



# eHealth in Estonia We just did IT

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*etervis2025.ee*



# Yes, we just did IT

... but IT is only the beginning

A map of Europe with Estonia highlighted in green. The map is in shades of gray, and the top right corner is decorated with blue snowflake patterns.

## ESTONIA

**Population:** 1.3 Million

**Size:** 45 227 km<sup>2</sup>

**Capital:** Tallinn

**Language:** Estonian

**Member of EU**

**Currency:** Euro

**GDP:** 17 BEUR

**e-estonia.com**  
The digital society







# 5 key features of Estonian healthcare

## **Earmarked social insurance tax**

13% flat rate top-up to all salaries

## **State responsibility for insurance coverage**

Single public purchaser of services  
(Health Insurance Fund)

## **+ Decentralized provider network**

private operators governed mostly by  
public entities

## **Strong primary care**

Universal free access  
>50% of outpatient contacts

## **One of the most cost-effective health care systems (perhaps)**

3-time champion of “bang-for-the-buck”  
prize by Health Consumer Powerhouse  
(SWE)

# eHealth achievements so far

- 100+% residents have data in national e-health database
- 99% of providers use EMRs (=capture data electronically)
- 97% of prescriptions are digital
  - 85% penetration was achieved just in 9 months
  - <1% citizens are dissatisfied with digital prescription

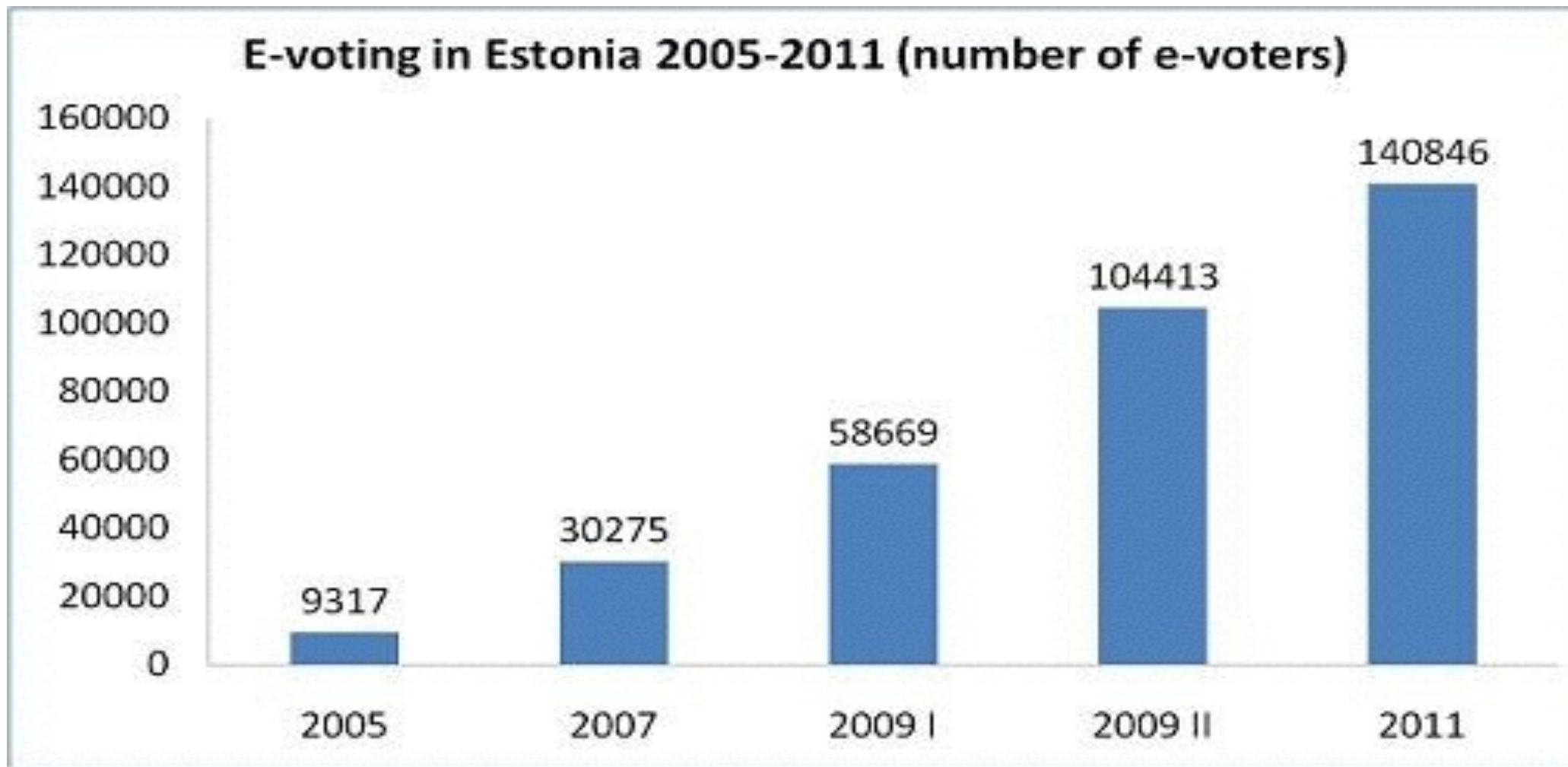
# ID-Card

- 2002 - introduction of national electronic ID-Card
- More than 90% of the population has one
- Compulsory for all residents

# E-services



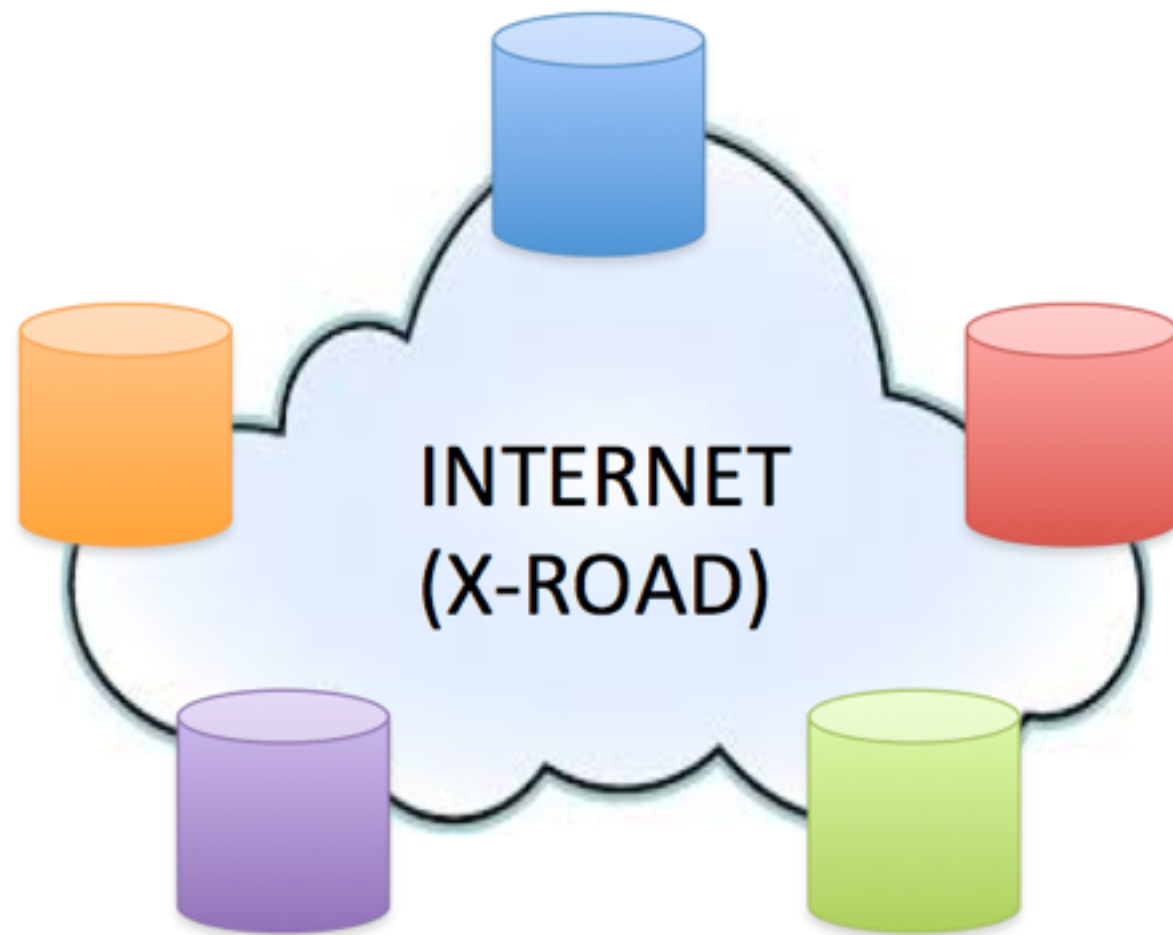
# + E-solutions are trusted ... as they are trustworthy



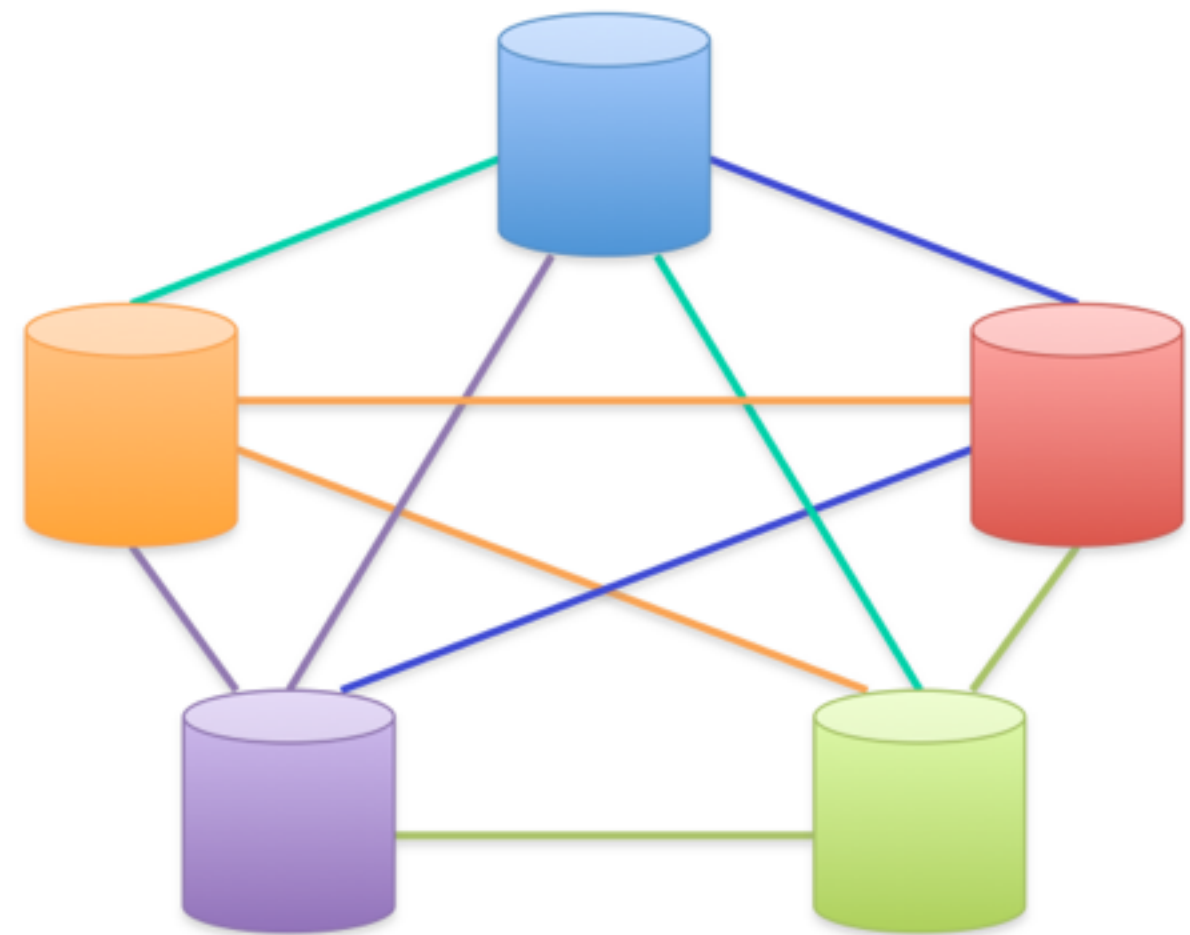
2005 – local elections  
2007 – parliamentary elections  
2009 I – local elections  
2009 II – European Parliament elections  
2011 – parliamentary elections



# How to resolve – secure data exchange?



**Multilateral solution**

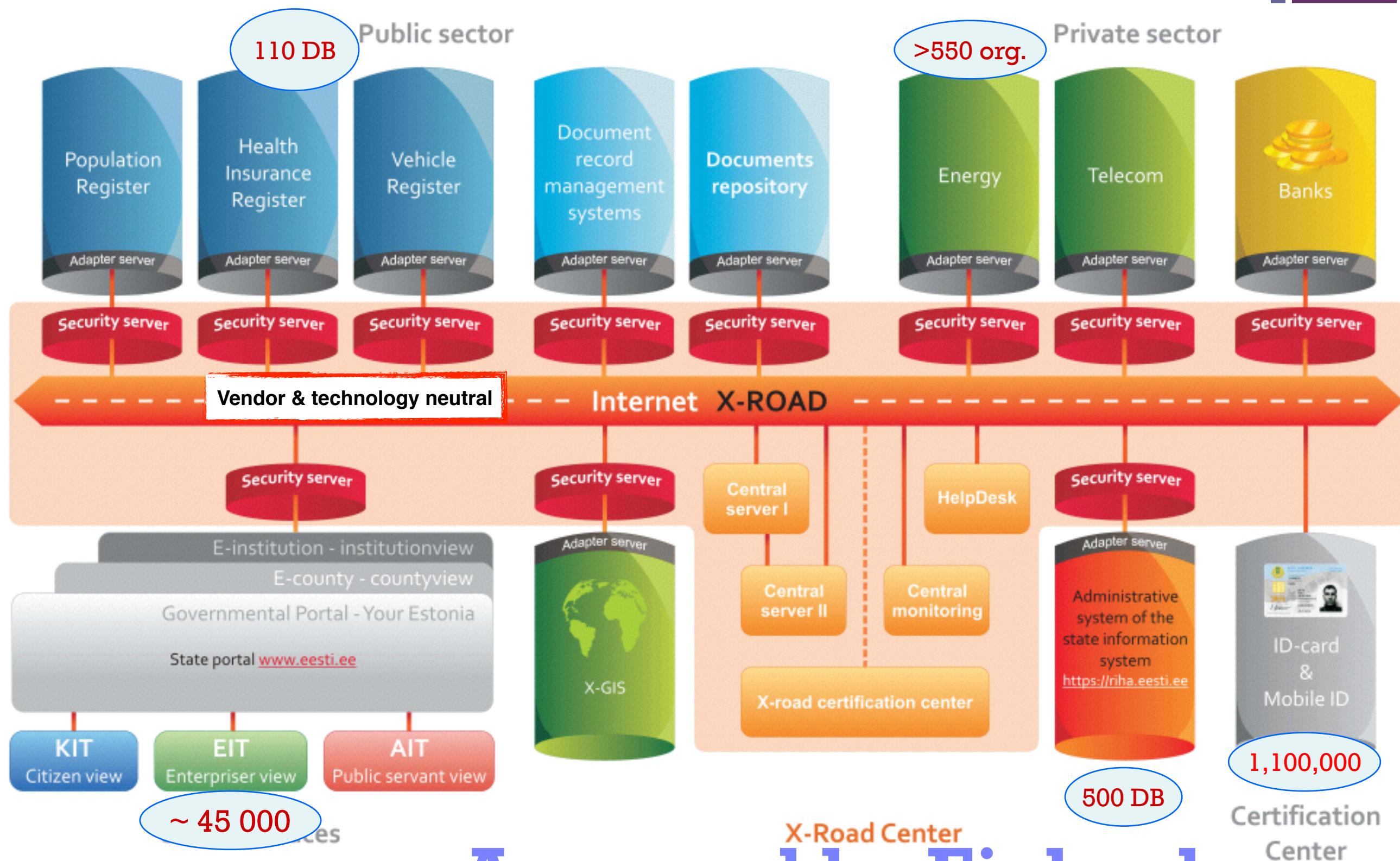
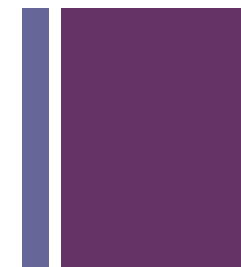


**Bilateral solutions**



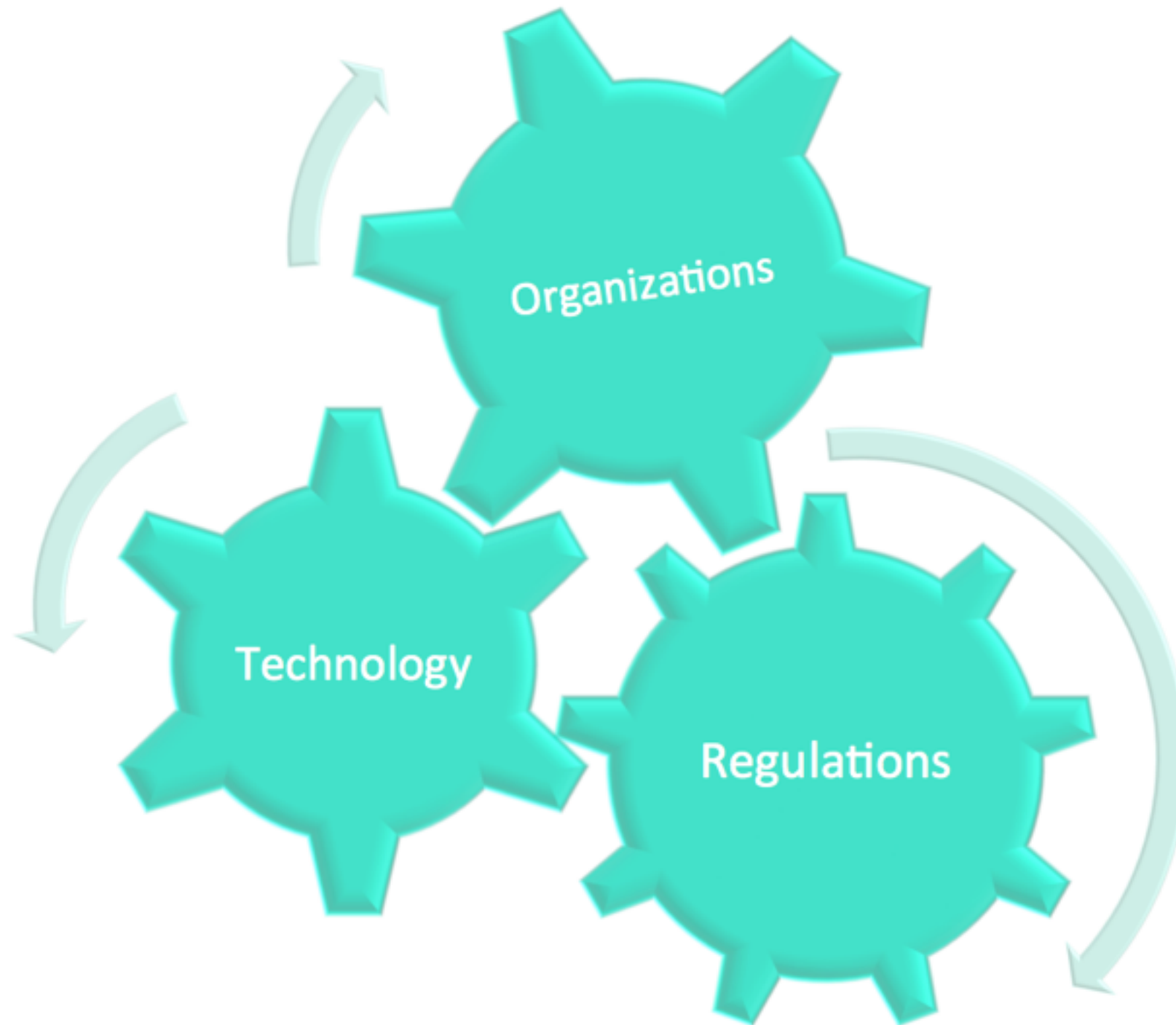


# Architecture of the e-society



Approved by Finland

# X-Road is not only technology



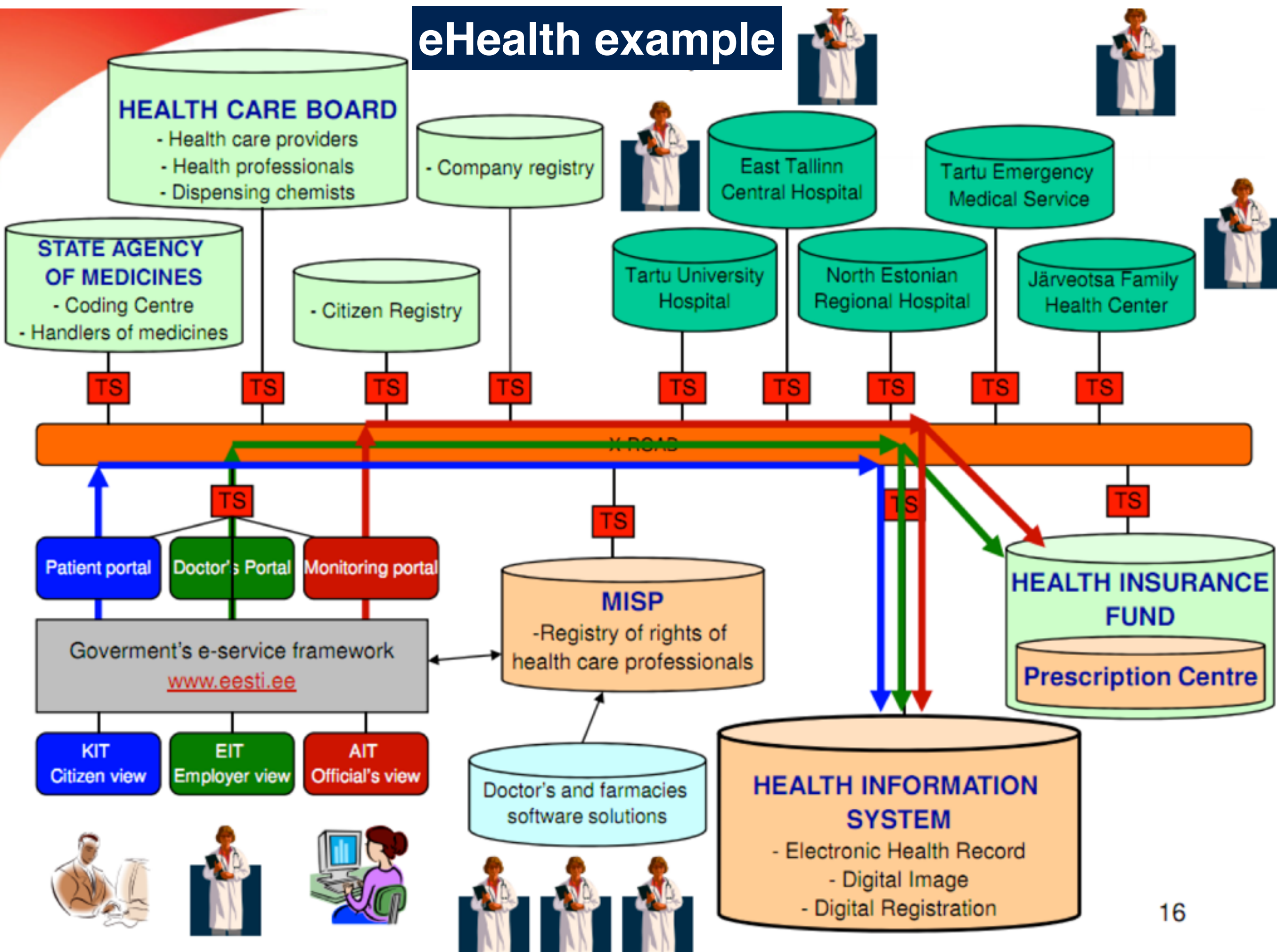


# Today's Situation

- X-Road launched in Estonia **in 2002**
- More than **~200 databases** are offering services via X-Road (producer certificates)
- More than **3000 services** are available
- More than **~1000 organisations** are using X-Road daily (consumer certificates)
- More than **50% of citizens** are using X-Road via Citizen portal
- **Most of companies (~160 000)** are used X-Road via Entrepreneur portal



# eHealth example





# eHealth lessons for future

- Usability
- Process innovation
- Financial incentives for change management
- Strengthening central coordination and execution role

What next?



e-Receipt

Official e-mail = physical address

Virtual Resident (e-Estonian)

Cross Border e-Services

Data Embassy



EstWin:  
2017: 100 MB/s internet  
in every household

# Smart specialisation areas for Estonia

- IT across sectors (eSociety)
- E-health
- Biotechnology
- New material technologies
- Intelligent construction





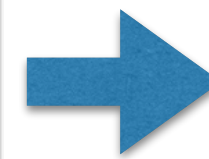
How can we benefit from  
our position of strength?

Estonia - integrated health data  
This time it will be personal ...

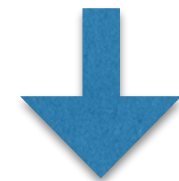
# New national e-health strategy 2020

- E-health support for **existing and known challenges** in health care
- E-health as a **transformative engine** for renewed more participatory, preventive, pre-emptive and personalised care
- Building on existing strength
  - universal digital data capture in health care
  - robust secure data exchange capacity and culture
  - Database of 50 000 gene data donors

- 1. Patient-centered and precision medicine driven service and organisation development**
- 2. Efficiency improvement from service integration within and between health care and social care provider networks**
- 3. Increasing the value of health and social care by performance and quality targets implementation**
- 4. Improving access to health and social care services through intelligent telecare solutions**



Critical  
functionalities



Usage  
performance  
targets

# Strategic development initiatives on e-health

## 1. Personalised medicine pilot programme

- clinical application of personalised medicine concept
- big data analytics with decision support from integration of dynamic longitudinal health data & genome bank data
- business development from personalised medicine platform: R&D platform, clinical trials, technology solutions, service models, strategic consultancy

## 2. Quality driven healthcare development programme

- quality management framework
- business intelligence

## 3. Regional big data and business intelligence centre

- decision by National eGovernance Council

# Acknowledgements

- [e-estonia.com](http://e-estonia.com)
- Estonian E-health Foundation
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