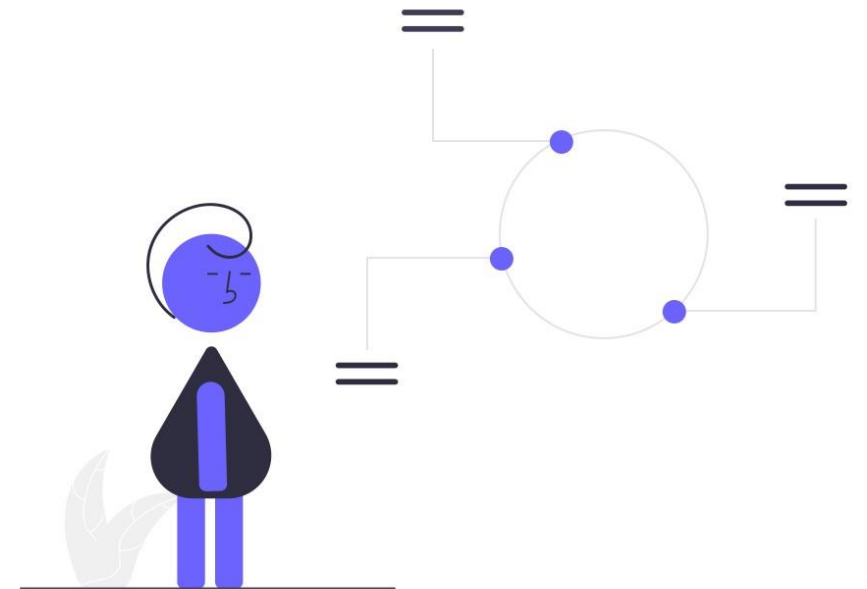


REVOLUTIONIZING HEALTH DATA PRIVACY AND ACCESS WITH BLOCKCHAIN

Maria Torop, Martin Onton, Kristjan Narusk, Andres Taats, Silver Soolep



THE PROBLEM

DATA PRIVACY

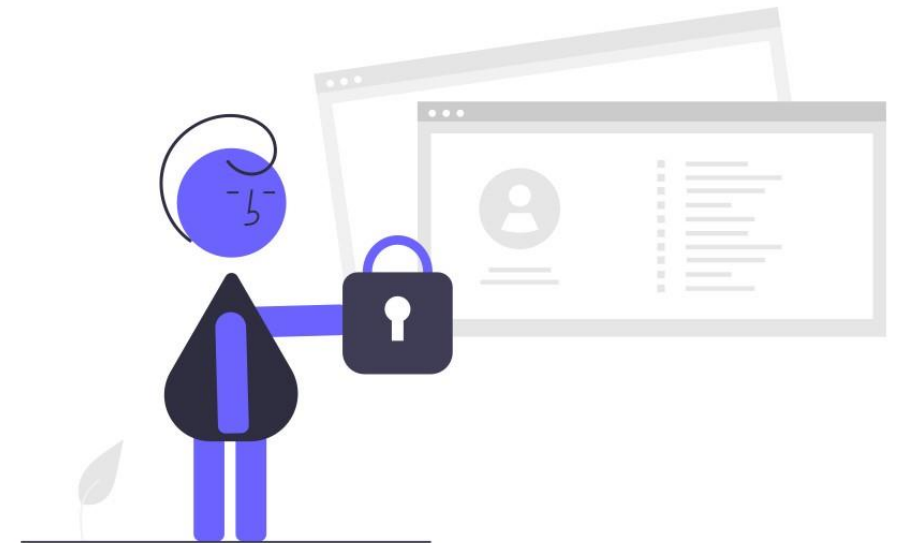
Lack of privacy controls in current health data management systems, leading to potential unauthorized access and breaches.

ACCESS ISSUES

Current system often leads to either over-accessibility (where all doctors can see all data) or under-accessibility (where crucial data might be inaccessible when needed).

REAL WORLD EXAMPLES

There was an issue including a Special Health Doctor in Estonia browsing the full access of a patient without consent.



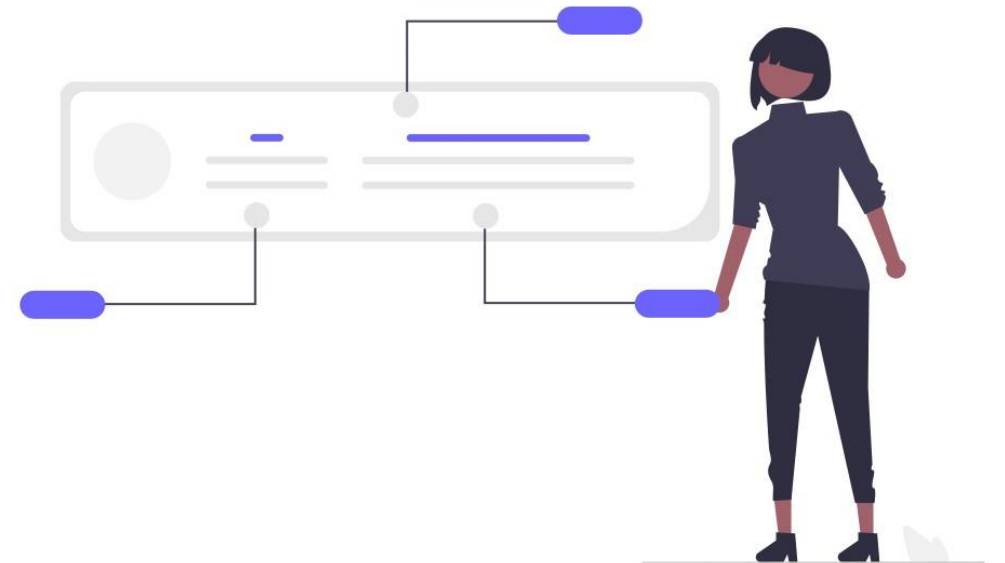
THE AUDIENCE

PATIENTS

There's a need for privacy and control for patients over their medical data.

DOCTORS AND HEALTHCARE PROVIDES

There's a need for timely and efficient access to relevant patient data to provide proper care, while remaining independent from multiple systems.



THE BLOCKCHAIN SOLUTION

BLOCKCHAIN, SMART CONTRACTS

- Control access to health data, ensuring that only authorized individuals (e.g., assigned doctors) can access specific categories of data.

TRANSPARENCY AND SECURITY

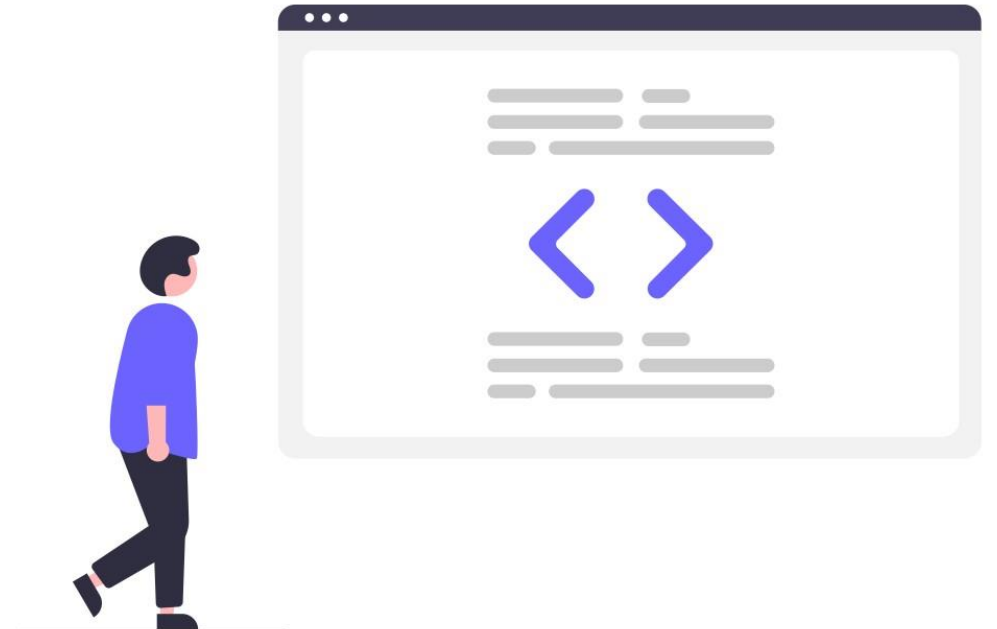
- Ensures transparency (through logging data access and changes)
- Ensures security (through encryption and decentralized data storage).



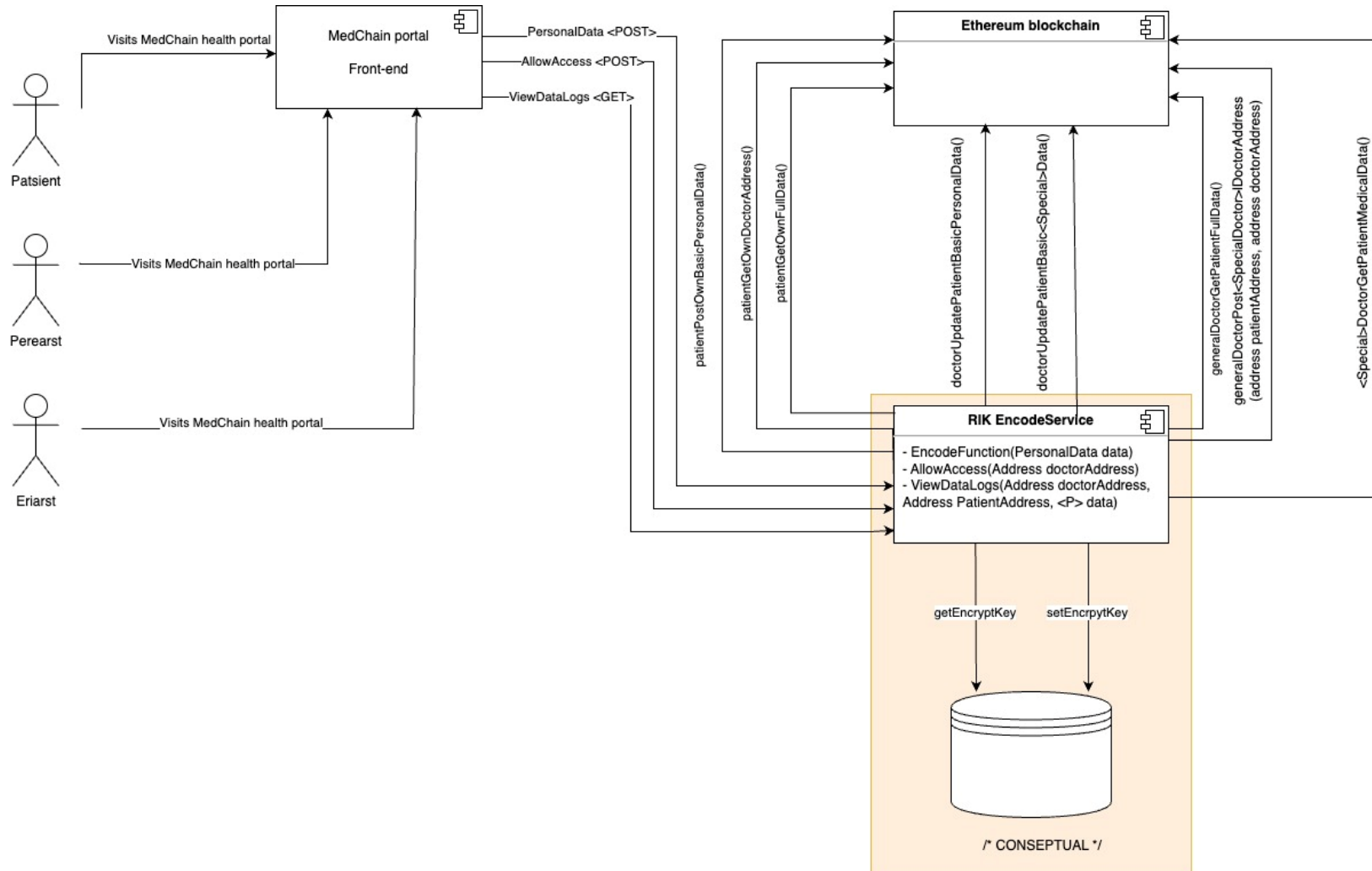
TECHNICAL OVERVIEW

BLOCKCHAIN, SMART CONTRACTS

- Ethereum and Solidity
- Smart Contract Mechanics
- Access Control Logic
- Event Logging
- Security Features



TECHNICAL OVERVIEW (2)



TECHNICAL OVERVIEW (3)



TECHNICAL OVERVIEW (4)

CODE OVERVIEW AND CONTRACT

- <https://sepolia.etherscan.io/address/0xf41c4917efe1043ddd05a62215fc0b1338209b56>

Q&A