The Human Aspect of Digital Identity

2023-03-16 – John Erik Setsaas

John Erik Setsaas
Digital Identity Expert
@jsetsaas

V3

“On the Internet, nobody knows you’re a dog”

Peter Steiner - 1993

Thread

#general

John Erik Setsaas May 6th at 2:38 PM

Hi all. Thanks for letting me in 🙂

I work for Signicat in Norway

2 replies

[redacted] 13 days ago

Prove it! 😉

John Erik Setsaas 12 days ago

Touché... 🙂

tietoevry

Regulations

Why?

Regulations

Risk & Fraud prevention

Why?

Car rental

airbnb

Is a person
Female
20ies

Is a person
Male
30ies

Regulations

Risk & Fraud prevention

Accountability

Why?

Identity proofing

Evidence that the real-world identity exists

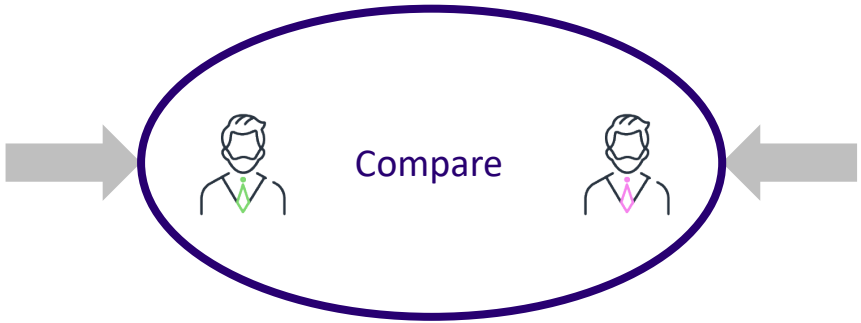
Confidence that this user is present

Online identity proofing in practice

Identity document

NFC or optical reading
with liveness detection

This is a genuine identity document



The owner of the identity document is present

User

Face with
liveness detection

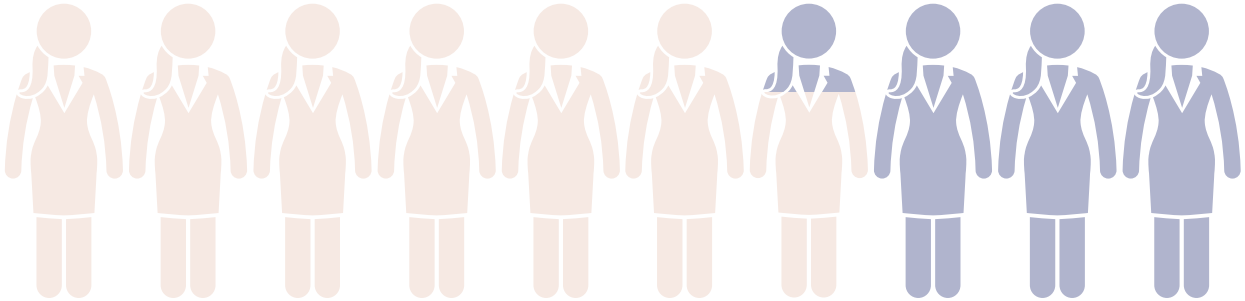
This is a real human

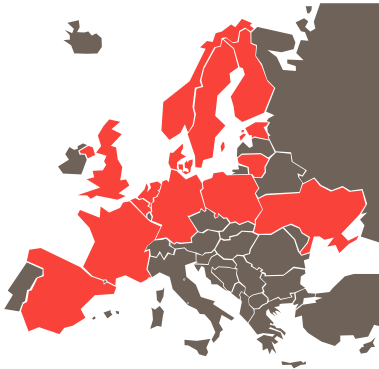
68%

have abandoned onboarding for financial services

2022

7600 interviews
UK, DE, NL, SE,
FI, NO, BE, DK, FR,
ES, LI, ES, PL, UA





Source: The Battle to On-Board 2022 © Signicat

tietoevry

Somebody else using your identity

Identity infringement

(Aka “identity theft”)

Being tricked

Sharing your identity

Please enter password

Bad idea

Irritating

To complex to remember

Bah

Difficult

Help

Simple

Not again

Hard to remember

Safe

Annoying

Unguessable

Secure

I don't remember

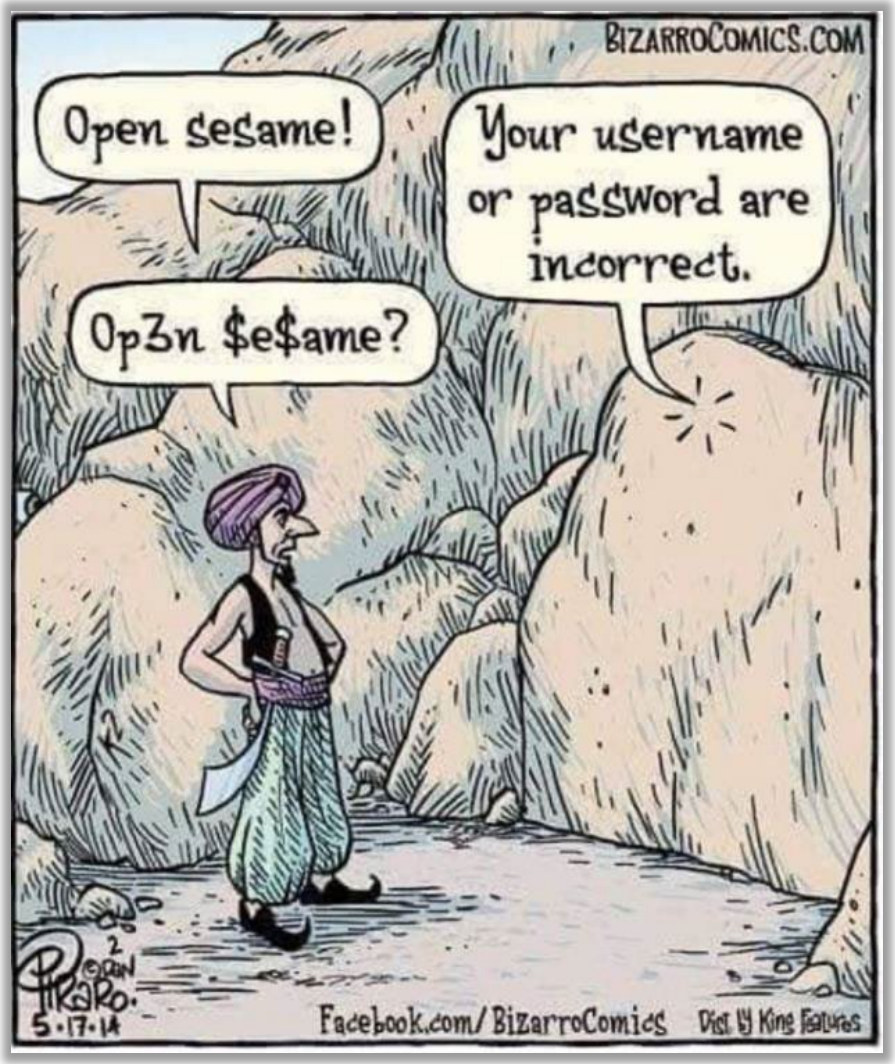
Special characters

Please enter password

"I get a nervous breakdown whenever somebody mentions the word password"

Arve Tellefsen – Famous Norwegian Violinist

tietoevry



Antoine Galland's
Les Mille et une nuits
(1704–1717)

Watchword - Medieval

A safe-word to get access to a city or stronghold

The password is "Scheveningen"

Score:2 of 222
Sound:on
"Yeah. Whatsda passwoid?"
Leisure Suit Larry – 1987
Sierra Entertainment Inc.
]_

Complex password rules

- One upper case letter
- One number
- One special character

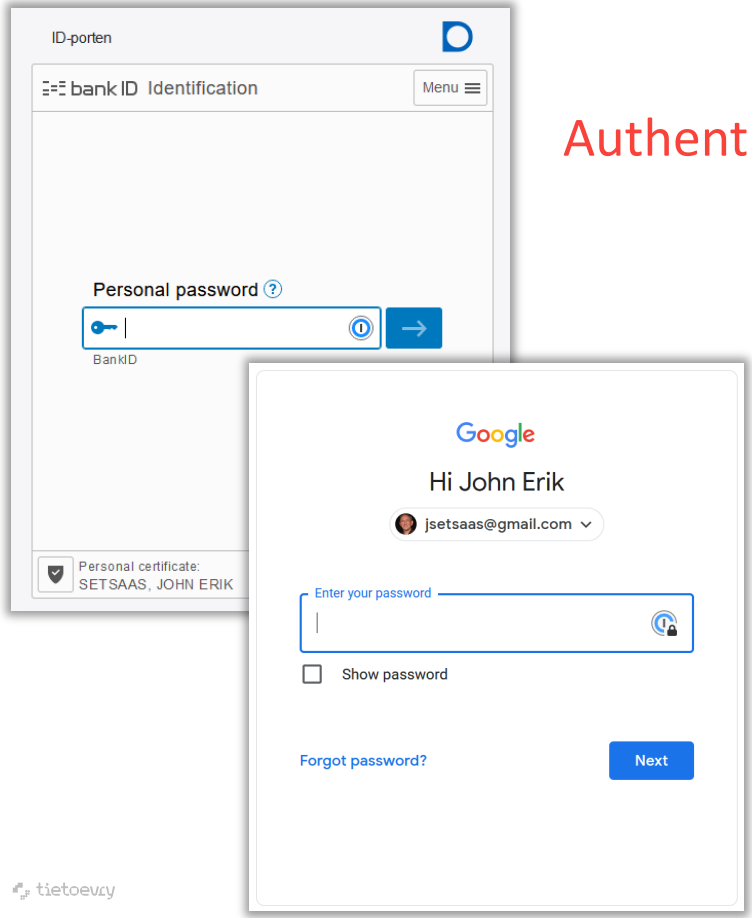
https://youtu.be/aHaBH4LqGsI

People are predictable

mypassword

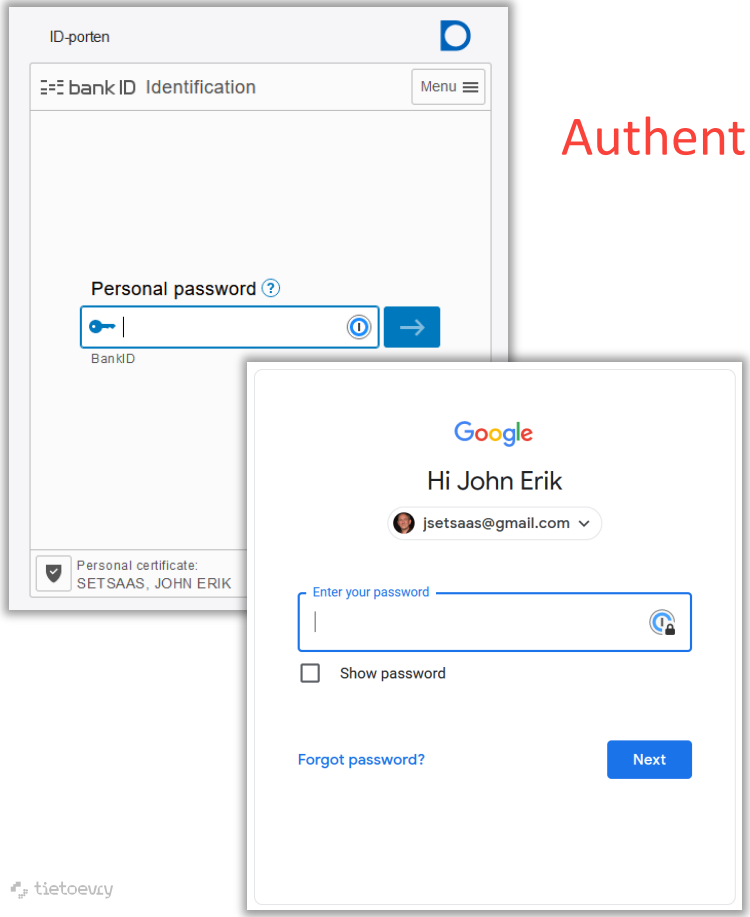
Mypassword1!

The password confusion



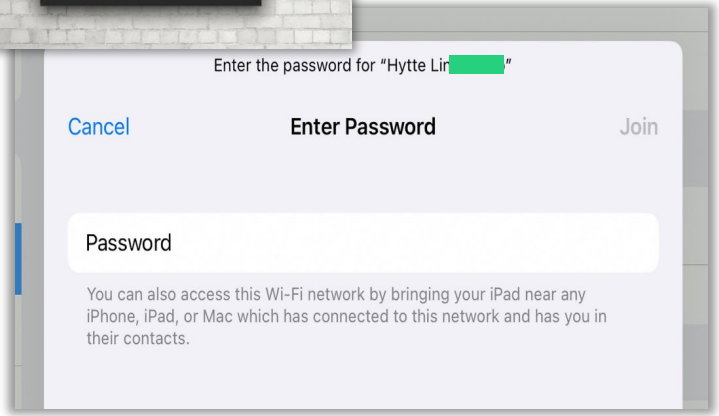
Authentication

The password confusion



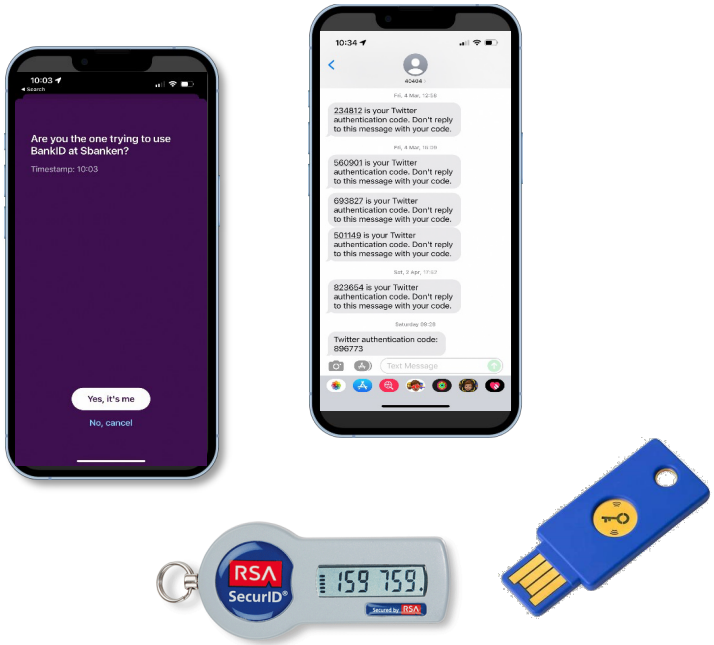
Authentication

Authorization



Mitigations

MFA



Password managers

1Password

LastPass

ZOHO Vault

DASHLANE

What about biometrics?

- Local device biometrics
- Easy for user, nothing to remember

What about biometrics?

- Local device biometrics
- Easy for user, nothing to remember

- Local device biometrics
  - Convenience feature – Does not prove identity

- Server-side biometrics
  - Risk of compromise
  - Promising work on “hashing” biometrics (homomorphic encryption)

Biometric challenges

- The user device is NOT a trusted environment

- Bias
- Inclusion

Twitter

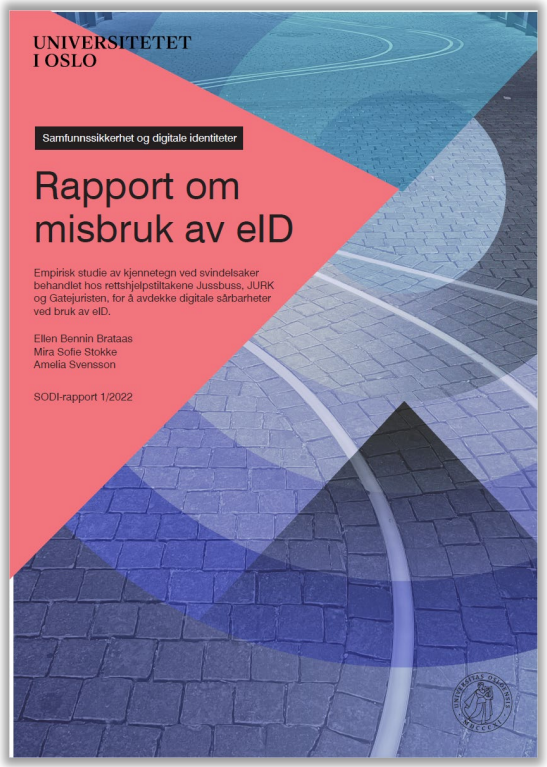
I wake up can cannot find my phone.
I find my 3-yo in the living room watching Disney+ on my phone.

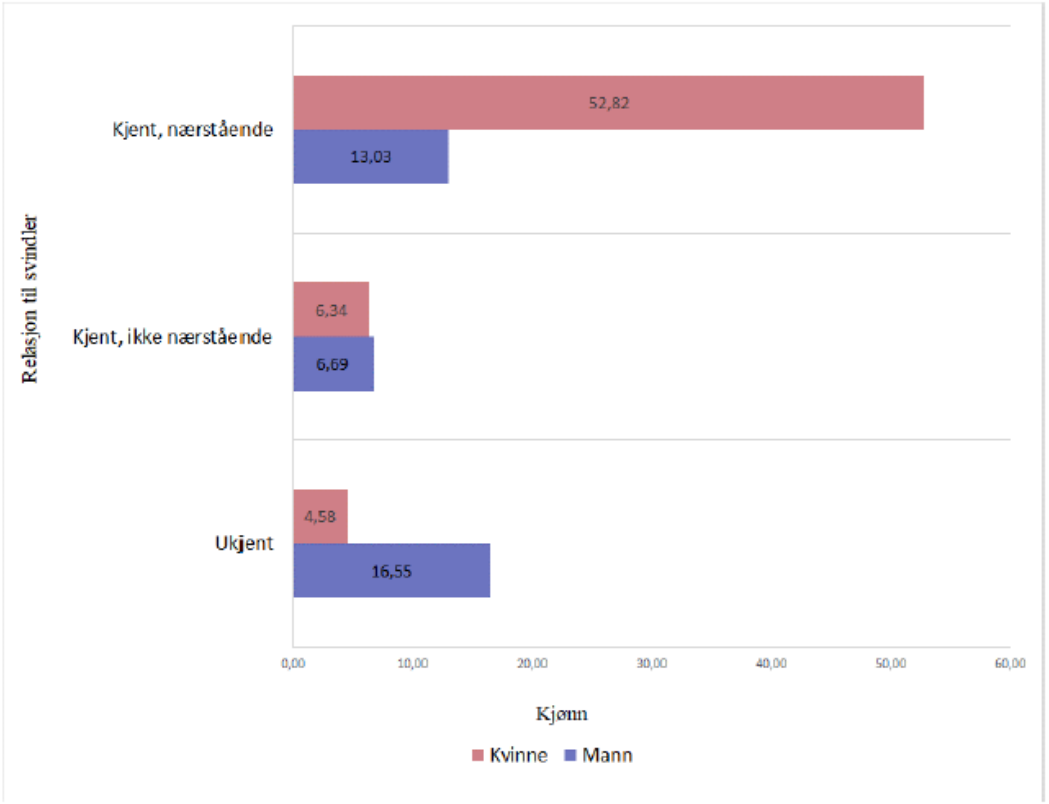
Me: “How did you unlock my phone?”
Kid: “I used your finger. Right thumb!”

eID

buypass
ID-porten
MinID
inera
BankID
Suomi.fi
Mobiilivarmenne
AUÐKENNI
COMMFIDES
samleikin
bankID
tu
FTN
Finnish
Trust
Network
Telia
NEM ID
iD
iDIN
Mit
EHerkenning
SMART-ID
DigiD
verimi
.beID
IRMA
YES®
itsme
dni
mobile
connect
FranceConnect

Most frauds happen in close relations





Graf 3. Svindelofferets relasjon til svindler og kjønn. Prosent. 284 observasjoner.

https://www.jus.uio.no/ifp/forskning/prosjekter/sodi/publikasjoner/rapporter-mv/

eID

Person exists:
Very good

Person present: Questionable

Norway is introducing
a new financial directive

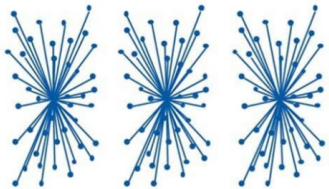
⬇

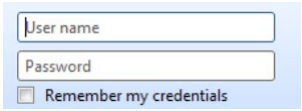
more liability on the banks

Identity wallet

Past

Centralized

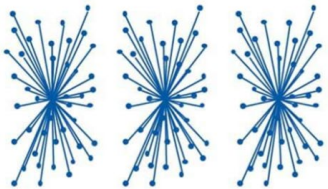




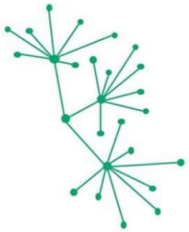
Org-centric

Present

Centralized



Federated



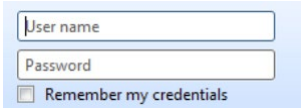
bankID

FREJA eID

buypass

Mit ID

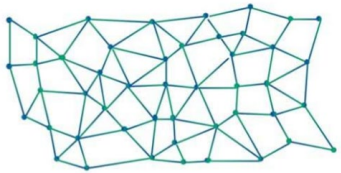
BankID



Org-centric

Future

Decentralized

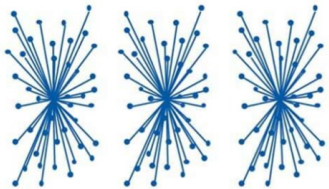


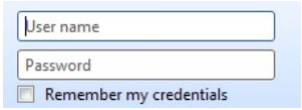
Identity wallet

User-centric

Past

Centralized

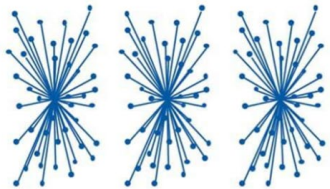




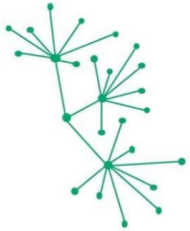
Org-centric

Present

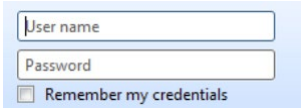
Centralized



Federated



bankID FREJA eID buypass BankID Mit ID



Org-centric

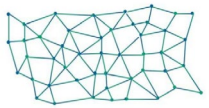
Future

in reality

Centralized

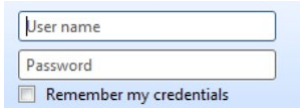
Federated

Decentralized



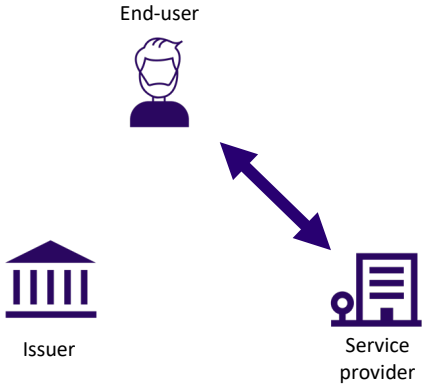
bankID FREJA eID buypass BankID Mit ID

Identity wallet



User-centric

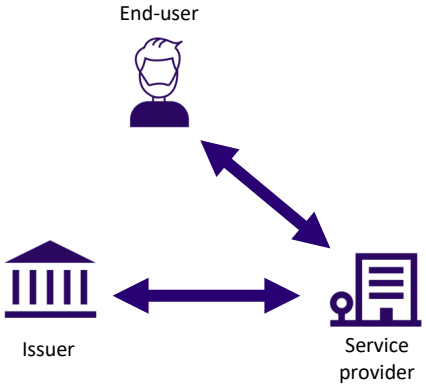
Past



Too many logins

Org-centric

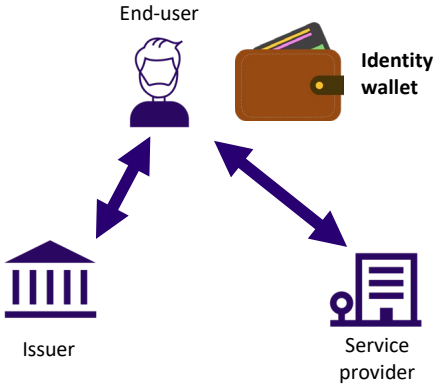
Present



Too much information shared

Org-centric

Future



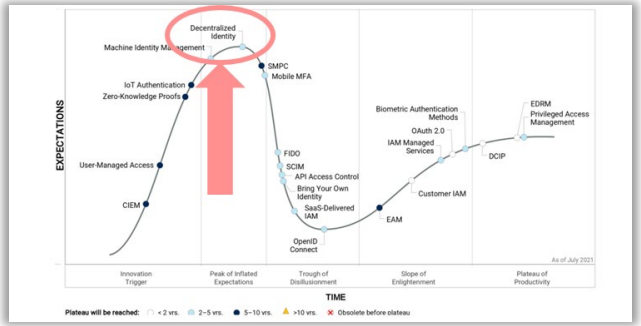
User in control

User-centric

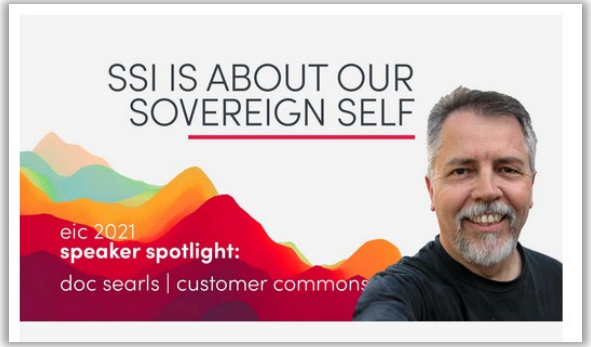
eIDAS/2 → Digital Wallet

SSI inspired

Gartner



kuppingercole ANALYSTS



Microsoft's strategy for Decentralized Identity

Microsoft's mission is to empower every person on the planet to achieve more.

Microsoft cloud identity systems already empower developers, organizations, and billions of people to work, play, and achieve more, but there's so much more we can do can own so they can control their digital identity and data. This self-owned identity must seamlessly integrate into our daily lives, providing complete control over

FORRESTER®

REPORT

Boost Your Security And Security Experience With Decentralized Digital Identity

A Review Of The Key Use Cases, Benefits, And Market Dynamics

November 22nd, 2021

Andras Cser
Vice President, Principal Analyst

Sean Ryan
Senior Analyst

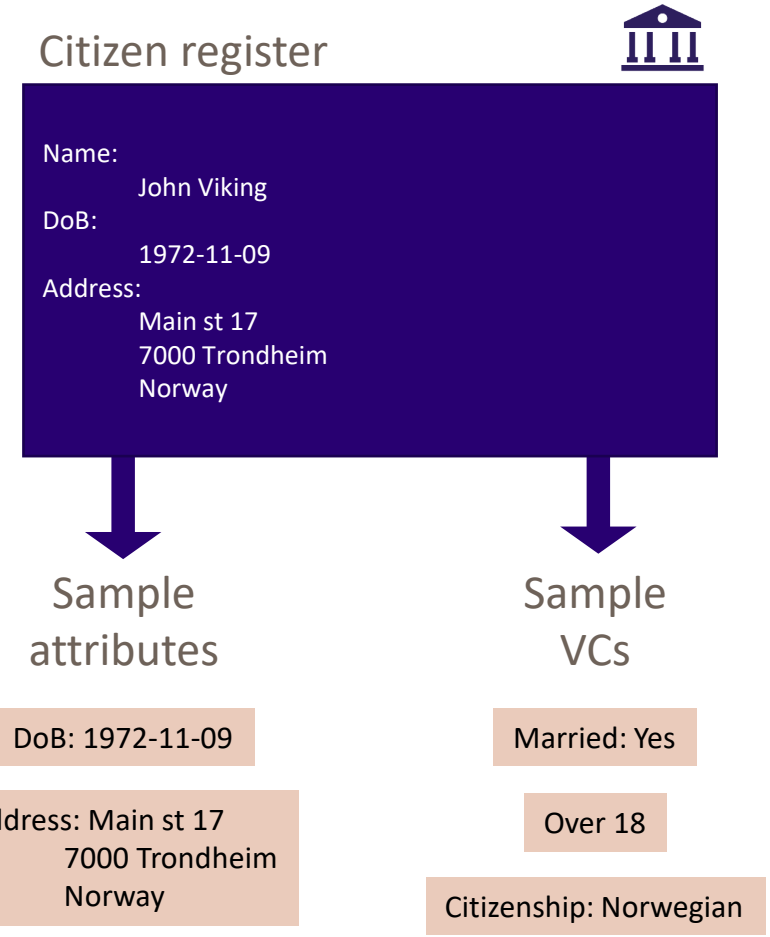
With Contributors:
Merritt Maxim, and Hailey DiCicco

The European Commission

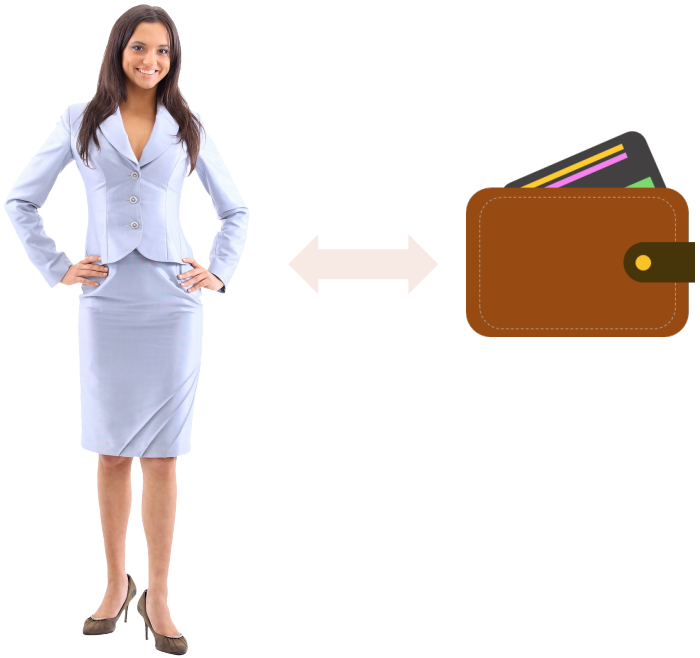
- Member States will introduce a digital wallet
  - Full user control on release of information («SSI inspired»)
  - A level high eID that can be used nationally and across borders
  - (Qualified) attestation of attributes
  - Providing attributes and attestations (verifiable claims)
    - In addition to or instead of basic identity
- Qualified signatures
- Usable by the private sector
  - Even required to be accepted by selected
- The state shall provide a wallet to everybody
  - Free of charge

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



Linking the wallet to a user

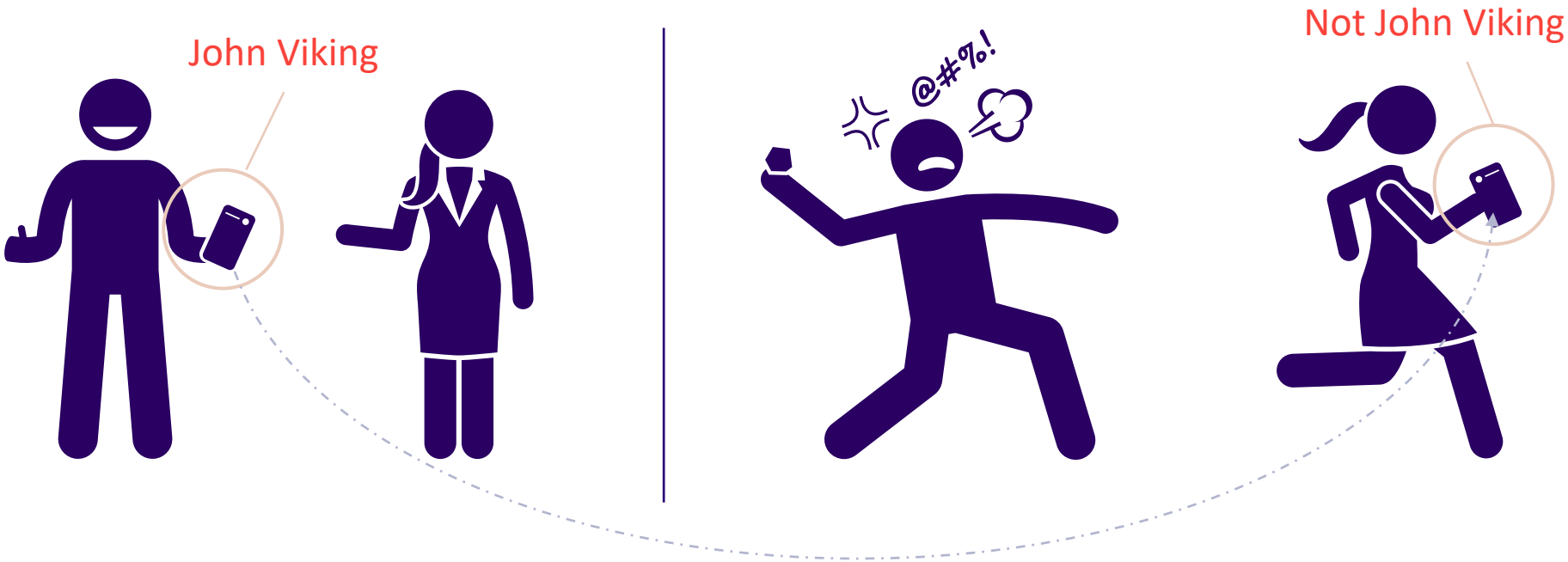


Please enter password

~~Please enter password~~

We need
something better

The device “knows” that it’s in your possession



We are all creatures of habit

John Erik Setsaas

@jsetsaas

Who are you?

Passwords

Identity proofing

Mitigations

The identity wallet