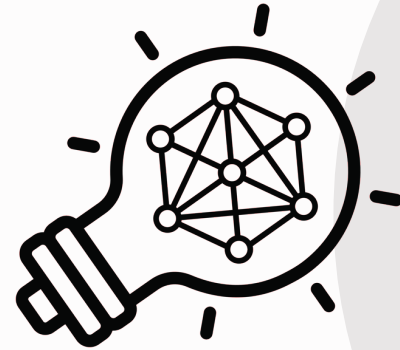




Hotel Blockchain: Revolutionizing Rentals

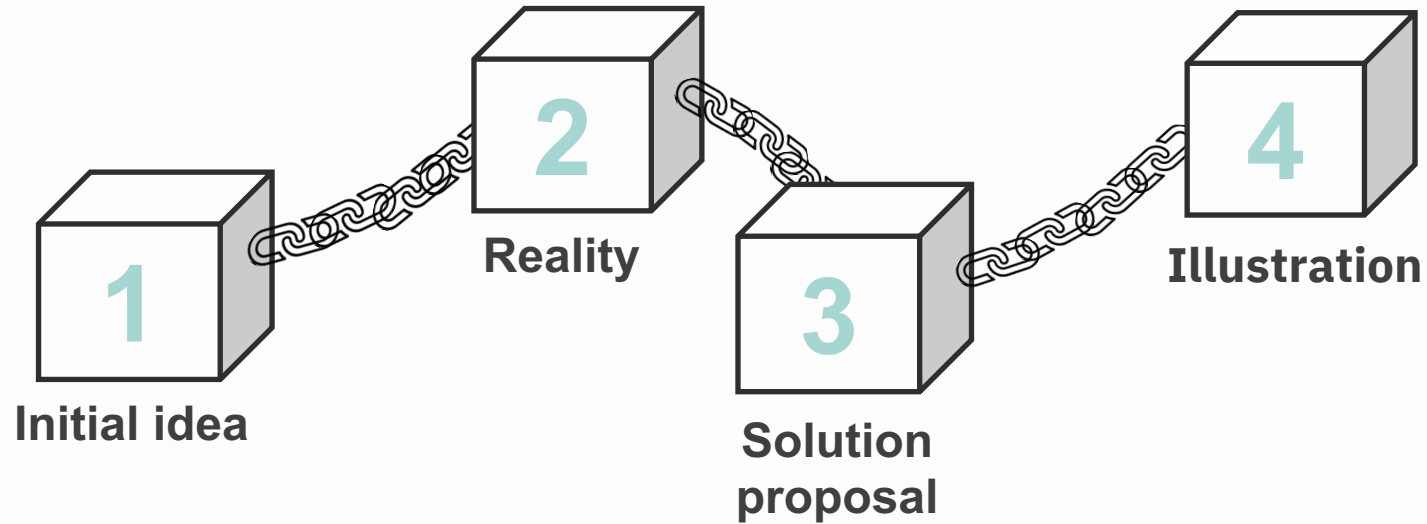
Leveraging Blockchain Wallets for
Secure Payments and Access

Shaila Brändle - Hong Le





Introduction to the case



1

Initial idea

Billy

I need to book a
hotel room



1

Initial idea

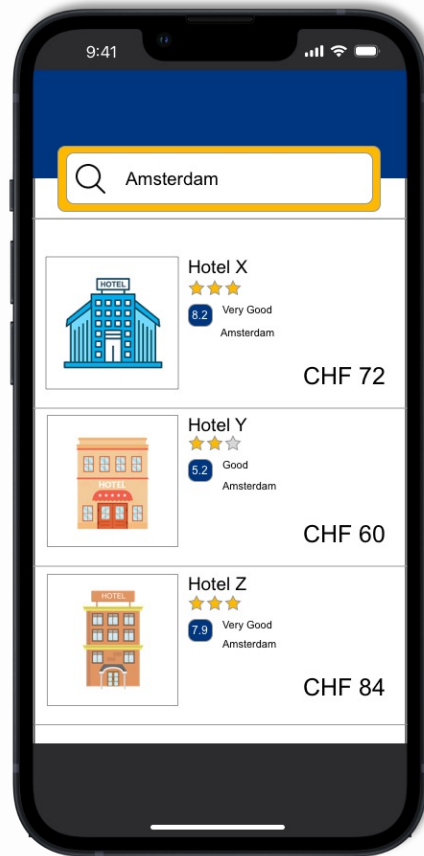


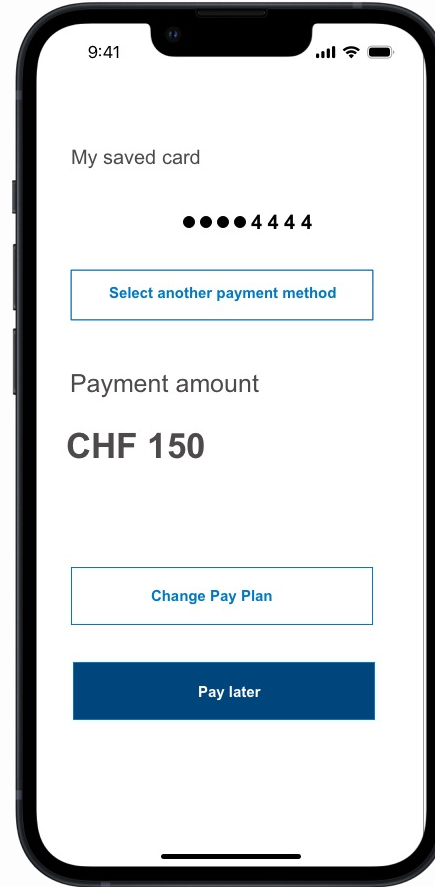
Book in
advance



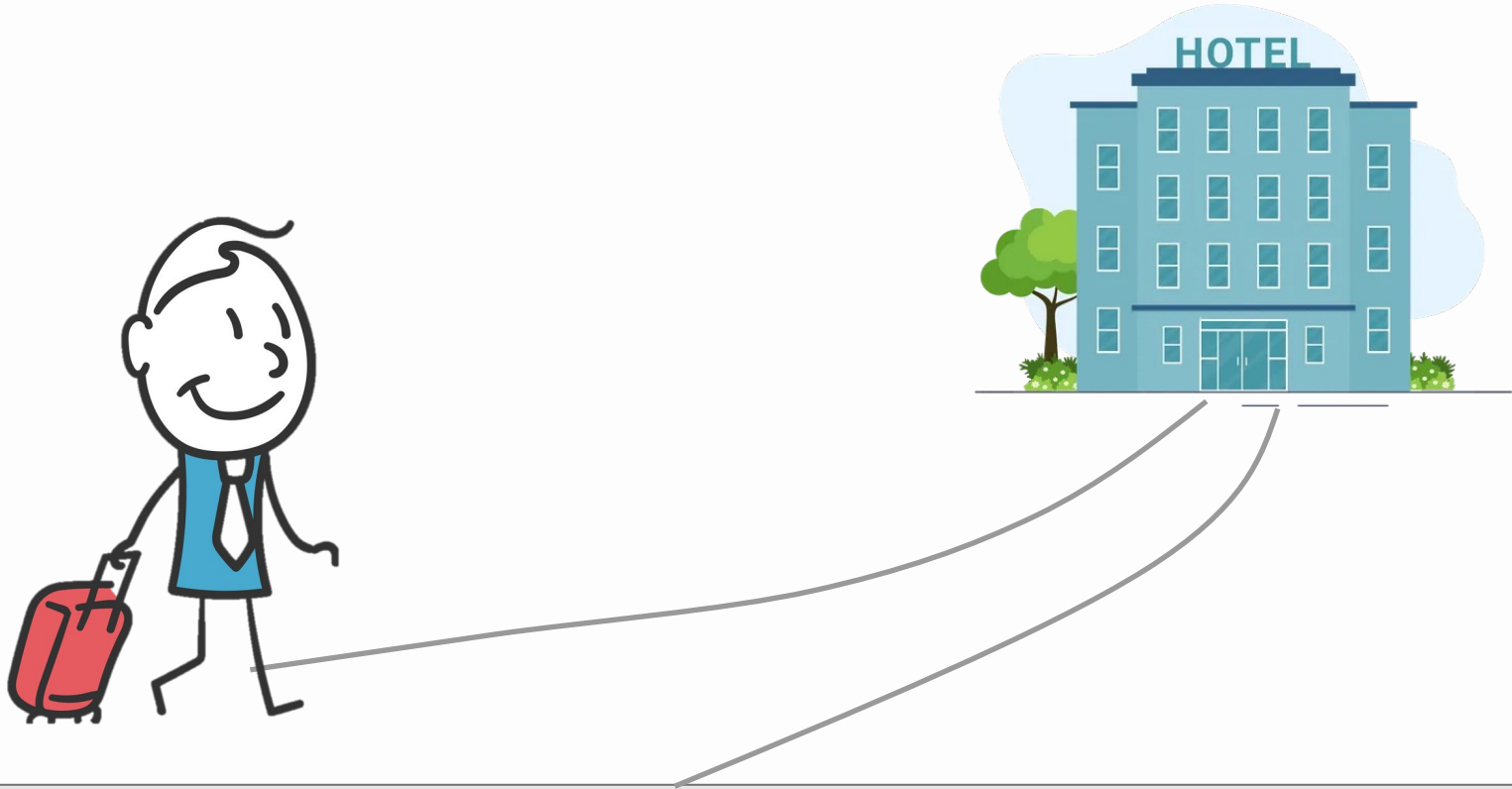
Pay in
advance





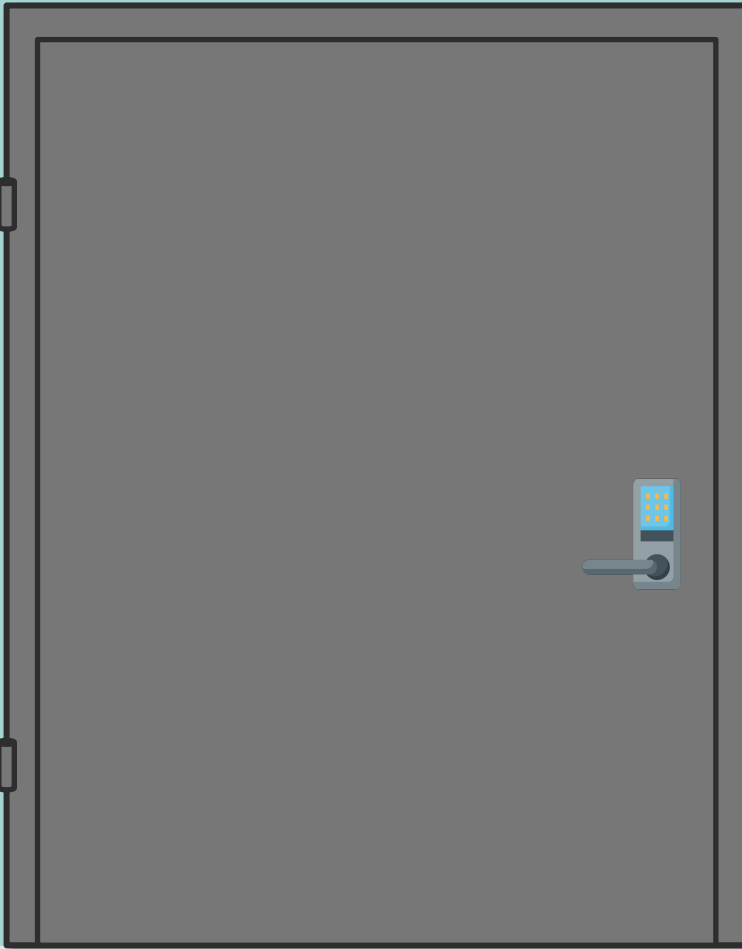


On the day Billy arrives...

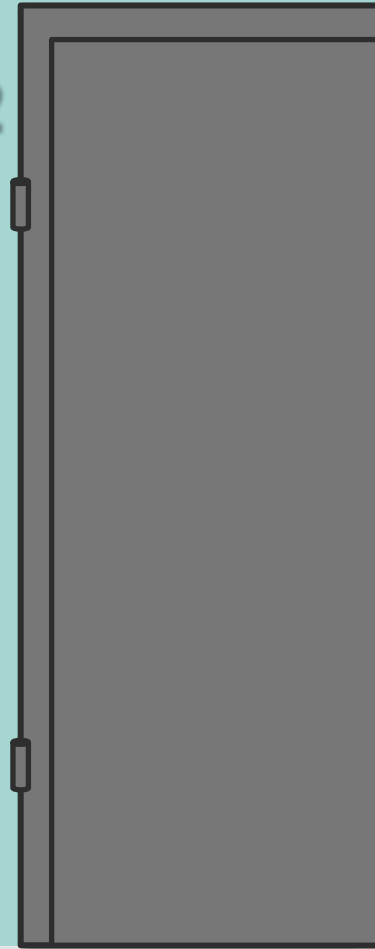




S0



S2



University
of Basel

Center for
Innovative Finance



BLOCKCHAIN
Challenge

S1



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of Basel

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Innovative Finance

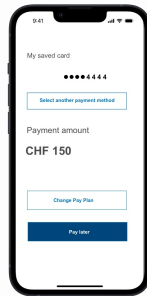
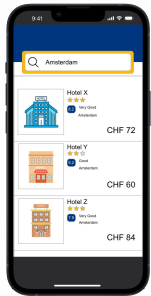


BLOCKCHAIN
Challenge





Initial idea





Initial idea

What could be the **problems** for Billy and Alice?

- Payment insecure
- Inconvenient
- Waiting time



- Commission Fee
- Investment for physical assets
- Inefficiency
- No competitive advantage



Reality

The Clark Hotel & Spa Jersey

4.5 stars

LOCKTrip

Unlock Secret Travel Deals

[📧](#) [f](#) [@](#) [X](#)

[📞 Emergency Support: +17163303036](#)

SITE

NFT

Community Guides

Destinations

Travala.com

Stays Flights Activities

REWARDS! AVA Smart Program

USD Login Sign Up

BOOK HOSTELS WITH CRYPTO & SAVE UP TO 60%

Pay With Crypto for 2,200,000+ Hotels Worldwide. Best Prices Guaranteed

Stays

Flights

Activities

17 Oct 2024 Thursday

18 Oct 2024 Friday

2 Adults - 0 Child 1 room

SEARCH

Help Center

LockTrip Academy

Contact

Join Community

Press

Terms & Conditions

AML & KYC Policy

Privacy Policy

Book Hotels With BTC

Book Hotels With ETH

Book Hotels With XRP

Book Hotels With LTC

Book Hotels With SOL

Book Hotels With USDT

Book Hotels With USDC

Intermediaries!



Reality

Customer



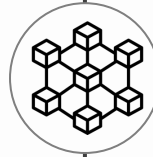
Business travellers and crypto enthusiasts seeking efficient, autonomous rentals

Owner Entity



Hotels and property owners offering rentals with reduced admin via smart contracts.

Technology Provider



Blockchain networks, smart lock vendors for access control.

Regulator



Ensure compliance with AML, KYC, and GDPR laws.



Solution

We propose a solution that

**Secure
Payments**



Blockchain

**Seamless
check-ins**



Asymmetric
cryptography



**Convenient
Access**



Technicalities



Type

Public



Environment

EVM



Model

Account-based



Technology

Solidity Smart Contract
Smart lock technology
Access Nodes

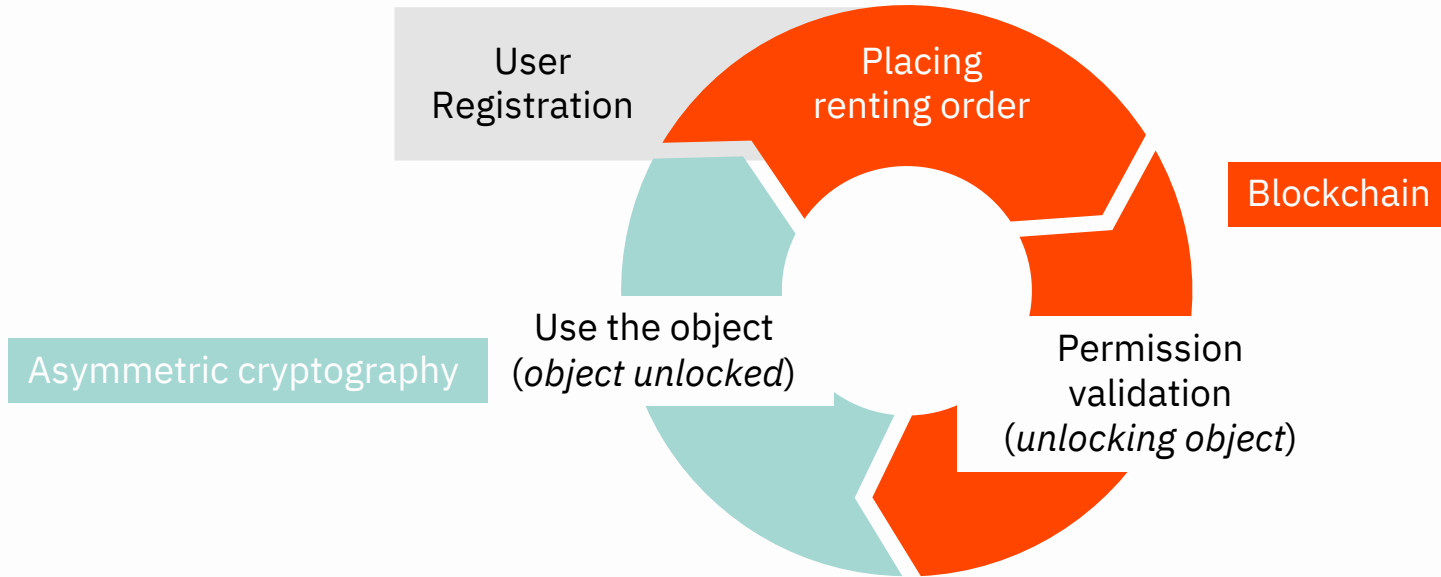


Wallet

MetaMask

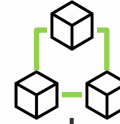
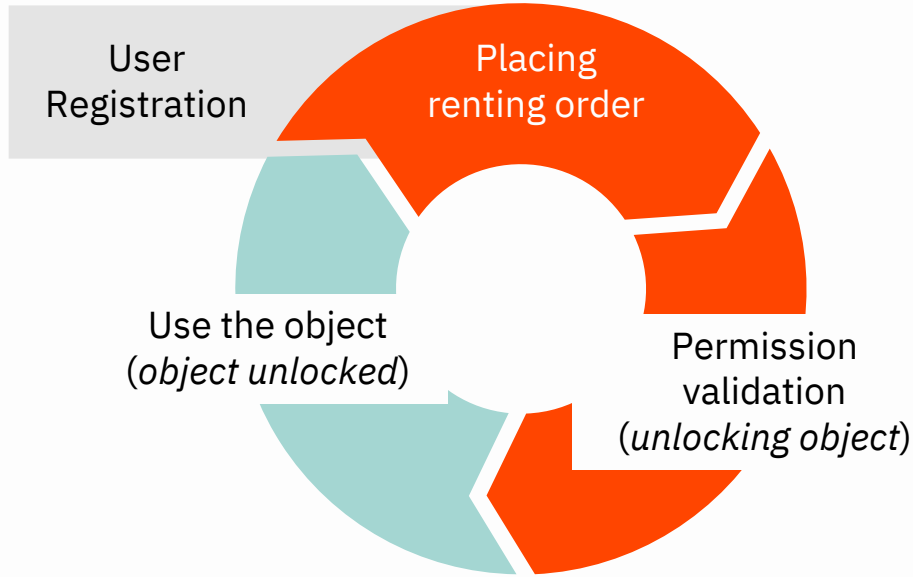


Illustration



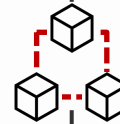


Data



On-chain

- Guest payment (Transactions)
- Authorized guest list (Address)

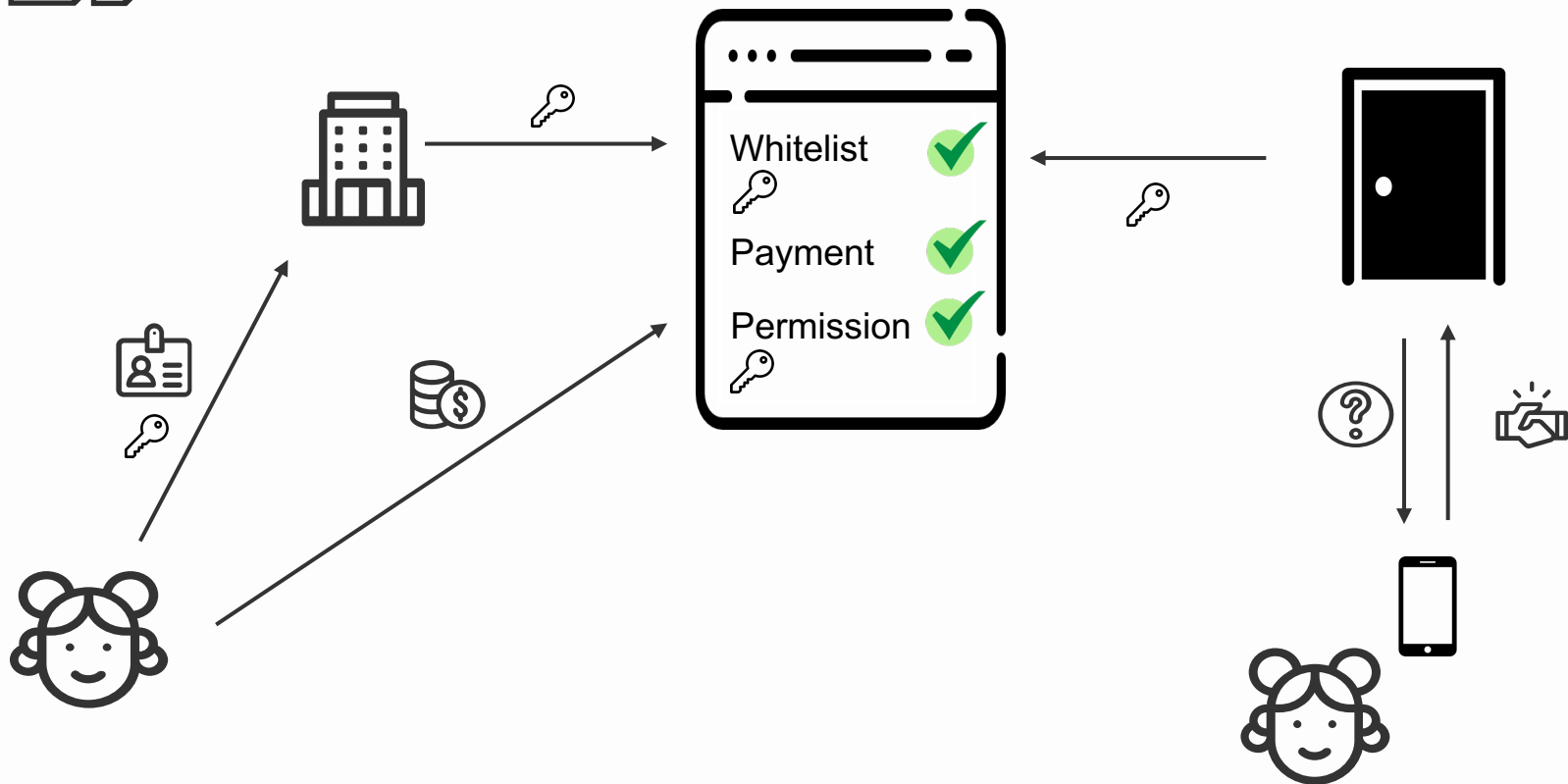


Off-chain

- Personal Identity Information
- Door lock mechanism

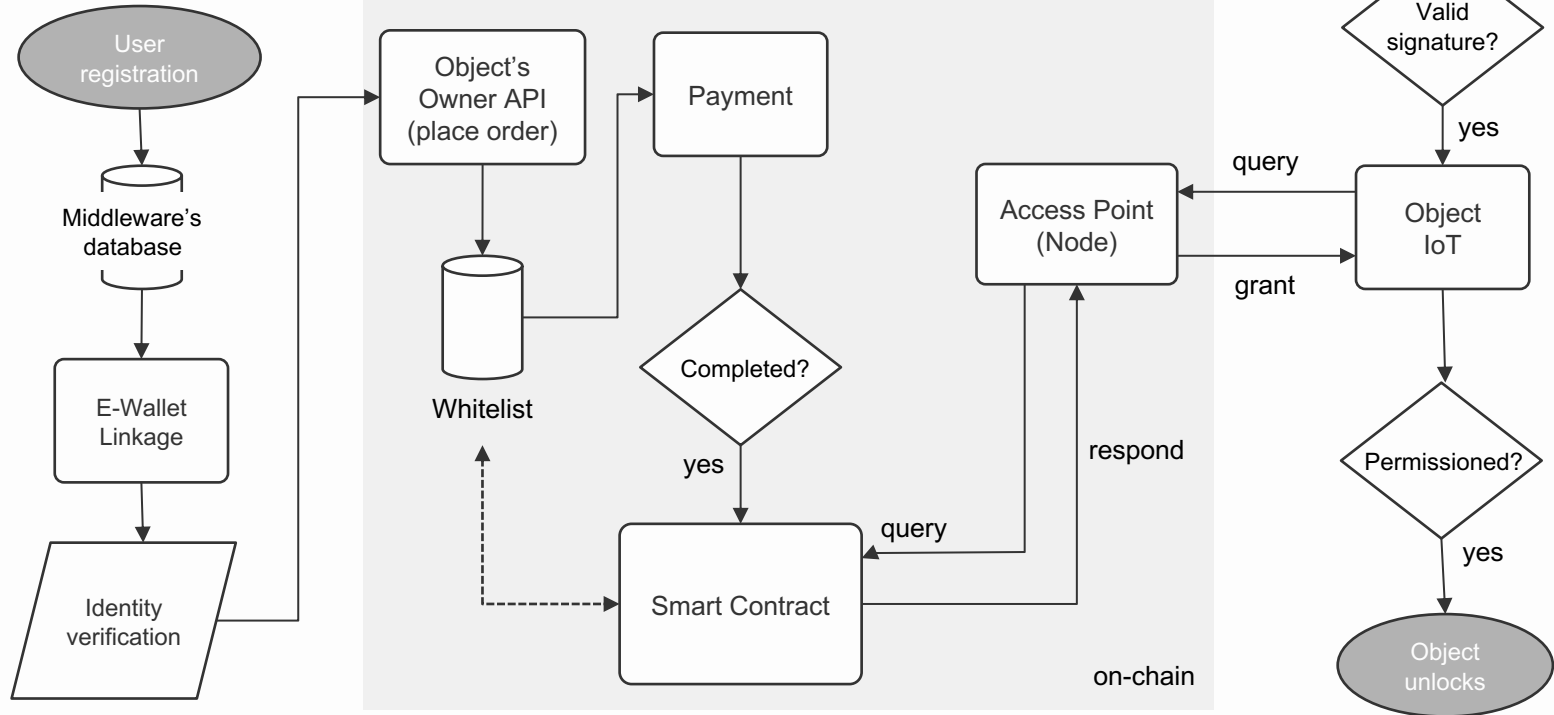
4

Macro process





Micro process





Asymmetric Cryptography

Challenge



Unique Text with
Entropy



Signed by K_{prv}



Verified by K_{pub}

Unique Text with
Entropy

APP MOCKUP

Guest registration



9:41


Welcome
Sign Up


Email
alice.chain@gmail.com


Password

Sign up

or

 Continue with Apple



 Continue with Google


 Continue with Facebook

9:41

< ID Verification ≡

Follow the steps to verify your identity

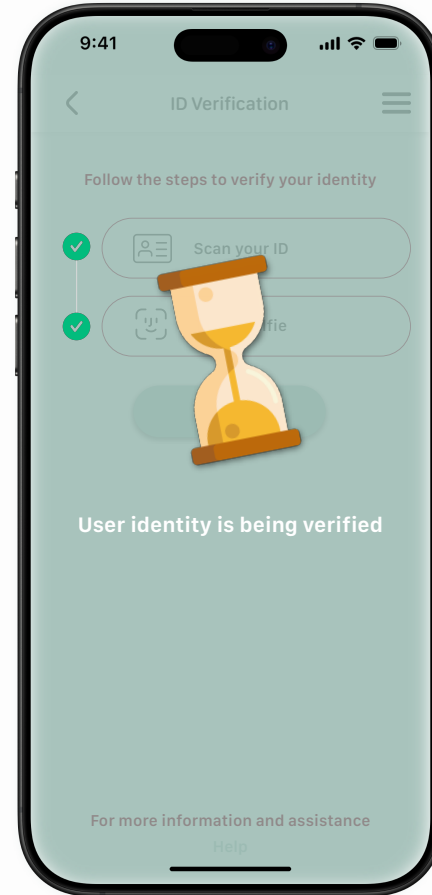
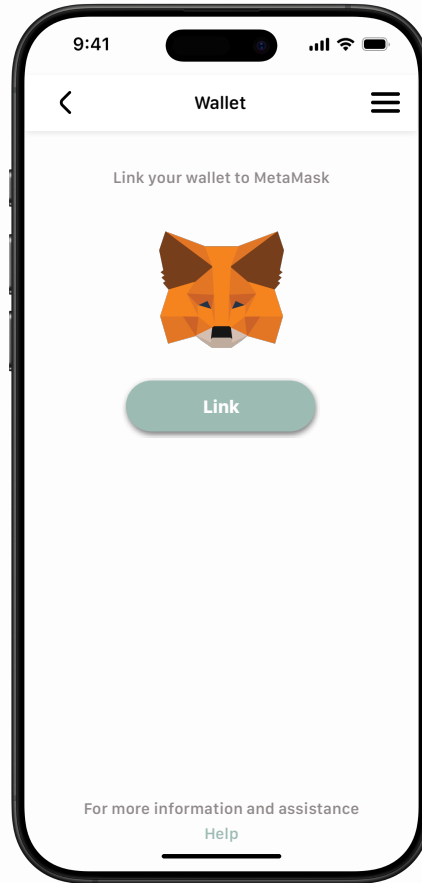
  Scan your ID

 Take a selfie

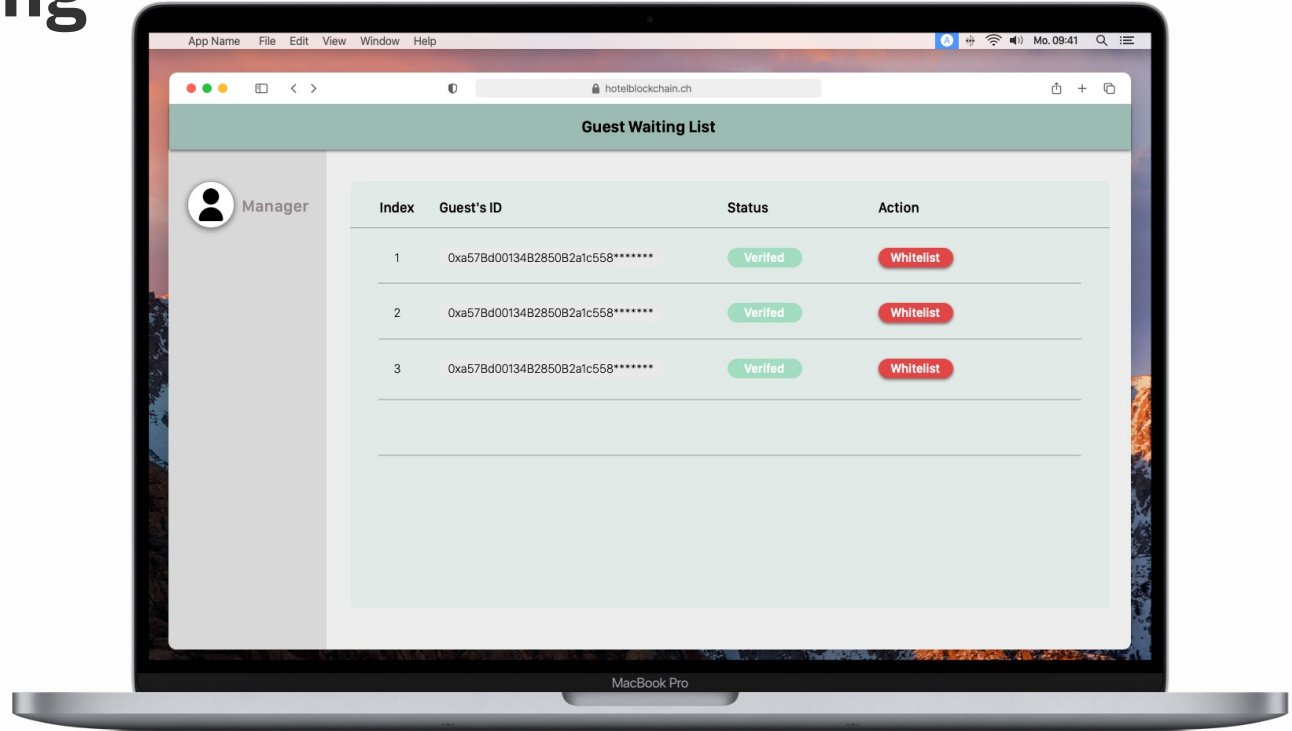
Verify

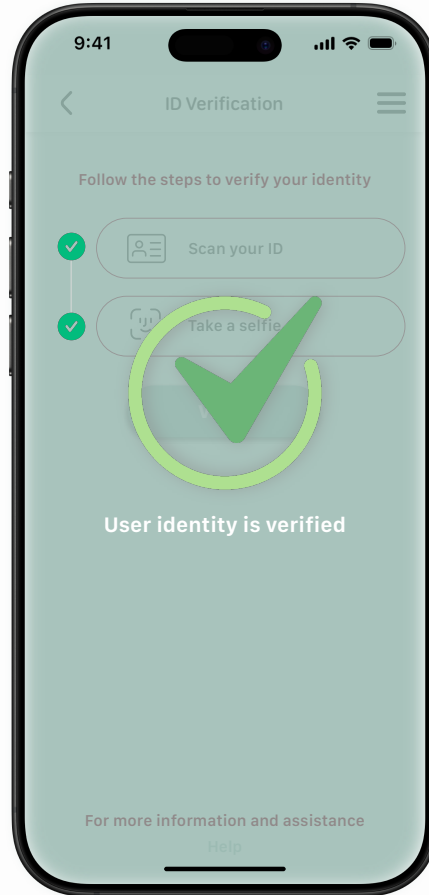
For more information and assistance
[Help](#)

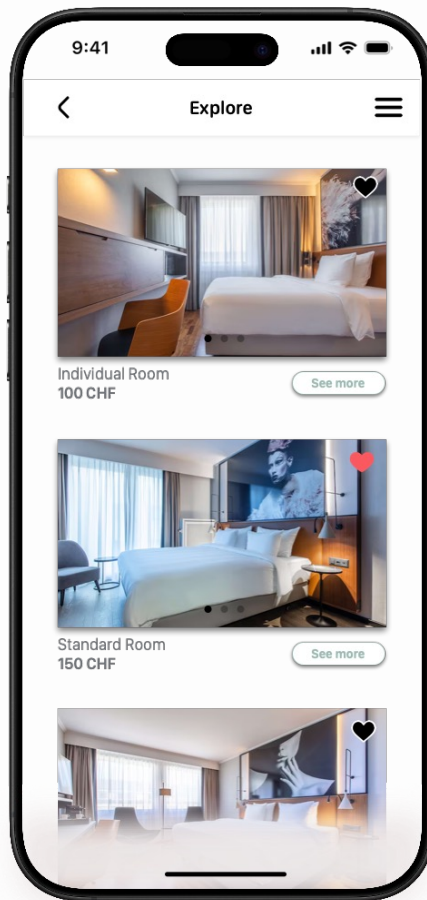
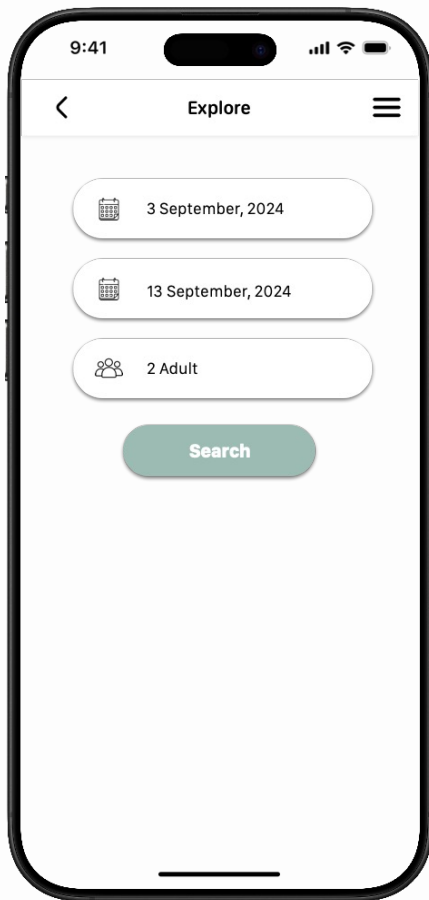
Guest registration

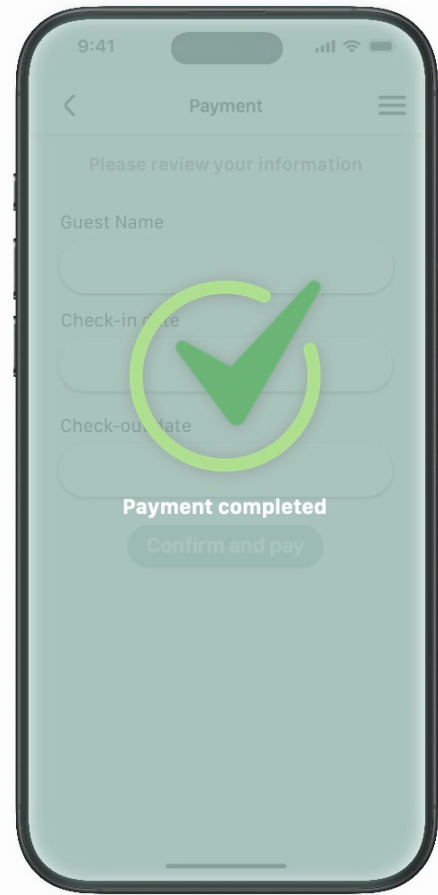
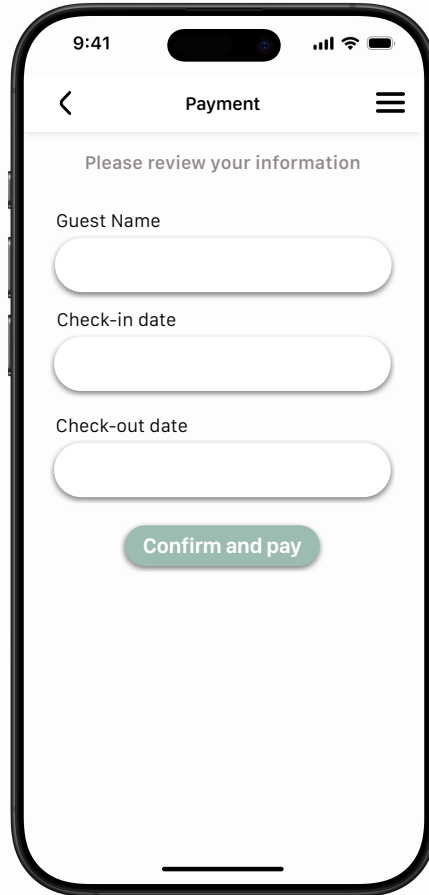
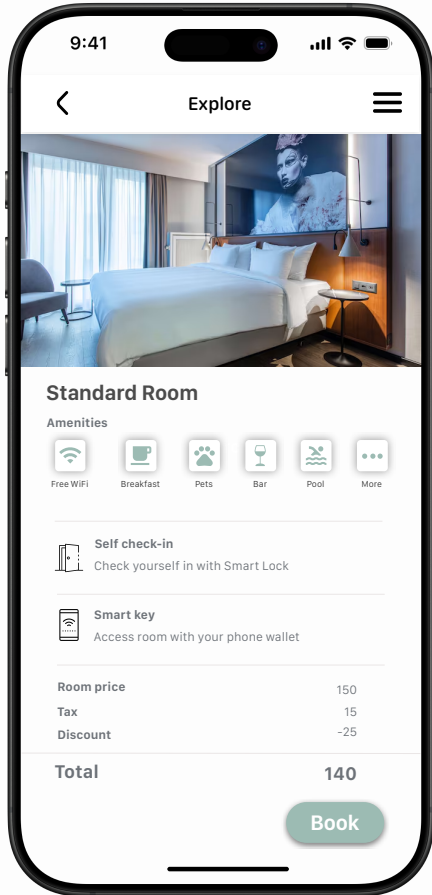


Whitelisting









Data update

