

The CMO Primer For The Blockchain World

How This “Trust Machine” Impacts Branding,
Customer Experience, Advertising and Much More

By Jeremy Epstein

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Newspaper, Radio, TV, Internet, Social, Mobile...Blockchains Are the Next Technology That Will Transform the Practice of Marketing



Trust Continues to Erode in Brands...and Worldwide

The first is an ongoing erosion of trust in institutions. The *Edelman Trust Barometer, 2017* highlights how widespread lack of trust is across business, government, and even non-profits. In fact, only 43% of people in 28 major countries trust their governments

The “fake news” phenomenon is also well documented, with only 2 in 10 Americans having “a lot” of trust in news organizations, **according to the Pew Research Center.**

Blockchains Continue to Rise

The second force is the immense potential and increasingly demonstrated capability of blockchain technology. Best known as the layer that underpins the Bitcoin cryptocurrency, blockchains are a distributed ledger that enable a peer-to-peer, immutable, highly secure method of transacting assets of value without central intermediaries. Various types of cryptography are used to guarantee the veracity of a transaction.

In the words of **the Economist**, blockchains are a “trust machine.”

Large corporations such as JP Morgan Chase and Walmart are already making investments and rolling out implementations, providing additional momentum to widespread mainstream adoption. Simultaneously, an explosion in innovation that rivals the early days of the commercial Internet is occurring on the start-up side. Over \$380 million in funding (in ICOs; initial coin offerings) was invested in the technology in the **first five months of 2017**, and hundreds of millions more since then.

Soon, your customers will all but demand the security, transparency, and privacy the blockchain allows.

Like the Internet Before it, Blockchains Will Impact Marketers and Marketing Dramatically

Just like radio, TV, the Internet, social, and mobile before it, blockchain technology presents an opportunity as well as a threat and will dramatically affect the practice of marketing. It will also give rise to a new set of competitors with different business models.

For marketers, many questions arise:

- How does blockchain as a “trust machine” offer marketers an opportunity to differentiate and gain competitive advantage?
- What are some of the opportunities and initial use cases for marketing in a blockchain world to drive greater ROI?
- What might be the long-term impact of blockchain adoption on how marketers understand ideas such as customer experience and branding?

What You Will Get From This E-Book

The objective here is to help enterprise CMOs (and future CMOs) get an initial level of familiarity. The implications and potential of blockchains and decentralized protocols on the depth and breadth of marketing are vast. There will be more to explore in the months and years to come, but after reading this, you'll emerge with a better understanding of:

1. What blockchains are
2. Why they are important
3. How they might impact some marketing functions and responsibilities in both the near-term and the long-term

In this first effort, we've highlighted just a few areas where the impact of blockchains will be felt. These include:

- Customer Experience
- Branding
- Advertising
- Commerce & Sales
- Loyalty
- Data
- Management & Leadership

There is much more to come, particularly if your firm is a member of the **Blockchain Research Institute**, where Never Stop Marketing has partnered with industry thought-leaders Don and Alex Tapscott to explore the impact on marketing in even greater depth.

You may also have a better idea of how blockchain technology may impact the function of marketing. Perhaps more significantly, you will gain some insight into the competitive advantages that "blockchain-native" organizations have over more traditional, centralized ones.

No One Knows All the Answers About the Impact of Blockchains on Marketing

We certainly do not have all the answers yet. We probably do not even have all the questions. This is only the beginning of an exploration of how the arrival of these technologies will impact marketing in the future. The goal is to help you (and me) be better prepared.

To help you, this eBook assembles some of the top minds in the world as your guides, including enterprise CMOs, thought-leaders, and emerging vendors.

If you believe that a brand represents a promise to a customer, then the pages that follow are for you. As we head into the back half of 2017, two macro forces continue to gain momentum. Each one offers the possibility for a big shift for the future of marketing. All of us hope you find this of value and look forward to your contribution to the conversation.

Jeremy Epstein
CEO, Never Stop Marketing



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From the Desk of the CMO

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Building Trust in a World Where Trust has Receded

The world is challenged by a crisis of Trust.

Recently, I was honored to interview legendary CBS anchorman, Dan Rather, and the President and CEO of Edelman, Richard Edelman, on this topic. The takeaway was clear:

"We've gotten to a point where there's a loss of faith in the system. That there's a sense of unfairness."

At one point during the conversation I also heard, "half of the people think innovation is a bad thing." If innovation is bad—the fuel which has enabled much of the progress during the last two centuries — then we are in a very tough spot indeed.

The question becomes, "what steps are needed in order to re-establish trust and confidence in many of the things that we once took for granted?"

At my company, we are committed to building marketplaces using advanced technologies to ensure that they are fair and resilient for all parties. Our brand has been built on a foundation of trust—with our clients—and with the investing public. It is not something we take lightly.

There is much that Nasdaq is doing to build even more trust with our clients and to ensure the soundness and resilience of our markets remain intact. One of them is investing in disruptive technologies like blockchain and machine intelligence.

Blockchain, the secure digital ledger, which underlies Bitcoin, has numerous potential implementations and far-reaching implications.

My colleague, Fredrik Voss, Nasdaq's Vice President of Blockchain Innovation, said, "We've taken it upon ourselves to be a leader in terms of encouraging people and companies to explore this technology and understand it better." Blockchain technology has the potential to dramatically reduce settlement times and make the transfer of securities more secure and efficient. We have announced implementations of this technology in our Nasdaq Private Market. Another area where we are using technology to help make the markets more safe is in the area of surveillance.

what steps are needed in order to re-establish trust and confidence in many of the things that we once took for granted?

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Building Trust in a World Where Trust has Receded (cont'd)

We are integrating machine learning and other cognitive computing capabilities with our SMARTS surveillance solutions to monitor trade data alongside unstructured data elements, like electronic or audio communications taking place in chat rooms, social media or email to enable the detection of any wrongdoing more quickly.

As Chief Marketing Officer of Nasdaq, I am aware that technologies such as blockchain and machine intelligence have the capability to re-establish trust by improving market performance, empowering clients and creating a more resilient experience. The exciting part is we are just beginning to scratch the surface of what is possible. Our role as marketers is to build ever deeper relationships with clients and prospects. If blockchain and other technologies can help transform financial services, then, it's certainly worth exploring how new tools, technologies, and processes can aid marketers in achieving their goals and providing deeper actionable insights into their campaigns.

I've known Jeremy Epstein for a few years. I've seen his commitment to the art and science of marketing.

I'm confident that you'll walk away from the next few pages inspired and enlightened about the future possibilities for marketers in a blockchain-enabled world.

There's no doubt that it's going to be exciting.



**technologies
such as blockchain
and machine
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to re-establish
trust**

Rishi Dave

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Thoughts on Marketing in a Decentralized World

1) What does marketing in a decentralized world look like?

Brands that authentically add value to customers will win access to their personal data.

The concern about protecting personal data is at an all-time high. Individuals are distrustful of what businesses will do with their personal information and are becoming more guarded in what they will share voluntarily. People want to control their own data and feel they have lost much of that control in recent years. This is one of the reasons decentralization is gaining popularity. In a decentralized world, individuals will have more say over who has access to their personal data. No longer will monolithic websites maintain control and no longer will companies be able to simply access personal data without consent.

This will pose a huge challenge to marketing teams. How will they offer targeted and personalized campaigns without the data to fuel them? Without that data, their marketing programs will fall flat and their sales cycles will stall. In a decentralized world, it will now be imperative for marketers to deliver real, authentic value to customers so that they are willing to voluntarily part with their valuable personal data. Also, customers will have more control in demanding an understanding of how it is being used. What's more, businesses will have to

continually deliver value to the customer so that they don't retract their consent to have their data included. In a decentralized world, customers can pull their data out at any time, forcing companies to constantly deliver something of value so that customers feel it's worth the tradeoff of keeping their information accessible. Contrast this with today where companies like Facebook, Google, and Amazon have such centralized power that consumers have no choice but to share their data with them, even in ways against their wishes when these sites demand it.



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Thoughts on Marketing in a Decentralized World (cont'd)

2) What can companies and marketers start doing today to prepare for the future?

Continually find ways to offer value

The first thing businesses need to do is to find ways to deliver true, authentic value to customers through use of their data and to understand that customers want to be made aware of how their data is being used. If customers see they are no longer receiving value from making their data available, they have no reason to leave it open and accessible. This will require a shift in some business models and will also require a keen use of the data they do have. It's much easier now, while the data is available, for marketing teams to test what works and what doesn't to keep customers engaged. Use this time while we still have ready access to data to test at scale and plan for the time when marketers will have to fight for the data we've so easily taken for granted.

It will also become increasingly important for departments within a business to work together to deliver that value to the customer. This will require smart use of the data they provide and really leveraging that one view of the customer to deliver a seamless customer experience.

From marketing — to sales — to service — the customer wants to feel the data they've provided has given insights that make their experience with that company more worthwhile, and coordination will be key. If your company is not already practicing this one view approach, it's imperative you get that foundation in place now, before decentralization becomes commonplace.

**plan for the
time when
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Key Terms and Concepts

As with any new technology, there are new ideas that come along with it. You can go deep on any of these, but this basic introduction will give you a quick start to preparing for the rest of the e-book.

Blockchain

A blockchain is a distributed or “decentralized” database in which no one can modify or delete past entries. There are rules—known as the ‘protocol’—for how new entries are made to the ledger.

Each “block” is a snapshot of the transactions in the ledger, in the form of a database. The term “chain” refers to linking each successive block to the prior one in a linear, chronological order. Hence, “blockchain.”

The ledger is open to anyone for inspection. There are scenarios where access is controlled. These are known as *private blockchains*. For this e-book, we focus primarily on *public* or *open* blockchains, for the same reason that Internet is bigger than Intranet.

One critical component of blockchains is that the transfer of ownership of an asset (as represented on the ledger) can only be authorized by the entity that controls the corresponding private key. A second critical element is that security is provided by a decentralized network of computers instead of a centralized entity. Blockchains offer the potential for improved security and network resiliency while lowering transactional costs because of their distributed, peer-to-peer nature. They herald an age of decentralized systems and organizations.

Decentralized

Perhaps the most remarkable starting point is that any transaction is recorded not in one centralized location but in many, ostensibly thousands of servers. For example, Bank of America has the sole responsibility of securely managing its customers’ transactions and holdings. In the blockchain world, perhaps 100,000 servers in as many locations all record every customers’ transactions and holdings. Add that these machines use a complex, difficult to disrupt process to resolve and verify each new day of transactions.

What is particularly challenging about the decentralized nature of the blockchain is that it flies in the face of so much of how the world operates today.

Immutable

Merriam-Webster defines this term as “not capable of or susceptible to change.” That is what is possible when you store the same transactional ledger in hundreds of thousands of locations. Even if a hacker may change the facts in a few locations, it’s difficult (and economically infeasible by design) to manipulate that fact to a majority of these locations. The system ignores tampering of a minority of machines, making a blockchain, for all intents and purposes, immutable.

Tokens or Coins

Tokens or *coins* are digital assets intended to convey value akin to offline currency, and can represent anything from loyalty points to vouchers and IOUs to actual objects in the physical world such as a deed or title.

A token or a coin is a digital representation of a right to participate in a network. It cannot be duplicated, forged, or created out of thin air by a central authority because it's running on a blockchain and its rules are backed by immutable code. A Bitcoin, for example, represents your right to access and participate in the Bitcoin network protocol.

Smart Contract

A contract represents a series of "if... then" statements. "If you do the project, then we will pay you \$1,000." A *smart contract* takes those "if... then" statements and turns them into software code, which is then immutably written into a blockchain. The contract then becomes self-governing and self-executing, thus removing the power from individuals to change terms or renege.

Oracles

Smart contracts are valuable because they can be executed depending on inputs from various sources. These inputs may not be programmed into the blockchain on which the smart contract resides. A smart contract can be programmed to receive data from an *oracle*, a trusted, external source of data delivering information to one or multiple blockchains. These oracles (or data feeds) can deliver information such as weather, temperature, price fluctuations, and signify success or failure of execution for a particular smart contract.

For example, a biomedical firm hires a shipping company to transport its vaccines and requires them to be kept at a certain temperature during transit for ensured viability. An RFID thermometer accompanies each shipment, serving as an oracle for the shipping smart contract. If the temperature is kept within a specified range, the thermometer can "sign" the contract, releasing funds to the shipping company.

Image source: **Blockgeeks**

Smart Contracts are Awesome!



Network Protocol

A protocol is a digital set of rules defining how information behaves in a given scenario.

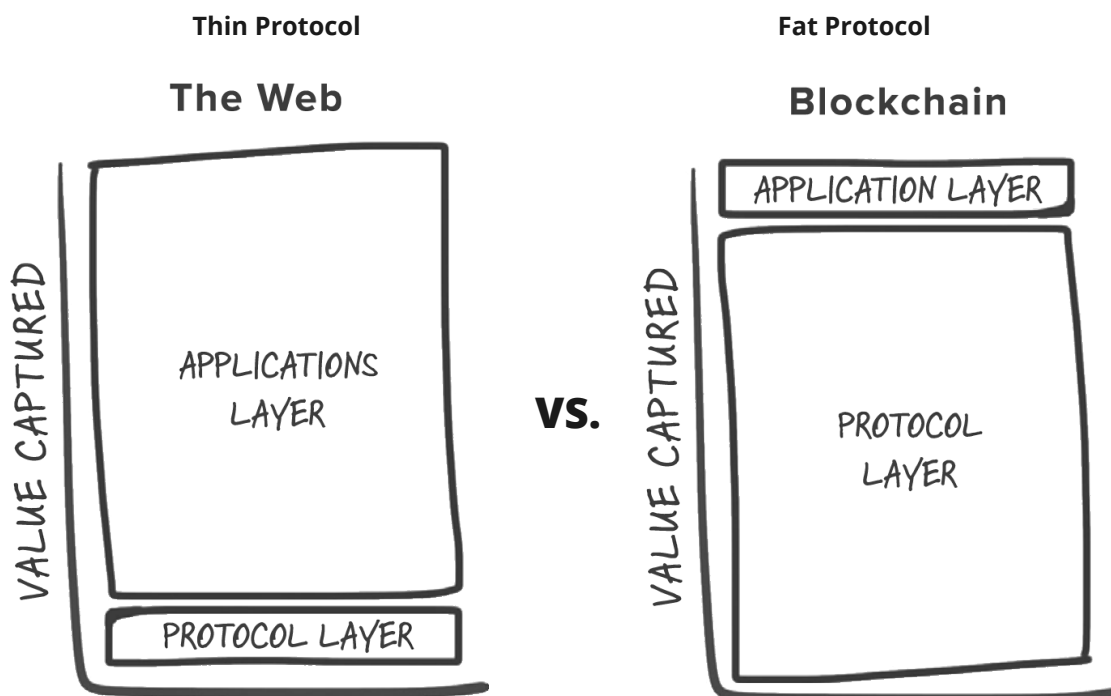
You use protocols every day such as TCP/IP, SMTP, and HTTP which define how information moves across the Internet, how you can email someone from Outlook to Gmail, and how you can access a website regardless of whether you use Safari or Chrome.

“Fat Protocol” vs. “Thin Protocol”

In the Web model, the protocols or rules are intentionally simple. Web related protocols are *thin*. This gives application developers a chance to add a lot of value (e.g., Facebook, Airbnb, Spotify) on top of it.

In the blockchain (a.k.a. “decentralized”) model, the rules can be much more robust or *fat*. For example, a protocol developer can write the same matching algorithms that Facebook, Airbnb, or Spotify uses and make it native to the protocol. You get the same benefits, you just don’t need the centralized party to do the matching, the software does it for you.

Joel Monegro explains it as well as anyone in his post *Fat Protocols*, and it comes to life in these two images (which he created):



Images by Joel Monegro of Union Square Ventures: <http://www.usv.com/blog/fat-protocols>



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How Blockchain Technology Will Affect and Upend Marketing in the Near-Term and the Long-Term



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Customer Experience Expectations Will Continue to Skyrocket

Familiar Challenges

According to the **Harvard Business Review**, “customers who had the best past experiences spend 140% more compared to those who had the poorest past experience.” **American Express** tells us that “55% walked away from an intended purchase in the past year because of a poor customer service experience.”

The arrival of social and mobile-empowered customers has increased the pressure on companies to deliver great customer experiences. No one wants to become the centerpiece of the next United Airlines ejection news cycle; at the same time, we are all subject to the *Amazonification of expectations*: regardless of the industry, customers now expect Amazon Prime level service.

Where Blockchain Technology Can Fit In

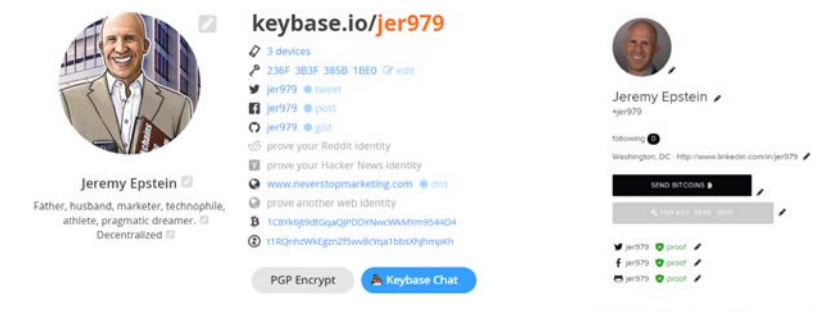
Blockchains create a shared data layer that is open and available for others. Instead of only seeing the transactions that occur within your enterprise, you could see all of the transactions in a given industry or protocol (with some anonymization). This will take “Big Data” to an entirely new level.

A blockchain-based identity system could simplify the process of creating, maintaining, and leveraging a unified view of the customer, enhancing your ability to provide a more cohesive experience. The big caveat here is that you will not own the customer data. The customer will give you access to PII on a permissioned basis. As a CMO, you will need to earn (and more importantly, re-earn) the right to customer data.

Given the right incentives in a blockchain-based identity system, customers will attest to their ownership of an account. It will be just like how they connect to social and email today, but with greater security and verifiability. These attestations will be cryptographically linked to each other (and cryptographically linked with data from internal systems) to provide an immutable record that offers greater confidence about the nature of the customer relationship across the enterprise and possibly the partner ecosystem.

A first-generation example of how this could work comes from **Keybase.io**. On Keybase, an individual sets up an account and then provides cryptographic attestation of his ownership of various social accounts, which proves he is the rightful owner. This data is available for everyone with blockchain access to leverage, though in the Keybase example, ownership of the data resides entirely with the customer.

Another example is **OneName** which is a decentralized version of the same concept. Below, I have cryptographically proven my ownership of the associated social media accounts.



Near-Term Impacts and Benefits

You should expect to see a slew of offerings from both start-ups and existing technology vendors that will offer artificial intelligence solutions to derive marketing insights from the open data available on blockchains. We haven't discovered any companies/projects that offer this specifically, but it's not far off.

On the identity front, you will most likely begin to see two types of vendor offerings in the next few years in the *blockchain-based customer relationships* space. Most likely these will be private blockchains, limited to implementation within one enterprise or across an ecosystem.

Vendors like IBM are pushing further into the business side of the enterprise. You should also begin to see traditional CRM vendors like Salesforce integrate blockchain technology.

While it will not be perfect, you will have greater confidence that, @Alice123 on Twitter is the same person as Alice321@gmail.com and so on. Seeing the interactions of a given profile across your touchpoints (and your partner's touchpoints) will give you a much greater understanding of the customer journey, helping you know the customer and treat them like the individual they are, all while building trust. In the interim phase between the current environment where PII data is stored in corporate silos to an environment where data is owned entirely by customers, there should be decent value for CMOs who effectively take advantage of blockchain-based identity systems.

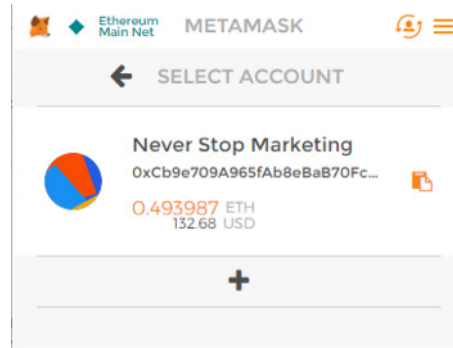
Long-Term Impacts and Benefits

The benefits gleaned from private blockchain-based CRM solutions are likely to be short-lived. Ultimately, individuals, not brands, will control access to identity and personal information through blockchain-based services and experiences like **Civic**, **uPort**, **MetaMask**, **Blockstack** or **Toshi**.

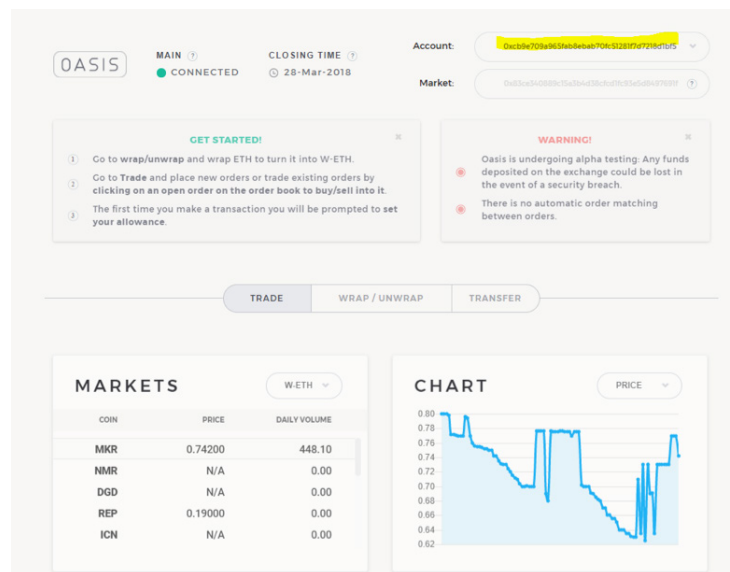
To make it a bit more real, let's look at an example from **MetaMask**. Let's say you want to use the **OasisDex.com** site to trade digital currencies. Go there in a browser (at the time of this publication) and you'll see this:



However, if you set up a **MetaMask** profile via a secure Chrome plug-in:



You are now able to access any distributed application via a Chrome browser.



Notice that the account number in the MetaMask extension and the account number on the top right of the screen in the OasisDex site are the same.

In this screenshot, the user is now logged into the site and can begin using it. There was no sign-in page, no password. Credentials are automatically verified and the application doesn't retain PII anywhere.

This is a dramatically different experience than the one we have today. Instead of keeping a series of passwords or using a tool like **LastPass**, a customer has a cryptographic proof to her identity and credentials. She can prove she is eligible to shop on your site as a US citizen without telling you any personal information whatsoever. Additionally, because the app itself is decentralized, there is no tracking imposed on the customer.

What this means is that delivering great customer experiences based on tracking customer behavior across websites will become a greater challenge. Consumers likely will migrate to blockchain-based social networks that preserve anonymity like **Mastodon** or **Steemit** (decentralized versions of Twitter and Reddit, respectively). These protocols could begin the disintermediation of Twitter and Facebook, **unless they decentralize themselves first**.

There's one other component of blockchain-based systems that will impact customer experience: switching costs. In a world of *Fat Protocols* and *Thin Applications*, it is possible to move from one interface to another in a matter of seconds. Imagine the possibility of moving from Citi to Chase in less than a minute. Impossible, right? Yet, you can easily move from a **Jaxx** Bitcoin wallet to a **Blockchain.info** wallet in under 1 minute. All you need is your private key.

Just like Uber, AirBnB, and Amazon redefined what was possible in our minds in terms of customer experience, we will see the same "bleeding over" of expectations as more people interface with blockchain-native applications. The fact that customers will easily move from app to app to interface with their protocol of choice will put pressure on entrenched industries to lower switching costs. In this future, customers might reasonably ask something that seems counterintuitive by today's standards like, "Why can't I use the Chase app to access and move money that is sitting in my Citi account?"

To retain and monetize customers, CMOs of the future will need to obsessively focus on CX (at the app layer) and utility (at the protocol layer).

Bottom line:

The arrival of blockchain technology means that:

- You will have much greater confidence in the integrity and accuracy of the data you use as the source of customer insights
- Obtaining perpetual access to customer data will be more difficult
- Stitching together behavior patterns across an ecosystem will be more challenging
- Expectations for frictionless experiences will increase

Suggested Action:

Ask your Customer Experience team (if you have one) precisely how they measure CX, what the components are, and how everything connects to either increased revenue, reduced costs or reduced risks. If you do not have a Customer Experience team, ask yourself the same question re: revenue, costs, and risks.



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Branding Means You Can Prove You Are Trustworthy

Familiar Challenges

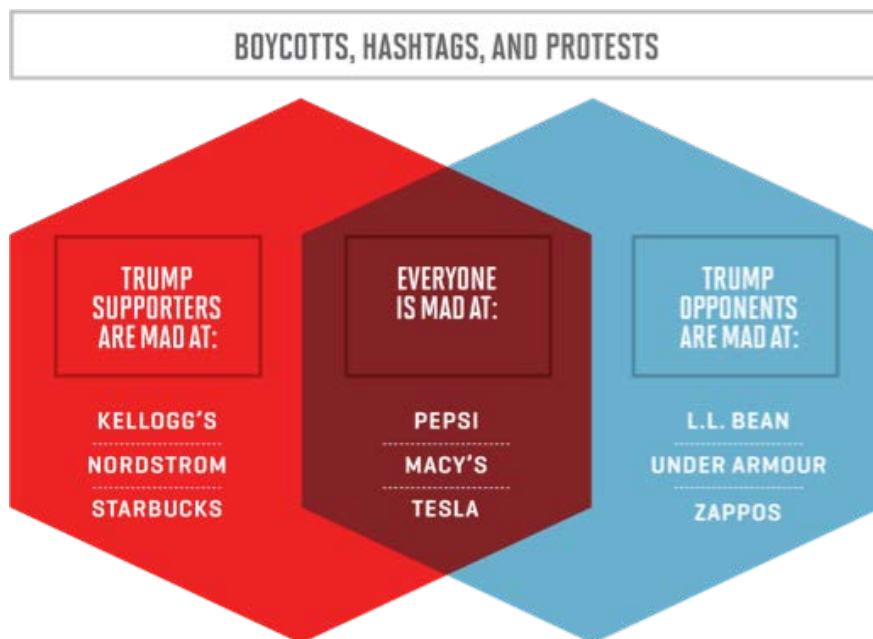
When someone writes a blog post called **30 Branding Definitions**, it is not surprising that non-marketers sometimes look at us with eyes askance. It seems we can't even get ourselves to agree on what we're doing.

Regardless of the words we ascribe to the idea, many CMOs would agree that a brand is about trust. Trust, in traditional brands, like trust in other institutions, is under a lot of pressure. According to **Edelman's Trust Barometer**, businesses are on the brink of distrust. CEOs fare much worse: they are at an all-time low for credibility.

Retail brands may be the bellwether of a trend that will impact every company. After the election of 2016, consumers expressed their disapproval and lack of trust in a number of well-known brands because the expectations they had didn't align with the behaviors of those companies. In an **article** in the Washington Post, Mark Cohen (director of retail studies at Columbia Business School) said that "We're seeing retail become more of a bully pulpit... How are consumers showing their disappointment? Some are demonstrating, others are spending a fair amount of time complaining. Many are voting with their wallets."

In a different article entitled **Donald Trump Is Dragging Brands Into Politics**, Fortune wrote that "corporations prefer to be seen as apolitical creatures," but those days appear to be waning. Empowered customers are increasingly unwilling to give corporations a free pass on societal issues, expect them to have values, and will patronize those with the values that best align with their own.

Image source: **Fortune**



Where Blockchain Technology Can Fit In

The promise of a blockchain-enabled world will allow every action of a company to be inspectable and verifiable, and the customer will grow to expect this level of transparency. This trend may go beyond retail and into CPG, where downstream suppliers could feel pressure as well. Richard Stacy sums it up quite nicely **when he writes**, *“the significance of blockchain is that, at its heart, it is all about the shift of trust from institutions into transparent processes – and this is what the whole social digital revolution is about.”*

Blockchain technology affords brand marketers a tremendous opportunity to thrive in this environment of heightened customer expectations. CMOs can rebuild trust with customers of all types by moving the relationship from blanket statements to verifiable proof.

For example, when you go into a store to buy a bag of coffee, you have no way of knowing if the label that says “organic, free-trade, bought from a family owned farm” is actually a true statement or not. With blockchain, you will be able to verify the provenance of the coffee beans. In a blockchain-based world, the verifiable supply chain becomes a key part of the value proposition. **Walmart is already using blockchain to track pork provenance in China**, improving safety, reducing risk, and building trust with customers.

Taking this to the next level, blockchain technology could help you prove:

- The percentage of employees or vendors that are women, minorities, or veterans
- How much money you donate to charity
- Customer satisfaction scores
- Defect rates
- On-time and on-budget delivery rates
- Retention rates

Applying this to a real-life example, it might have helped Nordstrom prove that Ivanka’s shoes were no longer on the shelves, avoiding potential negative PR. As author **Jack Trout once wrote**, *“claims of difference without proof are really just claims.”* The good news is that blockchains provide you with the ability to prove the veracity of your claims to build trust with your audience.



Near-Term Impacts and Benefits

Expect to see a number of new offerings that allow you to start proving the fidelity of your data, both internally and externally, as a means of demonstrating trustworthiness with customers and partners. Beyond that, you will see implementations that allow you to have greater confidence in the accuracy and integrity of the data you see daily.

One start-up to watch is **Tierion**. The company has developed the open *chainpoint* platform and aims to provide the “dial tone for trust” by offering the ability to anchor data to the blockchain, proving the integrity and timestamp of any data, file, or process. Tierion has partnered with Microsoft and Philips and can be integrated with nearly 500 different services like Salesforce and MailChimp. As noted on the Tierion website, “CMOs always suspect the accuracy of the data and reports they receive. Tierion gives marketers a global platform to verify the integrity and timestamp of marketing data.”

Tierion’s functions are intriguing for many reasons. The company promises to:

- Prove the integrity and timeliness of lead records
- Hold affiliate marketers accountable by ensuring they report data at a specific time
- Improve compliance and acquisition rates within regulated businesses
- Track data provenance (ensuring data integrity as it goes through “spreadsheet washing” before it gets to you)
- Issue digital receipts for shipping, tracking, or returns

You may see new revenue opportunities arise. For example, an intrepid marketer could use Tierion to prove the number of attendees in the morning session of an event to increase digital advertising rates for an afternoon session. Or **just like Julian Assange of Wikileaks proved he was still alive** by reading the transaction hash of the most recent block, you or your agency or partner could use Tierion or a similar offering to prove that a certain piece of data existed at a certain time.

In a blockchain world, customers won’t just have to take your word for it, and you will never have to ask them to.

**you will see
implementations that
allow you to have
greater confidence
in the accuracy and
integrity of the data
you see daily**



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Long-Term Impacts and Benefits

Just like American Express was known by the phrase, “*membership has its privileges*,” decentralized protocols and crypto-tokens offer the same benefit. Only in a blockchain world, the privileges are not just access, but token value appreciation (economic privileges), community (social privileges), and alignment with core beliefs (psychological and spiritual privileges). To have the privileges of the network, you must be a member.

The only way to be a member of certain networks will be to own one of the network’s tokens. A purchase of a token of any one of those networks is a chance to benefit economically from the growth of the network. At the same time, it represents an opportunity to support others who share similar values, thereby allowing people to live in greater harmony. It also makes you a de facto marketer for the protocol, thus reducing customer acquisition time and costs.

Hundreds, if not thousands, of tokens have been created. As Fred Ehrsam, co-founder of **Coinbase**, wrote in ***Value of the Token Model***, “the fundamentals of the token model are valuable and powerful. They allow communities to govern themselves, their economics, and rally a community in powerful ways that will allow open systems to flourish in a way that was previously impossible.”

Balaji Srinivasan, founder of 21.co, wrote in ***Software is Reorganizing the World*** that “an infinity of subcultures outside the mainstream now blossoms on the Internet — vegans, body modifiers, CrossFitters, Wiccans, DIYers, Pinner, and support groups of all forms. Millions of people are finding their true peers in the cloud.”

Putting Fred and Balaji’s observations together, it is possible to imagine a blockchain-based protocol that only allows for the buying and selling of 100% vegan items (as verified by the blockchain), or products made by Wiccans, or certified DIYers. Inherently, those communities are incentivized to support the evolution and growth of the protocol; it is in their economic and spiritual self-interest. Vegans want more vegans. Cross-fitters want more cross-fitters. The way to do it is by having a brand of which they can be both proud and financially rewarded.

Ever since Clay Shirky published ***Here Comes Everybody***, marketers have been looking to harness the power of the crowd for innovation. Brands have embraced community-driven marketing to varying degrees.

Others, like Ikea, resisted the idea of empowering fans and ultimately lost. See ***Ikea vs. Superfans: how paranoid trademark lawyers make everything suck***.

Token economies are based on a circular economy idea where participants share a belief in the utility and core values of the underlying protocol and are willing to accept the token as payment.



in a
blockchain-world,
a strong
community is
non-negotiable



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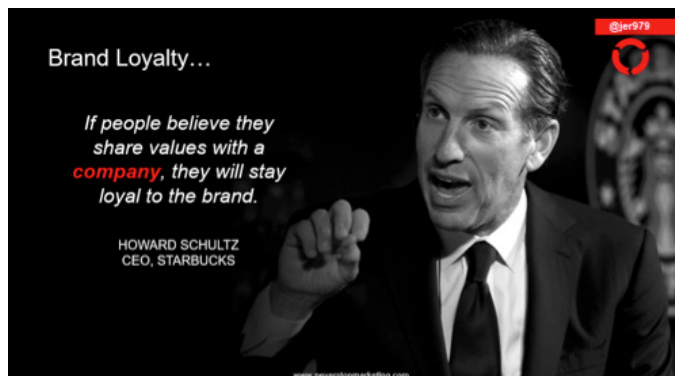
Bitcoin is an example. When Satoshi Nakamoto released the **Bitcoin whitepaper** and put out the genesis block on January 3, 2009, he was basically serving as a brand manager for a blockchain-based system.

First, he outlined the brand (protocol) vision via the manifesto. In so many words, he sees “a world of payments that does not require third-party intermediaries.” **Second**, he outlined the mission. “What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party.” **Third**, he started to build a community. His first few posts (**here** and **here**, for example) are efforts to create believers, which is precisely **what happens in Hal Finney’s post** who buys into the vision and then argues for the value:

“With 20 million coins, that gives each coin a value of about \$10 million. So the possibility of generating coins today with a few cents of compute time may be quite a good bet, with a payoff of something like 100 million to 1! Even if the odds of Bitcoin succeeding to this degree are slim, are they really 100 million to one against? Something to think about...”

Enthusiasm for the protocol attracts new believers. The growing of the ecosystem increases the value of the coin and stimulates innovation. Admittedly, there is a huge amount of speculation in the crypto-market right now, but you will see more and more brands born based on:

1. A clear mission, usually for disrupting an incumbent
2. A strong whitepaper/vision document
3. Creating a community of believers who benefit across multiple axes: emotional, psychological, and financial



What we are seeing now is the true power of community to build brands in an era of hyper-connected individuals.

Bitcoin has achieved its position with no “marketing” in the traditional sense. Ethereum raised just over \$17 million in its crowdsale and does not really spend much on marketing either (or Ether). The Ethereum Foundation runs DevCon, and it’s a safe bet to say that the sponsors more than cover the costs.

The list goes on.... **Gnosis** raised \$12.5 million with a whitepaper and some emails, **Bancor** raised more than \$150 million with **basically no marketing**, **Stratis** was valued at over \$1 billion right after its launch.

What got all of these going? It’s what makes brands thrive in a blockchain world: Inspired Media. Ben Thompson of Stratechery **explains it** quite well:

“And what drives engagement? Emotion and passion. That may mean a funny product video, or, in the case of politics, politicians who eschew the middle and run to the extremes... the extremes inspire passion which drives engagement; ‘broadly acceptable’ doesn’t go anywhere.

This has profound implications for products and politics... products and politicians designed for the TV age — that is, meant to be palatable to the greatest number of people — are at a fundamental disadvantage on platforms like Facebook. The products and politicians that win inspire passion, stirring up a level of engagement that breaks through on a scale that far exceeds an ad buy. To put it another way, above I mentioned ‘paid’ media and ‘earned’ media; what matters on the Internet is ‘inspired’ media.”

With this will come new tools and methods for measuring customer sentiment. **Santiment** is one such next generation technology. Today, they are focused on sentiment around cryptocurrencies, yet their roadmap is clear that they are going to create reports and insight about protocols (brands) based on token activity, price, and more.

The combination of the present realities shows that passion drives engagement, and the coming realities of a blockchain-based world which is supercharged by the passionate users who benefit from the underlying protocols show us a very different future for communications, messaging, and branding.

Bottom line:

A “brand” of the future, by whatever definition you choose, will need to do three things well

- Deliver unquestioned trust via blockchain-based proofs
- Inspire belief in the core vision and mission
- Create circular economies of value around the vision and mission

Suggested Actions:

- Investigate partnership opportunities with supply chain or other leaders in the company where proving trustworthiness can enhance your value proposition to the market
- Talk to your teams about how you might start to measure the level of inspiration that your messages delivers to your customers

Advertising Becomes More Accountable

Familiar Challenges

You know you are not getting enough value for your advertising dollar. For every \$1 you invest in advertising, **you only get \$.44 of value**. One **Forrester** analyst claims that publishers who remove middlemen can increase CPM from \$1 to \$5.

The **Ad Maze** report in the Wall St. Journal is only the most recent illustration of the number of middlemen (and resulting lack of transparency) between you and your intended audience. As if that is not bad enough, you also do not have enough visibility into how your advertising performs. To top it all off, **bots inflicted \$7.2 billion in fraud last year**.

Awareness is critical and advertising is a necessary component to driving consideration. You also know that the current model does not optimize your effectiveness or your return on marketing investment. John Wanamaker's quote still rings true:

 *"Half the money I spend on advertising is wasted; the trouble is I don't know which half."*

Where Blockchain Technology Can Fit In

This next line will not help with the popularity of agencies, but that does not mean it is not accurate.

 *"Any industry that is full of intermediaries, has a lot of value lost along the transaction path, and lacks transparency and trust is an industry that is ripe for blockchain-driven disruption."*

It comes as no surprise that the first and most advanced wave of blockchain-based protocols and technologies are seeking to upend how digital advertising is purchased, delivered, measured, and valued.

Near-Term Impacts and Benefits

Expect to see initial traction from the first generation of solutions as early adopter CMOs and digital marketing leads begin to experiment in the next 12-18 months. You will hear of preliminary proof-of-concept implementations that reduce reporting time, improve reporting accuracy, reduce fraud, and reduce costs in the advertising supply chain. You may also see downward price pressure on traditional agencies responding to the competitive threat.



**bots
inflicted
\$7.2 billion
in fraud
last year**

The field of contenders is starting to fill up. Expect to see more join as well. You will also see several different strategies. Some of the early entrants include:

- **AdChain**, built by **MetaX**, which offers a protocol for establishing trusted relationships for buying and selling advertising space via its own native token. The token will represent your right as a shareholder in the network. Together with the other shareholders, you will have an incentive to keep it clean from fraudulent or low-value publishers. In return, you will benefit by getting more ad value for your investment and verifiable campaign auditing through cryptographically secure impression tracking. In late June, AdChain raised \$10 million in 6 hours in its initial coin offering.
- **NYIAX** (New York Interactive Advertising Exchange) claims the world's first advertising contract exchange. They are using NASDAQ's blockchain technology to combine a financial matching engine and trading concepts with advertising technology. The goal is a transparent marketplace for buying, selling, and re-trading of future premium advertising inventory as guaranteed contracts. They expect fees to lower as the number of intermediaries goes down to one.
- **AdShares** is a decentralized, peer-to-peer market for programmatic advertising. It gives advertisers and publishers ability to trade directly without the need for centralized ad exchanges.
- **MadHive** is a video advertising and data platform that allows brands and publishing partners to build audiences and target those audiences across multiple screens and platforms. MadHive's back-end product uses blockchain technology to allow brands and publishers to leverage the inherent trust and verifiability of a decentralized, peer-to-peer sharing network. MadHive is a founding member of *AdLedger*, the advertising industry's blockchain consortium.

As these solutions start to come to maturity, you will have greater trust that your advertising investments are being placed as you intended. Wanamaker's quote may not go away entirely, though you may be able to reduce the percentage wasted slightly.

Long-Term Impacts and Benefits

In his book, *The Attention Merchants*, Tim Wu writes;

“If we think of attention as a resource, or even a kind of currency, we must allow that it is always, necessarily, being ‘spent.’ There is no saving it for later. The question is always, what shall I pay attention to?”

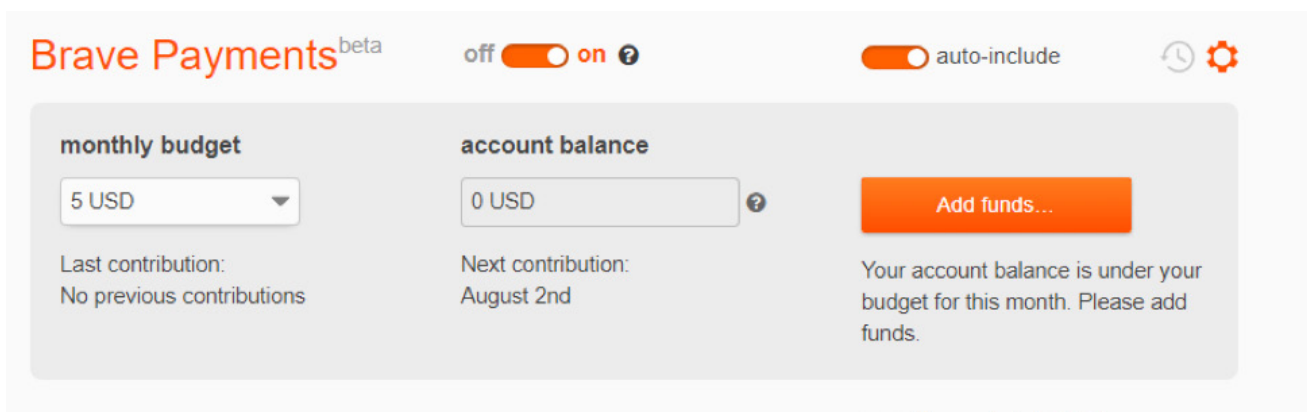
As marketers, we sometimes take for granted that the attention of others comes without any cost to ourselves. Since others pay for attention, marketers have historically just done whatever they could to get it. Advertising has been based upon this paradigm since the first **penny papers of New York** and **Belle Epoque posters of Paris**.

In a blockchain-based world, this paradigm could change. Arguably, it is already changing as **more than 600 million devices worldwide run some form of ad-blocking software**. William Gibson writes:

! *“The future is already here — it’s just not very evenly distributed.”*

In the future, though, if you want someone’s attention via advertising, you may end up having to pay the person for it directly. You certainly will not swipe a credit card every time someone sees your ad. However, you might pay them a small fraction of a cent. Micropayments for attention can only work at scale with a digitally native currency.

Making and tracking these types of payments at scale is precisely one of the inherent strengths of blockchains. **Brave** offers a glimpse of this future. On the surface, Brave just looks like another web-browser. Built by the creator of JavaScript and the co-founder of Mozilla and Firefox, it is already a strong browser experience for end users. It natively blocks ads and prevents cookies, which makes it much faster than its competitors. However, it is in the “Payments” tab where the story starts to get unique.



Brave offers the capability for site visitors to directly make micropayments to a publisher via cryptocurrency for their content. You may not be willing to pay \$200 a year for a subscription to The Economist, but you will pay a fraction of a penny to read an article. At scale, some of the most popular sites will start moving away from advertising as we know it

The next iteration will come in the form of something like the **Basic Attention Token (BAT)**, a function built by the architect of the Brave browser. The token is the mechanism through which an advertiser pays for attention-based mental effort by an individual. With Brave and the BAT, you will pay end users for their attention, instead of the 73% of all ad dollars going to Facebook and Google.

Brave may be destined for failure and there are **valid critiques from very smart people** that are worthy of attention (even though you will not be paid for it just yet).

Still, it is radical and different and a possible hint at a world in which the CMO of the future is going to live.



Bottom line:

Advertising will be the one of the first disciplines to be disrupted by blockchain technology. The good news is that you will have much greater trust in knowing that your advertising and outreach efforts are going exactly where you intended them to go. The bad news is that attention of others will come with a price tag.

Suggested Actions:

Talk to some of the initial entrants to the blockchain-based advertising space. Even if they are not ready for prime time, they can help you understand the direction.

Download the Brave browser and play around with it.

Commerce and Sales Get Automated and More Measurable

Familiar Challenges

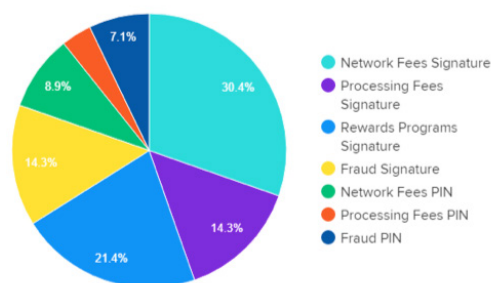
Time is money and, well, money is money.

For a business that processes credit cards or bank transfers to fund its operations, transactions can end up being costly and time consuming. Credit card transaction fees average anywhere from 1.5% to 3%. This doesn't include other fees such as monthly minimums. Companies pay these fees to compensate for the fact that they cannot be 100% confident about the trustworthiness of every customer or supplier. It's a big "Trust Tax."

Meanwhile, it is not like bank transfers are any better. They can take anywhere from 2-5 days in the US and international can take 2 or 3 times longer, and there's more and higher fees for those.

To make matters worse, the **Nilson Report estimates** that in 2016, losses topped \$24.71 billion. Merchants were responsible for 28% of those losses stemming from card-not-present issues **when customers buy online or pick up in a store**. Retailers spend **\$6.47 billion annually** on credit and debit card fraud prevention.

Issuers' Costs for Debit Card Transactions



(Source: Pulse via Food Marketing Institute, 2012)

B2B Challenges As Well

On the B2B side, there are plenty of challenges when it comes to commerce. According to the *Atradius Payment Practices Barometer*, only 50% of businesses check buyer credit worthiness, request secure forms of payment, or both, and **81.5% of companies report** employing credit management policies to mitigate trade risks.

This does not even mention all of the value lost by payments not arriving on time, with average payment terms for the Americas of 28 days and the average Days Sales Outstanding of 48 days, according to **some estimates**.

Beyond B2B and B2C, there's a humanitarian element to address with not-so-ultimate motives. There are 2 billion people in the world who do not have access to the traditional banking system. Banking the unbanked serves the greater need of extending capital to those previously unable to prove themselves trustworthy to participate in the global economy, growing an entirely new market in the process.

Where Blockchain Technology Can Fit In

One of the oft-quoted maxims of the blockchain world is that “the trade is the settlement.” In **Satoshi Nakamoto’s whitepaper**, the entire point of Bitcoin and peer-to-peer digital currencies is the elimination of middlemen and the increase of trust. Every payment could be automatically verified.

Each customer or vendor can immediately prove his trustworthiness “by demonstrating ownership of the private key that can access funds.” People that were too costly or risky to serve (say in a developing country) can now become customers.

While fees for transactions will not go away entirely, peer-to-peer transactions verified by a network consensus model will ultimately be lower than centralized third parties.

Near-Term Impacts and Benefits

As digital currencies become mainstreamed, you will see an increasing number of companies that accept them as payment as well as opportunities to use them to lower costs.

There are already more than 46,000 merchants worldwide that accept Bitcoin **via Coinbase** alone. The CEO of AirBNB, Brian Chesky, **said** he was “surprised that Bitcoin functionality was the number one requested improvement to Airbnb, even topping a loyalty scheme.” There are even **two New York City private schools which are now accepting Bitcoin, Litecoin, and Ether as payment.**

The benefits are clear: faster transaction processing times and reduced fees means that either prices are lower, sellers keep more of the revenue, or both. Accepting these currencies will provide a competitive differentiator for some companies.

For one simple example, let’s say you put on a customer or partner event that has 1,000 people attending with an average ticket price of \$500. Today, you are paying \$10,000 in credit card fees. What if you could reduce it to \$1,000 or less by accepting digital currencies? It may not make sense for every activity, but it will allow you to get more value from your marketing budget.

You will also see more and more adoption of digital currencies internationally, lowering the barrier to sales and enabling you to expand more rapidly to new markets. **South Korea is preparing to legalize Bitcoin.** Japan has removed the consumption tax on Bitcoin leading some to estimate that **300,000 stores will accept Bitcoin by the end of 2017.**

Finally, you may start to see discounts from vendors if payment is made digitally. Vendors might make this offer if payment cycles and cost of processing can be reduced. When you are in the vendor position, you may want to offer discounts for payment in digital currencies.

As for the accounting of it all, that appears to be going mainstream as well. Microsoft has announced that it will **add native Bitcoin support to Excel.** Others are sure to come behind.



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A company called **OpenBazaar** is essentially a decentralized eBay/Amazon. By eliminating the middleman entirely, they offer a commission-free environment for sellers and a shopping experience that has better security and privacy (and potentially lower fees). Because it is decentralized, any information about your transaction is known only to you and the seller. This is unlike eBay or Amazon who know everything and use that information. As a result, it becomes a great way to build your direct relationship with customers.

Plus, there are more customers (and potential vendors). Since there is no bank or ID requirement to set up a store or become a buyer, you have access to more potential customers. You do not have to worry about credit card fees or invoicing; every transaction occurs in a cryptocurrency. People often ask me “what can you buy with Bitcoin?” My favorite answer is “earrings for my wife for Mother’s Day.” There is a world of customers that will be using OpenBazaar (or some version of it) soon.

As a side note, OpenBazaar is doing a pilot program with a charitable organization in Buenos Aires, Argentina enabling women who live in the barrios to access the global market with their wares and have greater financial security by owning Bitcoin instead of the inflationary Argentine Peso.

Long-Term Impacts and Benefits

One of the most exciting components of blockchain technology is the enablement of *smart contracts*. If you think about a set of business processes or a legal agreement, it is really nothing more than a set of if... then statements. That same logic is the basis for computer code. A smart contract takes the if... then of a legal requirement and embeds it immutably into the blockchain, signed by two (or more) parties.

A simple SEO example that you could implement today at **SmartContracts.com** may help illustrate the potential.

What if you want to improve your organic SEO rankings? Today, you might hire a vendor and negotiate a fee and a timeframe. When the time for the contract is up, the vendor and you agree on what has happened (hopefully) and then you are billed. You approve the invoice, send it over to AP, and thirty days later (hopefully), your vendor is paid.

What if, instead, you set up a smart contract that said:

“Two months from now, if Google returns <http://SomeSpecifiedURL.com> for keywords A, B, & C in the top 10 results, pay this Bitcoin address 1 BTC

If it does not return the following URL, then pay this Bitcoin address .5 BTC”

After you set it up, both you and your vendor cryptographically sign the contract and it is immutably written into the blockchain.

On the specified date, the smart contract itself queries Google (the *oracle*) and since the result is known, the payment is automatically released in the appropriate amount.

SMART TERM 1

IF the API location

HAS a value

FOR the

BY expiration date

THEN Smart Term 1 is **COMPLETED**

AND is recorded as completed in the blockchain, making a secure record of verified performance

RELEASING the escrow **TO**

OTHERWISE Smart Term 1 is **FAILED**

AND is recorded as failed in the blockchain, making a secure record of verified performance

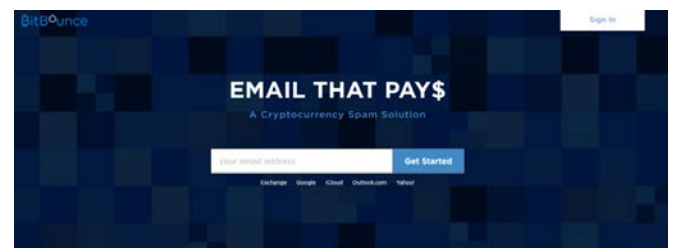
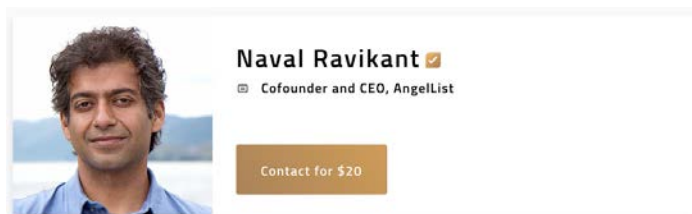
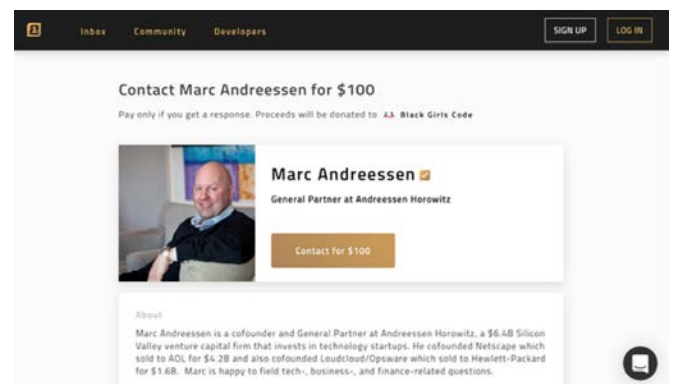
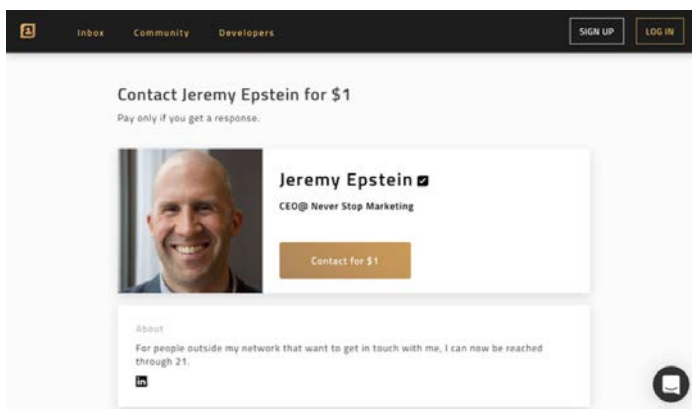
RELEASING the escrow **TO**

Add Smart Term

It may be a simple example, but you can begin to see the power of how commerce can be automated. Even better, you will have the ability to pay for performance as a marketing executive. At the same time, when you recognize that the legal and business rules that surround our business agreements can be turned into code, you will have the opportunity to flexibly and dynamically create new types of revenue opportunities within your target customer audience.

Is it early for smart contracts? Absolutely. Will there still be a need for dispute resolution? Yes. The key point is that a great deal of friction will be removed from many marketing processes, simplifying commerce and facilitating sales at all levels of the organization.

Another area where commerce and sales will change will come from the arrival of a “pay for attention” model. We talked previously about advertising, but this trend could extend to market research and many other functions as well. The basic idea is that in a blockchain-world where customers maintain their own identity and control over their information, marketers will have to pay each individual to get their attention. Today, you pay Google or Facebook. Tomorrow, you might pay **BitBounce** or **21.co**. Eventually, large enterprise-grade tools should emerge that allow you to manage these efforts at scale, but the concept will be the same. Each person will set a price for their guaranteed attention. It will be a marketplace and you can choose to pay it or not. If you do pay it, you will get a response that you can verify came from that individual.



It is not that either of these solutions are precisely what the future looks like. They are a glimpse of the future in which customers are taking control of their data and access to their attention. With blockchain-based cryptocurrencies that can handle micro-transactions, it is now already feasible to have this type of system. When we assign an exact amount to the cost of attention for each individual, marketers will have a far more granular understanding of how to value the relationship with each customer.

Bottom line:

As scrutiny on the enterprise CMO intensifies, smart contracts provide an opportunity to more clearly demonstrate the value of marketing spend. Pay for performance and pay-for-attention could prove to be the two pillars of how CMOs of the future are judged.

Suggested Actions:

- Have someone on your team execute a very simple smart contract so you can understand the immediate potential
- Download **OpenBazaar desktop** or the **OB1** mobile app for OpenBazaar to see a decentralized shopping experience
- Set up a **21.co** site of your own. **Feel free to test it out with me (<http://21.co/jer979>)** - all proceeds will be donated to charity

Loyalty Becomes Simpler, Flexible, and Innovative

Familiar Challenges

According to a report by **Maritz Loyalty Marketing**, most customers abandon loyalty rewards programs due to frustrations with the time required to obtain meaningful rewards. 70% of the consumers polled cited the length of time it takes to accrue points.

Where Blockchain Technology Can Fit In

The capabilities of blockchains and digital token programmability will aid in removing friction from the settlement of loyalty points across multiple programs and companies. This will open new areas for innovation, particularly at the regional and local level.

Loyalty programs of the future will empower regional marketers to create new programs that unlock revenue potential, while staying consistent with the brand because the brand rules and regulations will be hard-coded into the loyalty points themselves. Simultaneously, tracking and trading loyalty points will also evolve in simplicity and possibly move from a balance sheet liability to a trackable marketing asset.

Two loyalty areas that will likely benefit from blockchain technology include:

- *Loyalty program interoperability:* The easier it is to exchange loyalty points with partners for redemption of their products, services, and perks, the more value your points will have for your customers. Airlines and credit cards obviously do this already, though there's a lot of friction in the process. The bigger the ecosystem, the more valuable your core product. Blockchains will make this easier.
- *Loyalty point transferability and management:* In a blockchain world, the tracking of loyalty points will become simplified, as each point can be represented as an asset on a blockchain. Since each asset is now digital and trackable, program owners will have the option to program or "hard code" business rules for customer utilization. Asset programmability will also provide companies with a way to incentivize loyal customers to cost effectively acquire new customers and do so with both brand and legal governance controls built in.

Finally, in a blockchain-enabled world, ownership of perks can be easily tracked, transferred, and fine-sliced into bits for micro-redemptions, providing greater options for customer satisfaction in an expanded rewards eco-system without increasing costs.

Near-Term Impacts and Benefits

The loyalty blockchain race has already begun. Several vendors are in the space and pilots are underway. By the end of 2017, you should expect to see the first case studies emerge among the early adopters. The primary benefits highlighted will most likely center around improved program liability management on the cost side and the first efforts at innovating around flexibility of offering and redeeming points for different types of customer relationships.

We may also see a “blockchain-ification” of loyalty points, where companies become transparent about the number of points available in the program. Part of the value of loyalty programs comes from the exclusivity it conveys. If “membership has its privileges,” and everyone is a member, what is the privilege really worth? Ask anyone with *Premier Status* on United Airlines and they will tell you that it feels like almost everyone has it. We could see the emergence of blockchain-driven points programs that show precisely how many spots are available in each program. Knowing that may increase the value of the program and incentivize customer behavior.

Some of the first entrants in the field include:

- **Loyyal** - a universal loyalty platform which can be applied to existing redemption networks, creating opportunities from interoperability. Brands can also choose which other brands they want to include in their own reward app on the blockchain. Norwegian **AiSpot** is one company which has selected Loyyal for **its travel platform**. They also have a pilot program with Dubai for tourists
- **Blockpoint** lets companies build their own distributed loyalty platform, lottery games, and gift card functionality
- **IBM and China UnionPay are developing a platform for trading loyalty points**, demoed in a proof of concept in September, 2016
- **TamTam Travels** offers members discounts and benefits on a range of travel products and services



Long-Term Impacts and Benefits

There are multiple ways that loyalty could be impacted in a blockchain world. Both are centered around the fact that the open-source network protocols replace many of the features which are now unique to siloed applications.

To use a protocol in a blockchain based world requires a *token* or a *coin*. In most (but not all) protocols, the number of tokens is either fixed or has a predictable inflation rate. As demand for the tokens goes up (based on the utility of the token), the value to the market increases as well. In a blockchain world, a token holder has an immediate incentive to use the token frequently, which increases utility for others in the network. In addition, it is in the token holder’s interest to help attract others to the network to further increase the utility and value of the token they already have. Loyalty then becomes not something that is *built-on* to a product, but rather something that is *built-in* to the product/protocol.

It is this very phenomenon that Kik is using by **inverting its business model to a decentralized protocol**. By issuing its own cryptocurrency, **Kin**, Kik hopes to create a circular economy of utility with loyalty built in that creates a competitive threat to Facebook's messaging dominance. Blockchain-enabled loyalty creates viral loops through the built-in economic principles inherent in the fixed "slots" in any blockchain.

We may see a world where **owning a token is the new brand logo**. A musician, such as **Tatiana Moroz**, can issue her own coin, "**TatianaCoin**" which her fans buy and use to not only get music, but also demonstrate their support for her.

Given the **"fat" protocols** of the blockchain era, switching costs at the application layer go to near zero. In this world, *lock-in* at the application layer goes away and brands will move to *love-in*, focusing on delivering unique experiences.

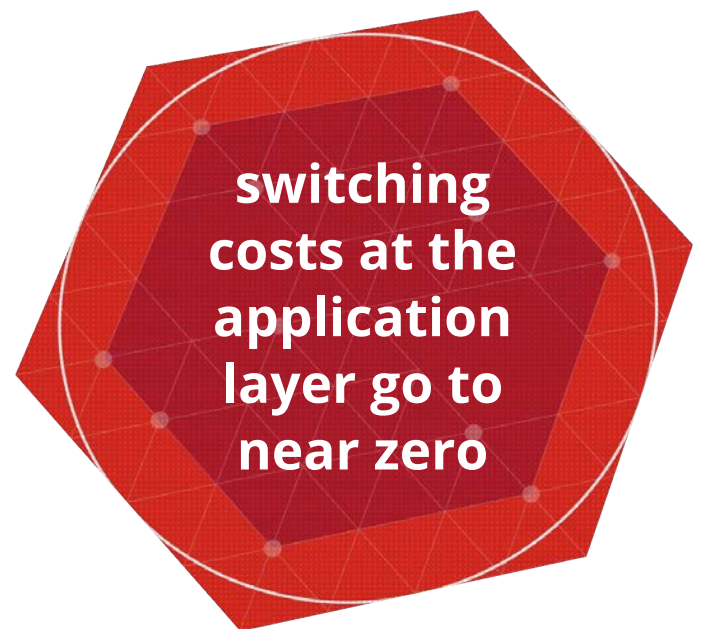
For example, we can look at two different Bitcoin wallet providers. The switching costs between them are negligible. One of them, **BitPay** makes it easy to connect your Bitcoin account with a Visa card, helping people integrate their cryptocurrencies with traditional fiat. The other, **Jaxx**, offers the same ability to manage Bitcoin, but instead focuses on creating a product that makes integration with other cryptocurrencies the main feature.

Bottom line:

Loyalty program management should simplify and new opportunities for innovative loyalty programs will emerge. Loyalty programs of the future look like they will be a function of maximized customer utility and innovative flexibility.

Suggested Actions:

- Dig deep on some of the early entrants to the blockchain-based loyalty space
- Drill them on the pilots. Like advertising, it may be early, but better to be ahead of this one



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Data Becomes a Commodity, Insights and Questions are Assets

Familiar Challenges

There is nothing you don't already know that can be added here.

Where Blockchain Technology Can Fit In

If there is a "sweet spot" for blockchain, this is probably it.

The first and most obvious benefit is that blockchains will give you greater confidence in the integrity of the data you see. Immutable entries, consensus-driven timestamping, audit trails, and certainty about the origin of data (e.g. a sensor or a kiosk) are all areas where you will see improvement as blockchain technology becomes more mainstream.

Beyond data integrity (which is a huge component), the shared data layer that blockchains will introduce creates an entirely new set of possibilities for marketing AI capabilities and insights.

Trent McConaghy, the CTO of **BigChainDB** does a **great job in explaining** the benefits of decentralized/shared control, particularly as a foundation for AI. In this world, you get:

- More data thus improved modelling capabilities
- Qualitatively new data leading to entirely new models

The inherent immutability leads to provenance on training and testing data and the models they produce, all leading to greater confidence in the accuracy.

We are also likely to see blockchain-based technology make an impact in the cost of storing data and in the amount (and quality) of data available to you as a CMO. This data will help you create predictive models to identify new revenue opportunities.

Cost savings in data storage will come from the disintermediation of centralized storage providers, thus reducing the "trust tax," you pay them currently. This should also create downward pricing pressure on your SaaS suppliers as they move to decentralized storage providers.

Near-Term Impacts and Benefits

You can expect to see decentralized solutions like **Storj**, **Sia**, **MaidSafe**, and **FileCoin** start to gain some initial traction in the enterprise storage space. Storj already has one enterprise customer in pilot phase and the estimates are that, so far, they will be able to reduce costs of storing data by 90% when compared to AWS. As a CMO with large enterprise data costs (either direct or indirect), this represents significant potential cost savings, which can be redeployed elsewhere.

Imagine reducing the cost of hosting the data for your entire website by 90%. As for blockchain-driven AI, you can expect to see a three phase roll-out. First, within the existing enterprise. Then, within the ecosystem. Finally, totally open systems. The entire industry might be termed *blockchains for big data* (Trent's words).

This will certainly take some time to evolve, but you will see companies like **BigChainDB** and others like **Chain.com**, **PeerNova** and **DisLedger**, as they expand from the financial services world. Of course, large established enterprise players will jump into the fray. IBM has already announced a “**Watson for Blockchain**” solution and Google will use DeepMind and Microsoft’s blockchain team is getting stronger.

For an early preview of what one AI+blockchain solution looks like, you can look at **Numeraire**. It is an effort to create a collaborative hedge fund using common data sets. Members of the network compete to create the best algorithm for generating returns. They stake their efforts using Numeraire tokens and then share proportionally in rewards. The hypothesis of the firm is that removing the obstacles to access to the data and giving each of the network participants a monetary incentive aligned to overall performance of the network will yield improved results.

Long-Term Impacts and Benefits

We will see an expansion of the concept of “big data,” as we move from proprietary data silos to blockchain-enabled shared data layers. In the first epoch of big data, power resided with those who owned the data. In the blockchain epoch of big data, power will reside with those who can access the most data (where public blockchains will ultimately defeat private blockchains) and who can gain the most insights most rapidly.

There are two significant implications.

- Customer data will not belong to organizations, locked away in corporate databases. It will belong to each individual, represented as tokens or coins on an identity blockchain. The customer of the future will grant access to others as necessary.
- Transaction data will be viewable by anyone. Anyone can access the data about the transactions that occur on a given blockchain. (For example, **here are the latest Bitcoin transactions.**)

When data moves out of proprietary systems onto open blockchains, having the data itself is no longer a competitive advantage. Interpreting the data becomes the advantage.

In a blockchain world, all competitors are looking at the same ledger (imagine you and your competitors all have the Google Sheet or Excel file). Anyone can provide an interface to that ledger. That’s relatively easy. That’s what you see here for **Ethereum** or **zCash**. Many companies will provide applications that enable a customer to interact with a protocol. This is what **Jaxx** or **BitPay** do, for Bitcoin.

Yet, there are very few companies that provide a set of analytic capabilities that suck up all of this data and explain what it all means or what should be done about it.



Fewer still have figured out the scalable process for doing this. This is the opportunity. Some have called it the **“Data Industrialization Opportunity.”** Simply put, it is the question of who can put the best AI/machine learning solution on top of open, shared, blockchain-based data layers.

Whoever does that gains some degree of competitive advantage. If a Bitcoin wallet, for example, instead of being “dumb” (as it is now) is actually “smart” — in the sense that it can advise or help customers make sense of the world (based on all the data available on the blockchain) — that one will be market leader.

It will also lead to improved customer retention. Customer lock-in should never be “let’s make it really difficult for people to leave;” it is better imagined as “how can we mine, extract, and deliver insights and value from the shared data layer so that people don’t want to leave.”

The world’s top 50 physical mining companies are worth about \$700 billion dollars. You can expect to see blockchain-based data mining companies that will easily take us into trillions of dollars of market capitalization (granted, this may be many years off).

As a CMO of the future, you will benefit from a cursory understanding of how AI works on top of blockchain-based data. According to the MIT Sloan Management Review in ***Romantic and Rational Approaches to Artificial Intelligence***,

“Managers and executives may find that their understanding of the AI output improves slowly. As complex as analytical models can be, managers and executives likely have at least some basic statistics background to build from — so they have a starting point. But with artificial intelligence models, managers probably have less background. Machine learning is rarely part of a business curriculum core.”

Understanding the capabilities of AI and machine learning is important, as is how to interpret the data, but that is not the most important skill for the CMO of the future. The most important skill is knowing how to ask great questions.

Kevin Kelly, one of the most impressive thinkers on technology in the world, wrote a fantastic book called ***The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future***. He makes many excellent points, but let’s focus on one in particular, the importance of questions:

“A good question is the seed of innovation in science, technology, art, politics, and business. A good question is a probe, a what-if scenario. A good question skirts on the edge of what is known and not known, neither silly nor obvious. A good question cannot be predicted. A good question will be the sign of an educated mind. A good question is one that generates many other good questions. A good question may be the last job a machine will learn to do. A good question is what humans are for.”

Machines may be able to give us the answers, but they don’t know which questions to ask. Work on your questioning skills.

Bottom Line:

In a blockchain world, data changes from an asset to a commodity. The larger the dataset, the better the AI, which is why open/public blockchains should dominate in the long run. It's not who owns the data, it is who uses it better by asking the best questions.

Suggested Actions:

- Begin exploring blockchain-based solutions to help stitch together various data silos within your enterprise and ecosystem, with the expectation of improving the size of your data set
- Get a basic understanding of AI and Machine Learning
- Practice asking better questions. **Start with the “5 Whys” of Toyota**



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Management & Leadership: Better Visibility, More Dynamic Environment

Familiar Challenges

 *"Our people are our most important asset."*

You've heard it said 1000 times and you have probably said it yourself, but we all know the difference between A and B players. How often have you seen an email announcing a new member of the team that proclaims how much of a "rockstar" they are, only to have them leave 6-9 months later? Sadly, we do not all work in **Lake Wobegon**. Enterprise hiring practices are truly hit or miss.

A **CareerBuilder study** found that 69 percent of employers reported that a bad hiring decision had placed a strain on their company. Twenty-four percent of companies reported that a bad hiring decision had cost well over \$50,000. Forty-one percent of businesses reported a figure of over \$25,000.

Once a person is on the team, particularly working in a large group, it is not always easy to assess who really is making an impact and who is just coasting. There is clearly frustration in many large companies about this issue. A recent **Wall Street Journal article** featured Kimberly-Clark committing to a new era of individual accountability where "people can no longer hide."


There are a myriad of other issues at play here including recognition, morale, resume fraud, and reference verification which impact your ability to hire and retain the best individuals.

Where Blockchain Technology Can Fit In

Keeping track of verified credentials (courses completed, awards won, training certifications) in an immutable way is a natural fit for a blockchain-based hiring solution.

In the realm of recognition and value created, imagine a crypto-token system where employees could (or must) spend all of their tokens by awarding them to others on their team whose contributions they value. For example, an employee who works on a big project with a large, distributed team is impressed with a few key players as teammates. The individual could send an amount of crypto-tokens to that person's account.

Then, at the end of the year, a manager could essentially have a "value ranking" of employees by how many tokens there are in that employee's account. Every employee would know in real-time how valued they are as a teammate and where they rank at the team, department, and company levels.



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This type of feedback could be used to spur collaboration, weed out weak performers, form stronger teams, and more. This reward system may not be sufficient alone, but you can start to see it as a quantifiable way to assess the relative value of employees as viewed by their peers.

Blockchain technology can give you confidence that the attestations of co-workers are valid and the claims of each person are true (or not). Recommendations that we see on LinkedIn might even be digitally signed and discoverable in the near future.

Near-Term Impacts and Benefits

You can expect to start seeing recruiting and resume verification platforms that are based on blockchains that reduce some of the risks associated with hiring marketing talent. Rob Scott writes in ***How Blockchain, Chatbots, and PDRs Will Disrupt HR Technology***:

“seed funding has increased by a multiple of five times since 2013 and a few HR tech vendors are exploring its [blockchain] possibilities and benefits.”

One notable early entrant from established players is **Recruit Technologies**. A subsidiary of Recruit Holdings Co., an established IT leader in Japan, the company is developing blockchain-backed cryptographic certificates of authenticity. They seek to encourage data-sharing among different institutions and allow for data-mining based fraud detection. They will store record credentials on a blockchain and tamper-proof certificates of authenticity will be generated via digital signatures. Through this effort, they plan to reduce forged or altered documentation of school credentials, previous employment records, or documents that have been translated.

Chronobank.io is an Australian short-term work platform that is developing a blockchain-based financial system for freelancers or contractors to obtain work and pay them in a proprietary *labour-hour* token. For an employer/employee relationship, this would be illegal if mandatory. In the client/contractor format (a relationship we are seeing more and more of in the age of remote work), a contractor may choose to receive payment in any fashion they choose. The designer of this handbook was paid in a combination of cryptocurrency and preferred arrangements for a trip to Zug.

Long-Term Impacts and Benefits

We are witnessing a change in the very idea of work and employment. A few months ago, The Wall St. Journal published a powerful article called ***The End of Employees*** which stated:

“Never before have big employers tried so hard to hand over chunks of their business to contractors.”

It goes on to quote the former CEO of Virgin America, David Cush:

“We will outsource every job that we can that is not customer-facing.”

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If this is indeed the trend, and the data in the article suggests that it might be, it is possible that what is already happening on top (to the people) is mirroring what is starting to happen below (the supporting technology infrastructure). That is, the trend towards decentralization. As technology makes coordination and collaboration easier, the cost of having a contractor do a job will continue to fall below cost of the FTE. This is Nobel Laureate **Ronald Coase's *Nature of the Firm***, which states that:

“If it is more efficient for a transaction to take place within the firm than under some other institutional arrangement, then it will take place within the firm.”

The corollary is that the opposite is true as well. Blockchain-based HR and workforce systems will help enterprises get to the point where it is more cost-effective to decentralize (another way of thinking about outsourcing) all but the most critical items. As the ability to interoperate with technology increases, it will be even easier to remove non-core employees (because the core shrinks even further). Andrew McAfee and Erik Brynjolfsson suggest in their new book ***Machine, Platform, Crowd***, that we will see a combination of **Companies, Networks, and Crowds**. According to Accenture:

“One of the 2,000 largest companies in the world will have **no full-time employees** outside of the C-suite within 10 years.”

It's almost, but not quite, a **Decentralized Autonomous Organization** (organizations that have no formal managers, just smart contracts executing agreements). Blockchains that enable decentralized systems could accelerate the end of the full-time employment world and make the “gig” economy the new reality for most people.

In this environment, the CMO of tomorrow does not look anything like the CMO of today. No huge organization charts or mandatory “all-hands” meetings. At the same time, fewer internal HR considerations and discussions of promotions and corporate ladder climbing. Fewer politics.

The future CMO in a blockchain-world is going to need to understand the inner-workings of the product a lot more than has traditionally been the case. They will also be looked upon to help communicate the vision of the brand in accessible, layperson's terms as a story that is designed to be re-told. In the blockchain-future more and more of the people you count on to “do” marketing will not work for the same company or project as you do.



Bottom Line

We will move towards a world of intensified accountability of individuals due to more objective feedback from credible systems, an increased ability to measure the impact of people and programs, and more dynamic working relationships. Hiring great talent will still be a challenge, but it will be easier, and blockchain technology will reduce the number of mistakes. Marketing organizations will be challenged to find a good balance on FTEs versus contractors when a CMO wants to add the most value at the least cost.

Suggested Actions

- Look for early-adopters of blockchain-based HR solutions as potential source of innovative talent (the first ones to use the system have a higher than average risk tolerance) and for clues as to how talent will be measured in the future.
- When thinking about what tasks/functions contractors can do just as effectively for your company as FTEs, take another minute and search to find out if there are companies using blockchain technology to address those issues.



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Blockchain-Native Competition: Understanding How Value is Created in a Decentralized World

"In early 1996, nearly a year after Amazon was actually ringing up sales, Steve convinced Len that they should look into the Web. He assembled some of Barnes & Noble's younger, tech-oriented employees and got to work. But at first, Steve didn't think the Internet would be anything more than an innovative marketing tool for Barnes & Noble's brick-and-mortar stores."

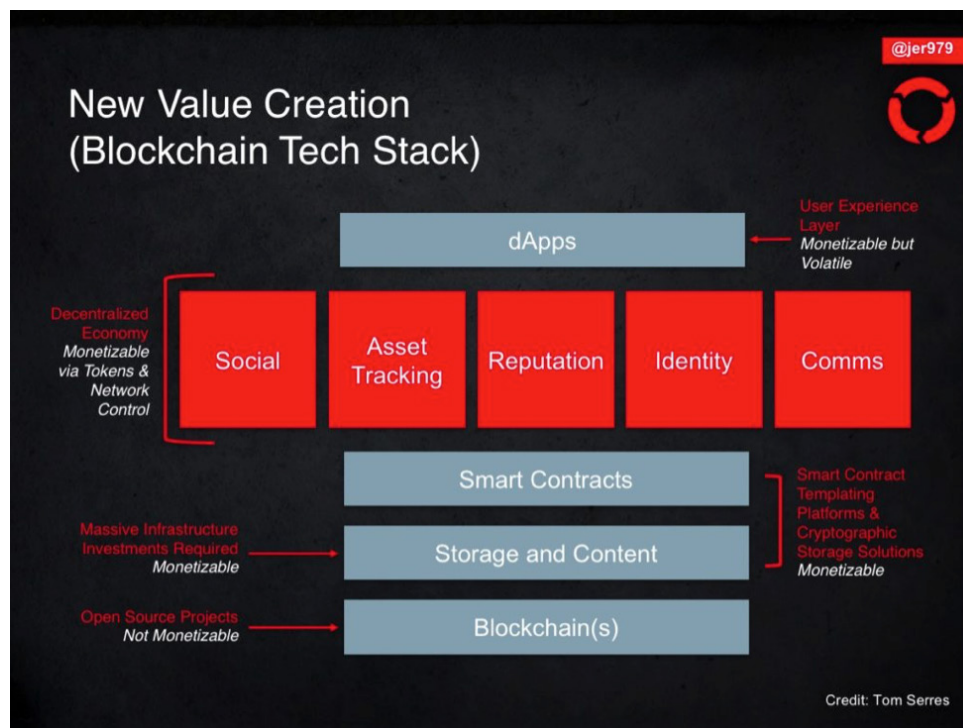
- **Barnes and Noble's Epiphany**, Wired, June 1, 1999.

If you are the CMO of a large organization, you have already seen this movie. New technology comes on the scene. Incumbents seek to leverage it to improve existing business processes while downplaying the threat of start-ups with entirely new-and unproven-business models. We have seen how the movie ends for a lot of the incumbents.

As Inc. magazine proclaims "**Why Half of the S&P 500 Will Be Replaced in the Next Decade**" they quote Innosight's report **Corporate Longevity: Turbulence Ahead for Large Organizations**:

"The 33-year average tenure of companies on the S&P 500 in 1965 narrowed to 20 years in 1990 and is forecast to shrink to 14 years by 2026."

Blockchain-native organizations are going to come to market with an entirely new business model, organization, and **structure**. To understand how blockchain-native companies create value, you need to understand the blockchain tech stack.



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Note: The explanation below comes from the blog post **How You Can Understand and Profit from the Blockchain Tech Stack**. It explains each layer of the stack in a more informal tone.

Blockchains: As has been said by many people, “it’s just a database.” And that’s pretty much true. It’s a distributed database (instead of centralized) where each entry in the ledger is time-stamped and cryptographically secured and linked to the previous and following set of entries in “blocks” of transactions.

Having a distributed database on its own is great, but you don’t always need one.

Storage and Content: A giant spreadsheet of time-stamped transactions doesn’t really require that much storage space. You can keep that on your computer without much fanfare. But what happens when we have images, audio, video, and VR worlds running on blockchains. We’ll need those to protect media rights of creators and ensure redundancy in our systems (to avoid things like **the S3 crash**).

Think about it this way: most of us have unused assets that could be turned into value in the form of hard disk space. You may have a 500 GB drive on your computer, but you are only using 200 GB of it. So, what do you do?

You can rent it out to someone like **Storj**, **Sia**, **MaidSAFE**, or **FileCoin**. Their network protocol then pays you for hosting some of the files that people put on the network. These files are encrypted and *sharded* (cut up), so you only have a fraction of someone’s file and you have NO idea what’s in it, and every file is copied to multiple nodes, creating redundancy.

A developer who wants to use one of these protocols as the back-end system for storing the data required in their application then pays the network via one of these coins. For example, you may get 1 coin for hosting a file. The developer may get 1.2 coins from an end consumer for the service the app provides to the end user. That .2 is the profit to the developer.

The network doesn’t take a commission at all, which is why these networks will be able to provide the same storage as Amazon or Google for a fraction of the cost, say 90% cheaper. Of course, for it to work, they need hundreds of thousands of people to rent out portions of their computers. In a classic chicken-and-egg problem, those people will only come if there are developers who are building on these platforms (which they will do only if there is enough storage).

Eventually, however, it will be worked out, and the creators of the protocols that win the space will see the value of their limited tokens increase due to demand. That’s how they propose to make a successful enterprise.

Smart Contracts: As explained earlier, if you think about a legal contract or a business agreement, it’s essentially a series of “if, then” statements. If Party A agrees to do X, then Party B will do Y, and so on. It’s basically the same thing as software code. Put it all together. We call it a *code of law*; the *legal code*.

Except now, instead of having it in big volumes or stuck in contracts that are just sitting on DocuSign's servers (eventually replaced by someone like **BlockSign**), the digitization of all of these assets can be programmed to have the legal and business rules associated with them directly connected to them, not sitting in a legal silo.

Decentralized Economy: As stated earlier, a good primer on this one is **Joel Monegro's** excellent post on **Fat Protocols**. It's also where we're seeing a ton of innovative efforts and initiatives such as **OpenBazaar**, **Steem**, **uPort**, **Metamask**, **Blockstack** among many, many others.

In this layer of the stack, you will have these protocols, which are basically open-source, portable, and reusable software codified rules, that replace the proprietary systems which dominate our current landscape.

One of the most obvious ways that this layer will be monetized is via so-called *crypto-tokens* or, the more benign digital assets. For some good primers on digital assets and tokens, check out **Nick Tomaino's post**, **Albert Wenger's post**, and both **Jake Brukman's** and **Naval Ravikant's** excellent contributions to the eBook, **"Blockchains in the Mainstream: When Will Everyone Else Know?"** which everyone should also read. I've also **blogged on the crypto-token possibilities more than once**.

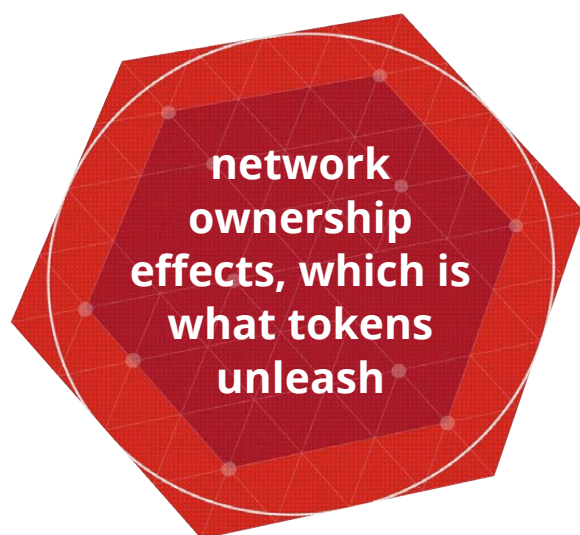
The key point here, I think, was summarized well by Nick in the aforementioned **post**, where he explains the difference between *network effects* (which we all know from phone, fax, email, Skype, etc.) and *network ownership effects*, which is what tokens unleash. You not only get utility from more people joining the network, but since participation in the network requires ownership and use of network-specific tokens, you actually gain an increase in the value of the tokens you hold.

Let's take **La'Zooz** as a very early example; it was an effort to become a decentralized Uber. In the Uber model, you join the network and as more users/drivers join, the utility of the network goes up. As the utility of the network increases, the value of Uber increases, because they are effectively the protocol (rule maker), connecting buyers and sellers. The value appreciation goes to the owners of the 'protocol,' in this case, Uber. Facebook, eBay, Etsy, Craigslist, Twitter and companies in the *sharing economy* fall into this category.

In the decentralized economy, La'Zooz created a token (*Zooz*) and offered it in exchange for participation in the network: Riders need Zooz in order to pay for rides. Drivers accept Zooz in return for rides.

As there is a finite number of Zooz (or a predictable inflation to it based on the protocol rules), the value of each Zooz increases as the demand for them increases. Let's think of it this way and keep it very simple for starters.

- There are 100 Zooz in circulation
- Each one is worth \$1
- There are 100 network participants: 50 drivers and 50 riders
- Each ride costs 1 Zooz.



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As word gets around that La'Zooz is cheaper than Uber, more people want Zooz. So they trade their dollars or Bitcoins for Zooz which increases the price of 1 Zooz to \$2. So now, everyone who has a Zooz has \$2 worth of value instead of \$1. The purchasing power has now doubled, so you can afford 2 rides for 1 Zooz instead of 1. You sell half a Zooz to someone who needs one, keep the Zooz you want for buying rides and get the profit from the other one. The drivers who were charging 1 Zooz now see the value of the ride they gave in the past go from \$1 to \$2 (retroactively) and are more inclined to accept Zoozs because they expect more people to join the network. In effect, by taking these tokens, you are getting value today AND getting value in the future. Instead of Uber capturing the value that accrues, the owners of the network (the token holders) capture the value.

This is what will happen in all kinds of networks. Identity networks, reputation networks, social networks. Shouldn't you get some of the value you create by posting on Facebook? Many more of these networks will eventually take hold.

This is precisely what has happened with Bitcoin over the past 9 years. Some networks will issue tokens and see the value creation there. And, if you have the question of "what's the incentive for the protocol creators?" it's a good one. The answer is that the protocol creators will hold a portion of the tokens for themselves and get to profit from the future value creation.

The number of tokens that the protocol creators receive will be transparently available for inspection by anyone via a blockchain. You or anyone can decide if it seems like it's too much (they are being greedy) or if it's not enough (they won't stick around).

Others will develop the protocol and not issue tokens. They'll attempt to monetize the efforts of the creators of the decentralized economy protocols via the app layer.

Distributed Apps (dApps): When you have a shared data layer and a shared protocol, the management of information becomes liberated. It is freed from silos and you have much more flexibility.

Let's take the example of your photos. Right now, you take a picture on your iPhone or Android device and you save it to the cloud (the cloud, in this case, is proprietary). Your iPhone picture sits in iCloud and if you want to use the photos in any type of application, you need to use iPhoto.

What if you really love the way that Google does the "auto-animation" or if you want Adobe Photoshop to interface with the same photo? Well, you have to download the picture and then upload it to a different proprietary cloud. Now, you have two copies of the picture in two different clouds, both of which are technically owned by you (but now actually also owned by Apple and Google) and management, tracking, and rights management (in some cases) becomes even more complicated.

Built on a photo asset tracking protocol, the world of dApps works differently. The data layer is shared among any app that uses the protocol, so any photo editing/tweaking app can interface with the same original photo. Obviously, you'll be able to create a copy or version of it based on how you tweak it, but you don't have to move it around from one proprietary cloud to another. In this model, you might pay a video editing dApp creator a small token for use of their software, and then a SlideShow dApp creator another token for use of their software. All of this could be run in another dApp, (like a browser) and the coins will be managed behind the scenes on your behalf, based on the smart contracts you've set up/agreed to.

As an end consumer, you'll get faster, cheaper, and more secure application experiences as well as the knowledge that only you have access to your data.

The dApp creator will get value from the payments in creating the most valuable application for interfacing with the protocols below it. So, if the dApp QuickTime version is the best, everyone can use it...regardless of the OS.

The challenge here, and why it is labeled as "volatile" is because switching costs are basically zero. If I don't like an app, I can pretty easily move to another one, use the same tokens that I already have and just start paying the new dApp creator instead.

For example, the other day, I moved one of my Bitcoin addresses (the interface to the Bitcoin blockchain) from one wallet provider to another (just to see if I could do it) and I did it in 40 seconds. Can you imagine moving your bank account from Citi to CapitalOne in 40 seconds? That's what we're talking about and why the UX/CX of these dApps will be the killer differentiator.

There's revenue opportunity and value creation at this layer as well. The people who build the great user experiences will be freed from platforms to focus on utility for the end user and they will be compensated for it. As you can see, the marketing challenge is to figure out how to compete with new entrants who are built on entirely new operational paradigms. It's a HUGE opportunity to re-think entire industries and functions and how value will be created and distributed.



Kalin Nicolov

Digital Transformation Architect

Kalin's experience ranges from ideation and prototyping to strategy and implementation with pragmatic, hands-on approach. He acquired his expertise in global projects with diverse cultural and business backgrounds in innovation (Pricewaterhouse Coopers, Sopharma), infrastructure (SITA, Accenture), business transformation (easyJet, Qantas), and non-profit organizations and partnerships with IBM, Intel, DELL, RedHat and other blue chips.



Marketing in a Decentralized World

Peter Drucker is no stranger to the concept of decentralization and early proponent of technology automating repetitive labor. He sketched the *knowledge worker* back in the 60s, and the management community has since recognized his vision and foresight. Decentralization aims to remove bottlenecks, possible points of failure, and dependency on central authority or concentration of influence. Staying sharp and focused is essential for companies to survive, Drucker argued. Intermediaries and facilitators, on the other hand, seek to retain control over their dominant position and (as seen in the fintech space) are adopting offensive (as opposed to defensive) innovation to join the next S-curve in hopes of retaining control. Some may argue this is a well: a marketed FOMO. The fact remains most financial institutions today are changing at a pace unseen before.

Today's marketing landscape is dominated by omnichannel, where the deepest pockets buy the widest coverage. Social media influencers are the new brand darlings, showering in the spotlight and casually endorsing sales and solutions from the gym, poolside or over morning coffee. We are all too familiar with the algorithms that control the product narrative, from cars to shampoo and flu sachets. Marketing at large has settled for mediocrity, with interns running social media accounts of Fortune 500 companies, reducing digital to just another

channel. This is to say that few companies develop separate channel campaigns, but rather broadcast the same message to all. Regardless if you believe in the 4P or 7P marketing mix, the necessity to animate the currently static "P"s is staggering. Add action, Predict, Propose, Persuade, and be the customer advocate to champion change in your company. Digital doesn't mean customers should be fronted with robo-advisors to prove human relevance. Decentralized doesn't mean offshoring support functions. Mobile-first is not a tactical exercise but a philosophy of expression and the pinnacle of A/B testing.



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Marketing in a Decentralized World (Cont'd)

The evolution of marketing reminds me of dev-ops. A few weeks back, Elon Musk took a customer complaint to problem resolution in six days. Online media was raving of this master class. Word of mouth spreading, the fanbase expanding, former Jobs followers are now following him, his company and products. Change should come from the top and be executed from within, bridging the gap between leadership and customer. The rise of AI and personal data ownership will diminish the value of SEO, SEM, and SEA. Shared, not harvested, data will feed metrics as they shift to a holistic understanding of the market and focused deep deep dives on feature evolution. As more and more of our world is available as a service or software, marketing will also see unbundling and commoditization of everything but creativity. And as you strip away the layers, the core (ideas and creativity) will slowly merge with product development. Backoffice dominated by AI and automation, front office bossed by marketing. Less media noise but superior adoption and improved market penetration.

The crux of marketing today is twofold: acknowledging the imbalance in information and the need for a new narrative. User information and behavioral patterns are concentrated within few platforms controlling

the channels (FB, GOOG, AMZN, AAPL). Kevin Kelly argues that today we are wasting our attention while platforms are amassing personal data on behavior, triggers, and decision journeys. Data in the attention economy will belong to the individuals where new tools, still missing today, will allow users to selectively share and/or monetize their personal information. Marketing in the age of decentralization requires a narrative that will educate, emancipate, and elevate the customers and their needs. It will serve value by answering questions instead of populating billboards. Marketing will become the new customer edge, where clients volunteer knowingly insights in exchange for focused product evolution and better value with each release cycle. Marketing will thrive in the overlap of company, societal and personal values that will engage customers at an emotional level. In our journey towards smart environments, where everything is interconnected, sensorized and even beyond, we remain human and emotional. We remain motivated by subjective feelings that are influenced by acts of kindness, displays of compassion, or sparks of positive emotion, music, love, hate, courage and fear - all things that make our species stand out.

Greg Damus

Managing Director of The Gathering

Greg has worked with some of North America's largest brands helping them find ways to meaningfully engage with their customers and fans primarily through digital and social media platforms. He has contributed to campaigns and programs that won a Silver Cassie Award and a Gold and Silver Canadian Marketing Association Effectiveness Award, and was shortlisted for Marketing Mag's Top 30 Under 30 in 2012. Most recently, Greg has taken the helm as Managing Director of The Gathering, the annual coming together of the world's most coveted brands.



Marketing in a Decentralized World

Marketing in a decentralized world is challenging, at best, to define or predict. The same way, we couldn't have predicted what was going to happen to social networks once marketers got their hands on them; these platforms hit IPOs, shareholders started demanding profits, and ultimately users got fed up with those very networks. Everything changed, then a few years later, it changed again.

I don't believe any particular platform or technology can or should redefine how you holistically approach marketing, but it should certainly influence it. We saw it with Facebook – brands clamoring to acquire fans and build audiences just to end up using it as another media channel to talk at their customers rather than talk *with* them.

We know one thing for sure; technology changes, and will continue to change - with or without you. The key is to create a brand and organization that can continually adapt and progress alongside technology. Some of the most beloved, cult-like brands on this planet are over 100 years old and have proven their staying power by doing so. Look no further than Harley-Davidson, Levi's or Converse.

Regardless of what the future brings there are core principles that brands can embody to achieve cult-like status and ensure they are prepared to take on whatever comes their way.

Be Remarkable – Deliver the Extraordinary

Cult brands don't buy impressions, they make them. Brands can become truly remarkable, by diverting mass media budgets toward more engaging activities that drive affinity and word-of-mouth advocacy.

Be Inspirational – Inspire from the inside out

Cult brands invest in indoctrinating employees with their beliefs and values. It's the CMO's responsibility to establish and improve brand culture, and to harness human resources as their most powerful branding tool.

**the key is to
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can continually
adapt and progress
alongside
technology**

Marketing in a Decentralized World (Cont'd)

Be Involved – Shut up and listen for a change

Mediocre brands scream via mass media; Cult brands shut up and listen. Cult brands know how to collect and value customer input and systematizes processes of co-creation.

Have Purpose – Be driven by a powerful ethos

Cult brands get customers to not just buy, but to buy into their noble cause. Brands must convey their “why”, so they can stop bribing customers with points and discounts, and start winning their hearts.

Be Relatable – Brands are not real people

Cult brands behave like people, and represent aspirational human characteristics. Cult brands need to constantly assess all brand/customer touch points and look for ways to insert more personality and humanity.

Be Pervasive – Cult brands are everywhere

Cult brands extend their reach into non-traditional channels (i.e. Lego movie, Marvel Comics mobile app). Cult brands come to life in complementary ways beyond their core offering.



**cult brands
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to not just buy,
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cause**

Ken Brooks

Co-author of AdChain Protocol

A serial entrepreneur, Ken has built technology companies from the ground up since 2010. His most recent accomplishment is co-founding and serving as CEO of MetaX, the first platform to unlock the blockchain for digital advertising. Ken also founded and served as CEO of VidRoll, a video technology and monetization partner for premium content publishers. Previously, Ken started StreamRoll Media, a cross-screen adtech company, in 2013, and earlier in his career held positions in both traditional and digital media.



Decentralization's Influence on Blockchain-Secured Marketing

In a decentralized ecosystem, companies are held to a different standard. Transparency and open-source ethos take a front seat to colorful tag lines or celebrity endorsements. Reputation is based on auditable source code and viability.

Marketing in a decentralized world is about harnessing the synergy that takes place between customers and companies throughout all phases of a product's development roadmap. It's an organic process of discovery in which open lines of communication become an integral part of the marketing effort; where credibility is established and trust is formed.

Even though blockchain is still in a nascent phase, change is inevitable, and will happen sooner than the industry-at-large realizes. Marketers should embrace the benefits they'll derive from emerging technologies fostering centralization. There is plenty of emerging opportunity to explore and understand this shift and what it means.

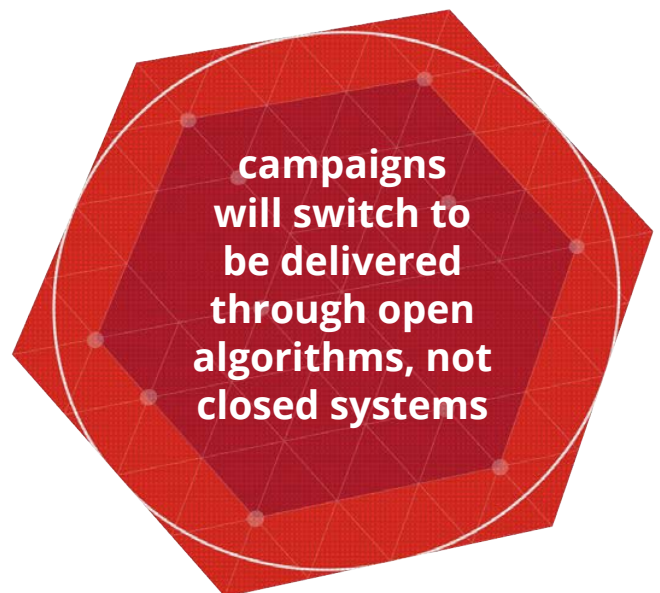
When looking at a decentralized marketing approach from the lens of brand advertisers the implications are vast. The way brands reach target audiences are changing and fragmenting, which opens up enormous opportunities for blockchain and, specifically, a decentralized approach.

For example, this technology layer will foster the breaking up, and working around, large centralized players that currently dominate the industry – and revenue. Campaigns will switch to be delivered through open algorithms, not closed systems. *Peer-to-peer* will take on an entirely new meaning for brands delivering messages directly to consumers in a decentralized world.

Brand safety won't be an issue. Impressions will be executed and delivered with confidence due to the intrinsic security capabilities. Measurement will radically change, as will our relationship with data. It will empower the technology we use with artificial intelligence, predictive analysis, attribution and, execute campaigns on a granular level.

The general public is starting to question the existing frameworks and systems we depend on. There is a growing desire to take back control over what's theirs. People want to secure their own information and not to reveal data unnecessarily. This will impact marketers as well. Decentralized systems will be central to this shift, enabling new ways to connect on the consumer's terms.

In essence, it will change everything.



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Richard Bush

Chief Product and Technology Officer of NYIAX

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Richard has over 15 years of experience in the advertising technology industry. He comes to NYIAX from IPONWEB, a key infrastructure provider in the media trading ecosystem, where he was the General Manager of its Publishing Solutions business. Richard has also served as the VP of Product and Technology at AOL Networks.

Ben Feldman

VP of Technical Operations at NYIAX



Having worked in the digital advertising space since 2011, Ben brings a wide range of experience to his role at NYIAX. Ben started his digital career at Mocean Mobile, a mobile ad server acquired by PubMatic in 2014, where he was responsible for product and business management, contracts, billing, and programmatic operations. Ben received a BA from Hampshire College and resides in Belchertown, MA.

Toward a Better Future: Blockchain and Advertising

As blockchain has grown from a multi-industry buzzword into a realistically applied tool, the evolution has sparked discussions about the implementation of blockchain to address specific advertising industry challenges. Fraud, transparency, and reconciliation are primary examples.

Implementing blockchain as a means to address existing issues which plague the industry has merit. To be truly effective, blockchain must be utilized in a holistic manner, rather than a topical solution or a band-aid for singular pain points. As an industry we have an opportunity to design the future, not just retrofit a shiny new tool.

If the industry takes a unified approach, we can take advantage of basic blockchain principles, such as inclusion, native assets, permissioned access, and distribution. These tenants will advance adoption and scaling beyond siloed blockchain implementations, which promote data segregation. While individual problems can be solved through siloed approaches, the intentional disconnect limits success without additional intermediaries acting as translators, at which point blockchain is acting as a secure database, and little more.

In the first days of advertising there was a basic relationship between consumers, publishers, and advertisers. Over time, agencies emerged to represent groups of individual advertisers, providing an economy of scale and specialization. As advertising moved into the digital age, additional platforms, companies, and intermediaries spawned to support new areas of growth. With each additional actor, the supply chain between consumer/publisher and agency/advertiser muddled.

Here's an oversimplified example of what it looks like, in regards to a modern real-time advertising bidding scenario:

When a user visits a publisher page, the action triggers requests to multiple exchanges - who in turn call multiple bidders acting on behalf of agencies/advertisers - while additional requests are sent to third party data services to identify the user, and compare the user to known sources of fraud.

Toward a Better Future: Blockchain and Advertising (Cont'd)

In less than a second, advertisements and revenue offers are provided back to the publisher, whose ad server makes a final decision on which ad to show and how much money they'll get for doing so. Then, the question of how long the image was in view for the user, whether they clicked on the ad, and performed any additional actions comes into play. All information from the activity is then relayed back to multiple parties.

This *Frankenstein's Monster* of requests and responses grew out of a need for verification. The blockchain's natural network integrity can streamline this process, providing consistent and trustworthy verification, while improving user experience as well. With so many different types of actors (publishers, advertisers, intermediaries, data companies) involved in any given campaign delivery, it's no wonder fraud and transparency issues manifest so frequently.

If multiple blockchains are created, each trying to solve a separate area of concern, or to serve a sub-set of actors, we may shine light into some of the black boxes, but if we work together, we can accomplish a great deal more. It is for this reason that NYIAX has been tasked by the IAB (Interactive Advertising Bureau) to co-lead a working group focused on blockchain development.

Looking beyond the need for a single industry wide blockchain, questions of utilization arise. Price transparency? Delivery and user verification? User privacy protection? By resolving these questions, we believe it's possible to finally fix the broken value exchange that web 1.0 originally introduced.

At the end of the day, it comes down to basic desires:

1. Advertisers/agencies want to engage users, and verify the message they've paid a publisher to deliver did, in fact, reach a real human
2. In return, publishers want a fair exchange of value as rapidly as possible for performing their task, which in turn allows them to generate more and/or better site content to build their user base
3. Finally, users want access to content as inexpensively as possible, without being exposed to intrusive or irrelevant messaging, and without feeling they're being spied on



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Toward a Better Future: Blockchain and Advertising (Cont'd)

If we assume for a moment that blockchain can assist in fulfilling those desires, economics becomes a consideration. If payment, time, and delivery verification are all contractually identified actions, the next logical step within a blockchain world is the utilization of a “networked incentive mechanism” which empowers and encourages trade amongst the parties involved.

Critical to this is a strong proof of work mechanism, which in part already exists within digital advertising. The delivery of an impression to the desired and actual user, when verified by multiple actors, will generate proof that the asset – that of a verified impression delivery – has occurred. Proof of asset is key to the digital ecosystem, creating a method of trade accessible to all participants which can be utilized for the dual purposes of payment exchange and delivery verification.

This is not to say there are no risks with an industry wide blockchain. The current speed of writing to blockchain does not support the billions of impressions (let alone the exponential request volume) delivered daily. This restriction may be overcome, but in the meantime, other methods of streamlining decisioning and verification may be needed.

In summary, blockchain is now front and center in key discussions regarding the evolution of advertising. Its implementation can benefit all actors and align the necessary processes and transactions that must take place for all to ultimately win. However, to do so requires a core understanding of the inherent challenges, the stop gaps currently in place, and how blockchain and/or similar systems fundamentally realign the system to benefit consumers, content creators, and marketers. With today's global markets in transition, we are excited to be helping conversations with peers who share our commitment to ensuring that the future of advertising is better than the present.

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Stacy Huggins

Co-Founder and CMO of MadHive | @shuggins

Stacy Huggins, is an entrepreneur and seasoned marketing executive who is considered a thought leader in blockchain technology and its applications to media and ad tech. Having held leadership roles on the agency, ad tech and client sides of the business, Stacy has a deep understanding of the challenges within the ad tech supply chain. Stacy has identified and built partnerships with top-tier web publishers and ad networks and worked directly with such companies as American Express, Sony Music, The Weinstein Company, IAC, sbe Hotels & Casinos and Tamara Mellon to develop and execute innovative marketing strategies and data-driven campaigns.



Lowering the Cost of Trust with Blockchain: A Vision for Market Transparency

The State of the Industry

Ad Tech is broken. Data is underutilized by brands and advertisers because of an inefficient ad tech supply chain invested in its own profitability. As a result, publishers can't keep up as their margins are squeezed by intermediaries and they are forced to compete with the unparalleled targeting prowess of Facebook and Google. On the other side, brands want unduplicated reach and quality measurement. Instead of innovation, they are gifted with fraud, opaqueness, and costly intermediaries.

The industry is experiencing a call for change. Marc Pritchard, the Global CMO of Proctor & Gamble has called on the media buying and selling industry to become a "transparent, clean and productive media supply chain," or risk losing its business. The EU is calling for much stricter regulations for user data privacy and increasing the fines considerably. The shift in the television industry as it moves from broadcast linear to digital delivery is another instance where there is volatility and inevitable change. This moment in time marks the perfect opportunity for new technologies and protocols to emerge.

Ad Tech Is Broken

Ad Tech is connected in verticals through a disparate supply chain (SSP/DSP/DMP). While trust is maintained by centralized third parties delivering reports to

keep each other in check. The costs and thereby the profits are driven inwardly towards these centralized intermediaries for maintaining this trust. All of this verification is quite expensive on top of all the tech services. Intermediaries charge 60 cents on every dollar leaving a publisher with 40 cents. There is a huge lack of transparency for buyers and sellers; no one really knows what the other is bidding or where ads will end up. The programmatic marketplace is overtaken by intermediaries creating walled gardens around data and using their 'independent' position to arbitrage inventory from publisher to advertiser, sometimes at a 100x markup. The opacity of walled gardens also forces publishers and advertisers to pay for the same connectivity to the same user several times over.

Enter: The Blockchain

Blockchain is not actually a cure-all, but it does do certain things very well. First, it will be a game changer for reconciliation and payments. It has the potential to do away with millions in misplaced ad dollars. The fighting over chargebacks and make-goods will cease when there are enough parties transacting on a distributed ledger. Blockchain also has the potential to affect how data is protected, valued and traded within the ad tech supply chain. By creating new economic models on each impression, the value can shift from the independent demand side platforms

Lowering the Cost of Trust with Blockchain: A Vision for Market Transparency (cont'd)

and exchanges back into the edges of the supply chain (advertisers, publishers and programmers). By safely signing to a ledger with cryptographic hashes the provenance of data, advertisers can trust that publishers and programmers are providing quality inventory and quality audience segments.

All that cross-platform recording means is a new level of unified reporting capabilities. These tools can ultimately create secure gates within individual walled gardens. This data portability is something that is just not possible due to fear of data leakage and the need for everyone to hold tight to their data assets.

Blockchain Tools

In the real-time sense, blockchains are actually quite slow, however, there have already been innovations made that make off-chain channels able to process the speed needed for programmatic. These tools and the technology that underlies them offer an absolute advantage from a security perspective, in that it eliminates the threat of a single point of failure. With smart contracts, permissions, conditions, and regulatory restrictions are all governed in code.

Smart contracts will one day replace the deal ID in a programmatic environment. The governance of each campaign/insertion order will be in code and the trust between two parties will simply become a consequence of the technology itself. This will become incredibly important if/when data privacy regulations become stricter and punishments more

severe as in the EU with the GDPR regulations that go into effect starting in 2018.

Blockchains will ultimately create more secure and accurate pipes between supply and demand aided by applications that sit on top of these ledgers and allow network participants to transact with true market efficiency, removing data silos that protect the monopolistic intermediaries. With more transparency and security, new look-alike audience segments can be created and shared within a permission-based peer-to-peer network. Blockchain technology will create a platform for innovation rather than isolation and protection around the inefficient model of today. When there is more transparency, and trust is a consequence of the technology, more deals (and dollars) will flow through the system.

Marc Pritchard, the Global CMO of Proctor & Gamble has called on the media buying and selling industry to become a "transparent, clean and productive media supply chain," or risk losing its business

Sean Dennis

CHO and Co-founder of Loyal | @iamseandennis

Sean is a seasoned entrepreneur with an international background. Having grown up in the UAE (Dubai), Hong Kong, Europe, and Latin America, he brings a wealth of global perspective and experience to the Loyal team. He is passionate about loyalty and behavior incentivization, and the way in which blockchains and smart contract technology can enable it. He holds a masters from CASS business school (UK).



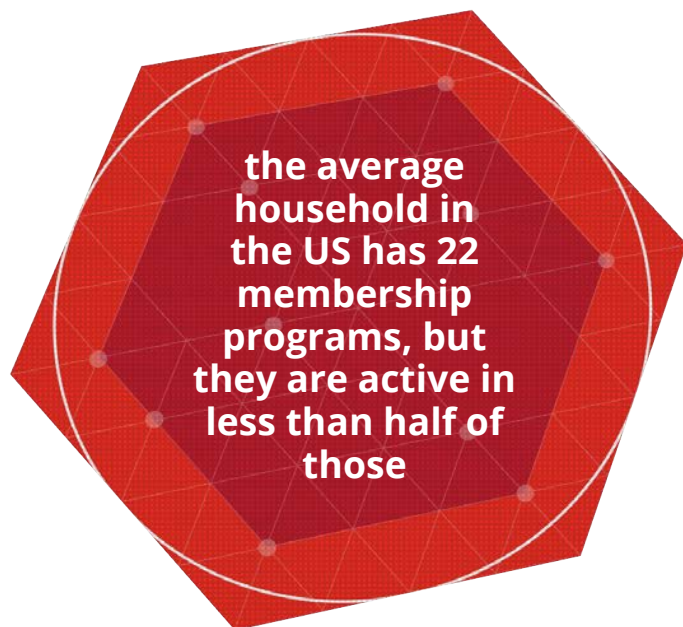
Blockchains Will Make Loyalty Programs Work Better

Loyalty and rewards is an increasingly important part of a company's marketing strategy, and in some customer centric businesses is the no.1 strategic goal. The traditional loyalty program was developed in the 80's and has experienced only iterative innovation since then. The industry has grown to well over a \$100 billion per year in points issued in North America. Operators simply do not have the technology or capabilities needed to deal with the rising costs, increasing competition, and an increasingly digital (therefore more demanding) consumer base. This has resulted in rising consumer disengagement (the average household in the US has 22 membership programs, **but they are active in less than half of those**), higher program operating costs, and in some cases, unwieldy liabilities upsetting balance sheets, not to mention the revenue risks of a 'run on the bank' scenario.

Let's look at what blockchain (Loyal) enables, and what capabilities it provides the operator with.

Scalability – One of the main desires of the millennial consumer/loyalty program member **is greater redemption options**. Using blockchain, partner integration cost, effort, and time needed to set up and operate is drastically reduced as partners connect via the blockchain and are issued a permissioned wallets with agreed upon rules as well as liability assignment to share data and manage points.

Interoperability – Blockchain provides near real-time capabilities to connect the customer journey and move value along with the customer, increasing speed by removing the need for reconciliations and trusted intermediaries. The consumer receives higher utility for points and a more dynamic experience; the operator can target increased revenues with contextually relevant offers.



Blockchains Will Make Loyalty Programs Work Better

Multi-Branded Programs – This is a potential game-changer for **larger program operators, alliance, and coalitions**. Blockchain provides cascading permission capabilities within networks as sub-branded programs. This means network partners can build their network value and run partner promotions whilst retaining control of their brand and programs (subject to rules set by the program operator). Basically providing a shared value proposition across businesses and common partner pool that is already available.

Dynamic issuance and redemption capabilities – Blockchain allows for near real time targeting of consumers through chain data that “objectifies” points issued as branded tokens. Smart contracts can read this data and can be programmed to respond instantly, which means that consumers can be targeted dynamically. Based on the increased data provided, they can be rewarded for behaviours that they actually are likely to achieve. This means a more satisfied (and therefore more loyal) customer base and a greatly increased efficiency in the loyalty reward spend ROI.

Effectively, what blockchain provides operators with is a lower operating cost base and the benefits of programmable tokens. Utilising this means changing old process and inventing new opportunities to better manage the customer experience, programme costs and return on loyalty investment. This is an incredibly powerful tool.

Marketers should be paying attention and beginning to work, research, and plan their marketing/loyalty strategy in the decentralized world. It is fast approaching, and although many think of blockchain as a financial tool, the benefits from a marketing perspective are clear.



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The Last Word

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Blockchains Aren't Perfect... And They Are Not Going Away

My brother often accuses me of having drunk too much Kool-Aid. It may be true. I know that the bulk (ok, almost all) of the text in the book focuses on the positive transformative power of blockchains. Guilty as charged.

I am incredibly optimistic and excited about how a decentralized future can make us all better off, more secure, healthier, living in a cleaner environment, and more respected.

Still, as this is my "third rodeo," (Internet, Social Media) where I have put myself into the center of it all as much as I could, I have seen enough to know that any new technology brings with it a slew of potential problems.

With blockchain, there are many. To name a few:

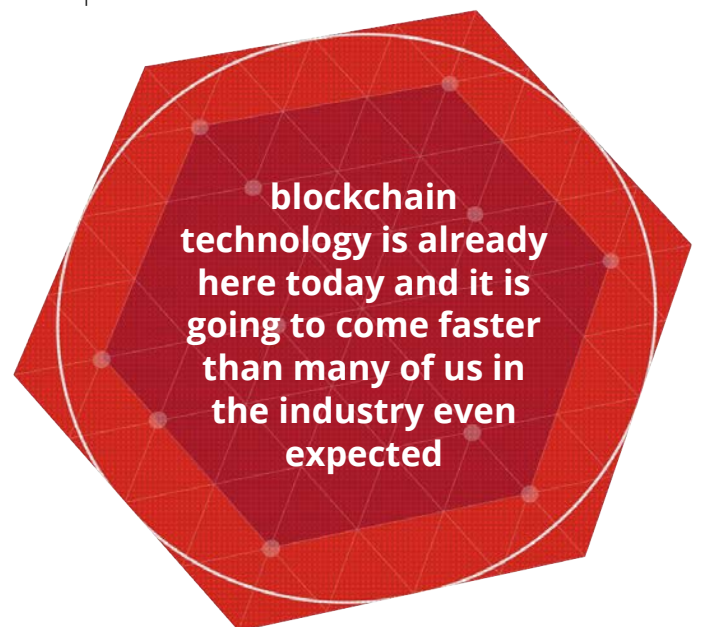
- There is more opportunity for theft and dishonesty in a more anonymous world offering more individual privacy and security
- There are still many security concerns (e.g. 51% attack) and private blockchains still need very strong defense
- There will be job destruction as many back-offices jobs that are redundantly supporting fragmented silos will consolidate
- They may not be quantum-computing resistant (which may be nearer than we think)

There will be a lot of change (positive and negative) brought by blockchains as usually is the case. The key point is that this technology genie is out of the bottle. Blockchain technology is already here today and it is going to come faster than many of us in the industry even expected.

Peter Drucker said:

"Because the purpose of business is to create a customer, the business enterprise has two—and only two—basic functions: marketing and innovation."

The purpose of this book was not to give answers; it would be arrogant of me to suppose that I could predict how marketing will evolve in a blockchain world. The purpose of this book was to ask questions. This primer was built for marketers who are *students of the game*. The goal was to give them (you) an introduction to the technology, help you begin thinking about the what-ifs and to get your input about how things might evolve, so we can help create customers by creating value.



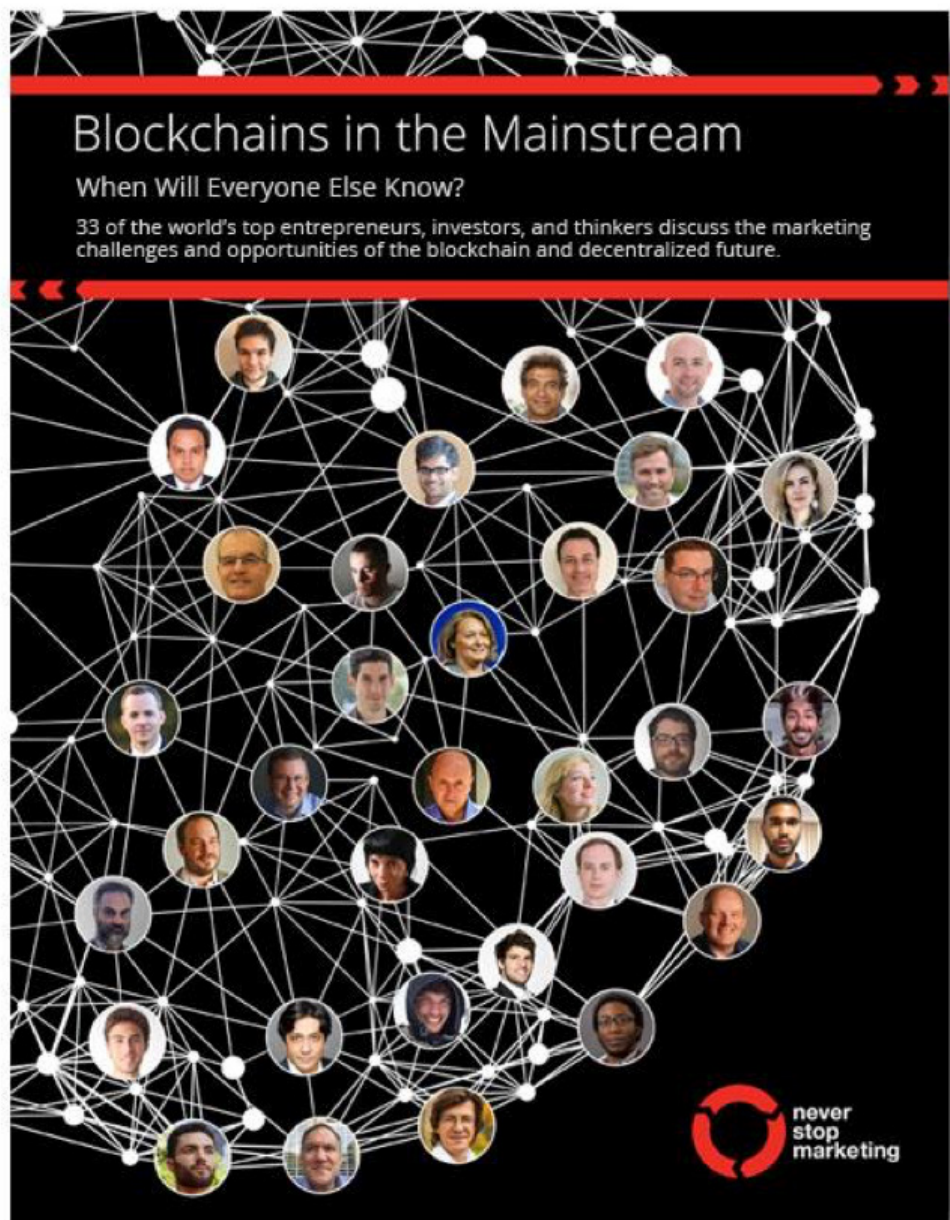
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Additional Resources

For a good intro to blockchain, see *Common Craft's Overview of Blockchains*. A bit more technical, but still consumable is **this one** from MIT.

To get a broader overview, please download your FREE copy of *Blockchains in the Mainstream*. This curated compilation of thirty-three of the best and brightest entrepreneurs, investors, and technologists in the world will help you explore the challenges and opportunities in a blockchain future.



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About The Author

Jeremy Epstein, CEO of **Never Stop Marketing**, has 20 years of international marketing experience in helping to bring innovative technologies into the mainstream. Most recently, Jeremy was VP, Marketing at **Sprinklr** which grew from a \$20 million valuation and 30 people to \$1.3 billion valuation and 900 people in 3 years.

Previous work experience includes Microsoft and consulting to start-ups, mid-market firms, and enterprises, including JNJ, Yes To Carrots, and two NY Times best-selling authors (Dan Pink and Gretchen Rubin). Jeremy also spent 3 years living and working in Frankfurt, Germany and Tokyo, Japan.

Jeremy is the author of numerous whitepapers and a book, appropriately titled ***It's ALL on the Blog, DON'T Buy the Book***, and has presented to hundreds of audiences in 15 countries. Jeremy has been the top-ranked **speaker** at multiple conferences including Microsoft Worldwide Partner Conferences, the Microsoft CIO summit, and the Microsoft Global CXO Summit.

Jeremy currently works with some of the leading and most innovative companies in the blockchain/decentralization space including OB1/OpenBazaar, Storj and DCorp. He also facilitates the Decentralized Marketing Network, a peer-to-peer network for start-ups looking to disrupt major industries. In December of 2016, he edited and published a collaborative eBook with 33 of the biggest influencers and thought-leaders called ***Blockchains in the Mainstream: When Will Everyone Else Know?***

A leading speaker and writer on the topic of blockchain-driven innovation, Jeremy is a frequent contributor to VentureBeat, Bitcoin Magazine, and Distributed Magazine, and is the marketing subject matter expert for the the Don and Alex Tapscott-led **Blockchain Research Institute**.

Jeremy takes great joy in being an early adopter of new technologies, celebrating the victories (like buying Bitcoin at \$80) and the defeats (too many to list) equally.

Described by one client as a “shot of marketing espresso,” Jeremy discovered his calling for marketing while living in Tokyo in 1997 after reading Peppers and Rodgers “The 1:1 Future” and hasn’t looked back since.

Jeremy was a History major at Johns Hopkins, a skill which he wholeheartedly believes prepared him for the marketing profession.

By far, the toughest and most rewarding job he has is to be a kind, thoughtful, and sensitive husband to his wife of 16 years and a patient father of 3 kids on the precipice of being teenagers.

You can connect with Jeremy directly on **LinkedIn** or **Twitter**.



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About Never Stop Marketing

Never Stop Marketing is the world's only marketing services firm 97.9% focused on helping clients thrive in a world of blockchain-driven disruption. We help two types of organizations:

- We assist blockchain/decentralized-based projects accelerate market awareness, improve market perception, and drive measurable growth, all with reduced risk. We have worked with some of the world's most innovative teams such as OpenBazaar/OB1, Storj, DCorp, AI Banks, and others
- We advise Fortune 2000 companies on understanding and preparing for a world of blockchain-driven innovation

For more information, please visit NeverStopMarketing.com.



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Special Credits

With special thanks to the “Microsoft Marketing Mafia.”

I appreciate their “gut check” to make sure that I hadn’t gone totally off the deep end with these ideas.



Abe Pachikara



Paul Johnson



Will Knight

Shout out to the Never Stop Marketing 2017 Summer Intern Class who dealt with my short emails that may not have always communicated “Commander’s Intent.”

- Coby Melkin
- Judah Guggenheim



This eBook was designed, proofread, and edited by the team at **HaganBlount.com**. This is the fourth eBook on which I’ve partnered with Hagan, and he accepted compensation for this work in Bitcoin and a slot on **my first trip to crypto valley** (he’s eating the dog food).

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