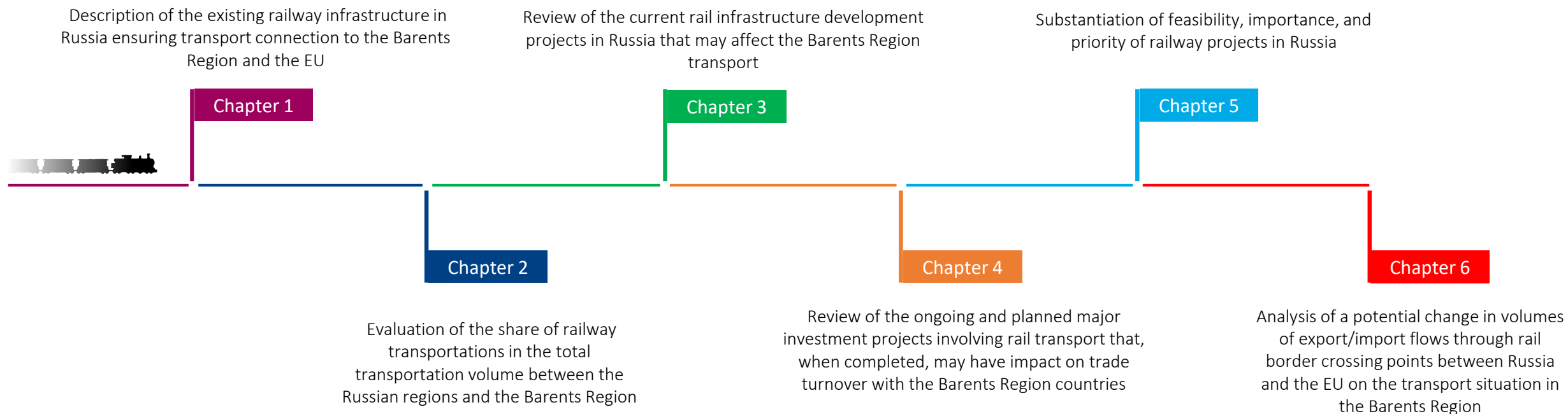


**NORTHERN AXIS – BARENTS LINK KO 4159 (NABL) PROJECT IMPLEMENTATION
UNDER KOLARCTIC 2014-2020 CBC PROGRAM**

Impact of Russian Railway Projects on the Transport System of the Barents Region



Study Chapters



Information Sources

Information sources:

By Type	Inquiries			Public sources			
By Level	Data from the governments of constituent entities of the Russian Federation Russian regions being part of the Barents Region, and constituent entities having high investment attractiveness		Data from the territorial agencies of federal authorities and federal services of the Russian Federation The data applies to the group of regions on a territorial basis	Data from the central bodies of federal authorities and federal services of the Russian Federation The data applies to the entire territory of Russia		Data from private companies JSC Russian Railways	
	Transport authorities	Rail transport authorities and their agencies	Russian border crossing points development authorities	Customs authorities	State Border Service departments	Statistics Service departments	Economic development agencies

Public Sources of Information

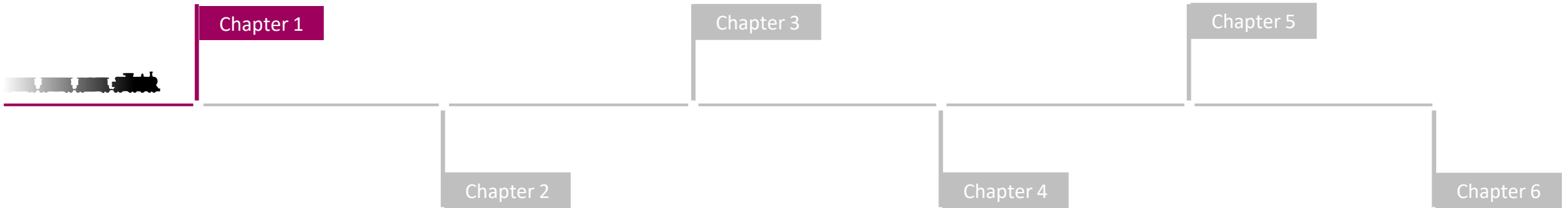
- Official website of the Federal State Statistics Service (Rosstat) <https://rosstat.gov.ru/> and websites of Rosstat departments in the constituent entities of the Russian Federation
- Website of the Unified Interdepartmental Statistical Information System (UISIS) <https://www.fedstat.ru/>
- Website of the Ministry of Transport of the Russian Federation <https://mintrans.gov.ru/>
- Website of the Federal Agency for Railway Transport (Roszheldor) <http://www.rlw.gov.ru/>
- Website of JSC Russian Railways <https://www.rzd.ru> - the official online representation of the company
- Website of the Federal State Directorate for Construction and Operation of the Russian Border Facilities (FGKU Rosgranstroy) <https://www.rosgranstroy.ru/>
- Website of the Federal Customs Service <https://customs.gov.ru/> including its section Customs Statistics on Foreign Trade of the Russian Federation <http://stat.customs.ru/>
- Official website of the State Customer Directorate for Implementation of the Transport System Modernization Program <http://ppp-transport.ru/ru/fcp/otchety>
- Portal of State Programs of the Russian Federation <https://programs.gov.ru/opendata/>
- Official websites of the Governments' Offices of the RF constituent entities
- Information portal of Railway Transportation <https://cargo-report.info/>
- Database of the studies posted on the Barents Region website https://www.barentsinfo.fi/beac/document_database/wg_documents.aspx?ID=4
- Official website of the United Nations Economic Commission for Europe (UNECE)
- Official website of the European Commission https://ec.europa.eu/transport/themes/infrastructure/about-ten-t_en
- Website of the World Bank
- Website of the European Union Statistics Service (Eurostat) <https://ec.europa.eu/eurostat>
- Website of the Finnish Customs <https://tulli.fi/en/statistics>
- Website of the Norwegian Customs <https://data.toll.no/dataset>

Inquiries

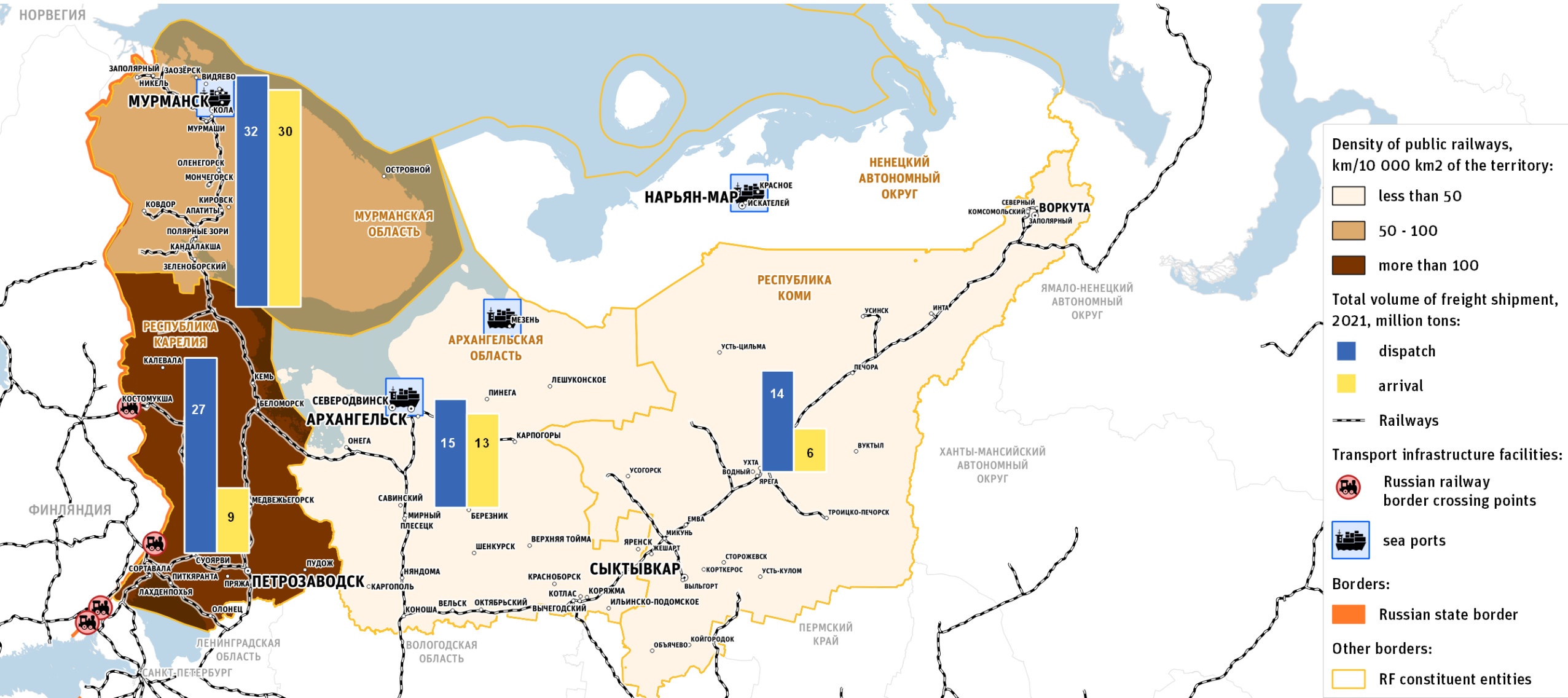
1. Ministry of Arctic and Economic Development of Murmansk Region
2. Ministry of Economic Development, Industry and Science of Arkhangelsk Region
3. Department of Finance and Economics of the Nenets Autonomous District
4. Komi Ministry of economic development and industries
5. Karelia Ministry of economic development and industries
6. Ministry of Economic Development of the Russian Federation
7. Oktyabrskaya (October) Railway, JSC Russian Railways branch
8. Severnaya (Northern) Railway, JSC Russian Railways branch
9. Northwest Territorial Directorate of the Federal Agency for Railway Transport
10. Vyborg Customs of the Northwest Customs Directorate
11. Baltic Customs of the Northwest Customs Directorate
12. Karelia Customs of the Northwest Customs Directorate
13. Murmansk Customs of the North-West Customs Directorate
14. St. Petersburg Branch of FGKU Rosgranstroy
15. Murmansk Branch of FGKU Rosgranstroy
16. Infrastructure Development Directorate of the Ministry of Transport of the Russian Federation
17. Ministry of Transport of the Russian Federation
18. State Customer Directorate for Implementation of Transport Infrastructure Complex Development Projects (FKU Rostransmodernizatsiya)
19. Directorate for Construction and Operation of the Russian Border Facilities (FGKU Rosgranstroy)
20. JSC Russian Railways Directorate of Foreign Projects and International Relationships
21. Border Service of the Republic of Karelia
22. Border Service of St. Petersburg and Leningrad Region
23. Institute of Transport Economics and Development

Chapter 1

Description of the existing railway infrastructure in Russia ensuring transport connection to the Barents Region and the EU

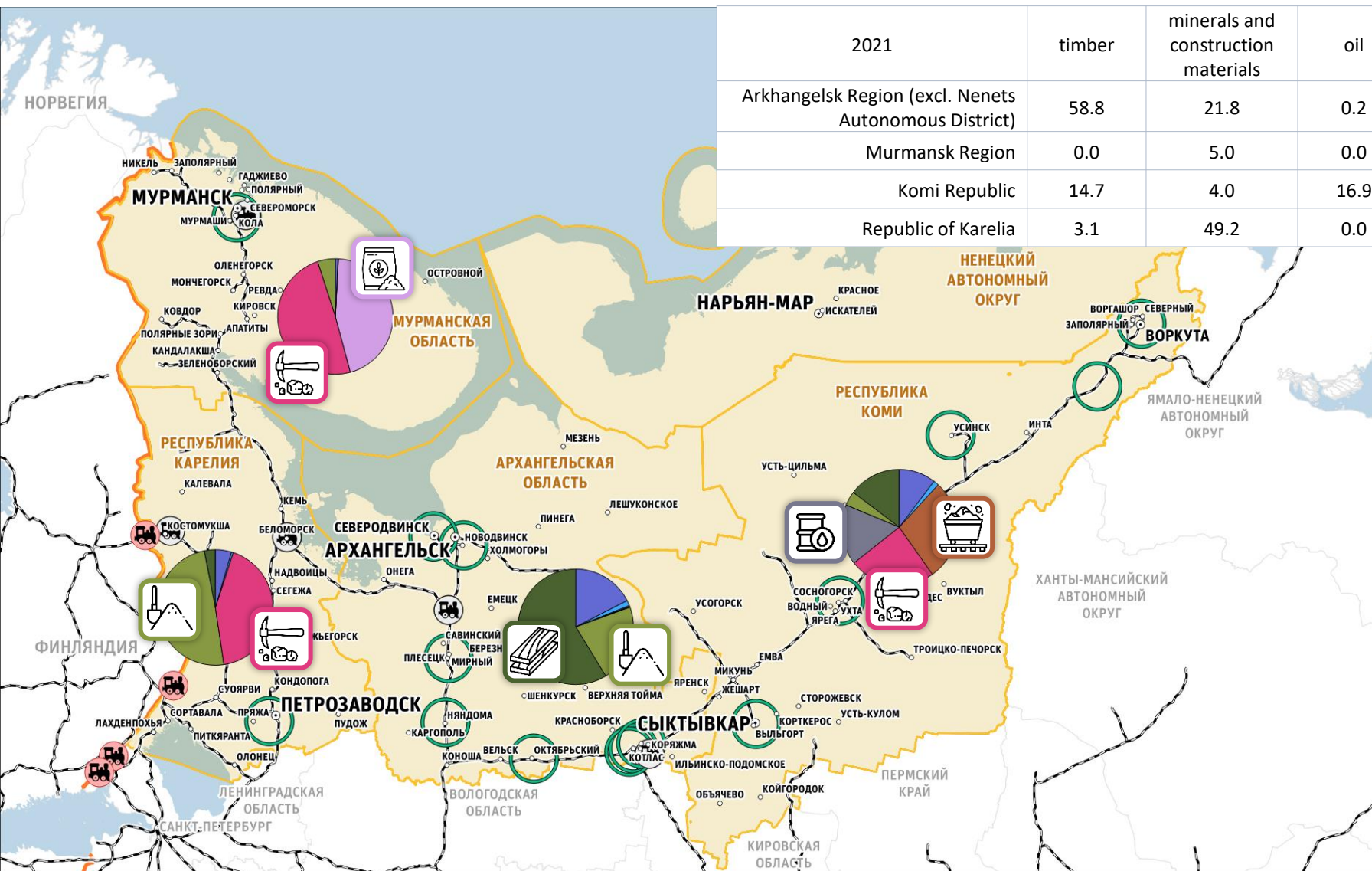


Railway Infrastructure Characteristics



Railway Infrastructure Characteristics. Freight Dispatch 2021, %

2021	timber	minerals and construction materials	oil	ores	hard coal	fertilizers	ferrous metals	other
Arkhangelsk Region (excl. Nenets Autonomous District)	58.8	21.8	0.2	0.0	0.3	0.0	1.5	17.5
Murmansk Region	0.0	5.0	0.0	49.2	0.0	45.0	0.1	0.7
Komi Republic	14.7	4.0	16.9	24.1	28.4	0.0	1.5	10.3
Republic of Karelia	3.1	49.2	0.0	42.6	0.0	0.0	0.5	4.5



Commodity, 2021, %:

- timber
- minerals and construction materials
- oil
- ores
- hard coal
- fertilizers
- ferrous metals
- other

Transport infrastructure facilities:

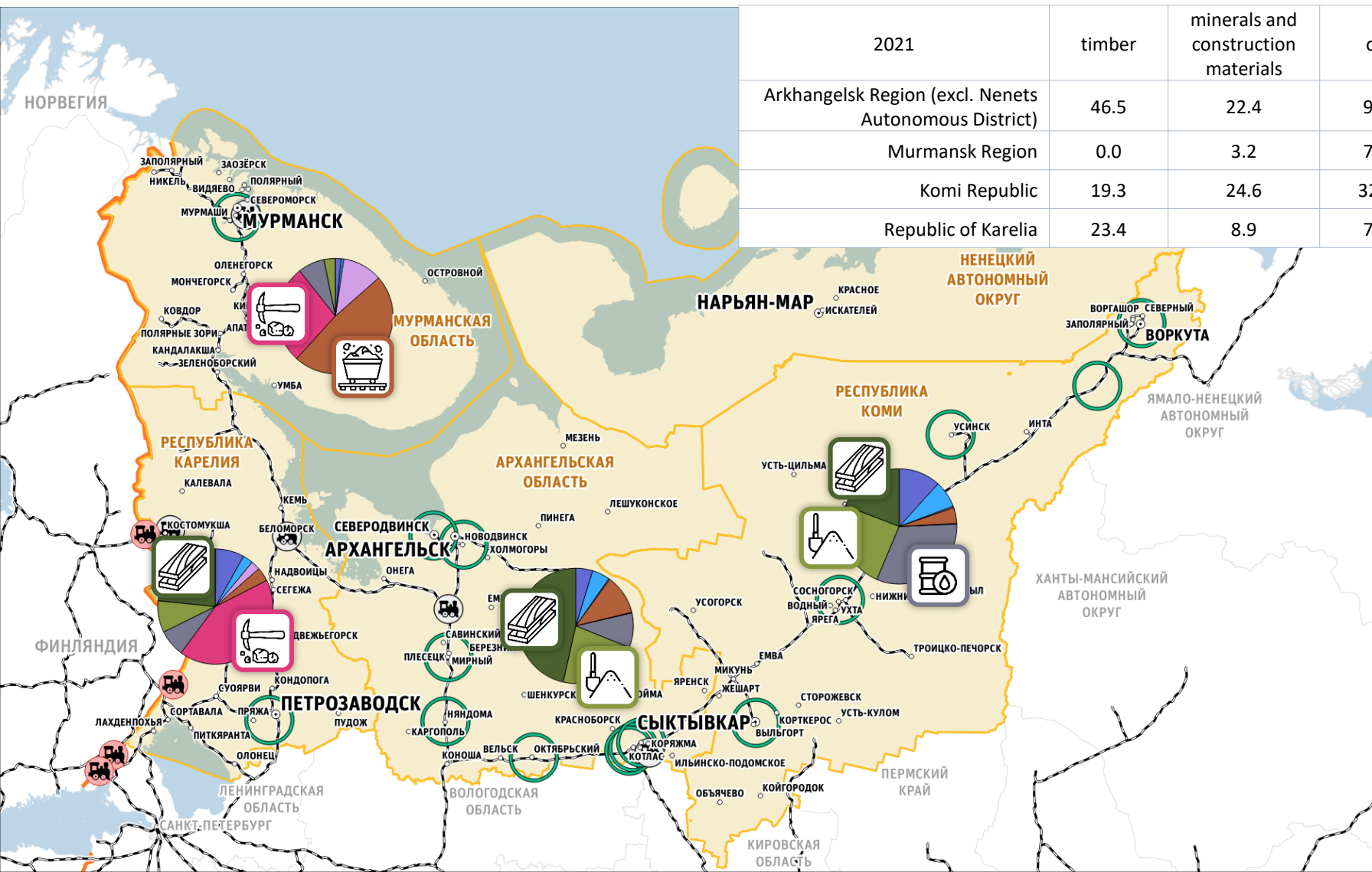
- Russian railway border crossing points
- main freight railway stations
- Freight yards and terminals
- Railways

Borders:

- Russian state border
- RF constituent entities

Railway Infrastructure Characteristics. Freight Arrival 2021, %

2021	timber	minerals and construction materials	oil	ores	hard coal	fertilizers	ferrous metals	other
Arkhangelsk Region (excl. Nenets Autonomous District)	46.5	22.4	9.7	0.2	11.2	0.3	5.0	4.7
Murmansk Region	0.0	3.2	7.5	27.6	48.3	11.2	0.7	1.6
Komi Republic	19.3	24.6	32.2	0.2	4.5	0.4	7.0	11.8
Republic of Karelia	23.4	8.9	7.6	42.7	3.9	2.6	2.9	8.1



Commodity, 2021, %:

- timber
- minerals and construction materials
- oil
- ores
- hard coal
- fertilizers
- ferrous metals
- other

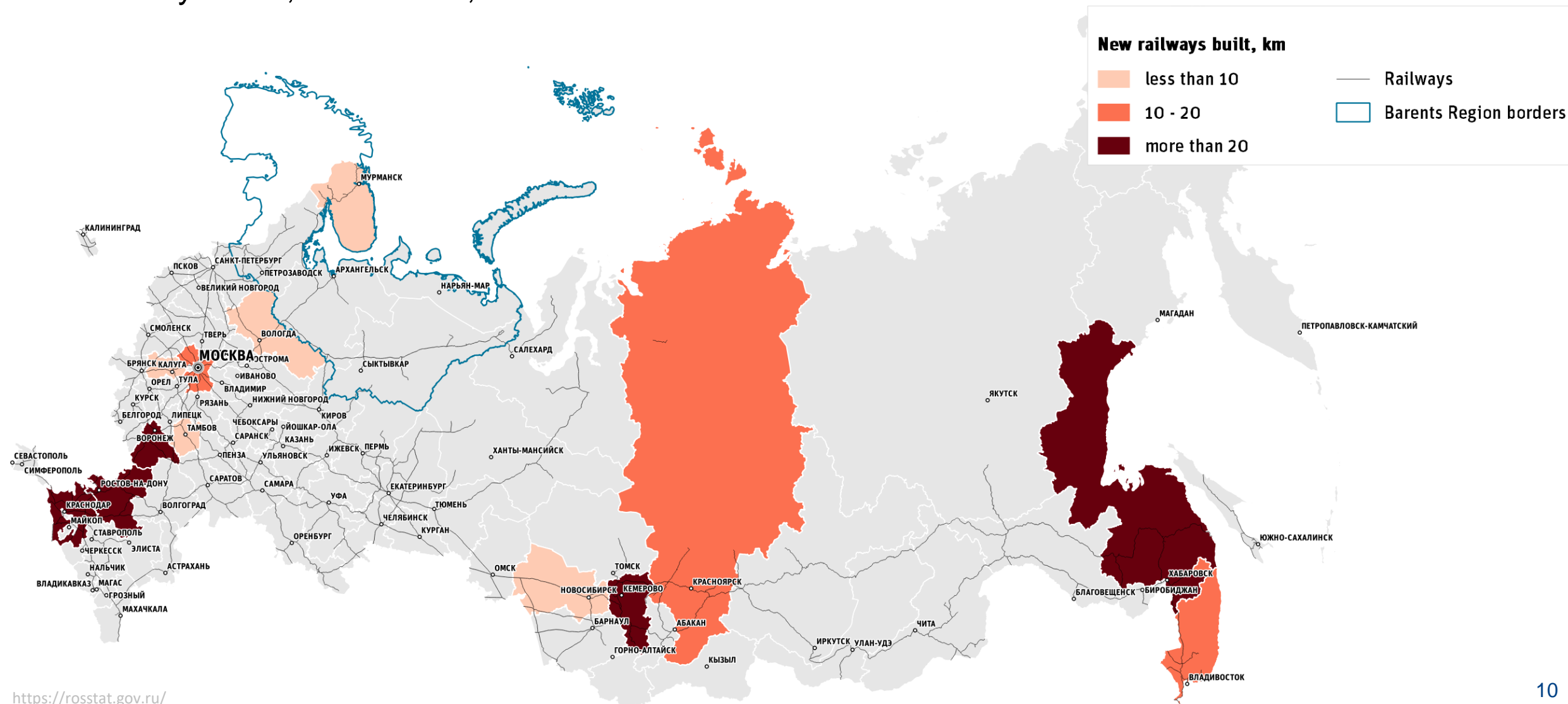
Transport infrastructure facilities:

- Russian railway border crossing points
- Main freight railway stations
- Freight yards and terminals
- Railways

Borders:

- Russian state border
- RF constituent entities

New Railways Built, 2015-2020, km



Railway Stations Operating Volume by Commodity and Transportation Type

**Arkhangelsk Region
(excl. Nenets Autonomous District)**

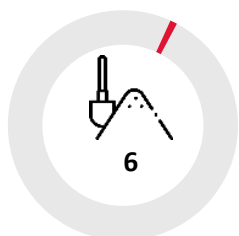
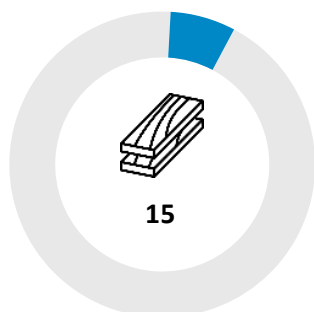
Freight dispatch and arrival:

domestic

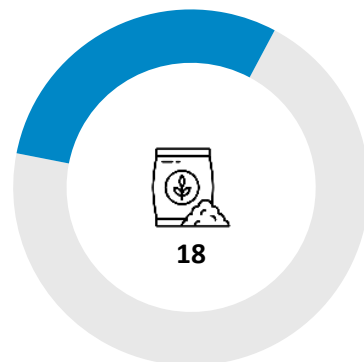
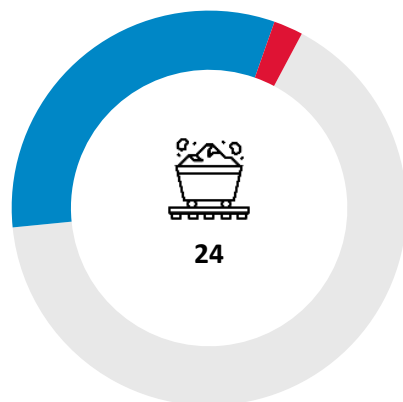
export

import

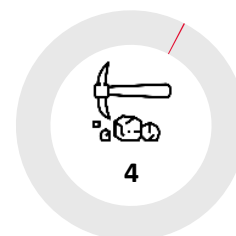
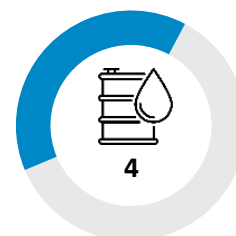
25 total by commodity, million tons



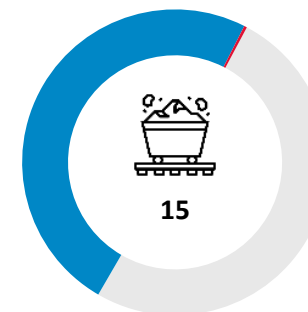
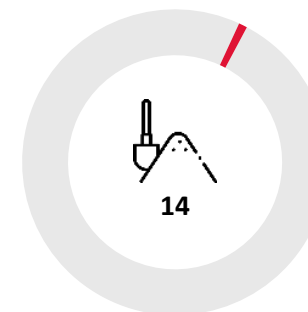
Murmansk Region



Komi Republic



Republic of Karelia



Commodity:

-  timber
-  minerals and construction materials
-  ores
-  hard coal
-  fertilizers
-  oil

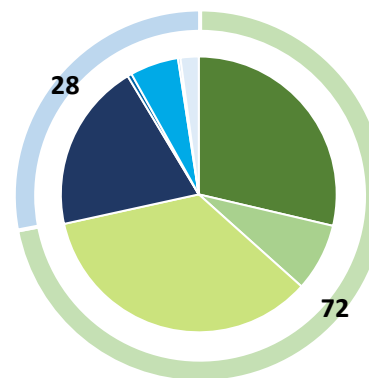
Diagram diameter is proportional to the freight volume

Actual annual capacity of the border crossing points on the Russian Federation border, 2021

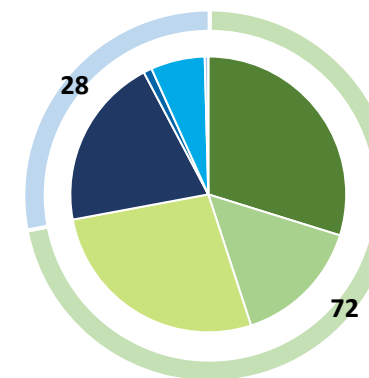
Automobile border crossing points

Border crossing point on the RF territory	Region	Bordering state	Bordering crossing point
Brusnichnoye	Leningrad Region	Finland	Nuijamaa
Svetogorsk			Imatra
Torfyanovka			Vaalimaa
Värtsilä	Republic of Karelia		Niirala
Inari			Inari
Lyttä			Vartius
Suoperä			Kuusamo
Syväoro			Parikkala
Salla	Murmansk Region		Kellosekya
Lotta			
Borisoglebsk		Norway	Storskog

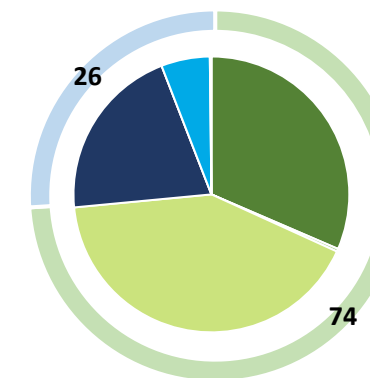
Share of the border crossing point by the number of individuals allowed through, %



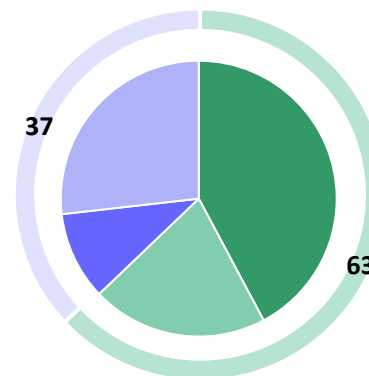
Share of the border crossing point by the number of trucks allowed through, %



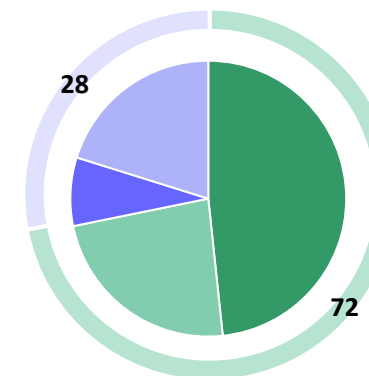
Share of the border crossing point by the number of passenger vehicles allowed through, %



Share of the border crossing point by the number of individuals allowed through, %



Share of the border crossing point by the number of freight trains allowed through, %



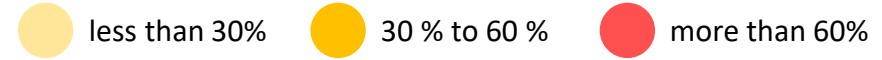
*72 - total share of border crossing points by regions

Railway border crossing points

Border crossing point on the RF territory	Region	Bordering state	Bordering crossing point
Buslovskaya	Leningrad Region	Finland	Vainikkala
Svetogorsk			Imatra
Värtsilä	Republic of Karelia		Niirala
Lyttä			Vartius

Analysis of Russian Railway Border Crossing Points Capacity

Volume of freight transport at border crossing points, % of the design capacity



FINLAND

Railway cars:



loaded



empty

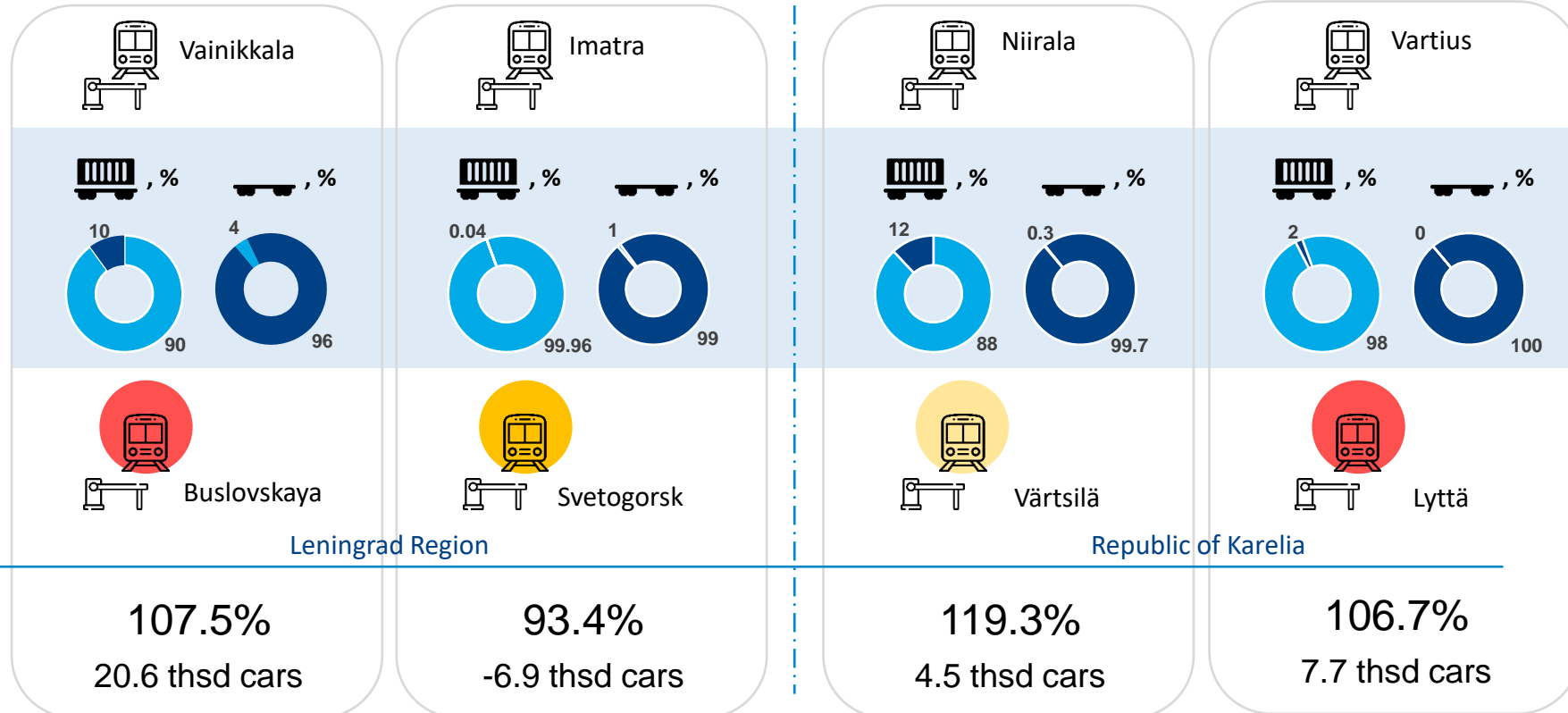
Traffic direction:



to Finland



to Russia



TOTAL

at Russian-Finnish border:

to Finland



to Russia

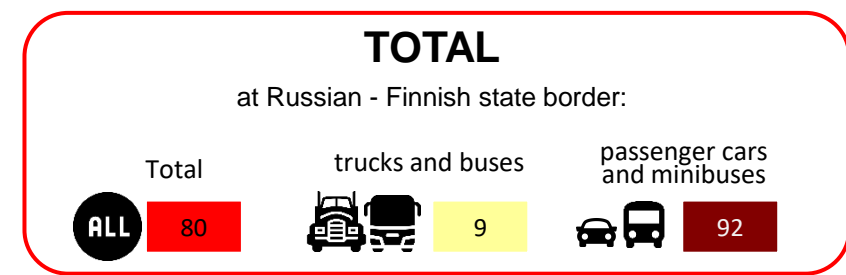
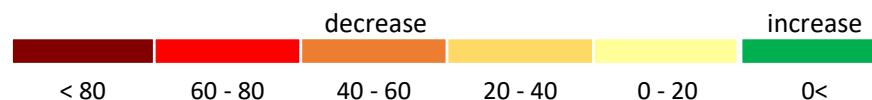


RUSSIA

2021 compared to 2019

Analysis of Russian Road Border Crossing Points Transport Volume Change

Changes in the number of vehicles, 2021 compared to 2019, %:



FINLAND

26%

- total share of border crossing points by regions, %

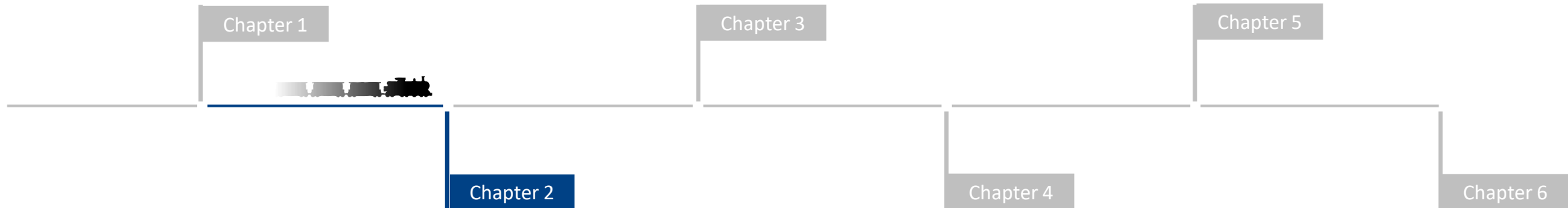
	Vaalimaa	Nuijamaa	Imatra	Parikkala	Niirala	Vartius	Inari	Kuusamo	Kellosoelkya	Raja-Jooseppi
	Torfyanovka	Brunichnoye	Svetogorsk	Syvääoro	Värtsilä	Lyttä	Inari	Suoperä	Salla	Lotta
	Leningrad Region - 71%			Republic of Karelia - 26%				Murmansk Region - 3%		

RUSSIA

Changes in the number of vehicles, 2021 compared to 2019, in %

	ALL	79	76	89	16	80	82	95	96	94	
		7	26	37	13	0	19	n/a	69	32	13
		91	87	100	98	93	94	99	97	98	

Chapter 2



Evaluation of the share of railway transportations in the total transportation volume between the Russian regions and the Barents Region

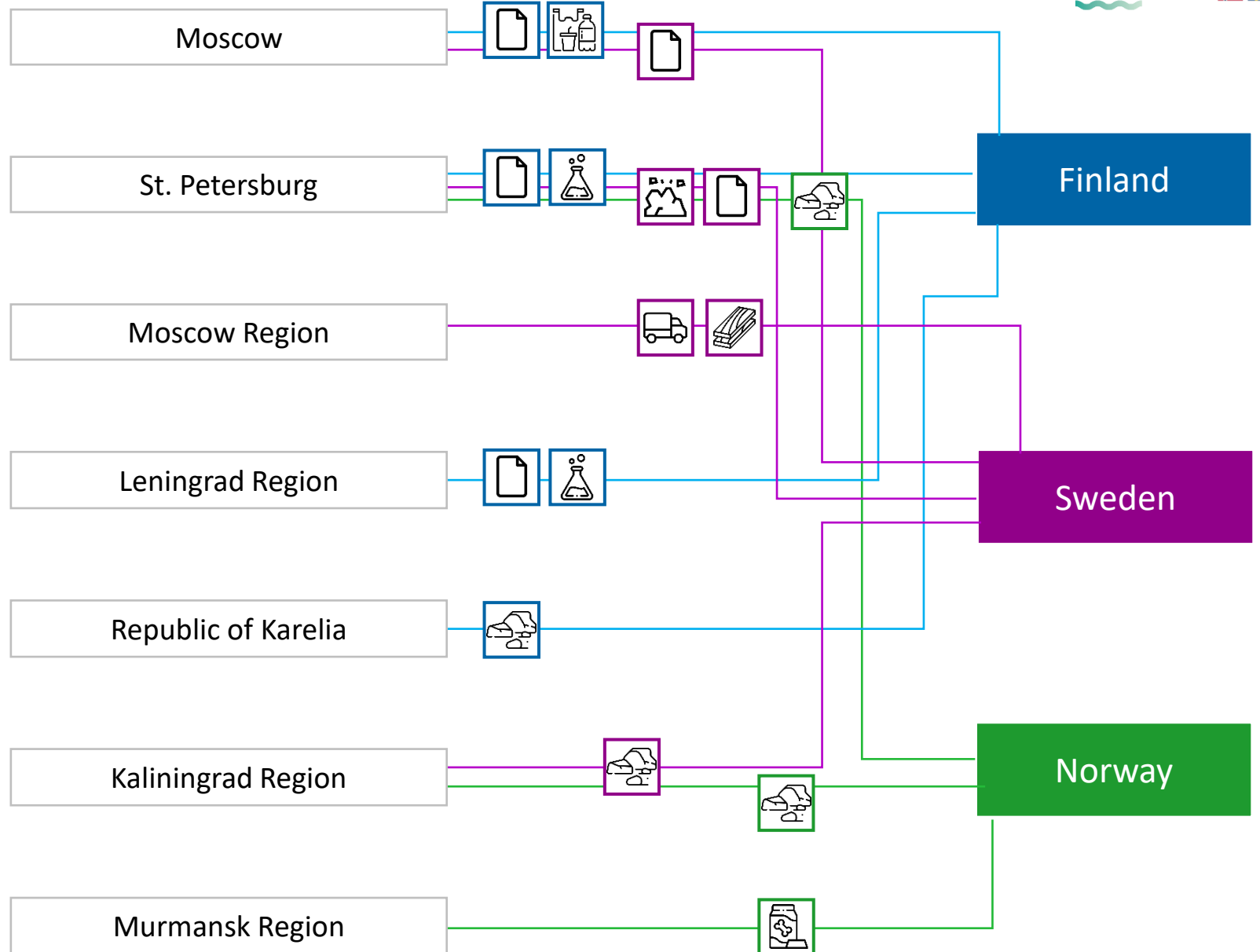


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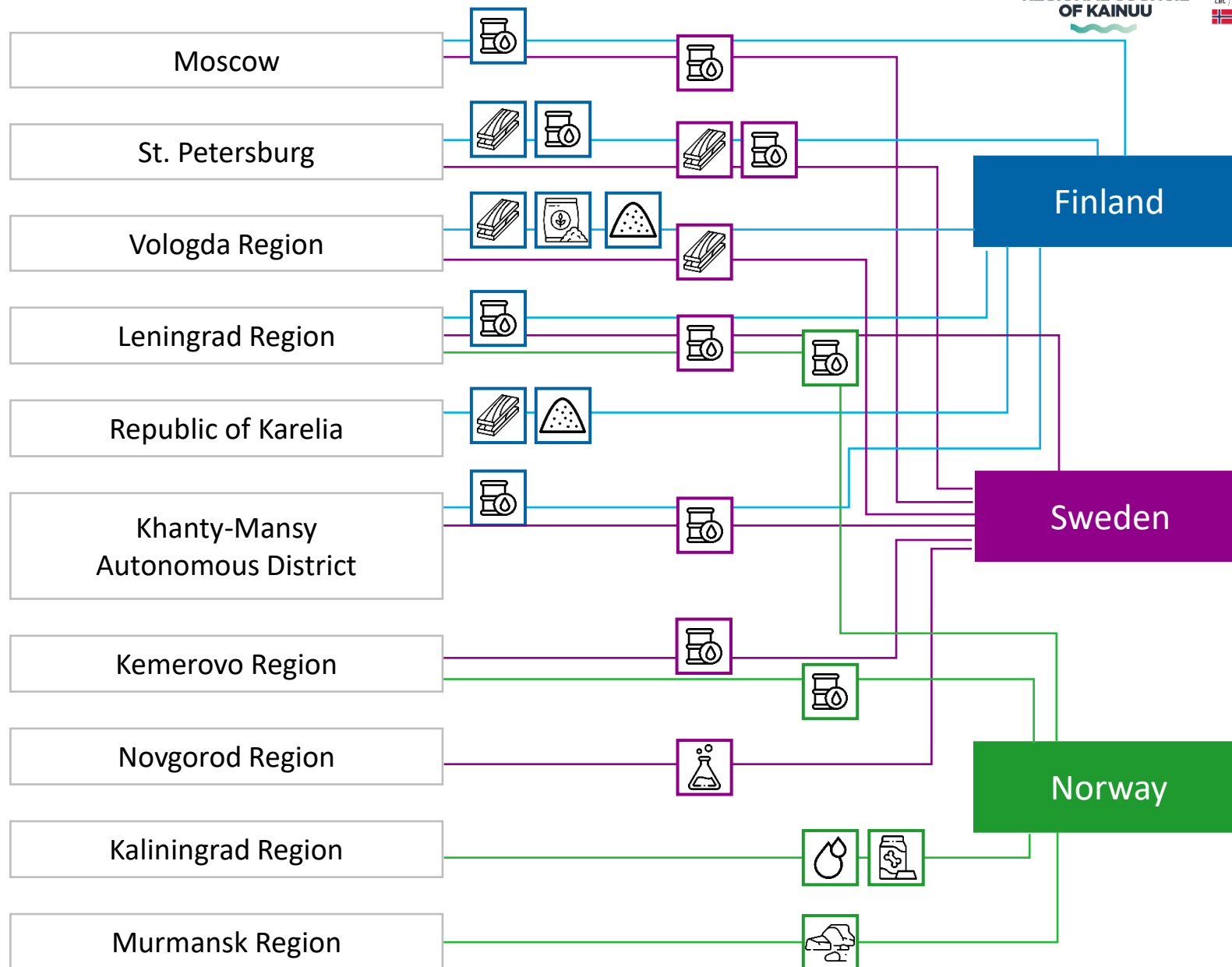
Foreign trade statistics of the Russian Federation with the Barents Region countries in 2021. Import to the Russian Federation

- paper and paperboard
- plastics and plastic products
- inorganic chemical products
- salt; sulphur; soil and stone; plaster, lime and cement
- wood and other fibrous materials pulp
- ferrous metals
- means of land transport, their parts and accessories
- food industry residues and wastes; ready-made animal feed










Foreign trade statistics of the Russian Federation with the Barents Region countries in 2021. Export from the Russian Federation

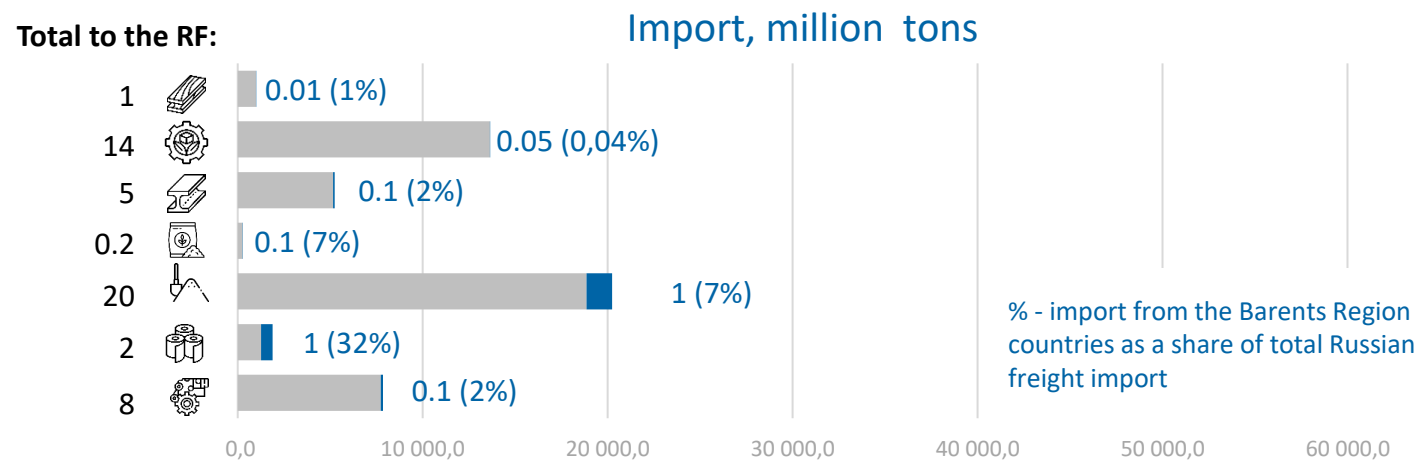
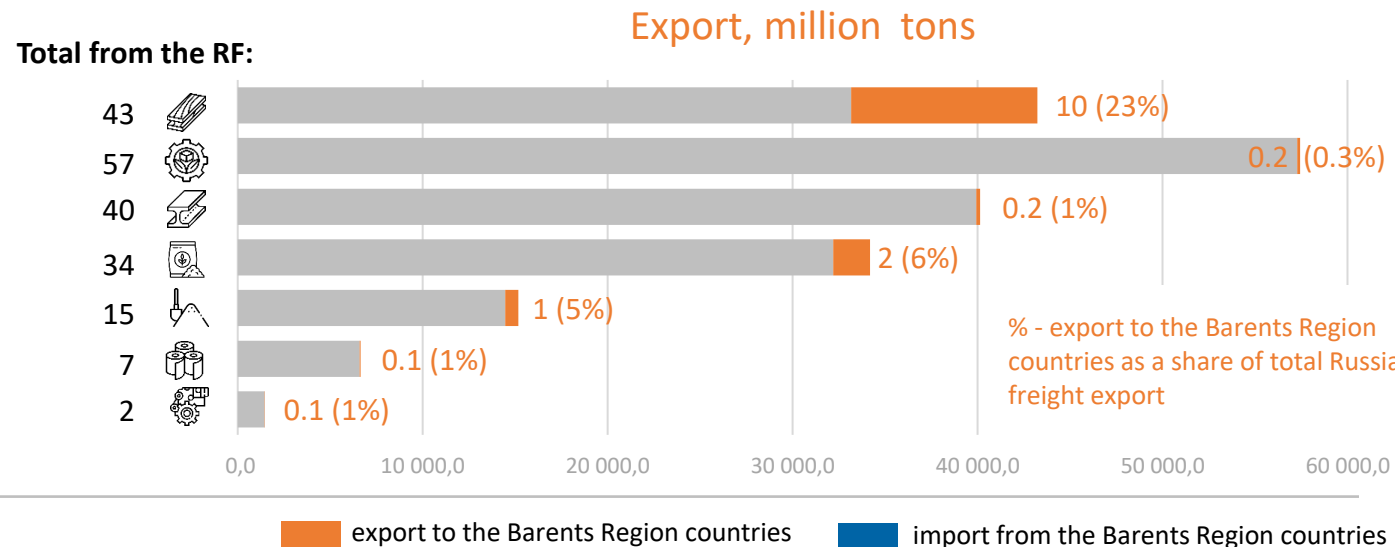
-  mineral fuels, petroleum and products of their distillation, etc.
-  wood and wood products; charcoal
-  fertilizers
-  ores, slag and ash
-  inorganic chemical products
-  animal or vegetable fats and oils and their cleavage products, etc.
-  food industry residues and wastes; ready-made animal feed
-  salt; sulfur; earth and stone; plastering materials, lime and cement



Development Potential of Railway Transportation, million tons

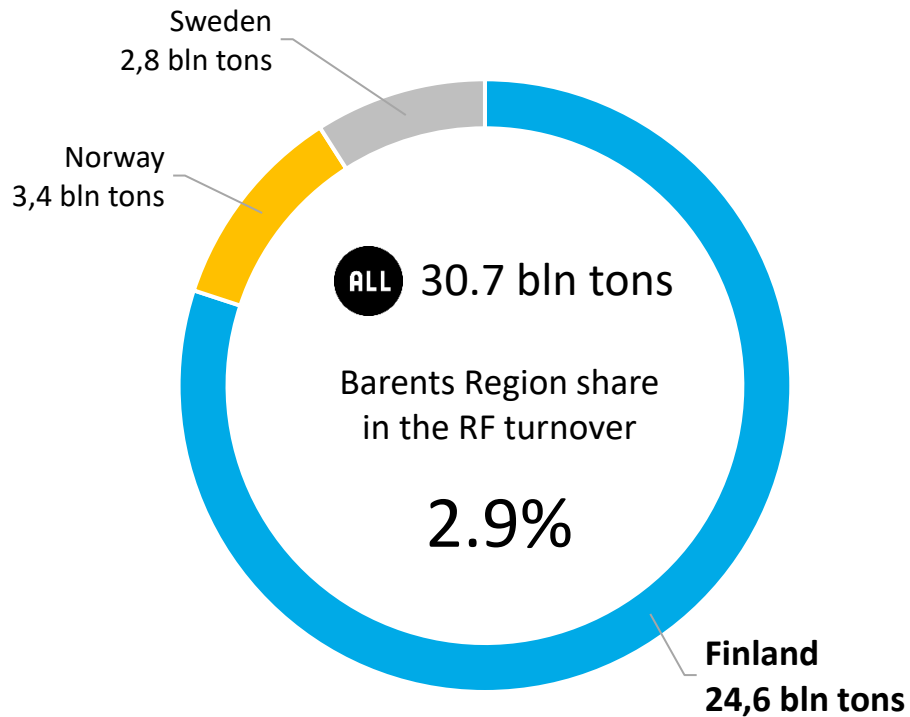
Commodity groups that have the potential to increase the containerization level:

-  timber
-  agricultural products
-  ferrous metals
-  fertilizers
-  salt, sulphur, minerals and construction materials
-  pulp and paper industry products
-  machines and equipment



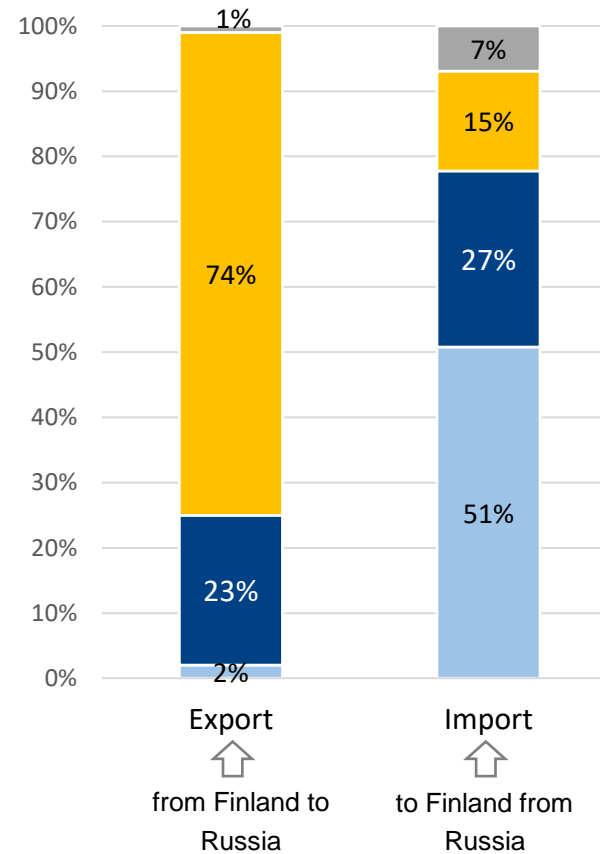
Railway Transport Role in Foreign Trade Turnover

Russian foreign trade with the countries of the Barents region



Finland's share in Russian foreign trade with the countries of the Barents region | **80%**

Share of different modes of transport in foreign trade between Russia and Finland - 2020





Russia's share (of all Finland foreign trade partners) in the exchange of goods by railway

export from Finland



82%

import to Finland

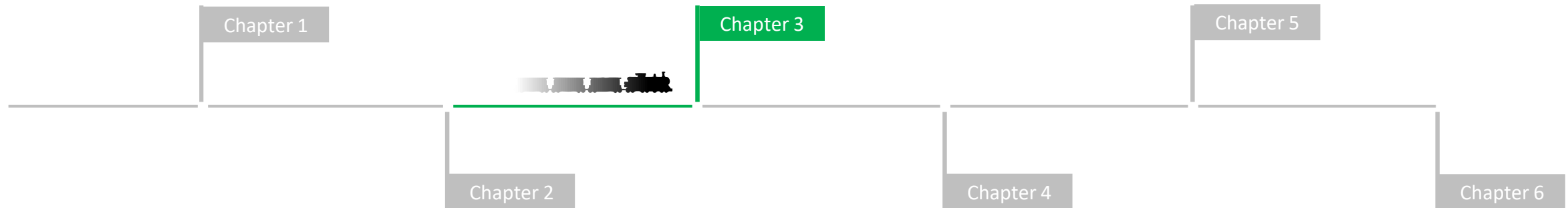


100%


- sea transport
- railway transport
- motor transport
- other transport modes (air, internal water, pipeline, cable etc.)

Chapter 3


Review of the current rail infrastructure development projects in Russia that may affect the Barents Region transport




Analysis of Policy Documents

 The number of documents used to select railway infrastructure development projects


8

 Selected projects to create the scheme

219

 The number of Russian regions expected to develop railway infrastructure in their territory

67

 The number of projects implemented in the Barents Region

12

Main Policy Documents

- Land-use planning scheme of the Russian Federation in the field of federal transport (railway, air, sea, inland water transport) and federal highways
- Transport Strategy of the Russian Federation to 2030 with the forecast for the period to 2035
- Long-term Development Programme of JSC Russian Railways to 2025
- Development Strategy of the Russian Arctic Zone and Provision of National Security for the period to 2035
- National Programme of the Russian Federation “Development of the Transport System”
- Integrated plan of the trunk infrastructure modernisation and expansion for the period to 2024, including the federal projects identification summaries:
 - Railway transport and transit
 - Communications between centres of economic growth

Types of work to be performed

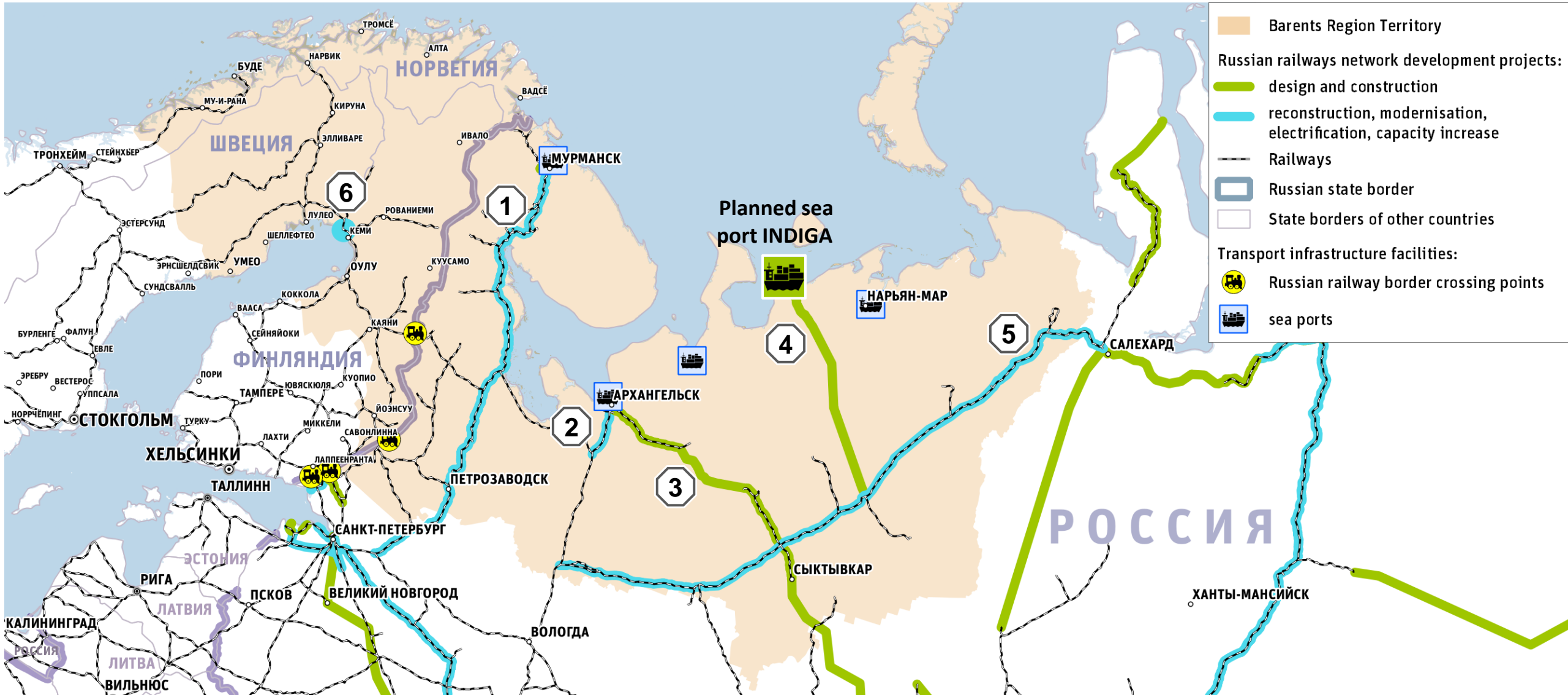
- Construction, reconstruction, capacity increase, modernisation, electrification of railway tracks
- Construction and reconstruction of railway stations



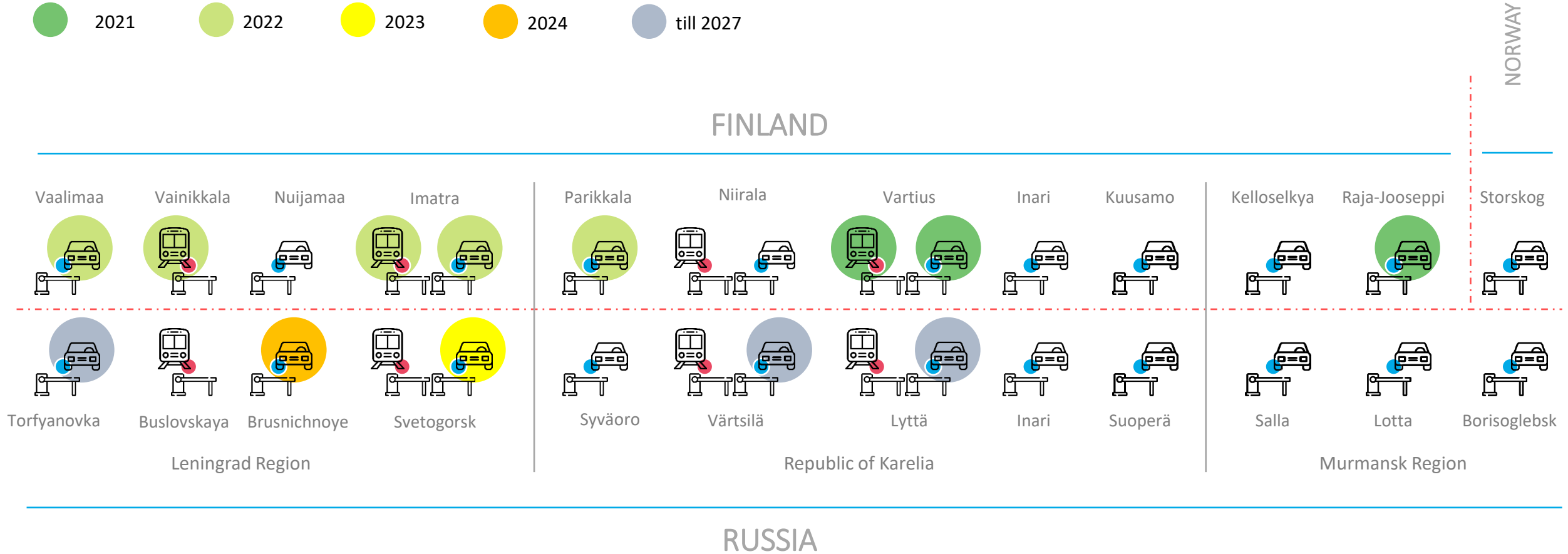
Russian Railways Network Development Projects



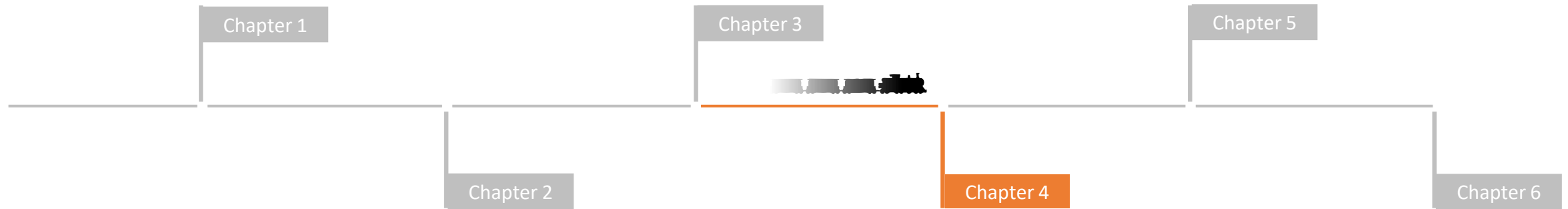
Russian Railways Network Development Projects. North-West Region



Development of Border Crossing Points



Chapter 4



Review of the ongoing and planned major investment projects involving rail transport that, when completed, may have impact on trade turnover with the Barents Region countries

Information Sources. Investment Projects

Investment portals, state information sources

Investment platform of Russian regions	https://www.investinregions.ru/
Investment portal of Nenets Autonomous District	http://investnao.ru/nao-rus/projects/investprojects/index.html
Investment portal of the Komi Republic	https://invest.rkomi.ru/
Web site of the Development corporation of the Republic of Karelia	https://invest.kr-rk.ru/
Investment portal of Murmansk Region	https://invest.nashsever51.ru/
Investment portal of Moscow	https://investmoscow.ru/
Investment portal of the Republic of Tatarstan	https://invest.tatarstan.ru/ru/#start
Investment portal of Tyumen Region	https://investtyumen.ru/investoru/
Investment portal of Tula Region	https://invest-tula.com/
Investment portal of the Republic of Bashkortostan	https://investrb.ru/ru/
Investment Portal of the Arctic Zone of the Russian Federation	https://arctic-russia.ru/projects/
Web site of the Ministry of Arctic and Economic Development of Murmansk Region	https://minec.gov-murman.ru/activities/invest/
List of special investment contracts (SPIK), Ministry of Industry and Trade	https://gisp.gov.ru/spic2/pub/spic/search/

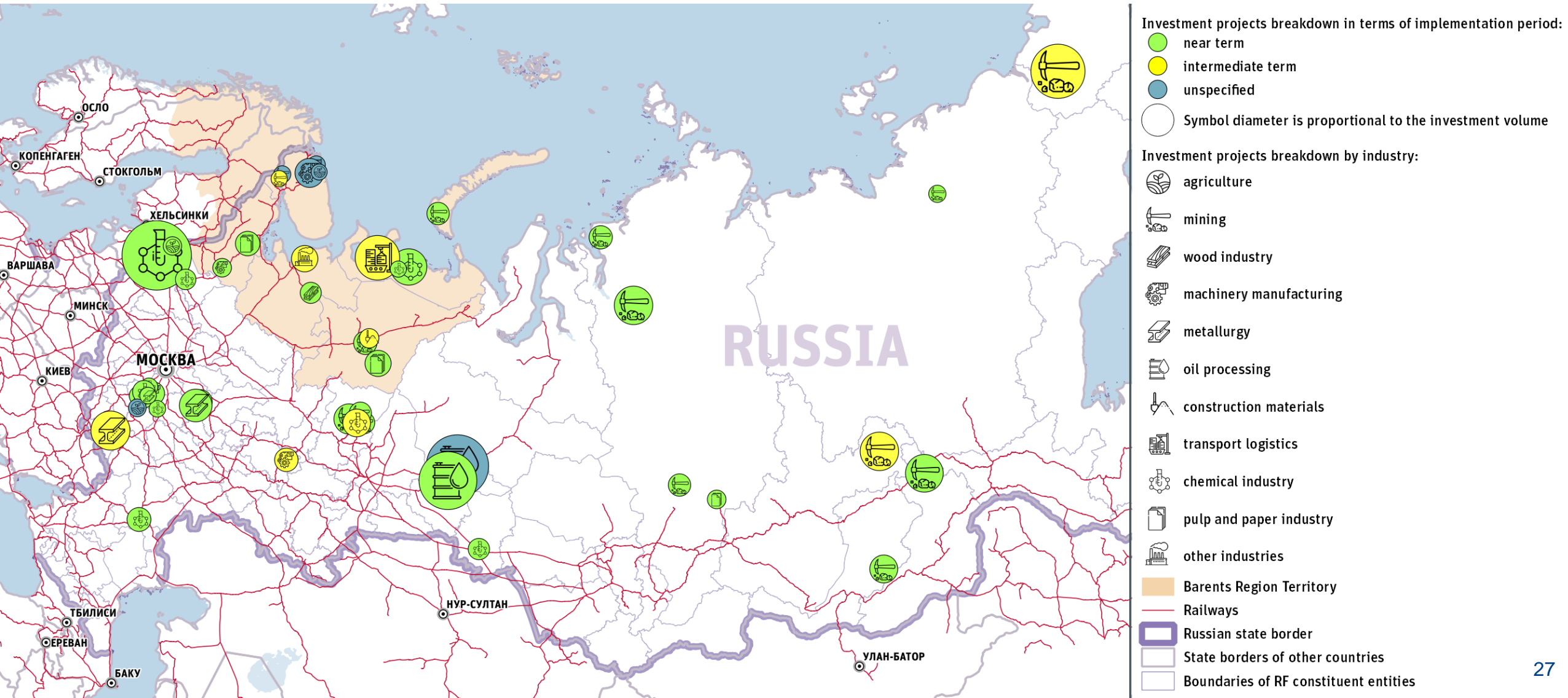
Investment project agreements concluded at economic forums

Investment project agreements concluded at St.Petersburg International Economic Forum 2021	http://www.kremlin.ru/supplement/5649
Outcomes of the Eastern Economic Forum 2021	https://forumvostok.ru/archive/2021/outcomes-of-the-eef-2021/
Outcomes of the Eastern Economic Forum 2019	https://forumvostok.ru/archive/2019/outcomes-of-the-eef-2019/
Outcomes of the Eastern Economic Forum 2018	https://forumvostok.ru/archive/2018/outcomes-of-the-eef-2018/
Outcomes of the Eastern Economic Forum 2017	https://forumvostok.ru/archive/2017/eef-2017-outcomes/
Yalta International Economic Forum 2019	https://yalta-forum.com/Itogi/

Information from the Russian regions being part of the Barents Region

List of the priority investment projects in Arkhangelsk Region	Information source: Ministry of Economic Development, Industry and Science of Arkhangelsk Region
Ongoing and planned major investment projects in the Republic of Karelia	Information source: Karelia Ministry of Economic Development and Industries

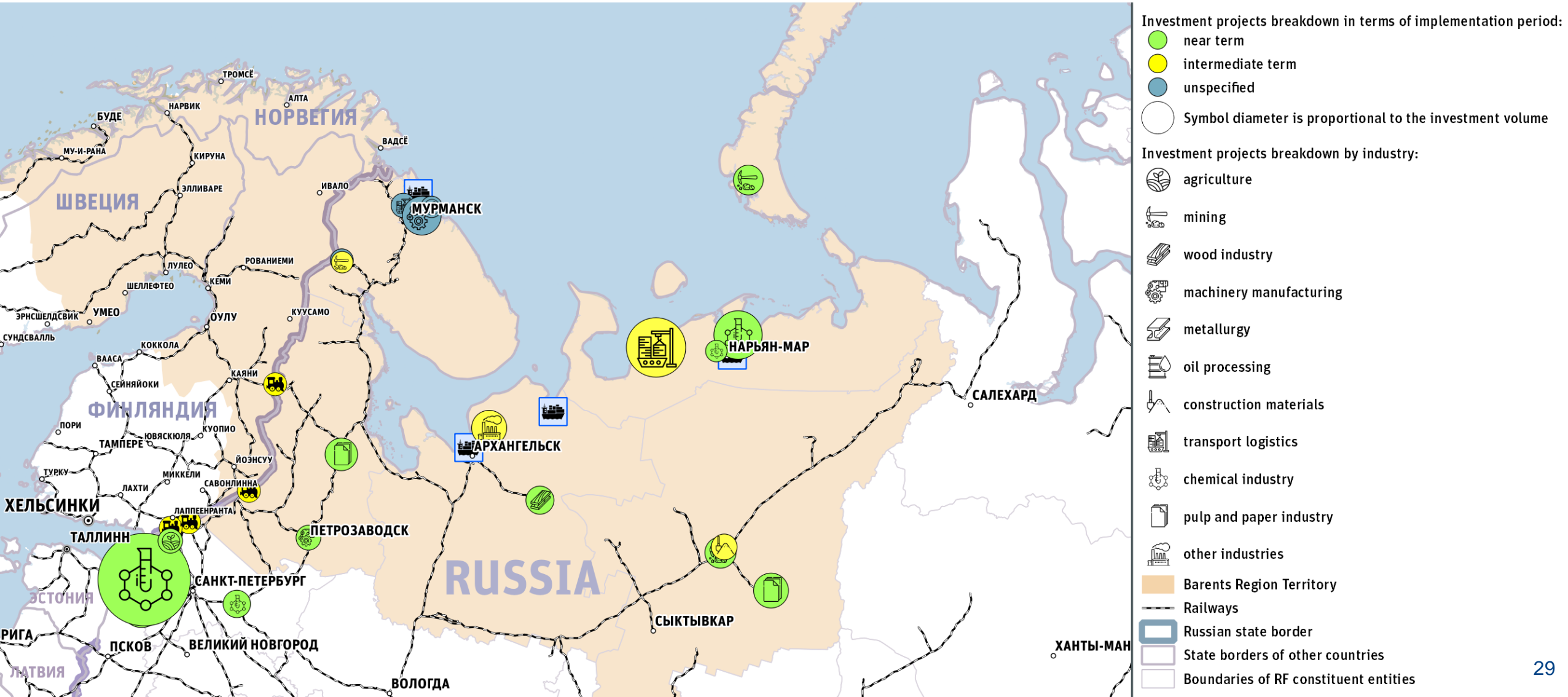
Major Investment Projects



Major Investment Projects



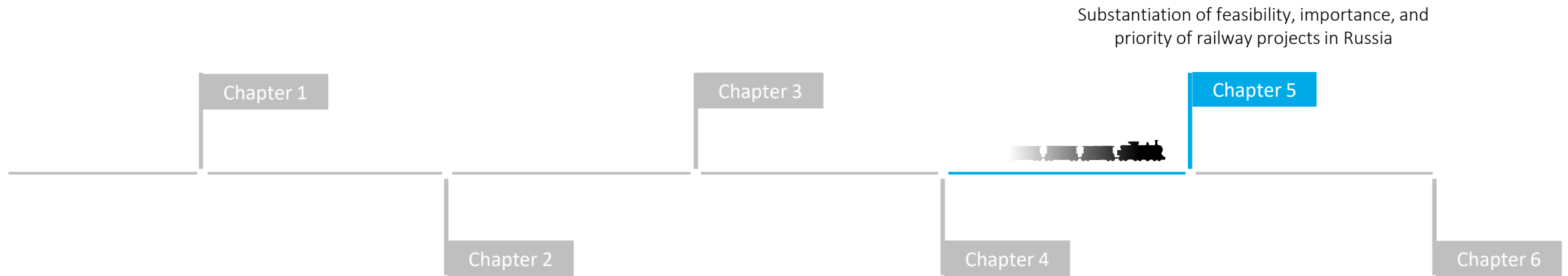
Major Investment Projects in the Barents Region



Major Investment Projects



Chapter 5



Ranking method of Russian Railway Development Projects

Ranking method is based on the evaluation of projects in terms of the following five criteria

Weight of each criterion defined by expert evaluation

criterion 1 Policy Document Type

- W_1 (criterion 1 weight) – 26%

criterion 2 Implementation Period

- W_2 (criterion 2 weight) – 23%

criterion 3 Interest

- W_3 (criterion 3 weight) – 25%

criterion 4 Specified/Not specified Budget

- W_4 (criterion 4 weight) – 14%

criterion 5 New freight volumes

- W_5 (criterion 5 weight) – 13%

Project Rank (R_i) evaluation formula

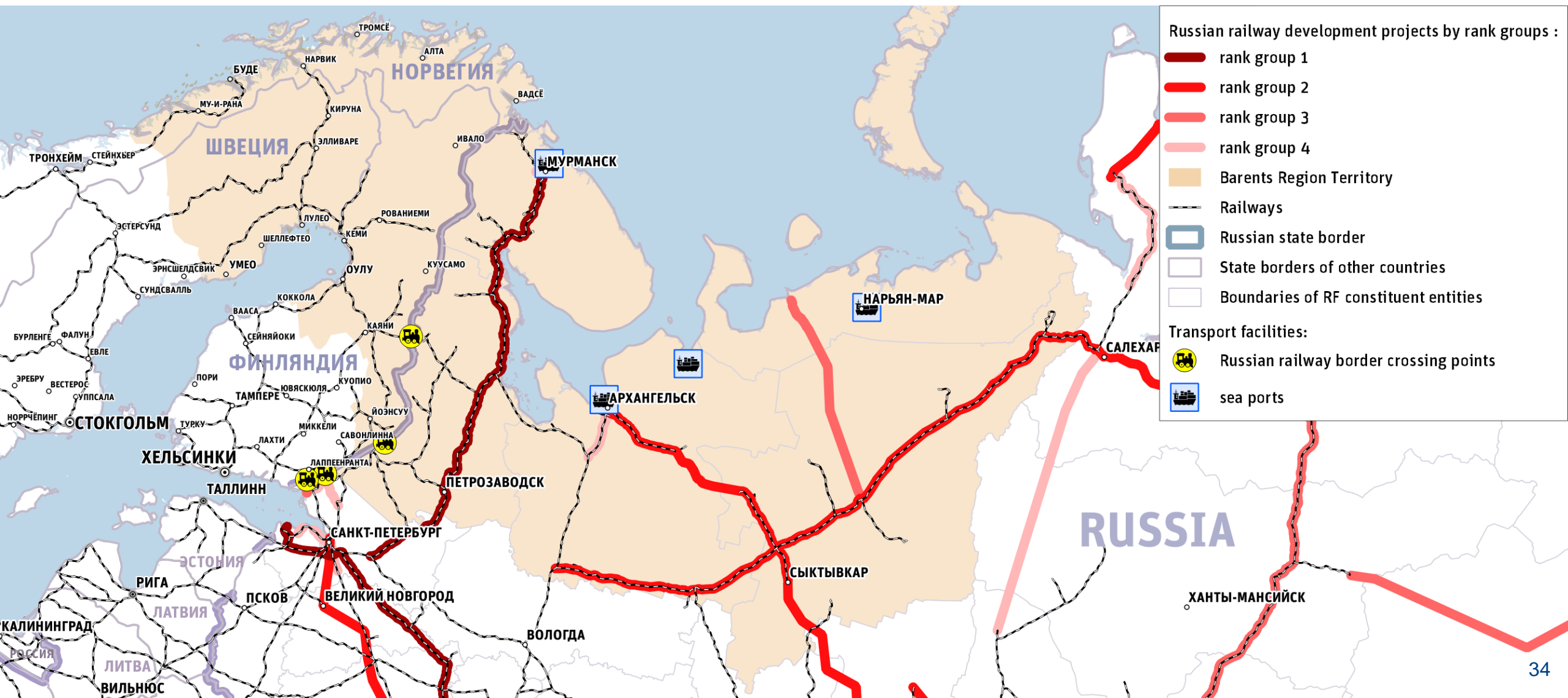
$$R_i = k_{1i} \cdot W_1 + k_{2i} \cdot W_2 + k_{3i} \cdot W_3 + k_{4i} \cdot W_4 + k_{5i} \cdot W_5$$

Russian Railways Network Development Projects by Rank Group

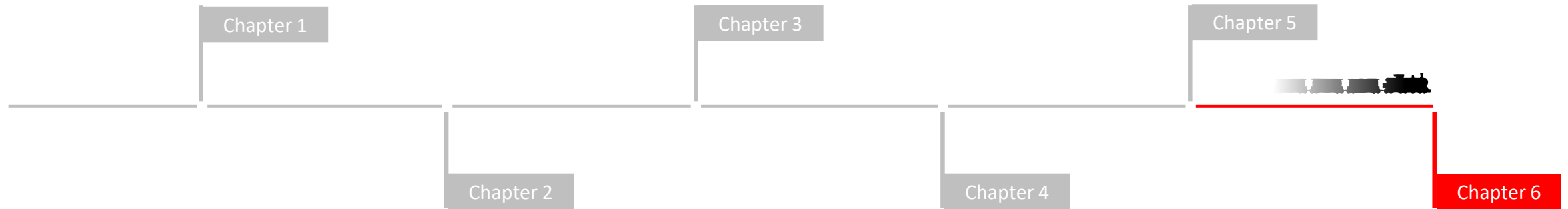




Russian Railway Network Development Projects by Rank Group



Chapter 6



Analysis of a potential change in volumes of export/import flows through rail border crossing points between Russia and the EU on the transport situation in the Barents Region

Project Implementation Impact on the Transport situation in the Barents Region

Expected additional freight volumes through the border crossing points if the planned railway development and investment projects are implemented:



Svetogorsk - Imatra: **6** million tons per year



Värtsilä - Niirala: **7** million tons per year



Lyttä- Vartius: **1** million tons per year

Additional freight volumes are estimated at about **14** million tons per year, and the total freight volume will amount to **43** million tons per year.

Taking into account the growth in container transit through the Barents Region, the share of containerized transportations may reach **30%**



InfraTerra



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Lead Partner

Regional Council of Kainuu
Project Manager Tatiana Petrova

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e-mail: tatiana.petrova@kainuunliitto.fi

