

How blockchain can eliminate fraud, waste & abuse

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The real value of blockchain extends far beyond cryptocurrency. Its applications are being explored as a means to reduce or even eliminate fraud, waste and abuse in healthcare.



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“Blockchain is a database or ledger that maintains a continuously growing list of records or transactions,” said Dr Ntuthuko Bhengu, panel member of the Health Market Inquiry and commissioner: SA National Planning Commission at the Board of Healthcare Funders of Southern Africa (BHF) conference in Cape Town.

Blockchain has five distinctive characteristics:

1. Distributed

A group of servers or nodes maintain the entries (known as blocks) so that no central authority is required to approve transactions

2. Permitted

In a permissioned blockchain only appointed nodes are given the authority to validate blocks of transactions and only participants in the network can create smart contracts or transact on the network.

3. Secure

The database is an immutable and irreversible record. Posts to the ledger cannot be revised or tampered with, not even by the administrators of the database.

4. Trusted

The distributed nature of the network requires computer servers to reach a consensus, which allows for transactions to occur between unknown parties.

5. Automated

The software is written so that conflicting or double transactions are not written in the data set and transactions occur automatically.

Categories of blockchain use

There are six categories of blockchain use case, which address two major needs:

1. Recordkeeping: Storage of static information

- **Static registry**

Distributed database for storing reference data. For example: Land registry; patents; food safety & origins

- **Identity**

Distributed database with identity-related information and particular cases of static registry treated as a separate group of use cases due to extensive set of identity-specific use cases. For example: Identity fraud; civil registry & identity records; voting.

- **Smart contracts**

Set of conditions recorded on the blockchain, triggering automated, self-executing actions when these predefined conditions are met. For example: Insurance claim payouts; cash equity trading; new music releases.

2. Transactions: Registry of tradeable information

- **Dynamic registry**

Dynamic distributed database that updates as assets are exchanged on a digital platform. For example: Fractional investing; drug supply chain.

- **Payments infrastructure**

Dynamic distributed database that updates as cash or cryptocurrency payment are made among participants. For example: Cross border peer-to-peer payments; insurance claim. **Other** Use case comprising several of the previous groups and standalone use case not fitting into any of the previous groups. For example: Initial coin offering; blockchain as a service.

Key use cases in healthcare

Bhengu said that when it comes to healthcare, 20 use cases in four key areas have been identified, namely patient consent and health data exchange, payments and claims, drug supply chain provenance and traceability and rethinking clinical trial management.

“The Council for Medical Schemes would have access to every transaction between medical schemes, their members and practitioners. Blockchain has the potential to eliminate financial fraud.

“If authorities are serious about tackling this scourge, they need to invest massively in technology, particularly blockchain. The key considerations include how fast or slow government and regulators adopt the technology. The value chain will have to be rearranged, but this won't happen overnight.”

In addition, the South African industry needs to be truly committed to eradicating fraud including the medical schemes, administrators, practitioners and health establishments.

Finally, he said healthcare is no longer local. “Google has three companies working on healthcare technology, each with the budget equal to the economy of a small country.”

ABOUT NICCI BOTHA

Nicci Botha has been wordsmithing for more than 20 years, covering just about every subject under the sun and then some. She's strung together words on sustainable development, maritime matters, mining, marketing, medical, lifestyle... and that elixir of life - chocolate. Nicci has worked for local and international media houses including Primedia, Caxton, Lloyd's and Reuters. Her new passion is digital media.

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