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From Basic Blocking and Tackling to Big Plays:

A PLAYBOOK OF BLOCKCHAIN POSSIBILITIES IN RETAIL

A CLOSE CALL

Regardless of whether you think bitcoin is in- or out-of-bounds, or whether you think blockchain is first-round phenom or seventh-round bust, it's difficult to argue with the call that someday very soon blockchain will change the playing field for retail.

To help you predict the score, here's our playbook of possibilities for blockchain in the future of retail, and whether they are still a long way from the end zone or if they are concepts that are getting closer and closer to the goal line.

1 DOWN — FIRST AND GOAL

DIGITAL MARKETING AUTOMATION

THE PLAY: Simplify and Verify the Advertising Supply Chain

Prove that users are real and not bots, prove the identity of advertising channels so that there isn't pay for ghost sites or for advertising on sites that go against what the brand stands for, and validate stories to prevent the spread of fake news.

The Players: IBM and Unilever

These two giants tested the first-ever blockchain for media-buying to provide a clear chronology of media activity that is approved by all parties. Everyone now knows who's in the picture and what they're getting paid with one agreed-upon audience metric.

Scoring Chances: Very High

These are real problems for retailers, many of whom do a ton of advertising. IBM isn't the only company trying to figure this out, and Unilever isn't the only big advertiser who would like to see a solution here.

SUPPLY CHAIN TRACKING

THE PLAY: Track Individual Items throughout the Entire Product Lifecycle

Track all actions taken across multiple parties to deliver goods from source to destination. The expected benefits include far less paperwork, an increase in the speed of conveying information across the supply chain and to expedite the movement of goods through customs in import situations.

The Players: Walmart and Nine Food Giants

Several of the world's biggest food companies are building a blockchain to remake how the industry tracks food worldwide. The blockchain greatly enhances tracking on over 1 million items in 50 categories.

Scoring Chances: High

Walmart reports that the blockchain was able to shorten the time it took to track produce from six days to two seconds. Also, there's a lot of overlap/concurrence with product provenance, which helps things along.

2 DOWN — SECOND AND FIVE

CUSTOMER IDENTITY

THE PLAY: Consumers Take Control of their Own Data

Using a digital wallet app on their smartphone or desktop, users have the power to temporarily grant access to their personal information. Consumers control their personal information and avoid duplication no matter where they are.

The Players: Shopin is by Far the Front-Runner

Shopin's blockchain-based consumer profiles enable retailers to offer more secure transactions, better product recommendations and more valuable rewards to shoppers who give retailers access to their purchase history and preferences.

Scoring Chances: Medium

With data breaches right and left, it seems that the general public's acceptance of life in a data wild west is getting smaller and smaller. Early trials indicate shoppers love the idea of a record that they own and control, with a method of deciding which retailers they want to share data with – and explicitly what to share and how long they can have it. The challenge will be getting all the other industry players to line up for the play.

INTERNET OF THINGS

THE PLAY: Make it Easier for IoT Devices to Write to Blockchains

Combine the Internet of Things and blockchains to create a verifiable, secure and permanent method of recording data processed by smart machines that can interact with their environment and make decisions without any human intervention.

The Players: WaltonChain

WaltonChain leverages RFID to track products throughout the life cycle from production all the way to distribution. The data within each item is stored on an impenetrable blockchain that will ensure accuracy and availability in all parts of the process.

Scoring Chances: Medium

To gain ground, RFID and IoT in general both need some specialized systems at the edge of networks to figure out how to sort out the signal from IoT noise. If the supply chain is going to be taken over by blockchain, then IoT is going to need to talk to it. This will probably score eventually – once both IoT and blockchain in supply chain are more mature.

3 DOWN — THIRD AND TEN

LOYALTY PROGRAMS

THE PLAY: Reward Consumers for their Actions

Use Blockchain loyalty platforms to enable retailers to reward customer purchases (and potentially other actions) with crypto-currency tokens.

The Players: Qibee

Customers using the Qibee app earn coins every time they make a purchase, by scanning a QR code. They can also exchange their tokens for cash, cryptocurrencies and loyalty tokens from other brands.

Scoring Chances: Low

Qibee isn't the only company out there trying loyalty programs based on blockchain. In their case, it also serves as a kind of affiliate program, where coins earned at a restaurant could be redeemed at a fashion retailer, for example, but there are just a few very large, successful affiliate programs out there, and upstarts in the space have found it difficult to get traction.

COUPONS

THE PLAY: Control the Distribution and Redemption of Coupons

Eliminate the hassle of coupon management and accounting by distributing, tracking and reporting on coupons via blockchains. This approach could also be the gateway to connecting coupons and digital wallets for redemption, leading the way to truly digital coupons.

The Players: MasterCard

MasterCard recently received a patent for a coupon-authenticating system built on blockchain, which would assign shoppers a unique blockchain address, to store credit card or digital wallet number and the amount of coupons available. Anytime the shopper tries to use a particular coupon, the application will use blockchain to check whether the coupon is valid and can be used.

Scoring Chances: Low

There are a lot of parties involved in coupons, which has hampered the adoption of digital coupons, and blockchain isn't going to suddenly align all those parties' interests. But the MasterCard patent may serve as a notice to other parties that they need to move more quickly.

PRODUCT CONTRACTS

THE PLAY: Govern the Sourcing, Manufacturing, and Delivery of Goods

Create "smart contracts" that attach payment promises to the achievement of specific objectives (e.g. the delivery of a design, the delivery of goods, etc.). In sourcing retail goods, anything that deals with importing from other countries also deals in letters of credit and specified currencies, which the cryptocurrency aspects of blockchain could also make easier.

The Players: Plantoid

While not a product contract in the traditional sense, Plantoid is an interesting example of what a smart contract could be. People make crypto payments in order to get the Plantoid (a manufactured art object) do its intended action – light up, shake, bloom, etc. When the Plantoid has collected enough currency, it puts out a new contract to build a new Plantoid, which will then collect payments for performing its intended function.

Scoring Chances: Low

There are a lot of parties who want this to get better, but all of the challenges of sourcing products, especially from regions of the world that are less technology-enabled, still exist, and blockchain alone is not going to fix it.

4 DOWN — FOURTH AND LONG

STORE OPENINGS

THE PLAY: Govern the Site Selection and Construction of a Store

Similar to the smart contract for products, retailers could set up smart contracts that govern the site selection and ultimate construction of a store. Smart contracts could even let consumers bid on/show their support for a local store such that if a certain level of support was achieved, the retailer might commit to build the store.

The Players: Qtum

This isn't a perfect example, but in addition to the Plantoid example above, "Two Roads' Picture Co recently distributed the movie "No Postage Necessary" via Qtum's blockchain, where customers were rewarded for viewing the movie and for doing things like posting reviews. Combining these ideas together would reveal customer behaviors that might trigger an activity like building a store.

Scoring Chances: Very Low

To date, we haven't found an example of a retailer attempting to build this blockchain, (but it seems to us like it has great potential).

This playbook was excerpted from a blog post written by Aptos Vice President of Innovation Nikki Baird.
Visit aptos.com to see all the blockchain possibilities for retail on Nikki's list.

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