REPUBLIC OF ESTONIA
LAND BOARD

Overview about Address Data System

Andre Kaptein
Estonian Land Board / Chief Specialist

26.04.2018 – Presentation in Ernst & Young Baltic AS

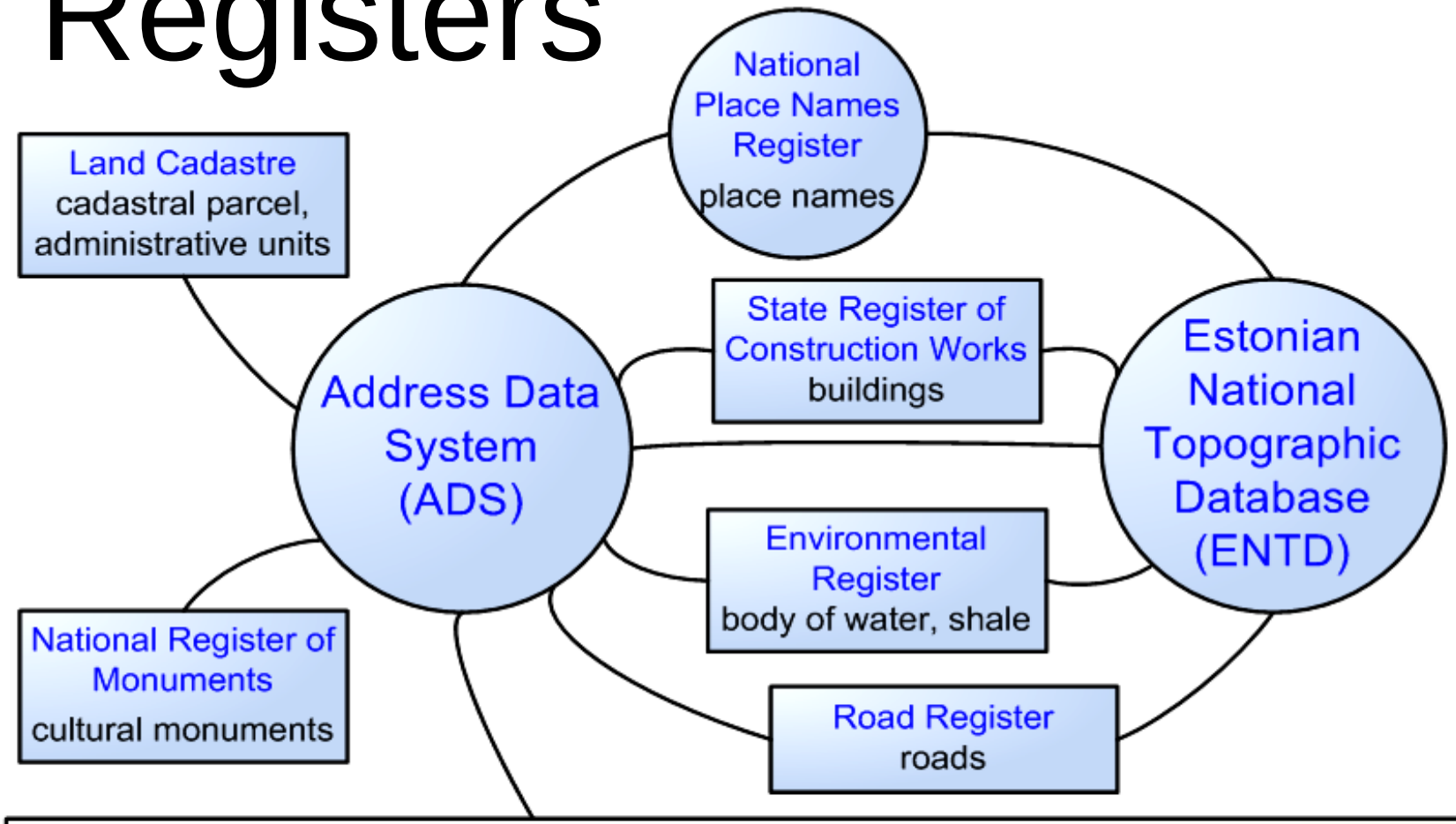
Address Data System (ADS)

It is a base for spatial data infrastructure and **ensures that address data is up to date**

It is a framework that provides an **unambiguous identification of address** objects in their location and in different databases

Aim is to ensure **uniform organisation** of the functions of establishment of geographical addresses and processing of address data.

Registers



Registers and information systems which use the data, public and private sector

for example: Population Register, Commercial Register, Land Register, Police Information System, Rescue Board, Alarm Centre, local governments, Estonian Post Ltd, Estonian Energy Company, communication company etc....

The beginning 1

- At first there was only address data from Land Cadastre and State Register of Construction Works (EHR).
- The aim was to combine the data from these two registers together.
- Problem was that only 8% of buildings in State Register of Construction Works had spatial data.

The beginning 2

- For census of population Statistics Estonia initiated a project (AKP) to collect the spatial data and addresses for all the buildings and apartments to ADS.
- To get the data, it was bought from two private sector companies: Eesti Post AS (postal services) and Regio OÜ (map services).
- The aim was ADS to have all the available data possible and then ADS could start building the quality of the data from there

The beginning 3

- Regio and Eesti Post gathered and organized spatial data, place addresses, uses, types and apartment info of buildings and, if possible, links to EHR buildings.
- The links found with EHR data were partly used to fix EHR data.
- Unlinked data (that coudn’t be linked to EHR) was transferred to the ADS informal layer.
- An exchange of data between Estonian National Topographic Database and the ADS informal layer was launched. EHR could continuously use this data.

The beginning 4

- The AKP project ended in 2010. At the end of the project 16% of EHR buildings had spatial data.
- The quality of the collected data was as high as possible by the given conditions.
- After checking the collected data, the project partners fix the data problems (by the warranty).
- From there on, to further improve the quality of address data in different registers, only ADS data can be used.
- Improving data in different registers (such as EHR, Business Register and Population Register) requires political will and legislative changes.

API for processing address data

- Application launched 01.01.2012. Constantly further developed and modified.
- Addresses are created directly by local authorities
- No address object can be registered without first entering its address to ADS
- Addresses are verified through business rules before gaining official status
- No address valid before being registered in ADS
- Building addresses verified from october 2014

ADS menetlusrakendus

Maa-amet, Andre Kaptein [Logi välja

Register ▾ | Menetlus ▾ | Väljavõtted ▾ | Volitused | Klassifikaatorid ▾ | Mitteametlik ADS ▾

ADS-OID/tunnus | Otsi aadressiobjekti | Menetluse nr | Otsi menetlust | Uus menetlus | Ava kaart

Tere tulemast ADS menetlusrakendusse!

Probleemide korral soovitame pöörduda oma organisatsiooni tugiisiku poole Maa-ameti aadressiandmete osakonnas. Omavalitsuste tugiisikute kontaktid on leitavad lisatud tabelist (TUGIISIKUD). Pöörduda võib ka ADS menetlusrakenduse üldtoe poole e-posti aadressil või telefonil 6650790 (E-R 9-12 ja 13-17).

Uudised

Täienenud kasutusjuhend	5.06.2013
Uus õppevideo - EHR hoonesse ADS's hooneosade lisamine	31.05.2013
Mais 2013 ADS menetlusrakenduses tehtud täiendused	23.05.2013
ADS-i ja rahvastikuregistri koolitused mais 2013	30.04.2013
Aprillis 2013 ADS menetlusrakenduses tehtud muudatused ja täiendused	8.04.2013
Oktoobris 2012 ADS menetlusrakenduses tehtud täiendused	10.10.2012

Näita kõiki uudiseid

Kasulikud lingid

ADS menetlusrakenduse kasutusjuhend
ADS menetlusrakenduse lühijuhend
ADS menetlusrakenduse koolitusmaterjalid (VIDEOD)
Aadressitoiminguid EHR's tutvustavad videod
Maa-ameti geoportaal
Maa-ameti koduleht
ADS käsiraamat
Ehitisregistri ehitise otsing
E-Kinnistusraamat
Kiirpäring Maaregistrist

Maa-amet menetlused

Pooleli menetlused (19)
sh süsteemi algatatud menetlused (6)
Jõustatud viimase 30 p jooksul (4253)
sh haldaja poolt (2)

Andmekorrastuse käigus muudetud andmed

Jõustatud menetlused
sh viimase 60 päeva jooksul (10049)

Jõustamisvalmis menetlused

Jõustamisvalmis menetlused (7)
Harju maakond(1)
Pärnu maakond(1)
Viljandi maakond(4)
Võru maakond(1)

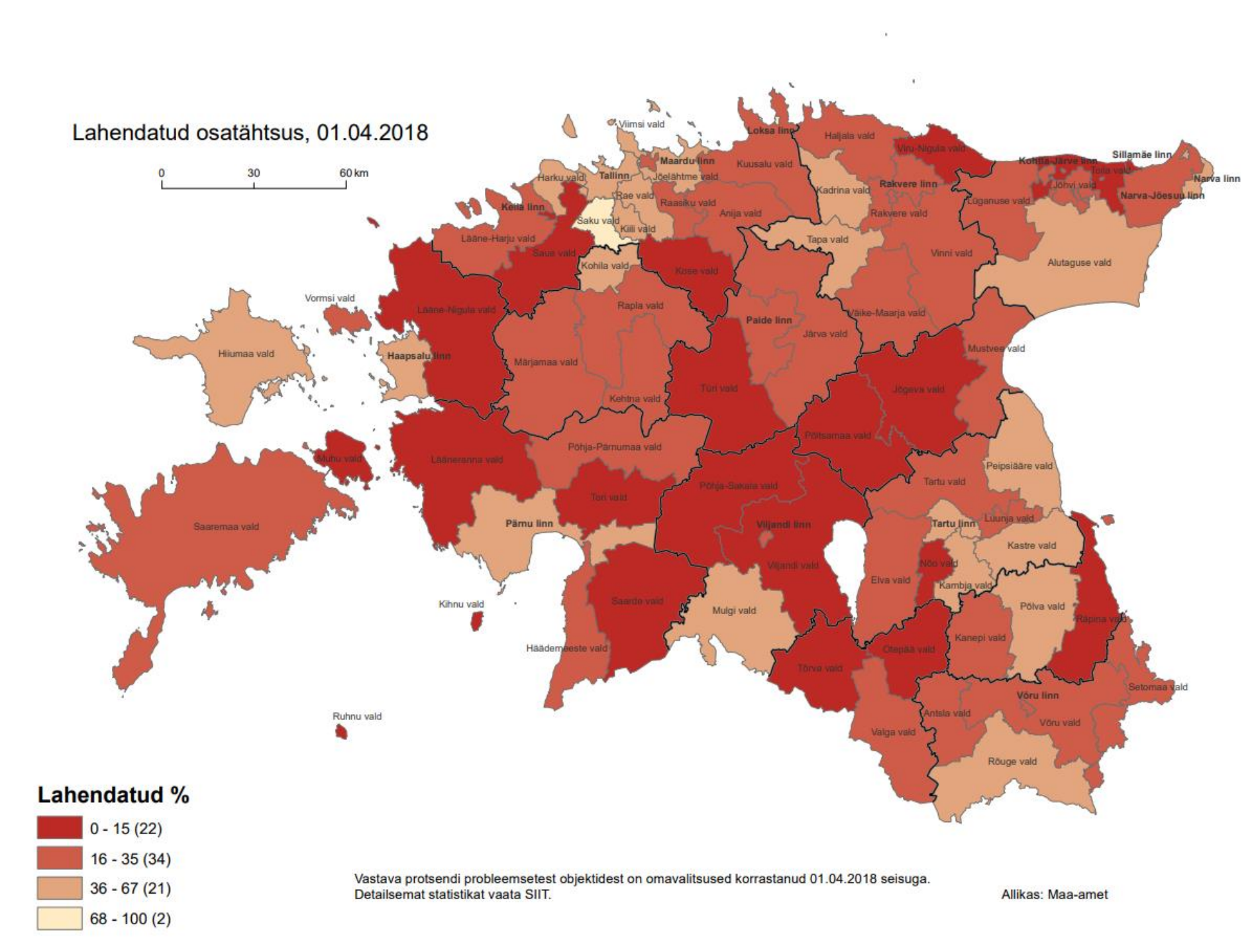
1. funding for data quality improvement

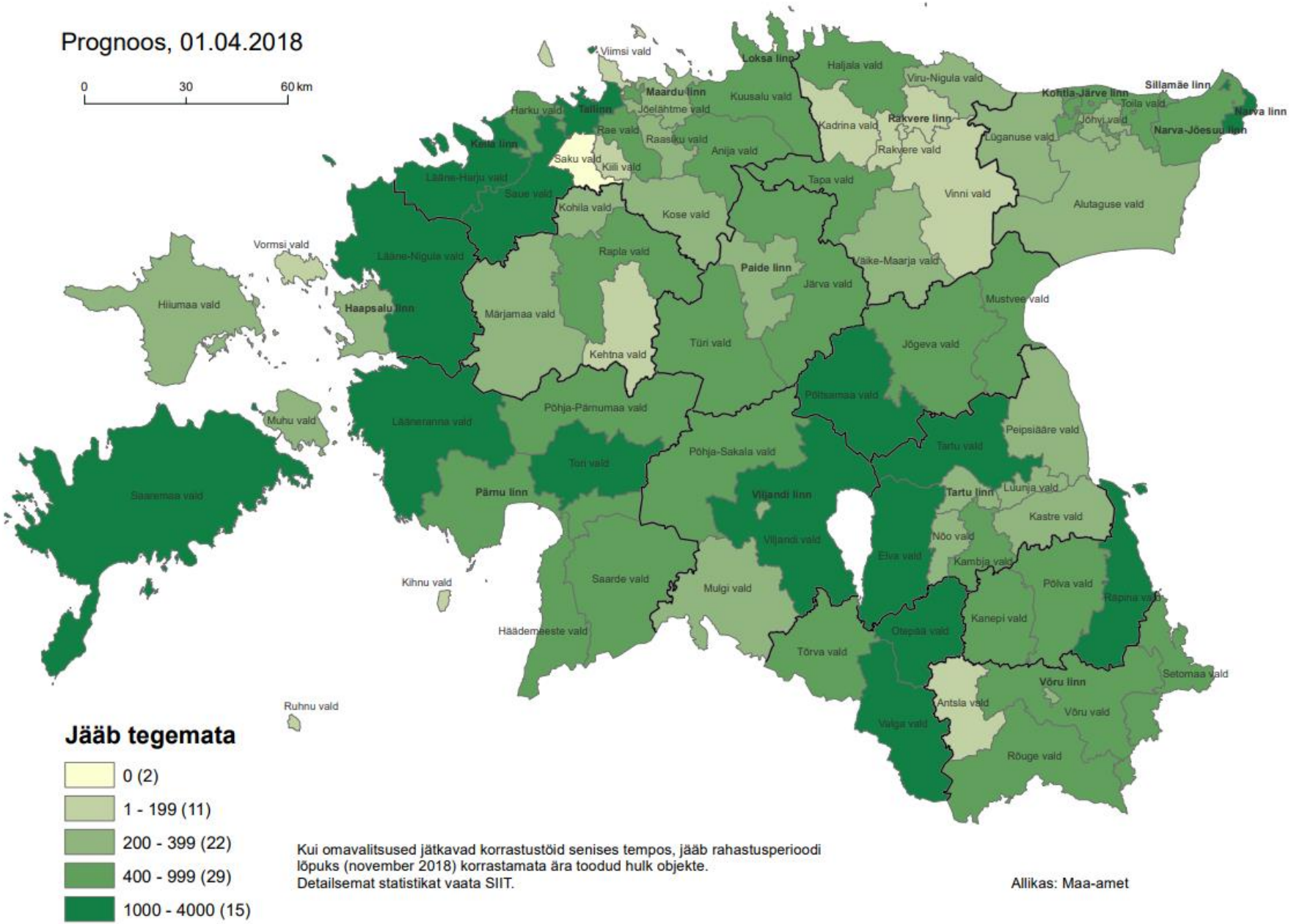
- To improve data quality, 1,5 mln € was given from the Ownership reform reserve fund of Government of Republic
- Project from July 2013 – November 2014
- Task for local municipalities
- Different tariffs meant to compensate labour costs
- **BUT still only 35% of the funding was used**

2. funding for data quality improvement

- Second funding period for data quality improvement from January 2015 – November 2016
- **AGAIN only about 70% of the funding was used**

- **Second funding period was extended from November 2016 – November 2018**


Lahendatud osatähtsus, 01.04.2018
0
30
60 km
Viimsi vald
Loksa linn
Haljala vald
Viru-Nigula vald
Sillamäe linn
Kohtla-Järve linn
Toila vald
Narva linn
Narva-Jõesuu linn
Maardu linn
Kuusalu vald
Harku vald
Tallinn
Jõelähtme vald
Kadrina vald
Rakvere linn
Jõhvi vald
Rae vald
Raasiku vald
Luganuse vald
Keila linn
Anija vald
Rakvere vald
Saku vald
Kiili vald
Tapa vald
Lääne-Harju vald
Vinni vald
Saue vald
Kohila vald
Alutaguse vald
Küsse vald
Vormsi vald
Rapla vald
Lääne-Nigula vald
Väike-Maarja vald
Paide linn
Järva vald
Hiiumaa vald
Haapsalu linn
Mustvee vald
Märjamaa vald
Türi vald
Jõgeva vald
Kehtna vald
Põltsamaa vald
Muhu vald
Lääneranna vald
Põhja-Pärnumaa vald
Peipsiääre vald
Tartu vald
Põhja-Sakala vald
Saaremaa vald
Tori vald
Tartu linn
Luunja vald
Pärnu linn
Viljandi linn
Kastre vald
Viljandi vald
Nõo vald
Elva vald
Kambja vald
Kihnu vald
Saarde vald
Mulgi vald
Põlva vald
Räpina vald
Kanepi vald
Häädemeeste vald
Otepää vald
Tõrva vald
Setomaa vald
Võru linn
Antsla vald
Võru vald
Valga vald
Rõuge vald
Ruhnu vald
Lahendatud %
0 - 15 (22)
16 - 35 (34)
36 - 67 (21)
68 - 100 (2)
Vastava protsendi probleemsetest objektidest on omavalitsused korrastanud 01.04.2018 seisuga.
Detailsemat statistikat vaata SIIT.
Allikas: Maa-amet


Prognoos, 01.04.2018
0
30
60 km
Jääb tegemata
0 (2)
1 - 199 (11)
200 - 399 (22)
400 - 999 (29)
1000 - 4000 (15)
Kui omavalitsused jätkavad korrastustöid senises tempos, jääb rahastusperioodi lõpuks (november 2018) korrastamata ära toodud hulk objekte.
Detailsemat statistikat vaata SIIT.
Allikas: Maa-amet
Viimsi vald
Loksa linn
Haljala vald
Viru-Nigula vald
Kohtla-Järve linn
Sillamäe linn
Toila vald
Narva linn
Narva-Jõesuu linn
Maardu linn
Kuusalu vald
Harku vald
Tallinn
Jõelähtme vald
Kadrina vald
Rakvere linn
Jõhvi vald
Rae vald
Raasiku vald
Lüganuse vald
Keila linn
Anija vald
Rakvere vald
Saku vald
Kiili vald
Tapa vald
Lääne-Harju vald
Vinni vald
Saue vald
Alutaguse vald
Kohila vald
Kose vald
Vormsi vald
Rapla vald
Lääne-Nigula vald
Paide linn
Väike-Maarja vald
Järva vald
Hiiumaa vald
Haapsalu linn
Mustvee vald
Märjamaa vald
Türi vald
Jõgeva vald
Kehtna vald
Põltsamaa vald
Muhu vald
Põhja-Pärnumaa vald
Läänemaa vald
Peipsiääre vald
Tartu vald
Põhja-Sakala vald
Tori vald
Saaremaa vald
Pärnu linn
Viljandi linn
Tartu linn
Luunja vald
Kastre vald
Viljandi vald
Nõo vald
Elva vald
Kambja vald
Kihnu vald
Saarde vald
Mulgi vald
Põlva vald
Räpina vald
Kanepi vald
Häädemeeste vald
Otepää vald
Törva vald
Setomaa vald
Võru linn
Antsla vald
Võru vald
Ruhnu vald
Valga vald
Rõuge vald

ADS includes the following data

- place names
- geographical addresses
- coordinates of address points
- the dates of commencement and termination of the validity of the address data
- information on the status of address objects
- spatial addresses
- and others

Address objects in ADS

Object	**Code**	**Number of objects**
Cadastral unit	CU	702 859
Residential building	EE	301 210
Non-Residential building	ME	813 338
Dwelling / flat	ER	530 380
Other part of building	MR	62 249
TOTAL		**2 240 036**

1. County

2. Administrative unit (city, rural municipality)

3. Settlement unit (village, borough) or city district

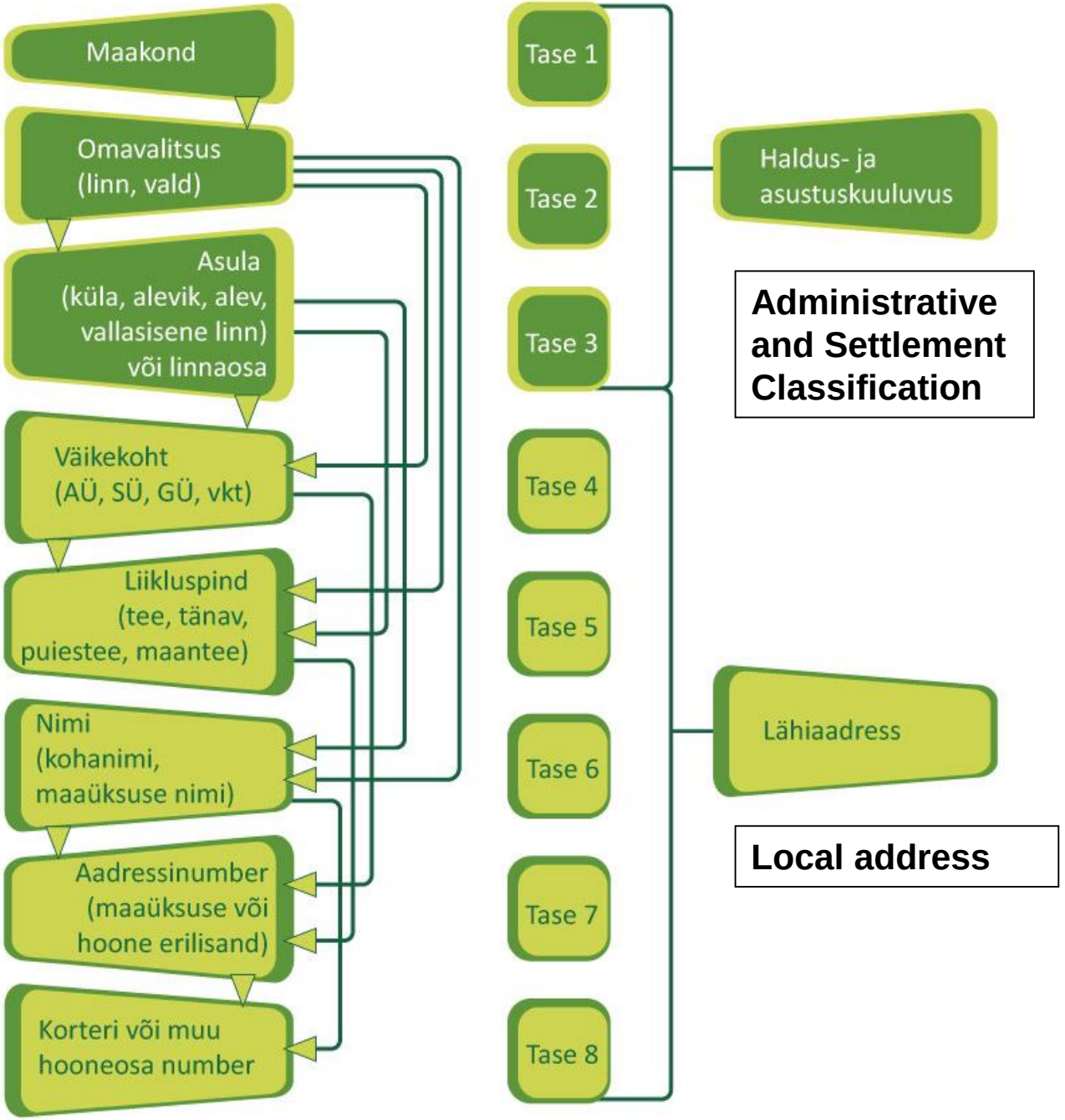
4. Territorial address unit (small places, gardening cooperatives, garages)

5. Traffic surface (street, road, alley, highway, cross-street)

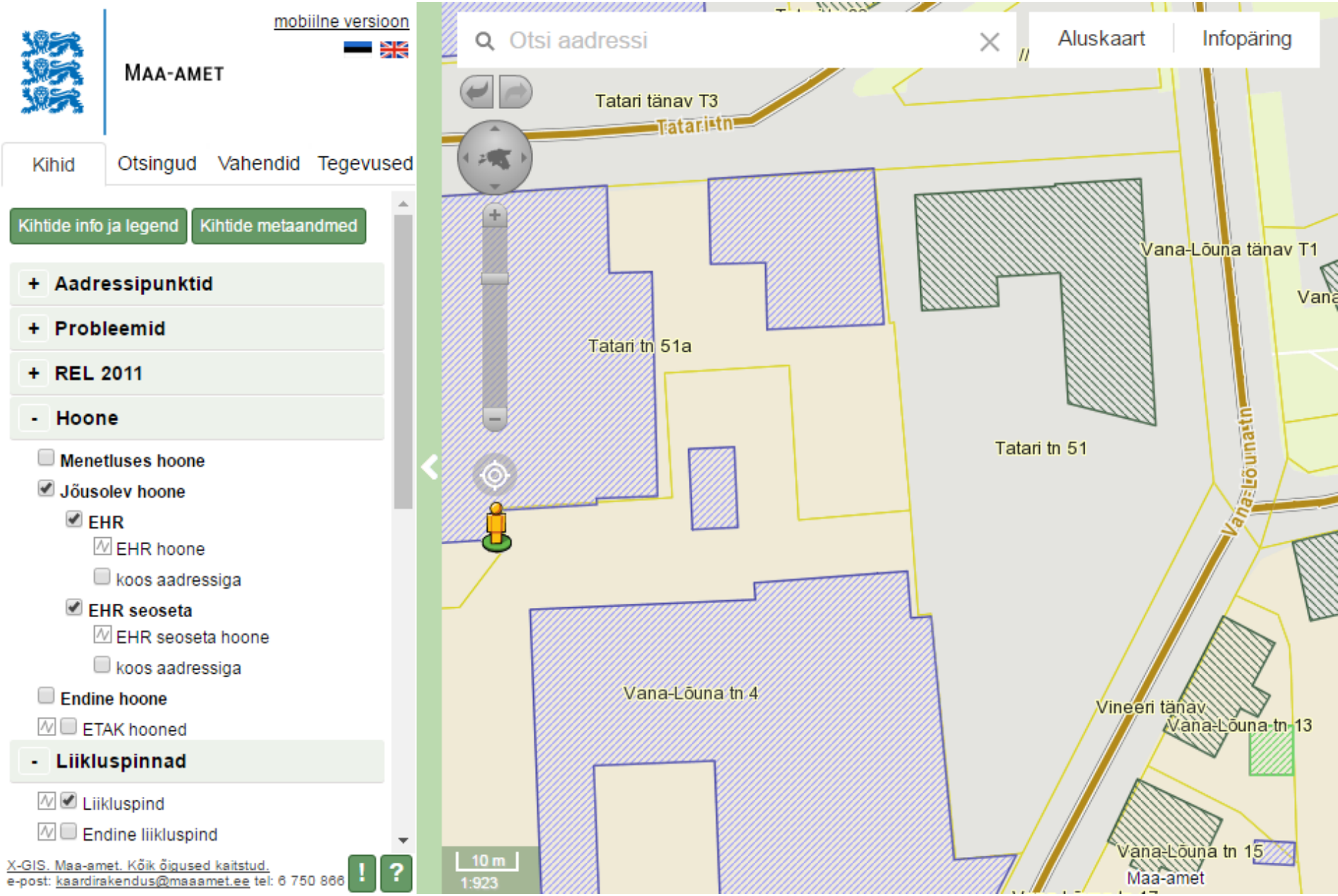
6. Name (place name, name of a land parcel)

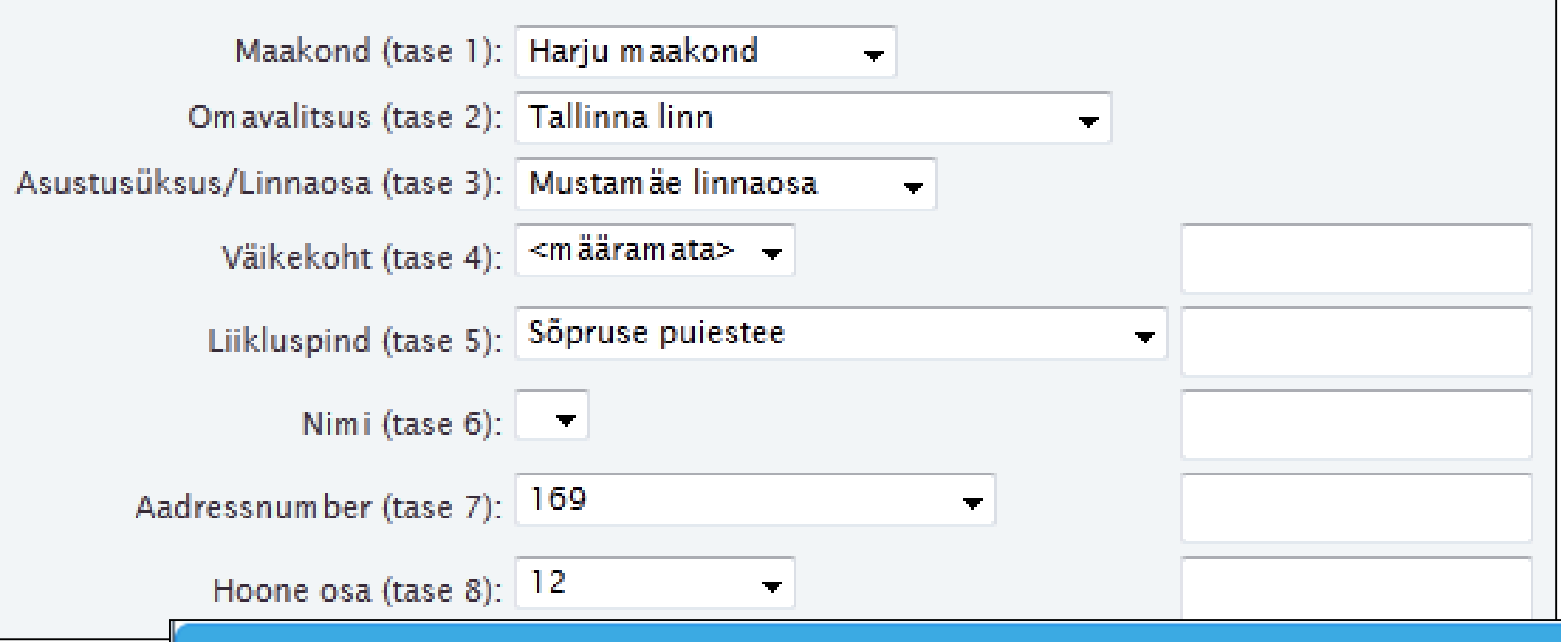
7. Address number (number of a house or land parcel)

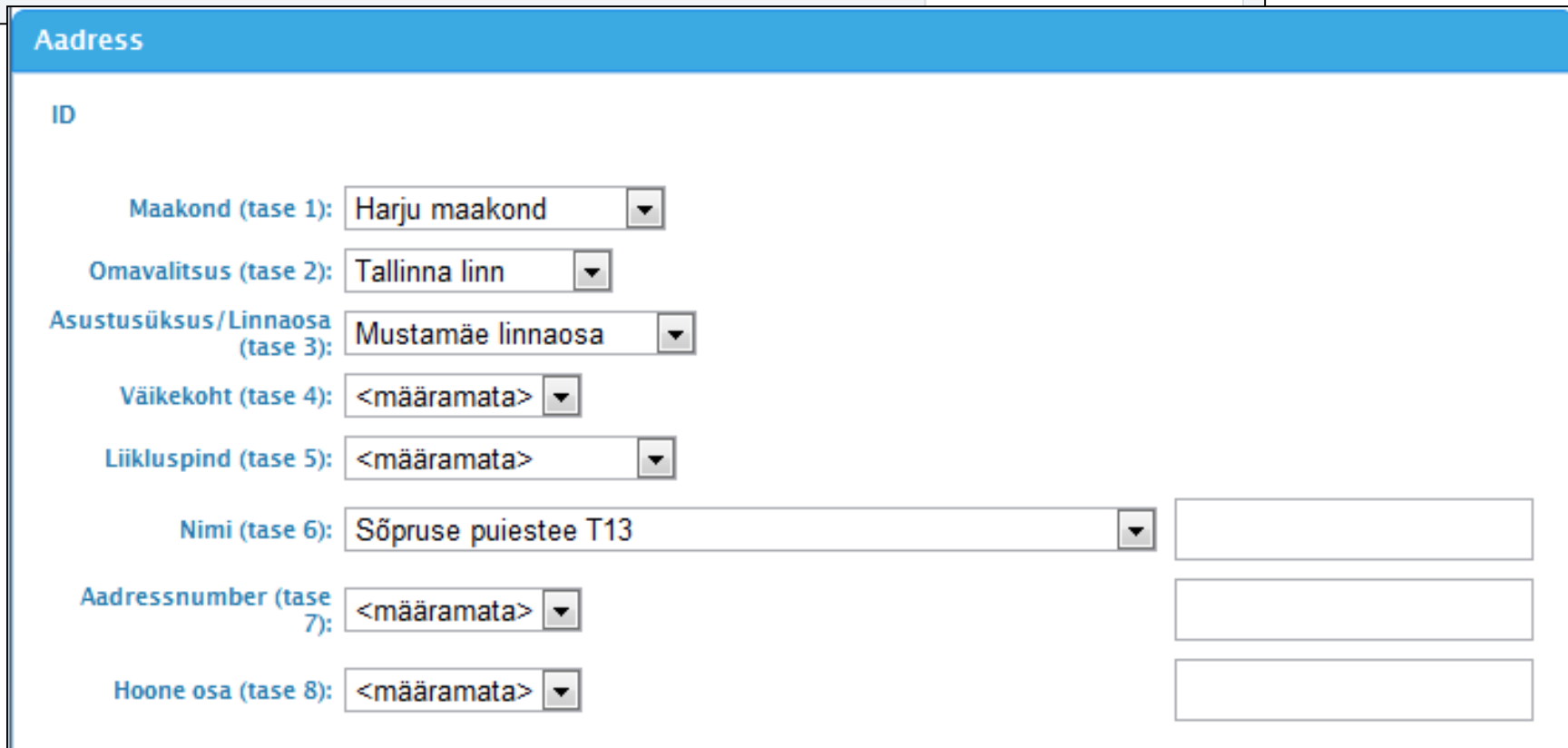
8. Part of the building (number of apartment or other part)



Loodelaht
Sarvesoo
Kadakasaar
Roojõgi
3a
3
4
1
2
Pillijärv
Oru mõis
Oru park
Roo tee
Geographical address of cadastral parcel:
Maasika maakond
Mäe vald
Naeru küla
Roo tee 2
Geographical address of cadastral parcel :
Maasika maakond
Mäe vald
Naeru küla
Oru mõis


MAA-AMET
mobiilne versioon
Kihid
Otsingud
Vahendid
Tegevused
Kihtide info ja legend
Kihtide metaandmed
+ Aadressipunktid
+ Probleemid
+ REL 2011
- Hoone
Menetluses hoone
Jõusolev hoone
EHR
EHR hoone
koos aadressiga
EHR seoseta
EHR seoseta hoone
koos aadressiga
Endine hoone
ETAK hooned
- Liikluspinnad
Liikluspind
Endine liikluspind
X-GIS. Maa-amet. Kõik õigused kaitstud.
e-post: kaardirakendus@maaamet.ee tel: 6 750 866
Otsi aadressi
Aluskaart
Infopäring
Tatari tänav T3
Tatari tn
Tatari tn 51a
Tatari tn 51
Vana-Lõuna tänav T1
Vana-Lõuna tn
Vana-Lõuna tn 4
Vineeri tänav
Vana-Lõuna tn 13
Vana-Lõuna tn 15
Maa-amet
10 m
1:923


Maakond (tase 1): Harju maakond
Omavalitsus (tase 2): Tallinna linn
Asustusüksus/Linnaosa (tase 3): Mustamäe linnaosa
Väikekoht (tase 4): <määramata>
Liikluspind (tase 5): Sõpruse puiestee
Nimi (tase 6):
Aadressnumber (tase 7): 169
Hoone osa (tase 8): 12


Aadress
ID
Maakond (tase 1): Harju maakond
Omavalitsus (tase 2): Tallinna linn
Asustusüksus/Linnaosa (tase 3): Mustamäe linnaosa
Väikekoht (tase 4): <määramata>
Liikluspind (tase 5): <määramata>
Nimi (tase 6): Sõpruse puiestee T13
Aadressnumber (tase 7): <määramata>
Hoone osa (tase 8): <määramata>

Quality of Data

- All data is controlled according to business rules before entering it into ADS
- Examples of problems:
  - *Object must have shape*
  - *Object must have a unique address*
  - *Building and cadastral unit addresses do not comply*
  - *Incorrect symbols in component*

    » … and 60 other checks
- It is the task of **local governments** (who establish addresses) to fix these faulty situations

In some cases, addresses are essential

If you don't care where you are, you cannot get lost

ADS as a support system for maintenance of Estonian State Information System

consisting of a central technological solution (ADS administration system)

including interfaces for processing address data and providing address services, and databases processing address data

of **requirements** for

form of addresses,

establishment of geographical addresses,

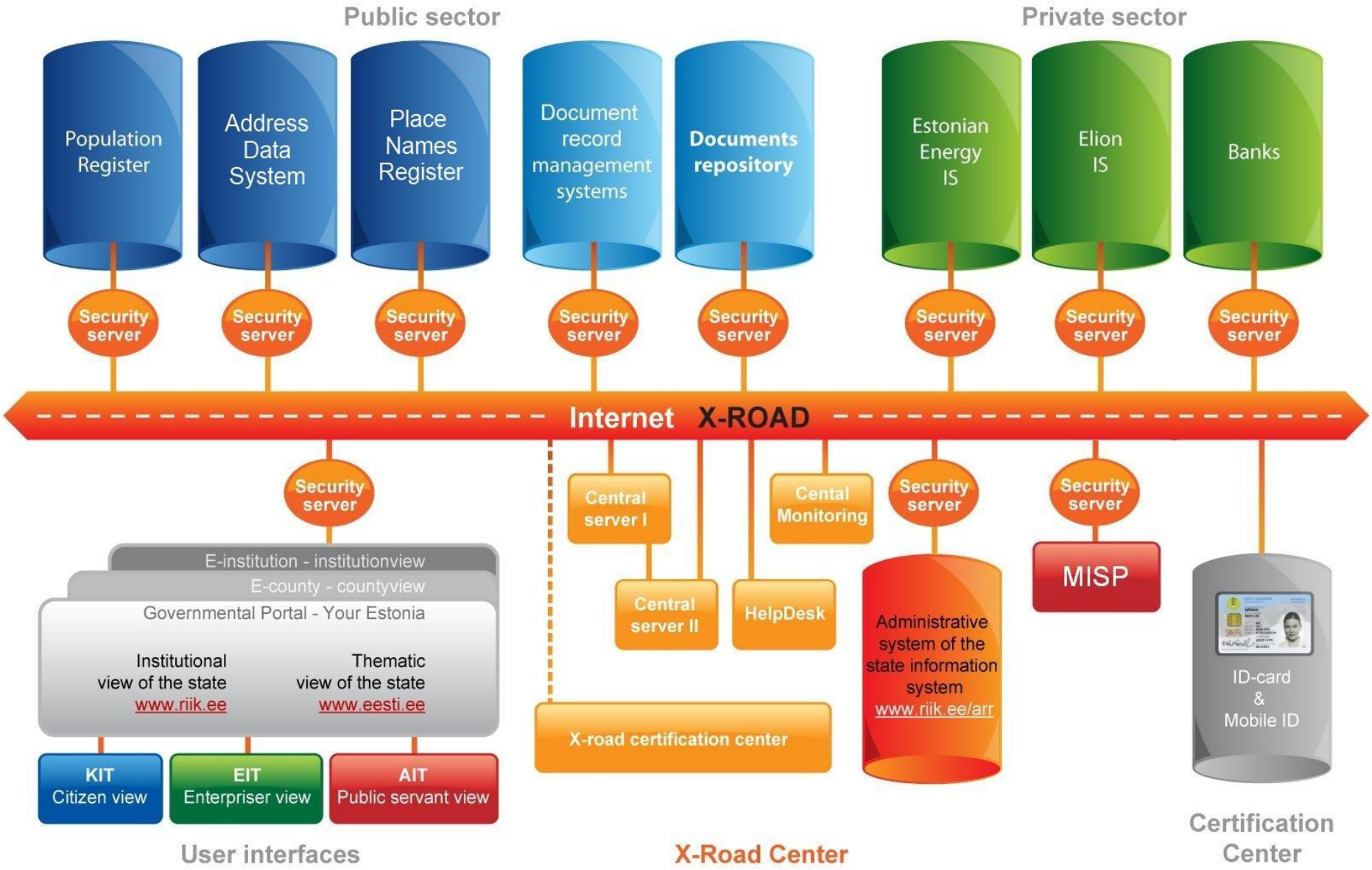
the chief processors of address data,

the chief processor of the ADS administration system,

address services

the processing of addresses

Estonian information system



Statistics Estonia and ADS

- Address data fully imported to Statistics Estonia databases
- Changes from X-road services
- Feedback of data quality to Estonian Land Board
- Use of other address related resources like geocoding, normalizing etc
- Good co-operation

Population register and ADS

- Long history of residential addresses and own logic of dealing with addresses
- Long process of finding links between existing addresses
- From 01.06.2014 fully using ADS data
- **Residential address** and **contact address** needs to be connected to an address object
- Changes are read from object address change log

Population register and ADS

- Overall **551 000** valid addresses
- Approximately **2900** unlinked addresses and **4100** addresses linked to an address, but not to object
- That means about **99,5% of addresses are linked**
- Local municipalities improving data and creating links between residential address and ADS address
- Giving feedback to ADS about new problematic addresses (X-road services)

Land Register and ADS

- General data, size, owners, restrictions and encumbering mortgages of immovable properties (land parcels, **apartment ownerships**)
- Overall **518 000** valid apartment ownerships
- Details (address) of apartment ownerships cannot be changed (need to create links to ADS objects)
- Approximately **350** unlinked apartment ownerships
- That means about **99,9% of addresses are linked**
- Local municipalities creating links between apartment owneships and ADS addresses
- Planned to give feedback to ADS about new problematic addresses (X-road services)

Business Register and ADS

- Real-time data of all legal persons registered in Estonia – overall 250 000 legal persons registered
- All addresses of legal persons need to be ADS addresses
- Just recently started using ADS data and address normalization still in process – about 88,4% of addresses are linked to ADS
- Development underway currently
- Legislation recently modified to make using ADS data possible

More information

- Estonian Land Board: http://www.maaamet.ee/
- Spatial Data Act
- Government of the Republic Regulation No. 251 of 20 December 2007 “Address Data System”
- National Place Names Register in English: http://xgis.maaamet.ee/knravalik/knr?LANG=EN
- Estonian Land Board Geoportal: http://geoportaal.maaamet.ee/eng/
- Public Service of the Address Data System: http://xgis.maaamet.ee/adsavalik/ads
- Address Data Handbook (only in Estonian) http://ads.maaamet.ee/
- Data Exchange Layer X-Road https://www.ria.ee/x-road/

REPUBLIC OF ESTONIA
LAND BOARD

Thank You!

Andre Kaptein
Andre.Kaptein@maaamet.ee