NAVIGATING SPATIAL PLANNING IN ESTONIA:
Municipal Challenges, Strategic Development end Evolving Vision of the National Spatial Plan Estonia 2050

RIGA 7th Feb 2025

Pille Metspalu, PhD

Within the framework of the European Union Cohesion Policy Program for the period 2021–2027, Specific Support Objective 5.1.1 "Promoting the integrated social, economic, and environmental development of local areas and the cultural heritage, tourism, and security in the functional urban areas" Measure 5.1.1.2 Project No. 5.1.1.2/1/23/I/001 "Improving the capacity of municipalities and planning regions".

Līdzfinansē Eiropas Savienība

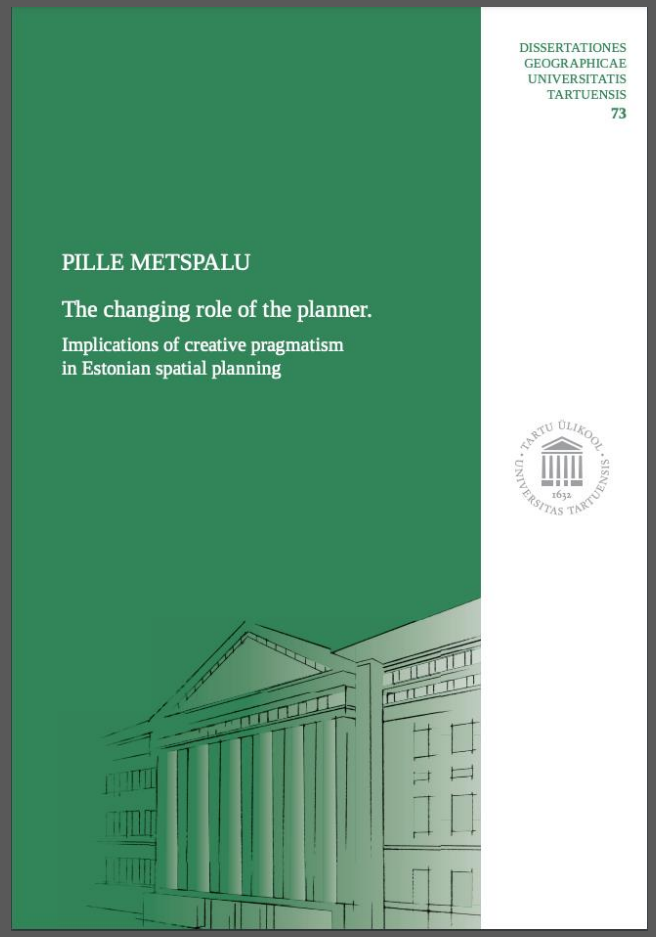
2027 Nacionālais attīstības plāns

Vides aizsardzības un reģionālās attīstības ministrija

TARTU ÜLIKOOL · UNIVERSITY OF TARTU · 1632

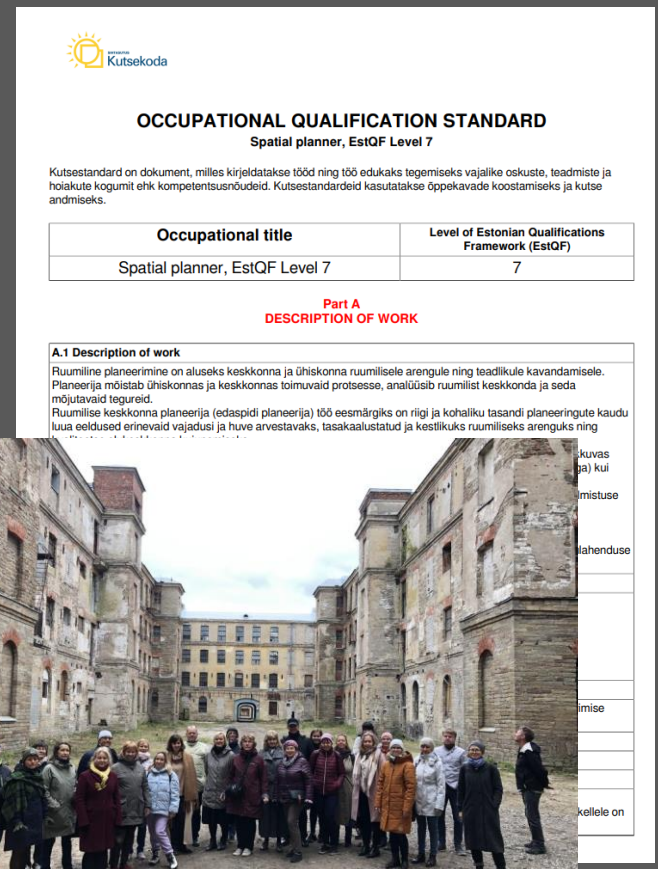
HENDRIKSON ÖGE

Estonian Association of Spatial Planners



PhD thesis on creative pragmatism in Estonian spatial planning (2019), **University of Tartu**

Head of comprehensive and regional planning in spatial planning and environmental consultancy company **Hendrikson DGE**


Kutsekoda

OCCUPATIONAL QUALIFICATION STANDARD

Spatial planner, EstQF Level 7

Kutsestandard on dokument, milles kirjeldatakse tööd ning töö edukaks tegemiseks vajalike oskuste, teadmiste ja hoiakute kogumit ehk kompetentsusnõudeid. Kutsestandardeid kasutatakse õppekavade koostamiseks ja kutse andmiseks.

Occupational title	Level of Estonian Qualifications Framework (EstQF)
Spatial planner, EstQF Level 7	7

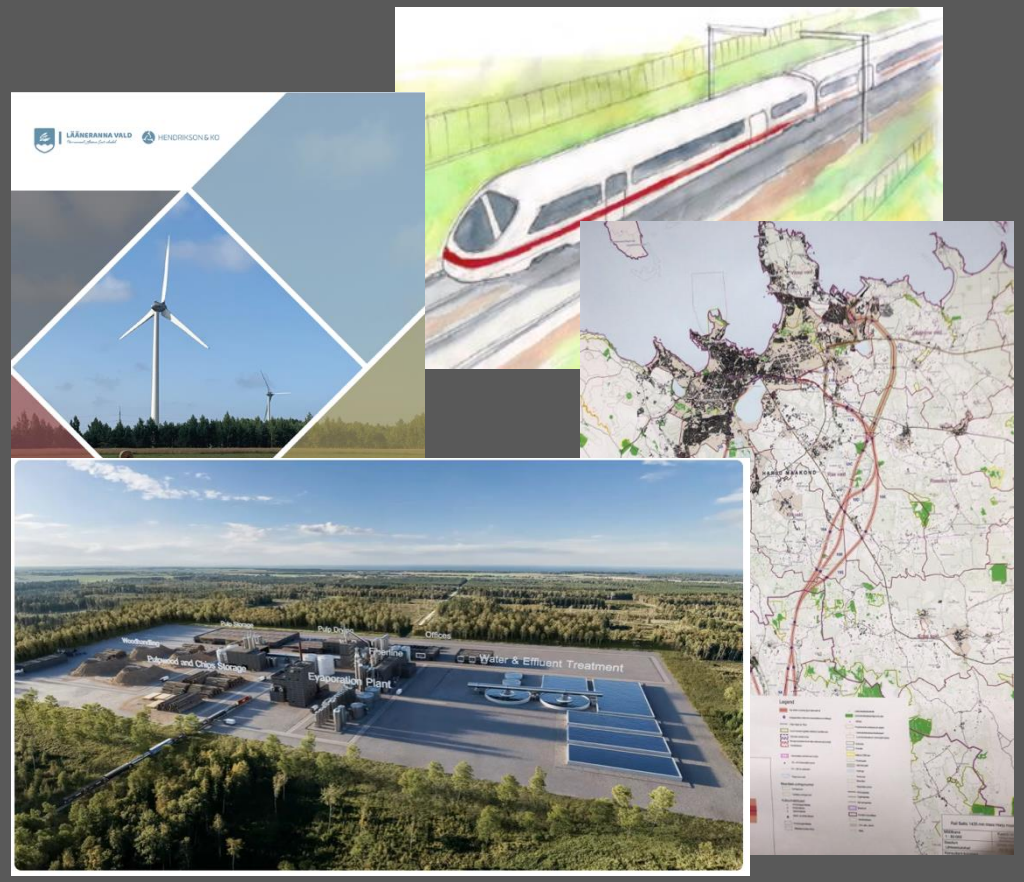
Part A
DESCRIPTION OF WORK

A.1 Description of work

Ruumiline planeerimine on aluseks keskkonna ja ühiskonna ruumilisele arengule ning teadlikule kavandamisele. Planeerija mõistab ühiskonnas ja keskkonnas toimuvaid protsesse, analüüsib ruumilist keskkonda ja seda mõjutavaid tegureid.
Ruumilise keskkonna planeerija (edaspidi planeerija) töö eesmärgiks on riigi ja kohaliku tasandi planeeringute kaudu luua eeldused erinevaid vajadusi ja huve arvestavaks, tasakaalustatud ja kestlikuks ruumiliseks arenguks ning

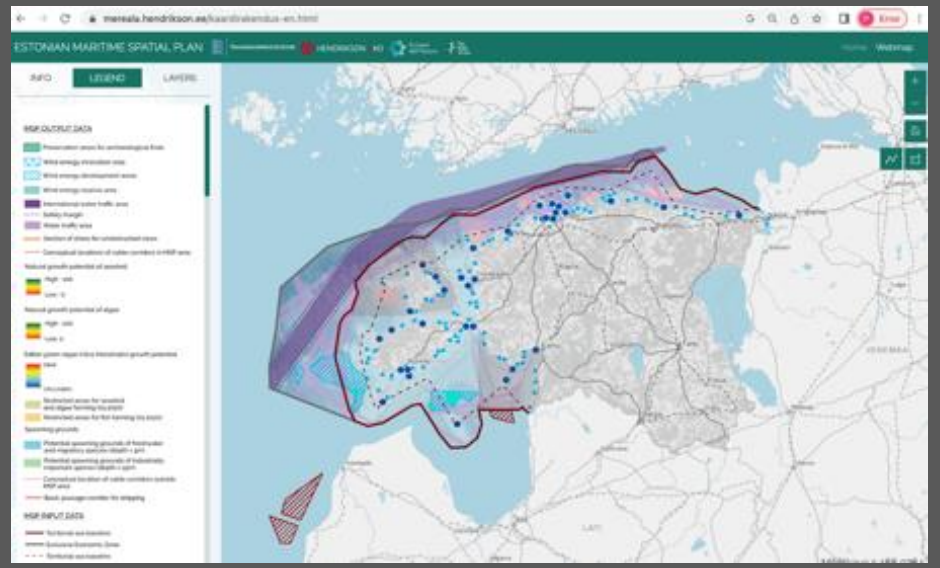
Estonian Association of Spatial Planners, member of the board and the planners' Ceritification Committee

My professional experience:



Spatial plans for objects with significant spatial impact - windfarms, factories, Rail Baltic

Comprehensive plans for local municipalities



Estonian Maritime Spatial Plan

Agenda:

1. Latvia and Estonia – like twins?
2. Spatial planning in Estonia
3. How do we plan objects with significant spatial impacts in Estonia? What's the situation with wind energy planning?
3. How do we cope with shrinkage in Estonia? The examples of comprehensive plans for town of Narva and Tõrva rural municipality.
4. Drafting a new national plan "Estonia 2050".

Latvia & Estonia

VASAB
VISION & STRATEGIES AROUND THE BALTIC SEA

Country Fiche on Terrestrial Spatial Planning

LATVIA

Updated June 2024

The main **challenges** influencing spatial planning are depopulation, low population density, peripherialisation, increasing ageing, employment (especially in rural areas), outdated infrastructure, revitalisation of degraded territories and contaminated sites, management of EU protected habitats and specially protected nature areas (including Natura 2000 areas), changing land use and landscapes, adaptation to climate change effects (including with green infrastructure/nature based solutions), climate change mitigation measures, capacity of governance institutions and local governments, cooperation of governance institutions, effective engagement of stakeholders in planning, information exchange, funding for spatial planning solutions etc. All of these factors are site-spacific and influence the content of spatial development planning documents, but an overarching challenge is to improve socio-economic development taking into consideration environmental protection measures.

Important challenge is the modernisation of public administration and ability to adapt to currently rapidly changing spatial planning needs. There are new tools and solutions that are still insufficiently used to improve the sphere of spatial planning in municipalities and institutions. A positive example for using new tools is Spatial development planning information system (TAPIS) that was introduced by Ministry of environment protection and regional development. This system allows all 119 municipalities to upload and to produce their planning documents on a common digital platform, making all documents available for institutions, territory planners and citizens in one place online – TAPIS (please see the chapter 4 for more detailed information). Still there are some municipalities that have not uploaded or produced their planning documents through this system. It shows the lack of motivation to work more efficient and better.

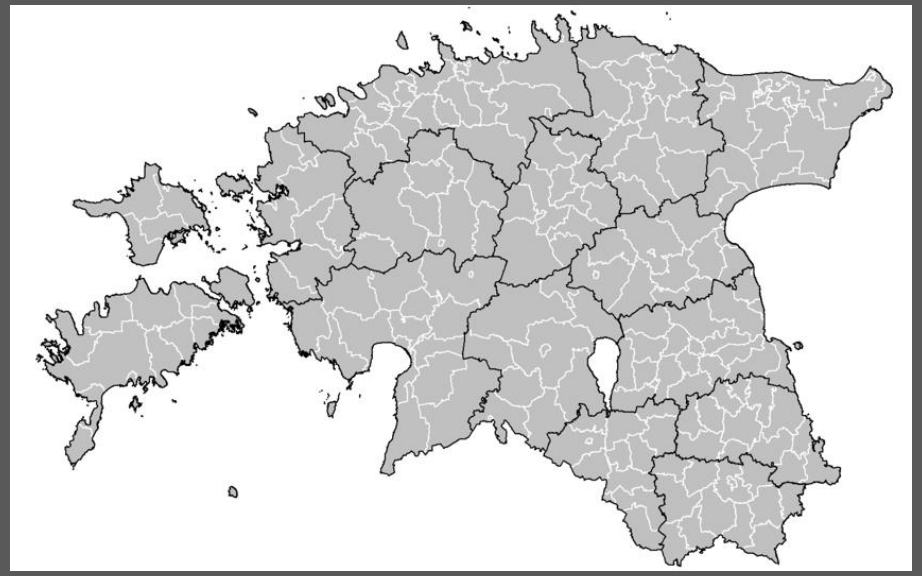
✓

Same in Estonia!

Indicator	Estonia	Latvia
Population Density	30.2 inhabitants/km²	29.1 inhabitants/km²
Share of Population in Capital City	Approximately 33.5% (Tallinn: 457,572; Estonia total: 1,366,491)	Approximately 32.3% (Riga: 605,273; Latvia total: 1,874,000)
Number of Cities with >50,000 People	3 (Tallinn, Tartu, Narva)	5 (Riga, Daugavpils, Liepāja, Jelgava, Jūrmala)
Share of Municipalities with Population Shrinking	~75% (OECD Report)	~85% (OECD Report)
Share of Municipalities with Population Growing	~25% (Growth mainly in Harjumaa, Tartumaa, and Hiiumaa; driven by Tallinn and Tartu regions)	~15% (Growth mainly in Pierīga, Jūrmala, and some other municipalities around Riga)

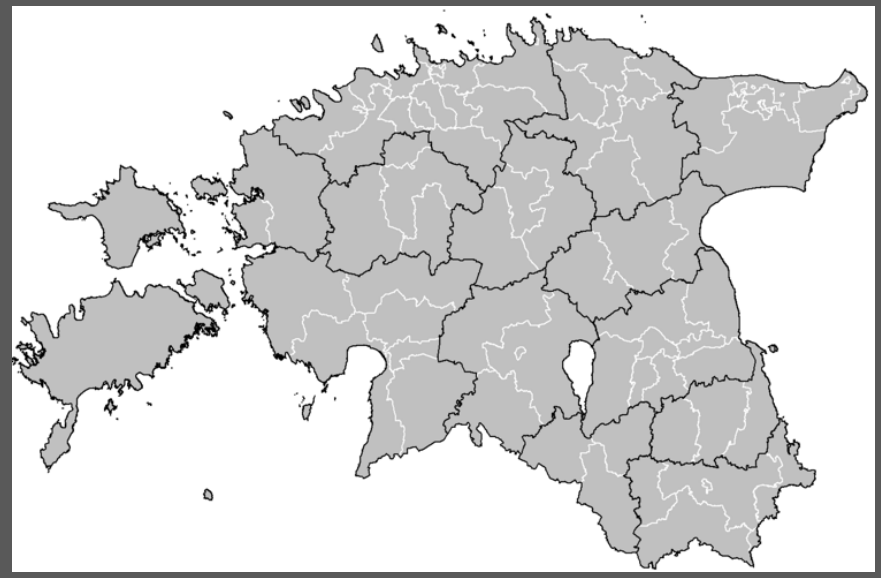
ChatGPT

213 → 79
local municipalities



Estonian
administrative structure 2016 –
213 towns and rural
municipalities

No regional government, although county plans do exist

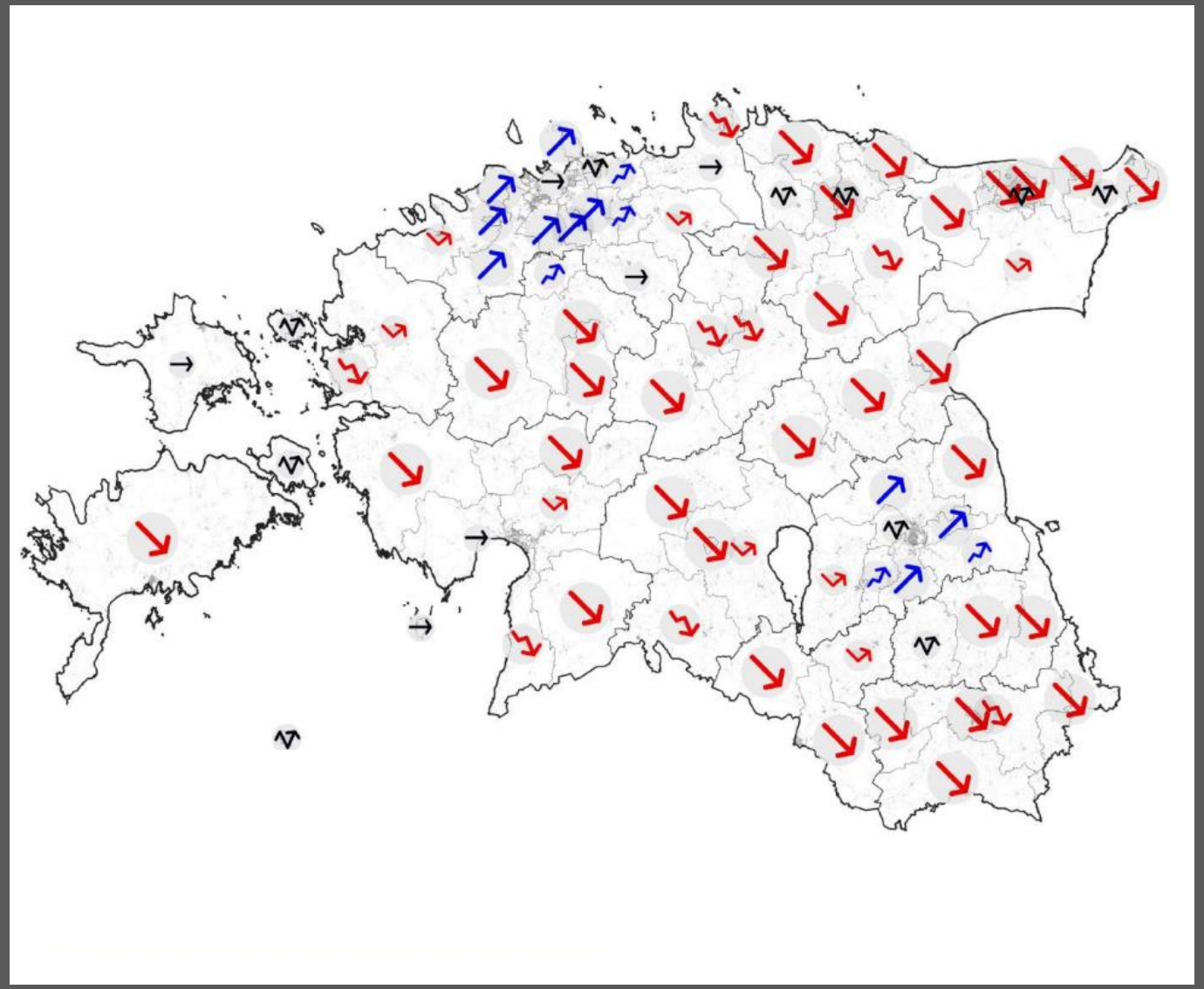


Estonian
administrative structure 2017 –
79 towns and rural municipalities

Shrinkage in Estonia

From 2000 to 2014, the building area per capita in Estonia increased by 18% (6th place among OECD countries). Meanwhile, Estonia's population decreased by 5% - our landuse is not sustainable.

In last 20 years we have lost more than 70 000 inhabitants.



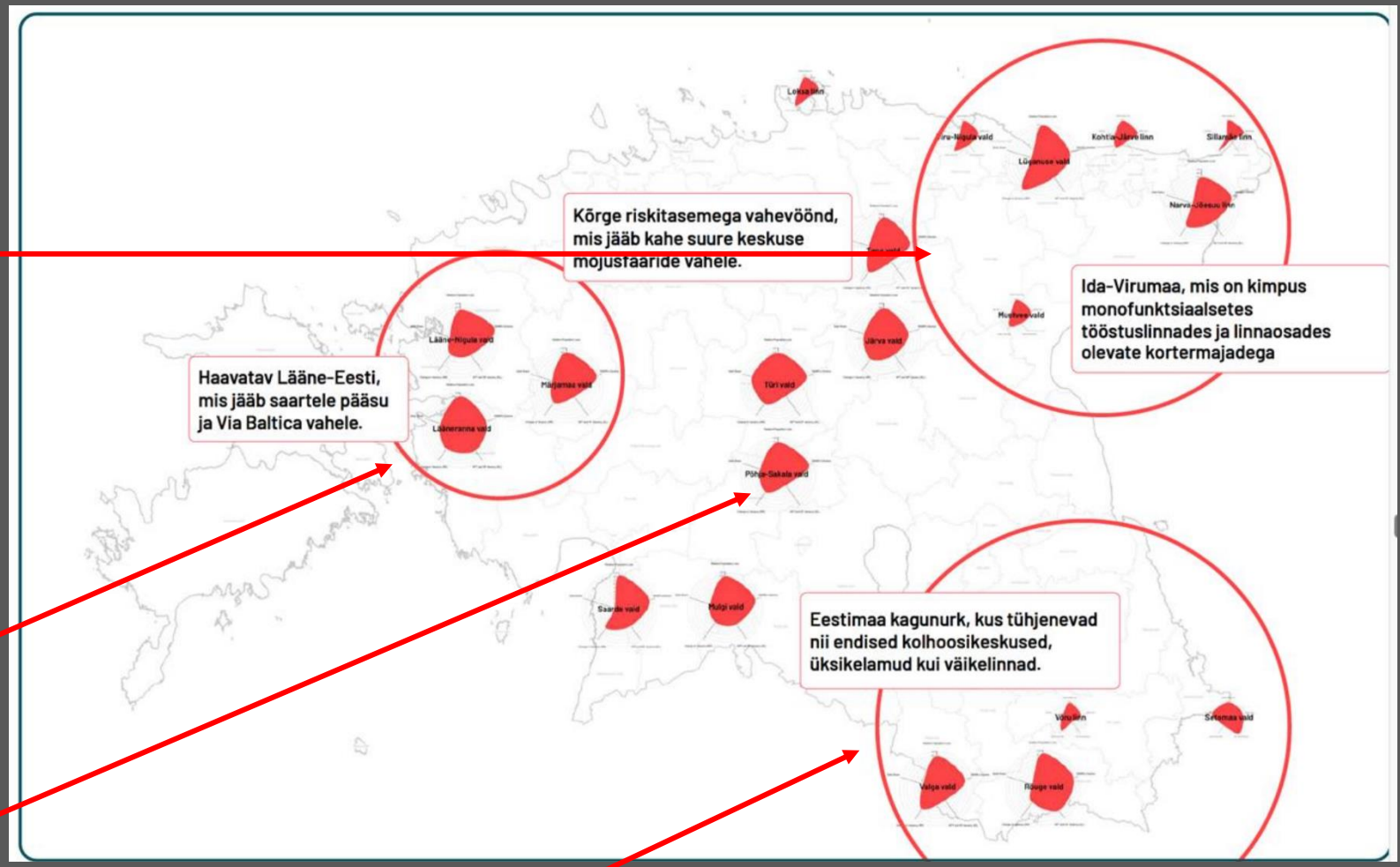
Spin Unit 2022

The reasons for the decline as well as the future perspectives vary by region.

North-Eastern Estonia, which struggles with monofunctional industrial towns and sparsely distributed apartment buildings.

Vulnerable Western Estonia in between the islands and Via Baltica.

A high-risk intermediate zone between two major centers of influence.



Spin Unit 2022

The southeastern corner of Estonia, where former collective farm centers and small towns, as well as single-family homes in sparsely populated areas, are becoming depopulated.

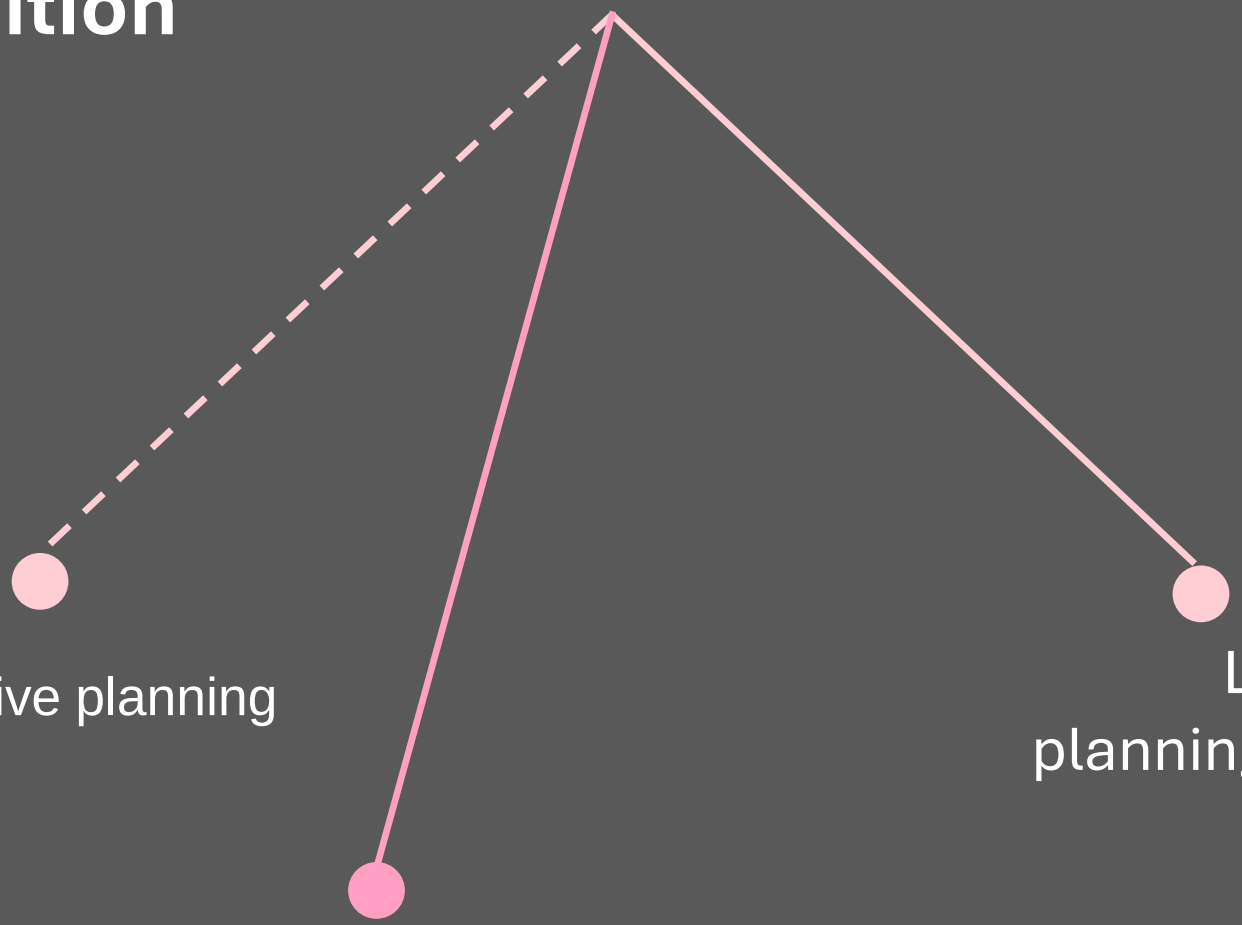
Spatial Planning in Estonia

Soviet past

- Centrally planned command economy – planning having a negative connotation
- State-owned land and development rights
- Strict norms and standards, certain and pre-defined outcomes
- Rapid urbanisation, pre-fabricated apartement blocks in large residential districts

- People distrustful and sceptical about planning

Rapid transition



Soviet central normative planning

Until 1991

"Legal planning" – strict and complex legal conditions to enhance judicial certainty

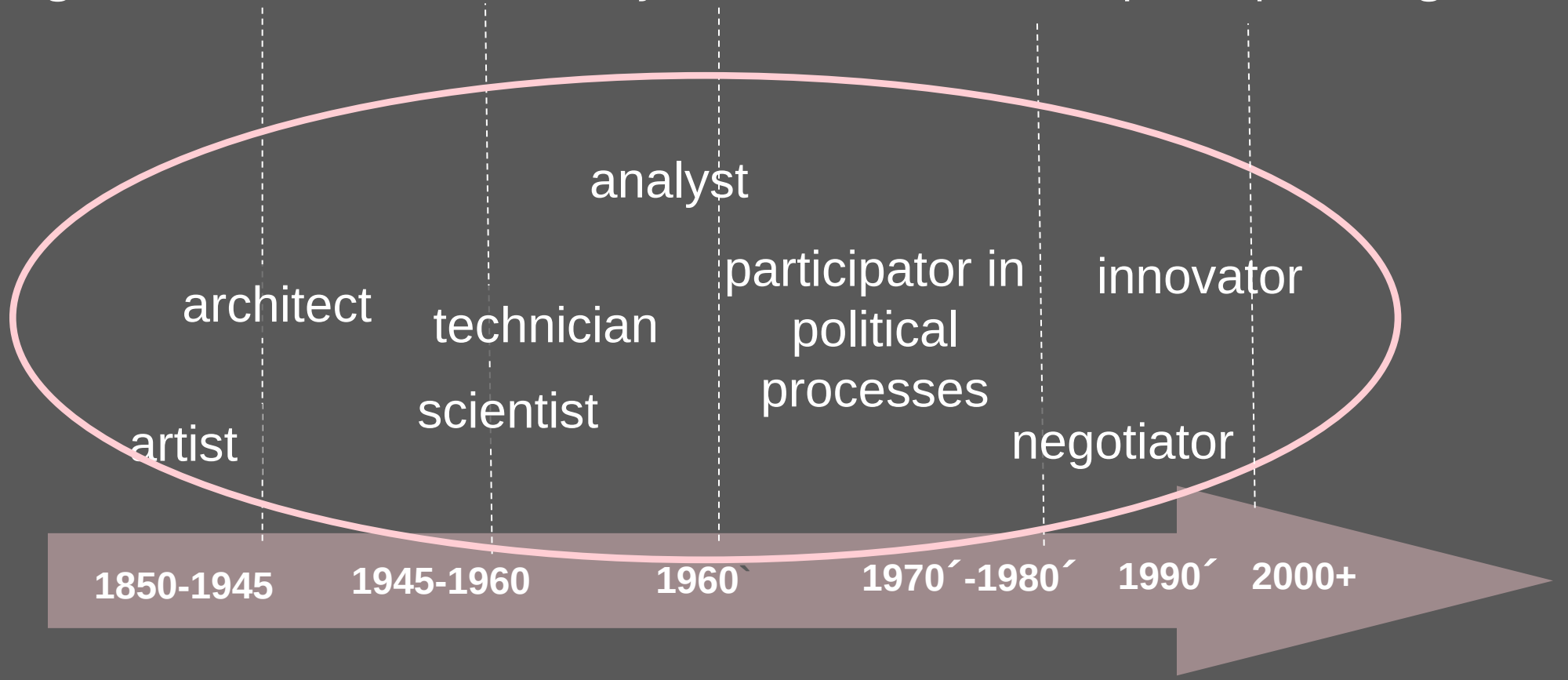
2010 onwards

Liberal market-oriented planning, abolishment of rules and standards

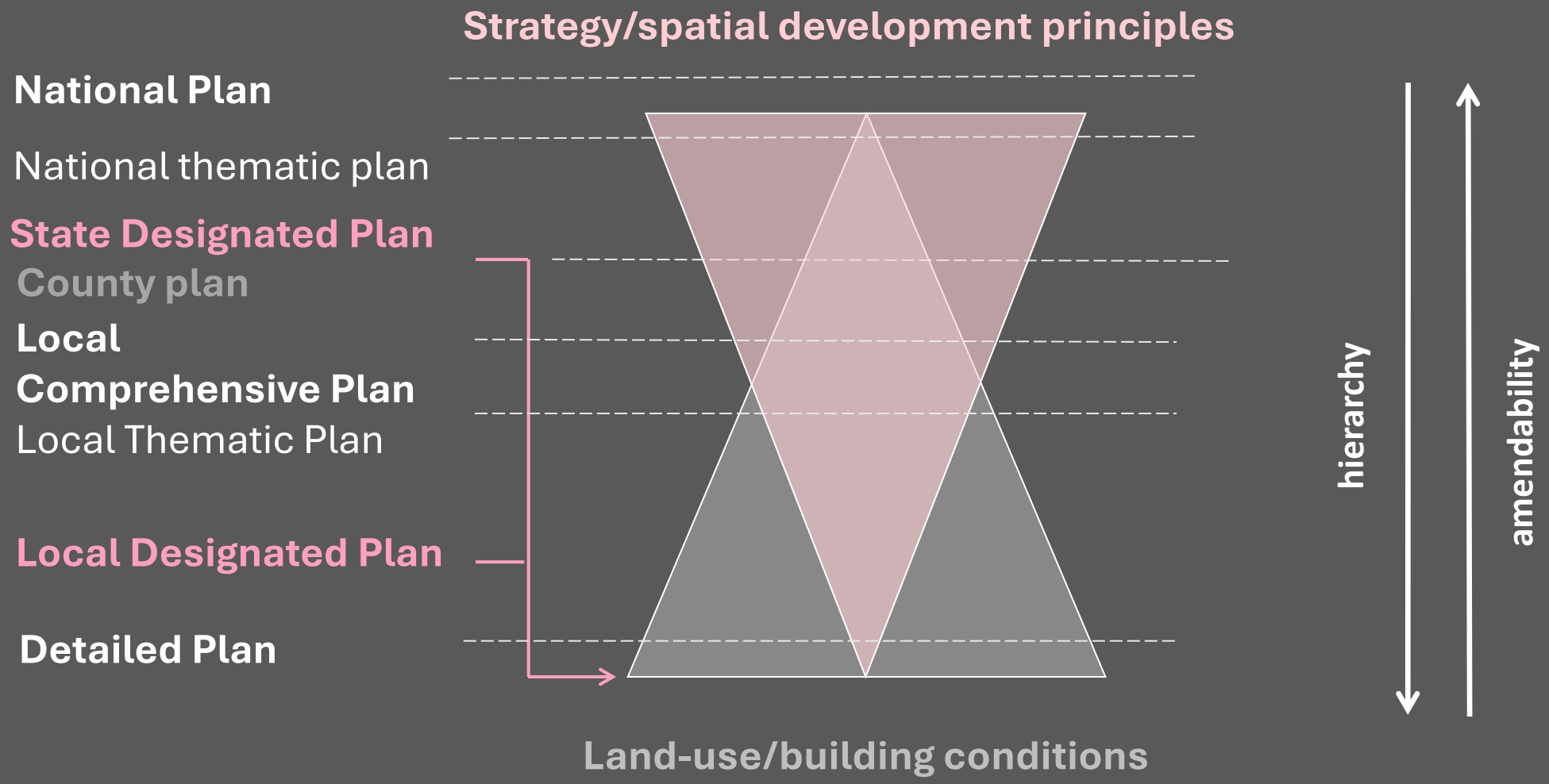
Ca 2000-2010

Planners' role is chagning over time.

Estonian Planners Qualification standard defines planner as a team leader, posessing various but not necessarily all skills needed for spatial planning.



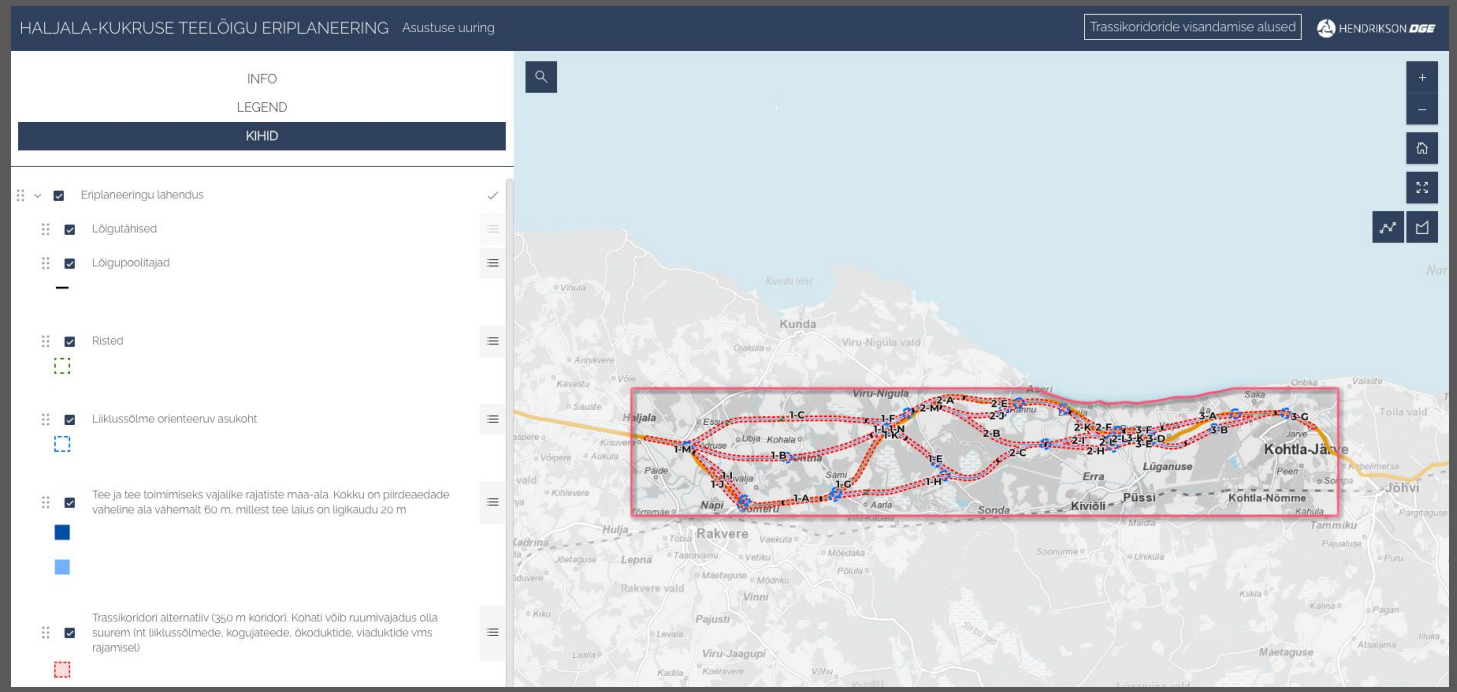
Estonian Planning System



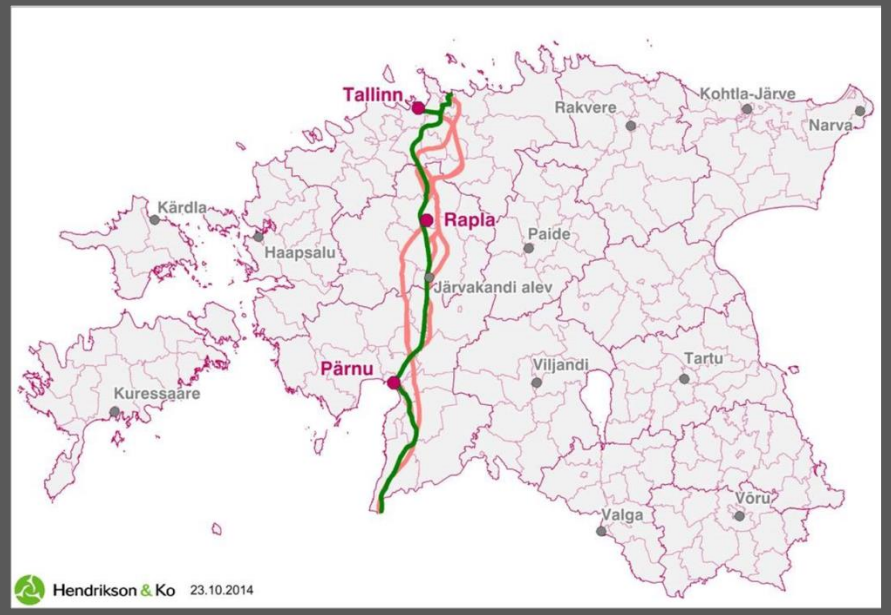
Planning objects with significant spatial impact

The aim is to find the most suitable location by comparing alternative sites and analysing impacts.

On national level - state designated plan. Inspired from Rail Baltic (and critisized for that, “steamroller, overriding people's opinions and ignoring their input.”)



Ongoing state designated plan for Tallinn- Narva state road

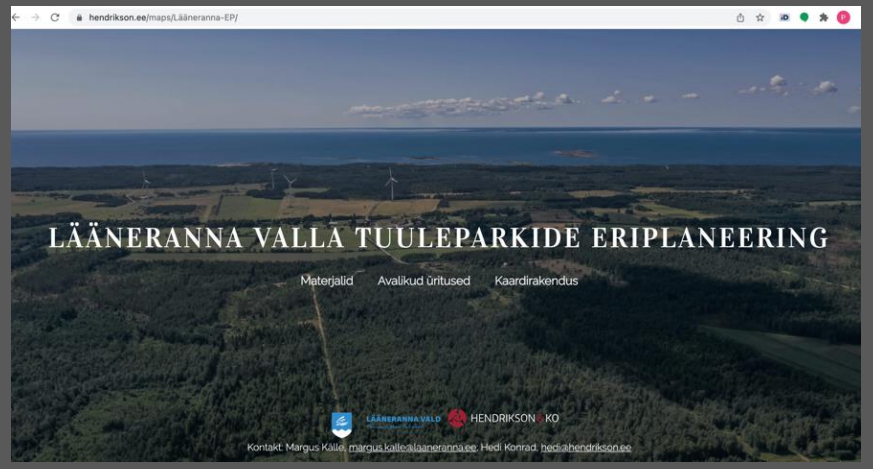


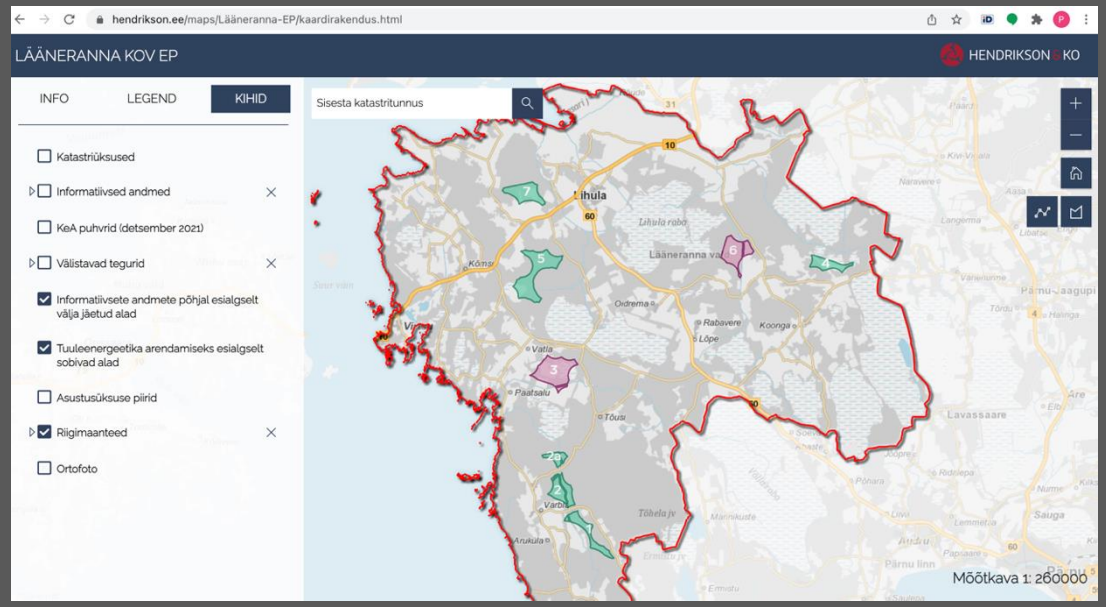
Rail Baltic site selection county plans, approved 2018

On municipality level - local designated plan.
So far mostly windparks, also some factories, industrial waste landfill.

The intended amendment for Planning Act will abolish this planning instrument as it has proven to be too complicated.

In the future, constructions with significant spatial impact will be planned through a detailed plan, preceded by an analysis of location exclusion factors. The obligation to consider alternative locations will be omitted.





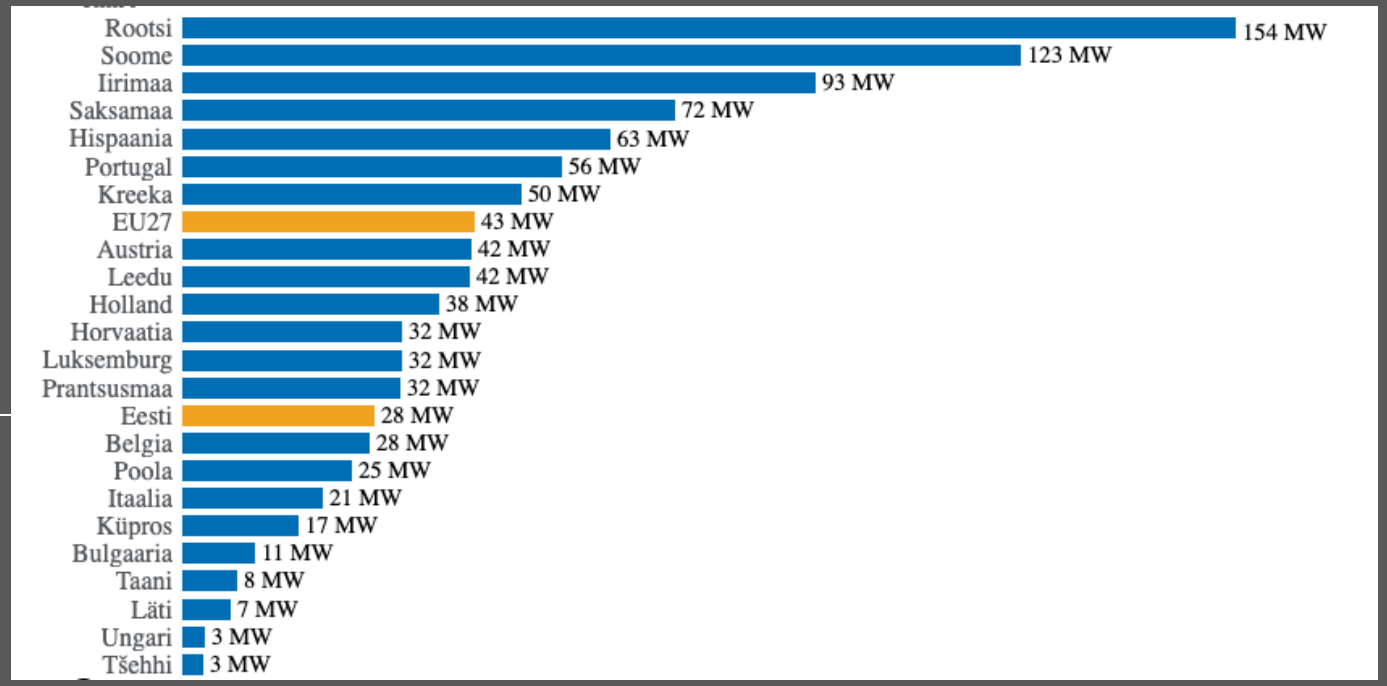
Lääneranna rural municipality local designated plan for windfarms (Hendrikson&Ko 2021 - ...)

Wind energy planning boom?

519 MW → 1 624 MW

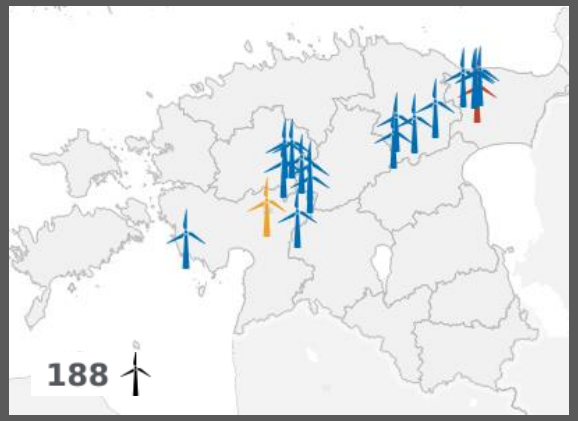
455 000 households

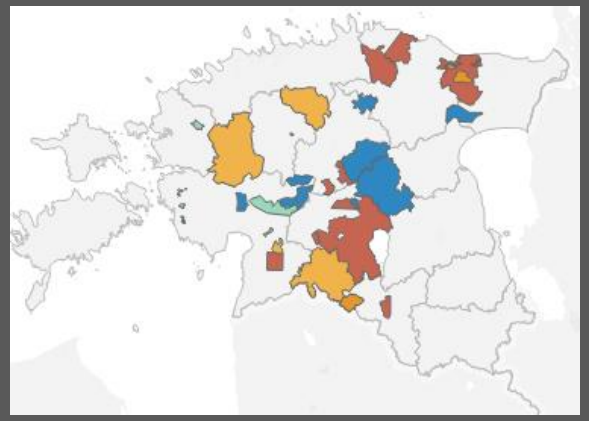
1 423 000 households

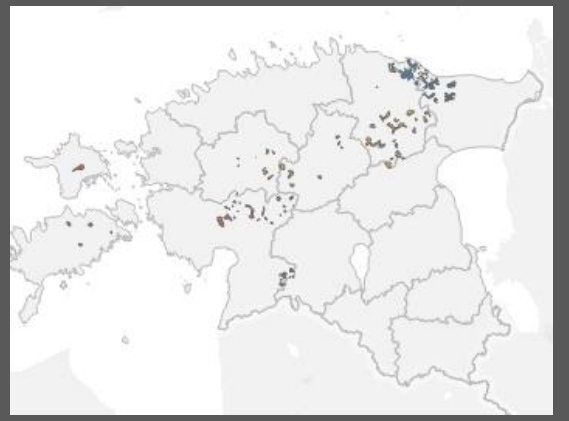


Wind energy capacity per 100,000 inhabitants in the European Union member states (2023)

No wind farms built during 2013-2018





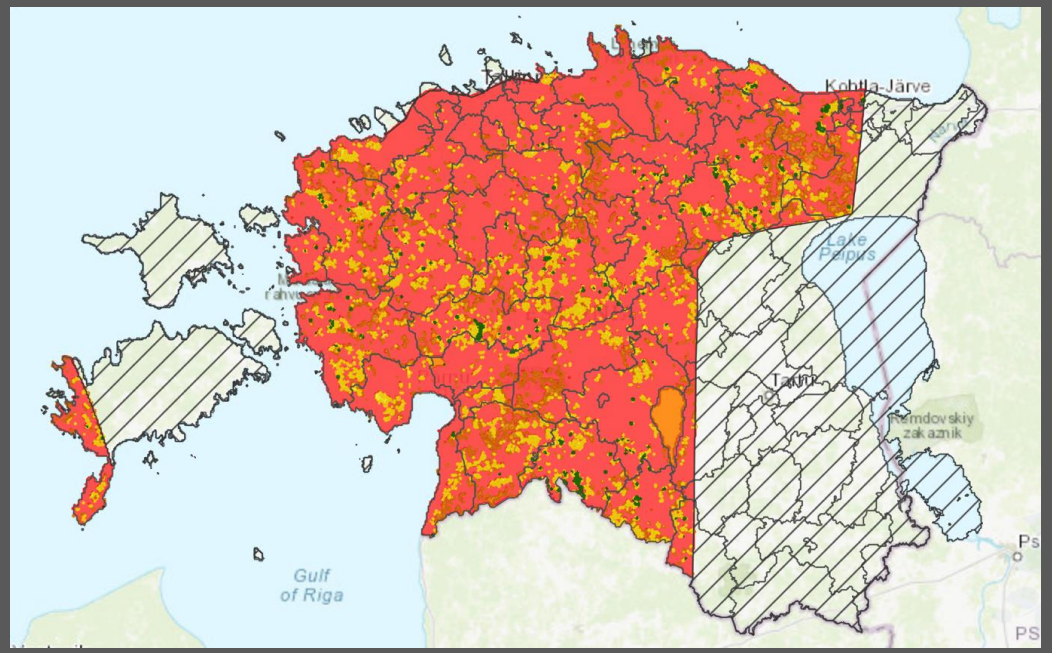


In progress: 16 detailed plans | 28 designated plans | 15 comprehensive plans

Confusing planning process on national level – 'strictly recommended' buffer zones based on impact on birds; no national-level agreements on buffers from roads, gas pipelines, high-voltage lines.

Planning details (should the wind turbine blades be inside or outside the building area?) left for local municipalities to decide.

Much delayed national guidelines on impact assessment; assessing cumulative impacts still unresolved. Since 2022, financial support has been offered to municipalities for drafting plans, but substantive support in terms of knowledge is very weak or almost nonexistent. Municipalities and consultants exchange experiences with each other and on their own initiative.



National Environmental Portal
Green areas – suitable for wind energy development; yellow areas – partially suitable for wind energy development; orange areas – non-suitable for wind energy development; red areas - development of wind energy is not allowed.

From NIMBY to YIMBY?

Since 2023 compensation fees collected from onshore wind farms.

- **Onshore wind farms** - the maximum fee up to 0.5€ per MWh of electricity produced. The fee also considers the previous quarter's average electricity market price and the amount of electricity produced by the turbines.
- For example, the annual fee for a 100 MW wind farm with an annual production of 300 GWh would be approximately €150,000.
- 50% of the fee is distributed by the local municipality among property owners who meet specific residence-related conditions. Households within 2 kilometers of turbines up to 250 meters tall and within 3 kilometers of turbines taller than 250 meters are eligible for compensation.
- During the construction phase 10% of the standard fee is applied.

From NIMBY to YIMBY?

Since 2023 compensation fees collected from onshore wind farms.

- **Offshore wind farms -** only for municipalities located within 25 kilometers**,** up to 0.3€ per MWh of electricity produced. For instance, a 1000 MW offshore wind farm generating approximately 4,000 GWh annually would result in a compensation of about 1,200,000 euros per year.
- Some developers offering additional benefits.

ChatGPT

Public discussions are well-attended but tend to be very emotional.
An independent moderator, often a journalist, is frequently involved, but this may not always help.

Brand new topics – infrasound

- **Infrasound** refers to low-frequency sound below 20 Hz, which is generally below the threshold of human hearing. Wind turbines generate infrasound primarily from their blades passing the tower and aerodynamic processes.
- Although the potential health effects of infrasound from offshore wind farms are somewhat debated topic, multiple studies (e.g., by the World Health Organization (WHO) and National Health and Medical Research Council (NHMRC) of Australia) have found **no direct evidence that infrasound from wind turbines poses a health risk.**
- A number of residents in different regions, residing ca 1 km from wind turbine are complaining about headaches and other health issues that are caused by infrasound. Estonian-based studies are demanded, claiming that no concluding evidence can be found on the issue.
- Estonian authorities obliged and special studies are under discussion - more time needed for planning and SEA procedures, no decisions can be made soon.

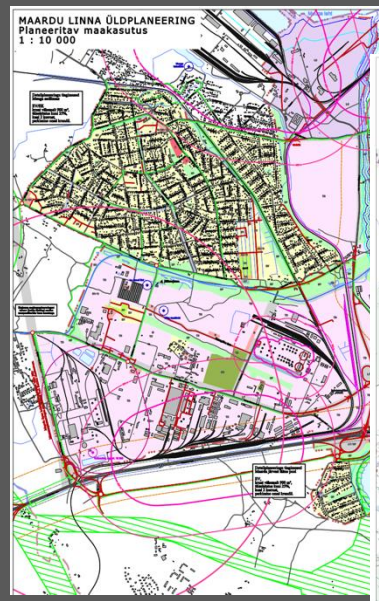
Brand new topics – feedback and comments from the residents during public display with a help of AI

- 450 proposals and amendments in one letter 80 pages long; for every proposal detailed and reasoned response demanded. Difficult to prove, but most likely Chat GPT is used.
- If there are already, for example, five such letters, the entire process could be clogged or has come to a standstill.
- The obvious outcome – responses also generated by Chat GPT. **War of machines?**

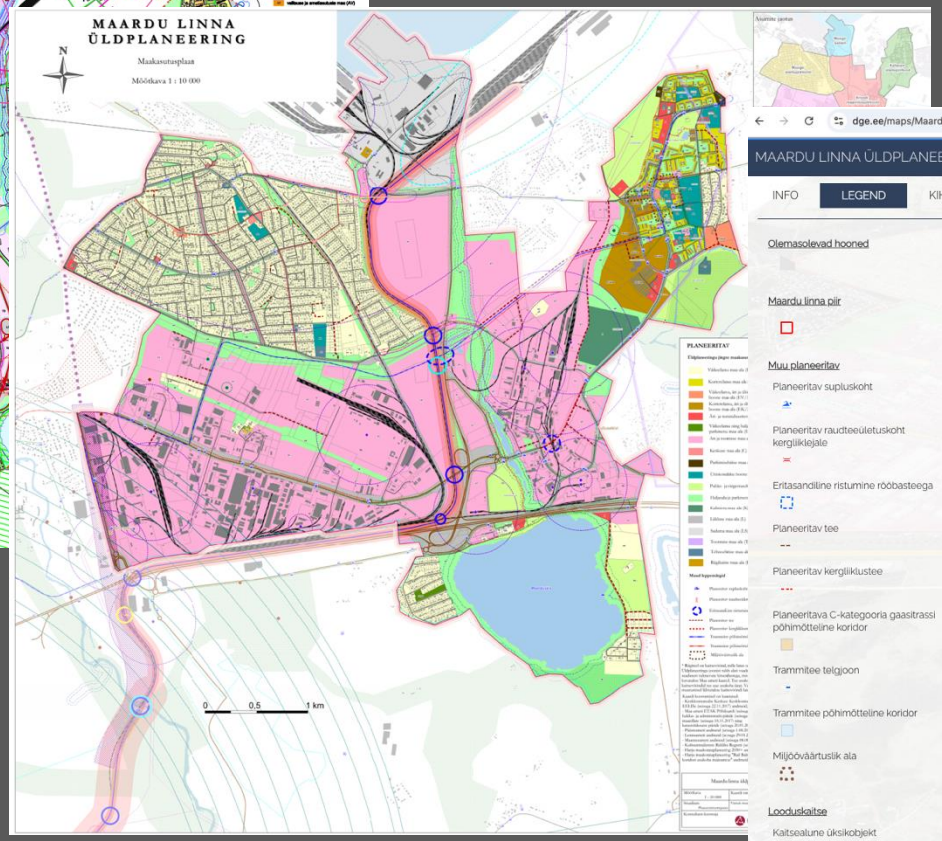
ChatGPT

Coping with shrinkage in a local comprehensive plan

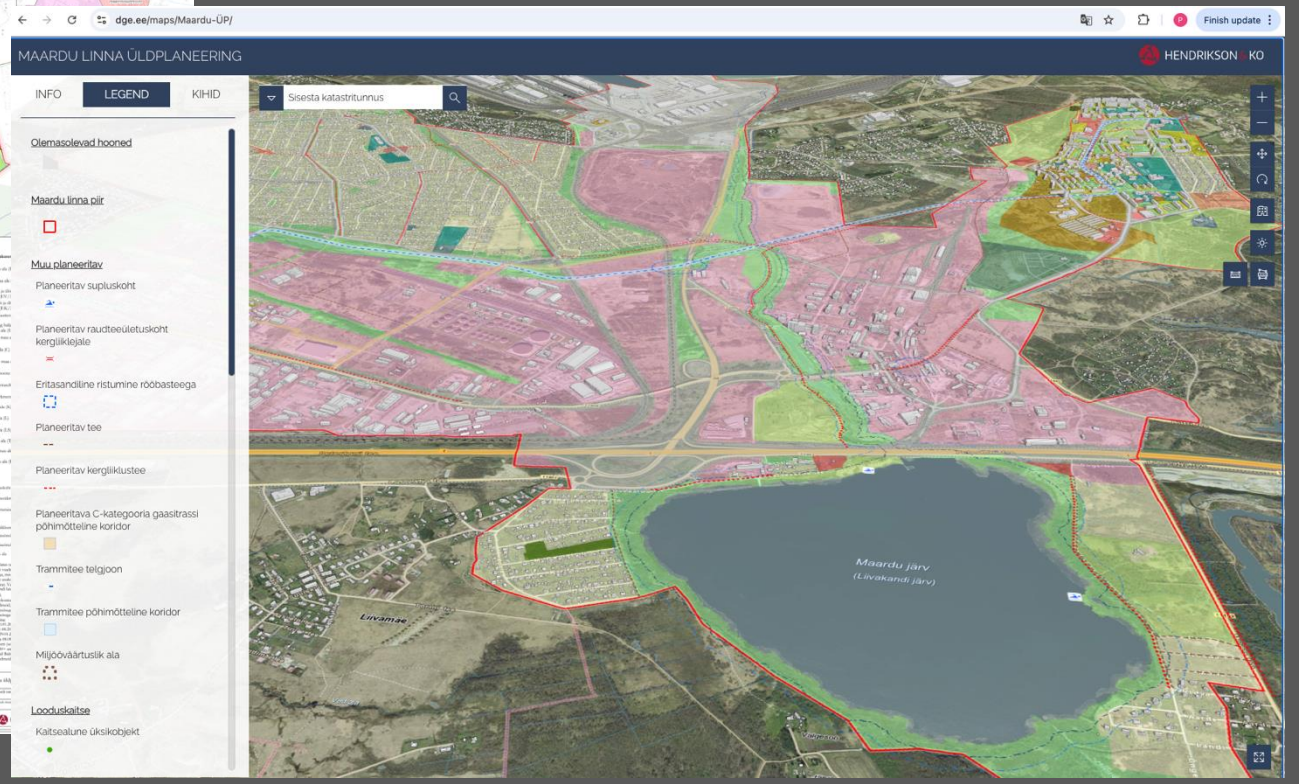
Third ”wave” of contemporary comprehensive planning in local municipalities. More digital tools, demands and expectations from nationa level. Stakeholders more aware of their rights, processes longer and more complicated.



Maardu town comprehensive plan 2005



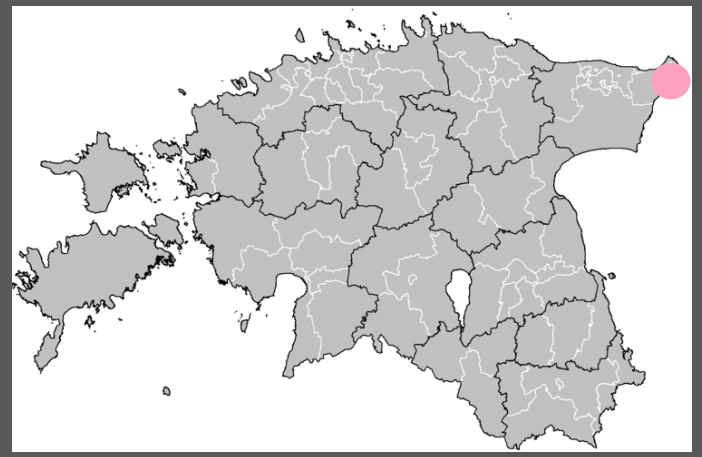
... 2014



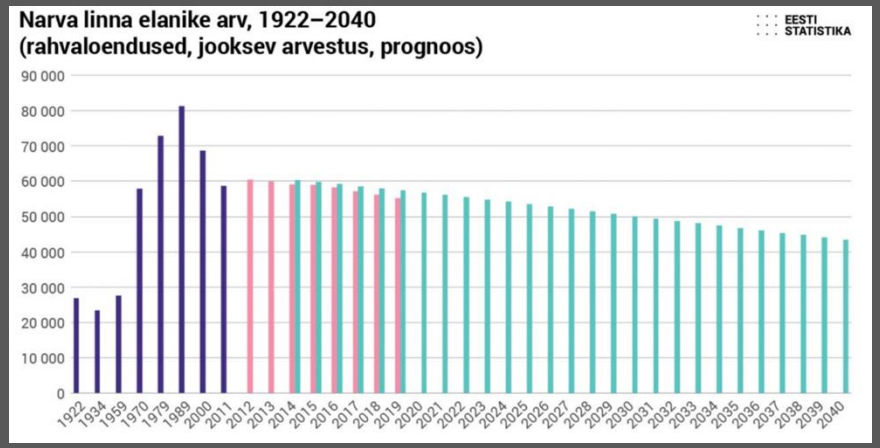
... 2023

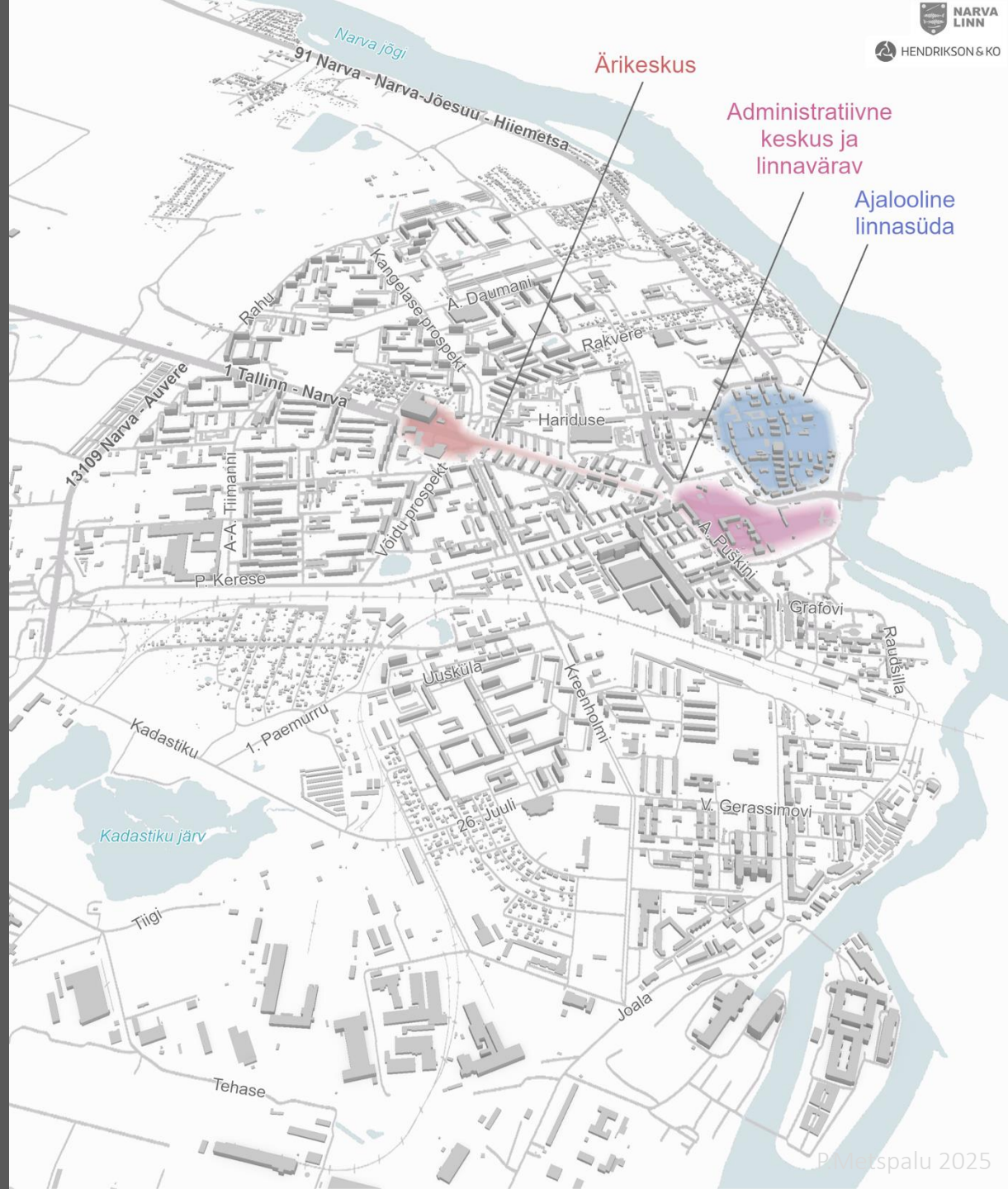
Tackling shrinkage in a comprehensive plan of Narva

(52 000 inhabitants, 95% russian-speaking)



Census,
Ongoing population tracking,
forecast

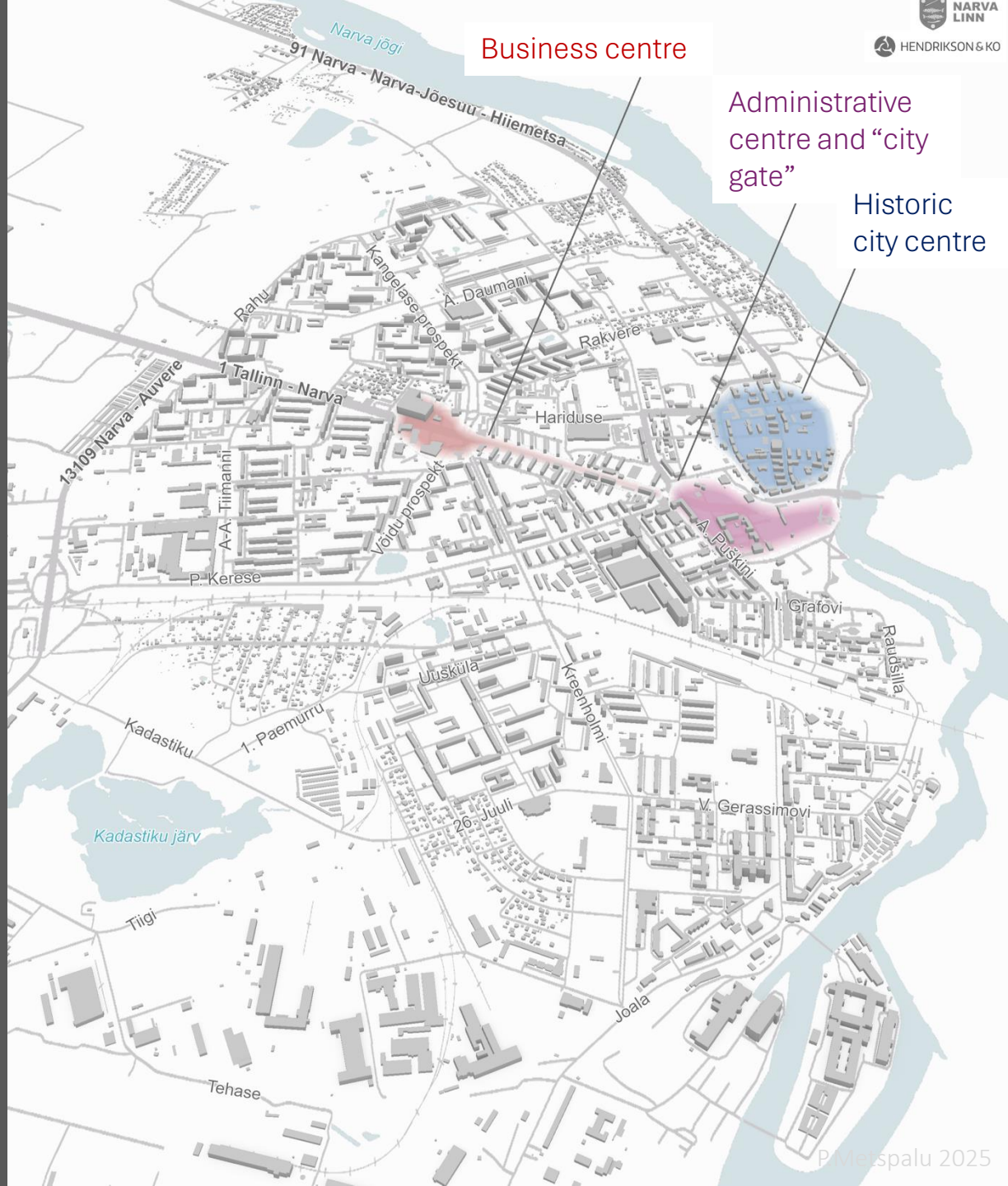




A beautiful Baroque city was razed to the ground during World War II by Soviet forces.

Nowadays a compact town of 52000 inhabitants, residential areas of mainly soviet-era apartment buildings (60% of the housing stock). Car ownership the lowest in Estonia (258 per 1000 inh; in Tartu 365, in Pärnu 508).

The share of urban territory reached by foot in 15 minutes from city centre very high – 31%.

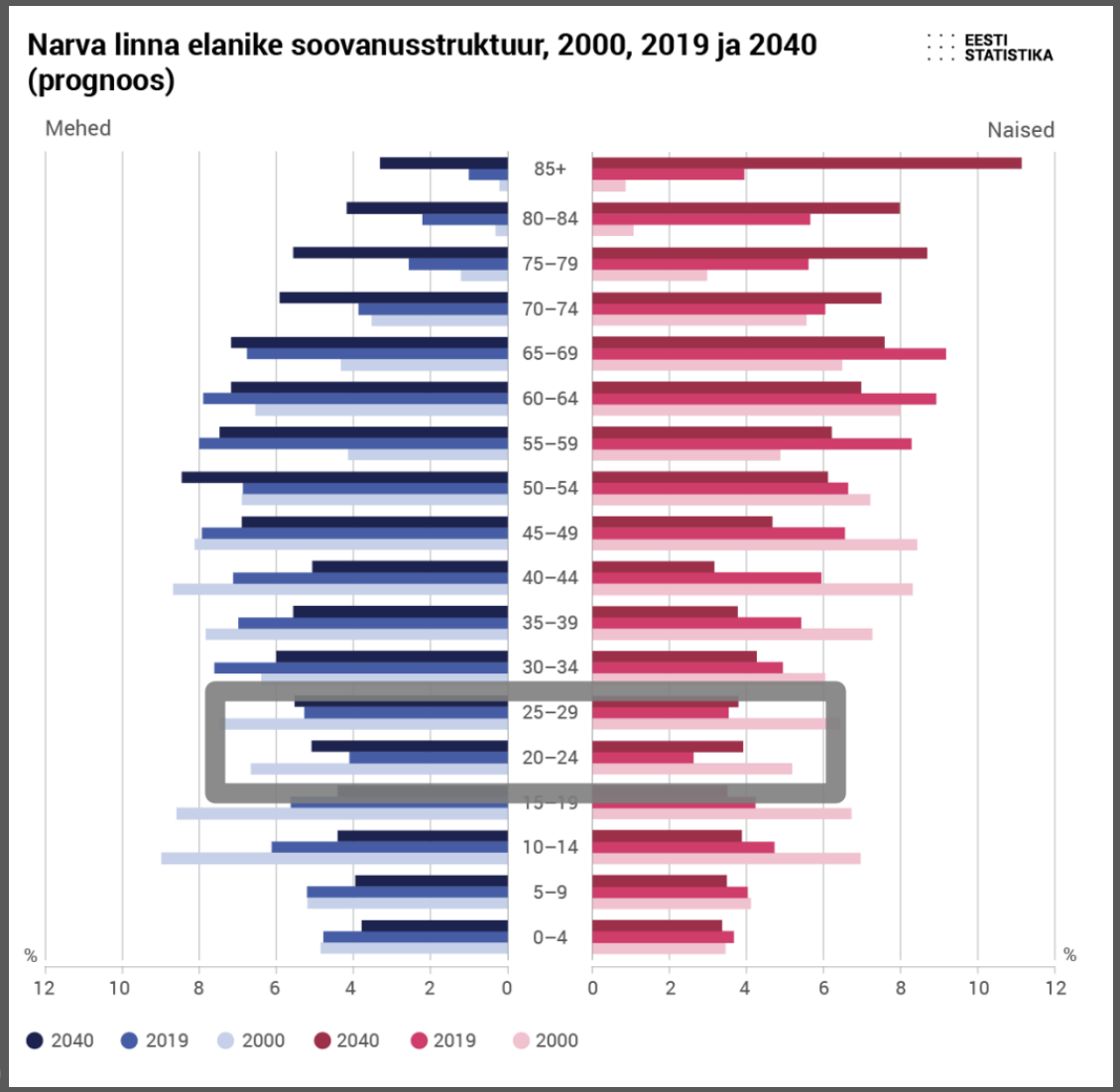


Clear statements for the local council:

- The declining age groups are primarily children and those of working age, while the proportion of the elderly is increasing.
- A critical factor is the retention of young people – the quality of the living environment and the attractiveness of urban space play a significant role.
- The development plan's goal – 45,000 residents by 2035 – requires careful planning and decisive action.

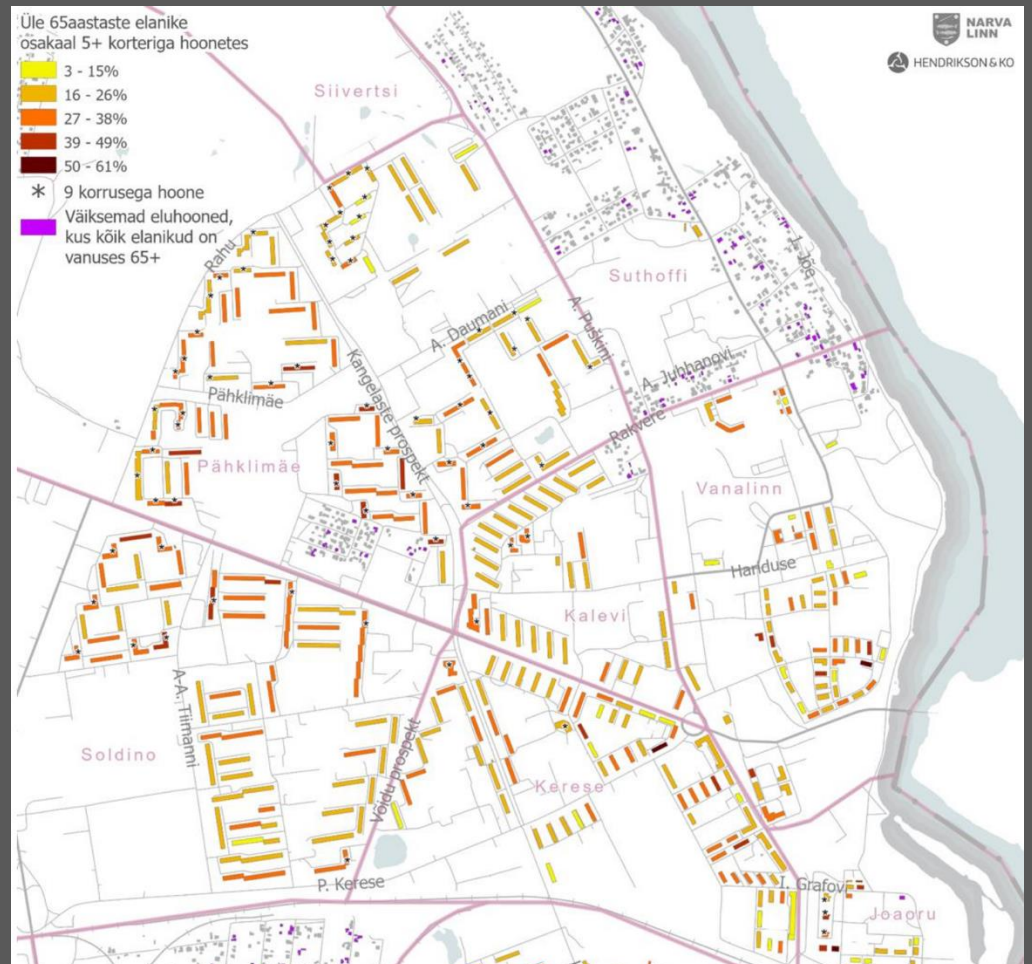
Decline in numbers:

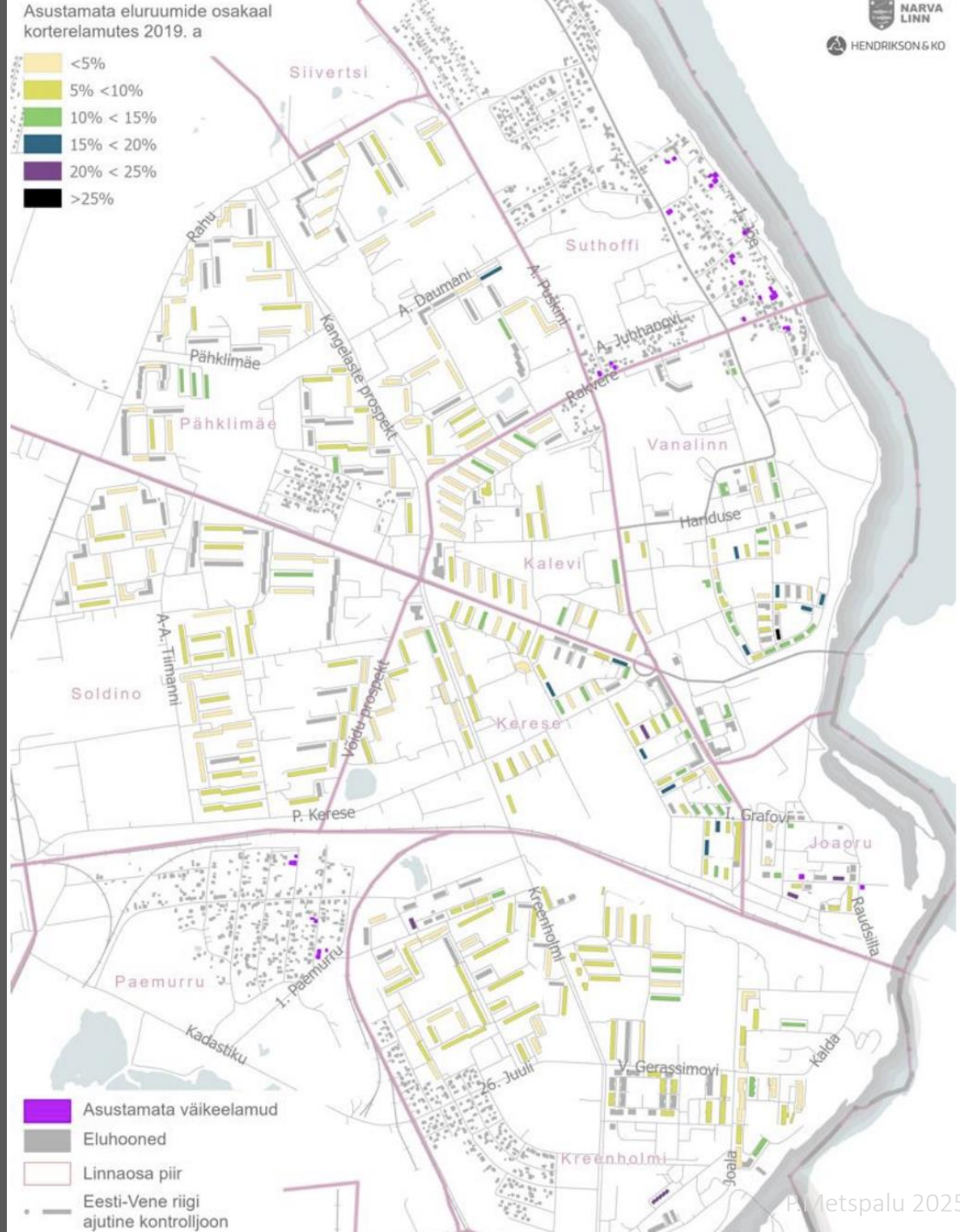
53000 (2021) – 45 000 (2035). Minus 8400 inhabitants
1500 (2019) unhabited residential units – 5400 (2035) unhabited residential units



Looking for spatial patterns:

Uninhabited dwellings and also elderly citizens are scattered across the city, with no clear concentrations.





Large-scale participatory process

P.Metspalu 2025

Stakeholders and experts from all over Estonia

involved

Two fundamental scenarios, along with their pros and cons, were presented to the City Council for decision-making: directed shrinkage and undirected shrinkage.

Undirected shrinkage – abandoned apartment buildings (marked with red on a map)scattered all over the town.

- The burden on the city budget increases as the same urban space must be maintained with the support of a smaller number of taxpayers.
- Car dependency increases, while public transport services decrease (maintaining routes becomes unprofitable) – consequently, social inequality and segregation grow.
- Infrastructure maintenance costs rise.
- As the proportion of abandoned urban areas grows, outward migration increases.
- Property prices decline – renovation and construction become unprofitable

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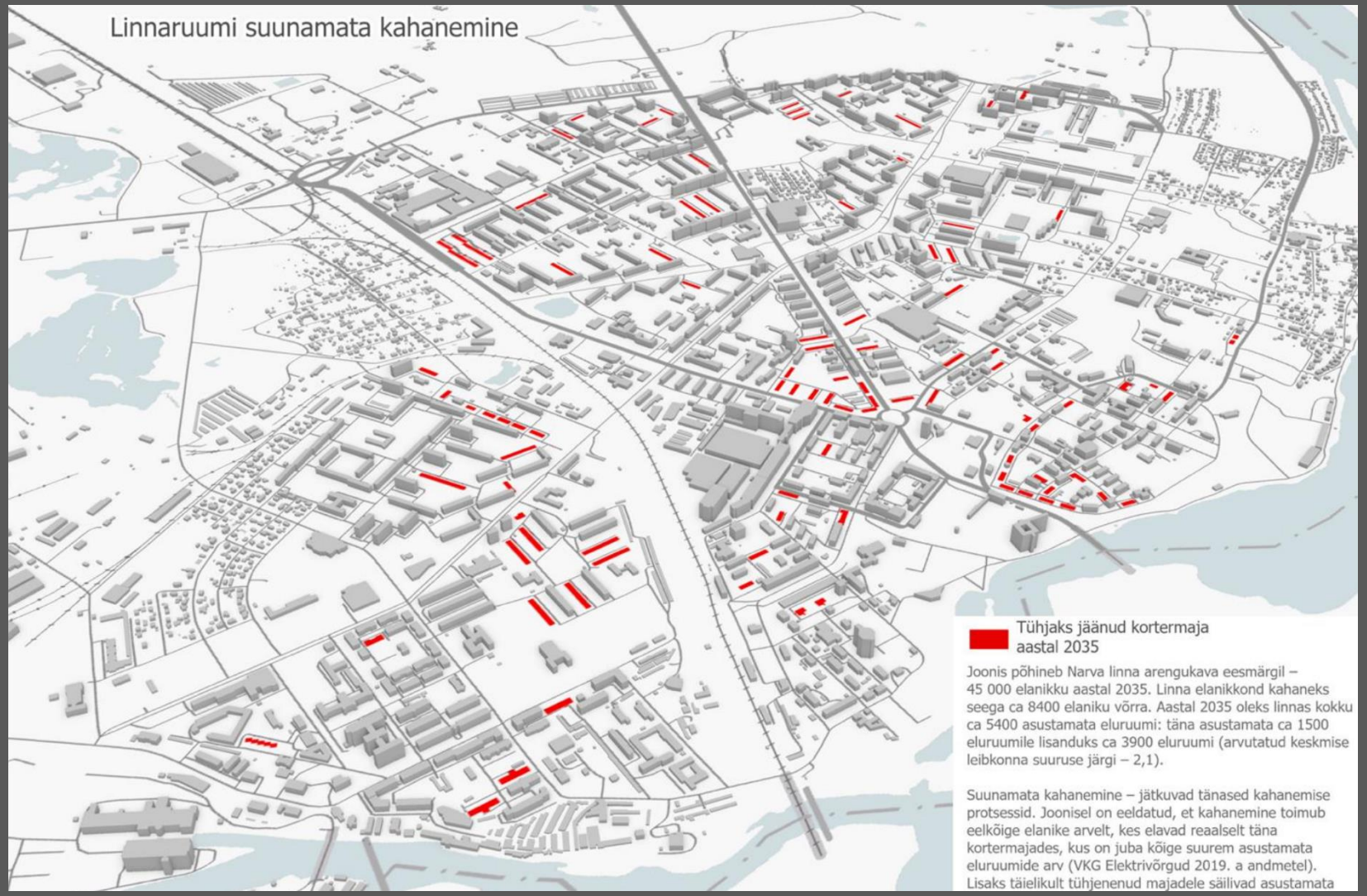

Directed shrinkage – abandoned apartment buildings (marked with red on a map) concentrated in specified districts in the outskirts of the town.

- Cost savings occur, and abandoned urban areas are reduced.
- The possibility of a 15-minute city – minimizing the need for car use.
- Maximizing benefits with limited investment opportunities – investments are not dispersed across the urban area.
- Higher property values.
- Good reputation for areas with quality urban space, encouraging residents to stay.
- Specific areas are freed up for new activities and functions.
- The possibility of deactivating utility networks, reducing the overall (maintenance) load on the network

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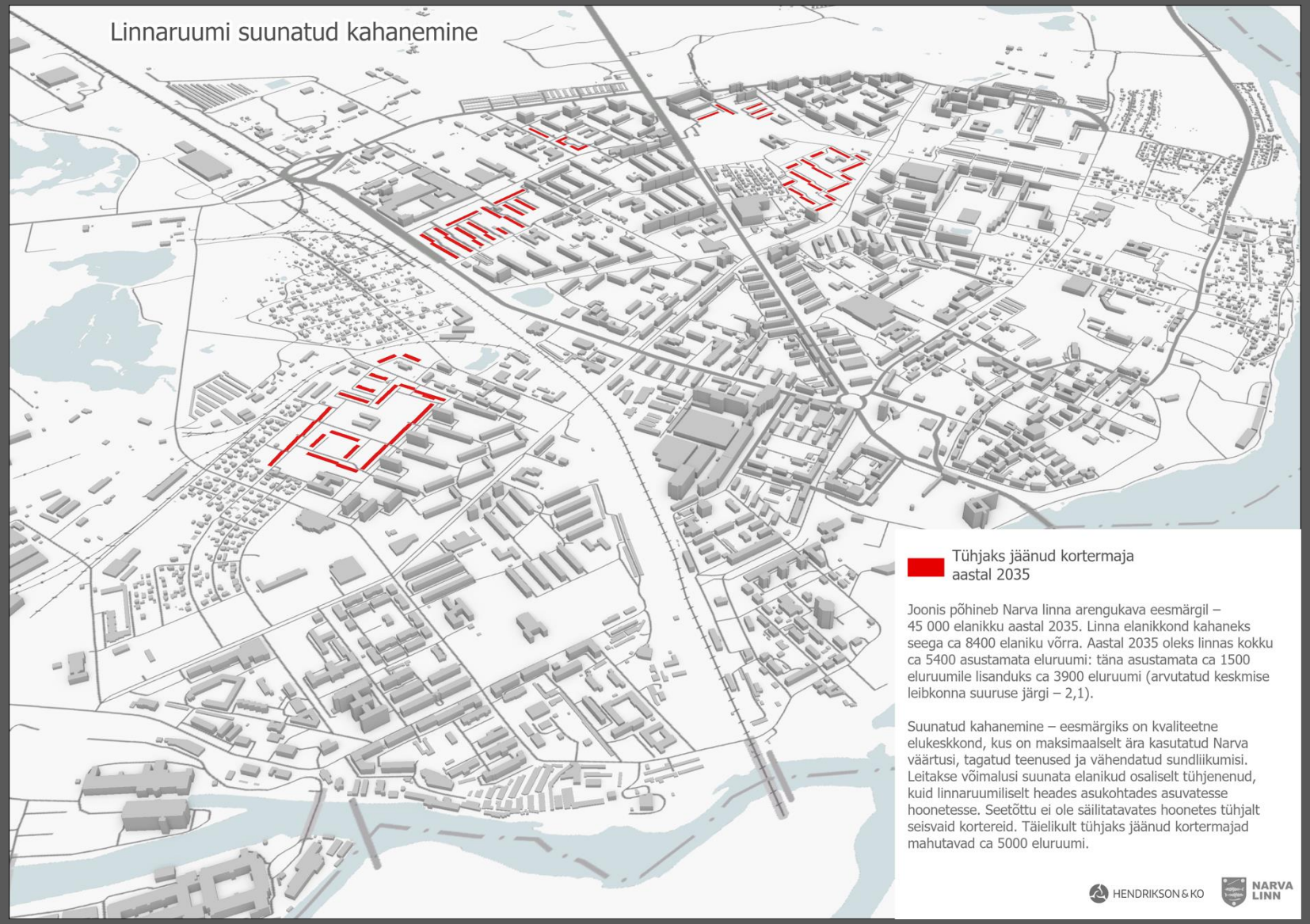
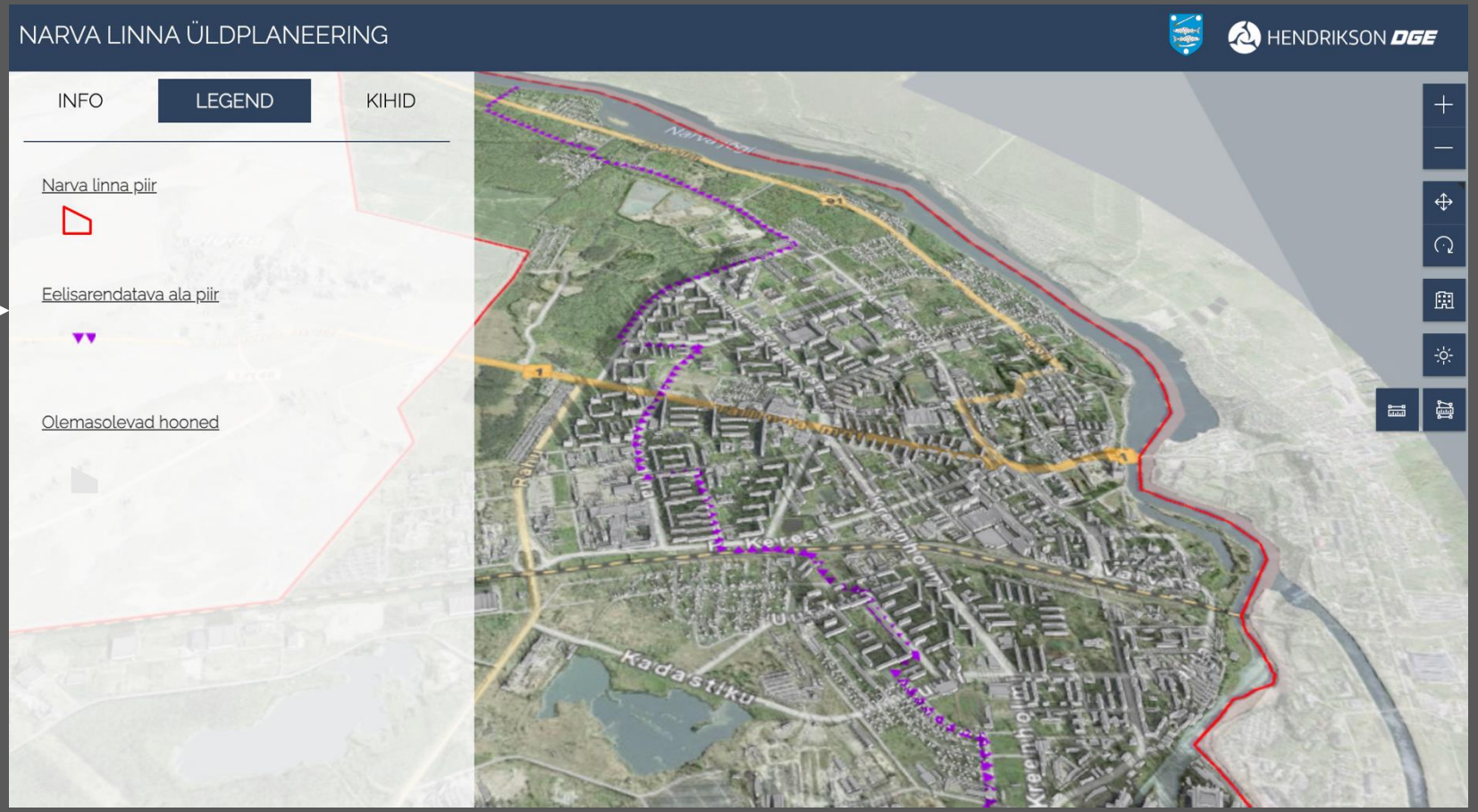
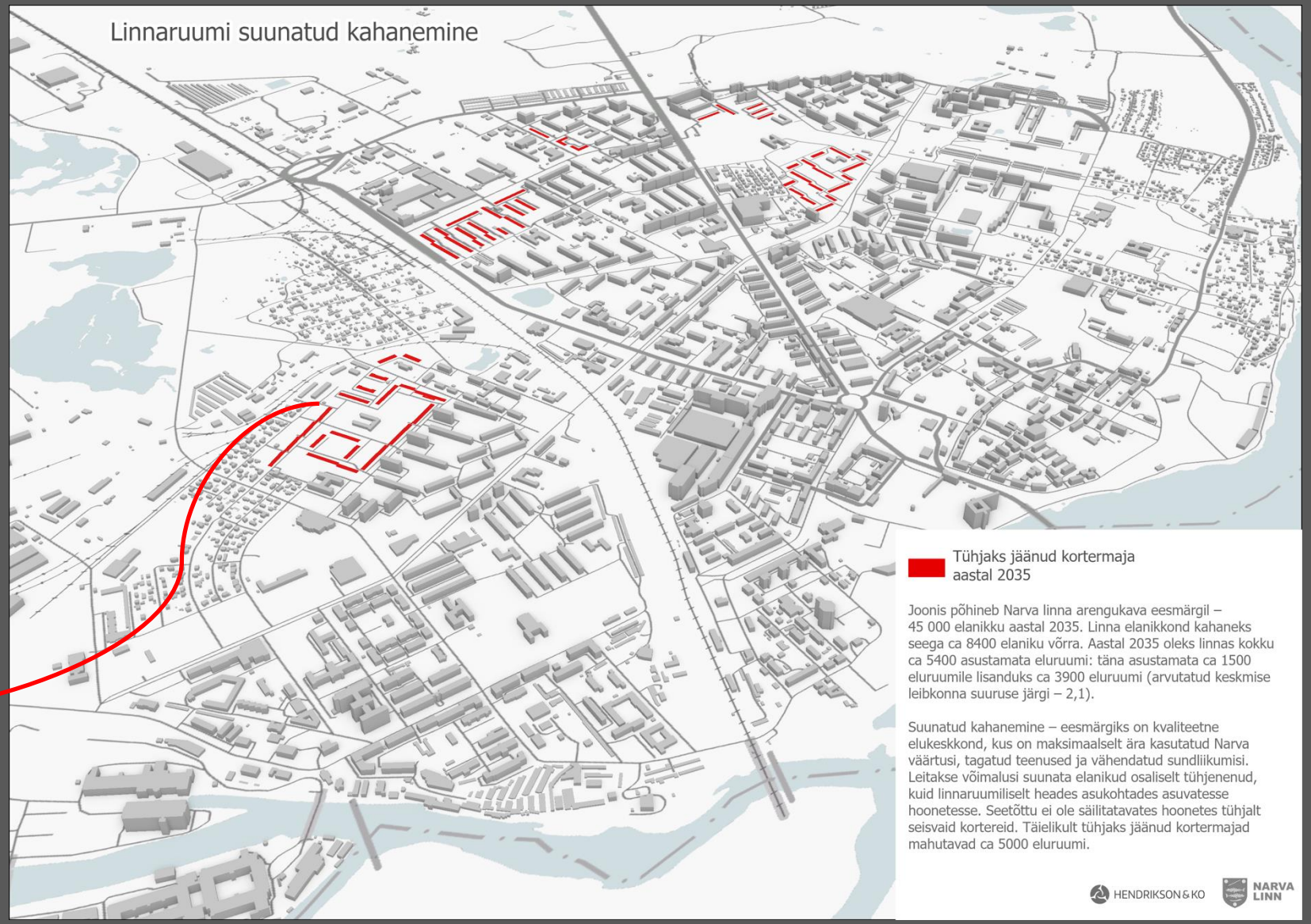


Directed shrinkage scenario was chosen by the City Council (a relief to the planners ☺).

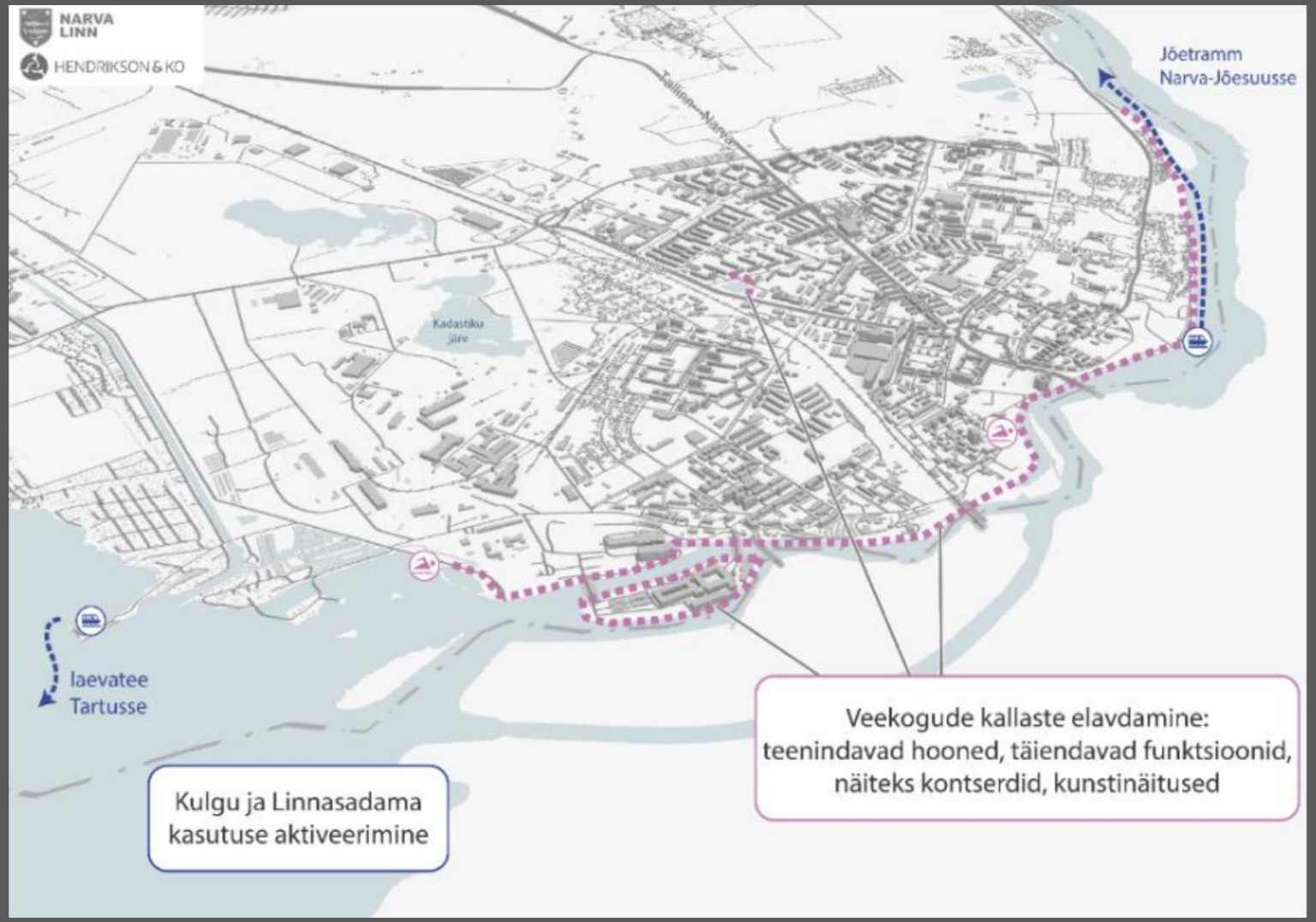
To "shrink" the urban space, a so-called **priority development area** was defined in the planning solution. Public investments, such as improving public spaces, urban greenery, building renovations, and the construction of new developments, are directed there under the conditions of a declining budget capacity due to population decrease. The priority development area was smaller at first, but political will was not strong enough – as a compromise the area was enlargened.



Some apartment buildings that were left out of priority development area were zoned as private residential housing.



Additional attention towards the living environment - revitalization of waterfronts – new buildings and functions.



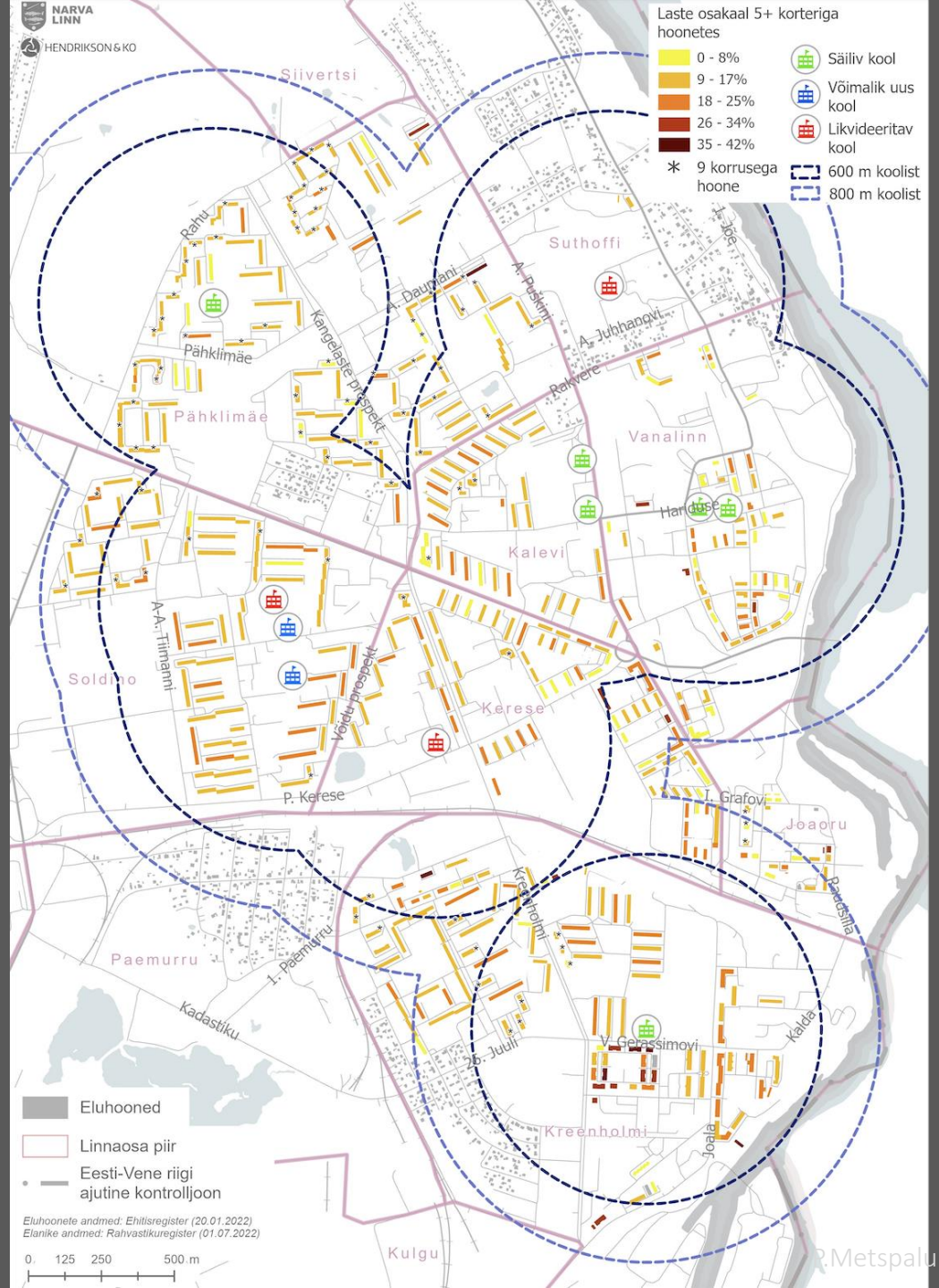
Challenges in implementing the comprehensive plan adapting to shrinkage:

State has provided finances for a new school. Strong pressure to build a new school on the outskirts of the city, as the central part quite well covered by scools already.

Existant school

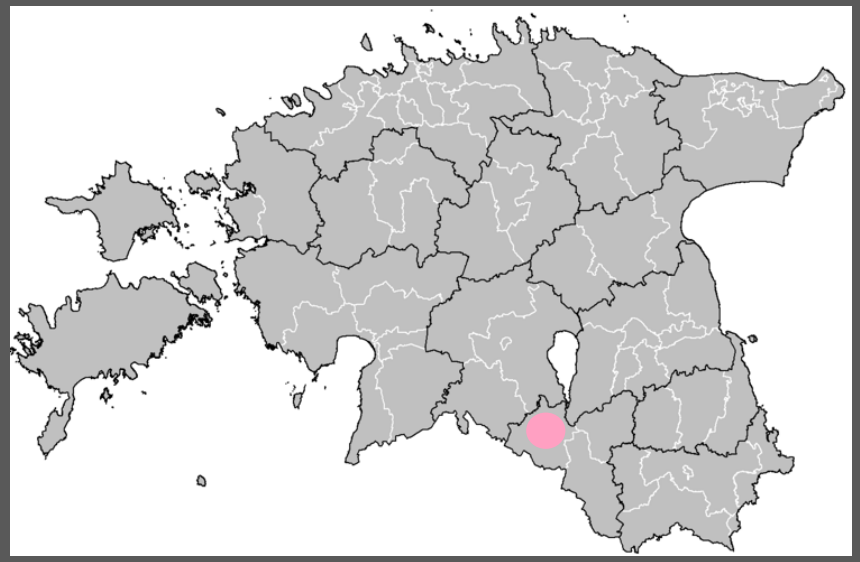
Possible new shool

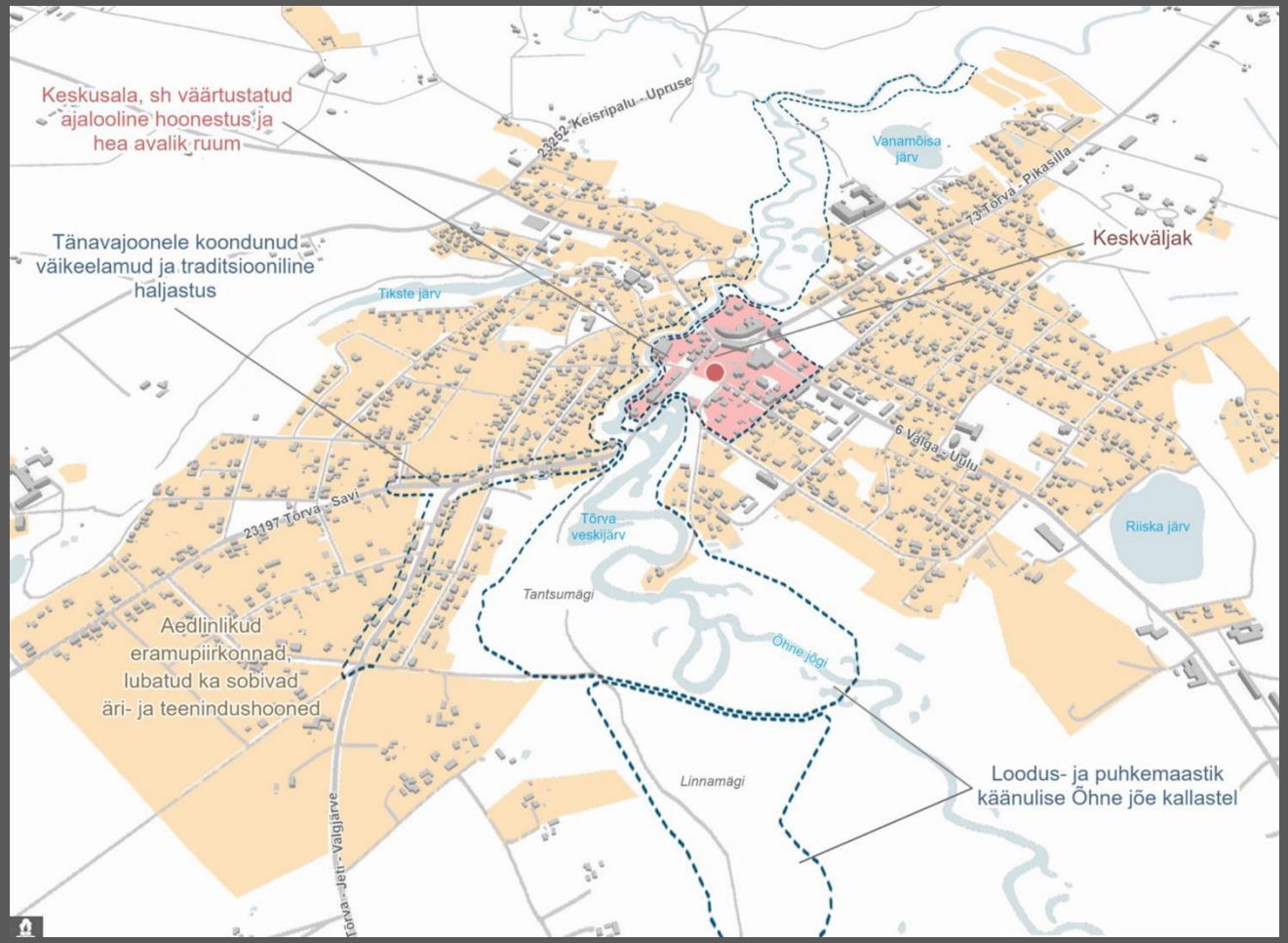
A school to be closed



Comprehensive plan for a shrinking rural municipality, central town Tõrva
(2600 inhabitants)

Zoning the central part as a multifunctional area – to provide development opportunities and keep the historic centre alive

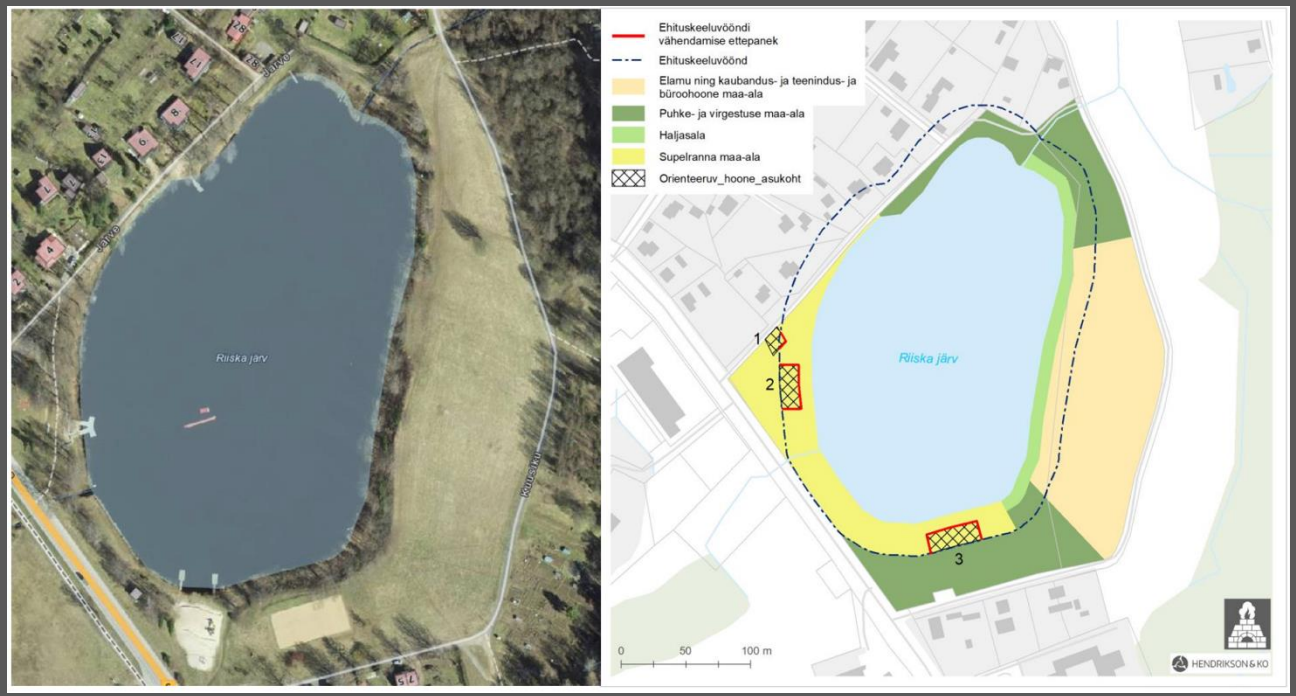




Further and sensitive development of the local values.

To make the living environment more attractive, it was proposed to reduce the building restriction zone around the lake in the city to allow the construction of a café and individual residential buildings.

The Environmental Board did not agree to the reduction of the building restriction zone.



P.Metspalu 2025

Strong leadership to carry out the comprehensive plan.

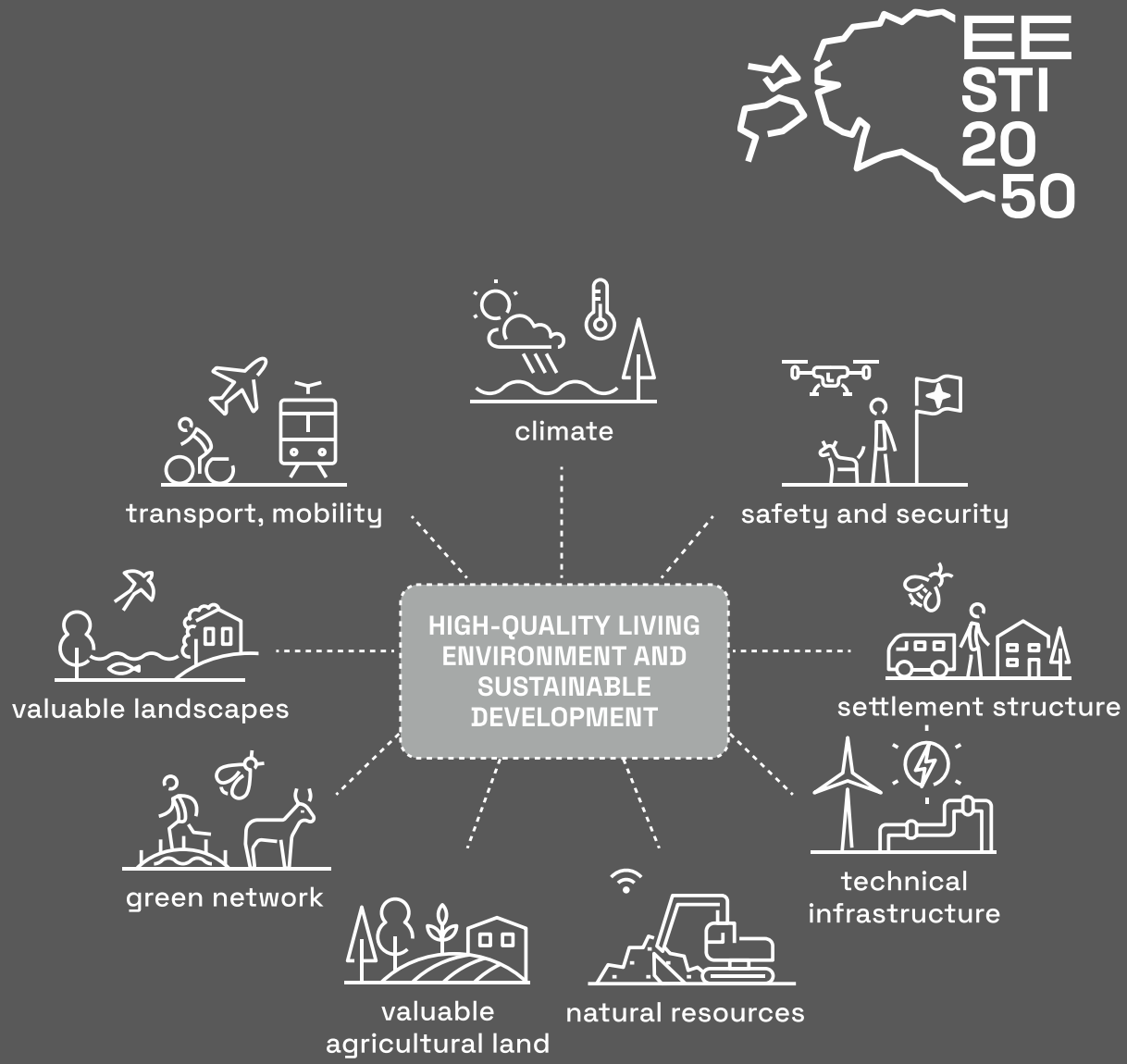
Under the leadership of the municipal mayor, an area designated for single-family housing was subdivided, and a residential district for young families was planned. The municipality acted as the developer, constructing roads and utility networks. Seventeen of the 24 plots were sold within the first hour.

The new national plan “Estonia 2050”

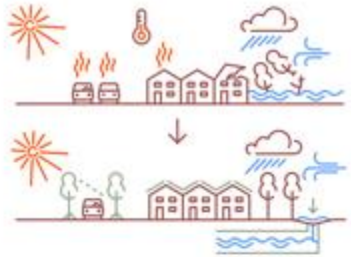
Broad-based spatial planning strategy.

The topics defined by Planning Act, some added due to current trends and conflicts. (climate, safety and security). **The main bottleneck** – national spatial plan is not a strategic development document in the context of the State Budget Act; there is no direct obligation to consider it in thematic development plans at the state level or in the allocation of public funds.

Amending the State Budget Act under consideration; possible to link Estonia 2050 with new development pans and EU financing period.

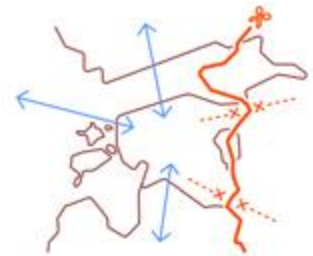


NATIONAL SPATIAL PLAN "ESTONIA 2050": KEY MESSAGES AND TRENDS FROM THE BASELINE STUDY



CLIMATE

Average air temperatures will rise and extreme weather events are becoming more frequent. Securing urban and economic infrastructures against climate impacts becomes imperative.



SAFETY AND SECURITY

Geopolitical tensions are creating new spatial obstacles, disrupting eastward cross-border interactions and economic ties. The security of the urban environment becomes crucial.

POPULATION

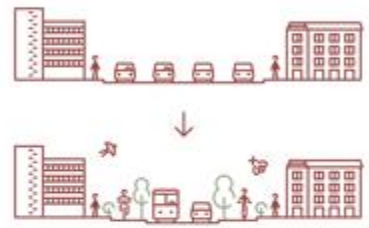
Population and economic development continue to concentrate in the capital region. Population growth is driven by immigration and is aging, and this occurs unevenly across regions.

VALUABLE LANDSCAPES

The landscape surrounding us is seen as a communal public space that requires valuation and respect. Green policies will pay significantly more attention to improving the climate impact of land use, soil protection and biodiversity.

TRANSPORT AND MOBILITY

Emphasis is placed on pedestrian-oriented spaces and user-friendly multimodal transport services. The need for mobility is decreasing due to changes in the nature of work and consumption. In international transport, a shift occurs favoring connections to the north, south, and west.

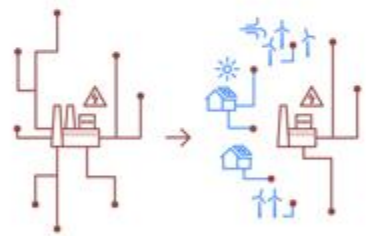


SETTLEMENT STRUCTURE

Awareness of the links between living environment quality and mental and physical well-being is increasing. Planning is shifting to promote well-being, but there is a growing discrepancy between existing settlement space and changing needs.

GREEN NETWORK

To preserve biodiversity, it is necessary to expand the area of green spaces, including local protected areas, to ensure the diversity, connectivity, usability and ecological quality of green infrastructure.



TECHNICAL INFRASTRUCTURE

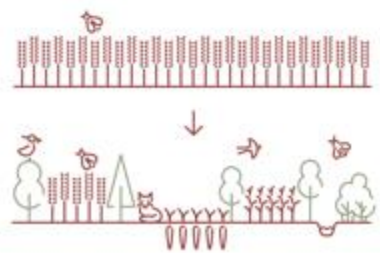
The share of renewable energy sources (wind, solar) will increase significantly. Digitalisation and distributed grids are creating new opportunities for rural settlements and small towns.

LIFESTYLE

Digitisation, e-services, and telecommuting are fostering favorable conditions for dispersed settlement. There is a longing for a house of one's own as a main residence or second home.

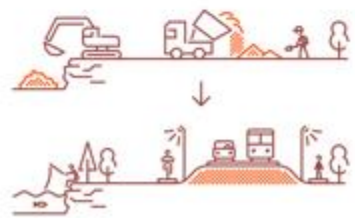
AGRICULTURAL LAND

Mitigating environmental impact and enhancing the value of arable land are priorities. It is necessary to ensure sufficient local food production capacity.

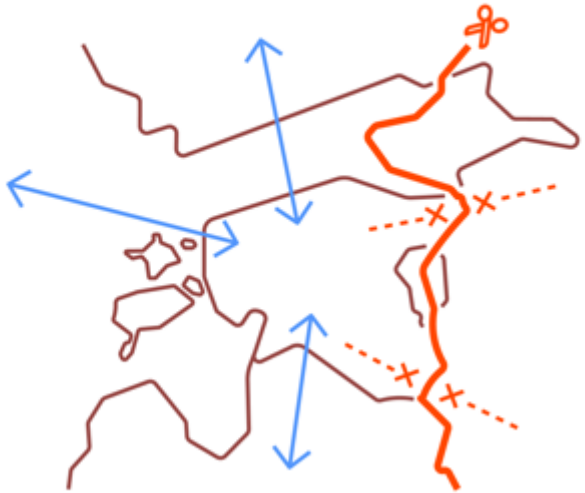


NATURAL RESOURCES

Demand for construction materials remains high with many building resources mined close to areas of use. In the extraction and use of materials, there is an increasing contribution to recycling.



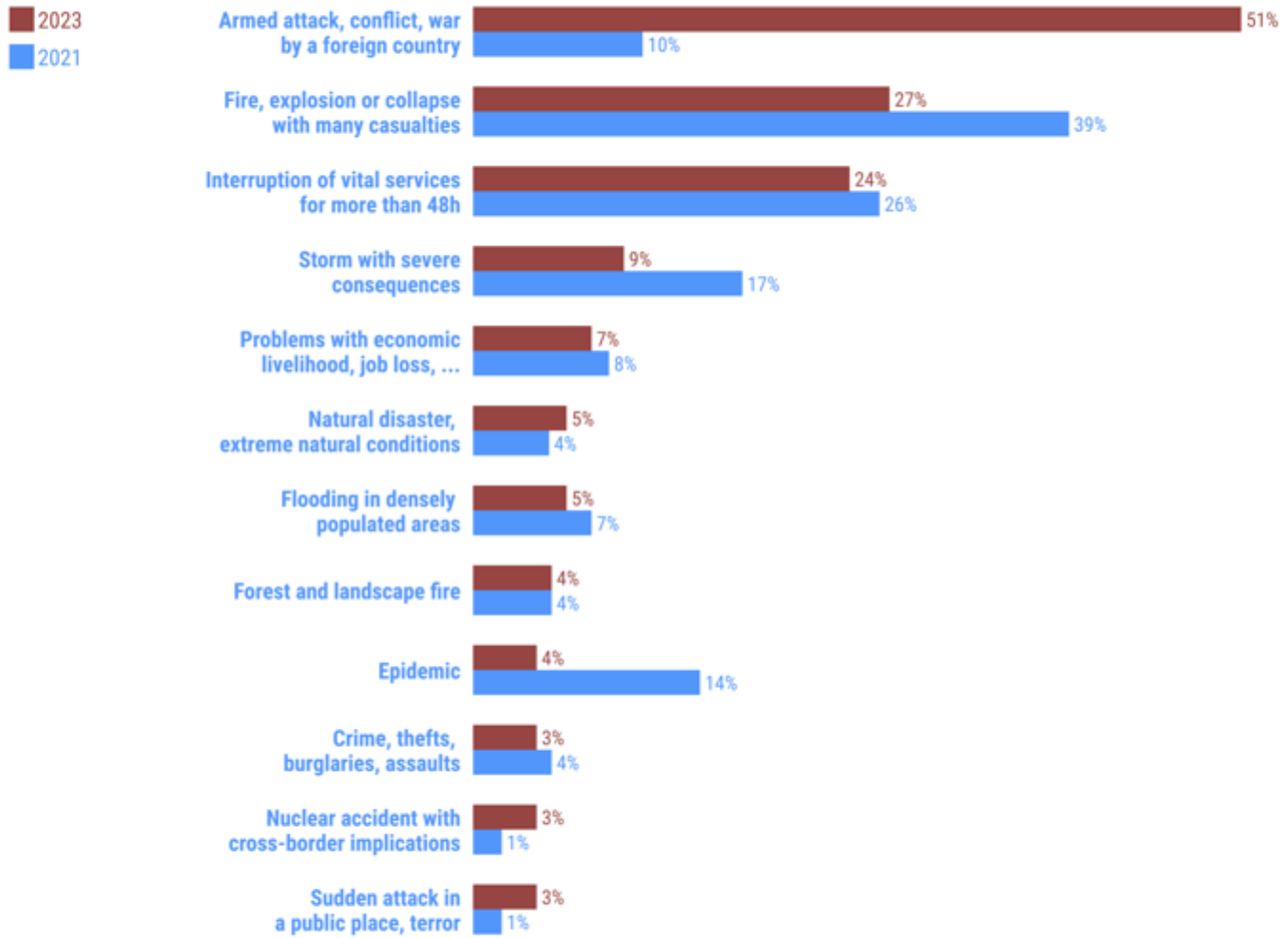
SAFETY AND SECURITY



- **Geopolitical tensions are creating new spatial obstacles, disrupting eastward cross-border interactions and economic ties.** A growing sense of insecurity surrounds border regions, influencing both residential and business decisions.
- **The security of the urban environment becomes crucial,** requiring consideration of resident protection in urban planning. Security concerns require the dispersal of energy infrastructure.

"What emergency have you thought about?"

Percentage of those who have thought in the last two years that their family and home could be in a serious emergency situation

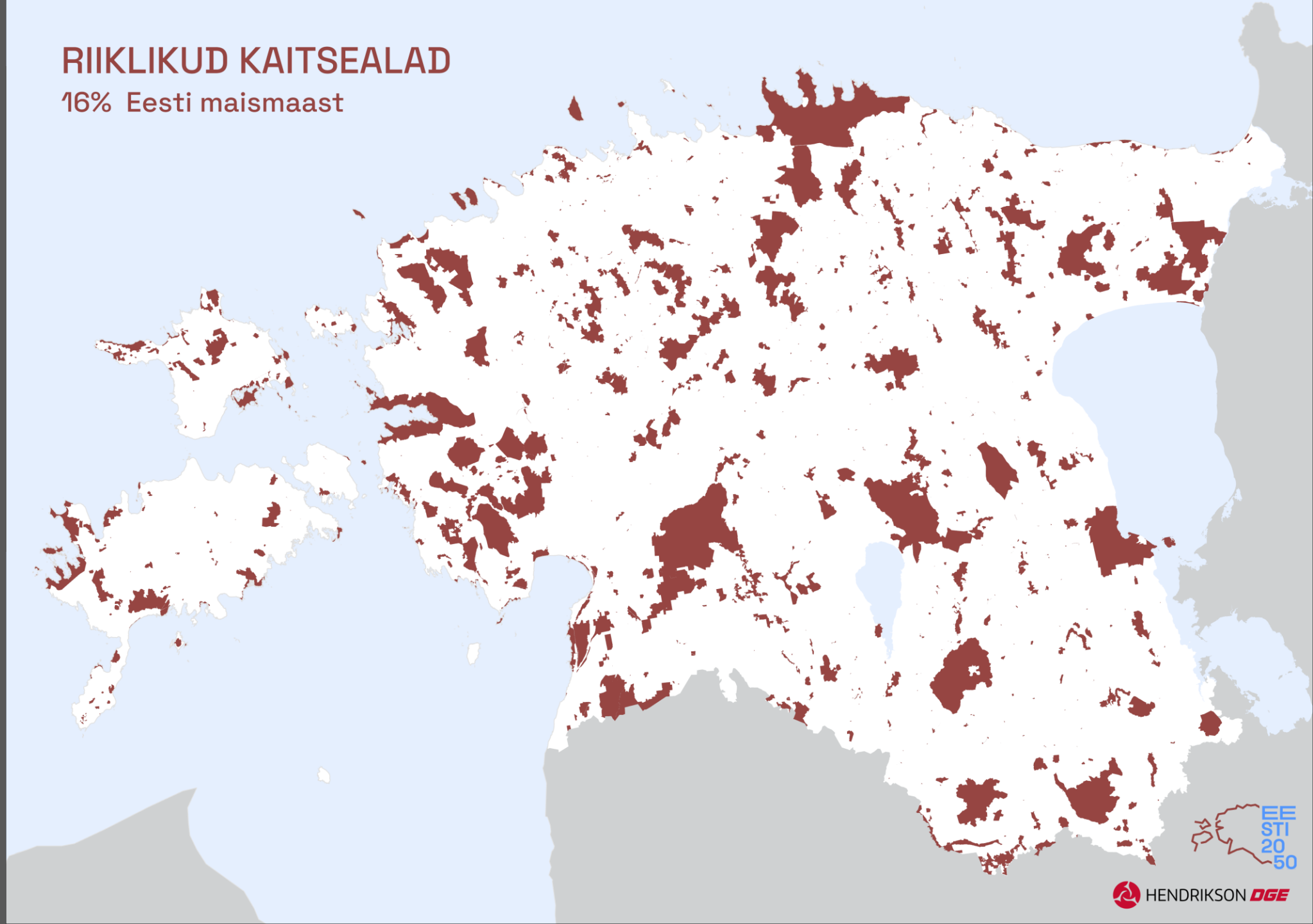


Allikas: **Kantar Emor**

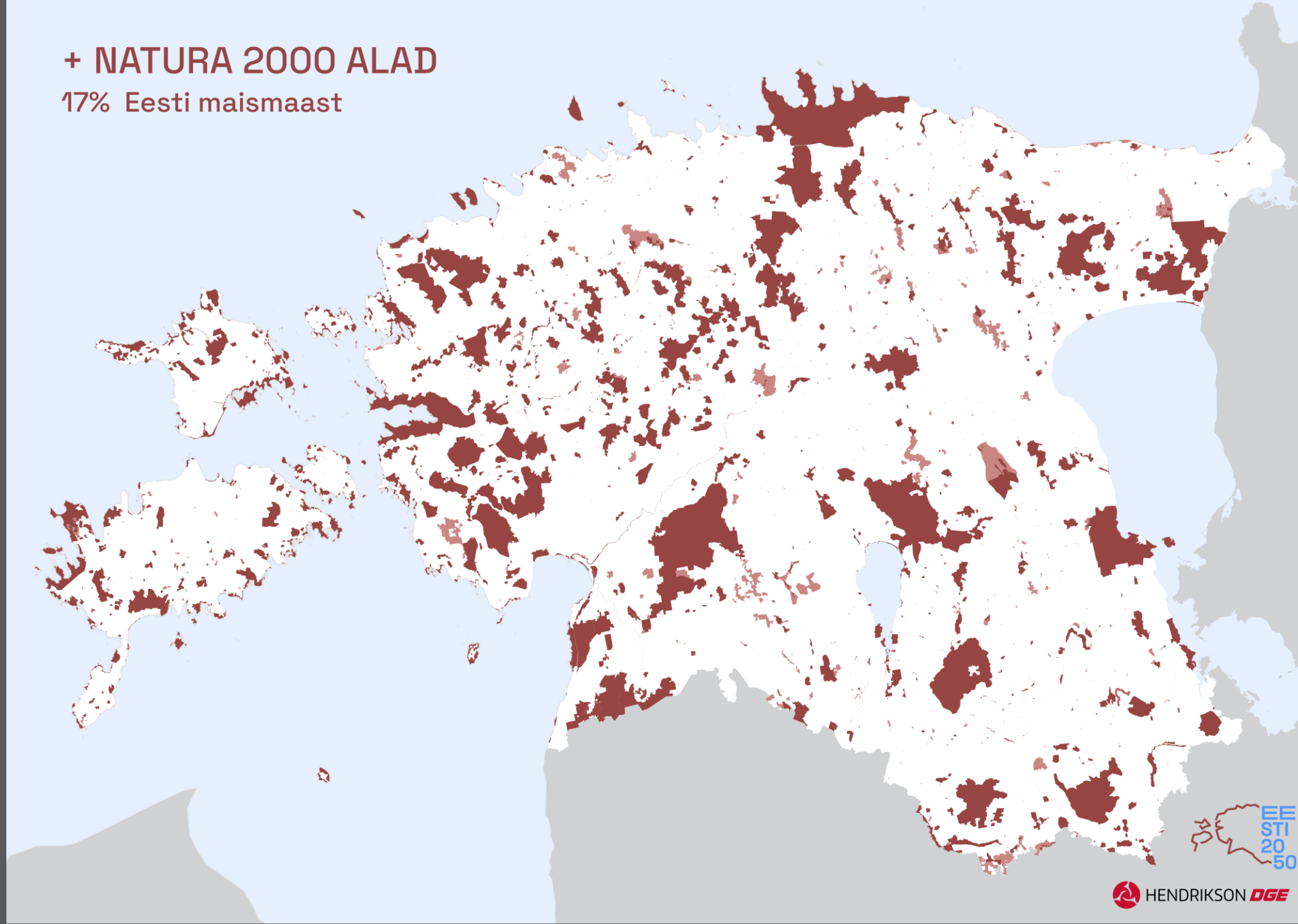
Not enough space?

Values or restrictions?

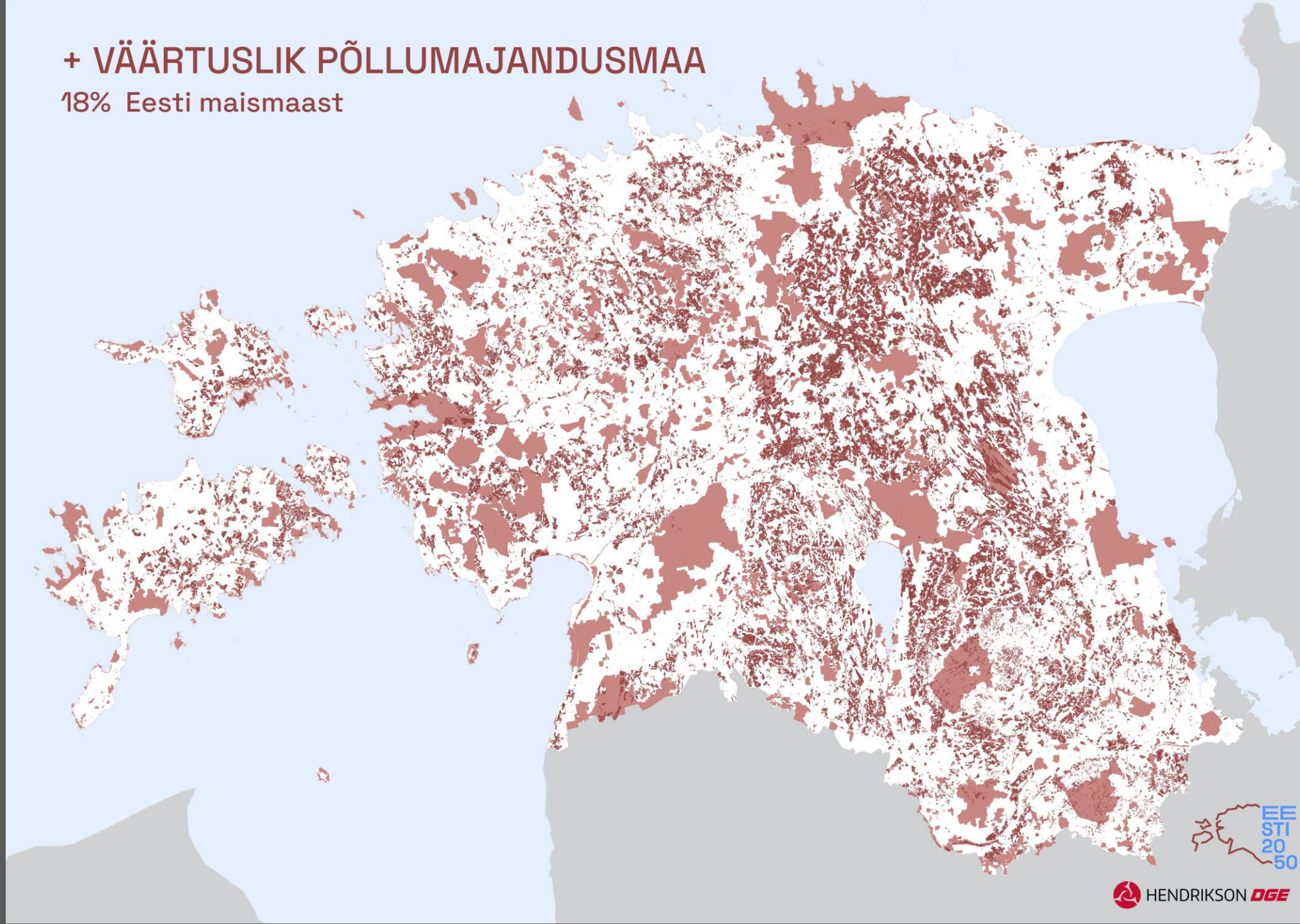
National nature protection areas – 16% of Estonian territory



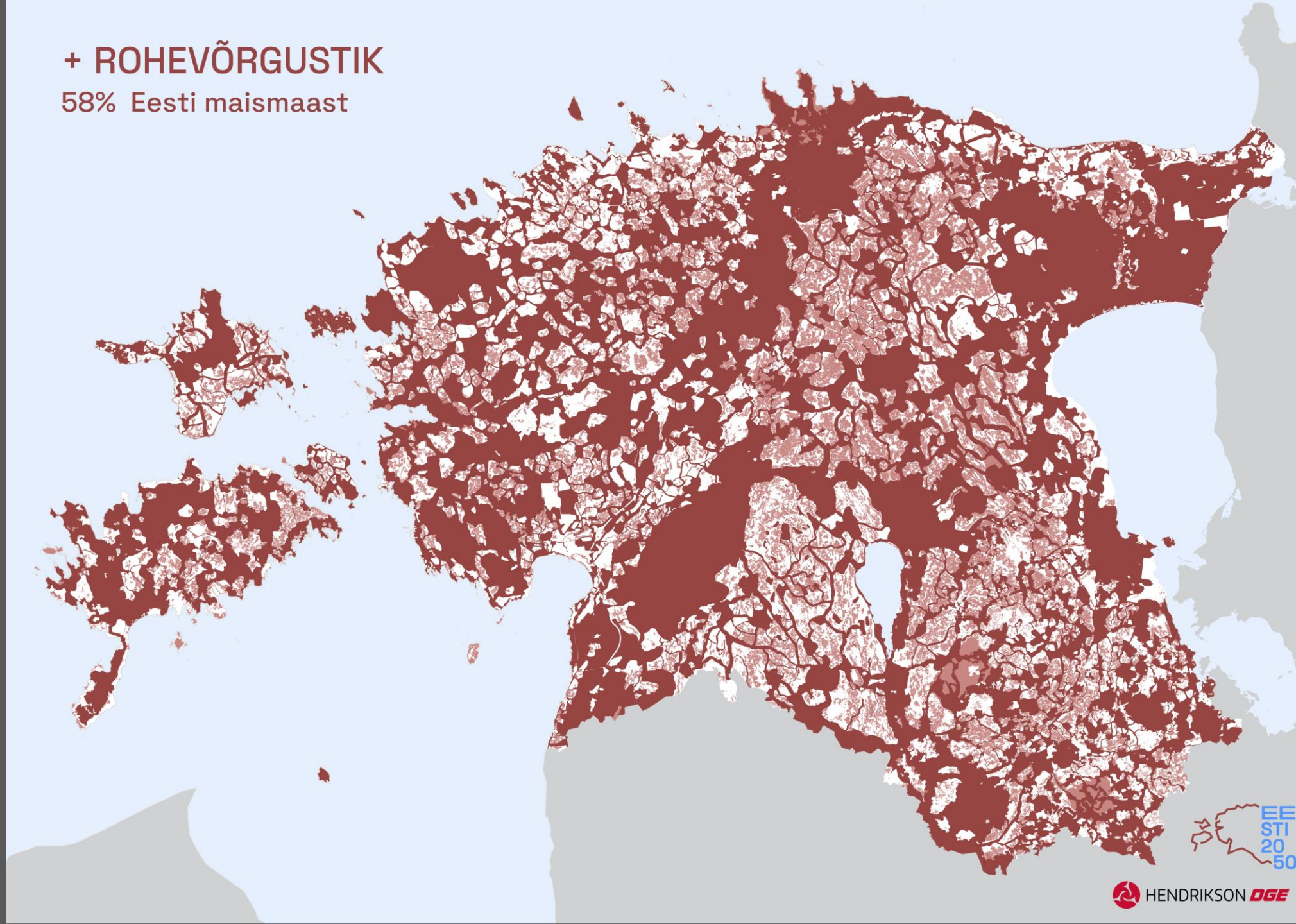
Natura 2000 areas – 17% of Estonian territory



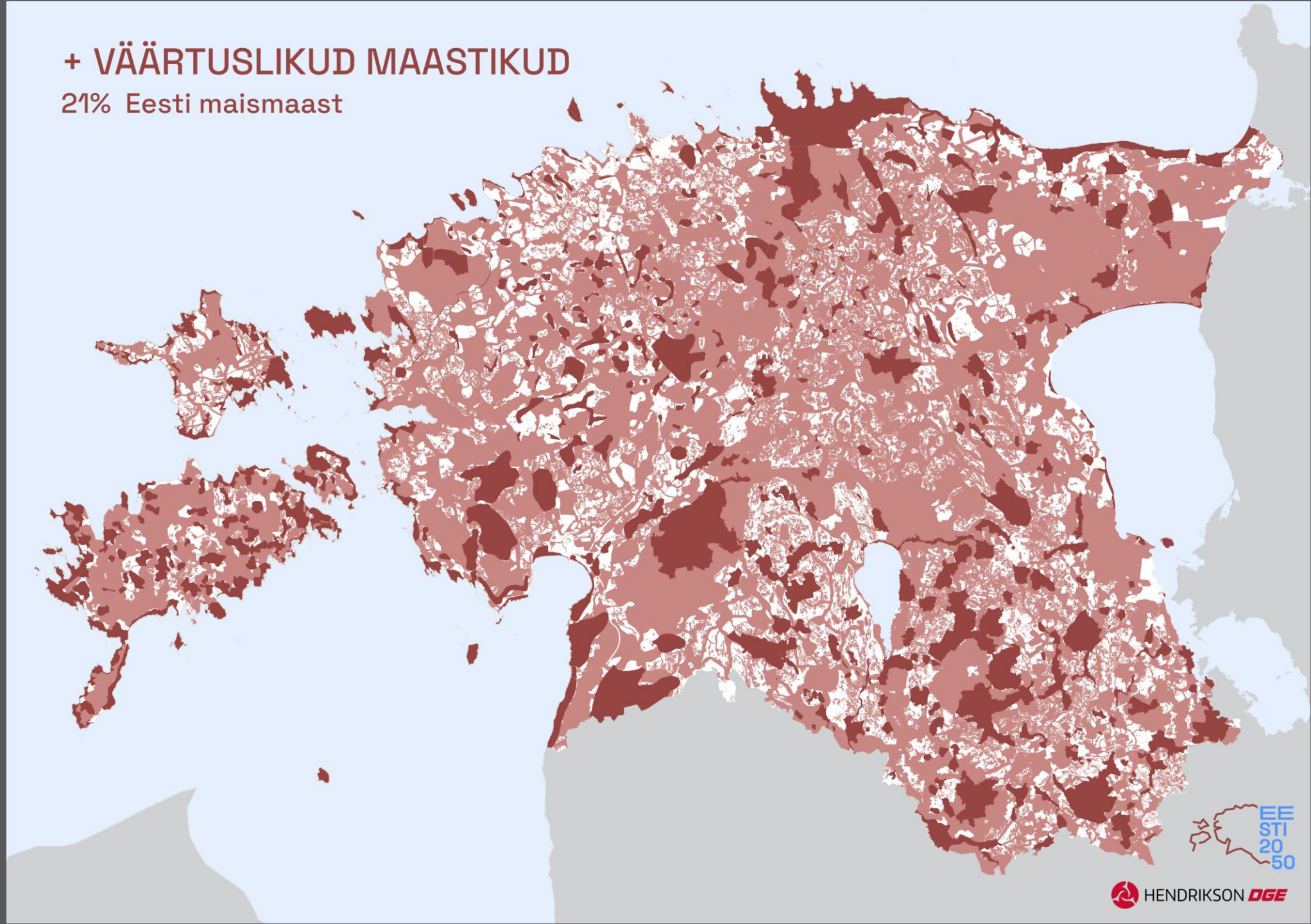
Valuable agricultural areas– 18% of Estonian territory



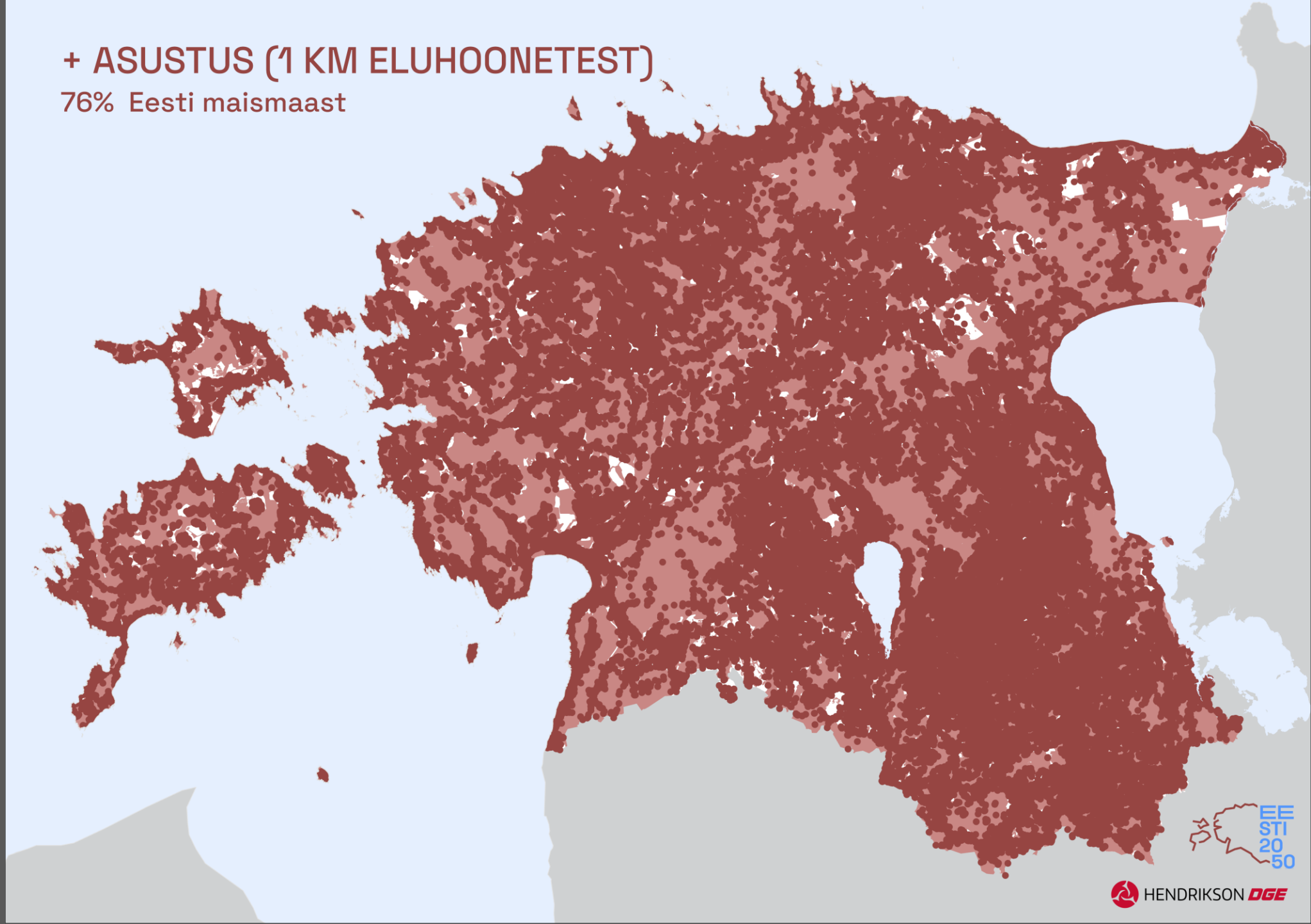
Green network – 58% of Estonian territory



Valuable landscapes – 21% of Estonian territory



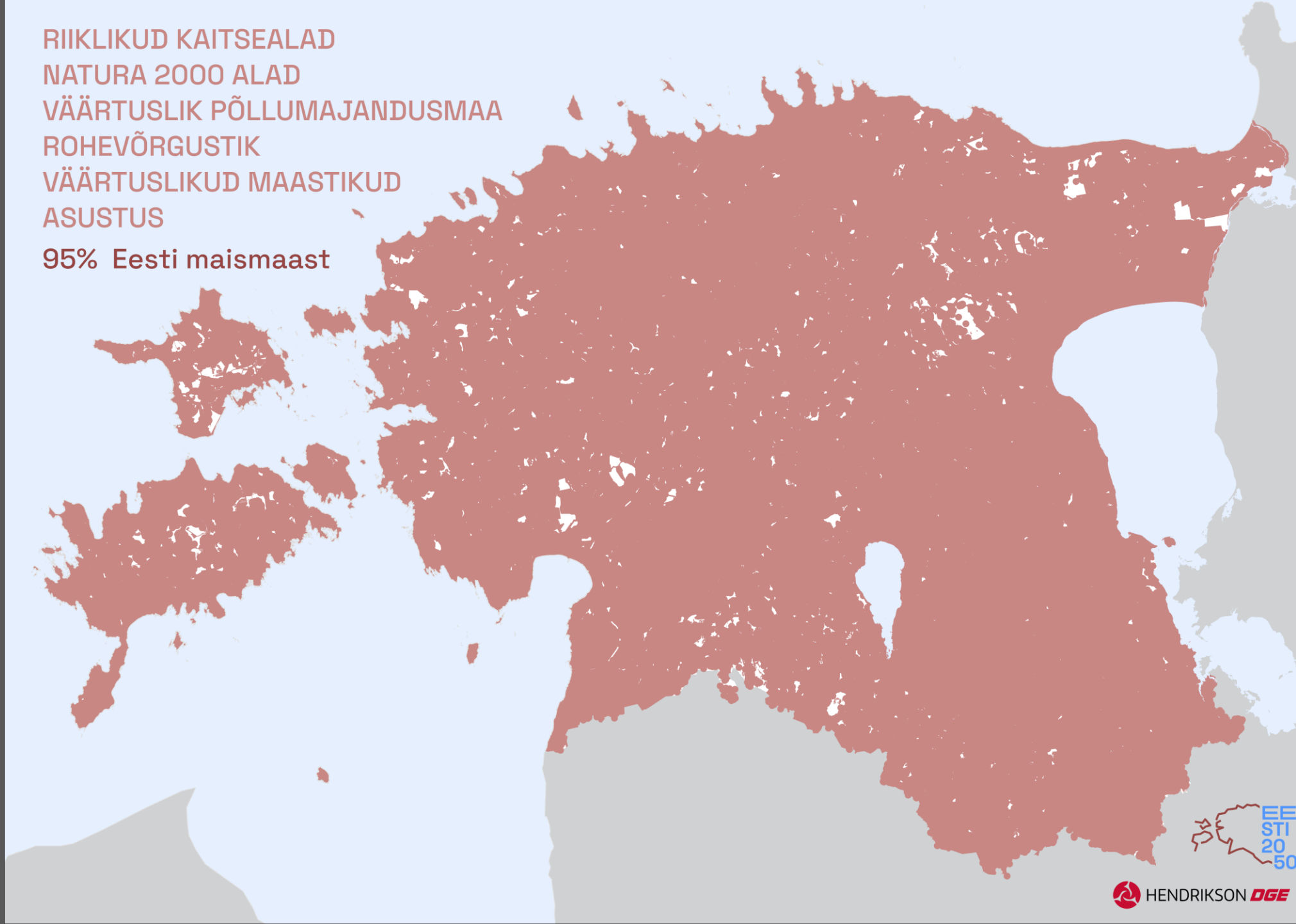
Settlement structure (buffer 1 km from residential buildings) – 76% of Estonian territory



National nature + protection areas Natura 2000 areas + Valuable agricultural areas + Green network + Valuable landscapes + Settlement structure (buffer 1 km from residential buildings) +

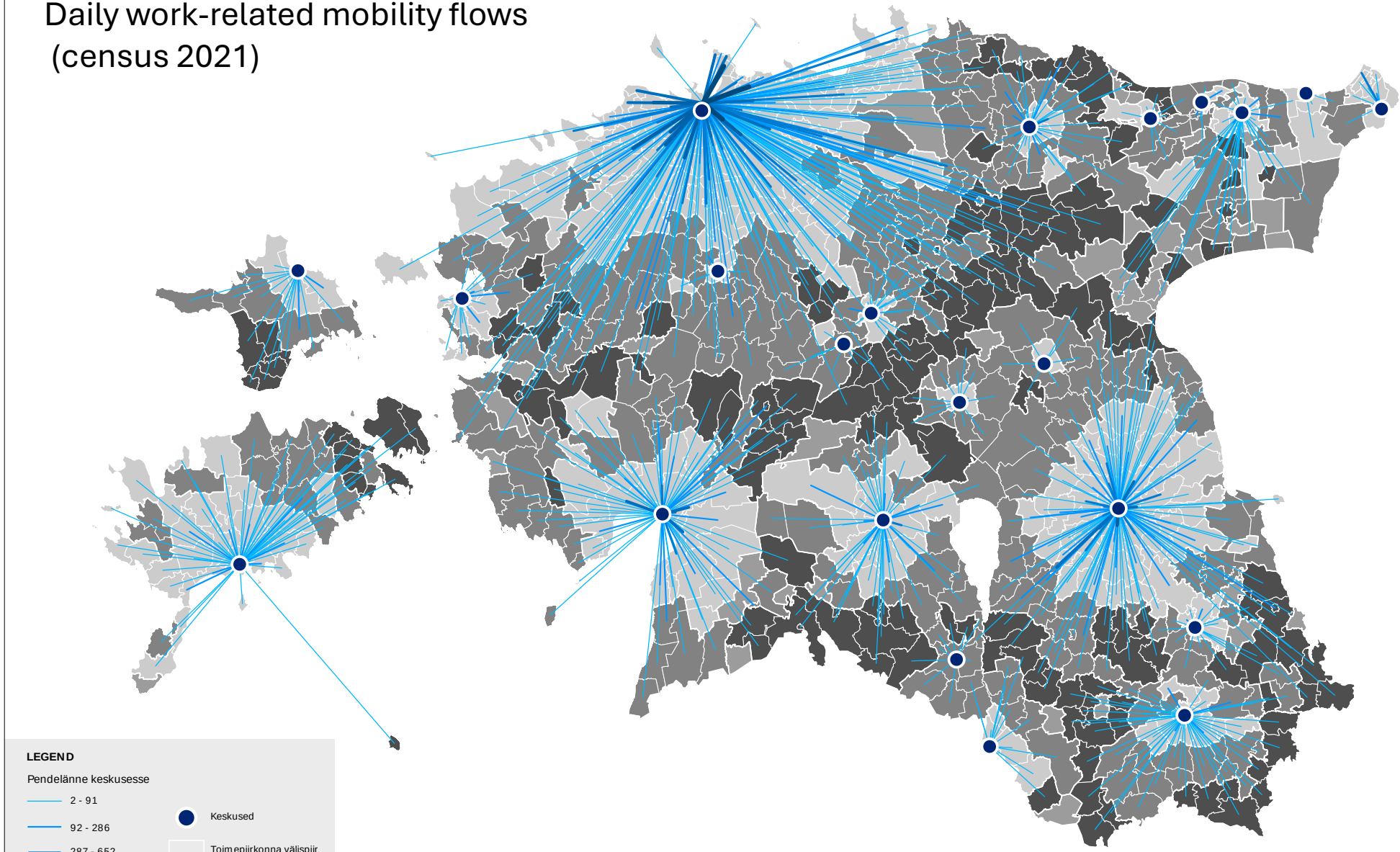
– 95 % of Estonian territory

Smart combined use needed!



Small towns are losing importance as functional centers

Daily work-related mobility flows (census 2021)



HENDRIKSON DGE

Are we able to re-design our settlement structure? Scenario analysis ongoing

Capital region dominating + sprawling and scattered settlement

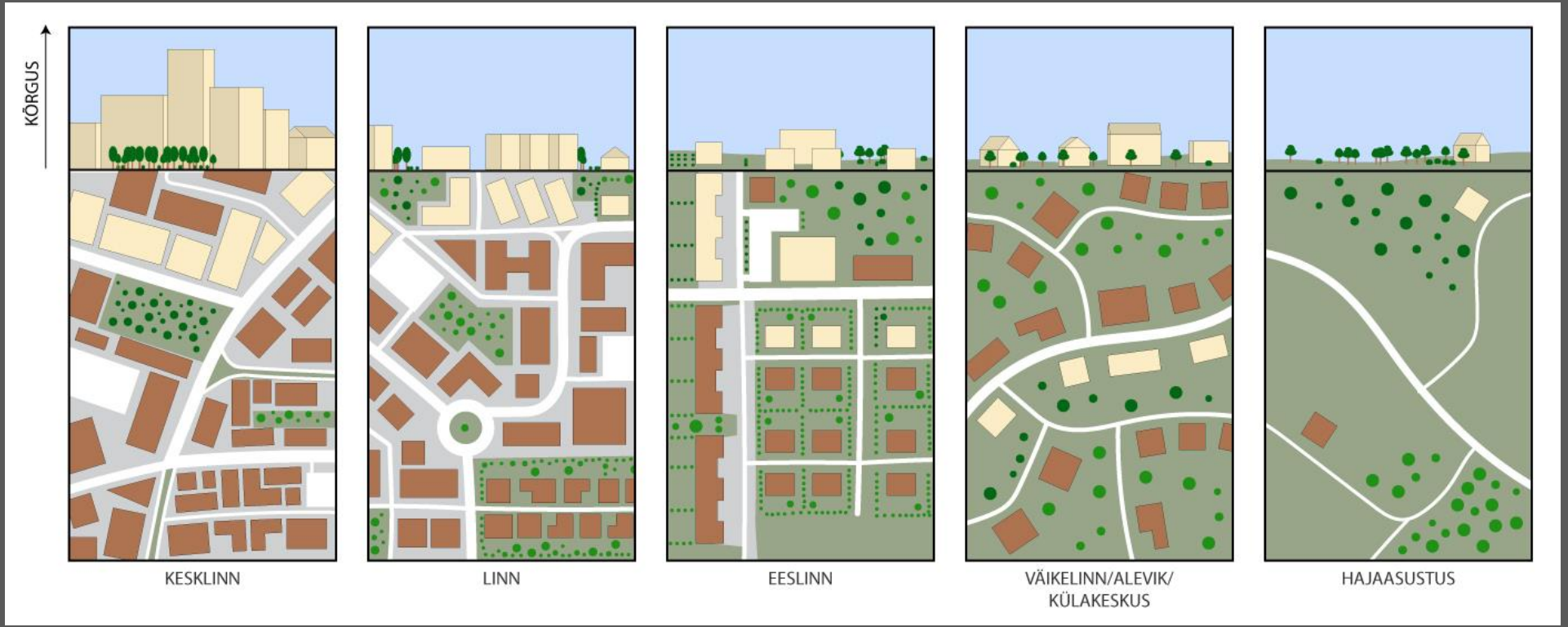
“Urbanising Estonia”, settlement structure based on developing larger towns

“Estonia of small centers”, settlement structure based on county capitals

“Growing Estonia”, continious immigration (war and climate refugees)

Local municipalities' expectations to the new national spatial plan

- Clear understanding about the responsibilities – for instance, is the green infrastructure a national or local responsibility?
- Definition of terms (not all terms are defined in Planning Act)
- More specific guidelines but at the same time, keeping the local planning monopoly



Conclusions

- Spatial planning faces multiple challenges, highlighting its growing significance and increasing necessity in contemporary development processes.
- Universities need to train more planners, but are students interested in such a complex profession?
- The amendment of the Planning Act is currently in progress, with the primary objective of optimizing and enhancing the efficiency of planning procedures. Additionally, simplifying specific planning tasks may also be necessary. The National Spatial Plan is expected to play a pivotal role in facilitating this process.
- To ensure the effective implementation of the National Spatial Plan, it is necessary to make strategic choices and, at times, difficult decisions, such as those related to shrinking areas.

Thank you for your attention!

pille@dge.ee

Within the framework of the European Union Cohesion Policy Program for the period 2021–2027, Specific Support Objective 5.1.1 "Promoting the integrated social, economic, and environmental development of local areas and the cultural heritage, tourism, and security in the functional urban areas" Measure 5.1.1.2 Project No. 5.1.1.2/1/23/I/001 "Improving the capacity of municipalities and planning regions".