




Estonia

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Brussels - 3rd of June 2022

An aerial photograph of a misty, swampy landscape. A long, straight wooden walkway or boardwalk stretches from the foreground towards the background, crossing over a body of water. A person is walking on the boardwalk. The landscape is covered in dense, low-lying vegetation and scattered trees. The background is shrouded in a thick mist or fog, creating a serene and atmospheric scene.

enter e-estonia

the coolest digital society

x-road

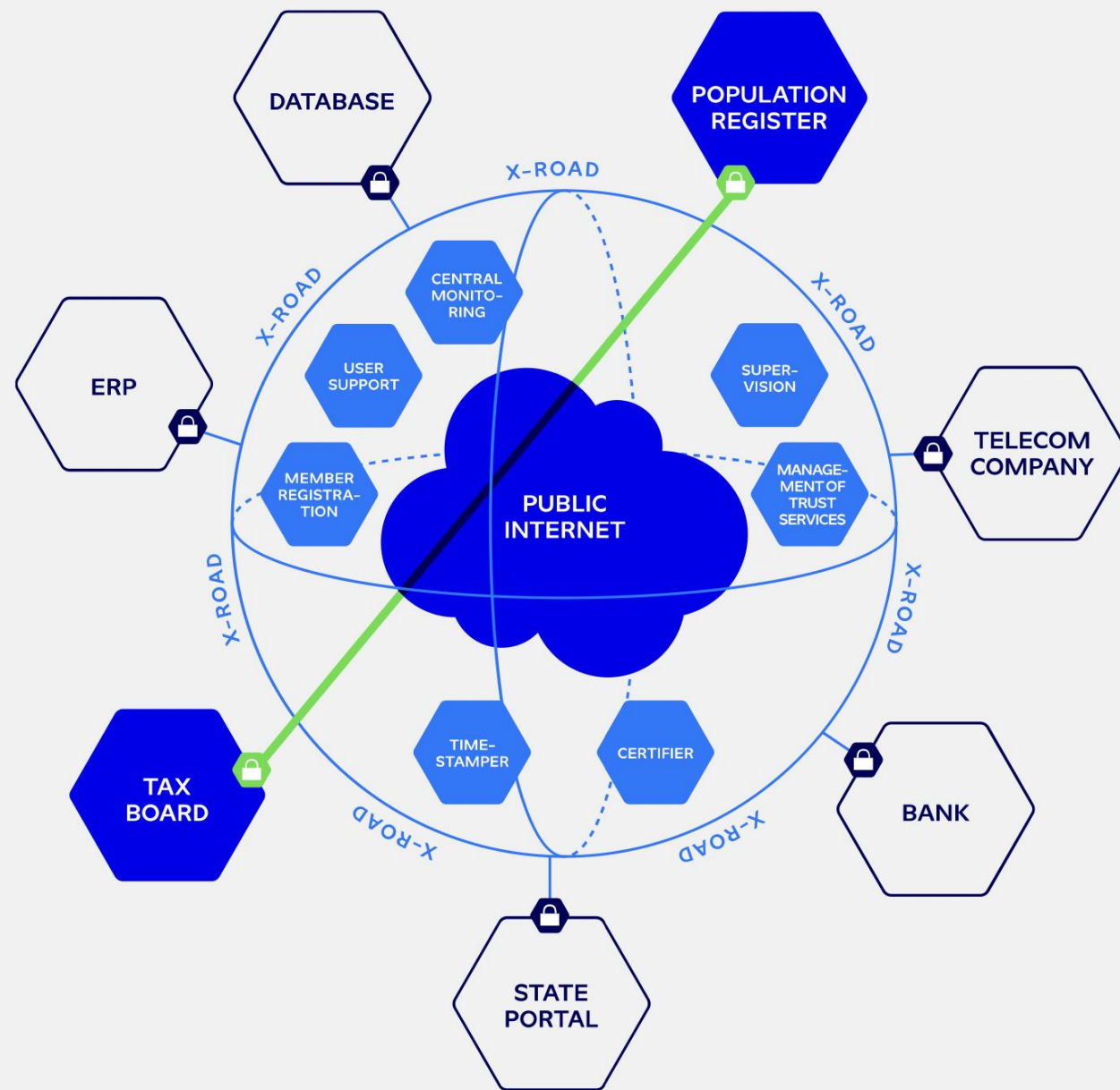
the busiest highway since 2001

X-Road – secure and interoperable open-source data exchange platform

- + operational in Azerbaijan, Argentina, Cambodia, Colombia, El Salvador, Estonia, Faroe Islands, Finland, Germany, Iceland, Japan, Kyrgyzstan, Vietnam

X-tee – the Estonian X-Road ecosystem since 2001

- + saving 3 million working hours annually
- + over 3,000 different services
- + over 2,5 billion transactions per year



1

**Dashboard with KPIs
from Tartu University Hospital**

https://rstudio.klinikum.ee/statistika/

Eesti

English

Years

2017

2021

2016

2017

2018

2019

2020

2021

Select clinical area

All

Select unit type

All

Select unit

All

Key indicators

Structure

Employees

Research and Development

Medical work

Data tables

Indicator	Explanation	2021	Target
Medical work			
Päevakirurgia osakaal	Proportion of day surgery		70%
Operatsioonitubade efektiivsus	Efficiency of operating rooms	70%	≥ 80%
EMOs viibimine > 360 min	Stay in EMO> 360 min	3.1%	< 10%
Ambulatoorsed vastuvõtud väljaspool Tartut	Outpatient receptions outside Tartu	7.0%	Ajas kasvav trend
Haiglatekked vereringeinfektsioonid	healthcare-associated infections	0.7	< 0.9
Patsiendikogemus Patient experience			
Patsientide rahulolu ambulatoorsel vastuvõtul	Patient satisfaction in outpatient clinics		≥ 80%
Patsientide rahuolu statsionaaris	Patient satisfaction in the hospital	80%	≥ 80%
Patsientide soovitusindeks	Patient recommendation index		≥ 50
Kukkumine haiglas	Falling in the hospital	0.3%	< 0.5%
E-konsultatsioonide osakaal	Proportion of e-consultations	3.0%	≥ 25%
Meie töötajad Our staff			
Töötajate rahulolu	Employee satisfaction	91%	≥ 80%
Töötajate soovitusindeks	Employee recommendation index	3	≥ 50
Arstide koolitused	Medical training	40.9	60 academic hours per employee
Õendustöötajate koolitused	Training for nurses	29.2	60 academic hours per employee
Arstide järelkasv	Percent of young doctors	28.2%	≥ 25%
Õendustöötajate järelkasv	Percent of young nurses	45.8%	≥ 33%



Patsiendikogemus

Patient experience

Patsientide rahulolu ambulatoorsel vastuvõtul

Patient satisfaction in outpatient clinics

≥ 80%

Patsientide rahuolu statsionaaris

Patient satisfaction in the hospital

80%

≥ 80%

Patsientide soovitusindeks

Patient recommendation index 

≥ 50

***ACTIONABLE METRICS
COMING FROM THE USER OF THE
SYSTEM***



2

**Mobile eye clinic
from East Tallinn Central Hospital**

2 Mobile eye clinic

- Aim: To estimate the prevalence and risk factors of myopia among children and youngsters in Estonia
- Developed by ophtalmologists at East Tallinn Central Hospital and Tallinn University of Technology
- Goes to a random sample of schools in Estonia
- Collects data for research regarding causes of myopia
 - Eye examination
 - Questionnaire and diary
 - School based criteria
 - Myopia prevention



Inside the mobile eye clinic



3

**Evidence-based outcome measures at
Haapsalu Neurological Rehabilitation
Centre**

3. Haapsalu Neurological Rehabilitation Centre

- ◆ Holistic view on rehabilitation treatment:
 - ◇ Function independent method (FIM)
 - ◇ Function attentive method, cognitive (FAM)
 - ◇ Specialists meet the patient in teams, not one by one
- ◆ BI software and local software to analyse
 - ◇ current bed occupancy, current, past and future financial goals
 - ◇ waiting list, feedback from patients and employees
- ◆ Under development: System to measure patient activity outside therapeutic treatment





Our take home message



Having a system that collects a lot of data automatically enables many possibilities.



By collecting data you can analyse and make informed decisions.



To use information from data analysis in its maximum the management needs to be ready and open to change.



“Without data
you’re just
another person
with an opinion.”

- W. Edwards Deming,
Data Scientist