

FIWARE
**Global
Summit**

Trust, Identity and Access Management

Stefan Wiedemann, Technical Lead & Architect, FIWARE Foundation e.V.

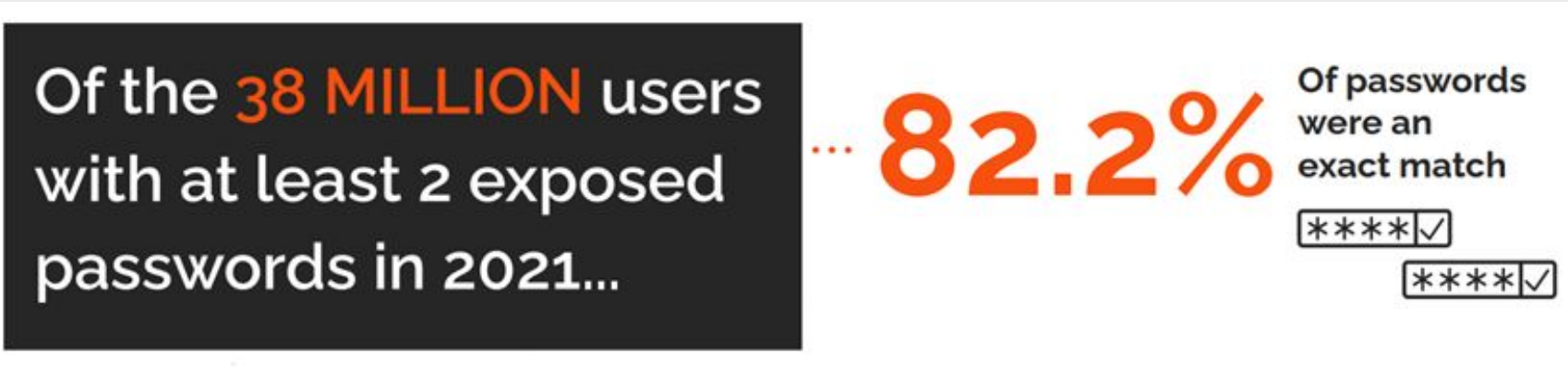
Vienna, Austria
12-13 June, 2023
#FIWARESummit

**From Data
to Value**

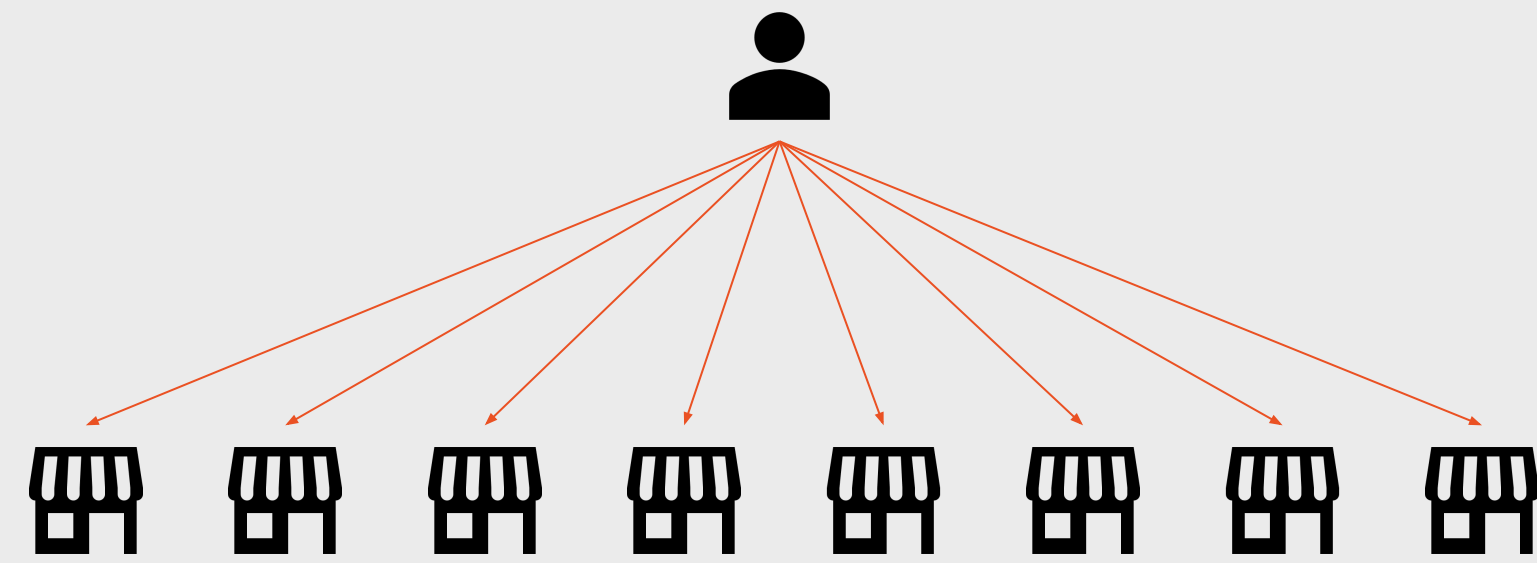
OPEN SOURCE
OPEN STANDARDS
OPEN COMMUNITY



Current models of identification



```
pass 123456 password 123456789 12345678 qwerty
12345 111111 1234567890 qwerty123 123123 1234567
1q2w3e DEFAULT 1234 000000 qwertyuiop abc123
123321 1q2w3e4r5t iloveyou 11111111 654321
a123456 666666 123123123 1q2w3e4r 987654321
admin x4ivygA51F asdasd password1 123456a
1qaz2wsx Password zinch 112233 zxcvbnm 123qwe
qwe123 asdfghjkl fuk19600 121212 7777777
UNKNOWN 123456789a dragon 123654 homelesspa
azerty 5201314 555555 00000000 159753
q1w2e3r4t5y6 1234qwer yuantuo2012 Sojdlg123aljg
aaaaaa abcd1234 qazwsx 3rJs1la7qE 12345678910
princess monkey football 88888888 q1w2e3r4
qwer1234 147258369 0123456789 pokemon
1qaz2wsx3edc asdfgh 0987654321 sunshine 222222
Aa123456 killer 2011-10-10 [censored]you mynoob
michael ashley col123456 daniel 999999 google
777777 30di15ngxB superman naruto changeme
qwerty1 123abc shadow 789456123
```

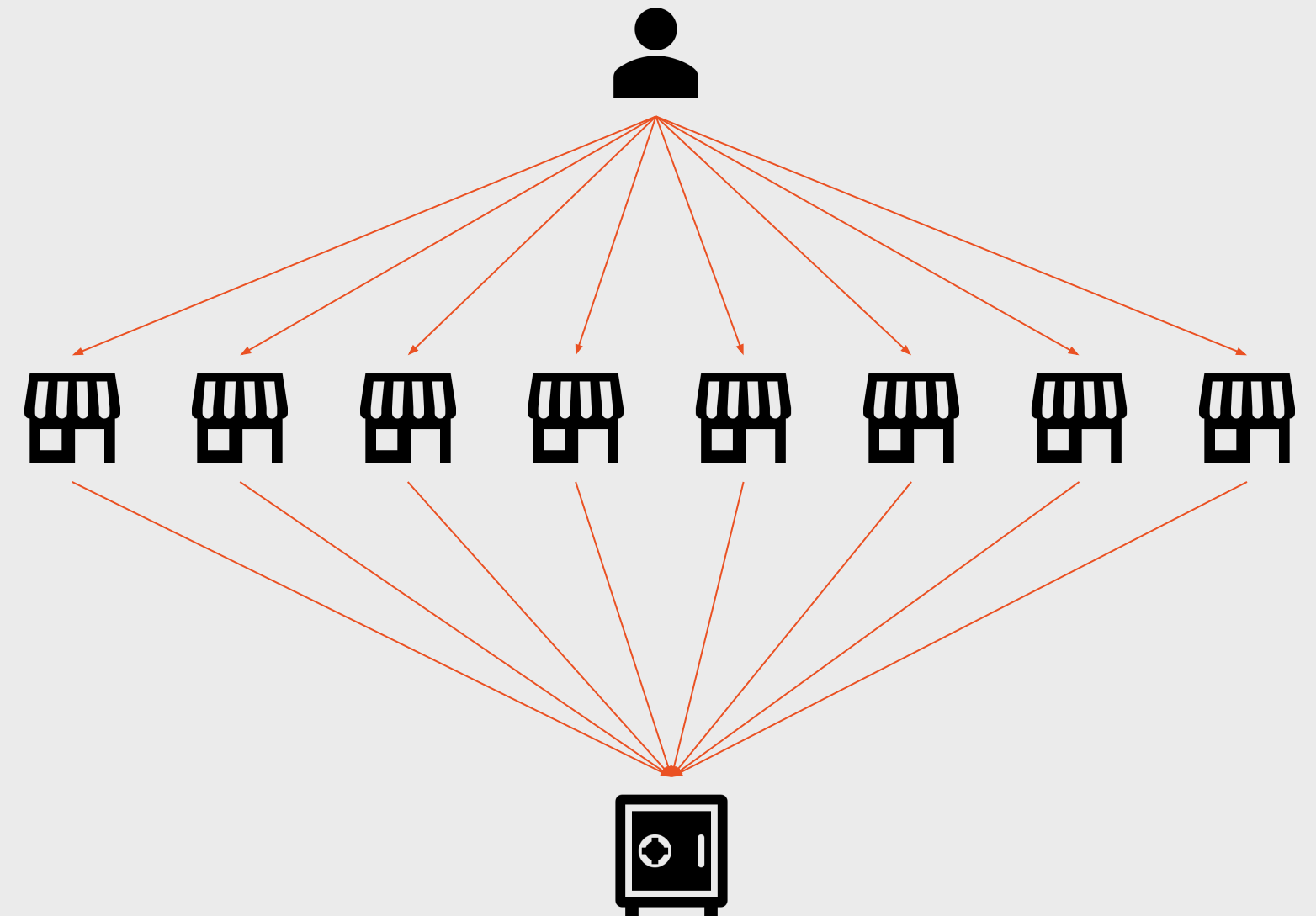


Current models of identification

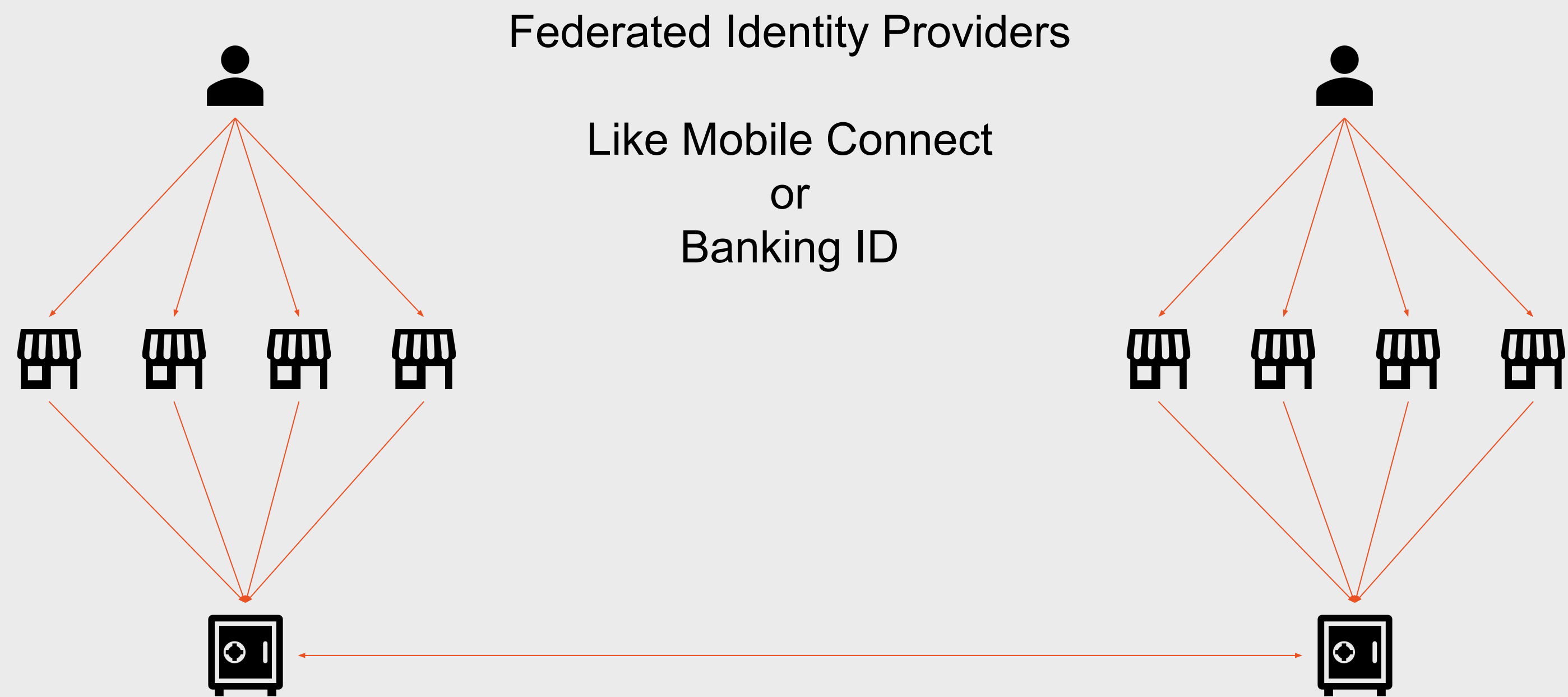
Login with XXXX

Easier for citizen and business
but provides too much power to
the Identity Provider.

Very centralized



Current models of identification



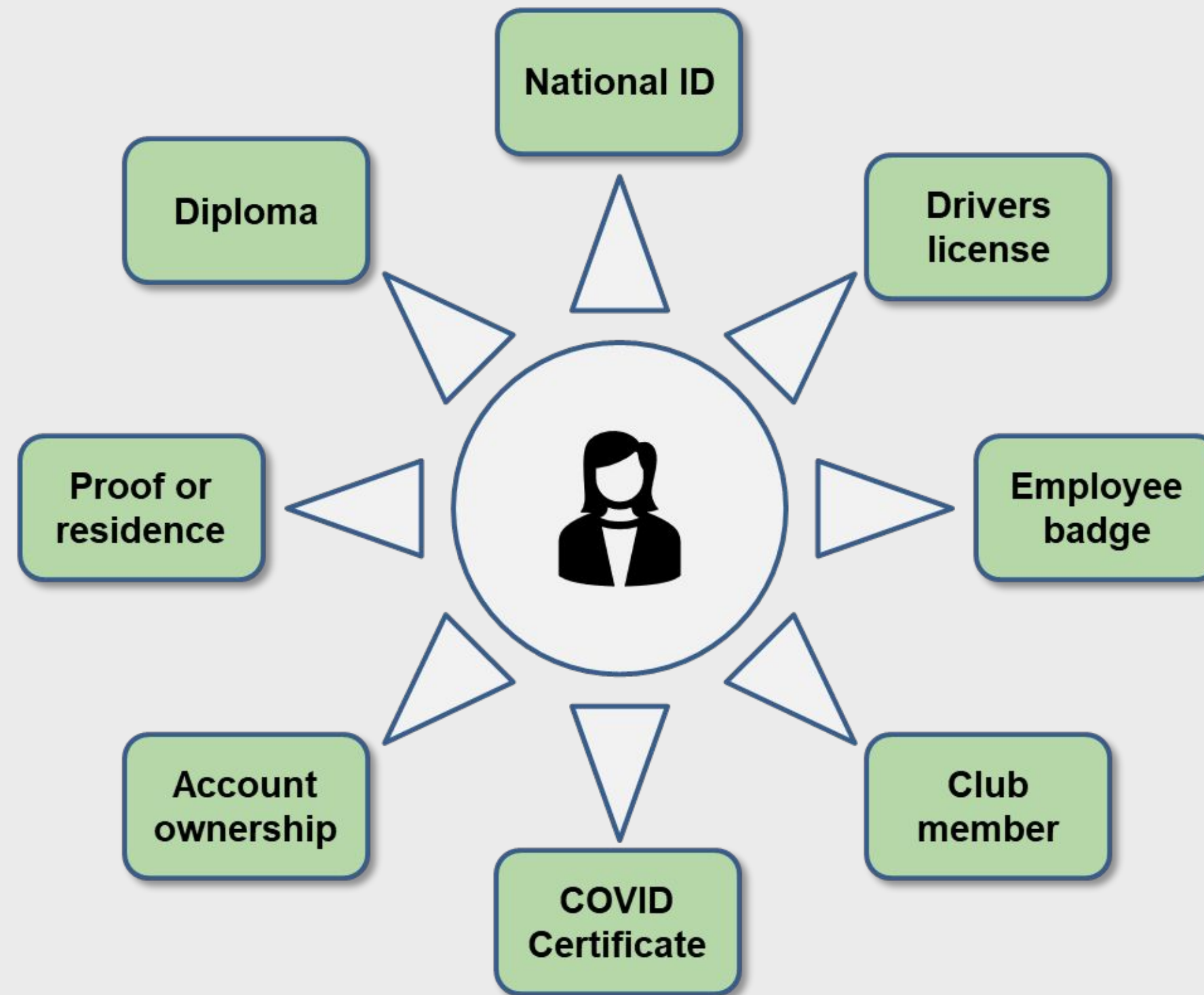
Back to the future

- Copy the good things of the physical world
- Augment with digital powers
- Preserving the required properties
- Adapted to the current legal framework, but prepared for the future one

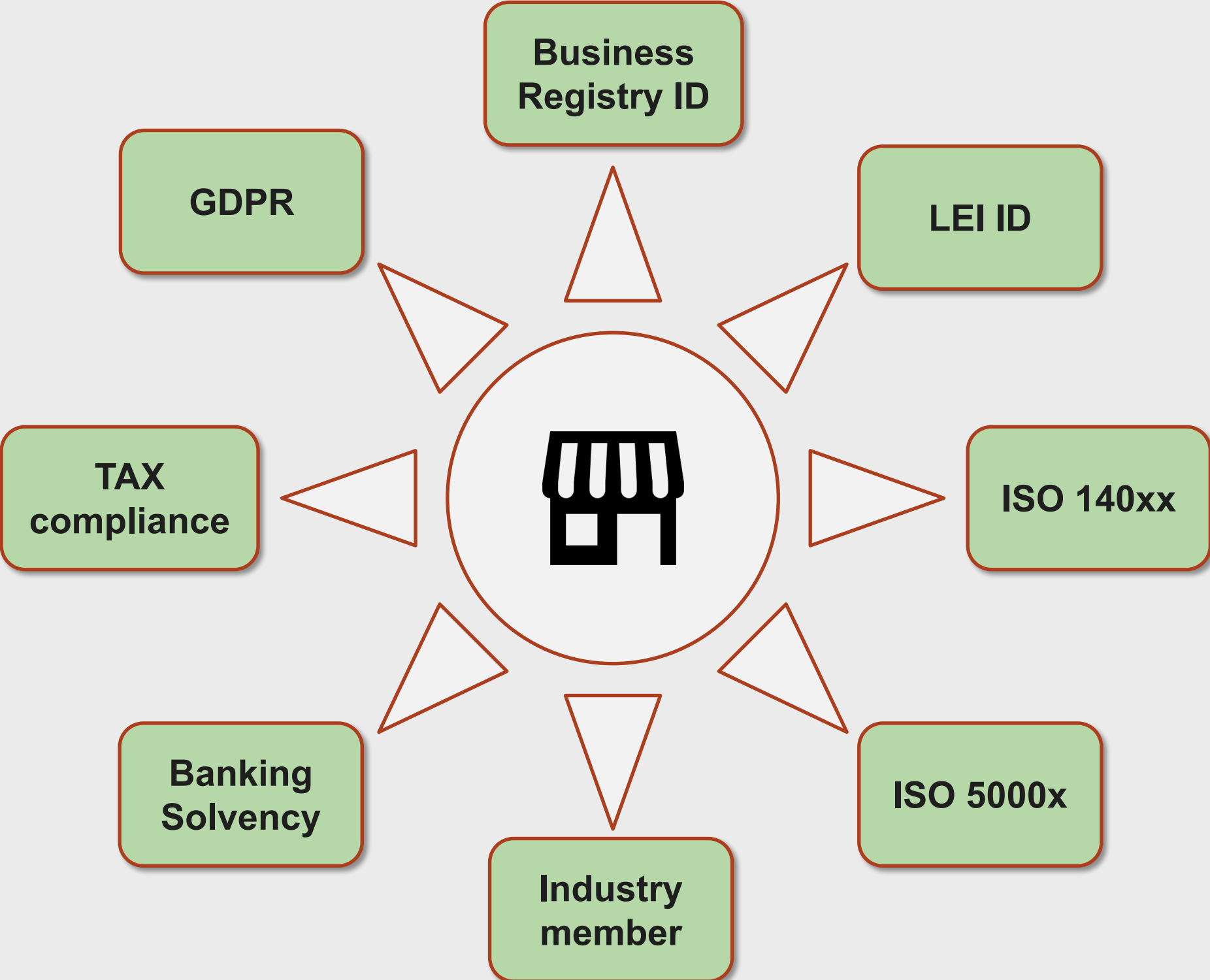


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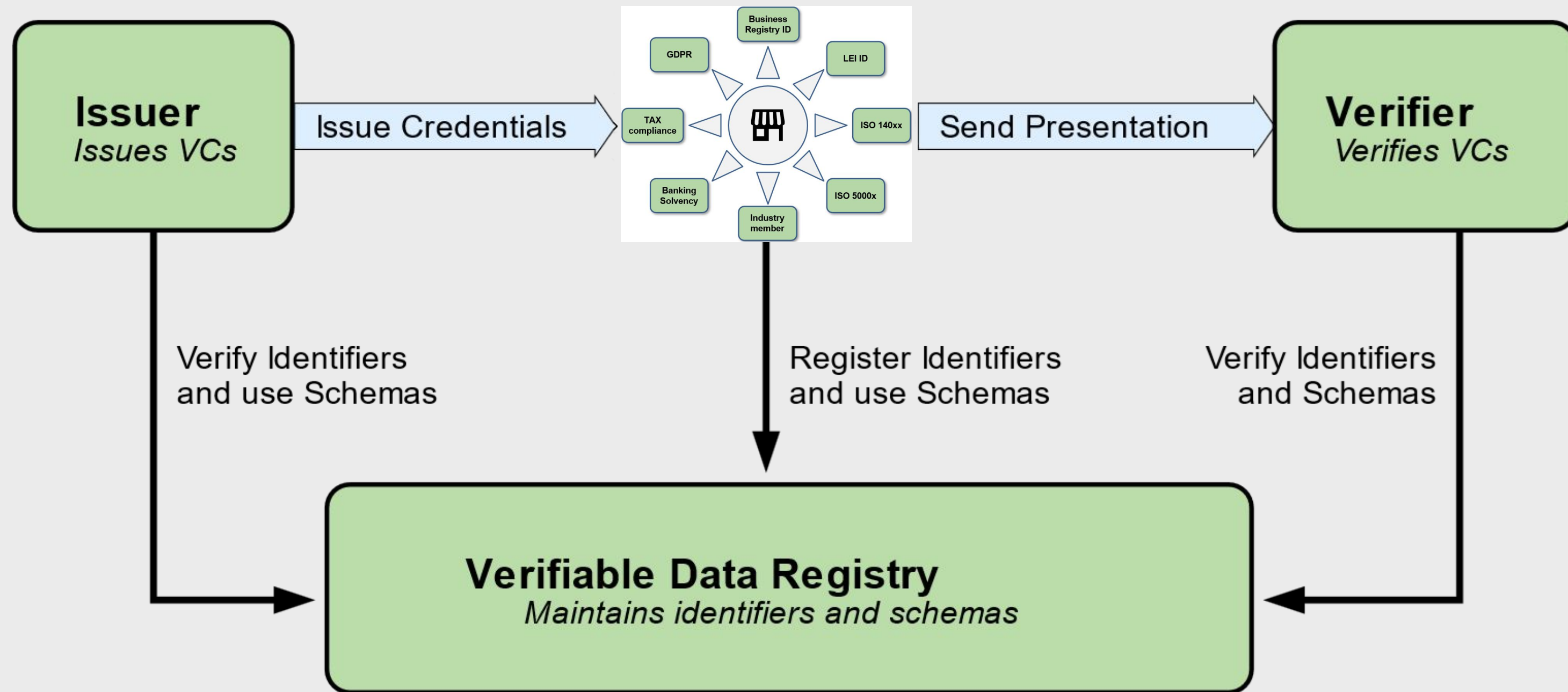
Identity of a natural person



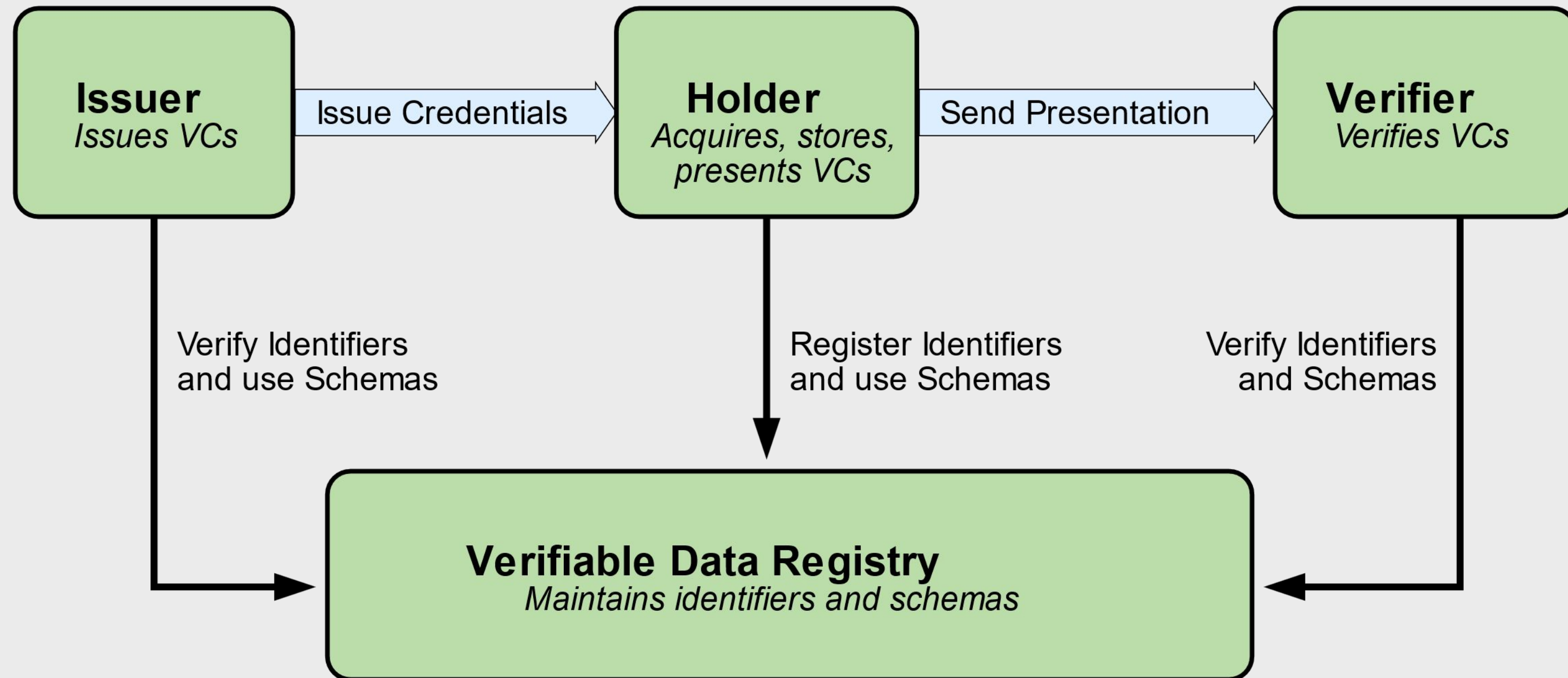
Identity of a juridical person



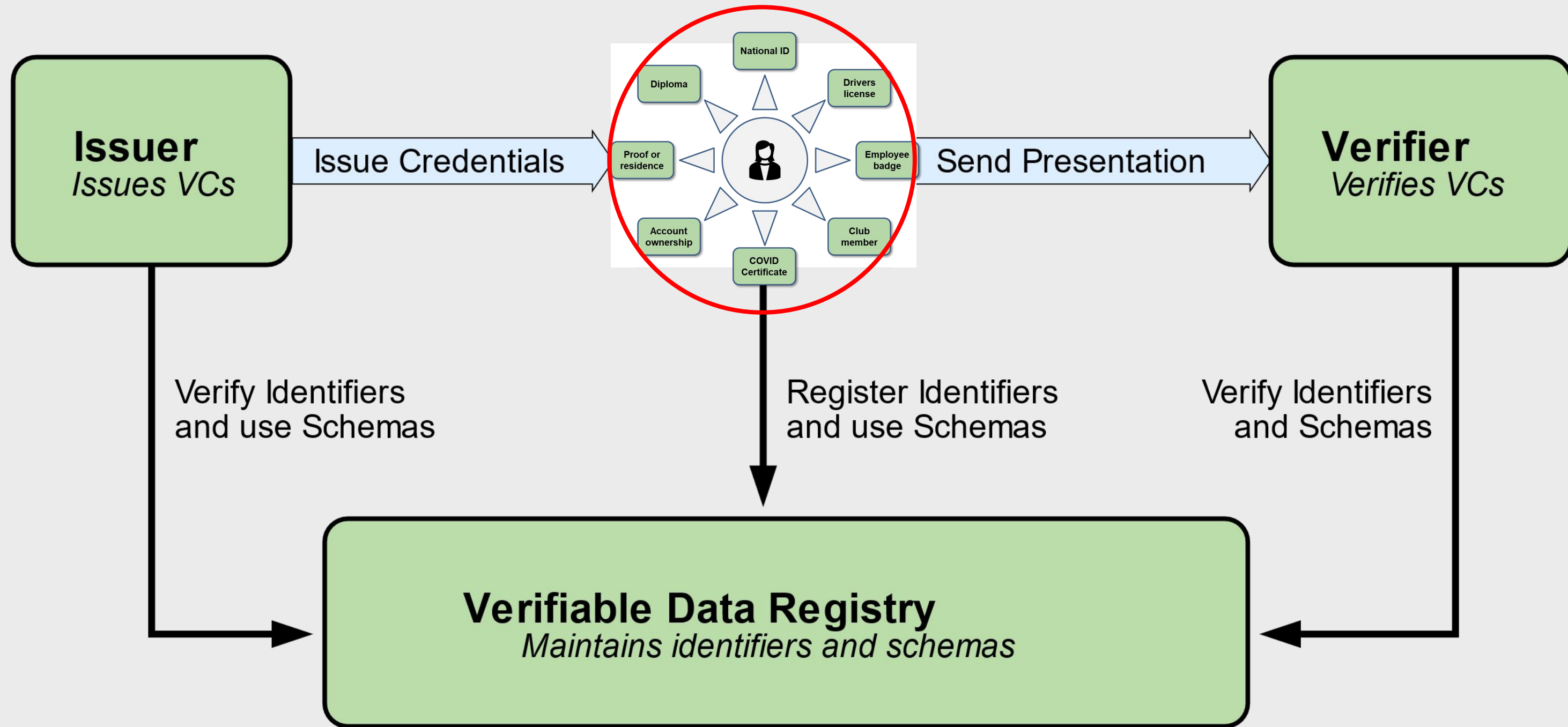
W3C Verifiable Credentials ecosystem



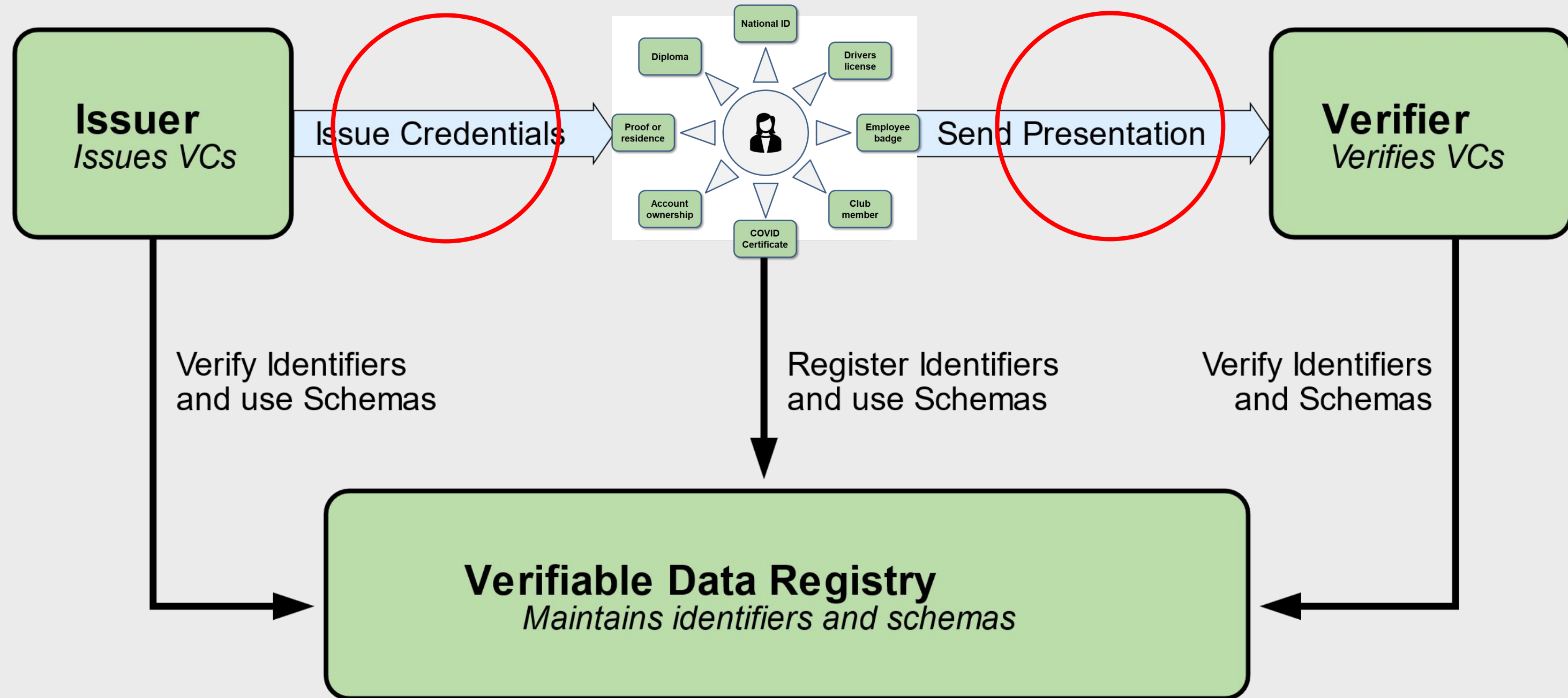
W3C Verifiable Credentials ecosystem



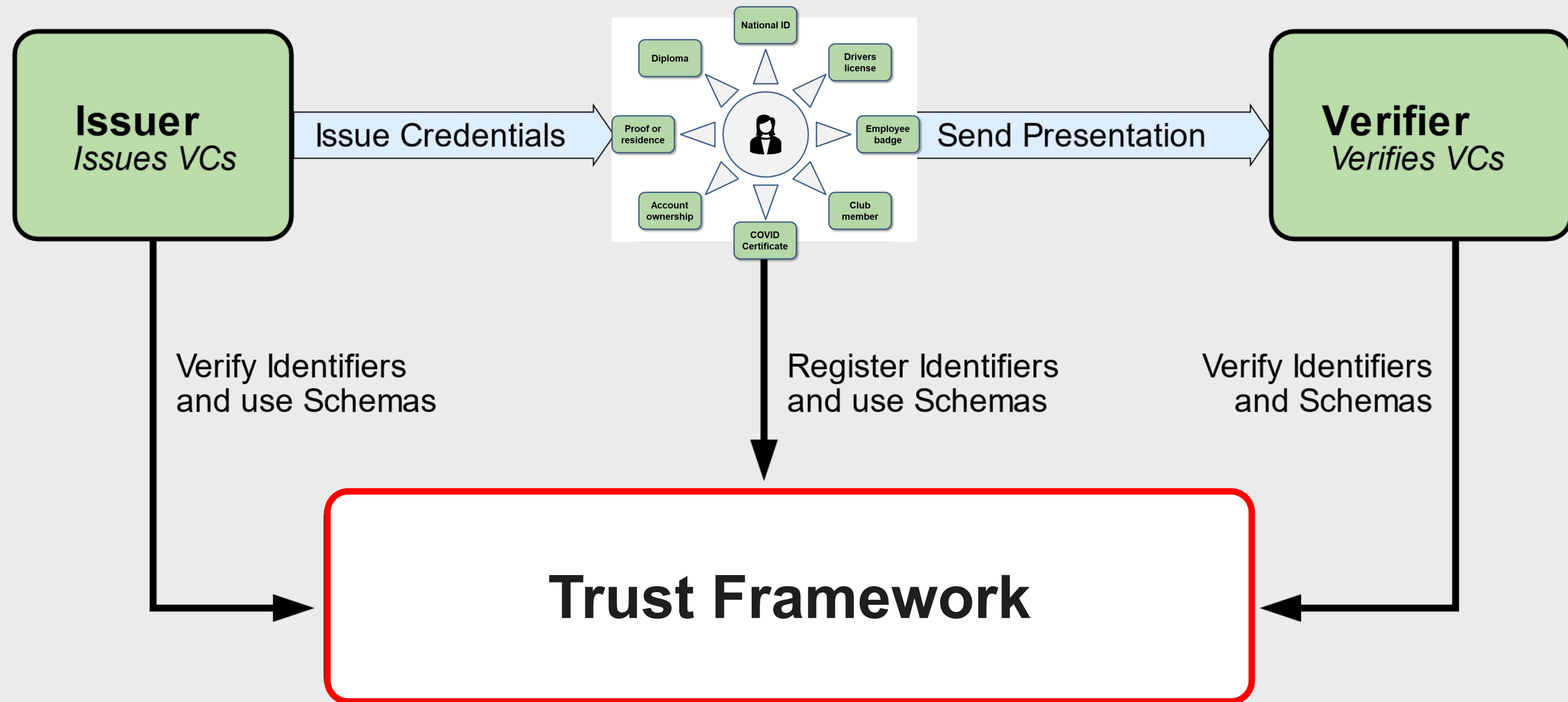
Which credentials and data model for each one



Transport mechanism for credentials



Trust Framework



Standards-based Open Source Identification and Authorisation implementation

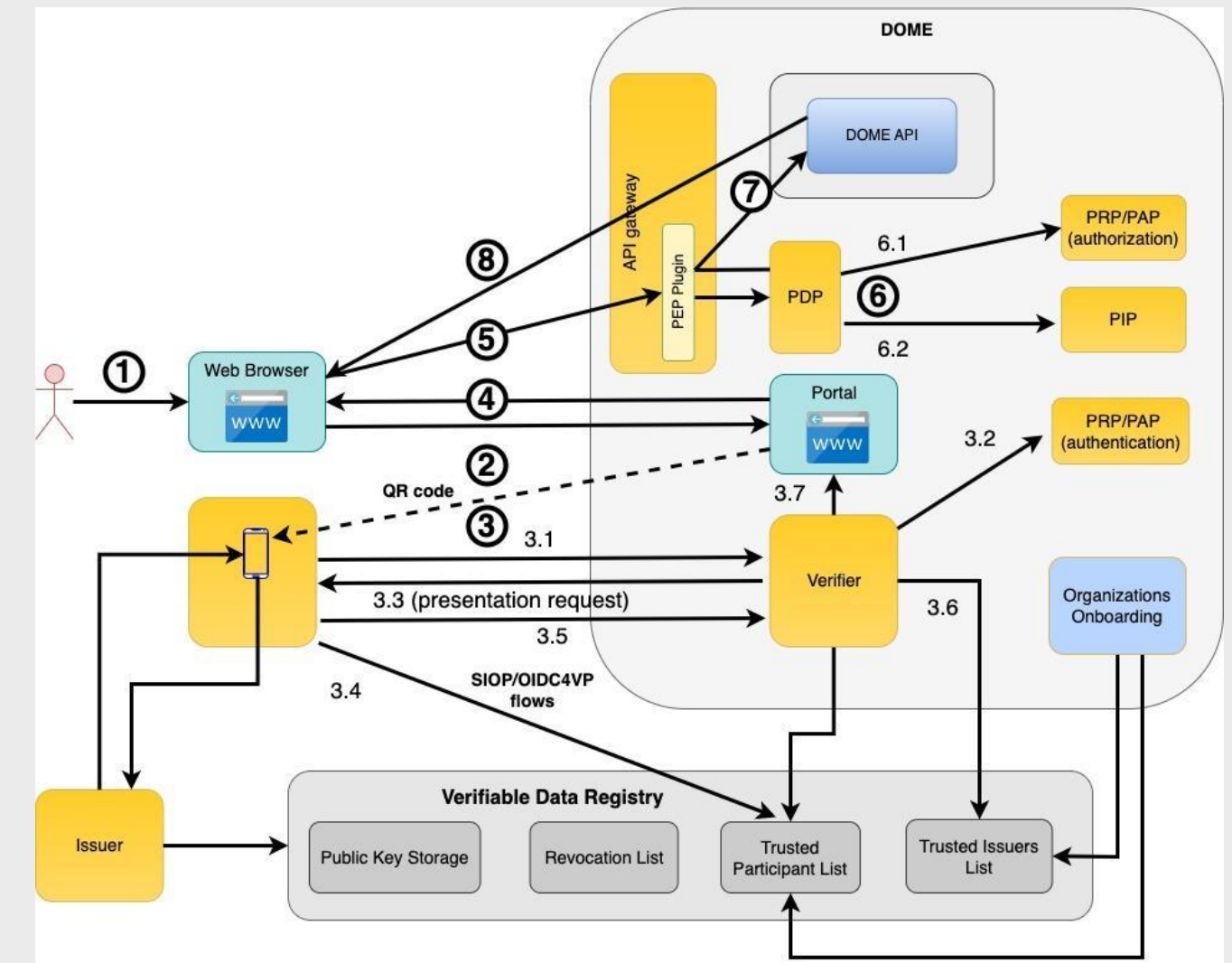
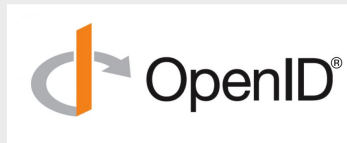


- **Decentralised IAM Framework based on W3C Verifiable Credentials.**

- Avoid centralized identity providers using **Self-Issued OpenID Provider v2 (SIOPv2)** and enable all participants to send identity data.

- Transport VC/VP in the flows of OpenID Connect, using **OpenID Connect for Verifiable Presentations (OIDC4VP)** leveraging **proven, standard and secure** mechanisms.

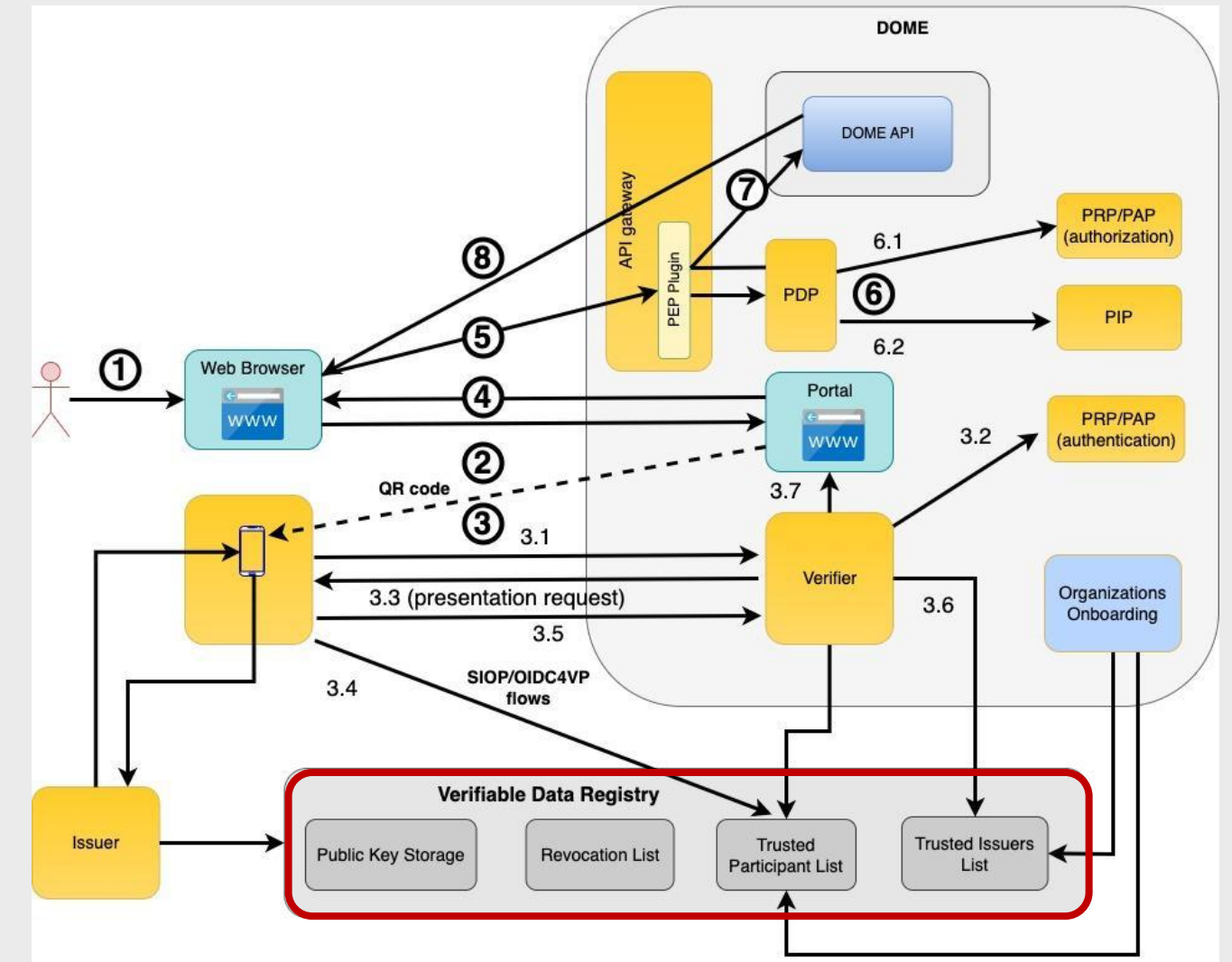
- **Aligned with EBSI** (European Blockchain Services Infrastructure)



Trust Anchor Framework

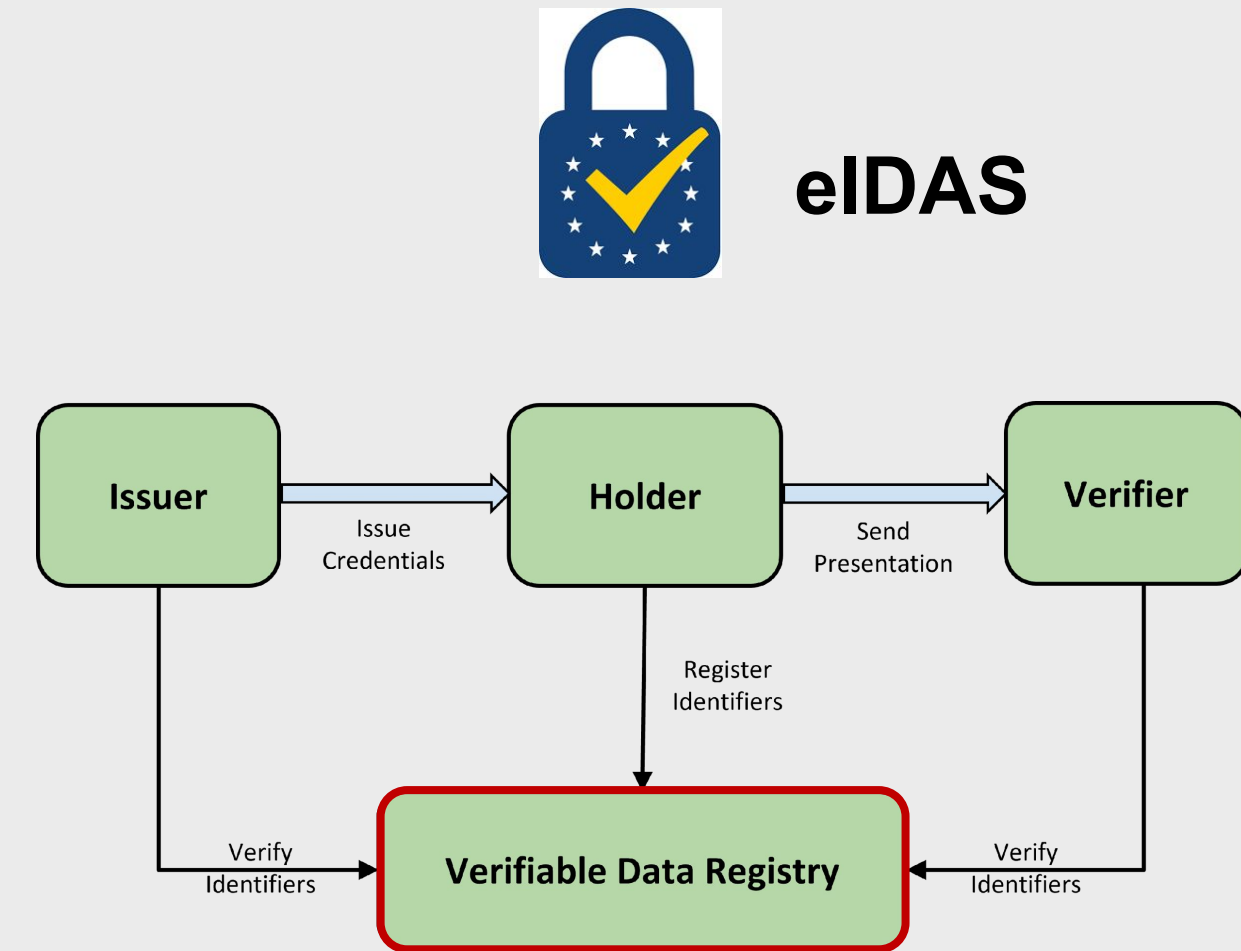


- ID Binding using identifiers in eIDAS digital certificates issued by **EU Trust Service Providers** (TSP).
- Proof of participation using (**Decentralized**) **Trusted Participant List** stored in the Verifiable Data Registry.
- Proof of issuing authority using one or more (**Decentralized**) **Trusted Issuers Lists** stored in the Verifiable Data Registry.
- Verifiable Data Registry can be implemented with any technology, but we use APIs based on **EBSI** and **Decentralized Ledger Technology** (blockchain/DLT).

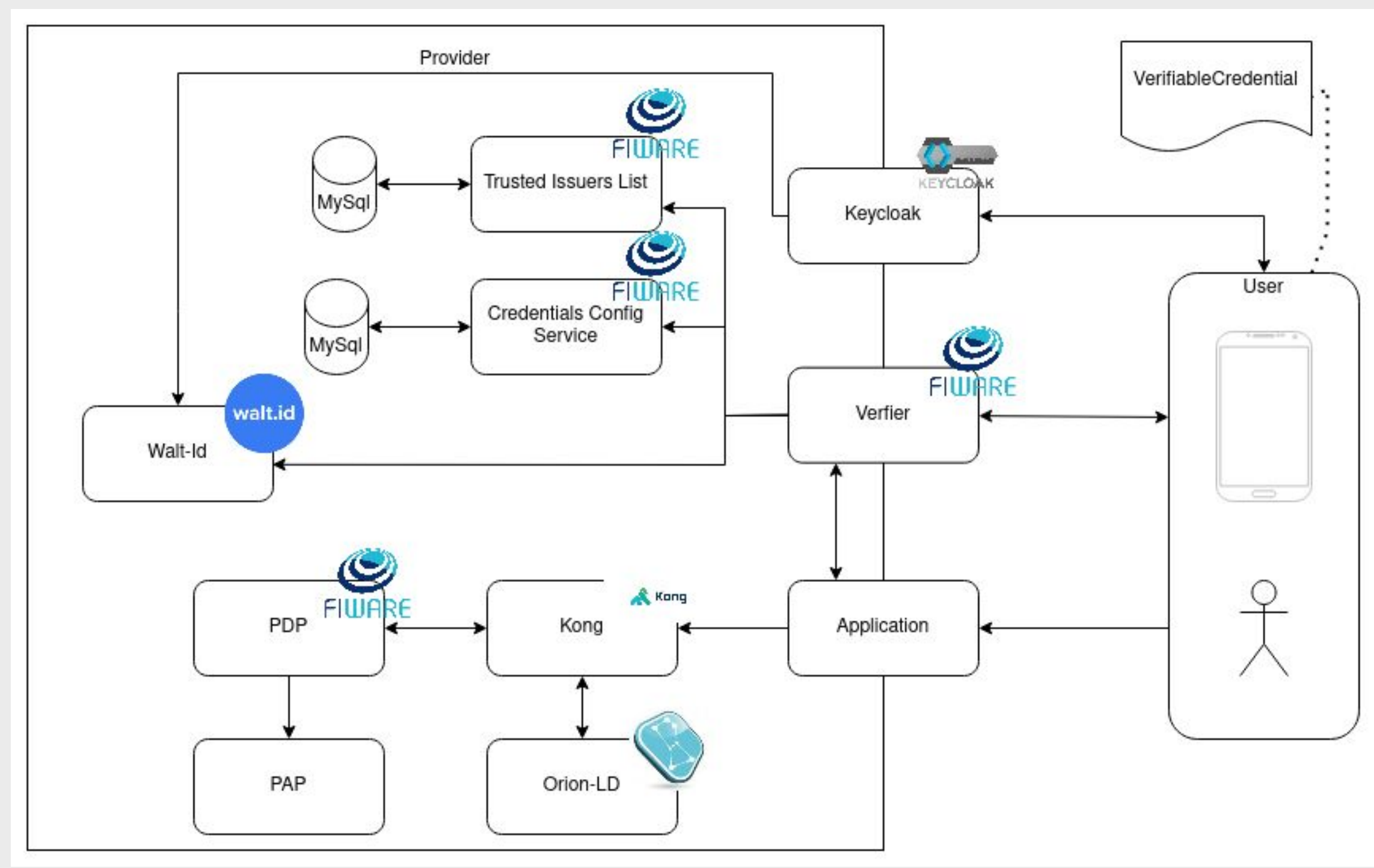


Trust Anchor Framework

- ID Binding using identifiers in eIDAS digital certificates issued by **EU Trust Service Providers (TSP)**.
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- Verifiable Data Registry can be implemented with any technology, but we propose APIs based on **EBSI** (European Blockchain Services Infrastructure) and **Decentralized Ledger Technology** (blockchain/DLT).



FIWARE Implementation





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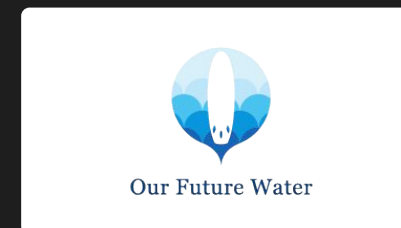
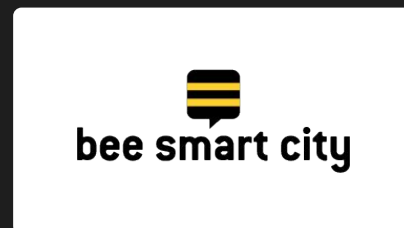
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Thanks!

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