



COMMUNICATIONS REGULATORY  
AUTHORITY OF THE REPUBLIC OF LITHUANIA

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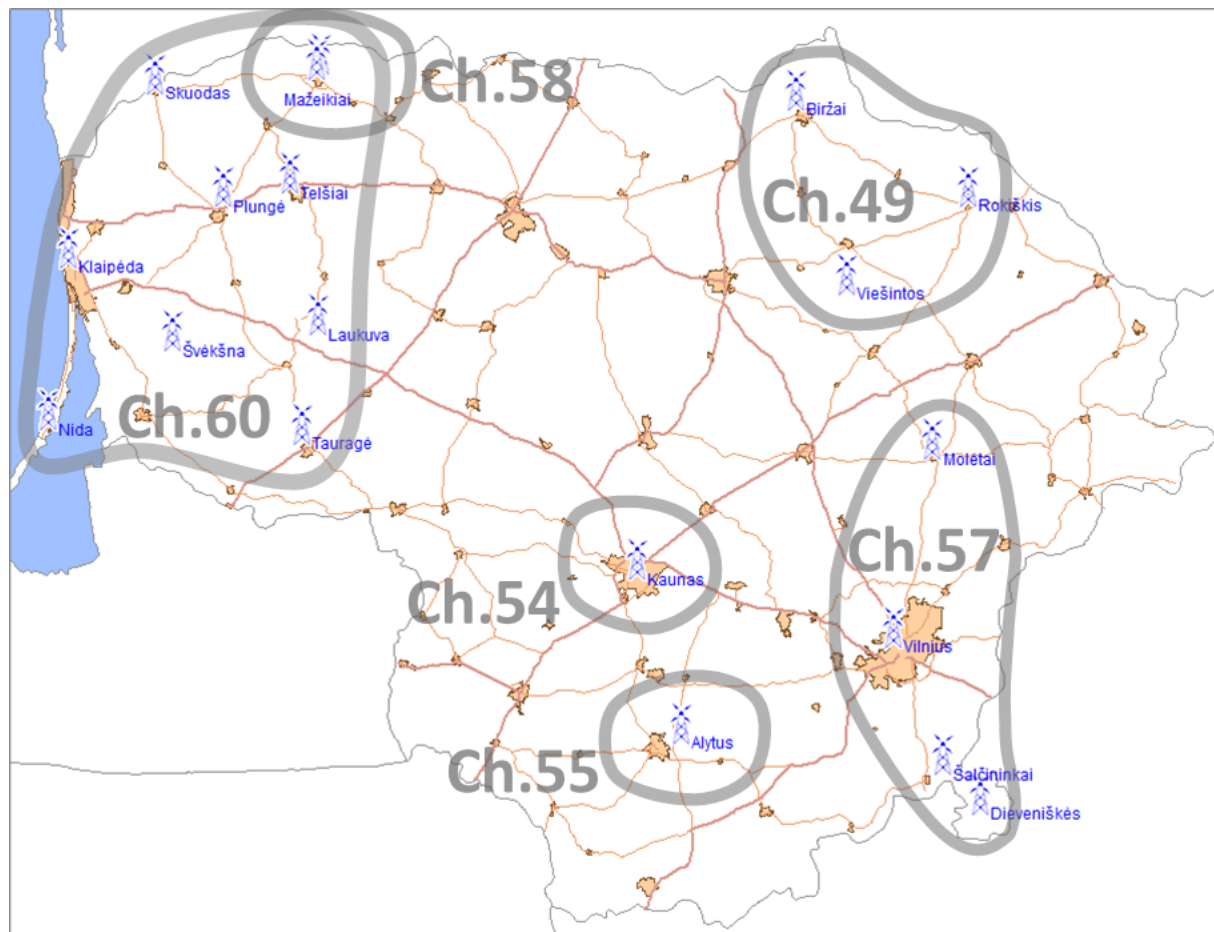
# Assignment of the radio spectrum in the band 700 MHz in Lithuania

2021 09 21



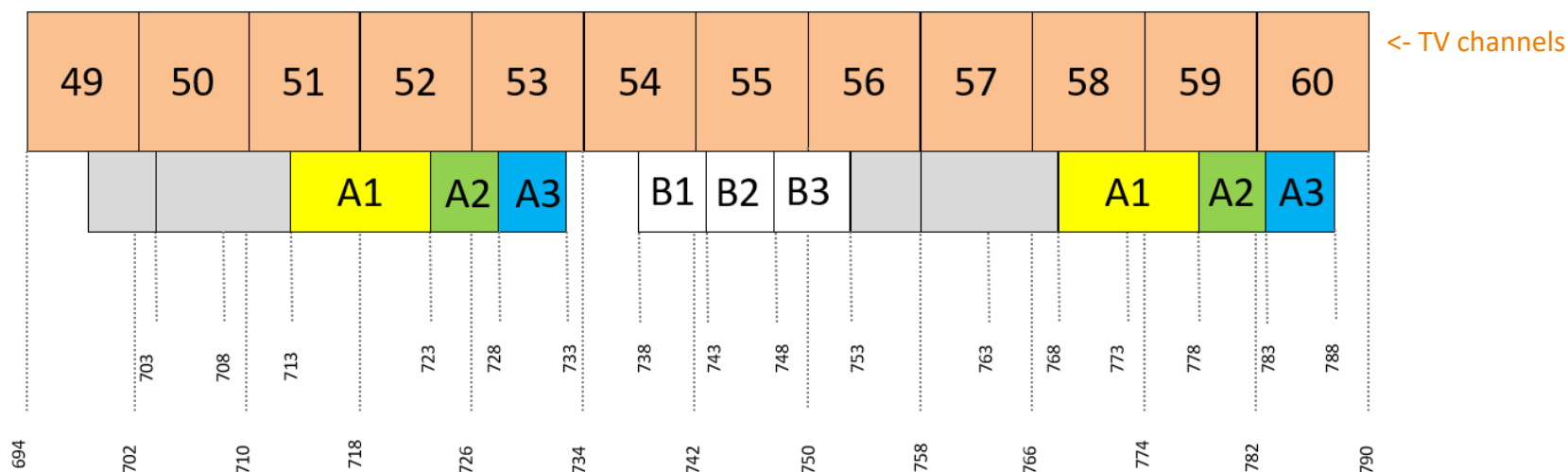
# 700 MHz band clearance

The 694-790 MHz band is released from broadcasting since **1 June 2021**.



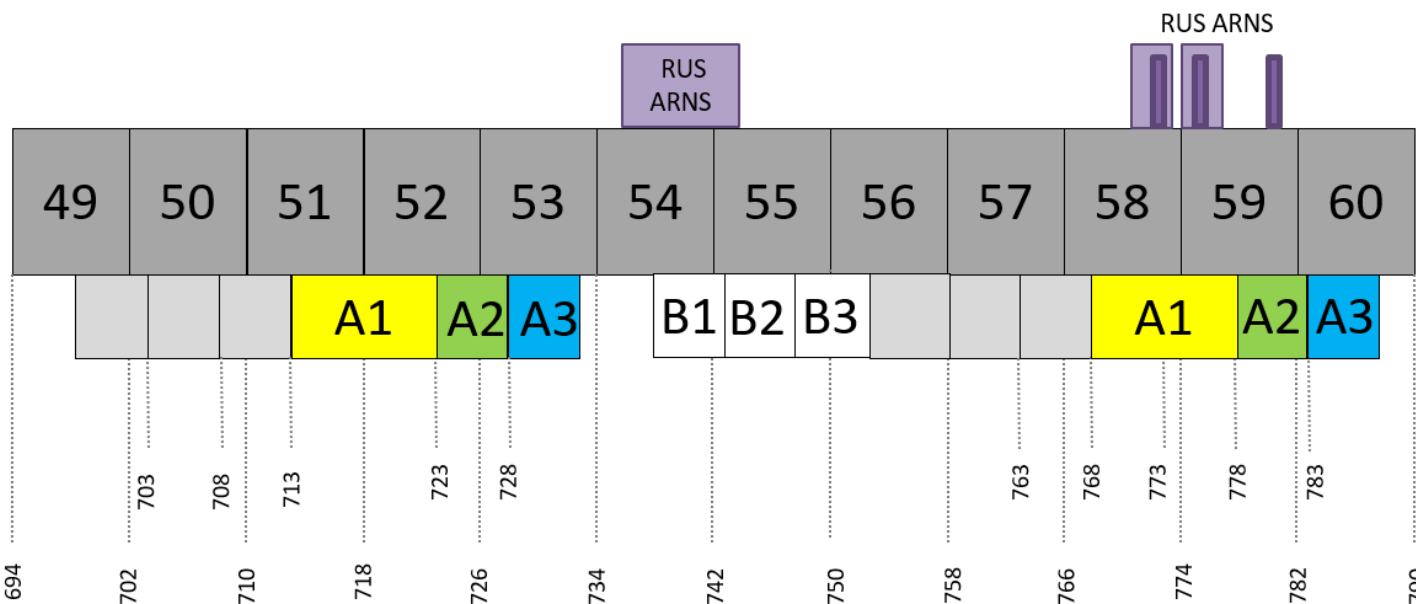
# 700 MHz plans in Lithuania

- A1 - A3 FDD will be auctioned to MNOs in 2021;
- B1 - B3 SDL won't be auctioned because no demand from market (no equipment);
- 698-703/753-758 and 703-713/758-768 MHz FDD spectrum is reserved for PPDR. radio communications usage.

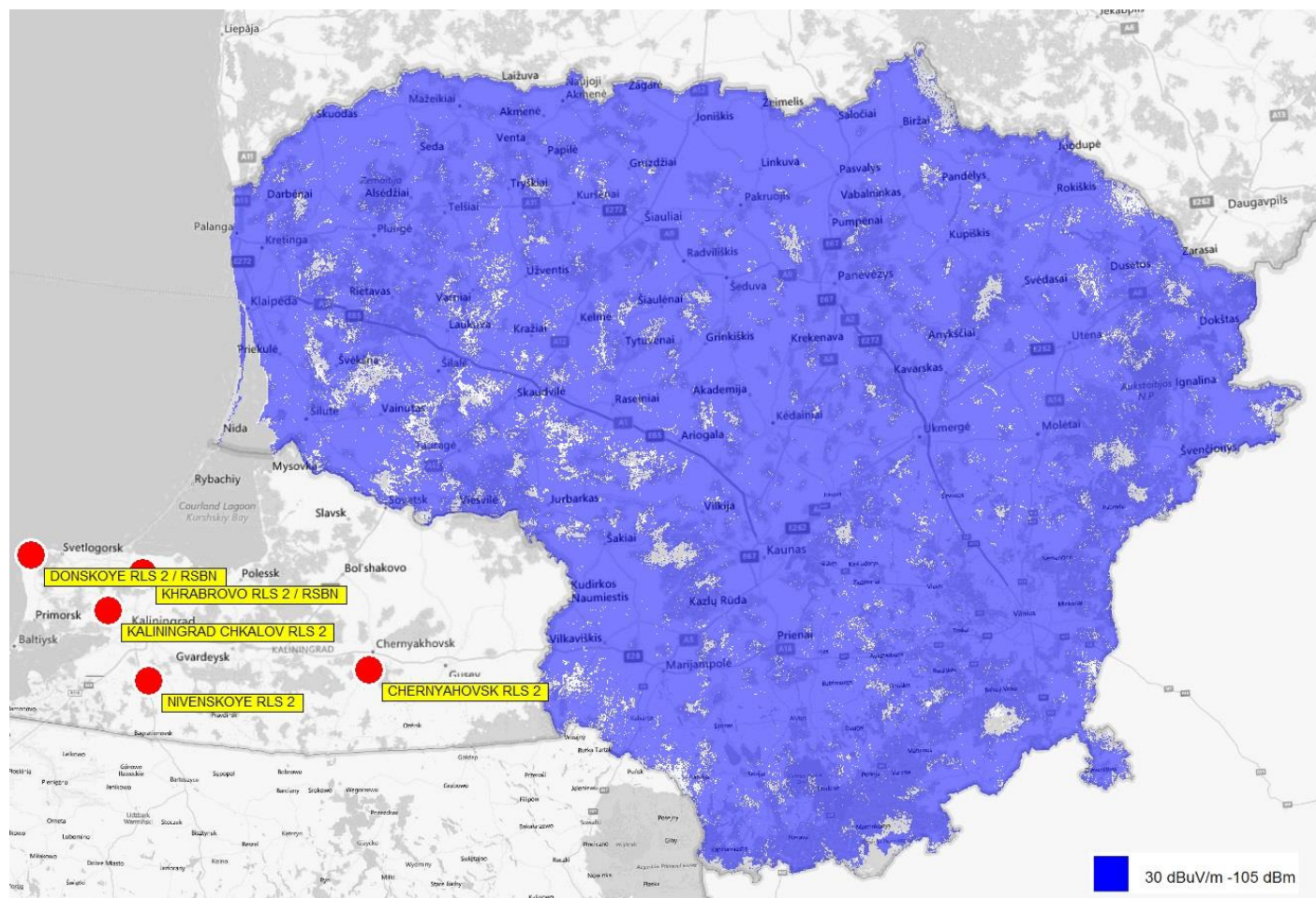


# Existing services in Russian Federation

- ✓ Bilateral agreement on coordination between stations in the land mobile service of LTU and stations in the aeronautical radionavigation service (ARNS) of RUS in the frequency band 694-790 MHz (2015).
- No agreement for TV switch off in 700 MHz band. However, there are no TV channels operating in 700 MHz in Kaliningrad at the moment.

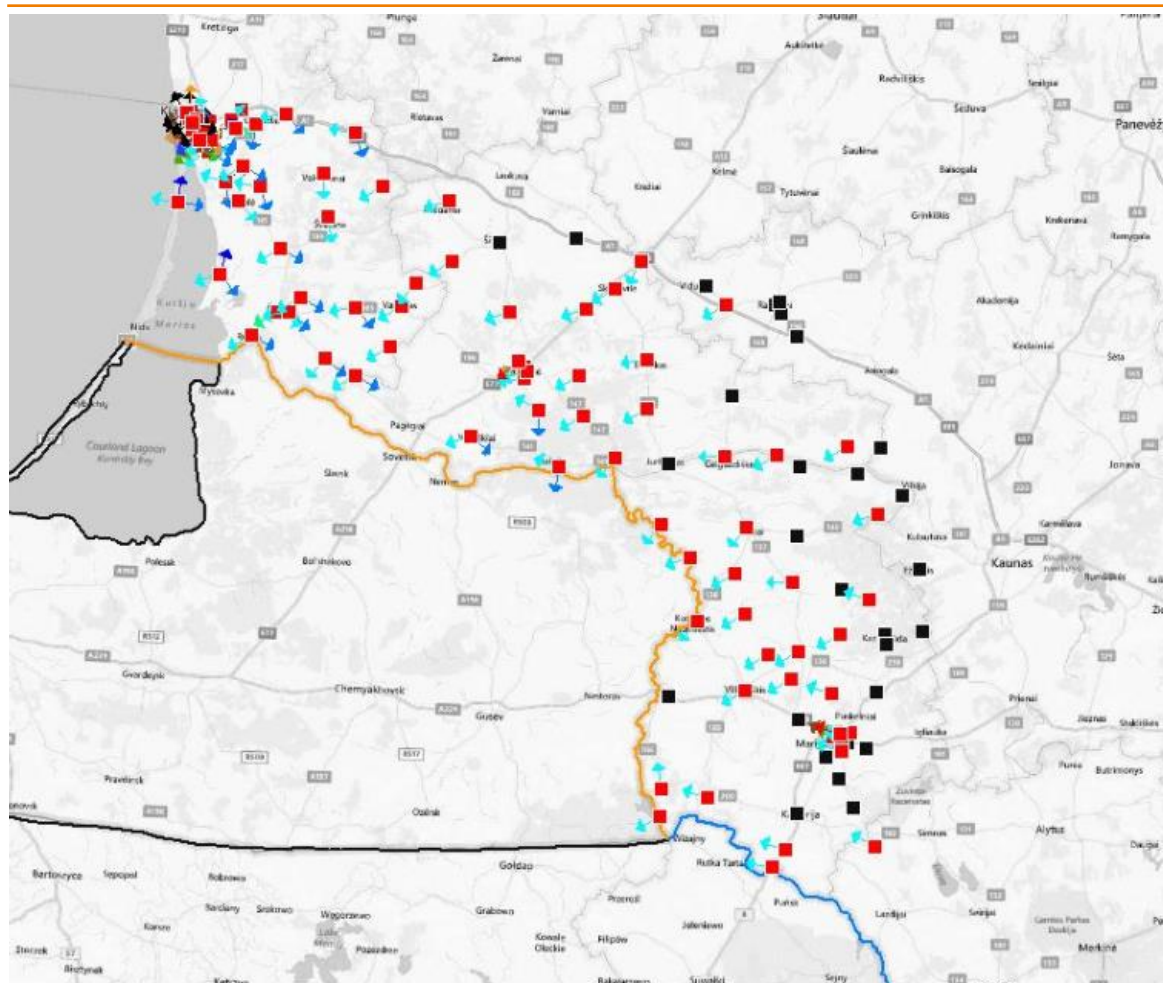


# Agreement between Lithuania and RUS (2015)



30 dB( $\mu$ V/m) / 5 MHz  
RSRP: -105 dBm

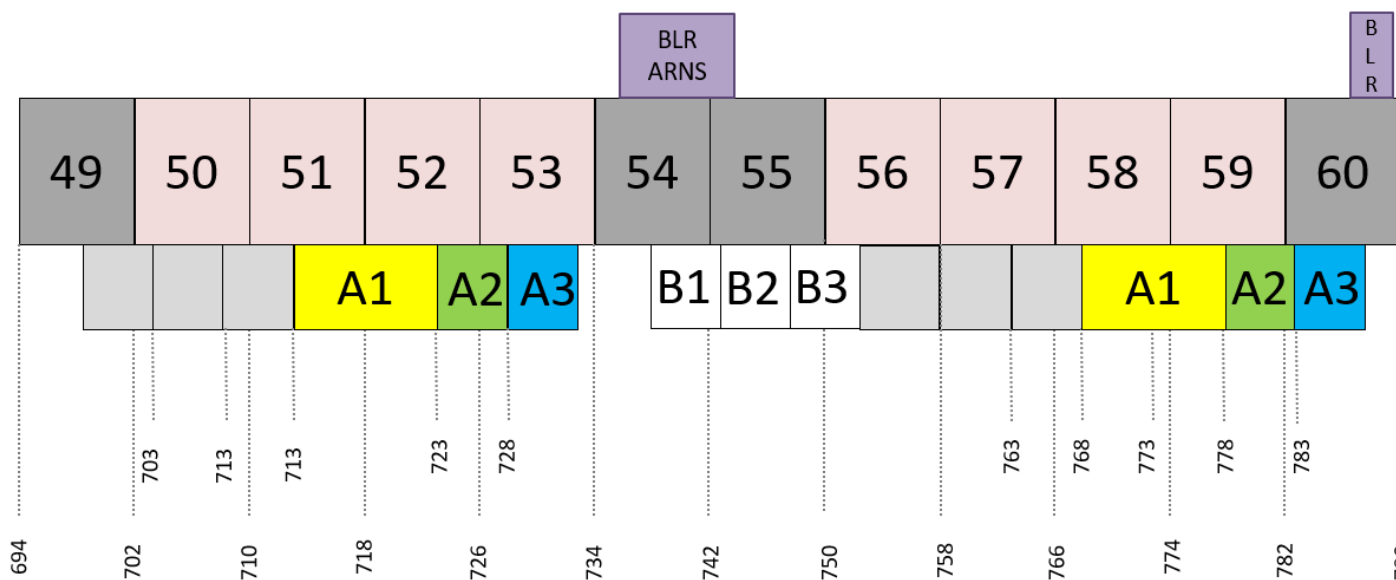
# Agreement between Lithuania and RUS (2015)



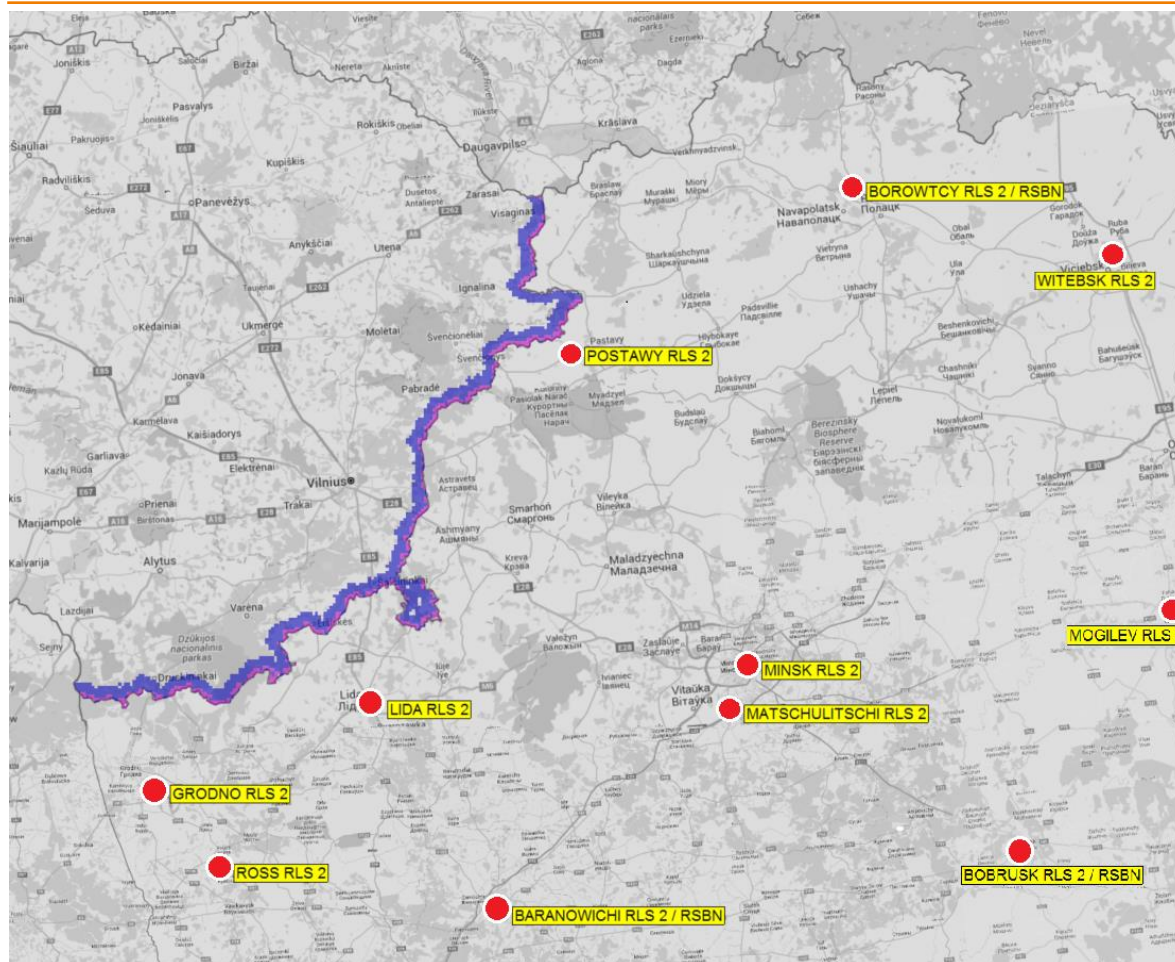
- - SDL (738-753 MHz) cells, rejected by RUS administration during the coordination procedure

# Existing services in Belarus

- ✓ Bilateral agreement on the principles, conditions and technical parameters in the coordination between stations in the land mobile service of LTU and stations in the aeronautical radionavigation service (ARNS) of Belarus in the frequency band 694-790 MHz (2015).
- ✓ Belarus has officially started TV switch off in September, 2021.



# Agreement between Lithuania and Belarus (2015)



- BLR ARNS





- restricted area for  
5G base stations with  
typical parameters.

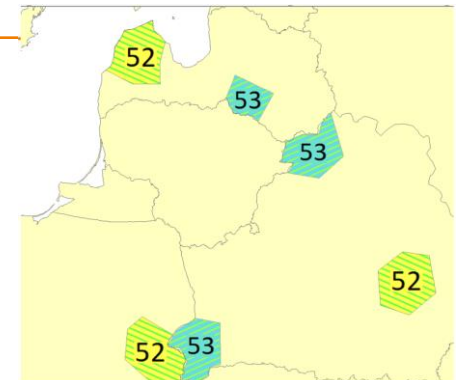
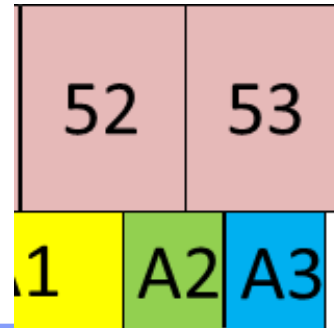
According to REC 15(01):

**59 dB( $\mu$ V/m) / 5 MHz** at the  
borderline and  
**41 dB( $\mu$ V/m) / 5 MHz** at a  
distance of 6 km inside the  
neighbouring country.

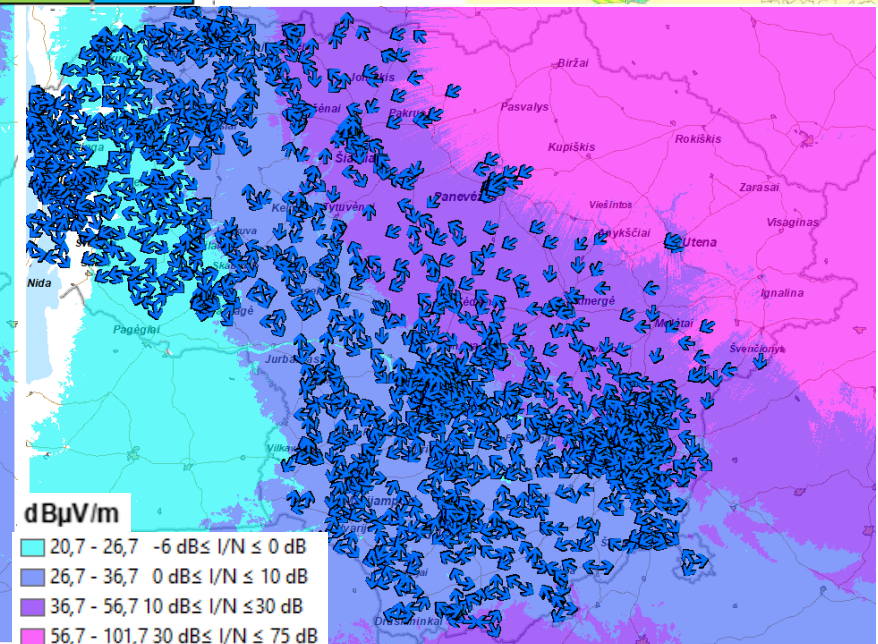
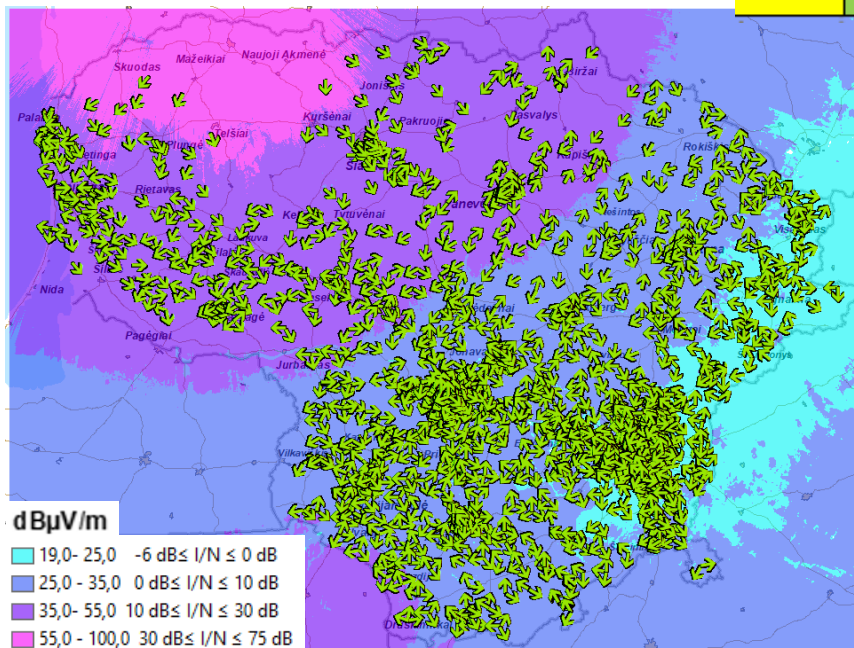


# Impact to uplink (718-723 MHz)

-  BS cells with acceptable interference from Channel 52
-  BS cells with acceptable interference from Channel 53

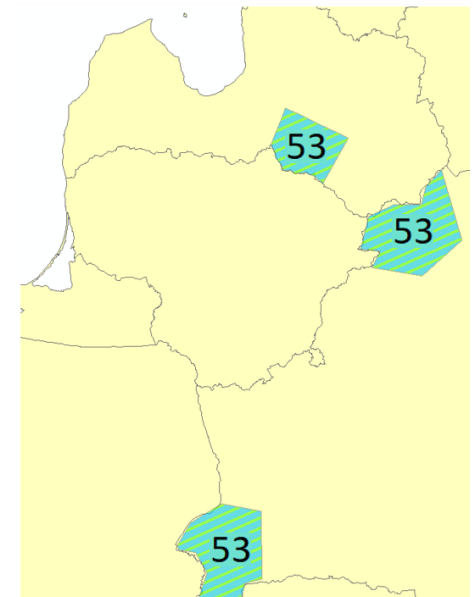
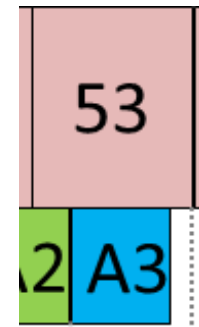
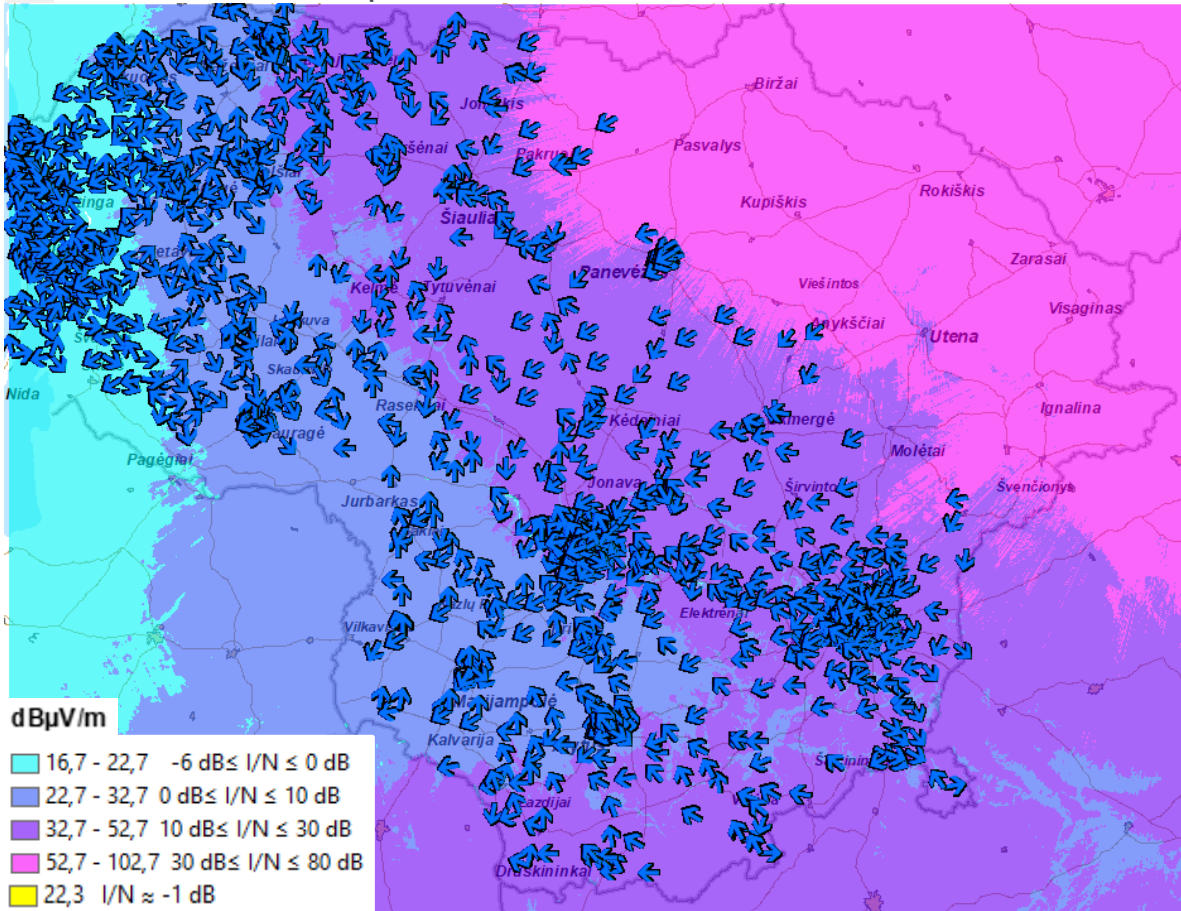


Receiving height  $h = 50$  m, 10% of time



# Impact to uplink (728-733 MHz)

↑ BS cells with acceptable interference from Channel 53



# Authorization model

## UPLINK

PPDR	PPDR	ECS			PPDR
703	713	723	728	733	736
		A1	A2	A3	
698	703	713	723	728	733

## DOWNLINK

	SDL			PPDR	PPDR	ECS			PPDR
	743	748	753	758	768	778	783	788	791
B1		B2	B3			A1	A2	A3	
738	743	748	753	758	768	778	783	788	791

2x15 MHz of spectrum is reserved for governmental emergency network (PPDR)

The auction for A1, A2, and A3 lots

Spectrum caps: 2x10 MHz and 2x5 MHz

The license duration: 15+5 years



# Authorization model

## Auction type:

- SMRA (Simultaneous Multiple Round Auction) - one bid per round per lot

## Rezerve prices:

- 10 000 000 EUR for 2x10 MHz
- 5 000 000 EUR for 2x5 MHz

## Payment terms:

- The final price is paid in 15 years within the period of license duration with annual adjustment depending on index of consumer prices of the past year



# Authorization model

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## Attendant should (qualifications):

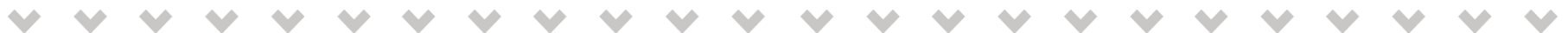
- be a member of EU, NATO, OECD, or EFTA;
- comply with national security interests (including cybersecurity);
- have at least 5 years' experience in electronic communications.



# Draft obligations

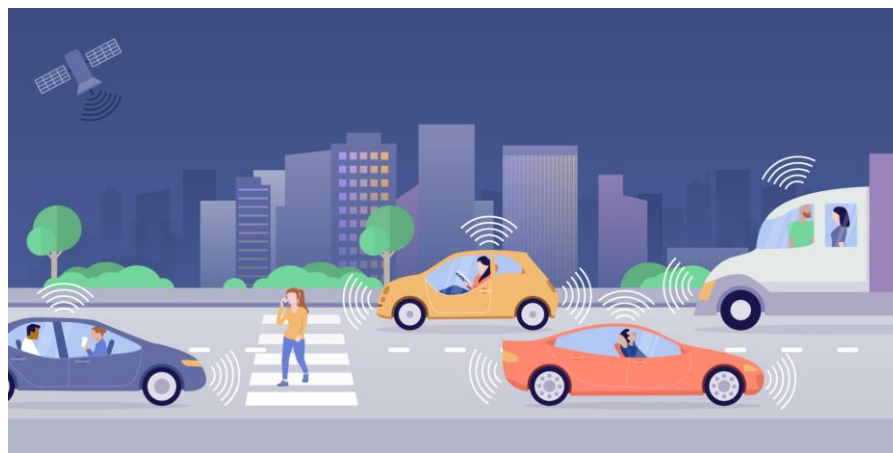
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- by the 2025, **30 Mbps** speed with 10 MHz bandwidth or **15 Mbps** with 5 MHz bandwidth in TEN-T transport corridors („Via Baltica“, „Rail Baltica“), highways and households;
- by the end of 2025, **5G for autonomous transport systems** in „Via Baltica“;
- In five years to cover **98% territory** of Lithuania with RSRP > -115 dBm;
- to provide **national roaming service** to Governmental emergency network.
- by the 2024, **IPv6**;



# Mobility requirements

- Licenses holders shall, no later than 31 December 2025, implement 5G communication solutions in the Via Baltica transport corridor in accordance with the standards of the European Telecommunications Standards Institute (ETSI) (for example **ETSI TS 122 261 V16.12.0 or later**) in order to test and use autonomous vehicles.



# Timeline for 700 MHz

Amendment  
of Radio  
Communi-  
cations  
Develop-  
ment Plan,  
October  
2021

Deadline for  
application,  
end of  
December  
2021

Autho-  
rizations,  
February  
2022

Auction  
announce-  
ment,  
October  
2021

Approval  
of the  
winners,  
January  
2022

Start of  
usage  
of the  
band,  
Q2  
2022





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Communications Regulatory Authority  
Radiocommunication Department, Mobile Service Division  
Kotryna Tamulynaite