

Census Geography

Georgian delegation study visit at SE

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The Aims of Census Geography (I)

- To support the planning and taking census (other survey)
 - Pilot census areas
 - Enumerator areas – each enumerator should know the territory to be enumerated
 - Supervisory areas
 - Visualisation the current state of the preparation

The Aims of Census Geography (II)

- To support the census dissemination
 - Administrative units (LAU – local Administrative units; NUTS - Nomenclature of Units for Territorial Statistics)
 - Functional territories (rural and urban areas = localities)
 - Grids

Census results should be easily used in many territorial levels

Census Geography

territories , hierarchically sub-ordinated

administrative territories

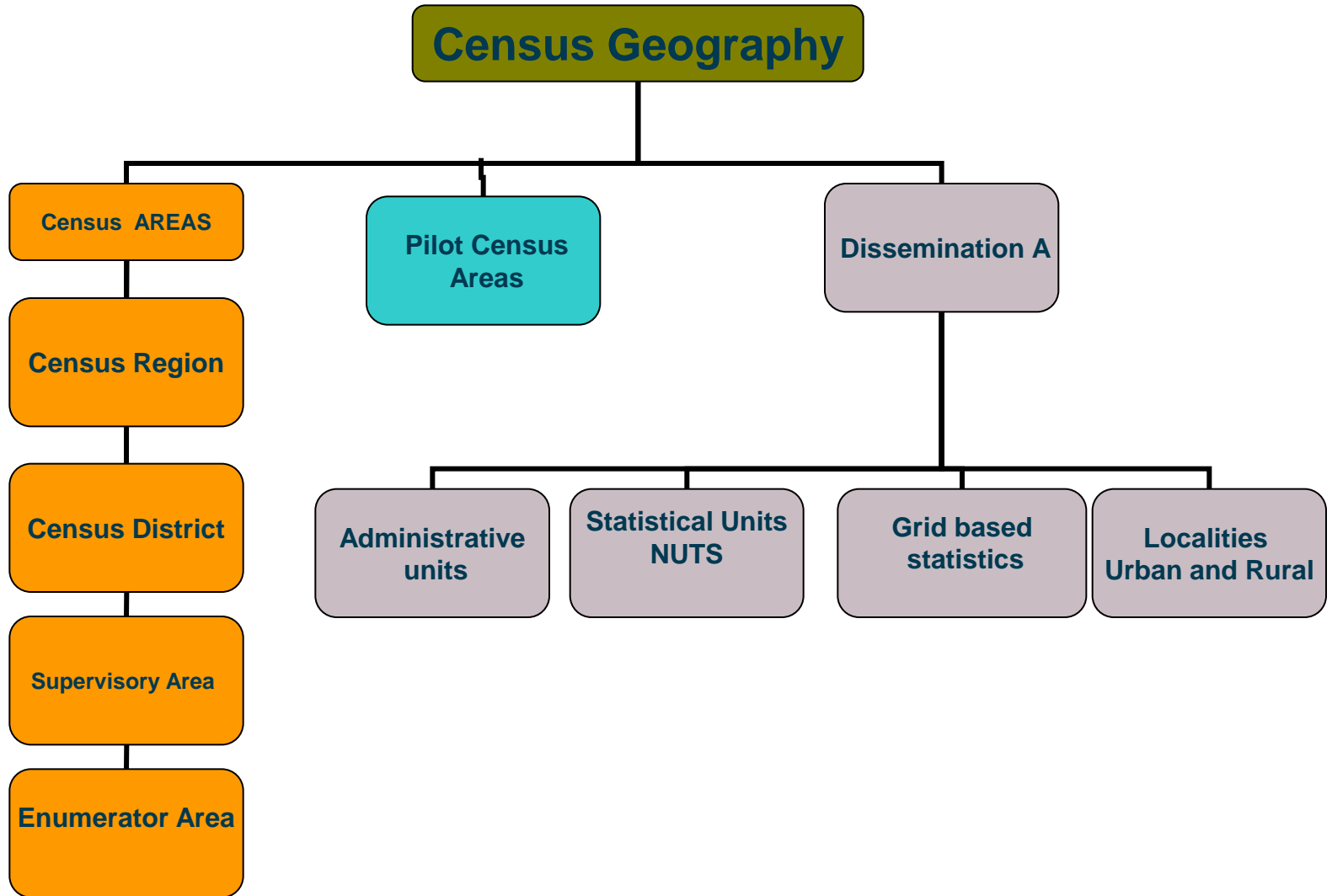
postal areas

voting districts

previous enumeration areas

.....

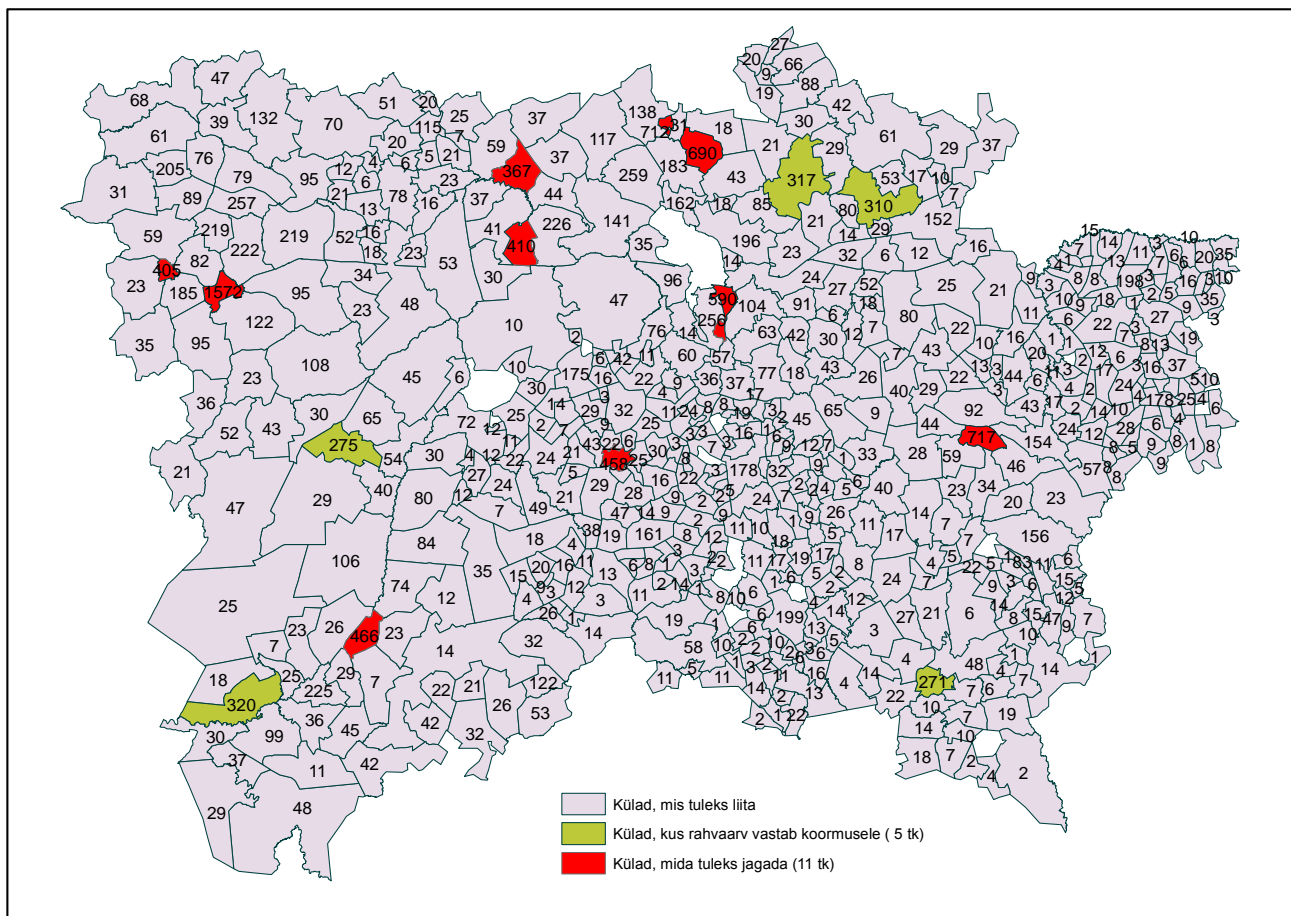
EA depends on the method of census and assigned
work load of the enumerators



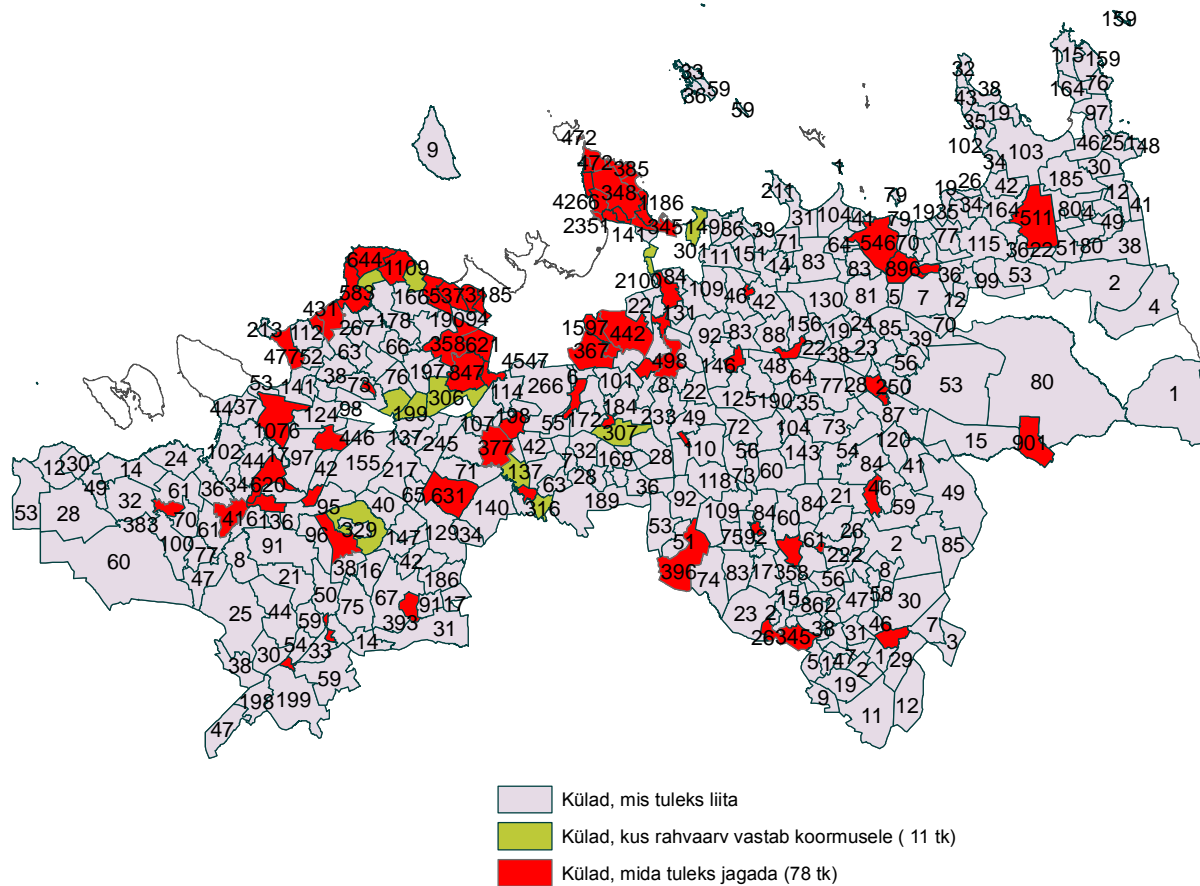
Compilation of EA vs using Administrative areas or previous Census EA in Estonia

- New Census Method in use
- Financial Pressure
- Other Surveys = wishing all in one solution
- Census 2000 EA are not applicable due to
 - heavy changes in settlement pattern
 - changed work load
- Decision: compilation of new functional EA + areas for other surveys

Inhabitants in settlements does not correspond to the work load of enumerators



Inhabitants in settlements does not correspond to the work load of enumerators



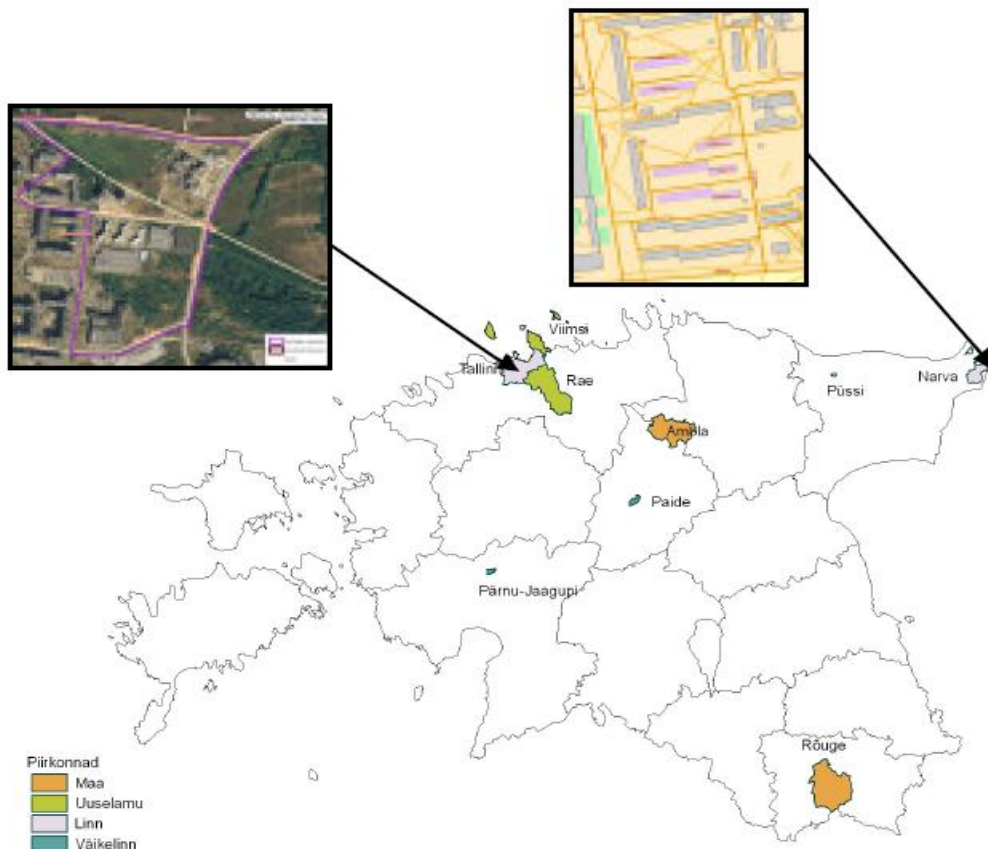
Settlements borders are not functional



Administrative borders tend to change over time



Pilot Census Areas , 2010

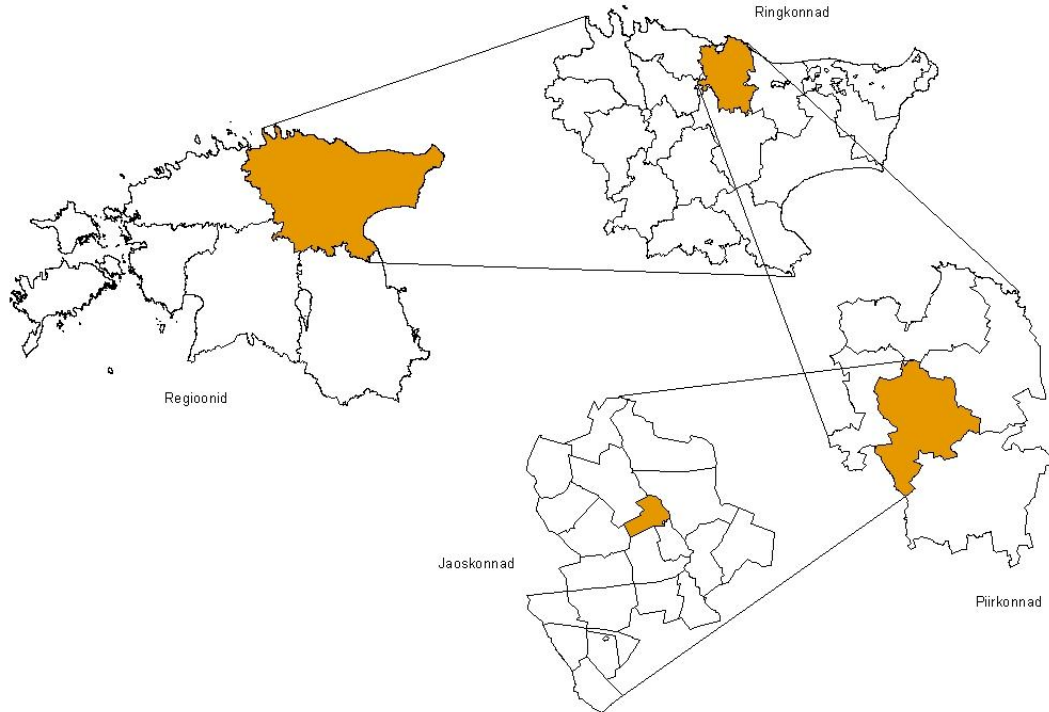


Valimi suurus on 10 000 elanikku/ 1 piirkonnas ca 1000 elanikku
Prooviloenduse alad, 2009. a

Census team needs info:

- Where the pilot census territories are located?
- How big are the territories?
- What is the current stage of the preparation?

Enumerator Areas – represent workload for enumerator



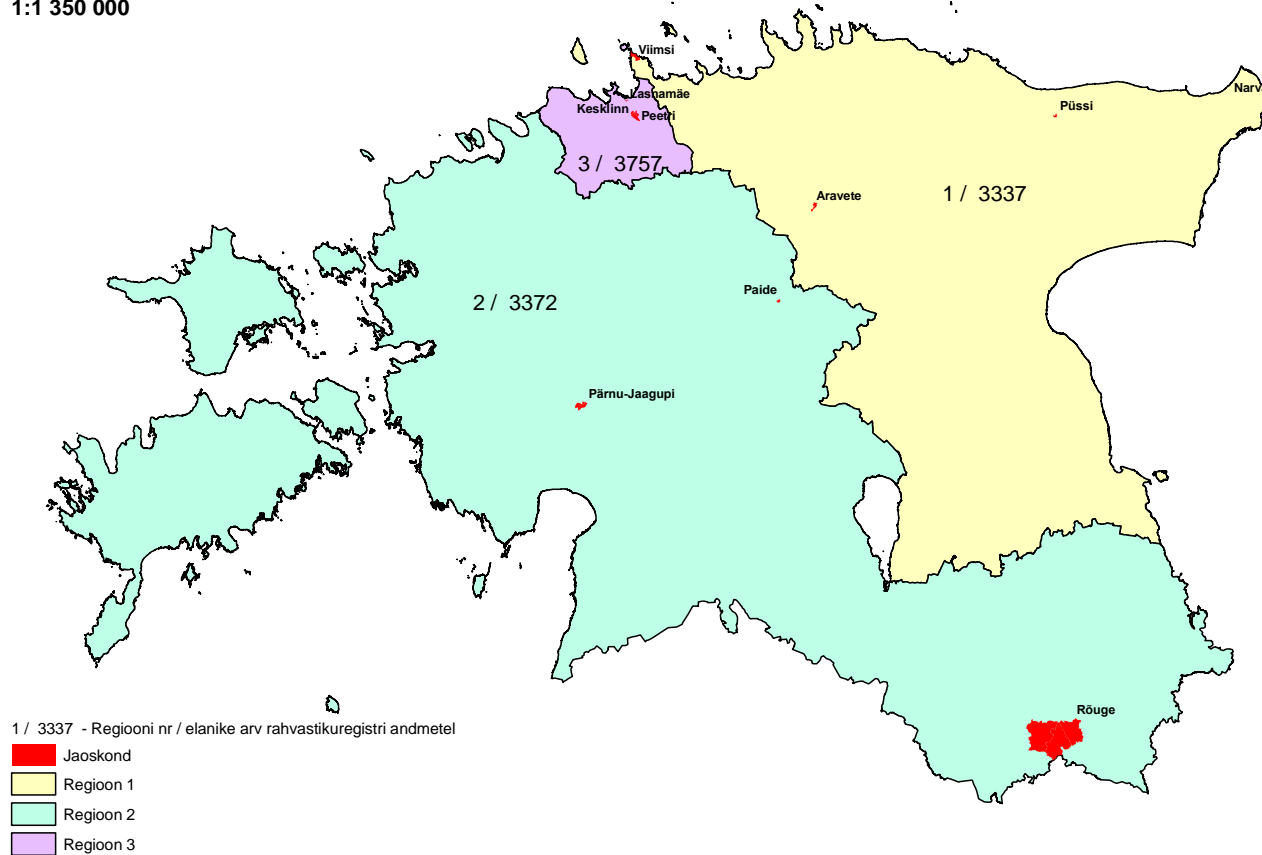
Rules applicable:

- Area must not consist of 2 separate areas
- Area must not contain “gaps”
- Area must not overlap
- Enumerator areas must be exhaustive (100% of the territory)
- The boundaries should be easily identifiable on the field
- Area must take into account the “natural barriers”
- Supports counting each person and housing unit once

Example of supervisory areas prior Pilot Census

Prooviloenduse regioonid, 2009

1:1 350 000



Hierarchy of Census 2011 EA

Eesti – Whole country



Region – Supervisory Area



Ringkond – Supervisory Area

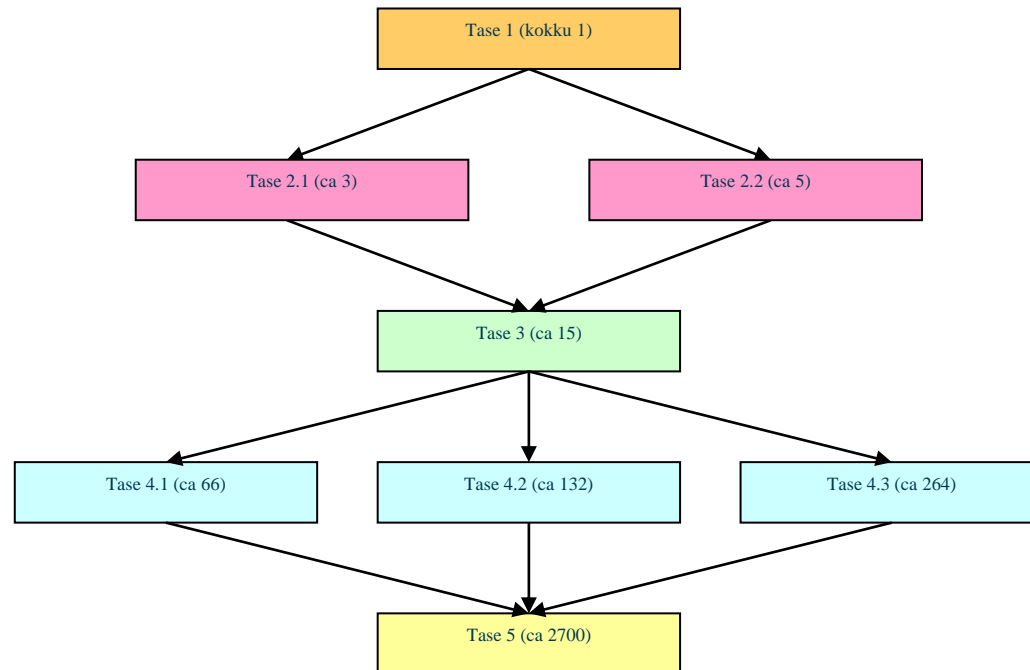


Piirkond – Supervisory Area



Jaoskond - EA

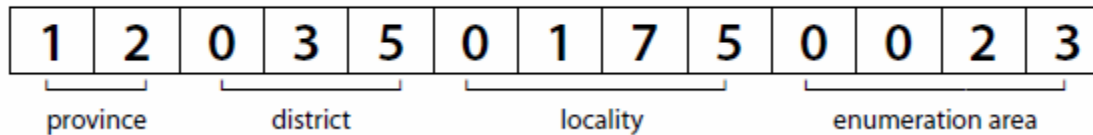
Census and other surveys work territories



Coding scheme

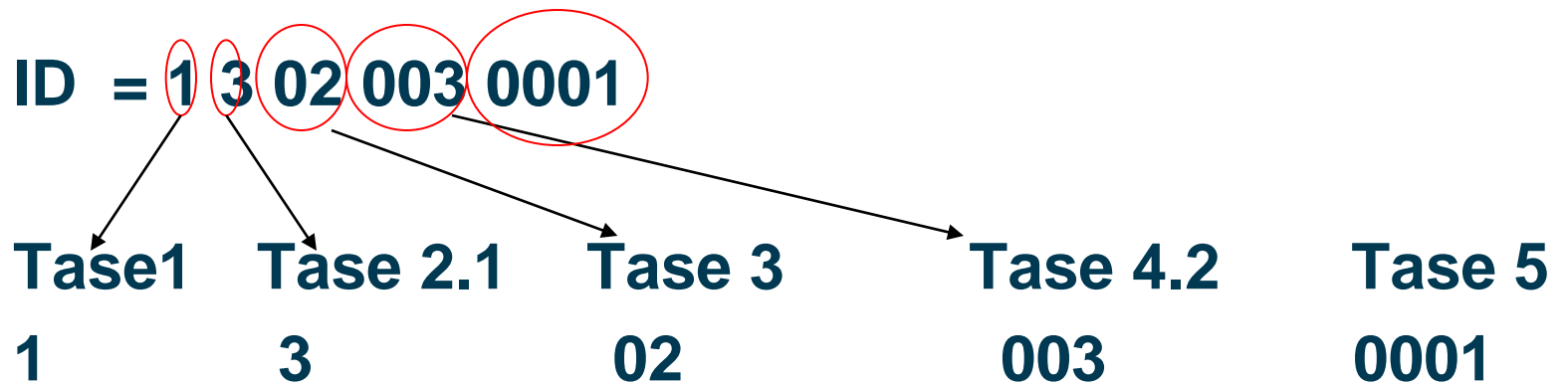
Source: *Handbook on Geospatial Infrastructure in Support of Census Activities*

Figure III.3
A generic enumeration area coding scheme



Coding Scheme in Estonia

Koodi näide REL puhul



Difficulties

- Difficult to estimate the % of e- census respondents in particular territory accurately
- Change in work load after the pilot census is too late for GIS staff => rise the cost and decrease the quality

**Compliaton of EA is time consuming
Work load should not be changed after the
beginning of compliation of EA**

Dissemination Areas

- LAU - Local Administrative units
- NUTS - Nomenclature of Units for Territorial Statistics)
- Functional territories (rural and urban areas (localities)
- Grids

- Some other countries are using also:
 - Enumerator areas
 - Postal code disitRICTS
 - Other territories (agricultural zones, service areas etc....)



Localities

- Main criteria
 - Urban and rural population clusters
 - People live in the neighbourhood
 - Houses should not be apart more than 200 m

- Generating locality territorial units with the aid of GIS
 - Using the standard GIS desktop SW (ArcEditor/ArcInfo)

Independent statistics from the change of borders

Benefits:

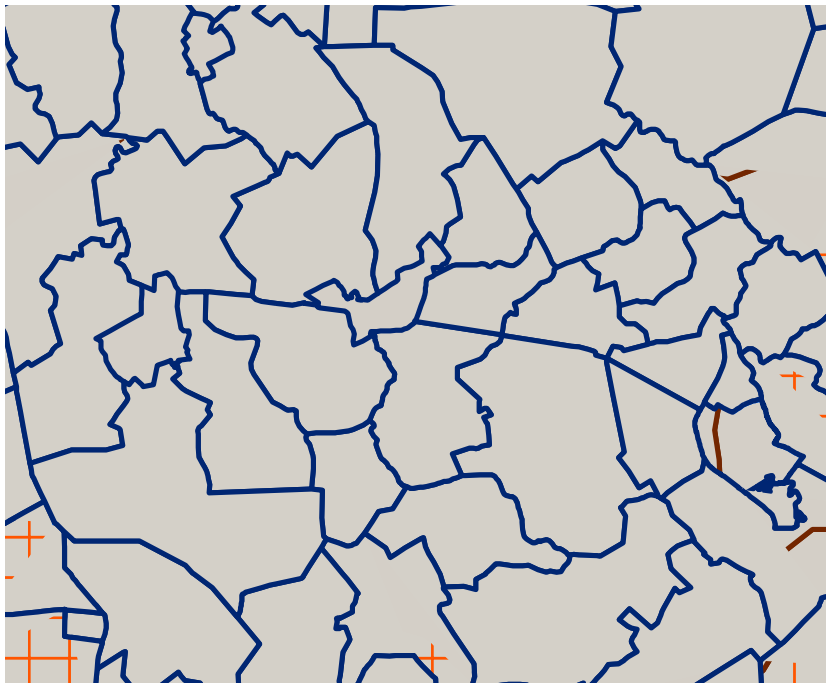
+ confidentiality

+ independent from the change of the boundaries of the administrative units

+ data are comparable in time and space; consistency in time and space

+ comparability with georeferenced Agricultural Census results

Data need to be geo-referenced on the building or cadastral parcel level



- Buildings
- Enumerated areas
- 1000m x 1000m grid
- parishes - 1992
- parishes - 2008

Geography dictionary

- Definition
- Coding
- Relationship between administrative and other statistical reporting or management units

Thank You!

