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Estonian PKI, ID-cards And Services Offered Using those Possibilities by Public and Private Sectors

Networked Business and Government –
Something Real for the Lisbon Strategy

Finland's EU Presidency Conference in
Helsinki 23-24 October, 2006
House of the Estates

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Ministry of Economic Affairs and
Communications
Estonia

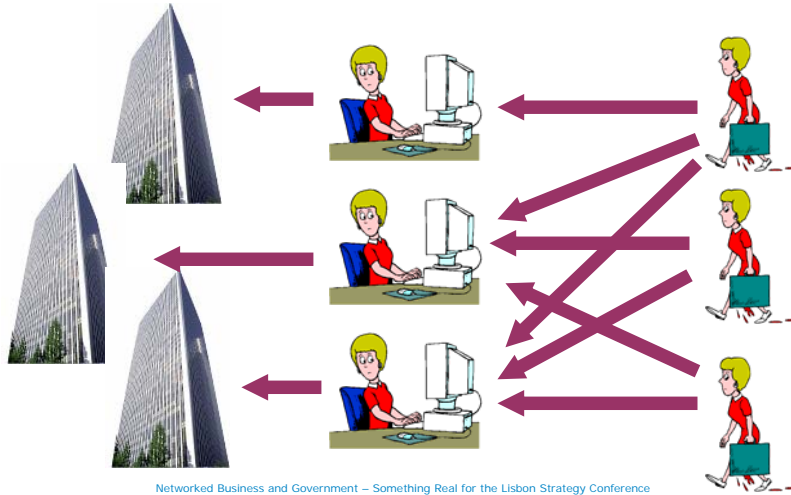


Idea from the beginning

3 slides from 2001

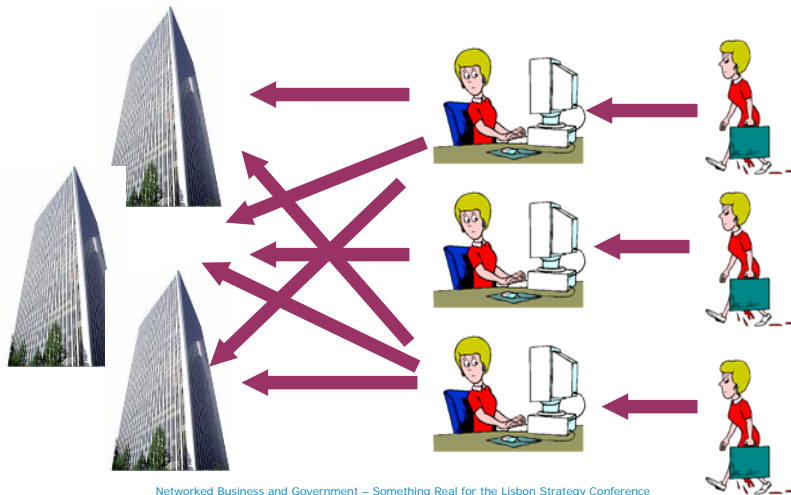
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Complexity transformations 1.



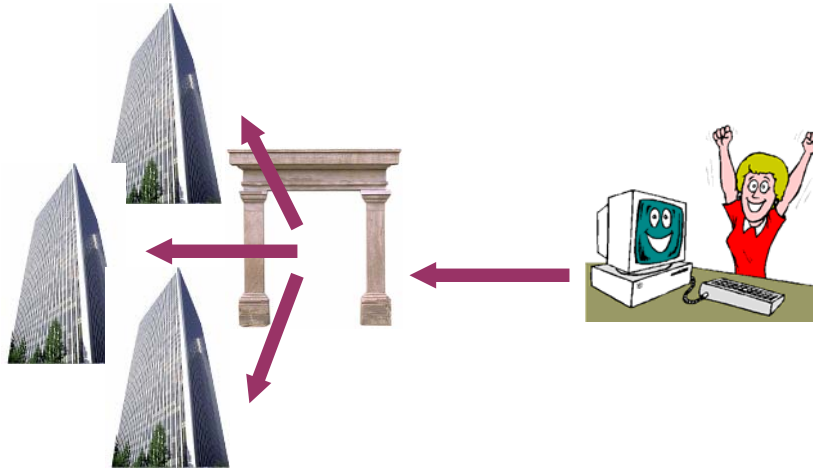
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Complexity transformations 2.



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Complexity transformations 3.



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Essential components needed for smooth electronic service provisioning

- Some common tools and principles for identification, authorisation and security.
- Some common understanding and practices for interoperability

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National chip-based Identity Card

Issuing authority:
Estonian Citizenship and
Migration Board
Service contractor:
TRÜB Switzerland

Start of issue: January 1, 2002

Conformance with:
ICAO Doc. 9303 part 3



Inside 16 Kb RSA crypto chip are :
2 private keys; authentication certificate;
digital signature certificate;
personal data file

- o 18 Dec 2001 – ID-card as a compulsory identity document
- o Today – more than 1 000 000 ID-cards have been issued
- o ID-card also carries also a certificate for allowing the use of digital signature and e-mail address Name.Family@eesti.ee
- o Field of usage is no limited and electronic features of ID-cards are used equally in public and private sector applications
- o Basic software needed for card usage is jointly developed by public and private sectors and made freely available to users.

For now ID card has been used for:

- signing electronic documents;
- accessing public e-services;
- participating in elections (e-voting);
- internet banking;
- service provisioning and customer contact handling by businesses;
- gaining access to computer systems for employees;
- as electronic ticket in public transport;
- access to virtual communication environment between parents, teachers and pupils (e-school);
- to open doors and to register visitors in security systems;
- ...

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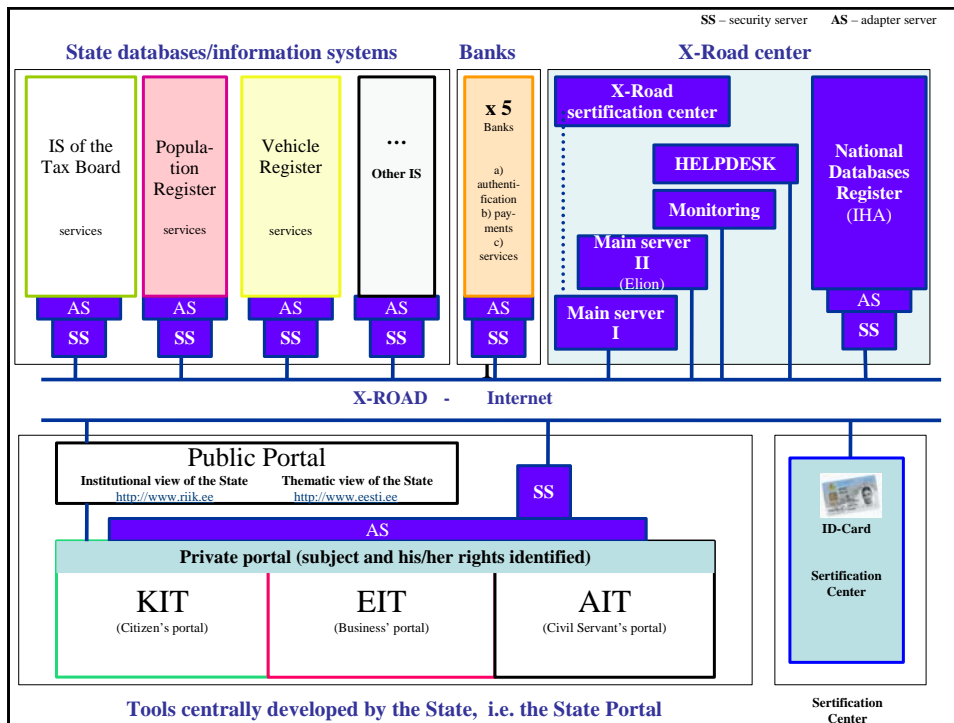
X-road

- In narrow sense – middleware solution for services connecting different databases and identified users.
- In wider sense – common de facto agreement for interoperable and secure services in (but not limited to) public sector.

By August 2006, the X-Road had:

- ~ 64 databases providing services;
- ~ 363 institutions and companies using the services;
- ~ 921 different services.

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X-road features:

- X-Road enables to do any common data processing operation. Proceeding from this principle, several extensions have been developed for the X-Road: writing operations to databases, transmission of huge data sets between information systems, successive search operations of data in different data sheets, possibility to provide services via web portals, etc.
- Today it takes only several days (in some cases only several hours) and limited budgets (from 1000 to 10000 EUR average) to develop new e-service in this environment.
- This year the X-Road environment was expanded to send all kinds of electronic documents in XML-format securely over the Internet.

Role of banks in X-road environment

- e-banking systems can be used also as gateways to X-road services;
- if e-service is charged, there is payment handling connection to banks;
- the banks themselves are users of data and e-services from X-road.

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Service example

Applying for child benefits.

- Responsibility of Ministry of Social Affairs
- Implemented (IT) by Ministry of Economic Affairs and Communications
- Decisions based on data from Ministry of Finance and Ministry of Interior
- 100% paperless e-service – same application used by self-service and desk-service

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Thank You!

and ...

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Three (3) main obstacles slowing Europe's competitiveness down

- Obstacle 1: ICT sector: European market for ICT services is still fragmented;
- Obstacle 2: Businesses (SME-s): Utilization of ICT-s for business success can be better;
- Obstacle 3: People (ageing population): European people are well educated on XX century, they often lack skills needed on XXI century.

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Three (3) concrete measures to boost Europe's competitiveness

- Measure 1: Break down internal borders for ICT services (keywords: roaming, ICT- interoperability, eID, secure pan-European e-services);
- Measure 2: Force businesses to information society by stick and carrot (actions for support but also some mandatory steps in style like e-invoicing with government in Denmark);
- Measure 3: Bring people actively to information society (good basis for great PPP initiative – for example to give ICT skills to 10 million adult people in Europe during 3 years).