Fraunhofer AISEC

The State or Private Enterprise? The Shift in Users' Preference for the Provider of an Identity Wallet

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Abstract

This poster presents a concept for storing multiple digital identities (e.g ID card, driver's license) in one app, the identity wallet (e.g. used for digital identification). The concept was implemented in two prototypes (low & high-fidelity) and evaluated from 2020 - 2022 in three user studies regarding trust in this concept to determine change over time.

Users mentioned the wallet provider as key component in terms of trust. Although the same prototype was tested, the preferences of the users with regard to the different points in time changed from state versus company as operator to a clearer tendency towards the state as operator.

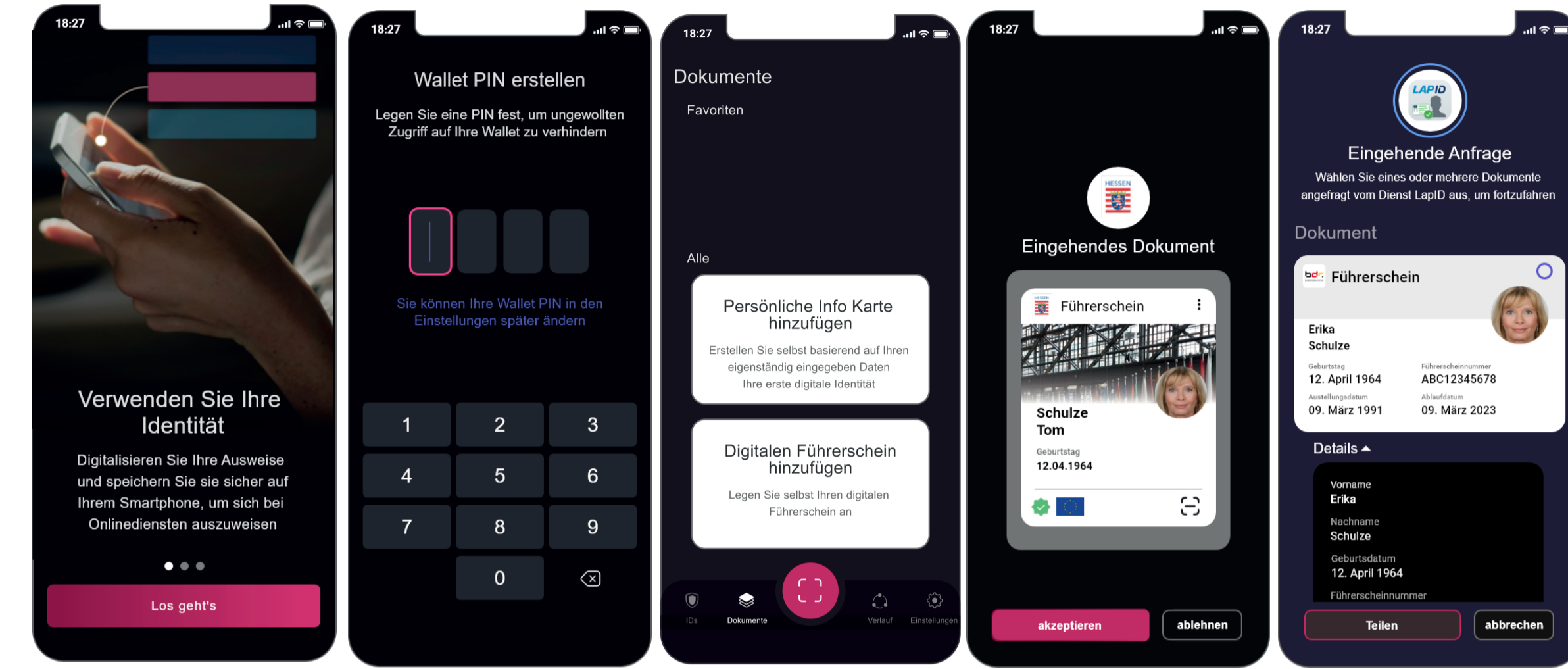## Low-Fidelity Prototype of the Identity Wallet
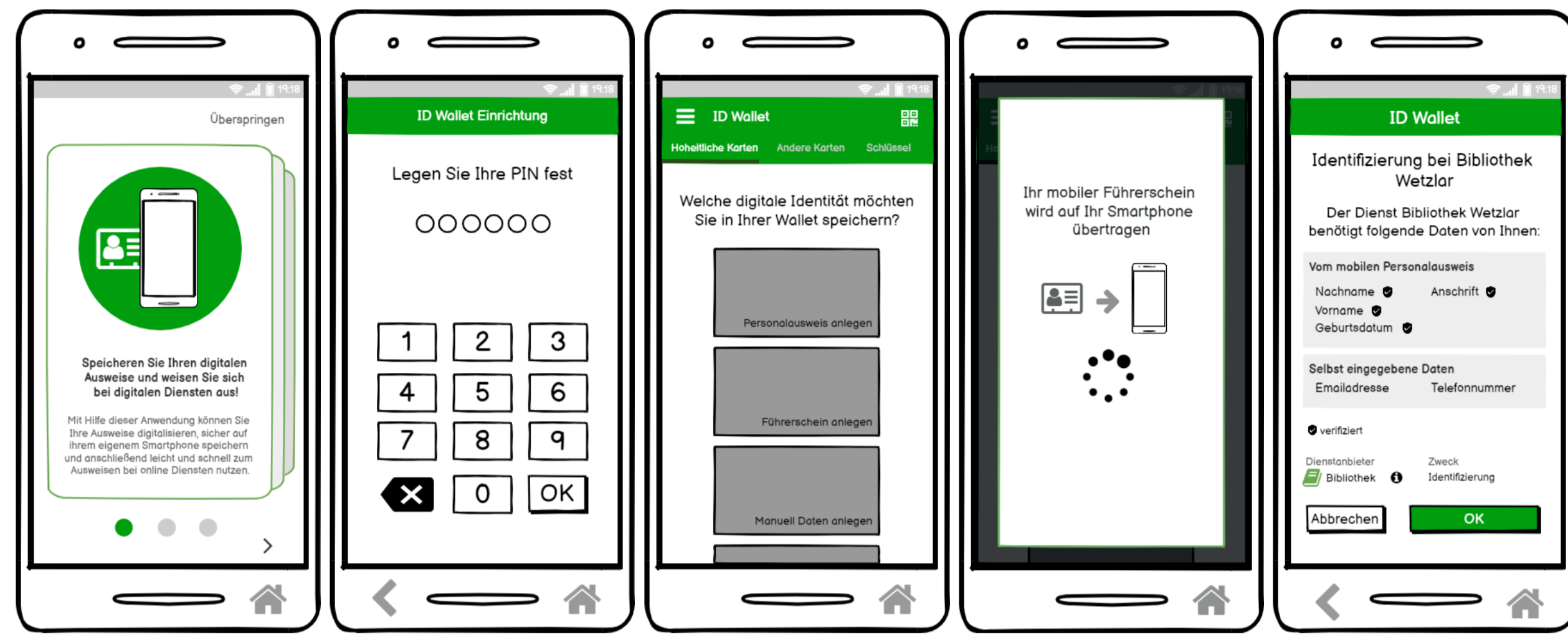
Introduction | PIN setting | Overview of possible IDs to be stored | Saving the ID in the wallet | Transfer of the ID / data

High-Fidelity Prototype of the Identity Wallet

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Research questions

- What conditions must be met for users to trust the concept of an identity wallet?
- What influence does the format of the prototype (low-fidelity or high-fidelity) exert on users' trust in the concept?
- To what extent does user trust change over time?

Features of the concept of the identity wallet

- Storage of sovereign IDs, credentials, keys (hotel, car, etc.)
- User decides which ID document and which data are used for authentication
- Data sending only with the consent of the user
- On-site identification with a QR code of the ID
- Supply of information about the requesting service

Evaluation with a total of 44 participants regarding trust

- Qualitative study (evaluation of the prototype and interview)
- Evaluation by using the think-aloud method
- All three studies used the same interview question to address the topic of trust
- Approx. uniformly distributed participants across age and gender

Results regarding the perception of trusting the concept - participants trust the concept, but trust depends on the *wallet operator*
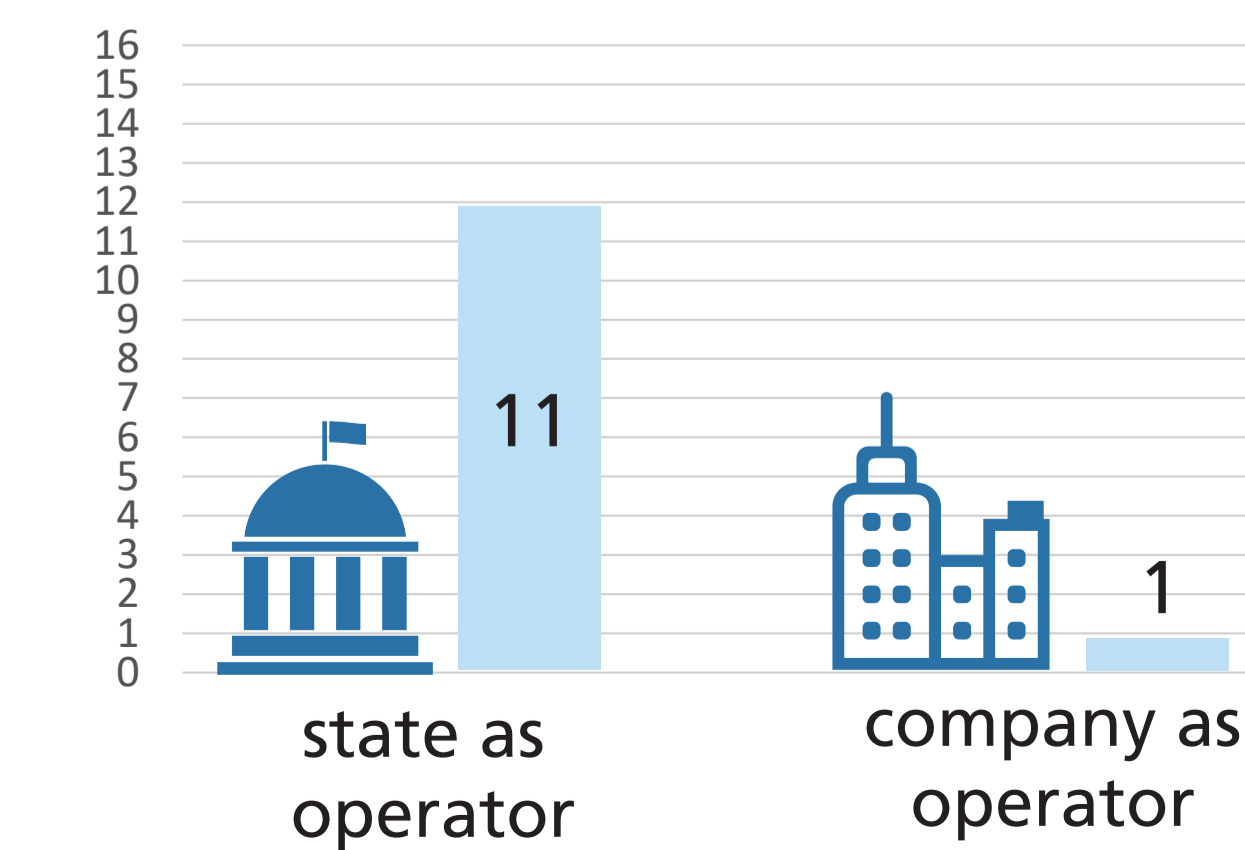
2020: Study with 16 participants to evaluate the *low-fidelity* prototype
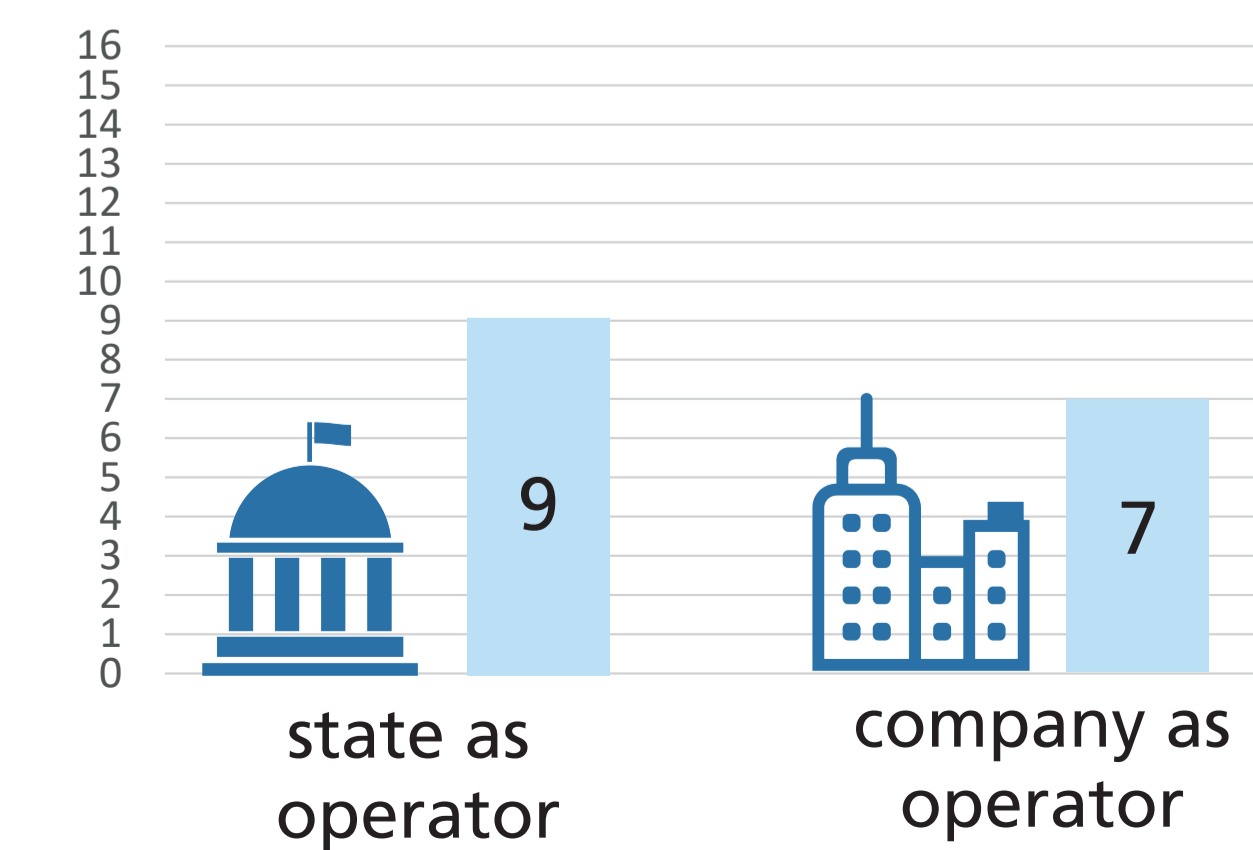
state as operator: 9
company as operator: 7

A Reason pro state:

State handles the national ID, so the state should also be the operator.

A Reason pro company:

State already has enough data, so a company should be the operator.

2022: Study with 12 participants to evaluate the *high-fidelity* prototype

state as operator: 11
company as operator: 1

A Reason pro state:

State handles the national ID, so the state should also be the operator.

A Reason pro company:

State is not capable to implement such projects, so a company should be the operator.

2022: Study from 2020 was replicated to verify feedback regarding trust

state as operator: 13
company as operator: 3
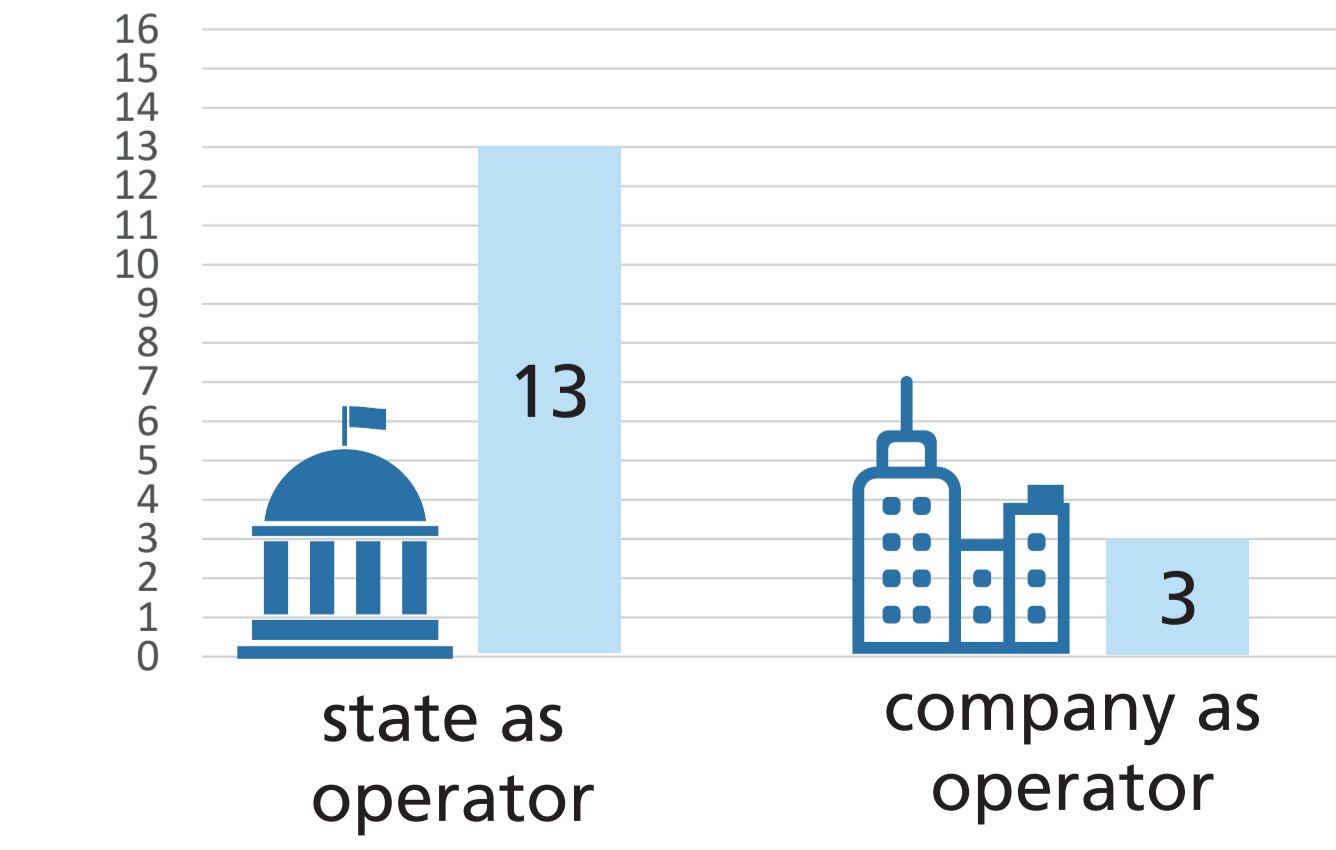
A Reason pro state:

Same as 2020 and worry about the company that will sell the data as their business model.

A Reason pro company:

State is not capable to implement such projects, so a company should be the operator.