# Cross-border eID and e-signature

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V31

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# Signicat



**Jon Ølnes, Product Manager Nordics**
Jon has 25+ years' work experience on international aspects of eID and e-signatures.
Member of the ETSI ESI standardization committee
Editor of upcoming ETSI TS 119 461 on identity proofing for trust services



**Antti Harsunen, Country Manager**
Antti established the Signicat finnish office in 2013. 20+ years experience in Identity Management, Access Management and Digital Identity.

# Signicat

Pioneering digital identity
company with roots in
top digitalization countries

Advanced Digital Identity
Platform to facilitate a
fully digital customer
journey

Over 1400 customers rely
on Signicat
solutions everyday,
40% YoY growth

# Signicat
## European leader in digital identity

250+ digital identity experts

30+ 3rd party electronic ID (eID) integrations

Roots in most mature digital identity markets: Nordics & Benelux

Support for full digital identity lifecycle

# The Digital Identity lifecycle



**1** FIRST TIME INTERACTION

**2** RISK AND COMPLIANCE

**3** RETURNING CUSTOMER

**4** CONTRACTS AND CONSENTS

Login username

Empowering your customers with a fully digital journey.

# The Digital Identity lifecycle

**RISK AND COMPLIANCE** 2

**FIRST TIME INTERACTION** 1

**RETURNING CUSTOMER** 3

**CONTRACTS AND CONSENTS** 4

PRH
asiakastieto.fi
DIGI- JA VÄESTÖTIETO-VIRASTO
TRAPETS SURVEILLANCE & COMPLIANCE
Bisnode

Regulatory compliance
Business authority
Customer data enrichment
Attribute lookup

Empowering your customers with a fully digital journey.

# The Digital Identity lifecycle

Verified national identities (eID)
2FA methods/authenticators
PSD2 compliant MobileID App/SDK
Social logins

FIR
INTE

RETURNING
CUSTOMER
**3**

CONTRACTS
AND CONSENTS
**4**

Login username

Empowering your customers with a fully digital journey.

# The Digital Identity lifecycle

**FIRST TIME INTERACTION** 1

**RISK AND COMPLIANCE** 2

**RETURNING CUSTOMER** 3

**CONTRACTS AND CONSENTS** 4

Sign(API/portal) with eID/authenticator/scribble
PSD2 Dynamic linking & consent
Qualified Time Stamps (eIDAS QTSP)

Pay $1 to Jane Doe?
Yes   No
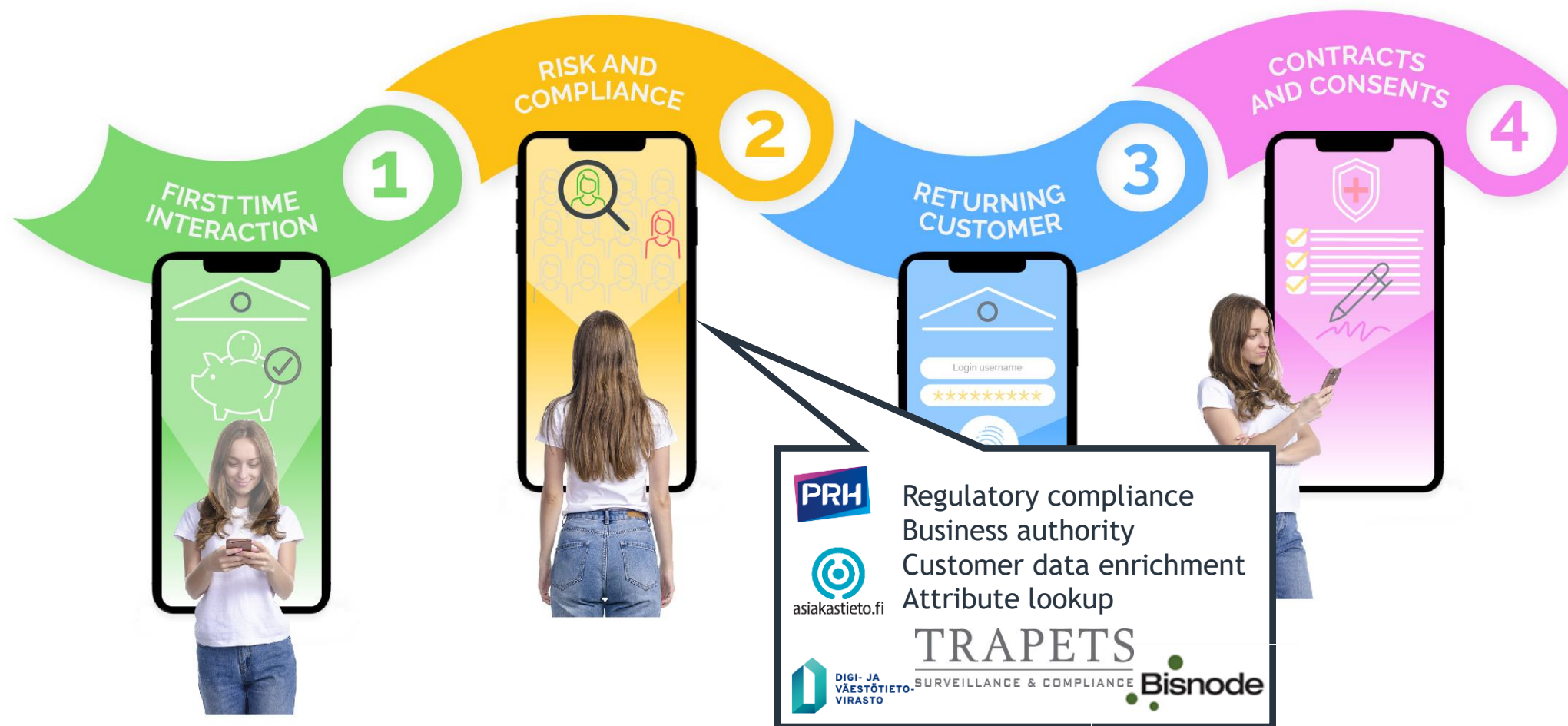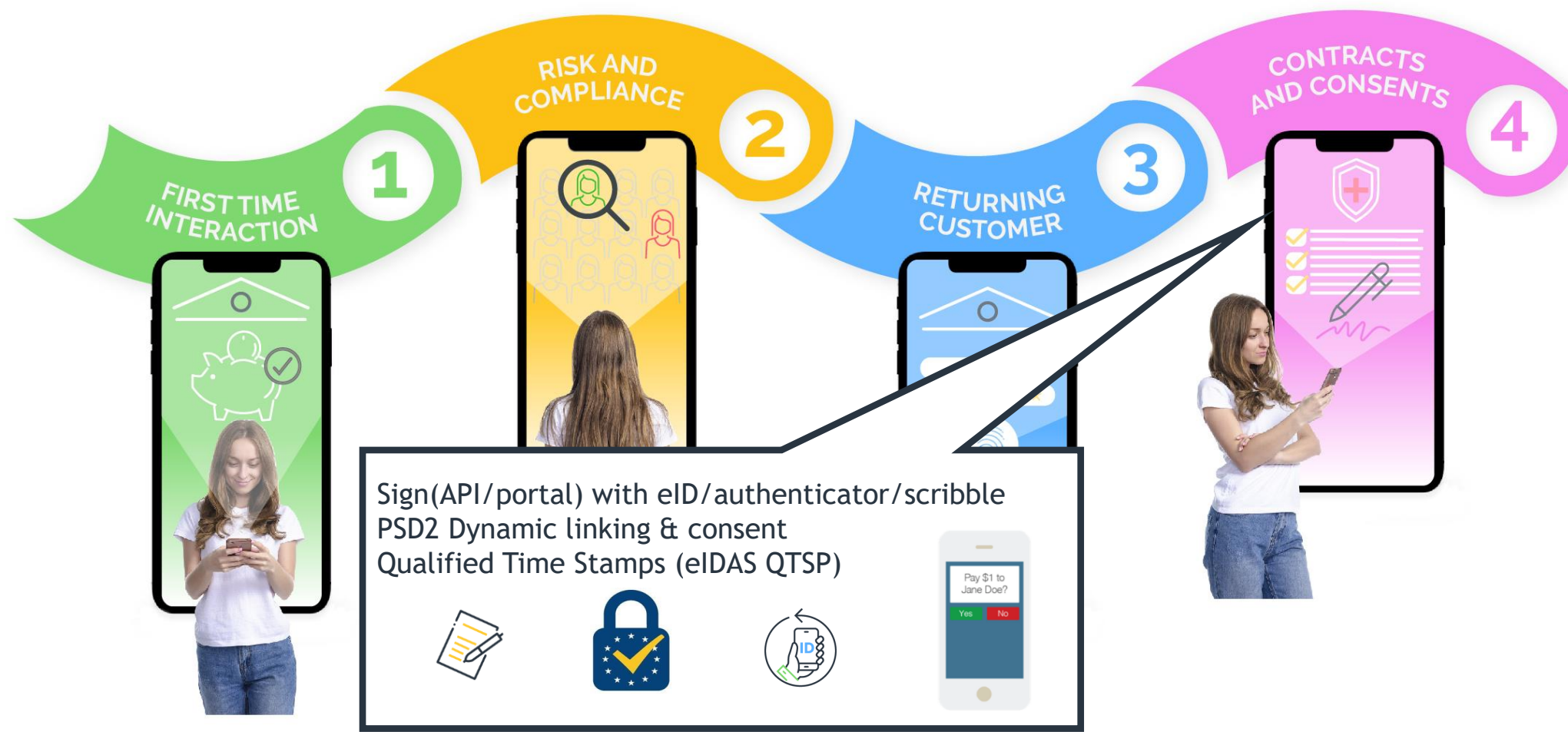
Empowering your customers with a fully digital journey.

# Cross-border eID

- eIDAS eID today
- The broker model
- The "secure European e-Identity"

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# The eIDAS regulation and eID – today

- Only covers cross-border eID
  - Identity and eID are national and governed by the states
- Only for public services
- eIDs notified by governments for x-border use
  - Notification at eIDAS LoA "substantial" or "high"
- Public services must (in principle) accept foreign, notified eIDs
  - Define the LoA needed

# The eIDAS infrastructure

- National nodes
- Redirection to home node
- SAML based



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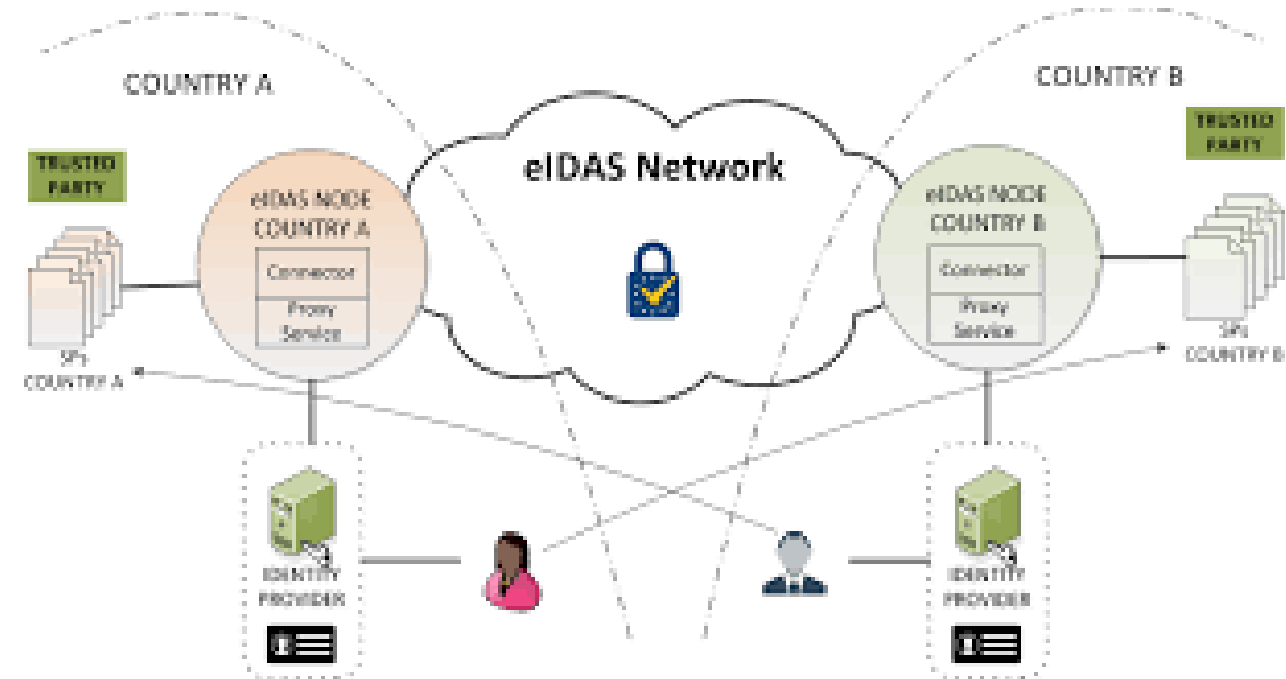
# eIDAS eID – what has worked

- Alignment of national eID assurance levels
  - Substantial and high as pan-European reference levels

- Attention on the role of eID and cross-border acceptance
  - The need is evident and understood in most countries

# eIDAS eID – what has partly worked

- The notification system
  - Countries notify but with minimal practical effect
  - Is it practical – should Finland notify 14 eIDs?

- The eIDAS infrastructure
  - Works, but old-fashioned
  - Not much practical effect
  - Not available to private sector
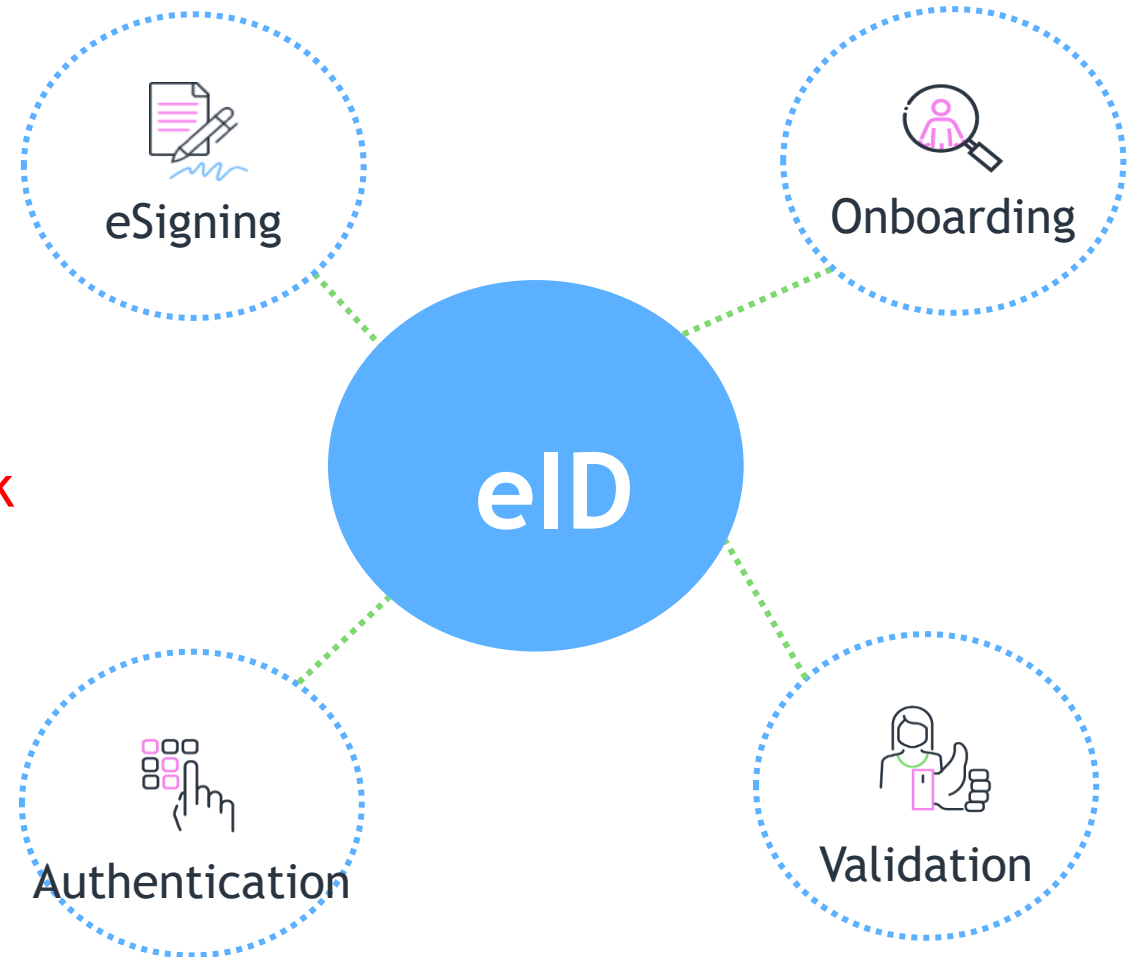


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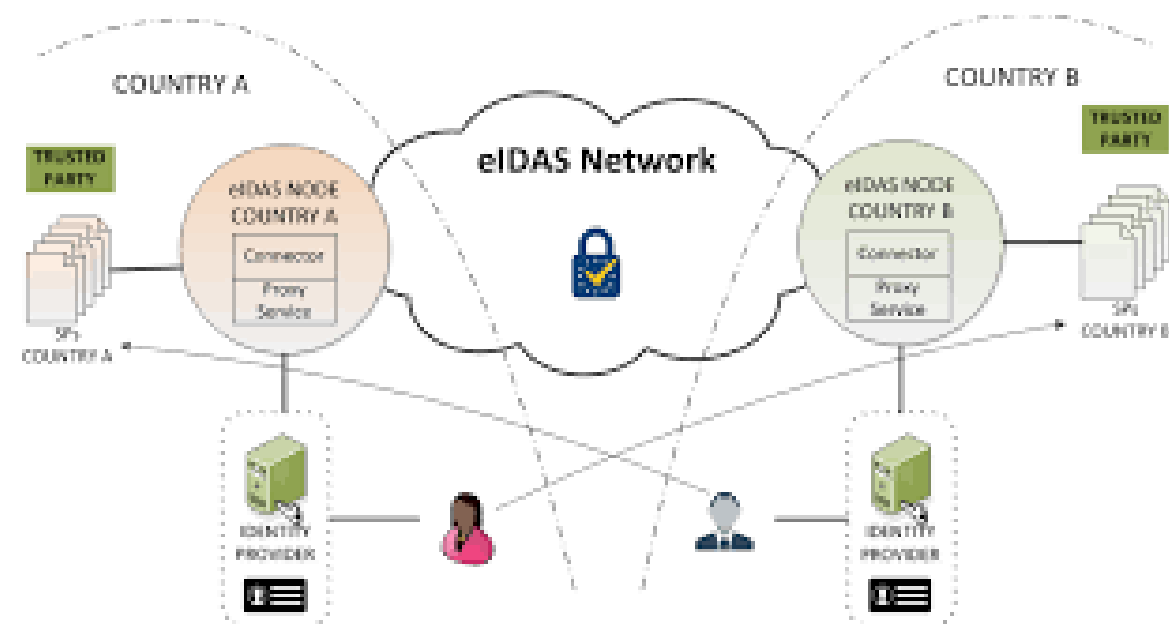
# eIDAS eID – what has not worked

– Most Member States have insufficient eID deployment

– eID must be a commodity

Suggested success criteria:

• 90 % of adult population has eID, and

• Uses it on average at least 2 times per week

Only 5-6 states (including EEA) fulfil this

– Successful deployments almost always involve both banks and government
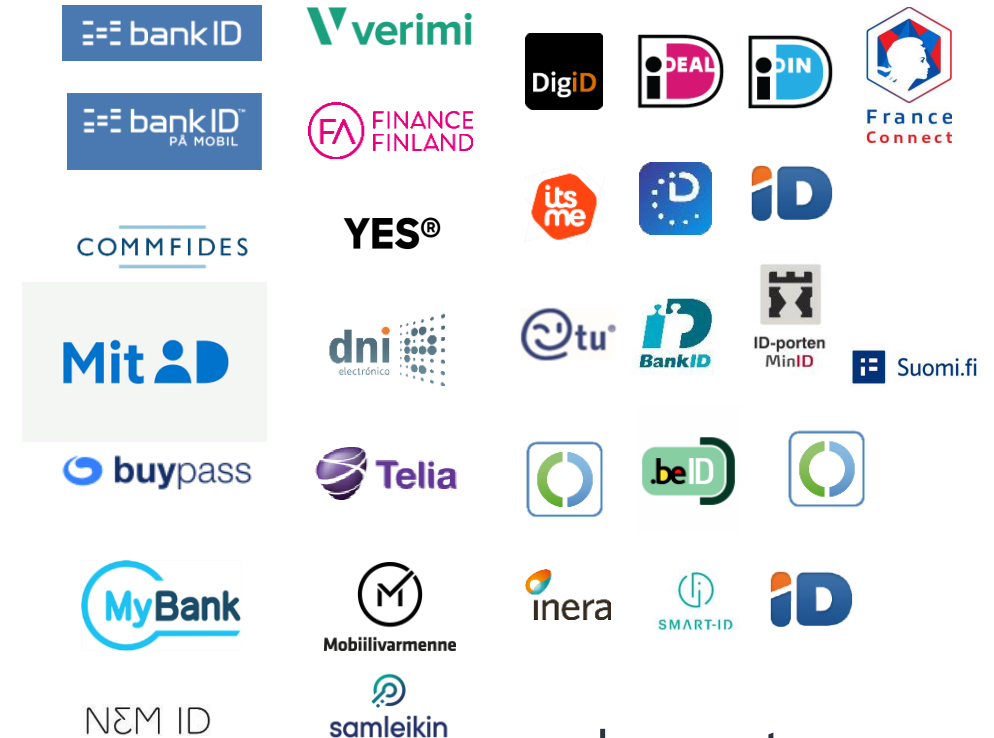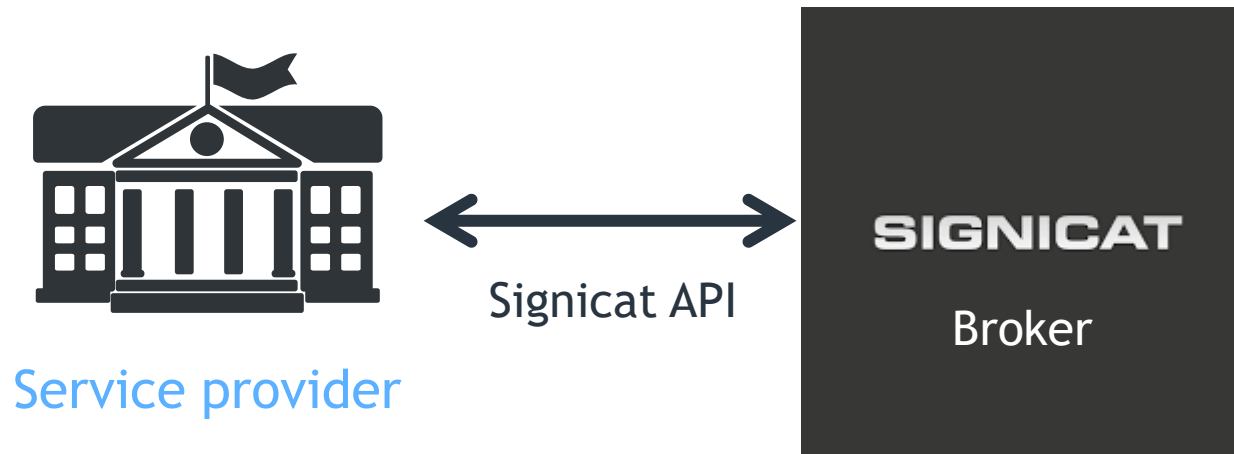


eSigning

Onboarding

eID

Authentication

Validation

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# Cross-border eID works today
# Broker model, Signicat example

- Integrating > 30 eIDs and eID schemes available over one API
- Covering 13 countries
- Customers operate X-border or in several countries



Service provider

Signicat API

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Broker

... and more to come

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# Ecosystem approach

- Base on eIDAS assurance levels

- Broker (abstract role) as a trust service
- Broker interconnection
- Attribute providers added to the picture
- Ensure Self-Sovereign Identity (SSI) and novel technologies are not left out



Service provider

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Broker

Other broker

Suomi.fi

iDIN

France Connect

YES®

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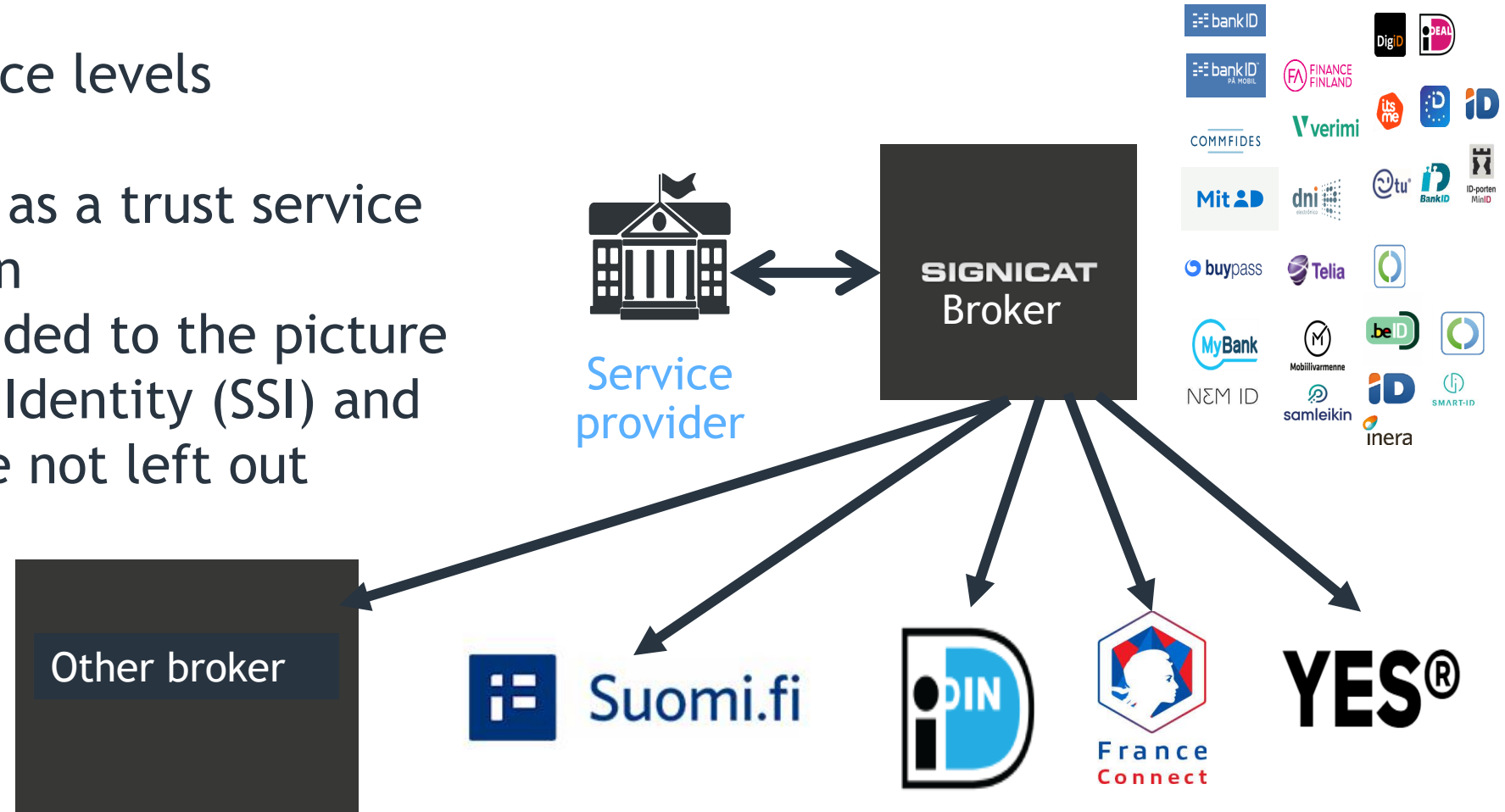
# Upcoming, «secure European e-Identity»

- Ursula von der Leyen "state of the union": **the Commission will soon propose a secure European e-identity**

- EU leaders **"will ask the Commission to put forward a proposal for a 'European Digital Identification' initiative by mid-2021"**

- eIDAS revision draft proposal Q1 2021
  - Piloting, review, comments etc. 2021
  - Revised eIDAS with revised implementing acts 2022
  - Likely proposal to regulate eID as a trust service
  - Means "qualified eID issuers" and either "qualified eID" or prolongation of "substantial" and "high" levels

- Additional European digital identity act is a possibility

Proposed principles for European e-Identity:

- Public and private providers

- Universally available, universally useable – might be legal obligation for services to accept it

- Protecting privacy

- Mobile, common standards

- Attributes from trusted sources (study to map availability of sources in member states)

- "Self-sovereign", user controlled, not necessarily "pure SSI" (e.g. need not be blockchain)

- EU might provision a secure identity wallet

- No information on how persons are uniquely identified (and over time).
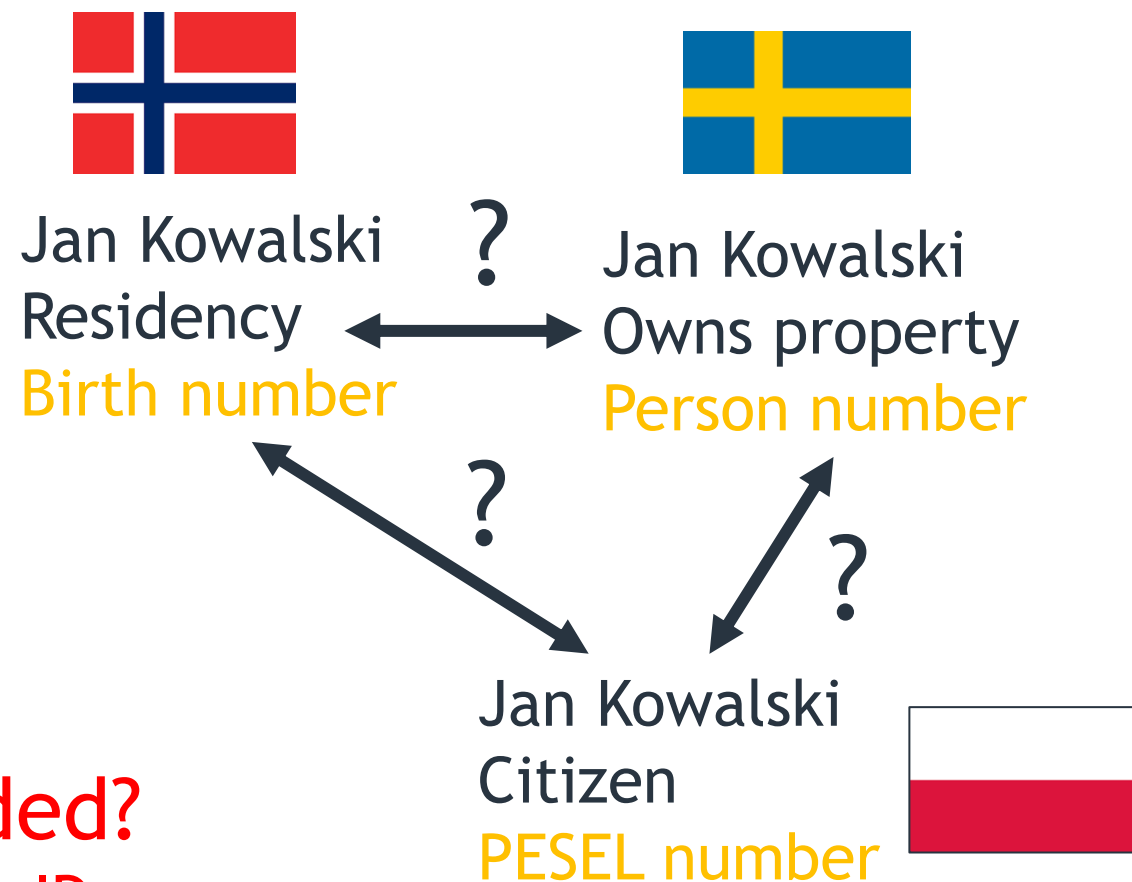
# Identification is the problem, not x-border eID

- There is no EU identity, only national identities

  - National identity defined by citizenship, residency, rights, and obligations
  - Link national identities cross-border?
  - What about countries that cannot (really) even identify their own residents uniquely?

Jan Kowalski
Residency
Birth number

?

Jan Kowalski
Owns property
Person number

?

?

Jan Kowalski
Citizen
PESEL number

Is an EU identity desired/needed?

**Identity**, to be used for eID....

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# Cross-border e-signature (and trust services)

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# Trust services in eIDAS

- Founded on treaty on the internal market

- Commercial services cross-border

- Closed set of services:
  - Certificate issuing (e-signature, e-seal, web-site)
  - Validation of e-signatures and e-seals
  - Preservation of e-signatures and e-seals
  - Time-stamping
  - Electronic registered delivery
  - (Signing – cannot be qualified)

- Qualified trust services
  - Fulfilling eIDAS requirement
  - Audited and supervised
  - Highest level possible
  - "Guaranteed acceptance"

- Non-qualified
  - Few eIDAS requirements
  - Light-weight supervision
  - No guaranteed acceptance

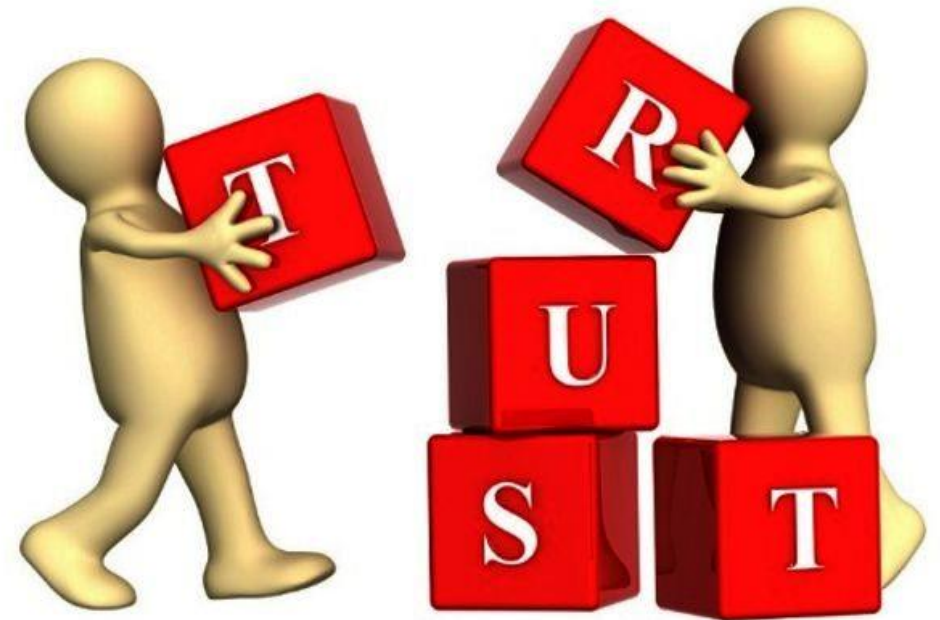# Trust services – what has worked

## Alignment of Qualified across Member States

- Not perfect but pretty well
- With standards as firm base
- Well established conformity assessment

# Trust services – what has partly worked

- Cross-border service provisioning
  - Not much yet but slowly evolving

- Qualified as a concept
  - Still the ultra-secure and expensive option
  - Either we must have «qualified as a commodity»
  - Or more focus on non-qualified

- Trusted Lists
  - Works – for specialized software and services
  - Not for browsers and off-the-shelf products (except Adobe)
  - Not for non-qualified trust services

# Trust services – what has not worked

## Lack of deployment and use

Suggested success criteria:
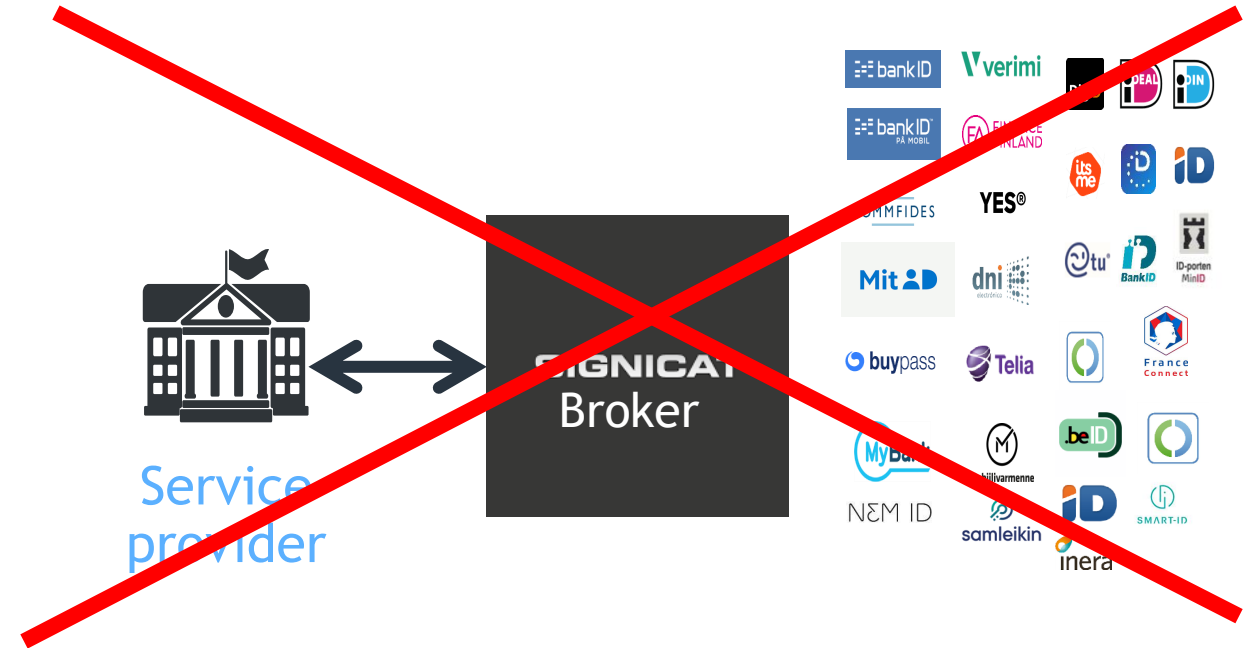- E-signature as a commodity
- To 90 % of adult population



Can only be met if  deployed with eIDs, not in parallel to eIDs

## Scaling!!

# Scaling part 1: Signing

- 151 issuers of Q-cert for sign
- With their own signing solutions

- Handling 151 eIDs may be OK
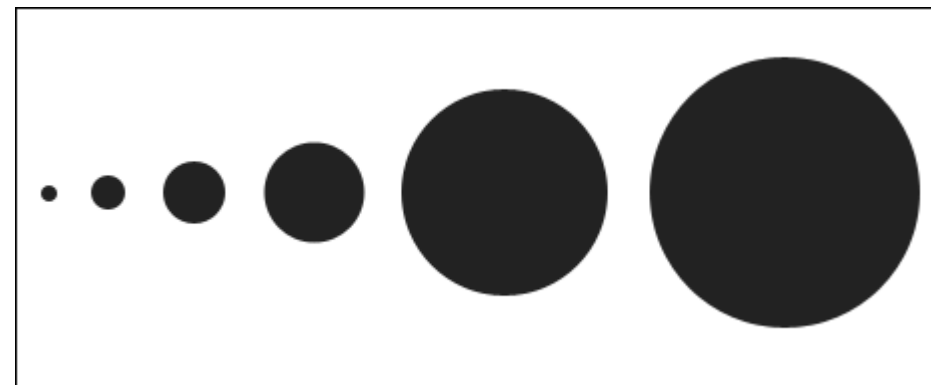- But not 151 signing options



Signing must be tightly integrated with use
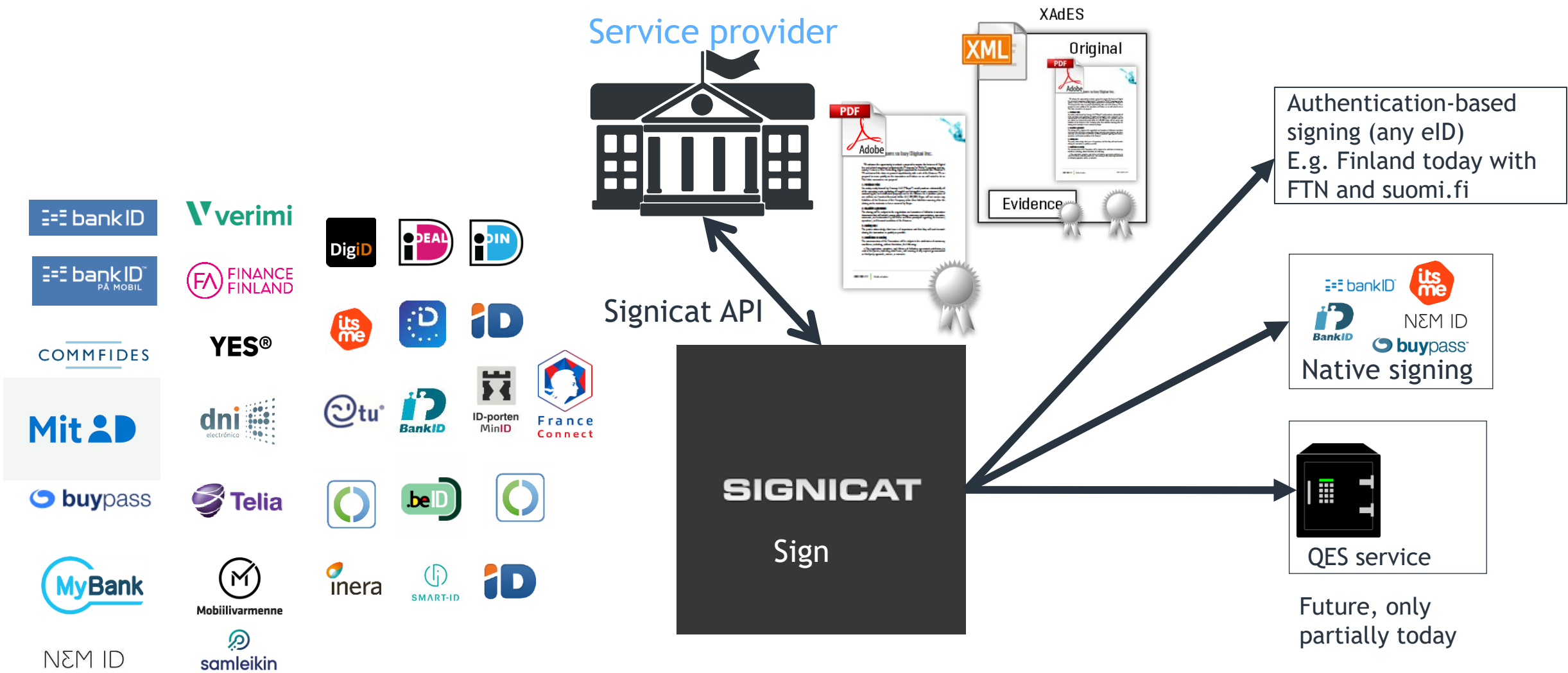of eID for authentication

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# Scaling part 2: Validation



- 151 issuers of Q-cert for sign

- 101 issuers of Q-cert for seal

- 51 issuers of QWAC (that does not work well in browsers.....)

- 108 providers of Q-timestamp

- ... and lots of non-Q providers, and think outside of the EU


- Trusted List system technically works for Q-services

Validation authority as trust anchor may be solution

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# eID as the core of signing



Service provider

Signicat API

XAdES

Authentication-based signing (any eID) E.g. Finland today with FTN and suomi.fi

Native signing

QES service

Future, only partially today

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