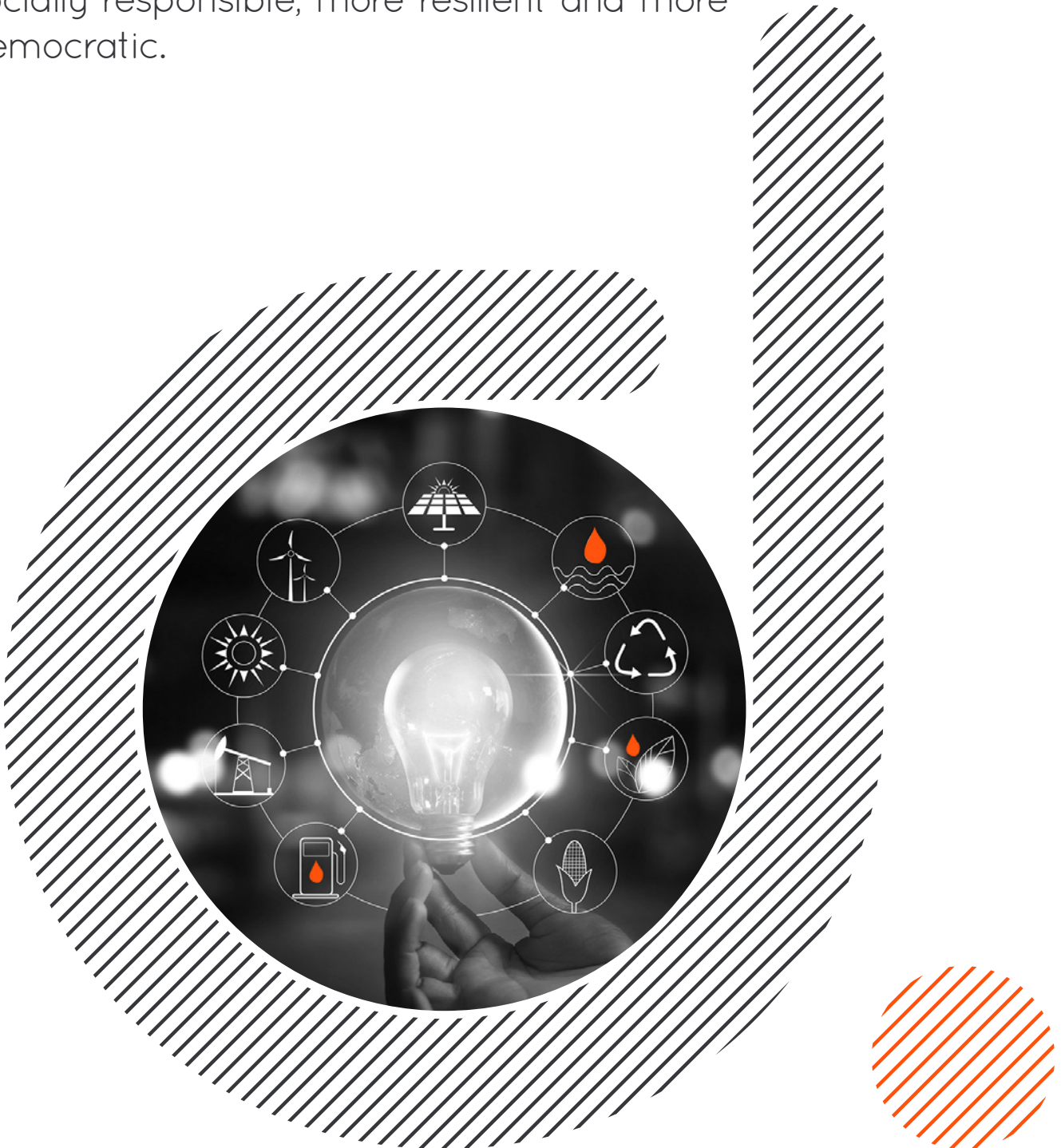# Reforming green energy generation

How Deqode reformed energy supplies by making them more sustainable, more socially-responsible, more resilient and more democratic.

deqode.

Challenge

Client issues and requirements

- To move energy distribution network onto a blockchain and acquiring knowledge on direct power transactions using blockchain technology

- Enabling financial transactions between prosumers, without involving utilities

- Making energy supplies are more sustainable, more socially-responsible, more local, more resilient and more democratic

- Developing a trading platform which would allow consumers to sell energy to their peersin a trustless environment

Blockchain

Graphene

Deqode's Solution Overview

How we helped the client realize his goals

- Energy supply could be made distributed in nature by creating a model for energy trading that takes control out of the hands of central entities and puts everyday citizens in charge. This required creating an identity of all the relevant entities on a blockchain network

- Simulated energy transactions were logged on the blockchain, transaction logging was eventually automated to occur at regular intervals

- Deployed smart contracts, to log the energy provided and the energy consumed by members of the ecosystem. Additional contracts were used to assist generate the bill for the users of the ecosystem

- In addition to monitoring energy usage on the blockchain, tokens were issued on the blockchain to facilitate the payments between the users of the trading platform

- Real-time metering data from microgrids was logged onto the blockchain for future auditing and for other data analysis

Tech Stack

Languages/ Runtimes/ Frame works:
C++, Go, Solidity, Javascript and React.js

DevOps, DB, and Other Utilities:
Kubernetes, Docker, MongoDB, GitLab CI/CD Pipeline

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