

# Authentication means in electronic environments

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# Authentication

- Identity vs. Authentication
- Needs
  - Ensure authenticity of data source or person
- Need for physical authentication in e-services
  - Provide authentic services
  - Data confidentiality
- Risks
  - Identity thefts
  - Fake services, confidential information stealing

# Authentication

- for a positive authentication, elements from at least two, and preferably all three, factors be verified.
  - the ownership factors: Something the user has (ID-Cards, magnetic card, ...)
  - the knowledge factors: Something the user knows (e.g., a password, pass phrase,)
  - the inheritance factors: Something the user is or does (biometric identifiers).

# Authentication technologies

- Password cards (random numbers)
  - Cheap to produce
  - Easy to copy, Not scalable
- One-time passwords (at paper)
  - Cheap, better security
  - Not scalable
- PIN-Calculators
  - Relatively secure
  - You need 1 calculator per service, not scalable
- NB!: Swedish BankID
- ID-Cards (PKI)
  - Secure,
  - Complicate to adapt and high cost of infrastructure
- Mobile-ID (WPKI), RFID in mobile phones, etc...

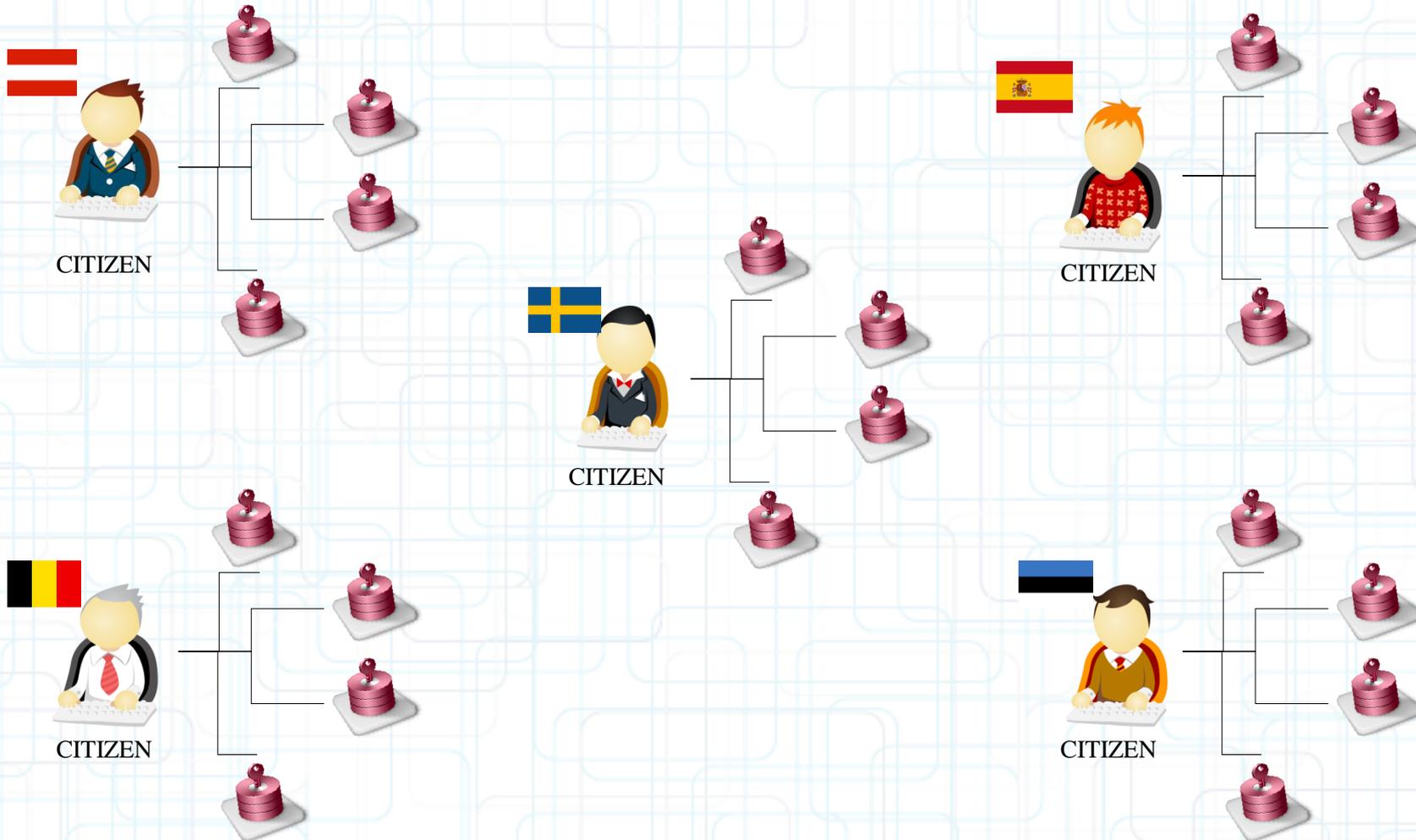
# Challenges of eID adaption

- Critical mass of users
- Technology adaption is key factor
  - Adaption in e-Services (financial and public sectors!)
  - Adaption among users:
    - Users take service security as granted – higher security is NOT sales argument
    - Barriers of installing and lack of card-readers (not in mobile-ID)
    - Usability of client-software
- Unsuccessful business models of certification authorities
- Infrastructure should be provided by public sectors

# STORK project

- **Secure Identity Across Borders Linked**
  - Establish a European eID interoperability Platform
  - Will allow citizens to establish new e-relations across borders, just by presenting their national eID
  - Pilot projects:
    - **Cross border authentication platform** - for electronic services
    - **Safer Chat** - To promote safe use of the Internet by children and young people
    - **Student Mobility** - To help people who want to study in different Member States
    - **Electronic Delivery** - To develop cross-border mechanisms for secure online delivery of documents
    - **Change of Address** - To assist people moving across EU borders
    - **European Commission Authentication Service – ECAS**

# All MS have their own eID infrastructure



# Pan European Proxy Service

