



NATIONAL STUDY OF SHRINKING PATTERNS IN ESTONIA

English summary

Helsinki April 2022



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UNIT

TAL
TECH



This is a brief English version of the national study on building vacancies conducted between June 2021 and February 2022 by the SPIN Unit and TalTech for the Estonian Ministry of Economy and Communication.

- This document covers only the most central aspects of our methodology and the more generalised insights. The authors will present not all arguments and findings of our full-length report here for brevity. Among many missing are:
- the municipal profiles
 - the comparison between municipalities showing how shrinking patterns are a relatively localised phenomenon, with significant differences between regions that cannot be generalised at the national scale
 - the comparison between vacancy rate of building types between cities, showing how certain building types are becoming abandoned in one region but the same ones are in high demand in another
 - the detailed review and validation of the dataset we used
 - the comparison between the vacancy rate of apartment buildings and single-family houses
 - the scenario planning chapter with the future projections

Our team thanks the members of the steering group and experts who made essential contributions to the completion of this study: *Kaja Sõstra and the Experimental Statics Team at Statics Estonia // Triin Pärsim and the Jõgeva government // Annely Grazer and Türi government // Tauno Asi, Diana Vene, // Tiina Hallimäe and the Võru government // Marko Teiva and the Tapa government // Imre Jugomäe, Arvi Meidla and the Mulgi government // Ott Valdma and the Märjamaa government // Taavi Jakobson and the Estonian Ministry of Economy and Communication. // Kalle Kuusk, KredEx // Keiti Kljavin, Linnalabor // Veronika Iisjan and the Vahur Tambaum, Maa-amet*

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What we talk about when we talk about shrinkage?

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THE RISE OF VOLUNTARY RESTITUTIONS

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In 2018 the Ministry of Finance received dozens of apartments from Ida-Virumaa after the municipality of Kohtla-Järve informed citizens and apartment associations that they could give unwanted apartments to the state.

Shrinkage has long been discussed and studied in Estonia from a demographic, economic and social perspective - starting with the periodical prognoses by Statistics Estonia to the most recent report "Shrinking Smartly in Estonia" by the OECD.

Amid these discussions, the gifting of unwanted apartments was a turning point and a surprise, particularly given that at the time, interest rates were low or negative, and housing prices were on a steady rise - the year-on-year cost of houses increased by 4,9% in 2017, 5,7% in 2018 and 8,2% in 2019.

The rise of voluntary restitutions spun a new branch of investigation in Estonia, focusing on the relationships between demographic change and the built environment.



WHAT WE TALK ABOUT WHEN WE TALK ABOUT SHRINKAGE

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When we talk about shrinkage, we tend to think about the rapid population decline of a city. The term was initially used to describe the population decline of post-socialist cities struggling with the privatisation of national industries. The concern with relying on this definition in our research was that, in practice, **"shrinking cities" has become an umbrella term that masks the complexity and ground truths of social change and urban transformation.**

When we talk about shrinkage, we also talk about a shared European experience that notably feeds into national politics. According to EPSON, in 2011, over **40% of European regions were experiencing depopulation, and the trend is set to continue towards 2050.**

Depopulation and the perception that a solution is out of reach are starting to shape the political

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imagination. In Spain, the Teruel Existe platform became a political party in the wake of protests demanding the fair and equal treatment of "Empty Spain" in 2019. Its success inspired the establishment of the party España Vacía (Empty Spain), which has seen electoral success in regional elections. In Italy, a Euro 420 million recovery fund assigned to rural areas via competition has ushered charged perceptions of unfair treatment toward the shrinking cities of "Empty Italy."

The triggers for shrinkage are also changed. European cities have long passed the privatisation issues of the post-socialist era. Nowadays, **the depopulation of rural areas can be better understood if framed in the context of the green (unfair) transition, automation and planetary urbanisation.** Moreover, multilocality and the demand for a more efficient and compact city add gasoline to the fire.

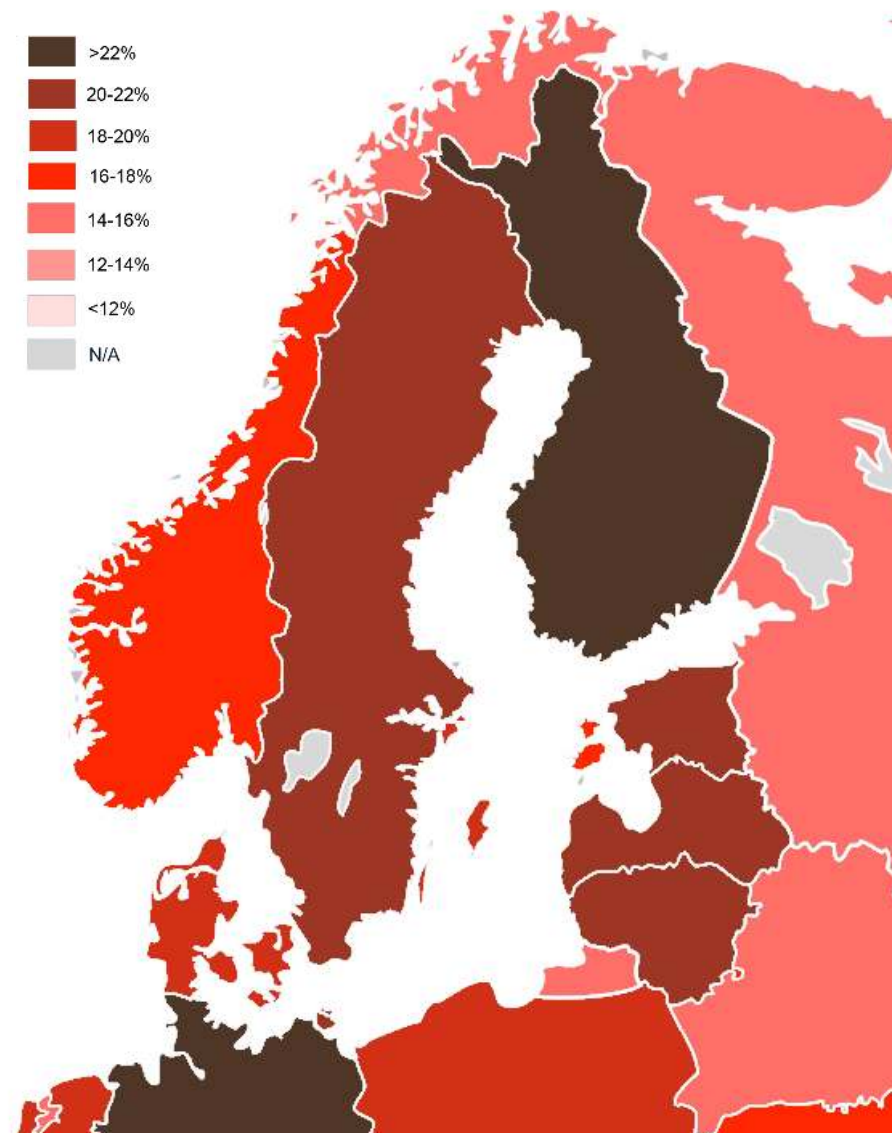




TRENDS

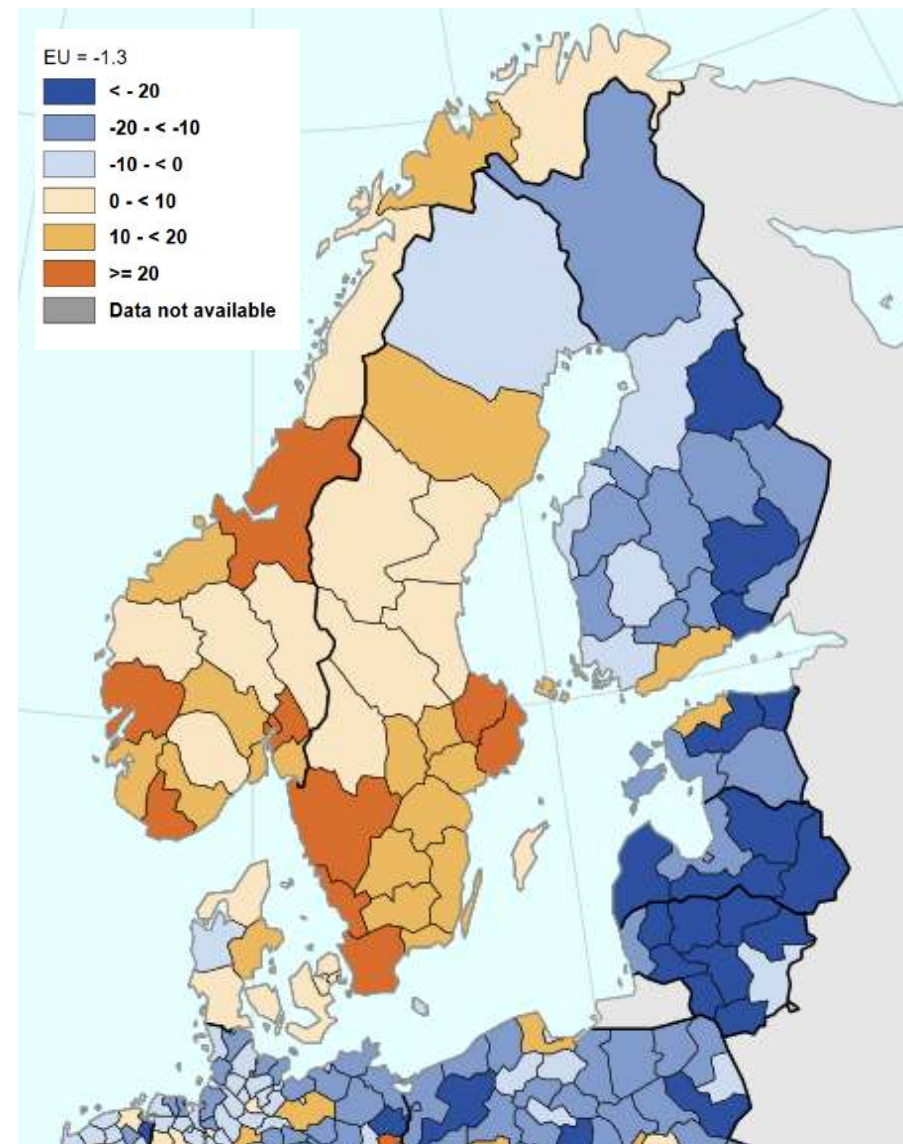
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Ageing population - Finland and the Baltics have a relatively high percentage of people over the age of 65.



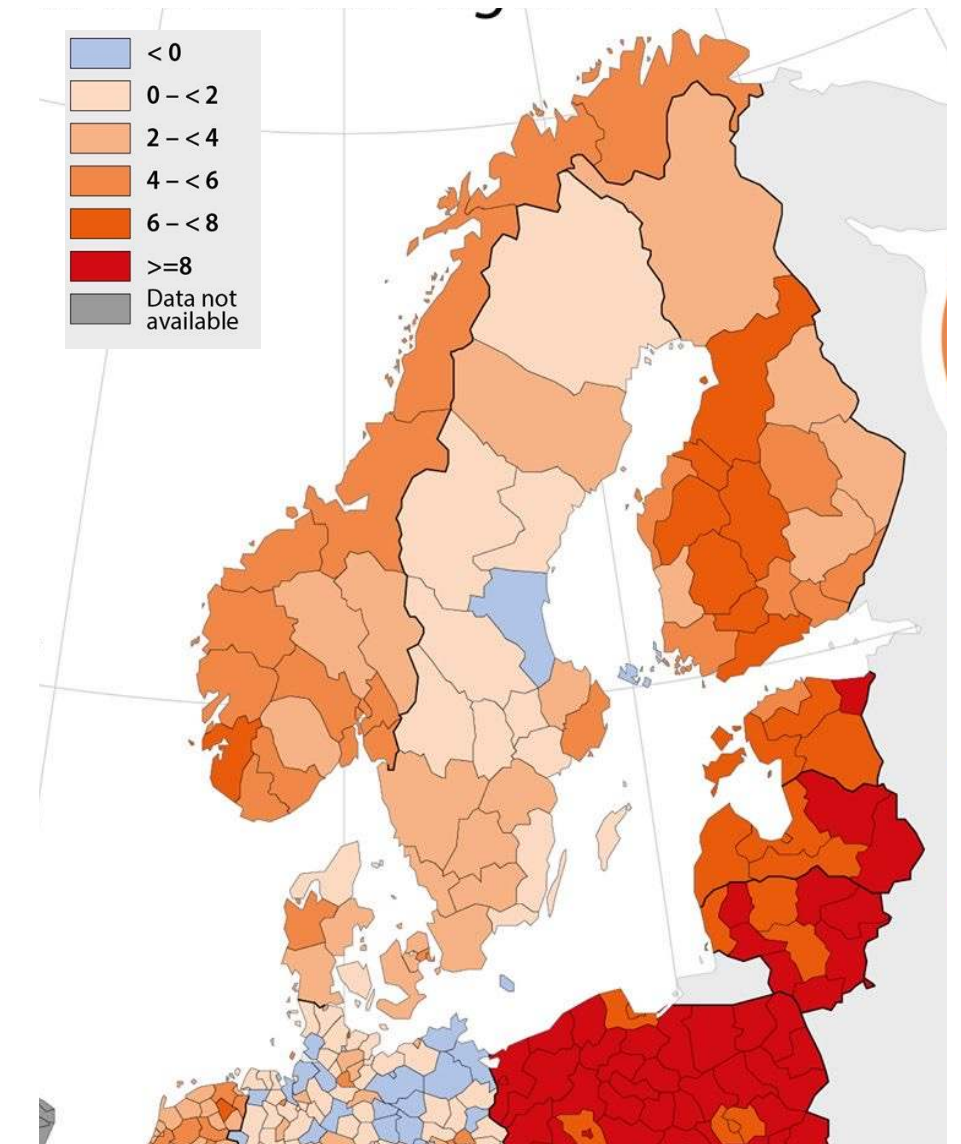
Percentage of the population over 65 in Europe in 2020
EUROSTAT

Population will decrease - By 2050, areas outside the capital regions of Finland and Estonia are expected to lose as much as 20% of their population. Total EU -1,3%



Projected percentage change of the population, by NUTS 3 regions, 2019-50 . EUROSTAT

Abd become even older - By 2050. Eastern and Northern European populations are projected to become considerably older in 2050 than today.



Project change in media age between 2019-50. EUROSTAT

THE GENERAL TREND IN ESTONIA

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Estonia's population figures have remained stable over the past few decades. After lukewarm growth in the 1990s, today's population is the same as in the 1970s despite the GDP more than tripling.

Public and policy discourse suggests that some cities are shrinking even if the overall population has remained stable. To gain a first-hand understanding, we mapped the population change of all Estonia's municipalities relative to the national trend from 2015 to 2021.

The metropolitan regions of Tallinn and Tartu experienced relative population growth while other regions experienced population decline. More precisely, it was not Tallinn and Tartu to drive this relative growth but the municipalities surrounding them. This is expected as housing prices in Tallinn and Tartu have increased steadily, while the general increase in wealth has propelled growth in the suburban areas where single-family houses are readily available.

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Depopulation is present in regions across the globe, and its dynamics are historically and structurally contingent. With urbanism becoming a planetary phenomenon, studying shrinking cities as a post-socialist phenomenon is no longer helpful, and new viewpoints are needed to see through new emerging phenomena.

While most studies on shrinking cities were based on demographic data, it became clear that to unpack the complexity of shrinkage in Estonia; we needed to find new data sources about the built environment. We knew from specialists at the Ministry of Finance that apartment buildings were becoming abandoned or empty while summer houses were getting transformed quickly.

To better understand what we talk about when we talk about shrinkage, then, we had to move from demographic research to fine-grained urban data.





DEMOGRAPHIC CHANGE

RELATIVE TO THE NATIONAL 2015-2021

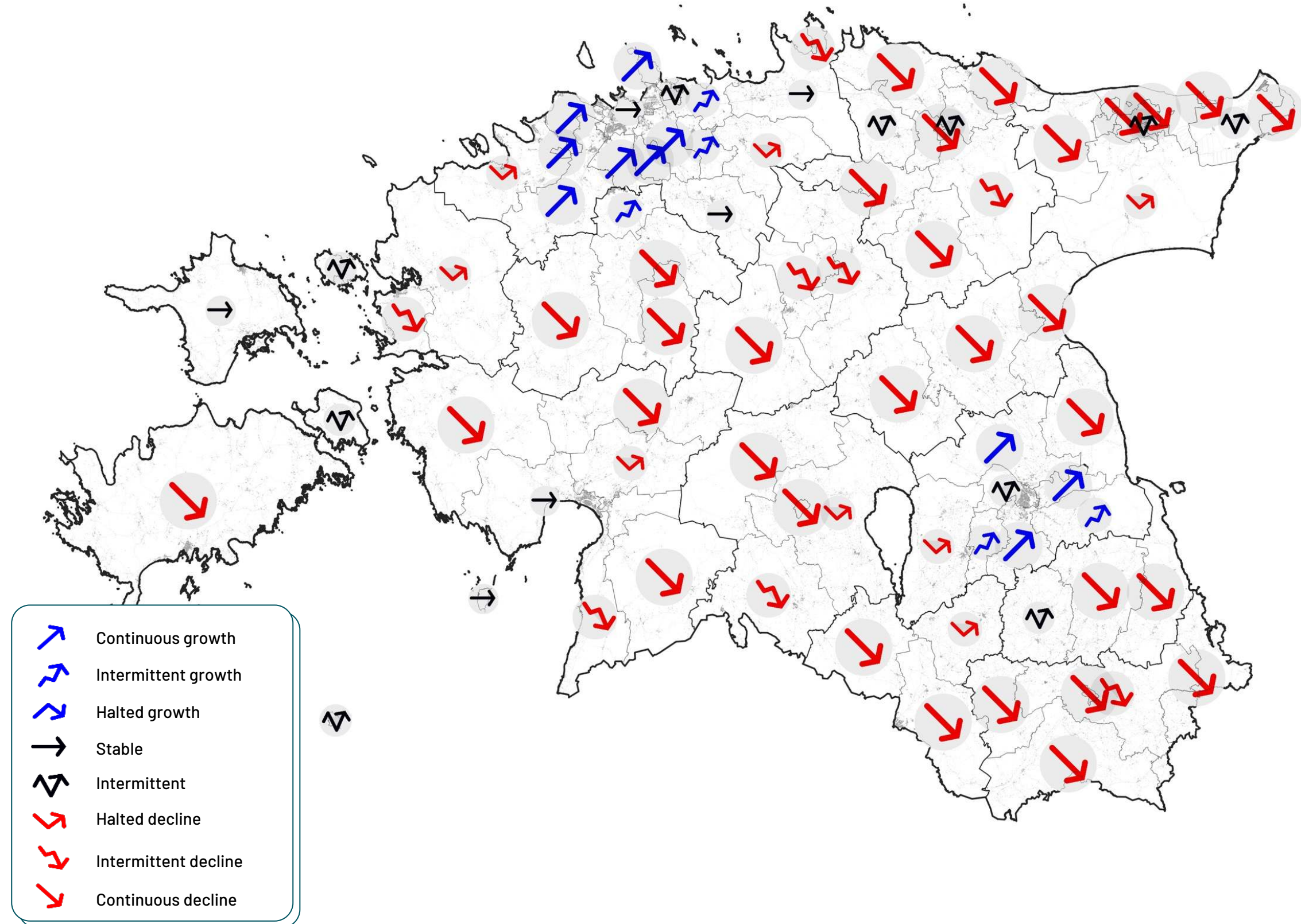
Estonian population size has reached a plateau, and it is expected to start declining rapidly. Elaborated from Statistics Estonia datasets.

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Estonian population size has been rather stable since 2015

Population growth relative to the national trend is experienced in the commuter belts of the major urban centres of Tallinn and Tartu.

Multilocality is becoming a predominant phenomenon.



Establishing a new methodology to study shrinkage

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THE FIRST RESEARCH PILOT

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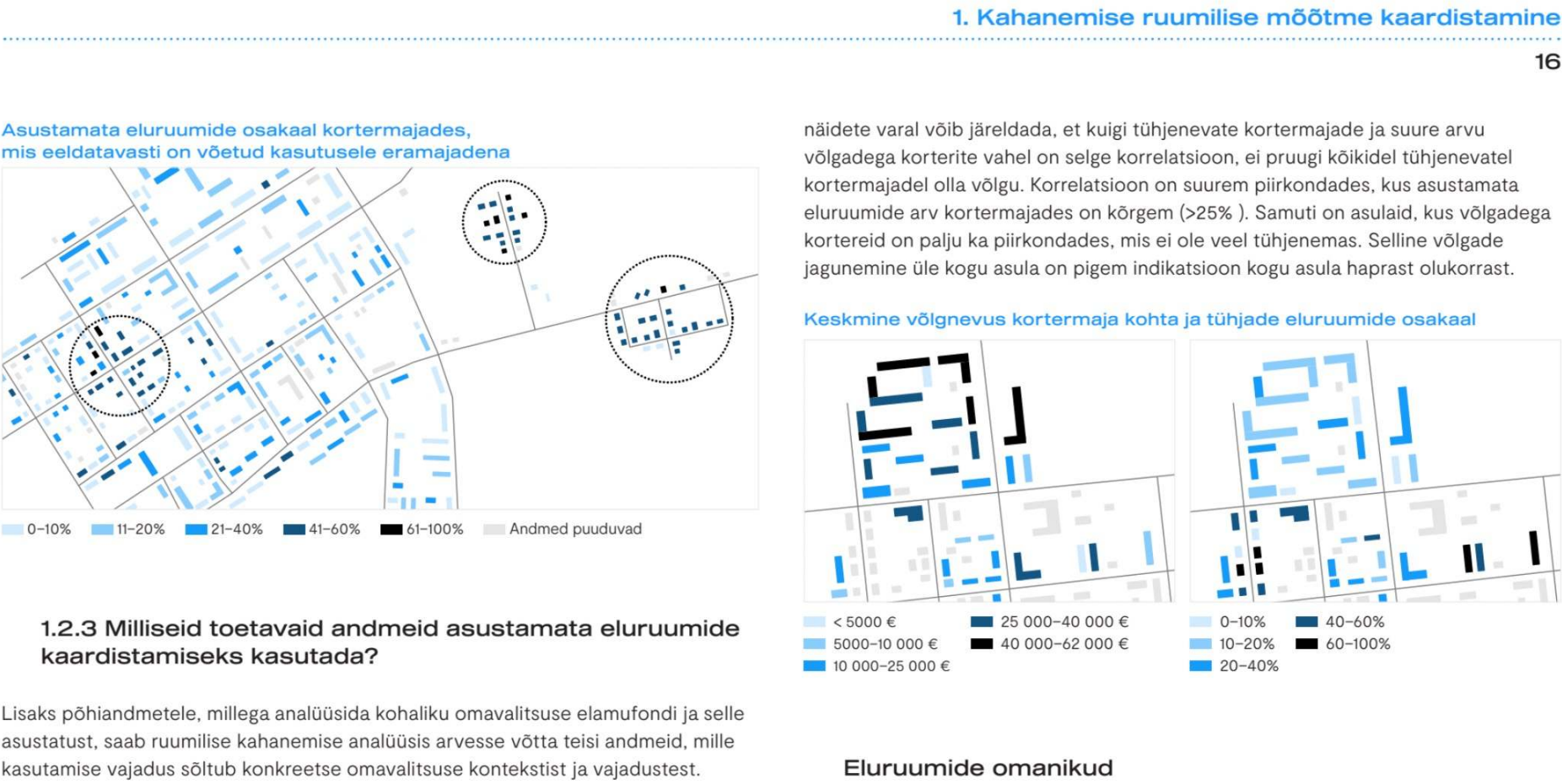
In 2019 we started our pilot study in Ida Viru (East Estonia) for the Ministry of Finance to design a methodology to study shrinkage. The aim was to assess viably and unknown data sources, validate them and use them to study shrinking patterns.

Our ground surveys and interviews and a study carried out by Linnalabor were used to verify that electricity consumption data and the Population Registry were valuable sources to map building vacancy reliably. This initial study lasted nearly one year, and it revealed that vacancy was reaching alarming rates in urban and rural areas, and highly vacant buildings tended to cluster with each other.

Because of the public and policy discourse on shrinkage, we expected post-industrial cities to shrink and others to be stable. However, this generalisation of shrinkage is because most studies

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rely on demographic data mostly aggregated by municipality or zip-code at best. By looking at vacancy at the building level using electricity consumption data, we started to unpack the known regional trends and unravel how vacancy clusters were present in both growing and depopulating municipalities.



Eluruumide omanike kaardistamine pakub võimalusi nii probleemsete kortermajade kaardistamiseks kui edasise kahanemisega kohandamise suunamiseks. Välisriikide kodanikest eluruumide omanike arv võib muutuda oluliseks kui neid on piirkonnas suurel hulgal. Samuti on võimalik nende andmete põhjal analüüsida välisriikide kodanikest omanike eelistusi kinnisvara soetamisel — nt kas teatud riikide kodanikel on hoonetüübi või piirkonna osas eelistused või kas noorema generatsiooni välisriikide kodanikest omanikel on hoonetüübi ja piirkonna osas vanemast generatsioonist erinevad eelistused? Eraldi tuleks välisriikide kodanikest omanike puhul kaardistada nn passiivseid omanikke, kellel puudub Eesti elamisloa ja isikukood. Nn passiivsete omanike puhul on tõenäoline, et nad ei ole huvitatud hoonesse investeerimisest

SCALING UP THE METHODOLOGY

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In 2021 The Ministry of Economy financed SPIN Unit and TalTech a study to take the methodology we developed during the pilot and scale it up nationally. The core questions to answer were, "What are the shrinking patterns in Estonia?" and "What are the most vulnerable areas and building types?"

Data collection was crucial, as this was the first time that electricity consumption data at the flat level was gathered to analyse vacancy rates on a national scale.

Over seven months, we worked closely with the Ministry of Economic, Statistics Estonia, and the Estonian Data Protection Agency to collect, validate, aggregate, and categorise vacancy data of apartment buildings and single-family houses - the first was released granularly. The second aggregated on an H3 grid.

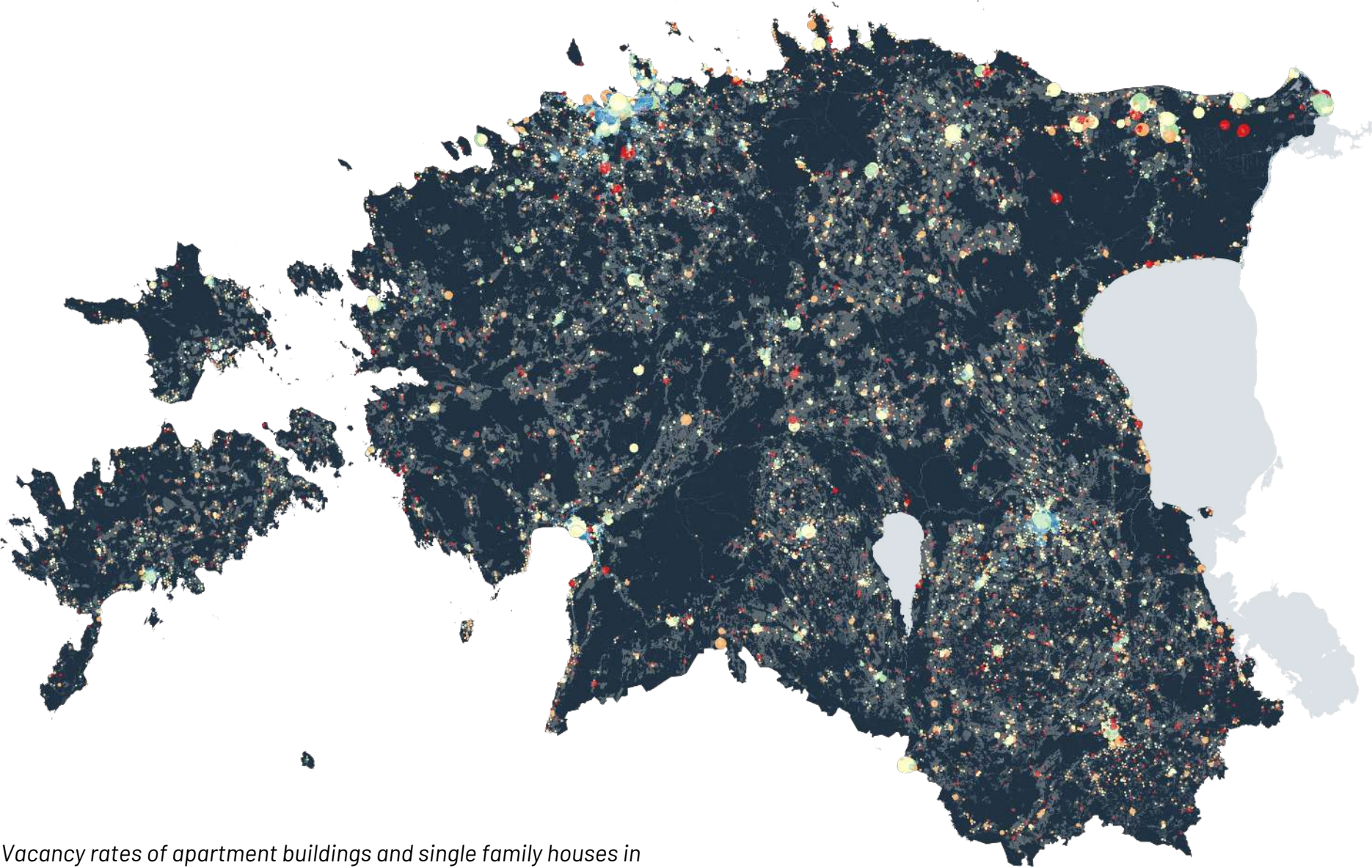
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With electricity consumption data, we could map dwellings' vacancy rates in 2019, while the Population Registry data was utilised to analyse vacancy trends between 2013 and 2020.

For the electricity consumption dataset, a dwelling was considered vacant if it consumed less than 100kWh of electricity in a year – less than what a fridge would consume. Due to technical limitations of the existing infrastructure, electricity consumption data were available for just above 80% of the entire building stock of Estonia.

The second most central source of data was the Estonian building registry. This is detailing a vast amount of information for each single building in the country.

**In our report, flats are referred to as dwellings.*



Vacancy rates of apartment buildings and single family houses in Estonia according to Electricity data in 2019.

ANALYSIS ACROSS SCALES

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One of the peculiarities of this study was that the outcomes and the findings had to be significant for policymakers in National, Regional and Municipal administrations.

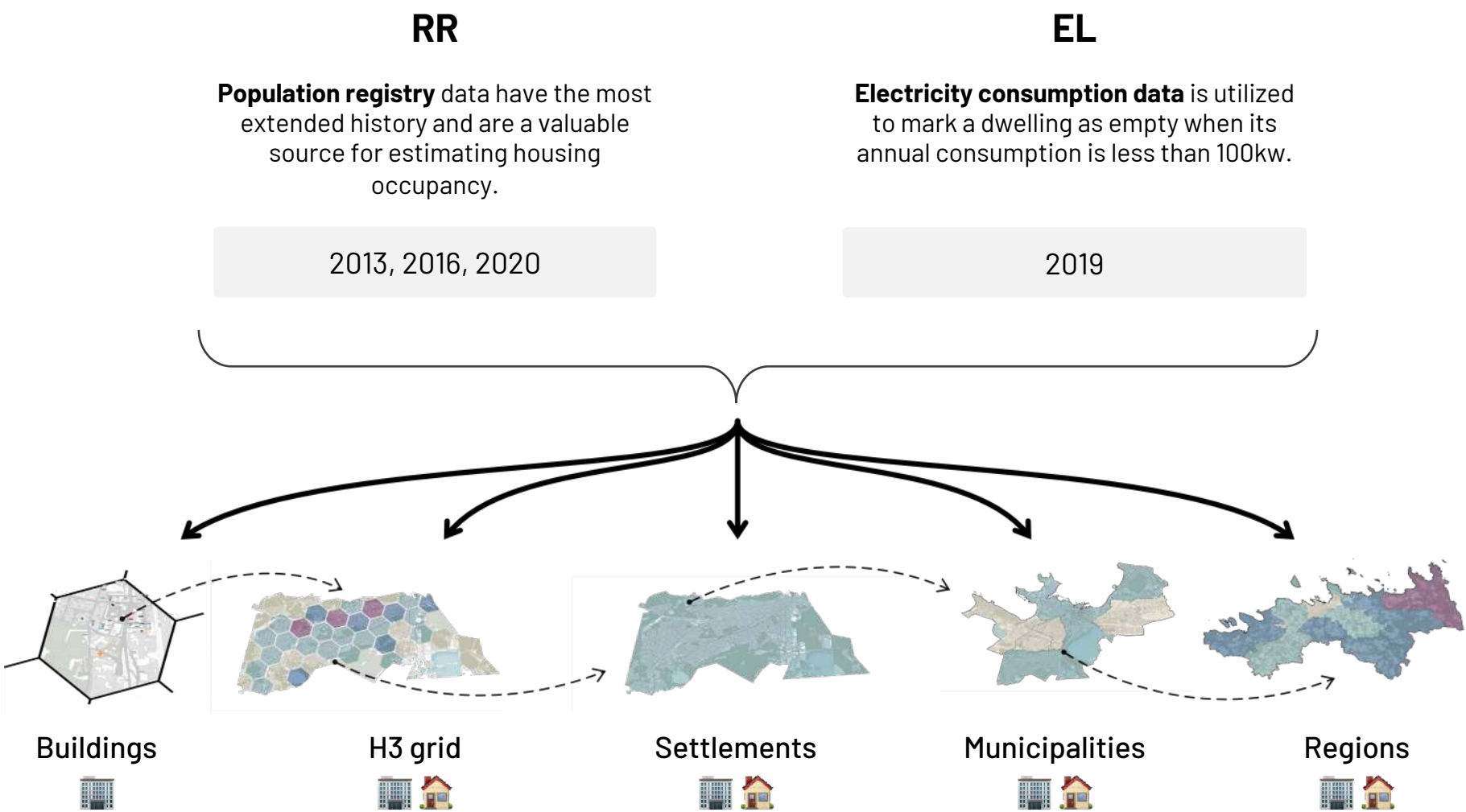
We aggregated and analysed data to the regional, municipal, and settlement scales to achieve clarity at different scales and provide the information required for an informed, data-aware decision-making process.

This laborious approach extended the length of this project, as data was not just aggregated in those unities but analysed in their geographical contexts. The advantage is that stakeholders would benefit from accessing nationally-comparable data while having insights into the administrative area for which they have decisional power.

Recognising that the geographical borders of settlements,

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municipalities, and regions introduce spatial bias when data is aggregated, we also conducted an analysis using the buildings themselves and the H3 hexagonal grid system.





DATASET - ESTONIAN BUILDING REGISTRY
2013-2022

Half of the building stock in Estonia is made of single family houses.

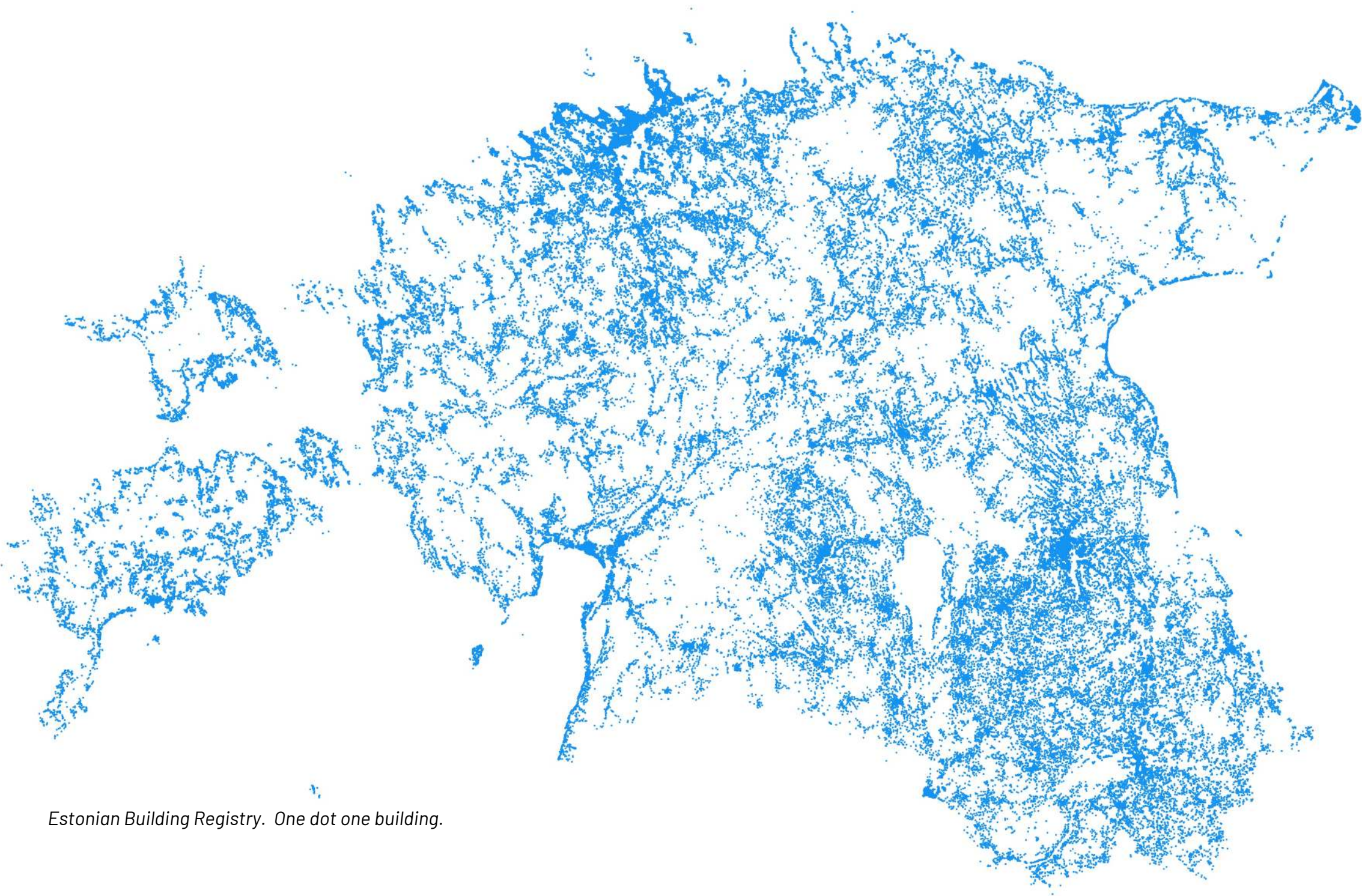
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As of 1 January 2020, in Estonia, there were **749,439 dwellings in 268,496 buildings.**

Apartment buildings have an average of **19 dwellings** (26,688 in a total of 501,437 dwellings).

Detached and semi-detached houses had an average of **1.03 dwellings** (241,808 in a total of 248,002 dwellings). There are only about 6000 dwellings in semi-detached houses.

Half of the building stock in Estonia is made of single-family houses.



Estonian Building Registry. One dot one building.

TIMELINE

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2018 →

VOLUNTARY RESTITUTIONS

A few years ago, the Ministry of Finance received dozens of apartments from Ida-Virumaa, after the municipality of Kohtla-Järve informed citizens and apartment associations that they could give unwanted apartments to the state.

Even if the phenomenon of shrinkage has long been discussed in Estonia, these discussions have largely been driven by general statistics and gut-feeling. In the midst of these discussions, the gifting of unwanted apartments was a turning point and a surprise, particularly given the context: skyrocketing housing prices, and cheap mortgages.

2019 → 2020

PILOT PROJECT Ministry of Finance

In 2019 we ran a study in East Estonia for the Ministry of Finance to see if vacancy data could help us understand shrinkage more fully.

In this study, we validated the use of electricity consumption data to map vacancy rates of apartment buildings.

The study revealed that vacancy reached an alarming rate of 25% and that highly vacant buildings tended to cluster.

2021 → 2022

NATIONAL STUDY Ministry of Economy

In 2021 The Ministry of Economy commissioned a study to scale up the methodology developed during the pilot nationally.

The novelty of the national study was the use of aggregated vacancy rates for single family houses and apartment buildings through time.

2021 →

REGIONAL IMPACT Ida Viru Region

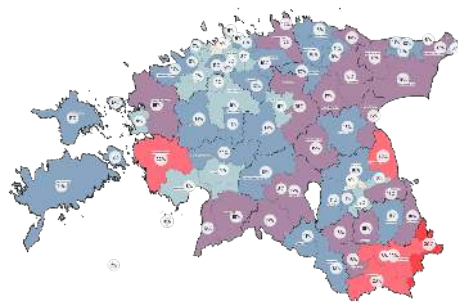
In 2021, when the national study was near ending, our team started working with Ida Viru (East Estonia) and its eight municipalities to further the research shrinkage at the building scale and start making an impact.

This project aimed to generate a tangible positive impact on local communities and the decision-makers and specialists in Ida Viru.

Our team designed a charette format comprehensive of site visits, seminars and workshops to share the results of our municipal profiles, initiate a local debate and kick-start new local strategies for shrinkage.

*The pilot project, the national study and the Regional impact project were carried out in consortium with TalTech and with the cooperation and experience of Linnalabor.

THE 5 RESEARCH AREAS OF THE NATIONAL STUDY



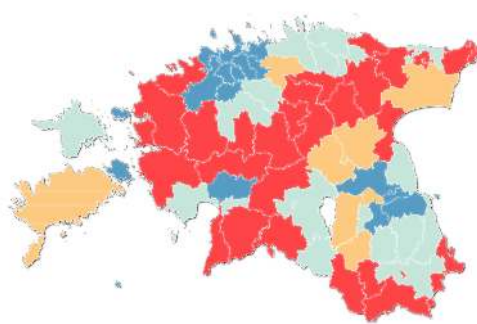
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VACANCY

What are the vacancy rates today?



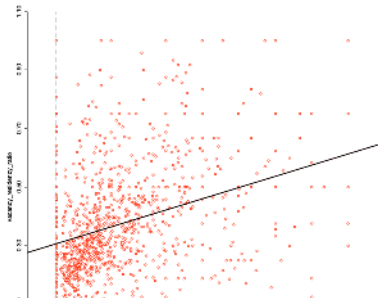
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TRAJECTORIES

What are the vacancy rates over time?



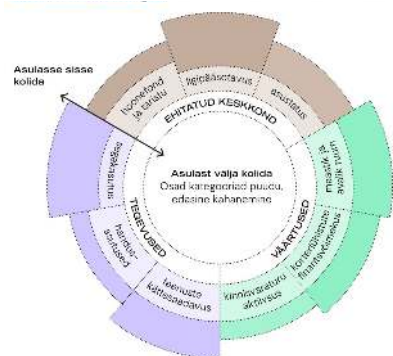
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VULNERABILITY

What are the most vulnerable municipalities, settlements and buildings?



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POSITIVE DEVIANCE

What can we learn from the outliers?



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SCENARIOS

What are the viable scenarios for policymakers?

What are the vacancy rates across Estonia?

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VACANCY RATES

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The emergence of the first map of vacancy aggregated by municipalities presented how East Estonia was not the only region affected by high vacancy rates. On the contrary, according to the electricity data, **25 municipalities had a vacancy rate of at least 15% in 2019.**

This meant that about **one in six dwellings is empty in roughly one-third of Estonia's municipalities.**

We have also observed a significant difference between the vacancy rates of single-family houses and apartment buildings: **7% of apartment dwellings are vacant, compared to 12% of single-family houses.** Those differences are also reflected locally.

For example, in the Võru region, the vacancy rate of the apartment buildings is 12% against the nearly double 22% of single-family houses. In Harju County, 5% of apartment

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dwellings are vacant, compared to 9% of single-family houses. In cities affected by shrinkage (municipalities with at least 15% vacancy rates), the opposite is true: apartment dwellings are more vacant than single-family houses.

For example, in Mulgi, the vacancy rate of single-family houses stands at 13%, while apartment buildings are nearly double as empty with a vacancy rate of 21%. The same is true for other cities, and they all share one common trait: buildings with less than ten dwellings are the most vacant.





Electricity data accounts for about 80% of all the dwellings in Estonia

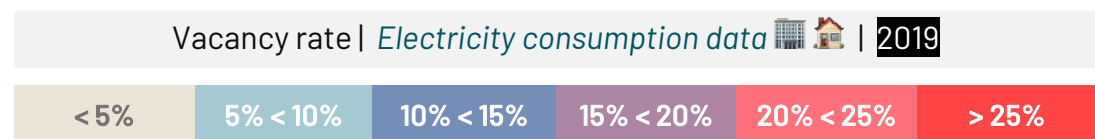
7,7%
Apartment
buildings

12,2%
Single family
houses

25 Municipalities have a vacancy rate of at least 15% - 1 empty flat every 6.

Those rates are significantly high because for a dwelling to be considered empty according to electricity data meant that during the entire year of 2019, it consumed less than 100Kwh – nearly three times what a fridge alone consumes.

N.B. In this version of our analysis, we removed areas with the prevalence of summer houses from this subset. With those included, the vacancy rates would be even higher.





VACANCY RATES AGGREGATED BY SETTLEMENT

By changing scale we can reveal the complexity of the phenomenon

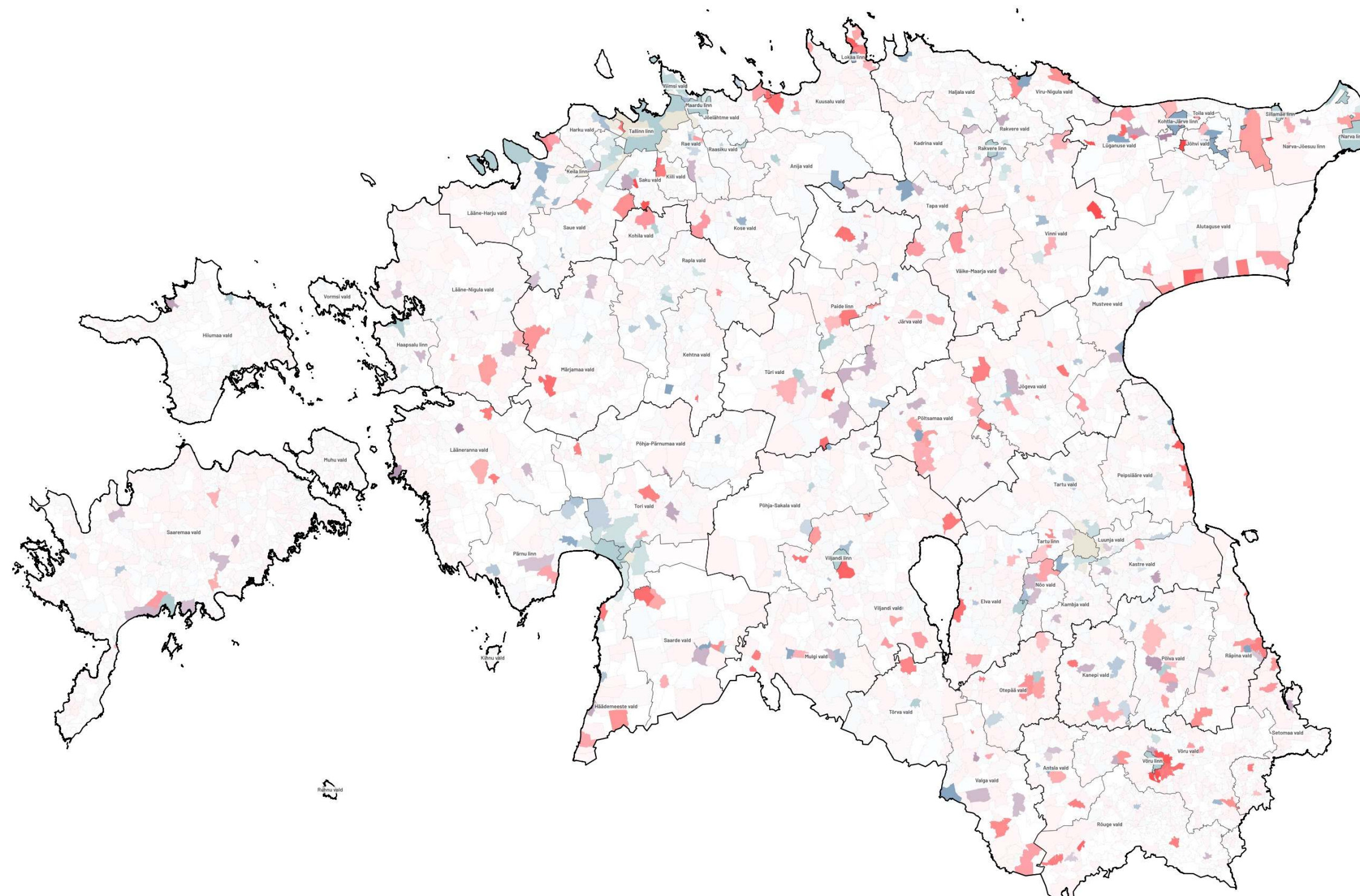
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There are at least multiple shrinking settlements in every region, regardless of socioeconomic conditions.

Shrinkage is a splintered phenomenon, and it can occur in regions with both positive and negative population change.

Vacancy rates are considerably high in settlements further from the metropolitan regions.

NB: in some cases, settlements unites have high vacancy rate because they are former summer houses districts undergoing transformation from home to residences.



Vacancy rate | [Electricity consumption data](#) | 2019

< 5% 5% < 10% 10% < 15% 15% < 20% 20% < 25% > 25%

Number of empty dwellings





VACANCY RATES

AGGREGATED BY SETTLEMENT

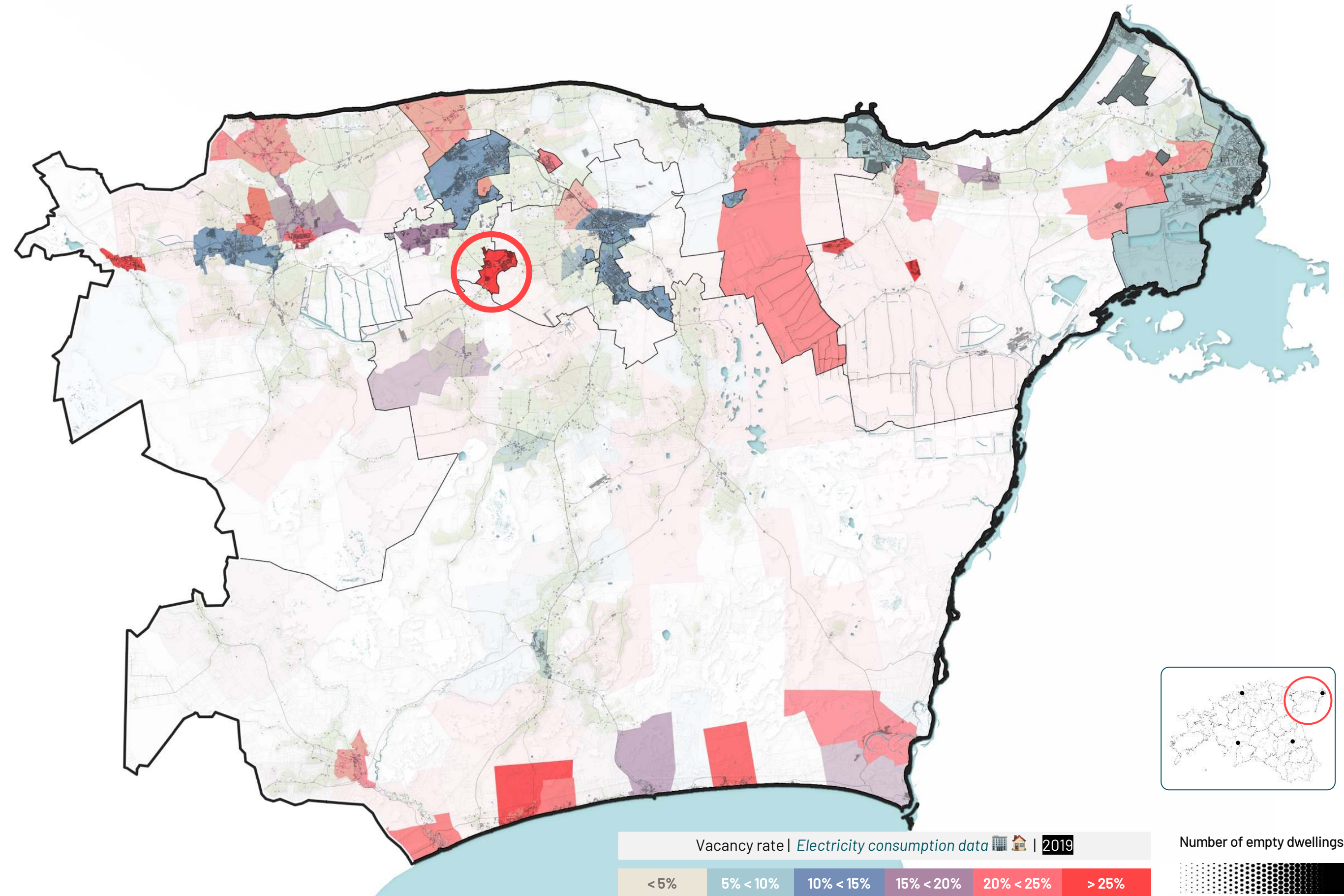
A zoom-in into Ida Virumaa (East Estonia)

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When we started mapping vacancy data, it became clear that the phenomenon looked different at different scales.

For instance, Kohtla-Järve is generally perceived as a shrinking city. However, its vacancy rate at the municipal scale is a relatively low 11% - about one in ten dwellings is empty.

We see a new picture at the district scale, with Sompa Linnaosa's vacancy rate of 27% driving the Kohtla-Järve's vacancy rate up. With this level of detail, we could dispel the myth that mainly East Estonia is suffering from shrinkage, when in fact, there are clusters of vacant buildings even in fast-growing regions.



SOMPA

EXAMPLES OF HIGH VACANCY CLUSTERS

A zoom-in into Ida Virumaa (East Estonia)

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One of Estonia's cluster of vacant buildings in Sompaa, Ida Viru.

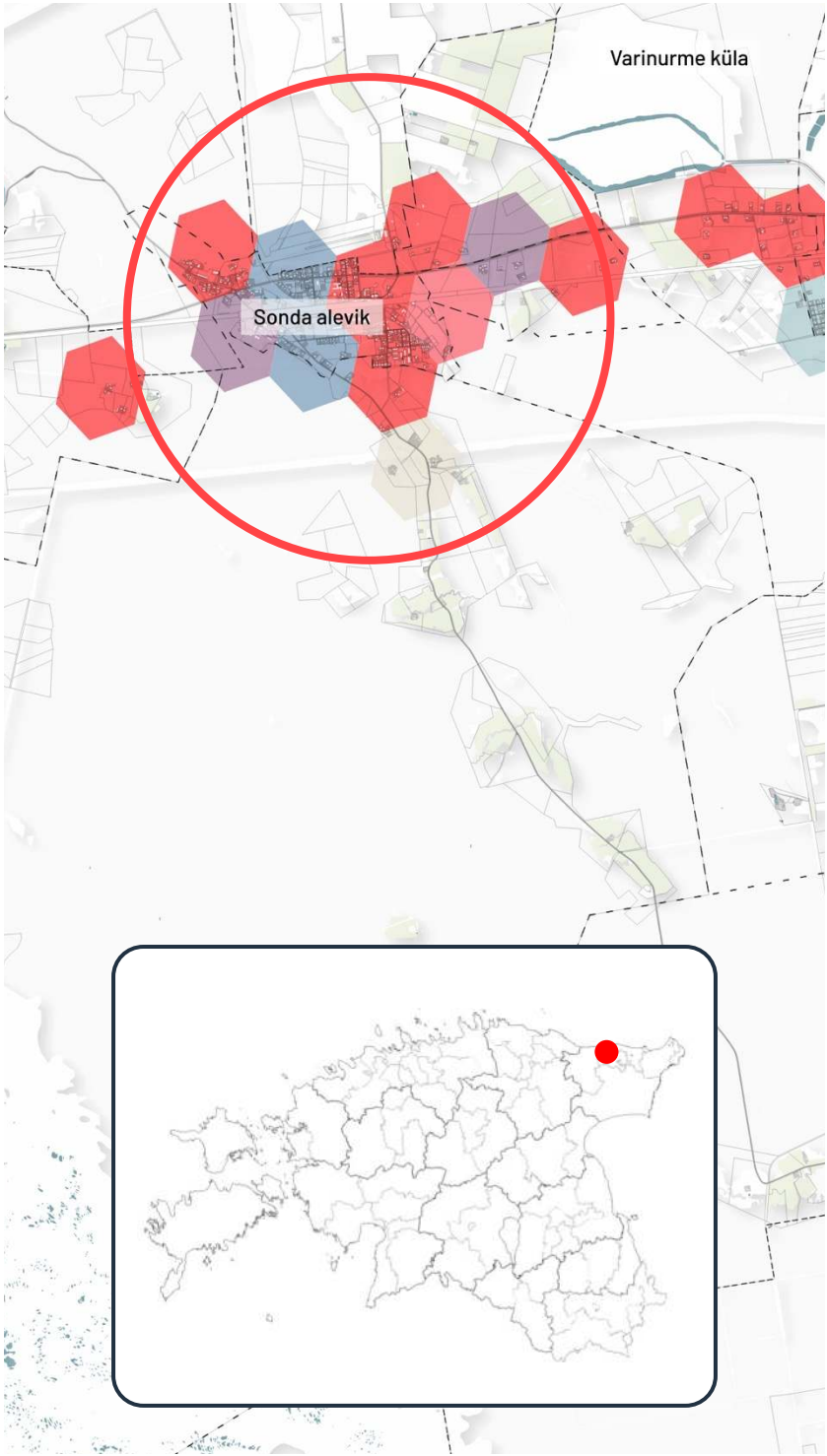
This, like many other highly vacant settlements, is characterised by historic buildings with high architectural and cultural value. For the same reasons, those buildings are more difficult and expensive to renovate, make energy efficient and maintain. That is also one of the core reasons for having vacancies.



ASERI
EXAMPLES OF HIGH VACANCY CLUSTERS



SONDA
EXAMPLES OF HIGH VACANCY CLUSTERS





VACANCY BY BUILDING TYPE

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8 family buildings built before the 70s are the most vacant type in Estonia.

1 every 5 dwelling is empty

Renovations are challenging, costly and this is the decade when they are needed.

In such small buildings, even if one flat become empty, the maintenance costs can become unbearable for the other tenants.

Just 2 or 3 empty flats in such building can make them socially unsustainable.

With interest rates rising, those buildings will become even more vulnerable.

	Vacancy (EL, 2019)				
	3-8	9-18	19-30	31+	Kokku
-1919	26.8%	15.1%	18.0%	8.7%	21.1%
1919-1945	24.5%	11.1%	8.6%	9.2%	16.4%
1946-1960	21.3%	13.2%	9.7%	6.4%	13.8%
1961-1970	20.0%	11.3%	7.8%	5.5%	7.7%
1971-1980	16.5%	9.6%	5.5%	4.2%	6.1%
1981-1990	17.7%	8.7%	5.8%	3.3%	4.8%
1991-2000	16.8%	8.2%	5.1%	3.3%	6.4%
2001-2005	12.1%	6.6%	5.0%	5.5%	7.1%
2006+	7.9%	4.4%	3.0%	8.0%	6.3%
teadmata	12.7%	6.9%	33.7%	6.4%	12.1%
Kokku	19.6%	10.3%	6.5%	4.4%	7.7%



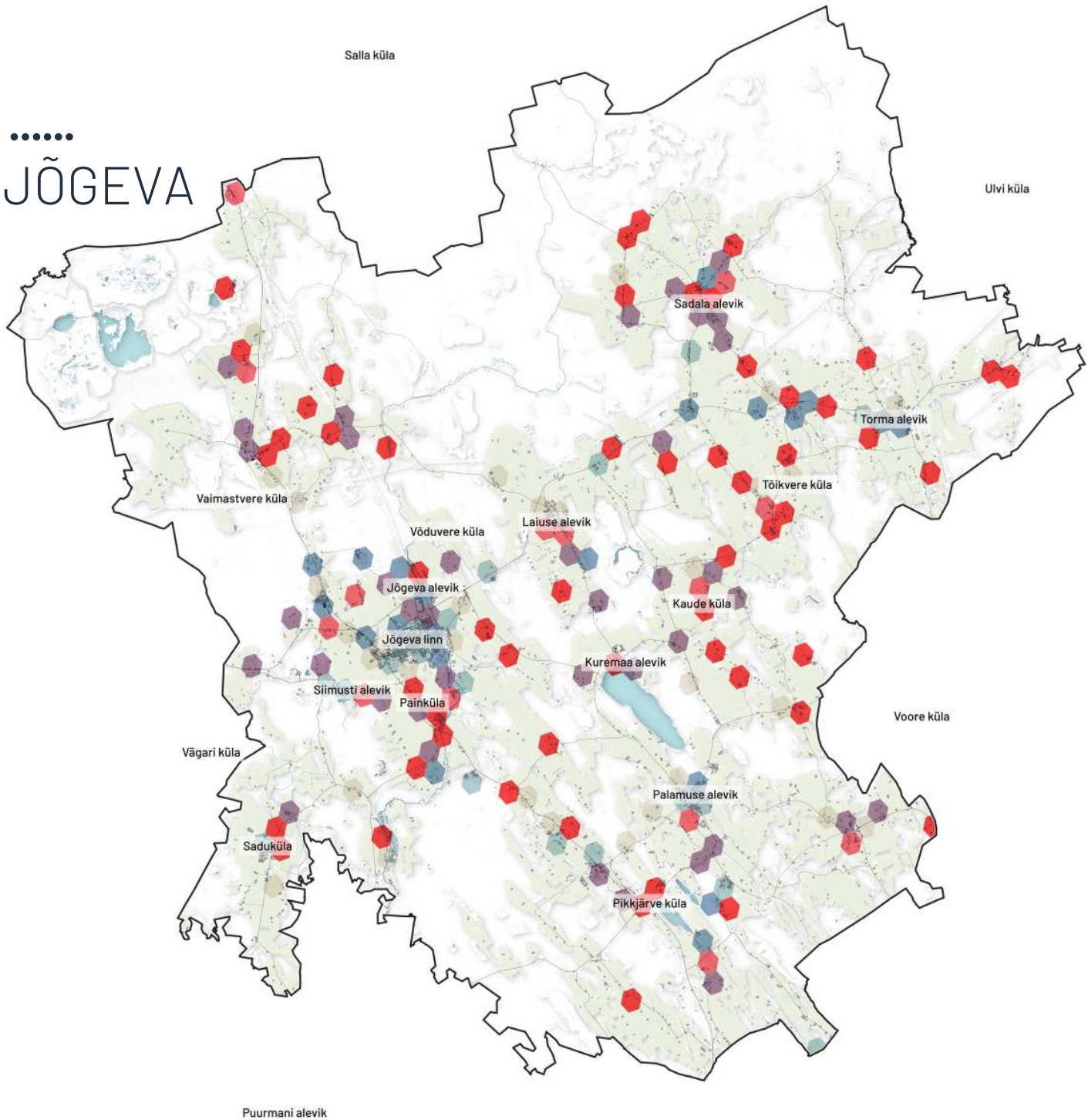
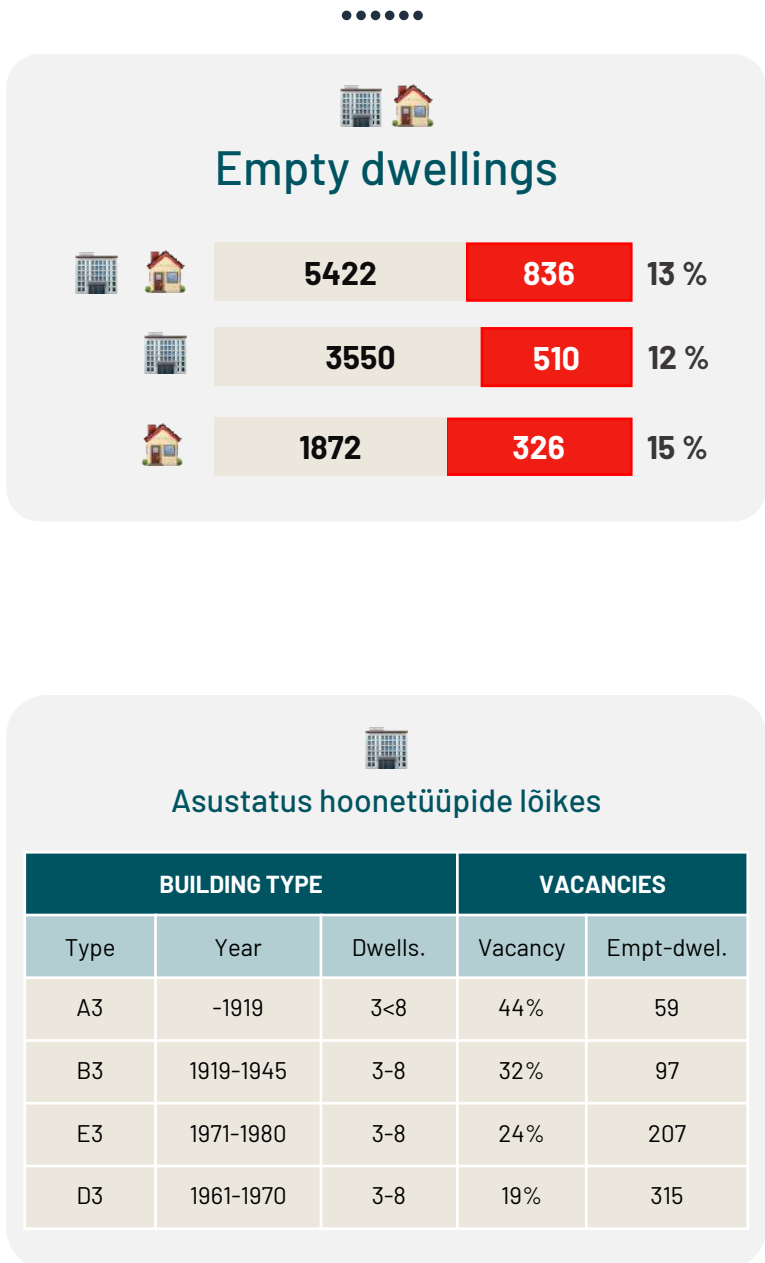
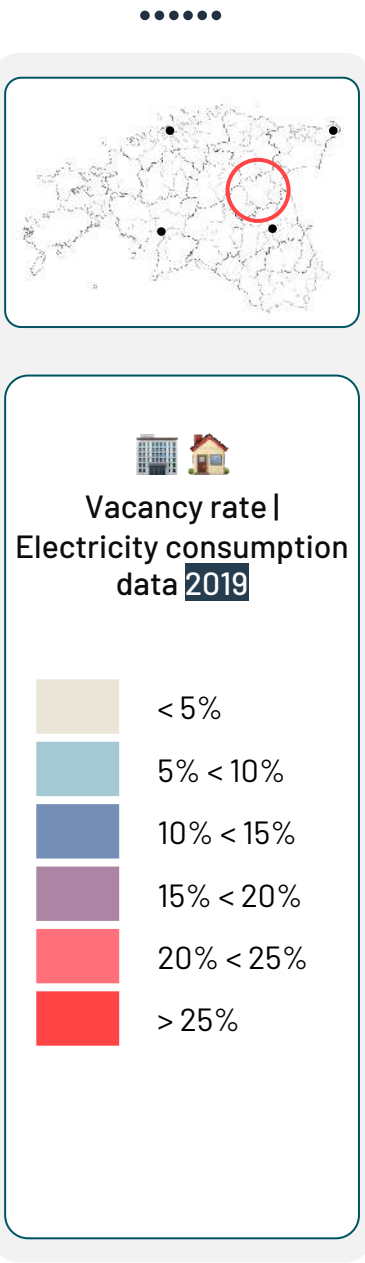
EXAMPLE FROM A MUNICIPALITY PROFILE

During the study we profiled 12 municipalities chosen by the steering group at ministry

Municipalities at the periphery of urban municipalities have higher vacancy rates.

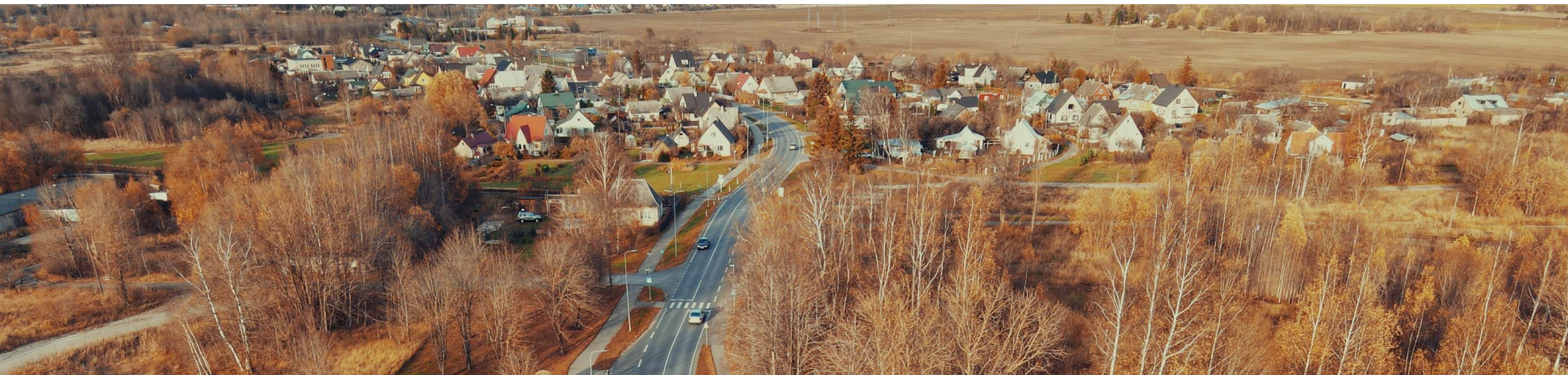
Within a municipality, settlements at the periphery of the densest settlements have higher vacancy rates.

Within settlements, buildings that are far from dense urban environment have higher vacancy rates.



What are the vacancy trajectories across Estonia?

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VACANCY TRAJECTORIES

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Growing cities are also shrinking and shrinking cities are also growing.

To understand the evolution and potential scenarios for shrinking cities, we studied vacancy trajectories. These are mapped as the change in the vacancy rate between 2013 and 2020 according to Population Registry data. Vacancy trajectories helped us get a sense of the momentum and directionality that any static picture, at any spatial scale, masks.

From this work, we learned that **Estonia is on the path of recovering from high vacancy rates with the exception of Loksa, Viru-Nigula, Lügänuše, Sillamäe and Narva**, where vacancy rates are not high, relatively speaking, but are increasing.

Overall in Estonia, 118 small towns are growing, and 42 are shrinking – at least a 5% vacancy rate decrease

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and a 5% vacancy rate increase, respectively. We learned that 2393 villages are growing and that 362 are shrinking, with the majority of those shrinking doing so at a high pace – at least a 15% vacancy rate increase. We also learned that 17 urban settlements are shrinking and 21 are growing.

A new picture was becoming clear: most Estonian settlements are growing, experiencing a drop in vacancy rates over the last seven years, but those that are shrinking are doing so in clusters.





VACANCY TRAJECOTORIES

CHANGE IN VACANCY RATES 2013-2020

Estonian population size has reached a plateau, and it is expected to start declining rapidly.

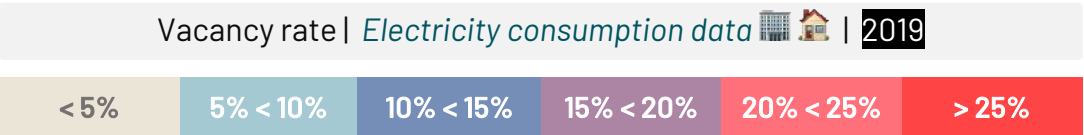
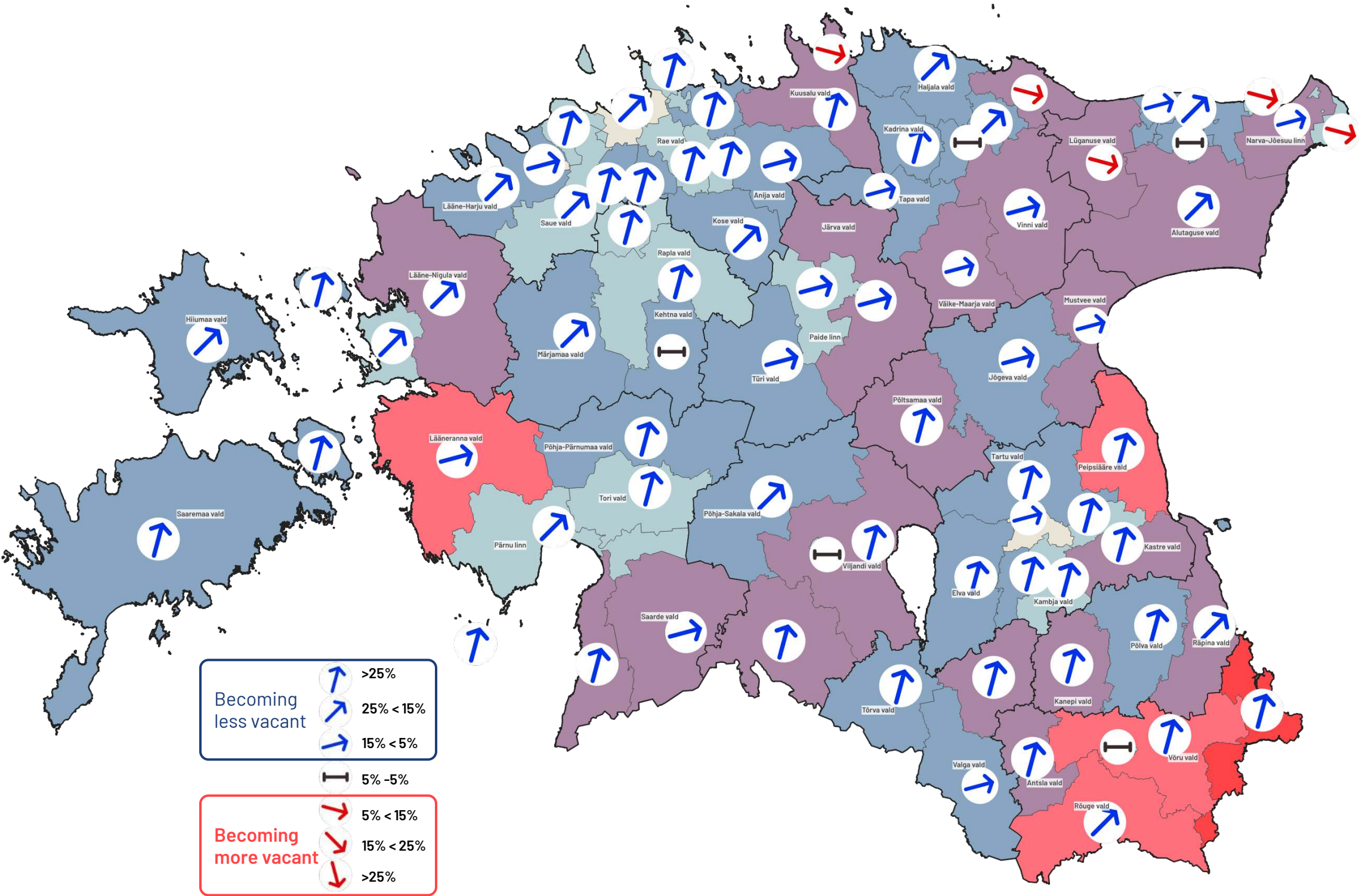
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Estonia is becoming less vacant across the board

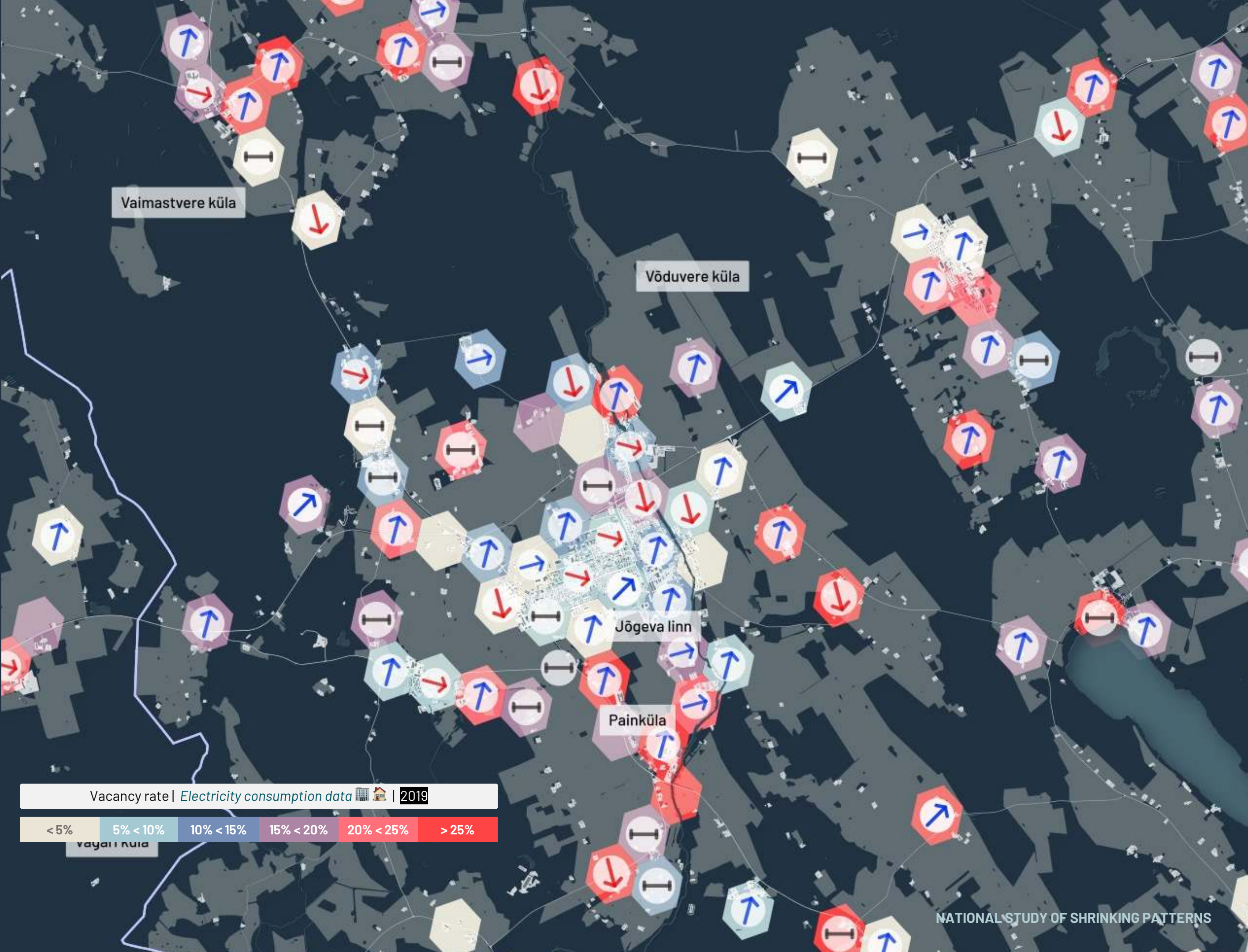
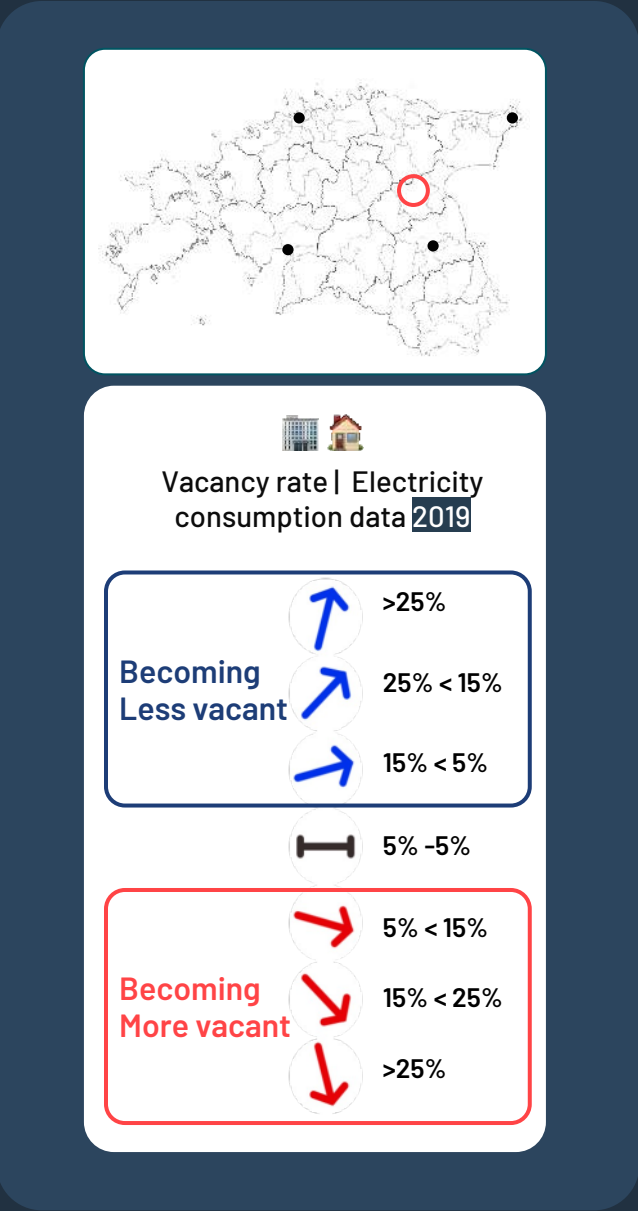
The commuter belts of Tallinn and Tartu are the fastest to recover from vacancy

4 of the 5 municipalities that are becoming more vacant are in East Estonia.

People’s perception of shrinkage has less to do with vacancy rates and more with the change in vacancy.



EXAMPLE OF VACANCY
TRAJECTORIES IN
THE H3 GRID





SHRINKAGE AND GROWTH

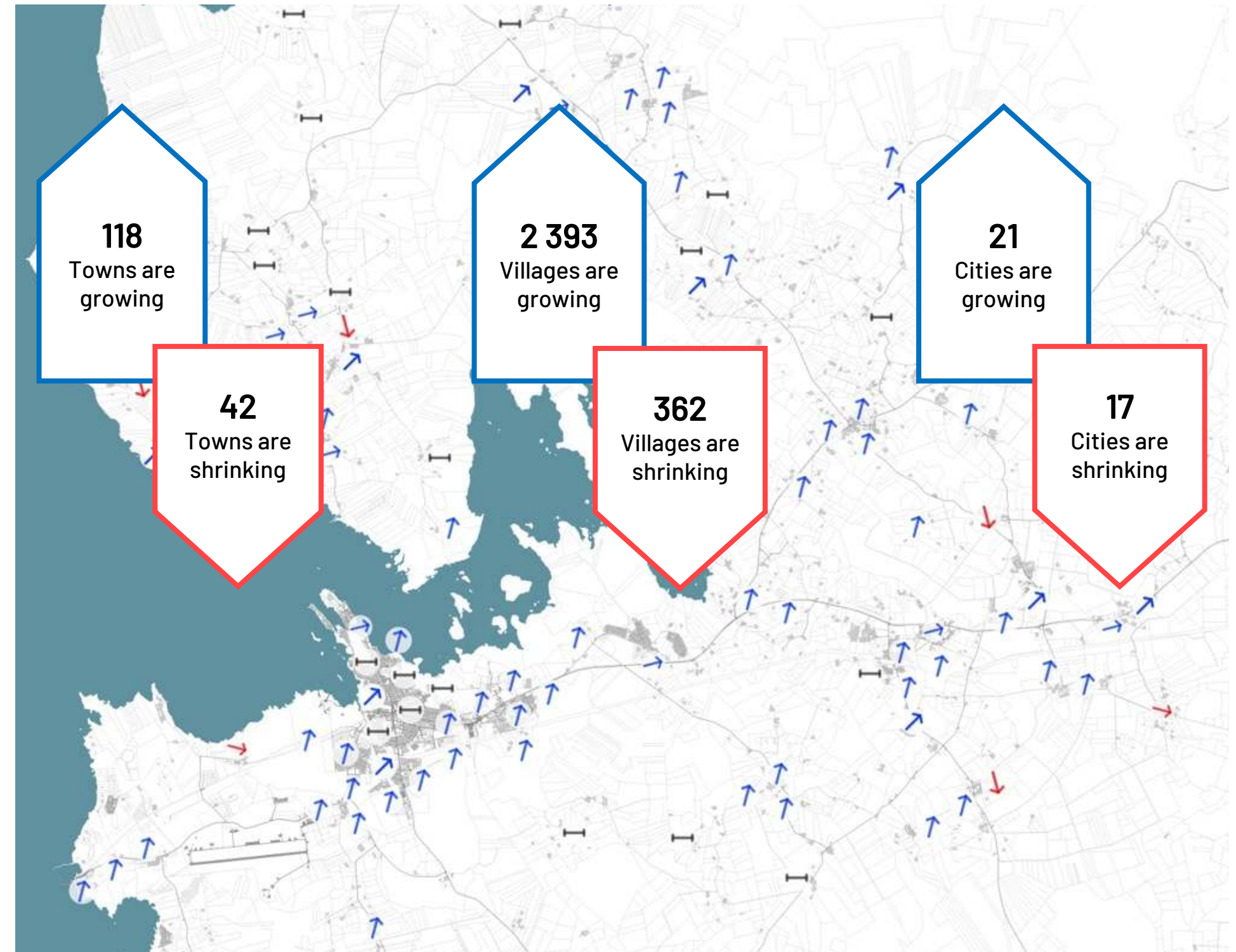
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Growing cities can shrink

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Shrinking cities can also grow

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The number of empty dwellings in settlements affected by depopulation is higher than in settlements with a growing population.

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While more areas are growing than shrinking, the latter can generate clusters of highly vacant buildings.

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Seventeen cities have been shrinking at a 5-10% rate in the past seven years.



VACANCY TRAJECTORY BY BUILDING TYPE

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National Population Registry data

While small buildings built before 1970s are the most vacant, high demand in cities like Tallinn and Tartu are driving down the vacancy.

However, this building is also becoming more vacant everywhere else than Tallinn, Tartu and Narva.

The only building types that are becoming increasingly empty are the panel houses.

Their vacancy rates are below 5%, but they are becoming increasingly unpopular.

	% Change in Vacancy (RR, 2013 - 2020)				
	3-8	9-18	19-30	31+	Kokku
-1919	-13.7%	-25.7%	-33.7%	-2.0%	-19.0%
1919-1945	-15.2%	-23.0%	-27.7%	-26.8%	-20.3%
1946-1960	-5.9%	-14.9%	-8.5%	-14.1%	-10.4%
1961-1970	-16.8%	-16.0%	-12.1%	8.4%	-1.7%
1971-1980	-20.1%	-25.7%	-4.7%	0.4%	-9.0%
1981-1990	-21.9%	-33.9%	-20.6%	4.6%	-10.8%
1991-2000	-18.3%	-20.7%	-9.8%	-8.8%	-14.8%
2001-2005	-32.5%	-25.5%	-37.0%	-23.1%	-28.5%
2006+	-41.6%	-42.2%	-40.7%	-31.3%	-36.8%
teadmata	58.8%	52.2%	121.0%	175.9%	91.2%
Kokku	-16.9%	-24.5%	-17.8%	0.9%	-11.5%

What are the vacancy rates across Estonia?

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VULNERABILITY AND PRIORTY

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While the pages of this research were still being written, we started working with the steering group selected by the Ministry of Economy to begin studying the most vulnerable cities, those for which further research is urgent. This was done by setting up two key performance indicators: Vulnerability and Priority.

→ VULNERABILITY
Vulnerability indicates which municipalities may be most vulnerable to shrinkage from a governance perspective, based on a combination of five metrics: the vacancy rate, the change in vacancy, the change in the Demographic Labour Pressure Index (DEMLPI), the population decline relative to the national mean, and the municipal debt.

The 20 most vulnerable municipalities are generally more isolated from the urbanised centres of Tallinn, Tartu, Narva and Pärnu. As

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for setting priorities for further research, the picture is similar to the vulnerability index. Our research continues in Ida-Virumaa, where both vacancy rates are high and rising.

→ PRIORITY
The Priority index maps the relationship between vacancy rate and their trajectory. High priority is set for areas where vacancy rates are high, and they have kept rising for the past seven years. Low priority is set for areas where vacancy rates are low, and they kept dropping during the past seven years. As for setting priorities for further research, the picture is similar to the vulnerability index. Our research will continue in Ida-Viru (East Estonia), where 4 municipalities have high vacancy rates are and kept rising.

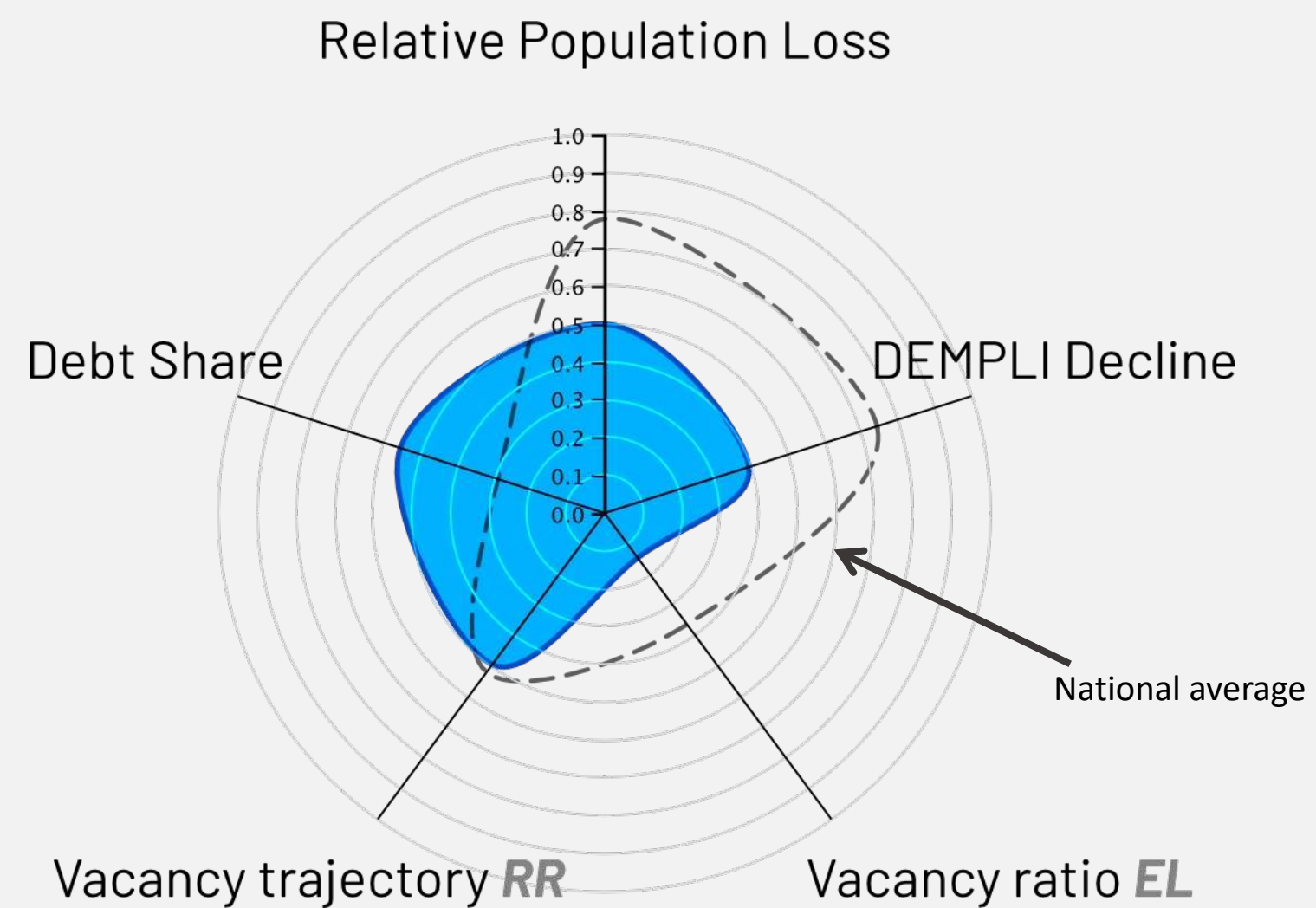




VULNERABILITY INDEX

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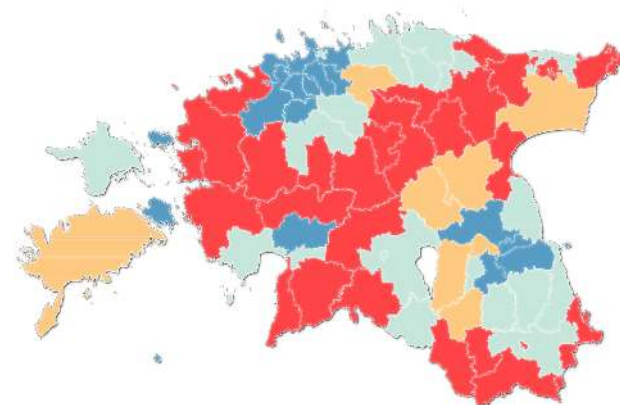
What is the capacity of Estonian municipalities
to deal with shrinkage?





VULNERABILITY INDEX

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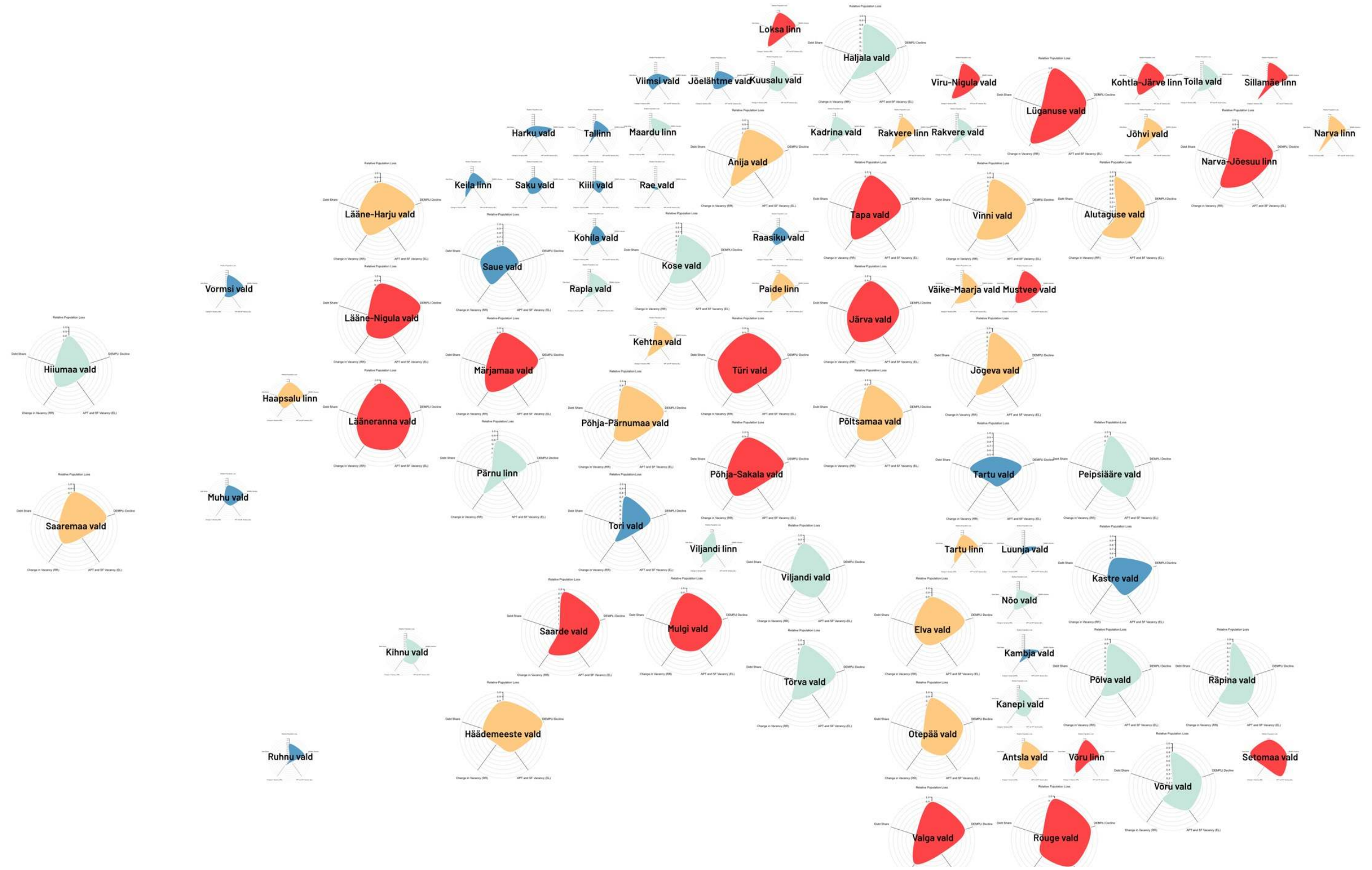


MOST VULNERABLE

VULNERABLE

LESS VULNERABLE

LEAST VULNERABLE





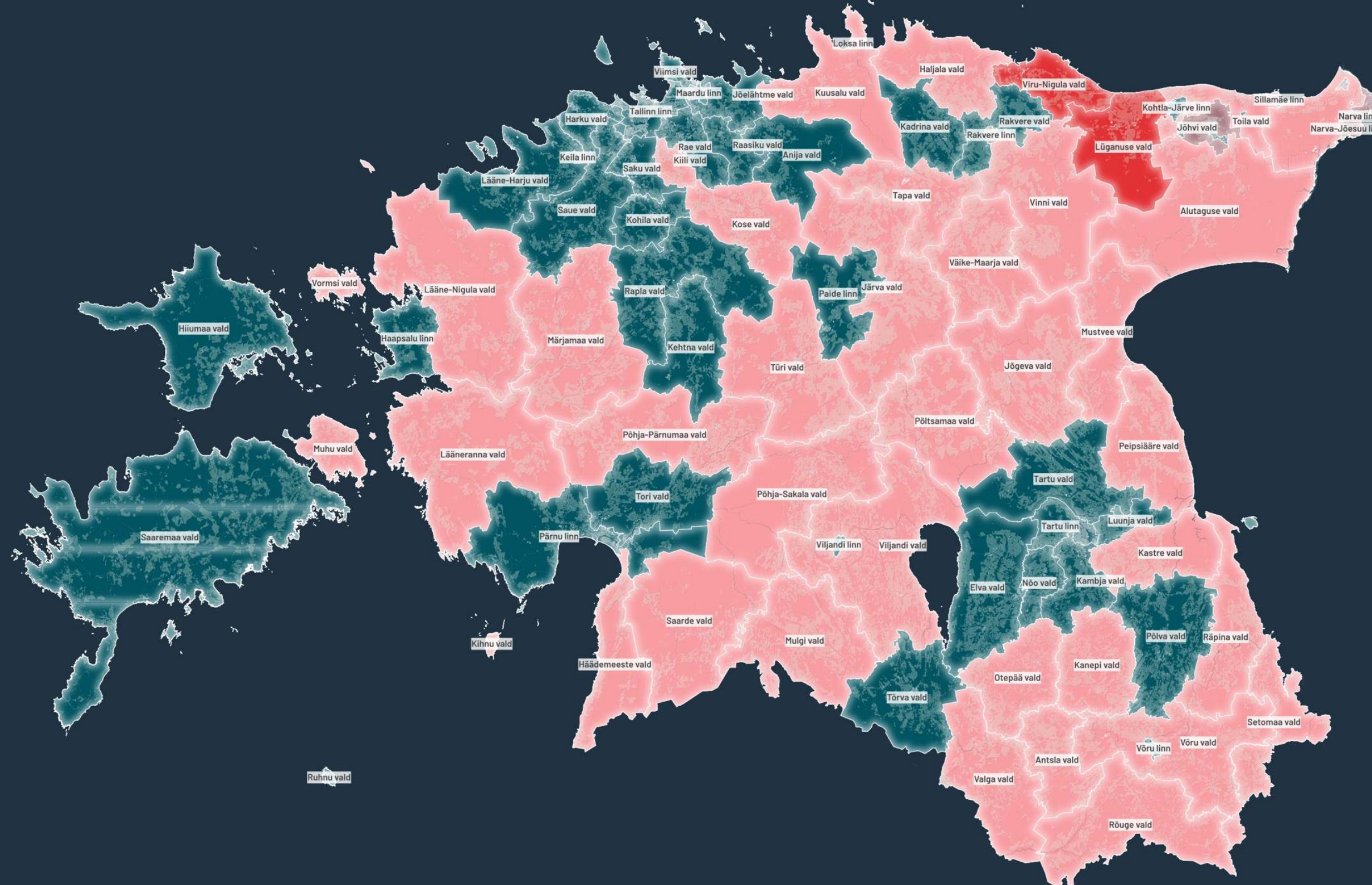
Setting priorities for future studies and interventions



LOW VANCACY
VACANCY INCREASING

HIGH VACANCY
OCCUPANCY INCREASING

LOW VACANCY
OCCUPANCY INCREASING





PRIORITIES

Setting priorities for future studies and interventions

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HIGH VACANCY
VACANCY INCREASING

369 settlements

LOW VANCACY
VACANCY INCREASING

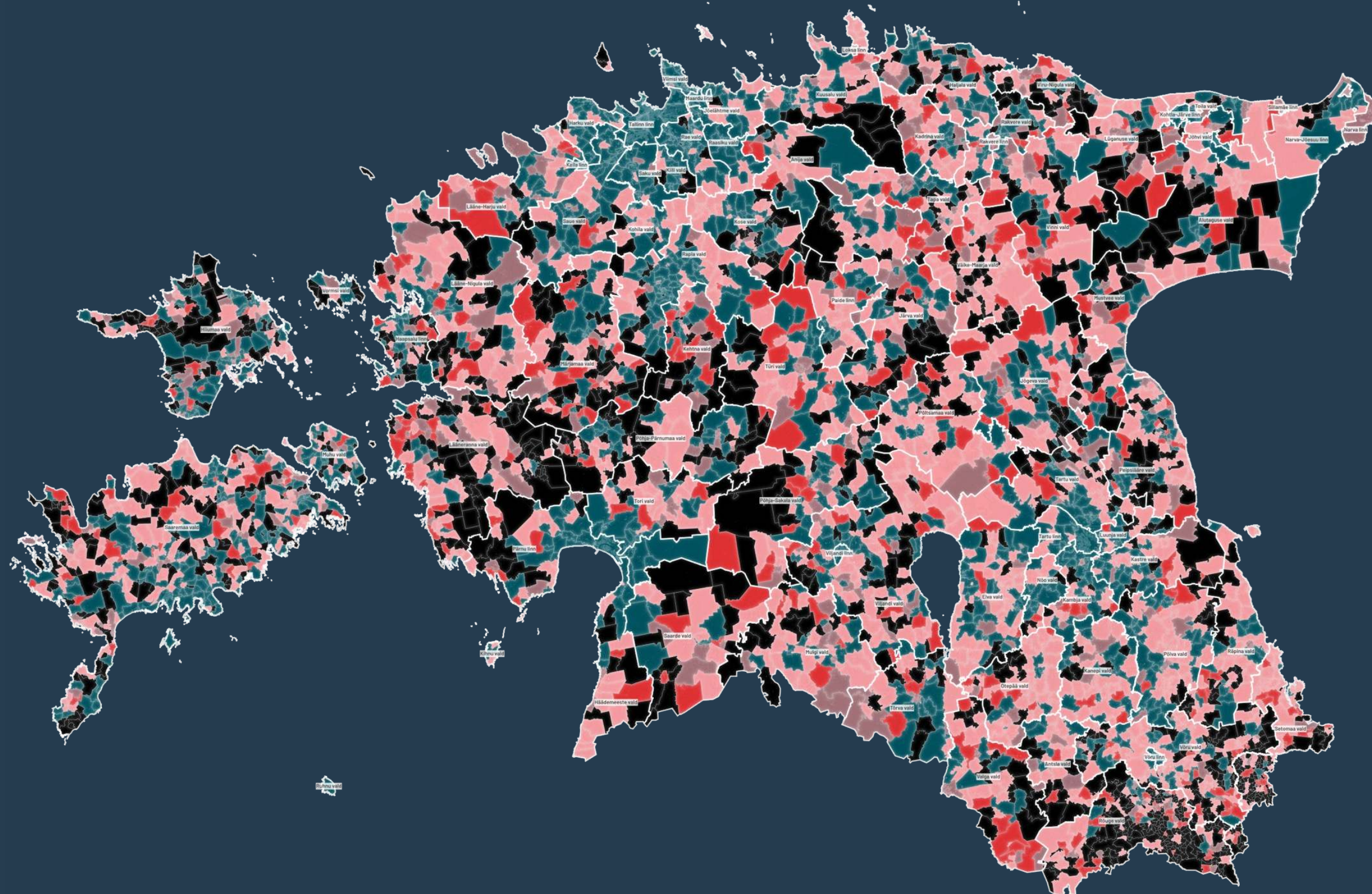
427 settlements

HIGH VACANCY
OCCUPANCY INCREASING

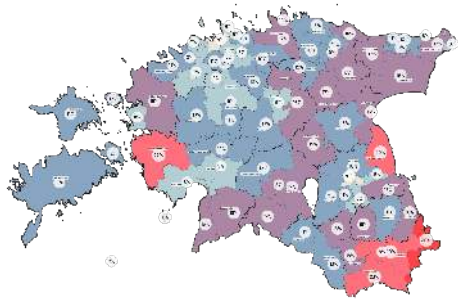
302 settlements

LOW VACANCY
OCCUPANCY INCREASING

1290 settlements



SUMMARY



VACANCY

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High vacancy rates are present in every region, regardless of depopulation or socio-economic conditions.

25 Municipalities have a vacancy rate of at least 15% - 1 empty flat every 6.

7,7% of apartment dwellings are empty and 12.2% of single family houses.



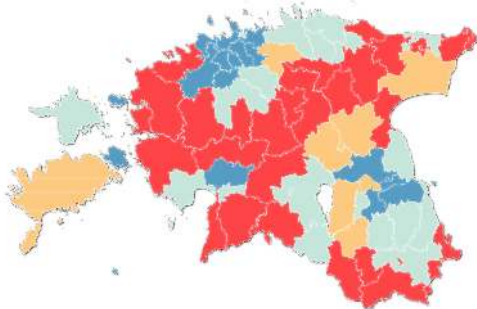
TRAJECTORIES

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Population growth is experienced only in the commuter belts of Tallinn and Tartu.

4 of the 5 municipalities that are becoming more vacant are in East Estonia.

17 cities are shrinking at 5-10% rate in the past 7 years.



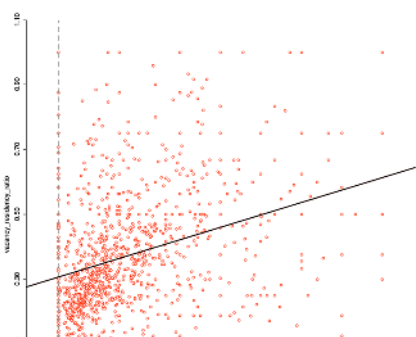
VULNERABILITY

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One forth of Estonian municipalities are highly vulnerable to shrinkage.

Small buildings built before the 70s are the most vulnerable to shrinkage.

Large apartment buildings built in the 60s and 80s are becoming increasingly vacant



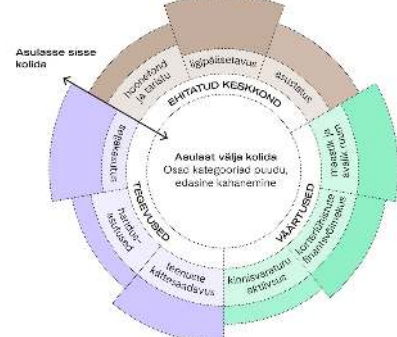
POSITIVE DEVIANCE

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Investment in public space and infrastructure can help to increase occupancy.

Occupied buildings in clusters of highly vacant buildings avoided becoming vacant through renovations.

Banks are reluctant to provide credit to shrinking cities, contributing to a vicious circle preventing regeneration.



SCENARIO

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Local centres have a low vacancy, but apartment building stock is not renovated and is thus at risk of emptying in the coming decade.

Monofunctional towns and villages far from local centres are becoming more vacant and are first to 'empty out' (starting with apartment buildings).

The vitality of towns and villages around local centres depends on the availability of services.

OPPORTUNITIES FOR INTERNATIONAL COOPERATION

CHALLENGE-BASED EVENTS

A series of 2-day co-creation workshops with local stakeholders, citizens and planners to learn about shrinkage, open the debate and co-design a concrete vision and roadmap for a local project or initiative.



The core of the debates will be to invite experts and policy maker from the two side of the discourse and learn what are the possible scenario.

«Vacancy is already the outcome of complex social socio-economic processes»



DIVEST IN SHRINKING CITIES

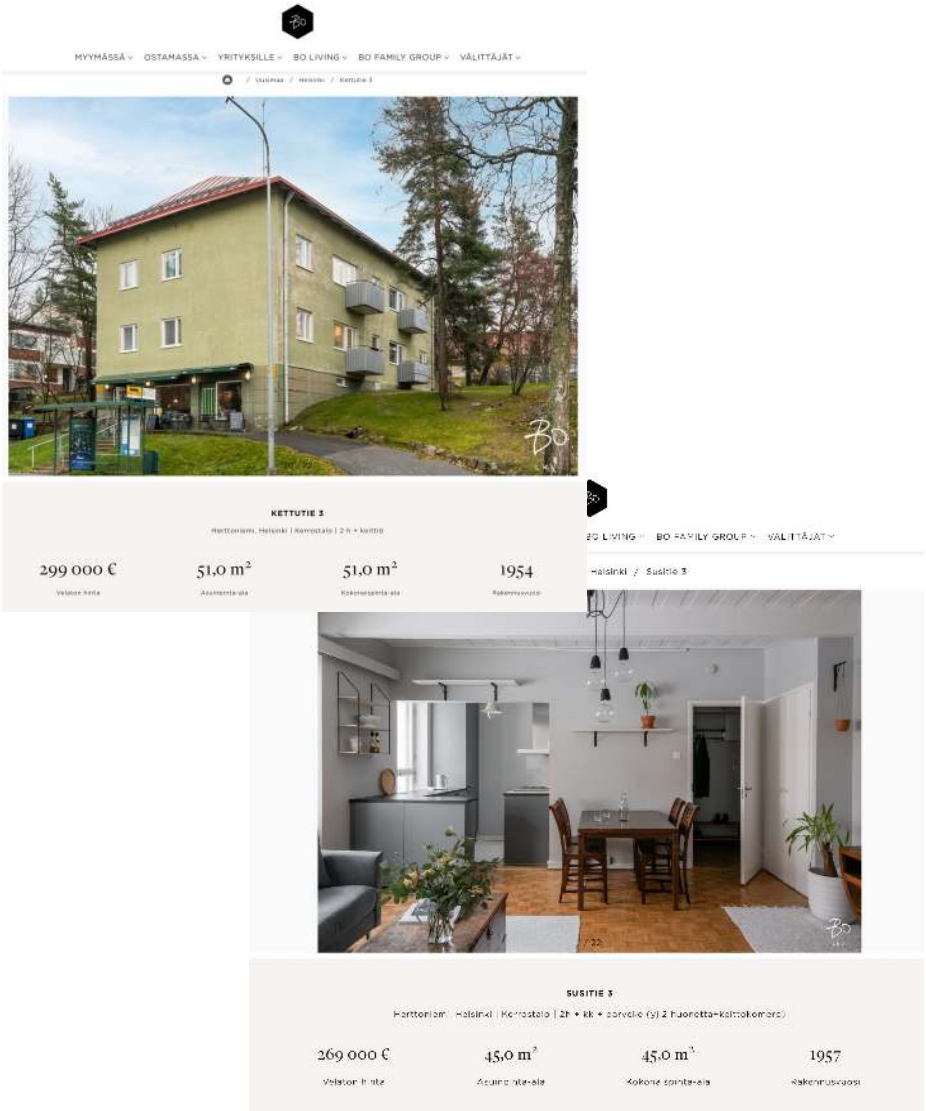
«Vacancy is the outcome of poor managment and lack of services»



INVEST IN SMART-SHRINKAGE

PILOT STUDY

Initiation of a research pilot using the methodology we developed in the national study to analyse the most vulnerable building types starting from real-estate data.



RESEARCH CO-OP

Cooperating with local research centres on shrinking cities, knowledge transfer, and developing a localised methodology to analyse shrinking patterns.

