



BankID face recognition

A few facts about BankID

7B

Identifications and
signings annually

60+

Identifications and
signings per end
user & month

6K+

Relying parties

100%

of the major banks in
Sweden as
customers

8.5M

End users
98.7% of adults

79

NPS score

99,99%

Availability

20

Years of leading
experience

Digital
banking

Healthcare
services

BankID - enabling digital identity ecosystems @ scale

Securing
card
payments

Logistical
services

- 6000+ commercial customers /
relying parties

- 200+ new relying parties per
month

- 100% of the major banks in
Sweden

- 100% of the Swedish government
agencies frequently interacting
with the broad public

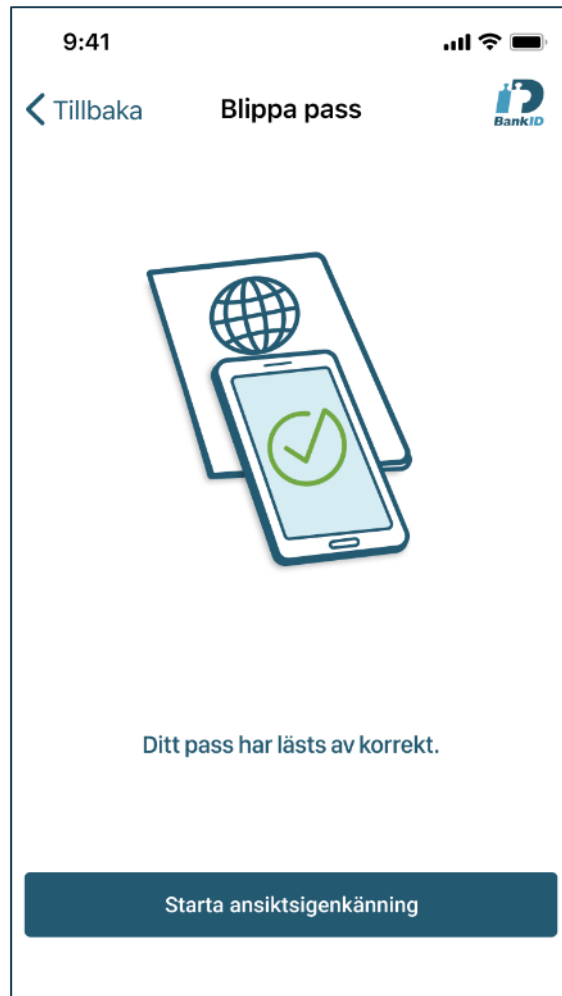
- 100% of the Swedish insurers

Digital
insurance
services

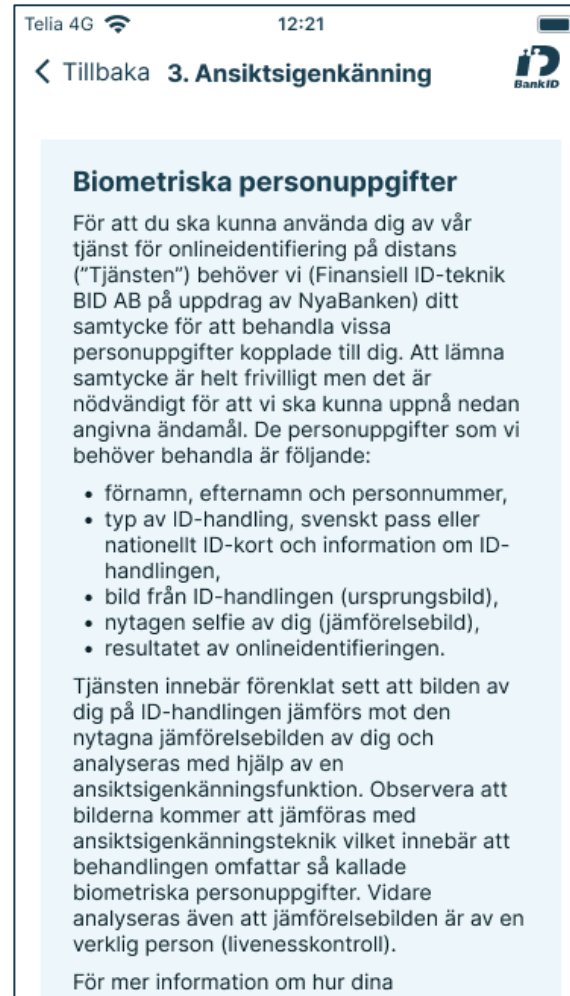
Governmental
services

Other
digital
services

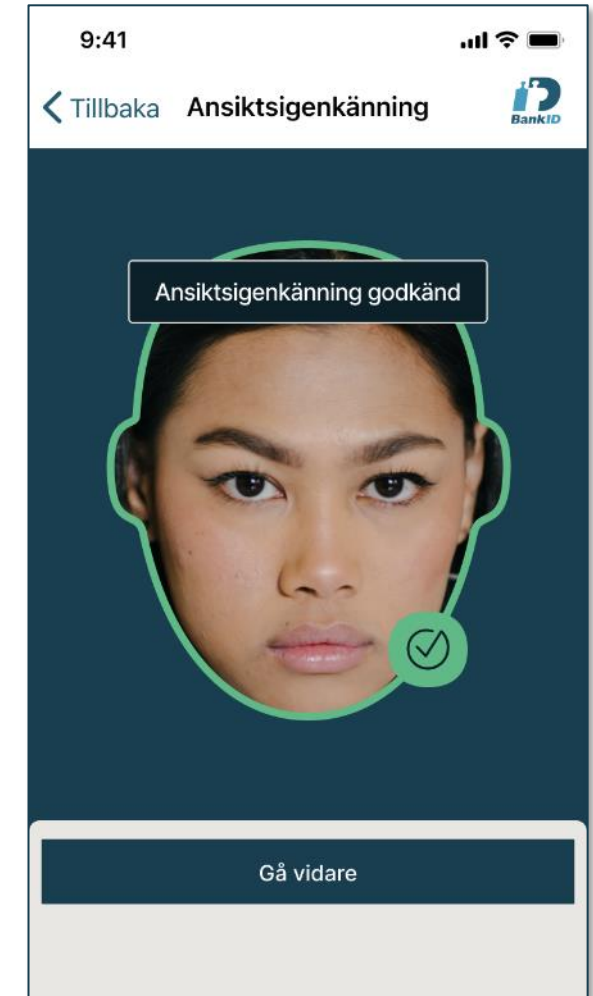
Digital onboarding with passport and facial recognition : overview



Verify passport

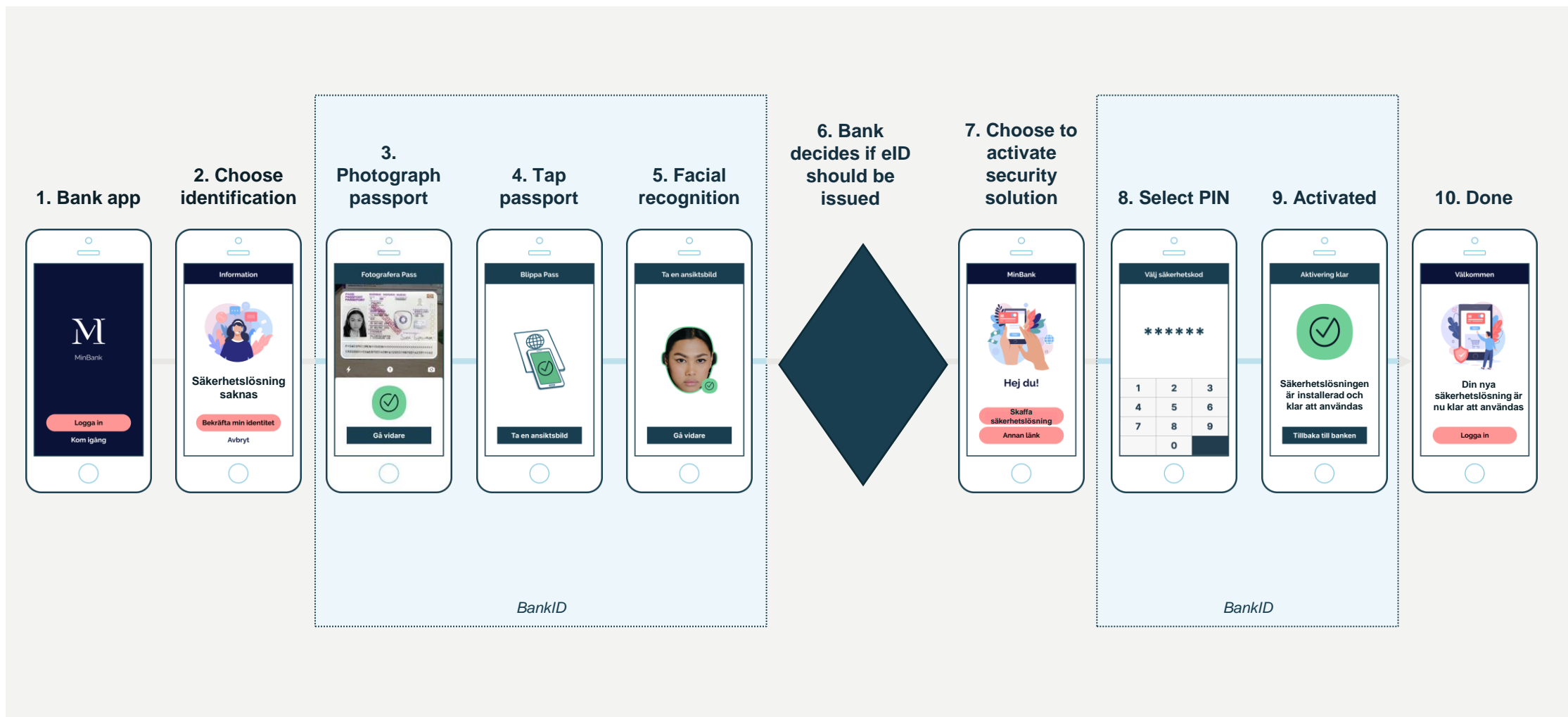


Consent



Facial recognition

Overview of reonboarding process to existing customers with significant economic or legal relationship

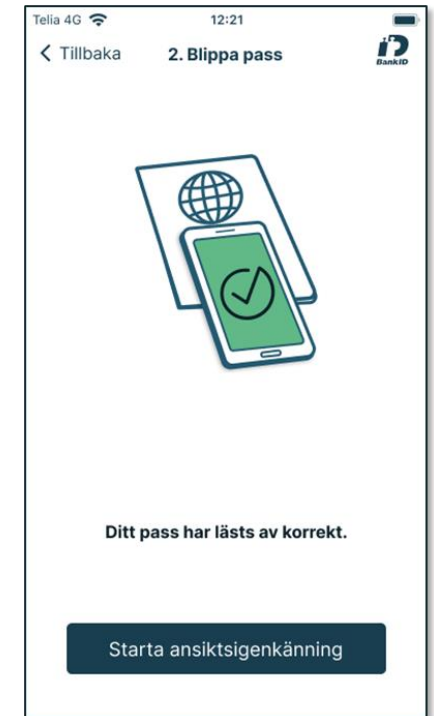


BankID launched the service in December 2022

- The biggest bank in Sweden uses the service
- Several other banks plan to implement it during 2023
- Around 7 000 transactions per month
- Face recognition as a step up will bring significantly higher volumes
- Very popular with users who can avoid traveling to a branch office and identify themselves.

Important security checks for the ID-card scanning

1. The passport/ID-card photo is taken in a Police station under good lighting conditions under supervision of trained staff
2. All information is read and validated electronically from a trusted ID-card or passport
3. The communication between the app and the passport is protected with authentication and encryption
4. Cloning protection is used to make sure that a copy of the passport is not used: active auth or chip auth
5. The authenticity of the passport is checked against the issuer Swedish Police by checking the signature of the data elements and the validity of the certificates
6. The passport is checked against the Swedish Police to make sure it is not revoked or reported stolen
7. Age limit in order to give consent



Säkerhetskontroller

Important security checks for face recognition

- **Do not rely on biometrics alone**, always add another trusted factor like passport.
- **Use up-to-date presentation attack detection software**. Choose a good vendor with a strong product.
- **Dont rely on certification alone**, it sets a pretty low bar. Employ external pen testing by accredited laboratories.
- **Limit the number of allowed failed attempts** and block users & devices that exceed the limit.
- **Is it a real and secure phone?** Does the selfie come from the camera? Detect/block rooted/jailbroken and emulated/virtualized units in order to prevent injection of photos. Detect non-human input.
- **Is it your app that collects the data?** Strong app security, protect against debugging, self integrity checks, repackaging protection, api-protection, version control.
- **Manual review** to check performance of the system
 - Initially all photos
 - Now a sample of approved/rejected photos (random selection and based on risk scoring)
- **Riskscoring, analysis and blocking**. Identify high risk. Let fraud investigators examine. Block transactions/users/devices that are found to be fraudulent.

Performance

- No identified successful attacks
 - Several attempts have been identified e.g. run face recognition on a photograph in a phone
- 92% success rate for facial recognition. Low support. Reasons for failing include:
 - Heavy makeup
 - Plastic surgery
 - Bad lighting
- 1.5% of transactions are blocked for the right reasons
 - Using someone else's passport and your own selfie, often father/mother's passport
 - Using the photograph on the ID-card to take the selfie
 - Using a photograph of the passport owner on a phone or other display
- 0.1% of users have been blocked from using the system due to abuse
- Passport scanning has a lower conversion
 - Don't hold the phone against the passport
 - Moves passport/phone during scanning
 - Protective phone case with credit card blocks reading
 - Some people don't have a valid NFC ID-card or passport



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