E-society as foundation for personalised medicine

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Estonian E-services

• 99% of bank transfers are performed electronically
• 94% of income tax declarations made via the e-Tax Board
• 30.5% of votes were cast over the internet on 2015
• 62% persons have completed the e-census 2012

• 2000: Launch of e-Tax Board
• 2000: Launch of m-Parking
• 2002: Introduction of national electronic ID-Card
• 2005: i-Voting was introduced
• 2007: Introduction of m-ID
• 2007: Launch of e-Police system
• 2008: Launch of e-Health system
• 2010: Launch of e-Prescription
• 2012: e-census
• 2014: e-residency
Estonian information system

Public sector
- Population Register
- Health Insurance Register
- Vehicle Register
- Document record management systems
- Documents repository

Private sector
- Energy
- Telecom
- Banks

User interfaces
- E-institution - institution view
- E-county - county view
- Governmental Portal - Your Estonia
- State portal www.ee.lee
- KIT Citizen view
- EIT Enterprise view
- AIT Public servant view

X-Road Center
- Central server I
- Central server II
- HelpDesk
- Central monitoring

Certification Center
- Administrative system of the state information system
  https://sha.ee/eid
- ID-card & Mobile ID
The Estonian ID card

- The ID card is a **mandatory** ID document for all Estonian residents from the age of 15
  - Estonia has been issuing electronic ID cards from January 1st 2002
- Enables secure digital authentication and signing
- A digital signature has the same legal consequences as a hand-written signature
- Does not have any additional information
  - No bank account, no health information etc.
- Active cards: **1 258 358** (28.10.2015)
  - Estonian Population 1 286 540 (census 01.01.2013)
National Patient Portal

Genomic information
To be added…
Digital Decision Support Pilot

Feasibility study for the implementation of decision support systems in personalized medicine.
e-Residency

• The Republic of Estonia is the first country to offer e-Residency — a transnational digital identity available to anyone in the world interested in administering a location-independent business online

  – https://e-estonia.com/e-residents/about/
Estonia as e-society pilot

- 98% of population has government-issued digital identity
  - Fast growing e-residency
- One universal national identification code
  - Registries and databases use same code to uniquely identify persons
- Simple and secure national framework X-road for data exchange
- People have and expect mature e-services
  - Healthcare technology and services one of three priority areas
- High public acceptance and trust
  - No public incidents or misuses (13 years)
President Barack Obama
03.09.14 in Tallinn:

• „… With their digital IDs, Estonians can use their smart phones to get just about anything done online — from their children’s grades to their health records. I should have called the Estonians when we were setting up our health care website“
Thank you!

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