

# OPINION



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## BLOCKCHAIN TECHNOLOGY BOON TO HEALTHCARE INDUSTRY

It is making innovations possible

**T**ECHNOLOGY has evolved rapidly since the days of James Watt's steam engine that launched the first industrial revolution in 1760.

The recent 2019 Beyond Paradigm Summit saw the social humanoid robot, named Sophia, make her first appearance in Malaysia.

It engaged in banter with Prime Minister Tun Dr Mahathir Mohamad.

Sophia exemplified new ways of future communication using artificial intelligence, big data and the Internet of Things.

Given this accelerated technology advancement, woe betide any firm that does not update its technology.

Take Nokia, a once-leading firm whose mobile phones were ubiquitous in the late 1990s.

Nobody would have predicted that it would lose market share so rapidly that it had to be sold to Microsoft in 2013.

Nokia did not keep pace with prevailing technologies such as the touchscreen.

While its Symbian operating system gave Nokia an early advantage, the system was no match for Android adopted by Samsung and HTC. The rest, they say, is history.

Nokia's sad decline in the marketplace is emblematic of other companies that went bust because they were slow to innovate.

Professor Michael Porter, a management guru from the Harvard Business School, considers innovation as central to a nation's prosperity as it makes businesses globally competitive.

Given the nexus between innovation and national growth, the government is keen to accelerate innovation on the back of digitalisation.

One such innovation that has received attention is blockchain technology, which has revolutionised different industries all over the world.



*Different hospitals have different management systems and these are not interconnected with one another. Blockchain helps solve these problems.*

The same holds true for the healthcare industry.

The efficiency of blockchain technology is not only revolutionising the healthcare industry but also making innovations possible.

The technology is a public digitised ledger that is decentralised and distributed. With the help of encryption technology, manipulation of data within the ledger is not possible.

The data stored on the ledger is in the form of blocks. Each block is interconnected to the preceding and the next one to form a blockchain.

The impact of blockchain technology on the healthcare industry is multi-pronged.

Blockchain technology is helping with accurate data management, fraud reduction and tracking of drugs.

With the blockchain, all the stakeholders of the healthcare system can be easily tracked.

However, there are challenges in the adoption of the technology.

For one, as the healthcare industry is adopting the technology in bits and pieces, the entire tracking of the supply chain as well as various stakeholders is not possible.

For the other, the integrated management of patient data is proving difficult as it varies from one hospital to another. Different hospitals have different manage-

ment systems and these are not interconnected. There is no single place to access the complete medical history of the patient.

Blockchain helps solve these problems.

With the help of patient records on the blockchain, it is easy to have a complete medical history of the patient.

Also, with the help of the keys and addresses of the blockchain, the patient can decide who can access this data.

It means that patient data is secure and will be available to only those few authorised professionals. Due to the foolproof nature of blockchain technology, tampering with data is not possible. That can help hospitals diagnose and treat patients in a much better manner.

Also, hospitals will not have to use their own patient data management systems.

With blockchain technology, companies are now creating digital records of clinical trials. That is why it is now possible to create a tamper-proof history of clinical trials.

For this very reason, the process of clinical trials, and the approval or disapproval of drugs and treatments are now streamlined.

The speed at which companies can conduct such trials is also increasing. As a result, the healthcare industry as a whole can benefit not only from newer

treatments and drugs but also reduction in costs to the tune of millions of dollars.

One of the advantages of blockchain technology is transparency and real-time operation. With the help of supply chain management and proper tracking with blockchain, each drug is easy to track.

Moreover, drug abuse can be integrated with the patient data management system allowing doctors and pharmacists to know right away about the drugs and medicines which the patient has consumed in the past.

Since every drug will have a proper tracking system, it will be tough to introduce counterfeit medicines in the supply chain. The tracking will involve the production steps of the drug until its consumption by the patient. And since the data on the blockchain is tamper-proof, it is easy for consumers to verify the drugs before purchasing them.

So blockchain technology is a boon to the healthcare industry.

With multiple start-ups working to integrate blockchain technology with the healthcare industry, the technology can completely revolutionise the industry and make it easy for the industry to align its interests with the patients'.

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