2022 WICPA ACCOUNTING TECHNOLOGY CONFERENCE

YOUR SOURCE FOR KEY UPDATES & INSIGHTS ON TIMELY ISSUES

HIGHLIGHTED TOPICS:

BLOCKCHAIN BASICS

Gain an understanding of actionable business insights connected to virtual money options, resources where attendees can learn more and suggestions about how to speak to clients about these issues

THE FUTURE OF MONEY

Discover just what exactly the future of money, a complex topic, might be and what external factors will drive this evolution

CPA TECHNOLOGY TRENDS UPDATE

Learn about new and emerging technologies, such as cloud computing, data analytics, the metaverse, digital money, artificial intelligence, state-of-the-art equipment and more

THURSDAY, DEC. 8 | BROOKFIELD CONFERENCE CENTER & WICPA CPE LIVESTREAM

CONFERENCE AT A GLANCE

THURSDAY, DEC. 8 | BROOKFIELD CONFERENCE CENTER | BROOKFIELD

7 – 8 a.m.
Registration & Networking
Celebration Atrium

8 – 8:10 a.m.
Welcome & Opening Remarks
Connect C1 & C2

8:10 – 9:50 a.m.
GENERAL SESSION
The Future of Money
Connect C1 & C2

9:50 – 10:05 a.m.
Networking Break
Celebration Atrium

10:05 – 10:55 a.m.
BREAKOUT SESSIONS
Blockchain Basics
Connect C3

KPI Dashboards
Connect C1 & C2

10:55 – 11:10 a.m.
Networking Break
Celebration Atrium

11:10 a.m. – 12 p.m.
BREAKOUT SESSIONS
Key Considerations for Setting Up a Crypto Payments System
Connect C3

Cloud Accounting Software Update
Connect C1 & C2

12 – 1 p.m.
Networking Lunch
Collaborate A & B

1 – 1:50 p.m.
BREAKOUT SESSIONS
Non-Fungible Tokens
Connect C3

Microsoft Teams Deep Dive
Connect C1 & C2

1:50 – 2:05 p.m.
Networking Break
Celebration Atrium

2:05 – 2:55 p.m.
BREAKOUT SESSIONS
Hot Topics & Trends in Virtual Money
Connect C3

Get the Most Out of Office 365
Connect C1 & C2

2:55 – 3:05 p.m.
Networking Break
Celebration Atrium

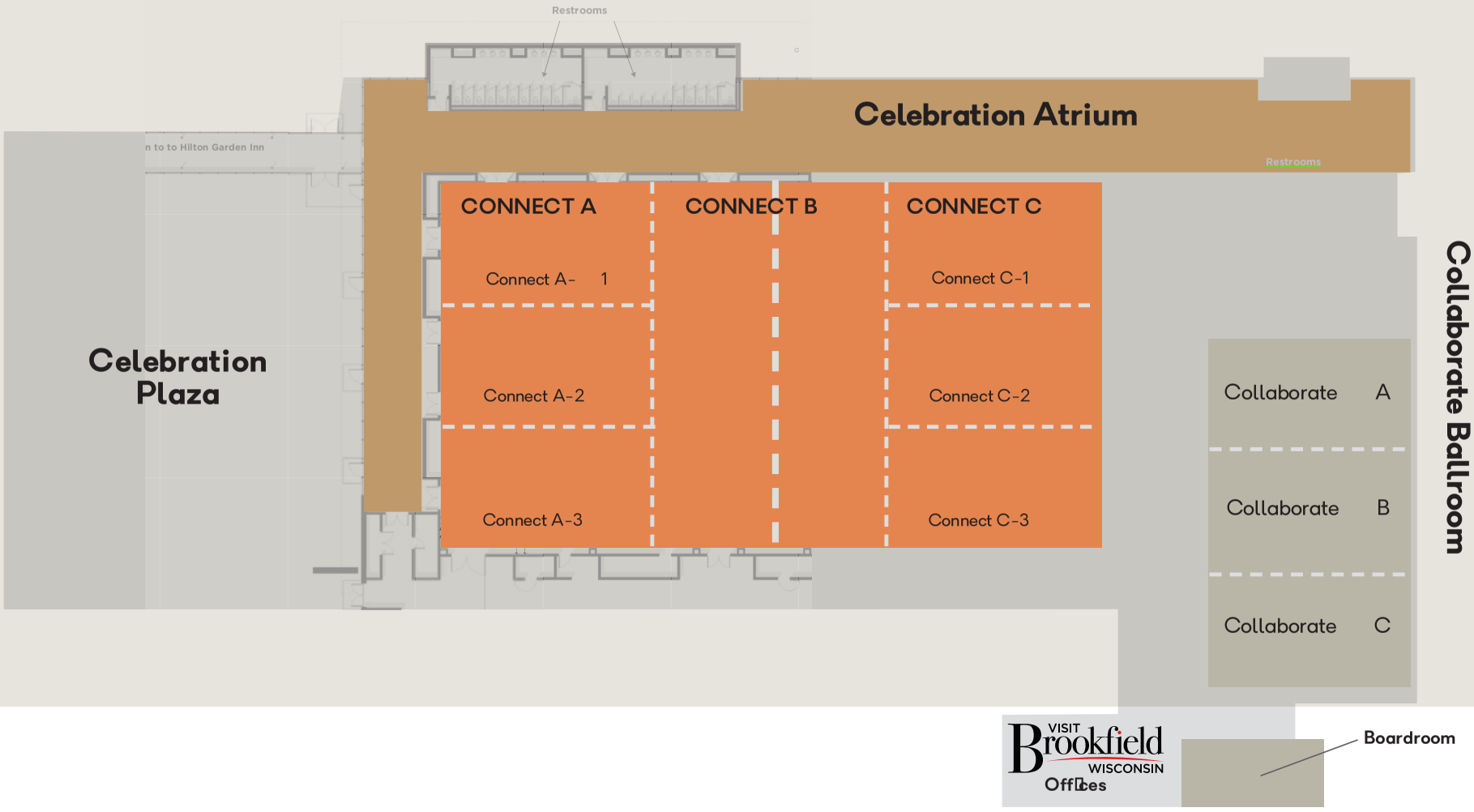
3:05 – 4:45 p.m.
GENERAL SESSION
CPA Technology Trends Update
Connect C1 & C2

4:45 p.m.
Closing Remarks & Raffle Drawings
Connect C1 & C2

BE SURE TO WATCH YOUR EMAIL FOR THE CONFERENCE EVALUATION TO LET US KNOW HOW THE CONFERENCE WAS!

BROOKFIELD CONFERENCE CENTER

FLOOR PLANS AND CAPACITY CHARTS



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8:10 – 9:50 a.m.

The Future of Money

Dr. Sean Stein Smith, CPA, CMA, CFE, CGMA, *Professor*
University of New York City

The Future of Money

Dr. Sean Stein Smith

WICPA Technology Conference

December 8th, 2022

About me

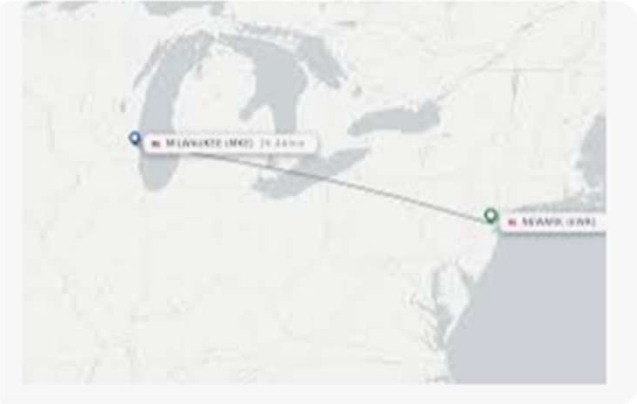
- Dr. Sean Stein Smith, CPA, CMA, CGMA, CFE
- Assistant Professor, Lehman College, City University of New York
- Forbes Contributor – Crypto & Blockchain
- AICPA Outstanding CPA of the Year (2022)
- Accounting Today Top 100 Most Influential People in Accounting
- E.C. Harwood Visiting Research Follow – American Institute of Economic Research
- Board of Advisors – Wall Street Blockchain Alliance (WSBA)
- Chair, Accounting Working Group, WSBA
- Advisory Board Member – Gilded "Crypto Accounting Made Simple"
- Strategic Advisor – Crescent City Capital
- 40 under 40 in Accounting (2017-2022)
- NJCPA Trustee (2022-2025 FY)

Let's do a little more introduction

I'm from New Jersey….

My New Jersey

My trip



How I got into crypto

My crypto journey

Now we're all caught up

What is money

Money has three fundamental properties:

- A store of value, meaning people can save and use the value later
- A unit of account, a common base for pricing and comparison
- A medium of exchange; a way for people to use a common currency for buying and selling from one another

Money also has several important attributes:

- Durable, ability to last a long time before needing to be replaced
- Portable, something easily carried from one place to another
- Divisible, something easily divisible into smaller units
- Fungible, one unit is interchangeable with or the same as any other unit

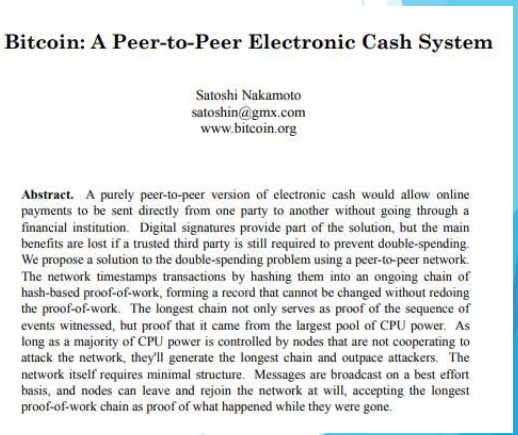
10

But what does that really mean?

- Money to needs to be trusted
- Money needs to be accepted
- Money needs to be redeemable
- Money needs to understood
- Money needs to be accessible
- Money needs to be stable
- Money needs to be portable

Blockchain

- First things first, who is to blame/give credit to for all of this?
- Satoshi Nakamoto
- https://bitcoin.org/bitcoin.pdf
- 10 pages (easy read)



Bitcoin: A Peer-to-Peer Electronic Cash System

Satoshi Nakamoto
satoshin@gmx.com
www.bitcoin.org

Abstract. A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

Satoshi

We are not sure who or what Satoshi is, but this is individual/team that developed blockchain

Almost as important as who is the “why” behind blockchain and cryptocurrencies

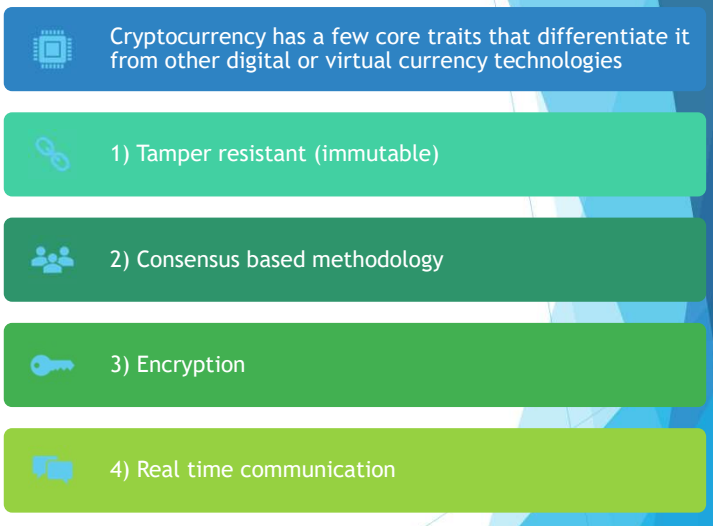
Why it doesn’t matter

- Some argue that not knowing who created Bitcoin is a negative
- Do you know who invented:
- The Internet
- Cell phone
- Streaming video
- Ecommerce
- Does it matter?

Why cryptocurrency

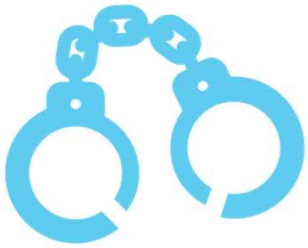
- Large numbers of the cryptocurrency community wanted a technology and option that
- 1) Not controlled by a centralized government or political entity
- 2) Lower cost basis to transmit funds
- 3) Ability to democratize finance and funding
- 4) Reduce reliance on traditional financial institutions
- 5) Empower the individual

Cryptocurrency breakdown



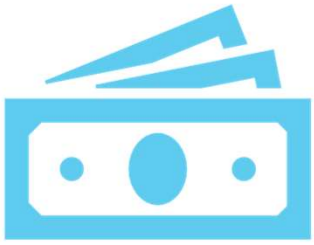
The dark side of crypto

- Like any other technology tool there is the potential for blockchain and cryptocurrencies to be used for unethical, criminal, or otherwise illegal acts
- Silk Road
- Money laundering
- Criminal activities
- Always opportunity for abuse



Dark side of cash

- Cash is also used for
- 1) Criminal activities
- 2) Money laundering
- 3) Buying and selling illegal goods/services
- So crypto is no different in that regard



Connecting crypto to blockchain

It is important to note that we would not have blockchain as we know it without the development of bitcoin and other cryptocurrencies

To get bitcoin to "work," the underlying technology (blockchain) had to be completed and finalized first

How do cryptocurrencies work?

- Every cryptocurrency is different, so let's stick with Bitcoin
- The original cryptocurrency that started the entire conversation
- Cryptocurrencies are connected to an underlying blockchain

Every crypto needs a blockchain, but not every blockchain needs a crypto

How are they different from fiat?

Bitcoin

- Fixed supply (21 million)
- Requires investment to create new units
- Not issued by a government or central oversight authority
- Borderless
- Cryptographically secured

USD

- Unlimited supply (printer go brrr)
- No investment required to increase supply
- Controlled entirely by central government or central bank
- Linked to specific nation-state
- No inherent security

Different cryptoassets (more than bitcoin)

Crypto-classes

- Decentralized cryptocurrencies
  - Bitcoin
- Semi-centralized cryptocurrencies
  - Stablecoins
- Centralized cryptocurrencies
  - Central bank digital currencies

Applications

- Smart contracts
  - Enable blockchains to talk to other technology
- Decentralized autonomous organizations
  - Organization governed by smart contracts
- DeFi
  - Banking without the banks

Blockchain – not just crypto

Important to recognize that blockchain is a lot more than cryptocurrency

Think of blockchain like the underlying "internet" or technology platform, with cryptocurrencies running on top of that platform like websites

Hundreds of enterprise applications that do not use crypto

Questions to think about?

- Will crypto ever be accepted in the mainstream?
- Will bitcoin be the future of money?
- Does crypto have a different path toward currency dominance?
- What are the other options for crypto-adoption?
- Has the promise of either blockchain or crypto actually been realized?

Some more questions

- Are we going to talk about FTX?
  - Yes
- Is crypto going to $0
  - I don't think so
- Is crypto a giant Ponzi scheme?
  - Funny you should ask?
- What is your 2023 prediction?
  - We will cover that at the end

FTX is not fine

FTX meltdown

- FTX was a market leader in the cryptoasset marketplace
- Obtained numerous celebrity endorsements and naming rights for venues
- Had served as the "white knight" for other crypto organizations during the ongoing bear market
- That all changed starting on November 6th, 2022
- Let's take a look at the timeline of the collapse of FTX and its proposed acquisition by Binance

Binance-FTX timeline

- July 2022 – FTX and Sam Bankman-Fried (SBF) bankrolled the troubled crypto lender BlockFi, and acquires Canadian crypto firm Bitvo as well as agreeing to acquire Voyager Digital
- August 2022 – Alameda Research co-CEO steps down
  - Alameda Research is closely connected to FTX, raising questions around governance and risk management
- September 2022 – FTX President steps down
- October 2022 – SBF is revealed to having donated $50 million to U.S. political candidates, and expresses support for Digital Commodities Consumer Protection Act
  - Widely rejected by the crypto community, except for SBF

Binance-FTX timeline

- November 2022 – CoinDesk reports that that Alameda's balance sheet is comprised, to large part, of the FTT token, which is native to FTX
- Almost $600 million of FTT is transferred to Binance to be liquidated
  - Led to a bank-run on FTT tokens and withdrawal demands by customers
- Pledge from Alameda to buy FTT at $22 fails to stop price slide
- Around 11 a.m. on November 8th it was announced that Binance would acquire FTX
- Due to FTX suffering liquidity issues and inability to meet customer withdrawal demands
- November 11th – FTX files for bankruptcy

FTX Takeaways

- As FTX collapsed several things became clear
  - Corporate governance was non-existent
  - Questionable loans and trading activities went on between related parties
  - Disclosures and valuations were inconsistent at best
  - Non-U.S. based organizations increasingly have a spotty track record
  - Bankruptcy procedures have not evolved to deal with such a large crypto filing
- Regulators and regulation will absolutely be coming for the space
- Might result in sped up process to create crypto-specific rules

Let's have some context

- October 2022 – Mastercard partners with Paxos to help banks and other intermediaries authorize and settle financial transactions
  - Already used by PayPal
- Madeira Islands (Portugal) are planning to embrace/adopt bitcoin
  - Potentially as legal tender
- Bitcoin Cash to be accepted as legal tender in St. Kitts
- Stablecoin transaction volume topped $800 billion in September
- That's not all

More context

- Blackrock and Coinbase have agreed to offer a jointly managed platform to allow institutions access to crypto trading and custodial services
- JP Morgan is expanding its enterprise blockchain, Onyx, and just completed it's first ever decentralized finance transaction
  - Polygon blockchain
- About 1 billion people have used crypto in 2022
- About 320 million daily users worldwide
- But there is more….

Keep this in mind

- 2022 has seen multiple centralized exchanges and platforms fail or struggle dramatically
  - Celsius
  - TerraLabs
  - BlockFi
  - FTX
  - Many others
- Investors withdrew over $1 billion in bitcoin from exchanges over the weekend
- Creates opportunities for new services – crypto & cyber

Hot wallet

- Online portal or accessible web tool that stores the private key or other identifying information
- Connects to the blockchain where the cryptocurrency is stored
- No crypto is actually stored in the hot wallet itself
- Most convenient method of accessing and using crypto for day-to-day purposes

Hot wallet considerations

- Many hacks, theft, and breaches have occurred via the hot wallets of exchanges
- Including Binance with over $40 million in investor losses
- Not protected by blockchain encryption
- Simply a website with traditional password protection
- Represents a vulnerability for uninformed investors/advisors

Cold wallet

- OFFLINE STORAGE METHOD FOR INVESTORS SEEKING GREATER PROTECTION OVER ACCESS TO CRYPTOCURRENCY
- SPECIALLY DESIGNED HARDWARE TO HOLD CRYPTO-RELATED INFORMATION
- USUALLY COMES WITH BUILT IN SECURITY TO PROTECT INFORMATION FROM HACKS ON THE COMPUTER OR NETWORK ITSELF
- NUMEROUS OPTIONS AVAILABLE FOR PURCHASE ON AMAZON AND OTHER MAJOR RETAIL SITES

Cold wallet considerations

- What hardware option to purchase?
- How to designate authorized parties
- Processes to be implemented to grant access to the cold wallet itself
- Physical storage considerations
  - Should be offsite in a secure location
  - May even be a bank safety deposit box
  - Procedures for recovering it must be documented

Key management

- One additional consideration for anyone seeking to provide services in this space is to understanding the following
- Public key & private key
- Public key = your address
- Private key = key that opens your P.O. box
- Public keys can be shared widely
- Private keys must be protected
- “Not your keys not your coins”

So what is the future of money?

Stablecoins or CBDCs?

Stablecoin vs. CBDC

Stablecoins

- Backed or otherwise supported by any number of external assets
- Issued by a private entity and centrally managed
- Cryptoasset layered on top of external asset (fiat/commodity, etc.).

CBDCs

- Issued and governed by a central government or central bank
- Direct representation of existing fiat currencies
- Will be treated as monetary alternative

What is a stablecoin?

- Cryptocurrency that is backed, pegged, or otherwise supported by some other underlying asset
- 1) Fiat
- 2) Commodity (gold or oil)
- 3) Additional cryptocurrency playing the role of reserve currency
  - MakerDAO

4) Or a basket of reserve assets (Libra 1.0)

5) Of a 1-1 crypto to asset relationship (Libra 2.0)

What are the benefits of stablecoins

1) To solve the volatility and perceived lack of stability associated with traditional decentralized and distributed cryptocurrencies
2) Goal: Encourage broader adoption and utilization of stablecoins as viable alternatives to fiat currencies
3) Criticisms: not ”true” crypto, are they better?

Types of stablecoins

- -Fiat stablecoin
- -Crypto stablecoin
- -Commodity stablecoin
- -Algorithmic stablecoin
- -Hybrid stablecoin
- -Derivative backed
- -Sovereign stablecoin

President's Working Group Report on Stablecoins

-
- https://home.treasury.gov/news/press-releases/jy0454
- First comprehensive report on stablecoins issued by the Federal Government, with major private sector partners

PayPal Stablecoin

- PayPal is actively working on developing a native stablecoin
- https://cointelegraph.com/news/paypal-stablecoin-what-it-could-mean-for-payments
- Has over 350 million users
- Already allows users to transact in Bitcoin, Litecoin, Ether, and Bitcoin Cash

Central Bank Digital Currencies (CBDC)

The Future of Crypto?

The Big Shift

- Blockchain has only been around since 2008-2009, but has already experienced several dramatic changes
- Bitcoin
- Price bubbles
- Regulatory enforcement and updates
- Global interest and investment in the space
- So what is next?

The Big Shift, cont.

- Blockchain has evolved from a permissionless and open source model to more permissioned
- Easier to control
- Simpler to scale
- More conducive to enterprise use
- Enterprise use = funding

So what is the big shift?

- Permissionless > Permissioned > Stablecoins > Centralized Cryptoassets > Central Bank Digital Currencies

Central Bank Digital Currency?

- So what exactly is a CBDC?
- What does it mean for the crypto and blockchain marketplace?
- How will these cryptoassets change the blockchain/crypt accounting marketplace?

Central Bank Digital Currency, defined

Cryptoasset that is issued and governed by a central bank or other quasi-governmental entity

Semi-centralized or fully centralized

Let's look at the pros and cons of a CBDC

Pros - Central Bank Digital Currencies

- Price stability
- Implicit/explicit government backstop
- Governed by a central entity
- Issued by a central entity
- More able to be used as a legitimate fiat alternative

Cons - CBDC

- Issued by a centralized entity
- Too much transparency and traceability
- Potential control and monitoring by a governmental entity
- Privacy?
- Who is in charge of how this CBDC will work?

Making it different from crypto

- A CBDC is very different from a decentralized cryptocurrency
- 1) Issued by a government
- 2) Stabilized by a fiat currency
- 3) Able to be redeemed?
- 4) How is it going to be issued?
- 5) Will it be interoperable?

The future of crypto?

- Are these types of cryptoassets the future of cryptocurrency?
- Any cryptoasset solution or technology is going to have benefits and challenges that accompany this implementation
- Every nation is different, so it is reasonable to expect every CBDC to be different as well

Breaking down CBDCs

- A CBDC is, as its name described, issued or governed by a central government or some sort of quasi governmental entity like a central bank
- Completely different from other cryptocurrencies such as bitcoin, ether, or even other types of stablecoins
- Has some potential positives and negatives
  - Deeper dive

CBDC, positives

- Government backstop will encourage use as a legitimate fiat alternative
- Backstop will also help reduce price volatility
- Support from leadership might also help the accounting and reporting conversation mature
- Basically a CBDC can help make cryptocurrency actually be used as currency

CBDC, negatives

- Political interference
- Possible bifurcation of crypto market into a two-tiered setup
  - Valuation and implementation
- How will this actually get rolled out into the marketplace
- Timeline?
- Expansion of central banks balance sheet/possible inflation?

CBDC, implementation

- So how exactly would this be implemented and rolled out into the economy?
- Two primary options and possibilities
- 1) Mirror the current model and system
- 2) More closely connect individual accounts with the Federal Reserve itself

Option #1- mirrors current system

- The U.S. dollar is already a digital in nature
- Only 31% of total dollar transactions are actually physical cash in nature
- https://www.cnbc.com/2018/08/06/spike-the-dollars-obit-cash-is-still-a-growth-business.html
- So what would the actual benefit be of implementing a crypto dollar that is the same thing as the current system

Option #2 – Direct to the Fed

- If the government can watch and monitor every transaction using a CBDC what does that mean for privacy and consumer protections?
- Would it be used to directly encourage and direct consumer behavior?
- What about social scoring and other governmental led initiatives and ideas?
- Let's think about the following

Surveillance currency

- If the Federal Reserve, or other central bank, has the ability to monitor and review individual transactions that could create a turn-key policy state
- What if political leadership changes and becomes hostile to certain type of transactions, opinions, and purchases
- Could this risk the validity of the CBDC project?
- Keep in mind the first nation that will come to market will be China

CBDC, different types

- Another option is to have different types of CBDC that enter the marketplace, dependent on the use case in question
- Think about it for a second
- Does your banking relationship with your bank operate the exact same way as commercial banks with the Federal Reserve?
- Might lead to the creation of hundreds of different kinds of cryptocurrencies
- Now… let's take a look

Hundreds of cryptocurrencies?

- Wouldn't the creation of hundreds of types of cryptocurrencies simply lead to chaos and anarchy in the marketplace?
- No, and let's think about it for a second – how different are CBDCs from other financial instruments of other cryptoassets
- Not really!
- There are hundreds of actively traded ETFs so why should this market evolve differently

Potential Macro Benefits

- Ensure public availability to a legal tender
- Improvement to the efficiency of payment solutions
- Assist in the transition to a cash-less society
- Simplification to cross-boarder payment systems

The future of crypto?

- Are these types of cryptoassets the future of cryptocurrency?
- Any cryptoasset solution or technology is going to have benefits and challenges that accompany this implementation
- Every nation is different, so it is reasonable to expect every CBDC to be different as well
- Is there a difference between a CBDC and a Stablecoin?

Future Directions

- Which nation will be first to market?
- Will being first mean that model will win out?
- Does this mean the future of money is assured?
- What do you think?

Thank you!

- Questions?
- Comments?
- Jokes?
- Email – drseansteinsmith@gmail.com
- Twitter - @seansteinsmith
- LinkedIn – Sean Stein Smith

10:05 – 10:55 a.m.

Blockchain Basics

Dr. Sean Stein Smith, CPA, CMA, CFE, CGMA, *Professor*
University of New York City

Blockchain Basics

Different blockchain models

Blockchain is a buzzword, and is tossed around a lot, but it is not just one thing

1) Public

2) Private

3) Public-permissioned

4) Consortium/federated, etc

Why the need for different blockchains

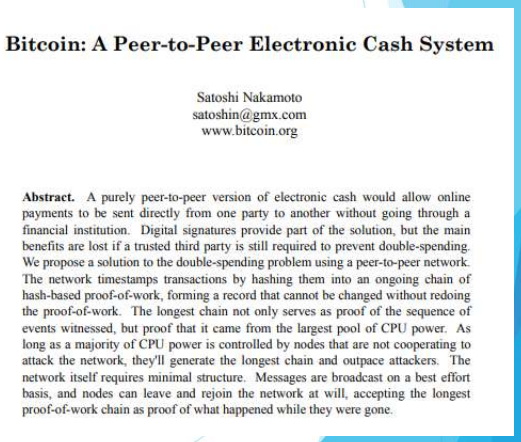
- Blockchain is not a mystical or magical technology
- Not always a good fit for every project or task at hand
- Three primary issues that have arisen with blockchain technology are
- 1) Scalability
- 2) Technical complexity
- 3) The permissionless nature of blockchain

Blockchain vs Distributed Ledger Technologies (DLT)

- Blockchain is simply one version of distributed ledger technologies
- Every blockchain is a distributed ledger tool
- Not every distributed ledger is a blockchain

Blockchain

- First things first, who is to blame/give credit to for all of this?
- Satoshi Nakamoto
- https://bitcoin.org/bitcoin.pdf
- 10 pages (easy read)



Bitcoin: A Peer-to-Peer Electronic Cash System

Satoshi Nakamoto
satoshin@gmx.com
www.bitcoin.org

Abstract. A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

Where blockchain fits

Centralized database	Current applications	SAP, Quickbooks, etc
Distributed database	Wikipedia	Microsoft 365
Blockchain	IBM Hyperledger	

The blockchain problem

There are over 100,000 cryptocurrencies

Hundreds of different blockchain options

Thousands of developers

How many of us feel confident describing or recommending what type of blockchain to implement?

Public blockchain

A decentralized and distributed ledger of encrypted information

Comprised of nodes (network members)

- Not every node is a full node
- Think of it like “read” or “read/edit” ability

Usually uses the Proof of Work consensus methodology

- A race to complete a puzzle
- To earn coins or other rewards

Most secure but also most complex

Business applications

- Not terribly realistic to use for business
- 1) Consumers too much power
- 2) Technical complexity
- 3) Easier ways to establish and maintain other models of blockchain

Private blockchains

- A hybrid approach between current database or ERP solutions and a public blockchain
- Usually managed by one firm, called the "organizing" firm
- Can use other types of consensus methodologies
  - Proof of Stake
  - Proof of Elapsed Time
- May not be as secure, but less energy intensive to operate
- Initial place where enterprise applications began

Business applications

This is where the development of enterprise or corporate blockchains start being implemented and developed

1) Simpler to control

2) Less power and energy intensive

3) Easier to establish access and control issues

Public-permissioned

- A crossover between fully public and fully private blockchains
- Allows almost anyone access to read or track transactions on the chain
- Requires special permissions or access to edit or add data to the platform
- Think of this like Google
  - Anyone can search
  - But in order to make changes or add to the results there are extra steps required

Business applications

This might ultimately be the ultimate end result for governmental blockchains

1) Freedom of information act and other disclosure legislation

2) Need for transparency

3) Connects back to the benefits of blockchain

- Efficiency
- Transparency
- Cost savings

Consortium

Arguably the most popular blockchain format currently in the marketplace

Think of it like a joint venture that is co-managed and co-funded by the founding or largest members of the network

Implemented by the Big 4 and other industry specific groups

Allows the spreading of risk, cost, and liability between the network participants

Business applications

- Might be the ultimate evolution and development of the numerous private blockchains
- 1) Development of sector specific models
- 2) Already underway with the rollout underway via
- Assist with standardization and regulatory development

Forbes Blockchain 50

- Annual listing of organizations using blockchain technology as a core component of operations
- Minimum of $1 billion in revenue and market capitalization of $1 billion
- https://www.forbes.com/sites/michaeldelcastillo/2022/02/19/blockchain-50/?sh=5da377797553

Blockchain differentiation

1) Consensus

2) Real time updates

3) No single point of failure

4) Standardizes different forms of information

5) Encryption/hashing

Consensus

Basically means that network members have to come to a level of agreement prior to the posting of information to the blockchain record

Different for every type of blockchain

Is one of the sources of strength

- No one actor can unilaterally upload information

Can also hamstring the efficiency and scalability of blockchain

Real time transmission

- Once records have been posted to the shared ledger, network members receive up to date versions of the information as it happens
- Reduces the time lag and delay that can be associated when sharing information
- Makes blockchain platforms especially useful for payment processing and trade settlement

No single point of failure

A key risk for data processing and organizations of any size and in any industry

Hacks have occurred at organizations of all sizes and types, exposing the risk of a single centralized processing point

- Facebook, Yahoo, Home Depot, Target, Marriot, etc.

Distributing the processing and storage of information assists with reducing this risk

Standardizes Information

- In order for any blockchain to function as advertised there needs to be agreement as to what information is stored
  - Inventory records
  - Hash numbers
  - Data to reference other blockchains
- This standardization also helps reduce possibility of incompatible data or wrong file types
- CSV vs. Excel vs. PDF

Encryption

Part of any blockchain network and implementation

Each blockchain, however, has a different type of encryption and this NEEDS to be assessed as a part of the control and implementation process

If the encryption and underlying coding language is not correct the entire project will fail

Public/permissionless blockchain

- A decentralized and distributed ledger of encrypted information
- Comprised of nodes (network members)
  - Not every node is a full node
  - Think of it like “read” or “read/edit” ability
- Usually uses the Proof of Work consensus methodology
  - A race to complete a puzzle
  - To earn coins or other rewards
- Most secure but also most complex

Business applications

- Not terribly realistic to use for business
- 1) Consumers too much power
- 2) Technical complexity
- 3) Easier ways to establish and maintain other models of blockchain

Permissionless examples

- Bitcoin blockchain
- Ethereum
- Primary underpinnings of virtually every other commercial or enterprise application
- Smart contracts, for example, are almost universally associated with Ethereum

Private/permissioned blockchains

- A hybrid approach between current database or ERP solutions and a public blockchain
- Usually managed by one firm, called the "organizing" firm
- Can use other types of consensus methodologies
  - Proof of Stake
  - Proof of Elapsed Time
- May not be as secure, but less energy intensive to operate
- Initial place where enterprise applications began

Business applications

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2) Less power and energy intensive

3) Easier to establish access and control issues

Private-permissioned blockchains

- Majority of enterprise examples are permissioned or private blockchains
- Walmart - Leafy Green Blockchain
- JP Morgan - Quorum
- Depository Trust and Clearing Corporation

Public-permissioned

A crossover between fully public and fully private blockchains

Allows almost anyone access to read or track transactions on the chain

Requires special permissions or access to edit or add data to the platform

Think of this like Google

- Anyone can search
- But in order to make changes or add to the results there are extra steps required

Potential use cases in governmental or NFP spaces

Business applications

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- Allows the spreading of risk, cost, and liability between the network participants

Business applications

- Might be the ultimate evolution and development of the numerous private blockchains
- 1) Development of sector specific models
- 2) Already underway with the rollout underway via
  - IBM
  - Microsoft
  - JP Morgan
- Assist with standardization and regulatory development

Data integrity with blockchain

- Blockchain addresses this issue with the technology that lies at the core of platform
- 1) Encryption
- 2) Public/private key
- 3) Hash ID's
- 4) Tamper-resistant
- 5) Consensus based methodology

Financial Reporting & Disclosure

Changing reporting

- Many open items still connected to the classification and reporting cryptoassets
- Still no definitive guidance from the FASB or IASB
- No update from the IRS — Although promised in May it would be "soon"
- Ambiguity is the only consistency

Financial reporting FAQs

1) The accounting taxonomy of cryptocurrencies?
2) What information has to be disclosed?
3) Which stakeholders get what information?
4) How often is this information communicated?
5) Do regulators need to be involved?

Accounting taxonomy

- Cryptoassets have been accounted for any number of ways by different firms
- 1) Inventory
- 2) Currency equivalents
- 3) Investments
- 4) Intangible assets
- Do any of these *really* work?

Accounting taxonomy, cont.

New idea emerging is to create an entirely new class of assets related to cryptoassets

Classified according to

1) Use case

2) Liqudity

3) Blockchain affiliation

Disclosure

- What specific data has to be disclosed
- Cryptoasset perspective
- 1) Volume of coins or tokens held?
- 2) Method by which the were obtained?
- 3) Any counterparty risk?

Disclosure, cont.

- From a blockchain perspective
- 1) The specifics of the underlying blockchain?
- 2) Consensus methodology used by that blockchain? — Possibly very important
- 3) How that blockchain is updated and maintained?

Stakeholder engagement

- Does the organization even know who the stakeholders are?
- Are they only internal stakeholders?
- Or do external stakeholders also exist?
- Where are these stakeholders located — Nexus for tax and financial reporting

Frequency of communication

- Does the company have to issue press releases every time there is a market headline or Congressional hearing?
- For every Presidential tweet?
- What about if there is a fork in the underlying cryptoasset itself ?
- How is that data communicated to the marketplace?

Regulatory involvement

- How engaged will the regulators be in the reporting process?
- Which regulator does the company want to engage with the most?
- What exactly does that involvement look like?
- Will there be a representative from the regulator on-site at all times?
  - Like with the SIFI's and the SEC

Thank you!

- Questions?
- Comments?
- Jokes?

10:05 – 10:55 a.m.

KPI Dashboards

John Higgins, CPA, CITP, *Strategic Technology Advisor*
CPA Crossings LLC

KPI Dashboards – The New Financial Reporting Model

Presented By
John H. Higgins
CPA Crossings, LLC

CPA Crossings

Learning Goals

After attending this presentation, you will …

- Recognize the concepts associated with KPI dashboard development
- Recognize the value proposition for embracing this new financial reporting model
- Identify opportunities to incorporate this skill set into your professional toolbox

John H. Higgins, CPA.CITP
Strategic Technology Advisor

jhiggins@cpacrossings.com

- Strategic technology advisor to the profession w/ 35+ years of experience
- Nationally recognized author and presenter on CPA technology
- Former National Mid-market Technology Partner - BDO
- Cygnus Media Top 25 Thought Leader for the profession
- AICPA Business & Industry Hall of Fame Inductee
- MICPA Innovative User of Technology Award
- Past Chair of the Michigan Association of CPAs
- Passionate advocate for the CPA profession!

Presentation Outline

THE CHANGING WORLD OF FINANCIAL INFORMATION

Financial Reporting - "The Good Old Days"

- Pencil
- Columnar paper
- Eraser
- Typewriter
- Extremely labor intensive
- Calculating percentages was a big deal!

Financial Reporting – Current Model

- Accounting / financial software
- Excel / Word
- Semi-automatic
- Focus on historical reporting
- Emphasis on compliance
- Columns & rows of data

Financial Reporting - Emerging Model

- “Big data”
- Data analytics
- Real time reporting
- Visual / graphical presentation
- Interactive reports

FYI

The value of dashboards extends far beyond the financial function to areas such as operations, HR, sales and more.

The opportunity for CPAs and financial professionals to enhance their value to their organizations and clients through the development of data analytics expertise is substantial !

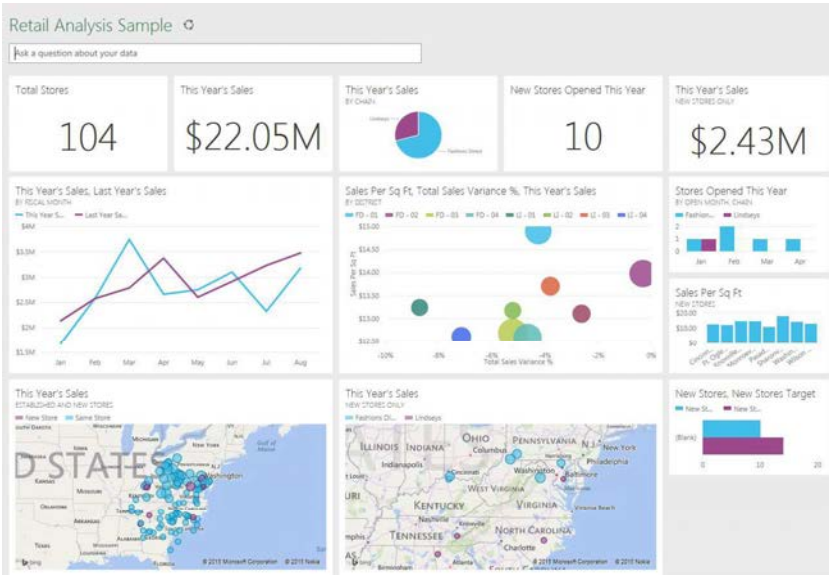
DASHBOARDS – THE NEW FINANCIAL REPORTING MODEL

Source: www.idashboards.com

Qualities of a Good Dashboard

- Simple to interpret through visual presentation
- Dynamic drill down capability
- Intuitive filtering functionality
- Connected to source data
- Current / real time data

Dashboard Example – Microsoft Power BI



Source: www.microsoft.com

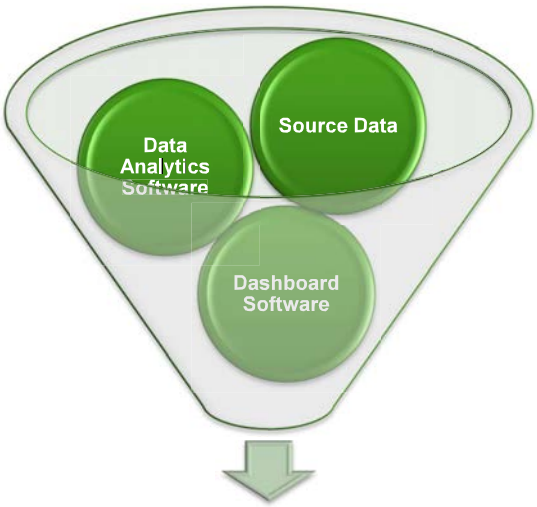
Dashboard Example - iDashboards

Source: www.idashboards.com

Dashboard Example - Sage Intacct

Source: www.intacct.com

Elements of a Dashboard



Source Data

- Need to identify the source(s) of the data
- Challenge of bringing in data from different sources
- Create data relationships as necessary
- Cleanse the data

Data Cleansing

	A	B	H	I	J	M	P		
1	Cust#	Customer Name	Product Categor	Order dat	Order Quantit	Sales Amour	Size	Colo	
411	46840	Roger L Huang	Jerseys	10/29/2010	1	49.99	XL		
412	49330	Sophia Mitchell	Jerseys	9/13/2010	1	49.99	XL		
413	23040	Drew D Raje	Jerseys	9/9/2010	1	49.99	XL		Verlander
414	33750	Julie G She	Jerseys	8/29/2010	1	49.99	XL		Miguel Cabrera
415	39200	Madison C Martin	Jerseys	5/13/2010	1	49.99	XL		Omar Infante
786	46030	Ricardo C Nath	Mountain Bikes	2/20/2011	1	3374.99	38	Black	Max Scherzer
787	44060	Omar L Liu				3374.99	38	Black	Max Scherzer
788	36650	Kristy Rubio				3374.99	38	Black	Max Scherzer
789	52370	Troy M Suri				3374.99	38		Max Scherzer
790	35000	Kathryn Chapman				3374.99	38	Black	Max Scherzer
791	29880	Jarrod E Suri	Mountain Bikes	11/7/2010	1	3374.99	38	Bl	
792	45030	Rachael Sai	Mountain Bikes	10/8/2010	1	3374.99	38	Bl	
793	13420	Antonio G Patterson	Mountain Bikes	9/30/2010	1	3374.99	38	Bl	
794	45060	Rachael M Rodriguez	Mountain Bikes	9/20/2010	1	3374.99	38	Bl	
795	34660	Kate L Raji	Mountain Bikes	7/22/2010	1	3374.99	38	Bl	
796	23090	Dustin Chander	Mountain Bikes	6/29/2010	1	3374.99	38	Bl	
797	44160	Orlando J Carlson	Mountain Bikes	6/4/2010	1	3374.99	38	Black	Max Scherzer
798	15600	Brett Mehta	Mountain Bikes	1/26/2010	1	3374.99	38	Black	Max Scherzer
799	20430	Cynthia Malhotra	Mountain Bikes	1/21/2010	1	3374.99	38	Black	Max Scherzer

Non-Contig us | Data | Codes

Blank cells s/b blank not a space

Data must be of the same type throughout a column

When a column is mixed, they should all be text

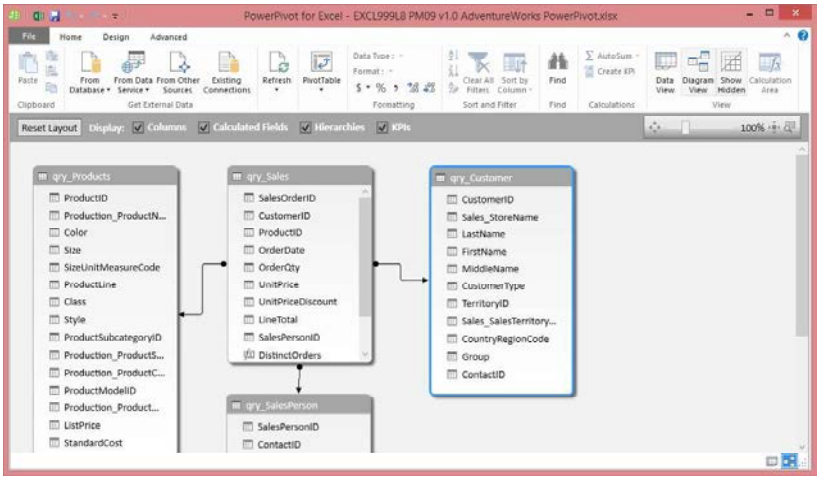
All Text

All Dates

All Values

CPA Crossings

Establishing Your Data Model



This is where you get data & create relationships between tables

CPA Crossings

Data Analytics Software

- Process raw data into meaningful information
- Excel pivot tables is a basic example
- Designed to process / analyze “big data”
- Built-in to some financial applications
- Sophistication relative to information desired

Alternative Dashboarding Approaches

Excel / Power BI	• Excel w/ PowerPivot • Power BI Desktop • Power BI.com
Packaged dashboard solution	• Horizontal (cuts across industries / functions) • Vertical (industry / function specific)
Application integrated	• Accounting / financial systems • HR system • ERP system

SELECT DASHBOARD SOLUTIONS

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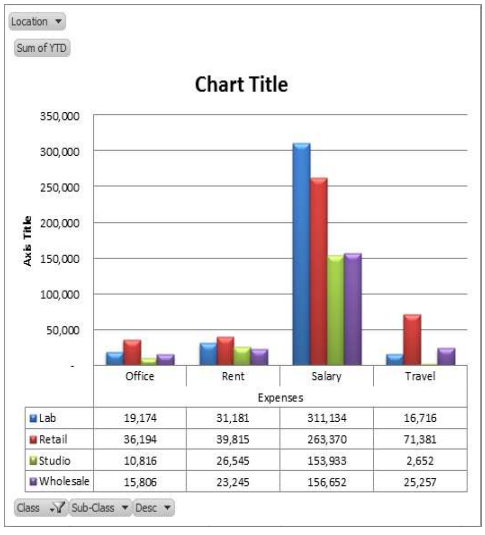
Alternative Excel Dashboard Methods

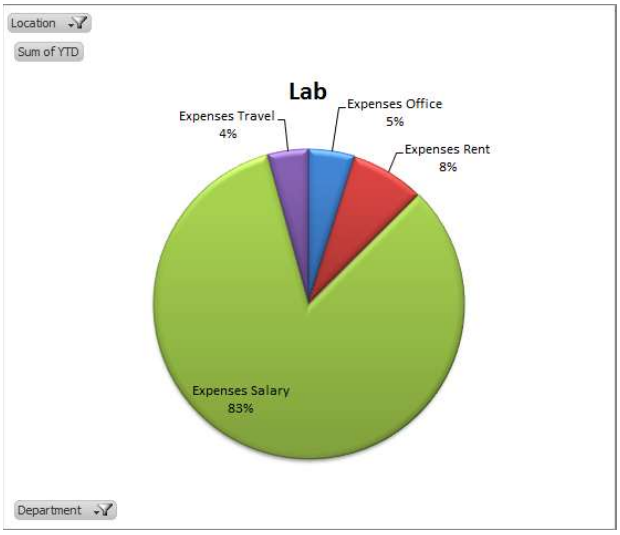
- Standard Excel charting features
- Pivot Tables and Pivot Charts
- Power Pivot Add-in
- Power BI.com

Excel Dashboards Using Charting

- Most basic dashboard tool
- Use charting functionality
- Suited for static dashboards updated periodically
- Use pivot tables and pivot charts for more dynamic dashboards

Excel Dashboards Using Pivot Tables & Pivot Charts





Power Pivot

Power Pivot Features

- Has NO data size limit
- Handles 2 million, 20 million, or even 200 million records
- Allows access to multiple data sets
- Uses relationships to join tables
- Has a new extensive Data Analysis Expression (DAX) formula language including Time-Intelligent Functions

PowerPivot Example

	A	B	C	D	E	F	G	H	I
1	Date	09							
2									
3	PeriodSales	Column Labels							
4	Row Labels	Current	LastYear	MTD	PriorYearMTD	QTD	PriorYearQTD	YTD	PriorYearYTD
5	7/9/2004								
6	⊞Europe	$308.63	$16,056.57	$3,140.81	$508,392.45	$3,140.81	$508,392.45	$6,759,815.77	$2,707,664.66
7	⊟North America	$572.99	$3,475.16	62.71	$2,284,621.97	$8,662.71	$2,284,621.97	$15,728,354.75	$13,918,143.71
8	⊞CA	$133.53	$2,319.99		$514,561.88	$3,266.22	$514,561.88	$3,056,302.24	$2,982,858.66
9	⊟US	$439.46	$1,155.17				$1,770,060.09	$12,672,052.50	$10,935,285.06
10	Central						$216,803.66	$1,323,769.09	$1,476,757.18
11	Northeast						$190,499.66	$1,059,022.59	$1,715,250.06
12	Northwest	$248.39					$402,987.80	$3,918,788.09	$2,166,645.87
13	Southeast						$177,763.10	$1,181,679.14	$1,253,029.36
14	Southwest	$191.07	$1,155.1				$782,005.86	$5,188,793.60	$4,323,602.58
15	⊞Pacific	$163.98	$13,149.71				$136,613.48	$3,304,034.43	$1,341,568.22
16	Grand Total	$1,045.60	$32,681.44	$14,283.48	$2,929,627.91	$14,283.48	$2,929,627.91	$25,792,204.95	$17,967,376.59

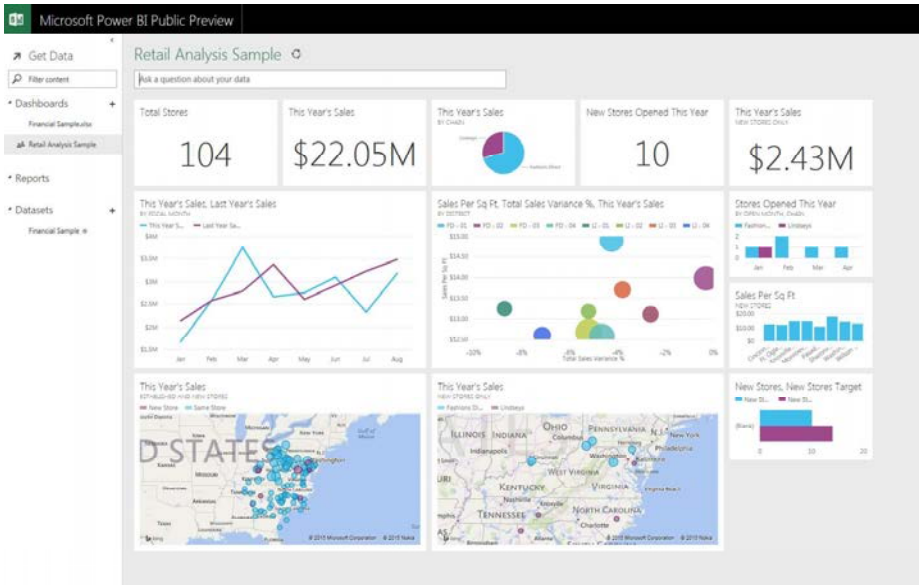
The calculated fields become “measures” to place in the Values area

Note: In a test on a PowerPivot with 3.4 million records, changing the date took less than a second to recalculate

Microsoft Power BI

- Cloud based business analytics service
- Create interactive dashboards hosted in the cloud
- API (application program interface) to create live connections to your data
- Power BI Desktop is the report / dashboard authoring tool (Excel alternative)
- Power BI.com is the dashboard hosting service

Microsoft Power BI



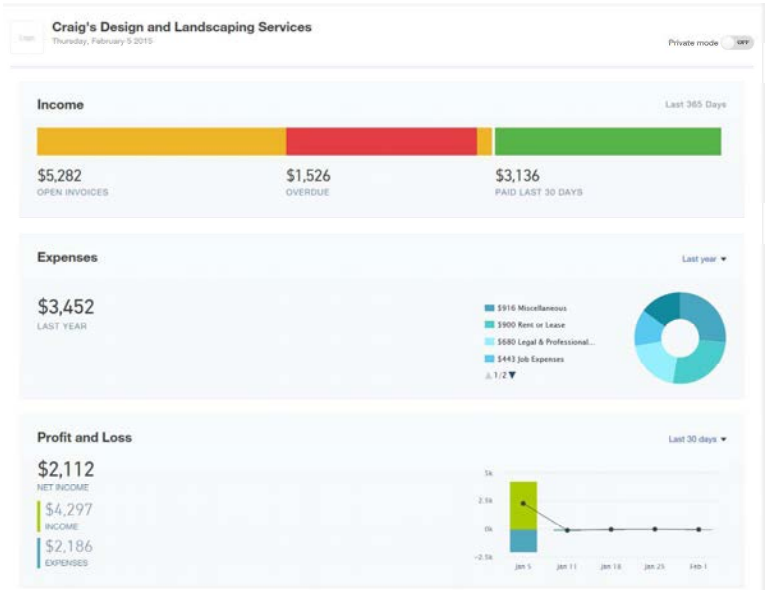
Source: www.microsoft.com

Cloud Financial Systems

Cloud Accounting Systems

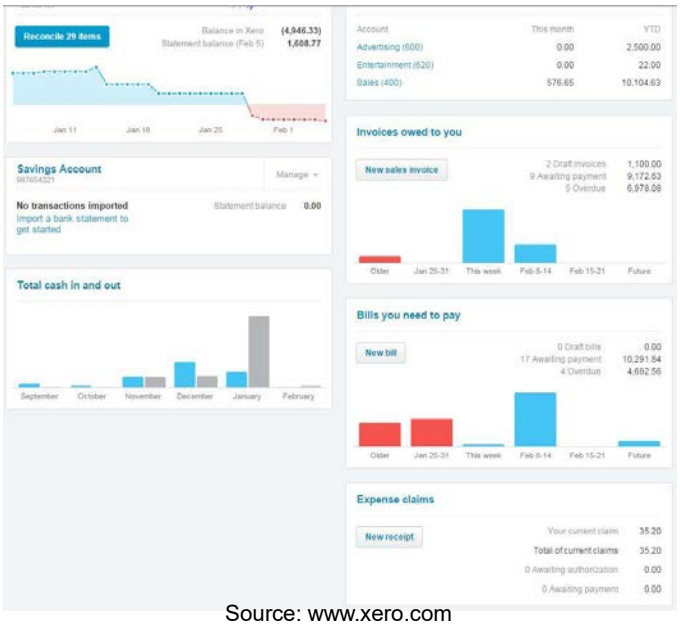
- Anytime, anywhere, any device access
- Embrace new software technology
- No need to create data connections
- Dashboards updated in real-time

QuickBooks Online Dashboard Example



Source: www.quickbooks.com

Xero Dashboard Example

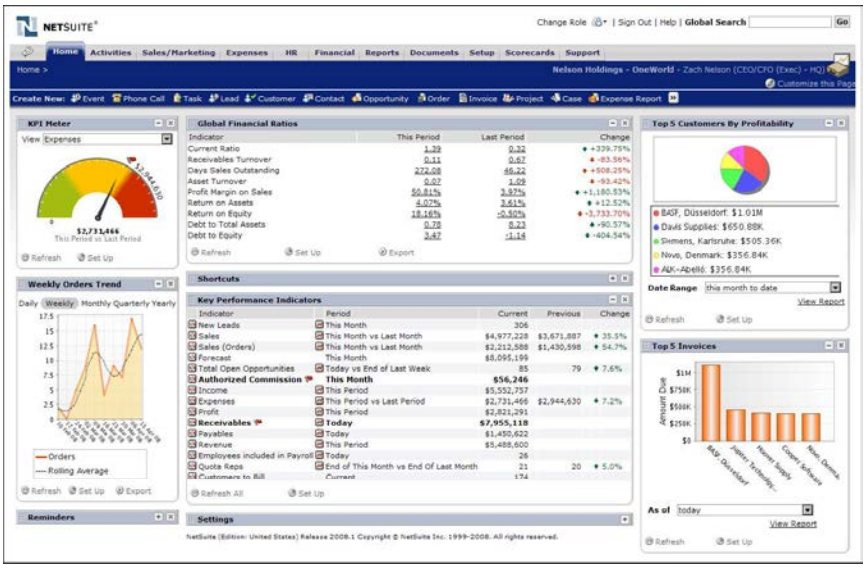


Source: www.xero.com

Sage Intacct Dashboard Example

Source: www.intacct.com

NetSuite Dashboard Example



Source: www.netsuite.com

Tableau

HOW TO BUILD A DASHBOARD

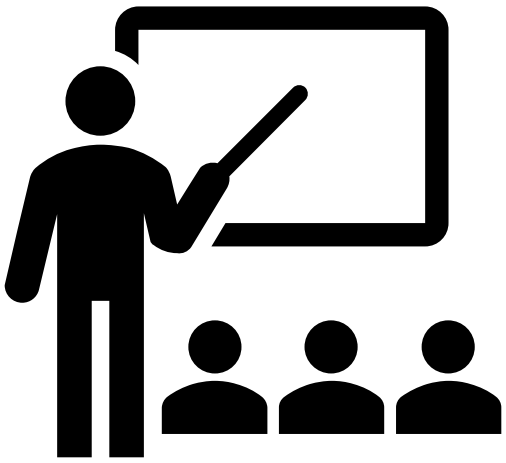
Building a Dashboard

- Analyze current report usage
- Facilitate creative storyboard session
- Develop prototype dashboards
- Refine and review
- Publish for web / mobile access

Establishing a Dashboard Service

- Internal or External
- Define scope of service
  - Data / report analysis
  - Data connectivity
  - Dashboard design
  - Dashboard review sessions
- Establish value priced annuity fee (external)

WRAP-UP



In Summary

- KPI Dashboards are the new reporting model of choice
- A picture is worth a 1,000 numbers
- This skill set is in high demand
- Opens up many professional opportunities for CPAs

Questions ?

THANK YOU

11:10 a.m. – 12 p.m.

Key Considerations for Setting Up a Crypto Payments System

Dr. Sean Stein Smith, CPA, CMA, CFE, CGMA, *Professor*

University of New York City

Key Considerations For Setting Up a Crypto Payment System

Yes, but not with bitcoin

Agenda

- Stablecoin FAQs
- Considerations for setting up a stablecoin payment system

So, what are stablecoins

Really?

What is a stablecoin?

- Cryptocurrency that is backed, pegged, or otherwise supported by some other underlying asset
- 1) Fiat
- 2) Commodity (gold or oil)
- 3) Additional cryptocurrency playing the role of reserve currency
  - MakerDAO

4) Or a basket of reserve assets (Libra 1.0)

5) Of a 1-1 crypto to asset relationship (Libra 2.0)

What are the benefits of stablecoins

1) To solve the volatility and perceived lack of stability associated with traditional decentralized and distributed cryptocurrencies
2) Goal: Encourage broader adoption and utilization of stablecoins as viable alternatives to fiat currencies
3) Criticisms: not ”true” crypto, are they better?

Types of stablecoins

- -Fiat stablecoin
- -Crypto stablecoin
- -Commodity stablecoin
- -Algorithmic stablecoin
- -Hybrid stablecoin
- -Derivative backed
- -Sovereign stablecoin

President's Working Group Report on Stablecoins

- https://home.treasury.gov/news/press-releases/jy0454
- First comprehensive report on stablecoins issued by the Federal Government, with major private sector partners

Terra Meltdown – May 2022

- What exactly happened here?
- Let's take a step back and break down some of the key components
- Stablecoins
  - Algorithmic stablecoin
- Multi-coin system
  - Terra stablecoin and Luna governance token
- Decentralized finance (DeFi)
  - Protocol to help encourage utilization
  - Returns of 20% have been promised

Terra Mechanics

- The Terra stablecoin is designed to be the equivalent to $1 USD
  - Able to be redeemed as used on a 1:1 basis with the USD
- If the price went above or below $1, investors and holders have an opportunity to trade Terra for Luna
  - Luna is the governance token connected to TerraLabs
  - Allow investors to take advantage of price differences (arbitrage)
  - Can generate profits and/or maintain the Terra peg as 1:1 with USD
- Also included the Anchor Protocol (DeFi) network that creates opportunities and demand for lending
- Luna Guard Foundation (LGF) tasked with maintaining the integrity of this system

Terra Meltdown, cont.

- May 2022 the value of Terra stablecoin (designed to be tradeable and exchangeable for $1 USD) collapsed
  - Dropped over 70% in value
- Luna governance token rendered worthless
  - Dropped from value of over $100 per token to under $0.10
- May 2022 – the LGF had to deploy (sell, lend, etc.) the over $5 billion in bitcoin that had been purchased for the purpose of supporting Terra and Luna
- Caused a widespread meltdown in the wider cryptoasset sector

Implications

- Increased scrutiny over cryptoassets and stablecoins specifically
- Widespread sell-off and decline in cryptoassets
- Doubts and questions raised around the decentralized finance (DeFi) sector
- Forecasts of the permanent decline of blockchain & cryptoassets

U.S. Executive Order – Crypto

- Long-awaited executive order signed into law in March 2022
- No specific actions steps or policies
- Three (3) main takeaways
  - No crypto ban or shadow-ban
  - Mandates coordination among policymakers
  - Definitive shift toward integration
- Brookings Institute article that breaks down the implications of this E.O.

SEC – Staff Accounting Bulletin

- Published March 31, 2022, with effective date April 11, 2022
- Proposes several accounting specific changes for publicly traded organizations offering crypto custodial services
  - Reporting of cryptoassets held for customers as liabilities, offset by an asset
  - Disclose risks associated with cryptoassets
  - Guidance to be applied by June 15, 2022
- Is not official guidance nor enforceable law
- https://www.sec.gov/oca/staff-accounting-bulletin-121
- Commissioner Peirce issued response
- https://www.sec.gov/news/statement/peirce-response-sab-121-033122

TRUST Act

- Draft legislation issued by Senator Toomey's office on April 6, 2022
- Centers around the issue of stablecoin issuance and crypto banking
- Three (3) primary issues
  - Establishes a new federal license designed specifically for stablecoin issuers;
  - Preserves the state-registered money transmitter status for most existing stablecoin issuers; and
  - Clarifies that insured depository institutions are permitted to issue stablecoins
- States that stablecoins are not securities and stablecoin issuers need to have annual attestations
- https://www.banking.senate.gov/newsroom/minority/toomey-announces-legislation-to-create-responsible-regulatory-framework-for-stablecoins

How are decentralized crypto different from fiat?

Bitcoin

- Fixed supply (21 million)
- Requires investment to create new units
- Not issued by a government or central oversight authority
- Borderless
- Cryptographically secured

USD

- Unlimited supply (printer go brrr) with no limit on supply
- No investment required to increase supply
- Controlled entirely by central government or central bank
- Linked to specific nation-state
- No inherent security

PayPal Stablecoin

- PayPal is actively working on developing a native stablecoin
- https://cointelegraph.com/news/paypal-stablecoin-what-it-could-mean-for-payments
- Has over 350 million users
- Already allows users to transact in Bitcoin, Litecoin, Ether, and Bitcoin Cash

Visa

- In Q4 2021 Visa settled $2.5 billion in crypto transactions
- Building out own internal tools and platform for additional crypto functionality
- https://www.coindesk.com/business/2022/03/08/visa-ceo-still-uncertain-on-cryptos-role-in-the-west/

Circle / USD Coin vs Tether / USDT

- USDC is created by Circle, backed by Goldman Sachs
  - Fully audited by GrantThornton
- Tether – largest stablecoin in the marketplace
  - Still questions around the recent 3/31 attestation report
  - Not audited and continuously under scrutiny
  - Paid a $41 million fine regarding lack of audited reserves
  - https://fortune.com/2021/10/15/tether-crypto-stablecoin-fined-reserves/

Stablecoins – drawing distinctions

- Distinct from traditional cryptocurrency and enterprise tokens
- May be stabilized and issued by an organization
- Widely traded or redeemable for certain underlying assets

The problem with cryptocurrency

- Major headwinds with regards to cryptocurrencies as investment vehicles are
- 1) Lack of clarify on regulatory/reporting
- 2) Price volatility
- 3) Tax treatment
- Potentially addressed by stablecoins

What problems are solved

- Still early in the development of this asset class
- Several items that could be addressed include
- 1) Reducing price volatility
- 2) Facilitating use of crypto for payment for goods/services
- 3) Increased clarity from financial reporting side
- 4) Lower tax uncertainty
- 5) Development of decentralized finance options

Stablecoin breakdown

- Have a market capitalization well in excess of $150 billion USD
- Used for transactional purposes, and play an integral role in the DeFi economic landscape
- Issued by private organizations and are pegged to external assets
  - Fiat currencies
  - External assets (gold/oil)
  - Other cryptocurrencies
- But, are they taxable?

Stablecoin taxes?

- Stablecoins are treated the exact same way as other cryptoassets
- When used for purchases or paying for goods and services these cryptoassets must be disclosed, reported, and have any applicable taxes paid based on these transactions
- Only primary upside is
  - Lack of volatility means the tax obligations will be limited
  - Authorization by major players means that reporting/disclosure is more consistent and understandable
- Who is involved?

Does this matter?

Cryptocurrency is talked about a lot, but does it actually matter for you and your clients

Now or in the future?

Yes!

Coinbase has 80 million users worldwide, with nearly 3 million trading daily

As per most recent filings

Do these sound familiar?

- PayPal – 361 million users
- Visa – over 1 billion accounts worldwide
- Mastercard – over 700 million accounts worldwide
- Venmo – over 50 million monthly users
- CashApp – over 30 million monthly users
- They all allow crypto transactions
- Does it matter now?

Additional stabilization questions

- Points to consider and research prior to recommending a specific coin include
- 1) Are coins redeemable for this external asset?
- 2) What are the rights of coin holders?
- 3) Does the stabilization actually work?
- 4) How is the stabilization reported?
- 5) What pieces of information are disclosed?

Speed – instantaneous transactions

Settles immediately for customer and institution on the back-end

Cheaper – fees and other transaction costs are lower than with fiat options

Transparency and traceability

100% of transactions are recorded on an underlying blockchain

How to send a stablecoin payment

Utilize a 3rd party wallet provider (Coinbase Metamask)

Utilize stablecoin/crypto invoicing solution (Gilded)

Track your stablecoin/crypto payments and sync them directly into your accounting system

Firms accepting crypto payments

- Home Depot
- Microsoft
- PayPal
- Overstock
- Whole Foods
- Etsy
- Starbucks
- AT&T
- Burger King
- Dallas Mavericks
- Virgin Galatic
- Express VPN

Stablecoin Considerations: Implementation

Does the organization have proper technical capabilities to process, record, and report these transactions

Reporting obligations surrounding stablecoins for commercial transactions

Succession plan

Stablecoin Considerations: Business and Organizational Considerations

- Approvals needed for implementing stablecoins as part of the payment process?
- How do you implement stablecoins into existing AR and AP processes?
- Internal control processes in place
- Proper tracking of payments and receipts
- Choosing proper liquidity/exchange provider

Setting up a crypto payment system

Items to consider

Crypto payment providers

- Coinbase
- Coingate
- CoinBank
- AlfaCoins
- Shopify
- BitPay
- BitcoinPay
- GoCoin

- Just a few of the many providers that exist in the marketplace
- Important to conduct due diligence on the provider and specific services offered
- https://www.devteam.space/blog/10-best-bitcoin-payment-gateways/

Step 1 – Which Crypto

- **Decide which crypto to accept.** Before doing anything else, an organization that is planning on beginning to accept cryptocurrencies as a form of payment needs to decide which crypto it will accept. Similarly, it must decide how it will store the crypto and what service it will use to facilitate the payment. This requires extensive due diligence in the vendor selection process as well as the underlying technology relied on by this vendor. It is important that competent professionals who understand the technology are involved in this process.

Step 2 – Develop a Strategy

- **Develop a crypto strategy.** Like every major implementation, remember the six Ps of planning: prior proper planning prevents poor performance. A company must determine how and where to store their currency just as they would with fiat currency. They may run into issues opening accounts with major exchanges due to mirrored federal banking concerns and limitations. They must develop standard operating procedures which dictate whether these crypto-denominated payments are going to be held by the organization (and if yes, how) or if they will immediately be converted back into fiat currency. Any conversion process requires clearing the traditional banking hurdle.

Step 3 – Don't Reinvent the Wheel

- **Don't reinvent the wheel.** Blockchain and crypto might still seem like an amorphous topic that can be confusing, but no organization interested in implementation of a crypto-based solution needs to begin from scratch. Accepting crypto as a payment option is not an impossible idea; multiple vendors have been offering these exact services for years at this point. Again, proper due diligence is key to understand and mitigate third-party risk.

Other considerations

Firm considerations

- **Cybersecurity and interoperability.** Going cashless and being able to access the banking system through stablecoins and other crypto payments might be a solution for certain firms, but that does not reduce the importance of cybersecurity.
- As prices and interest in crypto continue to increase, practitioners need ensure that the controls in place are up to the task. It is also important to understand how the technology you onboard will cooperate with other parts of your business and with those who you wish to do business.
- **Reduction in cash dependence.** Cryptocurrencies, specifically stable coins that maintain value against a certain benchmark such as the U.S. dollar, can act as an alternative to dealing in fiat currency for these organizations.
- Less cash dependence means lower risk of theft, embezzlement and security around organizational finances.

Firm considerations, cont.

- **Lower fees.** . Credit cards come with a “baked-in” fee of approximately 3 percent per transaction. Similar fees will be incurred to make use of third-party ACH services or cashless ATMs.
- Service providers generally understand the limitations imposed on the industry and are taking advantage to meet the demand at high costs.
- A crypto-based payment system could reduce these fees and add back some of these amounts to the bottom-line.

Talking to customers/colleagues about crypto

FAQ #1 – How to start

- Starting with crypto investing is very easy and straight-forward
- Can be done on a computer/tablet or phone
- Coinbase is the only publicly traded U.S. cryptoasset exchange in the U.S.
  - Where I invest
  - Nearly 100 million customers worldwide
- Ability to link banking and/or credit card information to allow crypto purchases using fiat currencies
  - USD to crypto purchases

FAQ #1, cont.

- What to look for when researching a crypto exchange
- 1) What is the history of the management team in change of the exchange
  - Look no further than QuadrigaCX
  - https://www.coindesk.com/learn/the-story-behind-quadrigacx-and-gerald-cotten-netflixs-crypto-king/
  - Netflix documentary
- 2) Is the exchange registered/insured/regulated by a regulator?
- 3) What are the policies for redeeming crypto back into fiat?
- 4) What is the history of hacks/breaches, etc.
- 5) Does this organization have relationships with other exchanges?

FAQ #2 – Is crypto safe?

- Blockchain and cryptoassets represent a fast moving and rapidly evolving asset class so there is a higher level of risk when compared to other financial instruments
- Regulatory uncertainty and confusion
  - SEC lawsuits
  - State-by-state settlements and fines
  - Federal ambiguity on regulation
- Technical complexity can lead to user errors/hacks
- Also, most crypto investments are not covered by any investor insurance tools as of yet

FAQ #2, cont.

- Recent crypto hacks include, but are not limited to:
- Scammers stole $14 billion in 2021, a 79% increase from 2020
- https://www.nbcnews.com/tech/security/crypto-scammers-took-record-14-billion-2021-rcna11192
- Criminals have already stolen $1.2 billion in 2022 alone
- https://finance.yahoo.com/news/crypto-hackers-stolen-173940395.html
- On April 17th, $180 million was stolen from the BeanSprout protocol
- https://www.coindesk.com/tech/2022/04/17/attacker-drains-182m-from-beanstalk-stablecoin-protocol/

FAQ #3 – Red flags

- Red flags to look out for individual cryptoassets or organizations include
  - Sudden increases in price
  - Unrealistic returns promised
  - Social media influences posing as investment advisors
  - https://www.outlookindia.com/website/story/business-news-cryptocurrency-frauds-5-red-flags-to-watch-out-for/401375
  - Anonymous team or team with no track record
  - Incomplete or poorly written whitepaper/documentation
  - Questionable trading exchanges
  - https://www.coinspeaker.com/5-red-flags-crypto-investing/

FAQ #3, cont.

- 2022 notable hacks include
- Over $600 million from Axie Infinity
- https://www.cnbc.com/2022/04/15/ronin-hack-north-korea-linked-to-615-million-crypto-heist-us-says.html
- Solana has lost over $300 million
- Binance smart chain lost $100 million
- NFTs have suffered nearly $50 million in hacks
- https://www.itbusinessedge.com/security/blockchain-hackers/

FAQ #4 – Hot or cold?

- Big decision around crypto investing is whether to hold crypto information in a hot wallet or cold wallet
- Hot wallets are online portals that allow real time access and trading of cryptoassets
  - Convenient
  - App based
  - Much easier to hack
- Cold wallets are specialized hardware devices that are used for longer term storage
  - Not connected to the internet
  - More difficult to hack

FAQ #4, cont.

- Which type of wallet is best?
- Depends on the goals of the investor in question
- Trading?
- Buy and hold?
- General rule is to keep 10% in a hot wallet and 90% in a cold wallet
- Allows flexibility for daily activities while keeping bulk of assets off-line and safer from hacks

FAQ #5 – How to plan & protect

- Generally speaking there are several pieces of advice every potential crypto investor should consider
- Tax implications
- Cyber implications
- What the goal of this investing is?
- What type of crypto to invest in?
- How to integrate this into your other investing/business activities?

Thank you!

- Questions?
- Comments?
- Jokes?
- Email – drseansteinsmith@gmail.com
- Twitter - @seansteinsmith
- LinkedIn – Sean Stein Smith

11:10 a.m. – 12 p.m.

Cloud Accounting Software Update

John Higgins, CPA, CITP, *Strategic Technology Advisor*

CPA Crossings LLC

Cloud Accounting Software Update

Presented By
John Higgins, CPA.CITP
CPA Crossings, LLC

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Learning Goals

- Review alternative cloud accounting models
- Learn about the new CAS & CAAS service delivery models
- Develop an understanding of the current market for financial, ERP and workflow software

John H. Higgins, CPA.CITP
Strategic Technology Advisor

jhiggins@cpacrossings.com

- Co-founder of CPA Crossings, LLC
- Strategic technology advisor to CPAs w/ 30+ years of experience
- Nationally recognized author and presenter on CPA technology
- Former Top 10 National Technology Partner - BDO
- Recognized by Cygnus Media as a Top 25 Thought Leader for the accounting profession (2011 – 2022)
- AICPA Hall of Fame Inductee
- MICPA Innovative User of Technology Award
- Past Chair of the Michigan Association of CPAs

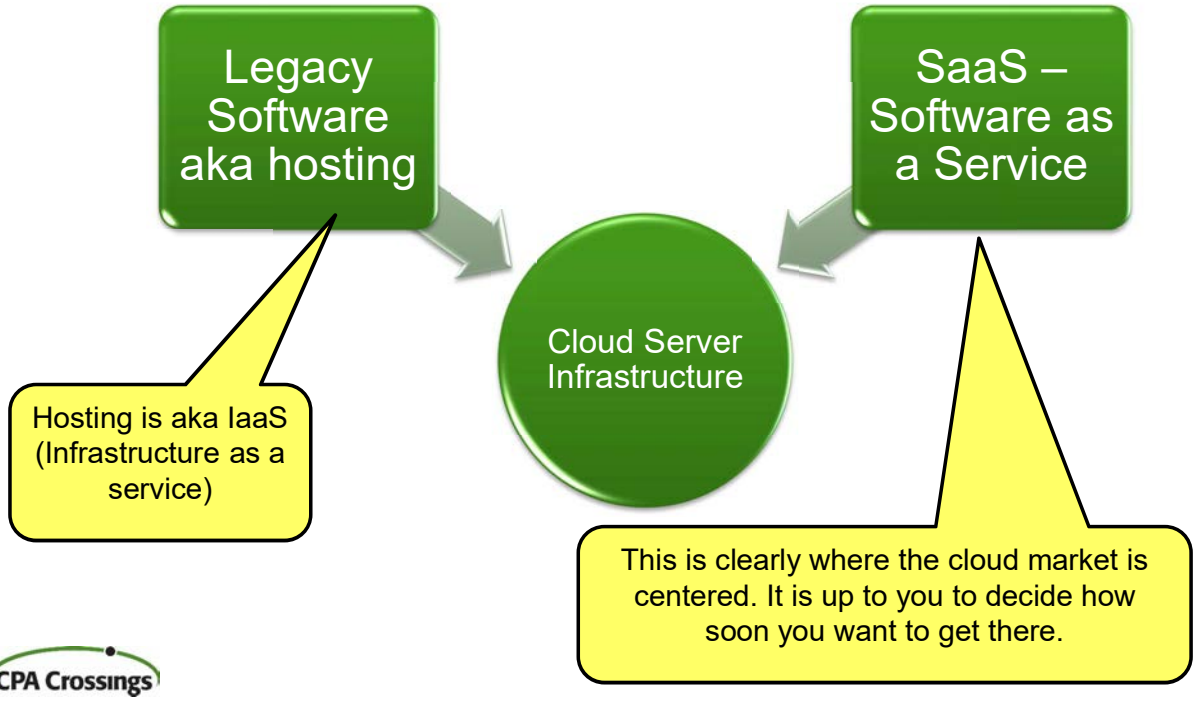
CPA Crossings

Presentation Outline

- Alternative Cloud Based Software Strategies
- The New Accounting Software & Services Paradigm
- Financial, ERP & Workflow Software
- Personal Productivity Software
- Wrap-up

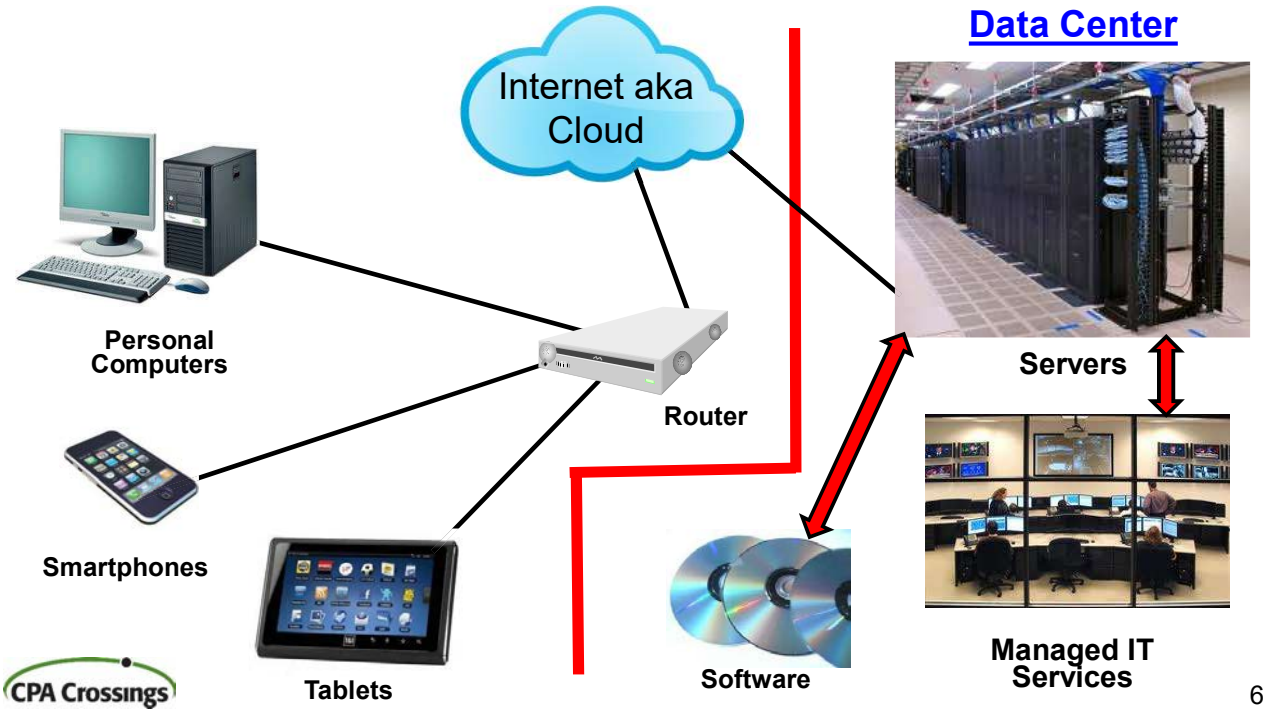
CPA Crossings

Alternative Cloud Based Software Strategies



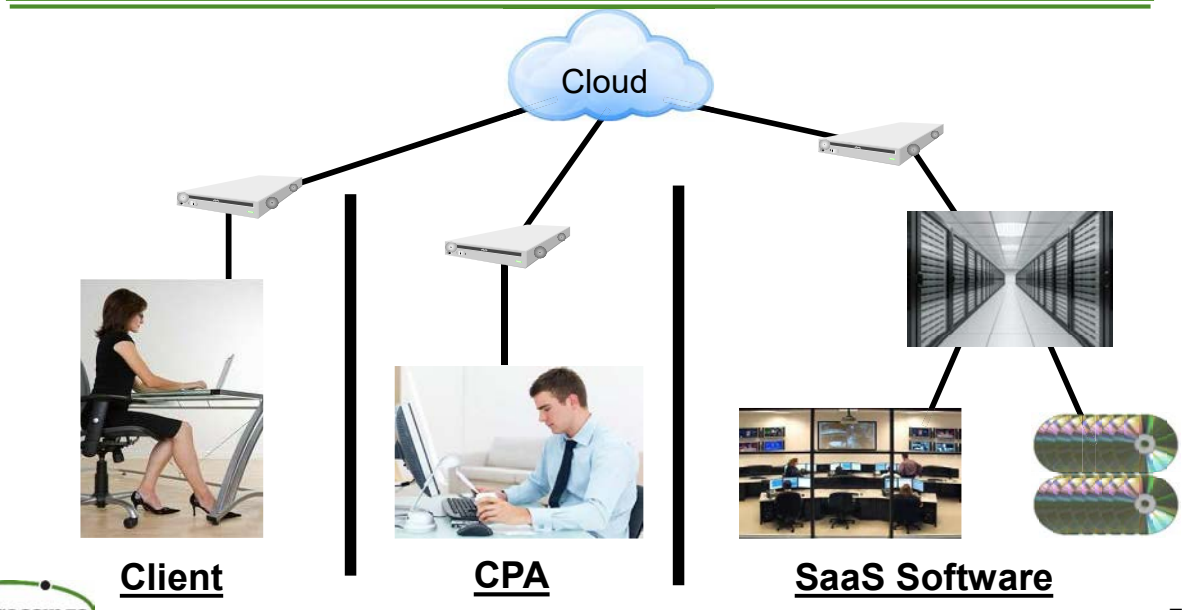
CPA Crossings

The Cloud Computing Model



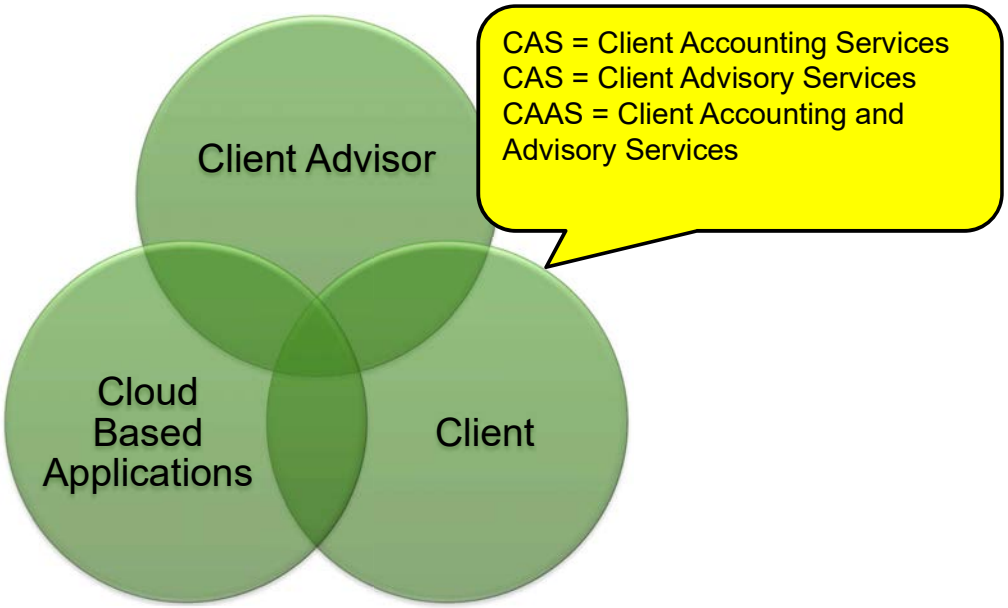
CPA Crossings

THE NEW ACCOUNTING SOFTWARE & SERVICES PARADIGM



CPA Crossings

The CAS / CAAS Model



CPA Crossings

FINANCIAL, ERP & WORKFLOW SOFTWARE

CPA Crossings

Best of Breed vs. Suites

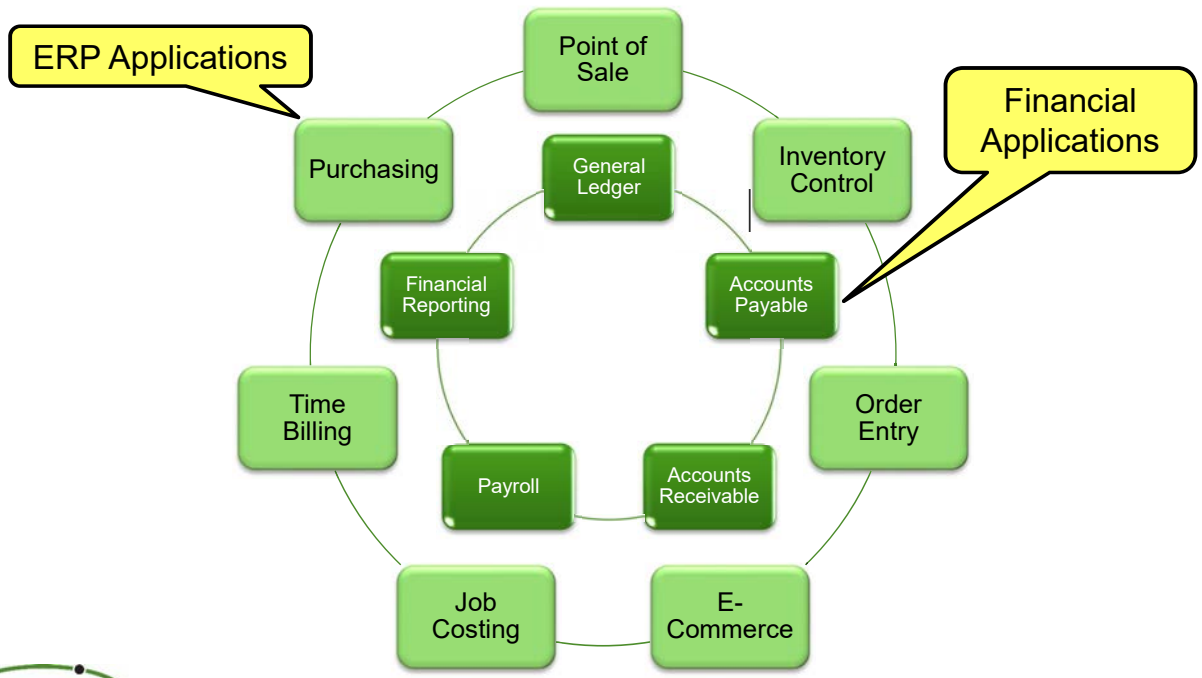
The timeless debate

CPA Crossings

Trends In Financial Software

- Everything is moving to SaaS
- Cross vendor integration is more prevalent
- Trending towards business process specific solutions
- Third party integrated apps are key

Financial & ERP Applications



Top Selling SaaS Financial Solutions

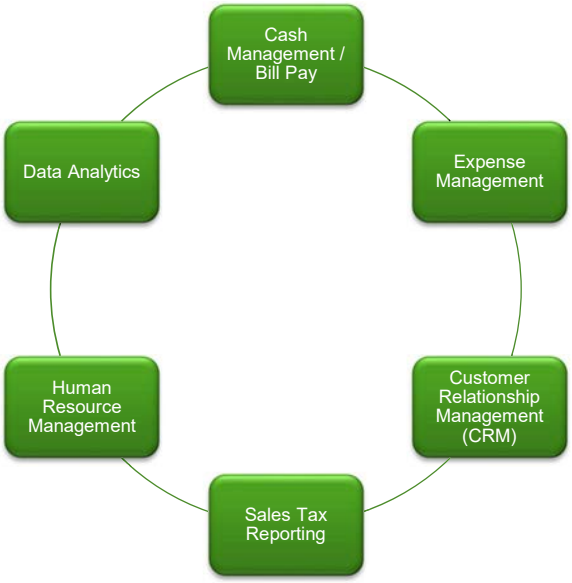
Small Business

- QuickBooks Online (QBO) - Intuit
- Xero
- Patriot Software
- BQE - CORE

Enterprise

- Accumatica
- Intacct - Sage
- NetSuite - Oracle

Niche **Workflow** Applications



Top Selling SaaS Workflow Solutions

Cash Management

- Bill.com
- Corpay

Expense Management

- Expensify
- Concur

Sales Tax Automation

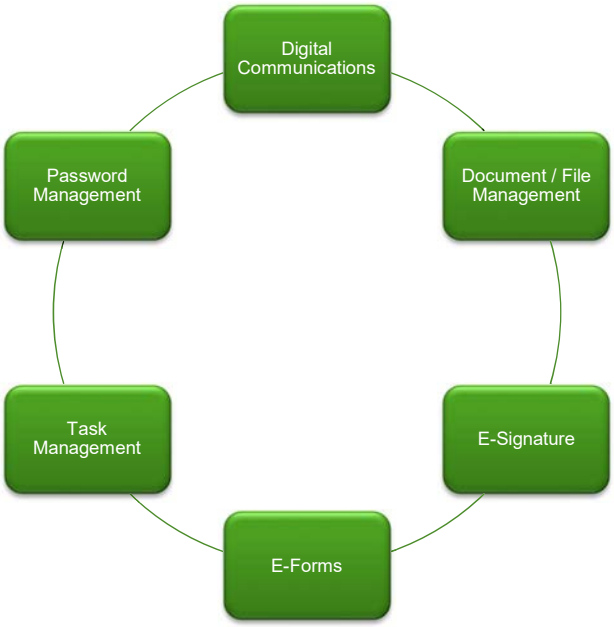
- Avalara
- Vertex

Human Resource

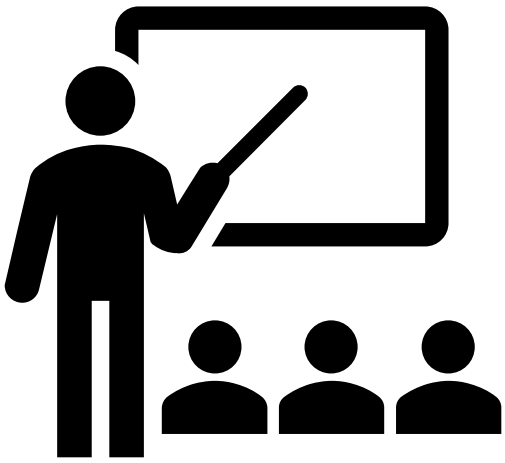
- ADP
- Paychex

PERSONAL PRODUCTIVITY SOFTWARE

Personal Productivity Applications



WRAP-UP

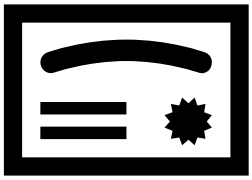


Presentation Wrap-Up

- All categories of business software are moving to the SaaS model
- You can have your cake and eat it too with a SaaS / hosting hybrid model
- A hybrid suite and best of breed solution may be your best option
- Don’t underestimate the ROI value of personal productivity software

Questions ?

THANK YOU



1 – 1:50 p.m.

Non-Fungible Tokens

Dr. Sean Stein Smith, CPA, CMA, CFE, CGMA, *Professor*

University of New York City

Smart Contracts & NFTs

Dr. Sean Stein Smith

Smart contracts

Let's start with this

- Interoperate – how technologies talk to each other
- Smart contracts – how blockchains speak to each other
- Smart contracts allow blockchain interoperability

Off the top

- I do not like the term smart contracts
- Confusing and inaccurate
- Personally, I use the phrase "blockchain-based automation"

First things first

- Smart contracts are neither
- Smart
- Nor technically contracts
- Smart contracts are programmable and executable code embedded into an underlying blockchain

Required elements

- Coding or programming language (can vary)
- Having an account and funds (tokens) associated with the blockchain in question
  - Ethereum uses ether, and charges "gas" (fees) for transactions
- Counterparty willing to engage with the smart contract

Smart contract, creation

- Part 1
- Develop a traditional contract
- 1) Terms & conditions
- 2) Consideration
- 3) Rights & obligations
- 4) Legality
- 5) Offer & acceptance

Smart contract, creation

- Part 2 – embed and translate onto a blockchain – most commonly Ethereum
- There are also permissionless smart contracts and private smart contracts
- Start with permissionless
- Let's dive in

Permissionless Ethereum Smart Contracts

- A "smart contract" is simply a program that runs on the Ethereum blockchain. It's a collection of code (its functions) and data (its state) that resides at a specific address on the Ethereum blockchain.
- Smart contracts are a type of Ethereum account. This means they have a balance and they can send transactions over the network. However they're not controlled by a user, instead they are deployed to the network and run as programmed. User accounts can then interact with a smart contract by submitting transactions that execute a function defined on the smart contract. Smart contracts can define rules, like a regular contract, and automatically enforce them via the code
- https://ethereum.org/en/developers/docs/smart-contracts/
- What???

Drilling down

- What we are actually talking about are two distinct items with regards to smart contracts
- The specific logic, or functionality, being coded into this contract
- Which tasks are being augmented or automated from out of manual review/approval
- Key takeaway: smart contracts can remove the need for intermediaries across different industries

Drilling down, cont.

- Permissionless smart contracts are not governed owned by any single individual or institutions
- Means that anybody or anyone can write a smart contract
  - Requires some coding knowledge
  - Increases the needs for due diligence
- These cannot obtain information about “real-world” events, since they cannot send http requests
- Basically, permissionless smart contracts are isolated from non-blockchain sources
  - Helps maintain integrity and security

Private smart contracts

- Coding language will vary from organization to organization
- Many different providers in the marketplace
- Process itself is not all that different from permissionless smart contracts
- Two distinct differences that need to be assessed

Private smart contracts, cont.

- Two main factors differentiate private smart contracts from public ones
  - Not specifically legal issues
- What specific third-party application or firm is used?
- Who has access to the code of these private smart contracts?

Summary

1) Smart contracts are programmable coding language (can vary)

2) Can be either on public or private blockchains

3) Attempt to program certain logic (instructions) into virtual platforms

4) Need to make sense from a legal and computing perspective to function

5) Have a range of potential use cases and implications

Risks

- Lack of standardization
- Regulatory ambiguity
- Technical inexperience
- Flexibility and adaptability
- Previous hacks and breaches
- Counterparty verification

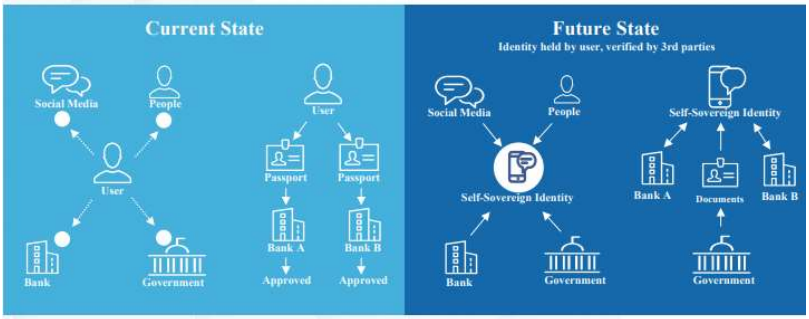
Use cases

Smart contract use cases

- Digital Identity
- Records
- Securities
- Trade Finance
- Derivatives
- Financial Data Recording
- Mortgages
- Land Title
- Supply Chain
- Auto Insurance
- Clinical Trials
- Cancer Research

- http://digitalchamber.org/assets/smart-contracts-12-use-cases-for-business-and-beyond.pdf

Digital Identity



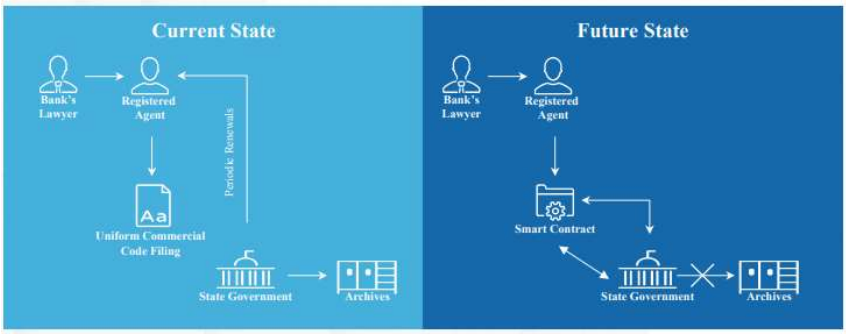
Current Challenges

- Expensive and time consuming Know Your Customer (KYC) processes that lack completeness
- Limited control over potential data leakage due to an individual's reliance on trusted third-parties
- High liability to safeguard user data presents a single point-of-failure and a target for hackers

Smart Contract Benefits

- Individuals own and control personal data (e.g. able to securely disclose personal data to various counterparties)
- Counterparties will not need to hold sensitive data to verify transactions, reducing liability while facilitating frictionless KYC
- Increased compliance, resiliency and interoperability

UCC Filings ☺



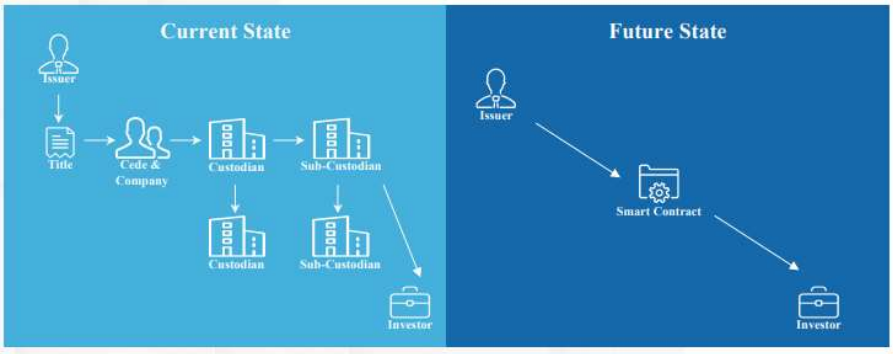
Current Challenges

- Paper-based filing for many foundational documents of finance with government
- Error-prone, manual process for renewing/releasing Uniform Commercial Code filings results in latency
- Expired archival data stored with government occupies warehouses and incurs additional costs

Smart Contract Benefits

- Reduced legal bills through auto-renewal and auto-release of digitized UCC filings
- Automated processes, including calling by lenders for additional collateral and tracking of loan vs. collateral value
- Archival data automatically becomes unsearchable/unreplayable after it reaches its sunset date

Getting to T-0 (GameStop)



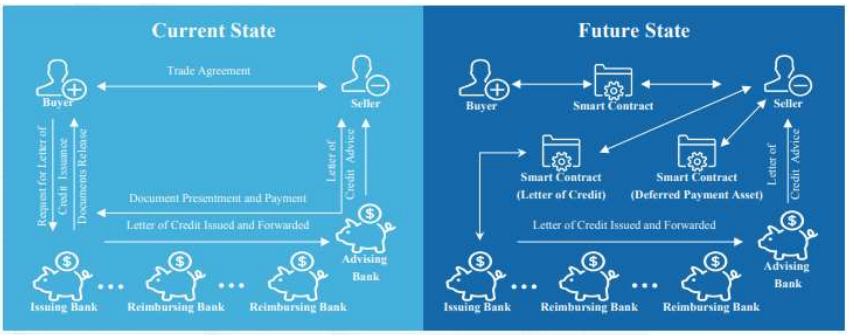
Current Challenges

- Paper-based, manual corporate registration processes
- Companies that fail to keep their corporate registrations up-to-date require clean-up and certificate of good standing before issuing securities
- Intermediaries increase cost, counterparty risk and latency

Smart Contract Benefits

- Digitized end-to-end workflows due to securities existing on a distributed ledger
- Trade date plus zero days (T+0) securities settlement cycles
- Facilitates automatic payment of dividends and stock splits, while enabling more accurate proxy voting
- Removes counterparty and operational risks created by intermediaries

Trade Finance



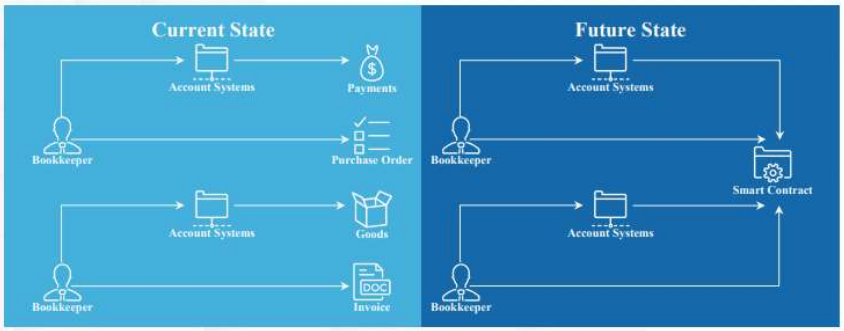
Current Challenges

- Time-consuming and costly Letter of Credit issuance process due to required coordination and paperwork
- Physical document management can delay shipment receipt until title document is released
- High document fraud/duplicate financing due to de-linked processes

Smart Contract Benefits

- Faster approval and payment initiation through automated compliance and monitoring of Letter of Credit conditions
- Improved efficiency in creating, modifying and validating trade, title and transport-related contract agreements
- Increased liquidity of financial assets due to ease of transfer and fraud reduction

Accounting Systems



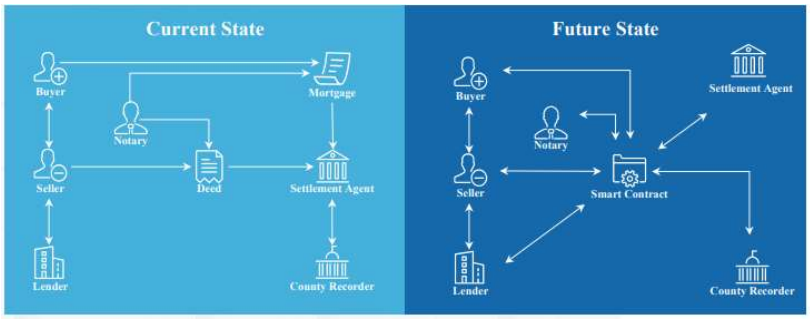
Current Challenges

- Accounting systems are prone to fraud and errors since they are controlled directly by entities
- Capital intensive processes due to each firm maintaining their own infrastructure
- Significant human capital/middleware required to process transactions from systems that do not interoperate

Smart Contract Benefits

- Improved transactional data integrity and transparency, yielding increased market stability
- Reduced expenditure for accounting information systems by cost-sharing across multiple organizations
- Improved insight into parties' capital due to increased financial accessibility

Mortgages



Current Challenges

- Capital intensity due to incompatible infrastructure
- Inefficient identity verification and signing process for documents
- Manual processes delay closing, escrow and recording processes and create potential for document alteration or loss
- Multiple parties can be shown the same property without detection

Smart Contract Benefits

- Higher confidence in identity of parties, streamlined processes and reduction in auditing/assurance costs
- Automated process notifications and incorporation of record integrity protections
- Reduce land title fraud conveyance
- Enhanced liquidity

Market Size

- Forecasted to reach almost $350 MM by 2025
- Compound Annual Growth Rate (CAGR) of over 18% annually
- Market research by Valuates - https://www.prnewswire.com/news-releases/smart-contracts-market-size-to-reach-usd-345-4-million-by-2026-at-cagr-18-1--valuates-reports-301241506.html
- Let's look at some examples - https://coinswitch.co/news/5-real-world-smart-contract-application-examples-smart-contract-reviews-2020

Examples

#1 Inmusik- The Music Industry

- The global streaming services makes around 40% of the global revenues but the music industry experiences some issues like the revenues fails to reach the content creators' hand due to centralization, lack of transparency over ownership of the content, royalties payment and many more.
- Inmusik is a music streaming platforms that can decentralize revenues and have a proper allocation of revenues to the worthy recipient or creators. All this is possible because of the smart contracts, available in the Inmusik blockchain that enables the validation of the ownership of a song through a transparent tagging system. As a result, the party who creates the track gets the right portion of fees allocated from the royalties.

#2 Ascribe- Digital Artwork

- The Digital Art industry is also prey to lack of ownership and transparency. With the blockchain art market emerging, digital artists are bound to find answers to the aforementioned issues.
- Boost of Digital art sales through imbibing digital scarcity
- Digital art investment to be democratized
- Improving trace ownership and digital art provenance
- Creation of an ethical way to pay the digital artists
- Ascribe is a digital art platform, merged with smart contracts to enable secure ownership or authorship of a digital artwork, which means the digital artists are saved against fraud. As the artwork is circulated and promoted across various platforms on the web, the artists can keep a track wherever their work is published so that they can claim the right publication fee.

#3 Tracr- The Diamond Industry Supply Chain

- Smart Contracts can help the diamond industry to improve its supply chain. Very recently, a diamond company, DeBeers introduced a blockchain-based project called Tracr, that will help in improving the supply and logistics of the diamond production. The issues which are looked forward to being solved with the help of smart contracts are:
- Monitoring or tracking the production processes and traceability of diamonds
- Lacking visibility in the supply chain
- Uncertainties revolving around authentication of the assets
- Privacy and Security concerns with respect to production supply.
- Too much of compliance costs due to inconsistent processes.
- Tracr takes care of all these issues and relies on a KYC procedure which facilitates the transactions while enablement of privacy control to respect sensitive data. Tracr even provides a digital fingertip that enables anyone to efficiently track diamond production. Some other smart contract supply chain examples include Maersk and IBM, Tomcar and many more.

#4 UBS- The Banking And Insurance Industry

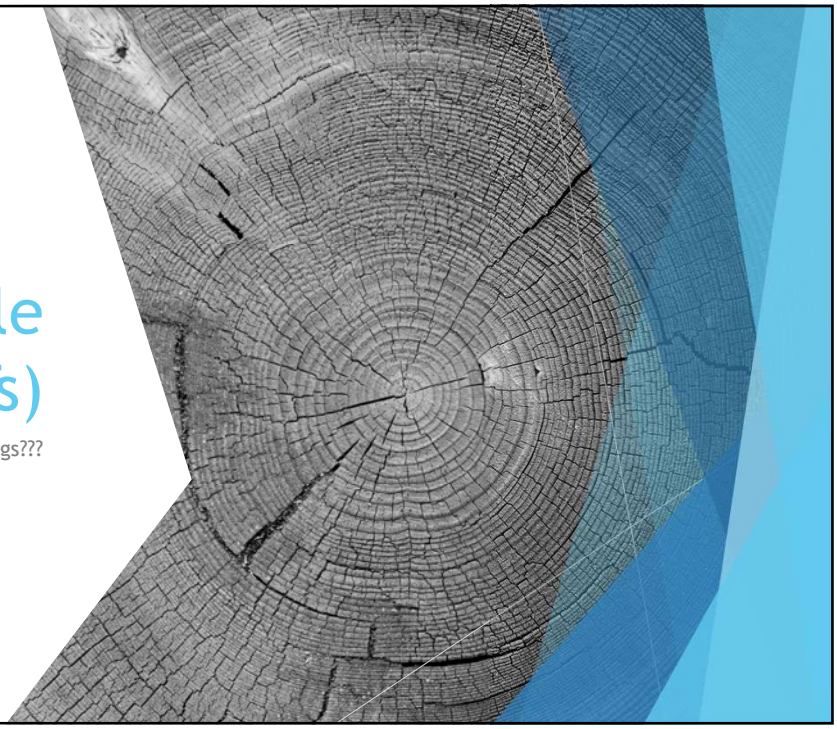
- The Banking industry is one such industry that will be getting the most benefit from the blockchain technology and smart contracts. Some of the areas that benefit the most from smart contract technology are as follows:
- Know Your Customer (KYC) Procedure
- Infrastructure costs can be saved for securities
- Alternative to traditional bonds and mortgages
- Reduction of insurance costs
- Recently, the Swiss Bank UBS has discussed the inception of a new technology called "smart bond", which is a blockchain-based program for the creation of the self-paying instrument, which will be risk-free and is an available payment stream for the unbanked people. This kind of micro contracts can enable microfinance which could help in payment of everyday goods.

#5 Applicature- The Healthcare Industry

- Even in the healthcare industry, there are several issues pertaining to data conservation and patient privacy. To get rid of the dependencies which involve a lot of middlemen and bureaucracies, introduction to the smart contract was much necessary for the healthcare industry. Smart Contracts would help in:
- Privacy and safety on patient's record or data
- Reduction of transaction costs
- Improving protocols or compliances
- Applicature is a blockchain development application, which fosters data integrity, wherein the patients will have access to a transparent, secure record of their health data. It provides a safe network to all the healthcare entities from the practitioners to patients.

Non-fungible tokens (NFTs)

What are these things???



Beeple - $69 million of art?

Beeple's collage, *Everydays: The First 5000 Days*, sold at Christie's. | Image: Beeple

https://www.theverge.com/2021/3/11/22325054/beeple-christies-nft-sale-cost-everydays-69-million

Beeple, explained

- So, what actually happened here?

NFT, explained

- Digital assets that are connected and represent an underlying asset
- Every NFT contains distinctive and identifiable information that makes it distinct from any other NFT
- Cannot be exchanges directly for each other
- Cannot be sub-divided like bitcoin can be sub-divided in Satoshi's
- Reduces the potential for fakes/forgeries due to blockchain foundation

Legal specific questions

- How do we establish the rights of NFT owners?
- What are the rights of NFT creators?
- Are there “open source” concerns?
- Tax code is legal law

NFTs explained

- How does an NFT work?
- NFT are unique and specific tokens connected to a blockchain
- Cannot be traded for each other
- Major use case and implication for smart contracts
- Can be programmed to be as complicated or simplistic as needed
  - Royalty payments can be allocated automatically
- https://www.thefashionlaw.com/nfts-what-are-you-buying-and-what-do-you-actually-own/

NFTs, minted

- Writing the underlying smart contract doe that governs how an NFT operates
- Can be written on different blockchains
- Some NFT marketplaces only function with specific blockchains
- Depending on the blockchain used could have an impact on resell and market value

NFT ownership

- The ownership of the NFT is a unique token
- NOT the underlying content of the NFT
- Generally speaking, the purchase of a piece of artwork does not convey other exclusive rights
- If a painting is purchased, that specific asset has been purchased, not the rights to create copies or other derivative products
- In other words, NFTs are for personal use, and not for monetization on public platforms

NFT License

- Put forward by Dapper Labs
- Contract template that can be customized to specify what rights are conveyed
- Distinguishes the NFT from the underlying art or asset
- Clarifies that the NFT holder obtains a 1) personal license to use and display the art, and 2) a commercial license to merchandise and monetize the asset
  - $100,000 gross revenue limit
- Just one example

NFT and IP rights

- NFTs can be used to authenticate the ownership and ownership history of a specific token or other cryptoasset
- Cannot be used to match an owner of the NFT to a real person in the physical world nor the underlying rights to that specific work
- Counterfeiting is still a major issue for the NFT industry
- Addressed by requiring artists to submit identifying data prior to minting the NFTs
  - Old-fashioned meets crypto

NFT Tax Treatment

- Might be a bit different from other crypto taxes, which create a taxable event every time there is a transaction involving these digital assets
- Since NFTs are just digital representations of physical assets, like real estate, would the tax treatment simply mirror the tax treatment of the underlying asset?
- No definitive guidance on accounting, but income streams are possible depending on the use case…

NFT Use Cases

- Creating digital or crypto-collectibles
- Managing ownership of digital items within blockchain-integrated games
- Proving authenticity of digital art, while allowing artists to retain their copyright and IP
- Devising a digital identity system that allows users to control their data from one place
- Allowing fractional ownership of high-value items, such as real estate
- https://www.gemini.com/cryptopedia/nft-non-fungible-token-crypto-collectibles

FAQ #1 - How are NFTs different from other cryptoassets?

- The primary difference between NFTs and other cryptoassets can be boiled down to two facts. Firstly, NFTs are unique and distinct assets, so this means that that they cannot be exchanged for one another like bitcoin and other cryptocurrencies can be. Secondly, and since these cryptoassets represent distinct claims linked to assets, NFTs cannot be subdivided and used fractionally as a currency equivalent.

FAQ #2 - What is the accounting treatment for NFTs?

- Since there is no crypto-specific authoritative accounting guidance in the marketplace, the general rule is that cryptoassets are treated as the equivalent to indefinite lived intangible assets. That said, and something we will be exploring in more detail, depending on the underlying asset in question - as well as the process by which these NFTs are issued - the accounting treatment will change.

FAQ #3 - Is there a tax implication for NFTs?

- Generally speaking NFTs are taxed as property, which all cryptocurrency are treated and taxed as. Where the differentiation comes into play is whether or not a taxpayer is an NFT creator, or is simply buying and selling NFTs. Creators are taxed at the point in time that the NFT is sold, with any income being recognized as ordinary income. Buyers and sellers of NFTs are going to be taxed similar to how other cryptocurrencies are taxed, with long term capital gains rates, or short term (ordinary income) rates coming into play.
-

Thank you!

- Questions?
- Comments?
- Jokes?
- Email - drseansteinsmith@gmail.com
- Twitter - @seansteinsmith
- LinkedIn – Sean Stein Smith

1 – 1:50 p.m.

Microsoft Teams Deep Dive

John Higgins, CPA, CITP, *Strategic Technology Advisor*

CPA Crossings LLC

Microsoft 365
Teams App Deep Dive

CPA Crossings

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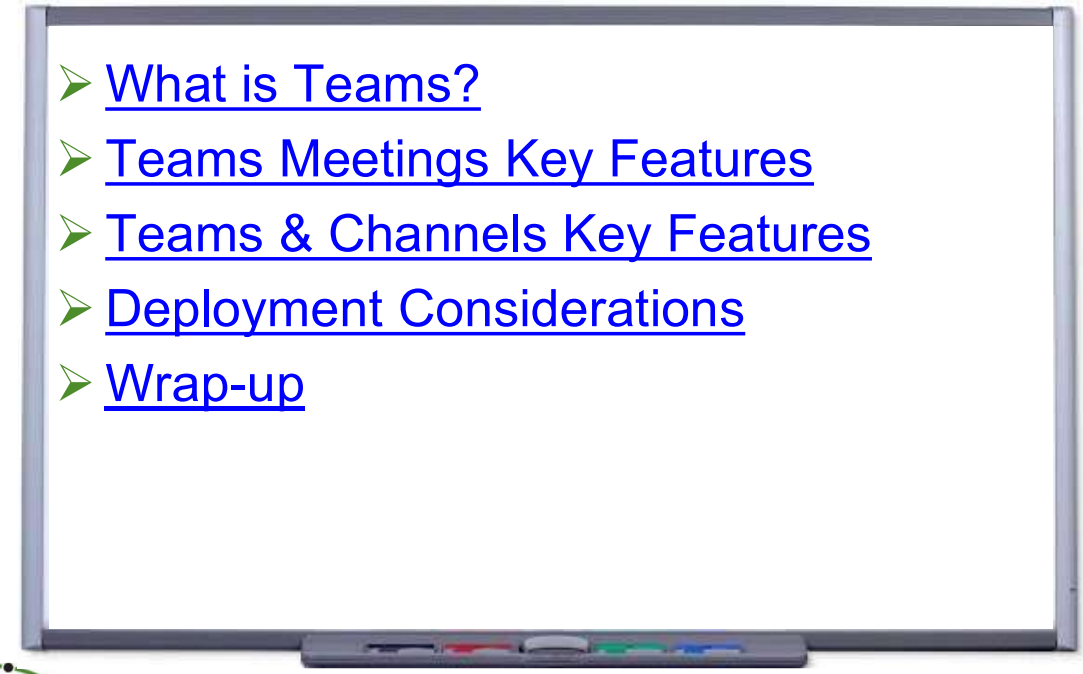
Presentation Outline



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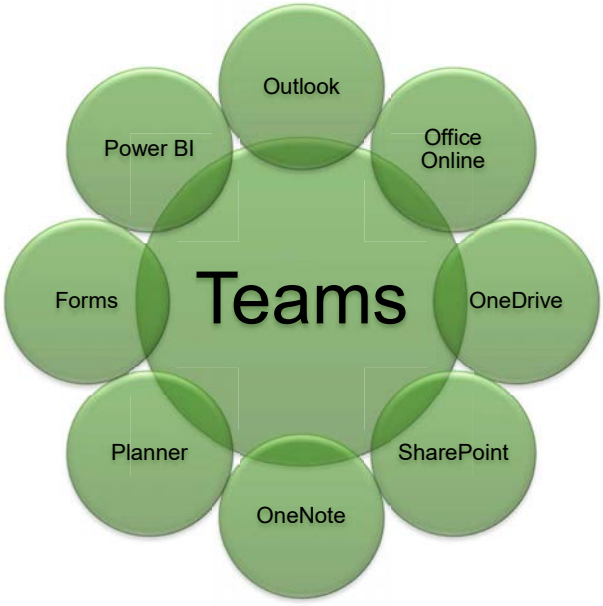
What is Teams?

A digital platform to transform the way you communicate, collaborate and share knowledge

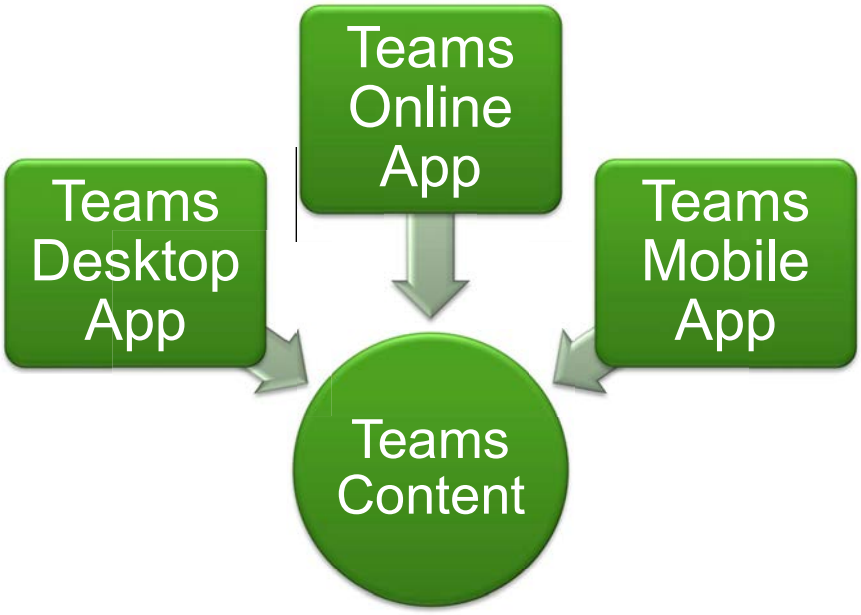
Teams and the Office 365 Ecosystem



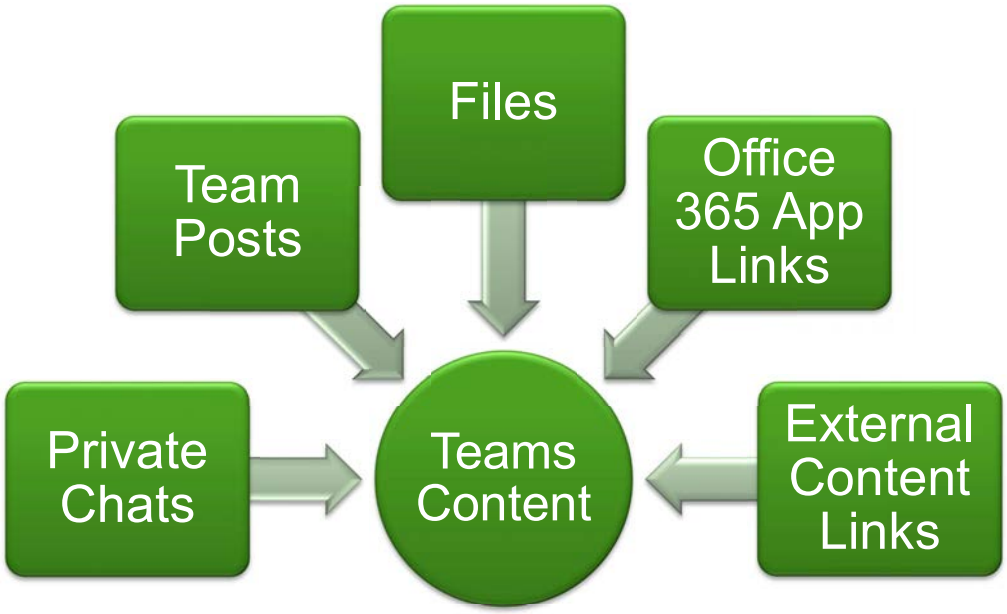
Strategic Impact of Teams

- Enhance internal & external communications
- Organize information for quick retrieval
- Replacement for email conversations
- New hire onboarding
- Enhance transparency and information privacy

The Teams App Ecosystem

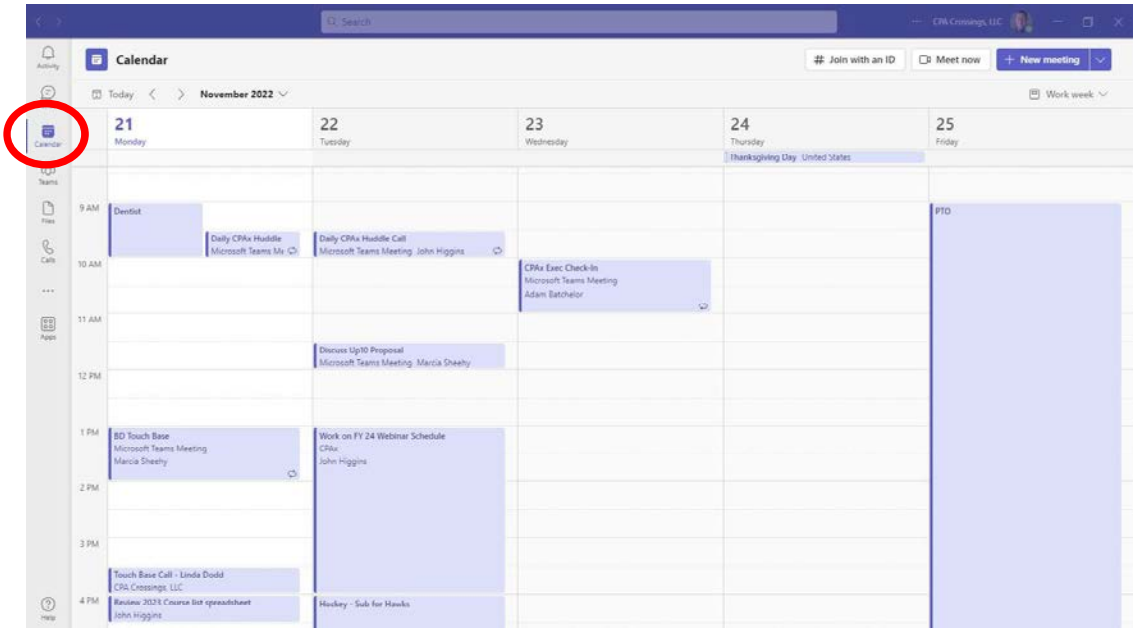


Teams App Content



CPA Crossings

Teams Meetings



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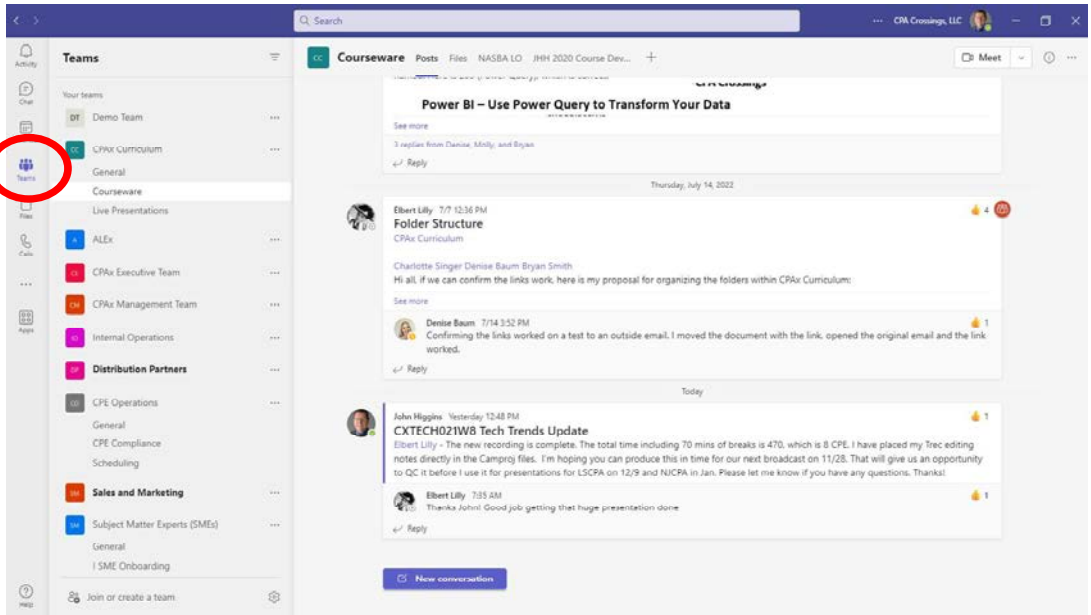
Key Meetings App Features

- Two-way synchronization with Outlook Calendar
- Control over attendee audio / video / chatting
- Utilize breakout rooms in meetings
- Screen and audio sharing
- Record meetings
- Customized registration forms

Teams & Channels



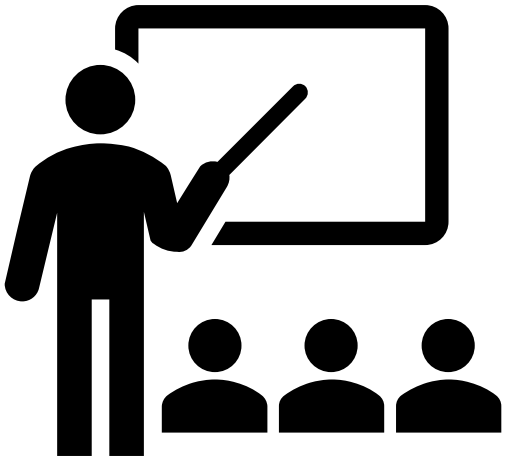
Key Teams & Channels Features

- Individual teams / channels configuration
- Individual and custom group tagging
- Customize links to external apps & content
- Direct integration with SharePoint
- Private channels option
- Integrated Office apps access
- Customized notification settings
- Connect with external “guest” users

Key Deployment Considerations

- How to organize your content
- Who will get access to what
- Who will manage the application
- Establish usage policies
- Support external users or not

WRAP-UP



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Teams Orientation Summary

- A little planning prior to your Teams deployment will pay big dividends
- Start with a small deployment
- Extend Teams to external users when you feel you have the experience and our prepared

CPA Crossings

THANK YOU

CPA Crossings

2:05 – 2:55 p.m.

Hot Topics & Trends in Virtual Money

Dr. Sean Stein Smith, CPA, CMA, CFE, CGMA, *Professor*

University of New York City

Agenda

- Trends in cryptocurrency
- Tax implications
- Audit implications
- Pending regulatory action

Agenda

MARKET UPDATE/RECAP

REGULATORY UPDATE

AUDIT/TAX IMPLICATIONS

FTX is not fine

FTX meltdown

- FTX was a market leader in the cryptoasset marketplace
- Obtained numerous celebrity endorsements and naming rights for venues
- Had served as the "white knight" for other crypto organizations during the ongoing bear market
- That all changed starting on November 6th, 2022
- Let's take a look at the timeline of the collapse of FTX and its proposed acquisition by Binance

Binance-FTX timeline

- July 2022 – FTX and Sam Bankman-Fried (SBF) bankrolled the troubled crypto lender BlockFi, and acquires Canadian crypto firm Bitvo as well as agreeing to acquire Voyager Digital
- August 2022 – Alameda Research co-CEO steps down
  - Alameda Research is closely connected to FTX, raising questions around governance and risk management
- September 2022 – FTX President steps down
- October 2022 – SBF is revealed to having donated $50 million to U.S. political candidates, and expresses support for Digital Commodities Consumer Protection Act
  - Widely rejected by the crypto community, except for SBF

Binance-FTX timeline

- November 2022 – CoinDesk reports that that Alameda's balance sheet is comprised, to large part, of the FTT token, which is native to FTX
- Almost $600 million of FTT is transferred to Binance to be liquidated
  - Led to a bank-run on FTT tokens and withdrawal demands by customers
- Pledge from Alameda to buy FTT at $22 fails to stop price slide
- Around 11 a.m. on November 8th it was announced that Binance would acquire FTX
- Due to FTX suffering liquidity issues and inability to meet customer withdrawal demands
- November 11th – FTX files for bankruptcy

FTX Takeaways

- As FTX collapsed several things became clear
  - Corporate governance was non-existent
  - Questionable loans and trading activities went on between related parties
  - Disclosures and valuations were inconsistent at best
  - Non-U.S. based organizations increasingly have a spotty track record
  - Bankruptcy procedures have not evolved to deal with such a large crypto filing
- Regulators and regulation will absolutely be coming for the space
- Might result in sped up process to create crypto-specific rules

Let's have some context

- October 2022 – Mastercard partners with Paxos to help banks and other intermediaries authorize and settle financial transactions
  - Already used by PayPal
- Madeira Islands (Portugal) are planning to embrace/adopt bitcoin
  - Potentially as legal tender
- Bitcoin Cash to be accepted as legal tender in St. Kitts
- Stablecoin transaction volume topped $800 billion in September
- That's not all

More context

- Blackrock and Coinbase have agreed to offer a jointly managed platform to allow institutions access to crypto trading and custodial services
- JP Morgan is expanding its enterprise blockchain, Onyx, and just completed it's first ever decentralized finance transaction
  - Polygon blockchain
- About 1 billion people have used crypto in 2022
- About 320 million daily users worldwide
- But there is more….

Keep this in mind

- 2022 has seen multiple centralized exchanges and platforms fail or struggle dramatically
  - Celsius
  - TerraLabs
  - BlockFi
  - FTX
  - Many others
- Investors withdrew over $1 billion in bitcoin from exchanges over the weekend
- Creates opportunities for new services – crypto & cyber

Ethereum merge, recap.

The Ethereum merge has successfully been completed (September 2022)

- Ethereum blockchain has converted from Proof-of-Work consensus to Proof-of-Stake consensus
- Energy consumption will decline by approximately 99% as a result
- Opens the door for further pivoting away from BTC to ETH as crypto market leader

Tax accounting has not changed

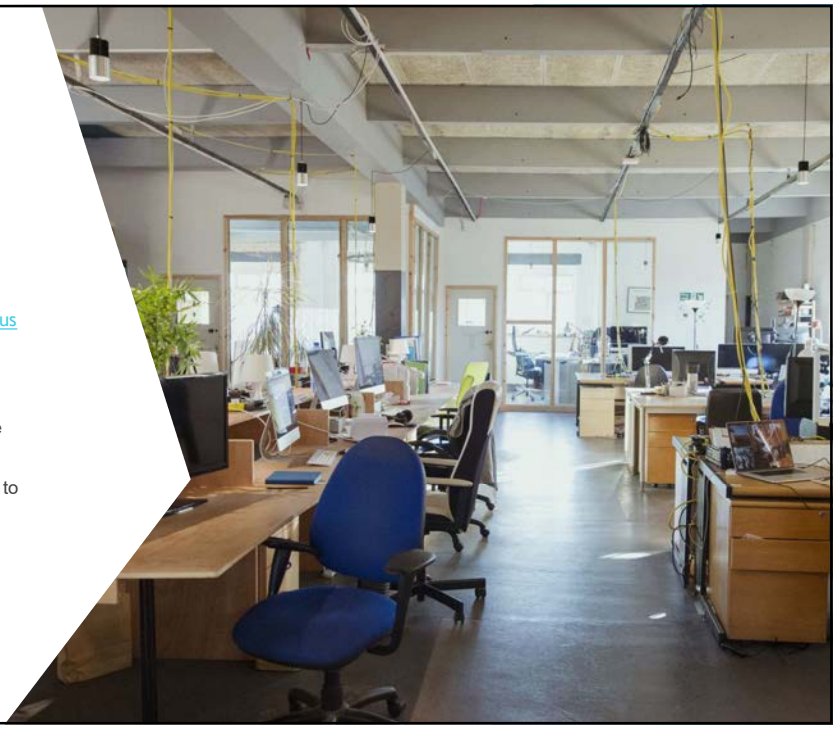
- More on that later

Financial accounting has not changed

- Not yet at least

SEC Crypto Asset Office – Sept 2022

- Office of Crypto Assets will join the seven (7) existing offices that handle corporate disclosure filings
- https://www.reuters.com/markets/us/us-sec-set-up-new-office-crypto-filings-2022-09-09/
- *Office of Crypto Assets*
- The Office of Crypto Assets will continue the work currently performed across the DRP to review filings involving crypto assets. Assigning companies and filings to one office will enable the DRP to better focus its resources and expertise to address the unique and evolving filing review issues related to crypto assets.
- https://www.sec.gov/news/press-release/2022-158



U.S. GAAP Primer

- U.S. Generally Accepted Accounting Principles are the rules that U.S. publicly traded firms must follow
  - U.S. domiciled and foreign firms trading on U.S. markets
- Determines how assets, liabilities, and equity instruments are reported on financial statement and for external financial reporting purposes
- The Financial Accounting Standards Board (FASB) is the group that writes, reviews, and codifies GAAP standards
- Up until 2021-2022, the FASB refused to consider crypto accounting rules at all

The GAAP problem

- What is the best way to describe crypto from an accounting perspective?
- Asset?
- Liability?
- Equity?
- In most cases it can be argued that crypto represents some sort of asset
- But what kind?
- Intangible
- So what's the problem?

The GAAP problem, cont.

- Under U.S. GAAP
  - Intangible assets cannot be marked to market
  - Intangible assets must be tested for impairment
  - If impairment has occurred, these assets must be written down
  - After impairment has occurred, the value can never be restored
- These represent major issues for firms seeking to use/accept/hold cryptoassets
- Crypto remains a volatile asset class

FASB Takes Action

- More recently the FASB has taken action to try and resolve these accounting issues
  - December 2021 the FASB added a digital asset project to its research agenda
  - May 2022, the FASB added this project to its technical agenda
- All seemed to be moving in the right direction
- https://www.fasb.org/Page/ProjectPage?metadata=fasb-Accounting-for-and-Disclosure-of-Crypto-Assets
- Not quite as thorough as was previously hoped

August/September 2022 update

- The FASB has released a statement setting the criteria that will be used on this project
- NFTs are excluded
- Certain stablecoins are excluded
- No specific crypto named to be included or not

CoinDesk

Business Tech Policy Indices TV & Videos Podcasts Crypto Explainer+ Events Research About

Policy

FASB Crypto Accounting Review Won't Include NFTs, Certain Stablecoins: Report

The accounting standards body outlined its criteria for crypto assets that would be covered by a forthcoming rule regarding companies and their digital assets.

Good news! October 2022

- FASB announced that certain cryptoassets, including bitcoin and ether, can be accounted for a fair-market-value
- Still has to proceed through the rule-making process
- GREAT first step toward establishing crypto-specific accounting guidance
- https://www.coindesk.com/business/2022/10/13/fasb-mulls-fair-value-accounting-for-crypto-holdings-report/


Podcasts
CoinDesk
Companies Policy Technology Web3 Learn Layer 2
Business
FASB Mulls Fair-Value Accounting for Crypto Holdings: Report
Fair-value accounting for crypto will encourage companies to put bitcoin on their balance sheet, according to Michael Saylor.
By Oliver Knight Oct 13, 2022 at 5:48 a.m. EDT

PCAOB in the conversation

- The Public Company Accounting Oversight Board recently issued some preliminary information on audits involving cryptoassets
- https://pcaobus.org/Documents/Audits-Involving-Cryptoassets-Spotlight.pdf

Jarrett vs. United States

- Nothing has changed as a result of these headlines
- Staking rewards are still an ambiguous tax topic
  - Post-merge this will become more important
- No change to IRS guidance or FAQs
- No indication that policy changes are coming
- Conversation specific to the unique facts and circumstances of this case and complaints therein
- https://www.natlawreview.com/article/recent-tax-developments-concerning-staking-rewards
- https://news.bloombergtax.com/tax-insights-and-commentary/taxpayers-in-jarrett-case-still-seek-an-answer-on-crypto-staking

Bad news! Sept/Oct 2022

- Jarrett case has been dismissed
- Jarrett plans to file appeals with existing legal team
  - Includes the Proof of Stake Alliance
- As of right now, block rewards and staking rewards are taxable upon creation
- https://news.bloombergtax.com/daily-tax-report/crypto-staking-tax-lawsuit-ruled-moot-after-irs-issued-refund

Photographer: Michael Short/Bloomberg

Crypto Staking Tax Lawsuit Ruled Moot After IRS Issued Refund

More regulation (pending)

President's Working Group Report on Stablecoins

- Issued in Q4 2021
- https://home.treasury.gov/news/press-releases/jy0454
- First comprehensive report on stablecoins issued by the Federal Government, with major private sector partners
- Not supportive of the sector nor its use cases

U.S. Executive Order – Crypto

- Long-awaited executive order signed into law in March 2022
- No specific actions steps or policies
- Three (3) main takeaways
  - No crypto ban or shadow-ban
  - Mandates coordination among policymakers
  - Definitive shift toward integration
- https://www.brookings.edu/blog/techtank/2022/03/17/how-bidens-executive-order-on-cryptocurrency-may-impact-the-fate-of-digital-currency-and-assets/

SEC – Staff Accounting Bulletin

- Published March 31, 2022 with effective date April 11, 2022
- Proposes several accounting specific changes for publicly traded organizations offering crypto custodial services
  - Reporting of cryptoassets held for customers as liabilities, offset by an asset
  - Disclose risks associated with cryptoassets
  - Guidance to be applied by June 15, 2022
- Is not official guidance nor enforceable law
- https://www.sec.gov/oca/staff-accounting-bulletin-121
- Commissioner Peirce issued response
- https://www.sec.gov/news/statement/peirce-response-sab-121-033122

TRUST Act

- Draft legislation issued by Senator Toomey's office on April 6, 2022
- Centers around the issue of stablecoin issuance and crypto banking
- Three (3) primary issues
  - Establishes a new federal license designed specifically for stablecoin issuers;
  - Preserves the state-registered money transmitter status for most existing stablecoin issuers; and
  - Clarifies that insured depository institutions are permitted to issue stablecoins
- States that stablecoins are not securities and stablecoin issuers need to have annual attestations
- https://www.banking.senate.gov/newsroom/minority/toomey-announces-legislation-to-create-responsible-regulatory-framework-for-stablecoins

Lummis-Gillibrand Responsible Financial Innovation Act

- Introduced in June 2022, and contains several important takeaways
- Proposes to grant the CFTC authority over any and all digital assets that are not securities
- Introduces a de minimis exemption for taxation of personal crypto transactions
  - $200
- Mining & staking would not be taxable until sold
- Increases definition around stablecoins
- Recommends creation of an Advisory Committee on Financial Innovation
- https://cointelegraph.com/news/lummis-gillibrand-crypto-bill-comprehensive-but-still-creates-division

New York Dept. of Financial Services

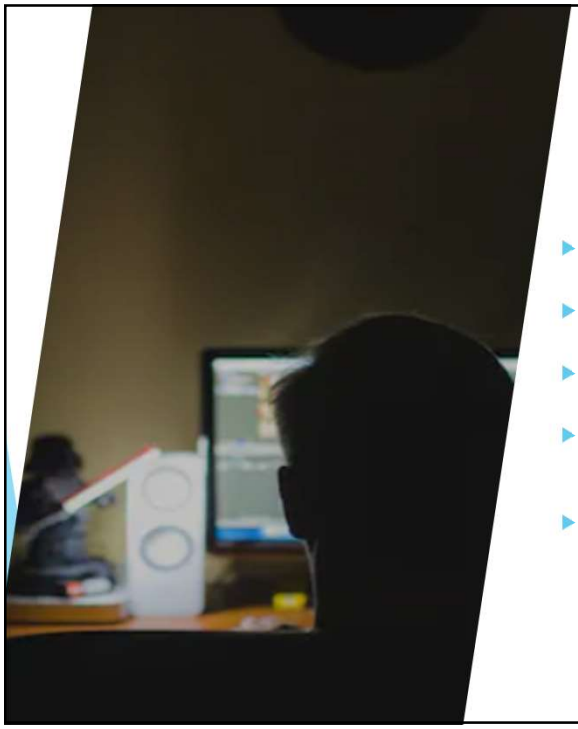
- Recently issued guidance on how stablecoins are to be treated (and used) within NY state lines
- Borrows significantly from the TRUST Act
  - Classification as payment stablecoins
  - Backed and redeemable into U.S dollars
  - Monthly attestations are required
- Only for stablecoins regulated by the NYDFS, but reasonable to expect other states to follow
- https://www.dfs.ny.gov/industry_guidance/industry_letters/il20220608_issuance_stablecoins

Do we need crypto audits?

I mean, really?

Do we need crypto audits?

I mean, really?

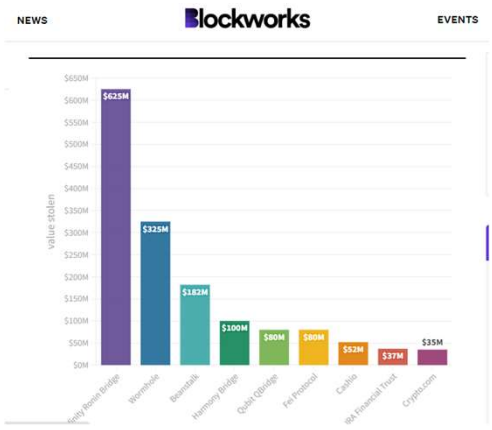


2022 Hacks

- Crypto hackers have stolen over $3 billion in 2022 alone
- Set to be the all-time-high for crypto hacks and breaches
- 125 individual hacks or breaches that have occurred
- October 2022 - $718 million has been stolen from decentralized finance protocols
- https://www.moneycontrol.com/news/business/cryptocurrency/crypto-hackers-steal-3-billion-in-2022-set-to-be-biggest-year-for-digital-asset-heists-9347301.html

Top hacks of 2022

- Ronin Network - $620 million
- Wormhole - $320 million
- Nomad - $190 million
- Beanstalk - $182 million
- Are there any common traits?
- https://www.moneycontrol.com/news/business/cryptocurrency/crypto-hackers-steal-3-billion-in-2022-set-to-be-biggest-year-for-digital-asset-heists-9347301.html



Common attributes of crypto hacks

- Some of the most common hacks and breaches include
  - Hacks and breaches of exchanges
  - Hot wallet hacks
  - Scams, rug-pulls, etc
  - Ransomware
  - Phishing
  - Malware
  - Password hacks/breaches
  - Bitcoin ATM scams
  - https://usa.kaspersky.com/blog/crypto-hacks/20042/

What are we auditing?

A blockchain/crypto audit can mean multiple different things

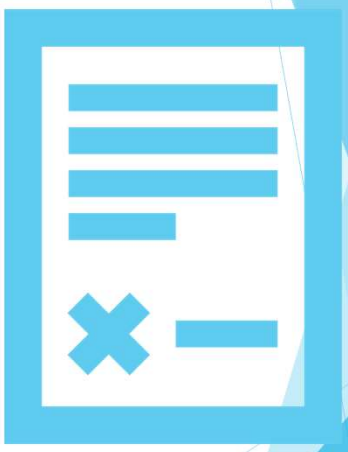
- Smart contract
- Reserves
- Valuation
- Cybersecurity
- Financial statement presentation

First question that needs to be answered

Different engagements and cryptoassets will lead to different questions

Smart contract audit questions

- Does the smart contract operate correctly from a technical level?
  - Do we need to outsource this technical aspect or develop it in-house?
- Is the smart contract operating correctly on a business level?
- Who has the ability to modify/edit existing smart contracts?
- How are the smart contracts updated?
- Do the smart contracts have a "manual override" function
- Are employees trained on how smart contracts operate and how to use them?



Reserve audit questions

- Almost always pertains to stablecoins like USDT, USDC, etc.
- Several different kinds of reserve audit questions
  - Asset-backed-tokens
  - Exchange/firm issued liabilities
  - Cybersecurity/insurance requirements
- Basically, are the tokens that are in circulation appropriately backed and supported by underlying assets?
- Become very important due to the rapid rise of stablecoins
  - Over $150 billion in market capitalization

Proof-of-Reserves

- An attest engagement that has rapidly come to the front-burner following the collapse
- Triggered the selling of a large position of the FTT token by Binance
- A native token created to facilitate trading on FTX and used to shore up the balance sheer of Alameda Research
- How were these tokens audited/confirmed/verified?
- Proof-of-Reserves provides, at least, a partial solution to this problem

Valuation

- How do auditors and accounting professionals accurately attest to the value of cryptoassets?
- Not all cryptoassets are widely traded like bitcoin, ether, or certain stablecoins
- Some cryptoassets are
  - Newly issued
  - Illiquid
  - Unique, such as non-fungible tokens (NFTs)
- Different marketplaces can have different valuations?
- What time should the valuations be taken?
  - End of day?

Cybersecurity

Cybersecurity issues play a key role in the hacks and breaches that have occurred in the space

- 2022 on pace to set records for dollar-cost and # of incidents

How are blockchain-based applications integrated with other technology applications

Do the hot and cold wallets of the organization interoperate correctly with other technology tools

Does the organization have appropriate insurance for these activities?

Financial statement presentation

- This is perhaps the area that has the most questions for accounting and audit professionals
- Where should cryptoassets be shown on financial statements?
- What other blockchain and crypto related data should be reported to investors?
- Should these disclosures be made on the face of the F/S or the footnotes?
- How often should these disclosures be made?
- Lots of open items

Thank you!

- Questions?
- Comments?
- Jokes?
- Email - drseansteinsmith@gmail.com
- Twitter - @seansteinsmith
- LinkedIn – Sean Stein Smith

2:05 – 2:55 p.m.

Get the Most Out of Office 365

John Higgins, CPA, CITP, *Strategic Technology Advisor*

CPA Crossings LLC

Take Your Office 365 ROI to the Next Level

Presented By
John H. Higgins, CPA.CITP
CPA Crossings, LLC

CPA Crossings

Learning Goals

After attending this presentation, you will …

- Identify opportunities to leverage your investment in Office 365 to improve productivity
- Recognize the potential to streamline some of your routine workflows with Office 365

John H. Higgins, CPA.CITP
Strategic Technology Advisor

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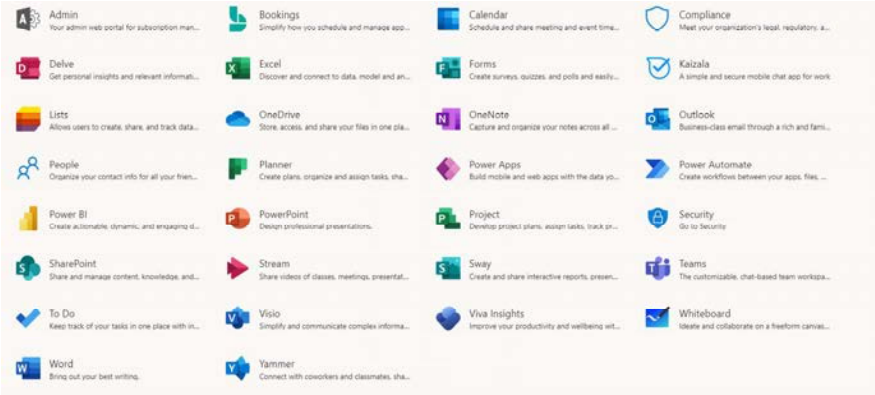
- Strategic technology advisor to the profession w/ 35+ years of experience
- Nationally recognized author and presenter on CPA technology
- Former National Mid-market Technology Partner - BDO
- Cygnus Media Top 25 Thought Leader for the profession
- AICPA Business & Industry Hall of Fame Inductee
- MICPA Innovative User of Technology Award
- Past Chair of the Michigan Association of CPAs
- Passionate advocate for the CPA profession!

CPA Crossings

Presentation Outline

CPA Crossings

The Big Picture

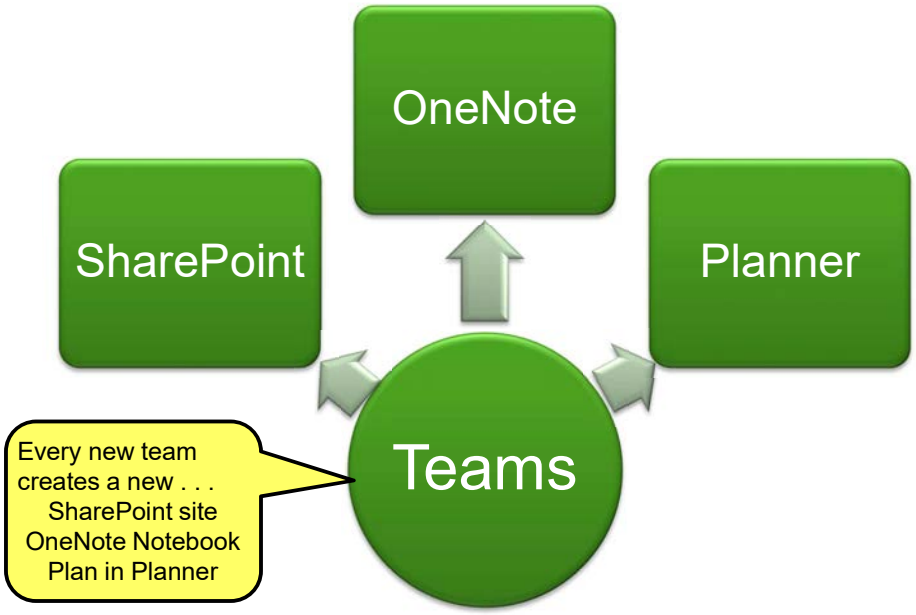


Office 365 Ecosystem of Apps

Time Saving Outlook Tips

- Quick Parts
- Dictation
- Share to Teams
- Rules / Folders / Favorites
- Categories
- Flag for Follow Up

The Core Apps



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Streamline Communications With Teams App

- ✓ Make all meetings Teams meetings
- ✓ Leverage custom tabs
- ✓ Use private channels as client portal
- ✓ Minimize use of “chat”
- ✓ Teams & Stream for process documentation
- ✓ Understand Teams / SharePoint relationship

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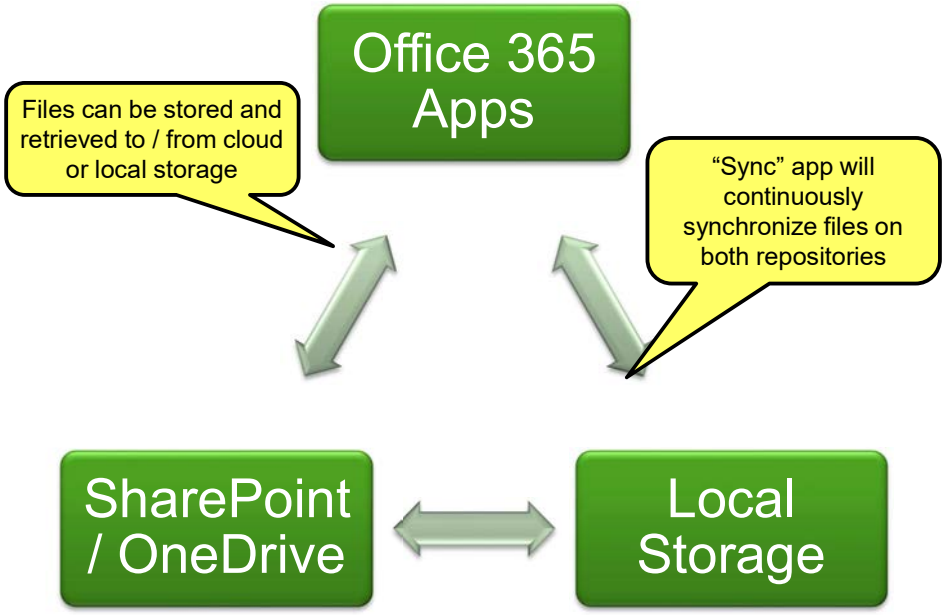
File Sharing & Collaboration With SharePoint App

- Teams and SharePoint work in harmony
  - Teams for conversation storage
  - SharePoint for file storage
- Versioning
- Alerts
- Sync App

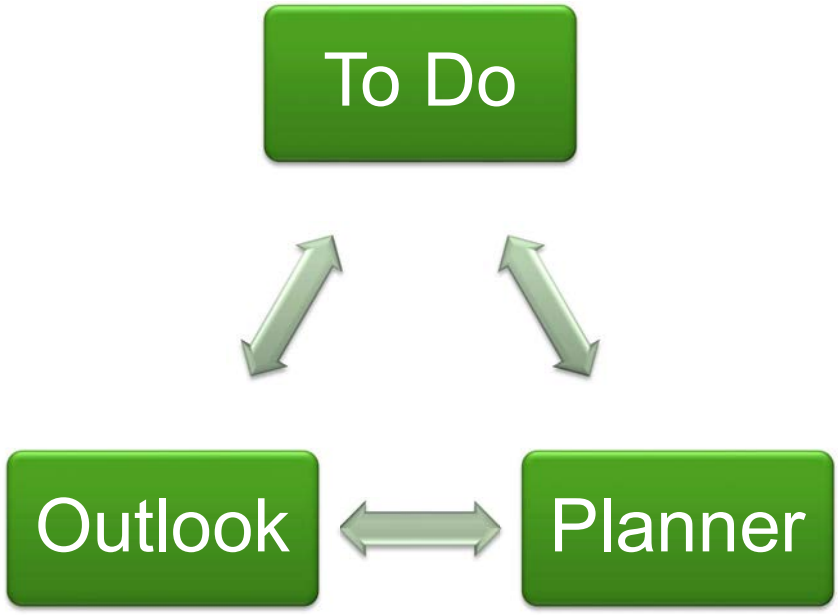
SharePoint / OneDrive Sync App



Get Organized With OneNote

- Each team generates a OneNote notebook
- Leverage dictation
- Link to files
- Use tags for quick retrieval
- Setup a tab to notebook in the team
  - Client team
  - Client SharePoint site
  - Client notebook

Stay Organized With "To Do" and Planner Apps



To Do App

- Consolidates “to do” items from:
  - Outlook flagged email messages
  - Outlook tasks
  - Planner tasks
  - To Do app tasks
- Create custom to do lists

Planner App Key Features

- Simple and intuitive interface
- Useful for project and event planning
- Integrates with many Office 365 apps
- Tasks can be assigned to external users
- Visual progress reporting tools

Planner App Components

- Plans
- Tasks and checklists
- Task board
- Progress charts
- Plan schedule
- Plan members

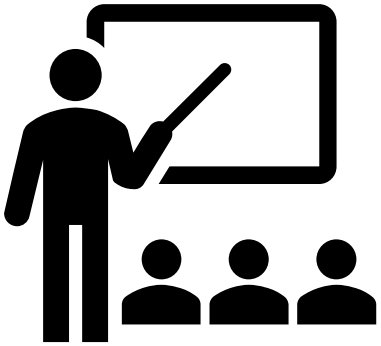
Control Your Schedule With The Bookings App

- Setup a bookings page
- Define appointment types
- Keep it simple
- Use with Outlook Quick Parts
- Test it!

Additional Apps

- Power BI for visual KPI dashboards
- Forms app for quick surveys and data gathering
- Lists app to create and manage custom lists
- Stream to host videos / Teams meetings
- Power Automate and Power Apps to automate routine processes (RPA) / workflow automation

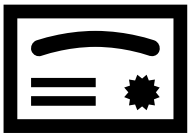
WRAP-UP



Presentation Wrap-Up

- There is an abundance of opportunity to increase productivity with Office 365
- Office 365 provides a platform to support a remote work environment
- Take time to learn how you can utilize the various apps in your organization
- It's a journey not a destination!

THANK YOU



3:05 – 4:45 p.m.

CPA Technology Trends Update

John Higgins, CPA, CITP, *Strategic Technology Advisor*

CPA Crossings LLC

CPA Crossings Technology Trends Update

Presented By
John Higgins, CPA.CITP
CPA Crossings, LLC

Learning Goals

After attending this presentation, you will be able to …

- Recognize and be aware of the important technology trends that will impact you and your organization
- Recall the important aspects of these technologies to prepare you to participate in discussions with your colleagues, clients, customers, IT staff and service providers
- Begin to develop a strategy for how to integrate these technologies into your business model
- Identify the emerging skills that will benefit you professionally

John H. Higgins, CPA.CITP
Strategic Technology Advisor

jhiggins@cpacrossings.com

- Co-founder of CPA Crossings, LLC
- Strategic technology advisor to CPAs w/ 30+ years of experience
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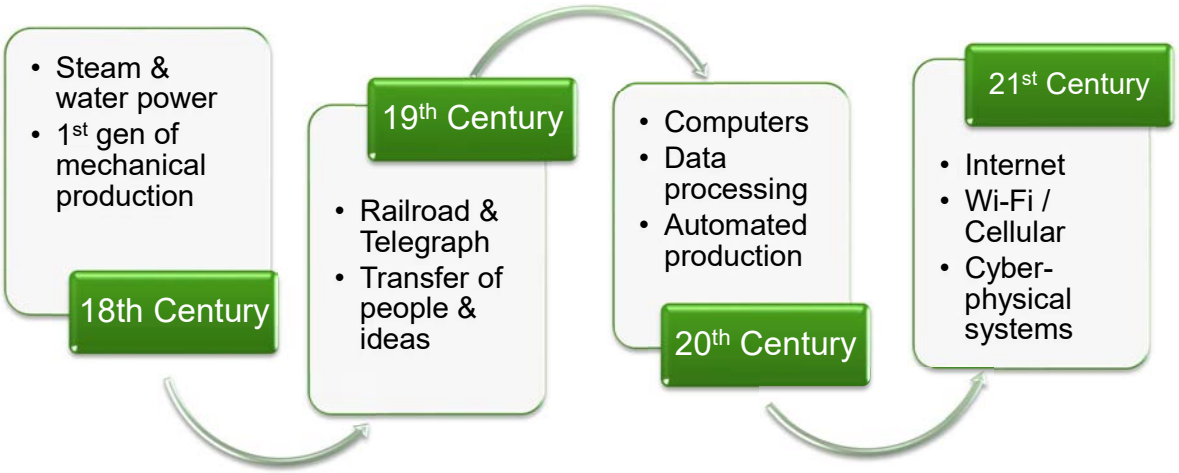
CPA Crossings

Presentation Outline

- The Big Picture
- Technology Mega Trends
  - Cloud Computing
  - IoT (Internet of Things)
  - Big Data & Data Analytics
  - RPA (Robotic Process Automation)
  - AI (Artificial Intelligence)
  - Blockchain Technology
  - Virtual Money
  - The Metaverse
- Personal Technology Trends
- Wrap-up

CPA Crossings

The Big Picture – Transformative Innovations



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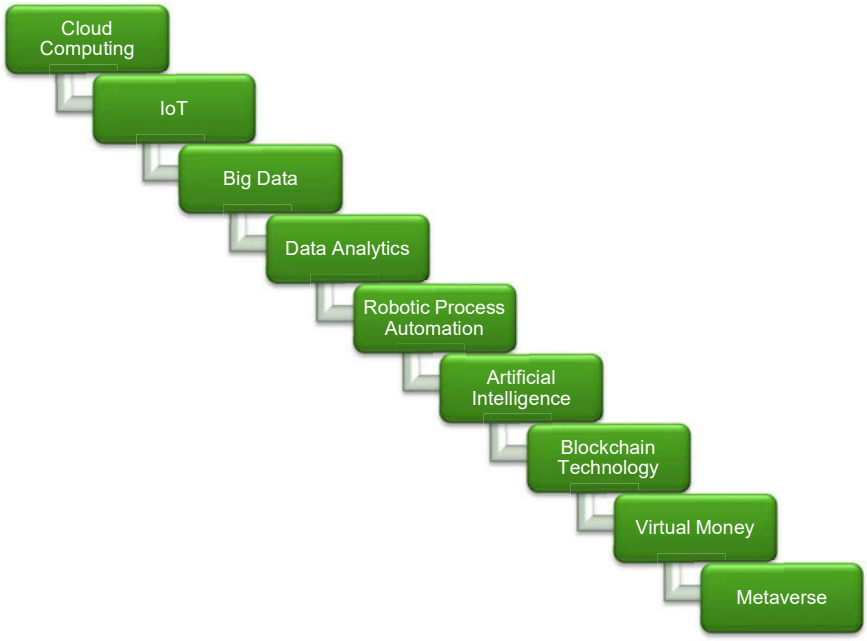
The Big Picture – Mega Trends

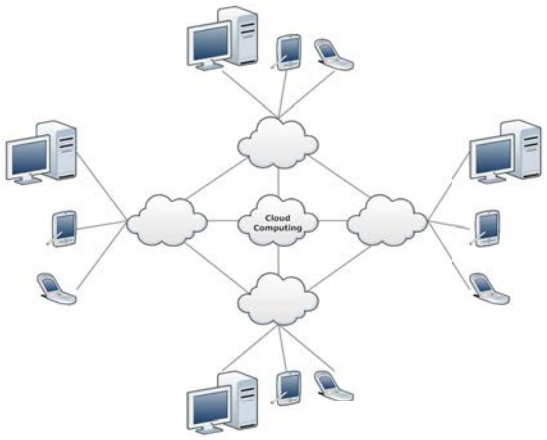


CPA Crossings

Today's Technology Challenges

- Developing an awareness of opportunities
- Expensive capital investment requirement
- Rapid obsolescence
- Privacy concerns
- Challenge of change
- Rapid transformation of workforce
- Lack of regulations / standards
- Integration of artificial intelligence & humanity

THE CLOUD

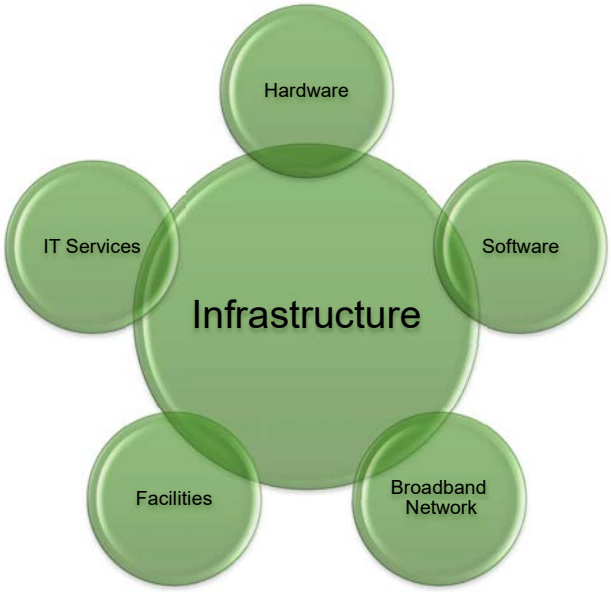


What Did The Pandemic Teach Us?

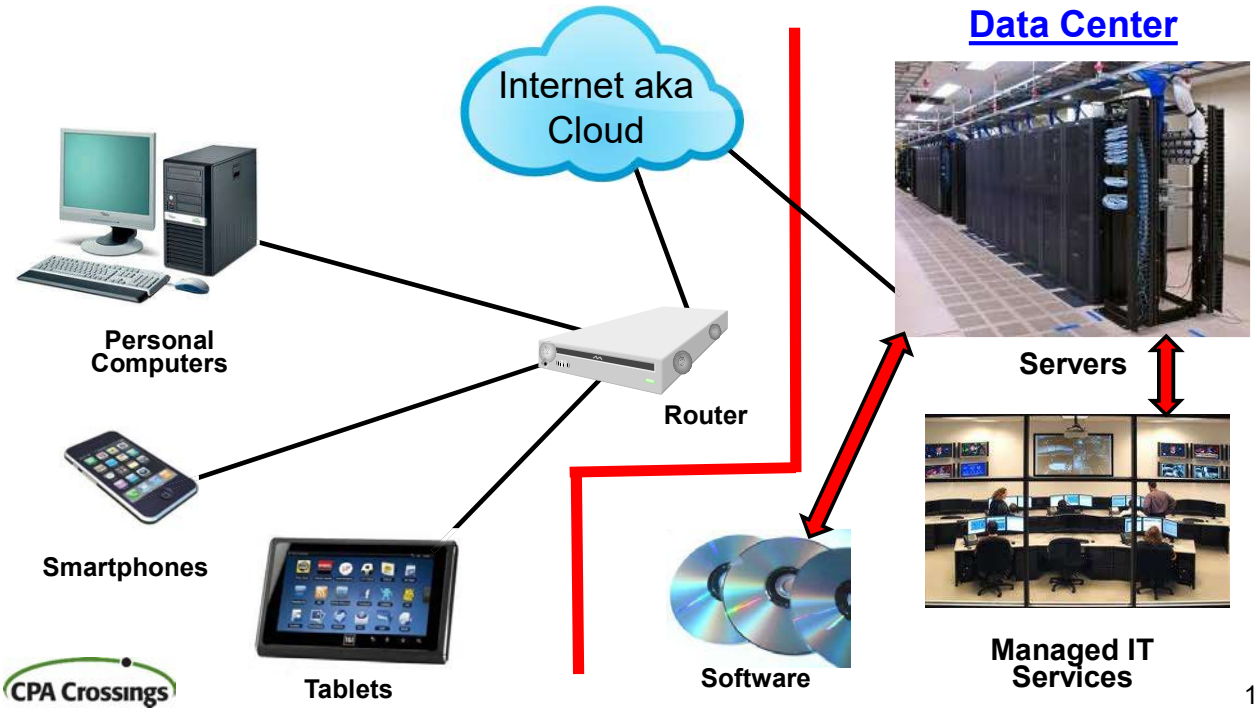
- Being digital and cloud based is no longer optional
- The cloud model is resilient and scalable
- Microsoft Teams broke a daily record of 2.7 billion minutes of chat on 3/31/20. Up 200% in two weeks and a 1,000% increase in video chat over the same period.
- Work from home can be a strategic advantage

Source: WSJ

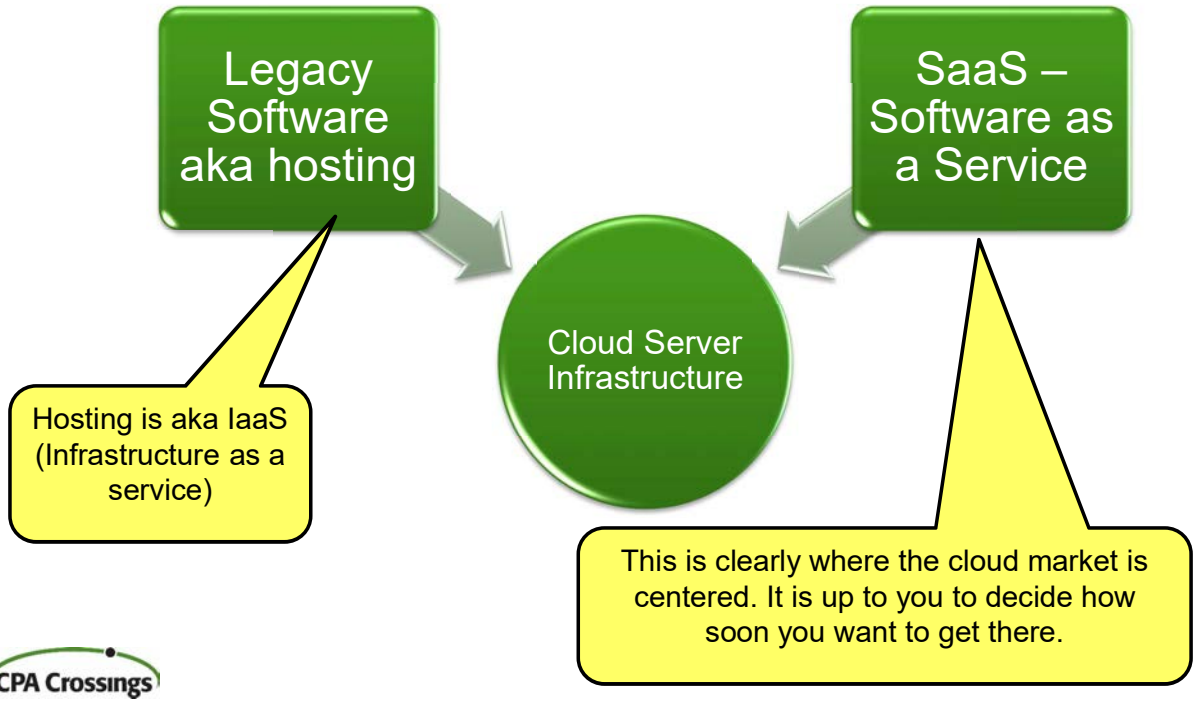
Cloud Computing Infrastructure Defined



The Cloud Computing Model



Alternative Cloud Based Software Strategies



Cloud Infrastructure Hosting Providers

- AWS (Amazon Web Services)
- Microsoft Azure
- Right Networks

AWS and Azure are often referred to as PaaS (Platform as a Service)

IOT (INTERNET OF THINGS)

Things To Know About IoT

- Any physical device can become an IoT device
- IDC Predicts 41.6 billion IoT devices by 2025
- Industrial and automotive will be the biggest users
- Transmit data back through the cloud for analysis
- Information privacy is a major concern

IDC = International Data Corporation

Smart Pill Bottles

- Real-time measurement
- Sense when the bottle was opened
- Missed dosage triggers automatic notifications

Smart Belly Trash Cans

- Wi-Fi enabled waste collection repository
- Reports real-time and historical waste collection history
- No electricity required to report via the cloud
- Optimize waste collection fleet scheduling

BIG DATA & DATA ANALYTICS

"Big Data" Defined

Big data is **high-volume**, **high-velocity** and **high-variety** information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision-making aka data analytics.

Source: Gartner, Inc. IT Glossary

Things To Know About Big Data

- Data is being accumulated at an unprecedented rate
- Trend is to analyze data and report visually
- Provides the foundation for AI (Artificial Intelligence)

Types of Data Analysis

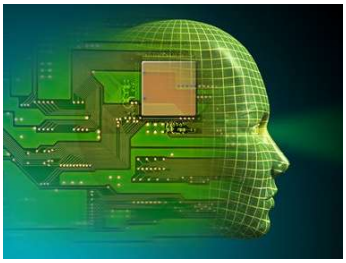
Descriptive Analytics	• What happened?
Diagnostic Analytics	• Why did it happen?
Predictive Analytics	• What is likely to happen?
Prescriptive Analytics	• What should be done?

Data Analytics Case Studies

- Netflix
- Amazon
- McDonalds
- UPS
- Uber

KPI Dashboard Examples

ROBOTIC PROCESS AUTOMATION (RPA) & ARTIFICIAL INTELLIGENCE (AI)



RPA vs. AI

- RPA (Robotic Process Automation) is the automation of ***"doing"***
- AI (Artificial Intelligence) is the automation of ***"thinking"***

Things To Know About RPA

- Software (ro)**bots** that perform routine tasks automatically
- Often uses the same interface as a human worker
- Mimic human – computer interactions
- Rules based task automation and decision making
- For processes that have defined inputs and outputs
- Think player piano

Things To Know About Bots & Robots

A bot is a computer program designed to execute a specific task automatically

A chatbot is a bot designed to interact with humans conversationally, via text or voice

A robot is a machine built to resemble a human being or animal in appearance and behavior

Practical Modern-Day Applications

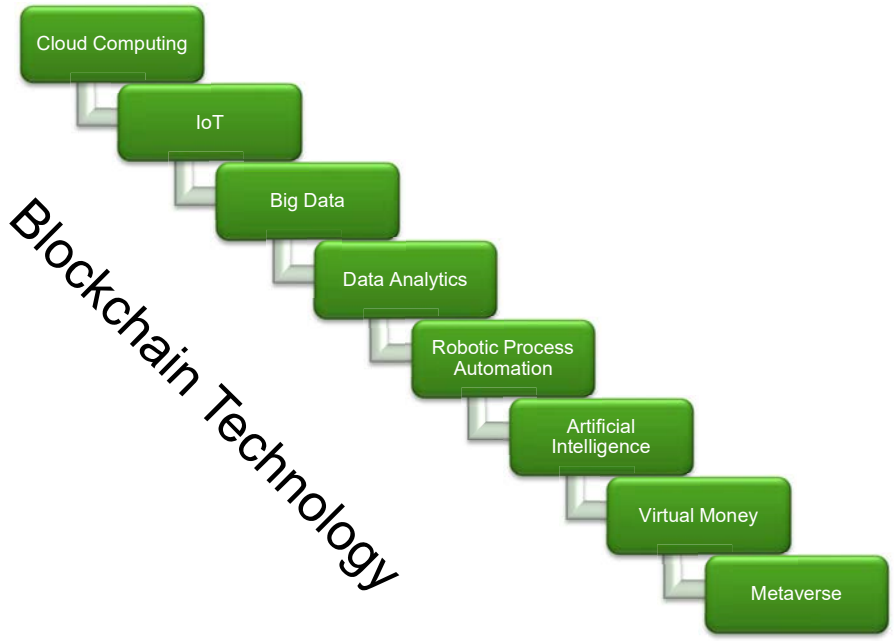
- Siri / Cortana / Alexa
- Online chat support
- Amelia Demo

McKinsey & Company AI Survey

- 1,843 participants across industries, regions and company sizes
- 56% report at least one AI function up from 50%
- 2/3 of companies plan to increase their AI adoption
- India & Asia-Pacific highest level of adoption
- 27% have achieved at least 5% growth of EBIT
- Biggest impact is in cost reduction (79%)
- High performers rely more heavily on cloud servers

BLOCKCHAIN TECHNOLOGY

Phases of Modern Technology



Blockchain is a revolutionary way to validate, record and preserve information digitally

Attributes of Blockchain Technology

- ✓ Can store any type of digital information
- ✓ Based on mathematics and cryptography
- ✓ Immutable / shared / distributed transaction ledger
- ✓ May not rely on a central authority
- ✓ Emerging and evolving technology

Emerging Blockchain Applications

- ➢ Cryptocurrency
- ➢ Supply chain tracking
- ➢ Intellectual property protection
- ➢ Medical history
- ➢ Voting systems
- ➢ Identity management

Blockchain application video

VIRTUAL MONEY

Disclaimer

- *This presentation is in no way intended to promote the use of cryptocurrencies*
- *This is a highly volatile market*
- *Invest in and use cryptocurrency at your own risk!*

THE EVOLUTION OF MONEY

Money Defined

- A measure of value
- A medium of exchange / payment
- A store of value

Types of Money

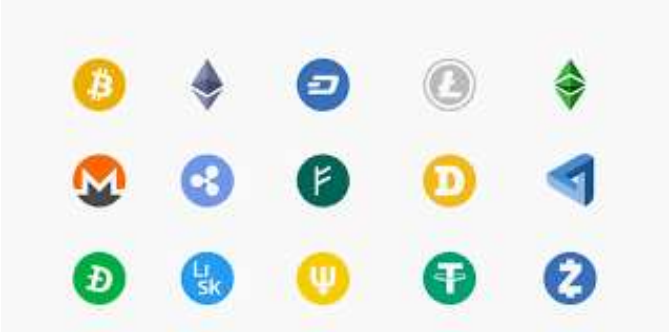
- Fiat Money
  - Supply / value established by government
  - Established as legal tender

- Commodity Based Money
  - Value tied to a tangible commodity
  - Gold, silver, copper
  - Value determined by market

- Digital (virtual) Money
  - Intangible
  - Based in technology
  - May be fiat (government controlled / CBDC)
  - May be crypto (autonomous)

Cryptocurrencies

- Bitcoin
- Ethereum
- All the other Alt coins



Bitcoin – The Big Picture

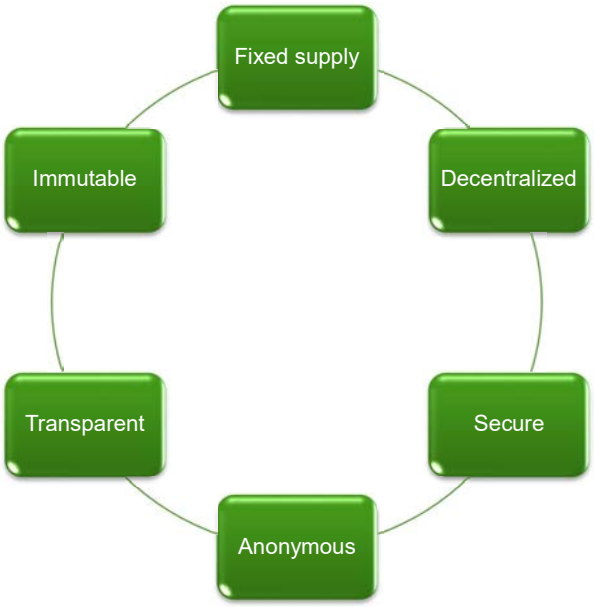
- A new frontier in money
- Bitcoin is a digital cryptocurrency
- Value is 100% market based
- A protocol based on mathematics and cryptography
- Designed by Satoshi Nakamoto (pseudonym)

Originating whitepaper

Bitcoin Facts & Stats

- First Bitcoin (BTC) was created in 2009
- A Bitcoin is a digital transaction, not physical
- First transaction: two Papa Johns Pizzas in exchange for 10,000 Bitcoins
- Total supply maxed out at 21 million BTC
- Current supply as of 2021 18.7m (approx.)
- 1 Bitcoin = 100,000,000 Satoshis
- 1 Bitcoin = $60k, 1 Satoshi = .0006 BTC (4/21)

Bitcoin Ecosystem Attributes



INTRODUCTION TO ETHEREUM

What is Ethereum?

- A blockchain protocol alternative to Bitcoin
- Cryptocurrency is called “Ether” second largest valuation behind Bitcoin
- Foundation for building apps
- Run by identified individuals
- **Supports “Smart Contracts”**

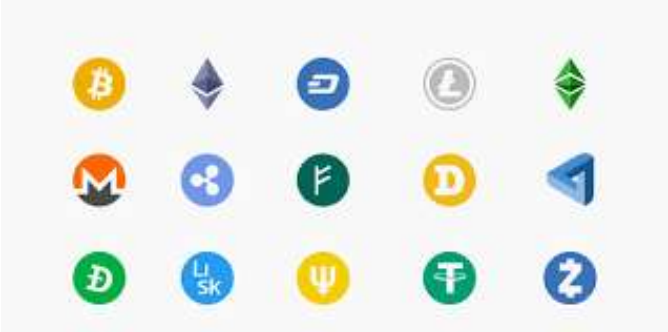
Smart Contracts

- Self executing contracts
- Terms of a contract stored in digital format
- A series of yes / no conditions that determine whether an action will be triggered
- Opens a whole new market for Blockchain

The Ethereum “Merge”

- The Ethereum protocol is switching from “proof of work” to “proof of stake”
- Completed September 2022
- Resulted in a “hard fork”

INTRODUCTION TO ALT COINS



Things to Know About "Alt" Coins

- Alt = alternative cryptocurrencies to Bitcoin
- May or may not be based on a decentralized model
- One objective is to use technology more efficiently
- Many alt coins can be bought and sold on cryptocurrency exchanges
- Many are built on top of the Ethereum network
- Often designed for a specific purpose
- BUYER BEWARE!

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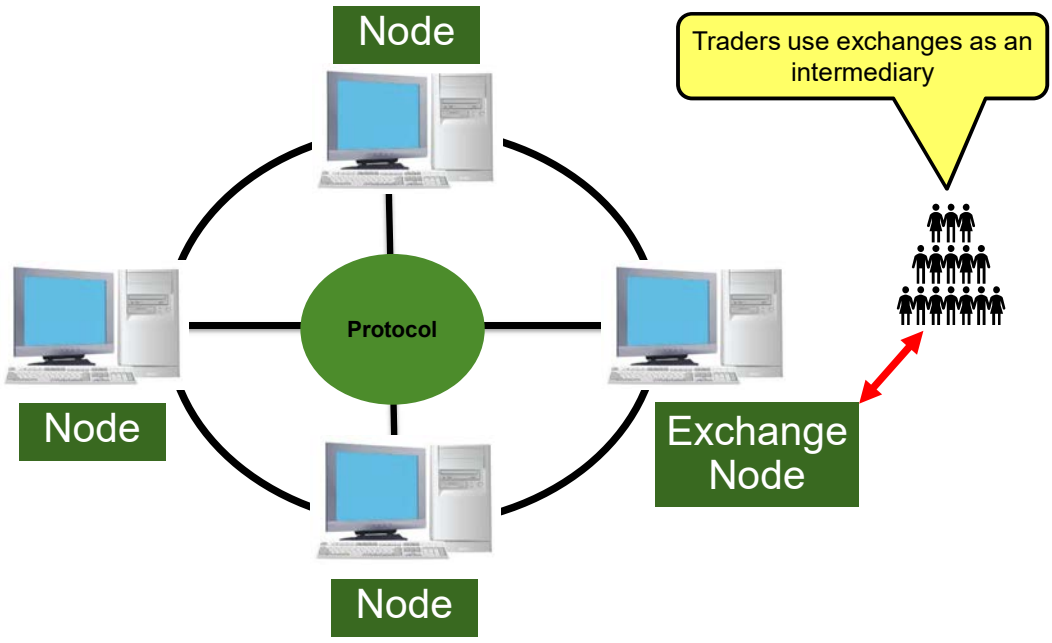
Cryptocurrency **Exchanges**



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Exchanges

- On ramp to the cryptocurrency market
- Acts as intermediary
- Adds an unnecessary vulnerability
- Convenient
- Lack regulation and oversight
- Big busts
  - FTX – Sam Bankman-Fried (2022)
  - Mt. Gox (2014)

CBDC (Central Bank Digital Currency)

- Digital currency issued by a central bank
- Legal tender
- Will likely not use blockchain
- Centrally controlled
- Every transaction traceable – digitized serial #
- Being considered by many countries
  - Project Hamilton in the U.S.

THE METAVERSE

The Metaverse

Where the world of make believe becomes everyday reality

Metaverse

- Simulated digital environment using augmented reality (AR) and virtual reality (VR)
- VR headsets / AR Glasses
- Avatar – an icon used to represent you online
- Digital Twin – people, products, processes
- Fueled by Web3 (blockchain / decentralization)
- Meta (formerly Facebook)
- Second Life – 1st generation metaverse

A Metaverse Business Case

- HBR Interview – Julie Sweet, CEO, Accenture
- Metaverse Continuum
- Onboarded 150k new staff in 2022 in the metaverse
- Replacement for traditional in person onboarding as a result of the pandemic
- Doing client visits the same way
- Started development back in 2007

PERSONAL TECHNOLOGY TRENDS

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Key Trends In PC Technology

- High performance, lightweight **laptops**
- Docking stations
- Large screen (30”+) displays
- Solid State Drives (SSD)
- High performance processors – Intel i7 / i9
- Windows 10 / 11

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Solid State Drives (SSD)

SSD

HDD

Dell Latitude 5530 Laptop

- $1,800
- Intel i7 CPU
- 15” display
- 16 GB RAM memory
- 512 GB SSD
- Docking station ($220)

Lenovo ThinkPad Carbon Gen 10

- $1,632
- Intel i7 CPU
- 14” display
- 16 GB RAM memory
- 512 GB SSD
- Docking station ($239)

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Microsoft Surface Laptop 5

- $1,500
- Intel i7 CPU
- 15” display
- 16 GB RAM memory
- 512 GB SSD
- Docking station ($200)

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Display Monitors

LG 49” Curved Monitor - $1,500

Samsung 34” Monitor - $290

ViewSonic 27” Monitor - $635

ASUS 15.6” Portable Monitor - $230

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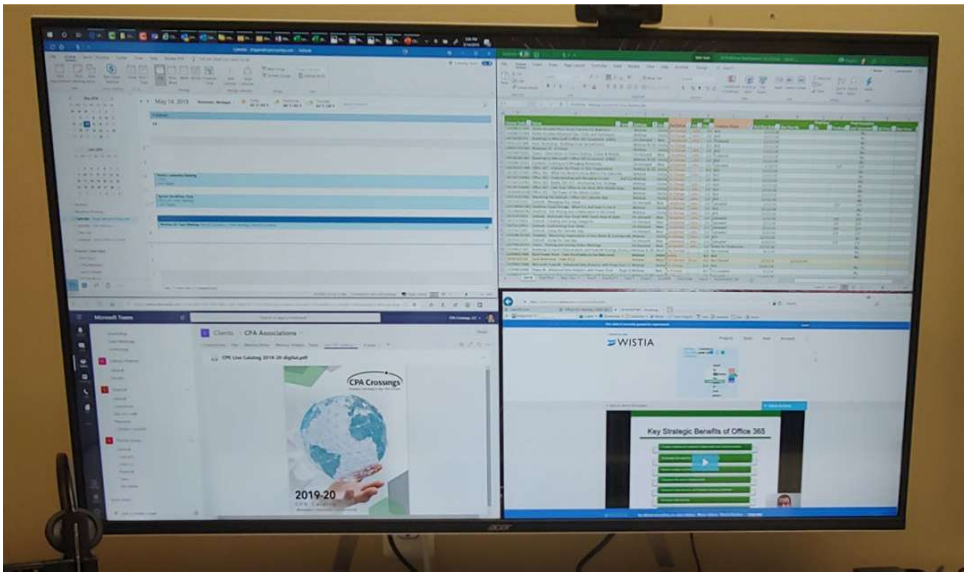
DisplayFusion Virtual Monitor Software - $49



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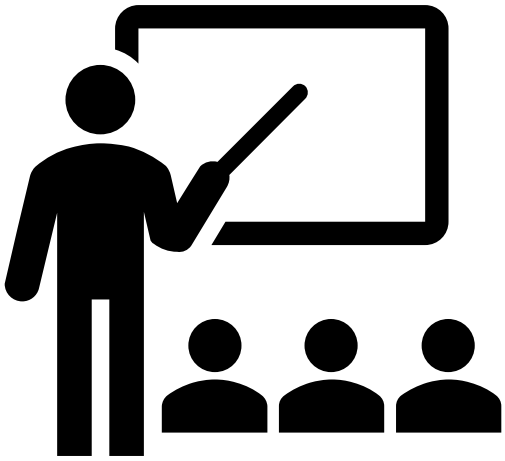
Logitech C930e Webcam - $130

Microsoft Hub 85” - $20k - $25k

WRAP-UP



Presentation Wrap-Up

- We have covered a lot of technology!
- Business technology awareness needs to be a core competency for CPAs
- Technology is positioned to alter the nature of every business at an unprecedented level over the next five years

Questions ?

THANK YOU