



**Speaker :-  
CA Akshay Sakaria**

# **Blockchain Technology & Crypto Currency Opportunity & Challenges for CA's**



**What gave rise to Blockchain & Crypto currency - The Problem**

**Blockchain & Cryptocurrency - The Solution**

**What is Blockchain Technology & why it is so popular**

**Elements of Blockchain & Block**

**How the process works & validation takes place**

**Disadvantages - Blockchain**

**Industry Applications - Blockchain**

**Introduction to Cryptocurrency & Valuation**

**What's in there for a Chartered Accountant & Probable (Indian) Tax/Regulation Impact**

# Session Coverage



**CA Akshay Sakaria**

# What gave rise to Blockchain & Cryptocurrency (The Problem)

No lets split it.  
You pay it & we  
will Google pay/  
Paytm you



I will pay  
the bill

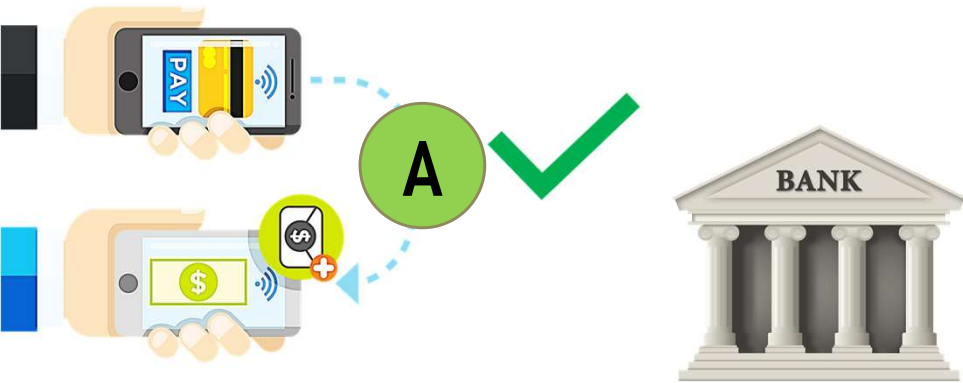


CA Akshay  
Sakaria

# (The Problem)



CA Akshay Sakaria



# Blockchain & Cryptocurrency - The Solution



CA Akshay  
Sakaria



A



B



C



D

A = 4, B = 4,  
C = 4, D = 0



A → D = 2 coins  
A = 2, B = 4,  
C = 4, D = 2



B → D = 2 coins  
A = 2, B = 2,  
C = 4, D = 4



C → D = 2 coins  
A = 2, B = 2,  
C = 2, D = 6



# Blockchain - The Solution



**Public Distributed Ledger –  
Each User has a copy**

**Each user has copy of Ledger /  
Block of Records**

**Encrypted by Complex  
Algorithm – Non Hackable**

**Each record Linked with each  
other creating a Ledger/ Block**



**CA Akshay  
Sakaria**

**Blockchain is very relevant for 0% errors & 100% responsibility - Akshay Sakaria**

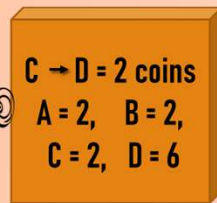
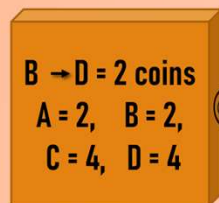


CA Akshay  
Sakaria

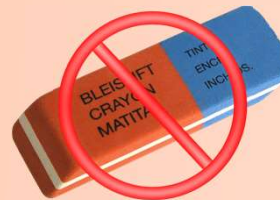
# What is a Blockchain Technology ?



Collection  
of Ledger



Linked with  
each other



Strongly resistant  
to alteration.



Protected using  
cryptography

- It is a specific type of database & differs from a typical one (spreadsheets) in the way it stores information; blockchains store data in blocks that are then chained together. It provides an infrastructure for record keeping.
- As new data comes in it is entered into a fresh block. Once the block is filled with data it is chained onto the previous block in chronological order.
- Different types of information can be stored on a blockchain, but the most common use so far has been as a ledger for transactions.

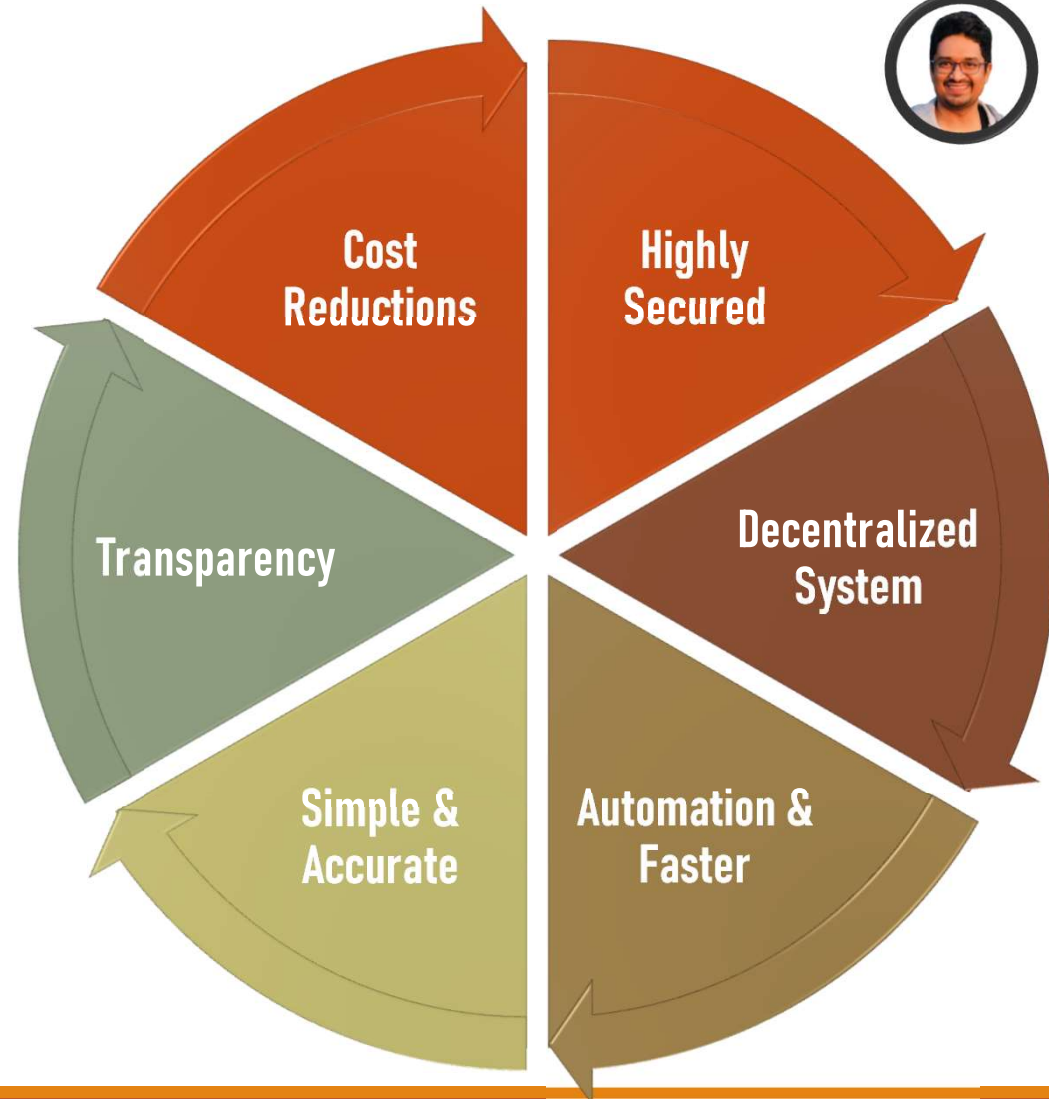
## History Fact !

- 1983 – ECASH
- 1995 – DIGI Cash
- 2009 – Bitcoin was created by Satoshi Nakamoto (Unknown Grp)

# Why it is popular ?

## Bitcoin Fact:-

In Bitcoin's case, blockchain is used in a decentralized way so that no single person or group has control. Decentralized blockchains are immutable, it means that data once entered is irreversible. Hence transactions are permanently recorded and viewable to anyone.



CA Akshay  
Sakaria



## Elements of Blockchain & a block

Transaction Record

Timestamp

Nonce Value

Hash Value

Miner/

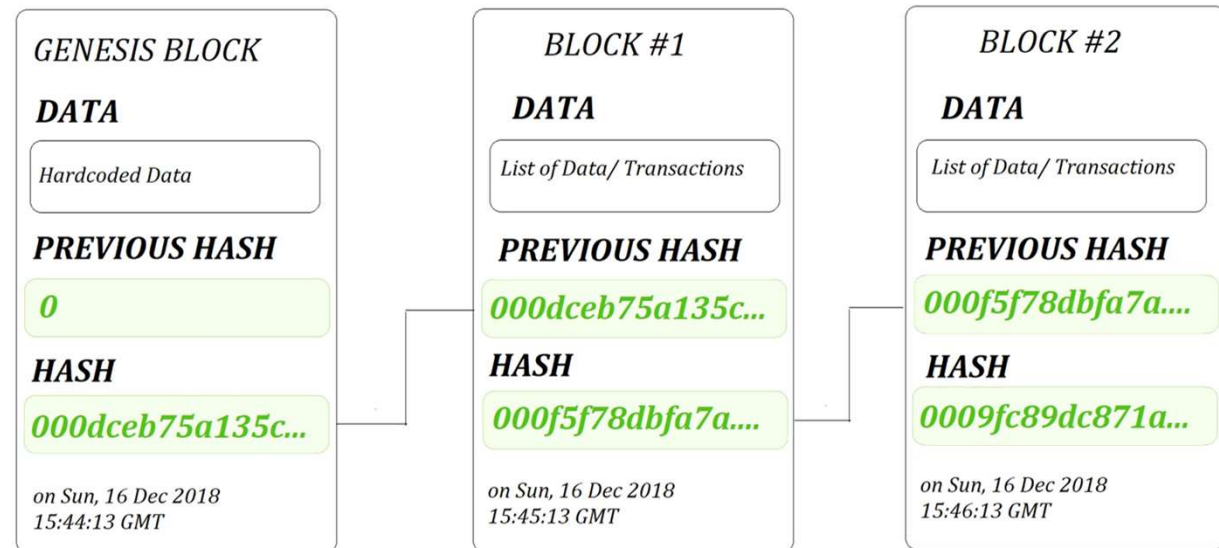
Nodes Identifier

Previous Block Hash

Digital Signature



CA Akshay Sakaria





CA Akshay Sakaria

# How does it work



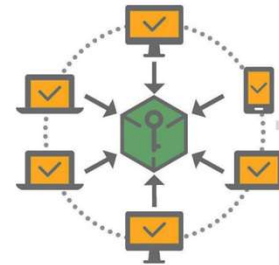
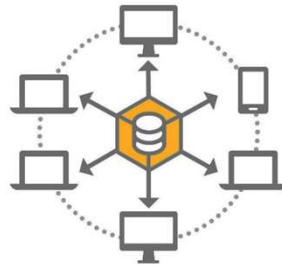
A transaction is requested



The transaction is broadcasted to a network of nodes



The network validates the transaction using known algorithms



VALIDATION MAY INCLUDE



SMART CONTRACTS



CRYPTOCURRENCY



OTHER RECORDS

Helps in making system self sustaining



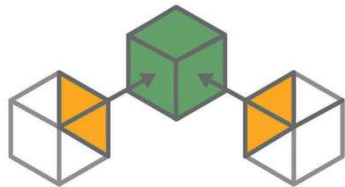
The transaction is unified with other transactions as a block of data.



The new block is added to the blockchain in a transparent and unalterable way.

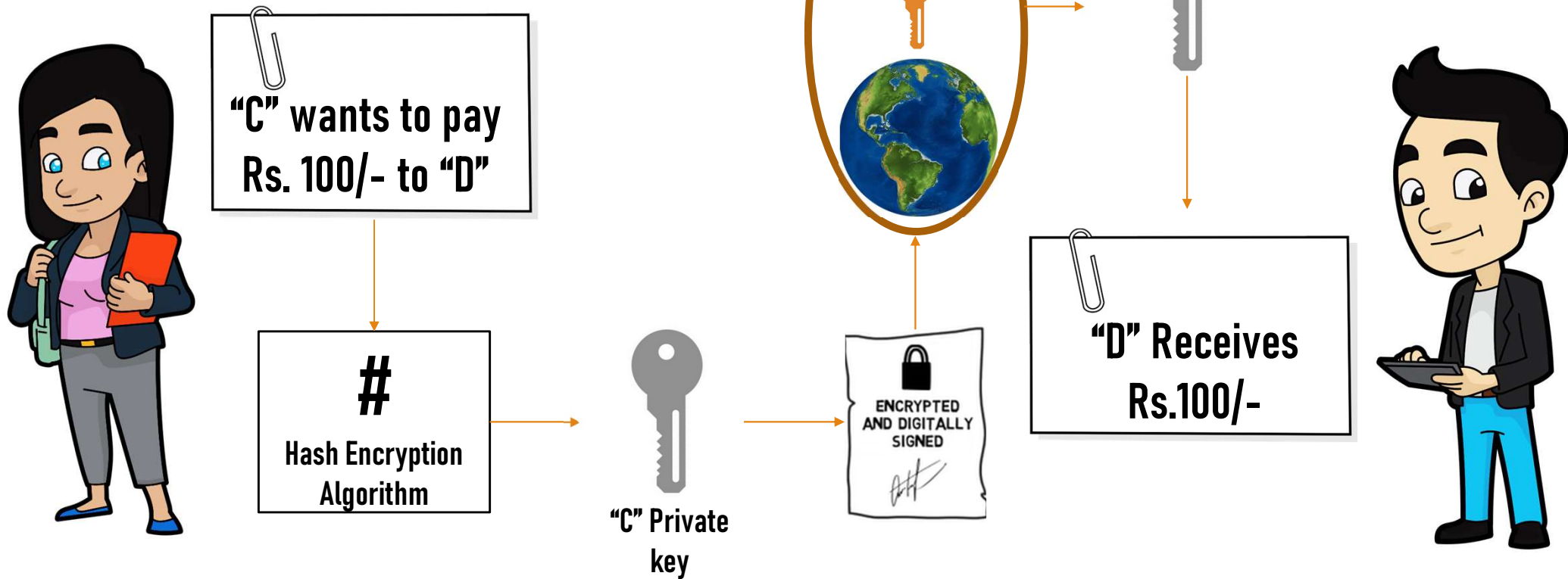


The transaction is complete



We will Learn about Validation Process & Cryptocurrency Usage in next Slide

# How Validations takes place



# Validation Rewards/ Key/Tools



CA Akshay  
Sakaria



## Cryptocurrency

- Loyalty/Reward points
- Not pegged with any currency
- Auto generated on mining



## (Non-Fungible Tokens) NFT

- Instead of data Digital assets can be stored
- Ownership can be tracked/traced



## Smart Contracts

- Automation of Validation process by using smart & digital contracts.
- One can pre-set Validation points/conditions
- Transactions can be executed & stored as a block on fulfilment of validation point as agreed by the contracting parties.

## Disadvantages of Blockchain

Technology Cost

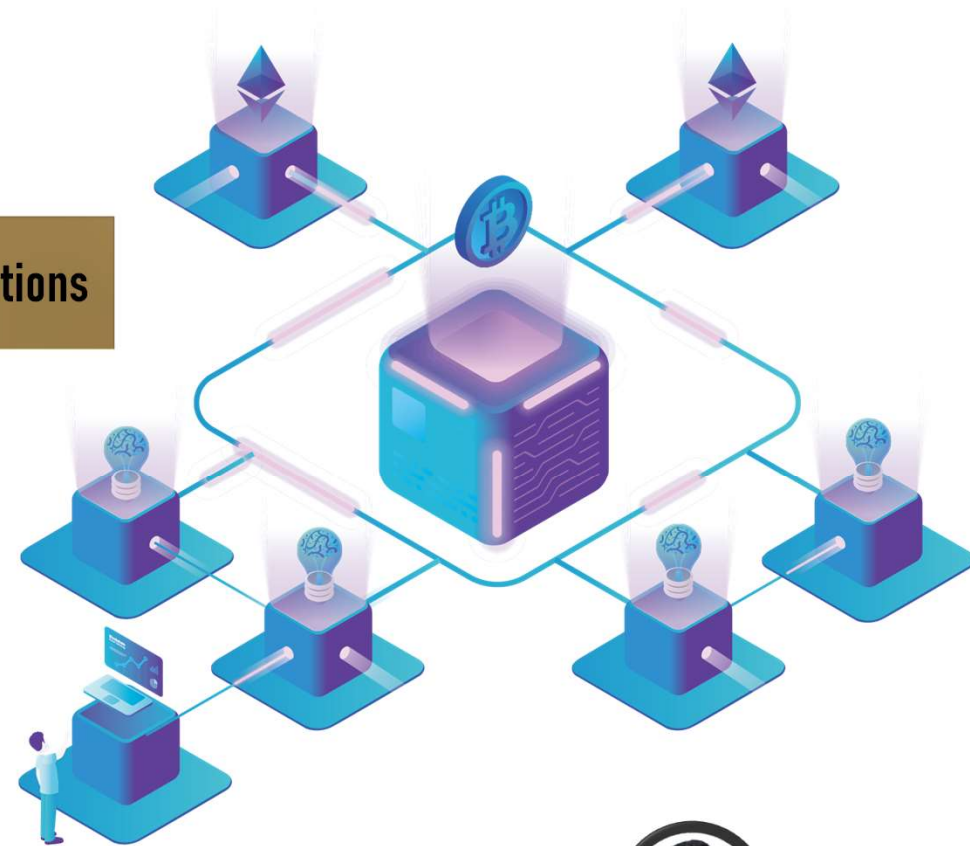
Consumes lot of power for processing

Speed Inefficiency

Timeline for processing a block

Illegal Activities

Regulations



CA Akshay Sakaria





CA Akshay  
Sakaria

## Crypto Currency

**What are they ?**

**Instrument of incentives for nodes/miners**

**Are they actually a  
currency?**

**No but can be treated as commodity. (Personal View)**

**Why are they paid?**

**To reward the miner for maintaining, securing & mining the block chain process**

**Why not make use  
of normal  
currency?**

**Data mining activity can take place anywhere in the world due to decentralisation & mining activities are paid in fractions of \$ for every micro transactions. Normal currencies have to pass through intermediaries & exchange fluctuations which will devoid the purpose of Decentralization**

**Why such High  
valuations**

**Due to scarcity of coins & self belief**



# Cryptocurrency Valuation Myth ?

- A cryptocurrency is **not real money** that can be used for payments
- Cryptocurrency **valuation is just a hype** because the young crowd has been easily influenced
- It is **not backed by any government**, nor it is regulated
- People investing in crypto are **investing without understanding** the basis & the crypto exchanges are using this to their advantage. Millennials feel that (looking at the hype of bitcoin) that crypto is much more lucrative for investment for making a quick buck.
- There are 2 different understanding of cryptocurrency, one wherein the businessmen's & wealthy people like the crypto because it has made them money at the same time the Nobel laureates & economists consider it to something similar as a **Ponzi scheme**



CA Akshay  
Sakaria



**CA Akshay  
Sakaria**

# What's in there for Chartered Accountant's

## **Services being rendered:**

- **Accounting**
- **Auditing**
- **Forensic Investigation**
- **System Audit & Development**
- **Payroll Processing**
- **Compliance Management**
- **Due Diligence**
- **Certification**
- **etc**

## **Regulatory & Tax Impact of Cryptocurrency**

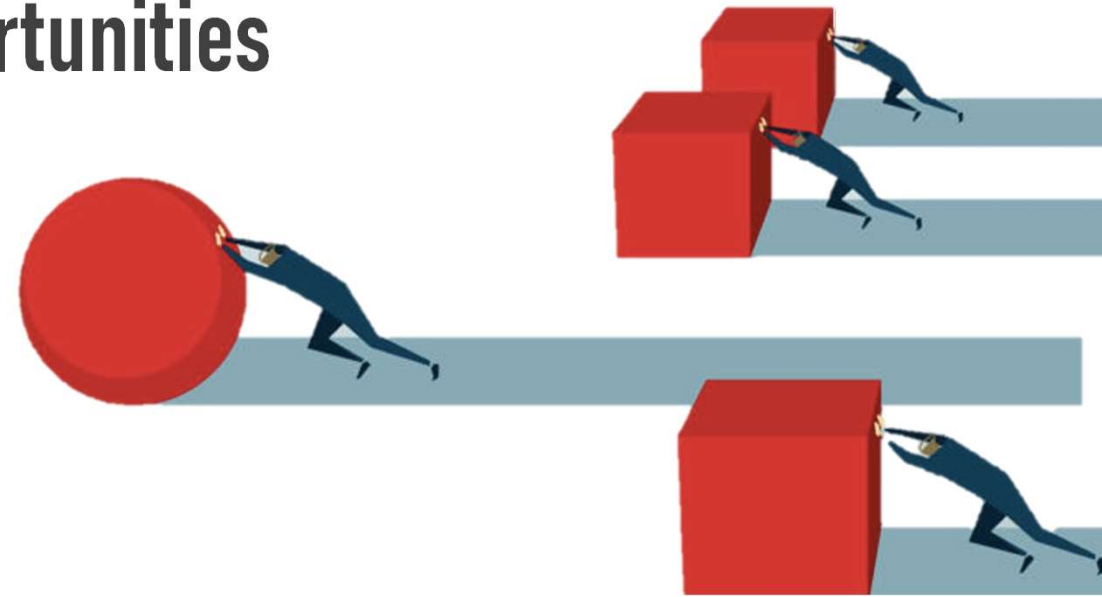
## **Benefits of Blockchain Technology:-**

- **Automation & Faster**
- **Simple & Accurate**
- **Transparency & Visible to all**
- **Decentralized System (Many Record Keepers)**
- **Highly Secured**
- **Cost Reductions**



CA Akshay  
Sakaria

# Opportunities



- CA's in practice should embrace blockchain rather than worrying about getting replaced by the same.
- We should also learn how it will impact businesses
- CA's with technology-based audit expertise would be preferred.
- CA's can play major role as miners/validators in the blockchain system.
- Use of blockchain will not remove audits nor the need for an independent auditor instead it will enhance the way in which auditors extract, test & analyze data.
- Layering blockchain technology with audit analytics could yield standardized & sophisticated audit routines & analysis that enable Realtime evaluation of transactions across blockchain.



CA Akshay  
Sakaria

# Potential Business features of Blockchain

## Improving Profitability & Quality

- Automation using smart contracts / algorithms
- Traceability of all historical transactions
- Speed of transactions by eliminating intermediaries
- Enhanced security by encryption of data
- Prevents tampering - tampering may leave behind trail.

## Increasing Transparency

- Distributed ledger
- Provides a comprehensive data for everyone
- Availability of multiple copies of the shared data

## Reinventing products and processes

- Transparent and predefined rules which facilitates creation of new products / processes through a decentralized model
- Tokenization / Digital Assets enables digital ownership, management and transfer





CA Akshay  
Sakaria

# Applications of Blockchains in Industry

Music	Weapon Tracking	Insurance
Cyber Security	Voting	Government
Human Resource	Loyalty Reward Program	NGO's
Banking	Health Care	Education
Supply Chain Management	Real Estate	Travel
Any other processes or systems part of any industry which requires automation, accuracy, transparency, security, auditing, investigation, inspection etc		





CA Akshay  
Sakaria

# Blockchain in Real-estate



**Decentralizing  
MLS**



**Tokenized  
Ownership**



**Smart  
Contracts**



**Decentralizing  
Airbnb**



**Preventing  
Title Fraud**



**Crowdfunded  
Investing**



**Preventing  
Wire Fraud**



**Property Inspection  
Transparency**



**Fighting  
Mortgage Fraud**

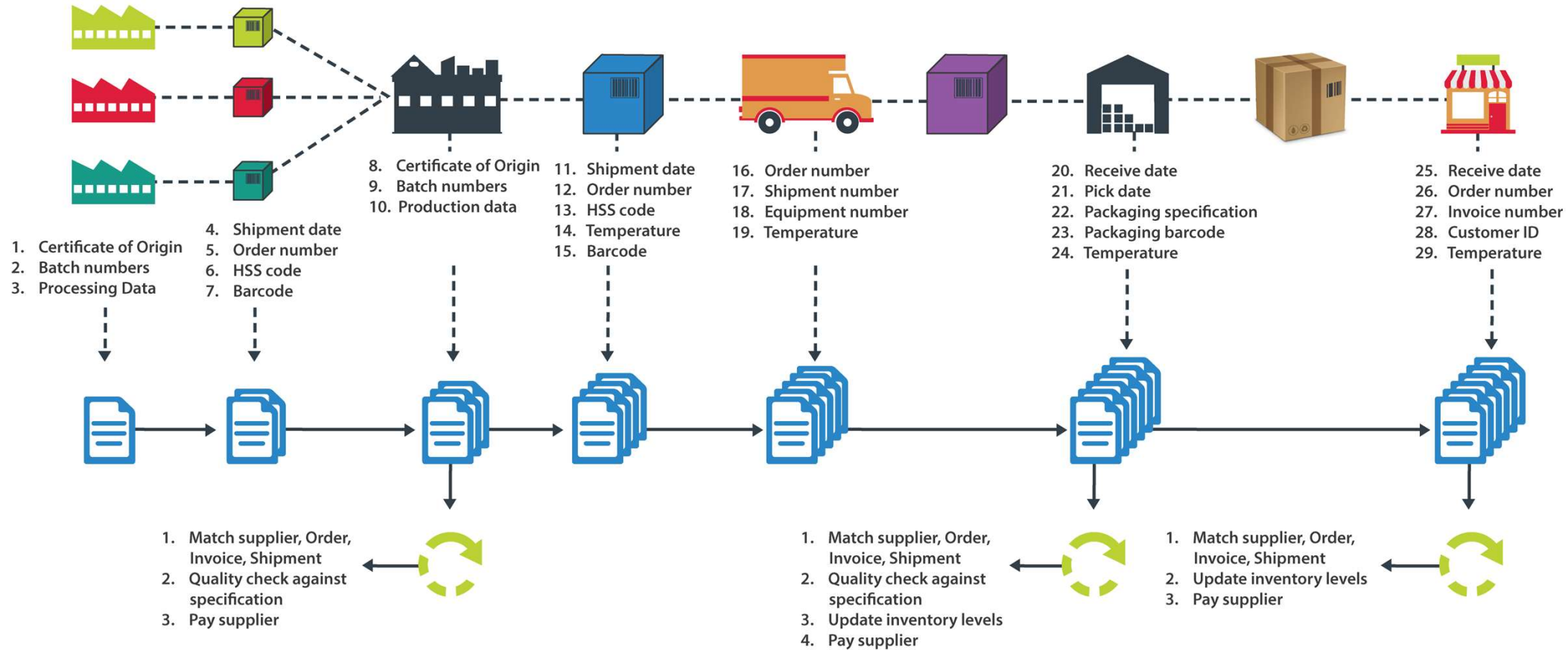


**Title Transfer  
Transparency**



CA Akshay  
Sakaria

# Supply Chain Industry Application Example





CA Akshay  
Sakaria

## Education Industry Application Example

- Enhanced and transparent record-keeping
- Student accountability powered by smart contracts
- Incentivizing students and teachers to achieve greater results
- Learning performance tracking and individualization
- Introducing verifiable lifetime student transcripts
- Providing students with an educational achievement portfolio

### CBSE introduces Blockchain to go paperless, make results tamper-proof

In blockchain technology, the data is recorded in the chain based on the consensus among the stakeholders and simultaneously replicated at all the locations in the distributed network of Blockchain nodes. This eliminates the dependency on a third party for verification. less

28 Sep, 2021, 10.06 AM IST

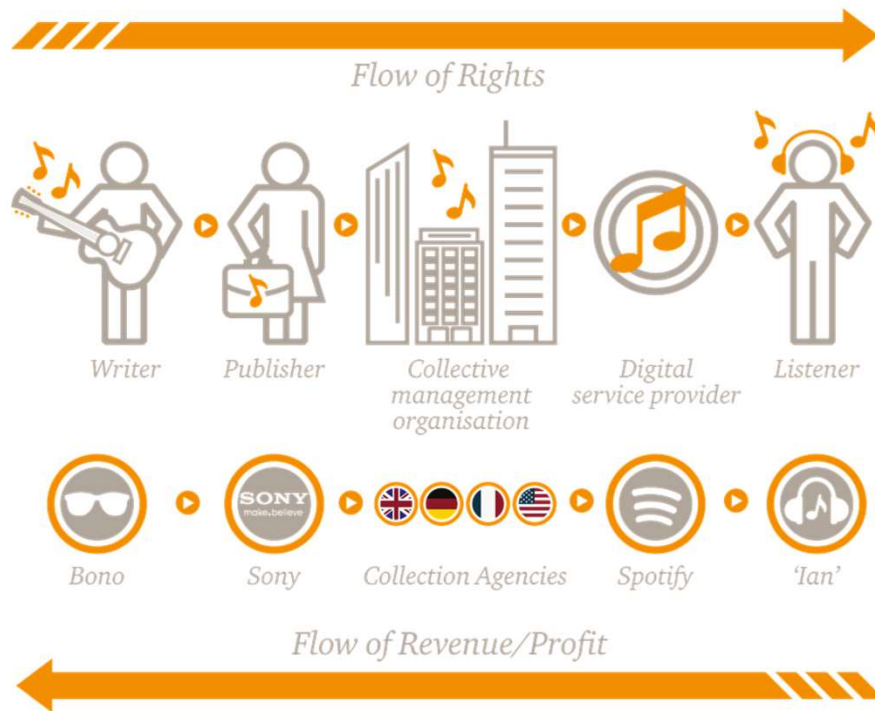


# Music Industry Application Example

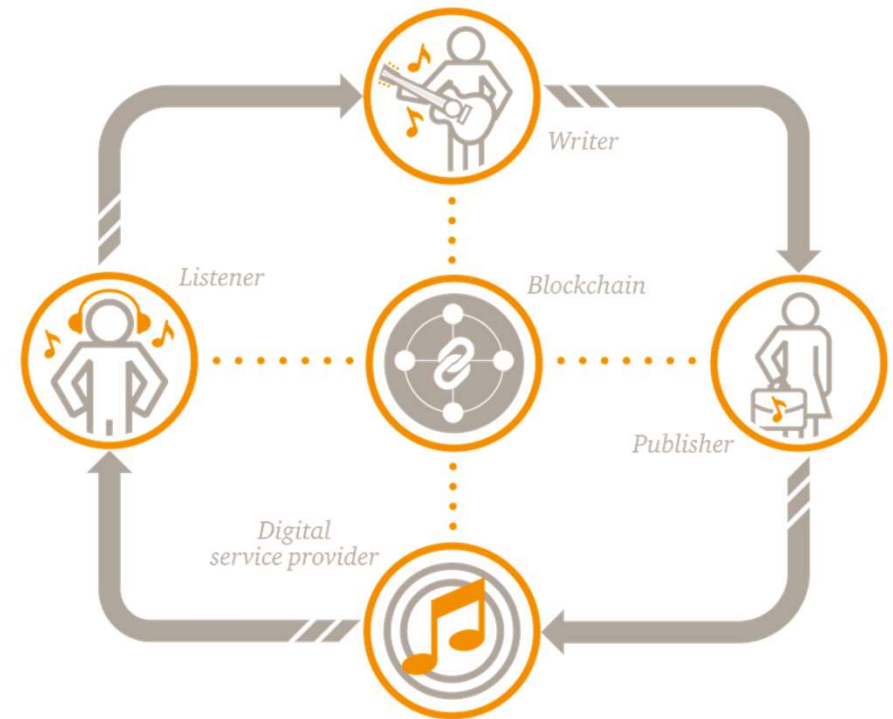


CA Akshay Sakaria

## Without Blockchain



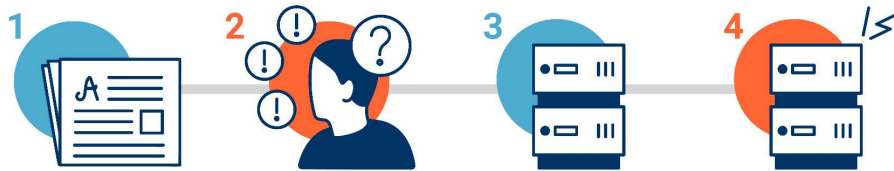
## With Blockchain





# E-Voting Application Example

## Pre-election



## Election



## Post-election



### Pre-election

Cryptography underlying blockchain technology helps ensure that digital content comes from a trusted source.



### Election

Blockchain's immutable ledger can help store identity data for authenticating voters, and help securely record digital votes for tabulation.



### Post-election

Individual voters and election officials can each audit the election's outcome on a public blockchain.



### Financial Services

- Trade Finance
- Cross Currency Payments
- Mortgages
- KYC
- Cross Border Tax



### Public Sector

- Asset Registration
- Citizen Identity
- Medical Records
- Medicine Supply Chain



### Retail Sector

- Supply Chain
- Loyalty Programs
- Information Sharing



### Insurance

- Claims processing
- Risk provenance
- Asset Usage History
- Claims file



### Supply Chain & Logistics

- Supply chain Finance
- Maintenance tracking
- Provenance
- Supply chain compliance

Other Sample use cases



CA Akshay  
Sakaria

# Blockchain: India – Importance & need of the hour

## Aadhaar

- World's largest identity database with more than 1.2bn biometric identities
- More than 25 million authentications per day

## Unified Payments Interface (UPI)

- World's most sophisticated digital payments system
- 1.3bn monthly transactions being processed

## Goods and Services Tax Network (GSTN)

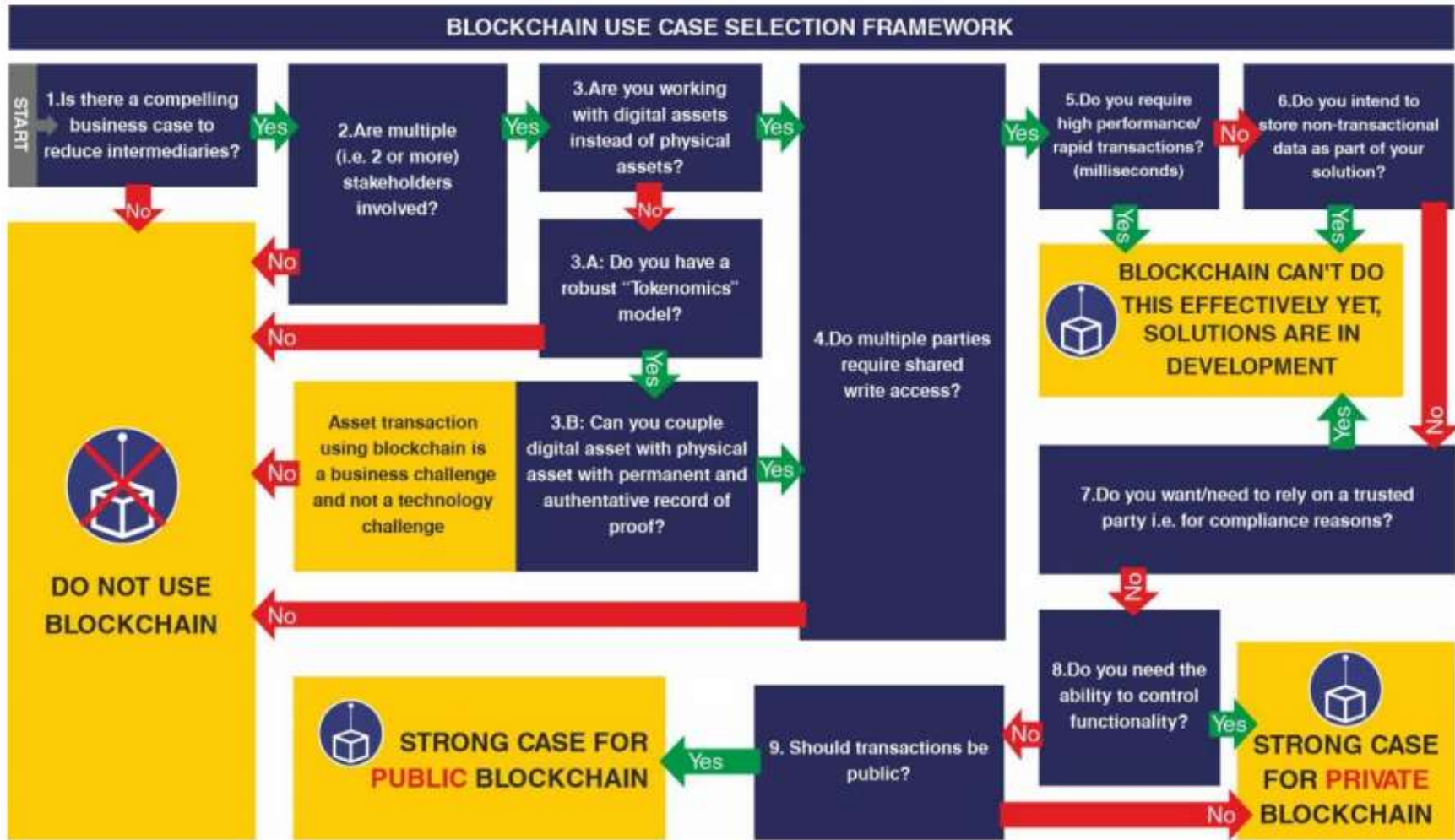
- More than 400 million returns filed
- More than 800 million invoices uploaded

## PM-JAY

- World's largest healthcare initiative with ~500 million beneficiaries covered
- 119 million e-cards issued so far, ~8 million hospital admissions



CA Akshay Sakaria



Recommendation by Niti Ayog





**CA Akshay  
Sakaria**

# Recent Updates



## 10 Marvel artworks, starring Stan Lee on the cover, to go up for blockchain auction in LA

The works are each signed by Lee, who died in 2018, aged 95. [less](#)

28 Oct, 2021, 03.01 PM IST

The Economic Times

## Amitabh Bachchan's NFT auction to go live on November 1

According to the updates on [amitabh.beyondlife.club](https://www.amitabh.beyondlife.club), the base price for the NFT of Big B's iconic movie 'Sholay' has been fixed at \$9,500 each.

1 day ago



## Invesco India Mutual Fund files papers for blockchain fund

Domestic mutual fund investors could soon get an opportunity to invest in a global product that bets on companies involved in blockchain technology. [less](#)

08 Sep, 2021, 12.24 AM IST

## CBSE introduces Blockchain to go paperless, make results tamper-proof

In blockchain technology, the data is recorded in the chain based on the consensus among the stakeholders and simultaneously replicated at all the locations in the distributed network of BlockChain nodes. This eliminates the dependency on a third party for verification. [less](#)

28 Sep, 2021, 10.06 AM IST



## Sebi okays blockchain technology for NCDs

To make the record-keeping process related to securities traded in the market more secure, Sebi on Wednesday asked depositories to use distributed ledger technology — popularly called blockchain technology — to record and monitor credit ratings of non-convertible debentures (NCDs) [less](#)

26 Aug, 2021, 07.18 AM IST



## Use blockchain to monitor security creation: Sebi to depositories

It offers better protection against different types of cyber-attacks because of its distributed nature, which removes the single point of attack, Sebi said in a statement. [less](#)

26 Aug, 2021, 06.21 AM IST

## TCS bets on blockchain-based solutions in financial services

TCS has won six large deals in the last five months for projects that are built atop blockchain technology, including one for building a bank guarantee programme for a leading Israeli bank. [less](#)

30 Sep, 2021, 08.48 PM IST

The Indian Express

## Here's how Blockchain and NFT ticketing can cut out middlemen and resellers

Here's how Blockchain and NFT ticketing can cut out middlemen and resellers. Blockchain technology, in particular, is being leveraged by major...

22 hours ago



# How can Blockchain Improve ERP Systems



CA Akshay  
Sakaria

ERP System  
aren't Flexible &  
are resistant to  
changes

Enhance &  
Strengthen Data  
Maintenance

Immutable &  
Integrated  
information  
which increases  
data quality

Competitive Edge

Complicated &  
Restricted  
functionality

Higher Accuracy  
& Security

Supreme  
visibility &  
transparency at  
every stage



# Regulations around the world



CA Akshay  
Sakaria

Country	Regulations in place or Proposed to be regulated	Can use as Legal Tender	Termed as commodity/ Asset class/ Financial Instruments
USA, Singapore, UK, Indonesia, Canada, Germany, Australia, Japan, & Brazil	Yes	No	Yes
Switzerland & EU	Yes	Yes	Yes
Pakistan & France	Yes	No	No
China, Bangladesh, Saudi Arabia, Morocco, Qatar & Algeria		Banned	
India	Yes	No	Yes

In 2019 India had drafted a bill for banning cryptocurrency & regulation of official digital currency which was kept on hold due to Covid. Now they might introduce this bill in the monsoon session of 2021.



CA Akshay  
Sakaria



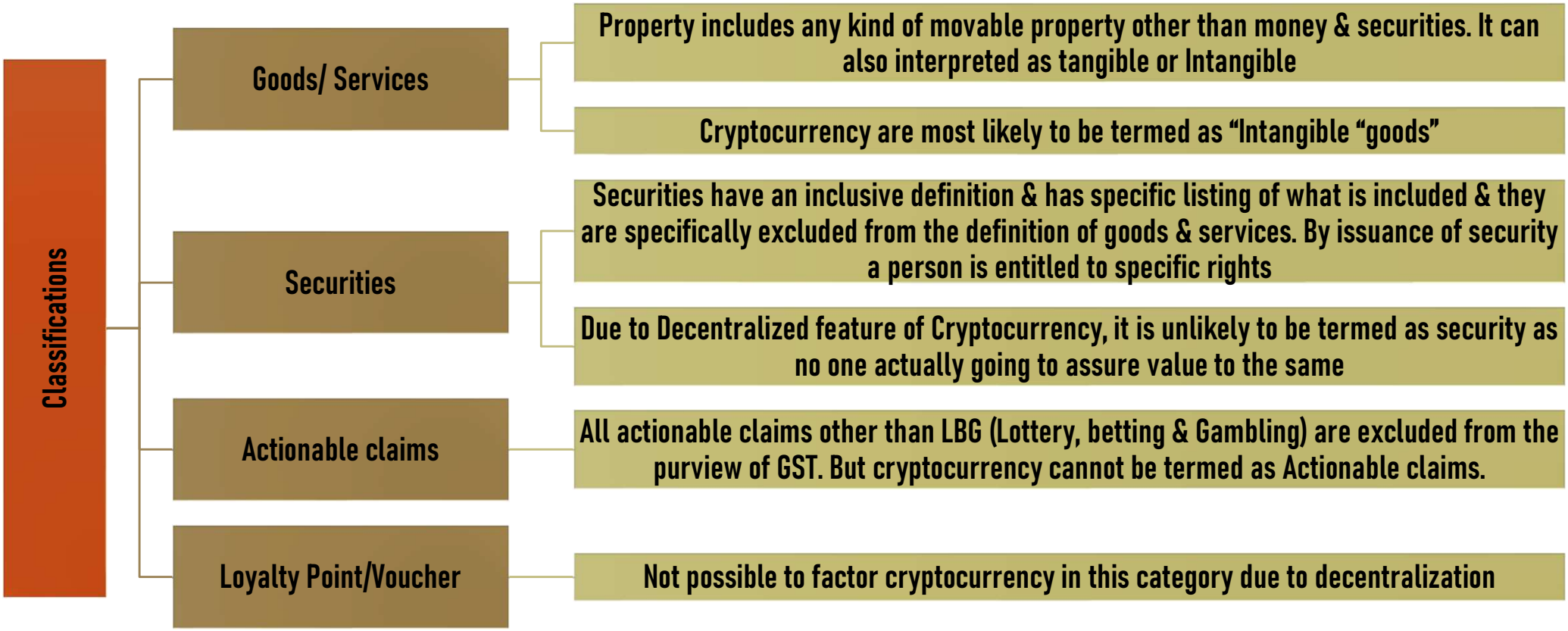
## Probable GST Implications

- **Classifications**
- **Mode of  
Considerations**

# Probable GST Implications



CA Akshay Sakaria





CA Akshay  
Sakaria

# Probable GST Implications

Mode of Consideration

Consideration means any payment made whether in MONEY or OTHERWISE (Barter)

Money is defined as Indian Legal Tender or foreign currency or any instrument recognized by RBI

The word otherwise means barter & hence cryptocurrency can be termed as goods & will be liable for GST. The only issue will be to understand which leg of the transaction is a consideration & which is transfer of goods.

Benefit of Zero-Rated Supplies is lost when payment is made in Crypto Currency because in order to become eligible the payment must be made in convertible foreign exchange - which can be derived as per guidelines of Rule 27

Crypto exchange

GST will be charged only on commission portion

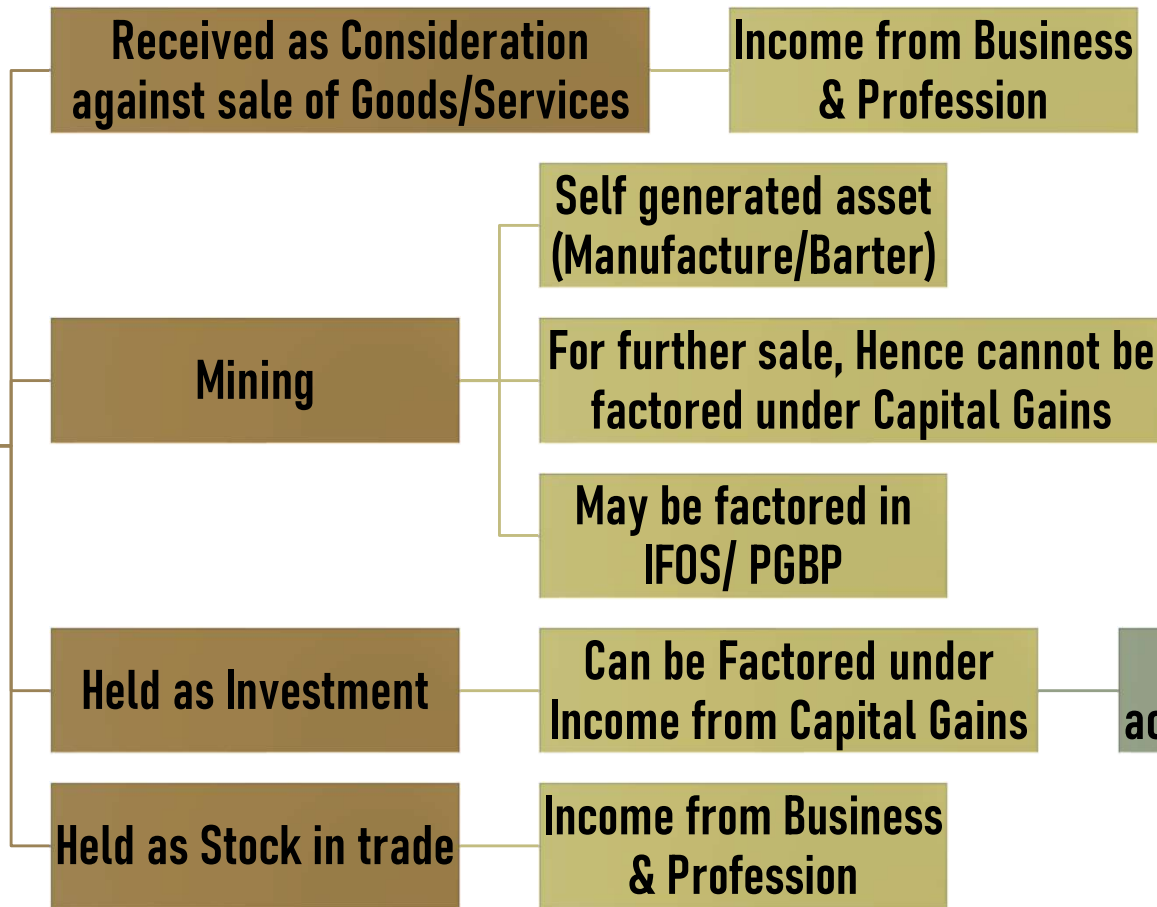
There is no such regulatory authority for Crypto Exchanges



CA Akshay Sakaria

# Income Tax Impact

Income Tax Act 1961, (Every Income is liable to Tax irrespective of its nature)



The issue here would be non acceptance by Dept as Capital Asset



# Other Regulations Impact & Recent Proposals

- RBI has not yet verified cryptocurrencies as **valid/legit means of exchange**, but **transaction trail** would be must in case of FEMA enquiry client may face in future.
- As per recent **MCA notification** all companies need to disclose the following details pertaining to cryptocurrency in their statutory fillings:-
  - Profit & Loss from transactions
  - Cryptocurrency held in hand
  - Any deposits or advances taken place
  - Trail of the entire transactions

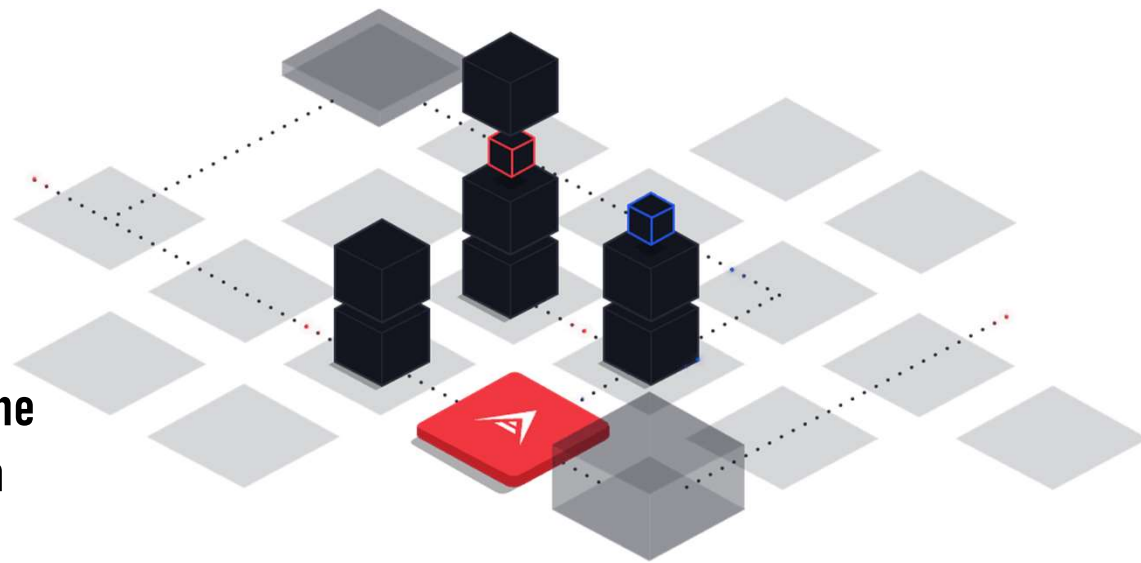


CA Akshay  
Sakaria



# Beyond the hype: Blockchain is not a panacea for all problems

- Firstly, the business should ask itself why it needs blockchain? Is there a valid problem?
- The technology is itself in its nascent stage
- All existing experiments are still in prototype stages
- Blockchain's 'immutable' nature necessitates the need to create a single source of truth before a process is put on blockchain
- Cryptocurrency can be used in illegal/illicit activities



CA Akshay  
Sakaria

# THANKYOU

Q. ≡  ≡ .A

Email :- [ca.akshaysakaria@gmail.com](mailto:ca.akshaysakaria@gmail.com)

M No. 9833903523



CA Akshay  
Sakaria

Blockchain is the best form of Truth !!