SMAIA-X

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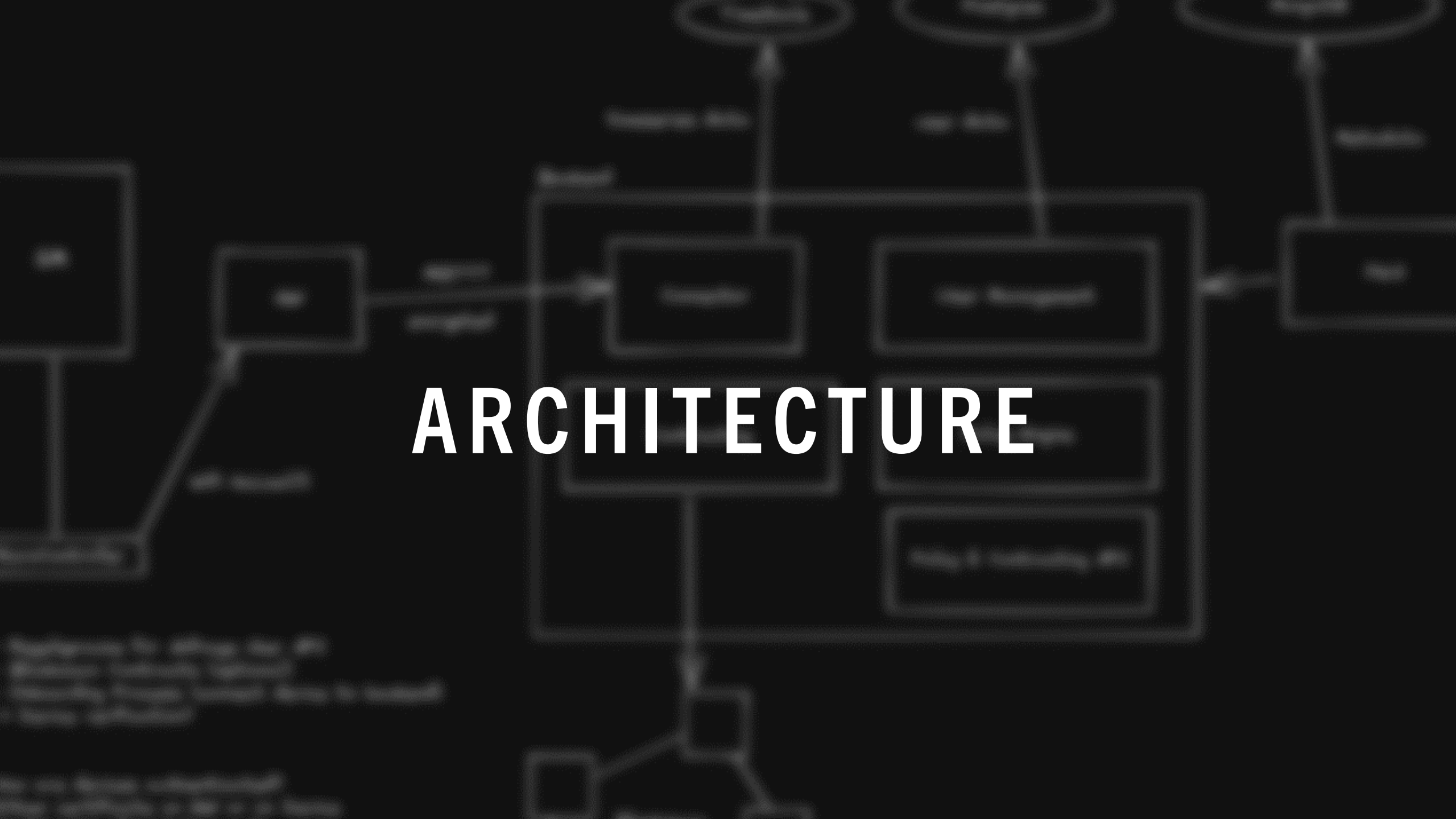
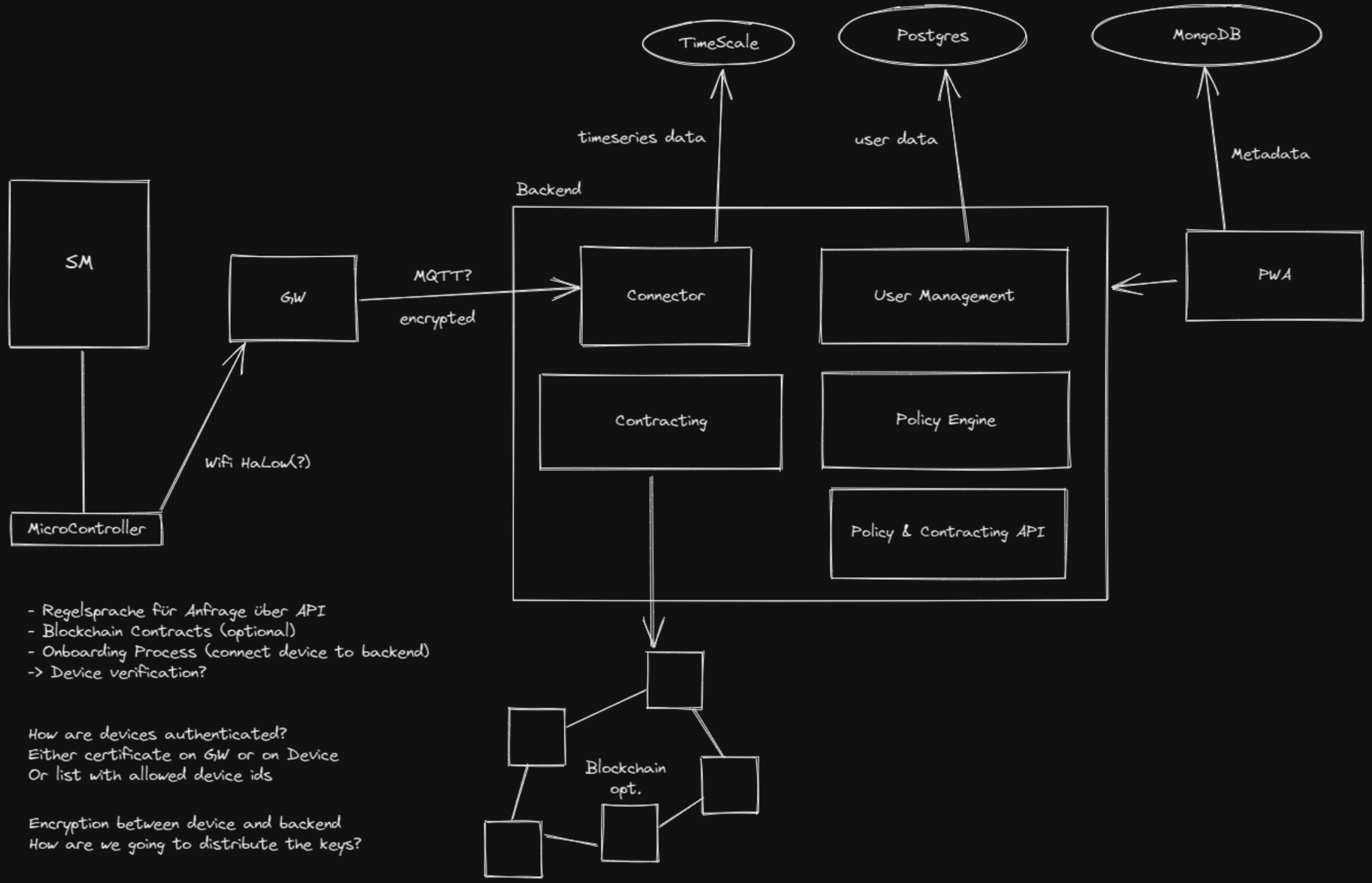

ARCHITECTURE



- Regelsprache für Anfrage über API
- Blockchain Contracts (optional)
- Onboarding Process (connect device to backend)
-> Device verification?

How are devices authenticated?
Either certificate on GW or on Device
Or list with allowed device ids

Encryption between device and backend
How are we going to distribute the keys?

POLICY ENGINE & CONTRACTING

- Define rules so that consumers and producers can share their data
- Access to data should be given in a dynamic way
- Contracts should be created automatically if a match is found
- Smart Contracts on Blockchain (optional)
- Policy & Contracting API for consumers
- Producer is always in charge of who receives which data under which conditions
- Policy for choosing to only offer encrypted (homomorphic encryption) data

ADDITIONAL CHALLENGES

- Dynamic configuration of Microcontroller and Gateway (for future changes)
- Key Distribution
- Onboarding for new devices (How are they identified, Certificate, ID, ...)
- Connectivity issues Microcontroller (Basement)

- Other teams stealing our ideas...

OUT OF SCOPE IDEAS

- App for configuring the Gateway and pairing it with WiFi via bluetooth
- Training of ML models on encrypted data
- Implementation of payment system
- Differential Privacy