

Transforming industries using consortium blockchains

- **An insurance example**
- April 22, 2022
- Pratap Tambe



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Introducing the Speaker

Head of BFSI Cyber & Blockchain Consulting, Tata Consultancy Services

- ❑ M.Sc. (Engg.) (Management studies), IISc Bangalore
- ❑ B.Tech. (Computer Sc. & Engineering)

- ❑ 25+ years of experience (10 years Insurance, 8 Banking and Finance, 8 years in Telecommunications and Retail)

- ❑ Well known for thought leadership in BFSI Blockchains (catastrophe modelling, blockchains in insurance, cybersecurity, cyber insurance, carbon accounting and trading, trade finance, carbon credit/debit NFTs, Modern Slavery credit/debit NFTs)

- ❑ **Views expressed here are my own and not those of TCS or its affiliates.**

Pre-adoption trajectories of different types of consortium blockchains

- **What are consortium blockchains? What are the advantages/disadvantages of different types**
 - Industry consortiums with equity investment by industry members, Industry associations without equity investment by industry members, Private company owned/operated
 - Mancur Olson – The problem of collective action (Strikes by Trade Union, Climate Change, Modern Slavery)
- **Pre-adoption challenges and best practices**
 - Proof of Technology is not needed, Proof of Value for one stakeholder is inadequate. Ecosystem value propositions evolve through iterations of consulting engagements and proof of value. Walk the path with one demo & PPT
 - Consider industry structure in designing balanced ecosystem value propositions
 - Create industry consortiums with representation of all categories of stakeholders
 - Choose the right stakeholder clusters and use-cases to maximize early adoption
 - » Growth and Transformation use-cases have more traction than Cost Optimization use-cases
 - » Clusters from some geographies, some stakeholder categories/sizes have more traction than others
 - » Multiple use-cases for each cluster gives better business case
 - » Gaining commitment to ecosystem value proposition requires conversations considering industry structure
 - Iteratively communicate use-case catalogue, feature list, commercial model, understand and address stated/unstated objections
 - Balance benefits and commercial models (Node costs, network access, use-cases) to get biggest MVE with largest business case
 - Essentially governance challenges abound in identifying, validating, financing, building use-cases in iterations
 - Fragmented governance has different challenges compared to governance dominated by few large parties – A new critical skill set

SI's as ecosystem partners to consortium blockchain anchors – pre/during/post adoption

Product engineering, Professional Services, Sustenance Services, Go-To-Market

- SI's who have customers in the target stakeholder clusters are a great asset
 - Getting representation from clusters into governance bodies
 - Getting participation in ecosystem value proposition design iterations from clusters
 - Scaling up ideation, market validation, design, delivery, roll-out, BAU support
 - Getting crucial SMEs and knowledge to unblock propositions
 - Getting access to less frequently needed skills on-demand
 - Scaling up global go-to-market to drive adoption
 - Getting access to remote markets without investing manpower
 - Scaling up global teams without increasing fixed costs

Key Questions to Adopt, Stages of Adoption, Attitudes to Adoption, Misunderstandings

What are the important things that do people not know about Blockchains in Insurance?

- **What are the key benefits of blockchains in Insurance?**
 - Reinsurance (e.g. **B3i Re**), International Programs (e.g. **B3i I3PT**), Managing General Agent (e.g. **B3i MGA**), Primary Insurance
 - How do the benefits and costs of insurance blockchain solutions vary across insured parties, brokers & insurers/reinsurers?
- **Who owns which data in blockchains for insurance?**
 - How is that different from the current situation in the insurance industry?
- **Brokers as well as insurers can be viewed as intermediaries between insured parties and capital providers. Can blockchains for insurance be used by one set of intermediaries to make the other set intermediaries more efficient?**
 - Does any one set of intermediaries have special advantages in doing this? Is there enough value on the table for all intermediaries, if they collaborate?
- **How will insurance blockchain solutions impact data architecture and application architecture in the insurance industry?**

What are the stages of adoption of Blockchains in Insurance?

- **Prove benefits of blockchain use cases for part/full friendly ecosystems (siloeed applications)**
 - Eliminate reconciliation effort and unallocated cash
 - You and your insurer will stop disagreeing about the detailed status of your insurance policy and/or claim. Your experience of the policy and claims processes will become more and more friction-free
 - Your experience of digital policy and claims workflows will integrate more and more ecosystem partners, so that you will get more and more choice of partners and the disagreements/friction with them about the detailed status of your interaction with them and friction will reduce.
- **Communicate benefits widely. Make blockchain/DLT easy to try out, easy to deploy and integrate blockchain nodes to enterprise systems.**
 - WYSIWYS beds in as the minimum expectation from all insurance businesses
- **Embed blockchain based transactions into various industries.**
 - Insurance will become integrated seamlessly into the customer experience of primary industries and become invisible as it merges into the digital customer experience of the primary industry.
 - Which other blockchain/non-blockchain platforms will collaborate/integrate with Blockchains for insurance? What benefits do blockchains for insurance generate over non-blockchains options in these scenarios?
- **Enable all benefits seamlessly across value chain globally**
 - In regional/closed ecosystems, across regional/closed ecosystems, In Global open market
 - Will there be one blockchain for insurance network or multiple in each region? Will/can they inter-operate, including across borders?

What are the different attitudes of prospects to Blockchains in Insurance? Who is best target?

- **Blockchain is waste of time.**

There are some people with vested interests who do not understand that Blockchain does not threaten their vested interests and are prejudiced and aggressive in their opposition. Only time will solve the problem of their aggression.

There are some non-prejudiced people who are aggressively against blockchain because they do not know what is it that Blockchain can do that other technologies cannot. Once they understand this they become less aggressive.

- **Blockchain has value, but will be suitable for only some applications.**

This is a good target segment to land with their preferred use cases and expand as their understanding improves. Once WISIWYS beds in, eyes open wide enough to see more of the promised land of milk and honey.

- **Blockchain has lot of value, but unless the whole value chain adopts it, it has no value.**

This is the top priority segment to target because Blockchain adoption can happen even if all stakeholders in the value chain do not adopt. There are ways and means to avoid everyone needing nodes.

What misunderstandings do people have about Blockchains in Insurance?

- We will need lot of Blockchain/DLT skills.
- We need to standardise everything in the ecosystem to use Blockchain/DLT
- All decisions will be made by Blockchain/DLT
- All data is visible to everyone
- Blockchain/DLT usage consumes lot of energy
- I have an ERP, so I do not need Blockchain/DLT.
- I am ready to adopt but my upstream and downstream value chain partners are not ready to adopt, so I cannot adopt.
- Deploying nodes and integrating my ERP to them is very difficult.
- I have automated/plan to automate my post-placement using ACORD so I do not need DLT (see next slide)

I have automated/plan to automate my post-placement using ACORD so I do not need DLT

How can we ensure high degree of straight through processing in the Industry?

- Only a handful of large reinsurance brokers have implemented ACORD with reinsurers
 - Only a handful of Cedants have implemented ACORD with their brokers
 - These reinsurers cannot do straight through processing unless their Cedants using ACORD with brokers because their Error-Query-Resolve flows will remain un-automated unless this happens
 - ACORD cannot generate a shared single version of truth store which is important to industry stakeholders
- To ensure high degree of straight through processing in the industry
 - Brokers who have ACORD gateways can choose not to deploy DLT nodes
 - Brokers not having ACORD gateways should deploy DLT nodes
 - Insurers and Reinsurers should deploy DLT Nodes and
 - Interact with brokers who prefer ACORD using the DLT Hub Node
 - Interact with brokers using DLT using DLT protocol
- DLT creates the shared single version of truth store which is important to industry stakeholders
 - This reduces settlement risk due to parties getting out of sync on agreed TA and FA records

Consortium Blockchains and Brokers

Broker sub-network strategy for consortium blockchains

Can brokers remain central connectors in the emerging insurance industry?

- Blockchains for insurance should offer brokers control of a sub-network controlled by them
 - Brokers control adding/removing people from the network
 - Brokers control the commercial model for the sub-network
 - Broker balances brokerage with node costs, network access, use-case (application) charges
 - Blockchains for insurance get a revenue share
- This complicates integration for insurers and reinsurers who may want to participate on the sub-networks of multiple brokers.
 - But this is technical problem which can be solved to ensure a smooth experience for all parties
- Multiple broker models can be enabled
 - Wholesale brokers can on-board insurers, retail brokers and insureds
 - Retail brokers can on-board insurers and insureds
 - Brokers and Insurers can create automated underwriting facilities on these sub-networks

Can we increase role of brokers irrespective of broker sub-network strategy?

Can enabling brokers to provide value-added services increase participation from brokers?

- Blockchain for insurance can support
 - Multi party process for corporate/individual/broker to
 - Create, validate, cleanse, augment, mint exposure NFT and assign it to the corporate/individual/broker
 - Review, validate, accept proposed changes to exposed NFT
 - Multi party placement process for corporate/individual/broker to
 - Place insurance policy for above exposure NFT generating policy NFT at bind
 - Place endorsement for exposure and policy NFT which augments the policy NFT with the endorsement
 - Multi party placement process for brokers to
 - Gather required details from corporate and create proof of insurance and proof of cover NFTs from policy NFTs
 - Enable the corporate to share the proof of insurance and proof of cover NFTs with other parties
- Corporates/individuals with SSI's should get keys to their exposure and policy NFTs in their wallet
 - Corporate/individuals should be able to use their SSI to grant/revoke access to part/full NFT for various types of access and end-uses for various periods of time

Zero broker strategies for consortium blockchains

Can insurers and reinsurers work through corporates to insure customers of corporates?

- Corporates can be target for different embedded insurance propositions
 - Original Equipment Manufacturers (OEMs) : Integrated Motor Insurance Propositions **761B USD GWP**
 - Travel GDS/OTA/Marketplace players : Integrated Travel Insurance Propositions: **12.5m USD GWP**
 - Energy Blockchain players : Integrated Property & Power Generation Insurance Propositions: **500m USD GWP**
 - Banking Bancassurance players : Integrated Property and Liability Insurance Propositions : **106B USD GWP**

- Embedded insurance starts with white label relationships, moves through MGA relationships and ends with captive insurer relationships
 - [3 Trillion USD Market Opportunity by 2023](#)
 - Blockchains for Insurance can together simplify the end-to-end journey for corporates in terms of systems, processes, people. E.g. for OEMs the following can be done
 - For White label partnership, OEM implements Cloud Node and integrates POS, Repair Network System and Part Sales System to the Node.
 - OEM can become MGA, *without much change* to OEM integrations. Admin systems can be implemented & integrated in Cloud.
 - OEM can become captive insurer, *without much change* to OEM integrations. Admin systems can be implemented & integrated in Cloud

Accelerating Adoption

Can we enable an SSI + credentials framework to help accelerate adoption?

Microsoft Decentralized Identity can enable the following

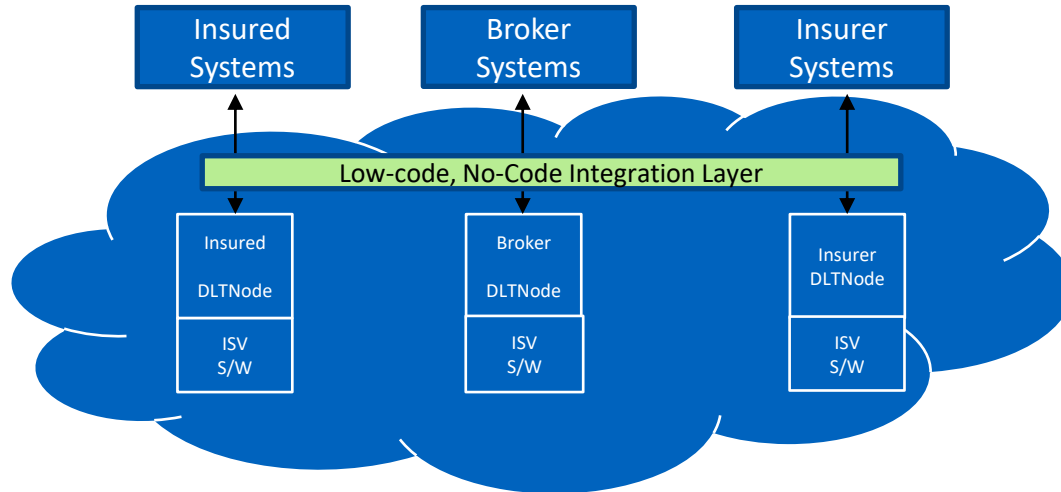
- Consortium blockchains should
 - Enable corporates, corporate staff and customers to create SSI
 - Enable corporate SSI to do KYC, AML and acquire consortium membership credential
 - Enable corporates to give credentials to their staff and customers that they are staff or customers

 - Enable corporate staff to gain corporate approval and
 - Deploy cloud node for corporate and integrate the node to B3i network
 - Select and deploy B3i Applications and their APIs to this Cloud Node

 - Support corporate staff to configure corporate applications to integrate with B3i Application APIs
 - Corporate applications may need modification do DID-auth with staff/customer SSI before requesting staff/customer credentials
 - Corporate applications send corporate SSI + credentials & Staff/customer SSI + credentials while invoking B3i Application APIs
 - Corporate applications may need be modified to generate the business payload needed by the B3i Application APIs

How can Enterprise Operations/Documentation Systems Partners help accelerate adoption?

Can we identify ISVs which have a reason to bundle a node integrated with their products?



Context

Enterprise Operations and/or Document Management Systems to Insured parties, Broker Parties, Insurer Parties and Reinsurer parties receive almost all data & documents required by DLT APIs and may have a reason to bundle a node integrated with their products

Proposed strategy

Create an attractive commercial model to incentivise these players to bundle nodes with new implementations and/or run a sales programme to bundle nodes with upgrades.

How can cloud partners be leveraged to help accelerate adoption?

There are distinct advantages to leveraging cloud vendors to accelerate adoption

- Prioritize customers of cloud vendors who already having enterprise systems integrated to cloud
- Invest in demonstrations for clusters (Insurer-MGA for MGA application, Insurer-Broker-Corporate for International Insurance application and Insurer-Broker-Reinsurer for Reinsurance application)
 - Needs primarily data creation, demo video creation and ppt/word document creation
- Do a campaign to demonstrate and propose pilots with respective enterprise systems
- Identify clusters of industry players suitable for adoption and build business case
- Sign-up, onboard, deploy, live cut-over

How can DLT Hub Nodes be leveraged to help accelerate adoption?

Parties with nodes create DLT network & use DLT Hub to work with parties not willing to deploy nodes

- Parties not ready to deploy nodes, but ready to use SaaS service from shared node
 - DLT Hub provides SaaS service intermediated by Smart Contract Proxy for parties on the DLT
- Parties not ready to adopt, but can send and receive ACORD messages
 - DLT Hub provides ACORD G/W integration intermediated by Smart Contract Proxy for parties on the DLT
- Parties not ready to adopt, but can send and receive E-Mail/FTP messages
 - DLT Hub Smart contract Proxy sends structured E-mail/FTP messages to parties
 - DLT Hub receives E-mail/FTP messages, processes them using Human-intermediated AI/ML and may resend E-mail/FTP message back and request confirmation before processing using Smart contract Proxy for parties on the DLT

Questions And Answers