

# ENISA Workshop

Remote video identification:  
Attacks and Foresight

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# Facts about Buypass



**Among Norway's largest professional environments for ID and security**

Located in Oslo and Gjøvik, a strong team of developers and experts in the field of authentication & payment



**Highly certified nationally & internationally**

Certified in accordance with ISO 27001/9001, PCI-DSS & European ETSI-certification that includes eIDAS Trust Services.



**Specialising in Player Account Management for lotteries**

**All functionality delivered as-a-service with high availability and scalability**  
Long track record for innovation and cost-efficient solutions

**Norwegian | 85+ staff | established in 2001 | NOK 310 mill. revenue in 2022**  
**Owners: Norsk Tipping and Tietoevry**



*We enable efficient and sustainable digitalisation by providing easy to use and secure ID, digital signature and payment solutions*

*Gunnar Lindstøl, Buypass CEO*



# An eID provider in Norway



**Publisert liste av eID-ordninger**

Nedenfor følger en liste over selvdeklarte eID-ordninger med opplysninger om hvilke eID-nivåer som tilbyderne har selvdeklart:

BUYPASS AS

Nettside: <http://www.buypass.no/>

eID	Sikkerhetsnivå	RA
Buypass ID på smartkort	Høyt	
Buypass ID i mobil	Høyt	
Buypass ID FIDO2	Høyt	




# A Qualified Trust Service Provider



European Commission | EU Trust Services Dashboard

DISCOVER BROWSE TRY

CEF eSignature / EU Trust Services Dashboard / Browse / Trusted Lists / Norway / Trust service provider

 **Buypass AS**

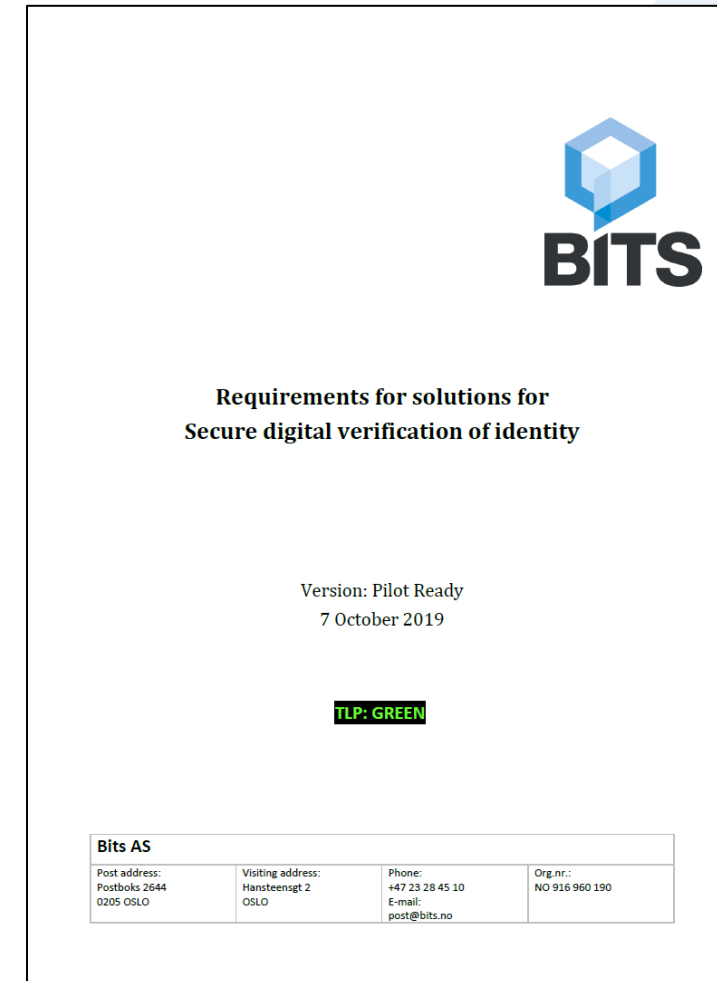
**Trust services**

- QCert for ESig** Qualified certificate for electronic signature
- QCert for ESeal** Qualified certificate for electronic seal
- QWAC** Qualified certificate for website authentication

Detailed information

# Background

- **Manual verification of identity since 2005**
  - Physical presence using services from Norwegian Post or by operators at Local RAs in the corporate market
- **Focus on digital verification of identity since 2019**
- **Involved in a pilot project together with national authorities in 2020**
  - Motivated by Covid
- **Using a solution from Nets for digital identity verification – Nets ID Verifier**





# Nets ID Verifier

## Nets ID Verifier

How do you balance compliance on one hand with the imperative to offer world-class digital experiences to your users on the other? Traditionally, identity proofing and verification comes with visits to branch offices. It's time consuming, costly, and limited to office hours.

Nets ID Verifier is an **electronic identity verification (eIDV)** service meant to give you cross-country reach as well as compliance with the highest standards. Here's how it works for your users:

- Download the Nets App or simply use Customer own App (embedded SDK)
- Scan passport or other ID document
- Take a selfie to match and verify one's identity

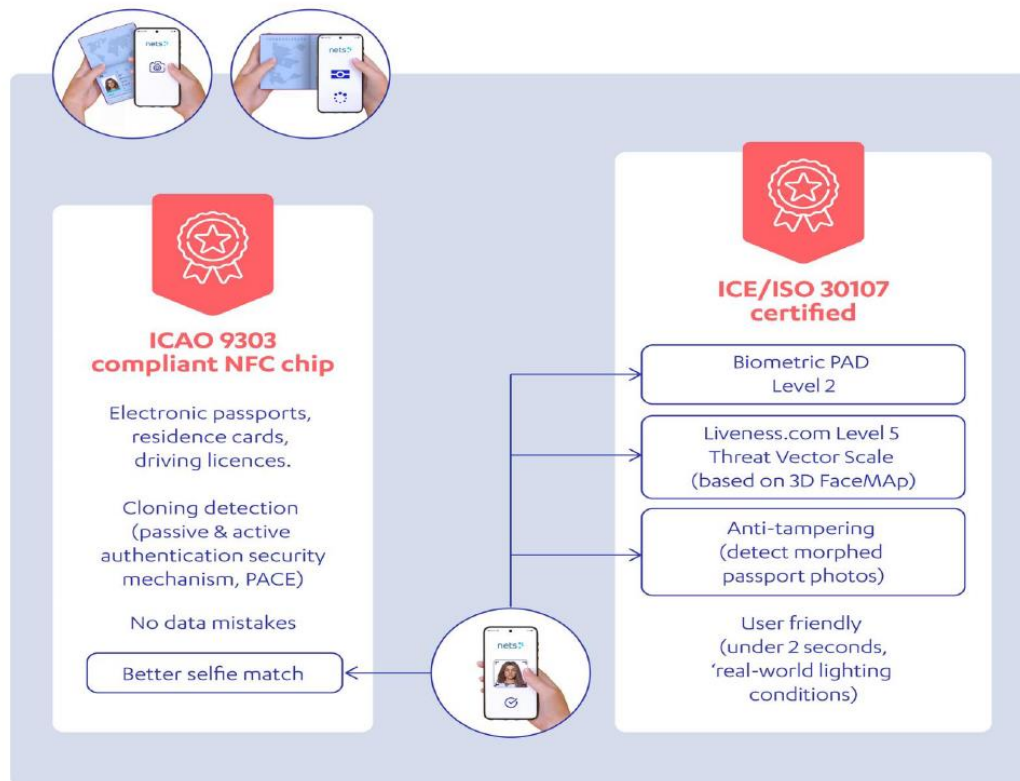
The process is fully digital and automated and only takes a few minutes. Your users have now a **trusted digital identity** which can be used to securely access services online (!)

Using your face to unlock your digital passport



# Nets ID Verifier certification

A certified solution offering the highest level of Trust



Nets ID Verifier qualifies for **eIDAS compliant identity proofing** and is certified by a Conformity Assessment Body, BSI (The British Standard Institution).

Check out our Trust Service Practice Statement (TSPS) for detailed info, including eIDAS High configuration parameter

[Identification Passport Reader \(nets.eu\)](https://nets.eu/IdentificationPassportReader)




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# Face match/biometrics (FAR)

## Nets ID Verifer – Face match/biometrics

**FAR Confidence score with FRR <1%**

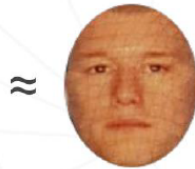
- Level 0 – no info returned
- Level 1 – 1/100 FAR\*
- Level 2 – 1/250 FAR
- Level 3 – 1/500 FAR
- Level 4 – 1/1.000 FAR
- Level 5 – 1/10.000 FAR
- Level 6 – 1/100.000 FAR
- Level 7 – 1/500.000 FAR
- Level 8 – 1/950.000 FAR
- Level 9 - – 1/1.200.000 FAR

\*FAR (False Acceptance Rate) vs FRR (False Rejection Rate)

Based on 2D Pic read from document



2D Face Match (Competition)



Nets 3D Face Match



- Hosted on prem (Norway) – no cloud set-up
- World-leading algorithm outperforming international standards
- Tested and certified by EU labs
- Approved by Digitaliseringsstyrelsen (Denmark) and Nkom (Norway)



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# Regulatory status in Norway

- It's currently not allowed to use biometric based methods for digital verification of identity when
  - Providing eID means at LoA High or
  - Issuing Qualified Certificates according to eIDAS
- This restriction is set by the Norwegian supervisory body
- However, Buypass has got a dispensation from this restriction, and we have gained some experience using Nets ID Verifier

# Introduced in the corporate market

- Using Nets ID Verifier for identity proofing when enrolling eID means to employees to one customer in the public domain.
  - As an alternative to manual controls by operators at local RAs
- Only passports and identity cards read by RFID are accepted
- Face match levels accepted  $\geq 6$ 
  - FAR less than 1/100 000 with FRR  $< 1\%$
- More than 8000 eID means are so far enrolled using the Nets ID Verifier

# Our experience

- The dispensation required additional controls to be implemented
- From a set of 2500 identity proofing trx. 15% has been subject to manual controls.
- Randomly picked samples are controlled manually each month, and no deviations has been identified
  - Buypass personnel get access to information from identity documents and selfies taken during digital verification and compares the results
    - The controls and results from the controls has been verified by an external auditor
- Digital verification of identity by Nets ID Verifier has been very successful. Fast , trustworthy, convenient.
- Distributed offices with few people available for doing manual verification of identity makes this an important use case for the corporate market in Norway.

# Current challenges

- **Different legislation among EU countries**
  - As a Norwegian QTSP, Buypass is not allowed to use digital verification of identity based for identity proofing when issuing Qualified Certificates.
  - QTSPs operating in some other EU countries are allowed.
- **A lack of EU wide common requirements for solutions using biometric based digital verification of identity**
  - Some attempts are done, but not sufficient
    - E.g. ETSI TS 119 416 refers to NIST and best industry practice
  - We need well defined requirements and criteria's for how to evaluate solutions.

# Foresight on future challenges

- A main challenge will be presentation attacks based on deepfake with (future) AI solutions. Tech. is moving fast.
- Current presentation attack detection is also based on AI technology.
- This will be a cat and mouse game, with presentation attacks based on AI competing with AI-based detection.
- **Relevant countermeasures for the future might be**
  - Improve sensor devices to ensure that real people are being involved in the process.
  - The involvement of human operators in the PAD processes



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