



Opportunities in Indian Blockchain Sector

Blockchain and Start-ups

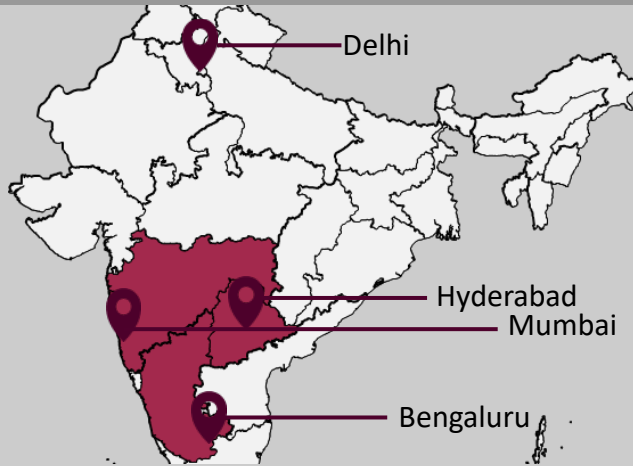
Blockchain Startups - Overview

Geographical Diversity

Blockchain startups are mainly centered around a few metropolitan cities

Number of Startups

There are over 360 blockchain startups in India



New Startup by the Year

2019

48

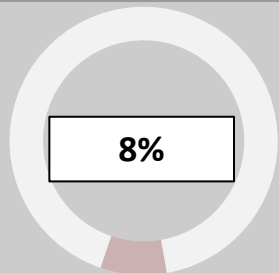
2018

103

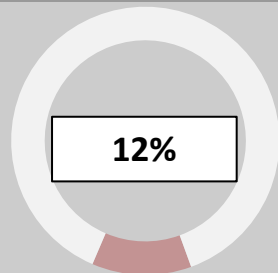
2017

108

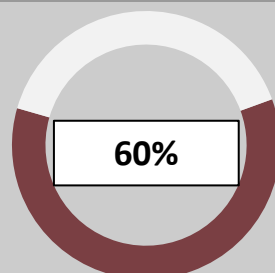
Distribution of Industry wise enterprise adoption of Blockchain solutions in India



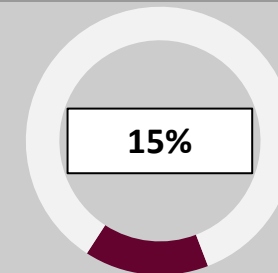
Logistics



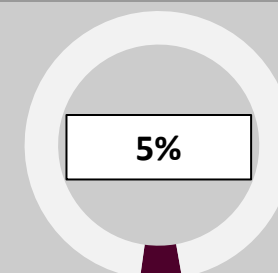
Healthcare



BFSI



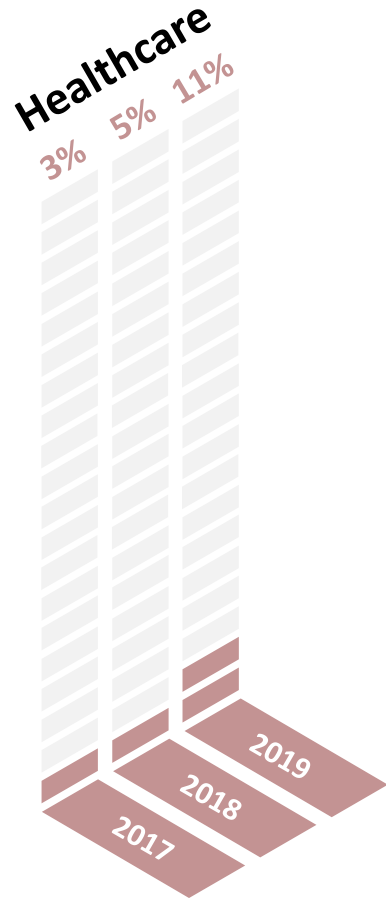
Public Sector



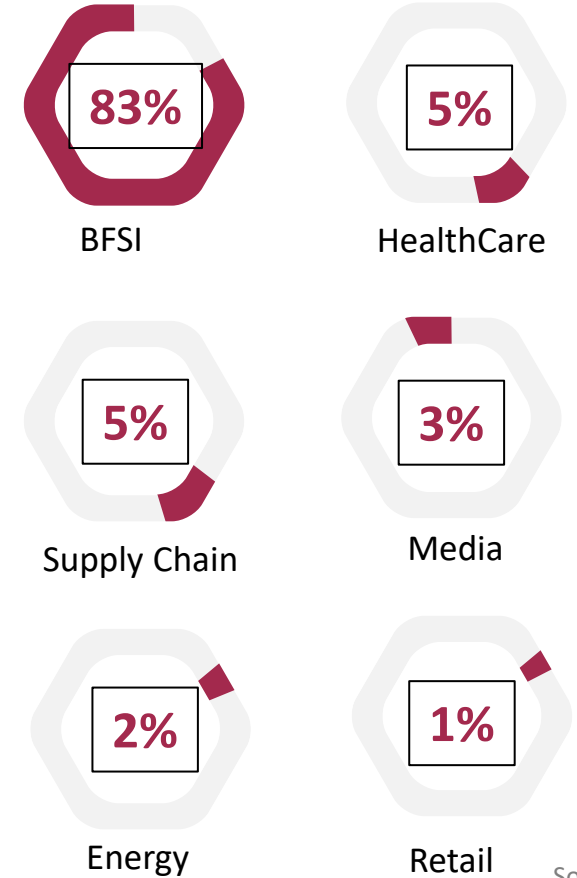
Others

Industry Focus for Blockchain Startups

The focus of Indian blockchain start-ups has been shifting from financial services to logistics and healthcare over the past 3 years.

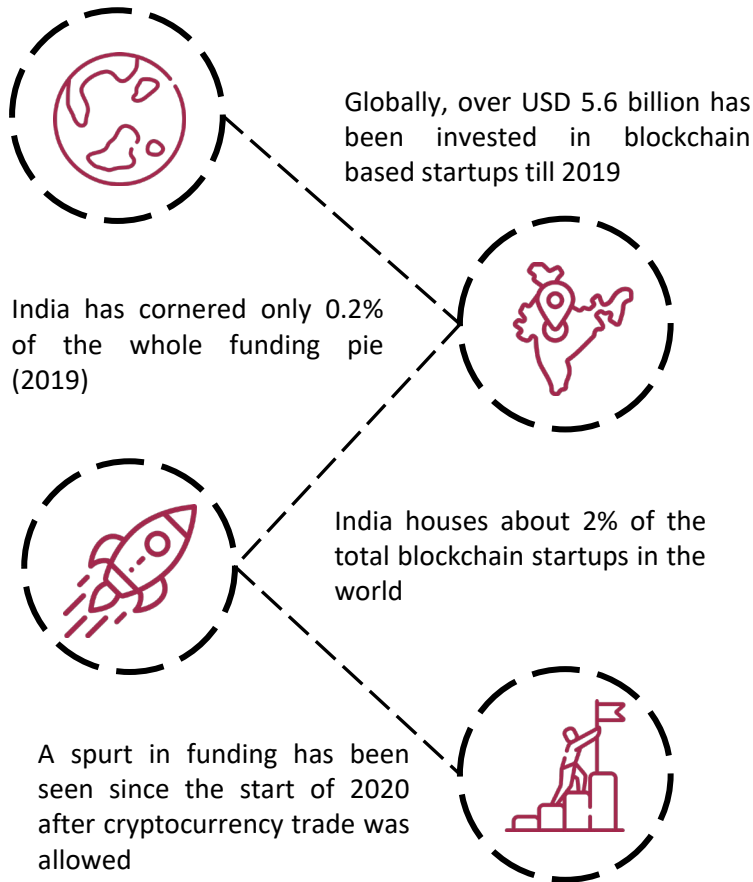


Division of Blockchain start-ups in India based on target industry



The Funding and Project Paradigm

Relatively low in the global context, but Funding has seen a growth spurt in 2020. This will lead to an increase in the number of new start-ups popping up.

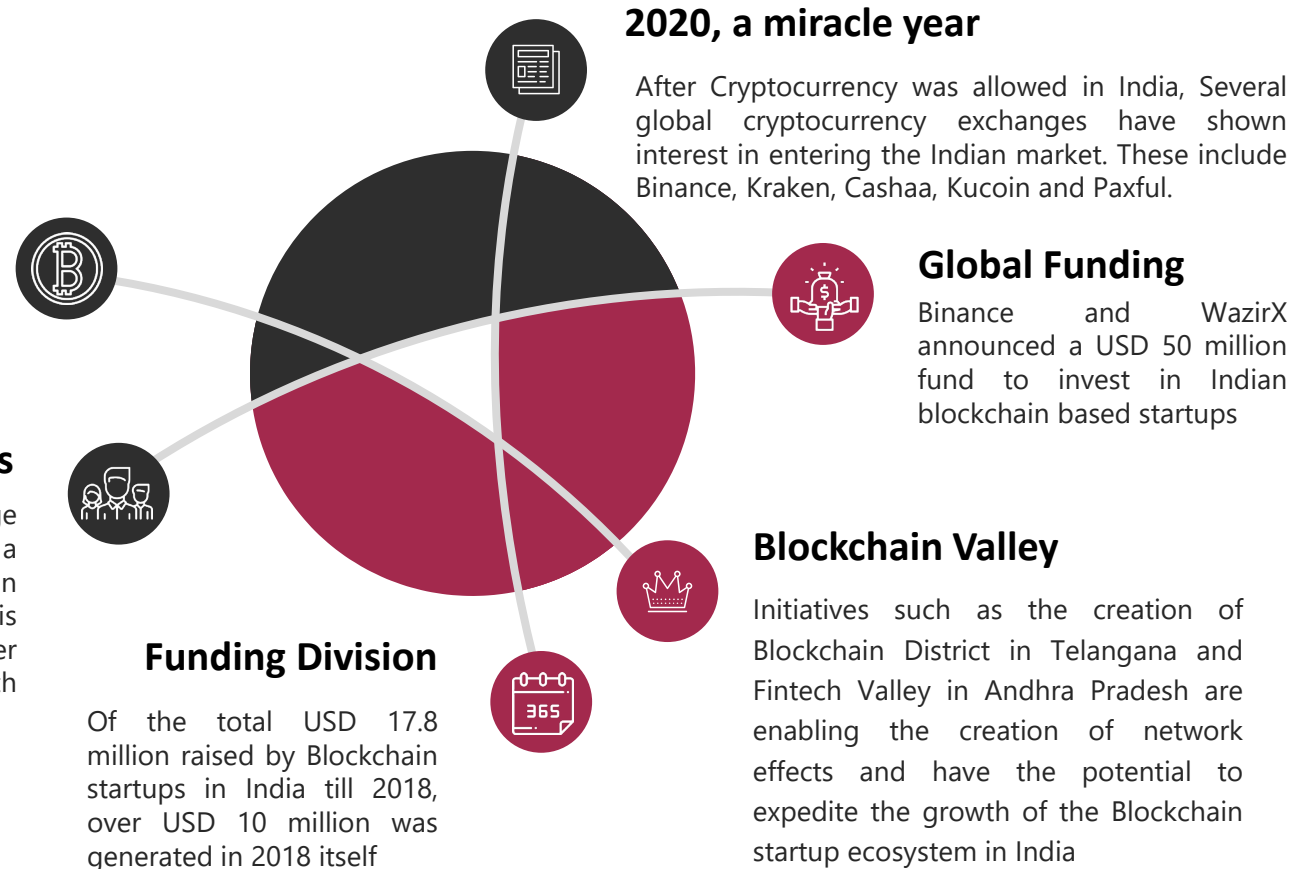


Funding Trend

Majority of the funding in India has been cornered by cryptocurrency startups

Service Providers

Majority of the mid and large service providers in India have a low portfolio of Blockchain projects in India (<5%) vis à vis their projects in other geographies (especially North America)



India's Digital Infrastructure

The period of digitalization in India began in the 2010's with several government services being digitalized, allowing citizens to become comfortable with the use of online platforms.

World's largest identity database with more than **1.2 billion** biometric identities

Aadhaar

World's most sophisticated digital payments system with over **1.3 billion transactions** processed in December 2019

Unified Payment Interface

Goods and Services Taxes

More than 400 million returns filed and over 800 million invoiced uploaded

PM-JAY

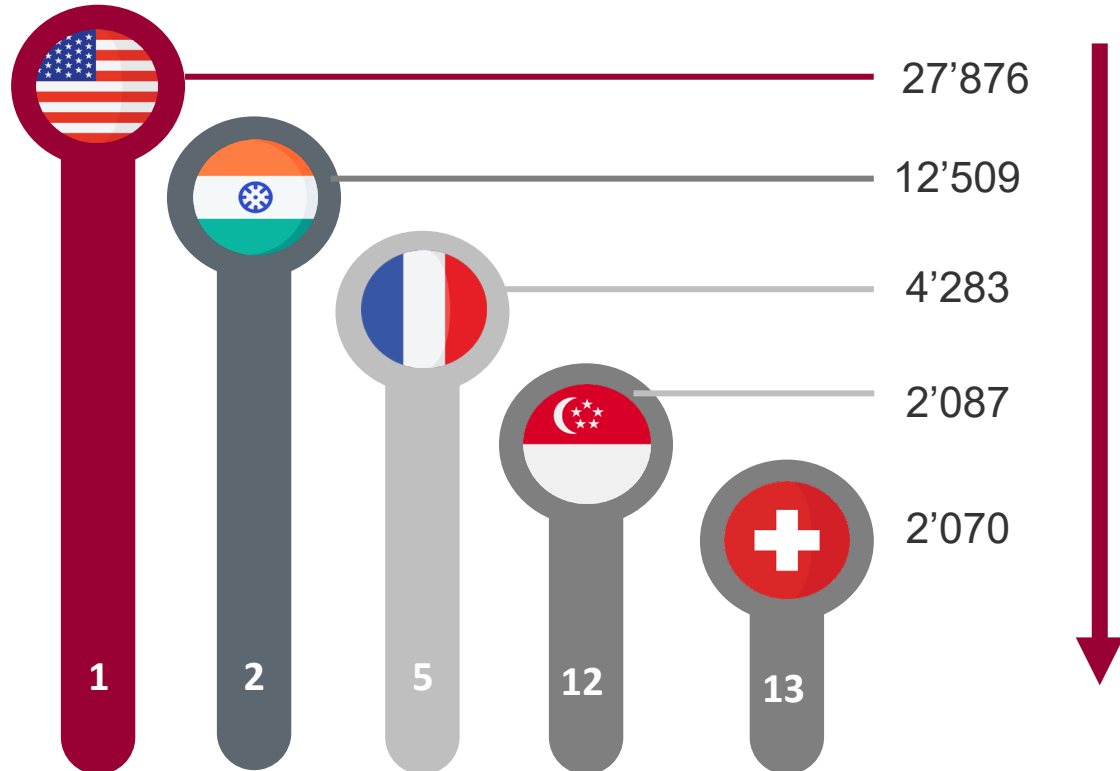
World's largest healthcare initiative with **500 million beneficiaries covered** and over **8 million hospital admissions** till now

Growth Drivers

Data is more valuable than oil, couple it with availability of skilled workforce and smarter innovation along with numerous problems to solve.

Number of Blockchain Developers by Country (2018)

Blockchain is also expected to create about 30,000 jobs in India by 2020



Sources: Dapros, Disclaimer: Information was collected through open sources such as LinkedIn – So if a person would not have highlighted in his profile that he is a blockchain developer then the same would have not been taken into account.

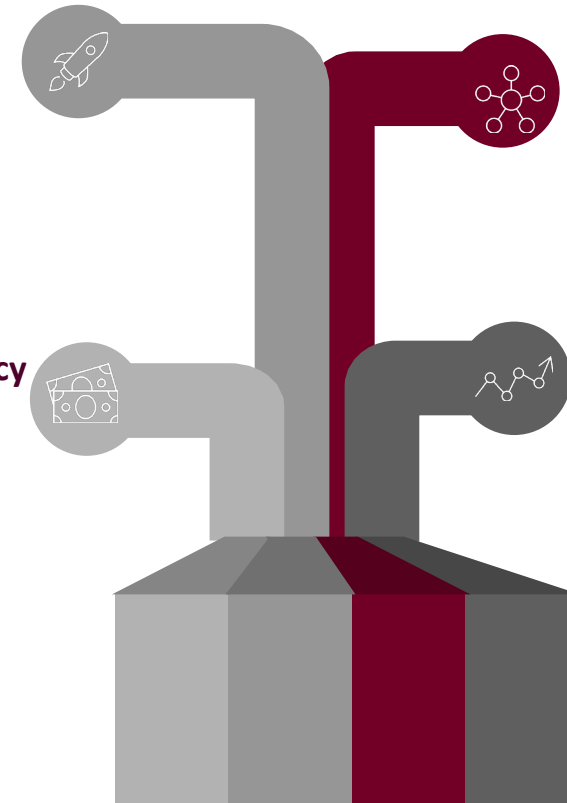
What is causing the Growth of Blockchain ?

Digitization

- Data is worth more than oil
- Lowest cost of Data across the world
- 2nd Highest number of smartphone users
- Highest per capita usage of data at 9.8 GB per month

Procedural Inefficiency

- 3 – 4 times more middlemen in supply chains as compared to developed countries.
- Use of legacy systems.



Cybersecurity

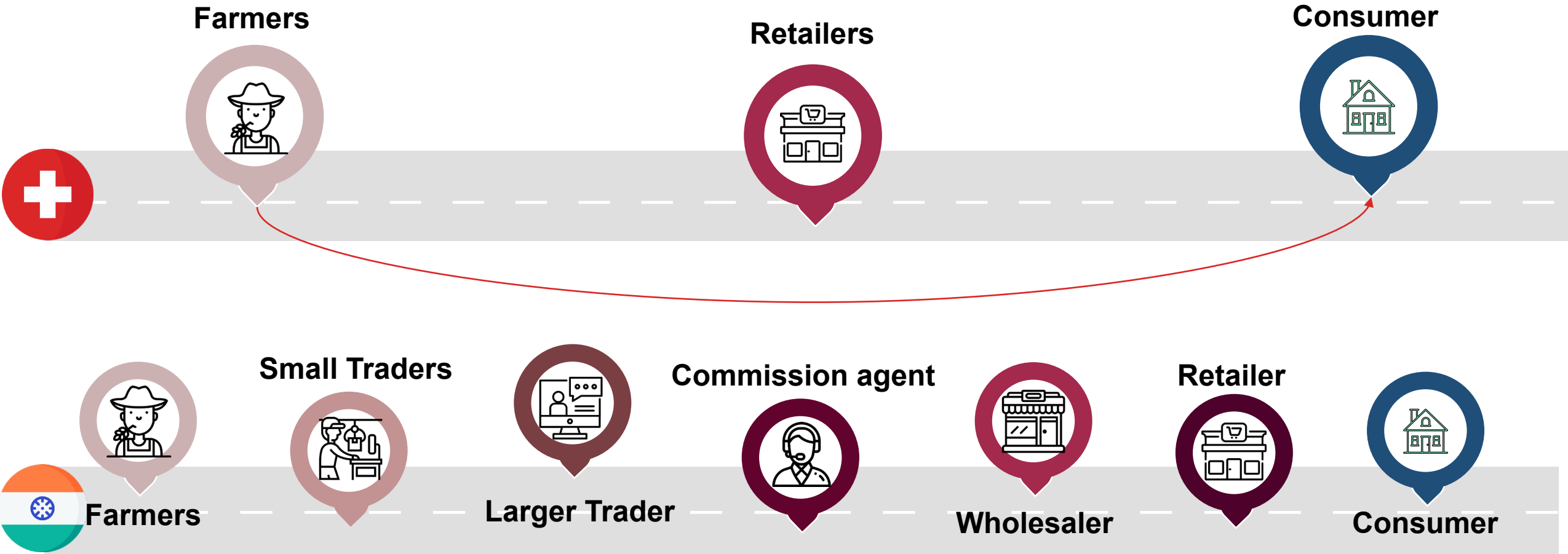
- India ranked amongst the top 5 countries to be affected by cybercrime
- Growth in data has led to higher security requirements

Service as an Export

- India is a global powerhouse for export of software services and enterprise applications.
- Several foreign firms outsourcing their blockchain requirements to India

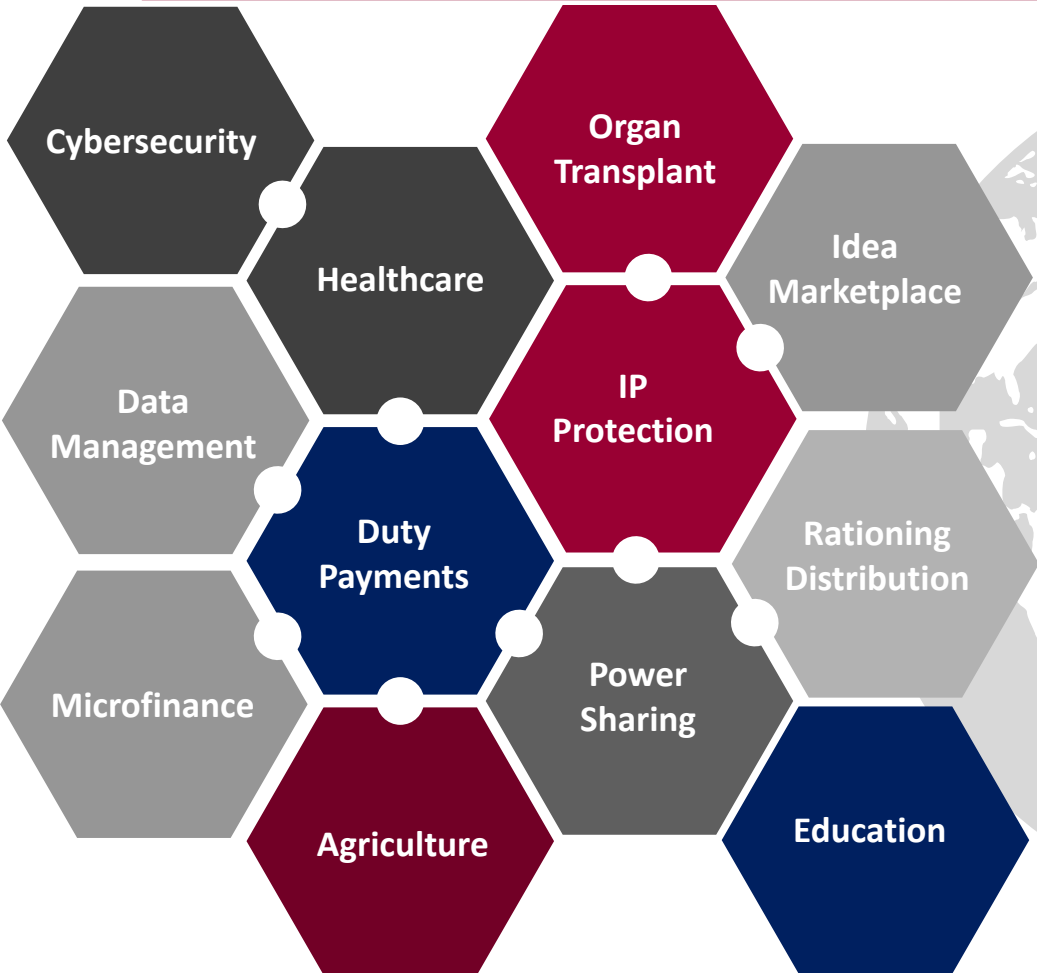
Farm Supply Chain – Switzerland V/S India

Indian Supply chains are ancient and complicated



Blockchain in the Indian Public Sector

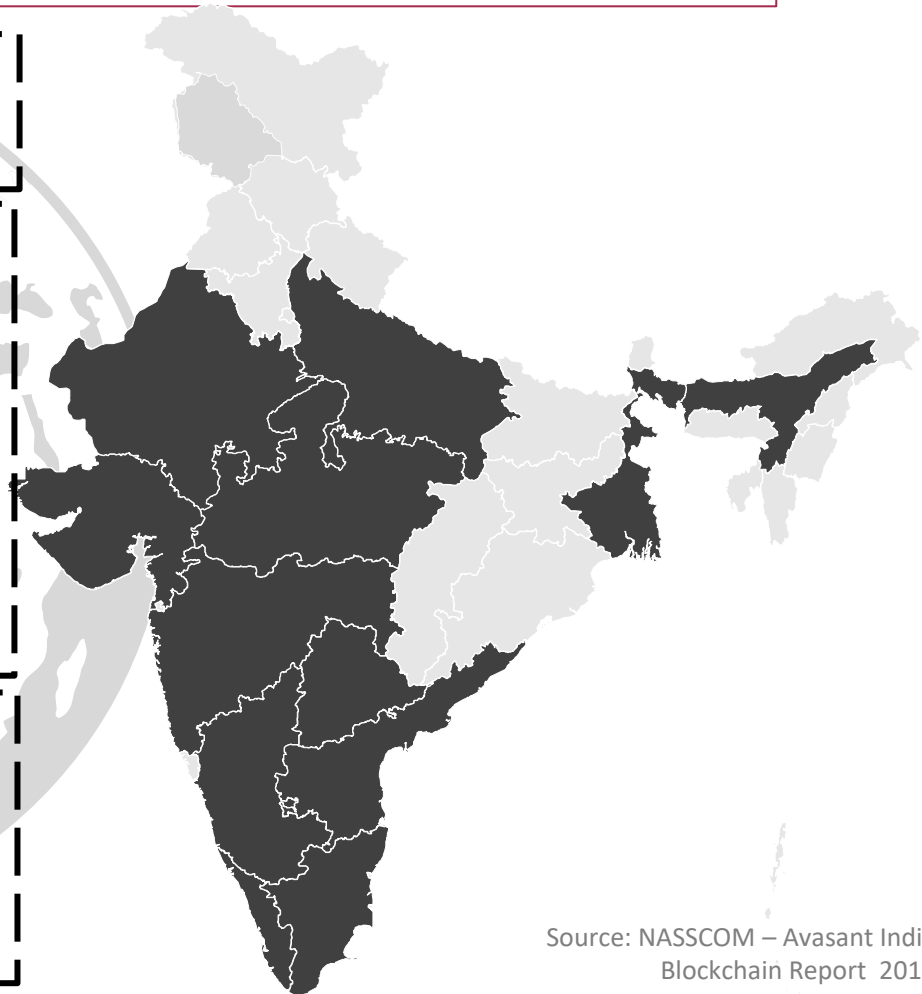
Proactive participation of various state governments to use blockchain is an indicator of its widespread application in a data rich country like India



About 50% of the Indian states are involved in Blockchain related initiatives

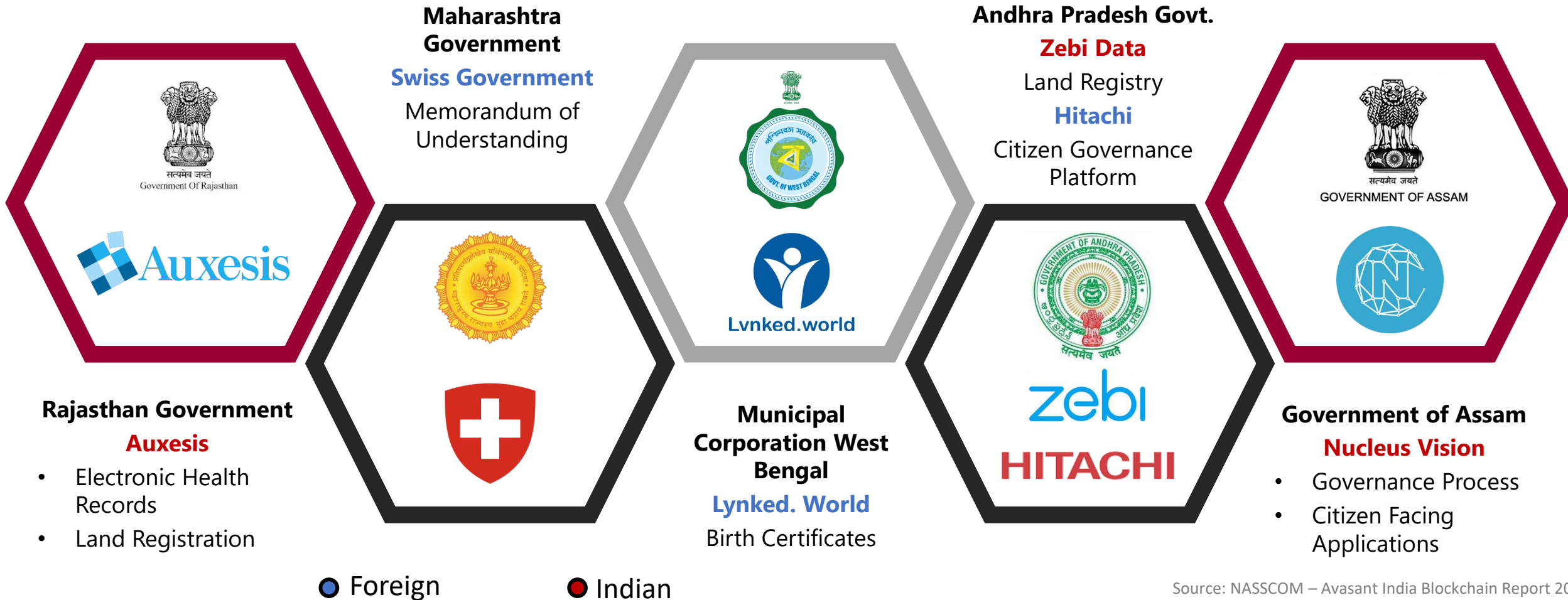
Favorable innovation and procurement policies by government entities (for example, in State of Telangana) have enabled Blockchain startups to overcome some of the entry barriers posed by public procurement policies for technology implementation projects

State governments are providing regulatory sandbox to blockchain start-ups to experiment their technology and to provide a Proof of Concept.



Collaboration Between Governments and Private Companies

The Indian state governments have been taking assistance from Indian as well as foreign blockchain companies to improve governance and provide services to the citizens of their respective states.



Government Use Cases

Government think tanks have been working actively to promote blockchain in India

Land Ownership

Challenges

- Legacy Systems
- Sale through Deed
- Manual Storage
- Subject to Adverse events
- Possibility of Tampering

Solution

- Bring existing stakeholders onboard
- Give Read/Write Access
- Ability for citizens to manage transfer
- Single User-Friendly Portal
- Ability to view status

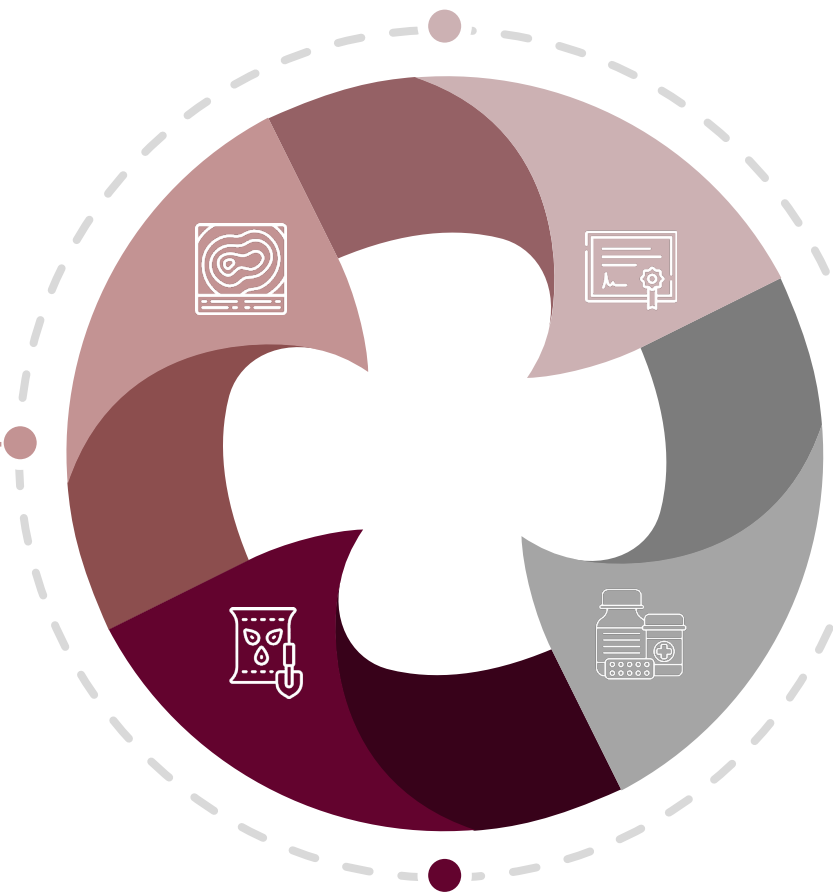
Fertilizer Subsidy

Challenges

- Process inefficiencies
- Limited visibility of stock and inventory
- Inability to track loss and pilferage
- Multiple data entry points
- Isolated claims data

Solution

- Immutable data bank
- Shared with all stakeholders
- Linking invoice to production
- End to end visibility
- Settlements and claims
- Real time claims and stock management



Educational Certificates

Challenges

- verification
- Centralization
- Lead Times
- Ease of Breach
- Possibility of Tampering

Solution

- Built SuperCert, a permissioned blockchain. encryption
- Decentralized
- Intelligent identity
- Identity interlinking for issuance
- Online and Offline verification

Pharmaceutical Supply Chain

Challenges

- Risk of fake drugs
- Complex supply chain
- Multiple data entry points
- No real time updates of inventory
- Multiple stake holders and middlemen

Solution

- Each transaction pushed by internal systems through an automated manner
- Each entry is time stamped to ensure safety
- Manufacturing inputs linked to final product
- Location and temperature logged through IoT devices and made available to all stakeholders

How Private Organisations are Implementing Blockchain

Precious Gems

Gujarat-based diamond companies have started investing in blockchain technology. Their solution tracks a stones journey from rough diamonds mined in the world to the end consumer



Cold Chain Solutions

An organization in India is making use of blockchain based cold chain solutions for tracking of temperature and tampering while delivery of vaccines



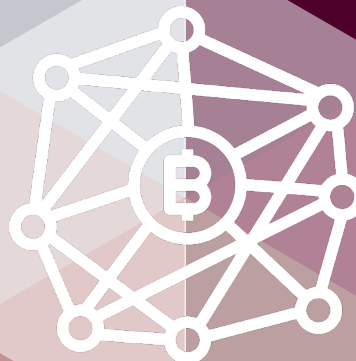
Healthcare

A prominent hospital chain in India, in partnership with a blockchain startup is exploring avenues to combat fraudulently modified documents and lack of digital data verification. This is being done by ensuring that all data points are auditable, traceable, controlled and immutable,



Banking

Bankchain was built by a consortium of some of the largest banks in India. It allows banks to share Valuable data such as KYC, AML, CFT, Investigation reports, Suspicious transaction reports, and Cross border wire transfer reports among the participating banks. This helps reduce frauds and improves efficiency and is being used actively.



Bill Discounting

An electronics manufacturer in India is using blockchain to eliminate manual steps required for discounting bills



Insurance

One of the prominent insurers in India is using a blockchain solution for speedy settlement of travel insurance claims.



Opportunities in the Indian Blockchain Space

Universal Basic Income and Digital Currency

- 10.7% of the population living under USD 1.90 Per day
- Part of population unbanked but have mobile access.
- Allow relief to people living in poverty with easy fund disbursement
- Will increase acceptability of new technology

Fundraising

- Allow new form of fundraising
- Will allow private individuals to invest without any minimum limits in emerging technology

More Opportunities

Financial Services

- Trade Finance
- Security Record Keeping

Travel and Transportation

- Shipping Documentation

Manufacturing & Supply Chain

- Anti-Counterfeiting

Insurance

- Claims Management
- Customer Data sharing
- KYC
- P2P Insurance

Government and Non-Profit

- Asset registration
- Asset Tracking
- Digital Identity
- Food Distribution

- Digital land and vehicle registry

Banking

- Cross Border Payment
- Client Onboarding
- KYC
- Inter Bank Payments
- Syndicated Loans

Healthcare and Life Sciences

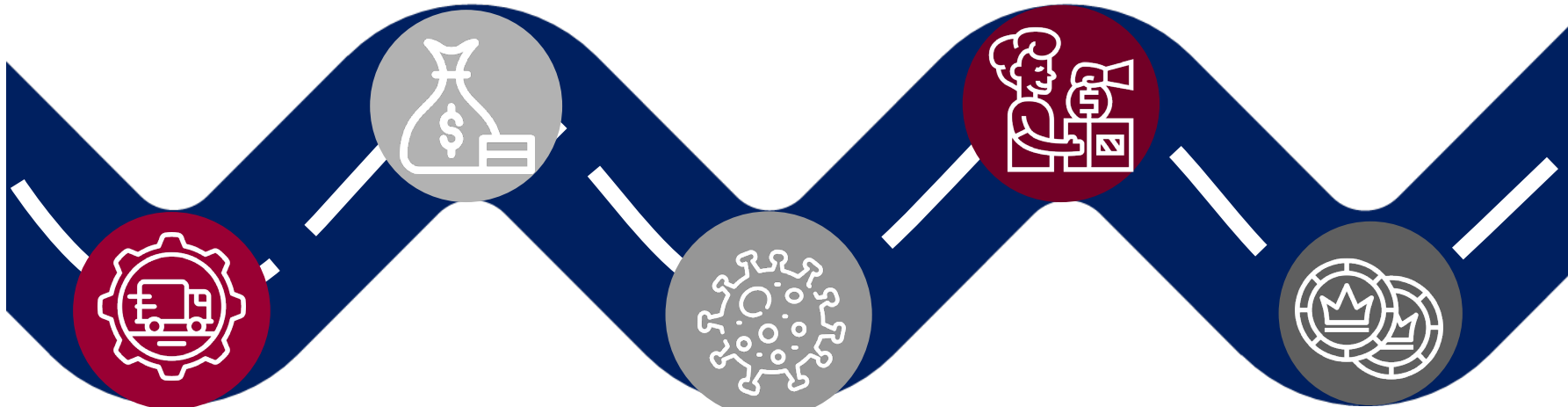
- Cold Chain Tracking
- Drug Provenance
- Pharma Track and Trace

Retail and CPG

- Supply Chain Traceability

Technology, Media and Telecom

- IP management
- Fraud Detection



Supply Chain

- Legacy supply systems
- Widespread Pilferage
- 40% of the food produced in India is lost or wasted
- Map out problem links in existing supply chains

Health Records

- Legacy supply systems
- Insurance Fraud
- Improvement in transparency, security.
- Faster Processing of insurance claims.
- Better Provision of Medicine

Tokenization and Fractal Ownership

- Currently, very few forms of fractal ownership present.
- Limitations to traditional fractal ownership mechanisms.
- Will improve mobility of funds into assets

THANK YOU
