



LIETUVOS RESPUBLIKOS
ŽEMĖS ŪKIO MINISTERIJA



Atkurtai
Lietuvai



NATIONAL REPORT OF LITHUANIA

NKG WG meetings 2021

Eimuntas Paršeliūnas, Simonas Valotka

Ministry of Agriculture

2021-03

Present/Future plans

- GNSS observations at **250** benchmarks of Vertical Network of Lithuania in **2019-2020**
- Development of the IIIrd order Vertical Network of Lithuania in **2019-2022** (**4000** km)
- Gravity survey in the Baltic sea (Lithuanian waters) in **2021-2022**
- Re-measurements at the points of secular variations of the geomagnetic field (6 points) in **2021**
- Second Re-measurement of the Ird order Vertical Network of Lithuania in **2023-2025** (**1800** km)

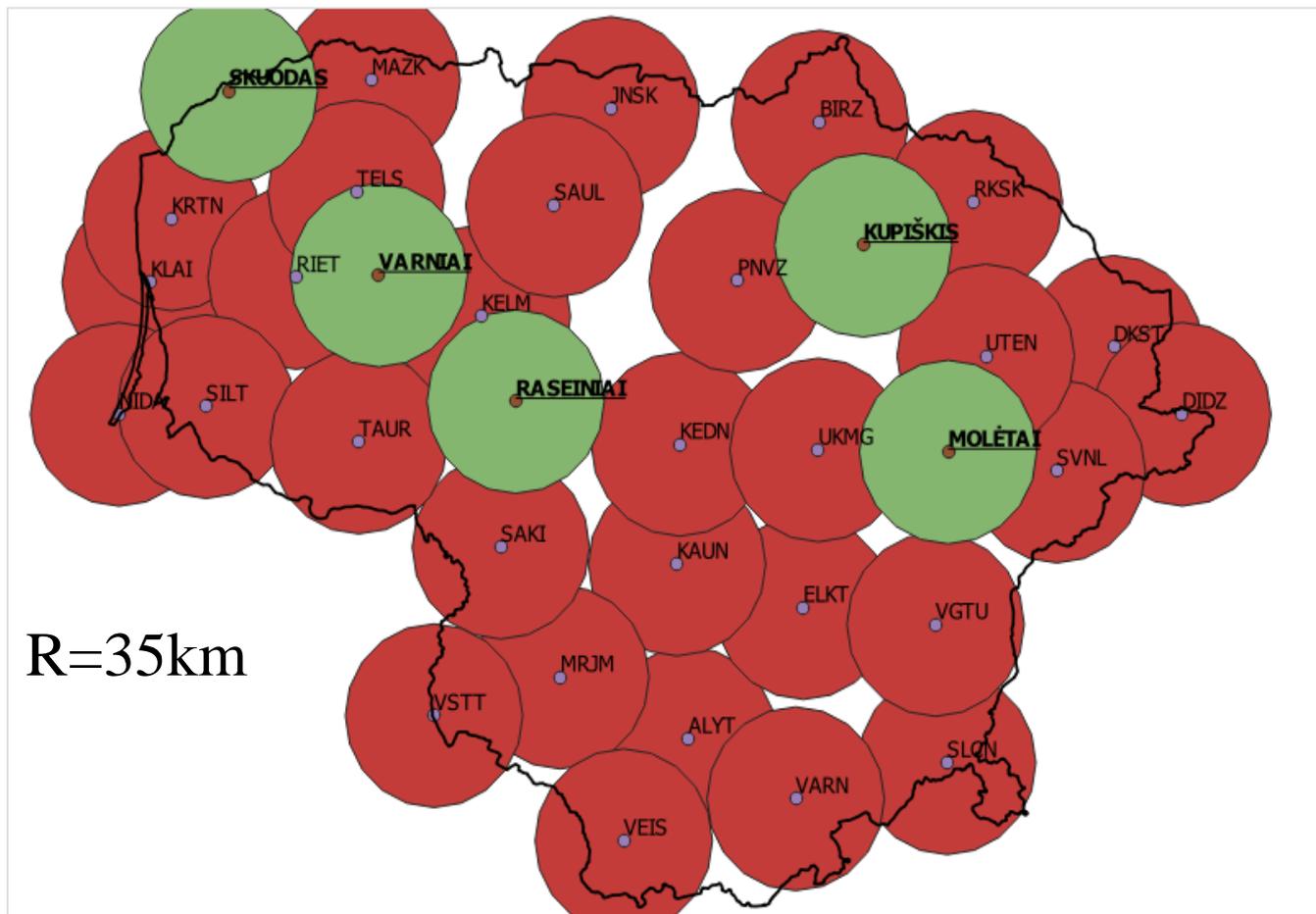


- **LitPOS updates**





LitPOS densification: **5** new stations during **2020** year





- **0-1 order updates**





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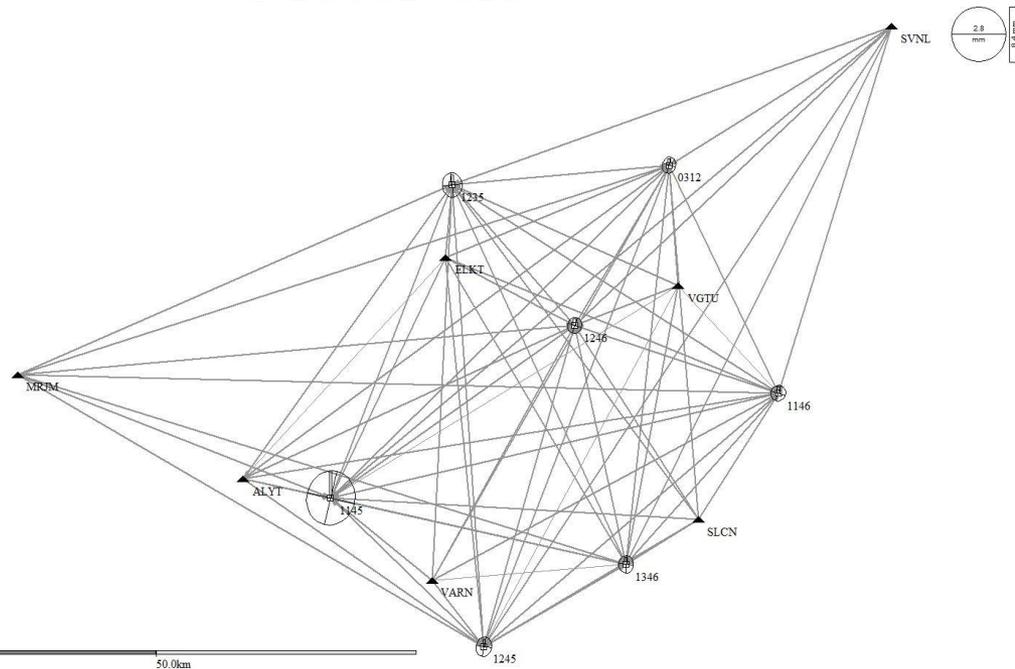
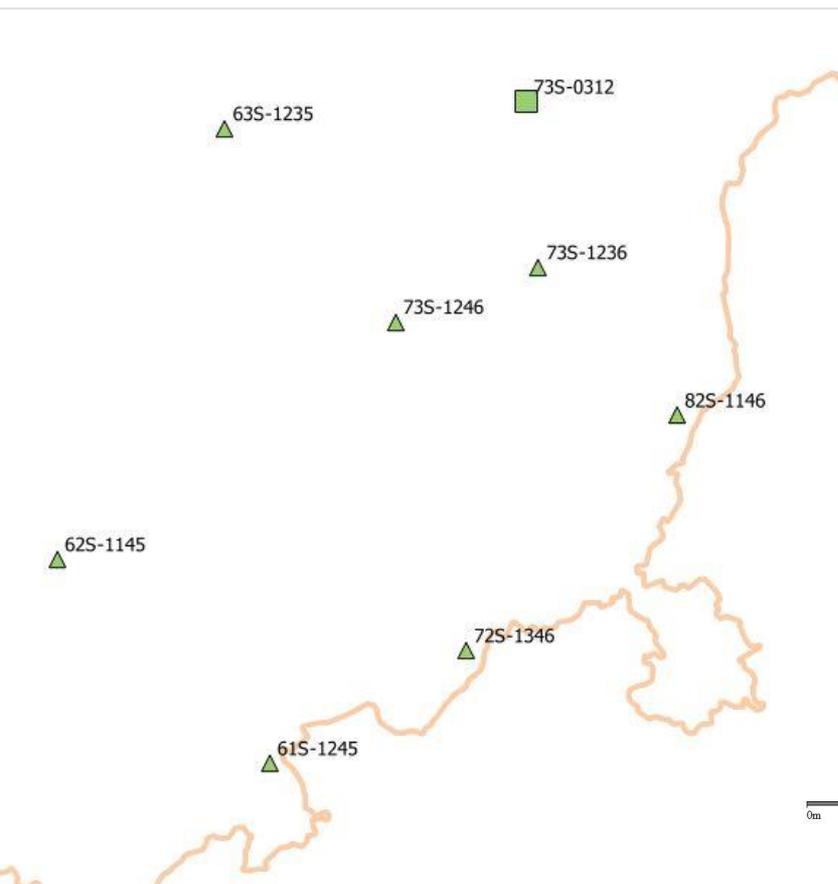
Zero and First-order GPS network re-measurements in 2018-2019 (4+48 points)





Zero and First-order GPS network re-measurements in 2018-2019 (4+48 points)

4 days sessions
8 receivers

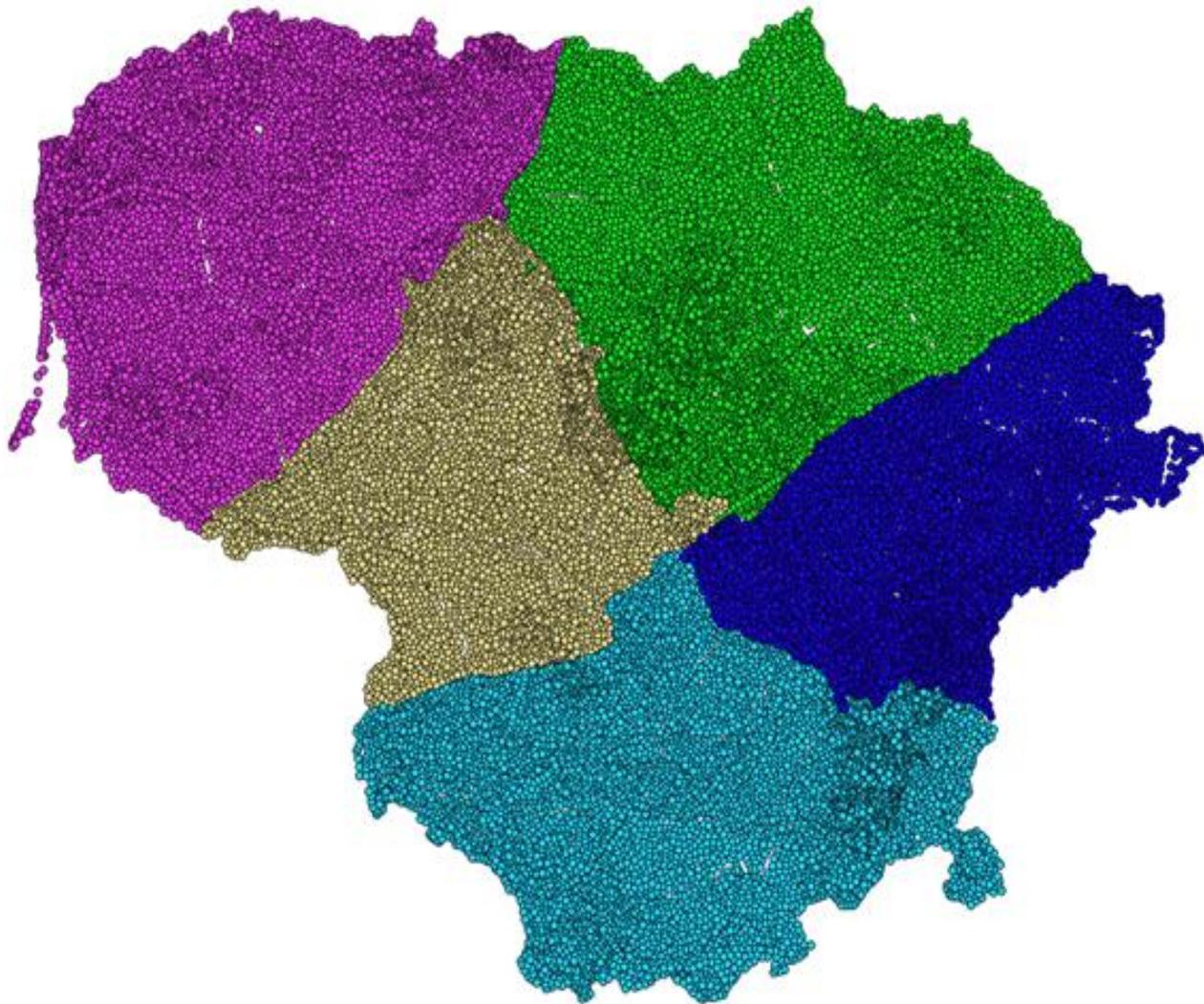




- **Geoid data updates**



Gravity database view (2016-2018)



35520
points



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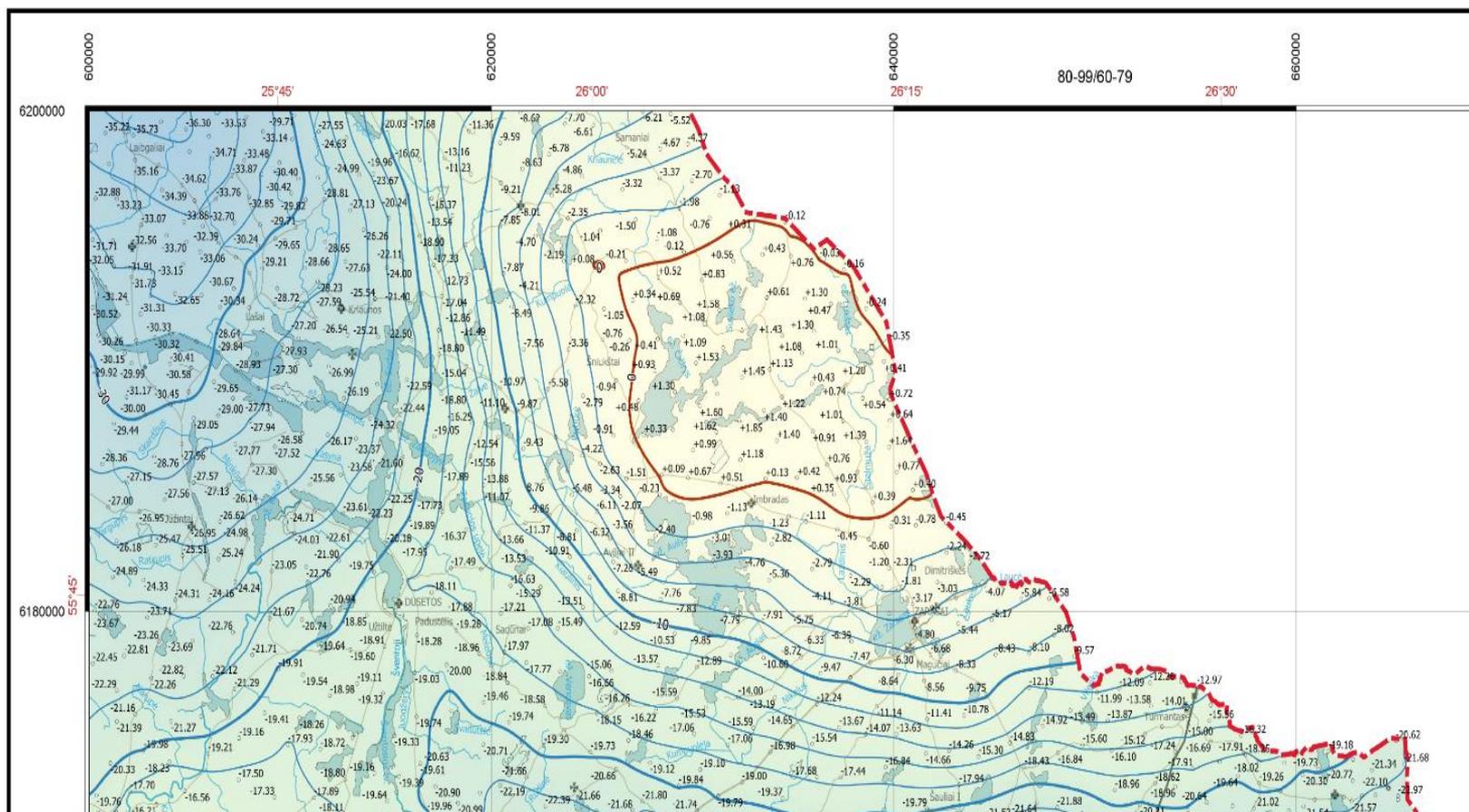
Gravimetric map

LIETUVOS RESPUBLIKOS GRAVIMETRINIS ŽEMĖLAPIS

Bouguer anomalijos

Mastelis 1 : 200 000

80-99/40-59



Determination of Ellipsoidal heights of First and Second order vertical networks points (250)

Duration: 2 days sessions

Team: 2 persons

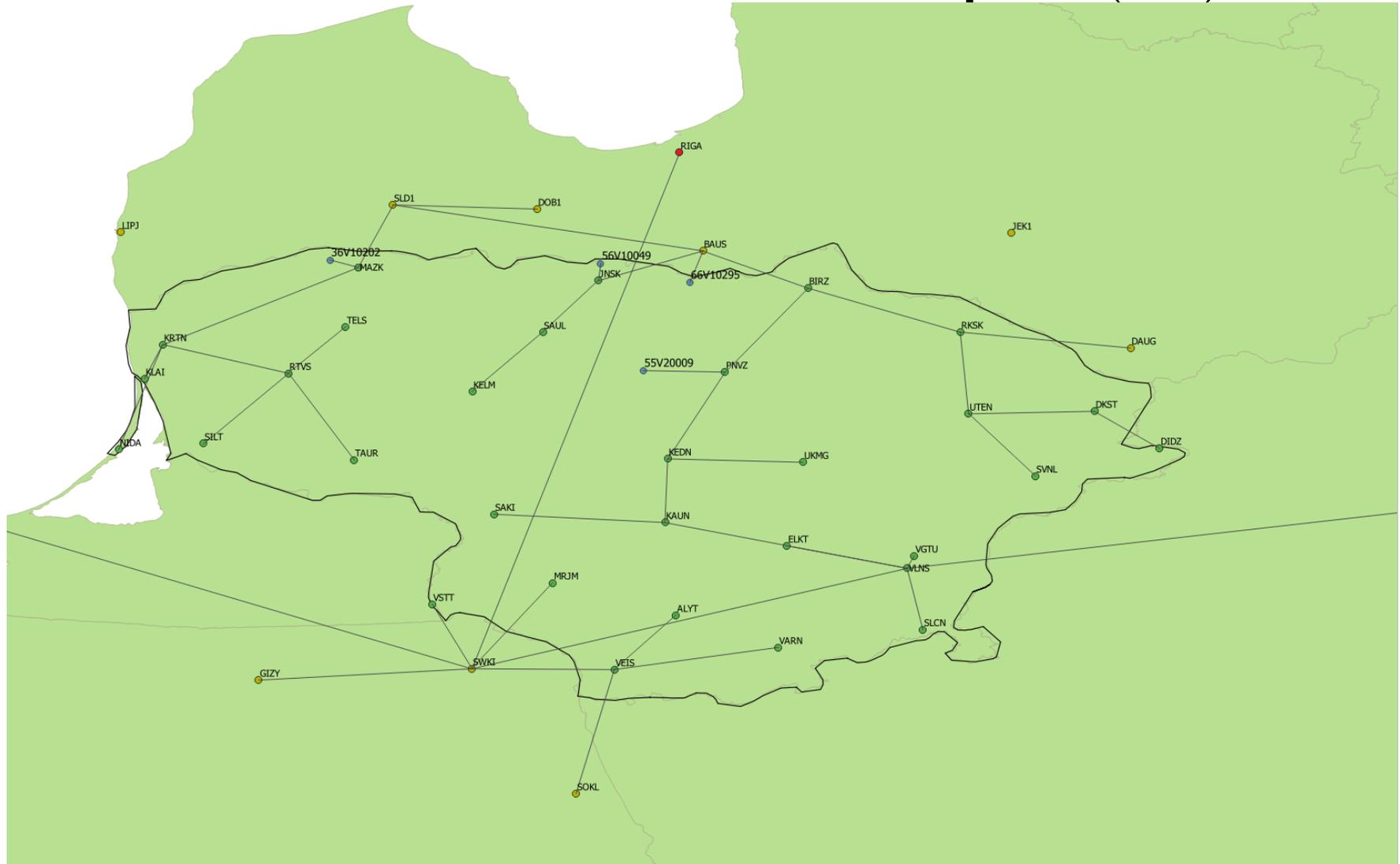
Number of points: 3 - 4 points per session

Instruments: Trimble 5700 + Trimble Zephyr Geodetic antennas

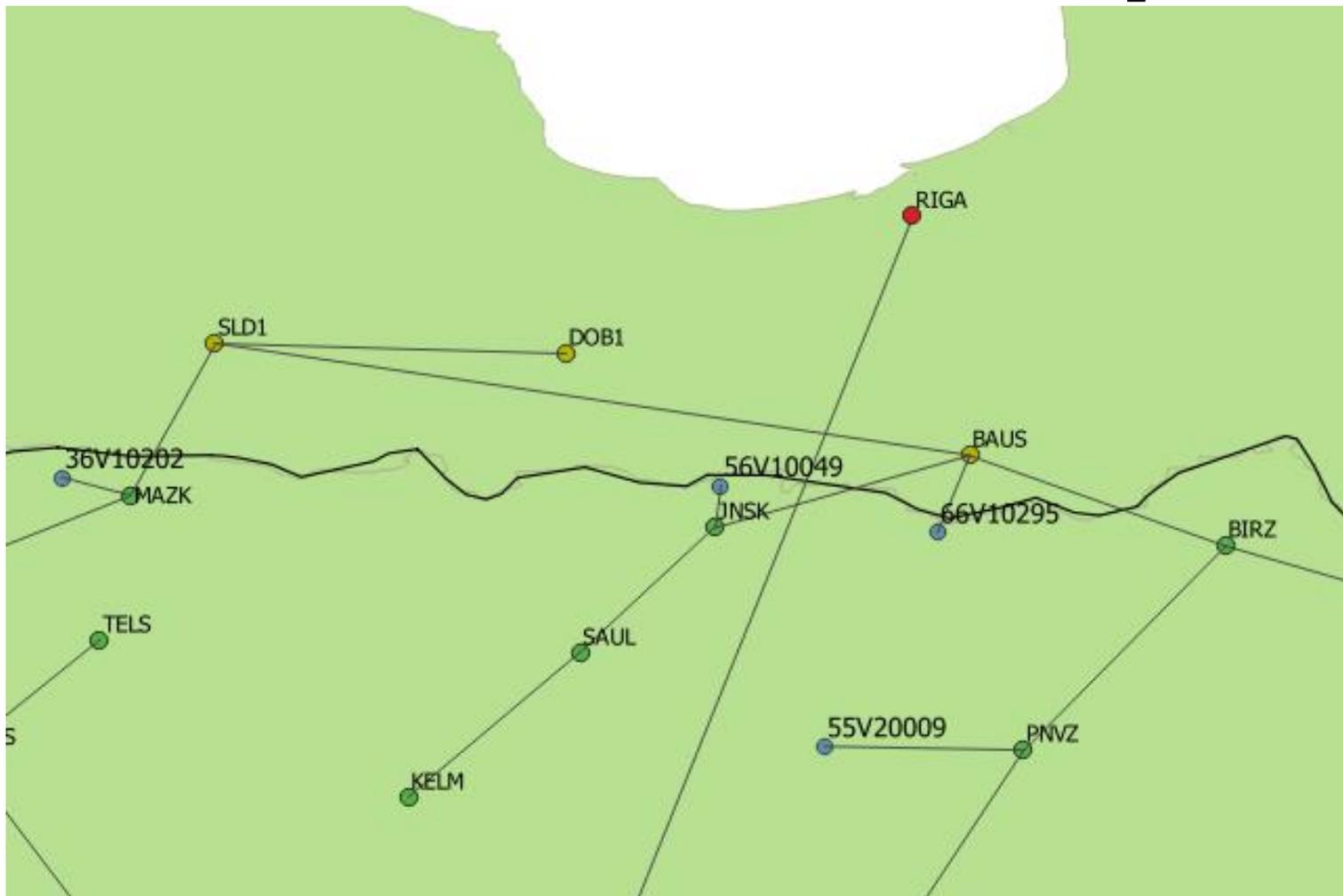
Software: BERNESE 5.2 and TRIMBLE TTC

Accuracy: plane coordinates – 3 mm, ellipsoidal heights – 5 mm

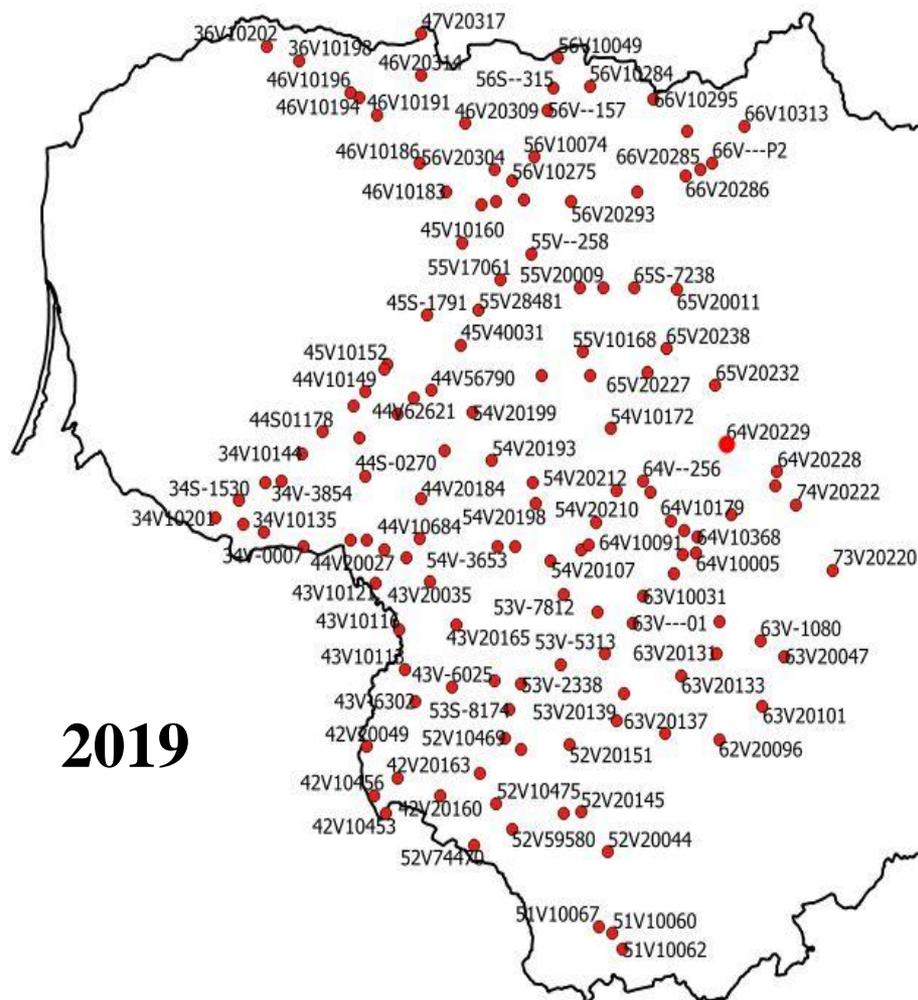
Determination of Ellipsoidal heights of First and Second order vertical networks points (250)



Determination of Ellipsoidal heights of First and Second order vertical networks points



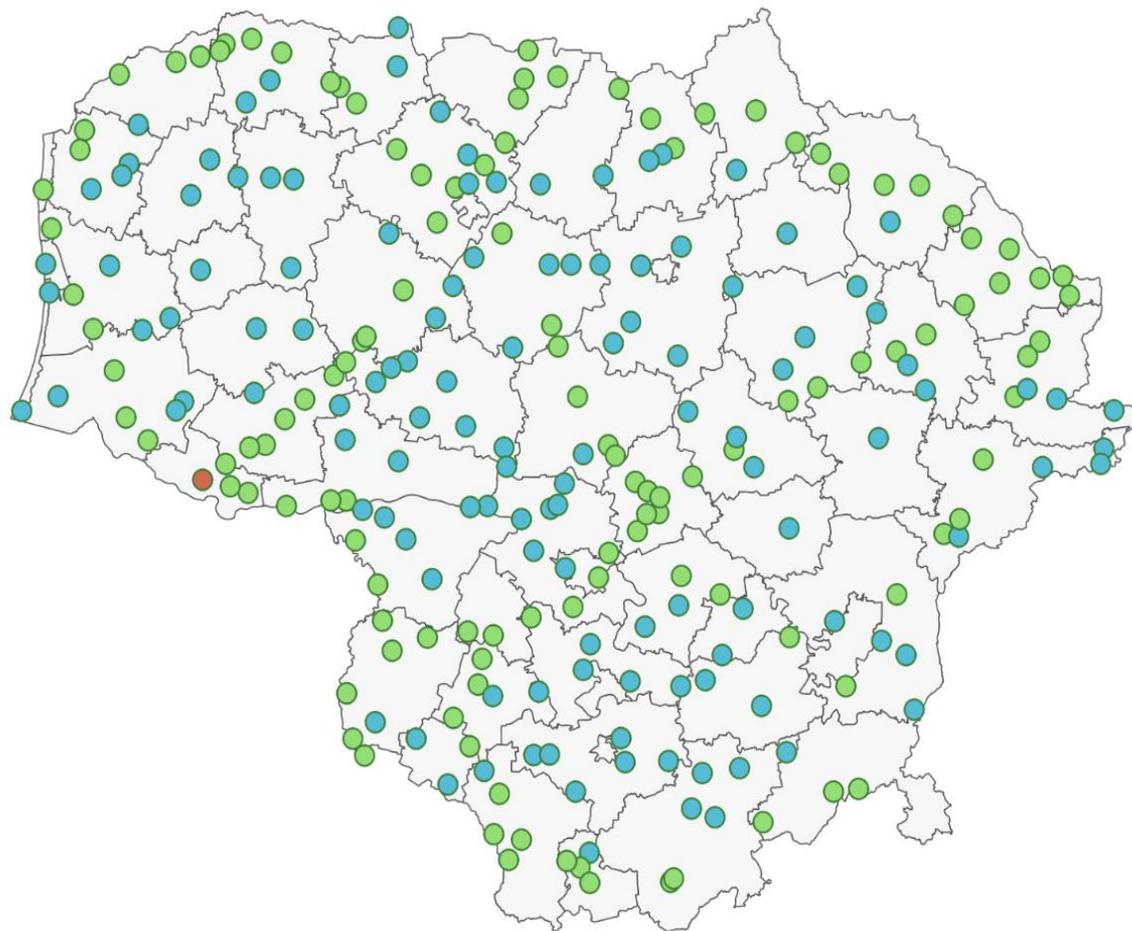
Determination of Ellipsoidal heights of First and Second order vertical networks points (250)



Feature	Value
vert	
MAPID	1
(Derived)	
(Actions)	
MSLINK	129
MAPID	1
PKOD	64V20229
PTIP	V
PPAV	
PKLAS	2
AVYKD	VG TU GI
ADAT	15.12.31
AREZ	Y
HN	83.219999999999999
MHN	0.004300000000000
HNMET	2
HDAT	15.12.31
HVYKD	VG TU GI
BL	55
BM	20
BS	16.076390000000000
LL	24
LM	28
LS	4.154350000000000
HE	106.825999999999999
MHE	0.005000000000000
HEMET	GPS
X	6133709.035000000149012
Y	529679.6809999999982305
ZTIP	155
ZDAT	
ZVYKD	
SAR	Y
GAUB	N
APK	Y
SKOD	
KRADR	file:///C:/GPDR/2018/VERTIKALUS/ANTRA/64V20229.PDF
PAST	gruntinis

Mode: Current layer Auto open form

Determination of Ellipsoidal heights of First and Second order vertical networks points (250)



0 – red

1 – green

2 - blue



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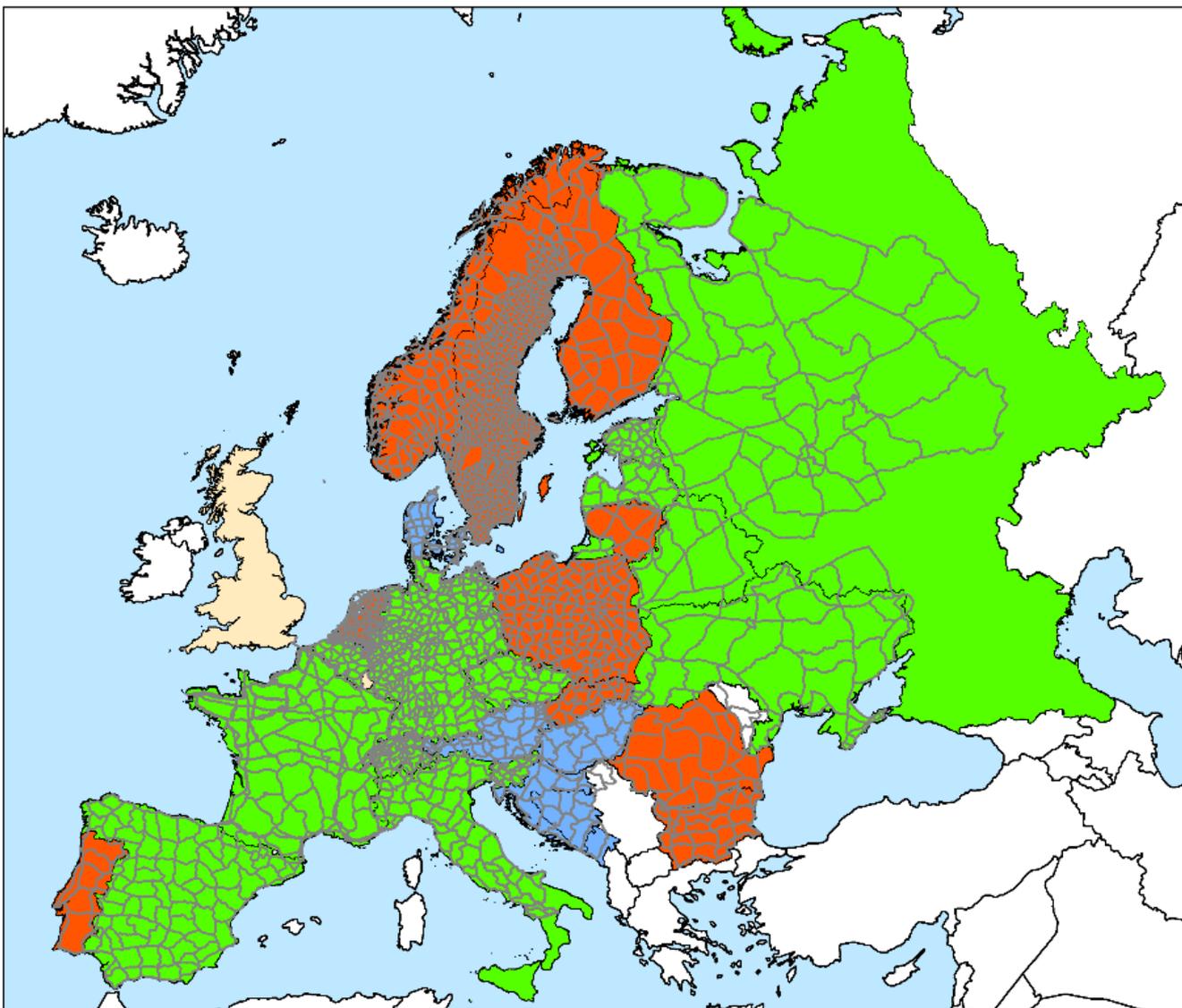


LTU Vertical network





LTU Vertical network in UELN



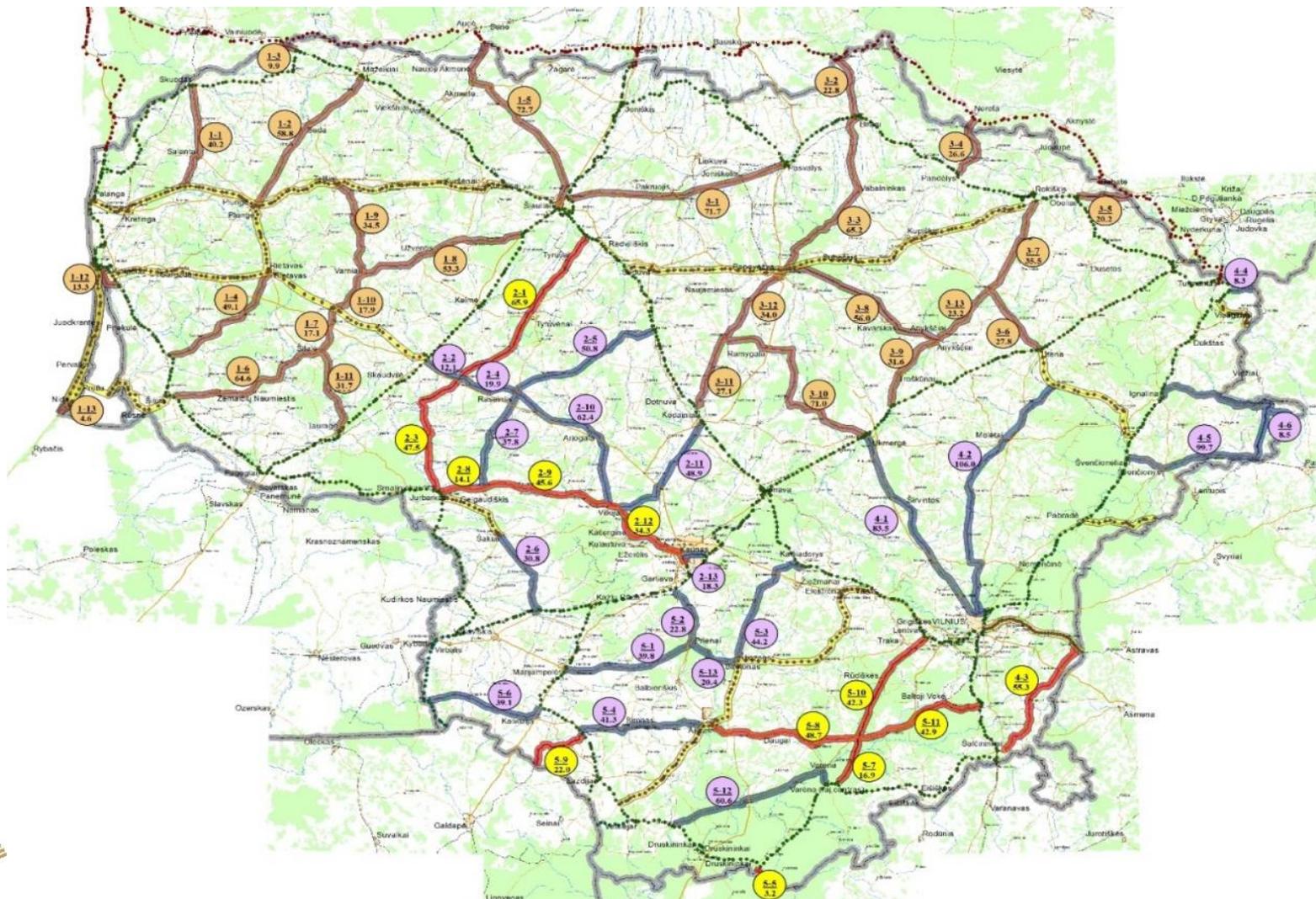


LTU Vertical network I order in UELN





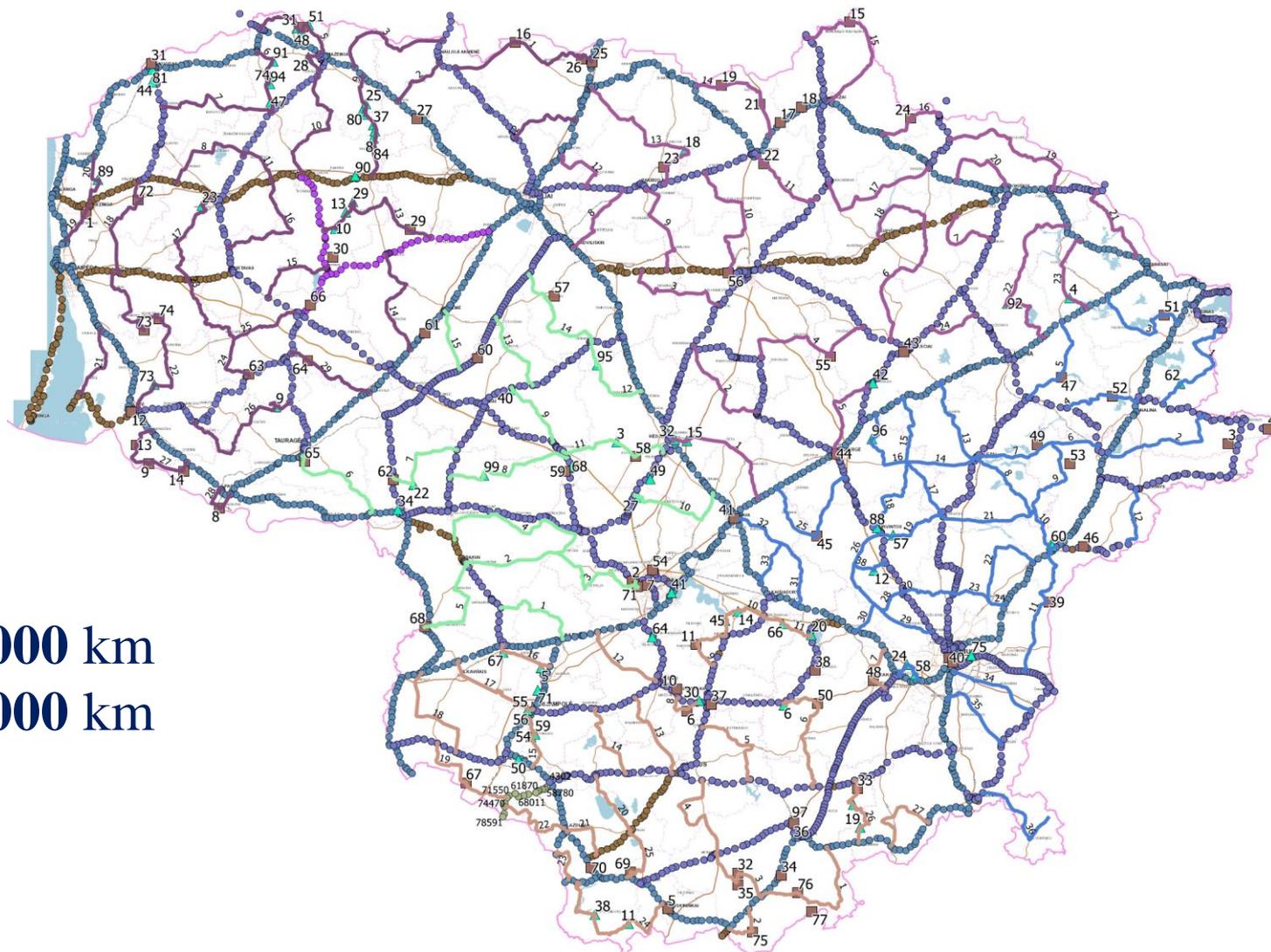
LTU Vertical network II order





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LTU Vertical network III order



2019-2020: **2000** km

2021-2022: **2000** km



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Thank You for your attention!