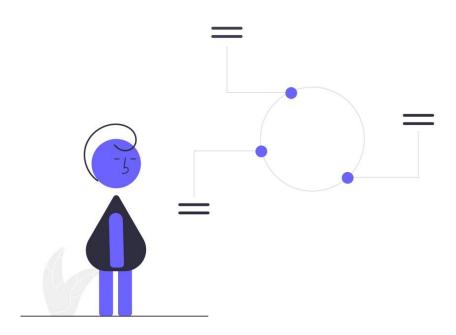
REVOLUTIONIZING HEALTH DATA PRIVACY AND ACCESS WITH BLOCKCHAIN

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.



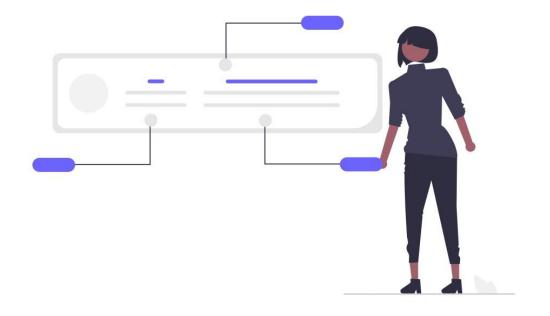
THE AUDIENCE

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.



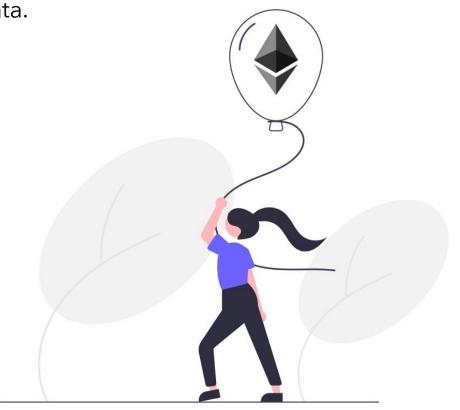
THE BLOCKCHAIN SOLUTION

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).



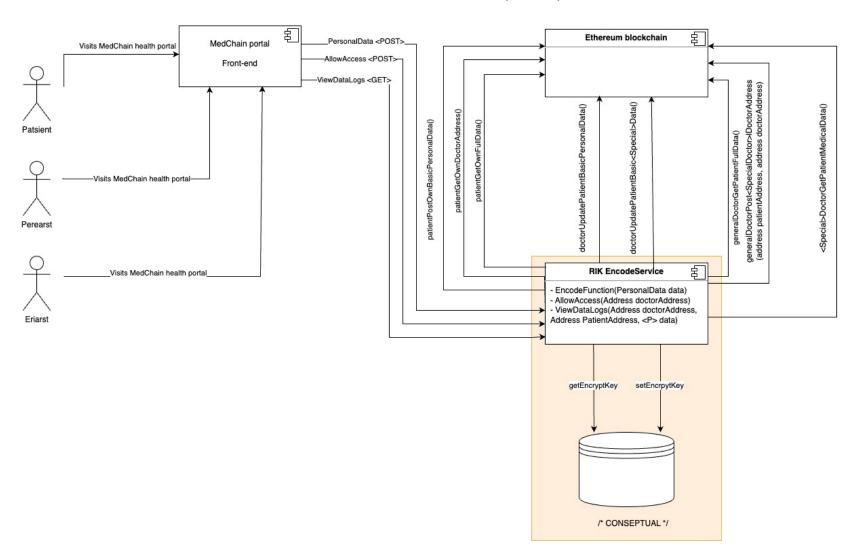
TECHNICAL OVERVIEW

BLOCKCHAIN, SMART CONTRACTS

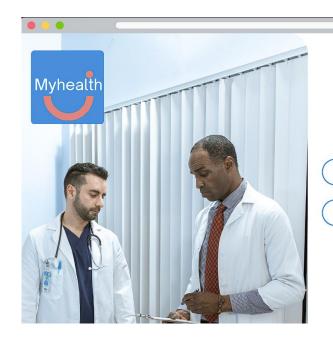
- Ethereum and Solidity
- Smart Contract Mechanics
- Access Control Logic
- Event Logging
- Security Features



TECHNICAL OVERVIEW (2)



TECHNICAL OVERVIEW (3)



PATSIENT

PEREARST



MINU TÖÖLAUD

Töölaualt leiad enda hilisema terviseinfo



Roll: Patsient 396####### Mati Maasik

PEREARST: Kati Kaasik Tel: 55667777

MINU ANDMED

MINU TERVISE AJALUGU

VASTUVÕTUD JA SAATEKIRJAD

RETSEPTID JA MEDITSIINIANDMED

TERVISETÕENDID JA DEKLARATSIOONID

<u>Digiregistratuur</u>

Broneeri ja muuda vastuvõtte:

Viimased sündmused

20.06.2023 - Analüüs: Veri, vensoone Vitamiin D (25-OH)

> 20.06.2023 - Vastuvõtt: Meliva Qvalitas AS

TECHNICAL OVERVIEW (4)

CODE OVERVIEW AND CONTRACT

 https://sepolia.etherscan.io/address/0xf41c4917efe1043ddd05a62215f c0b1338209b56

A&P