The Future of Digital Identity

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Signicat

2022-06-15

@jsetsaas
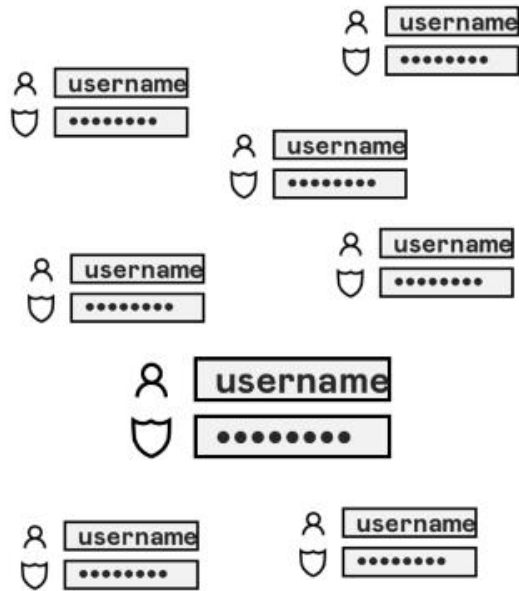

Global Forum
Shaping the future
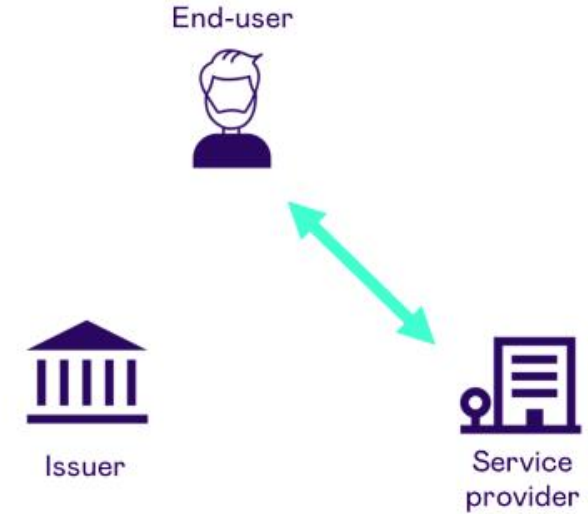
V3

Kim Cameron's 7 laws of identity - 2005

1. User Control and Consent
2. Minimum Disclosure for a Constrained Use
3. Justifiable Parties
4. Directed Identity
5. Pluralism of Operators and Technologies
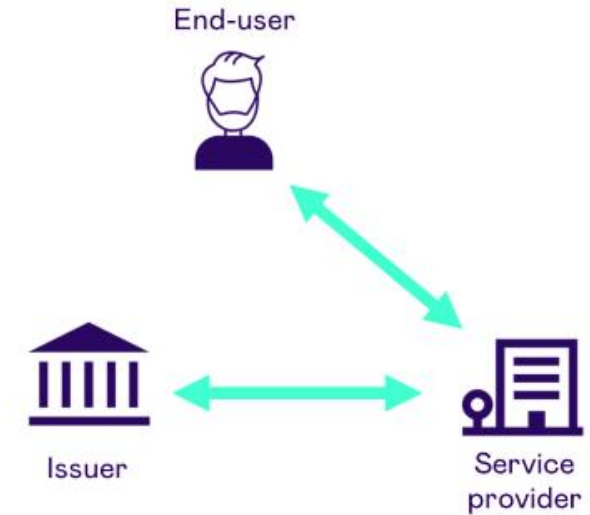6. Human Integration
7. Consistent Experience Across Context

https://www.identityblog.com/?p=1065

Past – too many logins

Org-centric

- Have to prove "everything" for every provider

- Too many passwords

Present – eID providers

bankID

COMMFIDES

buypass

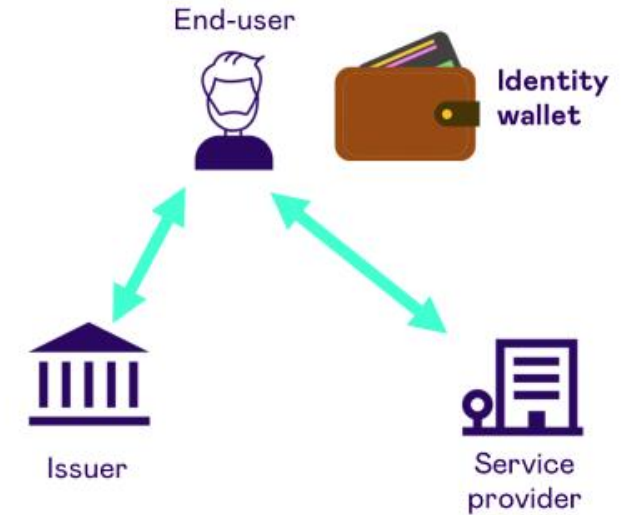**BankID**

Mit :D

f G in

Org-centric

- One identification, many uses

- User contacts service provider
- ... which contacts eID provider

- User has **no control** of which info is shared
- eID provider **knows** where the user is logging in

Future – Identity wallet

End-user

Identity wallet

Issuer

Service provider

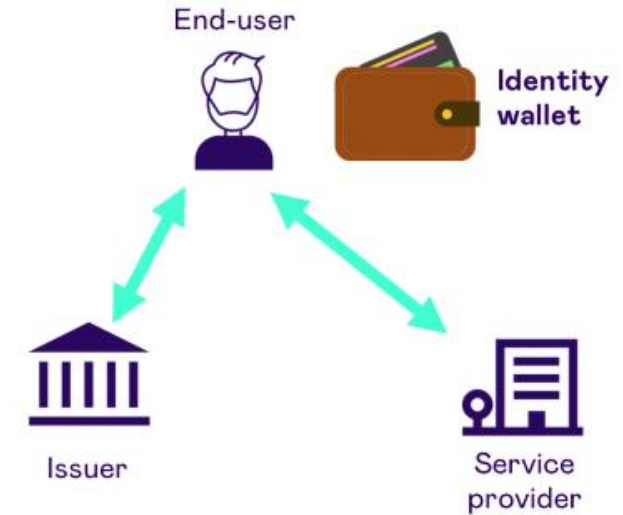Identity wallet

User-centric

- User in control: Decides what to share

- Identity wallet - mobile app
  - Populated by user from issuers

- Peer-to-peer sharing of data
  - All sorts of data

Identity wallet - How

Identity
wallet

User-centric

Identity
wallet

Issuer

Service
provider

- User fetches data from issuer
  → wallet

- User decides which data to share
  (in each case)

- User in control of which data is shared

Types of identity data

- **Structured data**
  - Attributes & Verifiable claims (VCs)
    - Bound to a user - Protected by encryption
  - Can be presented to service providers
    - ...without revealing the user's identity

- **Unstructured data**
  - Documents

Citizen register

Name:
John Viking
DoB:
1972-11-09
Address:
Main st 17
7000 Trondheim
Norway

Sample attr

DoB: 1972-11-09

Address: Main st 17
7000 Trondheim
Norway

Sample VCs

Married: Yes

Over 18

Citizenship: Norwegian

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Examples of verifiable claims

- University
  - Is a student
  - Is a master of art
- Employer
  - Is employed
  - Has signing rights
  - Title
  - Salary
- Doctor/hospital/health portal
  - Has received vaccine x
  - Has diagnosis x
  - Has an appointment at date x (to gain physical access to facilities)
- Telco
  - Phone number

- Government
  - Legal name
  - Physical Address
  - Date of Birth
  - NIN or SSN
  - Photo
  - Is alive
- Vehicle authority
  - Allowed to drive a car
  - Owner of car Z-10038
  - License expiry date
- Derived attributes
  - Is over 18 years of age
  - Is between 13 and 17 years of age
  - Is a citizen of Norway
  - Is living in Trondheim

The future is decentralized:

Better security
Anti-tracking – I prevent anyone knowing what I share with whom

Better privacy
Privacy-by-design – I can prove something without revealing other information

User in control
No central authority or (vulnerable) data store – I decide about sharing and manage my own data
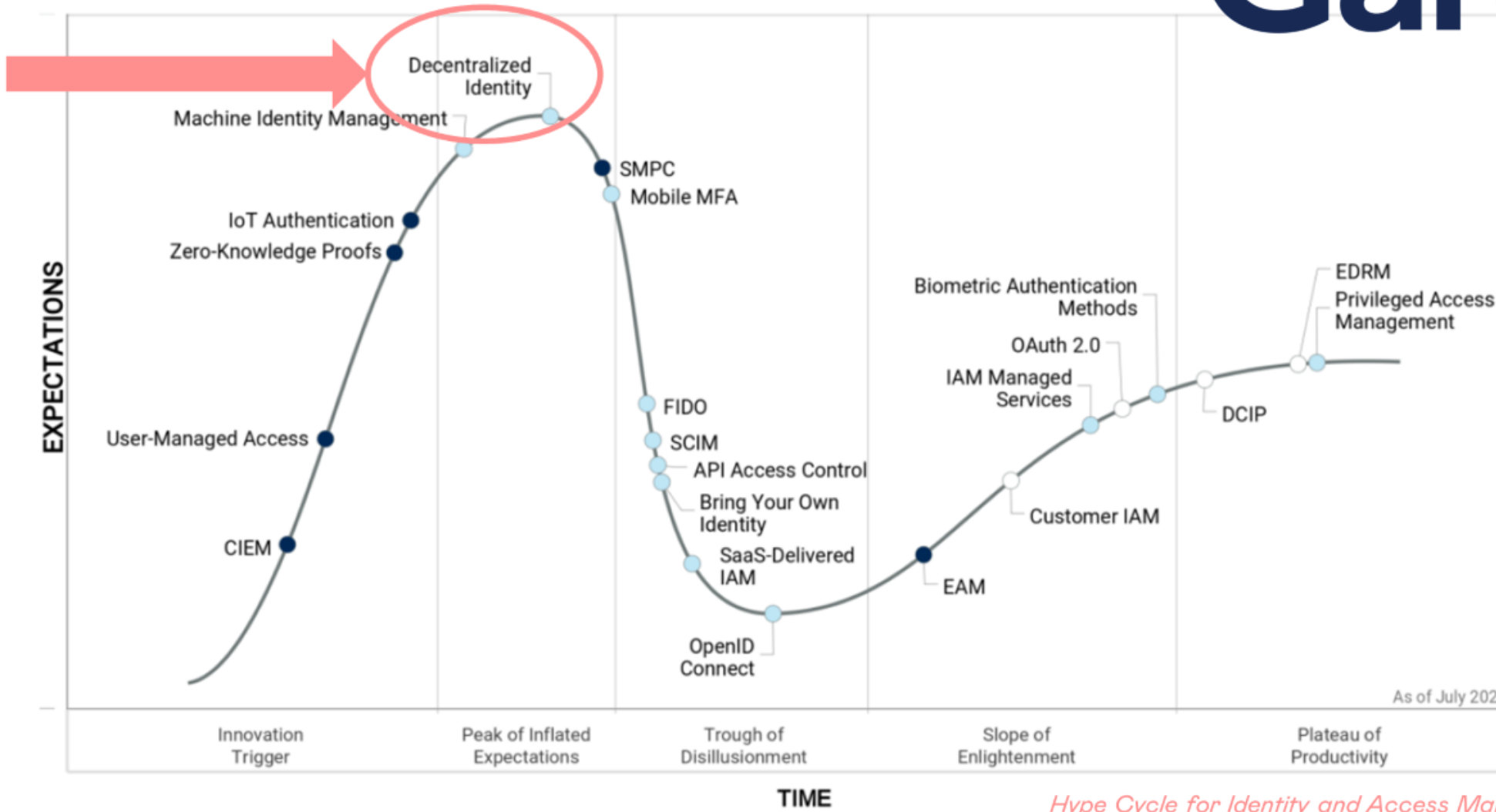
Usability
Identity wallets provide ease of use for both end-users and service providers

Analysts

Hype Cycle for Identity and Access Management Technologies, 2021

"The Commission will soon propose a secure European e-identity. One that we trust and that any citizen can use anywhere in Europe to do anything from paying your taxes to renting a bicycle. A technology where we can control ourselves what data and how data is used"

Ursula von der Leyen, President of the European Commission
Statement at the "state of the Union" speech, 16th September 2020

The European Commission

- Member States shall introduce a digital wallet
  - Full user control on release of information («decentralized»)
  - A level high eID that can be used nationally and across borders
  - (Qualified) attestation of attributes
  - Providing attributes and attestations (verifiable claims)
    - In addition to or instead of basic identity
- Enabling use for qualified signatures
- Usable by the private sector

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