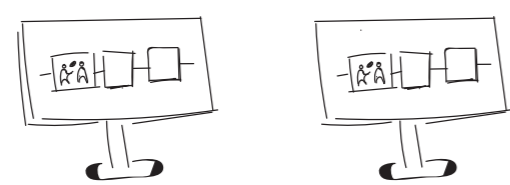


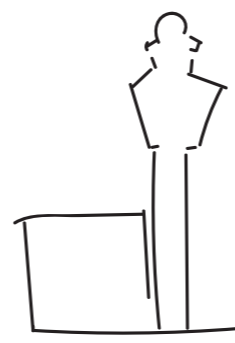


# The TravelWallet | a blockchain based identity verification service to enhance the passenger experience at Amsterdam Airport Schiphol



## | Blockchain based

The blockchain is a decentralised database which enables people and organisations to do transactions without having to trust each other. Because of this, blockchain will change the way we transact value on a global scale. Therefore it is important to explore what this new technology can do for companies. In this project the possibilities for Schiphol Group are explored.



## | Amsterdam Airport Schiphol

Schiphol Group has the ambition to become Europe's preferred airport. Next to this, they have the ambition to become the world's leading digital airport by 2018. To achieve this the airport has to continuously innovate. Schiphol Group does this by expanding the airport with the Capital Programme and by making the current airport smarter with the Digital Airport Programme. Both programmes aim to create an excellent seamless passenger process with a minimum of stressful moments.



## | Passenger experience

At the moment passengers experience dissatisfaction in some parts of their journey. These moments are often the moments with the lowest control. These include the waiting times at check in, security and passport control.

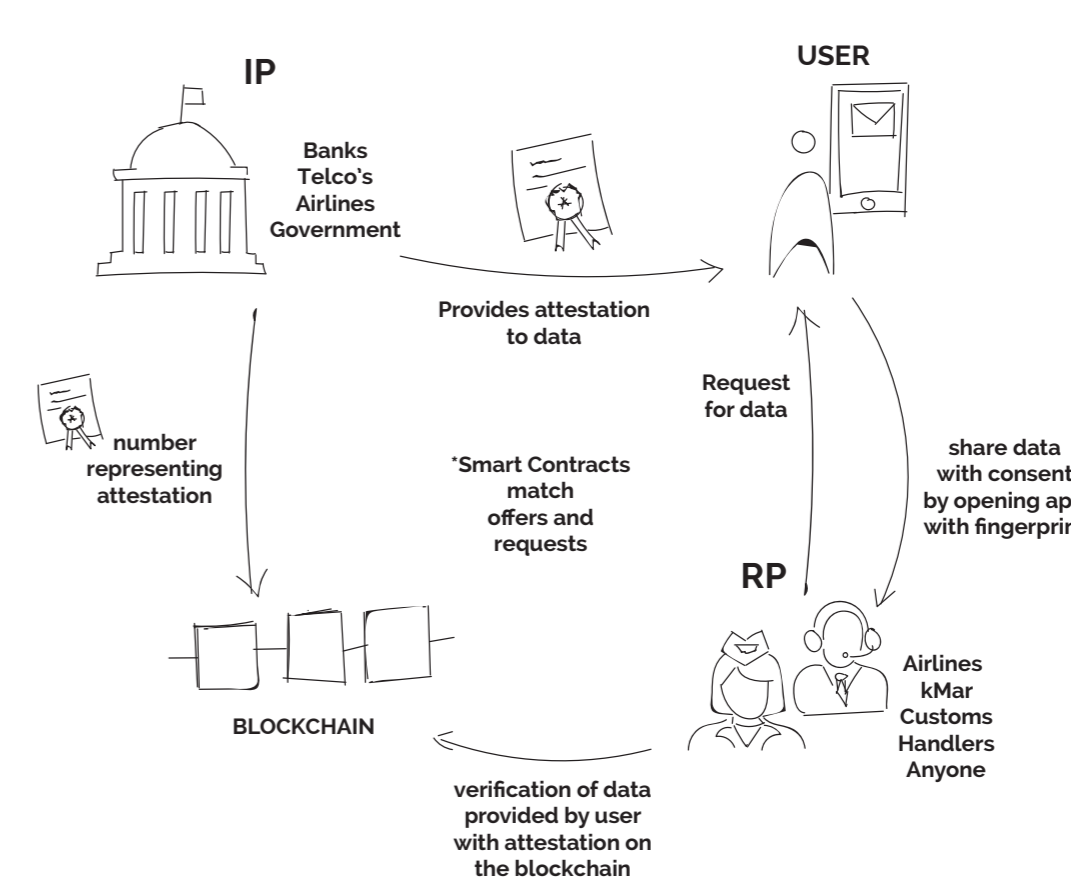
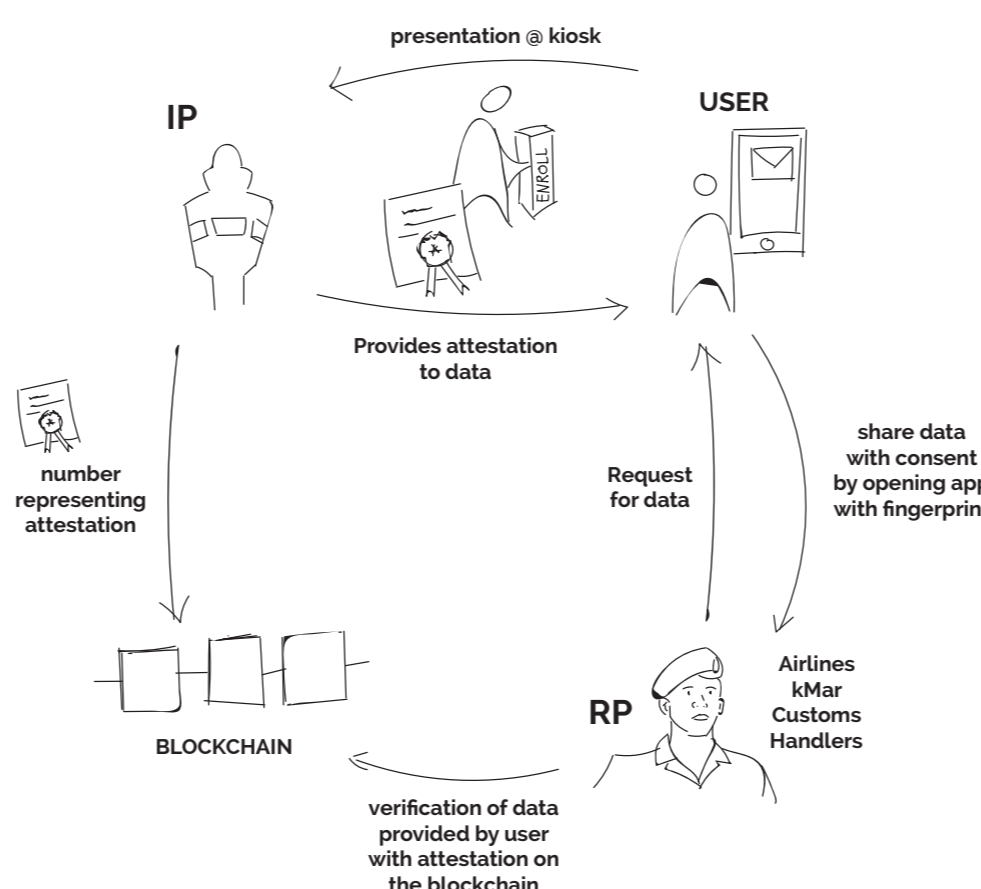
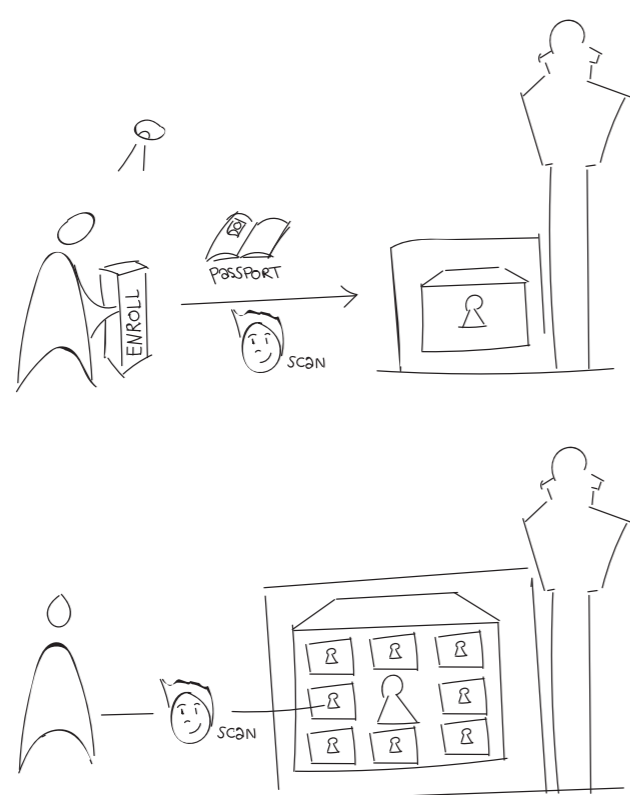
## The Roadmap | towards a self sovereign identity at AAS

To enhance passengers control over their journey and to solve the challenges biometric identification brings, the concept of a self sovereign identity is proposed. A self sovereign identity is a system working with blockchain technology in which the user has consent and control over who he shares his data with.

To decrease waiting times, Schiphol works on a project called Seamless Flow, that enables passengers to pass checks with biometric identification. But, implementing biometric identification brings along some challenges. Enrollment still takes quite some time. It is hard to proof the removal of personal data. Scanning a person's passport presents challenges because of privacy legislation. Last, due to the central character of the database it takes more effort to protect the data.

In a self sovereign identity system, identity providers provide the user of an attestation, a proof of correctness, for example that it is indeed the persons passport. From the same attestation a hash, a number that represents the attestation, is written onto the blockchain. The relying party, an organisation like for example an airline who wants a confirmation of the passengers identity, can then compare what is presented by the user with what is on the blockchain. When it's a match, your identity is confirmed.

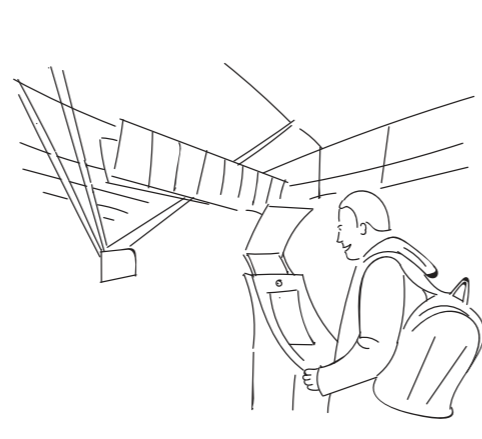
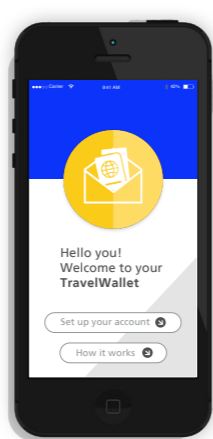
In the ideal situation Schiphol does not have a role in the self sovereign identity system. Until government enables such a system, Schiphol has the opportunity to act as a identity provider. They can create attestations with the enrollment kiosks that are going to be used for biometric identification in the upcoming years.



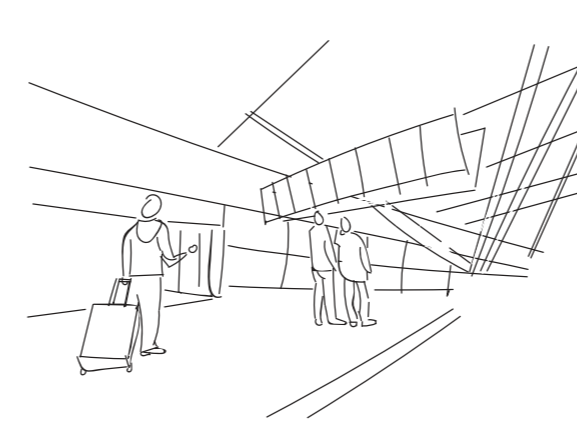
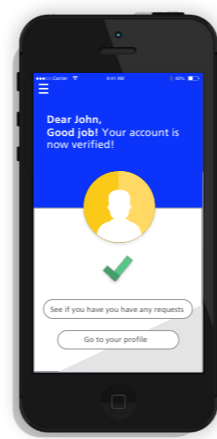
## 2025 Identity-as-a-service | from a passenger perspective



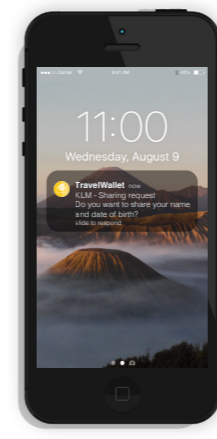
**1. Home Enrollment**  
Start with setting up an account



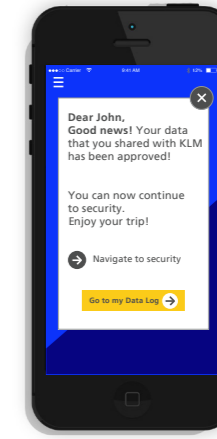
**2. At the Airport**  
Verify your account at the kiosk by scanning your passport and face



**3. Receive a sharing request from KLM who wants proof of your name and date of birth**  
Open and approve the request  
When you approve, KLM is only able to see the information they don't have the ability to share it.



**4. Once your data is approved, hold your phone close to the gate**  
If correct, it will open to continue to security



Tess Poot  
Blockchain, for an enhanced passenger experience at Amsterdam Airport Schiphol  
25 October 2017  
Strategic Product Design

**Committee** Siccó Santema  
Katinka Bergema  
Marit Gangsaas  
**Company** Schiphol Group

