Problem Statement:

Blockchain promises to fundamentally solve the issues of time and trust to address inefficiencies and costs in industries such as financial services, supply chains, logistics, and healthcare.

Blockchain's key features include immutability and a shared ledger where transactional updates are performed by a consensus-driven trust system, which can facilitate a truly digital interaction between multiple parties.

This digital interaction is not only bound by systemic trust but ensures that the provenance of the transactional record maintains an immutable track record of interaction between parties. This very characteristic lends itself to culpability and non-repudiation and incentivizes fair play. With the blockchain system design, we are attempting to build a system that has implied trust.

This trust system leads to reduced risks, and various applied technology constructs such as a cryptography, encryption, smart contracts, and consensus essentially create gates to not only reduce risk but to also infuse added security into the transaction system.

Blockchains may execute arbitrary, programmable transaction logic in the form of smart contracts, as exemplified by Ethereum (http://ethereum.org/). The scripts in bitcoin were predecessors of this concept. A smart contract functions as a trusted, distributed application and gains its security from the blockchain and underlying consensus among its peers.

Regardless of the choice in blockchain models, blockchain provides a lot of possibilities for transformation and disruption.

Blockchain has extraordinary potential as a technology platform. In the enterprise, blockchain can provide:

- A design approach that keeps transaction data, value, and state inherently close to the business logic
- Secure execution of business transactions, validated through a community, in a secure process that facilities the trust and robust transaction processing that are foundational to blockchain
- An alternative, permissioned technology that conforms to existing regulations