Enterprise blockchain attributes
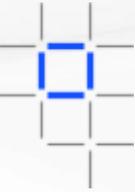
Append-only distributed system of record shared across business network
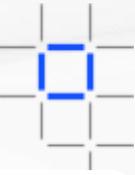
Shared ledger

Smart contract
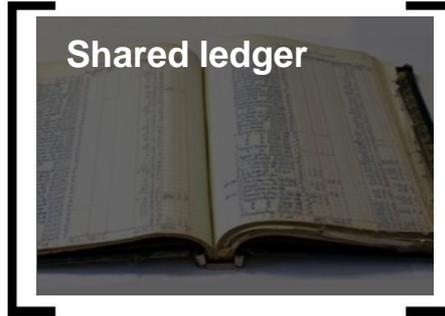
Business terms embedded in transaction database & executed with transactions

Ensuring appropriate visibility; transactions are secure, authenticated & verifiable

Privacy

Trust

Transactions are endorsed by relevant participants

IBM Blockchain helping government spans the globe

USA
- Register of Births
- Vehicle licensing
- *HR records*
- Data use agreements
- *Parcel tracking*
- Prescription drugs tracking
- *Corporate registrations*
- Student locker
- Credentials register

Canada
- *Corporate Registry*
- *Importation of Goods*
- *Patient Consent*

Japan
- *Registration of address change*

Europe
- Invoicing and payments
- Tax compliance and fraud
- Grants management
- Trade supply chain
- Defense logistics supply chain
- *Registry of electric bikes*
- *Immigration – document verification*

UK
- *Livestock information*
- *Inspection in the abattoir*
- *Authorized Economic Operator*
- Firearms register
- Immunization record
- *Doctor credentials and identity*
- *Payment of social benefits*
- Blood supply chain
- Benefits status and identity
- Defense Logistics supply chain
- *Property Exchange*

MEA
- Blockchain Strategy
- Municipal Blockchain Strategy (UAE)
- *Student Records* (UAE)
- *No Objection Certificates* (UAE)
- *Business Register* (UAE)
- *Credentials for Medical Staff* (UAE)
- *Blockchain Platform* (UAE)
- *Vehicle lifecycle* (UAE)

Africa
- Identity and payment
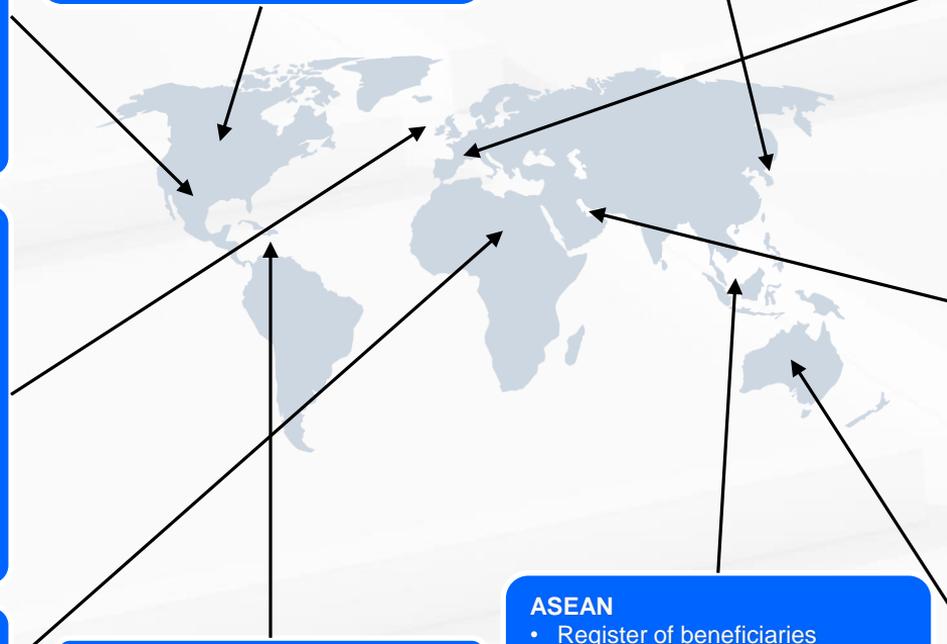- Tax compliance and VAT

Caribbean
- Business Register

ASEAN
- Register of beneficiaries
- Transmission of payment files
- *Property transfer*

ANZ
- Vehicle lifecycle
- Payment of social benefits
- Defense logistics supply chain
- Tax payments on land title transfer
- e-invoicing
- Corporate registry

Delaware Project Overview

1 | **Why we embarked on this journey?**
- Background & Need
- Timeline
- Pain points

2 | **Value to network participants**
- Hills/value points
- Use cases summary
- Demo scenarios by persona
- Recommendation

3 | **Progression to pilot**
- WHY: Business case & value assessment
- WHAT: Roadshows & identification of sponsor users
- HOW: Technical considerations
- Next steps

"Easily Accessible"

"Same answer across business network"

"Know when something changed"

"Know when something is not right"

"Auditable and Immutable"
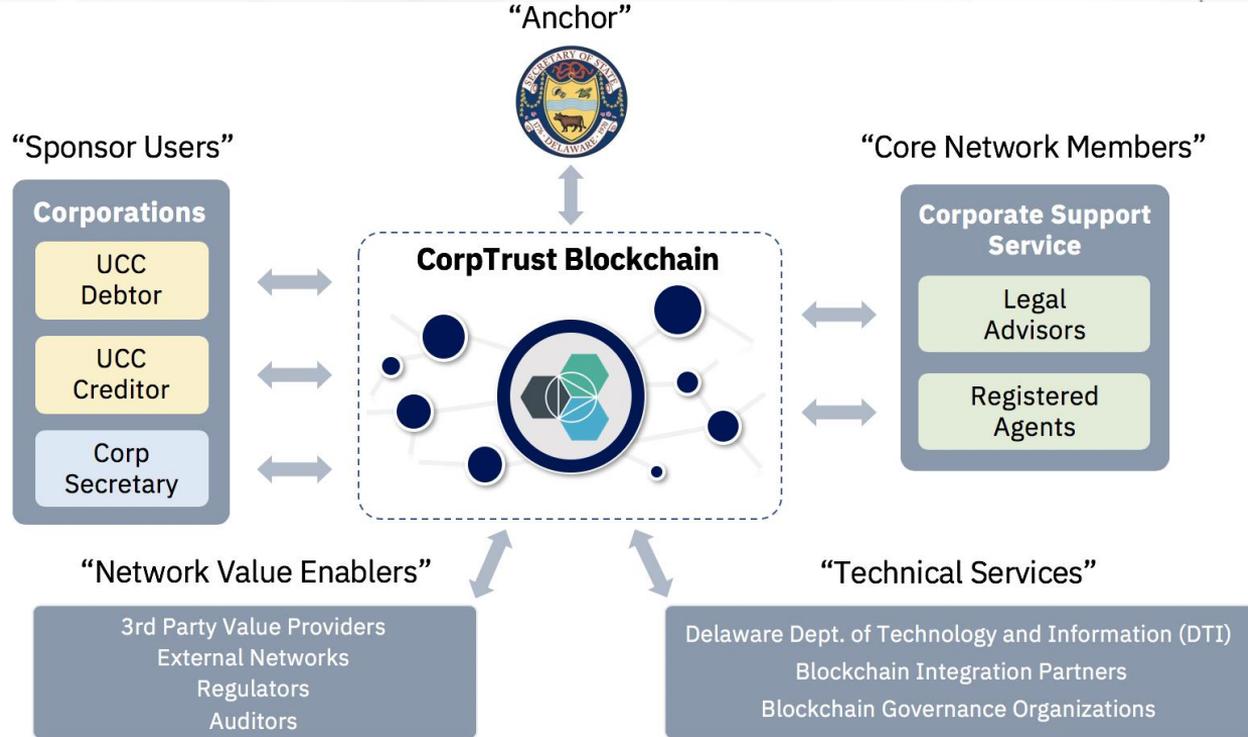
"Ability today to notify, and in near future to automate"

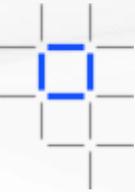"Aggregate Delaware information with 'my other data'"

Government Blockchain Projects: On Path to Production

Streamline the Ecosystem for doing Business in the State of Delaware	**Simplifying Resource Hiring Actions with Visibility, Smart Contracts, and a Blockchain-enabled Business Process**
State of Delaware – The Delaware Secretary of State is building out a Pilot prototype from their base Proof of Concept application addressing Delaware's UCC filing process between secured party and debtor companies, registered agents, and legal representatives while using blockchain to aggregate a shared Stock Ledger and capitalization table for registered corporations registered to track share ownership.	**USINDOPACOM** - IBM is working to create a blockchain-enabled process for hiring under the IPA Act. This system will enable USINDOPACOM to more accurately, easily and accountably procure high-value resources at low cost. It addresses the current inefficient, error-prone IPA process to keep IPAs paid and focused on their mission tasks while facilitating procurement of new IPAs.
International Mail tracking, Analytics, Alerts, and Error resolution	**Exploring Plans for Blockchain as a Service**
USPS is continuing to scale their Pilot blockchain solution to help better track and understand international mail between itself, air carriers, and foreign post offices. By leveraging the trusted, immutable, blockchain ledger, the network can create an actionable data source to feed analytics engines, operational alerts, and reporting on a per-member basis for USPS, carriers, and foreign posts.	**DISA** is working to create Blockchain as a Service (BaaS) capability on a secure, scalable, and fully-accredited DoD blockchain environment using permissioned Hyperledger Fabric to offer a managed service. Having the environment on a certified infrastructure will enable resource management, network administration, and Cloud support services as well as enhance network monitoring and security.

Note: demo video links embedded in logos

Government Blockchain Projects: Completed POCs

Blockchain, Artificial Intelligence, and Robotic Process Automation	**Selective Data Sharing around the Federal Employee HR Record**
HHS has received Authority to Operate (ATO) for a blockchain based application, Accelerate, to facilitate the Federal Acquisition Lifecycle and standardize taxonomy of their acquisition data. Accelerate also addresses acquisition workforce process challenges, strengthen industry interactions, improve IT security, and increase the savings and quality for procurement activities across the Department leveraging machine learning and AI.	**OPM** wants to accomplish selective data sharing for the Federal Employee Human Capital Lifecycle to ensure the security, privacy, and consistency of their employees' data. OPM and IBM created a prototype that addressed the challenges around employee transfer including single field entry and record access changes, both of which were accomplished through the implementation of smart contracts.
FEMA Disaster Response	**CDC** EHR Reference Data Chain of Custody and Consent
FEMA's Blockchain will enable an immutable, trusted ledger tracking projects, providing FEMA and its PA applicants veracity of metadata and spends while automating manual processes through smart contracts while sharing of data among recipients.	**CDC** and IBM implemented a robust consent management process within CDC's data surveying processes and captured data governance events like consent to access, change in ownership, and access to EHR data on a blockchain ledger to be shared with relevant stakeholders.

Note: demo video links embedded in logos