

BankID

- a Norwegian eID provided by retail banks

PRESENTATION for EPCA workshop 22 March 2010
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BankID Norge

Semming Austin

 **FNO**
Finansnæringens
Fellesorganisasjon

Eline Vedel

Main messages

BankID is ...

- An eID and eSignature provided by retail banks in Norway
- Result of a long-term collaborative effort within the banking industry
- Based on a common operational infrastructure managed by BankID Norge
- The most used eID in Norway
- Allows banks and other service-providers to:
 - provide existing services in a more efficient manner
 - create new services.

Our agenda



1. A few facts about Norway and Norwegians
2. Coopetition among retail banks
3. The BankID Scheme
4. BankID key stores and technical architecture
5. BankID usage and market position
6. Conclusion

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A few facts about Norway

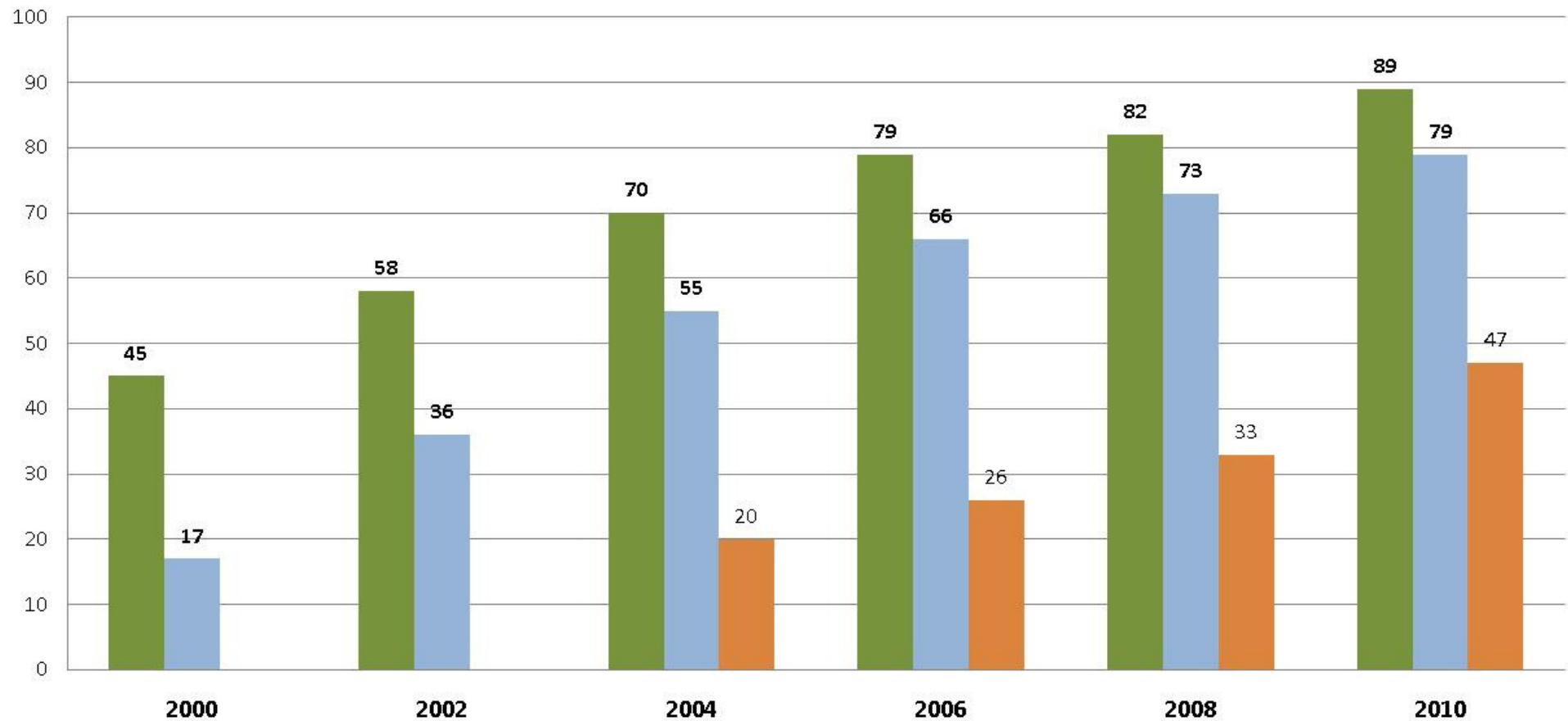


- 385,252 square kilometres
- Fish, water, oil ...
- Independent 1905
 - EEA-member
- 4,9 million inhabitants
 - Oslo: < 1 million
- Cooperative culture

- and about Norwegians and the Internet

Percentage of Norwegian population 15 years. (Source FNO 2010)

■ Internet ■ Netbanks ■ Netshopping



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Retail banks in Norway

- 140 retail banks
 - 119 savings banks
 - 21 commercial banks
- 3,9 million personal customers (15 years+)
- 40 percent of personal customers use two or more banks
- All savings banks are members of the Norwegian Savings Banks Association
- Most commercial banks (as well as other financial institutions) are members of the Norwegian Financial Services Association
- All members are served by: Finance Norway (FNO)

Basic standardized services provided by retail banks in Norway (only)

Payments

- **BankGiro** (credit transfers)
- **Avtalegiro** (recurrent debit transfers)
- **Efaktura** (eInvoicing B2C)

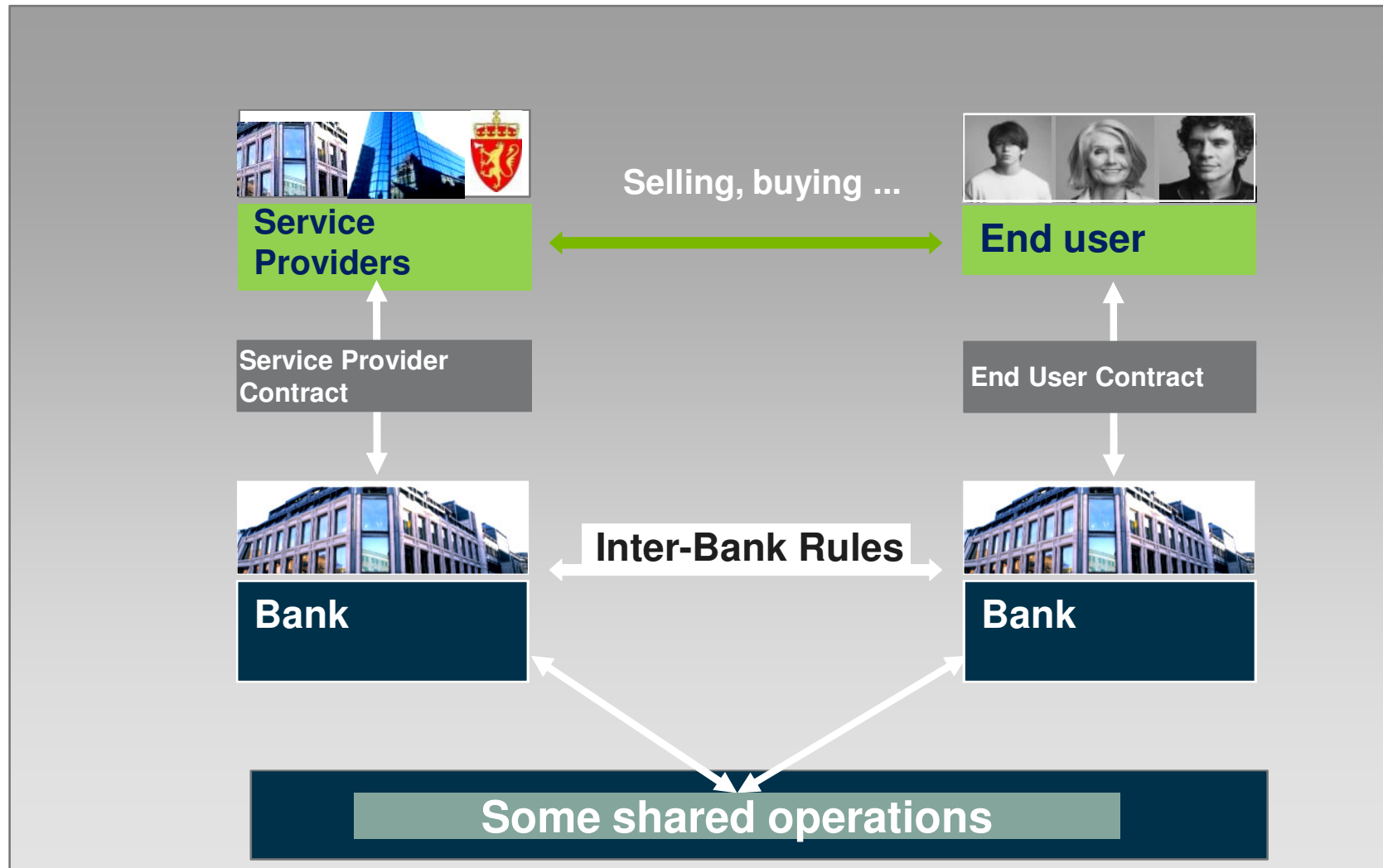
EFTPOS and cash

- **BankAxept** (debitcards accepted at all ATMs and almost all points-of-sale terminals)

ebanking and eCommerce

- **BankID** (eID and eSignature)
- **BankAcess** (ePayments)

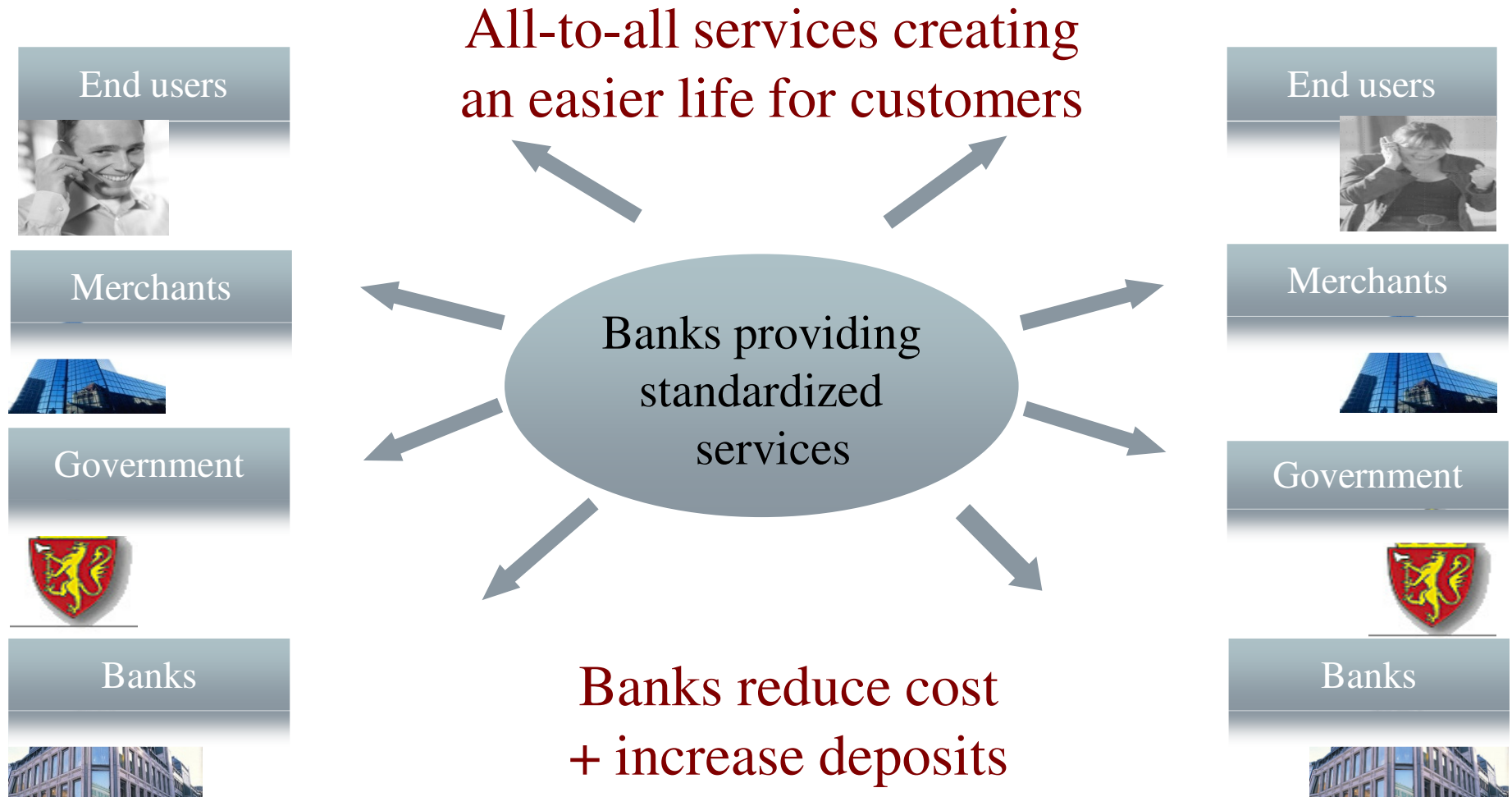
Generic model for provision of basis services



Coopetitive provision of basic services

- Coopetition = Cooperation + Competition
 - Competitors cooperating ***to create value networks***
- Among retail banks in Norway
 - Cooperation in creating and maintaining ***schemes*** for standardized provision of basic services
 - Competition in providing and selling these (and many in-house) services in the market place
- Schemes are ***owned by the associations:***
 - and governed through Finance Norway, Banks Standardization Office and others (e.g. BankID Norge)

Coopetitive provision of basic services



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BankID is

- An eID with related services for authentication and signing over the Internet
- Provided by banks to customers registered in Norway
- Based on a PKI (Public Key Infrastructure) and a cooperative scheme (*like other basic services*)
- The result of a long-term collaborative effort involving the entire banking industry: the BankID Collaboration



Main goals of the BankID Collaboration

Overall goal:

Banks in Norway are active and visible in securing the digital marketplace

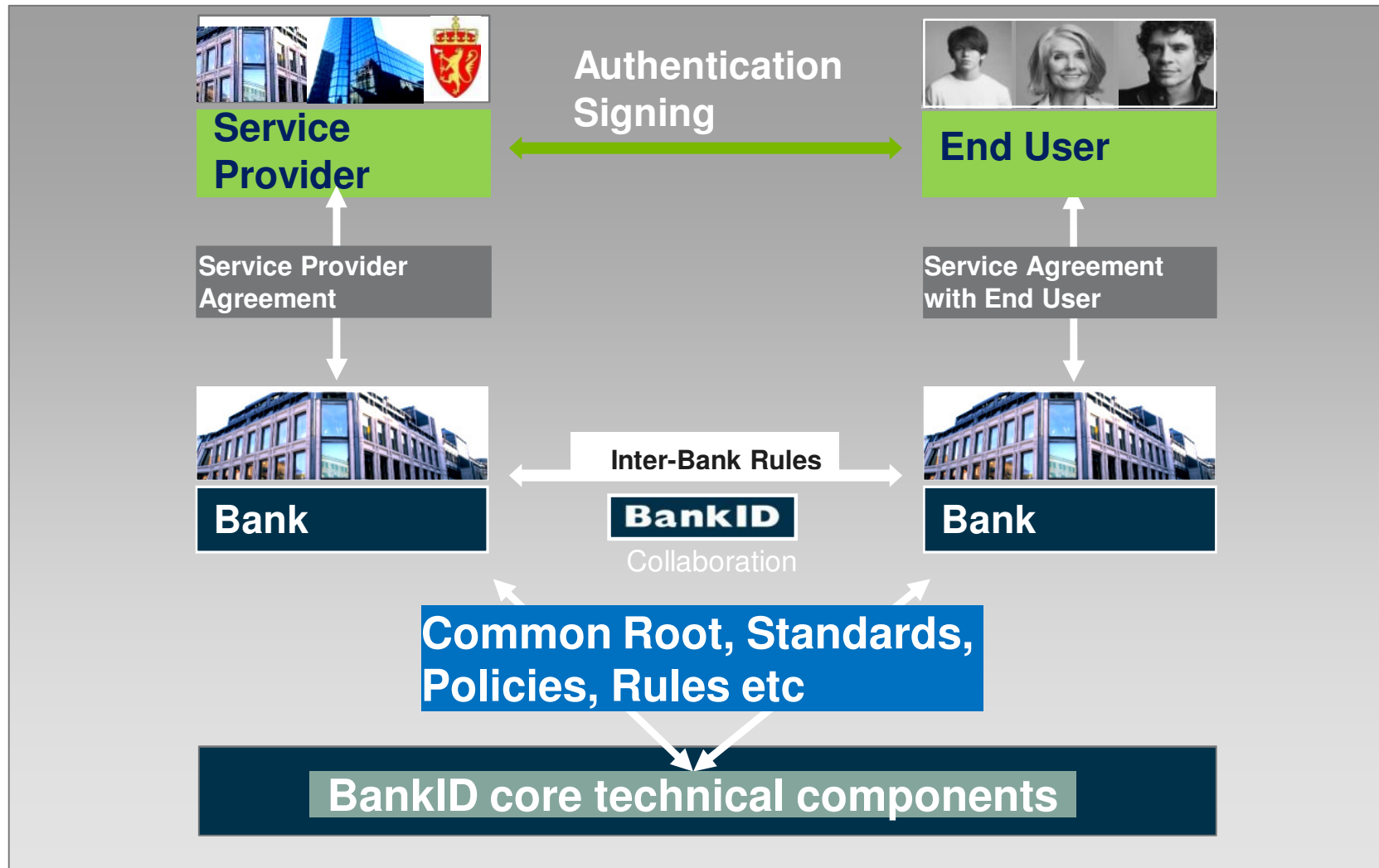
- BankID is primarily designed to be useful to banks, other financial institutions, merchants *and* their customers
- BankIDs are issued and used in Internet-banks

Additional goal:

Should also be useful in securing interaction where there is no need for financial services.

- BankID fulfils general requirements to PKI-based eIDs and eSignatures for use in the Norwegian public sector.

The BankID scheme



BankID is supported by central agencies within the banking industry

- *Finance Norway (FNO)*
Overall scheme management
- *Banks' Standardization Office (BSK)*
Technical standards and security requirements
- *BankID Norge (BankID Norway)*
Management of operational aspects
-
- *BBS Infrastruktur AS:*
Certificate factory and other core components

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BankID keystores

For personal customers

Bank-stored= net-centric in HSM+ (since 2004)

- 2,5 million certificates (2,2 million customers)
- Declared as Qualified Certificate

Mobile = on SIM (since 2009)

- Small volume yet : approx. 9500 certificates
- Provided with telcos (currently only Telenor)

For banks and other service-providers

Local, soft or inside HSM (since 2003)

- 700 active certificates (280 service providers)

Bank-stored BankID - Authentication

- Service provider (owner of website) uses BankID Server to initiate authentication or signing
- Client software is downloaded to BankID user's equipment at time of use
- Access to net-centric keystore through two-factor authentication
 - Knows: UserID and password
 - Has: OTP device
- Identification of both parties



The image shows a screenshot of the BankID authentication interface. The title is "Identifisering" (Identification) with the BankID logo in the top right corner. Below the title, there is a label "Brukerstedets navn" (User location name) followed by a text input field. To the right of the input fields, there are labels for "Fødselsnummer:" (National ID number), "Sikkerhetskode:" (Security code), and "Passord:" (Password). The "Fødselsnummer" field contains the value "11223312345". The "Sikkerhetskode" field contains "****". The "Passord" field contains "*****". Below the password field, there is a label "Personlig passord." (Personal password) with a horizontal line underneath. At the bottom right, there are three buttons: "OK", "Endre passord" (Change password), and "Avbryt" (Cancel).

Bank-stored BankID - signing

- Access and security elements like authentication with BankID
- Standard-layout shown
 - Varies depending on area of application
- Signing creates Signed Data Object (BankID-SDO) stored locally and/or with bank
 - Non-repudiation
 - SDO viewer provided
- Approximately 1/3 of BankID - transactions are signings

Signering BankID
Brukerstedets navn

Innholdet i tekstfeltet bekreftes ved å signere med din BankID.
Merk: Signering med BankID er bindende.

Her fremkommer teksten som brukerstedet ber deg om å signere.

Fødselsnummer:
11223312345

Passord:
Personlig passord.

OK Avbryt

Mobile BankID

Developed as a joint venture between Telenor and the Norwegian banking industry

- Open invitation to other telcos

Utilizes a PKI-enabled SIM in the mobile phone

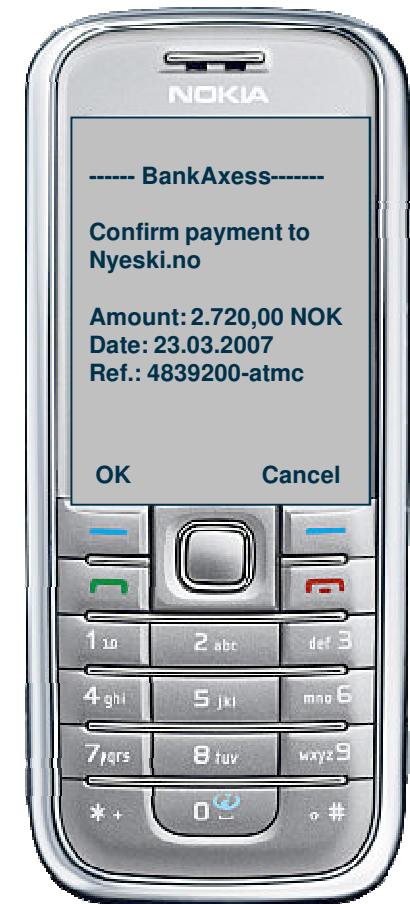
- A smartphone is not required.
- Key generation takes place inside the SIM.

Activation through Internet bank

- (like Bank-stored BankID)

Covers authentication and simple eSignature.

- Data to be signed in a SIM toolkit msg.
- SIM application can only produce simple PKCS#1-signatures



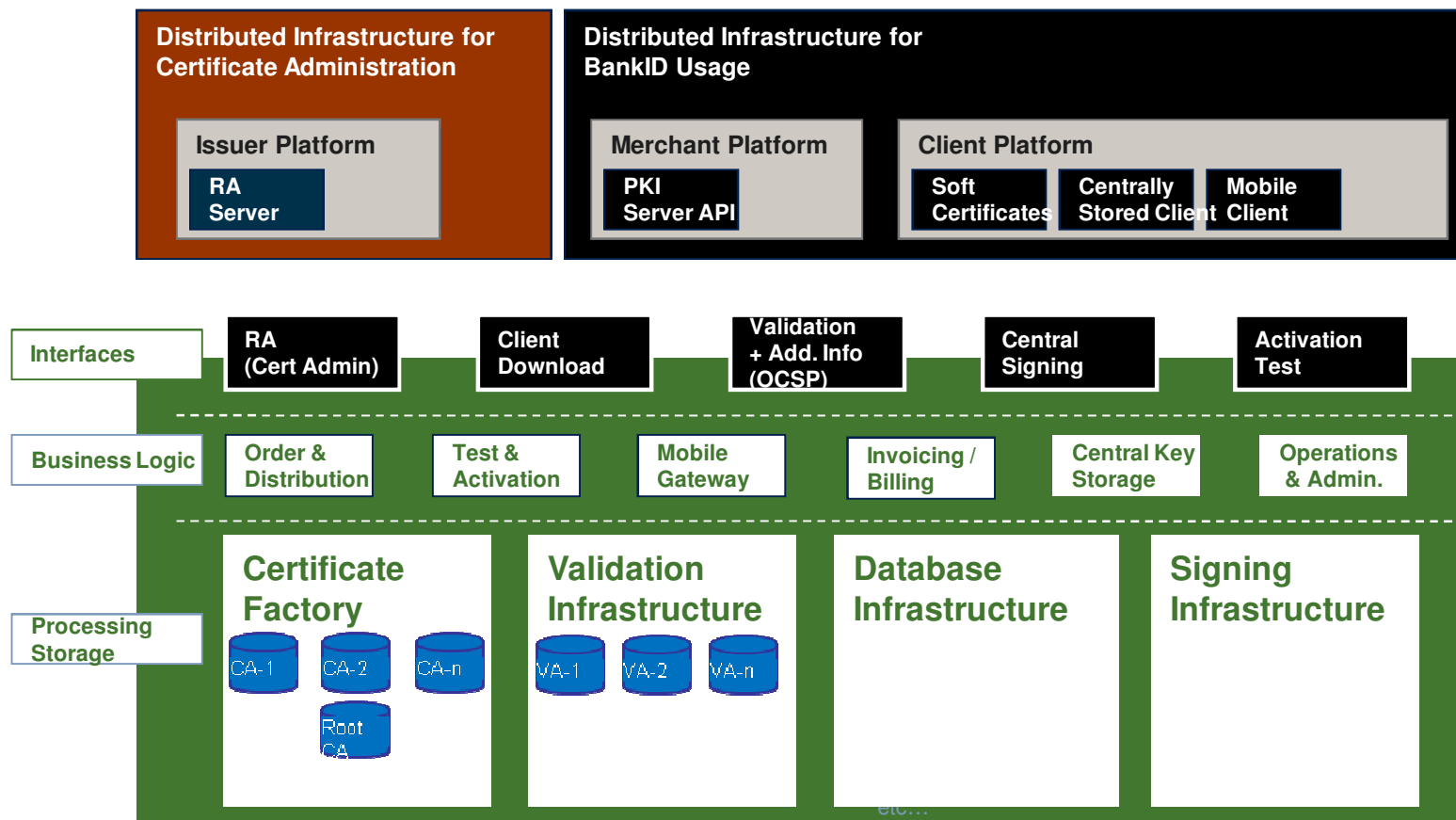
BankID Architecture

– Main technical components



BankID Architecture

– Main technical components – cont.



BankID cost structure

- Costs for maintaining and developing common operational infrastructure:
 - Shared between all participating banks
- Costs for maintaining and developing telco's part of infrastructure for BankID on mobile phones:
 - Covered 100% by telco
- Other costs related to issuing and validating BankID:
 - Covered by individual banks

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BankID usage – main figures

- 2,3 million end-users
(out of 3,9 million private customers)
 - uses BankID 800.000 times per day (average)
- Introductory application: Homebanking
- 40 percent also use outside netbanks
 - 155 other websites with active BankID users
- High satisfaction among end-users
(KPI 5,2 of possible 6,0)

BankID main areas of application

1. **Home-banking** (“killer-application”)
2. **Other retail banking services**, e.g.
 - ePayments at POS
 - Loans and mortgages
3. **Other financial services** e.g.
 - Consolidation of pension-agreements
 - Financing in connection with online shopping
4. **Other**, e.g.
 - Change of address with Posten Norge (Norwegian postal service)
 - Handling of applications for student housing
 - Secure trading of used cars



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BankID provides added value and simplifies everyday life!

2,3 million end users


End users



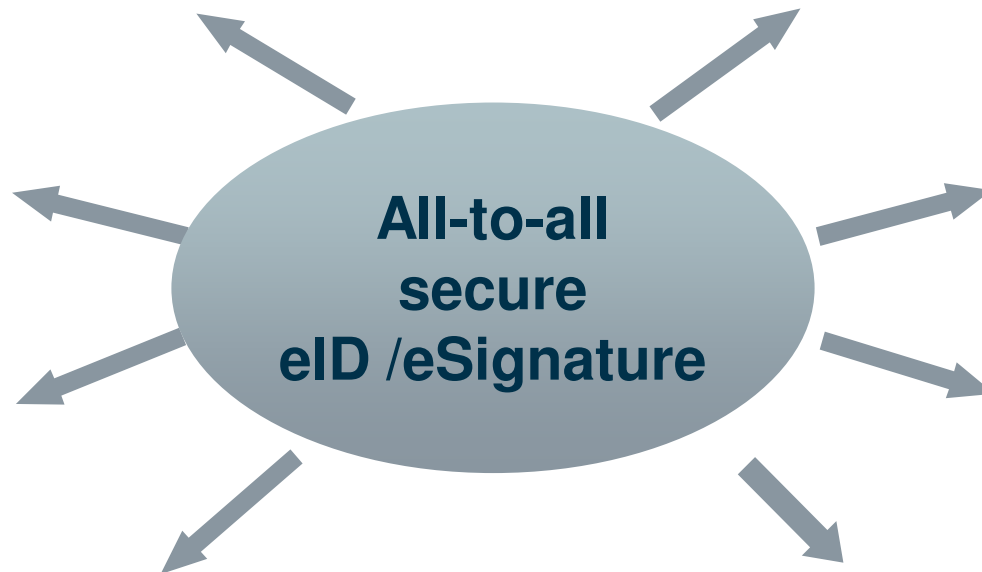

Merchants



Government




Banks




800.000 transactions per day
(average)


End users




Merchants



Government



Banks



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- The most used eID in Norway, allowing banks and others to
 - provide existing services in a more efficient manner
 - create new services
- Based on a common operational infrastructure managed by BankID Norge
- The result of a long-term collaborative effort within the banking industry

Thank you for your attention!

Questions?

Comments?

Other feed-back?

BankID Norge

www.bankid.no

 **FNO**

Finansnæringens
Fellesorganisasjon

www.fno.no

Additional slides

The following slides are provided as information on relevant topics beyond what will be covered in the presentation.

Important BankID milestones

- 2000: Associations agree on main scheme
- 2001: Decision to develop shared operational infrastructure
- 2004: First person-customers with BankID
- 2006: Largest banks start "rolling out" BankID
- 2008: 1 million active certificates + BankID Norge established
- 2009: 2 million active certificates +



Mobile BankID – example usage scenario

