BIZCOMMUNITY

Blockchain technology a game-changer for the construction industry

For increasingly complex construction projects, blockchain technology could prove to be a game-changer, according to Databuild CEO Morag Evans, especially when role players have difficulty agreeing on project fundamentals.

Source: Supplied

“Blockchain can play a significant role in enhancing productivity and efficiency on job sites, while also helping to combat fraud and corruption by improving transparency and accountability among stakeholders,” she says.

Fundamentally, blockchain is used to record and track transactions, amounts and contracts between parties involved in a project across a network of connected computers. This record of events comprises blocks of information which are linked together in a chain to form a detailed and comprehensive history of the project from its inception. Because the data is encrypted, it’s also secure and once authenticated, cannot be duplicated, changed or deleted.

The technology holds significant benefits for the construction industry in various areas, says Evans.

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Smart contracts

Blockchain can be used to create smart contracts in which the terms and conditions pertaining to the project are automatically enforced as the project progresses.

“Because onerous human approval processes are eliminated, invoices can be paid immediately when jobs are completed, or penalties imposed if the terms that were originally agreed to are not met,” Evans explains. “This is not only effective in holding contractors to account, but the resultant decrease in disputes and subsequent late payments helps to improve cash flow among contractors, which is particularly beneficial to smaller companies.”

Supply chain management

An automated contractual process means supply chains and resources can be better managed.

“The days of using spreadsheets, email, phone calls and even text messages to manage supply chains are numbered," Evans continues.

“As a single source of reference for all parties involved in a project, blockchain technology enables any delays or change orders to be traced to the point of origin. This accelerates project delivery in a manner that is fair and transparent to all participants. The end result is holistically enhanced trust within the industry.”

Curb corruption

No one can deny that fraud and corruption are major concerns in South Africa’s construction industry.

Conventional project management systems are particularly vulnerable to unethical behaviour. With blockchain, however, project transparency is elevated because all the data is accessible to everyone on the network, so any unscrupulous dealings are immediately exposed. This helps to curb any intended fraudulent activities.

How digital tech can hamper crime on construction sites

28 Jan 2022

The road ahead

While the potential benefits of blockchain technology in construction are enormous, it is not without its challenges, Evans points out.

“South African construction companies have been slow to adopt digitalisation in their operations, and few currently have the technological expertise to implement the virtual infrastructure required by blockchain technology. Additionally, for blockchain to be fully effective, it requires investment by all parties involved in a project, which makes it an expensive exercise.

“These challenges can be overcome, however,” she concludes. “As with any other technological innovation, blockchain will become more affordable as the market for the technology develops and adoption increases.

“Consequently, construction role players should begin educating themselves now on the benefits of this technology so that they are not left trying to catch up to their competitors when it is too late.”