



## Blockchain Consensus for IoT

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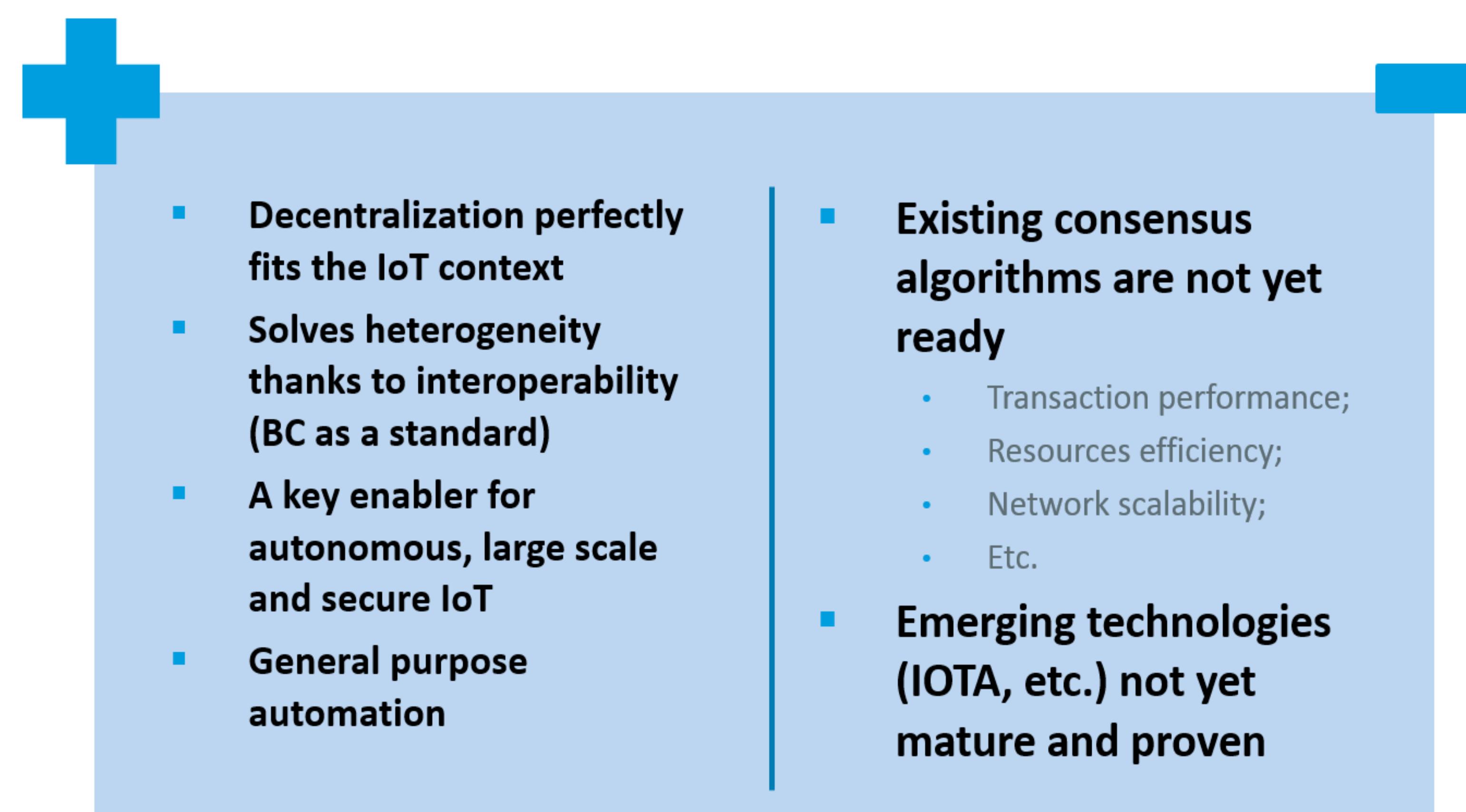
### 1. CONTEXT

- IoT could greatly benefit from Blockchain technology, but is not yet fully compatible.
- Blockchain's properties highly depends on its consensus algorithm.
- Various emerging Blockchain consensus algorithms, but not yet mature, proven and optimized.

### 4. APPLICATION

- Dynamic Marketplaces (High frequency market turns, data streams, decentralized exchanges, etc).
- Smart cities/home (sensor and actuators data sharing).
- Supply chain (asset tracking & flow management).
- Autonomous cars (secure and fast reliable M2M communication).

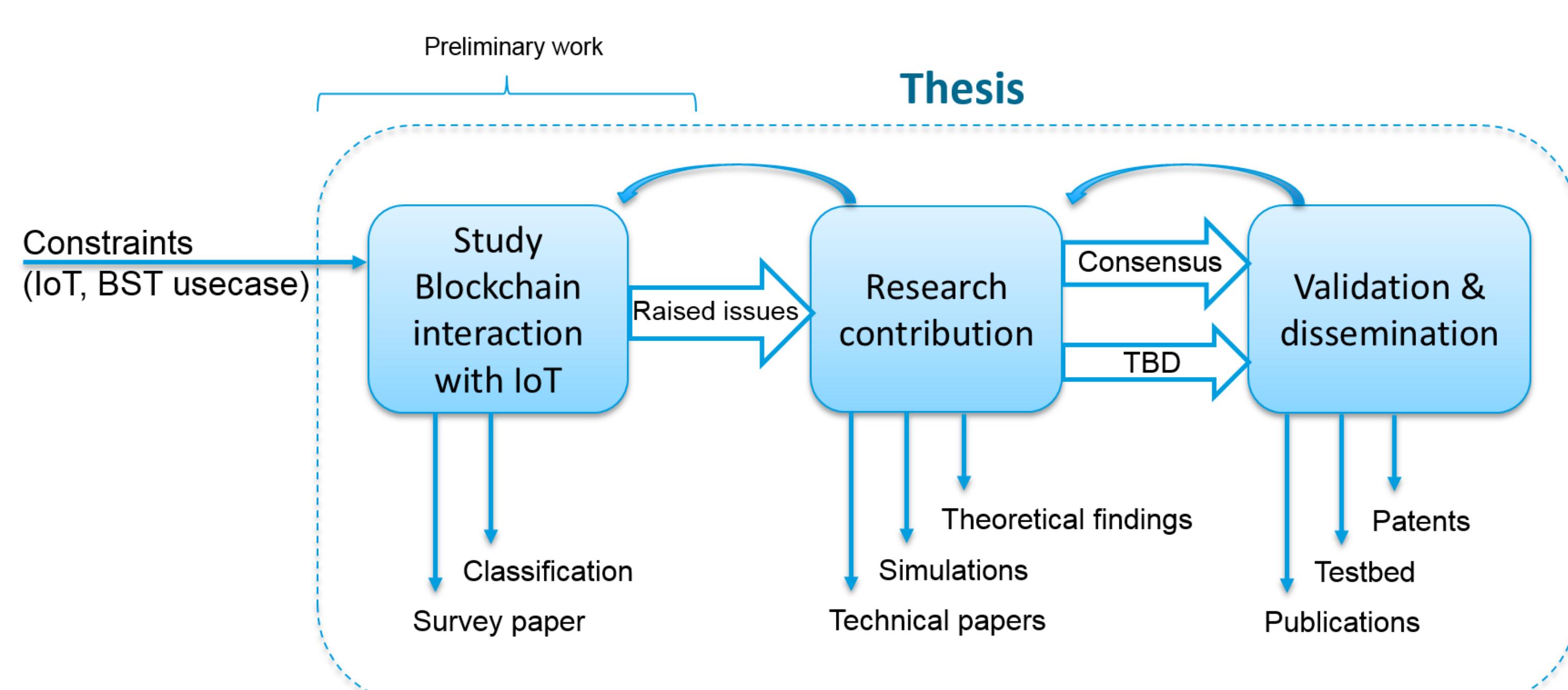
### 2. RESEARCH QUESTIONS



### 5. EXPECTED RESULTS

- State of the art.
- Comprehensive systemization of blockchain platforms.
- Tackle Blockchain scalability issues.
- Concrete implementation and deployment in IoT contexts.

### 3. RESEARCH METHOD



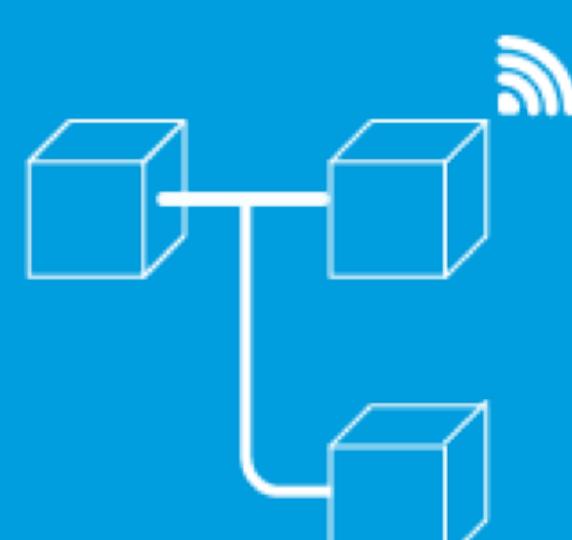
### 6. FUTURE WORK



- |                            |                            |                                |
|----------------------------|----------------------------|--------------------------------|
| • State of the art         | • Survey publication       | • Architectural considerations |
| • Consensus Classification | • Issues identification    | • Theoretic work               |
| • Technical assessment     | • Research axis definition | • Technical publication        |

### REFERENCES

- Christidis, Konstantinos; Devetsikiotis, Michael; (2016) Blockchains and Smart Contracts for the Internet of Things. DOI: 10.1109/ACCESS.2016.2566339.  
 Hileman, Garrick; Rauchs, Michel; Global; blockchain benchmarking study.  
 Liao, Chun-Feng; Bao, Sheng-Wen; Cheng, Ching-Ju; Chen, Kung On design issues and architectural styles for blockchain-driven IoT services, p. 351–352.



Scientific domain: Infrastructure and Networks  
 Program: Smart Territories  
 Project: Blockchain for Smart Transactions (BST)

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