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How Blockchains Can Provide New Benefits & Business Models For Healthcare



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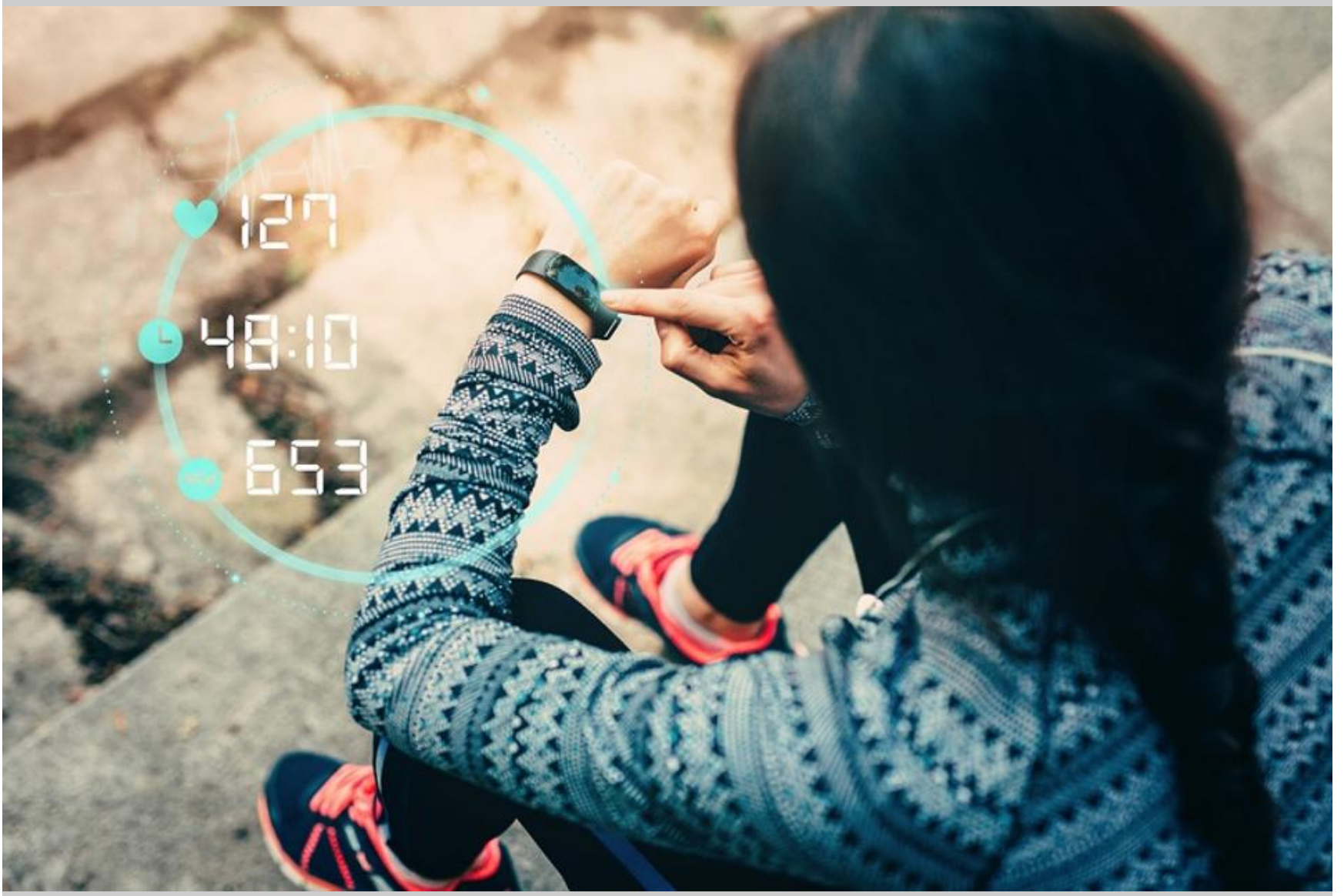
What's next for blockchains? Healthcare says @IBMIBV's Heather Fraser @Forbes

By Heather Fraser, IBM

How valuable would it be to have the full history of your health? What if every one of your vital signs that have been recorded, all the medicines taken, information associated with every doctor's visit, illness, operations and more could be efficiently and accurately captured?

The quality and coordination of health care would be expected to rise, and the costs and risks likely to fall.

Such a system is called "long data," which is short for "longitudinal data" -- and its application to healthcare. Long data is simply the lifetime history of data related to a person, place or thing.



And that is precisely why blockchains in the healthcare industry could do exceedingly well.

Data captured on blockchains can be shared in real time across a group of individuals and institutions. Every event or transaction is time-stamped and becomes part of a long chain, or permanent record, which can't be tampered with after the fact.

On permissionless blockchains, all parties can view all records. On permissioned blockchains, privacy can be maintained by agreement about which parties can view which transactions and where, by masking the identity of the party.

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In this way, blockchains shift the lens from disparate bits of information held by a single owner, to the lifetime history of an asset. This holds true whether that asset is a patient's health record or a bottle of pills as it moves through the supply chain.

From the perspective of blockchain adoption, healthcare organizations are moving fast and

even seem to have a lead on the financial industry.

A new IBM Institute for Business Value blockchain study, "[Healthcare Rallies for Blockchains](#)," surveyed 200 healthcare executives in 16 countries. We found that 16 percent aren't just experimenting; they expect to have a commercial blockchain solution at scale in 2017.

They are leading the charge with real-world blockchain applications that they expect to take down the frictions that hold them back. They're keenly focused on accessing new and trusted information which they can keep secure, as well as entering new markets.

Leaders expect the greatest blockchain benefits concerning time, cost, and risk in three areas: clinical trial records, regulatory compliance, and medical and health records. They also anticipate widespread business model innovation or more than other industries we have surveyed to date -- in six out of nine business areas.

Despite their expectations of transformative innovation, healthcare institutions, including the leaders who are adopting blockchain models, aren't anticipating significant disruption. They may believe that regulatory constraints will keep new competitors and models in check.

Regardless, healthcare institutions are going all-in: investing heavily in blockchain pilots, with nine in 10 respondents planning to invest by 2018 across several business areas.


Blockchains are widely recognized in many industries as an exceptional platform for regulatory compliance. They establish a trusted audit trail verifiable in real time. This means blockchains don't just track compliance; they streamline enforcement; and deter bad actors from the outset.

Instead of relying on periodic spot inspections, blockchain-enabled smart contracts can ensure that the appropriate parties are notified of non-compliant events as they happen. In short, blockchains establish a platform to automatically enforce privacy regulations; rules embedded via smart contracts dictate what they can see and when.

Moreover, as data and transactions are shifted or linked to blockchains, organizations can track who has shared data and with whom, without revealing the data itself.

By now, most healthcare organizations, like institutions in other industries, recognize that blockchains could greatly reduce the time, costs and risks associated with how they operate.

We asked healthcare executives about nine areas core to their business and analyzed their answers. Our analysis reveals near unanimity; blockchain benefits are compelling and can be gained in every aspect of healthcare. Potential benefits will only increase as blockchains in healthcare get closer to commercialization.

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Heather Fraser, a registered Pharmacist, is Global Life Sciences and Healthcare Lead for the IBM Institute for Business Value.

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What's next for blockchains? Healthcare says @IBMIBV's Heather Fraser @Forbes

By Harriet Green, IBM

What do sneakers, trains, washing machines and your car have in common? At first glance the answer is nothing of course. However, when you peel back the layers it becomes more apparent that there is one thing connecting them all: [The Internet of Things \(IoT\)](#).

We are just one month into the new year and one thing has become crystal clear -- businesses have made IoT a top priority for 2017. Need more convincing? According to Gartner, there will be 20.8 billion connected devices by 2020.

But the impetus behind these investments isn't solely about creating the next ground-breaking, life-altering product or service. The vision is more vast. It's about driving unprecedented levels of customer loyalty by making people's lives better, safer, healthier and more convenient and then tapping into reoccurring revenue streams that have eluded many businesses for years.



Today IBM and Visa [announced](#) the industry's first collaboration that brings the point of sale everywhere Visa is accepted, by allowing businesses to quickly introduce secure payment experiences for any device connected to the IoT.

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The collaboration brings together IBM's Watson IoT platform and [cognitive](#) capabilities,

with Visa's global payments services that are used by more than three billion consumers globally. IBM's Watson IoT Platform allows businesses to connect to billions of connected devices, sensors and systems around the world and then draw actionable insights.

If you're an avid runner, one of these connected devices may be your sneakers. Many runners today have chips put in their shoes which track how far they run, their splits and more which they count on to help meet their weekly goals. This is valuable information of course but imagine this scenario:

Knowing you're a busy executive, every week, the device takes into account your schedule and the weather and recommends the best time and place to get exercise. Now imagine you just got back from your daily run and the chip proactively sends an alert to your fitness tracker letting you know how many miles you've logged in your current pair and, knowing precisely when you traded in your last pair and why, it reminds you that it's time to buy new sneakers and places the order for you from your favorite retailer. It also knows where you are traveling for the next month and recommends some new running gear that is more appropriate for that climate.

These types of services build brand loyalty by bringing the simplest, best customer experience to consumers who get what they need, when they need it, with the guidance and insight from a cognitive system.

Another example comes from one of your most important household appliances -- your washing machine. A connected washing machine understands how many loads of laundry you do every week and the cycles you tend to use, and with this insight it could anticipate when you need to order more detergent to get the best possible price and place it for you. That's a great convenience for on-the-go people who often find empty detergent bottles at the worst possible time.

But there's more.

Now consider this from a business perspective. Traditionally a retailer sells you a washing machine or a refrigerator as a single transaction. It's a onetime payment that ends once it's hooked up in your home.


But it doesn't have to be that way. IoT transforms that entire business model, allowing companies to tap into continued revenue streams that last for the lifetime of the unit. In fact, it seeds a greater level of loyalty that will likely help ensure you buy from them again in the future.

In today's hypercompetitive world, every business must deliver exceptional services if they

want to secure customer loyalty and grow revenue and IoT is the best weapon. Railway operators can monitor trains not only to prevent breakdowns, but to improve reliability.

Don't want to buy a car? An automotive dealer can let you lease a new car with payments being processed automatically based on how far the you drive each day. The car can even alert you when a fan belt needs replacing and schedule a service appointment at their preferred local garage. That's the power of cognitive IOT.

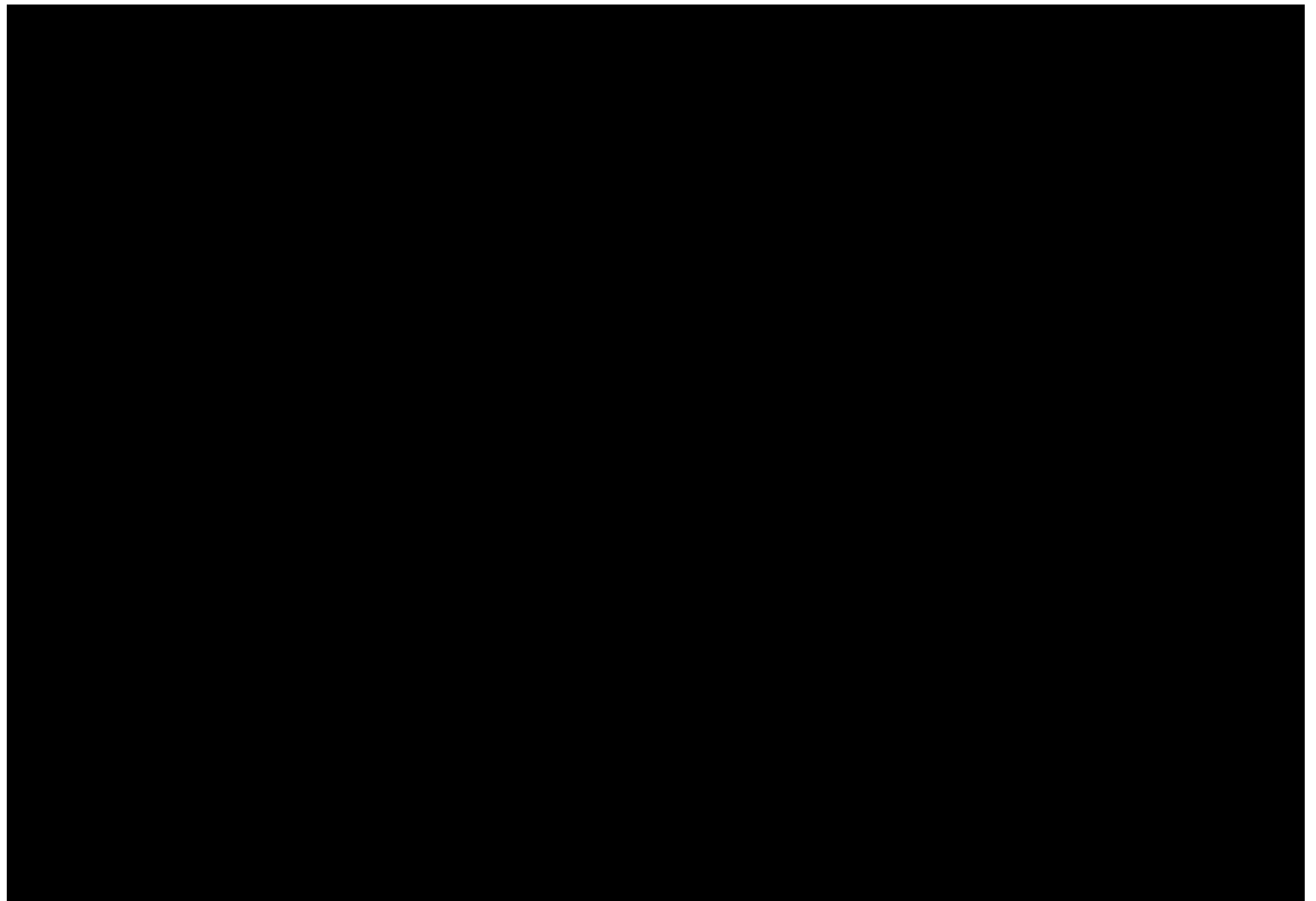
The list goes on and on its growing every day, which is why 2017 will be a watershed year for IoT.

Tweet this: Read @harrietgreen1's blog about @IBMIoT helping businesses "monetize" the IoT @Forbes. 

Harriet Green is General Manager of Watson Internet of Things, Commerce and Education at IBM.

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