



# **Digital Archiving in the eGovernment Framework in Estonia**

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# Today's topics



- E-government in Estonia
- E-government infrastructure
- E-government and archives

# Demographic facts about Estonia



- Population: 1.3 million
  - CH: 7.9 million
- Area: 45,000 km<sup>2</sup>
  - CH: 41,300 km<sup>2</sup>
- Population density: 30 persons/km<sup>2</sup>
  - comparable to Kanton Graubünden
- 226 municipalities

# Need for e-government



- In order to offer public services reasonably close to everyone and of sufficient quality, every second person should be a public servant..
- The e-Stonia solution
  - Most frequently used services are also available as (centralised) e-services
  - Minimise the need for face-to-face contact
  - Local governments still serve as local access points for services but can have fewer and more qualified employees



# **The e-Government Infrastructure**

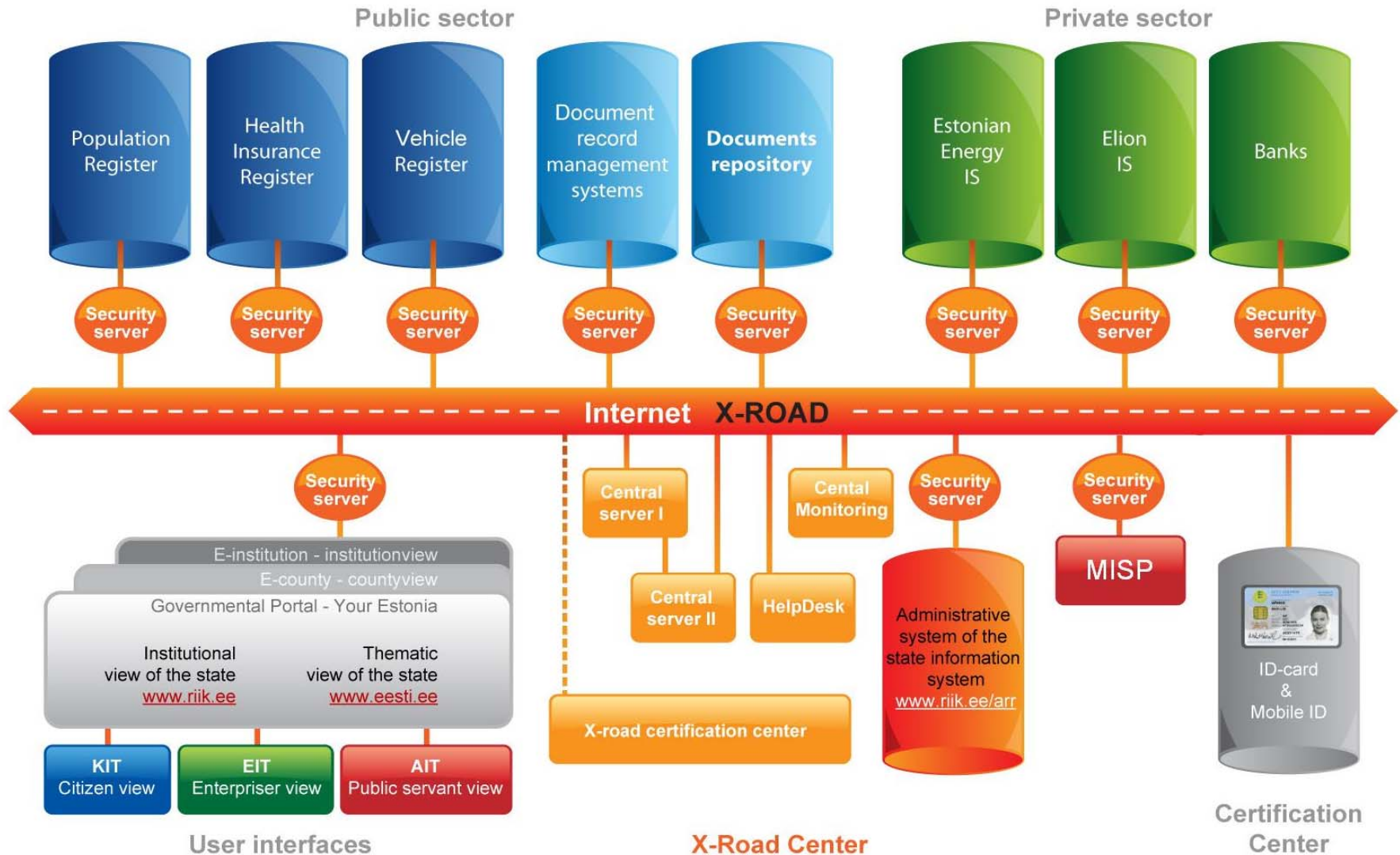
# National ID card

- Every resident older than 15 is required to have an ID card which includes means for electronic authentication and digital signing



# The X-Road Infrastructure

## Estonian information system



# State Information Administration System



- Central registry for ..
  - .. all public sector information systems, including EDRM systems
  - .. data gathered into those systems
  - .. services offered by those systems
- Used to
  - Maintain the „big picture“ – who is responsible for public information
  - Fulfil the Estonian data duplication avoidance principle – citizens should not be asked the same information twice!



List of services

A A A Graphics Text EST ENG RUS Content map Help **Exit**

**EESTI**

Front page **For a citizen** Entrepreneur For an official

For a citizen Kuldar Aas (38008156528) Tuesday, 13. September 2011 14:29:12, 37. week

Role: Kuldar Aas (38008156528)

Services History of used services Settings

Enter keyword --- All topics --- --- All databases ---

**Select the service:**

- ⊕ Agriculture
- ⊕ Benefits and social assistance
- ⊕ Currency and Ownership
- ⊕ Education and science
- ⊕ Environment
- ⊕ Family
- ⊕ Health care
- ⊕ Housing
- ⊕ National defence
- ⊕ Safety and security
- ⊕ The state and the citizen
- ⊕ Traffic
- ⊕ Work and Business

Information

Topics

- Housing
- Education and science
- Environment
- The state and the citizen
- Culture and hobbies
- Traffic
- Family
- Money and ownership
- Travelling
- National defence
- Benefits and social assistance
- Consumer Protection
- Health care
- Health protection
- Work and Business
- Foreigners in Estonia and Estonians abroad

State

Personal links

# Statistics 2010



- ID-card and digital signature
  - 1,1 million cards issued
  - 400,000 persons have used their digital signature
- X-Road and eesti.ee
  - 150 databases connected to the X-Road service
  - About 1,500 services available, many of those being complex services using data from multiple databases
  - Services used 226 million times
  - 9,900 visits in eesti.ee a day

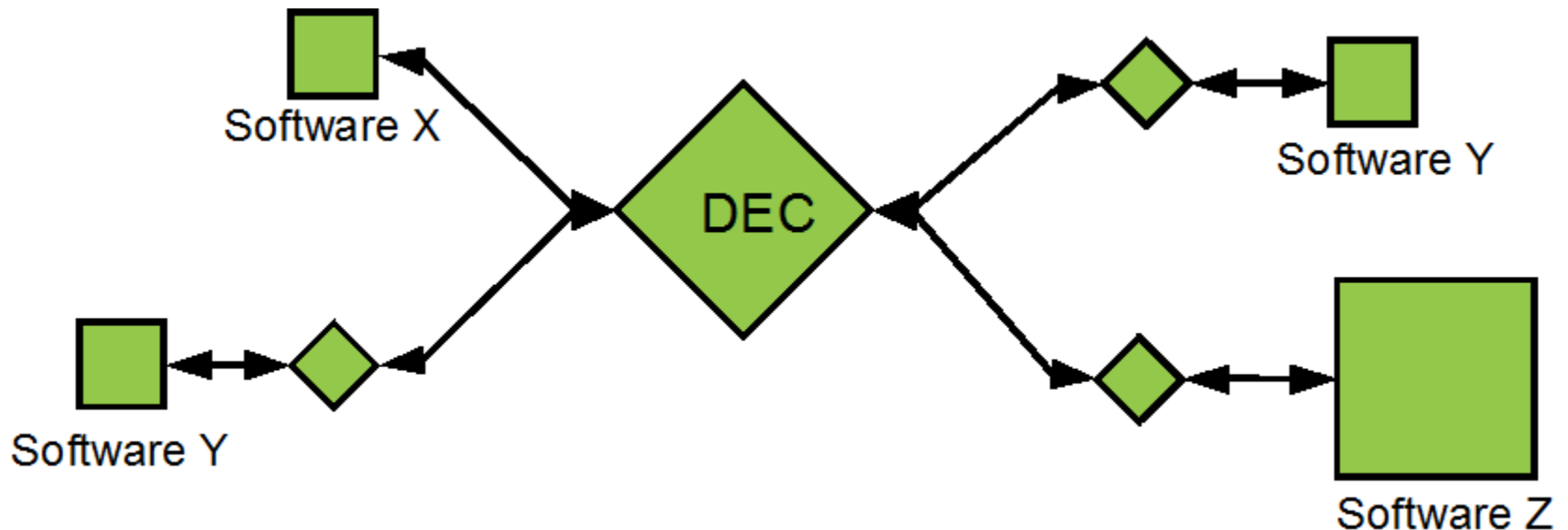
# Success stories



- E-Tax Board
  - Used by 92% of population for income tax declaration
  - takes about 10 minutes
  - tax returned in 5 days
- E-business
  - Register your company in less than an hour!
- E-health
  - **Secure** system to store the patients' health data and make it available to **authorised** doctors
- E-school, e-voting, online applications, ...

# DEC – Document Exchange Centre

- DEC is an information system that provides a central document exchange service for EDRM systems and other information systems dealing with documents



# UAM – Universal Archiving Module



- Software tool developed by the National Archives of Estonia to support agencies in:
  - Creating archival description and technical metadata
  - Validating and migrating computer files
  - Creating the XML transfer package (SIP)
  - Online transfer to the National Archives using DEC / X-Road

# Ideal service workflow



- Citizen initiates a service with a request in eesti.ee, in the agency or municipality
- Agencies process the service digitally using their EDRMS or other relevant systems, reusing as much as possible information already available, and exchange it via DEC
- The result is returned to the user either digitally (e-mail, eesti.ee) or if really necessary, on paper in the agency or municipality

# Problems behind the facade

- While central e-services are quite good, the efficiency of doing work electronically could be better and more widespread across the whole public sector
  - Many agencies still lack knowledge and competence to analyse and apply IT solutions
    - Especially smaller agencies and municipalities are having it hard to find competent IT staff or partners
  - Lack of interfaces (technical interoperability) between central and agency systems
  - Lack of trust in IT solutions
    - „I'll print the record just to be on the safe side“

# Next actions



- More publicity of basic principles and methods!
- Hands-on training of IT tools
- Facilitate collaboration and best-practice sharing
  - Proposed mentoring environment
- Sharing resources among smaller agencies and municipalities
- More attention towards usability and simplicity when developing new solutions





# **E-government and the archives**

# Changing scope of the archives



- Due to the fragile nature of digital information action is needed in the early phases of the lifecycle
- Archivists as crucial partners in e-government activities
  - Participation in e-government and interoperability workgroups
  - Participation in the development of key infrastructure components
- Archivists as teachers and consultants
- Archives as part of public service provision

# Change in legislation



- New archival law and guidelines in 2012
  - Shorter transfer periods – 10 years instead of 20
  - Shorter transfer intervals – 3 to 5 years instead 5 to 10 years
- Official digital deposit service for records with long-term retention periods
- Updates in appraisal and acquisition principles
- Regulation of hybrid transfers
  - Incl. a strict „no hybrid files“ policy

# Changes in appraisal and acquisition



- Digital information is often duplicated in different forms and locations
  - Duplication on analogue and digital records as well as agency databases
  - Duplication between agency records management and central information systems
  - Who is the owner of information?
- Appraisal and acquisition principles are being modified to take into account multiple copies and usability aspects

# Changes in the transfer process



- The number of records created in agencies is growing
  - How to make sure that the (more frequent!) transfers still provide enough control and quality?
- Estonian approach
  - Reuse of records management metadata
  - Automation of quality control processes, including the provision of necessary tools for agencies (UAM)
  - Participation in semantic interoperability initiatives

# Need for competent employees!



- To achieve all of this we need:
  - Additional lecturers, consultants, IT analysts and developers
  - Who have a wide area of knowledge (e.g., appraisal, classification, process analysis, digitisation, digital preservation techniques, etc.)
- Rapid change of IT platforms – what you learn today is obsolete tomorrow

# How to achieve the impossible?

- Make your problem public
  - Much effort into „educating“ responsible e-government officials about archival principles
- Maintain your contacts
  - Selected experts from different fields meet regularly and discuss archival issues
  - Need for archival participation in central projects has decreased
- Let others do the work
  - Training is important but it is impossible to reach everyone
  - Use of selected agency records managers to teach digital preservation principles enriched with their own practical experiences

# New directions in archival education



- Toolset vs mind-set
  - Until recently archival education was about the toolset: what tools to use in certain situations
  - Archivists and records managers today need to apply the appropriate mind-set of key principles and methods in a constantly changing world of tools
- More emphasis on collaboration
  - There is a gap between the principles of IT and archival science
  - Need for common training and workshops to facilitate knowledge sharing between these communities



# Summary



- Estonia has come a long way to set up necessary infrastructure and principles for effective e-government
- To harness its full potential more attention needs to be applied on wide-scale implementation
- Archives must have the motivation and energy to participate in e-government initiatives, without that they will struggle to keep up with public demand
- Key factor in achieving this is the growth of competencies both inside and outside the archives



**Thank you for your attention!**