

# Blockchain's revolutionary potential revealed

Slammed by JP Morgan, banned in China, its name synonymous with drug deals and data breaches, there's no doubt that Bitcoin has gone mainstream.



Launched in 2009 in the wake of the financial crash, it was the first of its kind, and many considered it a cursory novelty in the beginning. Yet this digital money continues to defy expectations, becoming the catalyst for an emerging cryptocurrency industry. While investors speculate about its future, selling opportunities amidst a cautionary trading environment, it is the technology which underpins Bitcoin which is now heralded as the true 'disrupter' of our times.

Blockchain is a fairly dull idea to explain. When two parties agree a transaction and Bitcoins are exchanged, a block forms around them preventing those bitcoins being used again by the person spending them. The technology solved the 'double-spending error' as each block becomes an immutable record confirming money has changed hands. As currency passes

on, chains of blocks become established where each block identifies with the previous block making it possible to trace exchanges back to where they began. Creating this 'distributed ledger' enables distributed control and verification of transactions in the chain.

So, what's the big deal? According to digital strategist and Blockchain expert, Kate Baucherel, the implications of the technology are huge. Currency aside, distributed immutable records (Blockchains) are now mooted for other types of exchange. These include for use in identity processing (proving who you are), asset tracking (proving previous ownership) and even within the burgeoning Internet of Things industry (e.g. preventing centralised control of CCTV data). For 'the man on the street' it could mean faster, smoother and safer

distribution of data by removing layers of bureaucracy and empowering individuals.

Much of this is hypothetical at present, of course, but Kate says we should expect profound changes once solutions emerge: "There's acknowledgment that the technology is powerful, but its true potential isn't yet realised. We don't know, for example, what the blockchain equivalent of social media will be; or what behavioural shifts will occur because of its adoption. It will, however, be massively disruptive. And the accelerating pace of change means in 20 years' time, Blockchain will have evolved a lot further than the internet did between 1997-2017."

Recent controversies surrounding Bitcoin and the subsequent restrictions on its use shouldn't stifle Blockchain innovation, according to Kate. Issues with Bitcoin lie in the unregulated nature of cryptocurrency.



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With over 2,000 different digital currencies now in circulation, Kate suggests misuse is unsurprising as it opens the door to charlatans who trade money with little real worth or value: “It’s completely different to fiat currency because there are no gold reserves and it’s not secured, but regulation will change that. People realise that regulation is needed and are working to establish adequate systems. Yes, there’ll be a protracted period of instability, but because Bitcoin is now established, it’s likely here to stay, and evolving and broadening the uses of Blockchain remain important.”

What Bitcoin, Blockchain and the subsequent discussions of security and regulation have brought to the fore, Kate argues, is a reimagining of transparency and trust online. During the early days of the internet there existed a code of trust, whereby people relied on each other’s honour when making transactions. Now that the internet is large and unwieldy, the trust

element has disappeared and this can be seen in the pervasiveness of encryption. Kate warns us, though, that encryption’s days are numbered and new ways to keep personal data safe will evolve: “Pretty soon everything will be crackable and the solution may exist somewhere between the two extremes of transparency and anonymity. Blockchains facilitate semi-transparency by protecting data in immutable records while allowing the tracking of transactions. There’s no reason to label transparency as a bad thing, because trust can be built over time through observing behaviours.”

The assumption that Blockchain and Bitcoin facilitate criminal activity, in this sense, is misleading. Following the WannaCry ransomware attack in April, for example, no one claimed the ransom because it was paid into a Blockchain wallet. If anyone accesses it, they will be immediately traced. The recent

Kate Baucherel



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Equifax hack, too, hints at the potential for Blockchain to provide greater reassurance to victims of cyber-crime. Kate explains: "If Equifax data were stored in Blockchains it would have been impossible to access it all in one single hack because data would be separated into different blocks. Even if you stole data in one block, it would be impossible to claim a whole identity without the entire algorithmic backup. Blockchains retain data transparency while preventing data theft in a form which is usable."

With the General Data Protection Regulation (GDPR) enforceable from May 2018, Kate sees conversations focused on developing solutions from Blockchain technology as timely and vital. This regulation is much tighter than those which existed previously, requiring businesses to guarantee data transparency and protection while placing authority of the use of data in its owners' hands. GDPR is aimed at larger firms and Kate stresses that encouraging big companies – where there's sizable investment and pay-off in terms of improved services and cost savings – to implement Blockchain technologies first is necessary to accelerate the overall pace of adoption.

Following 25 years working in a variety of finance roles up to FD level – as the "accountant who could do tech" – Kate established Galia Digital, a freelance consultancy in 2012, which advises businesses developing or using emerging technologies. Working from Teesside, Kate believes the region has the potential to play a key role in shaping Blockchain's future: "The North East is home to some talented people with extraordinary ideas. However, the tech-economy is still relatively new, and as well as needing more established businesses driving innovation, there should be clearer ways

for people with great ideas to make the right connections and turn their ideas into marketable products. Once we achieve a start-up ecosystem with these elements, something amazing will emerge here."

When she's not working with clients, Kate travels the world speaking at international conferences and contributing to the literature on the use of digital tools and the legislation and ethics surrounding them. Like many technology experts, however, Kate is also an avid fan of science fiction and in October she published her debut novel, *Bitcoin Hurricane*. The story introduces the mysterious @SimCavalier, a cyber-crime fighter operating in 2040s London who, while defusing a routine cyberattack in a city bank, uncovers a major global threat. Originally planned as non-fiction book, the challenge was laid down to make the topic of cyber-security more accessible, in the form of science fiction. Kate admits she knew little about writing fiction prior to embarking on the 12 month process. Now, however, she's caught the bug and revealed a @SimCavalier series is in development: "I love writing, but you've got to write about what you know. I don't want to end up writing about things that are obsolete, I want to keep learning, and I expect the output of what I learn will end up coming out in more novels."

To find out more about Kate Baucherel's work as a digital strategist, speaker and author please visit: [www.galiadigital.co.uk](http://www.galiadigital.co.uk)



