



REPUBLIC OF ESTONIA
LAND BOARD

Value affecting characteristics and valuation accuracy

Mass valuation experience in Estonia

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Mass valuation – what, why, how?

SIMULTANEOUSLY

- All land parcels in Estonia (~760 000)
- Value date 30.06
- Market-based valuation
- Sales for at least 5 years, older sales indexed

PERIODICALLY

- 1993, 1996, 2001
- Pause for 21 years
- 2022, 2026, 2030

BASED ON DATABASES

- Statistical generalisation
- Machine readable data
- No on-site observations are carried out
- Automatic valuation models
- Market tested

ONLY LAND

- Buildings not included
- Growing timber not included
- The impact of lease contracts or limited real rights not taken into account

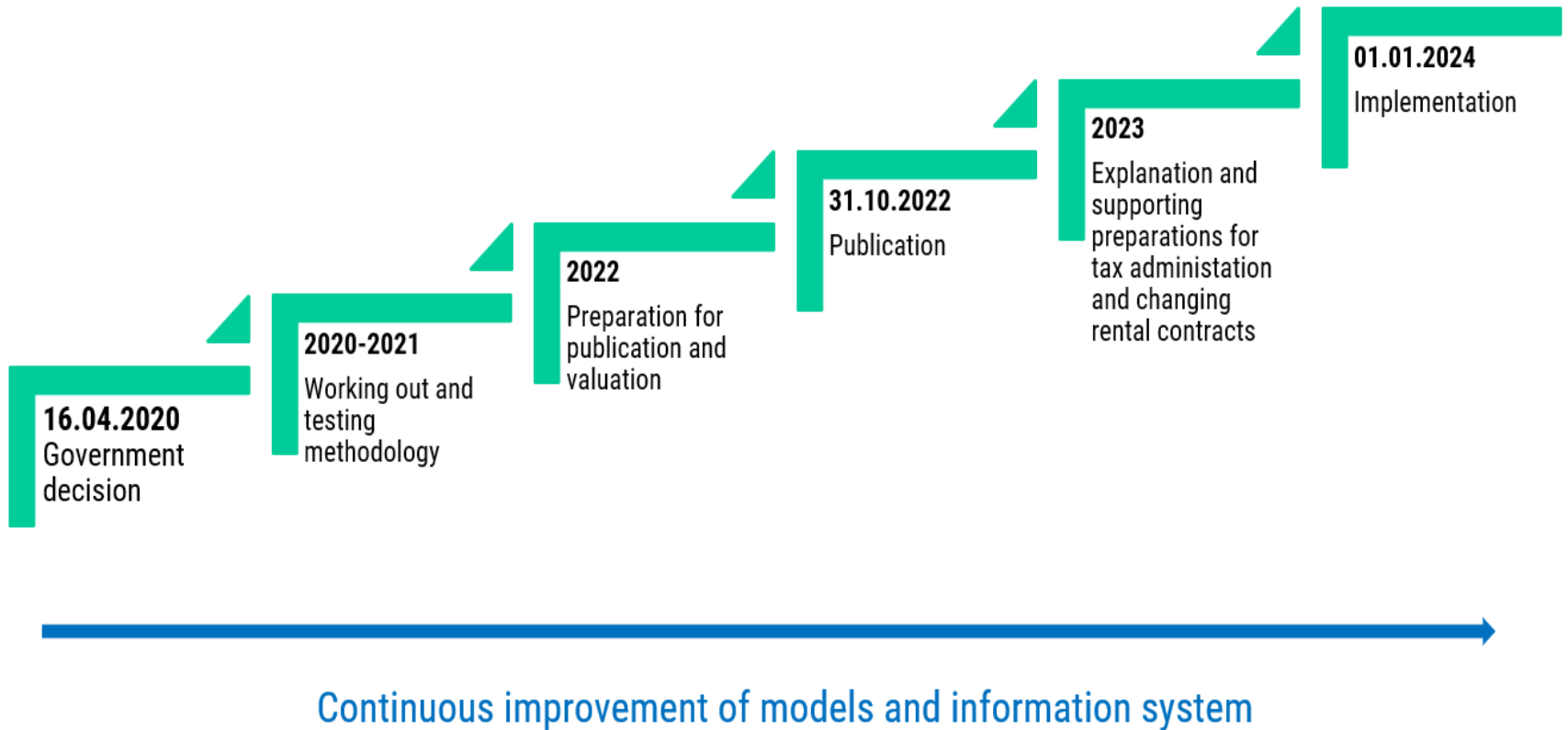
RESULT

- Approximate market value
- = Taxable value of land for each cadastral unit
- ≠ Land tax

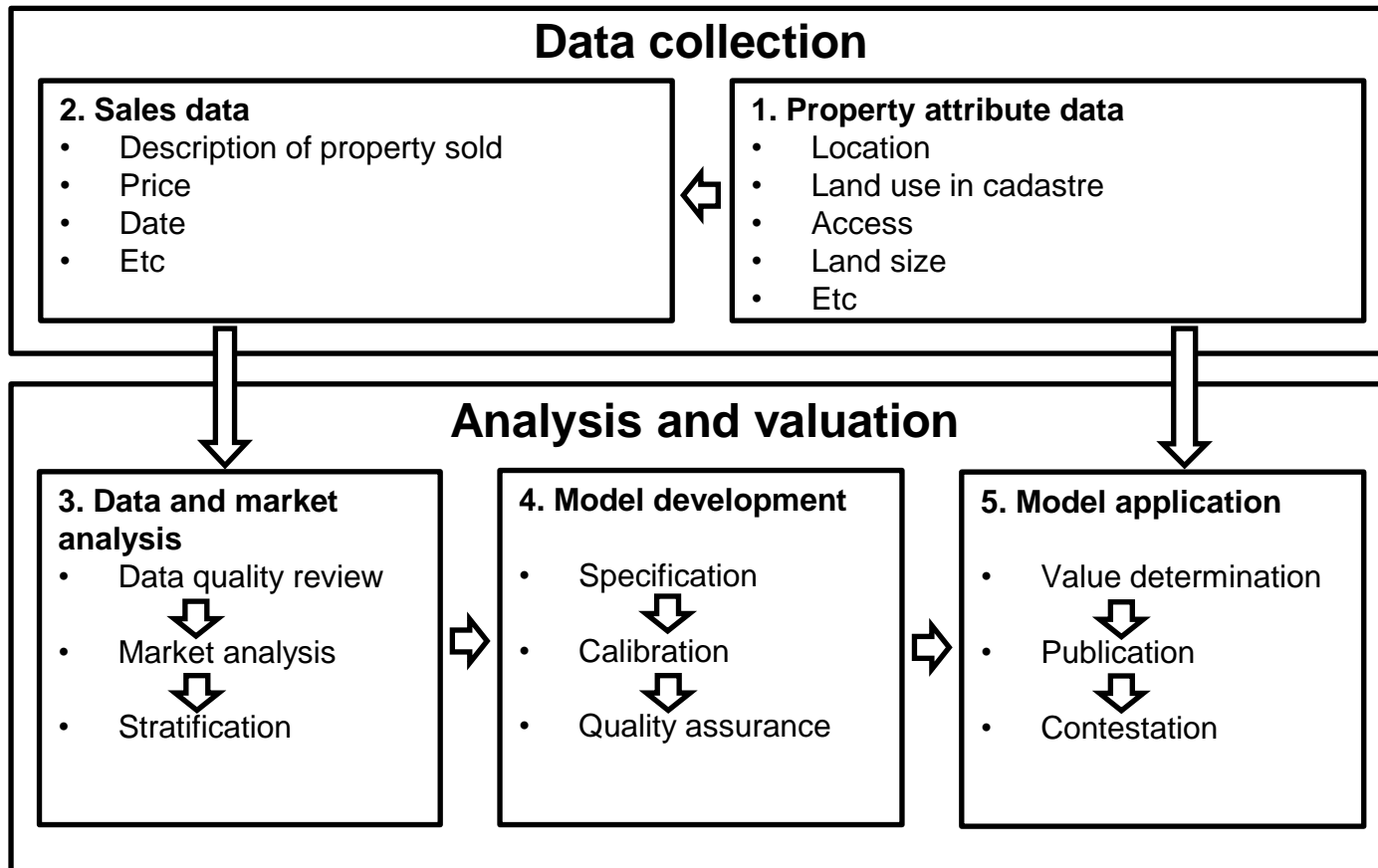
USE OF RESULTS

- Land taxation
- Contracts of use
- Tolerance compensations for utility works
- Simple transactions
- Financial reporting
- etc

Project timeline for 2022 mass valuation



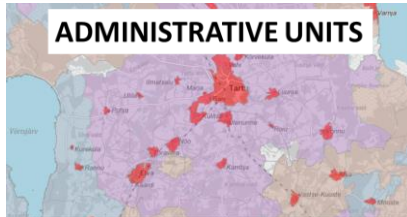
Mass Appraisal System



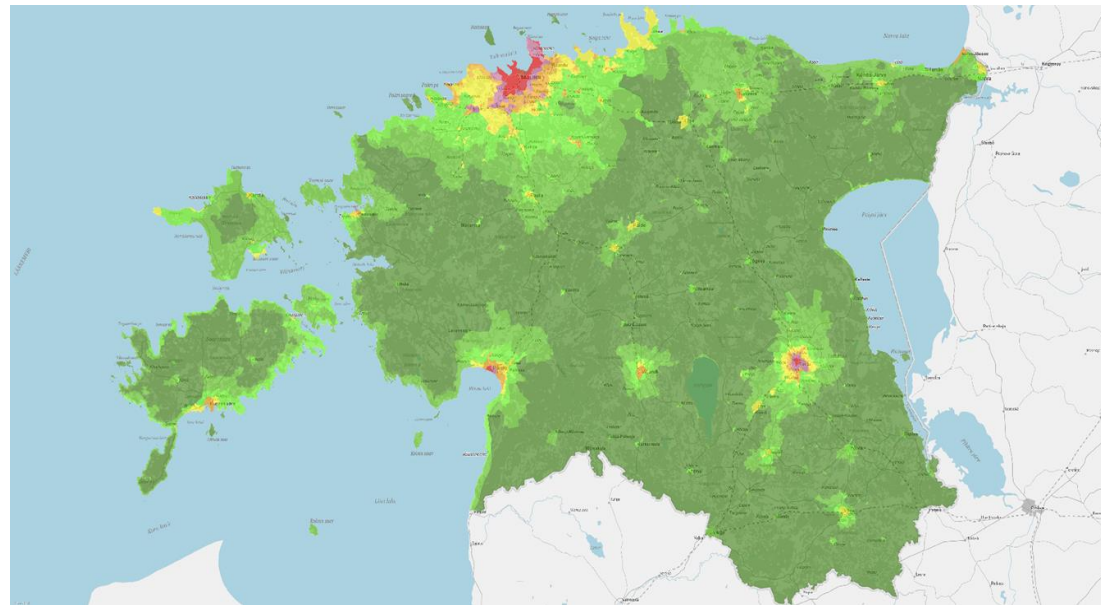
Starting from the beginning .. location, location, location

Micro-regions

Location classes



- Economic and social variables – population, income, labor, volume of new buildings etc
- Sales data



	I RED (Tallinn, Tartu)			II YELLOW (suburb, small town)		III GREEN (rural land)		
LOCATION CLASS	1	2	3	4	5	6	7	8
PRICE LEVEL OF RESIDENTIAL LAND (€/m ²)	300-...	100-300	50-100	20-50	10-20	5-10	1-5	0,05-1
THE LOWEST PRICE LEVEL IN THE AREA (€/m ²)	10	5	3	2	1	0,05	0,05	0,05

Market functions differently in different locations.

Analysis of characteristics



Land for buildings

- Nearest sales
- Area
- Proximity of water
- Building right
- ~~Distance from city centre~~
- ~~Electricity~~
- ~~Water/sewage~~
- ~~Road access~~
- ~~Building exclusion zones~~
- ~~Land restrictions~~
- etc



Agricultural land

- Nearest sales
- Soil fertility
- Excess moisture factor
- Area
- Road access
- ARIB registry status and land use (EU subsidies)
- ~~Distance to nearest settlements~~
- ~~Closeness of active nearby farms~~
- ~~Land restrictions~~
- ~~Compactness~~
- etc



Forest land

- Forest land type
- Soil fertility
- Land improvement
- ~~Nearest sales~~
- ~~Area~~
- ~~Distance to nearest settlements~~
- ~~Road access~~
- ~~Land restrictions, nature restrictions~~
- etc

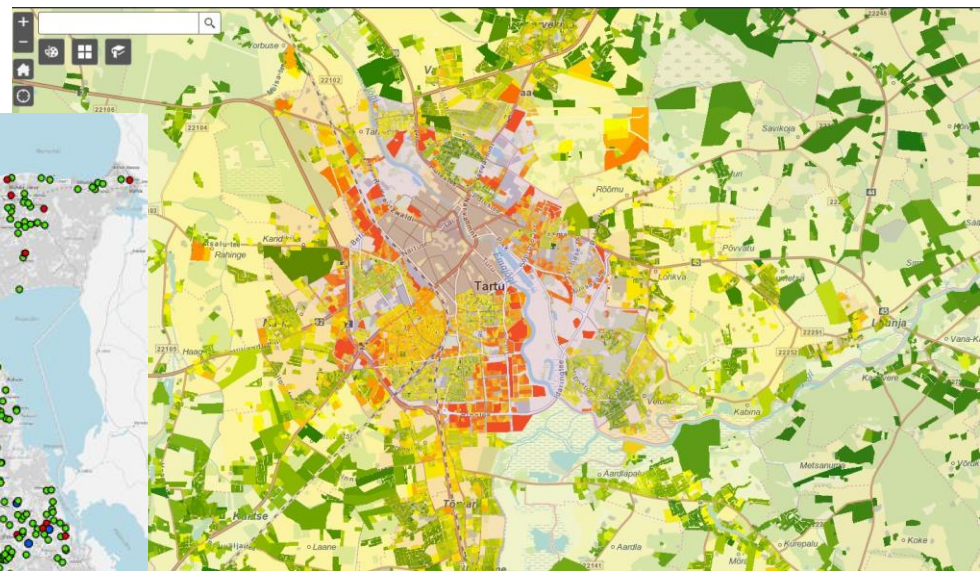
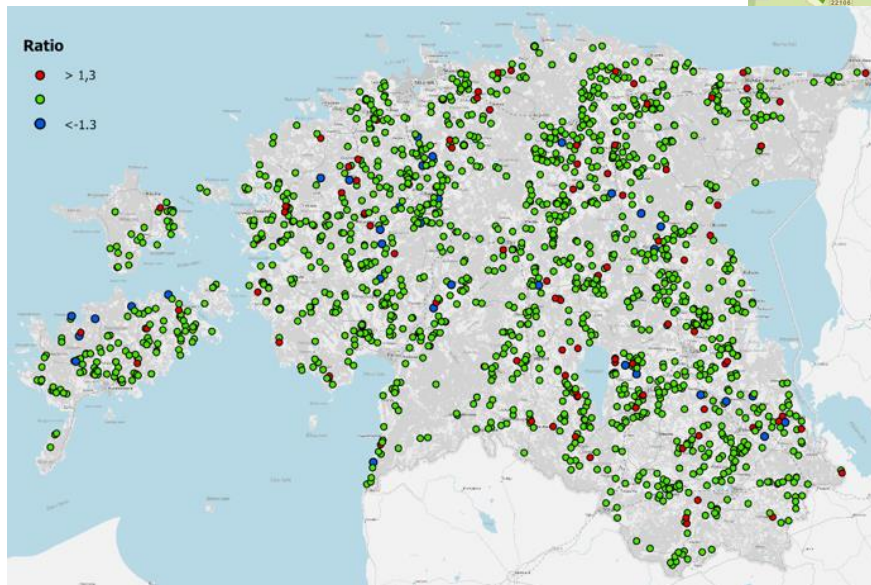
Characteristics excluded:

- insufficient data quality
- the effect was not statistically important
- the relation of the effect had no logic or too weak.

Testing



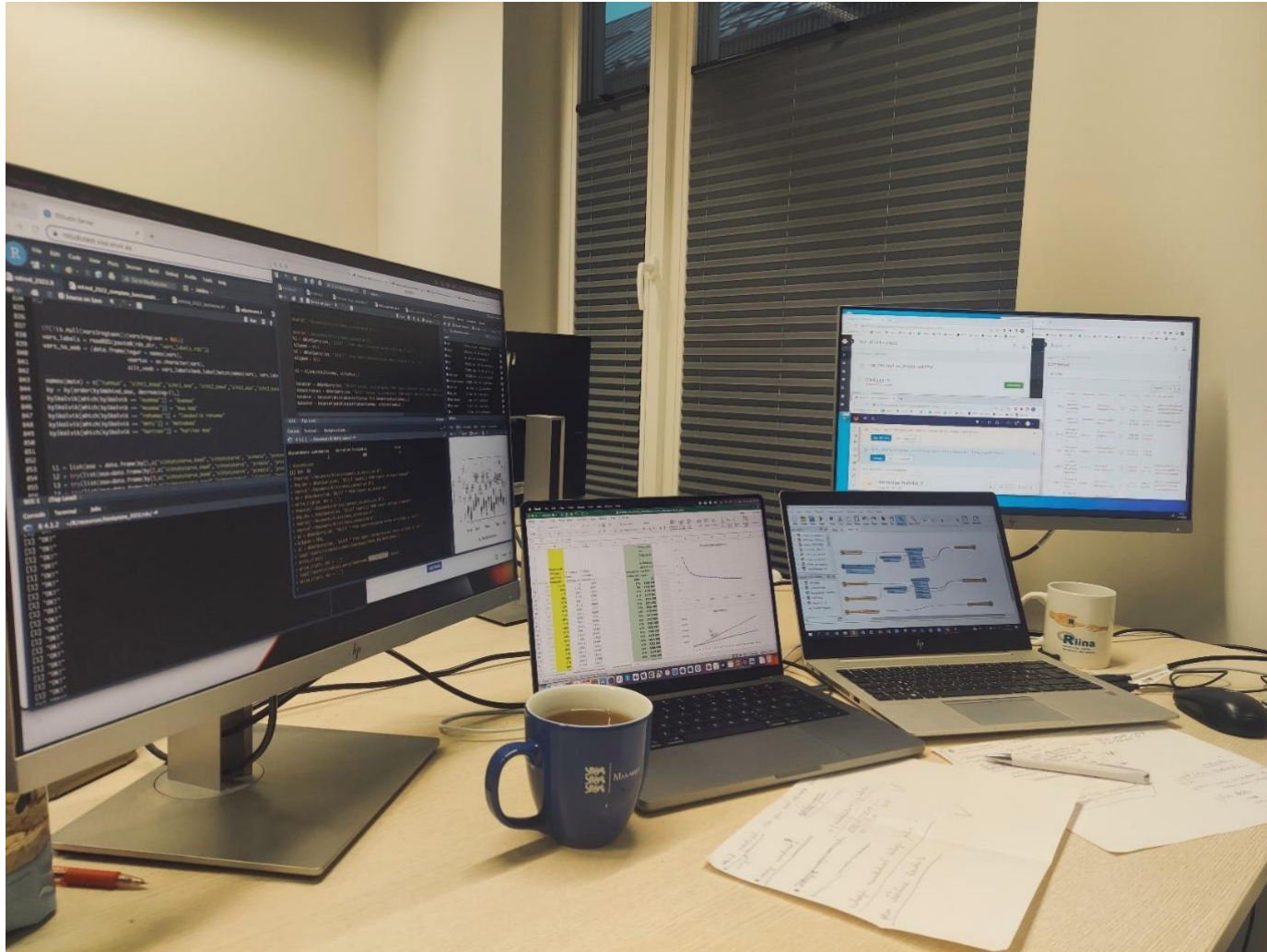
- IAAO *Standard on Ratio Studies*
- Visualisation – GIS tools show anomalies
- Expertize from professional valuers
- Foreign expertize



How do we calculate values?

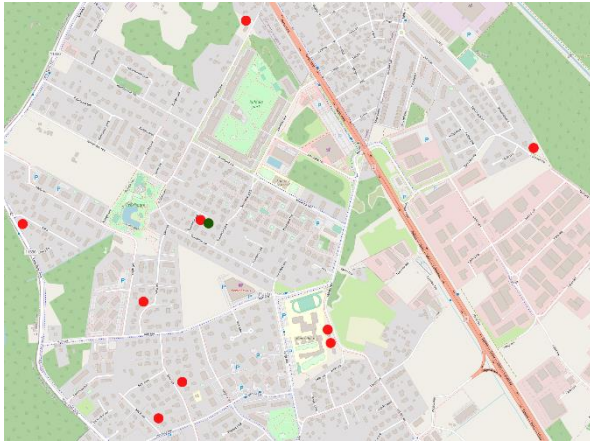
Valuation model	Value
BUILDING RIGHT MODEL	Urban region value of a building right for closed gross area
BUILDING LAND MODEL	Analysis of residential land sales 10 nearest sales Effect of various characteristics
AGRICULTURAL LAND MODEL	Analysis of arable land sales 10 nearest sales Effect of various characteristics
FOREST LAND MODEL	Forest land base value x quality factor *Quality factor (forest land type, soil fertility, land improvement)
MODEL FOR LAND WITHOUT ACTIVE MARKET	Lowest value of location class

Valuation pilot cabin



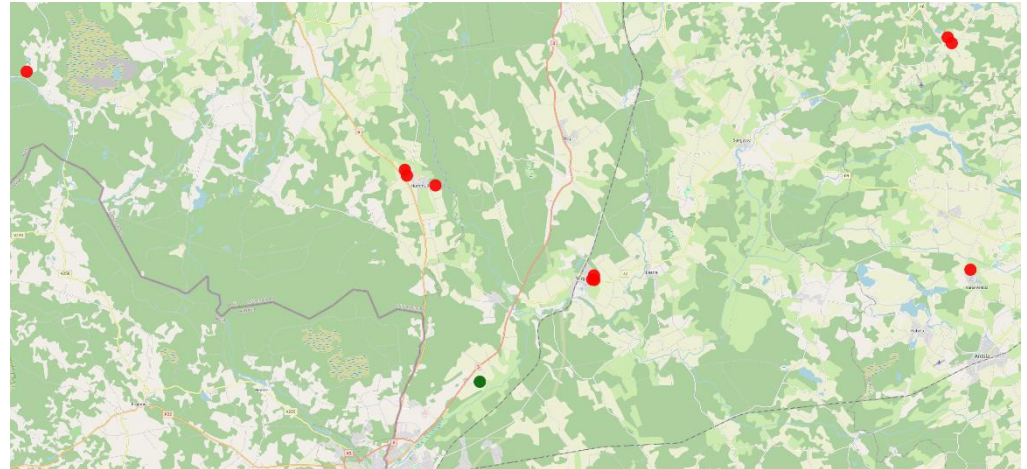
Volume and similarity of sales affects valuation accuracy

Location class 3



Active market
Longest distance between
nearest sales 1,2 km
Similar location and land plots
Typical size

Location class 8



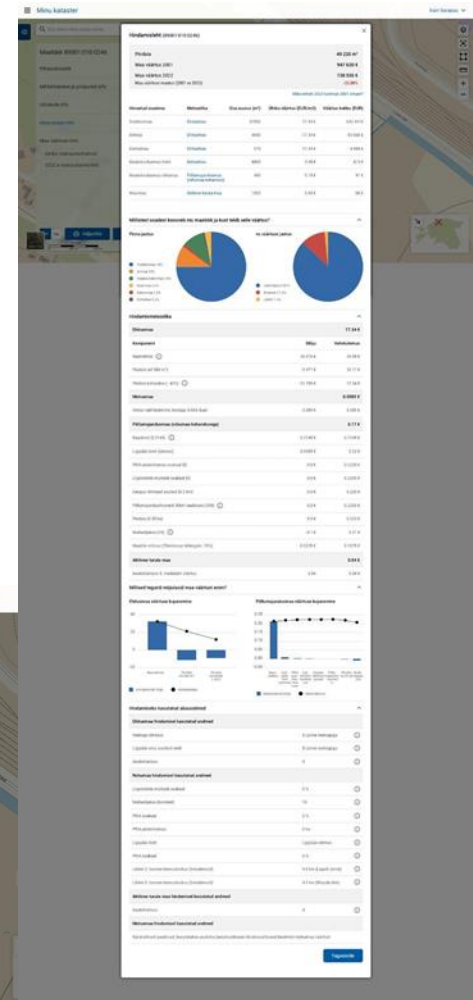
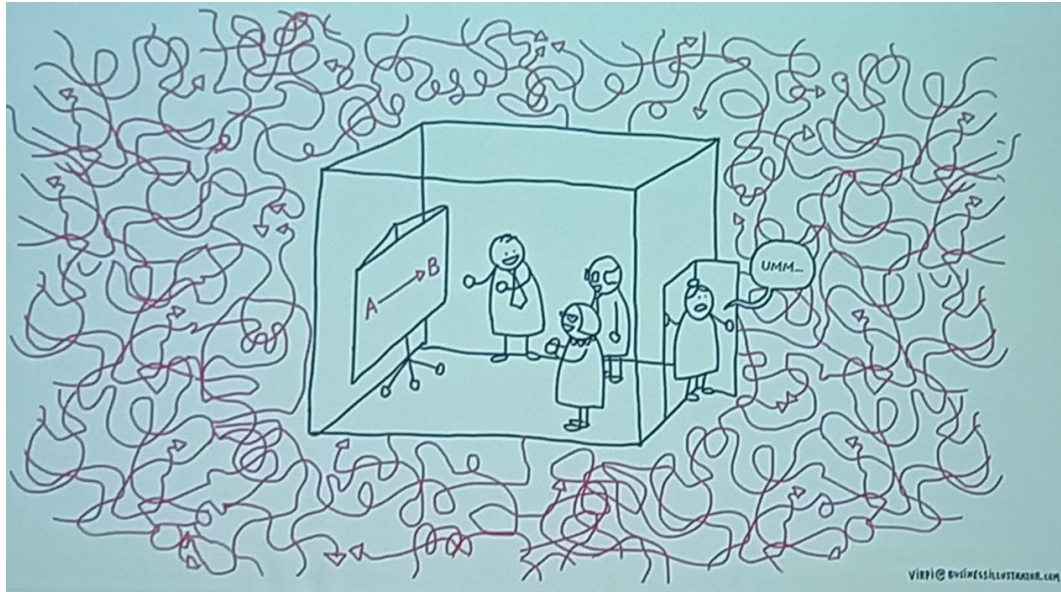
Not so active market
Nearest sale 8 km, longest 30 km
Sizes vary

Valuation accuracy

	Mass valuation	Individual valuation
Value	Market based value (approximate) Statistical generalisation	Mostly market value
Value date	Same valuation date for whole project	Depends on date of observation, valuation order etc
On-site observation	No on-site observations are carried out	On-site observation obligatory
Best use	Mostly best use, but in some cases actual use	Best use
Amount of land plots	Very big	Small
Valuation accuracy	Lower 80% of land plots achieve valuation accuracy of 30%	Higher Mostly for land 10-30%

It is science, but not an exact science .. it is an ongoing process!

Until next mass valuation 2026



- We explain
- We gather ideas for the next valuation
- We analyze characteristics

Time goes fast!



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Thank You !