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The potential of blockchain solutions for the aged care sector

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As a linked digital ledger, blockchain technology affects how we store and share data. So, can it revolutionise health care for aged and community care – or is it only as strong as its weakest link? With the sector experiencing increased demand for data transparency and robust data security, now is the time to start talking about the potential of blockchain solutions.

Many of today's social impact movements are shifting focus to community, values and trust – built on a core of secure blockchain technology. Therefore, the question needs to be asked, and debated: Who will form the trusted private network for the aged and community care sector?

Blockchain is linked in many people's minds with digital currencies like Bitcoin. So, what does it have to do with community or trusted private networks? Blockchain is a digital ledger that chronologically and securely records data.

It is both decentralised and distributed, which means the process is shared across multiple computers in different locations rather than having data in one single location.

The validation of transactions on a ledger can be done via a range of methods: centralised, decentralised or distributed. Traditionally, ledgers were centrally held and protected by private security measures.

Blockchain offers an open (available to many stakeholders) and decentralised (not owned by one gatekeeper) yet highly secure electronic ledger. In fact, contrary to the traditional secure, centralised ledger, decentralising is a key part of the process to make historical transactions harder to corrupt, indeed immutable.

However secure the final product is and regardless of the selected method, all ledgers involve working with participants, where a high degree of trust is required with those who have access to the stored information.

Generally part of the blockchain process includes miners, which are people with specific software programs and algorithms who dig for bitcoins. The role of miner is critical to the blockchain as it is that distributed group of people and their computer programs that authenticate and verify the blocks before they are added to the blockchain to form the official record.

Interestingly, it is the fundamental design core to blockchain technology that is likely to benefit the aged care industry – but it also poses a chief challenge. And that challenge is related to who will be in that trusted distributed network, who will be the aged care sector miners, and who will you – your organisations and the sector – trust?

Mining works nicely with cryptocurrencies, such as Bitcoin or Ethereum because the transactions are about the currencies, and the payment to the miners is created from the cryptocurrencies. In fact, new currency is simply created for the payment. Payment is not deducted from the transaction – new cryptocurrency is just created. But what about other uses?

If a transaction is about your assets or care-related records and cryptocurrency payments are decoupled from the sector's blockchain transactions, what will be the incentive for people to be the miners validating the blocks and maintaining the distributed network? In other words, how will miners of this aged care blockchain be paid, and what with?

Or will the process of mining actually be removed from the sector's blockchains? Can the users of the system themselves be the miners? Perhaps they can – via less computationally intensive algorithms. Think normal banking and government encryption levels, rather than the deliberately highly intensive bitcoin calculations.

In this era of increasing demand for data transparency among stakeholders but also increasingly stringent data security laws, now is the time to start the dialogue on blockchain solutions. What is needed is a hearty sector debate considering both the potential and the challenges around establishing sector-specific permissioned blockchains – where permissioned implies permitting entities to sign off on the blocks created, with a consensus scheme to ensure that the resulting chain of blocks represents a true consensus between the entities.

This means no currencies no separate miners but consensus on the data and a guarantee of a high level of data security as required by the aged care sector.

But again, this raises another question: Who will form the consensus? I suggest that current trends provide the answer: We will. In which case, the time to start thinking – and debating – is now.

About the Author

Sonja Bernhardt OAM is a director and CEO of ThoughtWare, creators of the award-winning ionMy: Governance, Risk, Compliance software platform, used by residential aged and community care and not-for-profit organisations Australia-wide. In her spare time, Sonja is a commentator on emerging technologies on ABC Radio and cruise ships.

ThoughtWare has started developing blockchain solutions as part of the overall Governance capabilities of the ionMy platform, where the first stage to roll out will be Asset Governance.

Visit ionMy – Governance, Risk & Compliance at www.ionmy.com.au or call 1300 659 506 to start a conversation.



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