Case study of a broadband infrastructure investment project approved by DG COMP

RAIN project in Lithuania

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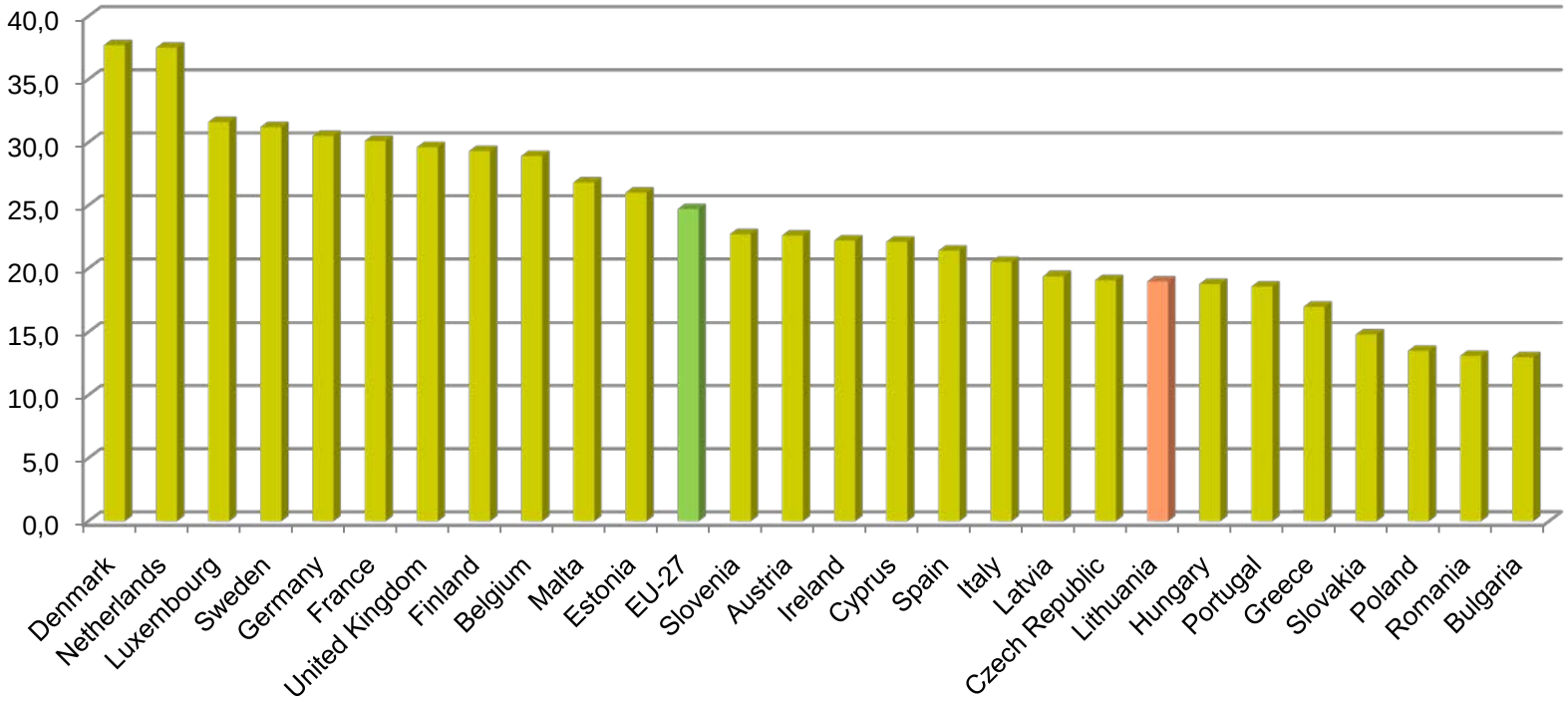
Who We Are

Placiajuostis internetas is a public company 100% owned by the Government, established in 2005.

Our main aims:

- Meet public interests by creating broadband access and providing broadband services;
- Prepare projects and implement them;
- Manage information technology infrastructures, organize their exploitation.

Broadband Penetration Rate



Broadband penetration rate in 2010 in EU-27 countries, by per cent.

Why is Lithuania Lagging?

- Densely populated areas of Lithuania (major cities, especially Vilnius):
  - these areas have sufficient demand for broadband services, and
  - users have sufficient purchasing power ->
  - **result: effective competition between broadband service providers.**

- Rural areas of Lithuania:
  - townships are geographically scattered, so the necessary initial investments in rural areas are much higher than in cities, and
  - the inhabitants of rural areas have generally a lower income and thus are unable to pay for the actual costs of the service ->
  - **result: broadband access operators are not interested in investing and providing broadband services in such areas.**

Plačiajuostis internetas

Circumstances of the Project

- In order to induce development of broadband, Lithuanian authorities decided to justify public intervention to construction of broadband infrastructure in rural, or “white”, areas.
- It was decided to support the construction of infrastructure in rural areas of Lithuania which are currently not served and where are no plans for coverage in near future. It would be available to all operators on non-discriminatory terms (they will provide broadband services to end users).
- The main goal of the project RAIN is to help eliminate e-divide of broadband infrastructure between cities and rural regions, to increase social cohesion and contribute to economic growth by achieving these goals.

Project Development Stages

- **R**ural **A**rea **I**nformation Technology Broadband **N**etwork (**RAIN-1**)
  - *Implementation period: 2005 – 2008.*

- Development of **R**ural **A**rea **I**nformation Technology Broadband **N**etwork (**RAIN-2**)
  - *Implementation period: 2009 – 2013.*

Project RAIN-1: Facts

- RAIN-1 was implemented by four partners:
  - The Institute of Mathematics and Informatics;
  - Public company “Placiajuostis internetas”;
  - The Ministry of Transport and Communications;
  - The Ministry of Education and Science.

- **3357** kilometers of fiber optical lines were built;
- **509** network nodes were installed;
- **467** elderates were connected to **51** municipality;

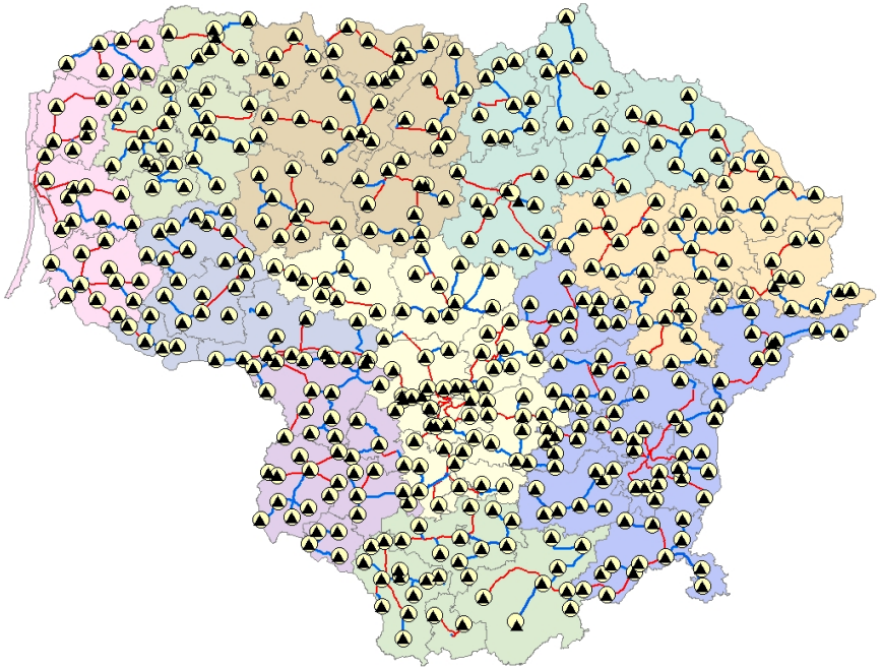
- Value of the project: **21 million** EUR.

Project RAIN-1: Results

Broadband services are available by RAIN network:

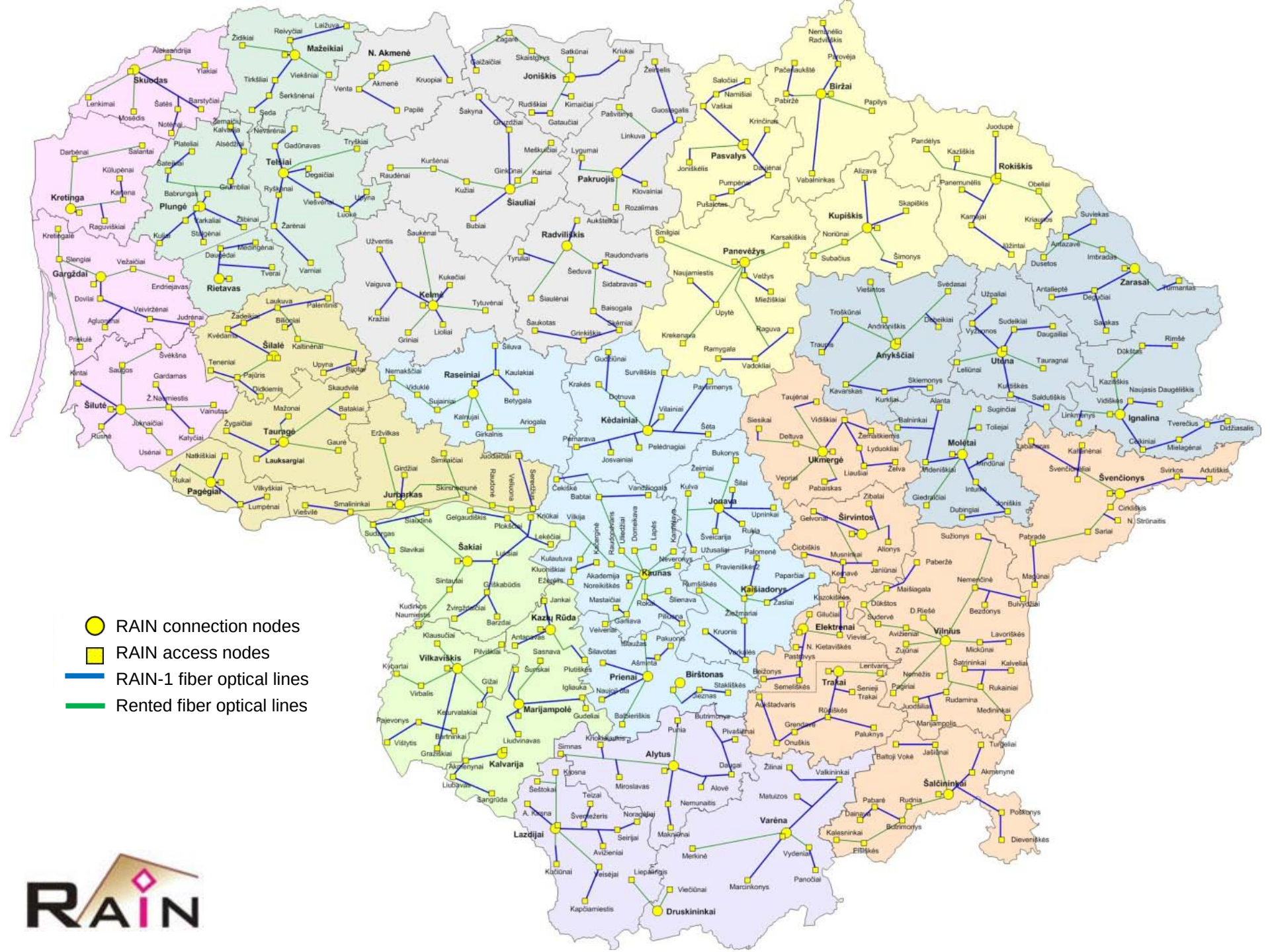
330 schools

467 elderates



More than **300 000** inhabitants

Plačiajuostis internetas


RAIN connection nodes
RAIN access nodes
RAIN-1 fiber optical lines
Rented fiber optical lines
RAIN

Not Connected Villages

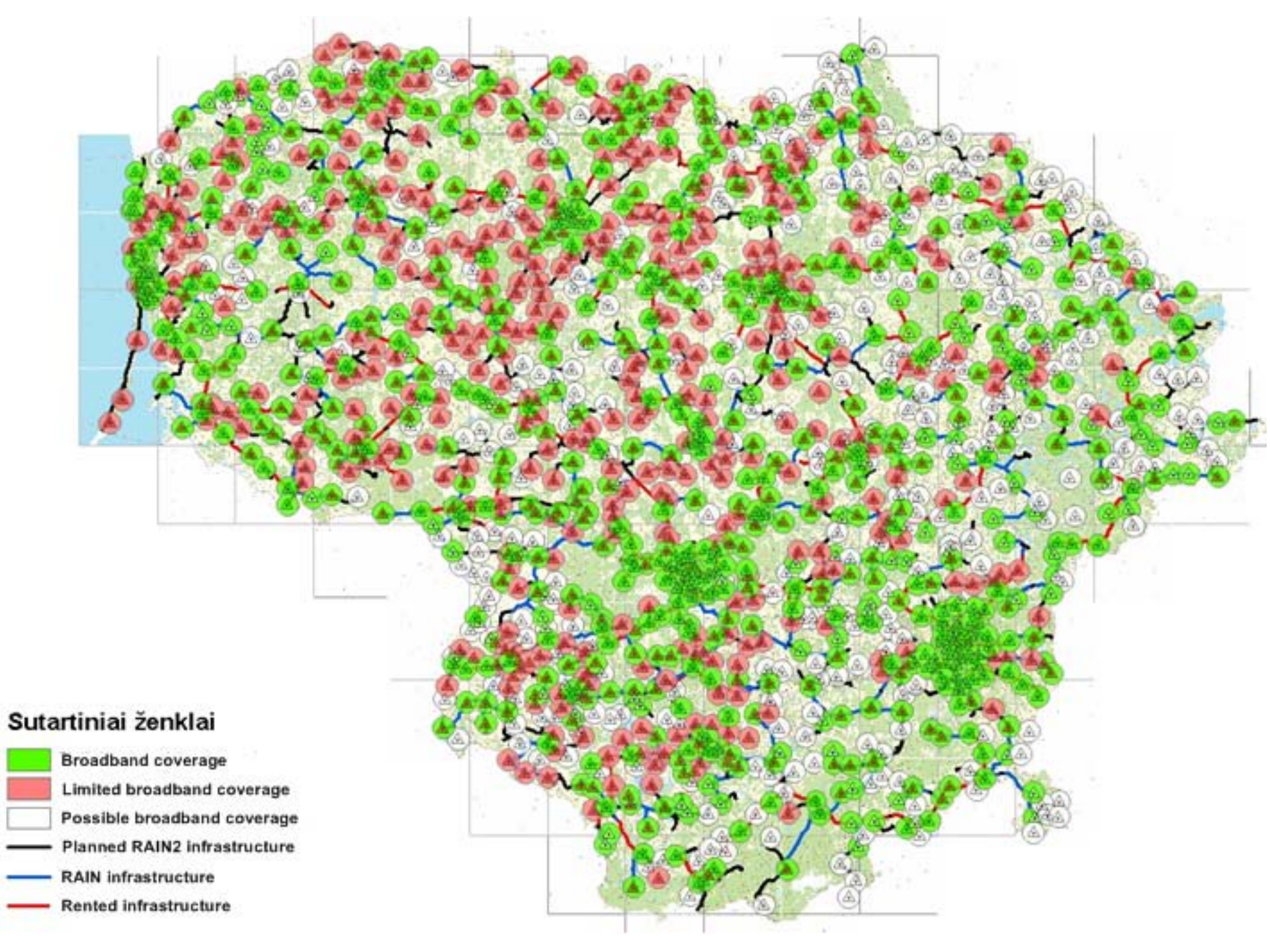
Rented infrastructure

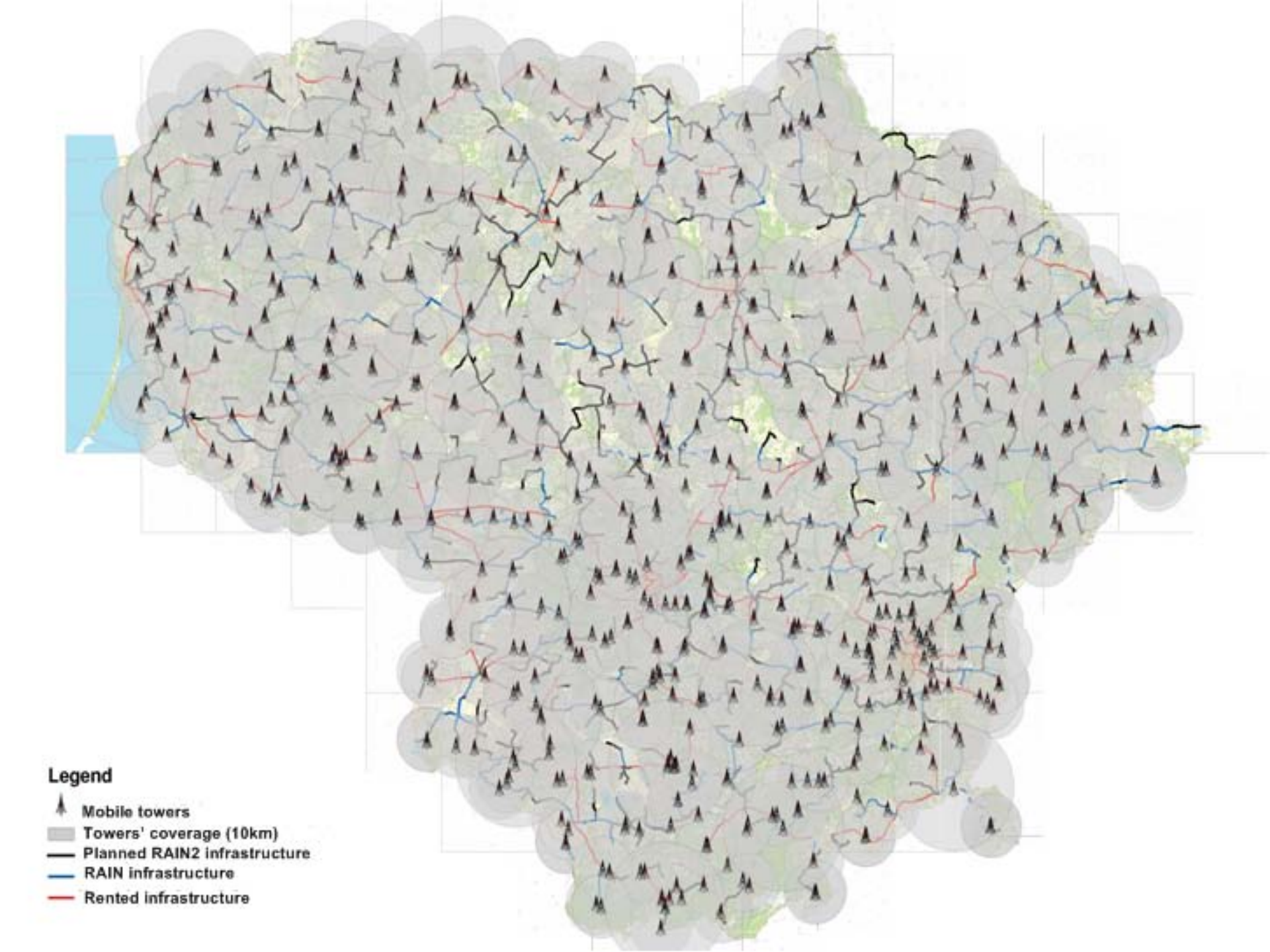
RAIN infrastructure

Connected elderates

Not connected villages with > 200 inhabitants

Plačiajuostis internetas


Sutartiniai ženklai
Broadband coverage
Limited broadband coverage
Possible broadband coverage
Planned RAIN2 infrastructure
RAIN infrastructure
Rented infrastructure


Legend
Mobile towers
Towers' coverage (10km)
Planned RAIN2 infrastructure
RAIN infrastructure
Rented infrastructure

Project RAIN-2: Presumptions

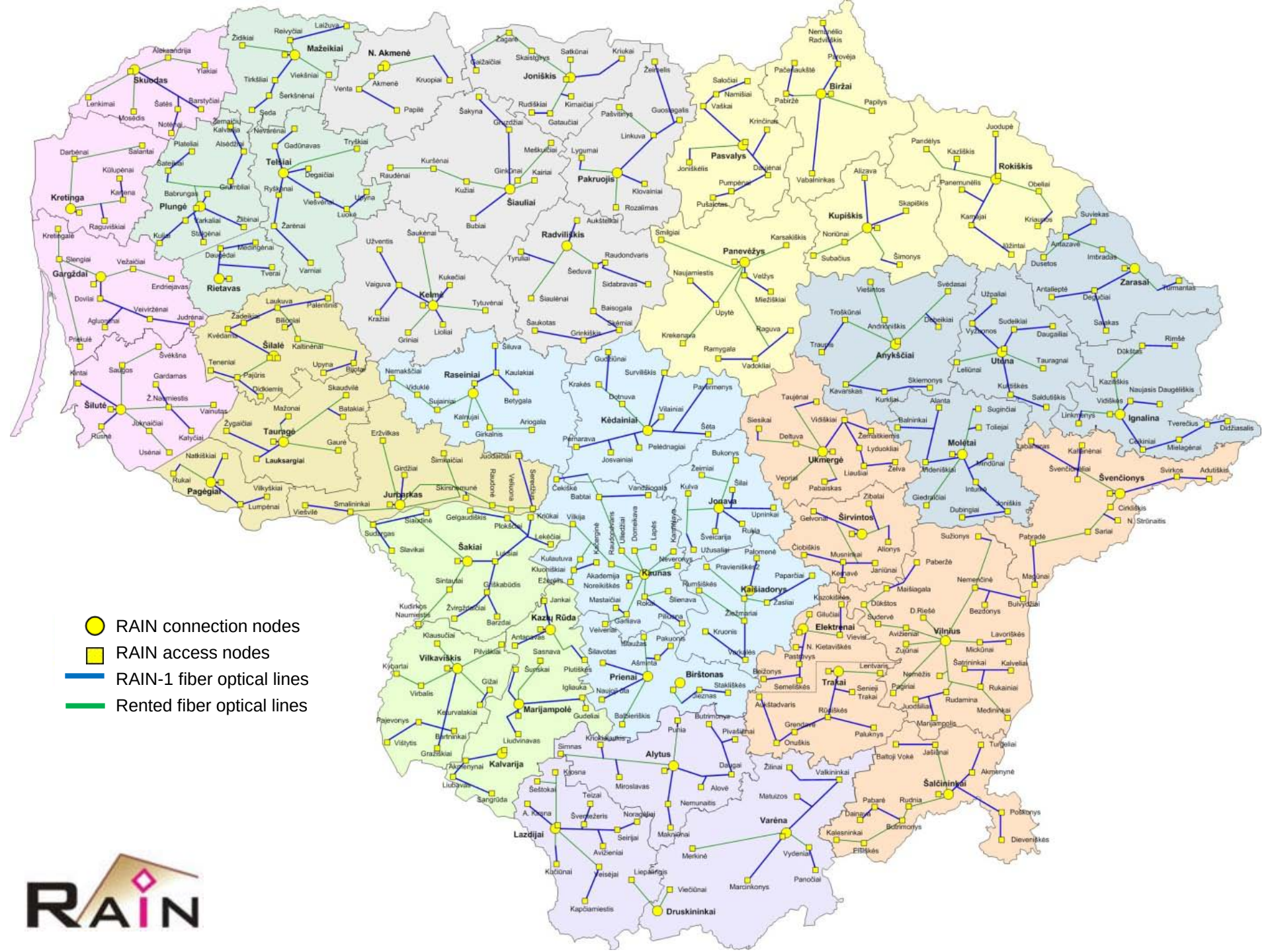
- Different operators have developed sufficient "last mile" infrastructure in large part of country's territory. The main reason preventing development of high quality broadband services to all rural residents and organizations – **the missing part of the network infrastructure, sufficient bandwidth aggregation part which combines operators' infrastructure segments.**
- Installation of missing parts requires huge investments. Also installing separate infrastructures they would be unprofitable and inefficiently utilized.

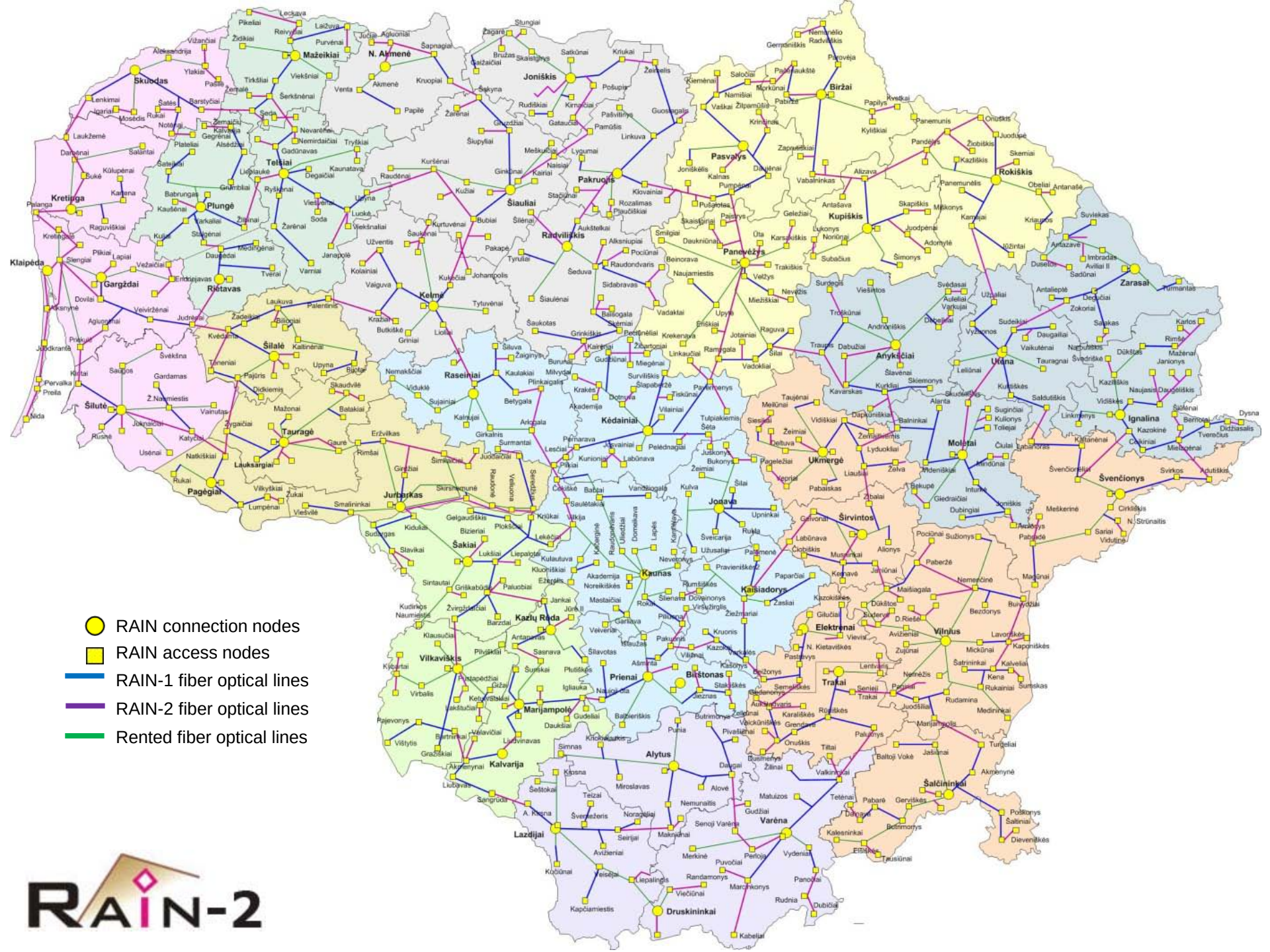
Project RAIN-2: Facts

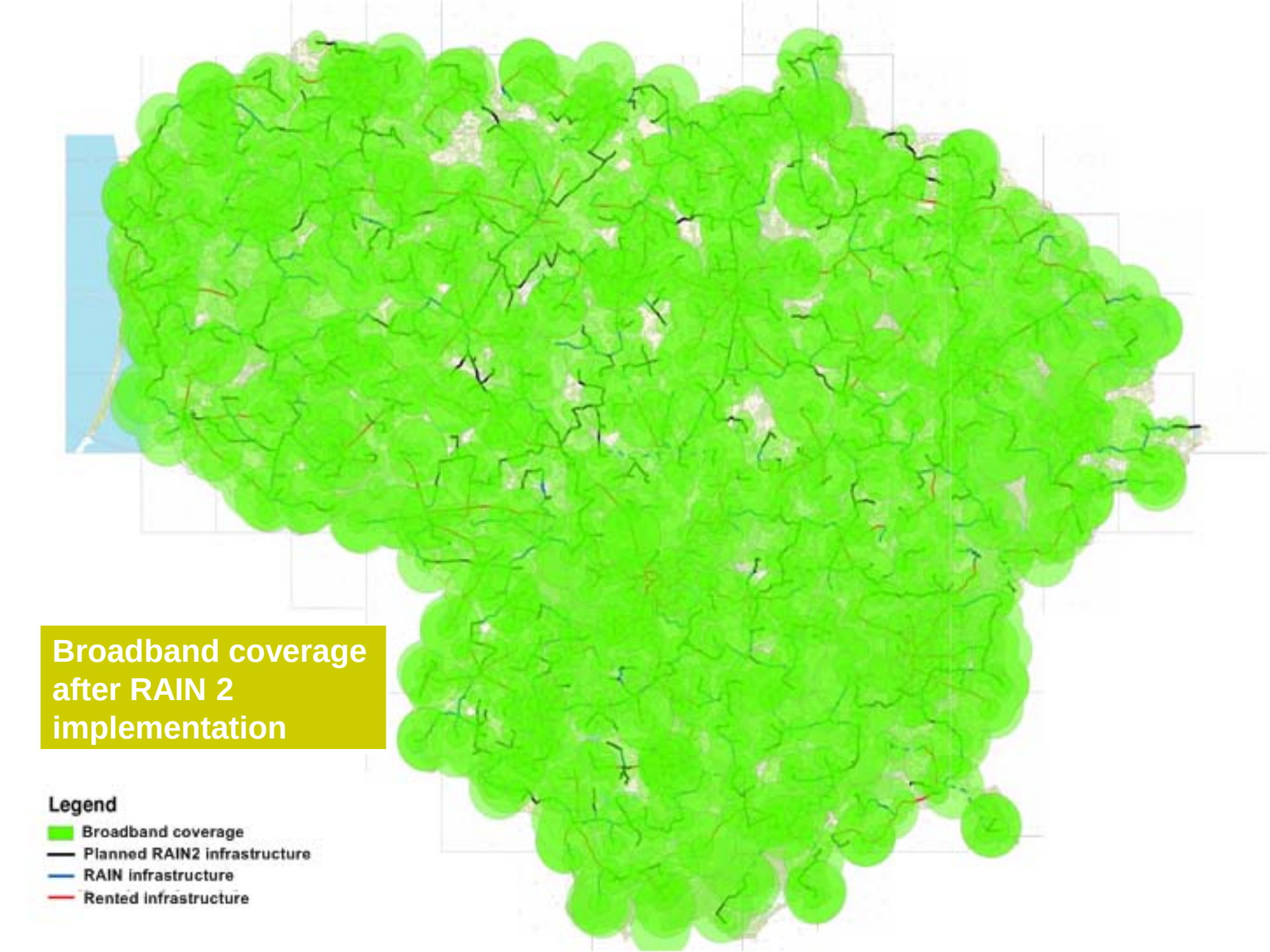
- RAIN-2 is being implemented by two partners:
  - The Ministry of Transport and Communications;
  - Public company “Placiajuostis internetas”.
- Scope of the project:

Optical fiber lines	4400 km
Residential areas	770
Operators’ towers	~ 850
Fixed operators’ POPs	~ 380
Education institutions	~ 570
Libraries	~ 580
Public internet centers	~ 360
Other objects	~ 220

- Value of the project: **50,13 million** EUR.


RAIN connection nodes
RAIN access nodes
RAIN-1 fiber optical lines
Rented fiber optical lines
RAIN


RAIN connection nodes
RAIN access nodes
RAIN-1 fiber optical lines
RAIN-2 fiber optical lines
Rented fiber optical lines
RAIN-2


Broadband coverage after RAIN 2 implementation
Legend
Broadband coverage
Planned RAIN2 infrastructure
RAIN infrastructure
Rented infrastructure

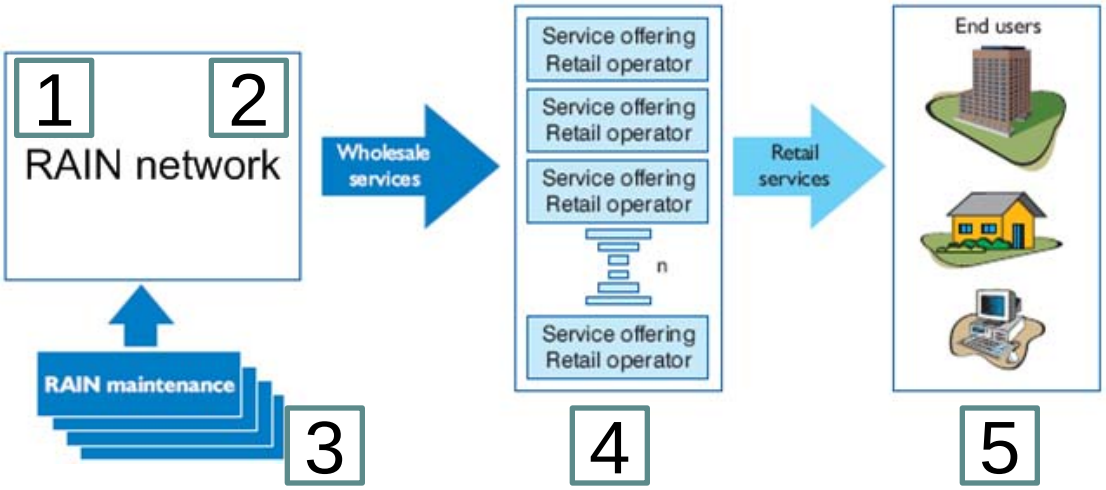
The key principles

- **The open access principle:** the built infrastructure may be employed by all service users. Technical solutions must allow ensuring this principle.
- **Technological neutrality:** the selected technologies should allow all potential users of the network to use the resources of the network freely without restrictions to technical solutions.
- The selected solutions must optimally promote **development of a competitive environment**, i.e. the end user should be allowed to freely choose the service provider and services.
- The infrastructure is constructed only in areas **where it does not exist**.
- The selected technical solutions should serve long-term and meet the needs for a period of at least **10 years**.

Infrastructure/service management model

RAIN Network Services:

- Transmission service via optical fibers
- Transmission service via multiplexed optical fibers
- The service of data transmission



1. **RAIN network will be owned by the State**. Ministry of Transport and Communications owns it, sets services and tariffs.
2. **Public company** "Placiajuostis internetas" – **supervisor of RAIN network**.
3. **Maintenance of RAIN network** is executed by private sector entities selected via public tenders.
4. **Users of RAIN network** – all retail operators (on equal conditions, i.e. without any restrictions, or tenders).
5. **End users** can freely choose retail operator, services and last mile technology according to their needs.

Thank you!

Questions, comments:
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