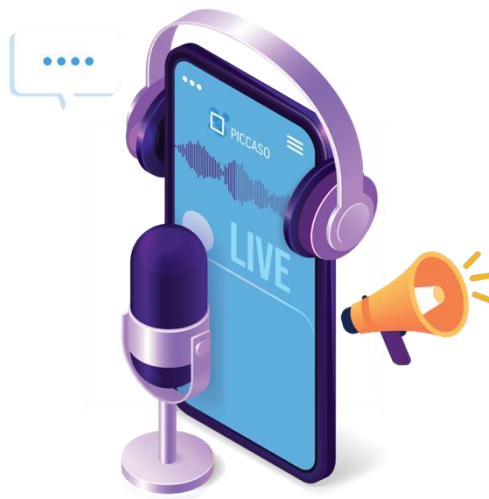




# Privacy & Security Insights with **PICCASO**



## **Blockchain and Privacy - are they contradictory?**

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## Blockchain and Privacy - are they contradictory?

They say that money makes the world go round. Whether this is true or not, it is certainly the case that in an increasingly digitised and global economy, the digital world appears to be without traditional borders, and economic impacts can be felt more quickly and significantly than ever before. A huge shift has been made toward digital money, and with our lives being revolutionised by the internet, we are seeing a new trend for money and other crypto assets to become decentralised through the evolution of distributed ledger technologies such as blockchain. Cryptocurrencies such as bitcoin are an example of a decentralised digital currency, with no central control, where bitcoin transactions are verified by network nodes through cryptography and recorded in a blockchain.

With the value of crypto assets rising to three trillion in 2021 and then falling in value by 75%, there is both opportunity and risk in this digital arena, which despite the concerns around security, governance, anti-money laundering and privacy, continues to grow and evolve globally and at record speed.

Beyond the market forces and innovators, we are now seeing governments and regulators across the world developing strategies and launching consultations on the possibilities of central bank digital currencies ("CBDC's") and developing road maps on how to regulate digital assets, particularly in the context of financial services. It is therefore also about time that we explored some of the privacy issues associated with the crypto assets that rely on the blockchain to bring together participants, both corporate and individual, from across the world.

By way of general explanation, blockchain is a computer program that serves as a shared unchangeable ledger that is transparent and provides a secure digital record of transactions. Each block contains data on an individual transaction such as the date, time and amount and is linked by a cryptographic hash. Each block forms part of an ever-growing chain making blockchain transactions irreversible. This allows participants to readily verify and audit transactions.

Given that much of the data on blockchain is also personal data, and more than two thirds of countries now have laws governing the use of personal data, there is an increasing urgency to consider the relevant privacy issues blockchain raises. The Bank of England and HM Treasury publication on the Digital Pound in February 2023 has explored a number of the privacy issues related to CBDC's, and below are outlined some of the perceived tensions between current privacy laws and the realities of how the blockchain operates.

On the face of it, blockchain offers some welcome features when it comes to crypto asset transactions, including security, transparency, immutability of transactions, auditability, and a decentralised and global model. However, the very nature of some of these features also raises a number of privacy concerns and potential conflicts as outlined below:

<b>Crypto asset features</b>	<b>Data Protection Requirements</b>
Borderless by design allowing data to flow freely	Data transfer restrictions and compliance requirements
Immutability of recorded transactions	How can data subject rights such as the right to correction and erasure be exercised?
The addition of new blocks may be inconsistent with the original purpose	Can purpose restrictions on data processing be sufficiently imposed via smart contracts
Decentralised and public nature	How do concepts of controller/processor apply, and what is the relevant jurisdiction?
New blocks embed previous data for resilience	How can concepts of data minimisation apply when data continues to be added and is never deleted?
Transparency and auditability	How can confidentiality concerns and “do not process” privacy requests be addressed?
Security	In the event of a breach, who is responsible for redress?

It is clear that there is much to still resolve as blockchain technology and the crypto assets which leverage this new technology evolve. In an ecosystem built on a predominantly decentralised framework which grows and evolves through ongoing use, it is a challenge to find ways to embed privacy by design principles in this dynamic framework and to determine how regulators will assert jurisdiction and enforce requirements where it is unclear whether participants are acting as controllers or processors or both.

Now is the time to embed privacy by design as blockchain technologies move from experimental and early-stage innovations to more established solutions within regulated sectors and become increasingly accessible to consumers. The opportunity for the whole of the privacy community (innovators, DPOs, regulators, thought leaders) to engage and help navigate the way forward to a robust, accountable, and trustworthy ecosystem is now. This is a hugely exciting inflection point, where the existing privacy concepts may need to flex and adapt to novel technological challenges, and innovators may need to be creative about solutions – there is everything to play for.

What do you think could be the privacy strengths for the blockchain going forward?

Vivienne Artz  
 PICCASO Vice Chair  
 6th November 2023

\*The views expressed are those of the author and do not constitute legal advice



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## About us:

We are a UK based non-for-profit privacy special interest group, led by seasoned volunteers who are senior leaders in privacy and data protection.

The primary aim of PICCASO is to create a community of professionals that share the value of exchanging 'know how', insights, clarity and explanation on specific privacy and data protection topics designed to distinguish between legal requirements, operational implementation, and strategic objectives, with the aim of greater understanding in how to achieve optimal outcomes based on good practice and thought leadership.

The PICCASO community is drawn from across the UK, Europe, and beyond, and from all industry sectors.

## Contact us:

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