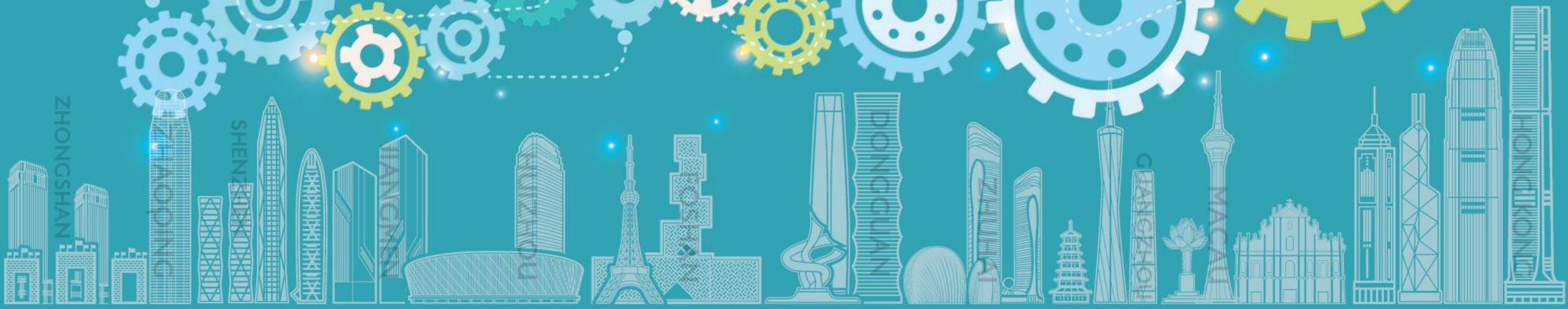




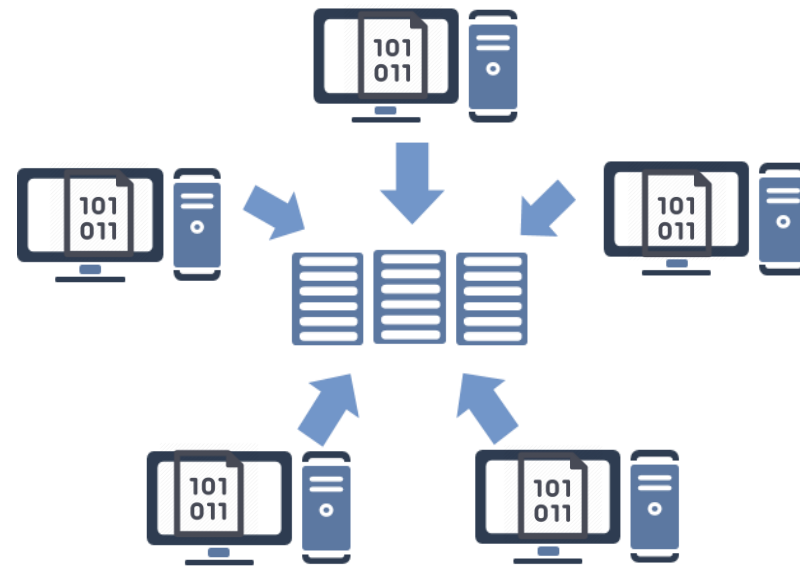
LOGISTICS SUMMIT
物流高峰會 2019

**The Pivotal Role of Hong Kong
in the Greater Bay Area**
物流新科研 創建大灣區



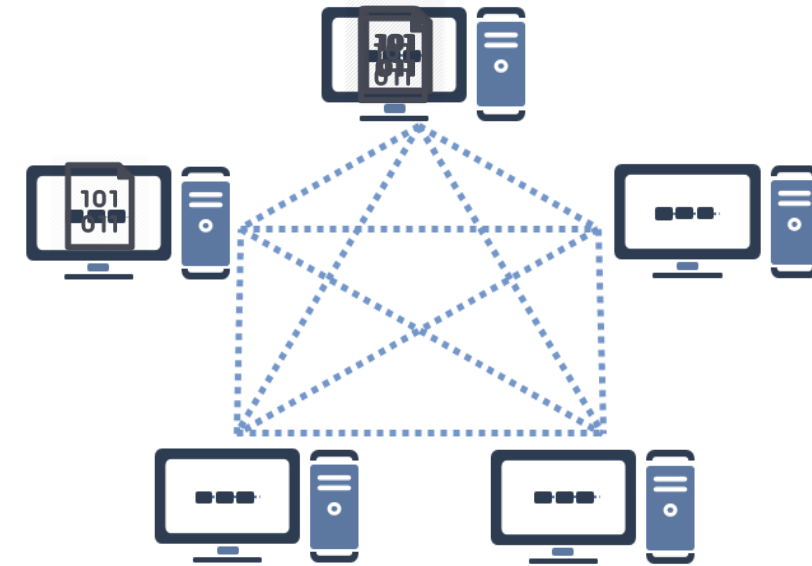
Blockchain Properties

- Immutability / Tamper detection
- Anonymity
- Decentralized
- Traceability



Conventional

V.S



Blockchain

Track and Trace



- Challenges in complete track and trace system:
 - Involves multiple parties
 - Huge number of log entries
 - Response time requirement
 - Counterfeit of labels/tags

RFID and Blockchain technology to help investigate counterfeiting problem in supply chain

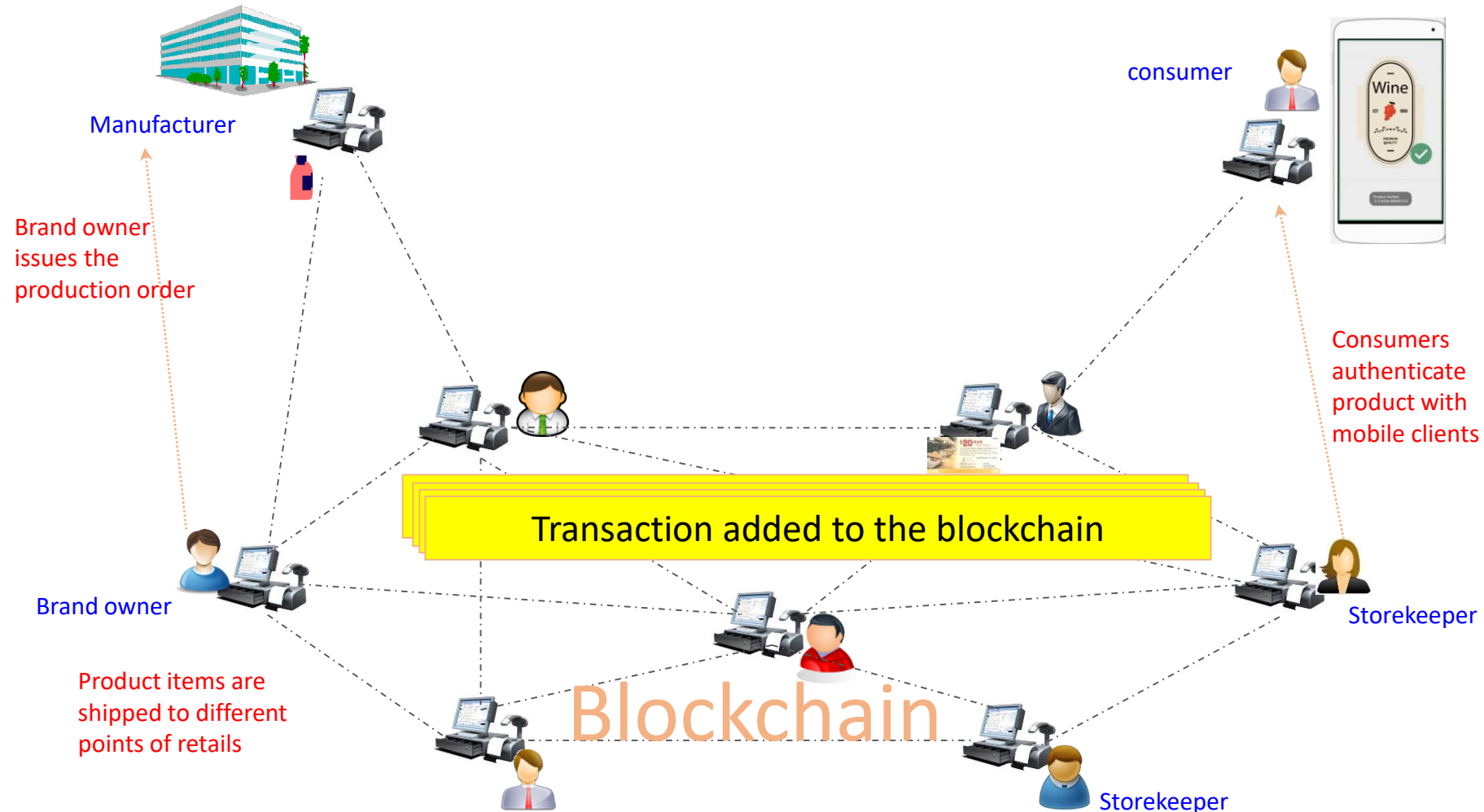
- Goal of the platform
 - To ensure product integrity
 - Get insight on the sources of the counterfeit items
- Strength
 - Low-cost RFID tag can serve as the unique ID for the item
 - Data storing on Blockchain is immutable, and the blockchain infrastructure can be “shared” by multiple parties, i.e. brand-owners, manufacturers, chain stores, etc.



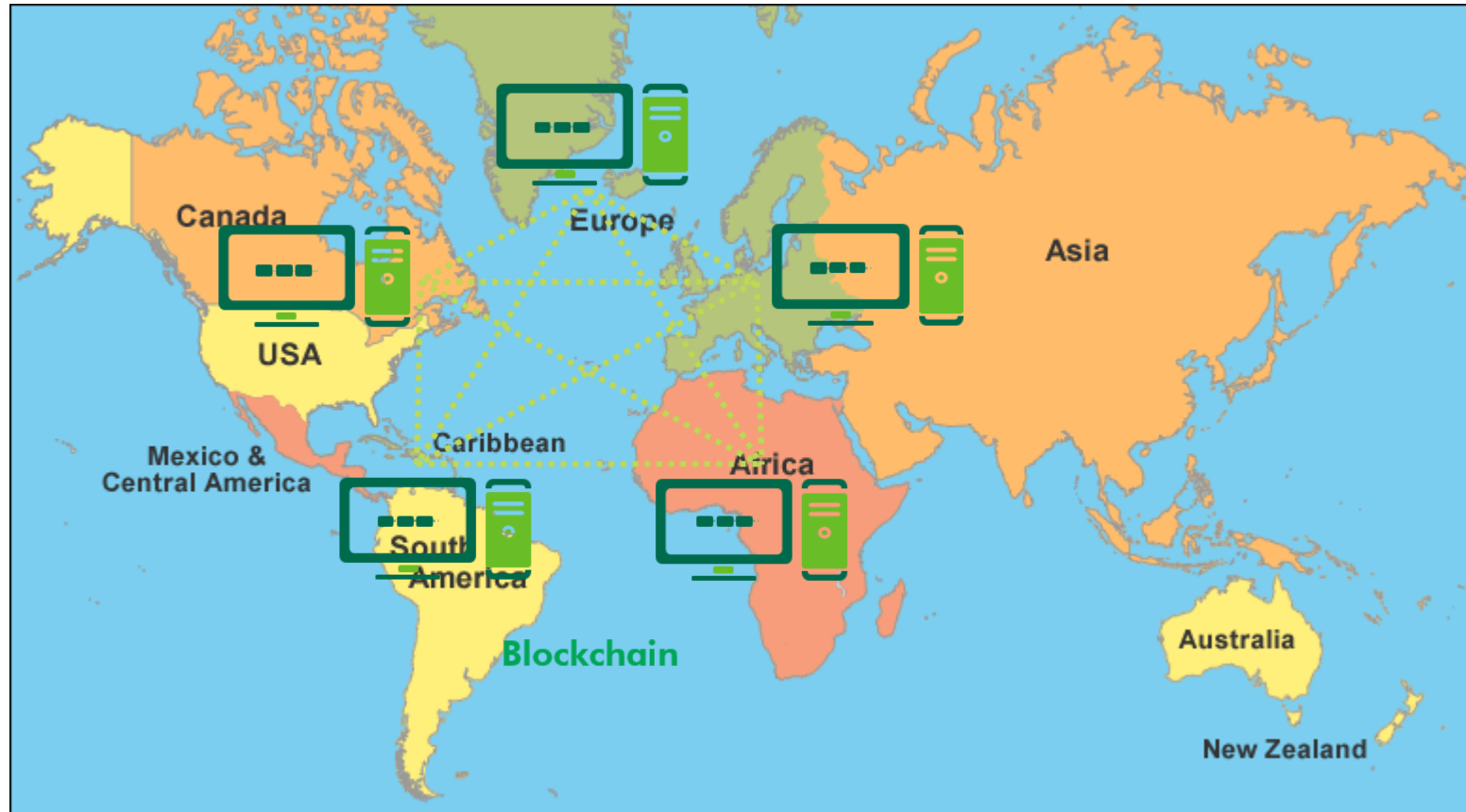
Blockchain Technology Selection

	Bitcoin	Ethereum	Quorum	Stellar
Block Generation Speed	10 min	15 s	50 ms	5 s
Confirmation Time	60 min	3 min	N/A	5 s
Tx Speed	3 tx/s	15 tx/s	15 tx/s	1000 tx/s
Smart Contract	Script	Turing complete	Turing complete	Pre-authorized
Computation Resource Consumption	High	Very high	High	Very low
Maximum Block Size	1 MB	4.7 MB	4.7 MB	N/A

Product Authentication on Supply Chain Flow



Potential Blockchain node deployment




Dashboard for visualizing data stored on Blockchain

AuthentiChain
AuthentiChain Beta

← Statistic and Report Region: Global ▾

^ Minimize

Monthly View Detail



Monthly View Detail

Total Scan Count
76

Monthly View Detail

Authentiguard Code Register
53.9%

Monthly View Detail


Overall Invalid Scan
35

Show Invalid result only

🔍 Search by product serial

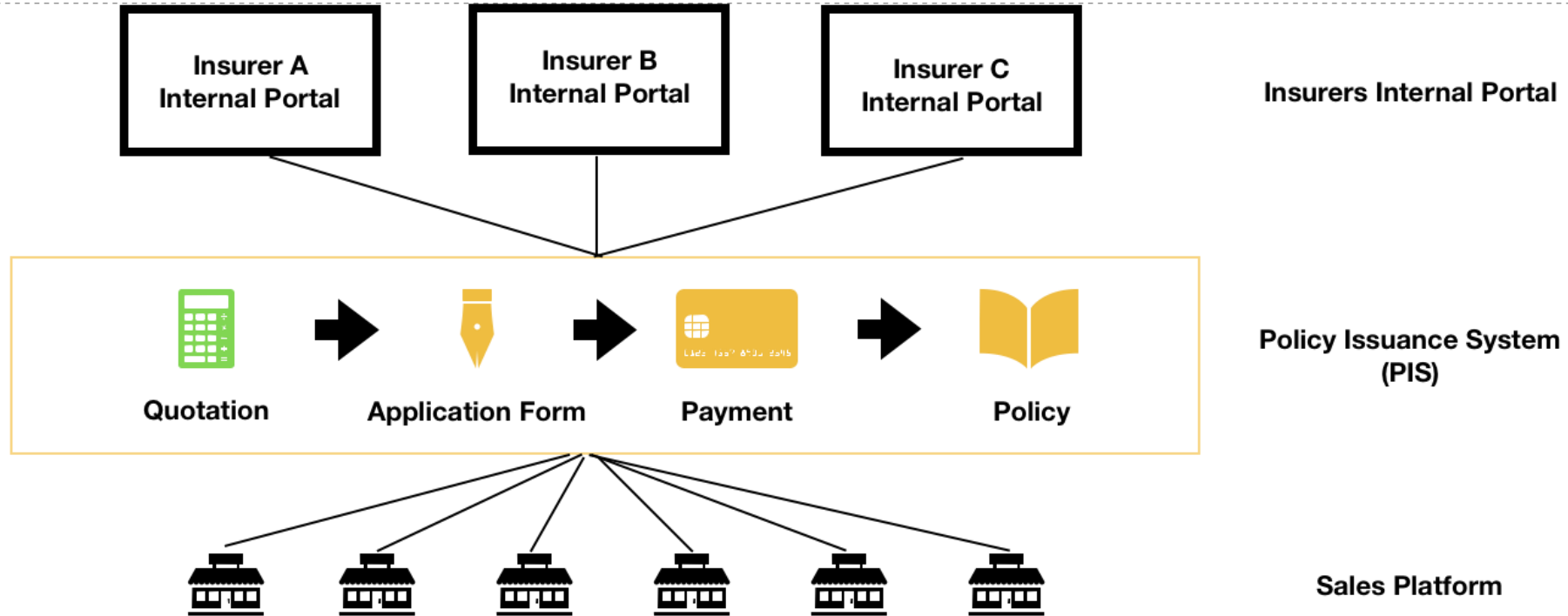
Status	Product Serial	Code Read	Location	Scanned By	Scan Time	Transaction Id	Blocknumber
Valid	00000009	8195B080	China	checker01	18 Feb 2019 05:40	19937371332022272	4642031
Valid	00000009	466DA806	China	checker01	18 Feb 2019 05:40	19937336972283904	4642023
Valid	00000009	6BD8BE75	China	checker01	14 Feb 2019 07:37	19647645723136000	4574574
Invalid	00000019	00000000	China	checker01	14 Feb 2019 07:36	19647641428168704	4574573
Valid	00000009	7F96CA26	China	checker01	14 Feb 2019 07:36	19647619953332224	4574568
Valid	00000009	5124A548	China	checker01	14 Feb 2019 07:34	19647525464051712	4574546
Invalid	00000019	00000000	China	checker01	14 Feb 2019 07:34	19647521169084416	4574545
Valid	00000009	2DD49C4D	China	checker01	14 Feb 2019 06:50	19645262016286720	4574019
Invalid	00000019	00000000	China	checker01	14 Feb 2019 06:50	19645244836417536	4574015
Valid	00000009	F29C4CBA	China	checker01	14 Feb 2019 06:50	19645236246482944	4574013

Previous
Page 1 of 80
10 rows
Next



DSS
SECURITY WISE. BRAND SMART.

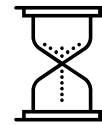
Insurance Business



Insurance Blockchain



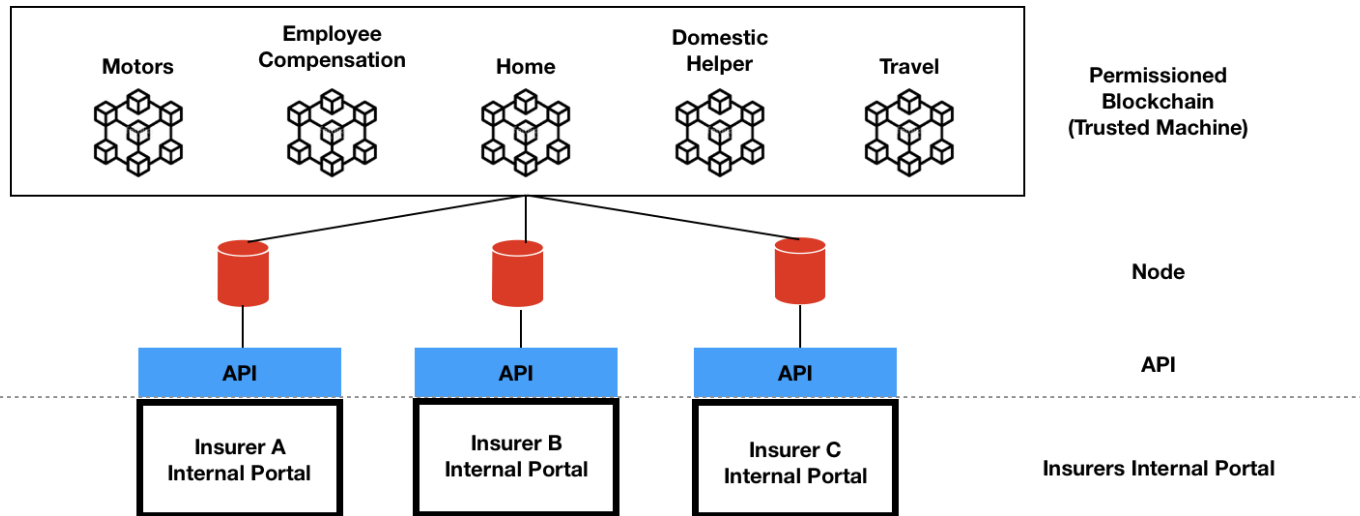
Instant access of insurance history



Reduce Operational Cost & Credit Risk
Less resource is required for policy admin
and less credit period required



Instant validation of insurance policy
Reveal counterfeits and eliminate unlicensed selling



Different ways of protecting privacy

- Traditional permissioned blockchain data are transparent to all users – for traceability
 - Everyone (in the network) sees. Authorized parties can add to it*
 - Once a transaction record is confirmed, nobody can change it*
- Commons ways to keep data private in Hyperledger Fabric:
 - Channels with different memberships
 - Stores encrypted data in blockchain
 - Access control in smart contract
 - Private data collections