MARKRUBENS - FOTOLIA

Blockchain use cases, private vs. public debate engross community

by
Sue Troy
Editorial Director

The blockchain industry is hashing out how to determine a good blockchain use case, debating the usefulness of private blockchains and mapping out how regulators might benefit.

THIS ARTICLE COVERS

Data privacy ➤

RELATED TOPICS

Compliance
Security Management
Risk management
Legal issues
Asset management

LOOKING FOR SOMETHING ELSE?

Blockchain market outlook: Hype vs. reality

The key steps to launching blockchain implementations

Time to step up your company's data governance plan

TECHNOLOGIES

Cryptography   Finance & accounting   Supply chain management

INDUSTRIES

Finance & insurance industry

If there's one thing virtually everyone in the nascent blockchain community can agree on, it's the need for valid use cases for the technology. Blockchain use cases are out there in abundance, proponents say, but pioneers in this space will need to determine where blockchain does -- and doesn't -- make sense.

Blockchain technology -- which underpins Bitcoin and other cryptocurrencies -- uses cryptography and a distributed ledger model to create what are considered immutable records of monetary and nonmonetary transactions. The fact that blockchain technology will be very valuable in the financial services space is undisputed. Big banks are throwing lots of resources at implementing blockchain -- to save money around transactions and to mitigate the disruption expected from non-banks offering financial services at a lower cost than the banks themselves.

But outside financial services transactions, how do companies determine what makes a good blockchain use case? When is today's technology good enough? Do we need both public and private blockchains? And will government regulators welcome the technology?

A panel at MIT Sloan CIO Symposium last week attempted to answer those questions.

🔖 Cautioning against blockchain fever

Anders Brownworth, principal engineer at digital payments company Circle, said the benefits of blockchain technology for the financial services industry are obvious. "I'm direct proof that [blockchain] can touch every

single bit of [the financial services industry], but that doesn't mean that those opportunities exist in other areas."

Moreover, there are trade-offs even for financial services companies. "It's slower, and it's less efficient to have a copy of everything everywhere," he said, and at least for the present, its potential is grossly over-hyped. "The blockchain has been pitched as this thing that fixes all the problems in the world, and frankly it does not."

Simon Peffers, an architect in Intel's Datacenter Innovation Pathfinding and Architecture Group, agreed that identifying blockchain use cases can be difficult. "There are things that people are trying to apply blockchain to that could be done just as well with traditional databases," he said. "So we have to be careful to pick the right problems here.

Blockchain panel members at the MIT Sloan CIO Symposium, from left: Moderator Christian Catalini, assistant professor at MIT Sloan; Anders Brownworth; Peter Nichol; Simon Peffers; Matthew Utterback.
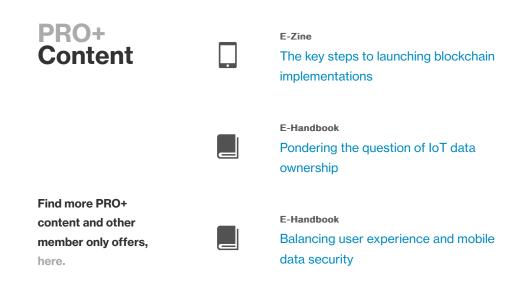
"There's a lot of hype around this: 'Let's look at all the places we could possibly apply blockchain.' I think it needs to be toned down to: Where should we apply it? Where does it add value that today's technology doesn't?"

Brownworth said organizations need to examine what factors qualify a project as blockchain-worthy. "You have to look at the reasons you would make those compromises [to use blockchain technology]. And all of that has to do with provenance and taking data that you're sure happened in a

certain order in a way that can be done without requiring any trust among the players."

Blockchain use cases for the supply chain

Blockchain technology has been cited as having applicability in a broad range of industries beyond financial services -- from insurance to real estate to legal to health care to supply chain. Indeed, Jeff Garzik, co-founder of blockchain services company Bloq, told SearchCIO a few weeks ago that he has customers from those industries working on blockchain projects. The panel at MIT drilled down on the supply chain use case.

Peffers pointed to blockchain's promise of tracking raw goods all the way through their consumption. Today, he said, "if you go to a retailer and you buy something with a unit tracking number, you can [track] a package, it goes on a ship, it goes on a truck, it goes to a distribution center, then on another truck and then it ends up on your door." Blockchain technology would extend that visibility to its original creation, he said. "Imagine seeing that for the same product all the way back to the raw materials.

"[Supply chain is] a good application for blockchain because you really

want to have all these companies interact with it on their own," Peffers said. "The guy who manufactures steel is going to deal with many customers downstream and so he doesn't want to deal with a hundred different databases; he wants one."

But why can't we do this with today's technology?

"The challenge today is that we have stuff moving through a lot of different companies in this chain. It would take a lot to push all these companies to adopt the same kind of centralized database. Somebody would have to run it," he said.

Matthew Utterback, co-founder of investment company Rex Mercury Inc., cautioned that to realize the full value of a blockchain system, all the moving parts need to be functioning correctly. "The problem that we think about every day -- and you could even apply it to the supply chain question -- is if one link in the supply chain didn't post a transaction to the blockchain, you lose the value of it. Or you couldn't recover it in the next step if it was skipped. The same is true for credit reporting or finance." The industry needs to figure out how organizations should interact with the blockchain, he said.

> Financial regulators, even people inside governments that are trying to get rid of fraud, have a huge incentive to digitize these transactions and move away from cash.
>
> **Matthew Utterback**
> co-founder, Rex Mercury

Private vs. public blockchain

One blockchain-related issue that proponents are debating is the value of public, permissionless blockchain systems versus private, permissioned ones.

Brownworth suggested private blockchains won't be very useful, likening them to company intranets, which held big promise in the 1990s but

ultimately ended up being much less valuable than the internet itself.

"Has the intranet changed the world as much as the internet? No one's talking about an intranet. That's like what a private blockchain would be if you were trying to take advantage of distributed trust," he said. In a B2B environment where transactions happen between parties with existing relationships, "you trust all the people around the table anyway. We all have a contract with them. So what do we really gain from using a [private] blockchain here?" he said.

Peffers, whose company, Intel, is a member of the R3 CEV consortium, disagreed. "I think there's a space for smaller consortiums of organizations that want a private [blockchain] -- where it's not fully trusted between the parties," he said. "They may have other requirements that a public blockchain doesn't support -- like number of transactions per second or maintaining privacy or auditability -- that you can provide on a private blockchain. Maybe it interacts with the public blockchain in some way, but as a more specialized instantiation."

Brownworth conceded that there's some value in private blockchains and that public and private systems need to get along with each other. "They absolutely need to coexist. I don't mean to say that there's no space for [a private blockchain]. It's just that it's a very, very different space," he said.

The debate over public and private blockchains inevitably touches upon the issue of privacy: how much information a company or individual should share on a public blockchain and whether that decision influences whether a public or private blockchain is used. "One of the biggest opportunities for us with public blockchain is the ability to share different views of the data with different parties along the transaction, but ultimately are we holding metadata about those users as a firm?" Utterback said. "How do we interact with public data to share that? When? How? Who would do that? That's a really big issue for us."

Peter Nichol, principal consultant at PA Consulting Group and former head of IT at Access Health CT, said that the decision of how much info to share hinges on what will be done with the data. "If you're ... a Slock.it and all you're trying to do is unlock a car door ... that's one degree of oversight and privacy that's required," he said. "If you're working on the

pharmaceuticals side on clinical trials and provide analytics and information that way, you need a different degree of visibility and transparency."

Regulator view of blockchain

Should regulators be happy about blockchain technology? Yes, according to Peffers, because it will provide them the same view into the data as the companies they're regulating.

Sue Troy asks:

What blockchain use cases might make sense within your vertical industry?

0 Responses   Join the Discussion

"There would be really no dispute and no need to figure out why does this one not agree with this one?" he said. "And you'd get immediate visibility so

Search the TechTarget Network

Utterback pointed to the blockchain's promise to reduce fraud, since transactions on a blockchain are visible and traceable. "Someone can audit [digital currency transactions]. So financial regulators, even people inside governments that are trying to get rid of fraud, have a huge incentive to digitize these transactions and move away from cash," he said.

The promise of blockchain technology is certainly there, Nichol said, along with many issues for the blockchain community to work out. "We're seeing

some cool examples [of the benefits of blockchain]," he said. "Ultimately somebody has to have the courage to adopt it and take that risk."

Next Steps

How blockchain requires rethinking financial services

Forrester prediction on when blockchain will reach mainstream

Gartner's take on the blockchain

This was first published in May 2016

Dig Deeper on Enterprise data security and privacy

ALL   NEWS   GET STARTED   EVALUATE   MANAGE   PROBLEM SOLVE

**Blockchain market
outlook: Hype vs. reality**

**Blockchain use cases
and how to get going**

**The key steps to
launching blockchain
implementations**

**Pondering the question
of IoT data ownership**

Load More

0 comments

Oldest ▼

Share your comment

☑ Send me notifications when other members comment.

Register or Login

E-Mail

email@techtarget.com

Username / Password

Username

Password

Comment

By submitting you agree to receive email from TechTarget and its partners. If you reside outside of the United States, you consent to having your personal data transferred to and processed in the United States. Privacy

SearchCompliance

▶ **Industry gurus tackle blockchain privacy and digital identity**

The decentralized nature of public blockchain has raised concerns about digital identity and blockchain privacy. A panel of ...

Experts wade through hype to shed light on blockchain security

Along with the hype, there have been plenty of questions around blockchain technology, particularly regarding blockchain security...