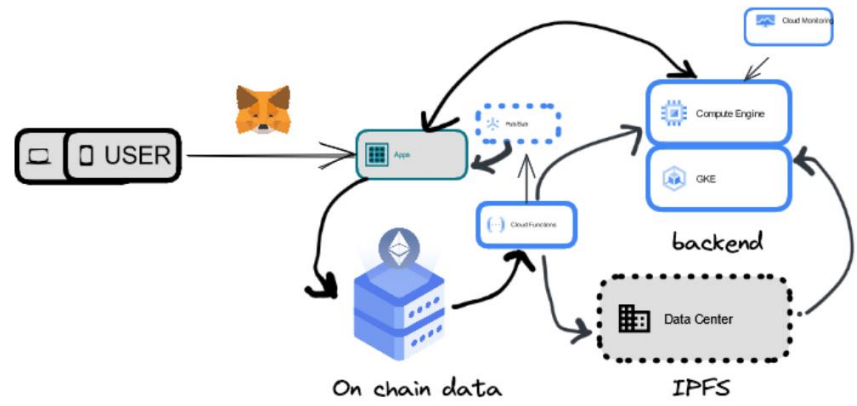
Supply chain traceability in Bangladesh via blockchain.

Traditionally supply chain uses a paper-based method to maintain functioning, it is time-consuming, error-prone, and costly. Also due to the slow process and inaccuracy very easy to counterfeit, fraud, and violation. Thus, can be avoided easily using blockchain technology which provides immutability, traceability, distributed transparent ledger system.

The current supply chain system is complex, it lacks traceability, visibility, communication, and trust, also disjointed data prevent automation and often causes delays. To solve these issues a modern supply chain requires feedback, communication, end-to-end visibility, easy track & trace, a single source of truth, improved privacy, security, safety, resiliency, and a public consensus method. A smart Contract is a great way to solve this particular situation.

A supply chain process starts with raw materials and ends with consumers; the producer of raw materials can be a farmer or fisherman in our use case scenario. This particular producer initializes a block of data which include txn_id, quantity and quality of goods, and date for his raw materials, and subjected authority such as processor, manufacturer, distributor, retailer, and regulatory regime can be notified. The block is unchanging so it is verifiable and publicly available so that even consumers can see and feel the product's freshness and authenticity. Also in the process, each authoritarian entity provides an updated and verifiable block for their own state, so everybody remains on the same page thus it is easy to understand and analyze from their perspective.

System Architecture:



Src: https://github.com/riyadhuddin/stwb