



Tartu
city of good thoughts

Local Government in Estonia

Estonia is territorially divided to counties, rural municipalities and cities:

- 15 counties
- 213 municipalities
 - 30 cities
 - 183 rural municipalities
- Two thirds of local government units have less than 3000 inhabitants
- Tallinn 435 000 (our capital), Tartu 100 000, Narva 66 000, Kohtla-Järve 45 000, Pärnu 44 000 inhabitants



The functions of local government

- Basic education
- Culture and sports
- Social welfare services
- Housing and utilities, the maintenance of infrastructure
- Environmental protection and waste management
- Spatial planning and construction activities
- Maintenance of law and order
- Other functions

Tartu – City of Good Thoughts

- Estonia's second-largest city
- Research and education centre
- Centre of medical and biotechnological landscape
- Important commercial centre
- Increasingly popular tourist destination



- Tartu first mentioned in written: 1030
- City rights: 1253
- Area: 38.8 km²
- Population: 100 000

Tartu – City of students

- 20% of the population are students (~23 000)
- 11 higher educational institutions
- Tartu University - founded by Swedish King in 1632



Tartu - high Science Potential

- Tartu - educational and science centre of northern Europe since 1632 when the University of Tartu was founded
- Internationally well-known centre of research
- AHHAA Science Centre – the largest in the Baltics
- The majority of R&D activities related to life sciences and medicine are concentrated in Tartu
- More than 60% of the total Estonian research potential is concentrated in Tartu



City administration

City Council

- 49 members

City Government

- 6 members (the Mayor + 5 Deputies)
- 12 departments



More facts about the City Government

Organizational structure: 80 units

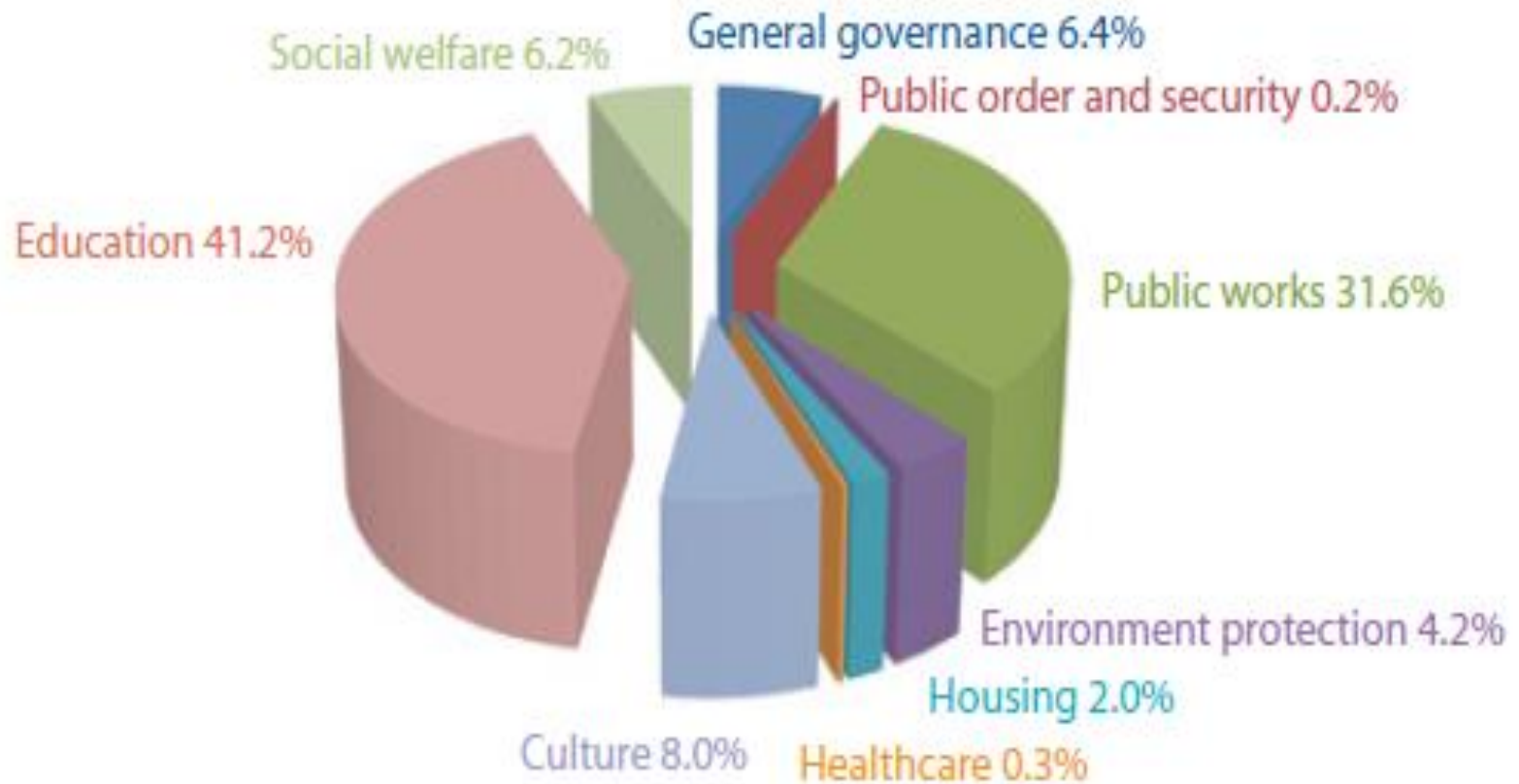
- City Government: 12 departments
- 30 kindergartens
- 21 schools
- 1 vocational school
- 2 museums
- 1 library
- 5 youth centres
- 5 social care centres
- 3 others

Total number of employees is ~3600

City budget – revenue 142 million euros



City budget - expenditures



The Twin Towns of Tartu

Tartu has 16 twin towns and four partner towns (twinning agreements were ratified with Aigina in Greece and the administration of the Vassili Island of St. Petersburg in 2006, with Siena in Italy in 2010 and with Ningbo in China in 2011).

The twin towns are:

- **Tampere, Turku and Hämeenlinna** in Finland
- **Uppsala** in Sweden
- **Lüneburg** in Germany
- **Pskov** in Russia
- **Ferrara** in Italy
- **Salisbury** in the USA
- **Bærum** in Norway
- **Frederiksberg** in Denmark
- **Hafnarfjörður** in Iceland
- **Veszprém** in Hungary
- **Kaunas** in Lithuania
- **Deventer and Zutphen** in the Netherlands
- **Rīga** in Latvia





eTartu



eTartu roadmap

Public Legislation

2000 - 2002
Public Information Act
Digital Signatures Act
Basics of state ICT interoperability

Infrastructure

2002 - 2007
Public key infrastructure
Electronic identity ID card & Mobil ID
Secure information exchange

Implementation

2003 - 2010
Document registry
Electronical document processing
Document web publishing
Digital signing
Strong Authentication

What is eTartu based on?

- Development of the state IT infrastructure has been the basis for rapid progress
- We use centered state solutions, when possible
- Our systems are built to query basic data from national registers
- Our systems are based on an electronic identity and secure information exchange
- Most of our main procedures are done digitally
- All original documents are digital (copies in paper)

What is eTartu based on?

- E-services are based on legal grounds
- A big part of the citizens of Tartu communicate to the municipality electronically
- Digital signature and mobile ID are very popular identifying applications in Estonia
- Today, all documents of the Tartu City Government are signed digitally



Once upon a time

Too many papers

Too slow

Too expensive





GoPro – Not just a DMS

Strong Authentication

Digital Signature

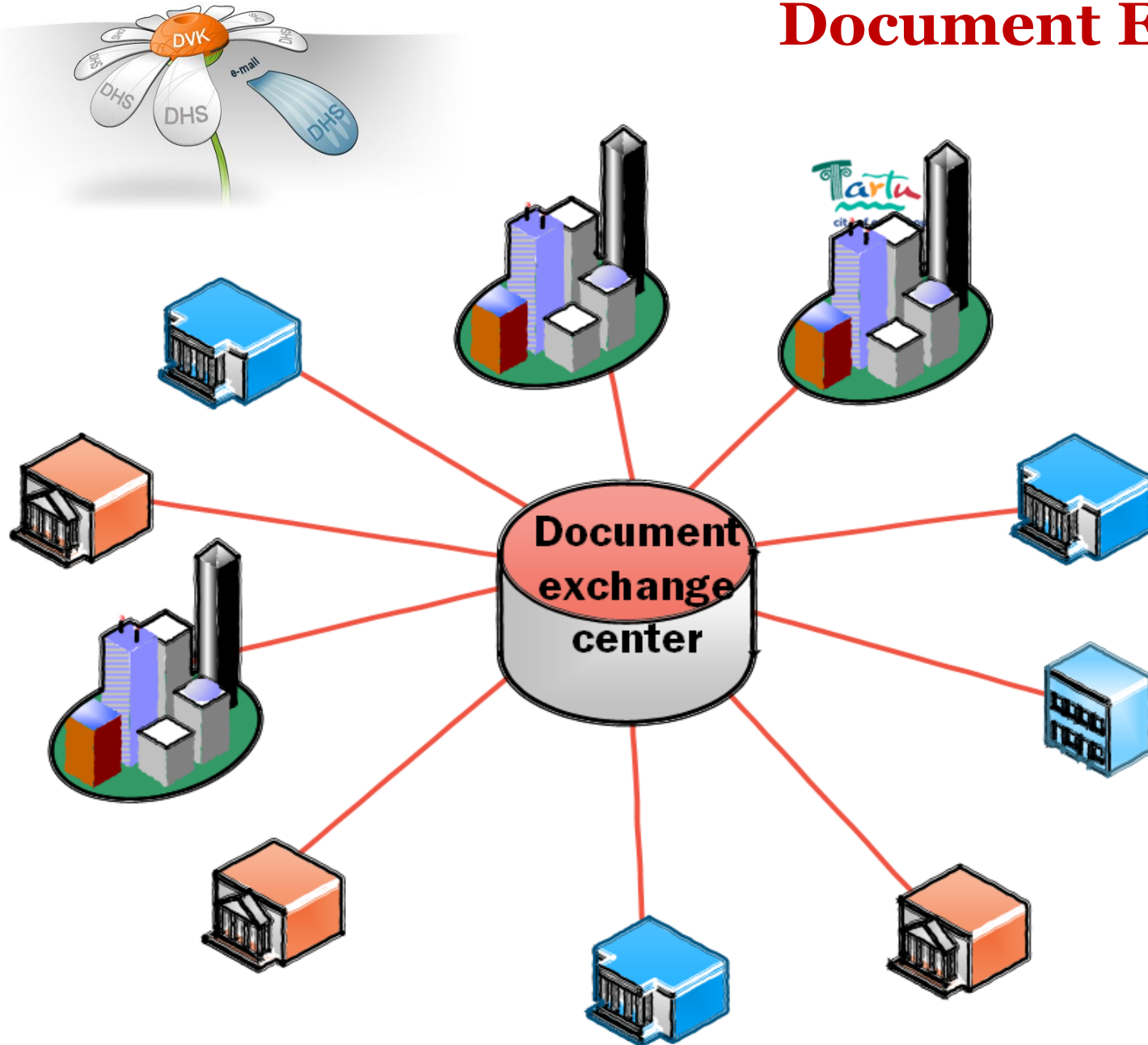
Digital-ID

Mobil-ID

ID card



Document Exchange center



eServices for public servant

Digital Signature

Strong Authentication

Electronic identity

Mobil-ID

ID card



Supervision



GeoArchive



Financial IS



Monitoring & Logistic



Public Servant
Authorization



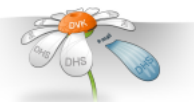
X-Road



Document
Management System



National
Registers



Document
Exchange Center

Financial IS



- Financial Information System was implemented in 2000
- Electronic processing of invoices was implemented in 2011
 - GoPro is used for processing invoices
 - Axapta is used for issuing invoices and making payments

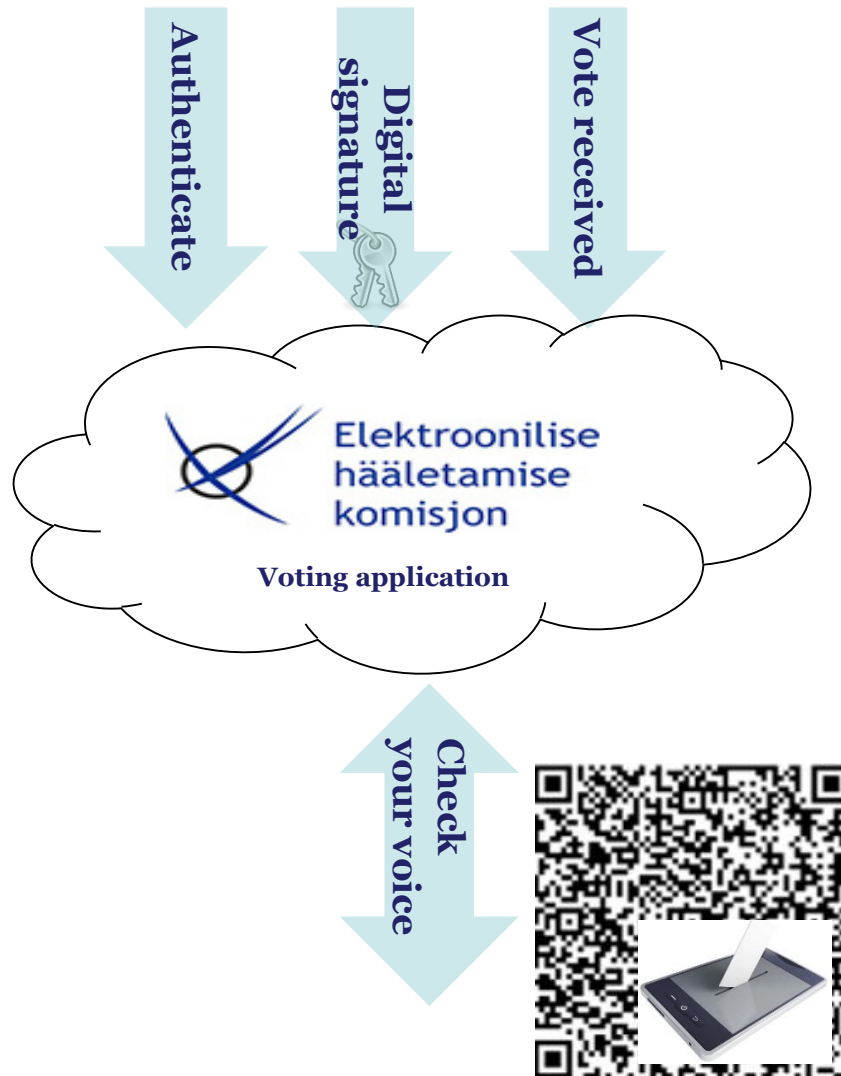
Municipal Parking



- Mobile app for public servant
- Car verification from National Car Registry through secure x-Road
- Parking permit verification by strong authentication
- Signing penalty decision by Mobile-ID on the street
- Penalty Decision Processing



Local Government iVoting



- Strong authentication
- Choose candidate and confirm your choice
- Vote encrypted and received
- When in doubt, check your vote

Benefits of iVoteing

- IT is central state solution
- Was first introduced in 2005
- Only voters with registered addresses are eligible
 - National Population register is used
- Increased participation in the elections
- Faster counting and less spoiled ballots
- Enables voteing with strong authentication independent of time and place
- Helped to attract young people to vote

Electronical services for citizens

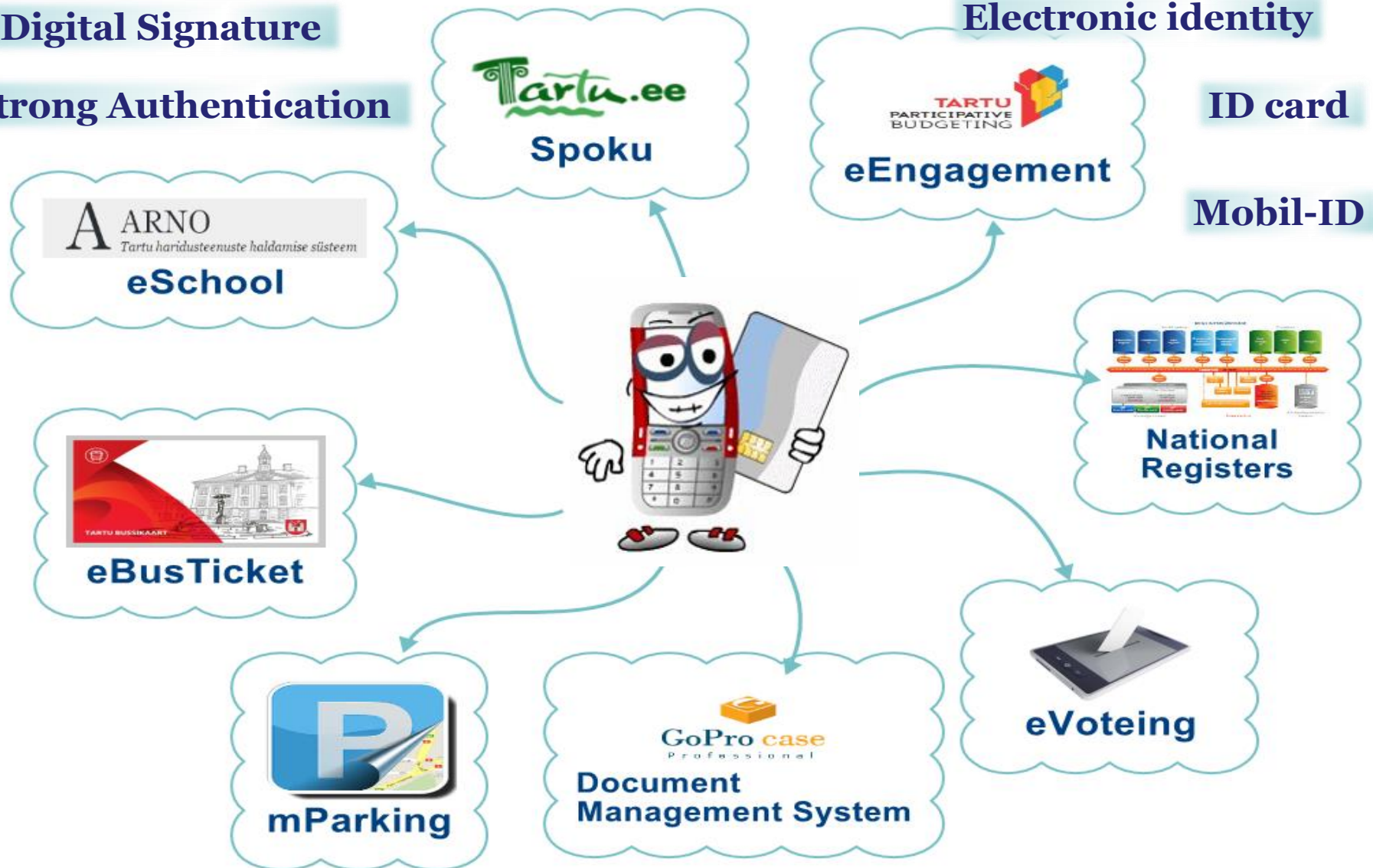
Digital Signature

Electronic identity

Strong Authentication

ID card

Mobil-ID





What is SPOKU



Tartu.ee
Spoku

National
Population
Registry

x-Road



Intrest club

- Parents can confirm their child's participation and preferences for the activities
- Activity clubs can submit applications for subsidy and submit activity reports
- City has an overview of subsidies



Benefits of SPOKU

- Child's hobby activities are authorized by their parents
- The subsidizing of interest/activity clubs is based on verified data
- Spoku can be used for the submission of applications in different fields

What is ARNO?

- Automatic placement of children into schools by region
- Vacancies accounting system for schools and kindergartens
- Kindergarten places queuing system
- Meal planning in the School and Kindergarten
- Application for financial support for children going to school

How it works?



Asks for
children's data
from
Population
register



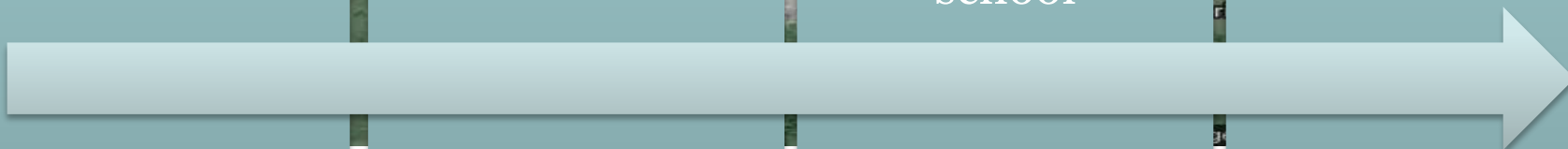
Asks for spatial
data from
Google Maps



Calculates the
distance of the
home from all
schools.
Places the child
to the nearest
school



The results are
published
Parents have
the opportunity
to apply for
another school



National
Population
Registry

ARNO
Tartu haridusteenuste haldamise süsteem
eSchool



Why ARNO?

- Static service areas did not take into account the capacity of schools
- The number of pupils is growing in Tartu and a lack of places has been forecast
- Service areas did not allow for sufficient flexibility, since one school could not necessarily accommodate all of the children enrolled in it, while another school may have been half-empty
- The fact was that some schools were required to enrol all of the children living in the area despite not being able to accommodate them



Geographic IS

- First GIS database 1991
- First public mapserver 2002
- Unified address database
- GeoWeb data exchange 2005
- Geo-archive 2011

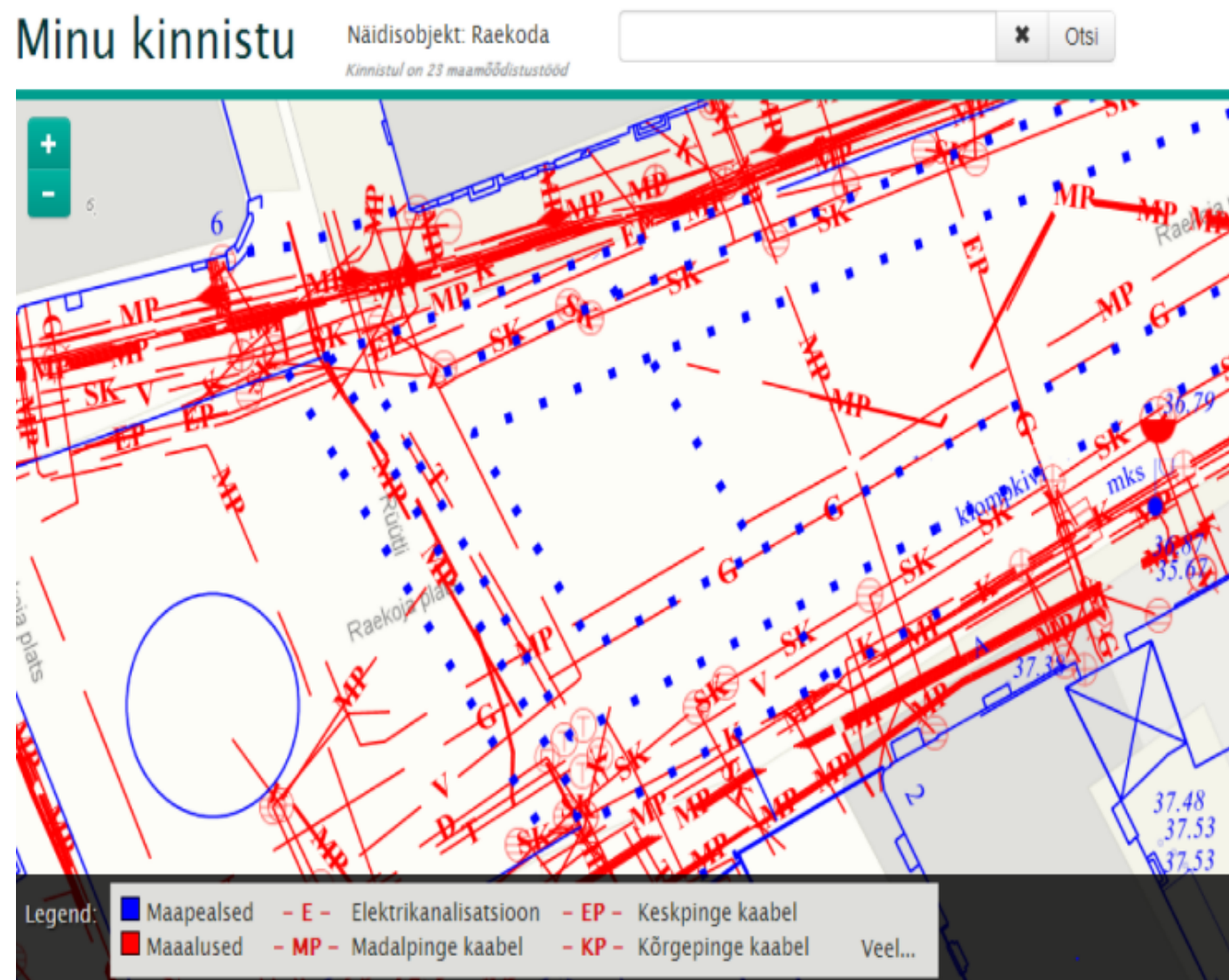


Tartu area Geo-archive

- preparation 2010-2011, development 2012
 - funded by Enterprise Estonia and European Economic Area Regional Development Fund
 - Tartu city as the principal partner in software development
- processing of geodetic survey data and archiving the records
 - 5 rural municipalities also participate and several others have taken interest in the project
- creating a database with 1:500 scale maps
 - Geo-archive contains over 17 000 land survey records



Geo-archive citizen interface



Geo-archive citizen interface allows the citizens to view the data on underground infrastructures pertaining to their real estate

The first application created in co-operation with the local IT enterprises in the context of Smart City Lab



eBusTickets

- From 1 September 2015, the City of Tartu is using a modern ticketing system which is already in use in many places throughout Estonia and Europe.
- The new system will charge the passenger the cheapest price, up to the price of a full day ticket
- Using a registered card also ensures that your credit is preserved in the event of your losing your card.
- Student Cards can be used as eTickets





eBusTickets

- You can load money onto your card:
 - at sales points,
 - online at www.pilet.ee
 - via mobile phone by sending SMS or by dialing 1322
- You can connect family members cards to your card



R kiosk



www.shutterstock.com - 284756698



Tartu
city of good thoughts



Supportive services for public transport

SmartMonitor 3.8.1 Web | public.bus.tartu.ee

Find direction: Clear Find stop: Clear

Operaattori 13.54
Tartu bussiajad

5	5 min → Nõlvaku	5	26 min → Nõlvaku
10	15 min → Nõlvaku	12	38 min → Tahe (Sood...)
3	15 min → Nõlvaku	26	41 min → Soola

Annelinna Gümnaasium

- Otsi
- Sõidugraafik
- Kaart

Rakenduse toovad teieni
Smart City Lab mobilab.

17:04 ru ring - Põltsu
17:05 ja - Soola
17:06 Nõlvaku - FI
17:07 - Kivilinna -
17:30 Sool

Map data ©2015 Google Terms of Use Report a map error

Realtime monitoring

App to find bus schedule
based on your location

Bus stop info monitors



eEngagement

- Tartu is the first city in Estonia that opens up its budget decision process for citizens
- The process was developed in collaboration with e-Governance Academy (eGA)
- Citizens of Tartu can decide how their city should spend 1% of next year's investment budget

eEngagement

- We use central state solution VOLIS
- Authorization and rights for the users are held in the central state portal (eesti.ee)
- VOLIS uses ID-cards and mobile ID
- Supports every step of our participative budgeting process

Stages of participative budgeting

- I. Information day
- II. Gathering ideas
- III. Technical preparation
- IV. Discussions
- V. Introducing ideas
- VI. Public vote
- VII. Implementing idea

Success factors of digital cities

Digital cities need smart administrations

- Small municipalities are good incubators for new e-solutions
- In Tartu, communities and citizens are very close to the municipality as everyone knows everyone

Municipality adapts to the e-needs of the community

- The more open the governing of the city, the more secure and aware is the citizen
- The salary of the mayor is only interesting till it's not openly visible
- Citizens and communities need to be engaged with the creation of e-services

E-involvement creates new networks and a million new ideas

- Citizens are not only needed for voting at the elections
- We need to be where the citizens are – in the internet!
- Citizens enjoy well-prepared e-involvement and they happily participate

APPLICATION eFORM FOR PARENTAL BENEFIT

FAMILY COMMUNICATING WITH THE STATE
WITHOUT LEAVING HOME...



Let's meet in the city of good thoughts!

You can have a glimpse of our doings on our webpage:

www.visittartu.com

- Information available in 12 languages
- Everything concerning accommodation, dining, entertainment, transport etc.

www.tartu.ee

- Information available in Estonian, English, German, Finnish, Russian

<http://smartcitylab.eu/frontpage/>



Thank you for your attention!

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