wipro.com

Adopting A New Approach To Demystify The Future Of Insurance With Blockchain

The traditional ways of maintaining centralized information and trust have resulted in organization specific silos and inefficiencies in technology systems. However, in a collaborative and shared economy, trust is derived from transparency. This is offered by Blockchain participants with the ability to share an updated ledger every time a transaction occurs through peer to peer replication. Cryptography is used to ensure that network participants see only those parts of the ledger that are relevant to them, and that transactions are secure, authenticated and verifiable.

Understanding Blockchain technology

Blockchain is a distributed ledger that contains a continuously growing list of data records on decentralized servers, working as nodes. Every node has a complete copy of the Blockchain, a shared single source of truth. The nodes maintain a copy of the ledger along with the cryptocurrency through a process called mining. The transaction is added to the ledger when a majority of the nodes agree on the validity of the transaction. Blockchain is gaining popularity and acceptance in the banking, financial services and insurance (BFSI) markets. Figures 1 and 2 describe how Blockchain works.

Blockchain is a peer-to-peer public ledger maintained by a distributed network of computers that requires no central authority or third party intermediaries.

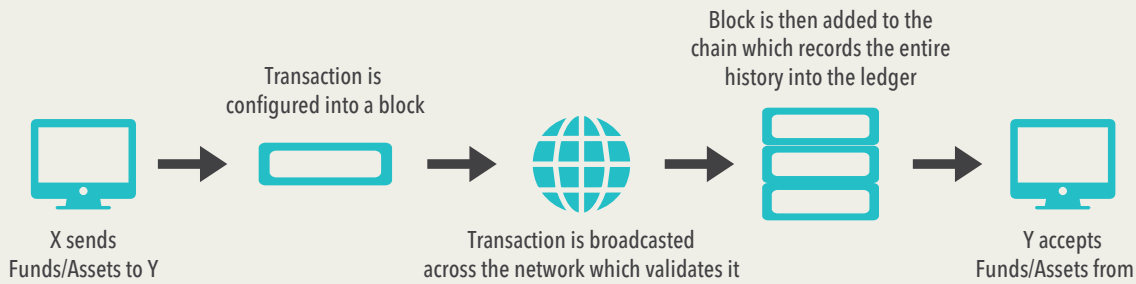


Figure 1: How Blockchain works

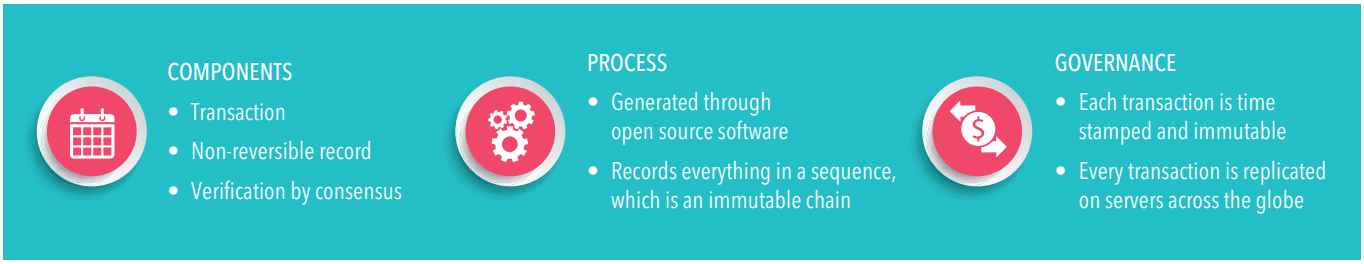


Figure 2: How Blockchain works

Blockchain in insurance: overview

The insurance industry is shifting to open technologies, open talent networks and open information systems. Given this scenario, Blockchain and Smart Contract solutions have the potential to fully automate insurance markets, while locking and unlocking funds, as prescribed conditions are met, dynamically pricing risk and enabling new markets to evolve.

Over time, disintermediation could take place as new peer-to-peer insurance markets, powered by Blockchains evolve. Instead of depending on insurance intermediaries for financial security, customers would rely on the technology enabled transactions. Figure 3 elucidates the opportunities presented with Blockchain.

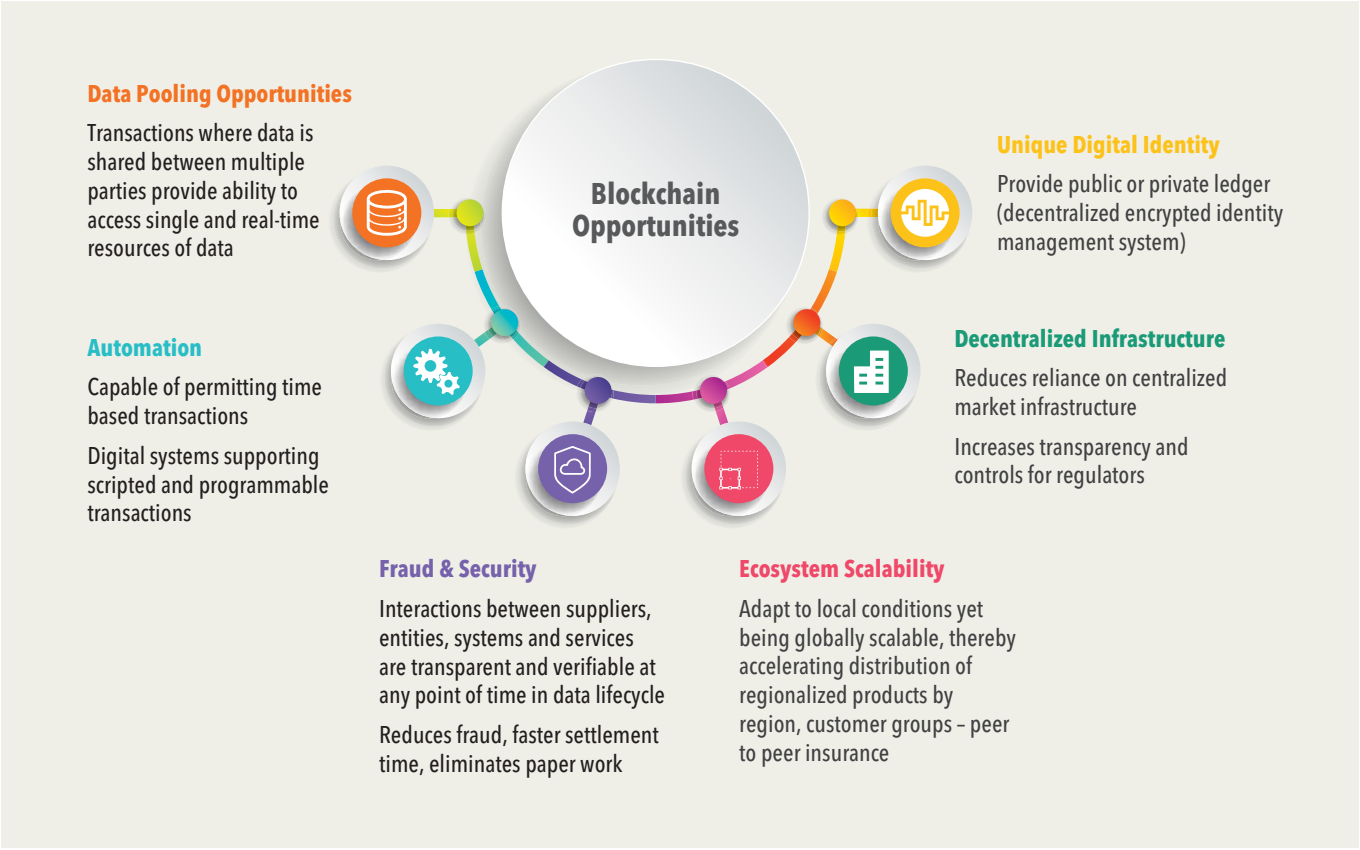


Figure 3: Opportunities presented by Blockchain

Blockchain can address the competitive challenges many incumbents face, including poor customer engagement, limited growth in mature markets and the trends of digitization. Insurance-related use cases are likely to benefit in enabling growth, increasing effectiveness, and reducing cost by automating key processes.

Blockchain as a technology has evolved over a period of time from first generation to third generation.

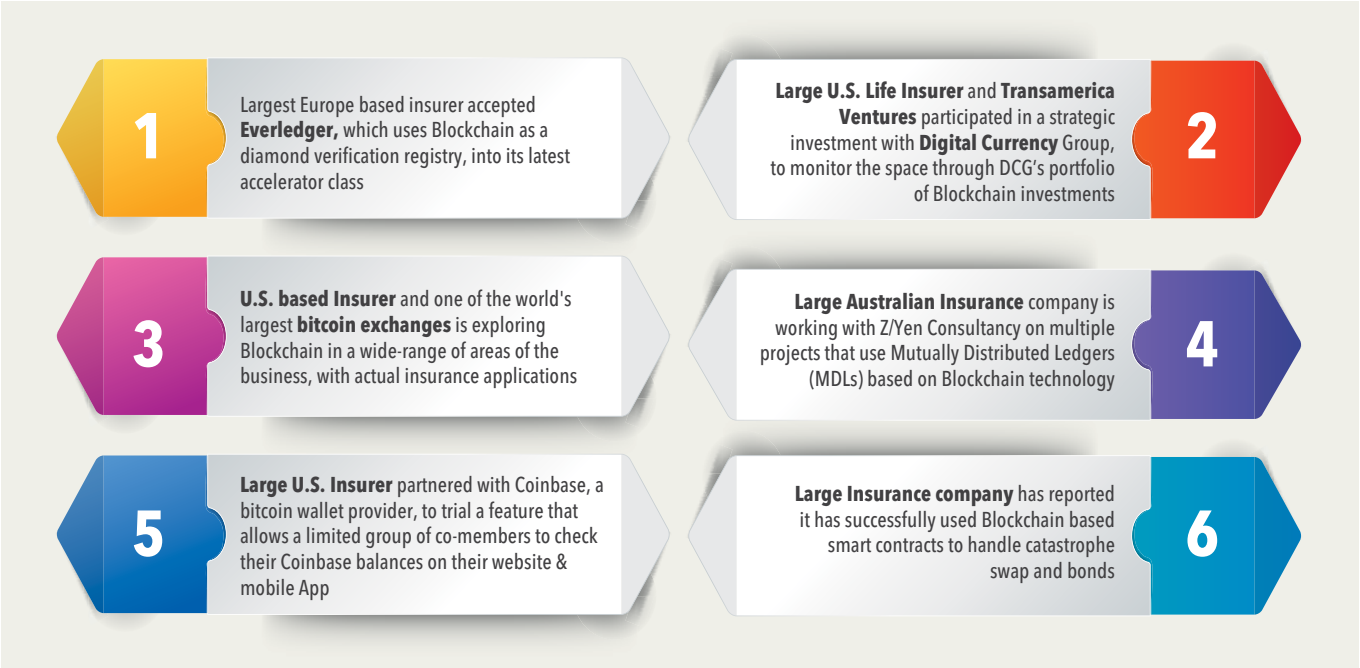
1. **First generation**- Blockchain technologies based on capturing:
    - Unique identities
    - Protecting sensitive customer data
    - Maintaining a payments transaction audit trail
2. **Second generation** - Blockchain technologies based on capturing:
    - Content (contracts, documents, claims forms, invoices that ink end transactions with client, policy or claims documents)
    - Access to third-party information
3. **Third generation** - Blockchain technologies based on capturing:
    - Programmable services (indexation of assets – driving third-party automation verification services)
    - Internet-of-things data reporting

Benefits of implementing Blockchain:

The core advantage of the Blockchain as decentralized ledger is that it exists in an endless number of nodes as the higher number of nodes maintains transparency. Through the elimination of intermediaries, Blockchain ensures lower fees, irrespective of what the ledger may hold. The data in the distributed ledger can hold any amount or information, not just a cryptocurrency like bitcoin. The data is both individually identifiable and programmable. This means that users can assign properties to the data. Users can also program the data to represent an amount in a currency, a share in a company, or even diamond certificates. Figure 4 describes the salient benefits of implementing Blockchain.

Figure 4: Benefits of implementing Blockchain

Trends in Blockchain insurance



Blockchain: conditions for its applicability

The implementation of Blockchain should be considered under certain conditions. Blockchain offers a disintermediation solution if the transactions involve multiple parties and require not only the assurance of an intermediary, but also a precise and immutable record of the date and time. Blockchain can be useful in situations where the parties involved in transactions have potentially competing incentives, and retroactive manipulation of data is risky, or multiple uses of the same asset are very likely, and no central trusted authority is available or wanted. Conversely, if transactions involve only a limited number of parties – or do not require an intermediary – or if a well-established, trusted intermediary already exists, insurance players can continue working under their current transaction models. Insurance companies need to familiarize themselves with limitations of this technology in terms of scalability, security and standardization. Figure 5 sums up the conditions for Blockchain applicability.

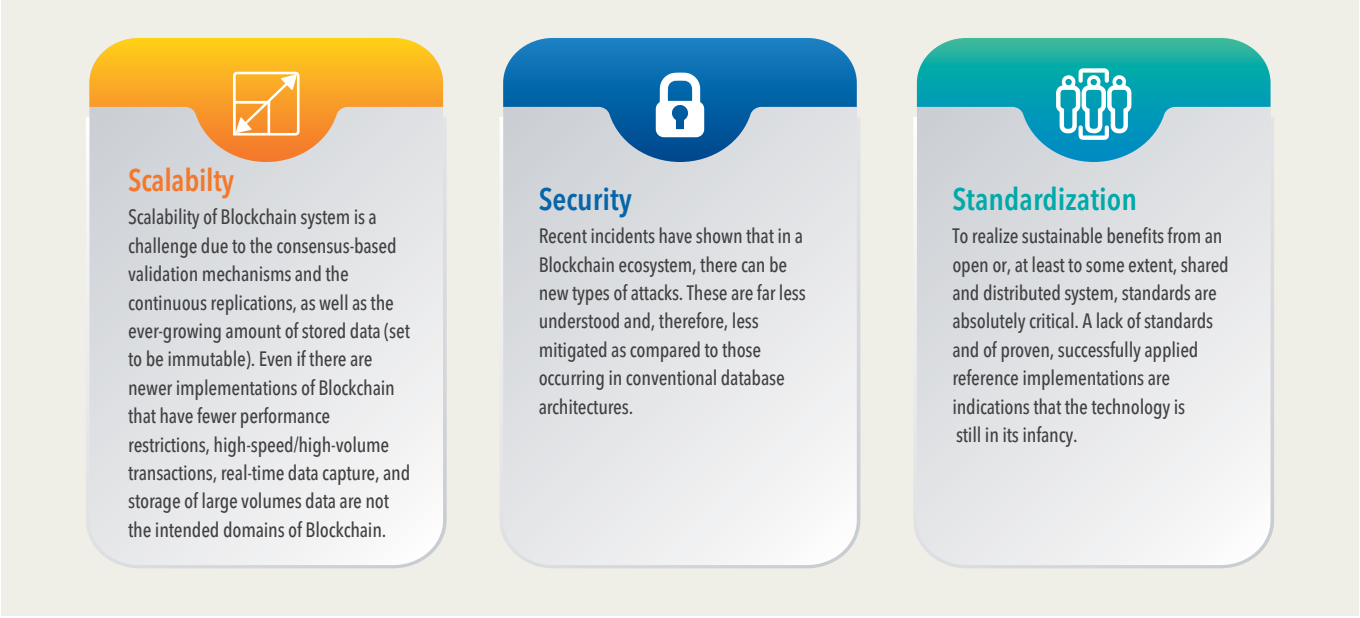


Figure 5: Conditions for Blockchain applicability

Blockchain use cases in insurance:

The initial value of Blockchain in insurance will result from initiatives which are not broad based across value chain and enterprises. It could find best use cases to build proprietary systems and reduce the costs, while at the same time increase efficiencies of the large financial institutions.Instead of deriving value from a new exchange, eliminating significant information discontinuities between multiple parties in existing business processes will be beneficial. The central goal will be to reduce or eliminate gaps in service and inefficiencies that have traditionally been marked as 'inherent costs' of insurance transactions - extended wait times, high settlement costs, and extensive negotiations on facts. Figure 4 details near-term applications of Blockchain technologies, which are either under way or can be expected soon.

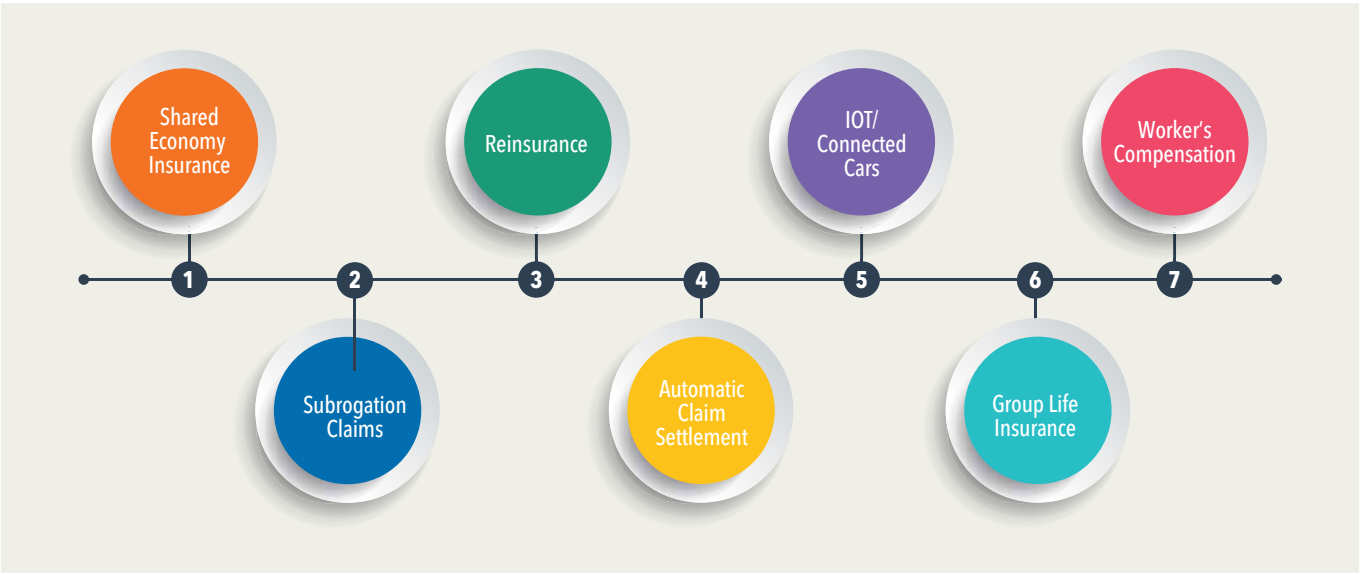


Figure 6: Near term application of Blockchain technologies

Shared economy insurance: The growing popularity of platforms based on sharing economy makes it imperative to provide real-time insurance coverage to the renters who book on this platform. The dynamic insurance, when offered through the Blockchain technology, can help real-time usage based insurance while maintaining the entire history of transactions. It will help in reducing the operational cost and maintaining the transaction history for future reference.

Subrogation in claims: While the current subrogation is highly manual in nature, insurers can leverage smart contracts to automate the processes of claim notification, loss investigation and recoveries from other insurers and reinsurers. This reduces the number of interactions between various parties, especially the call centers that spend considerable time on responding to queries of other insurance companies, claims intake, legal institutions and third parties.

Automatic claims settlement: The loss notification for an accident is trigged by the call center, smartphone app or connected car via the internet to the Blockchain and activates the smart contract. Once all the policy conditions coded into the smart contract are met, details are sent to the nearest workshop to prepare for parts replacement, the insurer is notified, and payment is triggered.

Reinsurance in insurance: This entails recording details of claims so that insurers and reinsurers can accurately share policy contracts, risk sharing and loss information costs between them. In this case, it

reassures reinsurers that the information provided existed at that point in time since the Blockchain provides an immutable record of claims and time-stamp when the claims are made.

IoT – Smart homes and connected devices: If accidents or problems are detected by sensors in the home / cars, devices can use Blockchain to trigger a set of instructions that automatically transfer cash for repairs from an insurer. Blockchain in IoT can solve the trust issues businesses face when building smart devices that can communicate and operate autonomously. Instead of having a human verify each change in the system, the Blockchain can verify each communication, transaction and change.

Group life insurance: Group life insurance policy involves employer as the owner of the policy with the employee as beneficiary. Therefore, all the changes are required to be routed through the employer to the insurer. Currently the process is highly manpower intensive and can be quickly automated in real-time by integrating the tri-party system through Smart Contract execution on Blockchain.

Workers' compensation (WC): Insurers are facing huge number of claim frauds through workers' compensation. Blockchain technology allows sharing of information between multiple parties. In this case, the health records and employment records, which are maintained digitally can be accessed by the insurer to decide on the actual loss suffered by the insured persons. This reduces the chances of fraud in WC and the claim settlement turn-around time.

Insurance proof of concept on Blockchain: shared economy insurance

Wipro has developed a solution that shows how insurers can form a Blockchain-based consortium to enable property sharing platforms to provide 'pay-per-use' property insurance in the sharing economy. The solution showcases a peer-to-peer (P2P) based insurance scenario involving multiple parties in a shared economy network. It demonstrates the ability to mobilize, validate and manage a P2P insurance using a marketplace platform to reduce latency and enable instant entire quote-to-policy process through smart contracts. Data points from different source systems that represent changing risk factors are captured.

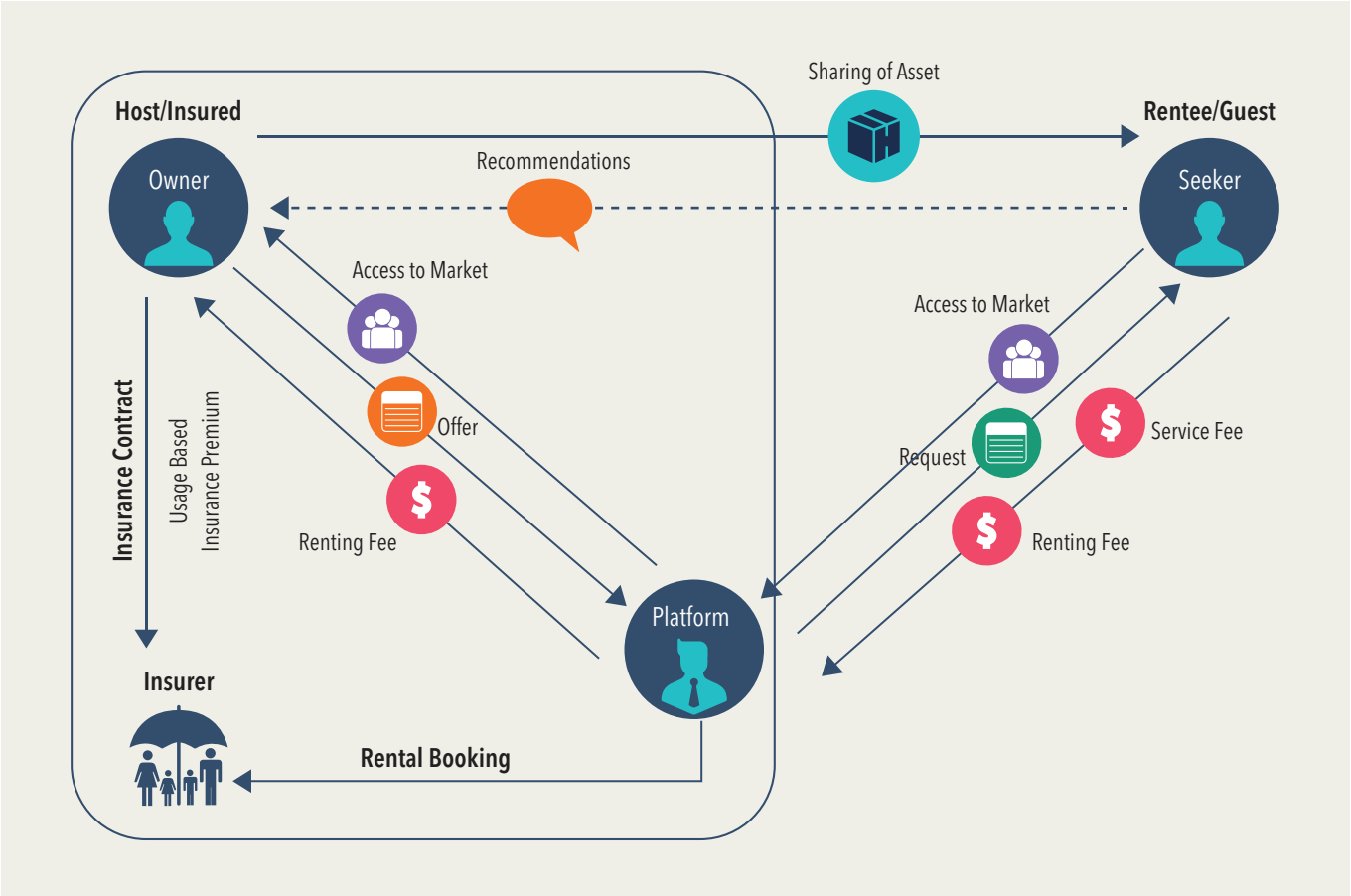


Figure 7: Shared property insurance on Blockchain

- Helps insurance companies offer its products to customers by participating in a shared economy ecosystem, while maintaining a history of insurance transactions on the Blockchain
- Coordinates the provision of products between counter-parties in near real-time and to radically cut the cost of this coordination. It can be used for facilitating and validating insurance transactions.

- Facilitates usage of Blockchain for timestamping the guest check-in and check-out, and accordingly trigger the insurance contract, service and settle claims.
- Enables of seamless integration with insurers' systems for policy administration, pricing, billing and claims processing needs

Wipro's capability in Blockchain

We are a thought-to-finish partner for our clients in their Blockchain journey. We bring respected and well-recognized advisory services to clients on Blockchain technologies, construct Blockchain networks and tailor solutions, leveraging our Center of Excellence (CoE) combined with our powerful Blockchain partner ecosystem. We help clients experiment and deploy proof-of-concepts on Blockchain technologies and incrementally expand to scale to production releases. Our thought leaders regularly educate clients, partners and CxOs on the power of Blockchain for today and tomorrow.

People

Technology:

- Blockchain SMEs
- Blockchain Architects
- Developers (Java / Node JS)
- Business & Functional Consultants
- Sand Box Environment for research and use case development

Process

Frameworks:

- Real time & real advice
- Rapid strategy development for emerging payments
- Use case attractiveness & complexity management

Execution Models :

- Risk / Success / Outcome Based
- BaaS – Blockchain-as-a-Service

Partner Relationships

Strategic Partners: IBM & Microsoft

- Executive sponsored strategic partnerships and reseller relationship
- Joint Blockchain labs, advisory and implementation services to our customers

Niche Vendors: Consensys, Stellar, Ripple, Loyyal, Bity, Traxpay, Netki

- Focused on specific Blockchain application use cases
- Access to the product / platform demos and technology enablement sessions

Co-innovation through Collaboration

About Wipro

Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading information technology, consulting and business process services company that delivers solutions to enable its clients do business better. Wipro delivers winning business outcomes through its deep industry experience and a 360 degree view of "Business through Technology." By combining digital strategy, customer centric design, advanced analytics and product engineering approach, Wipro helps its clients create successful and adaptive businesses. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, Wipro has a dedicated workforce of over 170,000, serving clients across 6 continents. For more information, please visit **wipro.com** or write to us at **info@wipro.com**

DO BUSINESS BETTER

CONSULTING | SYSTEM INTEGRATION | BUSINESS PROCESS SERVICES

WIPRO TECHNOLOGIES, DODDAKANNELLI, SARJAPUR ROAD, BANGALORE - 560 035, INDIA. TEL : +91 (80) 2844 0011, FAX : +91 (80) 2844 0256

IND/B&T/JUN-DEC2016