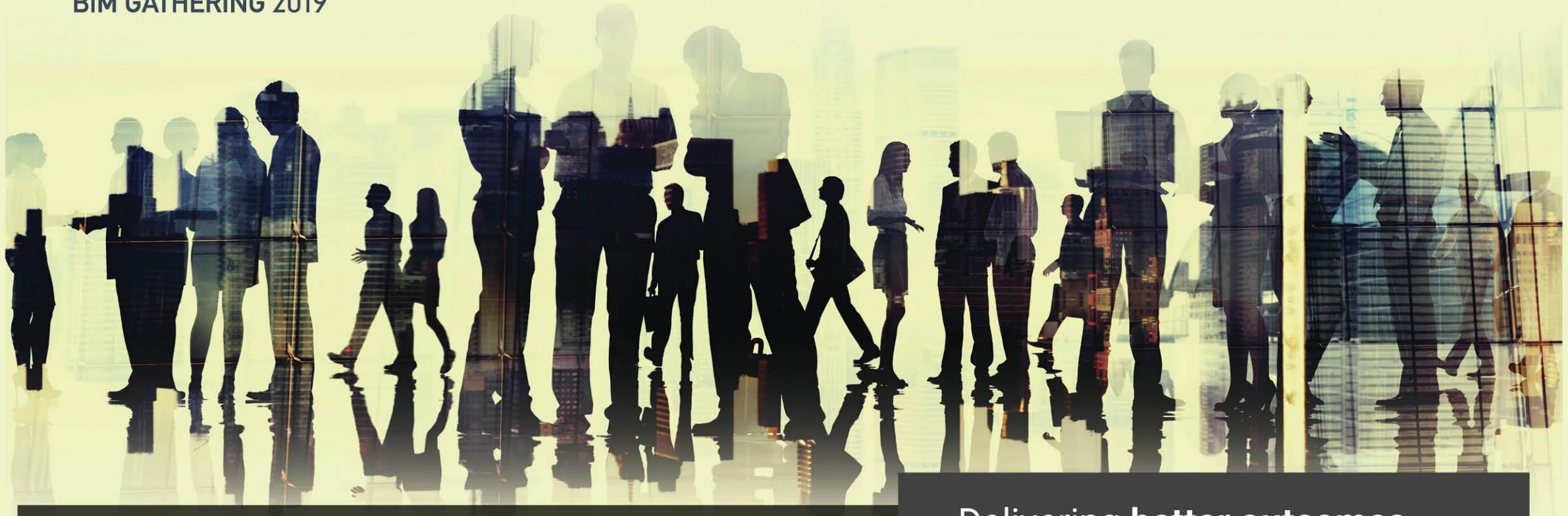


# CitA

BIM GATHERING 2019



**4th CitA BIM Gathering** 26th September 2019, Galway, Ireland.

Delivering **better outcomes**  
for Irish Construction



## Incentivising multidisciplinary teams with new methods of procurement using BIM + Blockchain



## Research Question:

If a building can produce more energy than it is consuming, is there an opportunity for the building owner and/or design team / building occupants to sell the surplus energy as a commodity?



## Blockchain Technology:

A Digital, decentralised and public ledger



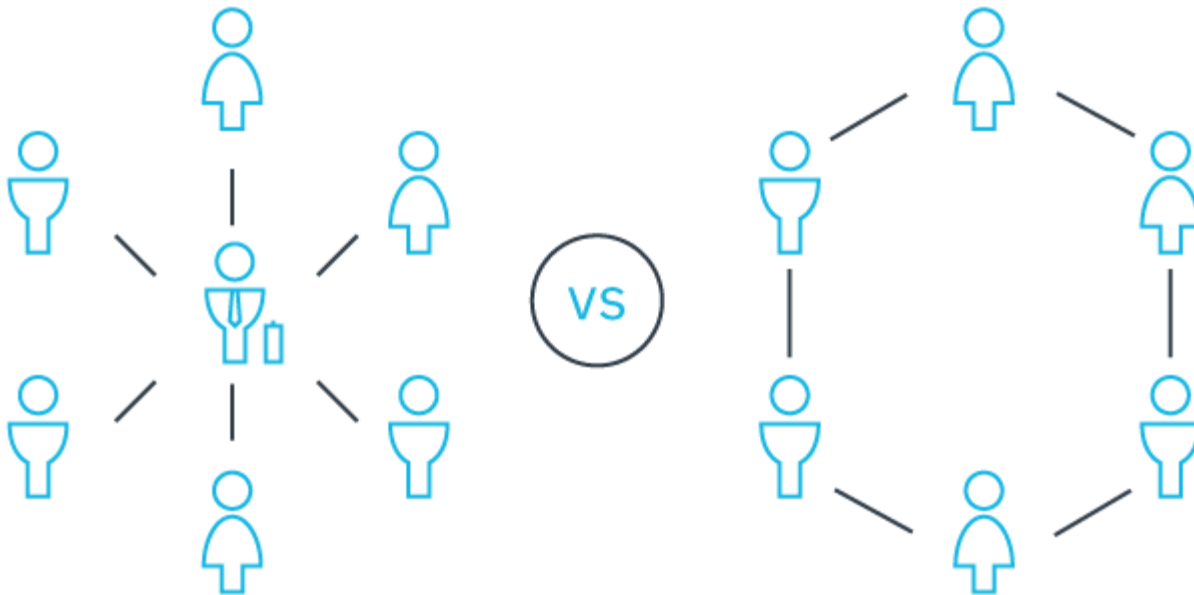
## Properties of Blockchain:

- Immutable
- Transparent
- Reliable
- Secure
- Peer to peer





### Centralized vs Decentralized Workplace

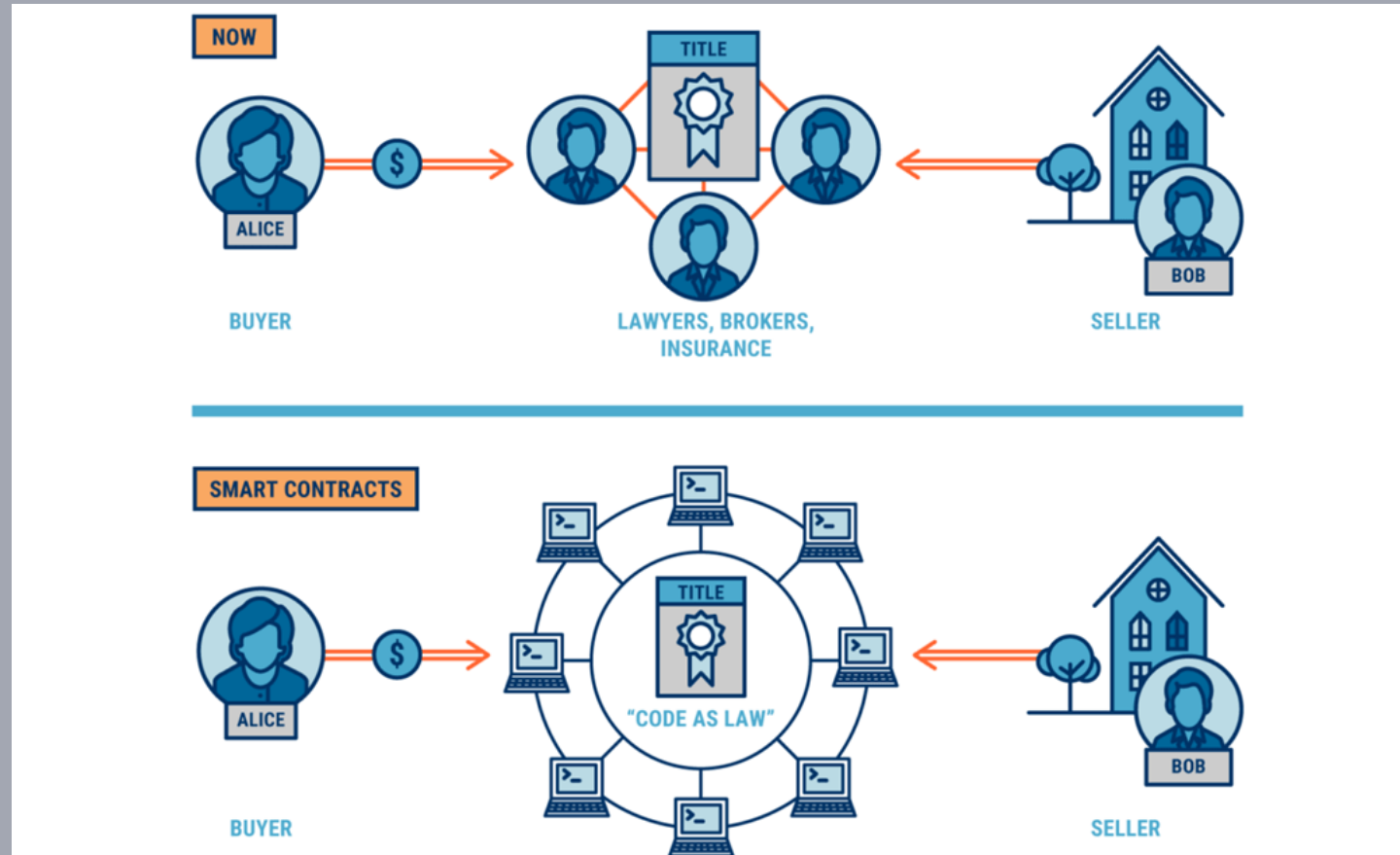


### Key terms of decentralized systems:

- Consensus
- Collaboration

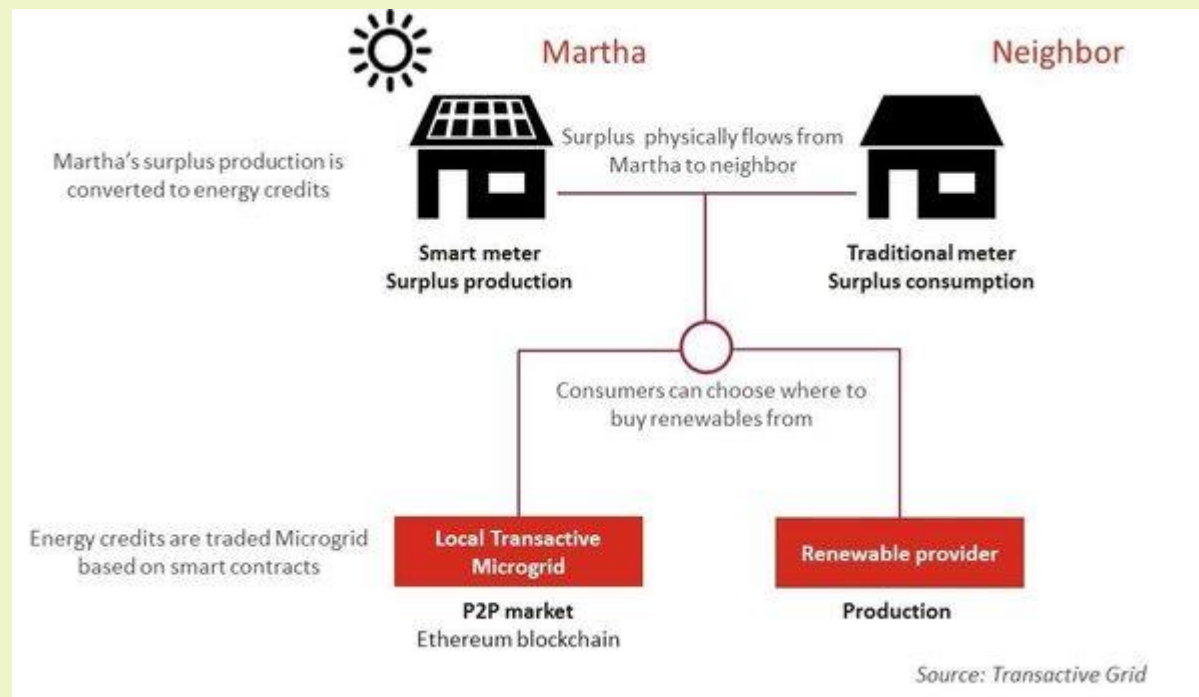


# Incentivising multidisciplinary teams with new methods of procurement using BIM + Blockchain



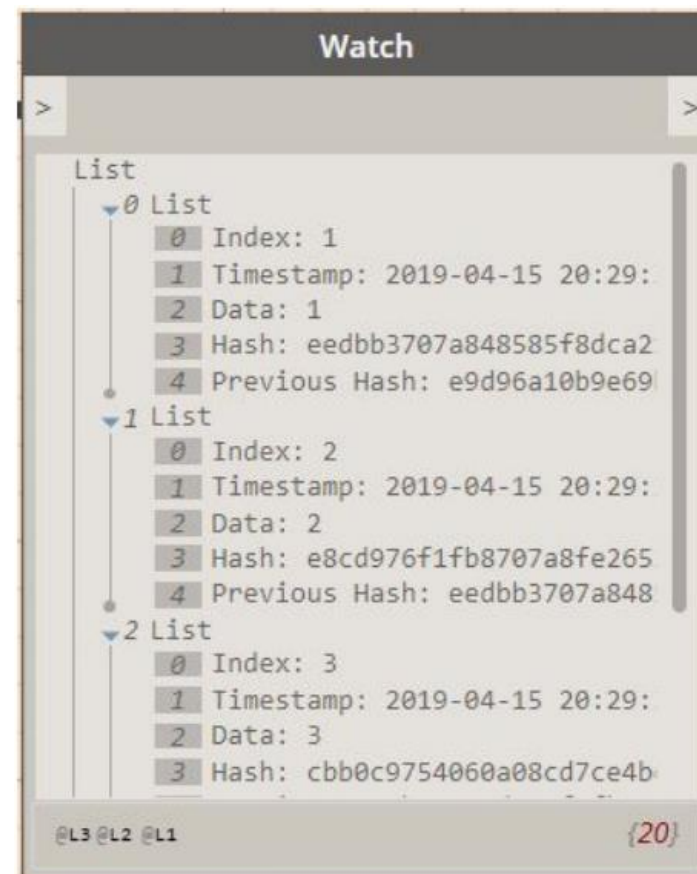
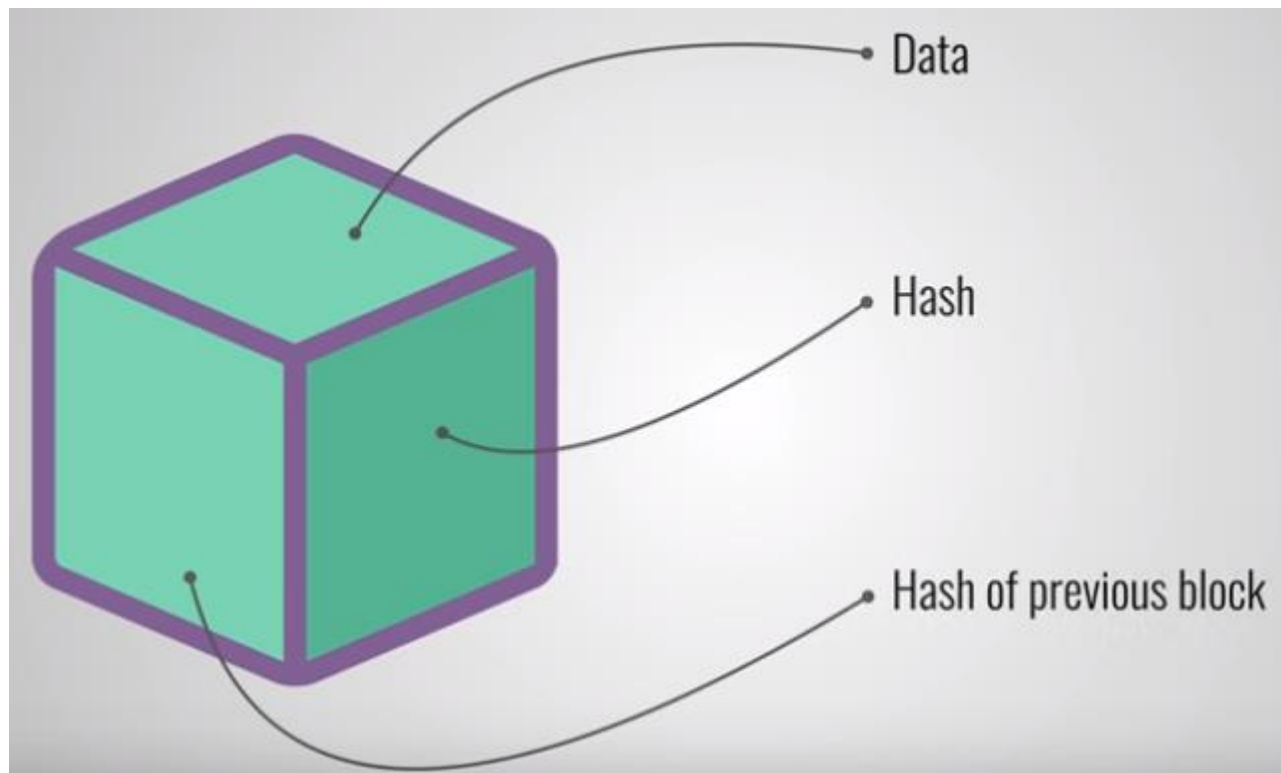


Digital Twin



Real-time sensor data







A distributed ledger with a digital twin.

All stakeholders will become aware of how much energy is produced by built assets and all stakeholders will know how much energy is consumed by built assets.

None of this information can be altered as to do so would result in an obvious deviation from the set rules agreed by the rest of the stakeholders.

If a built asset is successful in producing more energy than it consumes, smart contracts can be deployed on the Blockchain to sell the surplus energy back to the public and share the income amongst the design team in a democratised way.



## Added Value Networks:

- A financial incentive for designers to strive for the very best building performance.
- A financial incentive for building occupants to conserve energy leaving more energy for sale.



Thank you