National Agency for Cadastre and Land Registration

National Center for Cartography

ROMANIA – NATIONAL REPORT

Miluță FLUERAȘ
Head of ROMPOS Bureau

ROMPOS
Romanian Position Determination System

7th EUPOS TECHNICAL COUNCIL

Lastest updates

Active Stations

75

Data Exchange

20 stations

Galileo Stations

18 (8new)

2020

7 +1 GNSS stations with new equipments

Bacău, Baia Mare, Bârlad, Deva, Gheorgheni, Hârșova, Sfântu Gheorghe and Bucharest

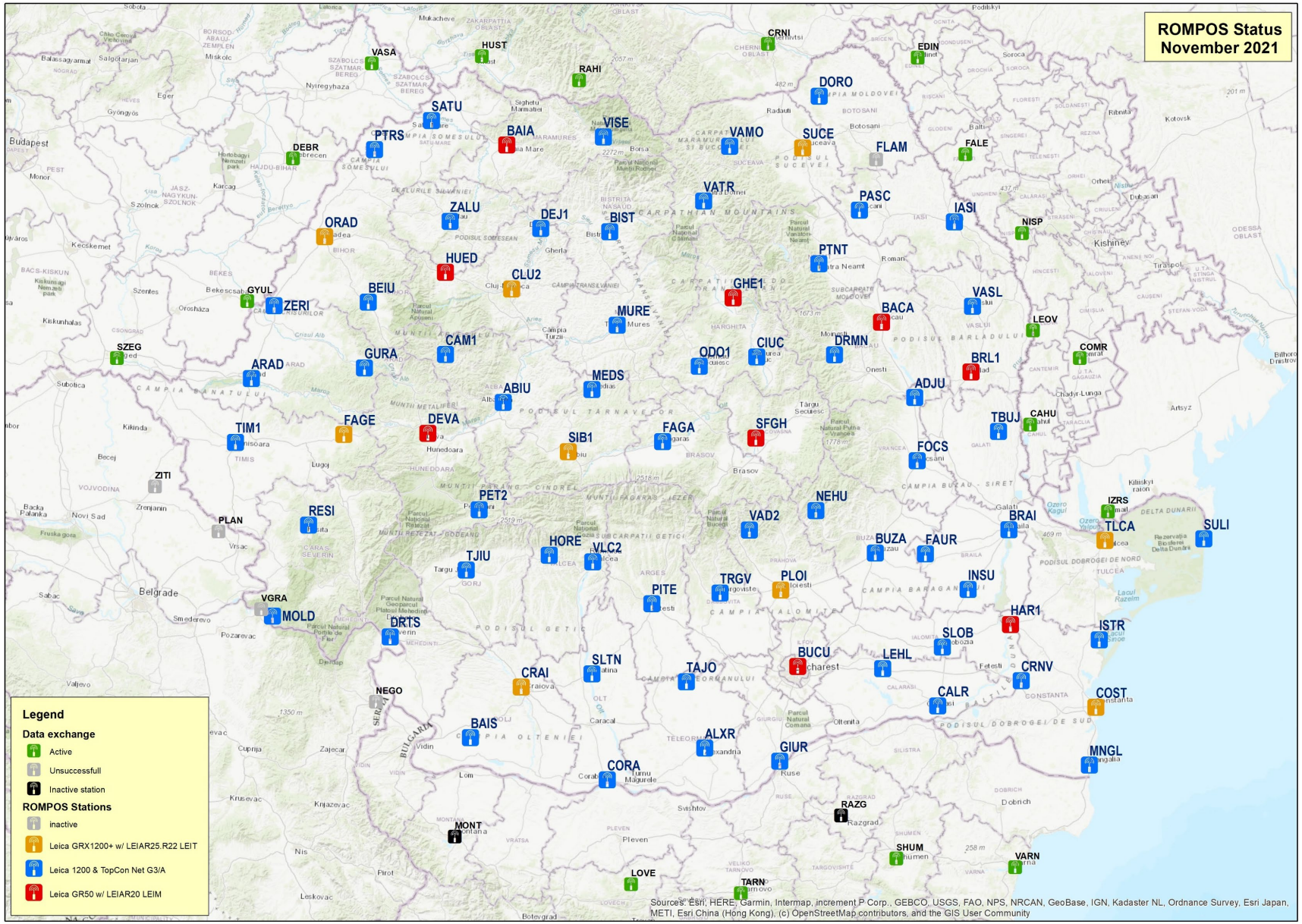
Leica GR50 + LEIAR20 LEIM

Running Software

Leica GNSS Spider 7.7.1

app.rompos.ro

Current status



New Equipments

8 stations

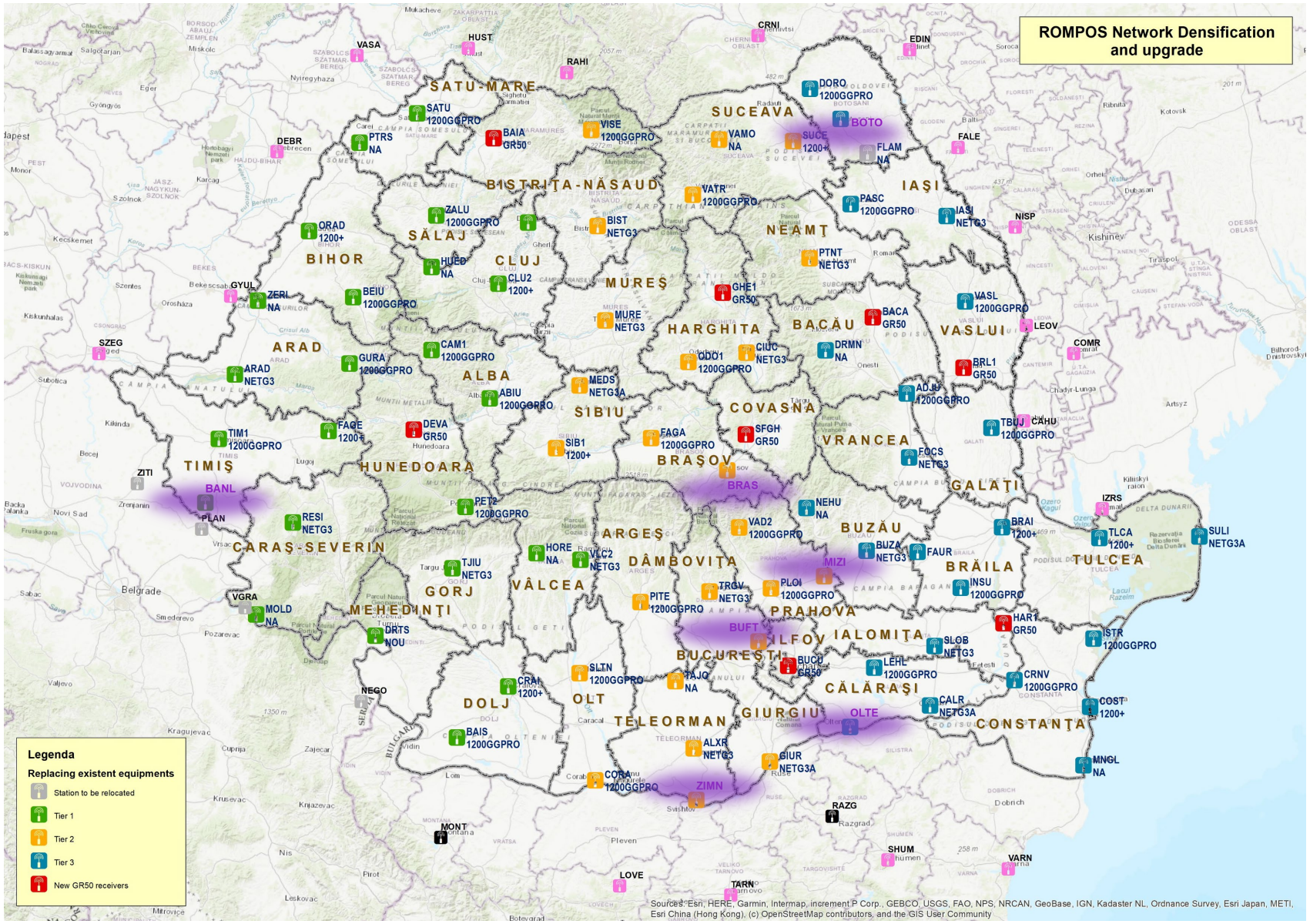
Republic of Moldova Galileo support

6 stations

Southern Border

Coverage problems

Network upgrade



Densification

7 new locations

Future densification

In plan

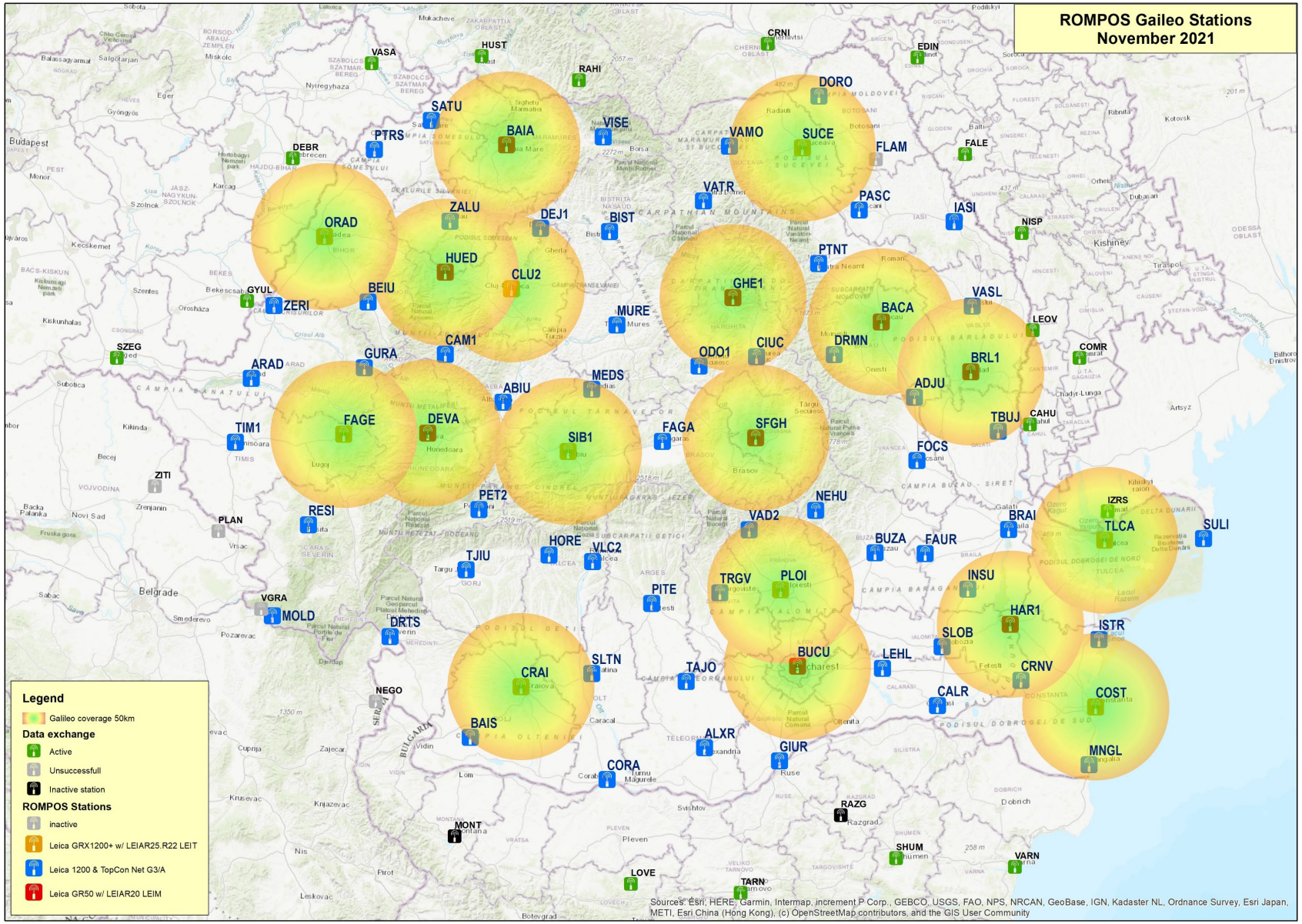
Procurement

74 new receivers - undergoing

Galileo coverage

Galileo

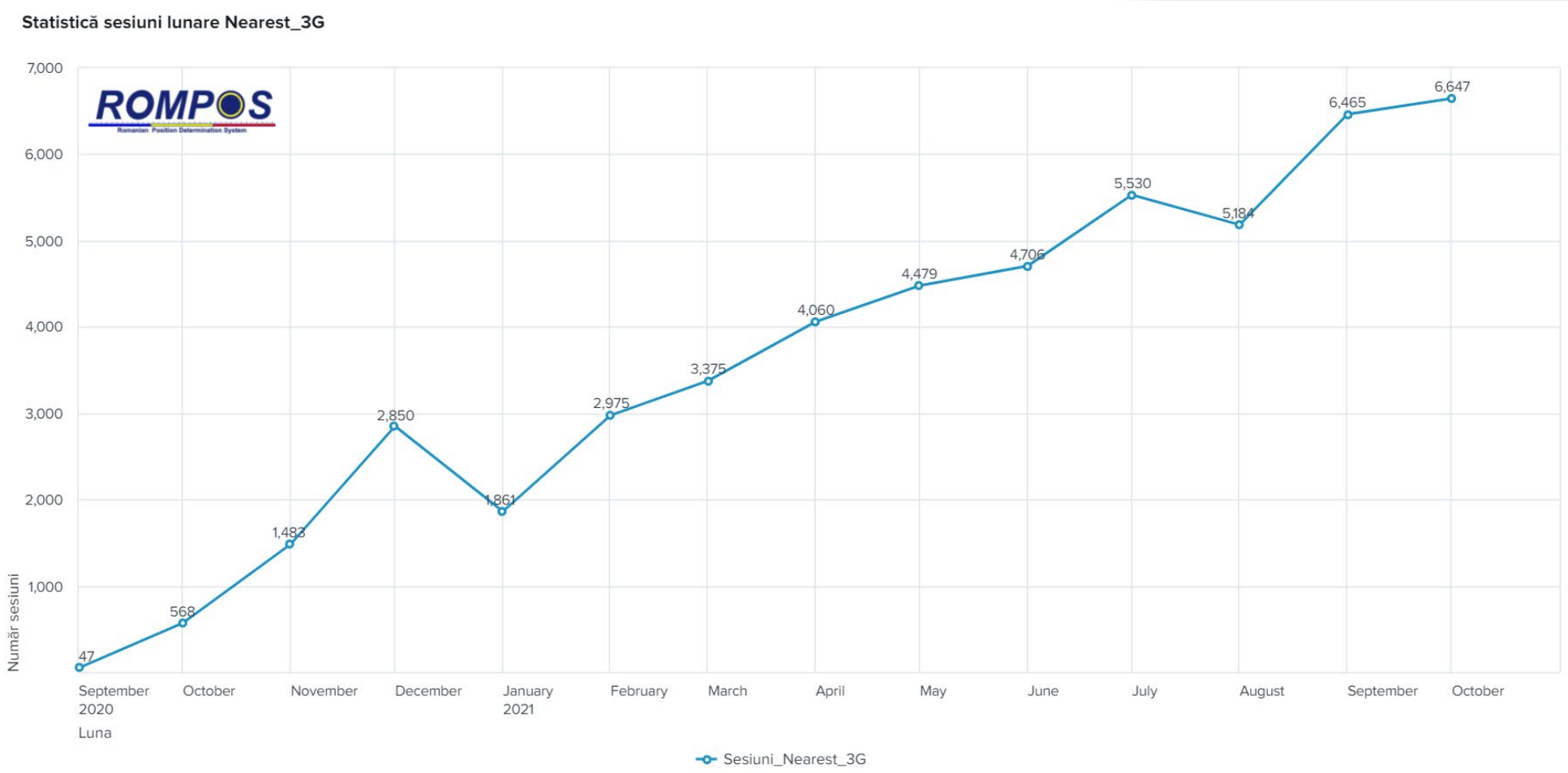
18 stations (8new)



Usage of Nearest 3G product
Galileo

Annual usage trend for 3G

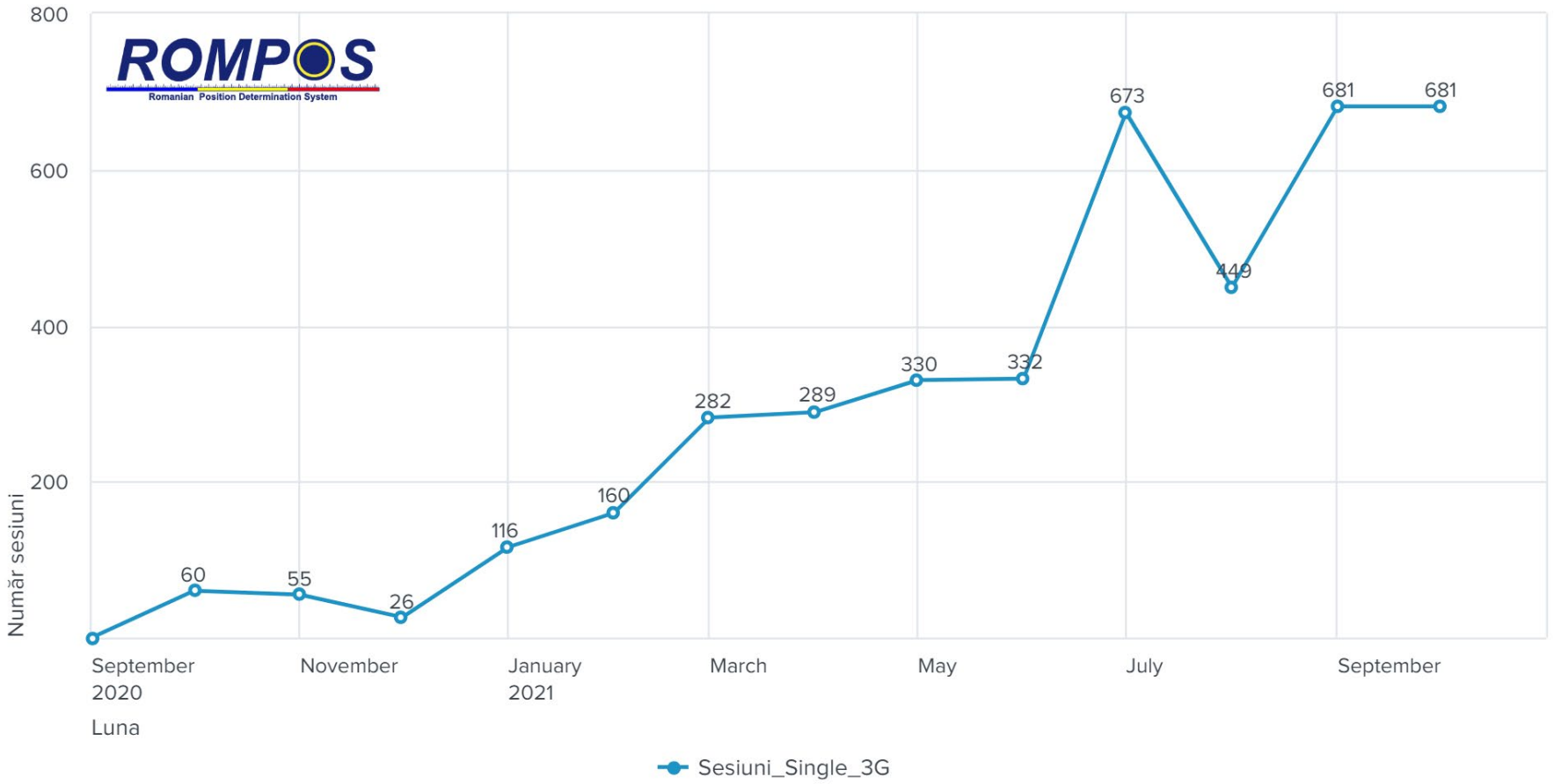
increase for the Nearest_3G sessions
(GPS+GLONASS+Galileo)



Single 3G product usage
Galileo (MSM4)

Annual trend for 3G products

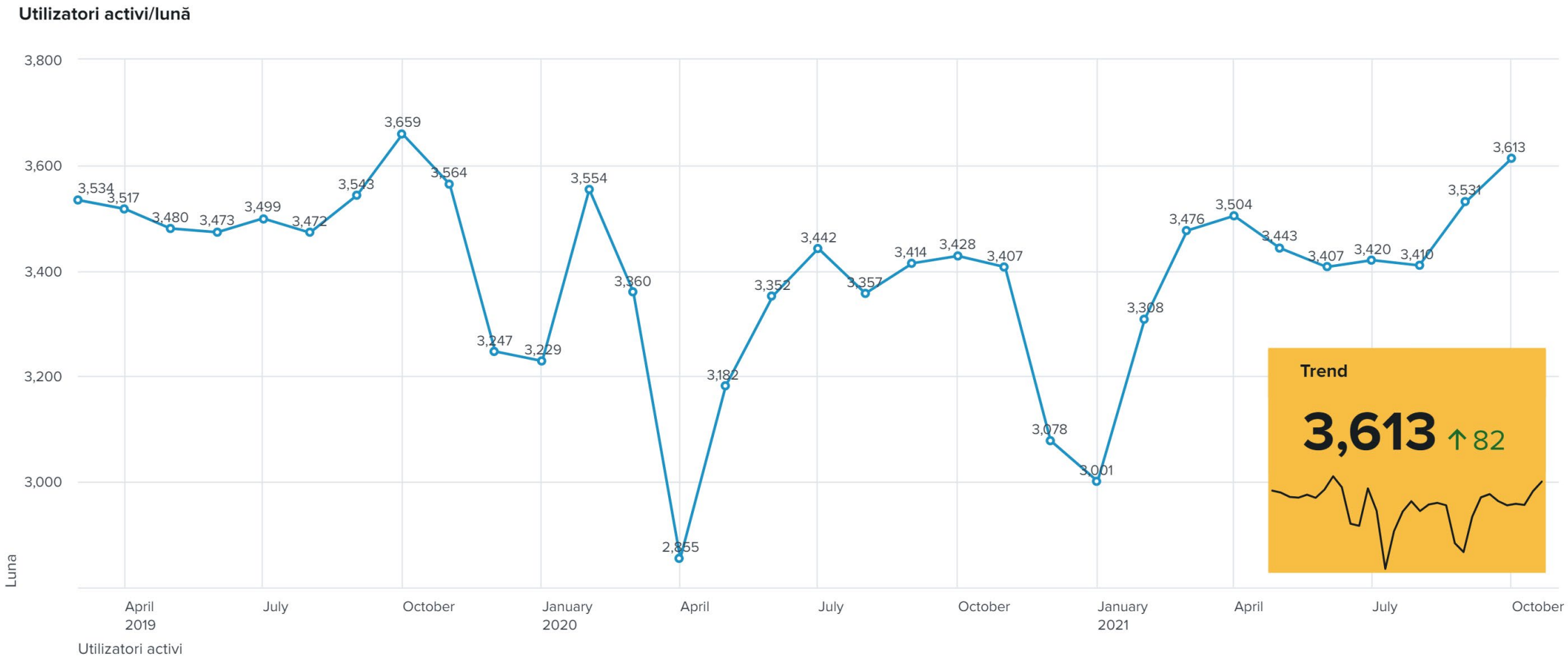
Increase usage for Single_3G products
(GPS+GLONASS+Galileo)



Monthly active users
users/month

Monthly RTK sessions

Mean value of aprox.3500 users/month



Monthly sessions analisys
2021

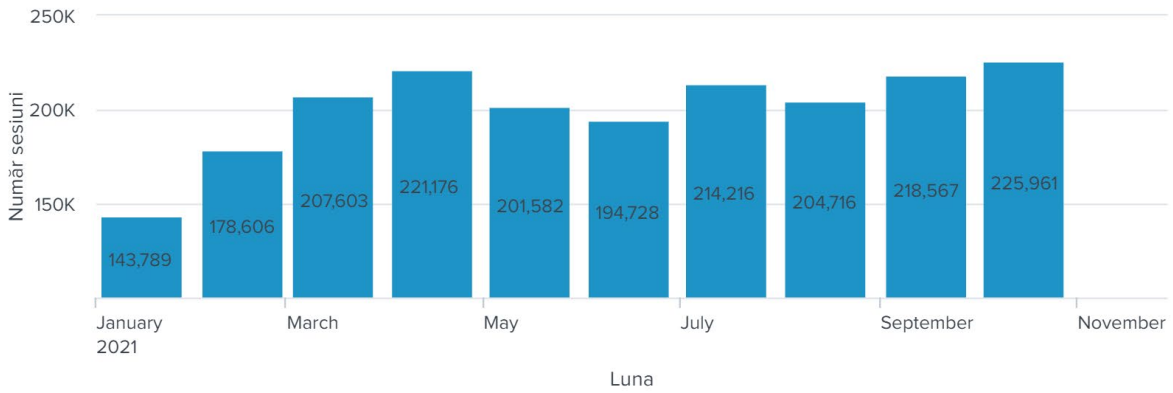
Annual trend for RTK sessions

Mean value of aprox.200K sessions/month

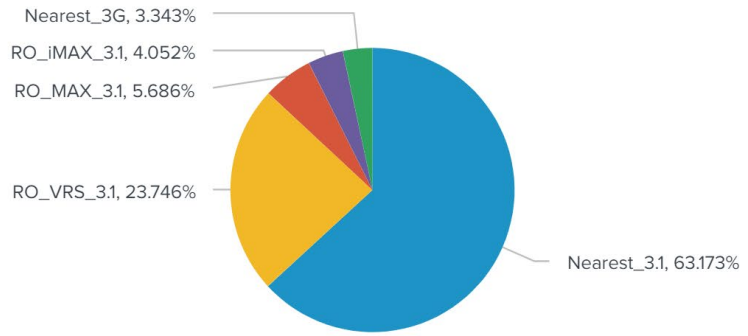
Constant usage

Număr sesiuni RTK lunare

(fără rovere virtuale)

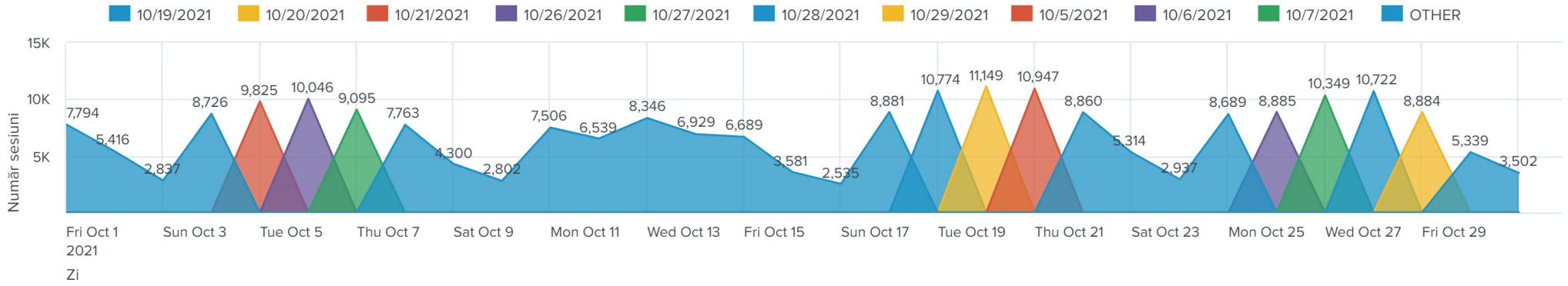


Top produse RTK an curent



Sesiuni zilnice luna trecută

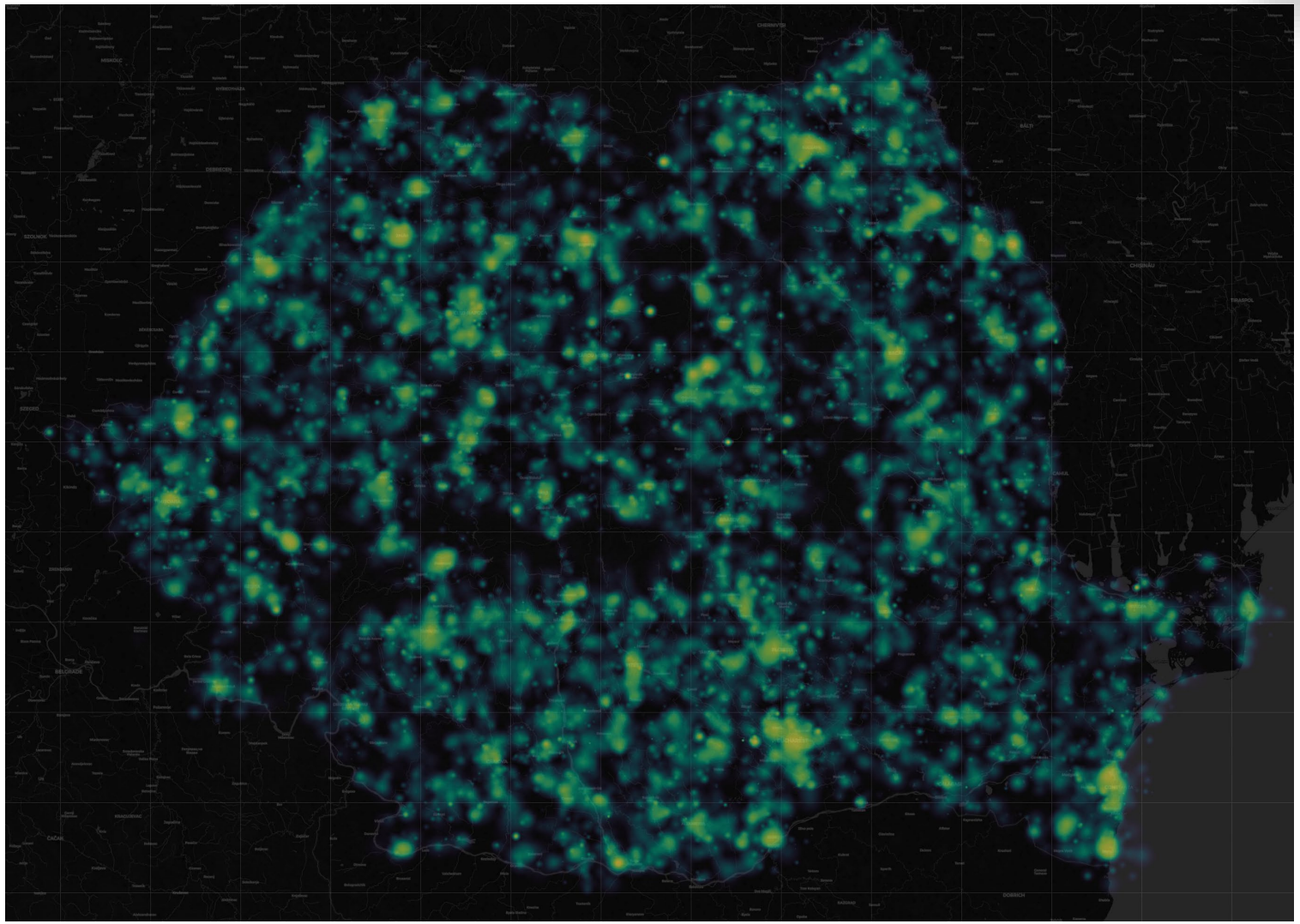
(fără rovere virtuale)



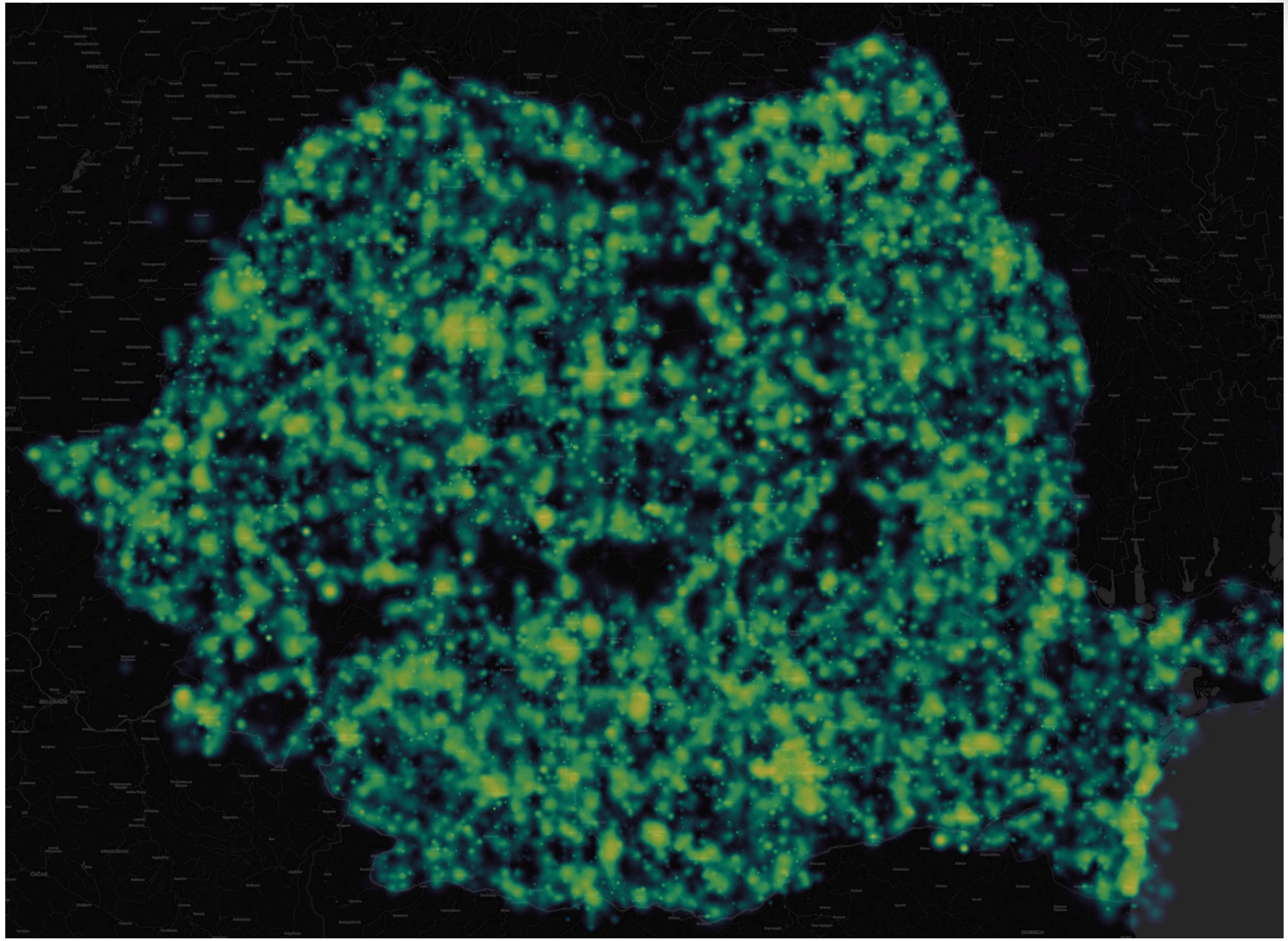
Heatmap of RTK sessions
September 2021

RTK Session density

RTK session distribution for a month



Heatmap of RTK sessions
2021



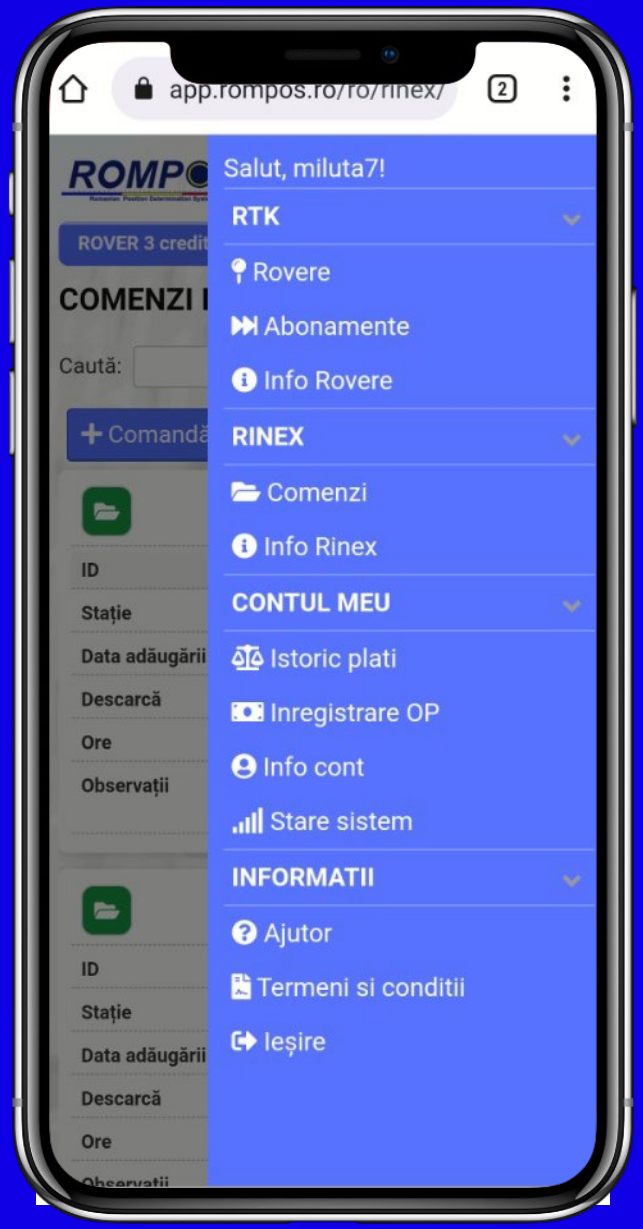
RTK Session density

RTK session distribution for one year

Mobile app
App.rompos.ro

Web based app optimised for mobile

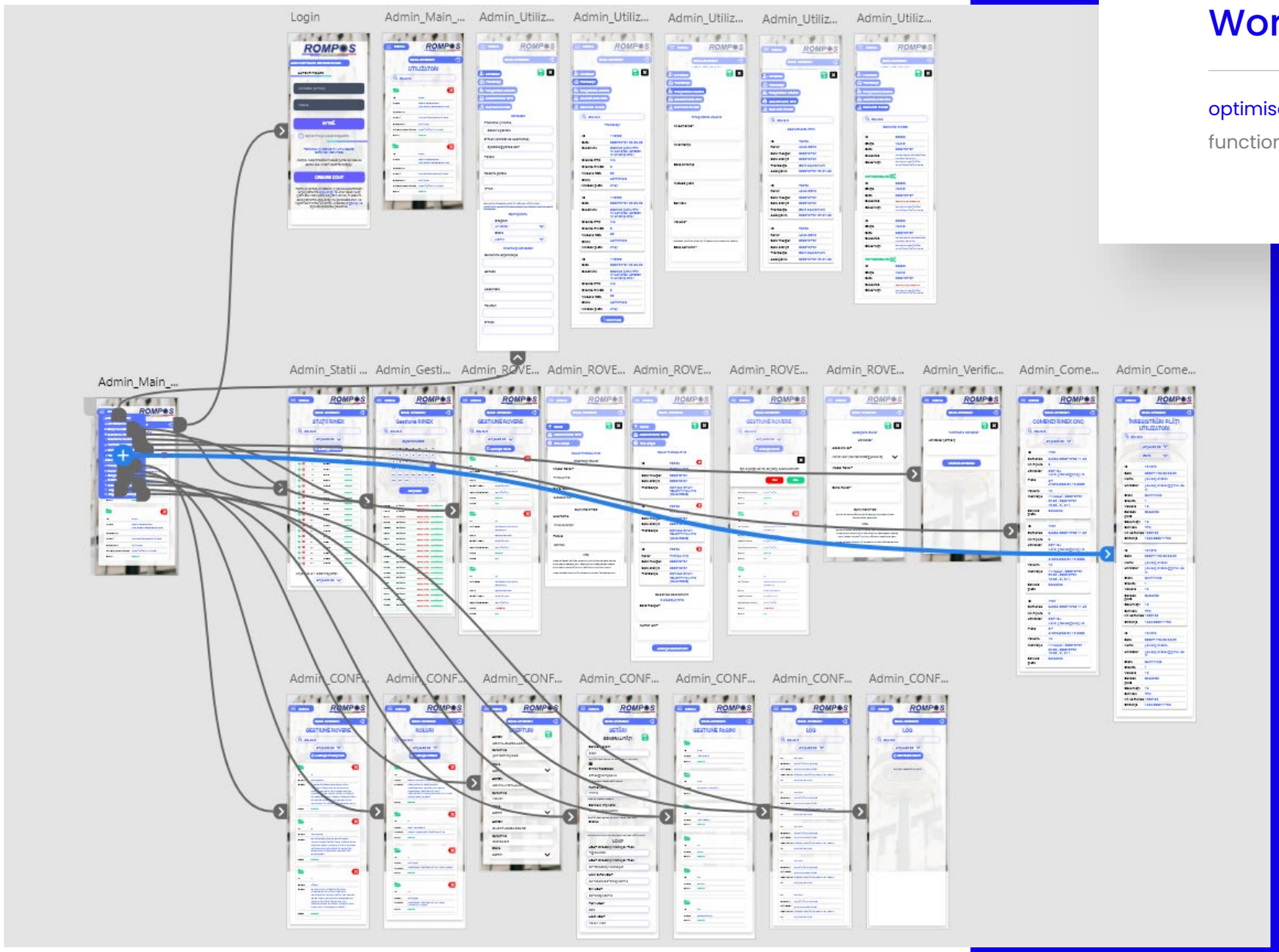
- ✓ RINEX extended orders
- ✓ System status



Flexibility

Workflows for mobile app

optimised to offer the user easy access to all of the desktop functions

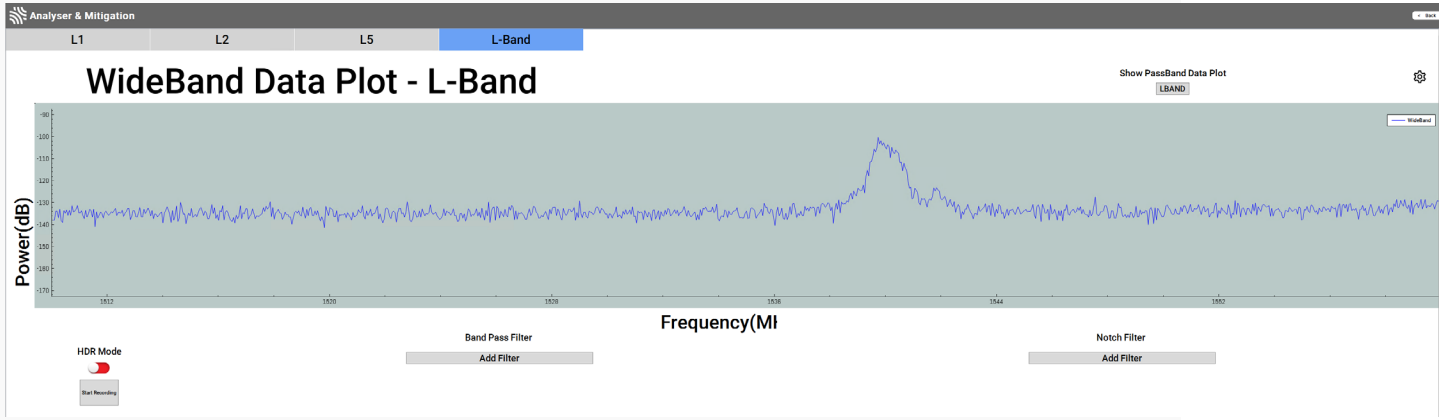


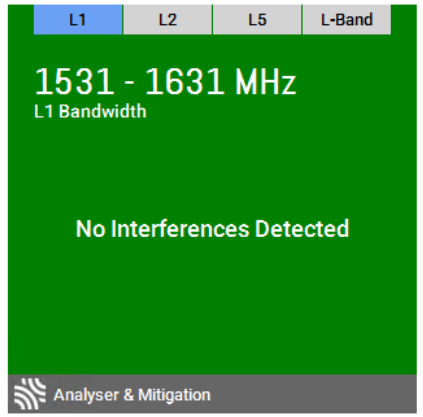
Interference monitoring on GR50

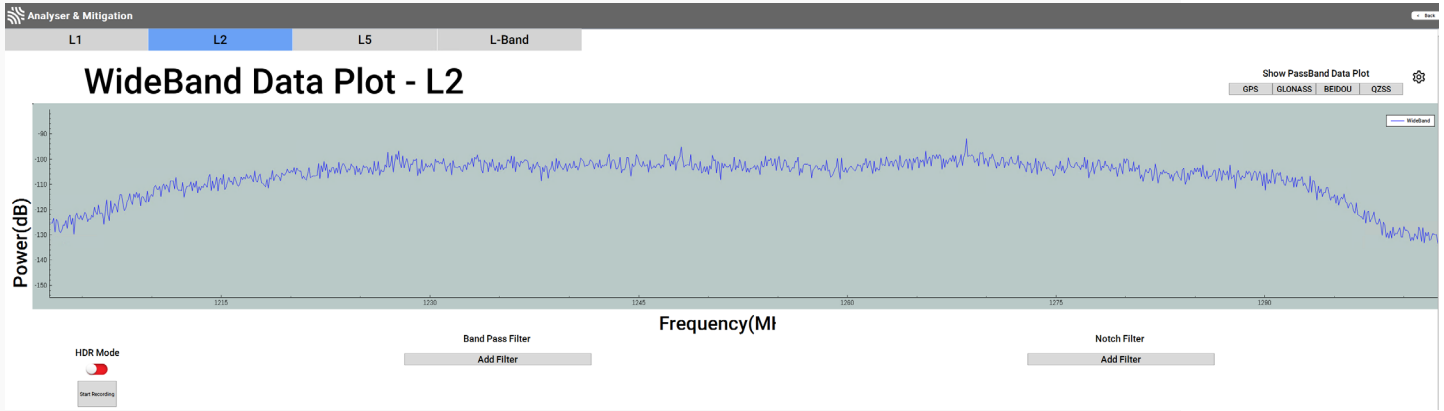
Periodic checks

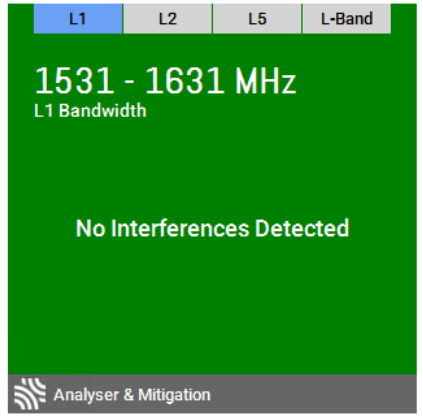
✓ No incidents so far

Quality Control



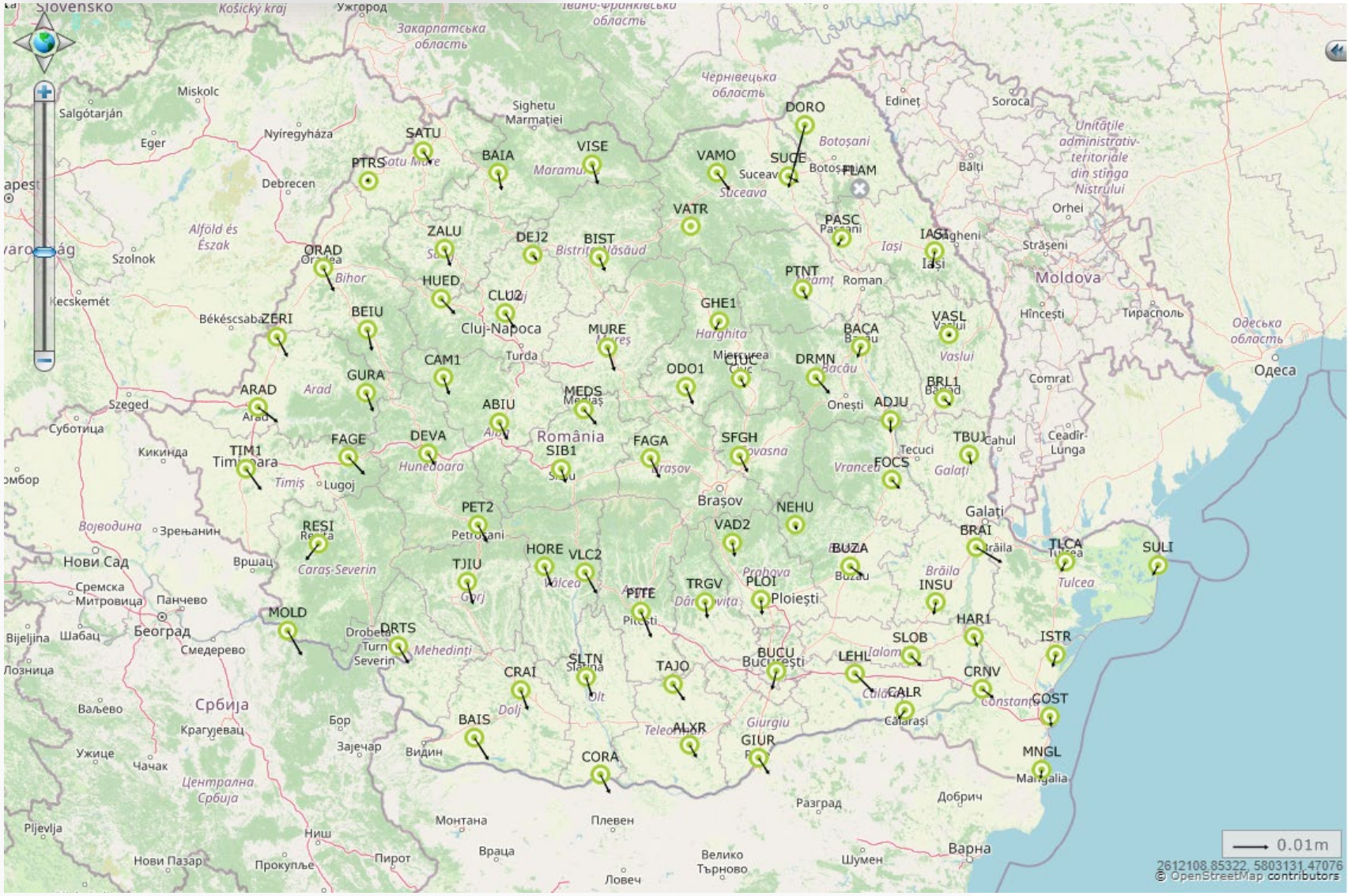






Quality Control

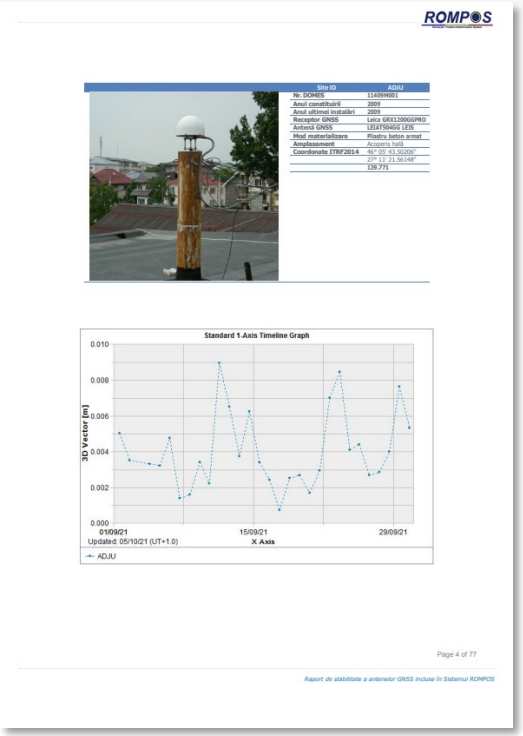
2D Resulting- 2021



Crosscheck Service

GNSS antennas stability

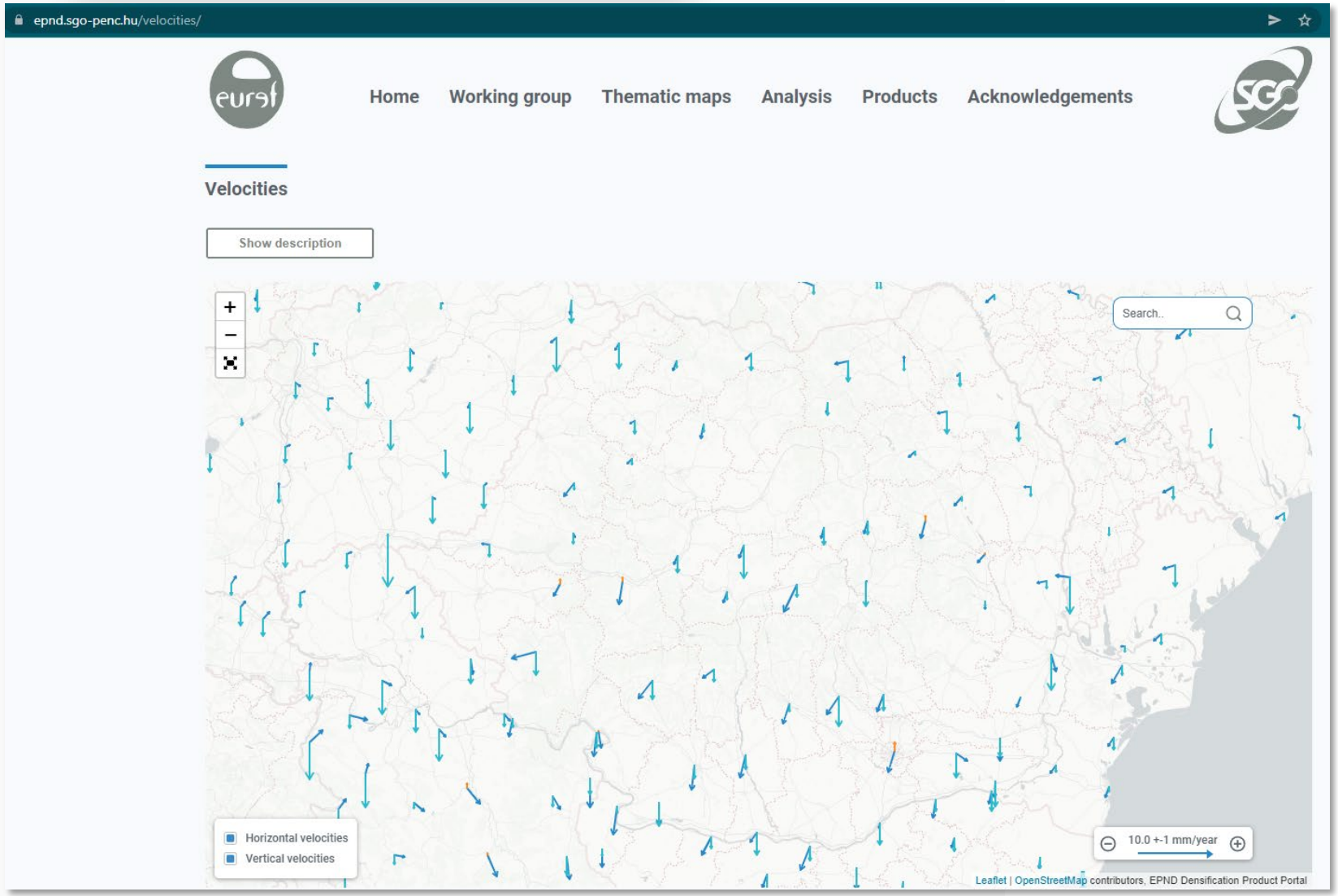
- ✓ Monthly reports published on rompos.ro



Multi-year solutions

Contribution to EPN densification

- ✓ Solutions for 2016-to date



Quality Control

Development in progress

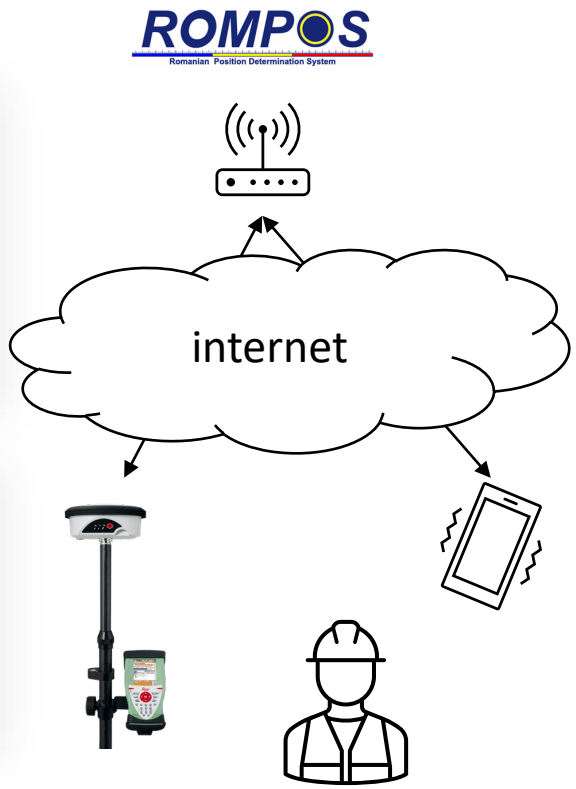
Rover Status

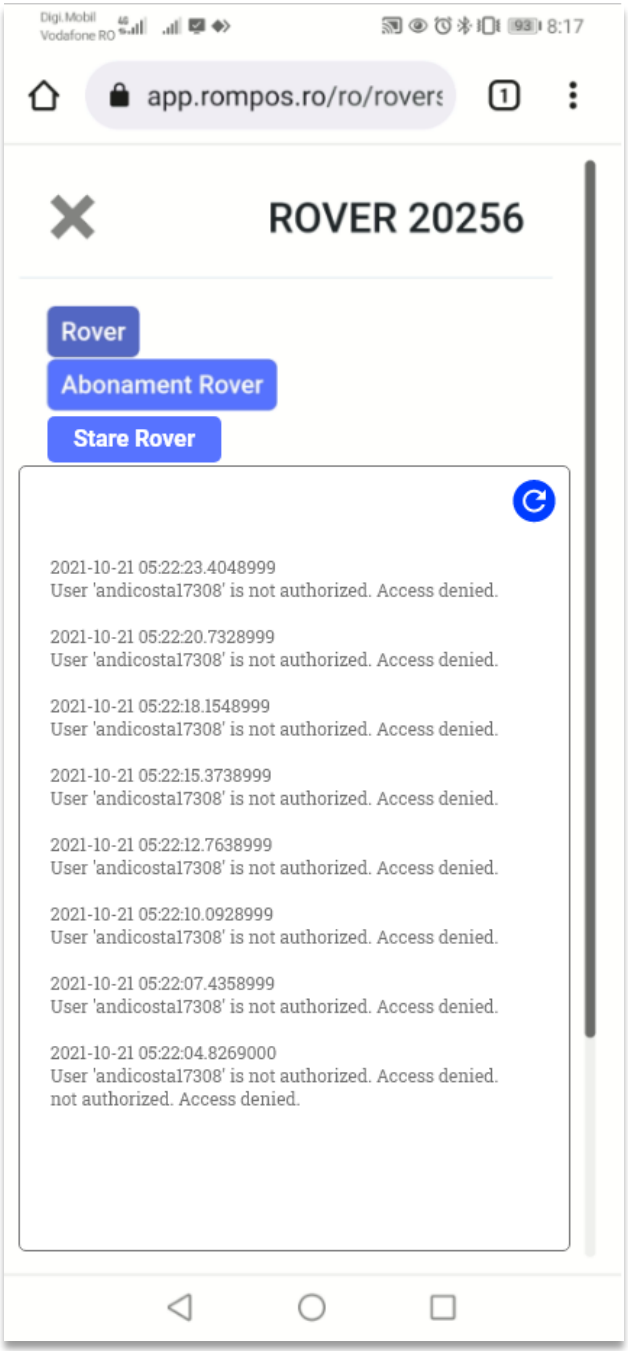
Utility

Ability to view realtime the errors generated by the rover in the system. The users can see if his connection reached the server or it generates errors.

Impact

Reduces the wait time by checking the errors generated by the system.





Development in progress

System performance transparency

01 Number of fixed satellites for each staion

02 Clusters KPI

03 Users with fixed solution

04 Interserver conectivity

Realtime info

Performance indexes are relevant for the system efficiency

Development in progress

Rover activity

Utility

Posibilitatea de a vizualiza toate soluțiile fixe obținute de un rover într-un interval de timp definit

Rover management

Posibilitatea de a verifica activitatea în teren a roverelor

- ✓ Time-based and spatial filtering of the sessions at user level
- ✓ Styled map (colors by session) of fixed points
- ✓ Geometry (.shp) uploading tool
- ✓ Final report with all the info

ROMPOS
Romanian Position Determination System

Finished sessions

Detailed session logs storage

Extraction and conversion
for fixed points

Points and sessions storage

internet

Rover portal framework upgrade (system development)

New features for users

Mobile

PC

Realtime session
monitoring

Rover activity
Field activity check

Download session log

Activity report extraction

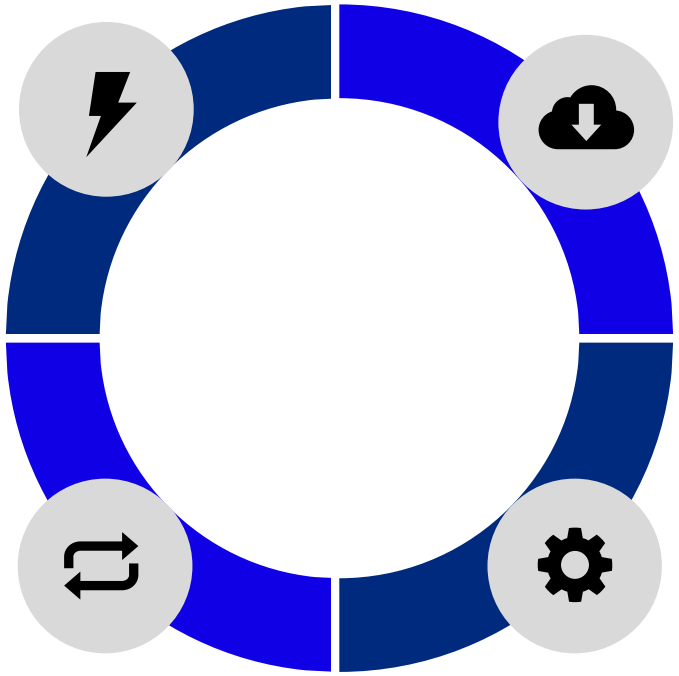
Future developments

BEIDOU support

With the network upgrade we will activate the network processing for BeiDou

Network Adjustment

Network adjustment including neighboring countries

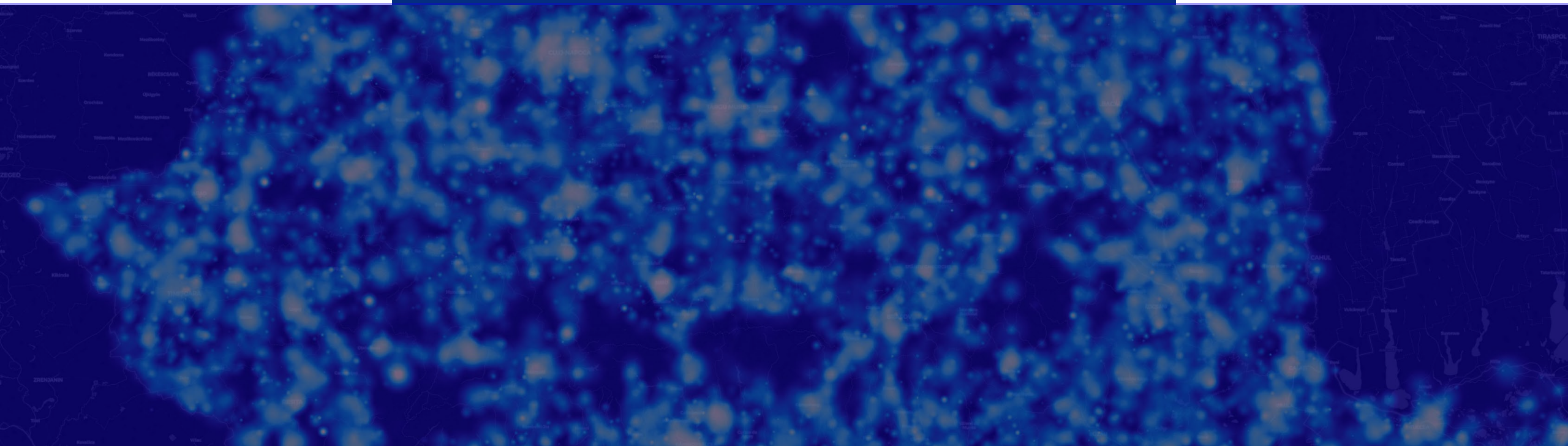


RINEX 3 workflow

With the equipment upgrades we will provide RNX3 files in our app with backward compatibility to RNX2.

Online processing

Online processing module of static GNSS measurements.

Thank you

rompos.ro