eHealth in Estonia

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E-TERVIS
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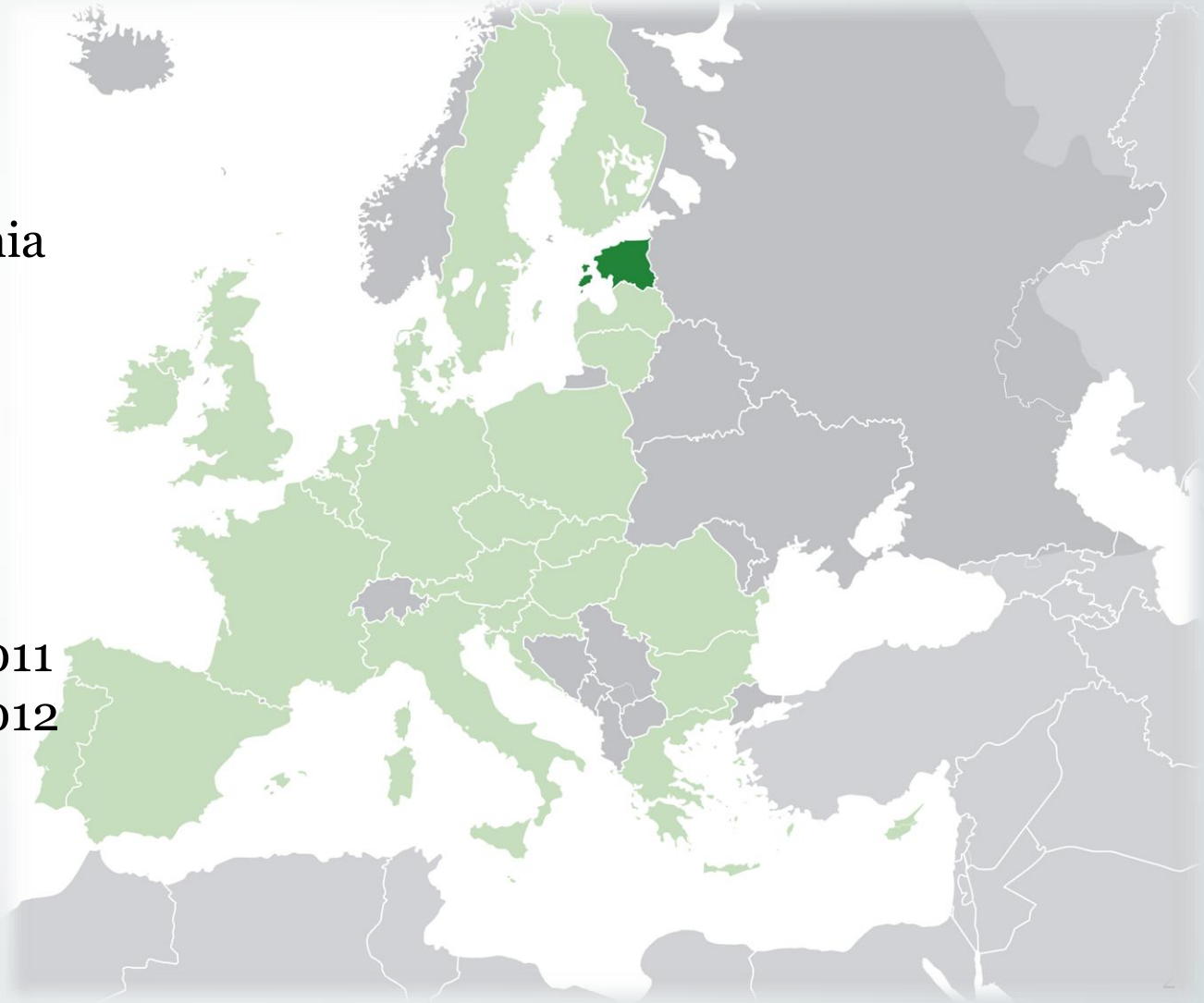
Facts about Estonia

Estonia

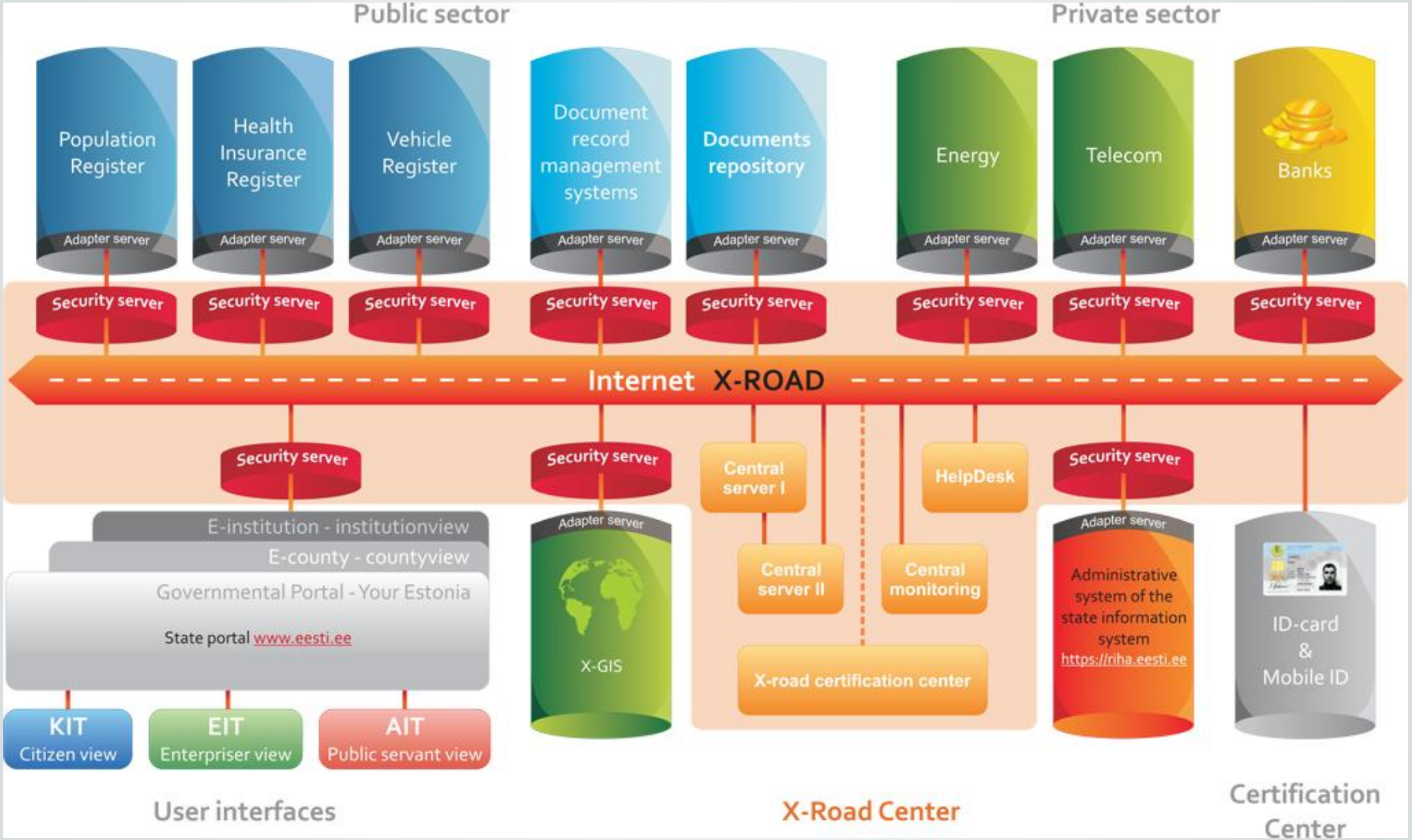
45 227 km²	area of Estonia
1.29 mio	inhabitants
60	hospitals
464	GPs

Healthcare expenditures

5.9%	from GDP 2011
6.3%	from GDP 2012



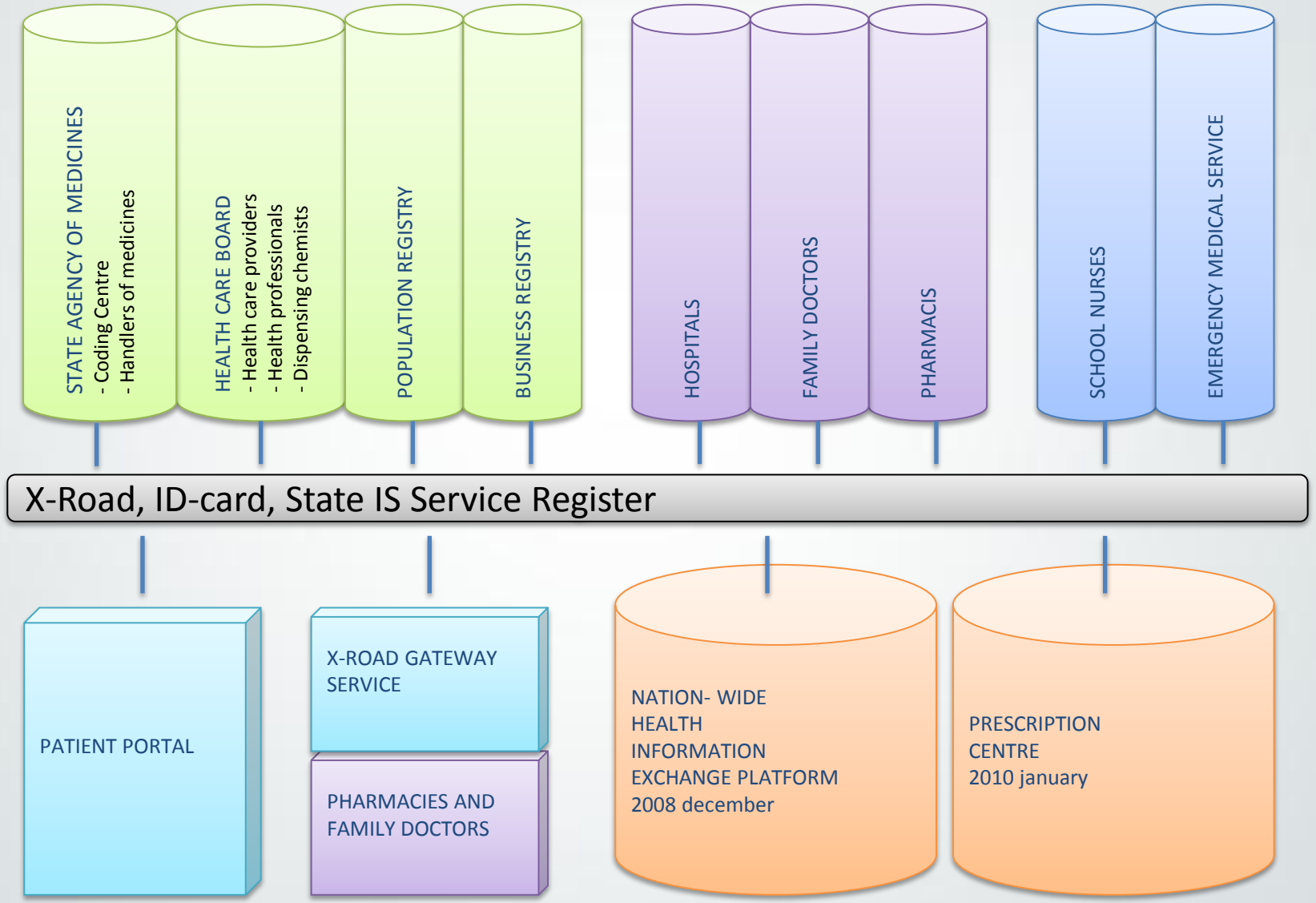
Estonian information system platform



eHealth systems in Estonia

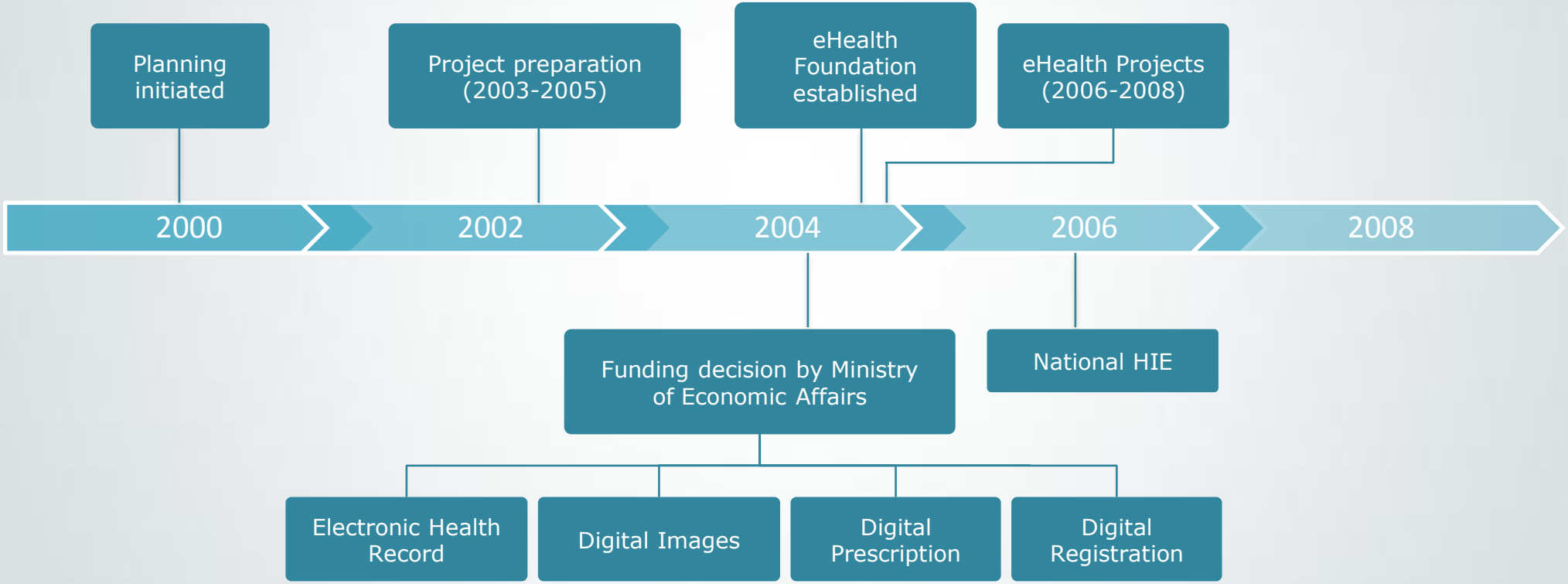
- Health Information System
- Digital Prescription
- Health Insurance Information System
- Administrative and Product Registries
- Public Health and Quality Registries
- Telemedicine Tools used in health sector
- Service providers information systems

Architecture



Security and authentication

HIE platform history



Functionalities of health information system:

- Provide services to health care providers to simplify their every day work
- Provide health information to patients
- Central secure storage of health data

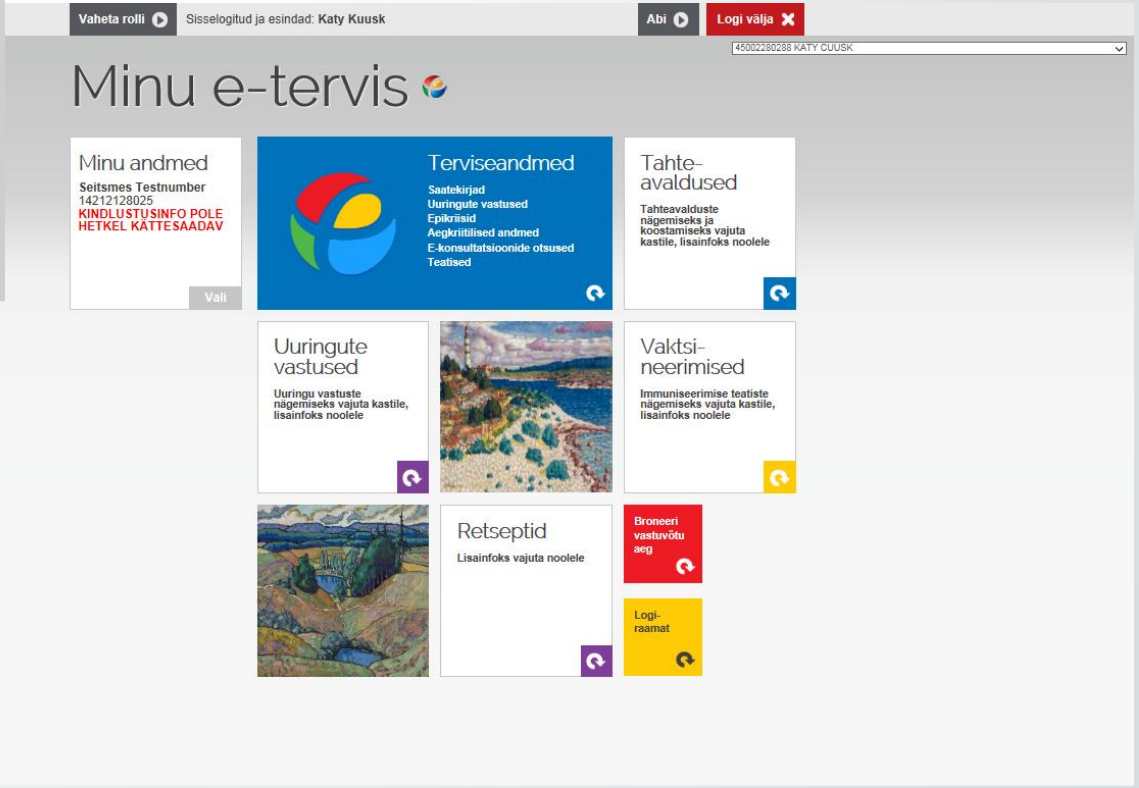
eHealth in numbers

ePrescription covers 97% of issued prescriptions.

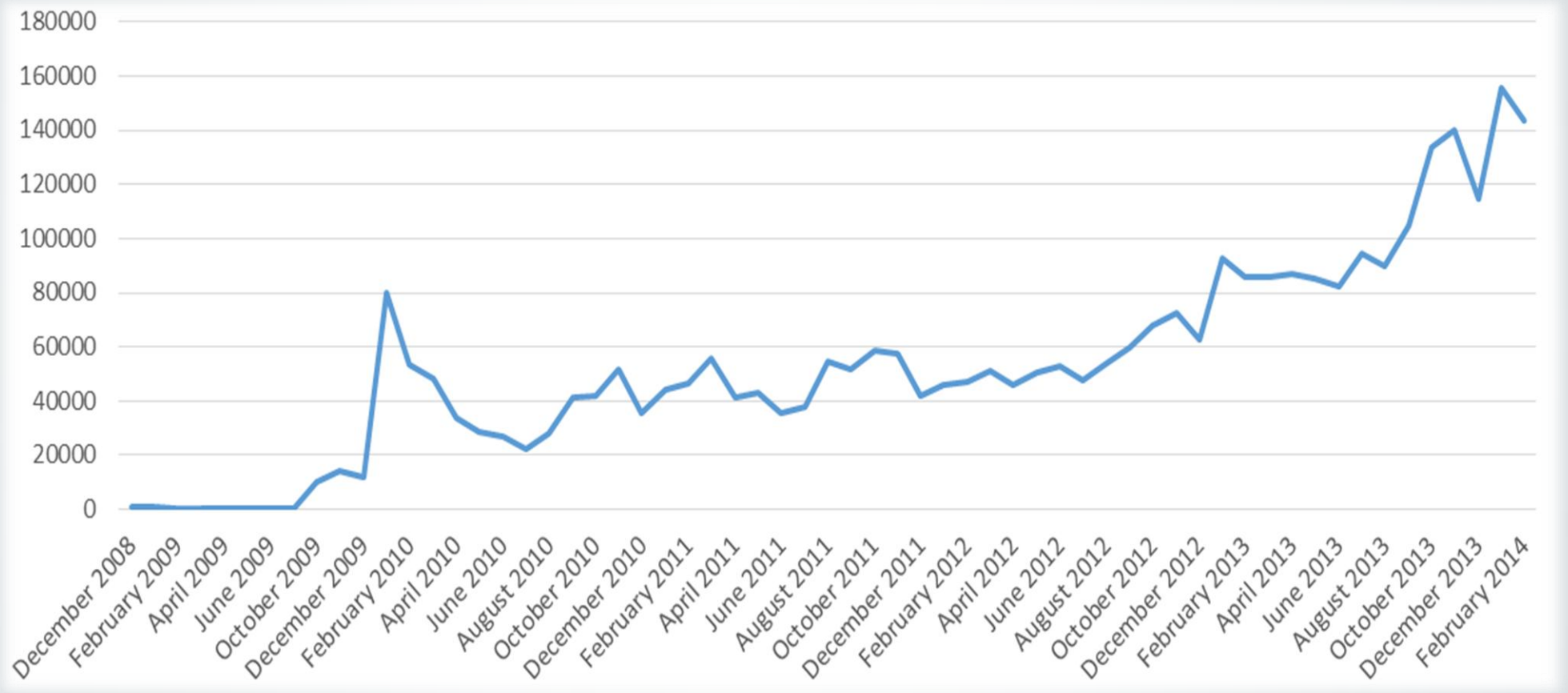
1.2 mio person have documents (93% of population) in central system

~ 97% of stationary case summaries have sent to the central DB

New Patient Portal released 01.07.2013



Number of patient queries



Possibilities for patient

In patient portal:

- View and print out medical documents sent by health care providers to the central system;
- View information about their general practitioners and validity of health insurance;
- Make informed consents;
- Provide general information about themselves for health care providers;
- Give authorisations for trustees;
- Mask data for trustees and health care providers;
- Monitor logs

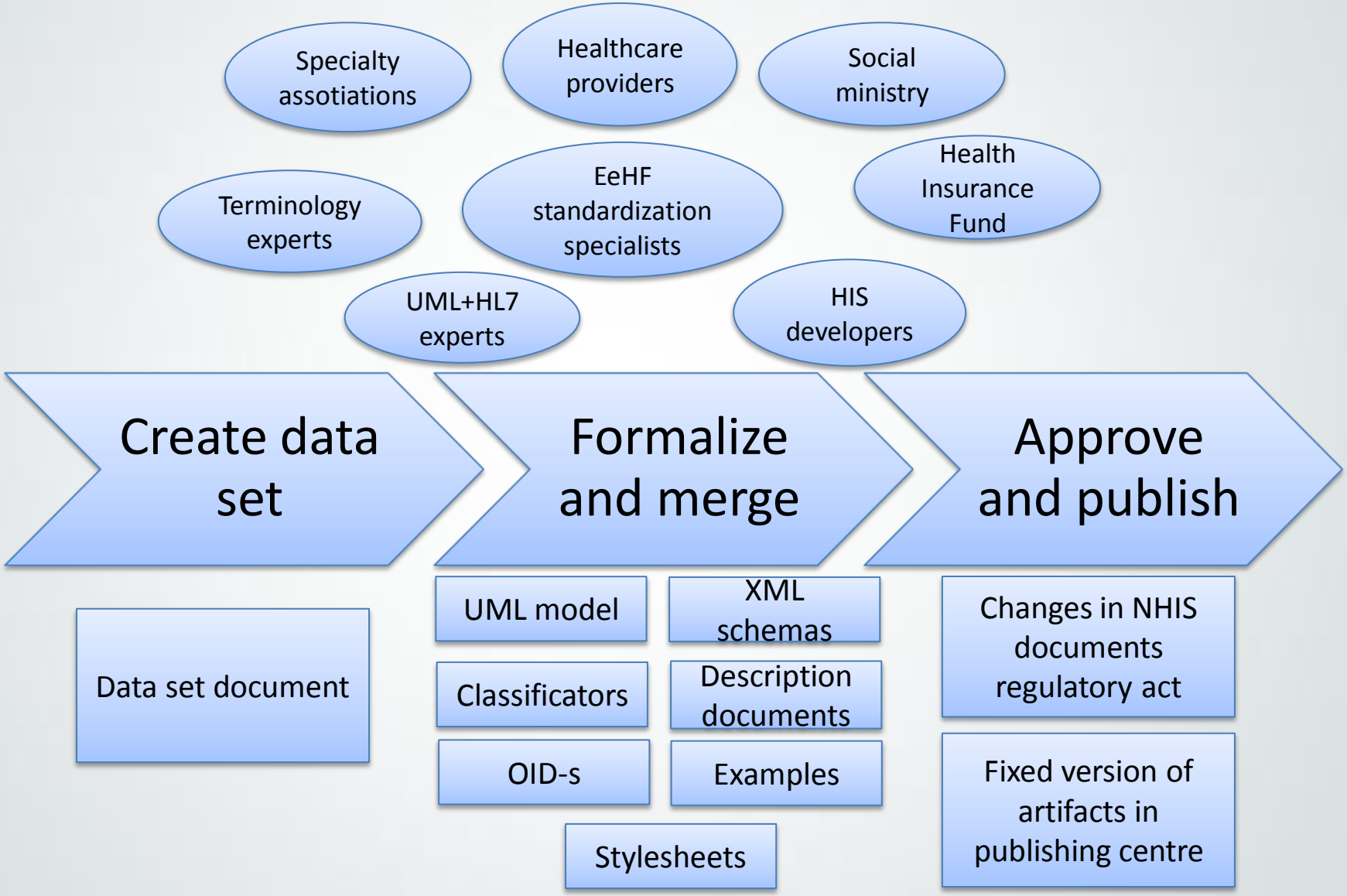
Get useful information and read explanations

STANDARDS

Standards

- HL7 and DICOM (Picture Archive)
- International classification: ICD-10, LOINC, NCSP, ATC
- Estonian eHealth's OID registry
- Local eHealth classificators
  - Published in publishing centre
  - Classificators are regulated by government act

Standardization process



Major architectural decisions of HIS

- Integration through Central system (Opt-out)
- HL7 v3 (extended)
- Documents are kept in XML format (HL7 CDA)
- All structured data fields have OID-s
- Only final versions of clinical documents are sent into central system
- Reuse of national infrastructure
  - ID card for authentication and digital signature
  - Xroad for secure communication

Benefits of eHealth Systems

- Greater efficiency
- Lower costs
- Quality of care
- Patient awareness about their health

LEARNING POINTS

- Resources were planned only for central development.
- Usability. Developing process has to include medical competence – users
- Data quality is important
  - Complete and quality data give value.
- Balance between security and usability
  - PIN for every document …

Thank you!