



# Blockchain & Digital/ Crypto/ Virtual Currencies



**12-18-2019 Mass Bay Presentation – *Thinking Outside the Box***



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# Charity Navigator – Accepts Cryptocurrency

**CHARITY NAVIGATOR**  
Your Guide To Intelligent Giving

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In 2002, Charity Navigator launched with a mission to guide intelligent giving. Today we are the largest independent charity evaluator, with ratings for more than 9,000 of America's largest charities and detailed information on nearly two million more. By elevating causes in need, empowering donors, and engaging with the sector, we make impactful philanthropy easier and accessible to everyone.

We are a 501(c)(3) public charity that is powered by donors. You can support Charity Navigator with a donation of Bitcoin or Bitcash.

Donations are processed by BitPay and, per our gift acceptance policy, cryptocurrency donations are immediately sold and transferred to Charity Navigator in USD. For the avoidance of risk, we do not maintain a reserve of cryptocurrency. **Therefore, all cryptocurrency donations to Charity Navigator are final.** To receive a receipt for your donation, please provide your email address when making the transaction.

Email:  
Email address (optional)

Amount:  
10 USD

[Donate with bitpay](#)

Currencies Supported

# Fidelity Charitable Accepts Wide Range of Cryptocurrencies

› Bitcoin, Bitcoin Cash, Ethereum, Litecoin and Ripple. “Alex donates his bitcoin...”

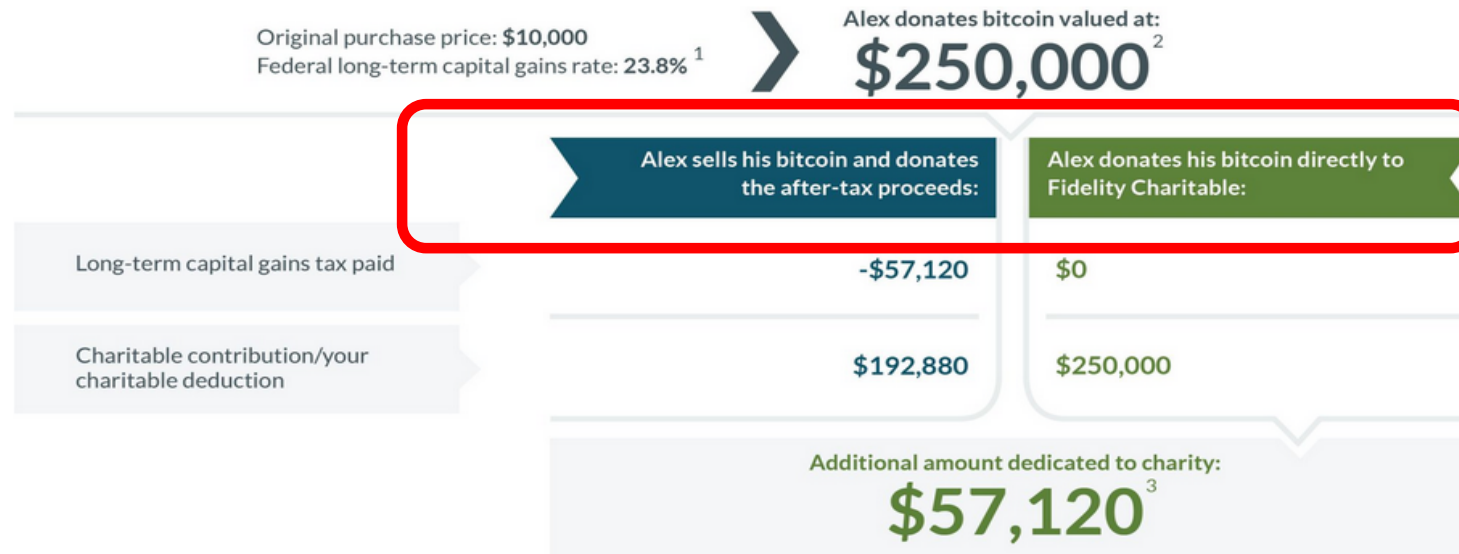
2017:

\$69 million

donations

## How does it work?

Contributing bitcoin to Fidelity Charitable means your tax deduction and your charitable gift may instantly increase over 20%. Charities are exempt from paying capital gains on the sale of assets, so the full value of your gift stays intact. Consider this example:



<sup>1</sup>This assumes all realized gains are subject to the maximum federal long-term capital gains tax rate of 20% and the Medicare surtax of 3.8%. This does not take into account state or local taxes, if any.

<sup>2</sup>Amount of the proposed donation is the fair market value of the appreciated property held more than one year that you are considering donating as determined by a qualified appraisal.



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# Venezuelan Crisis – Cryptocurrency Donations



— Bertha Dun shows medicine bought with cryptocurrency through online transfers, in Barquisimeto, Venezuela on April 11, 2019. Venezuela's political and economic crisis has now made it a prime testing ground using cryptocurrency to finance social projects or send relief directly to people living in poverty. *Manuel Rueda / AP file*

## Forbes Magazine – May 13, 2019

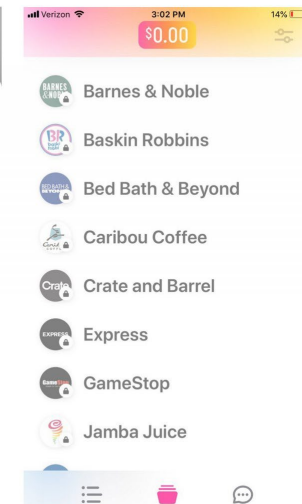
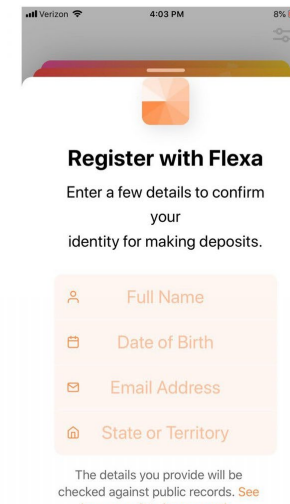
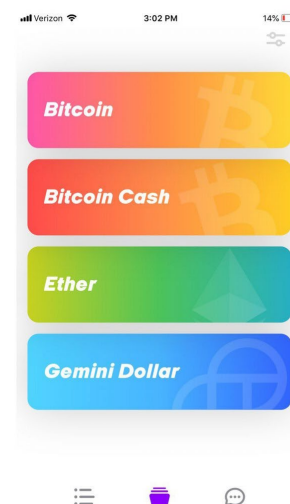
- › Customers can spend bitcoin at Starbucks, Nordstrom and Whole Foods, whether they like it or not (article by Michael del Castillo)
- › ... As the song *Work* by Rhianna blares through the coffee shop's speakers, Cameron orders the small cold-brew coffee he'd been craving and **takes out his phone**. He brings up the beta version of a new app called Spedn, built by little-known payments startup Flexa and waives a QR code in front of the Honeywell scanner, **paying for the drink with a cryptocurrency he and his brother invented that's powered by the Ethereum blockchain**.





# Forbes Magazine – May 13, 2019

- › Bitcoin comes to Whole Foods, major retailers in coup for digital currency (Jeff John Roberts)
- › What Flexa has done is persuade the retailers—which also include Regal Cinemas, Gamestop and Baskin Robbins—to configure their scanners to recognize payments from its cryptocurrency app, which is called Spedn. The customer simply holds up their app to pay. The store cashier will typically be unaware the customer is paying with crypto, while the merchant receives a real-time payment in the form of their choosing (crypto or dollars).
- › The app, however, appears to work as advertised. This weekend, I tried it by downloading a test version of Spedn, and transferring \$10 worth of Bitcoin to it. Next, I went to a Baskin Robbins in my neighborhood and bought a small coffee by scanning the app. It worked. Next, I went to a Starbucks (another partner in the project but an unofficial one) and bought a banana. That worked too. In each case, the app adjusted the amount Bitcoin in my wallet.



## The Above Situations are Taxable Events

- › Need to pay **capital gains taxes** on bitcoin / digital currencies that you used to purchase these goods / services because it is a **taxable event**
- › You bought the Bitcoin at \$1. You sold the Bitcoin at \$5. You need to report the capital gain of \$4 on Schedule D.
- › Some exchanges will issue a 1099. Others may not.
- › **New question / checkbox** on 1040 tax return – **Schedule 1**
  - At any time during 2019, did you receive, sell, send, exchange or otherwise acquire any **financial interest in any virtual currency?**





# Agenda

- › What is Digital Currency?
- › Tax Implications of Digital Currency
- › What is Blockchain
- › Blockchain's Potential Impact on the Future Audit Function
- › Pros / Cons of Cryptocurrency & Blockchain
- › Examples of Blockchain Applications in Use Today





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# Cryptocurrency Market as of December 16, 2019

- › Total Market Cap: \$187 Billion (\$282 Billion as of 8/19/2019)
- › Total Cryptocurrencies: 4,943 (2,454 as of 8/19/2019)
- › Last 24h Volume: \$70 Billion (\$49 Billion as of 8/19/2019)
- › Bitcoin (BTC) Dominance: 66% (69% on 8/19/19)
  - Market Cap: \$125 Billion (\$195 Billion as of 8/19/2019)
  - Price: \$6,934.20 (\$10,915.38 on 8/19/19)
  - Last 24h Volume: \$20 Billion (\$16 Billion on 8/19/19)
- › Source: CoinMarketCap



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# What is Digital Currency?

- › **Digital currency** is a broad term that refers to a digital-based medium of exchange with characteristics similar to fiat currencies
  
- › Three main types:
  - Virtual Currency
  - Central Bank Digital Currency (CBDC)
  - Cryptocurrency

# What is Digital Currency – Virtual Currency

- › **Virtual currency** is a digital representation of value that is neither used by a central bank or public authority nor is it attached to a fiat currency.
- › Accepted as a means of payment and can be transferred, stored or traded electronically
- › Examples – coupons received via email; credit card rewards, customer loyalty / incentive programs (Foursquare, Fivestars apps); pay for online entertainment in virtual worlds (Fortnite V-Bucks, Minecraft Coins)
- › IRS → **NO Tax Consequences** for most of the above examples of virtual currencies due to administrative burden in tracking these



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# What is Digital Currency – Central Bank Digital Currency (CBDC)

- › **Central Bank Digital Currency** is a digital form of fiat currency established as money by a government.
- › Large central banks are implementing this as an alternative to cryptocurrencies.
- › Bank of England pioneered CBDCs. Other central banks are now investigating – People's Bank of China, Bank of Canada
- › For years, banks have issued digital currencies to other banks
  - Each night, bank reserves are sent electronically to each other and are used as a final means of settlement between banks
  - International wire transfer in dollars between a bank in the U.S. and a bank in another country





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## What is Digital Currency – Cryptocurrency



<https://www.youtube.com/watch?v=6Gu2QMTAkEU>

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# Tax Implication of Cryptocurrency

- › IRS Notice 2014-21 – cryptocurrency is treated as **property** for tax purposes
- › Ohio established a portal for taxpayers to use bitcoins
- › 11/30/16 United States v. Coinbase – Northern District of California ruled that Coinbase must give the IRS data on all of its US customers who had virtual currency transactions that exceeded \$20K from 2013 – 2015
- › October 9, 2019 – IRS issued Rev. Rul 2019-24 – discusses hard forks and airdrops



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# Tax Implication Cryptocurrency – Federal Reporting Obligations?

- › Cryptocurrency on foreign exchange – may be subject to Bank Secrecy Act – US financial institutions might file Suspicious Activity Report (SAR); freeze bank account; etc.
- › April 3, 2019, SEC issued Statement on “Framework for Investment Contract” Analysis of Digital Assets
  - Depending on the nature of the digital asset, including what rights it purports to convey and how it is offered and sold, it may fall within the **definition of a security** under the U.S. federal securities laws.
- › **FBAR Required?** IRS → Property; SEC → Security; Most lawyers advise to err on the conservative side and, if applicable, **file the FBAR** since there is no significant tax in reporting; however **civil penalties** are:
  - Nonwillful violations - \$10,000 per violation
  - Willful violations – greater of \$100,000 or 50% of the value of the account at the time of violation **and** potential criminal charges

# Triggers for Taxable Event for Cryptocurrency

- › Trade cryptocurrency to fiat currency such as the US dollar
- › Trade one cryptocurrency for another cryptocurrency (just like trade one stock for another stock)
- › Use cryptocurrency to pay for goods and/or services
- › **Fork** – when a new version of a blockchain is created, resulting in two versions of the blockchain running side-by-side. As a blockchain forks into two, they will both run on the same network.
- › **Airdrop** – a marketing stunt that involves sending free coins or tokens to wallet addresses in order to promote awareness of a new virtual currency. This is done in return for a small service such as retweeting a post sent by the company issuing the new virtual currency.



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## Triggers for Taxable Event for Cryptocurrency (Cont)

- › Hard Forks / Airdrops
  - No gross reported income **if** taxpayer **does not** receive units of a **new cryptocurrency**
  - Gross ordinary income as a result of an airdrop of a **new cryptocurrency** following a hard fork **if** the taxpayer receives units of **new cryptocurrency**
  
- › **Mining** – process of computer hardware doing mathematical calculations for the Bitcoin network to confirm transactions and increase security. Users who use their computers and / or rent resources for mining are called miners. Miners are rewarded with bitcoins.
  
- › How do you determine the cryptocurrency's cost basis?
  - Profit Stance
  - CryptoTrader.Tax by Coin Ledger



# NonTaxable Events for Cryptocurrency

- › Gifts
- › Transfers
- › Hard fork that results in **one** cryptocurrency – the taxpayer **does not** receive units of a new cryptocurrency
- › Purchases of cryptocurrency
- › Charitable contributions of cryptocurrency



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## 1040 Schedule 1 – Cryptocurrency Question

- › At any time during 2019, did you receive, sell, send, exchange or otherwise acquire any **financial interest in any virtual currency**?
  
- › If your client engaged in **any** virtual currency transaction in 2019, check **YES**
  - Receipt or transfer of virtual currency for free (airdrop and/or hard fork)
  - Exchange of virtual currency for goods or services
  - Sale of virtual currency
  - Exchange of virtual currency for other property, including **another** virtual currency
  - Disposed of any virtual currency that was held as a capital asset
  - Received any virtual currency as compensation for services
  - Disposed of any virtual currency that you held for sales to customers in a trade or business or inventory or services



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# Cryptocurrency Strategies for Nonprofits

- › Gift acceptance policy – accept all, specific or no cryptocurrencies
- › Update accounting policies to
  - Properly reflect fair market value of cryptocurrency donation
  - Procedures on how to convert cryptocurrency to fiat – US dollar or other fiat currency (Euro, Yen, etc.)
  - Processing of *smart contract* requirements including *restricted net asset* classification
- › If donation exceeds \$5K, what is the policy to obtain a qualified appraisal? Who?

## Other Cryptocurrency Strategies for Nonprofits (cont)

- › Digital wallet / private key
  - Who has control?
  - What if the donation is anonymous / offshore?
  - What happens if the individual that has control leaves the nonprofit?
- › Does the donation have a smart contract which automatically impose and monitor compliance with certain restrictions? If so, does the Organization understand and have the ability to meet these restrictions?
- › What is the investment policy? Hold on to the cryptocurrency or sell immediately?
- › If maintaining cryptocurrency as part of its investment portfolio, should think about UPMIFA and data security



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## Other Cryptocurrency Strategies for Nonprofits (cont)

- › How to classify the donation on the blockchain?
  - E.g. if a grantmaker is funding LGBTQ rights in a country where homosexuality is still illegal (i.e. Uganda) and they use a blockchain to move money, they would need to be very careful that they didn't unwittingly publish information that allowed Organizations or individuals to be identified and arrested
- › In 2017, Silicon Valley Community Fund held nearly \$4.5 billion in digital assets
- › April 2019, Chris Larsen, co-founder of Ripple, gifted \$25 million of Ripple's cryptocurrency, XRP to San Francisco State University



# Risks for Accepting Cryptocurrencies

- › Not insurable – lose wallet / private key (could be result from hacking or loss of password), nonprofit most likely has lost the value of the gift
- › Cryptocurrency may become illiquid
- › Cryptocurrency gifts that originate from criminal activity may be subject to clawback risks
- › May inadvertently be violating anti-money laundering laws
- › Reputation risk in accepting large donations from anonymous donors



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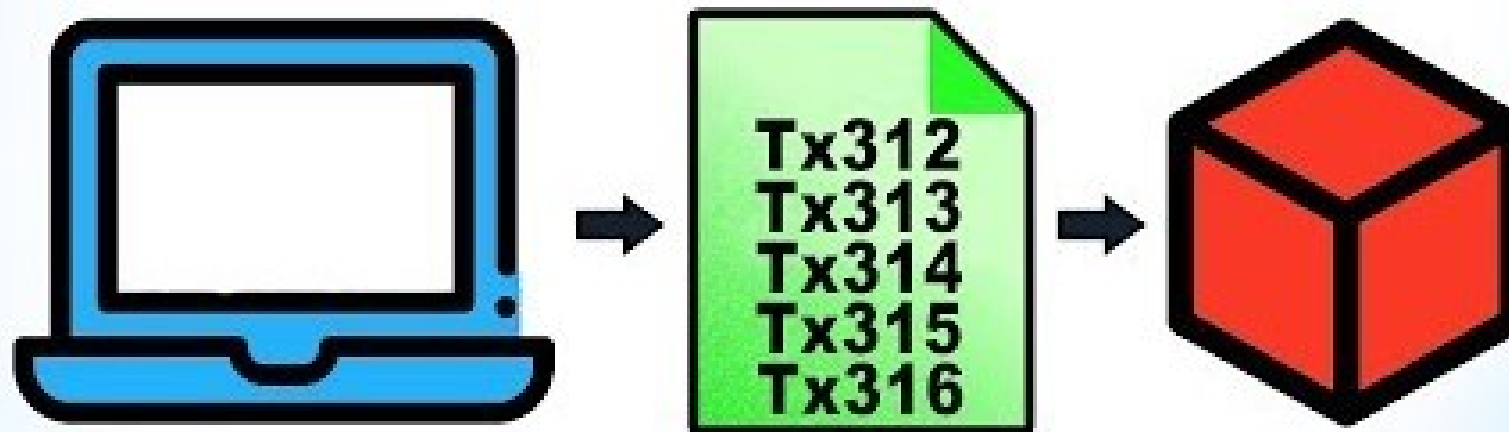


# Cryptocurrencies & Blockchain

- › Blockchains are used to keep track of cryptocurrencies. This is **one** application for blockchains.
- › Bitcoin (or any other cryptocurrency) **IS NOT** a blockchain
- › Blockchain **IS NOT** an accounting system or journal entry platform (i.e. Blockchain **IS NOT** like QuickBooks, Xero, etc.)
- › Blockchain is a decentralized database for storing and analyzing information

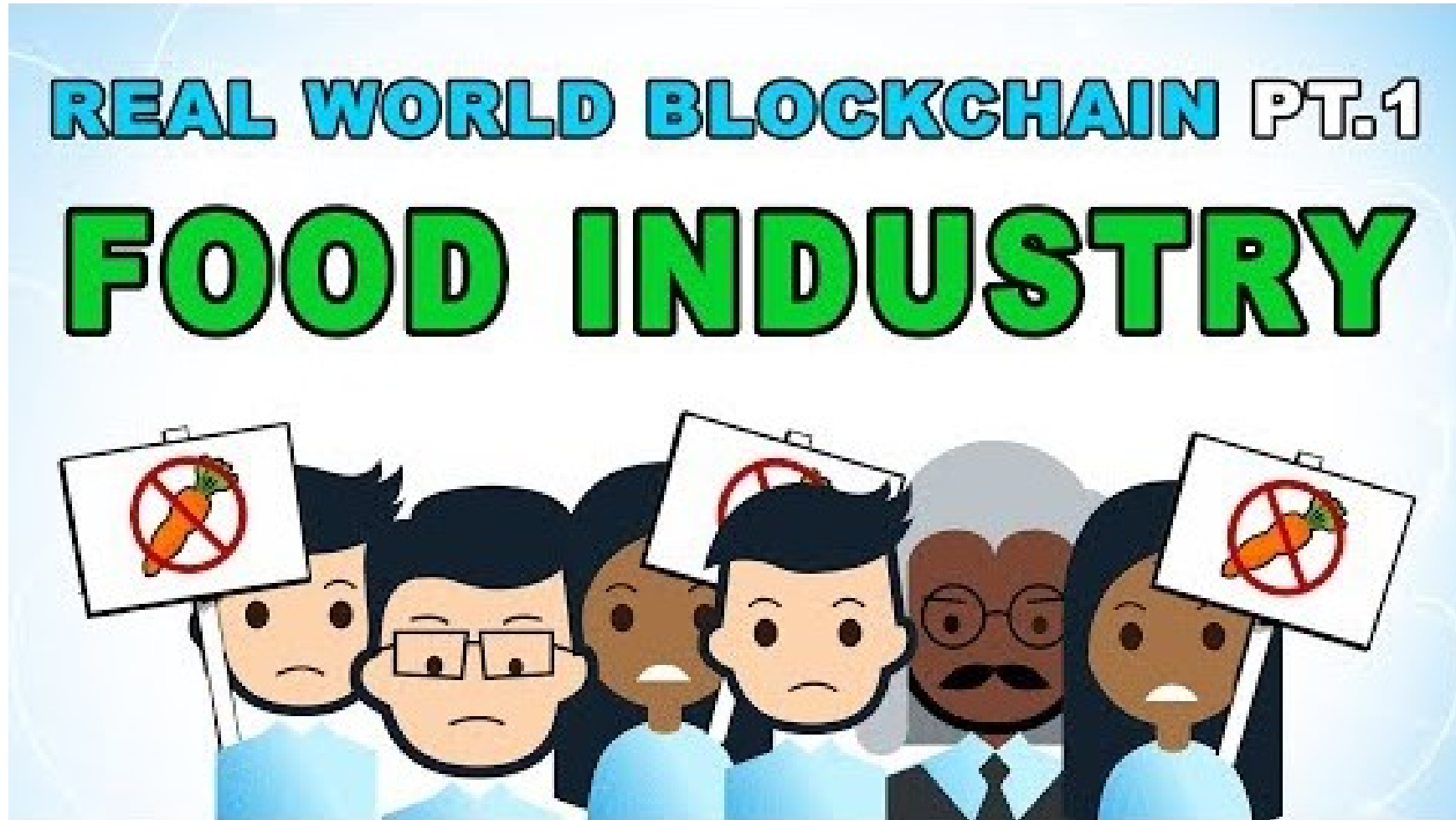
## Blockchain

# What is Blockchain Technology?



[https://www.youtube.com/watch?v=27nS3p2i\\_3g](https://www.youtube.com/watch?v=27nS3p2i_3g)

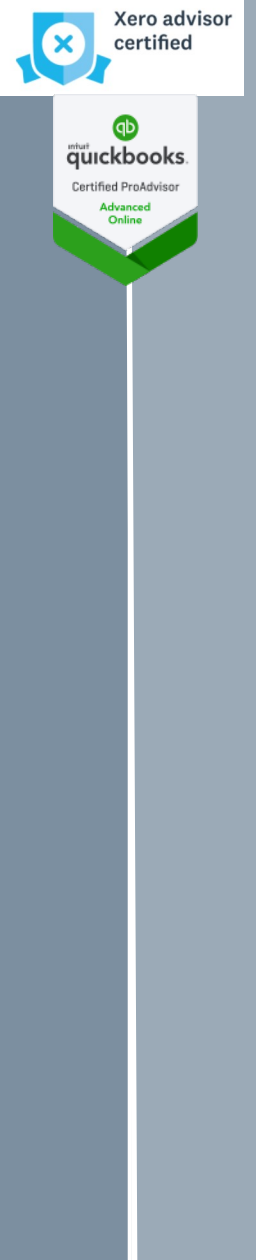
## Example of Blockchain – Food Industry



<https://www.youtube.com/watch?v=6wQ70mIDV5A>

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# Blockchain

We don't need to really understand the underlying software. It's the implications and power of blockchain that are more important than the actual software.

Blockchain's not going to sit around and wait for our working groups to report. Instead of thinking, "We have to get these things perfect before they go out the door," we need to accept that things will be iterative. If we wait for perfect, we're going to miss it!

- Barry Melancon, President and CEO, AICPA



# Blockchain

- › November 20, 2018, CDC issues romaine lettuce recall across the country.
  - At least 5 people died from E-coli
  - Grocery stores across the country pulled all of their romaine lettuce
  - Folks across the US stopped eating romaine lettuce
  
- › Blockchain very common in European food supply
  
- › According to IBM, time to trace bad batch would decrease from several months to 2.2 seconds



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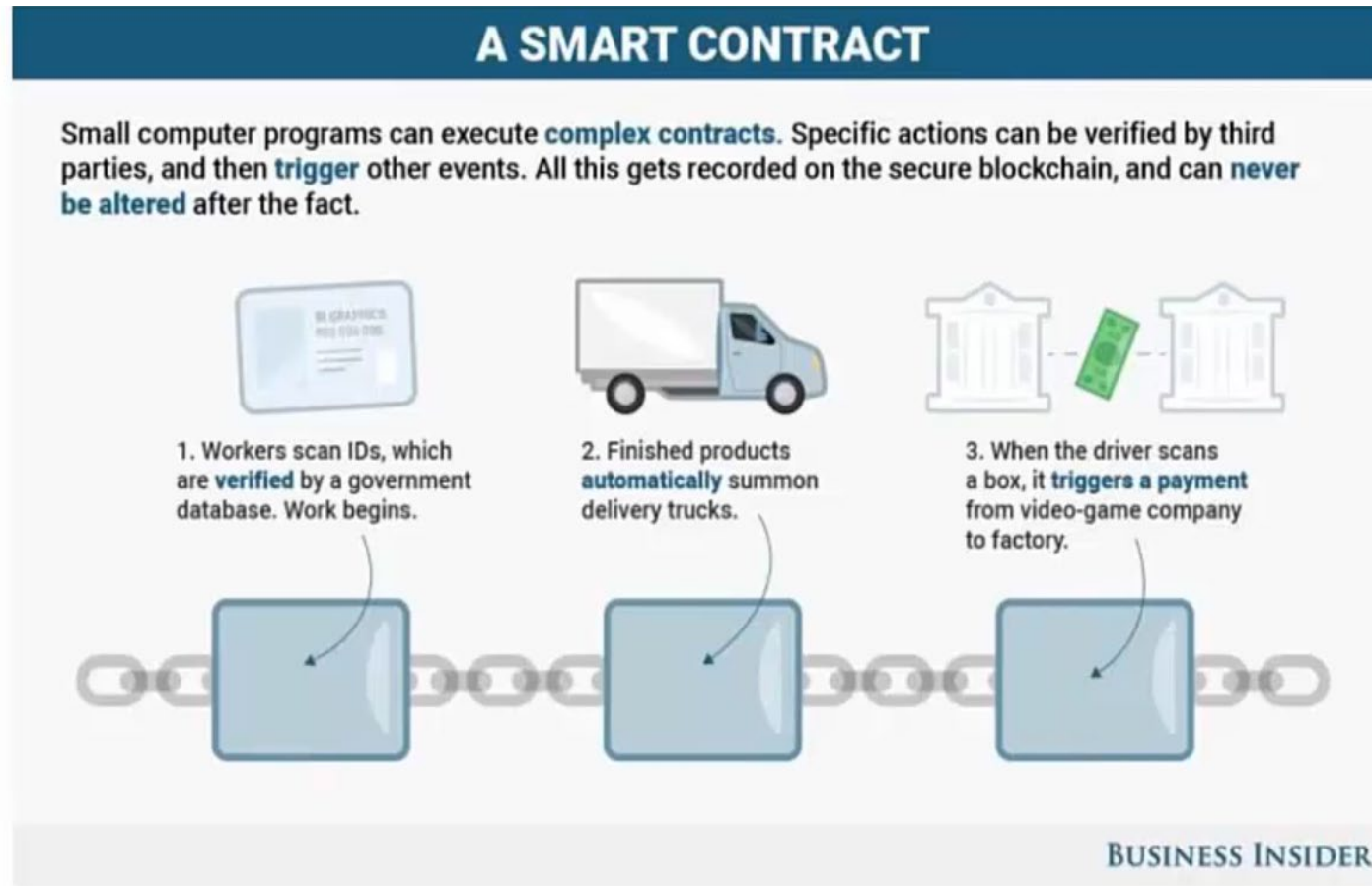
# Blockchain Will Change Our Processes

- › Eliminate manual bank, credit card & other reconciliations
- › Eliminate third-party confirmations
  - All affected parties have access to this information in real-time which is updated on a continuous basis
- › Current audit techniques will change. Today, audits are necessary to confirm the existence, valuation, completeness, accuracy, etc. of general ledger transactions
  - Instant access to continuous flows of information



# Applications Currently Using Blockchain

- › Smart Contracts, especially facilitation of government contractual requirements



## Applications Currently Using Blockchain (cont)

- › Guard (Global Decentralized Emergency Response Network)
  - Opened the emergency response grid to vetted citizens, private response organizations, and compatible devices
  - Brought first responders to 4 billion people across the world w/out government sponsored emergency response
  - Your Uber driver can locate you faster and more accurately than 911 can (Source: Entertainment: *Last Week Tonight: John Oliver on 911 Emergency*, May 16, 2016)
- › May 2017 the United Nations World Food Program (WFP) successfully sent aid to over 10,000 Syrian refugees through the Ethereum blockchain



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## Applications Currently Using Blockchain (cont)

- › Airdrop Venezuela – direct transfer of \$1 million in crypto donations to Venezuelans
  - Campaign registered 60,000 beneficiaries raising \$272K
  - Recipients received EOS tokens via their cell phone → traded EOS tokens for local money and purchased local food and goods
- › Bail Bloc – funds used to support immigrants to pay their bail from U.S. Immigration and Customs Enforcement (ICE)
- › British Virgin Islands – partnered with Lifelabs.io to launch an alternative cryptocurrency payments infrastructure to ensure that residents can continue to access essential goods and services in the event of a humanitarian crisis



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# Blockchain Applications that are Transforming Society

- › Asset Management: Trade Processing and Settlement – blockchain eliminates the need for intermediary parties
- › Insurance: Claims Processing – insurers can capture the ownership of assets to be insured
- › Payments: Cross-Border Payments – end-to-end blockchain powered remittance services
- › Smart Property – cars, houses, patents, property titles, etc. can have smart technology embedded in them. E.g. smart keys could facilitate access to the permitted party. Record & manage property rights
- › Unconventional money lenders / hard money lending – blockchain can allow a stranger to loan you money and take your smart property as collateral

## Blockchain Applications that are Transforming Society (cont)

- › Blockchain Internet-of-Things (IoT) – your printer can automatically order cartridges from Amazon when it runs low. On a larger scale, cities and governments can use more efficient energy and *smart cities* to improve how we live and work
- › Smart Appliances – receive alerts when your baked cookies are ready or the laundry is finished.
- › Supply Chain Sensors – end-to-end visibility of a supply chain by providing data on the location and condition of supplies as they're transported around the globe.
- › Smart contracts – financial derivatives, insurance premiums, property law, crowd funding agreements



## Blockchain Applications that are Transforming Society (cont)

- › Blockchain Healthcare – general health care management: supervising drugs, testing results, surgeries, etc.
- › Blockchain Music – ownership rights, royalty distribution
- › Blockchain Government – private individuals can confirm who they voted for; farmers can perform precision farm-cropping; ideal platform for *responsive, open data*
- › Blockchain Identity – passports; birth, wedding and death certificates; personal identification



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# Potential Blockchain Applications – The Sky is the Limit

Music and image rights

Land registry

Capital markets

Cross-border payments

Loyalty and rewards programs

Tax regulation and compliance

Financial reporting

Financial transactions

Managing Internet of things

Weapons tracking

Tracking prescription drugs

Sports management

Supply chain management

Vendor payments

Invoice and receipt verification

Health records management

Medical test report verification

Traceability of products and raw materials

Elections / voting

Freedom of speech

Insurance

Data sharing

Wills and inheritances

Ride sharing



# Questions???

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