Master of Engineering Management
MEM PC
Programs Consortium

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Northwestern University

2021
MEMPC
Poster Session

Project : Blockchains Smart Cities Project
Role : Neha: Student Researcher, Saumya: Project Manager
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BLOCKCHAINS

Objective:
Building a secure, transparent, blockchain-based platform to serve as the smart cities, energy and water infrastructure for a new digital economy that empowers individuals to fully control a) their personal data including personally identifiable information and all digital transactions/interactions that make use of this data; and b) their digital assets and digitized real-world assets.

BlockChain Problem/Opportunity:
Blockchain needs reference customers to test, prove and cite

Urgency:
Need to learn-by-doing by implementing, perfecting & improving

Impacted Populations:
Blockchains, Northwestern University, All new Customer
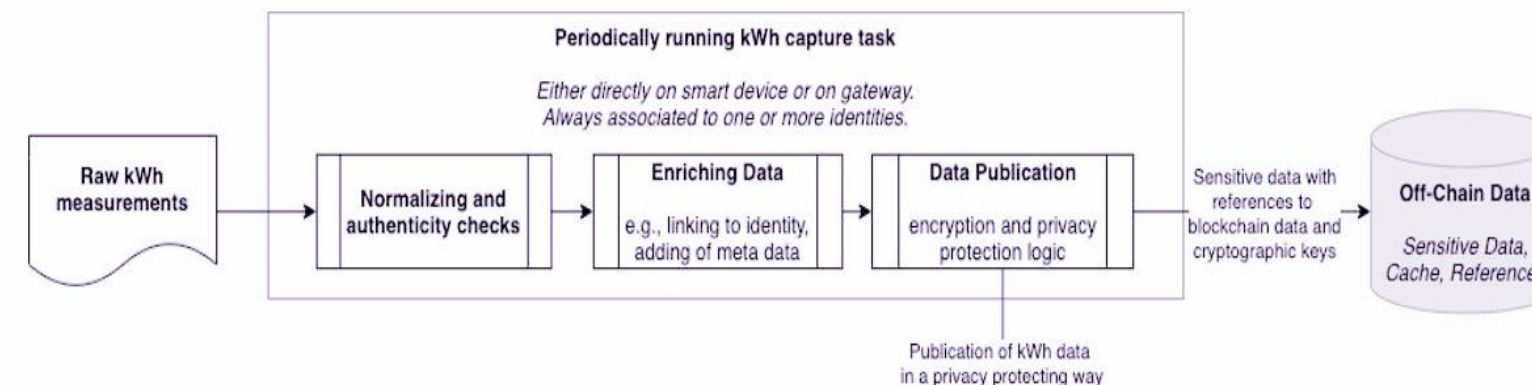
Blockchains Solutions:
Learn Customer Values Living Lab in chicago
Develop multi MW Distributed energy resources including Solar, wind and storage
Add EV charging and autonomous vehicle

Blockchainification process

A high-level process about the different steps how kWh data is published, and energy credits are calculated

THE PROCESS MAP

Capture Raw Data
from,
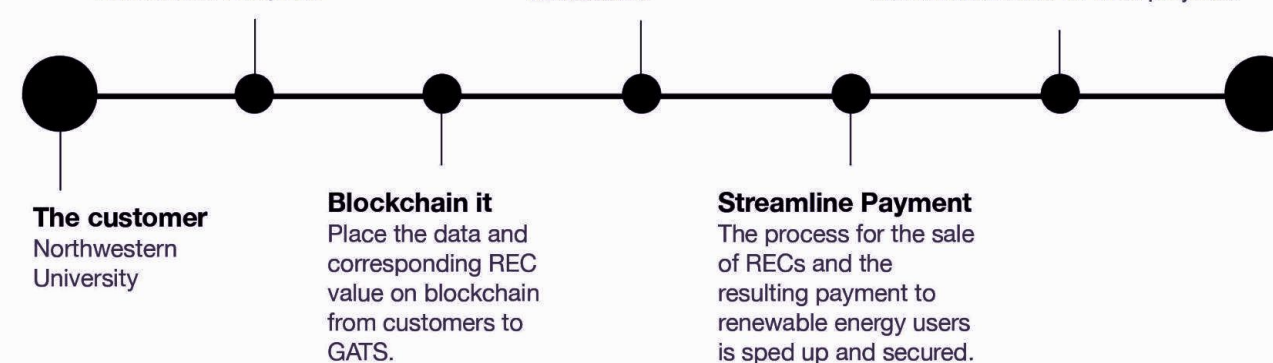- Ryan Fieldhouse, Kresge, Ford, etc...
through,
- Installing BC Software on inverter or gateway
- Installing SmartMeter or SmartMeter Adaptors

Verify and Audit Internally
The blockchain with all the customer data will bridge GATS and the customers, eliminating the need for third party verification.

Monetize
The newfound blockchain network offers speed and a consistent, uninterrupted cash flow to customers. Blockchains can take transaction fees, or percentages from these cash flows. Additionally, Blockchains can study this data to build foundations for new projects.

The customer
Northwestern University

Blockchain it
Place the data and corresponding REC value on blockchain from customers to GATS.

Streamline Payment
The process for the sale of RECs and the resulting payment to renewable energy users is sped up and secured.

Useful Skills & Lesson Learned::
- Blockchain Process.
- Decentralization.
- UX design for equs energy wallet.
- Problem Solving.
- Collaboration with various stakeholders.
- The clean energy industry lacks transparency and the blockchain process solves this problem.