LIETUVA 2030
bendrasis planas

COMPASS 2030

Comprehensive Plan of the Territory of the Republic of Lithuania

VASAB CSPD/BSR webinar on sharing the knowledge

Donatas Baltrusaitis www.bauland.lt

7 September 2020

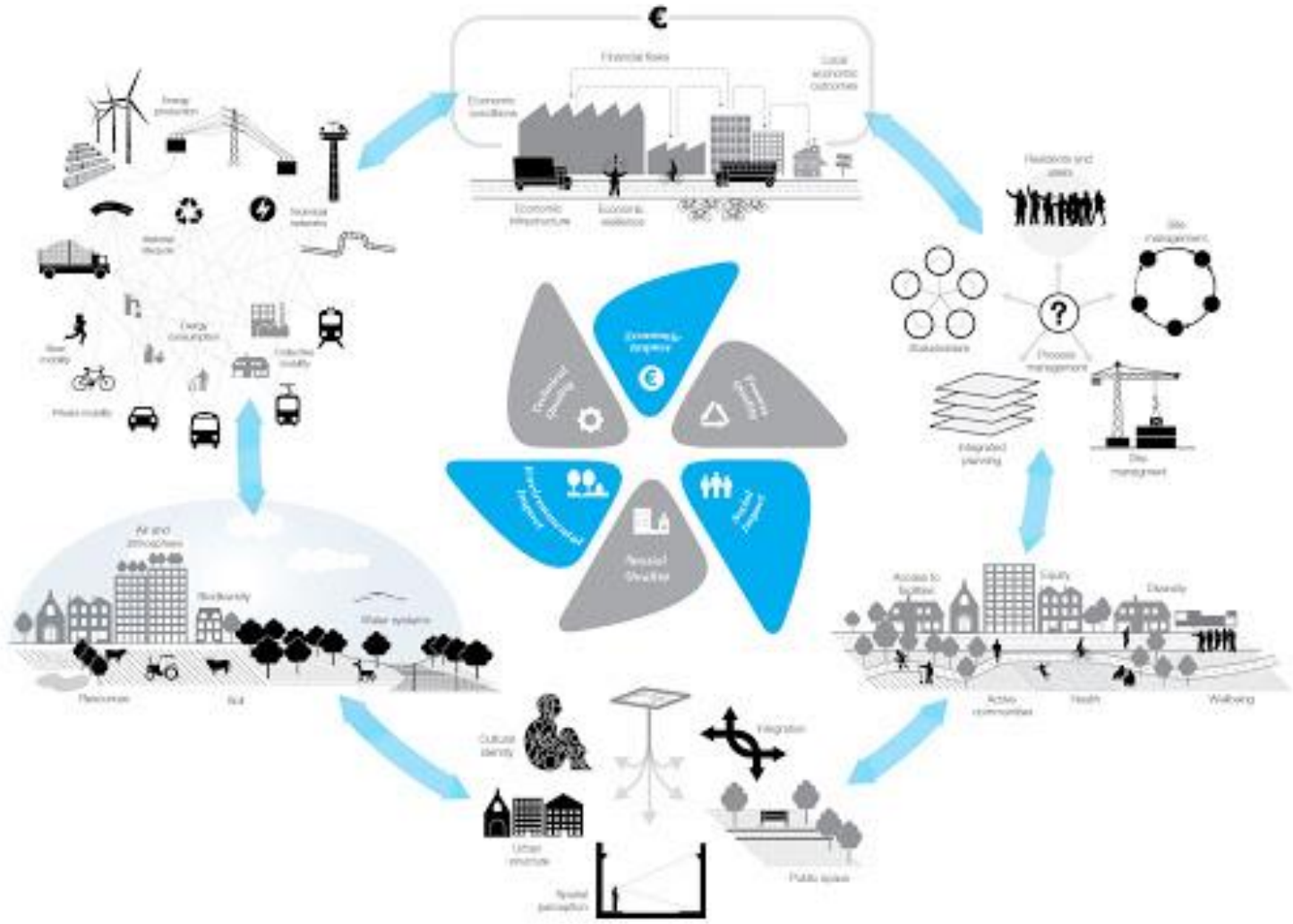
LIETUVA 2030
bendrasis planas

1.
International examples of how to apply spatial data systems in urban and territorial planning documents

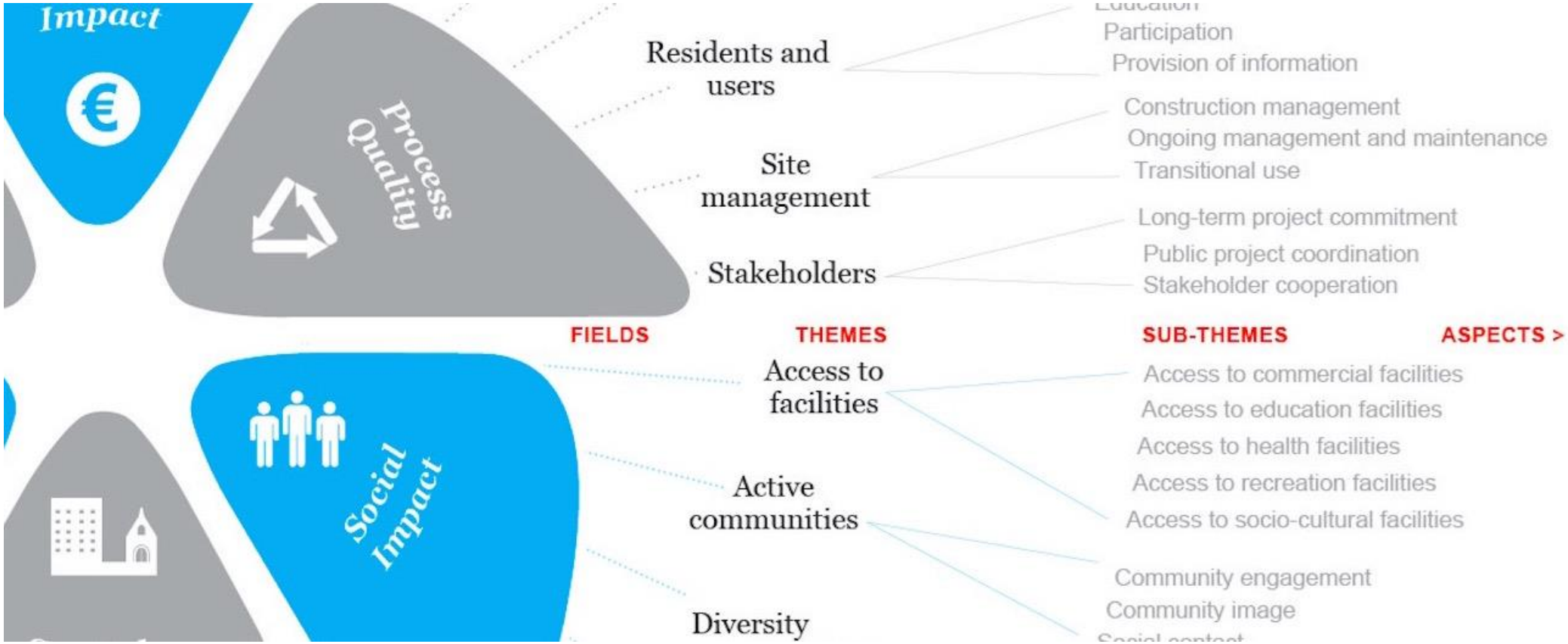
BUUR office for urban planning urban scale sustainability compass (Belgium)

Sustainability = maximum ***quality*** without ***negative*** impact

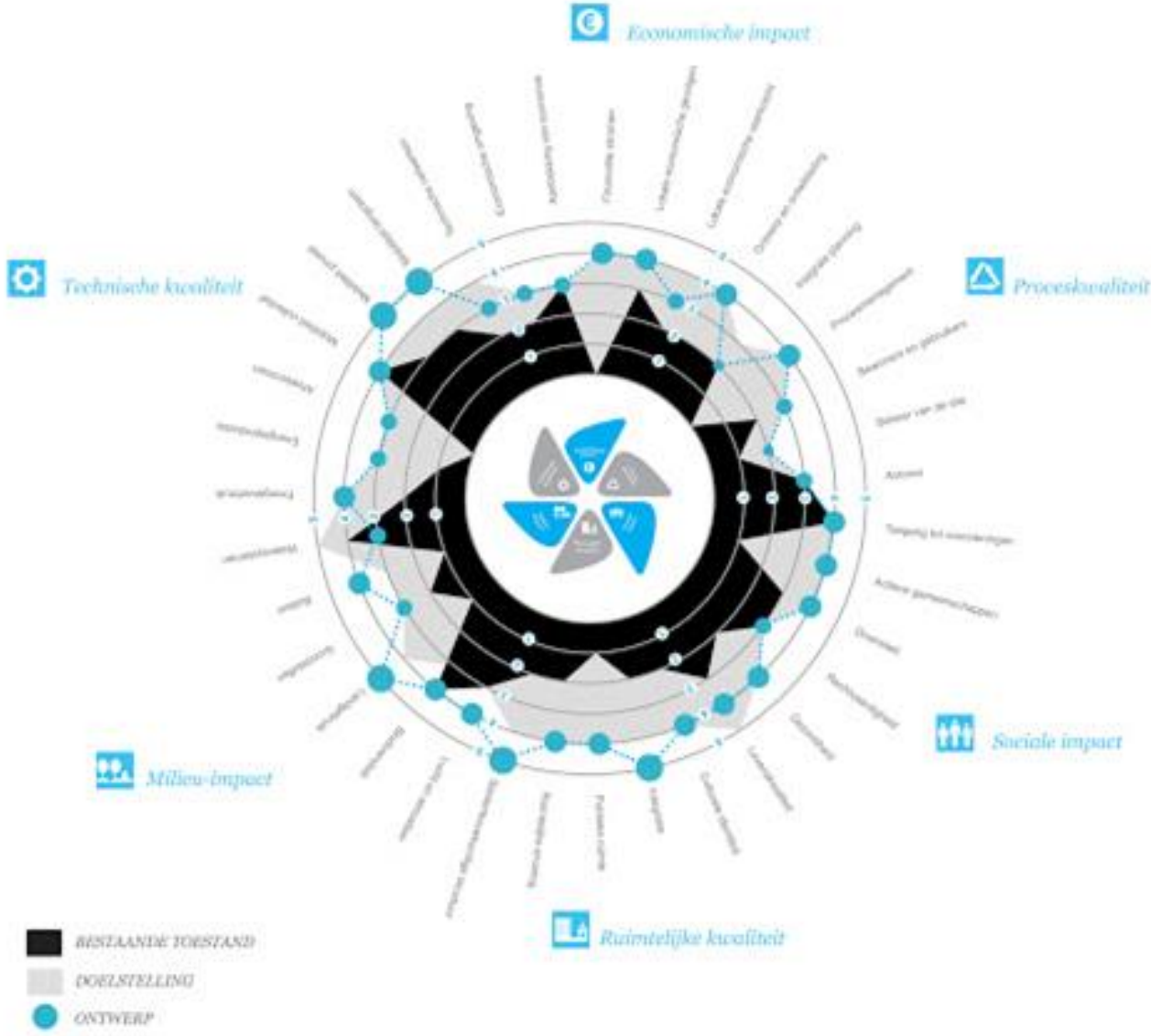
BUUR office for urban planning urban scale sustainability compass (Belgium)



From fields to themes to sub-themes to aspects to indicators

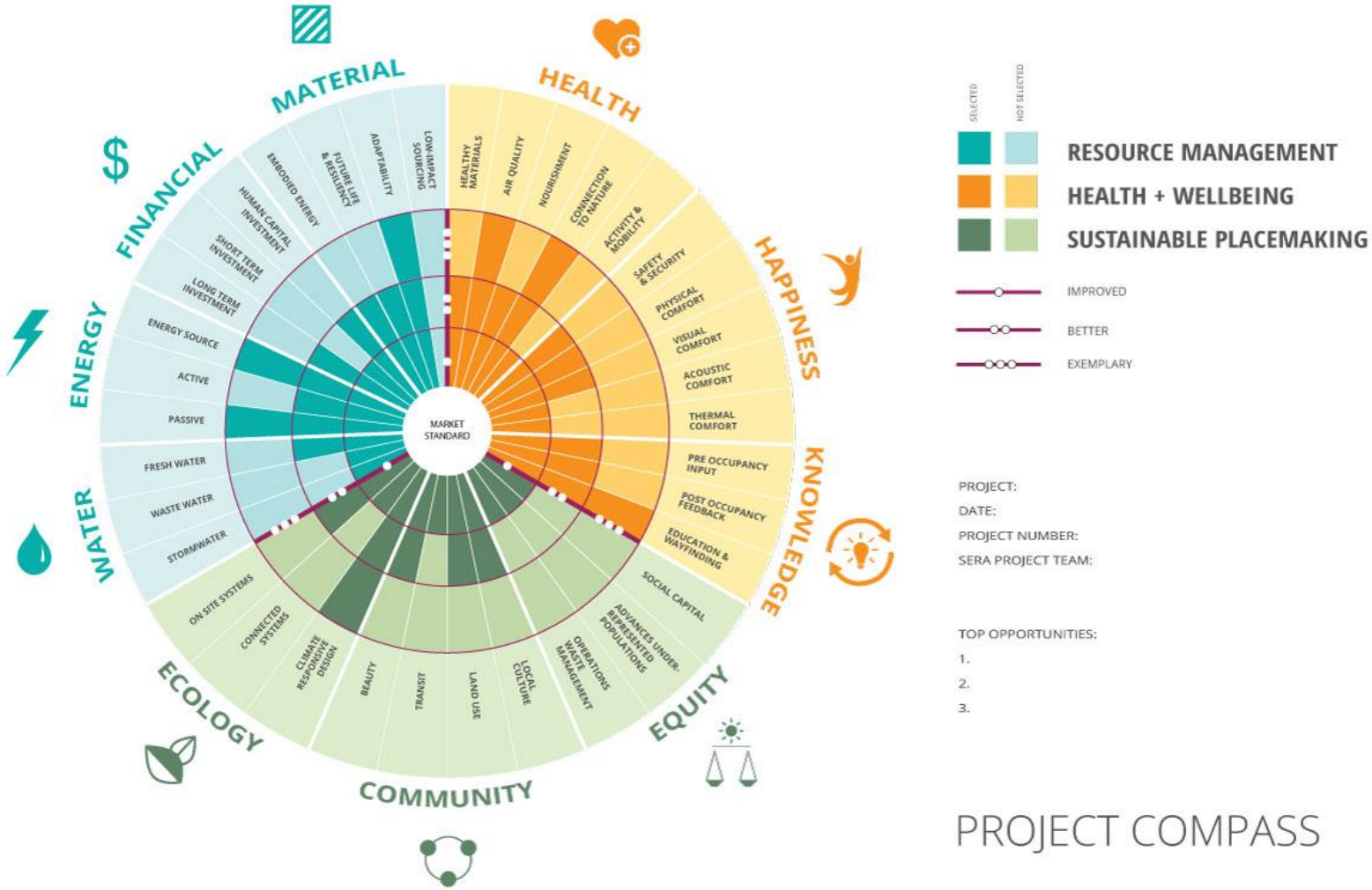


Defining existing situation and where it is critical to move forward

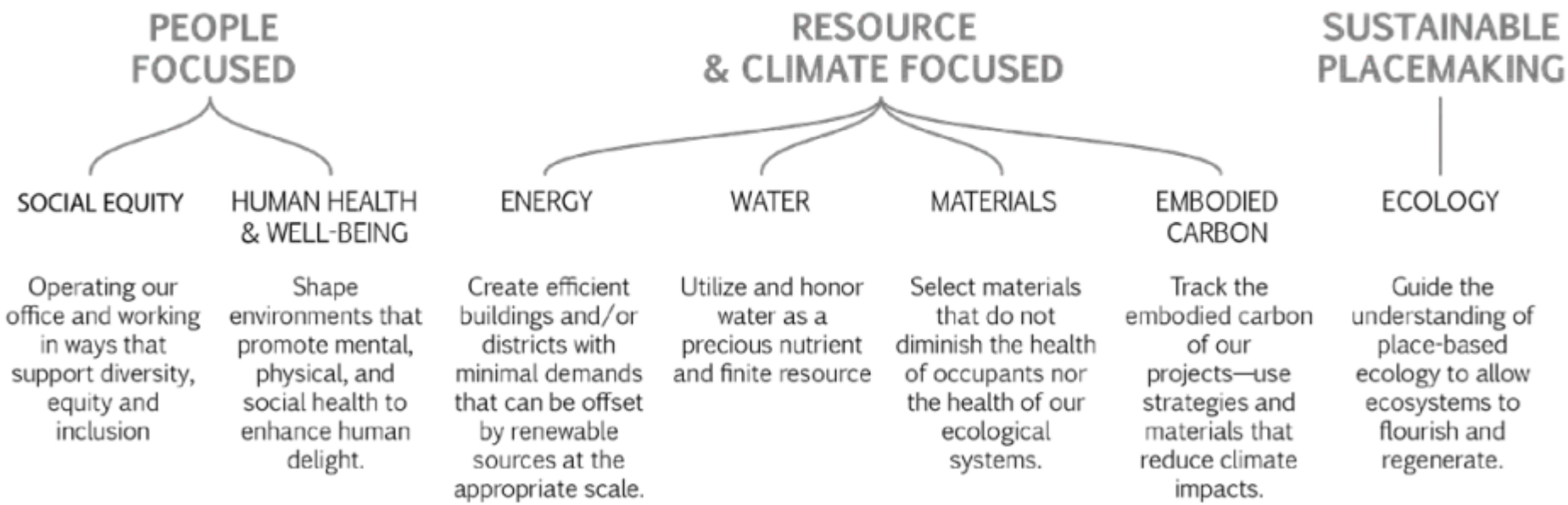


SERA created its first Sustainability Action Plan. As a design tool to guide goal-setting and decision-making through the lifecycle.

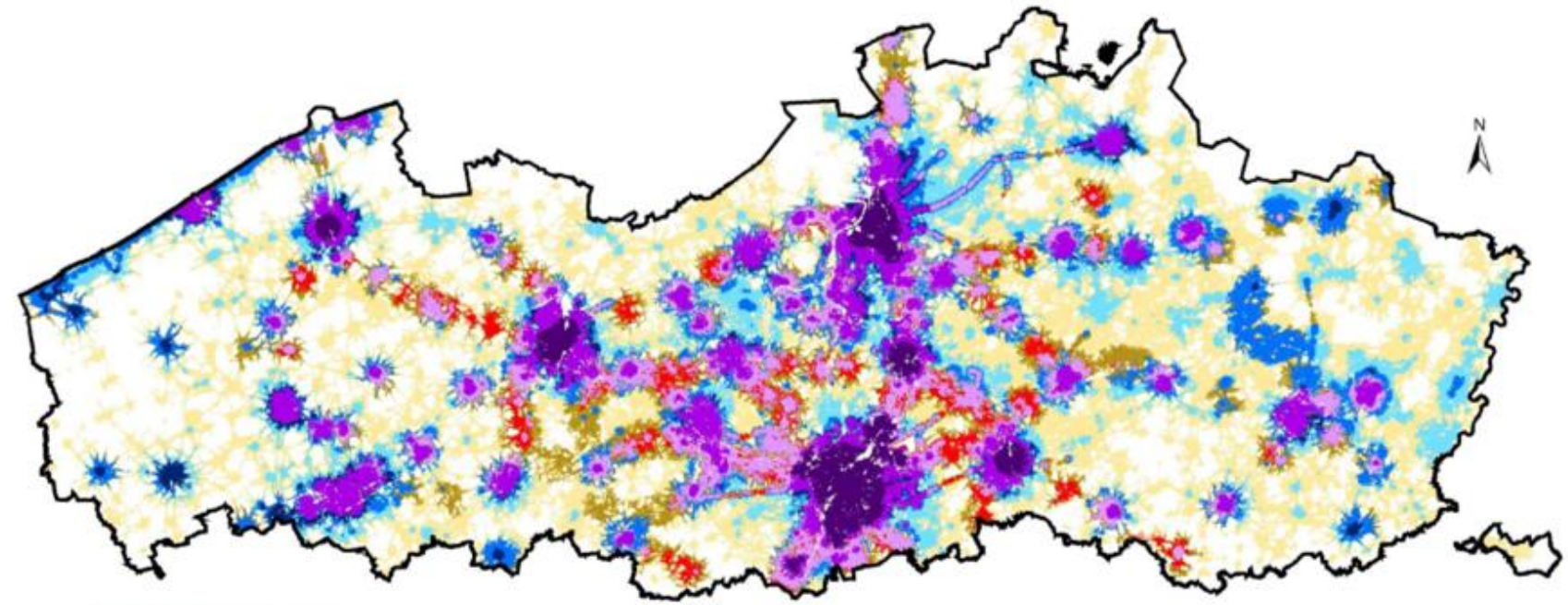
Aim: a more robust look into a project's health, sustainability and resiliency measures.



GUIDING PRINCIPLES



This study is part of the activities of “Ruimte Vlaanderen” to develop the Spatial Planning Policy Plan in Flanders in a scientifically founded way into an instrument with which the long-term objectives for the spatial development of Flanders are realized. Its purpose is to locate differentiated development opportunities (for living, working, facilities) in Flanders, taking into account: (1) the node value in terms of public transport of locations (2) and the supply and proximity of facilities in the locations.



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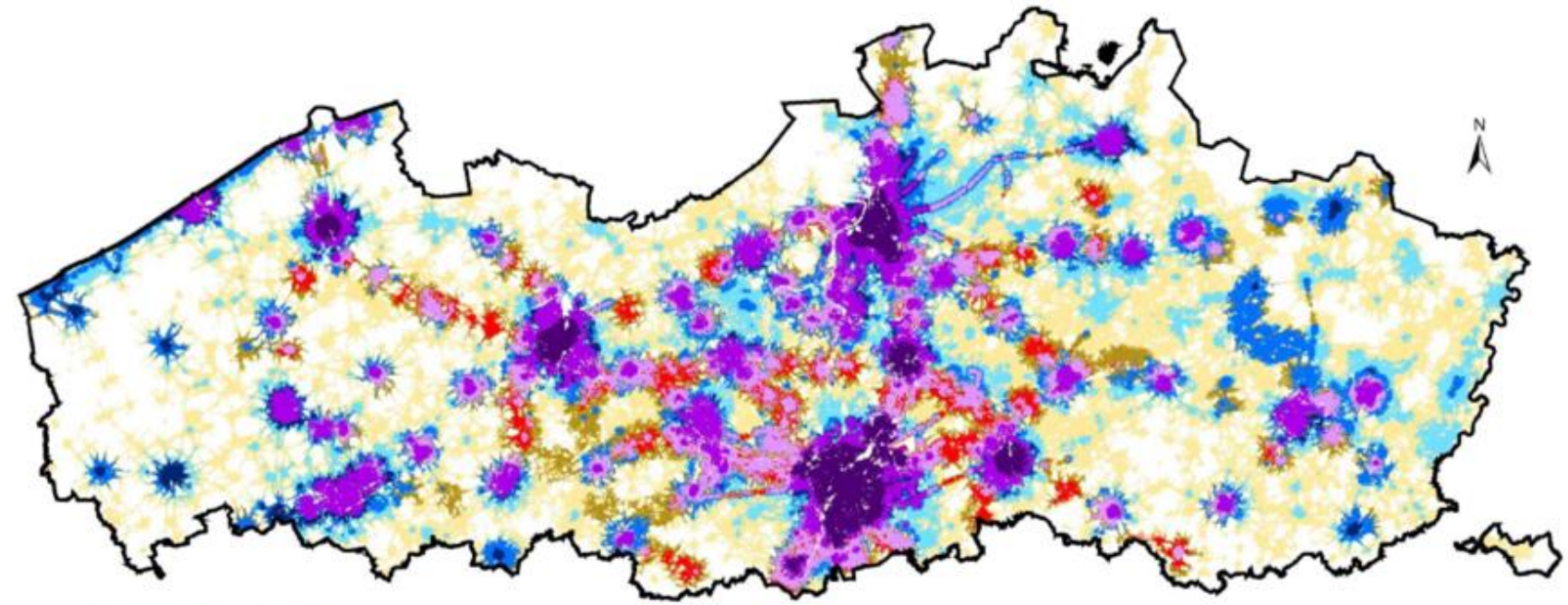
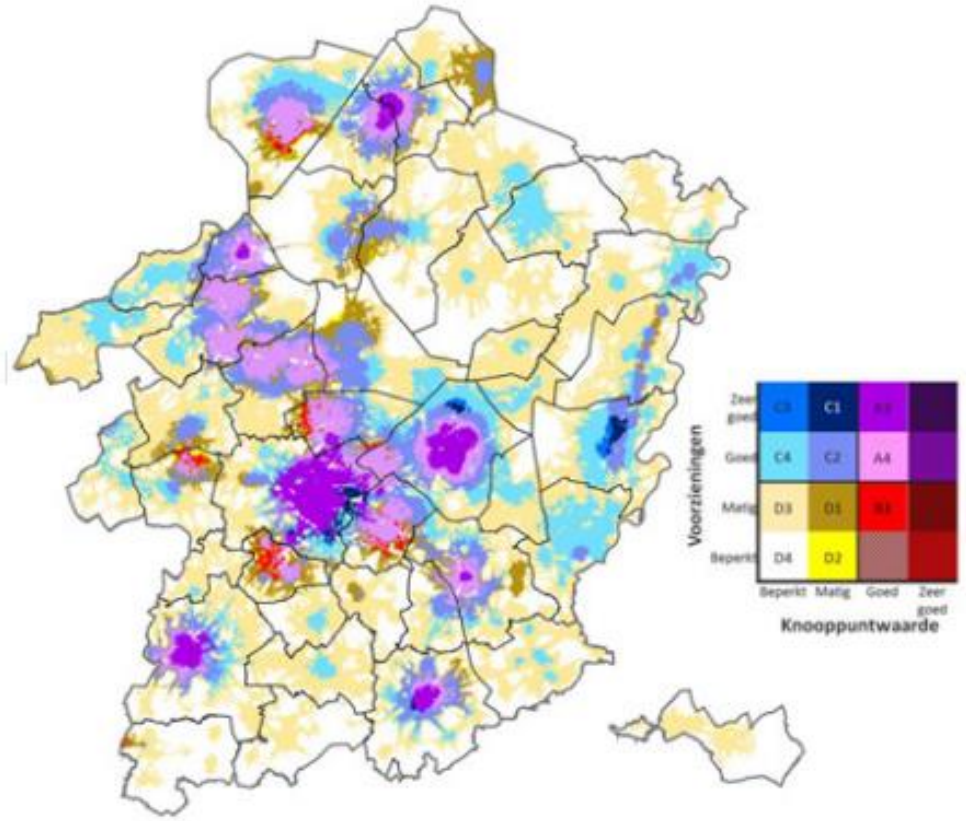
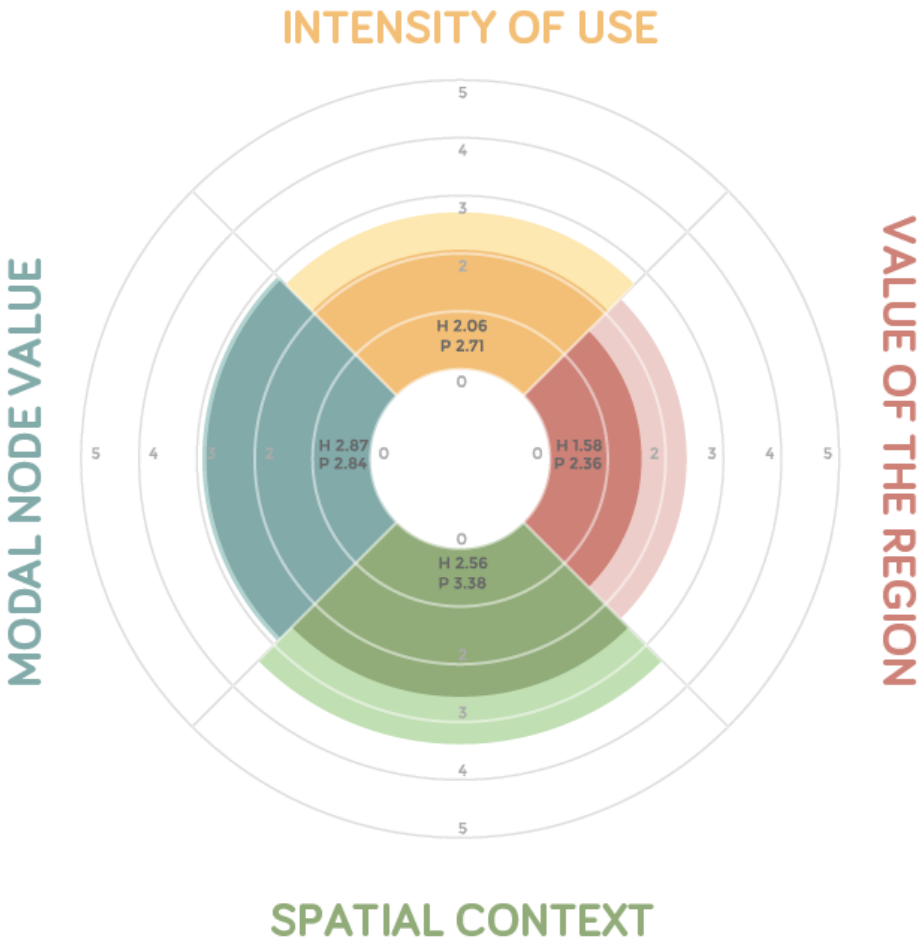


Compass application in Limurg region. Purple zones occur only to a limited extent in the province of Limburg. There there are a lot of blue zones, so areas where facilities are effective to reach, but where public transport is limited within walking cycling distance. The limited access by public transport and the decentralized location in Flanders also lead to Limburg the node model has rather limited development opportunities.



Aanvullende kaart voor Limburg. Bron: VITO

BUUR office has developed an upgraded version combining spatial context together with intensity of use indicators



PLAATSWAARDE

Voorzieningen lokaal

Eerder matig	H	2.16
Goed	P	3.13

Voorzieningen regionaal

Matig	H	1.64
Goed	P	3.13

Voorzieningen metropolitaan

Zeer beperkt	H	0.00

Mix

verhouding vte(x4)/inw	verhouding bez/inw		
0,520	0,360	H	2.19
0,600	0,400	P	2.41

RUIMTELIJKE CONTEXT

Nabijheid

nabije kernen en clusters <5km	<10km		
14	46	H	2.00
		P	2.25

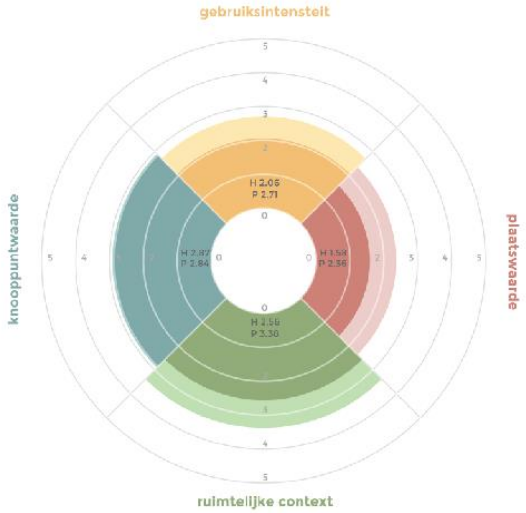
Kwetsbaarheid

water	natuur		
4.00	4.75	H	4.38
2.75	3.75	P	3.25

Ontwikkelingspotentieel

(P) verdichtingspotentieel			
oppervlakte	123.1 ha	H	1.50
dichtheid	171 gebr/ha	P	5.00
capaciteit	+10.900 gebr. (106%)		

Compass evaluates specific contextual data of urbanized areas in certain region. Example: Hoevenen in Antwerp



Hoevenen

gemeente Stabroek

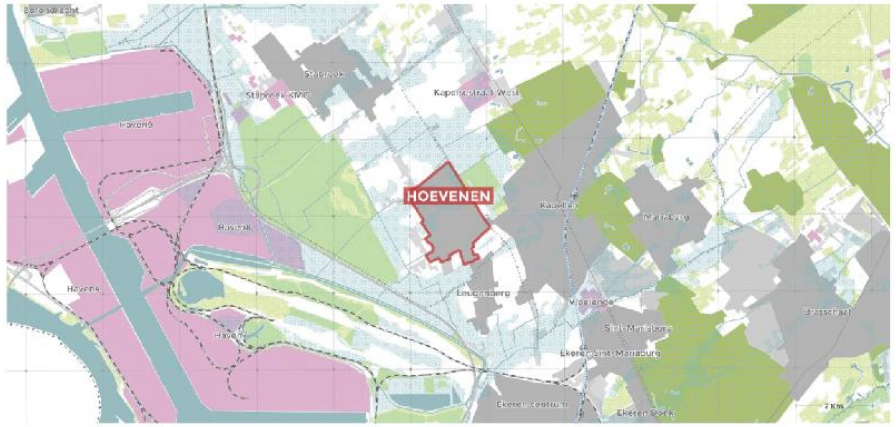
Kern

regio Antwerpen

type	Dorpskern
oppervlakte	123.1 ha
gebruikers	10.300 gebr.
inwoners	6.900 inw.
dichtheid inw	56 inw/ha.
huishoudens	2.900 hh.
dichtheid hh	24 hh/ha.
gemiddelde gezinsgrootte	2.36 inw/hh.
tewerkstelling	900 vte.
dichtheid tew	7 vte/ha.
bezoekers/dag	2.500 bez/d.
dichtheid bez	20 bez/dag.ha.

meest nabije stad

Antwerpen (10.6 km)



GEBRUIKSINTENTSITEIT

Inwoners

inw	6.900	H	2.50
potentieel	120%	P	3.00

Tewerkstelling

vte	900	H	1.75
potentieel	132%	P	2.55

Bezoekers

bez/dag	2.500	H	1.50
potentieel	132%	P	2.30

KNOOPPUNTWAARDE

Collectief vervoer

BUS HF/MF	H	3.42
BUS HF	P	3.51

Fiets

bereik		
21.8 km	H	2.00
30.2 km	P	2.50

Weg

tijd tot hoofdweg	congestie-risico		
19 min.	28%	H	2.80
19 min.	41%	P	2.16

PLAATSWAARDE

Voorzieningen lokaal

Eerder matig	H	2.18
Goed	P	3.13

Voorzieningen regionaal

Matig	H	1.64
Goed	P	3.13

Voorzieningen metropolitaan

Zeer beperkt	H	0.00

Mix

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Ontwikkelingspotentieel

	H	1.50
	P	5.00

Provincie Antwerpen

nota Ruimte kernenkompas versie 31.01.2019

BUUR

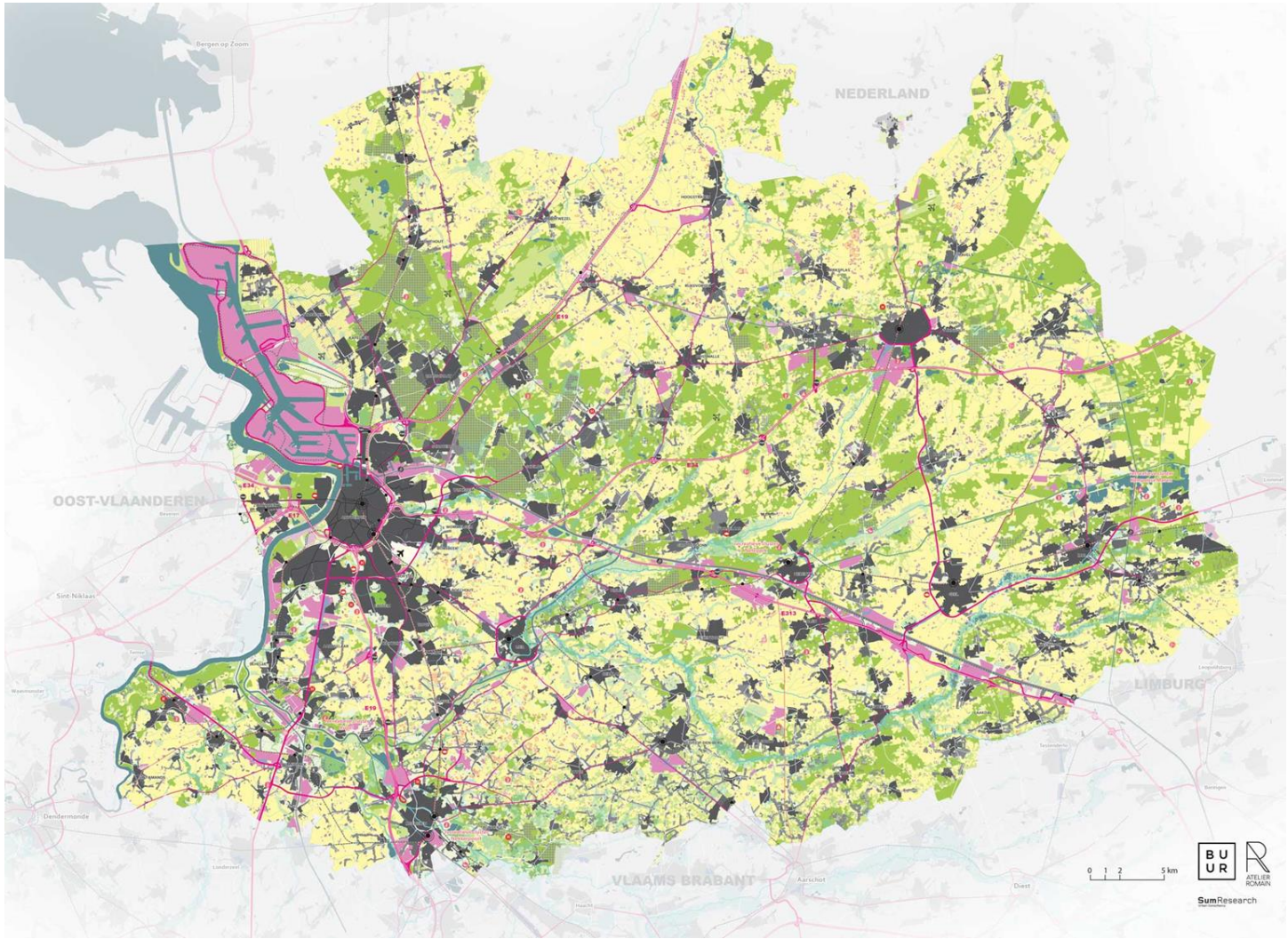
(H) onbebouwde percelen

oppervlakte	15.4 ha
dichtheid	95 gebr/ha
capaciteit	+1.500 gebr. (14%)

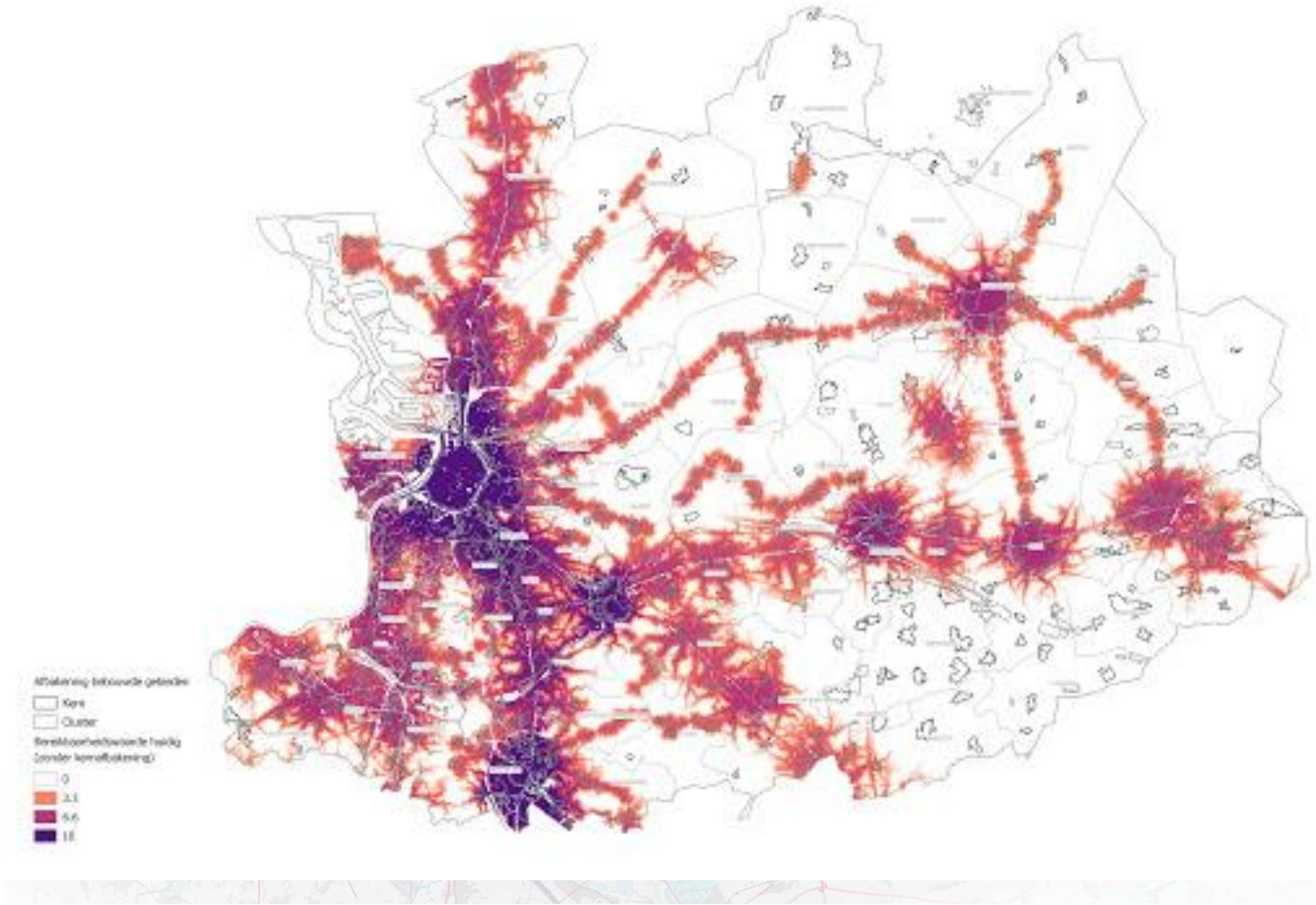
(P) verdichtingspotentieel

oppervlakte	123.1 ha
dichtheid	171 gebr/ha
capaciteit	+10.900 gebr. (106%)

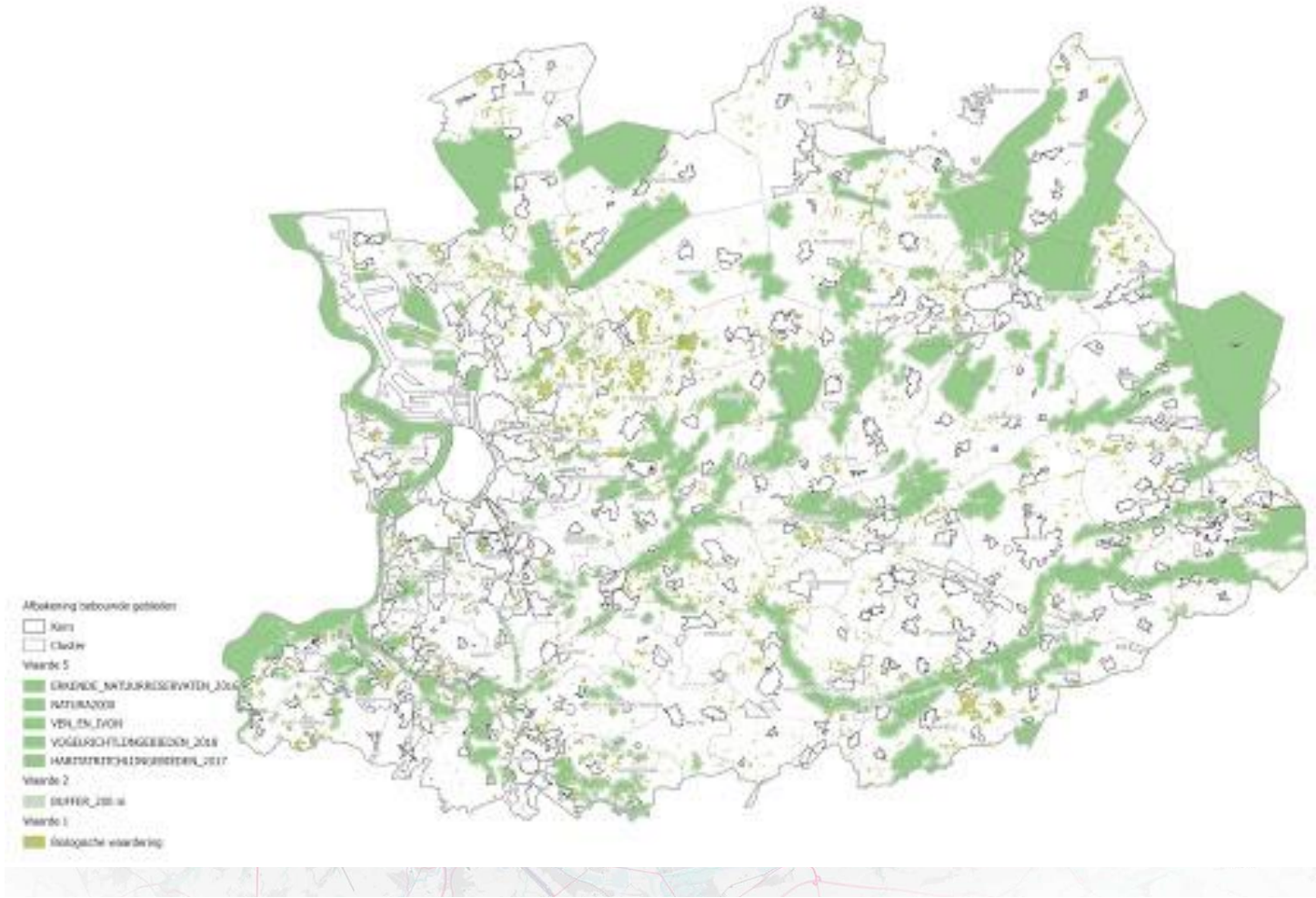
Province of Antwerp urban planning vision based on gathered data systems and visualized schemes



Anthropogenic balance



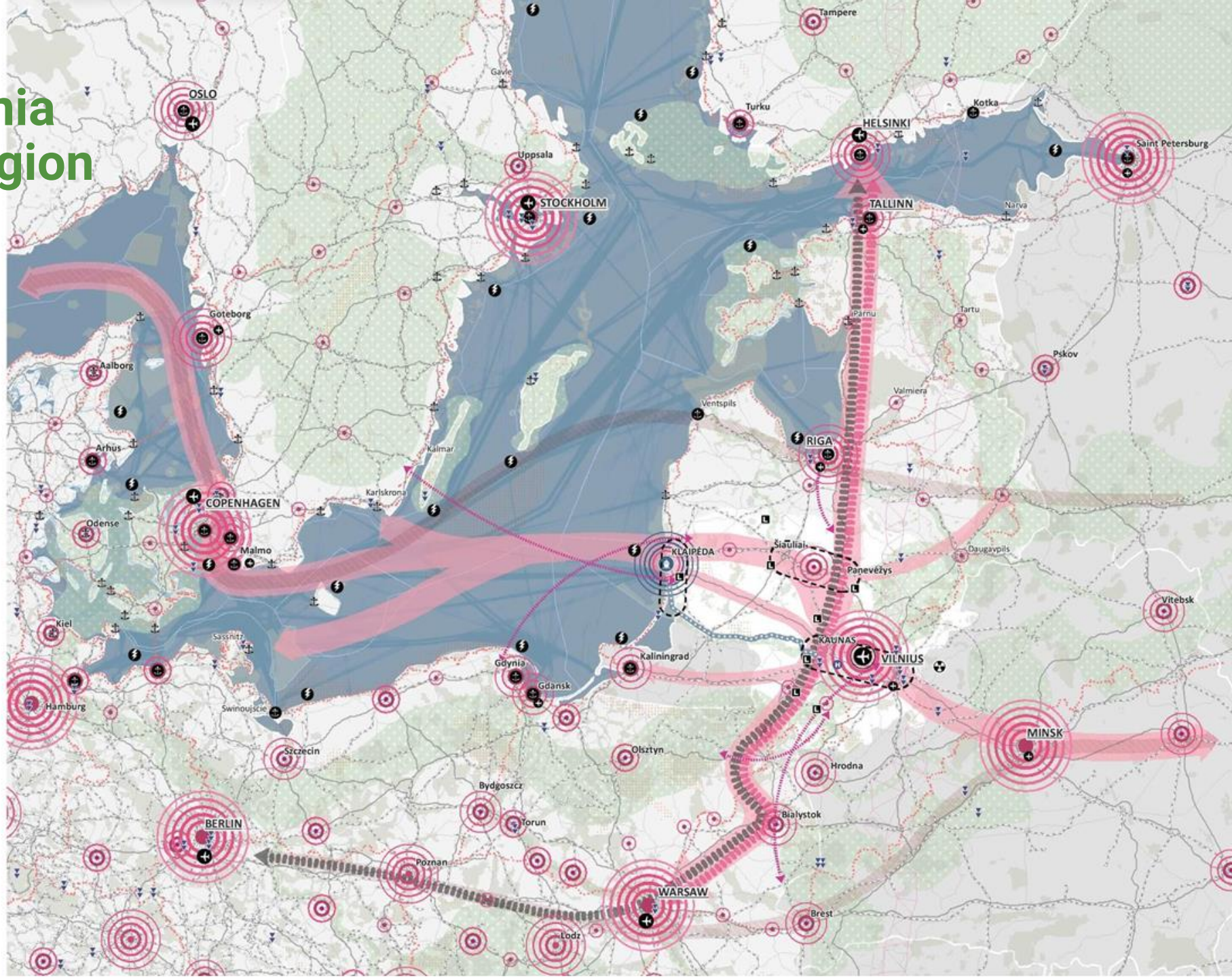
Natural balance



LIETUVA 2030
bendrasis planas

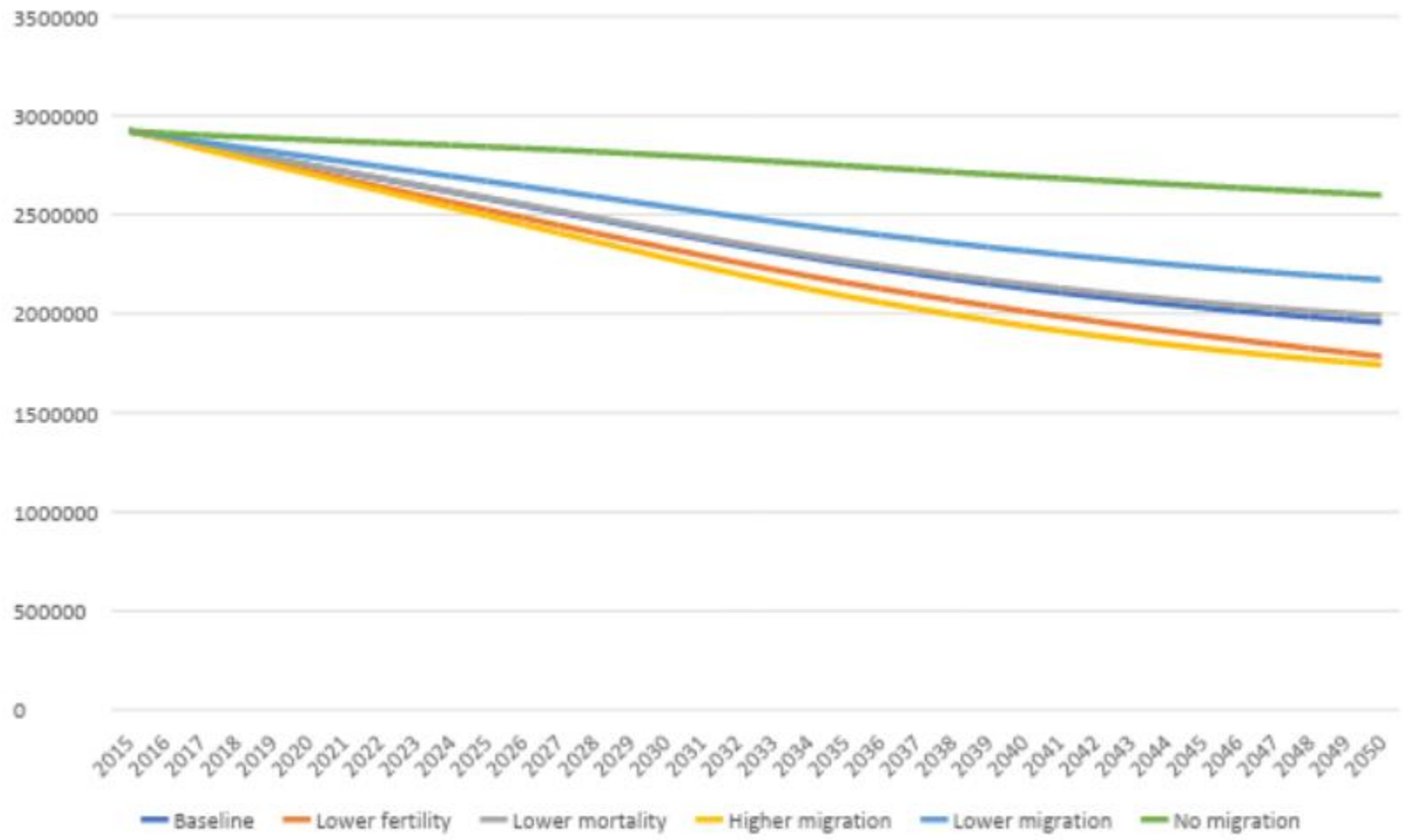
2.
How we apply international knowledge using spatial data systems into Comprehensive Plan of the Territory of the Republic of Lithuania?

Positioning Lithuania in the Baltic sea region



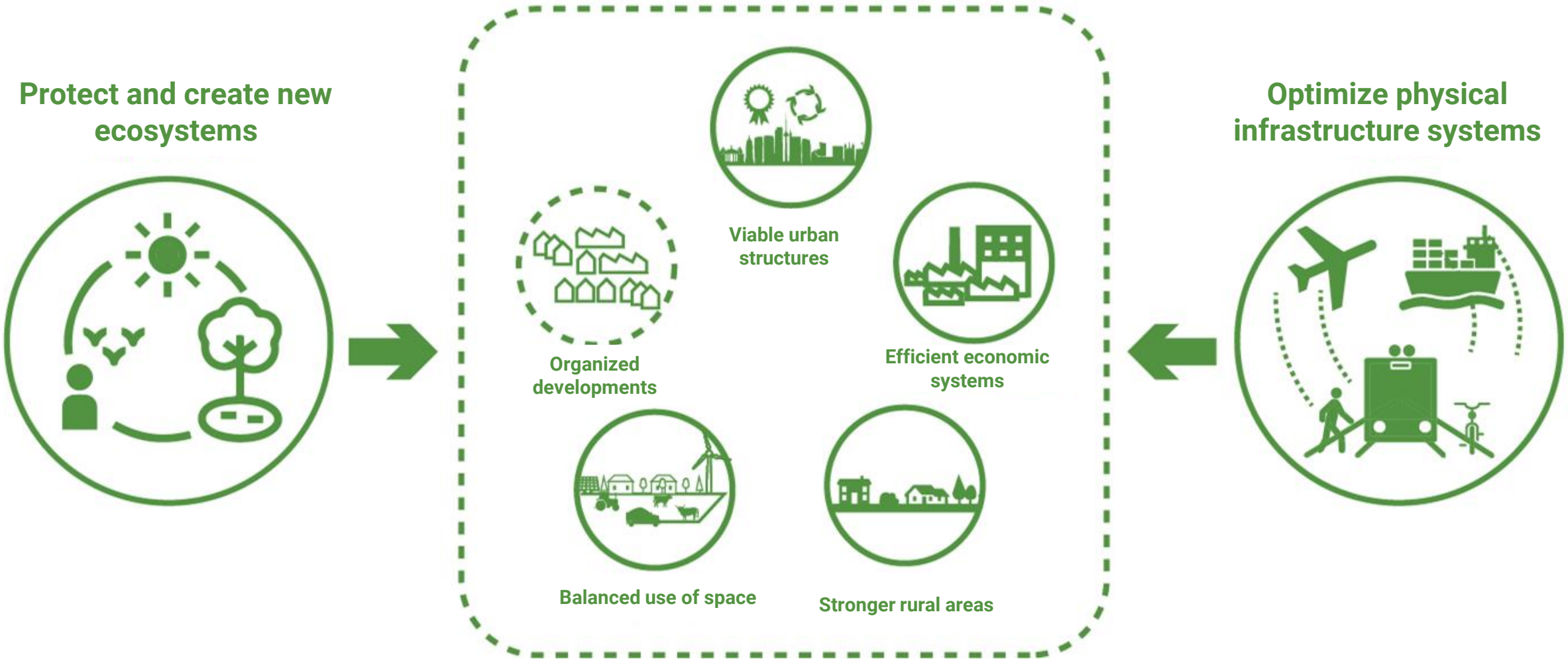
DEMOGRAPHIC PREDICTIONS 2050 ACCORDING TO EUROSTAT

Baseline	**1,957,377**
Lower fertility	1,784,867
Lower mortality	1,990,384
Higher migration	1,742,482
Lower migration	2,170,899
No migration	**2,598,421**



Compass 2030 is an indicator-and-spatial-data-based tool for a well informed and substantiated spatial planning process. This tool is currently used to refine and detail the conceptual frameworks set during the Concept phase of the CPRPL

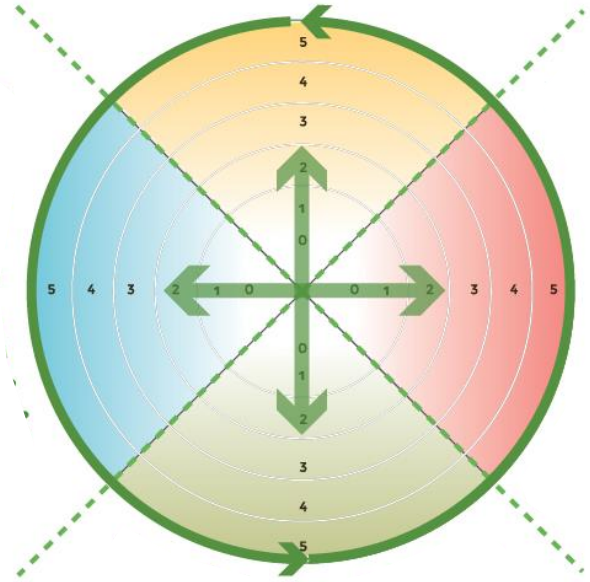
Objective for CPTRL detail phase



- The compass model is based on a comprehensive balance of certain systems, areas or themes, i. 4 components (compass chart columns) are evaluated as a whole. The compass model allows you to estimate the balance of relevant systems, areas, or topics (e.g., the balance between storage and use, or the balance between the amount of objects and the availability of them).

Use of resources

Sociocultural and socioeconomic capital



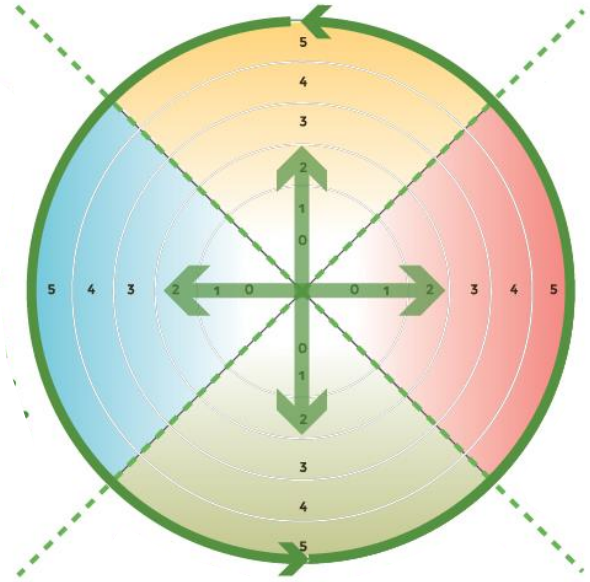
Access and mobility

Natural and cultural potential

- The country's spatial system consists of natural and anthropogenic (man-made) systems. In order to achieve sustainability in the scope of the compass, both natural and anthropogenic systems and their interactions are examined. According to the question or the formed goal for a certain territory, the topics of natural and anthropogenic systems are selected, where balance is sought and solutions are formed.

Use of resources

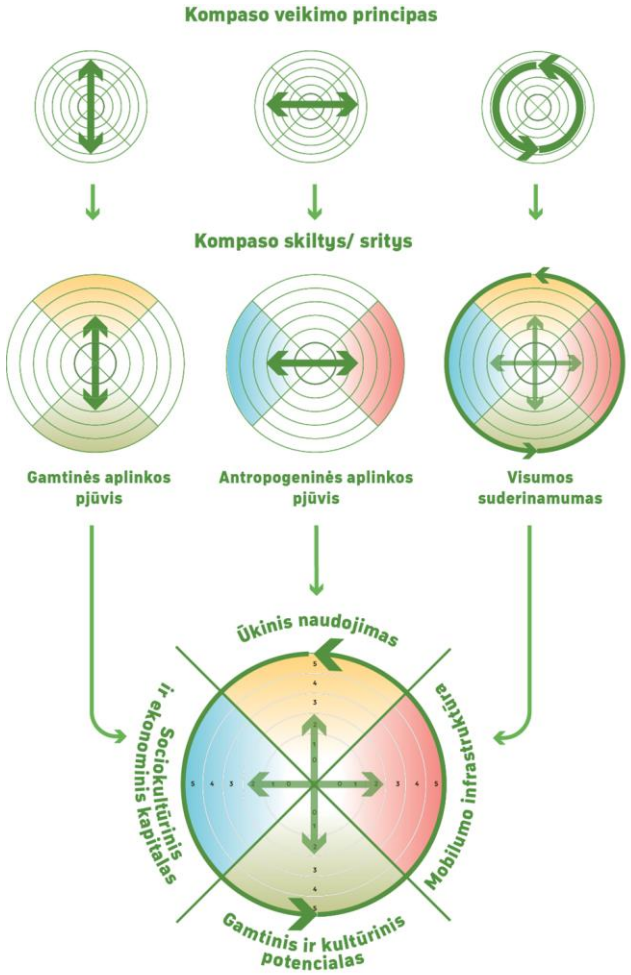
Sociocultural and socioeconomic capital



Access and mobility

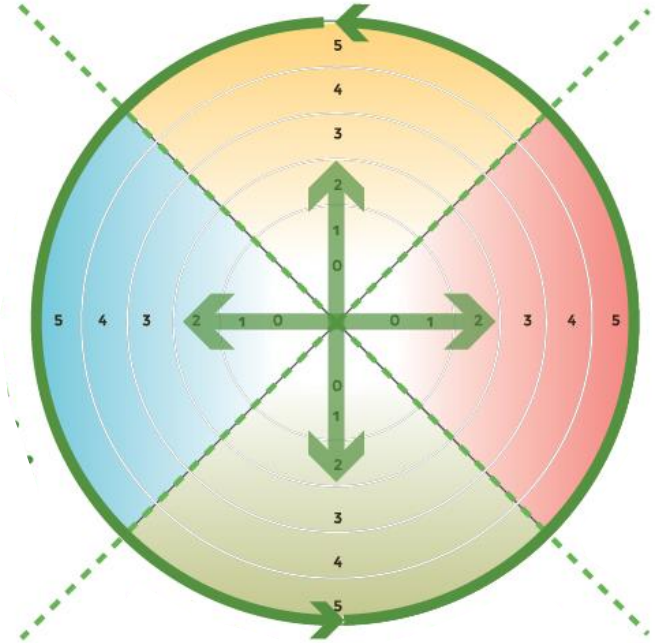
Natural and cultural potential

Compass 2030 structure is based on a balanced coexistence and use of natural and anthropogenic environments



Use of resources

Sociocultural and socioeconomic capital



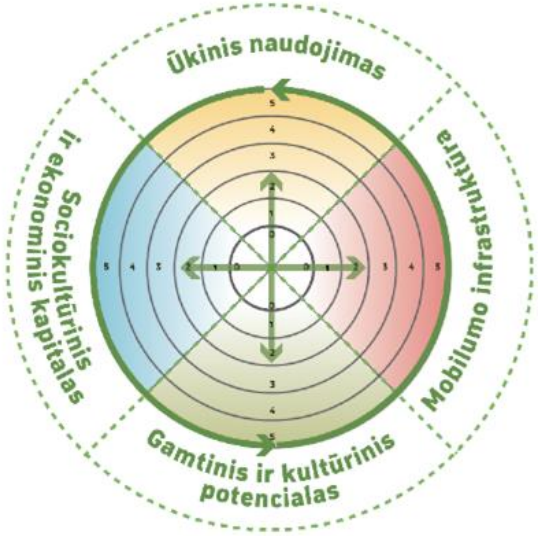
Access and mobility

Natural and cultural potential

CPTRL compass 2030 indicators

Use of resources
- Soil fertility rating
- Forests for production
- Surface of detail surveyed natural resources
- Productive areas at sea

Sociocultural and socioeconomic capital
- Workplaces
- Access to services



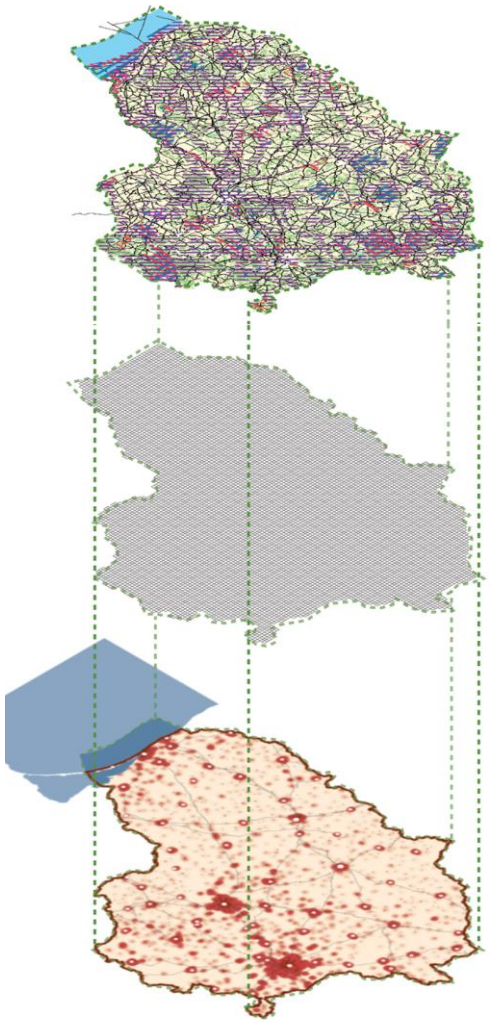
Access and mobility
- Public transport intensity
- Bicycle paths
- Road network
- Railway network
- Waterway network

Natural and cultural potential
- Protected areas
- Natura2000
- Preservation worthy Landscape
- Natural frame
- Sinkhole region
- Cultural heritage sites

List of Compass 2030 indicators

FIELD	INDICATOR	UNIT	WHAT IS BEING EVALUATED	SOURCE
Sociocultural and socioeconomic capital	**Workplaces**	**No**	Darbo vietų skaičius vertinamaisiais metais gardelėje	GIS įrankis „Sumanūs regionai
	Access to services	**km²**	Paslaugų pasiekiamumas per laiko vienetą. Skaičiuojamos gardelės plotas, kurį perdengia objekto pasiekiamumo teritorijos. Pasiekiamumas nustatomas būtinojo, dažno ir vidutinio poreikio paslaugoms atitinkamai 30 min., 45 min., ir 60 min. automobiliu.	GIS įrankis „Sumanūs regionai; Kultūros ministerijos duomenys;
Access and mobility	**Public transport intensity**	**Avg. services p. day**	Vidutinis viešojo transporto (autobusų ir geležinkelių) reisų skaičius per parą, patenkantis į gardelę	GIS įrankis „Sumanūs regionai“, UAB „LG Keleiviams", www.visimarsrutai.lt
	Bicycle paths	**km**	Dviračių takų ilgis km., patenkantis į gardelę	Lietuvos automobilių kelių direkcija, Openstreetmap
	Road network	**km**	Valstybinės ir vietinės reikšmės kelių, gatvių ilgis km., patenkantis į gardelę	GDB10LT, 2020
	Railway network	**km**	Geležinkelių ilgis km., patenkantis į gardelę	GDB10LT, 2020
	Waterway network	**km**	Vidaus vandens kelių ilgis km., patenkantis į gardelę	GDB10LT, 2020
Use of resources	**Soil fertility rating**	**Soil fertility rating, no**	Vidutinis dirvožemio našumo balas gardelėje	Dirv_DR10LT, 2020
	Forests for production	**km²**	Ūkinių miškų plotas, patenkantis į gardelę	Miškų kadastras, 2020
	Surface of detail surveyed natural resources	**km²**	Detaliai iššvalgytų naudingųjų iškasenų telkiniai, patenkantis į gardelę	Geologijos tarnybos duomenys, 2020
	Productive areas at sea	**km²**	Smėlio kasybos plotai, dampingo vietos, infrastruktūros koridoriai, uostų reidai, patenkantis į gardelę	LRBP esamos būklės analizės duomenys; LR teritorijos bendrojo plano papildymas jūrinių teritorijų dalimi
Natural and cultural potential	**Protected areas**	**km²**	Saugomų teritorijų plotas, patenkantis į gardelę	Saugomų teritorijų kadastras, 2020
	Natura2000	**km²**	Natūra2000 teritorijų plotas, patenkantis į gardelę	Saugomų teritorijų kadastras, 2020
	Preservation worthy Landscape	**km²**	Saugotinų vaizdingų kraštovaizdžio arealų plotas, patenkantis į gardelę	Nacionalinis kraštovaizdžio tvarkymo planas
	Natural frame	**km²**	Gamtinio karkaso plotas, patenkantis į gardelę	LRBP koncepcijos duomenys
	Sinkhole region	**km²**	Karstinio regiono plotas, patenkantis į gardelę	Geologijos tarnybos duomenys, 2020
	Cultural heritage sites	**km²**	Kultūros paveldo teritorijų plotas, patenkantis į gardelę	Kultūros vertybių registras, 2020

How does it work?



Step 1

Geospatial data and series of indicators from publicly available sources are carefully reviewed and aggregated into one GIS file.

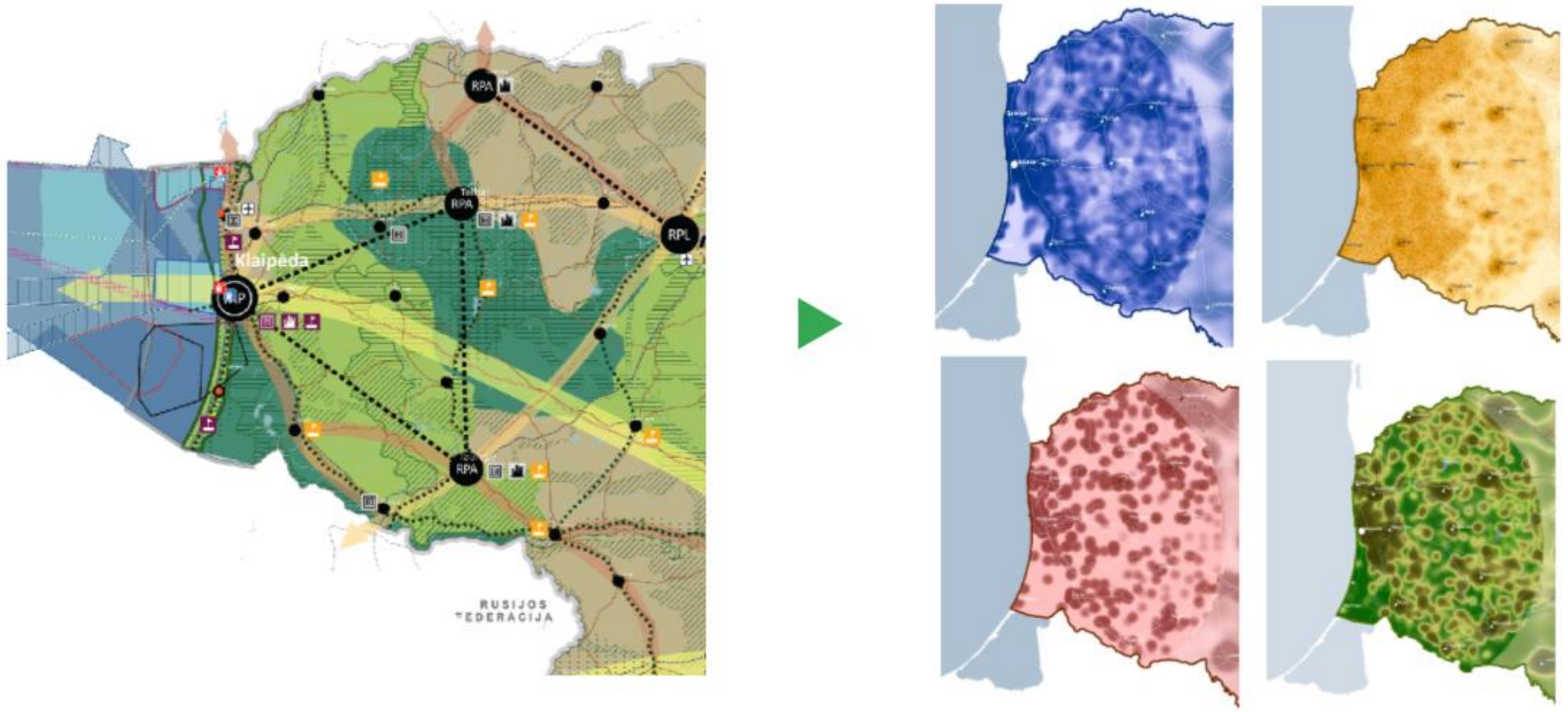
Step 2

Geospatial data is subdivided into small pieces of Geospatial grid of **1km x 1km**. This strips the data of all unnecessary components and allows standardization of Geospatial values into values within the grid

Step 3

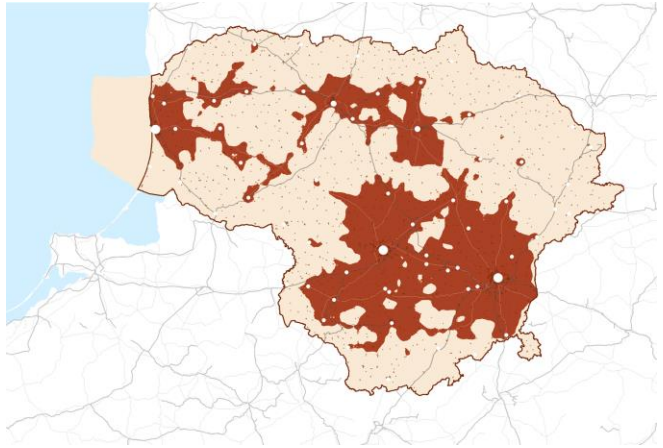
One of the conclusive compass layers is used to combine all data values into one comprehensive (thematic) layer.

By improving the tool of the Lithuanian BP Compass 2030 in the future, it can also be used at the regional level as a tool that substantiates / denies the potential of functional complementarity and development of partnerships. LRBP synthesis schemes for different spatial data identify gaps in the sustainability status of territories and opportunities for the development of various spatial structures for the period up to 2030.



Compass 2030: Sociocultural and socioeconomic capital (preliminary results)

Std. dev.n=0,01



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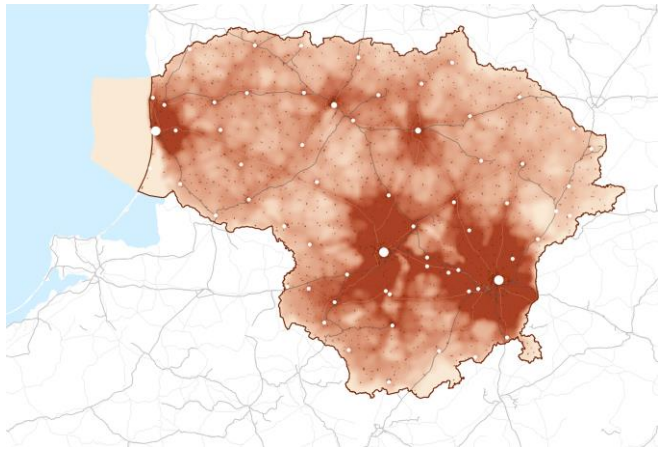
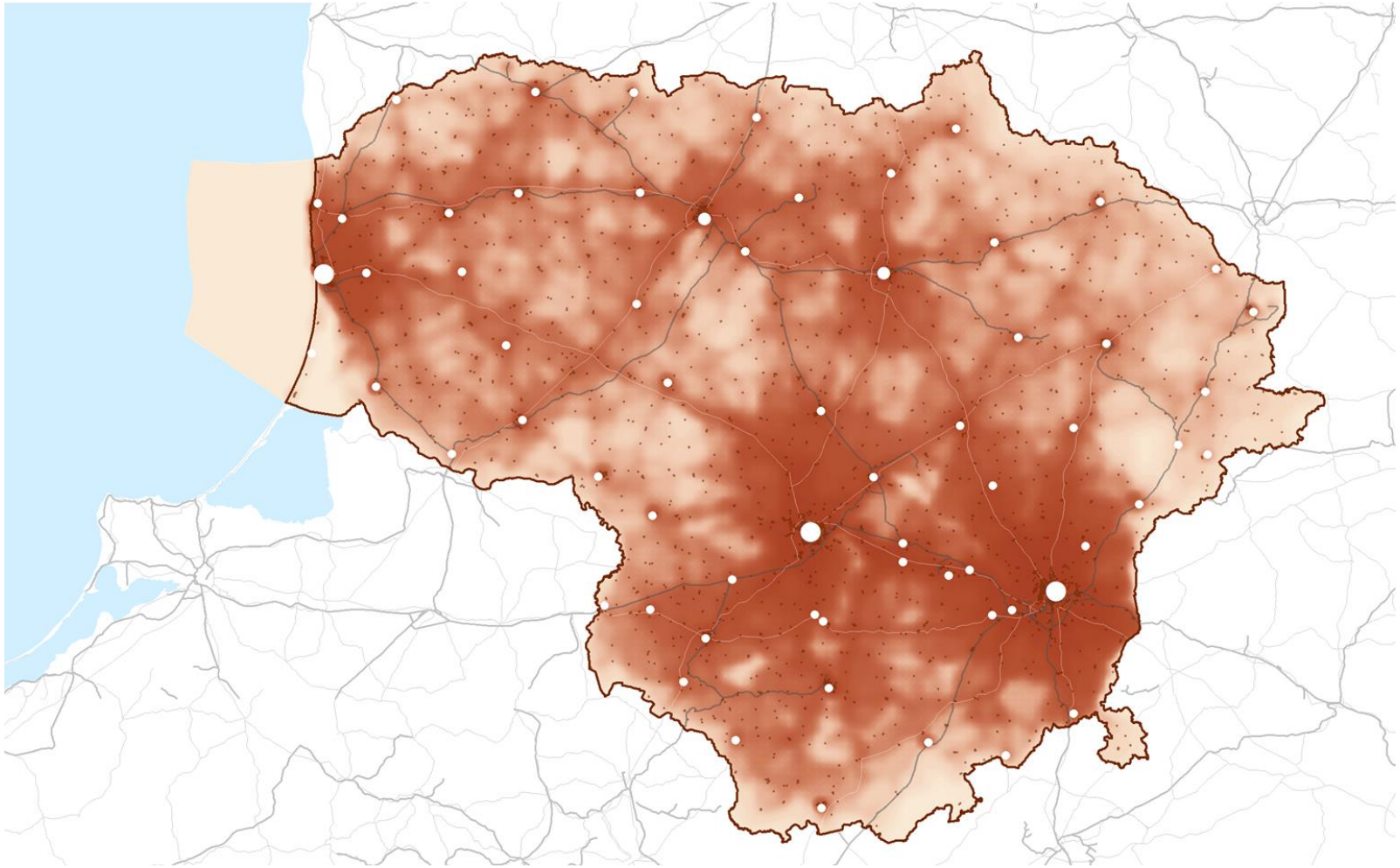


Histogram



Compass 2030: Access and mobility (preliminary results)

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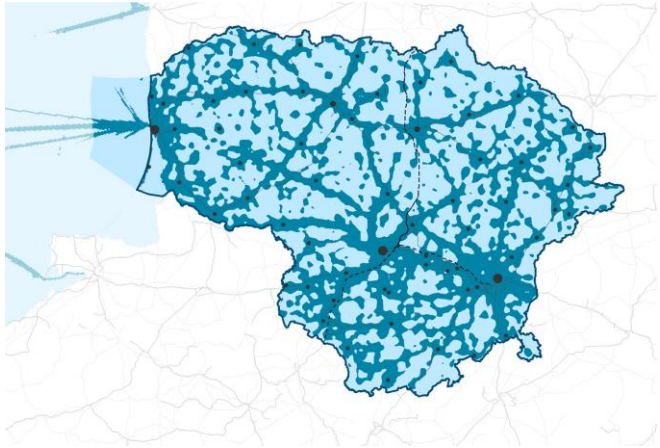

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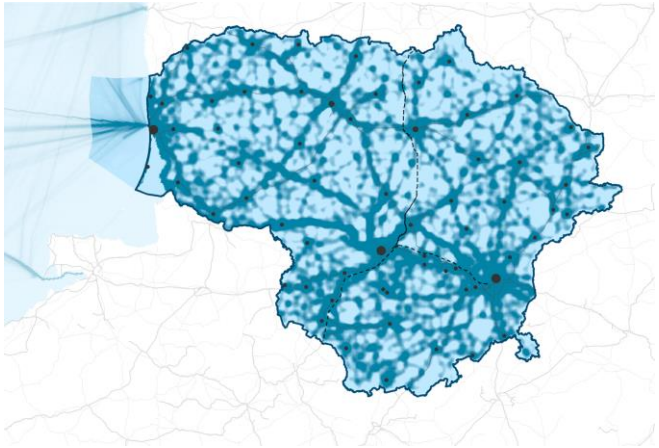

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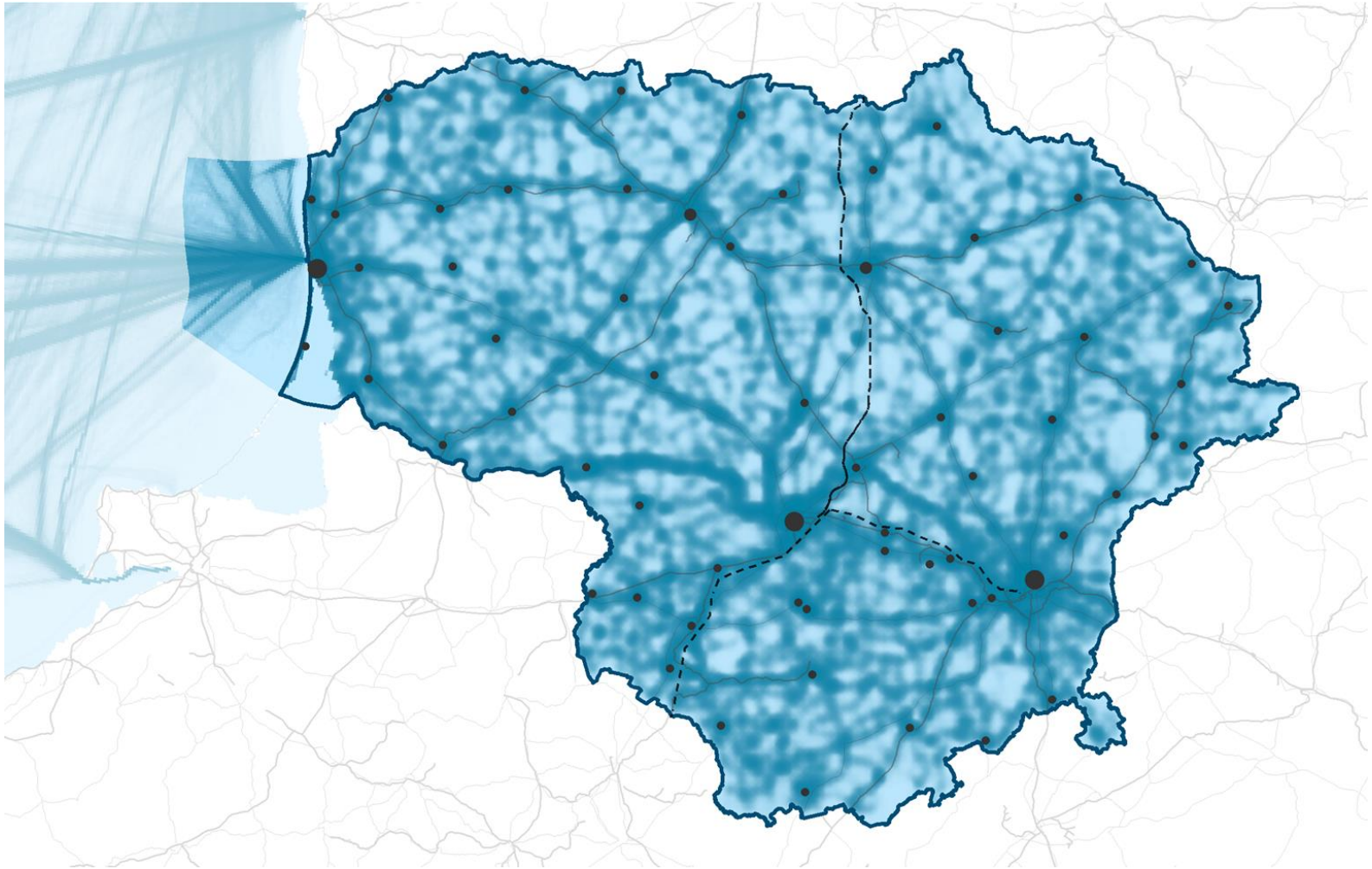

Compass 2030: Natural and cultural potential (preliminary results)

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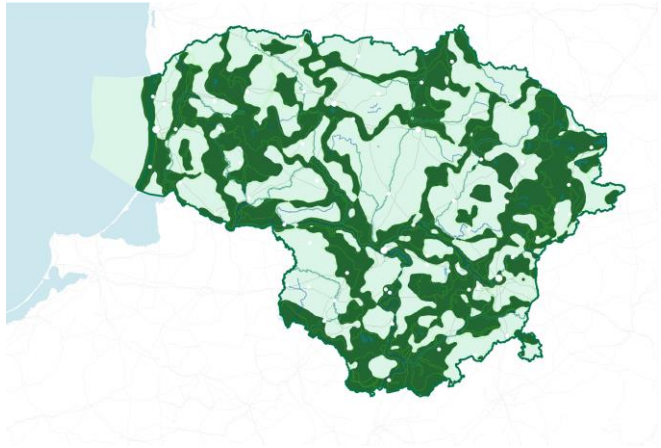

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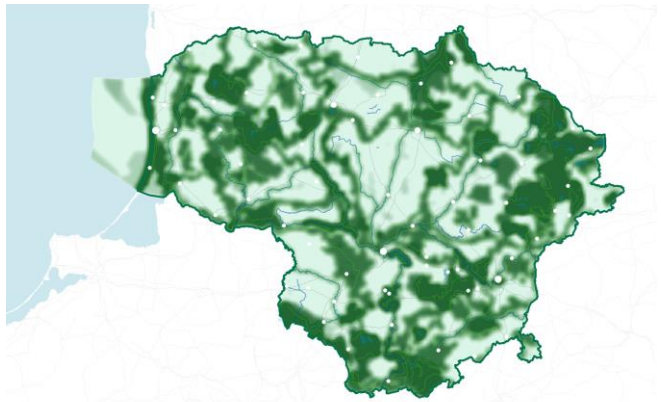
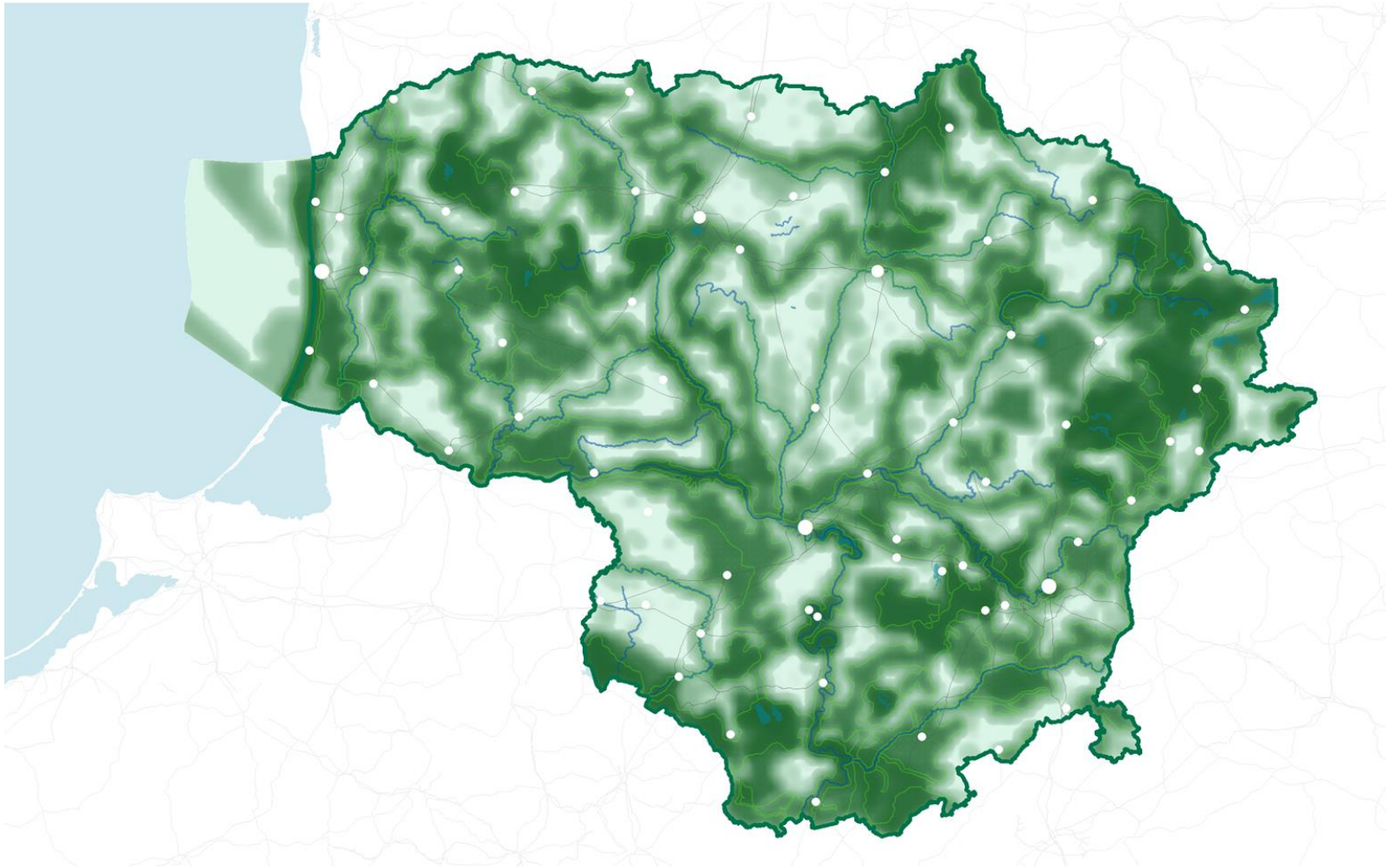


Histogram



Compass 2030: Use of resources (preliminary results)

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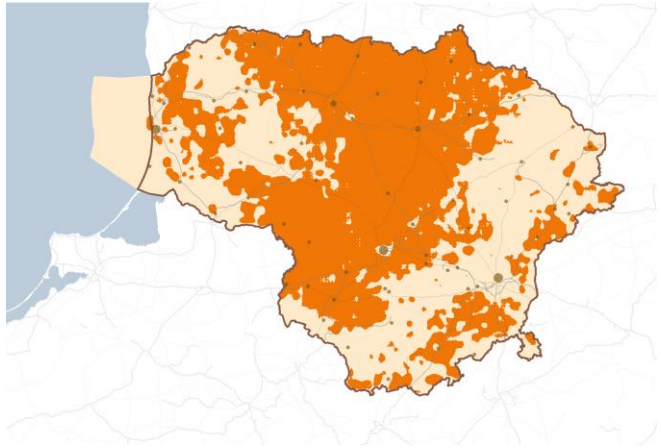

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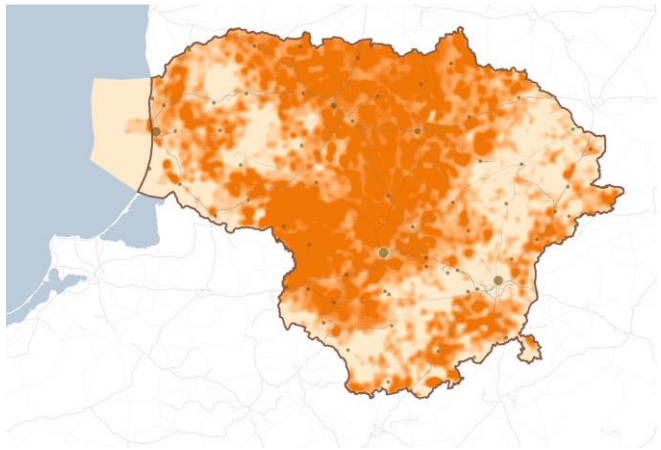
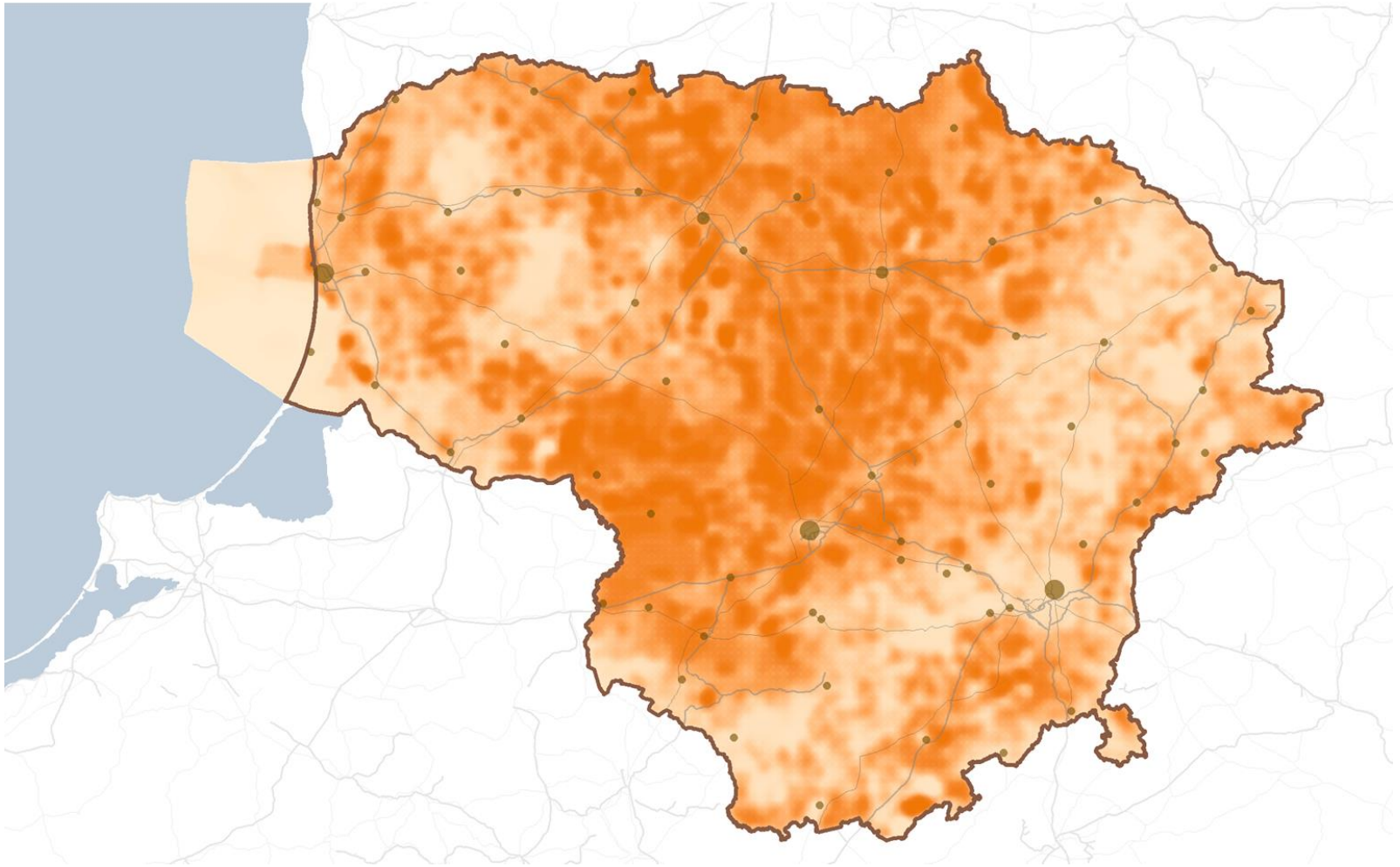


Histogram



Compass 2030. Synthesis #1: Natural environment (preliminary results)

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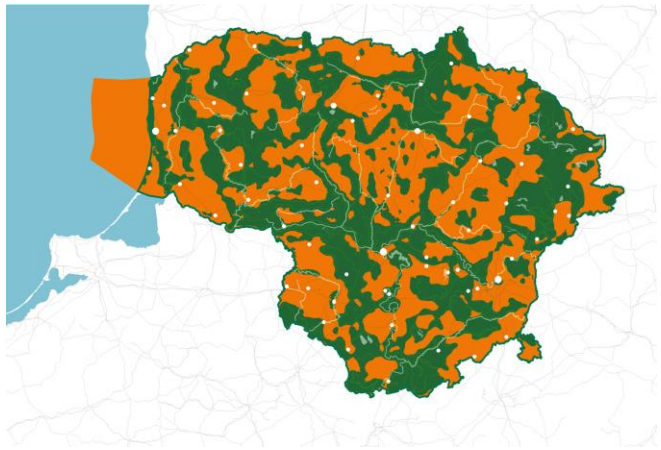

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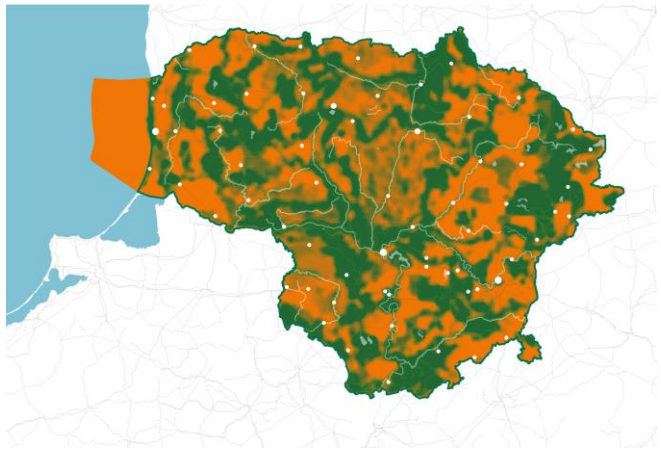

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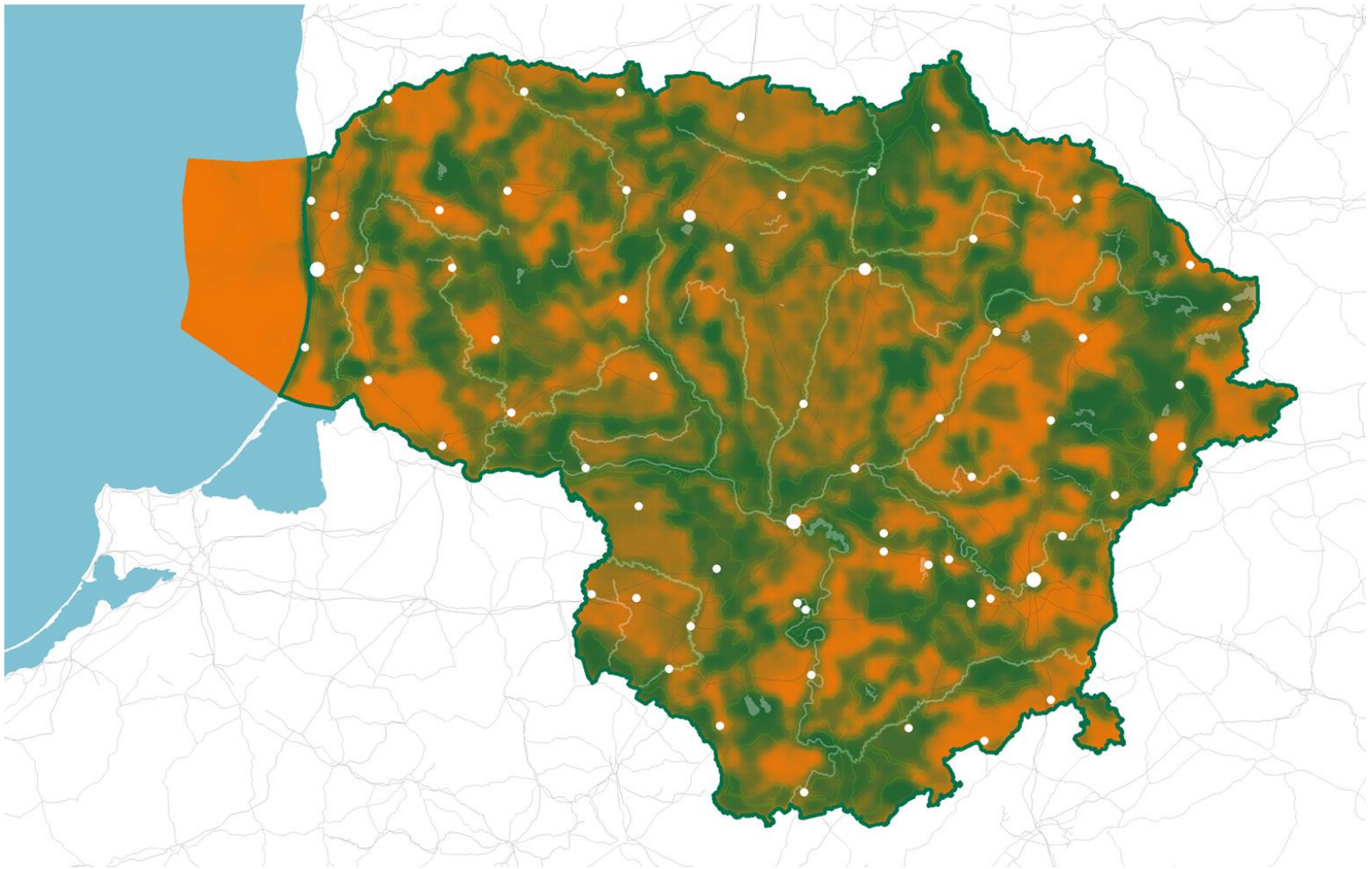

Compass 2030. Synthesis #2: Anthropogenic environment (preliminary results)

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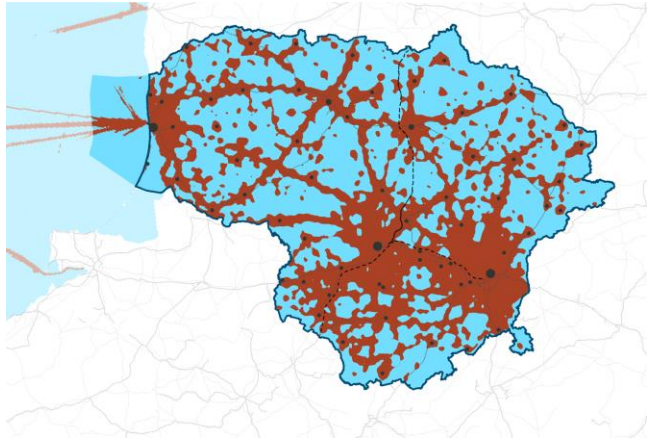

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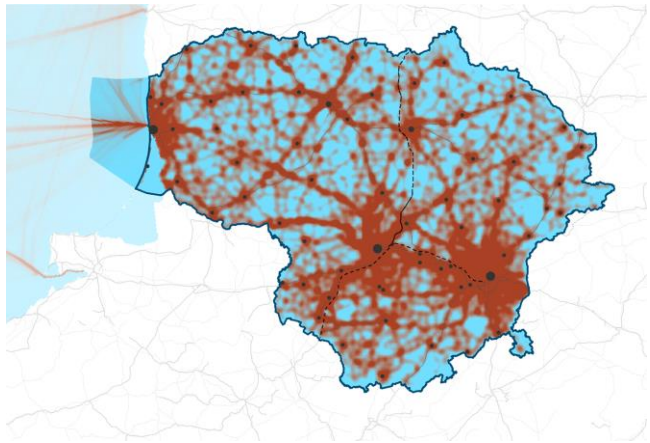
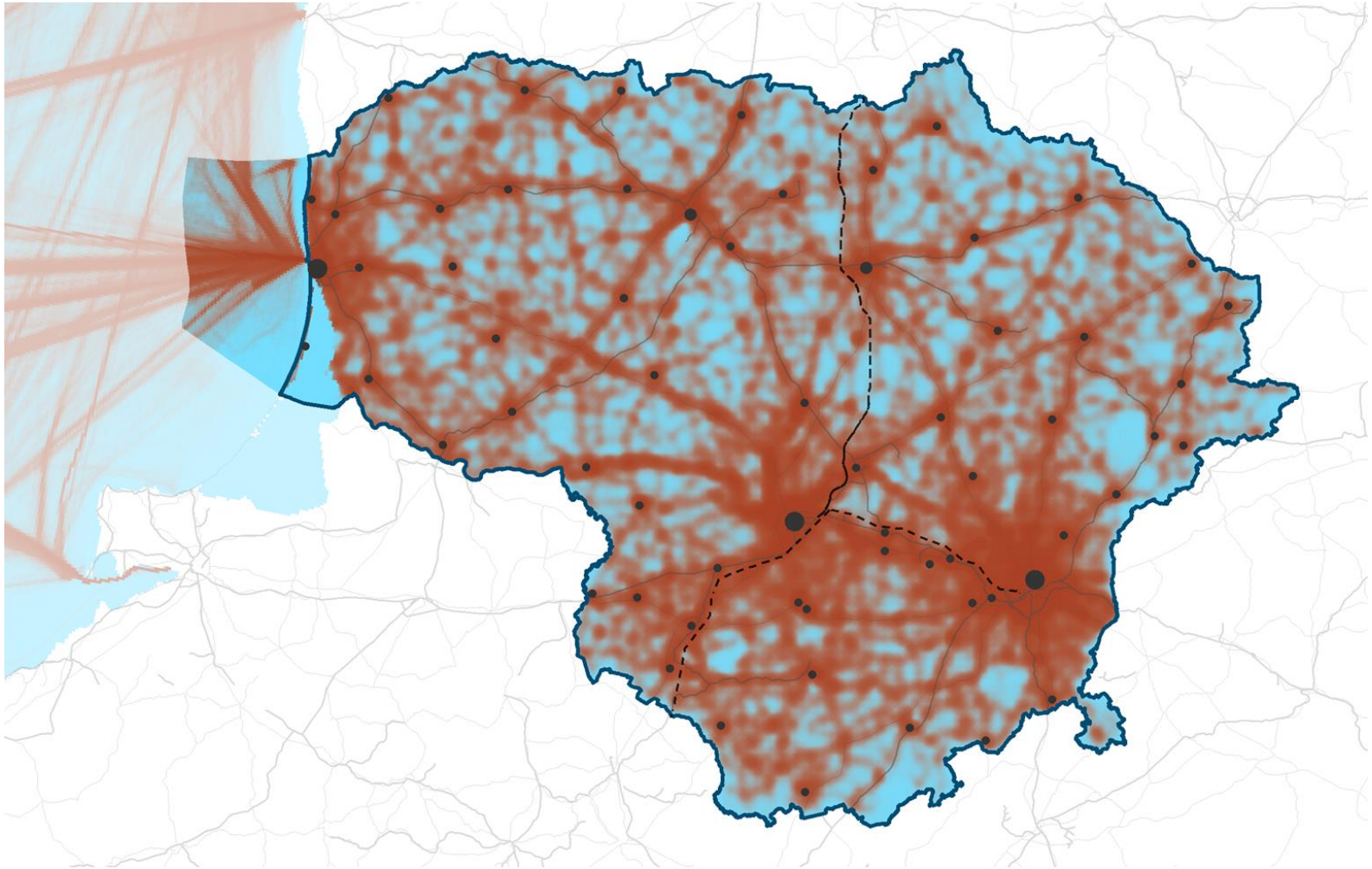
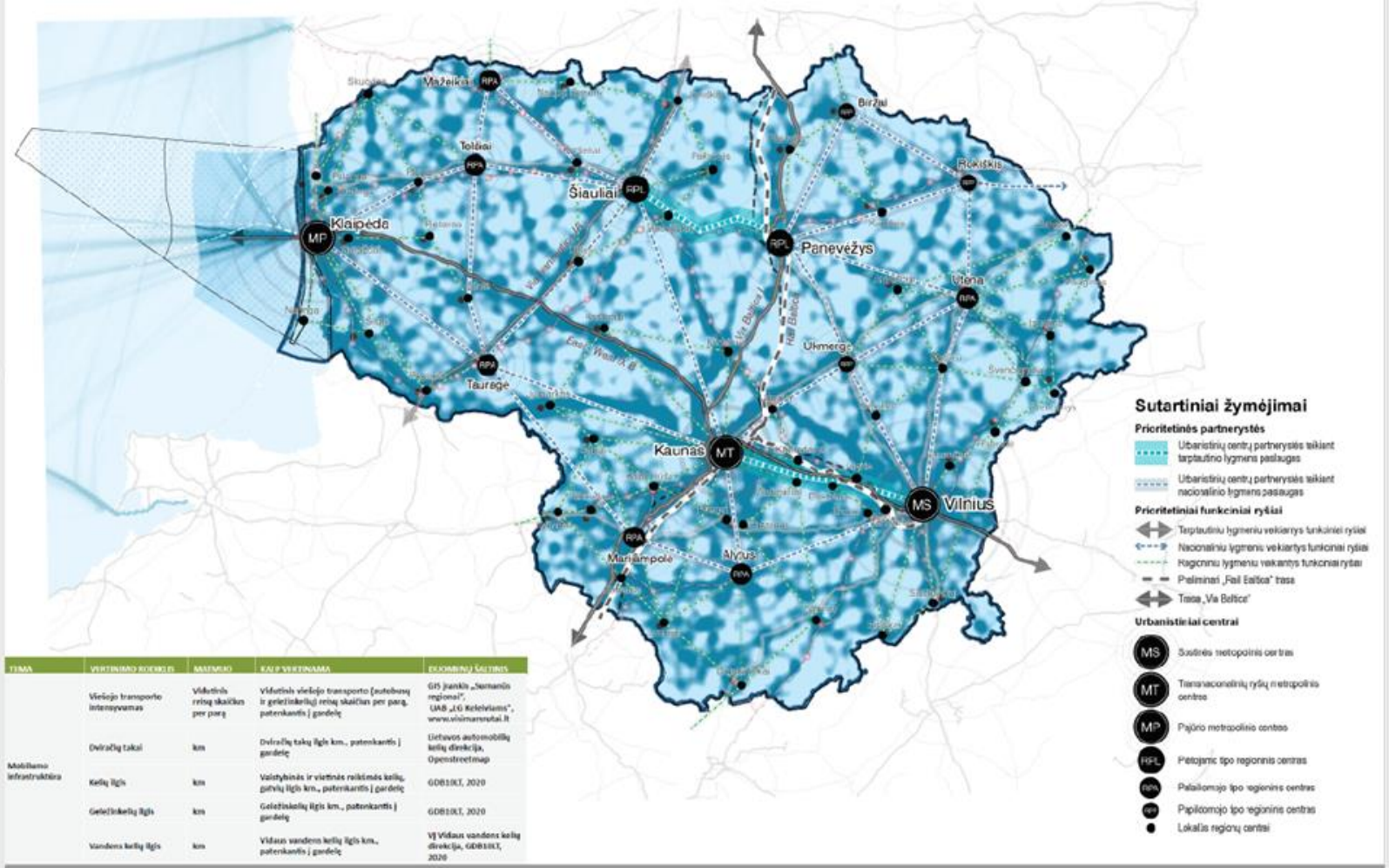


Histogram



How can Compass 2030 help bring more clarity and argumentation into the making of spatial decisions and planning choices?

LRBP kompasas 2030 m. [illegible] infrastruktūra



TEMA	VERTINIMO RODIKLIS	MATMUO	KAIP VERTINAMA	DUOMENŲ ŠALTINIS
Mobilumo infrastruktūra	Viešojo transporto intensyvumas	Vidutinis reisų skaičius per parą	Vidutinis viešojo transporto (autobusų ir geležinkelių) reisų skaičius per parą, patenkantis į gardelę	GIS įrankis „Sumanūs regionai", UAB „LG Kelelviams", www.visimarsrutai.lt
	Dviračių takai	km	Dviračių takų ilgis km., patenkantis į gardelę	Lietuvos automobilių kelių direkcija, Openstreetmap
	Kelių ilgis	km	Valstybinės ir vietinės reikšmės kelių, gatvių ilgis km., patenkantis į gardelę	GDB10KT, 2020
	Geležinkelių ilgis	km	Geležinkelių ilgis km., patenkantis į gardelę	GDB10KT, 2020
	Vandens kelių ilgis	km	Vidaus vandens kelių ilgis km., patenkantis į gardelę	VĮ Vidaus vandens kelių direkcija, GDB10KT, 2020

LIETUVA 2030
bendrasis planas

COMPASS 2030

Comprehensive Plan of the Territory of the Republic of Lithuania”

VASAB CSPD/BSR webinar on sharing the knowledge

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