial Intelligence', Ad Verbrugge discusses these and other questions with leading experts.

The Dartmouth Conference in 1956 is widely regarded as the start of artificial intelligence (AI) as a field, which means that AI has been around for more than 60 years. However, thanks to new and more powerful processors, the pace of advancement has really gathered speed over the past decade. Websites use trackers and, thanks to smartphones, gathering location data is simple nowadays.

Many organisations are keen to ensure they don't miss the boat. For example, numerous products – including cars – are already being fitted with smart sensors that are capable of capturing data for future AI purposes, and energy companies have installed smart meters in people's homes. But what does all this mean in the context of data sovereignty and digital sustainability?

In this broadcast on De Nieuwe Wereld's YouTube channel, journalist and philosopher Ad Verbrugge discusses artificial intelligence with two experts: Frans van Ette (AI Programme Director at TNO) and Haroon Sheikh (Professor of Strategic Governance of Global Technologies and a researcher at WRR).

This talk show is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

ORIGINAL VIDEO

GET IN TOUCH

VIDEO

The Future of Our Digital Identity

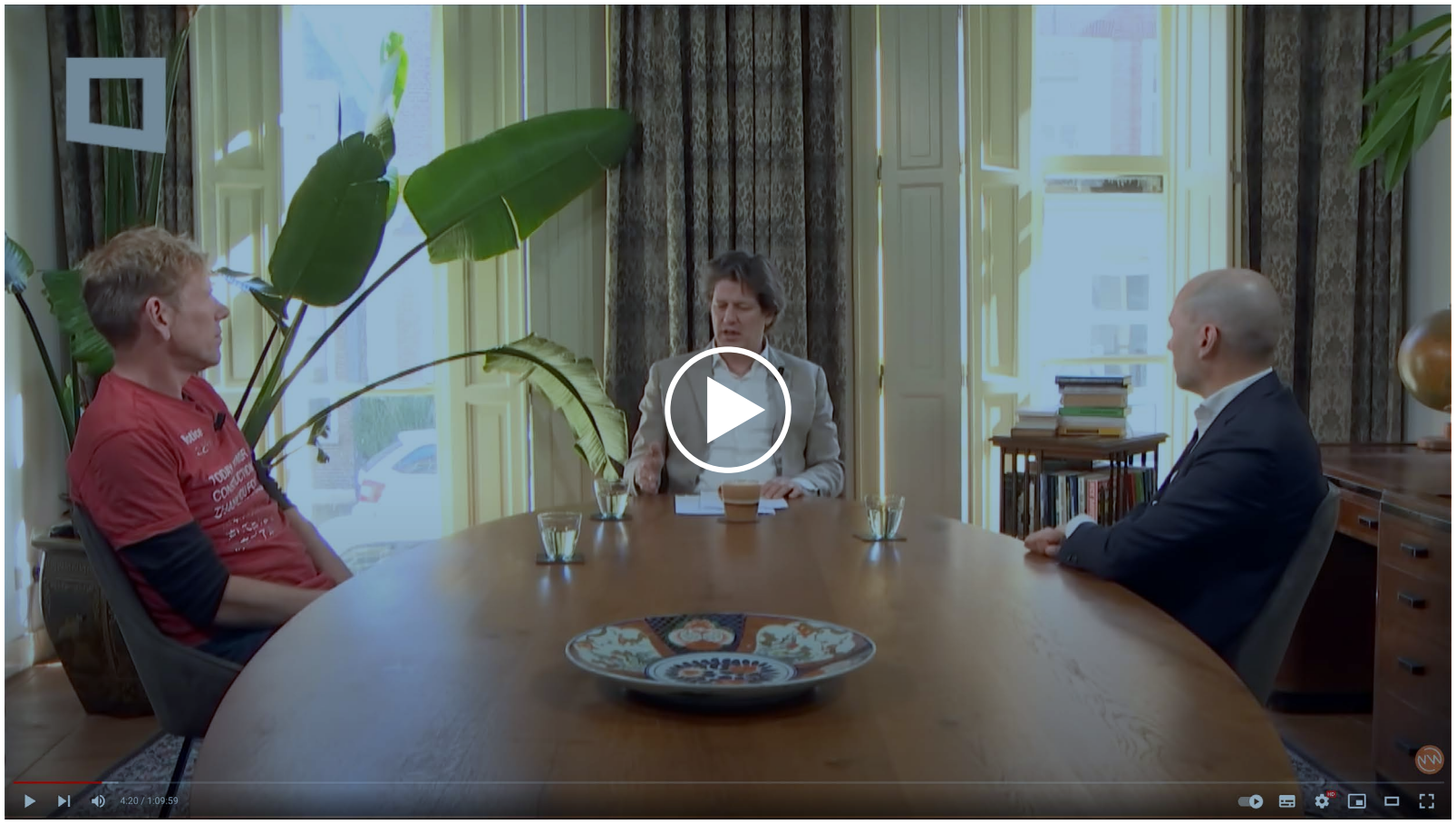
24 March 2022

What is digital identity? Why is the European Union working on a European Digital Identity Wallet? What are the associated opportunities and threats? Ad Verbrugge discusses these and other questions with leading experts in our talk show on 'The Future of our Digital Identity'.

The topic of digital identity is more relevant than ever, as illustrated by the fervent debate that accompanied the introduction of the EU COVID Certificate, for example. In the newest edition of our series of talk shows about digital sustainability, two experts discuss the latest developments related to digital identity.

In this broadcast on De Nieuwe Wereld's YouTube channel, journalist and philosopher Ad Verbrugge explores the importance of digital identity with Jaap-Henk Hoepman (Senior Lecturer at Radboud University Nijmegen) and Vincent Jansen (Partner at INNOPAY).

This talk show is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.



ORIGINAL VIDEO

GET IN TOUCH

VIDEO

Digitalisation in education – necessary, beneficial or overrated?

25 April 2022

The coronavirus pandemic has further accelerated the digital transformation in many areas of society, and education is no exception. In the latest edition of the talk show on digital sustainability, Marjan Hammersma – Secretary General of the Dutch Ministry of Education, Culture and Science – discusses the opportunities and threats of digitalisation in education. The broadcast is now available online.

The coronavirus pandemic has further accelerated digitalisation in many areas of society, and education is no exception. Ever-more digital learning resources are being developed, including adaptive learning material, virtual-reality applications, knowledge platforms, educational games, digital blackboards and multimedia lesson formats. Data is increasingly being used in learning management too, such as in performance management systems, progress dashboards and to conduct 'learning analytics' based on data collected about learners and their contexts.

All these developments come with the promise of improving education – but how exactly? And are they really improvements? Or do we need to acknowledge that digitalisation also has its downsides, and adjust our expectations accordingly?

In this broadcast on De Nieuwe Wereld's YouTube channel, journalist and philosopher Ad Verbrugge discusses digitalisation in education with Marjan Hammersma (Secretary General of the Dutch Ministry of Education, Culture and Science) and Linda Kool (Coordinator of the Digital Society team at the Rathenau Instituut).

This talk show is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

This episode on the changing role of banks is part of a series of broadcasts organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

Did you know?

Since the start of this year, businesses, educational institutions and public bodies work together on the development of sector-level agreements that will facilitate convenient, secure and trustworthy access to digital educational resources in the Netherlands. The aim is to make it easier and safer for providers of primary, secondary, special and secondary vocational education to make use of digital applications so that they can offer future-proof education and continue to get the best out of pupils and students. For more information, visit: www.edu-v.org (Dutch content only)

ORIGINAL VIDEO

GET IN TOUCH

VIDEO

Digital sustainability in agriculture and food production

25 May 2022

Digitalisation in our food system has made agriculture more effective and food production cheaper in recent years. The availability of data is crucial, but that requires transparency and trust throughout the entire agrifood chain.

Precision farming is heavily dependent on the availability of data. Data from technologies such as GPS and laser scanning enable farmers to make more efficient and effective use of production resources, such as by precisely deploying fertilisers and pesticides.

A study by Rabobank reveals that farmers are largely willing to share their data with other parties in the agrifood chain. However, 15% of the farmers surveyed regard a lack of clarity about who owns business data as a disadvantage of precision agriculture. Moreover, 9% of the respondents indicate that they first want to know who will be

regarded as the owner of business data before embarking on a precision farming approach.

How important is it to further digitalise the agricultural sector? What are the pros and cons? And what about the sustainable use of data?

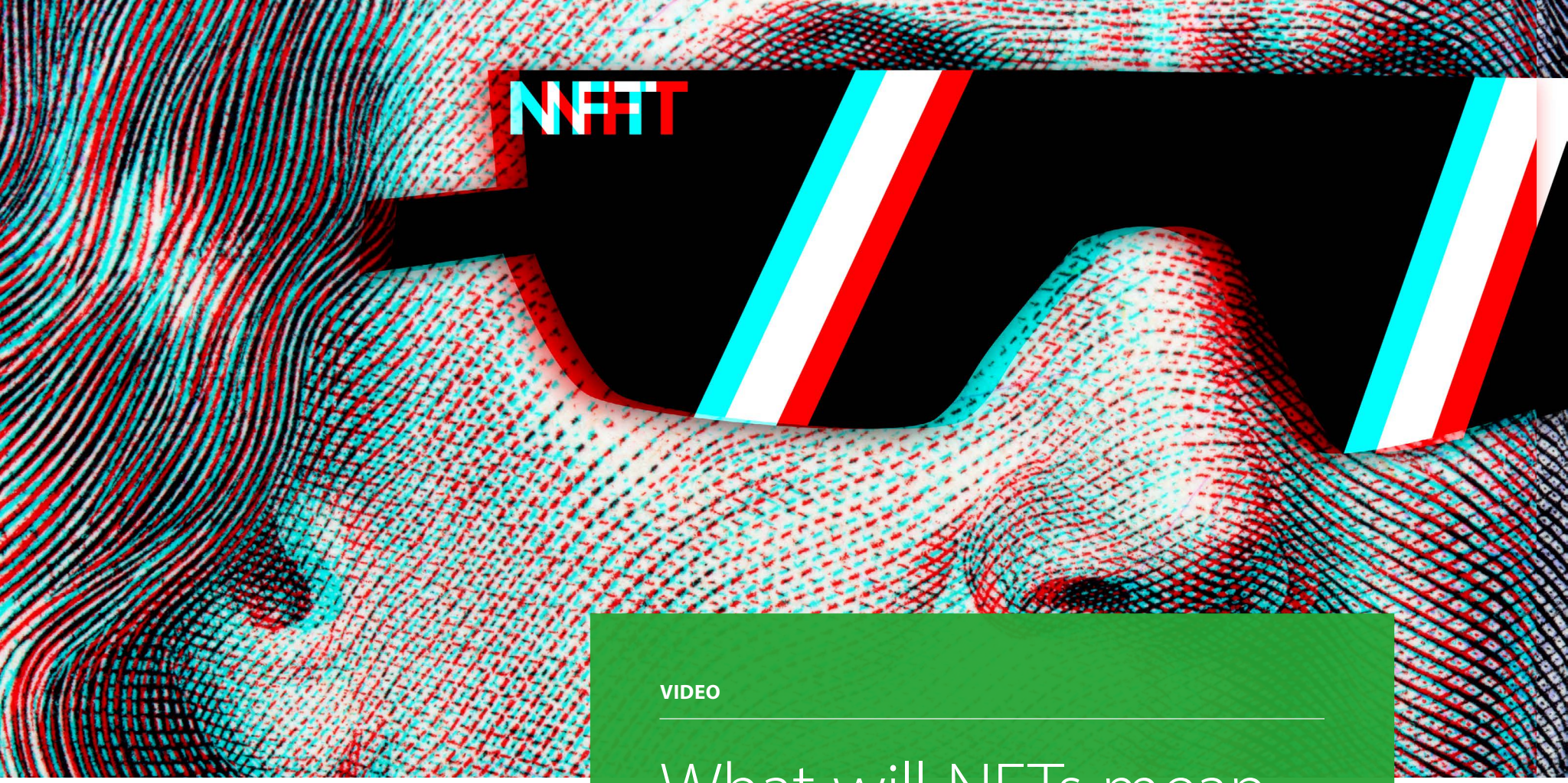
In this broadcast of De Nieuwe Wereld's YouTube channel, journalist and philosopher Ad Verbrugge discusses digitalisation in agriculture and food production with Fred van Heyningen (CEO of Nature's Pride) and Guus van Heijningen (CEO of PEAX data).

This talk show is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

This broadcast on cryptocurrencies is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

ORIGINAL VIDEO

GET IN TOUCH



VIDEO

What will NFTs mean for the cultural sector?

26 June 2022

NFTs (non-fungible tokens) are everywhere these days – from music and art to food – and shrewd traders can seemingly make millions from them. An NFT is a digital item that represents objects from the real world such as art, digital objects like weapons from video games, and even tweets. They are bought and sold online, often with cryptocurrency, and they are generally encrypted with the same underlying software as many cryptocurrencies. So what will they mean for the cultural sector?

NFTs are especially popular in the art world because they allow artists to profit from their work in new ways. For example, they are no longer dependent on galleries or auction houses for buying or selling their art. Thanks to NFTs, artists can now sell their creations directly to consumers instead.

So do NFTs signal a revolution in the art world? What does the digital art landscape look like today, and in which direction is it heading? In this broadcast on De Nieuwe Wereld's YouTube channel, Martijn van der Linden discusses the impact of NFTs on the cultural sector with Gustaaf Dekking (an innovation strategist for the art world) and Dennis IJlst (a researcher in new finance).

This talk show is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

ORIGINAL VIDEO

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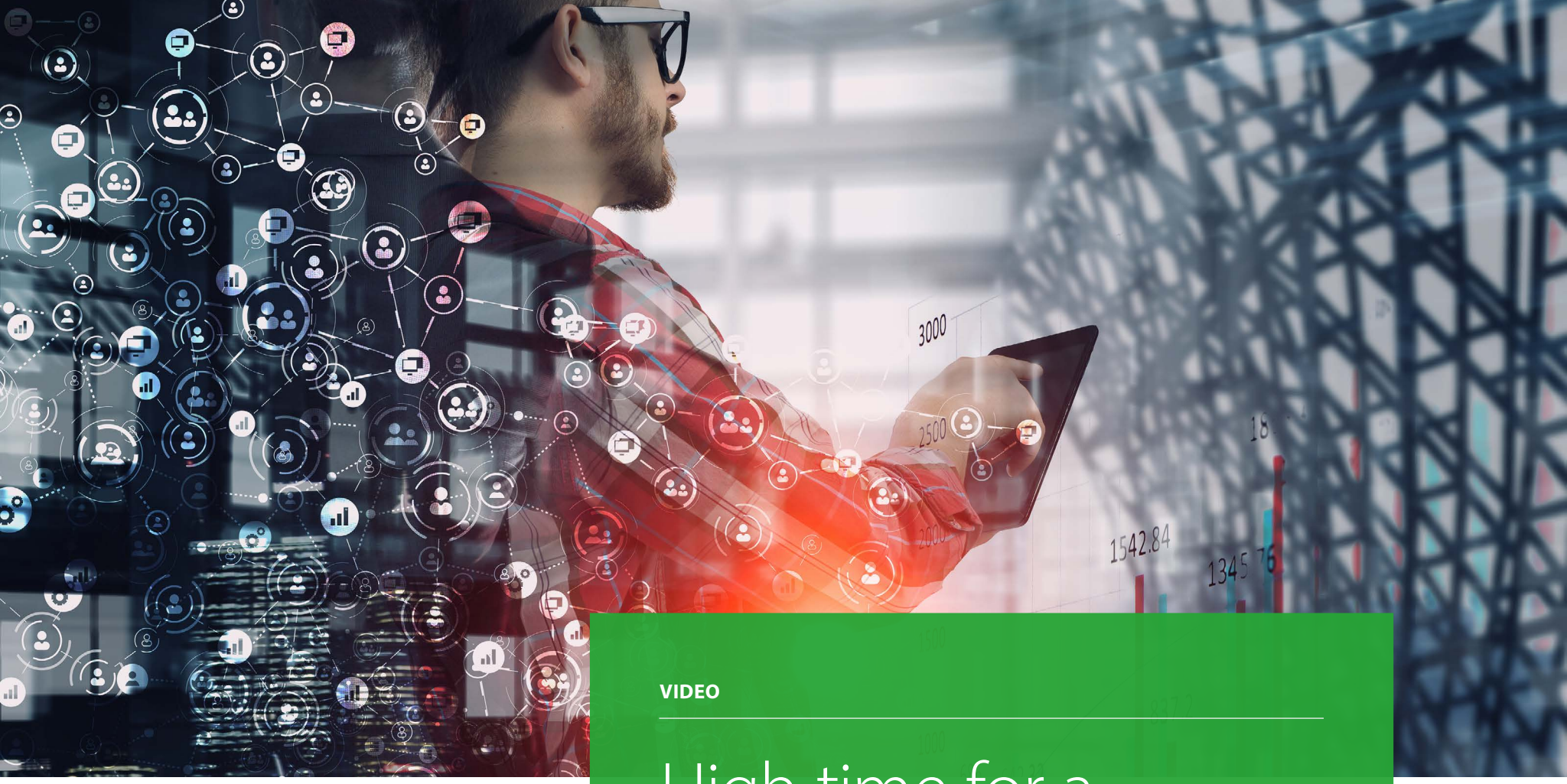

VIDEO

High time for a new data economy: from centralised to decentralised

27 October 2022

Despite legislation such as GDPR, people have lost the right to use and control their data, which is leading to growing resistance to data being collected and stored in central silos. At the same time, there is a paradigm shift from the centralised handling of data to a decentralised approach.

Earlier this month, we organised a talk show called 'High time for a new data economy: from centralised to decentralised'. In this special edition that took place with live audience philosopher Ad Verbrugge talked to Mladen Sancanin (director of innovation, data services and research at PGGM), Robert Reinder Nederhoed (blockchain entrepreneur) and Douwe Lycklama (founder of INNOPAY).

This talkshow about a new data economy is part of a series organised by De Nieuwe Wereld and INNOPAY on the topic of digital sustainability.

ORIGINAL VIDEO

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