



Interoperability and Infrastructure services in Estonia

Interoperability solutions for European Public Administrations (ISA)

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# Background

- 82 % householders have Internet
- 52% of population heavy users
- All public sector institutions have web pages
- High level of Internet-banking (98%)
- All citizens have ID-cards (smart cards)
- 88% tax declarations were filled online
- Estonia only binding Internet voting country
- Interoperability framework since 2004



#### Context

- Government program (political document)
- Information Society Strategy 2007-2013
- Implementation Plan: every year for two years
- Interoperability Framework
  - Main part: Strategical document
  - Parts: Architecture, Semantic Interoperability, Software, Interoperability of WWW, Security Framework, Interoperability of DMS
  - Guidelines



## tecnimap 2010 Common Infrastructure

- Broad-bone EEbone
- PKI Infrastructure
- Data Exchange Layer X-Road
- Citizen portal, personalized portal
- Document Exchange Centre
- Registry of Registries, Catalogue of Services
- Address data infrastructure
- Infrastructure for spatial information



#### Broad-bone EEbone

- Eebone public broadband network for state and local government, financed centrally
- Every public agency has right (no obligation) to use Eebone free of charge
- Clients pay only for access to the backbone
- End-users must look after the security of their local network themselves.
- Most governmental and local institutions are using EEbone.



#### PKI Infrastructure

- IDcard(2002), mobileID(2007), digital-ID(2010)
- IDcard is mandatory for citizens and for aliens
- Examples: logging, digital signature (all agencies accepts), @eesti.ee address, public sector correspondence Internet banking, Internet voting, loyalty card, ID-ticketing, ...
- We accepts users with Portuguese, Belgian and Finnish ID-card and Lithuanian Mobile-ID now





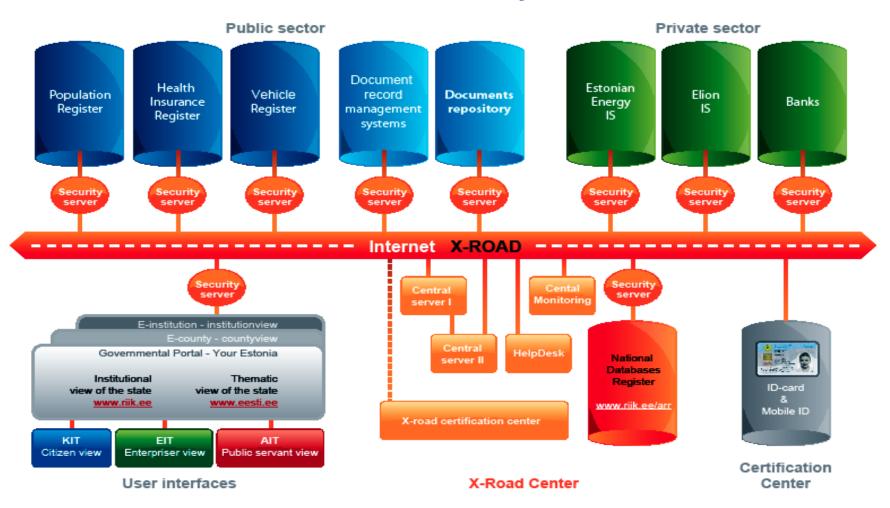
### SOA based X-Road

- SOA based system that...
  - allows effortless access to the data in registries
  - without compromising the security of the data and
  - with minimal impact to the existing systems
  - with using web services as underlying technology
  - which design is driven by security considerations
- Registries (143) offer online WSDL services (over 2000) to the 60000 government and private organizations (87000000 times in year)
- X-Road covers EU GPSM model requirements



#### X-Road architecture

#### **Estonian information system**





#### **Personal Portal**

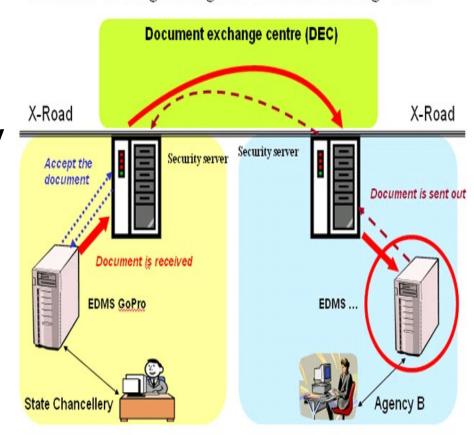
- Public part: rights and obligations of citizens
- Secure e-mail @eesti.ee
- Online services from registries over X-Road
- Notification services
- Personal Document Management system (prefilled forms, case tracing)
- Personal area for signing and exchange signed documents



# Document Exchange

- No more ordinary post
- No more scanners
- Cases are transferred without additional entry
- All EDMS have an interface to DEC
- Transport via X-Road

Document exchange through the document exchange centre







# Catalogue of Services

- Administration System of State Information Systems (RIHA)
- Data about:registries, services, service consumers, semantic assets
- Workflow for assessment of registries
- Joining to X-Road
- Documentation of registries
- Description of services (SLA, WASDL)



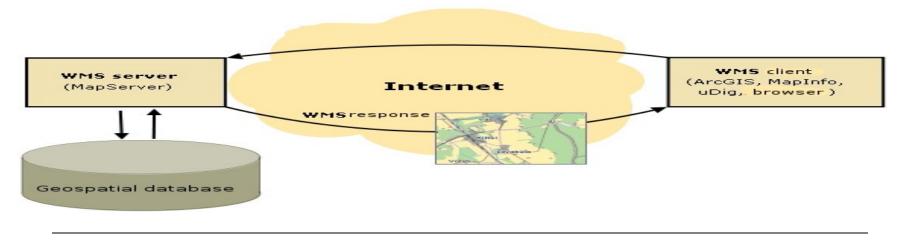
#### Address Data

- We have common address data Infrastructure: addresses are entered once, addresses are in all registries in the same form, different forms are used in search
- An address service is any activity associated with address details
- Address services: X-Road services
- X-Road services are used for the normalisation of addresses



## **GIS** Infrastructure

- Digital maps developed by the public sector are accessible and usable for all authorized users and for other information systems on the bases on open GIS standards.
- It is possible to use geoinformation data sources to provide new e-services.





#### End

# Thank you for your attention!

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