Why SMEs Need to Pay Attention to Blockchain

More than just cryptocurrency, blockchain can be a powerful tool for SMEs looking to increase efficiency, productivity and security. The SME4DD project shows you how.

Hear the word 'blockchain' and you're likely to think of Bitcoin. And while blockchain is what makes Bitcoin possible, cryptocurrency is but one of the many applications that depend on this decentralised technology.

"Although cryptocurrency was the originator of the blockchain concept and the first such system that truly introduced the world to decentralised IT systems, blockchain offers a solution to many other challenges," explains Dr. Imre Kocsis, a Senior Lecturer at Budapest University of Technology and Economics (BME), a leading technical university in Hungary and a SME4DD project partner.

But what exactly is blockchain?

According to Kocsis, blockchain is a decentralised, distributed, and immutable digital ledger that records transactions across many computers in a highly secure and transparent manner. Each new transaction is grouped into a 'block', which is cryptographically linked to the previous block, thus forming the 'chain' in blockchain.

"By distributing this ledger and using consensus mechanisms, blockchains eliminate the need for a central authority, enabling trusted and secure peer-to-peer interactions not only for cryptocurrencies, but also for supply chain management and data sharing," adds Kocsis.

A one-two punch of trust and security

It is this one-two punch of trust and security that makes blockchain such a powerful business tool. For instance, it's why logistics companies use blockchain technology to manage and track assets across supply chains.

"Because supply chains involve many different players, there tends to be an inherent level of mistrust," says Kocsis. "Blockchain offers a single, unbiased ledger showing which container is where and who is responsible for said container – it can even attach a cryptographic fingerprint of the shipping documents and bills of landing to a specific transaction."

Other examples of blockchain applications include managing smart metres, tracking energy use, managing documents, invoicing and making payments, organising customer procedures… the list goes on. "Really, any transaction that involves cross-organisational collaboration and that needs a boost in trust and security is ripe for 'blockchainification'," notes Kocsis.

An attractive option for SMEs

This added layer of trust and security is particularly attractive to SMEs, who see it as a tool for reducing fraud, fostering credibility with financial institutions and consumers, and improving operational efficiency within supply chains and lending processes.

It can also help with raising capital and managing investments.

To illustrate, Kocsis highlights the construction sector's use of tokenisation, the process of replacing sensitive data or assets with non-sensitive, unique symbols (i.e., tokens) to protect them or facilitate digital representation and trading. In the construction sector, by tokenising a house or a building project, a developer can enable, for example, fractional ownership, easier funding, enhanced liquidity, and greater transparency.

"By breaking large assets into smaller, tradeable units, tokenisation can make investments more accessible to a broader range of investors, allowing developers – or any SME for that matter – to raise more capital more efficiently," says Kocsis.

Checking and validating certifications and credentials

Another interesting area in the blockchain arena is Self-Sovereign Identity (SSI), a digital identity management approach where individuals have complete control and ownership over their digital identities and personal data, storing it in a digital wallet on their device rather than in a centralised database. "In a centralised database, anybody who operates the database can take that identifier away from you," remarks Kocsis. "But if your identifier is in a blockchain, by definition, there's no single party who can take that away from you."

Beyond protecting individuals against identity theft, SSI can help SMEs and jobseekers. To show how, let's again turn to construction, a sector that – like many SMEs – is facing a talent shortage.

One issue driving this shortage is that if a building professional gets trained in one country, that certification may not be recognised in another because there's no easy way of checking its validity. However, with SSI, one's certification could be stored in a digital wallet. When that professional goes to another country, they can show their digital certification and have it checked and verified via the blockchain. If it is, the position can be filled – a win-win for both the hiring SME and the jobseeker.

"This same concept can be applied to a range of certifications, qualifications and diplomas that SMEs regularly need to check, potentially streamlining the recruitment and hiring process," adds Kocsis.

Putting potential into practice with SME4DD

Clearly, blockchain offers a wide range of potential benefits to SMEs. But how does an SME put that potential into practice?

A good place to start is the SME4DD project.

Funded under the Digital Europe Programme, the project offers a wide range of structured courses on using blockchain. "Our courses run the gauntlet, starting from blockchain basics to intense courses on building a blockchain project," says Kocsis.

Taught via project partner BME, each course focuses on using real-world use cases. "A very popular component of our courses is the 'bring your own problem' session," says Kocsis. "This is a chance for participants to brainstorm how blockchain could potentially be used to help solve a real business challenge."

All courses are led by experts in the field, with some taught online and others in person at BME.

More information can be found here.