




BLOCKCHAIN

AND THE INTERNET OF THINGS

Justin A. Langley
04/14/2022
Western Governor's University



APPLICATIONS IN
AGRICULTURAL
SUPPLY CHAINS

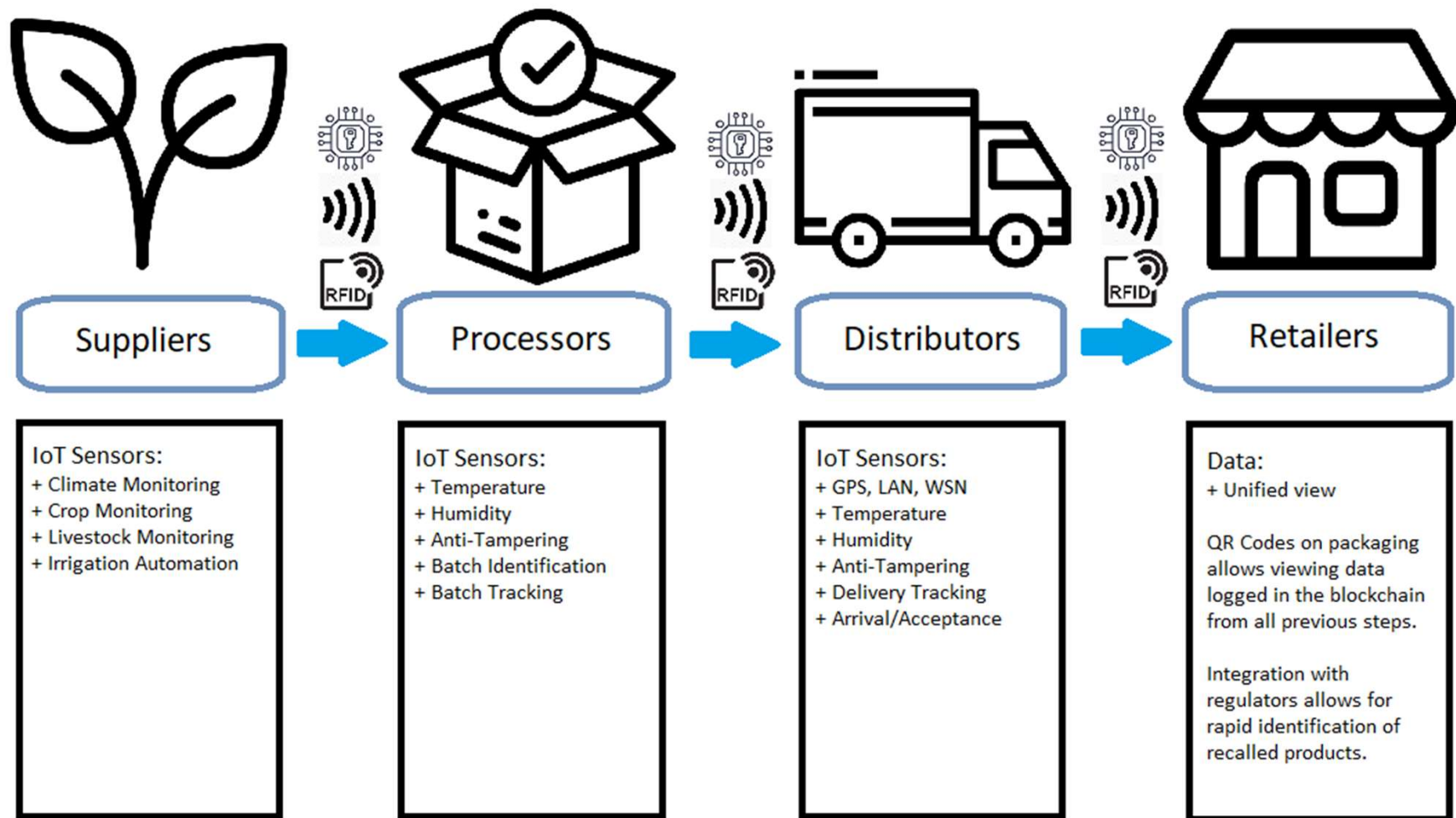
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- Applications
- Enabling technologies for IoT
- IoT adoption barriers
- Blockchain
- Blockchain adoption barriers
- Arguments for a Lightweight Trust Model



APPLICATIONS

- DIGITAL TRACEABILITY
 - PROACTIVE DECISION-MAKING
 - MACHINE LEARNING
- 





ENABLING TECHNOLOGIES FOR IOT

- WIRELESS CONNECTIVITY
(SHORT, MEDIUM, LONG-RANGE)
 - DATA PLATFORMS
 - RELATION TO BLOCKCHAIN
- 



IOT ADOPTION BARRIERS

- CONNECTIVITY
 - COST (DECREASING)
 - SECURITY (PERCEIVED RISK)
 - LACK OF INTERNAL
EXPERTISE
- 



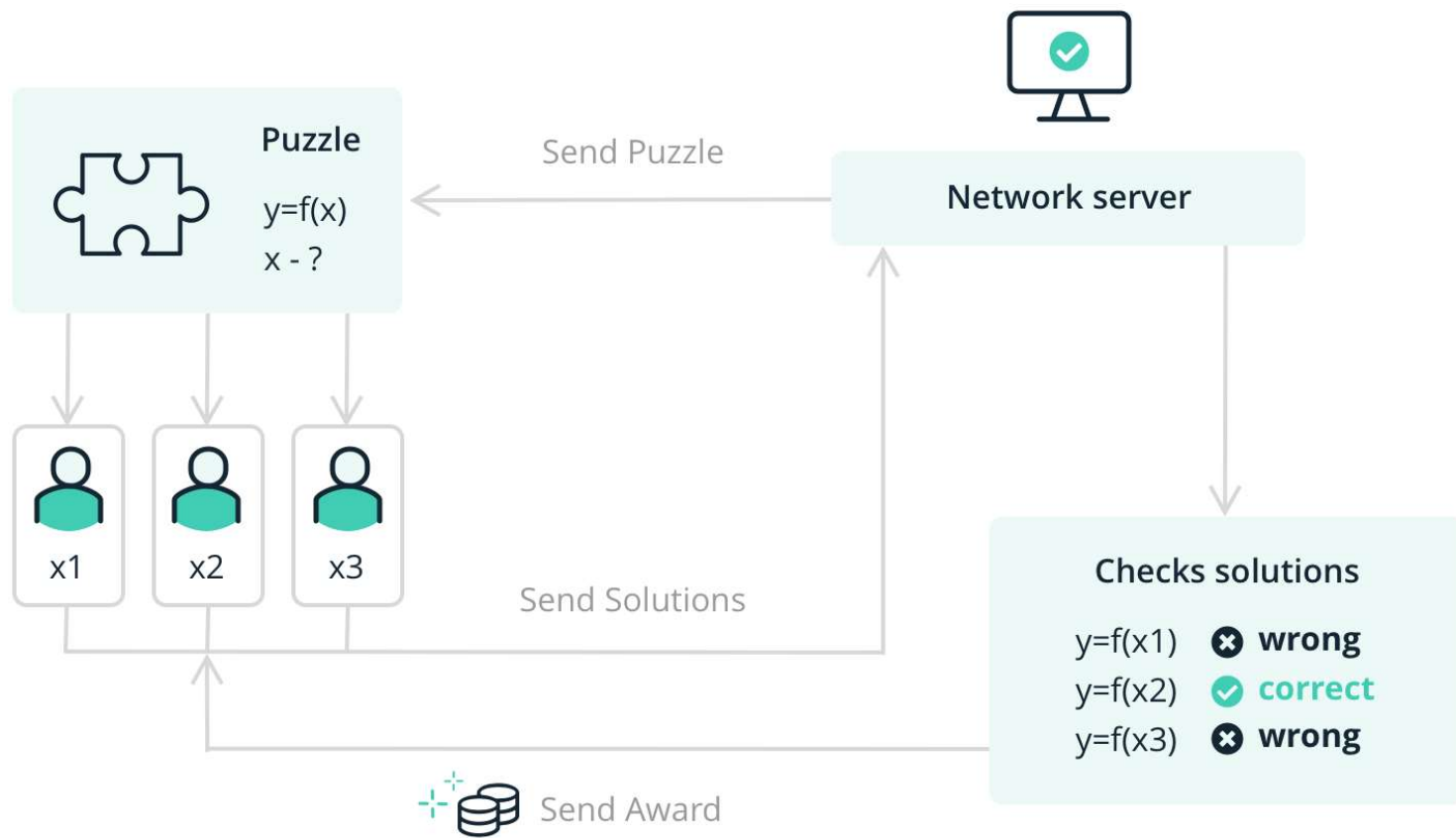
BLOCKCHAIN

- DISTRIBUTED LEDGER
 - PUBLICLY VIEWABLE
 - SECURITY
 - MODELS OF CONSENSUS
- 



BLOCKCHAIN ADOPTION BARRIERS

- LACK OF INDUSTRY KNOWLEDGE/AWARENESS
 - COST (SLA, EQUIPMENT, MAINTENANCE)
 - SECURITY (PERCEIVED RISK)
 - SCALABILITY
- 



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Proof of stake



The probability of validating a new block is determined by how large of a stake a person hold.



The validators do not receive a block reward, instead they collect network fees as their reward.



Proof of stake systems can be much more cost and energy efficient than proof of work, but are less proven.

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A LIGHTWEIGHT TRUST MODEL IS NEEDED



- POW – COMPUTE POWER IS TOO GREAT
- DATA INTEGRITY
- DEALING WITH BAD ACTORS

Malicious Transactions – Traditional Consensus vs. Lightweight Trust Model

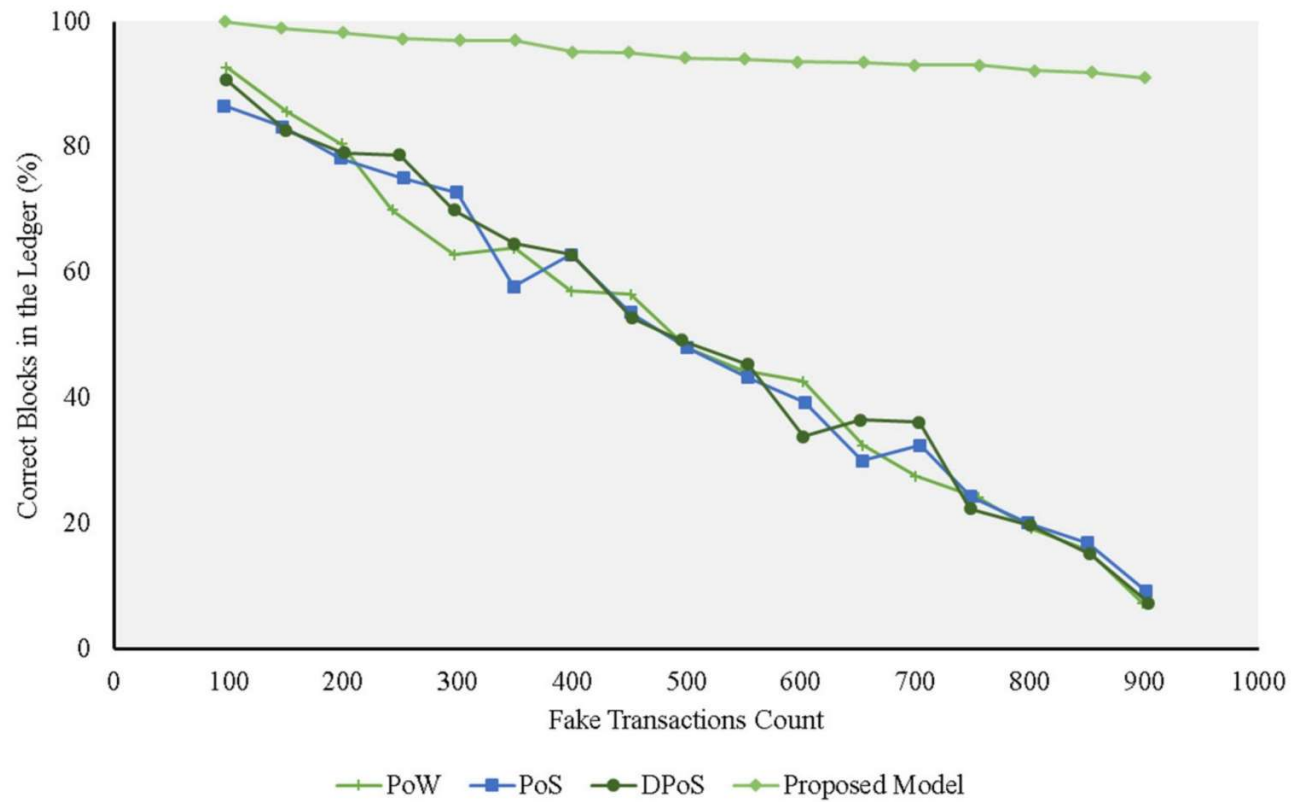


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