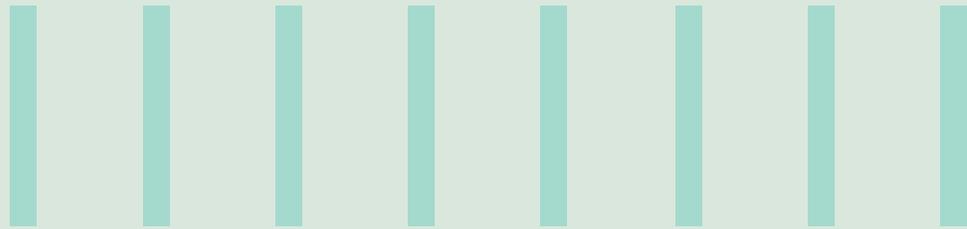




BLOCKCHAIN: CHANGING THE WAY PRODUCTS AND SERVICES WILL BE BOUGHT, SOLD, AND CONSUMED



“The technology most likely to change the next decade of business is not the social web, big data, the cloud, robotics, or even artificial intelligence. It is blockchain – the technology behind digital currencies like Bitcoin.”
– Harvard Business Review

While blockchain may not be news to the financial sector, its application within other sectors is. Blockchain technologies and cryptocurrency are digitally transforming Internet protocols, reimagining entirely new business models.

A recent report issued by the Deloitte University Press entitled 'Beyond Bitcoin, Blockchain is Coming to Disrupt Your Industry,' outlined blockchain's potential applications across industries as diverse as automotive, consumer products, energy, government, healthcare, hospitality, industrial products, life sciences, media, retail, and travel.

A Blockchain Primer

Basically, it is the Internet of Money. Blockchain is essentially a public ledger of cryptocurrency transactions (e.g. Bitcoin) shared globally and driven by a consensus mechanism that ensures transparency, trust, and accuracy for all transactions conducted.

There is no need for banks, government institutions, or other centralized

intermediaries because the blockchain is verified by all parties so that the value, use, and transactions can only be executed via unanimous agreement. Blockchain acts like a complete banking transaction history that is organized chronologically. Each block is like an individual bank statement with the entire database of transactions being shared by all parties (or nodes) in a system.

Just as the Internet became the first native digital platform for the transmission and dissemination of information, blockchain is the first native digital platform for value. And that means significant implications for businesses and consumers alike.

Implications for the Energy Sector: Decentralization and Value

The already challenged energy sector – faced with falling energy demand, depressed energy prices, and a new cost-effective capacity with clean energy – has another concern. Blockchain technologies are allowing suppliers and consumers to directly trade energy, overhead costs are reduced, and homeowners who saw solar energy as not just a cost-cutting or environmental move, but as an investment, will now see a tangible return on investment (ROI) by

becoming energy wholesalers themselves.

This month, the Australian company Power Ledger, rolled out a program to offer consumers and solar companies an easy way to buy, sell, and trade excess solar energy that is generated by homeowners' solar panels. The new system offers buyers and sellers a better value proposition than the current system where excess solar power is sold back to the grid, yielding low feed tariffs.

In short, blockchain technologies will accelerate the decentralization of power grids, which represents a shift from the expensive, inefficient, polluting centralized power grids that power most homes and companies around the world. If homeowners become the makers and traders of their own power, the cost, efficiency, and emission, the problems of today, could become a distant memory tomorrow.

Implications for the Healthcare Sector: Trust and Security

No other sector requires as much regulation or security than healthcare. That is why healthcare leaders are optimistic about the possibilities of blockchain, which could offer security and health data interoperability benefits via its privacy and trust attributes.

New models for the sharing of medical records and transactions are becoming apparent. In one fell swoop, blockchain is making health information exchanges

and all-payer claim databases a thing of the past. Whereas these legacy models require extensive member verification, blockchain does not - which eliminates the middleman, lowers cost, administrative time, and increases security between transacting parties.

Overall, blockchain systems make healthcare mobile communications and notifications easier for patients to share records with

numerous healthcare providers while maintaining security of the records. Currently, the insurer, insured, and healthcare provider all send documents back and forth, driving administrative costs up while trying to process claims. Everyone has experienced this – the endless nightmare of trying to submit claims, deal with deductibles, and appeal decisions. With blockchain, the necessary information is delivered securely

via the platform and payments can be issued automatically.

Health insurance leaders like Humana's CEO, Bruce Broussard, have been outspoken about blockchain technology, which he says is "positioned to be the next dramatic innovation in healthcare." Citing research that

claims banks stand to save US\$20 billion per year by 2022 via infrastructure cuts, Broussard believes healthcare could do the same while reducing costs and improving the patient experience.

Imagine a comprehensive database of your entire medical history from the cradle

up to now that includes every doctor visit, prescription filled, allergies to antibiotics, procedures performed, and vaccinations in every location you've received medical care – reducing errors, improving care, and empowering you as the CEO of your own health.

Implications for the Internet of Things (IoT): 'Device Democracy'

The management of trillions of daily transactions and data shared will undoubtedly require blockchains. The IoT will need a Ledger of Everything.

New business models for Internet protocols are emerging, based on blockchain technologies and cryptocurrencies that are capable of far more than their predecessors. For example, blockchain-based protocol, Ethereum, can be utilized to create 'smart contracts' and trusted databases, which are kept safe from corruption or alteration.

Similarly, IBM and Samsung introduced a platform called ADEPT, which utilizes software that authenticates 'smart contracts.' These 'contracts' might be micro-transactions between home appliances as they react autonomously to changing conditions on the grid.

Paul Brody, the global innovation leader of blockchain technology at Ernst and Young, calls this type of platform, 'device democracy.' "A humble washer can become a semi-autonomous device capable of managing

its own consumables supply, performing self-service and maintenance, and even negotiating with other peer devices both at home and outside to optimize its environment."

Such applications have the potential to change the way products and services are bought, sold, and leveraged in much the same way Uber and Airbnb have forever changed the transportation and hospitality markets.

Conclusion

Blockchain looks destined to change everything. And not just financial markets.

Blockchain is proving to be a scalable solution to a fundamental question in the digital world: "How do you establish trust between parties over a network like the Internet?" Specifically, "How do you get perfect, simultaneous, shared data between a number of different people, devices, or businesses?" The answer is blockchain

technology, which can support the transfer of any data or digital asset.

Decision-makers across industries are beginning to ask: "What does blockchain technology mean for our future?" And, "How can we start to leverage a trusted delivery system of digital goods, services, and agreements for our business?"

While it may have a long way to go, the technology is maturing and growing fast with new opportunities presenting themselves every day. If nothing else, your business needs to be prepared to meet growing customer expectations as blockchain becomes the norm in business transactions, just as Paypal, DocuSign, and Venmo have become second nature to a whole new generation.

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