



AIR CRE TOWN HALL

TOKENIZING REAL ESTATE



Wonderful real estate.



TOPICS

Why is Cryptocurrency Worth Anything?

Technological Revolutions of the Past 200 Years

The Age of Autonomy

Four Kondratieff Waves in the U.S.

Knowledge Doubling Curve

What is Tokenization?

Tokenization of Assets on the Blockchain

Smart Contracts & Automation via Blockchain

Advantages of Digital Securities

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Who is Active in the Digital Asset Space

It's Only Just Beginning...

SPEAKER



Jake Ryan

CIO, Tradecraft Capital

Author of [Crypto Investing in the Age of Autonomy](#)



AUTONOMY 2040

The Age of Autonomy
- by Jake Ryan

Quote to Start it Off

Setting some context...

“We are called to be architects of the future, not its victims.”

- Buckminster Fuller



Introduction

We're driving towards an autonomous future.

■ You've heard that software is eating the world?

■ It's far worse than that.

■ I outline an economic and technological case for how and why crypto is at the intersection of the next long-wave economic cycle.



Why is cryptocurrency worth anything?

Innovation concepts that make this transformational technology



Immutability



Blockchain & Proof-of-Work Consensus



Decentralization



Trustless / Trust-minimized



Permissionless Access



Technological Revolutions of the Past 200 Years

Five surges in the past 200 years as discussed in Perez's book



Industrial Revolution: 1771 – 1829



Age of Steam & Railways: 1829 – 1873



Age of Steel & Electricity: 1875 – 1918



Age of Oil & Mass Production: 1908 – 1974



Age of Information & Telecommunications: 1971 – 20??



The Thesis

A new technological revolution has begun, I call it *the Age of Autonomy*

■ Thesis is based on 100 years of proven economic theory.

■ Artificial intelligence, the Internet of Things (IoT) and robotics have been delivering on automation. That's been powerful, but not transformational.

■ Cryptocurrency is the last piece of the puzzle because it allows the transfer of economic value *without the need of human intervention*.



The Age of Autonomy

What drives the next 50-year economic cycle

■ The *efficiency* and *always-on nature* of autonomous operations will force businesses and organizations to rethink how they do business.

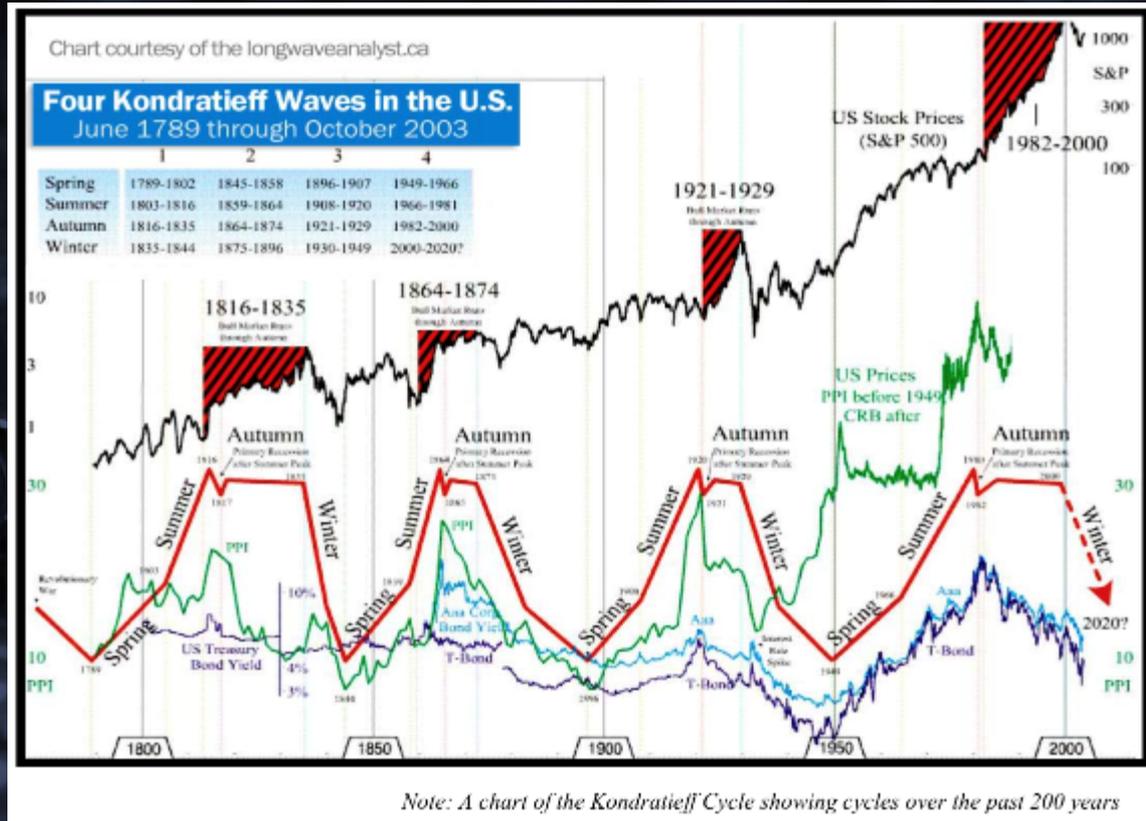
■ Businesses that do *not* have autonomous operations simply will not be able to compete with those that do.

■ Autonomy is the *ultimate* competitive advantage.



Four Kondratieff Waves in the U.S.

Long-wave economic cycles are driven by technological revolution



Note: A chart of the Kondratieff Cycle showing cycles over the past 200 years

A Current Example – Compound's RAY Contract

An autonomous contract that invests in assets using lenders to get the best rate, always & real-time.

Picks from 3 different tokens (reserve coin and stablecoins): DAI, USDC and ETH

Picks from 3 lenders: Compound, dXdY and bZx

Protocol provides the best yield/rate optimizing real-time, 24/7



A Future Example – The Precision Agronomist

Running a set of precision ag autonomous contracts that automate operation, real-time & always

■ Buying Commodities at optimal times through-out the year

■ Manage operations using sensors and AI agents to manage irrigation & growing

■ Selling Futures Contracts to hedge sell price of harvest



This should be enough, but it's much worse.

Optimization, efficiency and 24/7 nature is enough for humans to deal with.

- Data is at the heart of the problem.

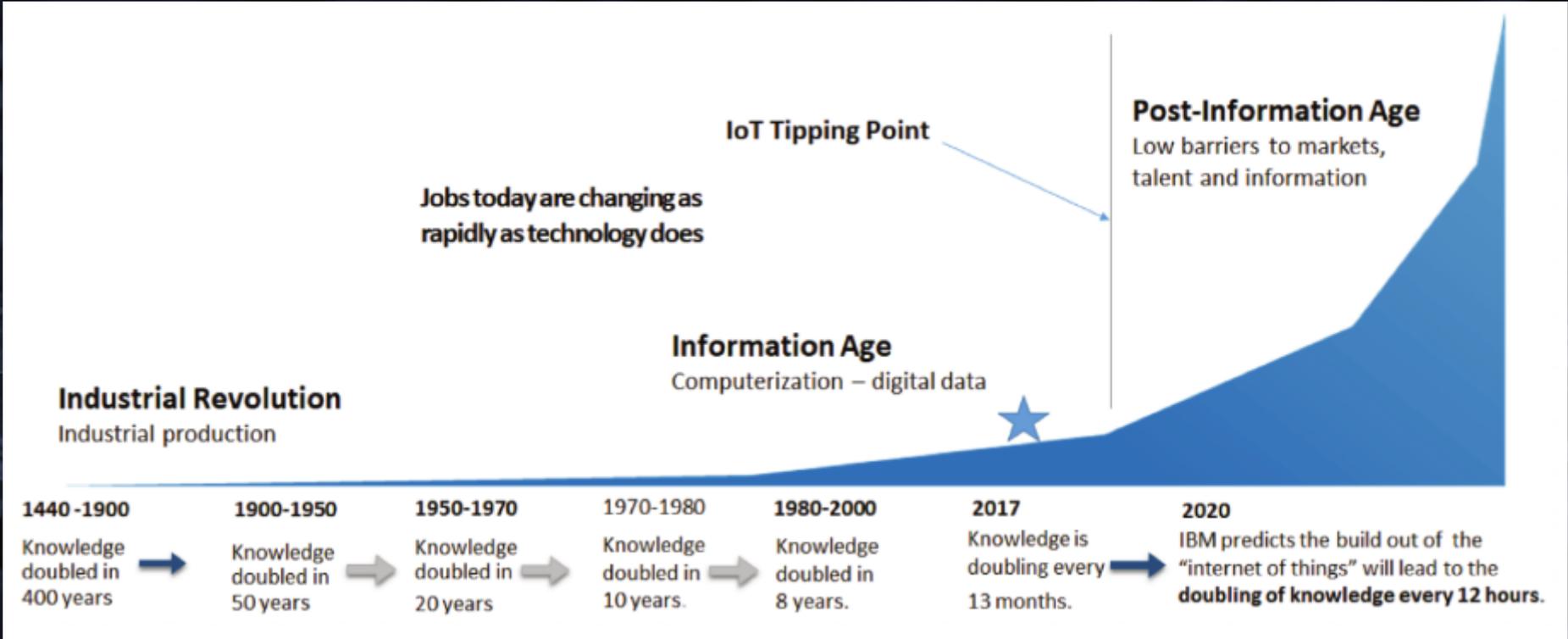
- Data is growing non-linearly.

- How can we process all this data?



Knowledge Doubling Curve

Knowing the past is helping us less and less with understanding the future



Predicting the Future

■ If you're working on a technology, like a DAO and you see how limiting it is today, I promise you that has less and less capacity to show you the future.

■ In 1997, I was in school and working at an ISP...

■ *Looking at the present gives no real view into the future.*



Ephemerization

A term coined by Buckminster Fuller

Ephemerization is the ability of technological advancement to “do more and more with less and less until eventually you can do everything with nothing.”



Ephemerization & the Age of Autonomy

■ The Age of Autonomy is the current phase and step towards the ultimate end of *ephemerization*.



Financial Services are evolving to embrace digitization

“Through this initial application of blockchain technology, we begin a process that could revolutionize the core of capital market infrastructure systems.”

– Bob Greifeld
Former Nasdaq CEO



Tokenization allows for the trading, tracking and monitoring of an asset with the agility and speed of blockchain.

For example, NBA player **Spencer Dinwiddie** has tokenized a portion of his three-year guaranteed \$34 million contract and issued the “SD26 Tokens” at \$150,000 each under Reg D.

The SD26 Tokens represent general obligation bonds on the Brooklyn Nets forward’s creditworthiness. These digitally traded Ethereum ERC-20 tokens are structured to pay investors an approximately 5% annual yield.

Paxos Trust, as custodian, maintains the tokens and disburses all payments to investors.



Tokenization is easily customizable to create a wide range of new & innovative financial products.

It is operationally efficient, with lower costs and faster settlement than traditional securities.

And its enhanced liquidity increases tradability and market depth.

With a lower cost of capital, tokenization removes certain middlemen, increases transparency and provides enforceable governance mechanisms.

Tokenized securities are more accessible than traditional securities with lower minimum investments which may diversify the investor base.

With the ability to automate processes that simplify monitoring & auditing, tokenization allows for better record keeping.



Tokenization



Payments

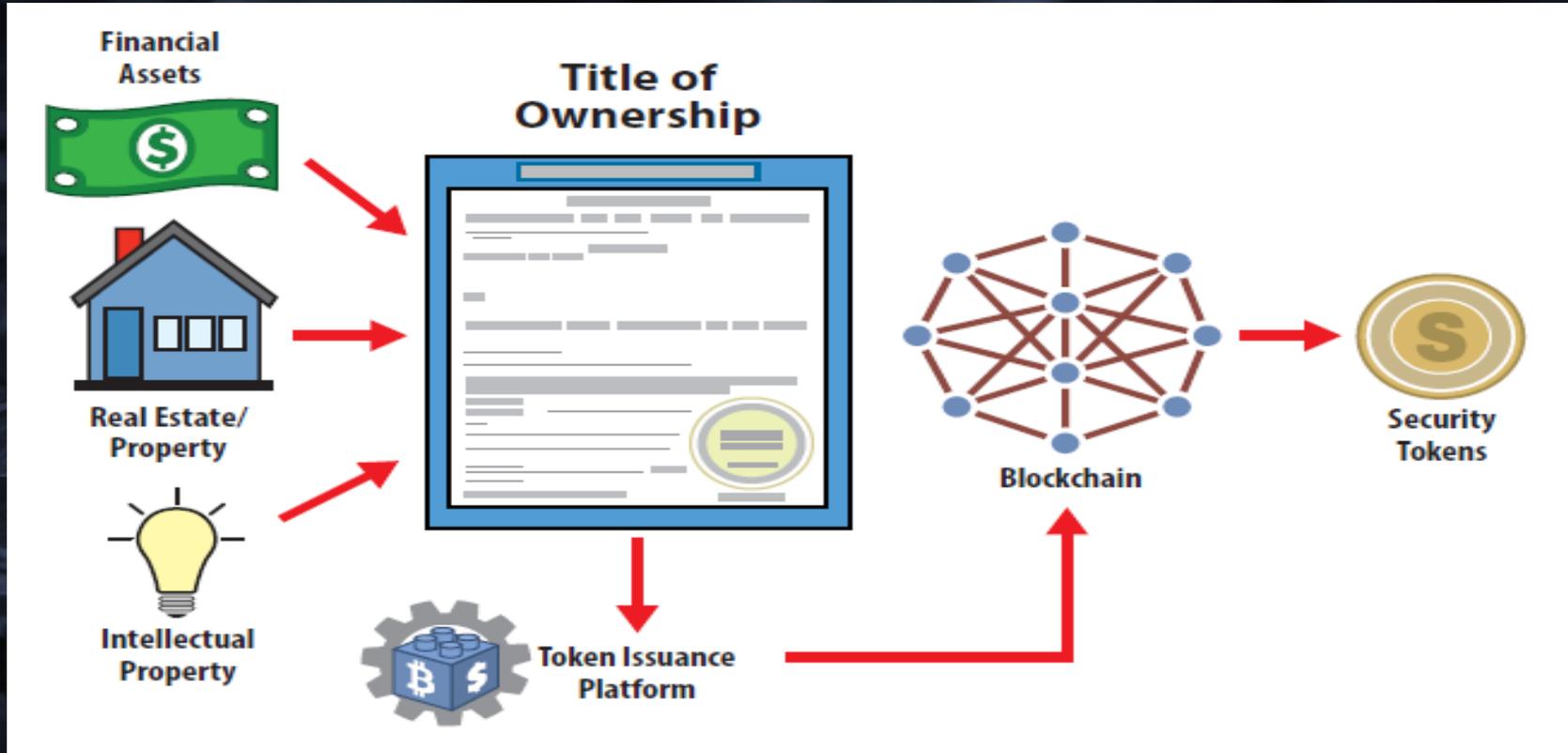


Web 3.0



Store of Value

Tokenization of Assets on the Blockchain



Smart Contracts & Automation via Blockchain....

How Smart Contracts Work

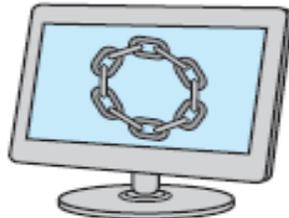
Step 1: Defining the Contract



All parties agree upon set terms and conditions of the contract which are then translated into computer code



Step 2: Monitoring of Events



The smart contract observes for material changes. If an event is triggered, code automatically executes a series of pre-defined actions



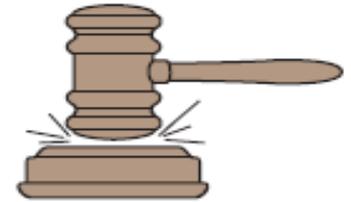
Step 3: Transferring Value



Relevant parties are compensated or penalized corresponding to contract stipulations. The smart contract releases assets accordingly. Payout is completed instantly



Step 4: Settlement and Recording



All details of the transaction are recorded and stored on the blockchain

Advantages of Digital Securities



Easily Customizable

Create a wide range of new & innovative financial products



Operationally Efficient

Lower costs and faster settlement than traditional securities



Enhanced Liquidity

Increase tradability and market depth



Lower Cost of Capital

Remove middlemen, increase transparency & enforceable governance mechanisms



Improve Accessibility

Lower minimum investments & diversify investors bases

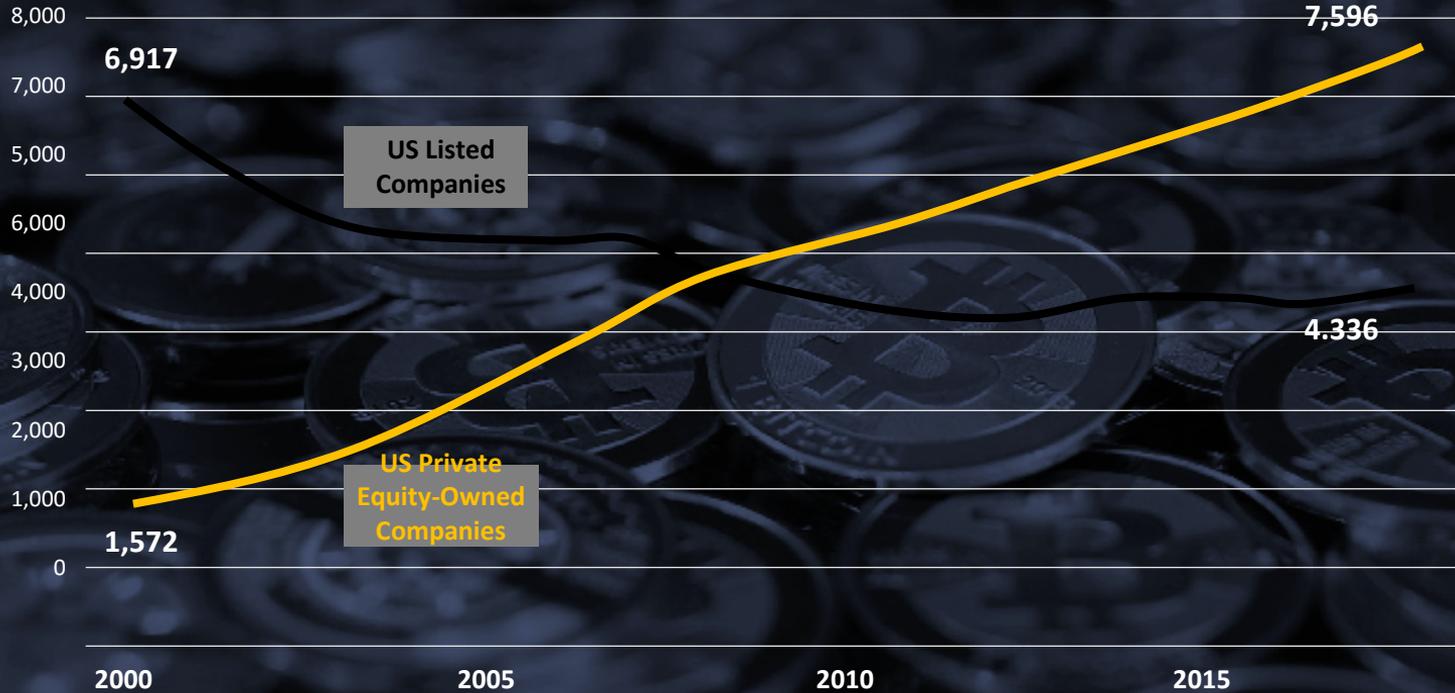


Better Recordkeeping

Automate processes to simplify monitoring & auditing

We expect trillions of dollars are coming to the blockchain.

Private Market AUM expected to grow at 10% annually through 2023.



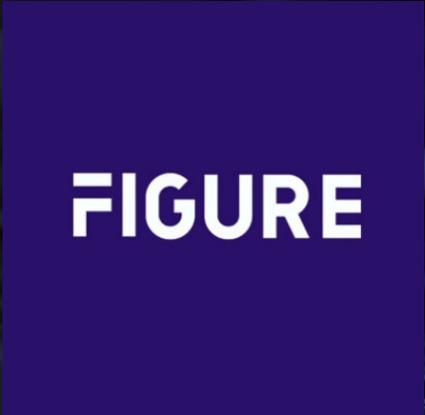
Case Study – a St. Regis Aspen

- A portion of the St Regis Aspen Hotel was tokenized and formed as a single asset REIT. The iconic Colorado property was tax-efficiently structured as a Reg D 506(c) offering with the capability and simplicity of an asset on the blockchain.
- The sponsor has since announced that it is launching an additional \$1 billion of real estate investment offerings on the Tezos blockchain.



Case Study – Figure Technologies

- Blockchain lending startup Figure Technologies is using its Provenance blockchain to more efficiently originate, finance and securitize loans for HELOCs, mortgage refinancing and student loan refinancing. Use of blockchain and distributed ledger technology allows Figure to dramatically cut costs, time and risk from the loan origination process.
- Provenance has already issued over \$1 billion in loan originations and estimates an increase in its margins of 1.25%.
- In March 2020 Figure announced the issuance of the first ever securitization backed by loans originated, serviced, financed and sold on blockchain. Parties in the transaction included Jeffries Group and Nomura Securities.

The logo for Figure Technologies, consisting of the word "FIGURE" in white, bold, uppercase letters centered within a solid purple square.

FIGURE

Established Investors and Financial Services Leaders
are Active in the Digital Asset Space.³



**Abigail P.
Johnson**
Chairman/CEO

**Fidelity
Investments**



Jack Dorsey
Chairman, CEO
& Co-Founder

Square & Twitter



Bill Miller
Former
Chairman & CIO

**Legg Mason
Capital**



**Paul Tudor
Jones**
Founder

**Tudor
Investment
Corporation**

It's Only Just Beginning...

Digital Assets & Cryptocurrency are Young

Bitcoin was first introduced in 2009 but began to gain widespread acceptance as an asset class in less than five years. Other digital assets are where Bitcoin was just a few years ago.

Digital Assets & Crypto Are a Fraction of Other Markets

The total market cap of digital assets is currently less than 1% of the world's money and markets.

Regulators and Legislators Are Paying Attention

International and domestic legislators and regulators are methodically working to understand digital assets, their ramifications on the economy and how best to regulate all parties in the digital asset ecosystem.





TRADECRAFT
CAPITAL

AIR CRE TOWN HALL

Q&A