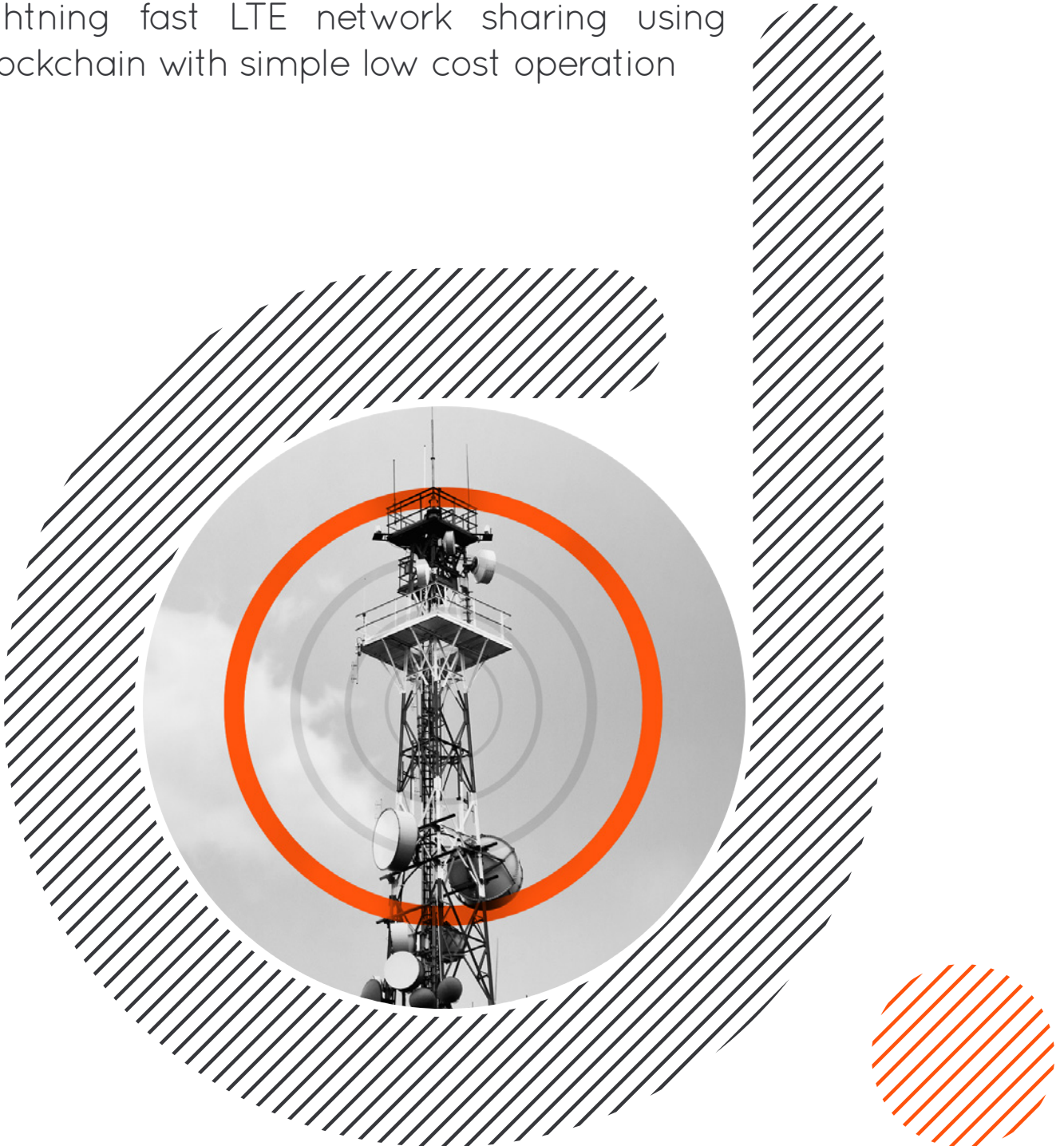


# Redefining high capacity and fast LTE network sharing

Read how we simplified high capacity and lightning fast LTE network sharing using blockchain with simple low cost operation



deqode.

# Challenge

## Client issues and requirements

- ➔ Provide a neutral host model simplifying high capacity and lightning fast LTE network sharing with simple low cost operation and deployment for In Building and Private wireless network, making wireless signals stronger and phone calls easier
- ➔ To create a virtual platform for network capacity sharing and peer to peer settlement
- ➔ Manage identity and access management of the suppliers and consumers participating in the system
- ➔ Provide with a flexible model that helps new parties to join the network, create offers, negotiate contract terms and digitally sign agreed SLA (Service Level Agreements)
- ➔ Provide real-time analysis of reporting data generated against the agreed SLA contract terms over network devices, to resolve disputes and detect SLA breaches
- ➔ Maintain privacy of the offer negotiations and contract terms, enabling suppliers to share their network bandwidth capacity at different selling prices

## Framework

Hyperledger Fabric

# Deqode's Solution Overview

## How we helped the client realize his goals

- ➔ Provided a permissioned blockchain solution based on hyperledger fabric to restrict anyone from participating in the blockchain network
- ➔ Created consortium network and access management system to allow users to participate and update ledger
- ➔ Added a certificate authority to manage cryptographically unique identities of suppliers and consumers participating in the network
- ➔ Provided a platform for offer creation, negotiation and signing SLA agreement with digital identity

## Tech Stack

*Languages/ Runtimes/  
Frame works:*

Node.js, Ruby on Rails,  
Javascript, BASH

*DevOps, DB, and Other  
Utilities:*

Kubernetes, Docker, PostgreSQL,  
Kafka, Zookeeper, Nginx,  
GitLab CI/CD Pipeline