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IMATRA-SVETOGORSK KANSAIN-VÄLISEN RAUTATIEYHTEYDEN KEHITTÄMISEN TOIMENPIDE-SUUNNITELMA
There are two reports, the scope of this report is IMATRA BCP and development actions planned on the FINNISH side of the border.

REGIONAL COUNCIL OF SOUTH KARELIA

THE ACTION PLAN

FOR DEVELOPMENT OF

INTERNATIONAL RAILWAY CONNECTION AT IMATRA-SVETOGORSK BCP

Imatra BCP report

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EP LOGISTICS PLANNING AND CONSULTING
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Transport Integration LLC.

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Imatra BCP report

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SUMMARY

Imatra Svetogorsk BCP today

In the end of 2018 the Council of South Karelia assigned a group of consultants both from Finland and Russia to prepare an action plan for the Imatra Svetogorsk BCP status change. The team worked for the first third of 2019 and prepared and delivered two action plans, which have been synchronised. The action plans defined the needed investments on both sides of the border. This action plan has been prepared for the Finnish side of the Imatra BCP. There is a separate action plan report for Svetogorsk BCP in Russian side with similar content.

The Imatra Svetogorsk BCP is one of the 11 BCP's in Finnish-Russian Border and one of four Railway BCP's. Imatra is the only RwBCP which is operating on temporary status only. The most important type of goods is timber imports to Finland.

Basically the Imatra Svetogorsk BCP needs to be equipped with sufficient equipment for railway traffic border crossings needs, before it could be opened for international traffic. In practice there are certain investments financed and currently (2019-2022) underway to introduce new equipment, security systems and new perimeter arrangements at the Imatra Svetogorsk BCP. These items range from x-ray units, CCTV's to fencing etc. Additionally there are railway development needs for both Imatra-Imatrankoski-border track section and Pelkola track yard.

There are some legal changes to be addressed in both countries in order to be carried out before the operative changes can be implemented. For instance certain definitions shall be changed to reflect the situation, now planned to be realised prior to 2025.

Imatra Svetogorsk BCP has served for bilaterally border crossing people and cargo since 1972. In May 1997 both Finnish and Russian authorities agreed in principal to change the status of Imatra Svetogorsk BCP from temporary, bilateral border crossing point to an international one. It was agreed that as soon as the BCP has been equipped with sufficient equipment for vehicle and railway traffic border crossings needs, the Imatra Svetogorsk BCP will be opened for international traffic.

In July 2002 the BCP Status of Imatra Svetogorsk BCP was changed from temporary BCP to international BCP but only for the vehicle traffic of RdBCP. The RwBCP, railway traffic was still left to run on bilateral, temporary BCP basis, where all cargo and passenger traffic is subject border commissioners mutual approval of both countries.

In 2016 the new railway interchange agreement between Finland and Russia was renewed and certain earlier limitations were abolished, like the BCP related allowed commodity list. The new agreement is known in Finnish legislation by SopS 85/2016. In 2017 the BCP has introduced a 24/7 service hours for BCP users travelling with cars, trucks and bicycles. The railway service is still bilateral and the RwBCP is running basically from morning until late evening six days per week.

Why International RwBCP status is needed

The difference of temporary and international RwBCP is that the international border crossing point works on principles of international trade. International BCP can be used as a channel, a route to plan for and used to make the crossing over the border. The temporary RwBCP can process only trains, passengers and transportation equipment

registered in either Russia or Finland and yet, the passing trains and goods have to have permission given by the border commissioners of both countries and the permission has to be approved in advance.

The Imatra Svetogorsk RwBCP is the only RwBCP which is operating as temporary BCP status. This temporary status does not support the trading principles for swift movement of traded goods and openness of the BCP's for all traders alike poses a handicap in railway network utilization and has generated increased industrial concern. The industrial actors would like to see the status change as it was meant to be in 2002, while the Imatra was opened as an international BCP for travellers and goods moving with small cars and heavy vehicles. The International status would also open the route for new regional passenger train service development and if it would be established, it would create possibilities for travellers, tourism and give boost to regional economy on both countries.

Map 1 Imatra BCP with International BCP status can provide shorter, more direct route, yet funtional route to Kamenogorsk Losevo track than the other BCP's. In International trade it can open more operative windows to existing traffic on current BCP's on other rail segments such as dangerous goods and Allegro and Lev Tolstoy trains in their current route.

The lack of international BCP status prevents the use of Imatra Svetogorsk RwBCP route for international cargo and passengers to be transported on railways. Currently, only by border commissioners mutual and in advance given approval, the goods and passenger of either from Finland or from Russia can use the Imatra RwBCP.

In the past winter this lack of International status prevented the use of Imatra RwBCP as a quick relief valve in railway network. Due to repeatedly received significant snow falls and some related consequences, certain consignments faced problems in railway logistics, the railyards got congested, first around BCP's then further away and finally some 70 km away. The access windows were delayed forward and some industrial importers reported three weeks waiting times. The actors were seeking to use counter measures, to re-route trains and make temporary arrangements, but is all took some time and the lack of International status at the Imatra Svetogorsk RwBCP did not help the situation.

With International status, this RwBCP could have acted more flexibly to receive, store and dispatch trains and empty wagon trains regardless if there had been 3rd country equipment or cargoes. In capacity and in functional point of this would had eased the planning and operations situations significantly. It also has other implication towards

the market circumstances as the flexible and less delayed railway service would be more agile in competion against the truck service. While creating new BCP's to be used by international traders, it will create attractive opportunities for competing service providers, as they all are not after the same resources on the same BCP.

How the RwBCP status change could be made

New investments are needed on both sides of the border. On the Finnish side and on the Russian side the needs are significant, yet somewhat different. Both Russia and Finland have already invested heavily to improve the railway network on the Karelian isthmus.

In recent years, investments valued more than 2 Billion Euros have been made to upgrade railway network and some of them are still underway with budgeted and government granted annual reservations. In the Russian side the 1,9 Billion Euro valued large development investment to Losevo-Kamenogorsk was completed in 2017. The remaining investments proposed in this study and described in Russian report, are some 90 million Euros on railway and track yard reconstruction from Kamennogorsk to Svetogorsk BCP.

On the Finnish side in South-East railway network there is underway large development investment for Luumäki-Imatra railway section worth of 190 Million Euros. Project will be implemented until year 2023. Imatra BCP has been financed with ENI CBC project with implementation time 2019-2022 worth of 5,2 Million Euros. The remaining investments proposed in this study and Finnish side report, are worth of 45 Million Euros until year 2025. Additionally it is proposed investments worth 33 Million Euros until year 2035 if maximum traffic forecast will be realised and seen realistic.

In whole Finnish South-East railway network investments improve capacity and competitiveness of train transportation due to international RwBCP status and increased axle load to 25 tons and possible maximum train length to 1100 m. Significant benefit is realised also in decreased transportation costs due to wider electrified railway network and triangle track connection between Imatra RwBCP and Kouvola direction. At the same time circumstances for more safe railway environment is achieved with railway signalling system and traffic control development and level crossing improvements. Environmental benefits would realised when traffic is transferring from road to railway.

While committing to these changes and by securing the Imatra Svetogorsk BCP development in the budget processes on both sides of the border, Imatra Svetogorsk BCP can be upgraded to an International RwBCP by 2025. The first practical steps are to introduce the Imatra Svetogorsk BCP development initiative to the ministeries on both countries. On the Finnish side we are living a finest hour regarding the daily politics. The new government will be nominated in weeks to come. The first task regarding the transport sector is to nominate the ministerial working group who starts to prepare the Transport policy report to Parliament for the new 2019 Government.

The Imatra BCP development should be submitted to the ministerial working group and it should be included in the list of Transportation Infrastructure Investments. Then the Imatra RwBCP development needs to be presented by the Finnish Transport Infrastructure Agency to the Ministry of Transport and Communication, who on their behalf would submit the Imatra BCP for the Budget 2020 negotiations. By securing the funds, the Finnish Transport Infrastructure Agency could start the detailed railway design and ELY

centers could move ahead with challenging construction projects needed on the Finnish side. In addition to these proposed steps, there are many things to be taken care of in the Road Map but with these early steps the process can be initiated. The remaining steps have been described later in this report.

What are the benefits, life after 2025

Naturally the world is not complete after the Imatra Svetogorsk RwBCP investments. By the year 2025 the new regional passenger train service could run for the first operational year. There will be significantly more freight traffic on Imatra Svetogorsk BCP route. There are competing cargo companies on railway and they are able to compete with HCT trucks and with inland waterway transports on timber transports. The general competitiveness of railway transportation has improved and there are long distance services to more remote stations in Russia, Kazakstan and beyond. Also GCC region projects on the Persian Gulf bring in supplies from companies operating in Russian NW and southern Finland.

The benefits for the industry are that their carbon footprint has been decreased, thanks to reduced road transports. The train units are more efficient as the 100 t wagons are business as usual on Imatra Svetogorsk RwBCP route, enabling better utilization of new open gondola wagons and other 100 t gross weight wagons

The population has been increased in the region due to its attractive and developed travelling and transport opportunities. The St.Petersburg will have more people than ever before. The travelling and tourism is looking more environmentally friendly nearby destinations. The private car is not that attractive with younger generations anymore and the queueing next to BCP is not an attractive way to travel.

These phenomena in 2025 mean more users on railway, both cargo and passengers and by that, reduced the number of cars on the roads. There is more demand to railway capacity, both on Finnish South-East mainline but also on the Imatra-Pelkola track section. If traffic demand is increasing as it is forecasted in maximum scenario it is additionally needed to improve railway capacity with investments to the Imatra-Pelkola track section and Pelkola track yard.

TERMS AND ABBREVIATIONS

TERMS

Border Crossing Point (BCP) means any crossing point authorized by the competent authorities for the crossing of external borders. In Finnish legislation, a BCP is a location where you can cross the Schengen border. BCPs perform tasks assigned by their government and provide facilities for border control authorities such as Customs and Border Guard, so there are two BCPs on both sides of the border. In this report we also use term **Road Border Crossing Point (RdBCP) and Railway Border Crossing Point (RwBCP)**.

Border Crossing Point, Temporary is a location where only Finnish or Russian passengers and freight units of neighbouring countries can cross the border.

Border Crossing Point, International is a location where all passengers and freight units (including those of 3rd countries) can cross the border. There may still be limitations on, e.g, hazardous goods.

Border Commissioners on the Finnish-Russian border are appointed by their governments. They solve emerging issues on the border and have active co-operation. Border Commissioners are also obliged to take action to prevent unnecessary delays at the BCPs.

CBC Cross Border Cooperation (CBC) is a key element of the EU policy towards its neighbours. It supports sustainable development along the EU's external borders, helps reducing differences in living standards and addressing common challenges across these borders. It was first recognised as such in the European Neighbourhood and Partnership Instrument (ENPI) regulation for the period 2007-2013. This was confirmed for the period 2014-2020 in the European Neighbourhood Instrument (ENI) regulation adopted in March 2014.

CEF The Connecting Europe Facility (CEF) is a key EU funding instrument to promote growth, jobs and competitiveness through targeted infrastructure investment at European level. It supports the development of high performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services. CEF investments fill the missing links in Europe's energy, transport and digital backbone.

ELY Center. ELY abbreviation is Finnish for Centres of Economic Development, Transport and the Environment (ELY Centres). They are responsible for the regional implementation and development tasks of the central government. Finland has a total of 15 ELY Centres, which are tasked with promoting regional competitiveness, well-being and sustainable development and curbing climate change. The Imatra area ELY Center is the ELY Center Southeast Finland, located in Kouvola. https://www.ely-keskus.fi/en/web/ely-en/

EMU stands for electric multiple unit. It is a multiple-unit train using electricity as the motive power. There is no need for a separate locomotive, as electric traction motors are incorporated within one or a number of the carriages. An EMU usually consists of two or more semi-permanently coupled carriages, and it can be driven from both ends. "Allegro" and "Lastochka" trains are EMUs.

ENI European Neighbourhood Instrument. The ENI is the funding instrument for European Neighbourhood Policy (ENP) which covers cooperation with South Mediterranean countries (Algeria, Egypt, Lebanon, Libya, Jordan, Israel, Morocco, Syria, Tunisia, the occupied Palestinian territory and East neighbourhood countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine) either bilaterally or regionally (in this latter case also Russia is included). It aims to encourage democracy and human rights, sustainable development and the transition towards a market economy in neighbouring countries. The ENI is managed by DG NEAR under the responsibility of Commissioner Hahn.

Food Agency Finnish Food Agency was formed on 1st of January 2019 when the Finnish Food Safety Authority (Evira), the Agency for Rural Affairs and part of the IT services of the National Land Survey of Finland were merged into one single Authority. It promotes, monitors and studies the safety and quality of food; the health and wellbeing of animals; plant health; fertiliser products, animal feeds and plant protection products that are used in agricultural and forestry production; and propagating materials i.e. seeds and planting materials. The agency operatos acress the land and has its HQ in Seinäjoki. Food agency is responsible for the border inspection formely carried out by the Evira. https://www.ruokavirasto.fi/en/about-us/what-is-the-finnish-food-authority/

IBM Strategy, European Integrated Border Management Strategy is a Strategy in the field of external border management. There are several levels of European IBM, the overall level is the Policy level. Underneath is the EBCG Staretgy package, which consists of two strategig components, namely Technical and operational strategy for the European IMB and of the national IBM strategies of member states. The objective of IBM strategy is to develop and implement European integrated border management at national and Union level. Finnish National IBM strategy was audited in 15th of April 2019 and approved as a first nation within EU to be fully compatible. https://ec.europa.eu/home-affairs/content/european-integrated-border-management_en https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1624&from=EN

Infrastructure Manager (IM). In EU and in EEA the IM is responsible for investments, maintenance, ownership and allocation of track capacity regarding a certain railway network. Often, the largest IM is a State actor (in Finland = Finnish Transport Infrastructure Agency, FTIA). According to Rail Transport Act, owners of private sidings often have responsibilities of IM. Division of railway system to IMs and RUs is connected to opening up the railway market to competition and it is often regarded as a means of lowering the barriers to entry and improving the transparency of markets.

PTR co-operation is a co-operation between the Finnish Police, Customs (Tulli in Finnish) **and Border Guard (R**ajavartiosto in Finnish). This co-operation has been running for more than two decades and it is defined by law 687/2009. The basic principle is that any of authorities have been authorized to conduct tasks of one or another here named official under the supervision and guidance of the responsibility authority. For example, the Border Guard conducts Customs surveillance and inspections on small BCP's where the Customs does not have 24/7 presence or the Customs takes care of border control tasks of the Border Guard in Harbours for Merchant Vessels. The common nominator in PTR-co-operation is crime prevention where surveillance and internanational co-operation tasks and single duties will be carried out appropriately, effectively and economically.

Rail transport agreement between Finland and Russia 2016. Instruments of ratification concerning the agreement were exchanged in Moscow on 21 November 2016. The 2016 agreement replaces the agreement, and its appendices, of 1997 on connecting railway transport. The 2016 agreement applies to direct international passenger and goods transport between Finland and Russia. Direct transport between the countries refers to passenger railway transport where no change of trains is required and to goods railway transport where the goods do not have to be loaded or unloaded for transfer at the railway stations on the border. The agreement allows all railway transport undertakings located in Finland or elsewhere in the European Economic Area to operate in the Finnish railway network in railway transport services between Finland and Russia. It did not open up Russia's internal railway markets to undertakings operating in the EU, nor did it open Finnish markets to Russian railway operators. https://www.lvm.fi/en/-/rail-transport-agreement-between-finland-and-russia-enters-into-force-on-22-december-2016-912438

Railway Undertaking (RU). In EU, an RU operates on a network owned by IM. The conditions for operating railway services are an operating licence, the railway operator's safety certificate, allocated capacity and an access agreement (FTIA 2019a). It is assumed here that the RU has the necessary permits and qualifications to operate or it can be subcontracted to entity which has the permits and qualifications in place. The Railway undertaking must be a legal "person" in EU country where it operates. In this report the Railway Undertaking is referred as the railway operator if not especially needed to mean the Contractual Undertaking, then the Railway Undertaking will be used.

Schengen Agreement (Schengen regulations) means abolition of common border controls inside the Schengen area. It was signed by all EU member states in 1997 and EU has since agreed that Switzerland, Norway and Iceland are now part of Schengen area. Of the new EU member states, Croatia, Romania and Bulgaria are not part of the Schengen area. Border between Finland and Russia is also a Schengen border.

Transport policy report to Parliament by the new 2019 Government. Transport policy guidelines and transport network investment and financing programme until 2030. [Uusi liikennepoliittinen selonteko]. In 2008 the Finnish Government submitted its first report on transport policy to Parliament. The report was prepared under the leadership of the ministerial working group on transport and communications chaired by Ms Anu Vehviläinen, Minister of Transport. It has been approved that a Government transport policy report will become a standard practice and a report will be issued to Parliament in the beginning of every parliamentary term.

A key target of the report is to improve long-term sustainability in transport policy. The report also includes decisions on transport investments and their financing for the current four-year parliamentary term. This will provide better opportunities for planning and implementing long-term projects and taking the economic fluctuations in the civil engineering market into consideration. All Transport Infrastructure project shall be listed on the Transport policy report to Parliament in order to proceed in public Financing.

ABBREVIATIONS

BCP	Border Crossing Point (especially Schengen Border)
CBC	Cross Border Cooperation
CEF	The Connecting Europe Facility
EAEU	Eurasian Economic Union
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EMU	Electric multiple-unit
ENI	European Neighbourhood Instrument
EU	European Union EU Mobility and Transport pages - Finland; Finland, Rail https://ec.europa.eu/transport/modes/rail/ertms/countries/finland_en
GCC	Gulf Co-operation Countries
IM	Infrastructure Manager
RU	Railway Undertaking

1. INTRODUCTION

The commerce and travel related border crossing between Finland and Russia is essential for the companies and citizens working and living on both countries. The border to be crossed is the longest land border (1340 km), out of the three landborders of Finland. On the Russian perspective, it is the land border to Finland, today also to EU area. The Russian border to Finland is one of the 4 borders to EU countries, and Finnish Russian border forms 58,7 % of Russian EU land borders.

Picture 1 The Imatra Svetogorsk BCP is one of the 11 BCP's in Finnish-Russian Border and one of Four Railway BCP's. Imatra is the only RwBCP which is operating on temporary status only. Picture Source: City of Imatra.

On the Finnish-Russian land border there are 11 Border Crossing Points (BCP). When categorised by mode of transport, wether the traveller is moving with vehicle, bicycle or train, wether the goods or traveller has origins on one of these two border countries or elsewhere, the BCP's are somewhat different.

Another approach to BCP's can be the service times, what are the opening hours of the particular BCP's. Some stations are open for 24/7 and some BCP's are closed some 9-13 hours in night time. There are very practical reasons behind these service hours, when there is no volumes and demand for 24/7 service hours, then the BCP is open on daytime hours only. That is the case also with temporary stations, as the volumes are so low, the day time service of border authorities can cope with the demand.

Today the current BCP system between Finland and Russia recognizes basically just two types of BCP's, the International EU/Schengen area BCP's and temporary, bilateral BCP's. Most of the BCP's are international but there are still two temporary, bilateral BCP's between Finland and Russia and additionally since 2002 the Rwy traffic of Imatra BCP has been on temporary status only. This is a two tier system. If a BCP is operated on temporary basis, it has (nationality) limitations to the BCP users, vehicles and in

some cases also transport units to Finnish and Russian traders and registers only. Therefore this temporary status has been considered to be a major operative defect in BCP's currently serving the trade and travellers on the border of these two countries. (The BCP's have been described more widely in Chapter 2.).

In last year these BCP's on Finnish Russian border handled various vehicles as follows. There were 524 thousand trucks and buses crossing the border, 3,37 million cars and vans and 550 thousand train wagons. That makes some 10'700 vehicle crossings and 1'500 train wagon border crossings per day.

Picture 2 Imatra BCP. Picture source: Etelä-Saimaa

With passenger traffic, the BCP's Vaalimaa, Nuijamaa, Vainikkala, Imatra recorded in 2018 some 7,2 million passenger crossings combined, 77 % of all border crossing passenger and traveller traffic. This is equal to some 20 000 people per day or 10 000 per direction per day through these four BCP's.

The traded goods in Finnish Russian trade transported over the land border, the west bound BCP cargoes are transported 72 % by railway as the eastbound cargoes are transported 85 % by trucks. Wagons arrive to Finland in loaded condition out of 98 % of cases but only 7,7% of wagons towed from Finland to Russia are loaded. This reflects the type commodities traded, the Westbound cargo consists mainly of raw material, wood, minerals, chemicals and mined products as the Eastbound goods are more delivery time sensitive goods such as manufactured goods, machines, equipment and vehicles, paper and liquid products etc.

These two countries have westbound trade worth of 9,3 Billion EUR (2,6 % of Russian exports and 14 % of Finnish Imports) and eastbound 3,3 Billion EUR (In 2018 this formed 5,2 % of Finnish exports and 1,4 % of Russian Imports). In tonnage terms, 44% of this trade was carried over these land BCP's between Finland and Russia.

Out of these FIN/RUS BCP's, most of the trade and travelling is handled through 3 BCP's, through Vainikkala (RwBCP), Vaalimaa and Imatra (RwBCP). Vainikkala is the most important RwBCP of the whole land side border, handling all of the passenger traffic on railway and some 50 % of the railway cargoes crossing the Finnish Russian Border. When volumes of Vainikkala and Imatra are combined, these two BCP's handle 2/3 of all the railway traffic between Finland and Russia.

1.1. Project background

This project, THE ACTION PLAN FOR DEVELOPMENT OF INTERNATIONAL RAILWAY CONNECTION AT IMATRA-SVETOGORSK BCP does have it's focus on Imatra-Svetogorsk BCP, however, the project has larger hinterland area, which is equally important to comprehend. As the project is about the transport node Imatra-Svetogorsk on railway network and about railway transport, the project area spans from BCP as far West as Finnish West Coast and area of Southern Finland where almost half of the Finnish population lives and where the majority of production and consumption centers are.

When looking this BCP area (Including Svetogorsk forest production facility) and mills north of the Imatra Svetogorsk BCP, it is in the core of one of the largest forest production concentration of the world. This industrial concentration area is one of the main user of railway logistics of NW Russia and Southern Finland. Additionally the mining industry and chemical industry make large freight moves over the area and therefore they are part of this project interest groups. As there are large population (the combined number of population in the area is in excess of 10 million inhabitants) and production centers on both sides of the Imatra Svetogorsk BCP, there are also significant number of logistics centers, which operate or which are being developed to operate on railway network on medium and on long range international routes. Their primary BCP's are the Vainikkala-Buslovskaya and Imatra-Svetogorsk.

Imatra-Svetogorsk is the only RwBCP which is operating as temporary BCP status. This temporary status does not support the trading principles for swift movement of traded goods and openness of the BCP's for all traders alike poses a handicap in railway network utilization and has attracted increasing industrial concern. The Industrial actors would like to see the status changed as it was ment to be in 2002, while the Imatra was opened as an International BCP for travellers and goods moving with small cars and heavy vehicles.

The lack of international BCP status prevents the use of Imatra Svetogorsk route for International cargo and for passengers to be transported on railways. Currently, only by border commissioners mutual and preceding approval, the goods and passenger of either from Finland or from Russia can use the Imatra Railway BCP.

Imatra Svetogorsk BCP history and current status

Imatra Svetogorsk BCP was opened for construction site logistics needs of the OAO *Svetogorsk* pulp- and papermill combinat in 1972. Since then twenty five years later in May 1997 the Diplomatic Notes[1] were exchange in order to change the status of Imtra Svetogorsk BCP from temporary, bilateral border crossing point to an International one. It was agreed that as soon as the BCP has been equipped with sufficient equipment for needs of vehicle and railway traffic border crossings, the BCP Imatra Svetogorsk will be opened for International traffic.

[1] Note exchange is a common process in diplomacy between two countries. It is process where two countries exchange official letters while seeking to enter into agreement, working towards a resolution or resolve a situation which is seen differently between countries. It is a standard procedure in international trade and trade agreements, yet also in dispute situations between countries.

In July 2002 the BCP Status of Imatra Svetogorsk BCP was changed from temporary BCP to international one but only for the vehicle traffic. The railway traffic was still left to run on bilateral, temporary BCP basis, where all cargo and passenger traffic is subject border commissioners mutual approval of both countries.

In 2010 and in early 2011 there were a new initiative round between Russia and Finland with an idea to develop the Imatra Svetogorsk RwBCP to level the freight load between the Vainikkala-Buslovskaya and Imatra Svetogorsk RwBCP's but the development process was not finalized at that point.

In 2016 the new railway interchange agreement between Finland and Russia was renewed and certain earlier limitations were abolished, like the BCP related allowed commodity list. The new agreement is known in Finnish legislation by SopS 85/2016.

In 2017 the BCP has introduced a 24/7 service hours for BCP users travelling with cars, trucks and bicyckles. The railway service is still bilateral and the RwBCP is running basically from morning until late evening six days per week.

The investments in railroad and BCP Infrastructure

There has been EU CBC projects to develop Finnish Russian Border crossing facilities over several years, where EU Investments have been directed to facilities, equipment and reconstruction project on both side of the border, worth of 43 Million Euros (There are more about the investments and their locations in Chapter (6.4).

On the Finnish side there are significant railway investments under way (Imatra-Luumäki), worth of some 200 million Euros. This will improve the capacity on Finnish eastern mainline as the new forest production Mills bring new volumes on rail. Additionally there are mill, bio-refinery and terminal investments (More than 50 Million Euros decided and) underway in southern Finland by companies, cities and terminal operators such as UPM, M.Rauanheimo, City of Kouvola and City of Pori. Also the large mill projects such as Metsä group in Kemi and Finnpulp in Kuopio are likely to affect to railway transportation demand on whole country.

In 2017 Russia completed a massive railway investment project (worth of 1,9 Billion EUR) between Kamenogorsk-Losevo (68 km) and since then part of the cargo traffic from Buslovskaya to St.Petersburg and further, has been shifted to use the Buslovskaya Kamenogorsk – Losevo St.Petersburg route in order to provide more and wider windows for the passenger trains Lev Tolstoy and Allegro currently using the shortest southern railway route. This serves the long term traffic segmentation sought for by several entities working with International railtraffic of the Carelian Isthmus.

Since then there has been discussions on different levels with variating intensity throughout the years. There has been constructive initiatives but users in early years of first decade of 21st century.

There has been initiatives by regional councils on regional governments on both sides, but despite the significant EU CBC projects, National and Russian Federation investments (in excess of 2 billion Euros in last ten years on related railway infrastructure alone) made on railway infrastructure on both sides of the border, so far the coordinated plans to equip the Imatra BCP's on both sides simultaneously, has been missing.

About this project

In 2018, the Regional Council of South Karelia conducted a tender for development of the Action Plan, which was won by the International Consortium of four consulting companies, three Finnish companies (EP-Logistics Oy, VR Track Oy (known as NRC Group Finland Oy since 7th January 2019), and Proxion Plan Oy) and a Russian company Transport Integration Ltd. (TIG), specializing in preparation of strategic documents and programs for the transport sector of Russia. This report is one of the two Action plan reports. This is about Svetogorsk-Imatra BCP development, actions needed on the Finnish side and why they are necessary. The other report is looking the Imatra-Svetogorsk BCP development steps on the Russian side.

The objectives of the Northern Growth Zone include:

- increasing Finland's competitiveness on the export and transit market
- create sustainable, traditional and digital traffic and transport services
- commercialise innovations through international cooperation
- increase the functionality of a uniform labour market area and economic area
- enhance Finland's attractiveness as an operating environment of business sector.

http://www.turku.fi/en/northern-growth-zone

The action plan project was financed with the aid of the Northern Growth Zone. Managed by the Helsinki-Uusimaa regional council, this partnership aims to promote growth and competitiveness along the major Finnish regions and cities. The Northern Growth Zone covers the main ports, international airports, border crossing points, top universities, and +50 % of people, jobs, GDP and R & D & I in Finland. On this project the additional contributing partners were Kouvola Innovation and Väylä (Finnish Transport Infrastructure Agency).

1.2. Objectives

The project objective of this Finnish Russian project is to define and prepare a list of required actions for the Imatra Svetogorsk RwBCP status change to be recognized as an International BCP and to be able to provide wider spectre of services for the transportation of goods and regular passenger traffic between Russia and Finland.

The action plan shall be delivered to Ministry of transport and Communication of Finland who shall present the report to the Russian Ministry of transport, which shall work together to hopefully decide about the development of the Imatra Svetogorsk RwBCP.

1.3. Status change benefits

The planned RwBCP status change is part of the larger picture. Today Imatra Svetogorsk bilateral RwBCP is an exception on Schengen border between Schengen area and rest of the world. Here Finland and Russia can make decisions on goods and trains to be transported over the border if they belong to one or another of these countries. That applies also to passengers travelling over the border with train.

The benefit from changing the status to an international BCP are tangible. The new status lifts the BCP to same level as other EU Schengen BCP's on EU's outer border. The users with cargo transport needs can use the border flexibly, like any other BCP's on the Finnish Russian border, or like any other RwBCP on Russian EU border.

The industrial cargo interests can make routing decisions where Imatra-Svetogorsk is part of the network, without need to reconsider if the goods, wagons or other transportation units are originally registered on third country. Also if a trader, instead of other BCP wants to reroute the goods via Imatra-Svetogorsk BCP, the process to cross the border are same as with other International BCP and there is no need to check the case from the Border commissioners of both countries and find the approval of both of them.

Therefore Imatra Svetogorsk RwBCP can serve as an alternative route for the goods to be transported in large quantities in short period of time and/or serve as a rapid return route for the empty wagons providing savings in logistics costs through reduced wagon day lease expences.

In addition to functional benefits for cargo and and tourism in general, the new international status shall make the Imatra Svetogorsk BCP eligible for new development financing instruments. The Imatra status change process should be accelerated as it is one step towards the application of TEN-T core netward status. This in turn, if successfully applied, would make Imatra BCP eligible for the CEF financing.

1.4. Method statement

The project followed a cross scientific approach to this action plan development work. The program of the project was as follows

- Collection of Initial information
- Current traffic analysis and forecasts for cargo traffic
- Current traffic analysis and forecasts for passenger traffic
- BCP status on both Imatra and Svetogorsk, including BCP stn Interviews. Technical requirements and development needs
- Interviews of companies and key actors involved in trade and/or using BCP
- Processes in BCP crossing for both cargo and passenger border crossings
- Action plan, roadmap, proposals and recommendations

The project was carried out by utilizing modern project management systems. This geographically scattered team[2] worked everyday like working in next room by using email, cloud services and video meetings to carry out daily project routines by communicating, preparing, storing exchanging project data. Yet, the project work is working with people, therefore several of Industrial actors were interviewed on their premices to bring in and to get full attention to the project matter. The list of interviewed companies and people can be found at the end of this report.

There were small differences in way of working, namely while the Finnish team worked with Industrial traders, cargo, terminal and shipping interests, cargo forwarders and railway companies, the Russian team conducted deep market survey and price elasticity analysis with the travellers and with train travelling preference. The team did meet roughly 6 times during the 4,5 months project period to exchange results and project information and discuss about the open issues.

International team of four companies with Regional Council of South Karelia representatives met with authorities in all four occasions, twice in St. Petersburg and twice with Finnish authorities.

Contribution by officials, public relations and media coverage

The project received full support from the authorities of both countries. The participation and contribution by the officials for each working group meeting has been excellent on both countries.

1.5. Information sources

To perform the study, the following official documents have been used:

Documents:

- Schengen Border Code (EURLEX 2016)
- Finnish National transport forecasts (Liikennevirasto 57/2018)
- Finnish Network Statement (Liikennevirasto 2018)
- Documents on Finnish BCPs with Russia such as (Nokki 2015) and (Sykkö 2015)

[2] Client, project sites and the team locations were as follows: Lappeenranta, Imatra-Svetogorsk BCP, Helsinki Haaga, Helsinki Pasila, Tampere, Tampere and St.Petersburg.

- Websites of Finnish Customs (Tulli 2019) and Finnish Border Guard (Rajavartiolaitos 2019)

Interviews are described in chapter 4.2 and interviewee list is on Appendix AA.

1.6. Project organization

The project team consisted of four consulting companies. Three of these companies have origins in Finland and fourth team member is the Transport Integration Ltd.

Graph 1 Project Team: EP-Logistics Ltd. - Proxion Plan Ltd. - NRC Group Finland Ltd. -Transport Integration LLC. NRC Group Finland is the new name of former VR Track since 7th January 2019

The project team consisted of several experts on various sides and levels of transportation, logistcs and Infrastructure development expertise with deep experience over the project area. The following brief project responsibility table is not exshaustive but it is believed that the most of the project participants have been included.

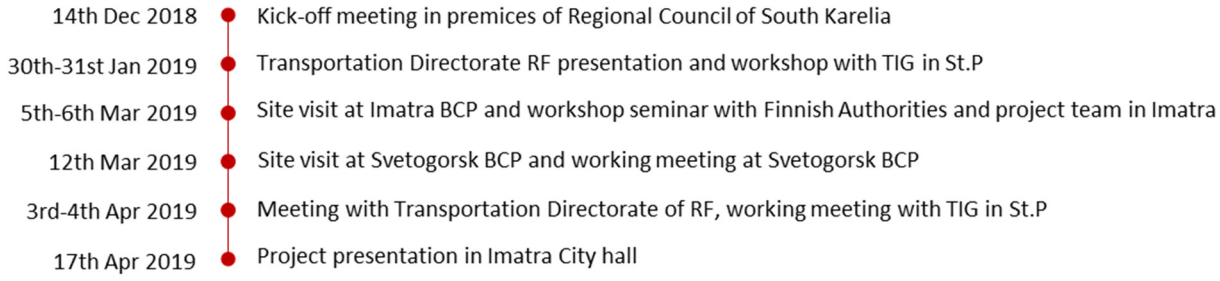
Name	Company	Project responsibilities
Esa Eerikäinen	EP-Logistics	Head of the project, Logistics expert, Industrial interviews, forecasts and BCP processes
Hannu Ranta	EP-Logistics	Logistics expert, QC
Tiina Kiuru	NRC Group Finland	Railway and BCP infrastructure, development cost estimates, processes and functional traffic analysis
Maija Vehkalahti	NRC Group Finland	Railway and BCP infrastructure, Interviews with Industrial services and railway passenger operators, forecasts and functional traffic analysis
Marko Nyby	Proxion Plan	Railway and BCP infrastructure, rolling stock expert, Interviews with Industrial services and rwy passenger operators, forecasts
Alexey Vorontsov	Transport Integration Ltd.	Team leader of the Russian project team, project coordinator, head of the logistics strategy work, head of the liasoning with russian transportation decision makers.
Svetlana Vorontsova	Transport Integration Ltd.	Key expert in the field of planning the development of transport infrastructure, forecasting the demand for freight and passenger traffic, determining the costs of implementing project

Irina Burenkova	Transport Integration Ltd.	Head of the International project department, traffic analysis and project management tasks
Vadim Vangorodskiy	Transport Integration Ltd.	Traffic dynamics and transportation forecasts
Yury Popov	Transport Integration Ltd.	Railway Infrastructure current status and development needs in Russian side. Regulatory requirements for the reconstruction of the checkpoint and railway approaches, and the arrangement
Nelly Gordeenko	Transport Integration Ltd.	Head of the complex of sociological research and forecast of the socio-economic development of St. Petersburg and the Leningrad region
Oksana Medvedeva	Transport Integration Ltd.	Railway passenger study and forecast on the project area of Karelian Isthmus, St.Petersburg area
Elena Fedorkova	Transport Integration Ltd.	Survey of industrial, transport and tourism companies
Valeria Nikitina	Transport Integration Ltd.	Preparation of cartographic materials
Anna Saveyko	Transport Integration Ltd.	Preparation of cartographic materials
Sergey Tsvetkov	Transport Integration Ltd.	Traffic flow analysis and traffic accident analysis

1.7. Project path

On this project the project work spanned over 4,5 months where progress of the work and results were followed in series of 5 steering group meetings and 2 on site RwBCP visits (Imatra BCP and Svetogorsk BCP). ´

Project schedule 1 This project meetings were held according to following schedule.



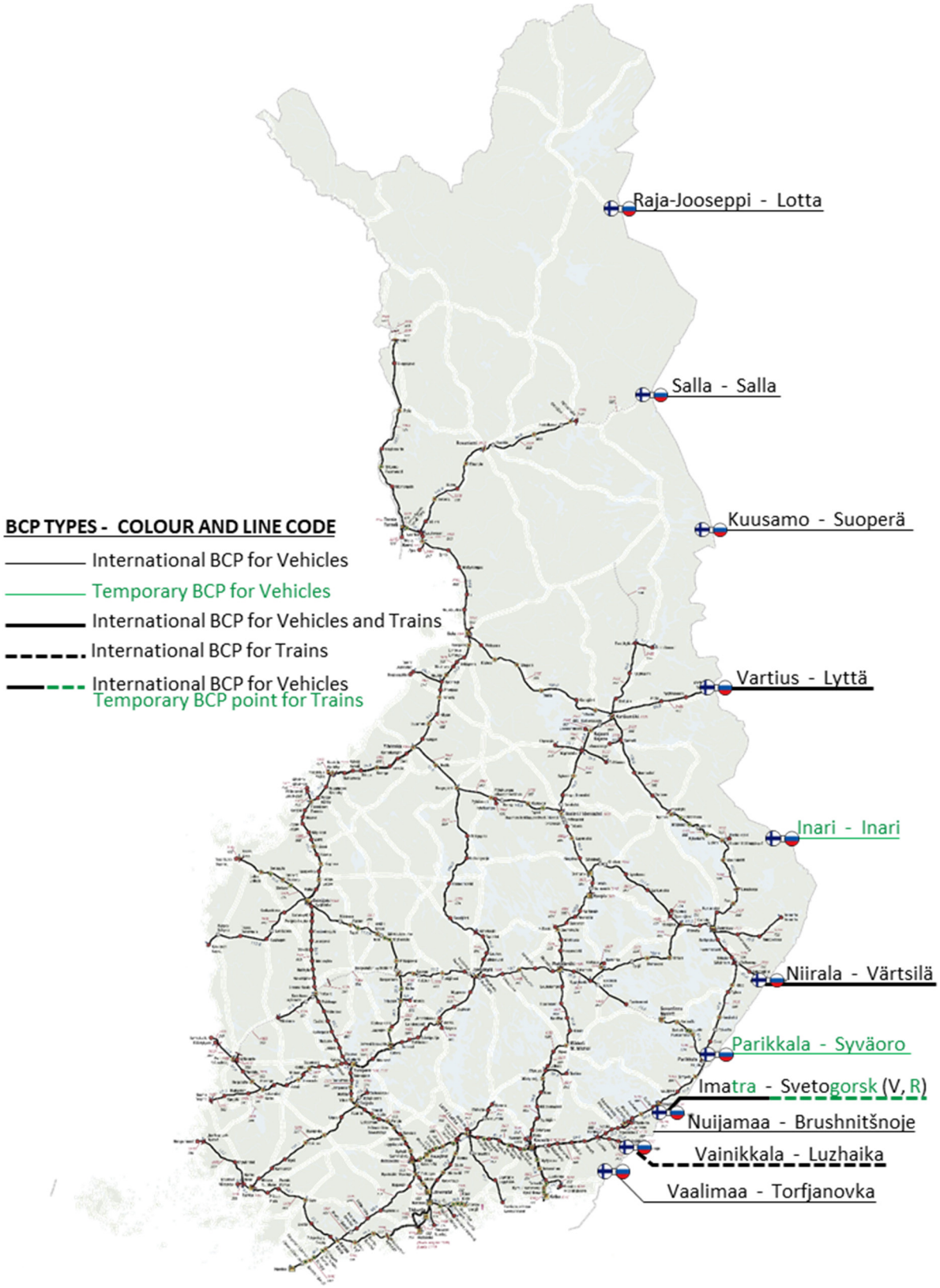
These project meetings were held so that every other meeting was held in one country. The start and concluding meetings were held in Finland. Additionally there were a hearing meeting about the Master plan of Imatra City hall in mid March and working group meeting at Väylä (Finnish Transport Infrastructure Agency) in Helsinki in early April.

Picture 3 Project presentation at the St. Petersburg Directorate of the Ministry of Transport of the Russian Federation on 31st January 2019. Source: Project teams own picture archives.

The project has received media publicity both by the press, printed and digital media, radio and TV. After the first meeting in St.P at the end of January, the presentation at the transportation directorate received wide media attention and it continued throughout the project period.

Picture 4 The project received extensive media coverage. The Regional Council of South Karelia, the Direksija po Rasvitij Transportij Sistem and newspapers and media portals such as Kommersant, TKS.RU, 47 News, Advis.Ru and TV Channel 78, Etelä-Saimaa, Uutisvuoksi and YLE reported the project in its various phases.

2. BORDER CROSSING POINTS



Map 2 Currently there are 11 BCP's on Finnish-Russian border. Four of the BCP's are for the railway traffic Vainkkala-Luzhaika (Buslovskaja), Imatra-Svetogorsk, Niirala-Värtsilä and Vartius-Lyttä. Today Vainikkala BCP is the most used RwBCP and the only RwBCP for passengers and hazardous goods.

2.1. Railway and road BCPs and their current status

The following table presents all BCPs on Finnish-Russian border from north to south. It is followed by statistics on passengers, vehicles and railway wagons.

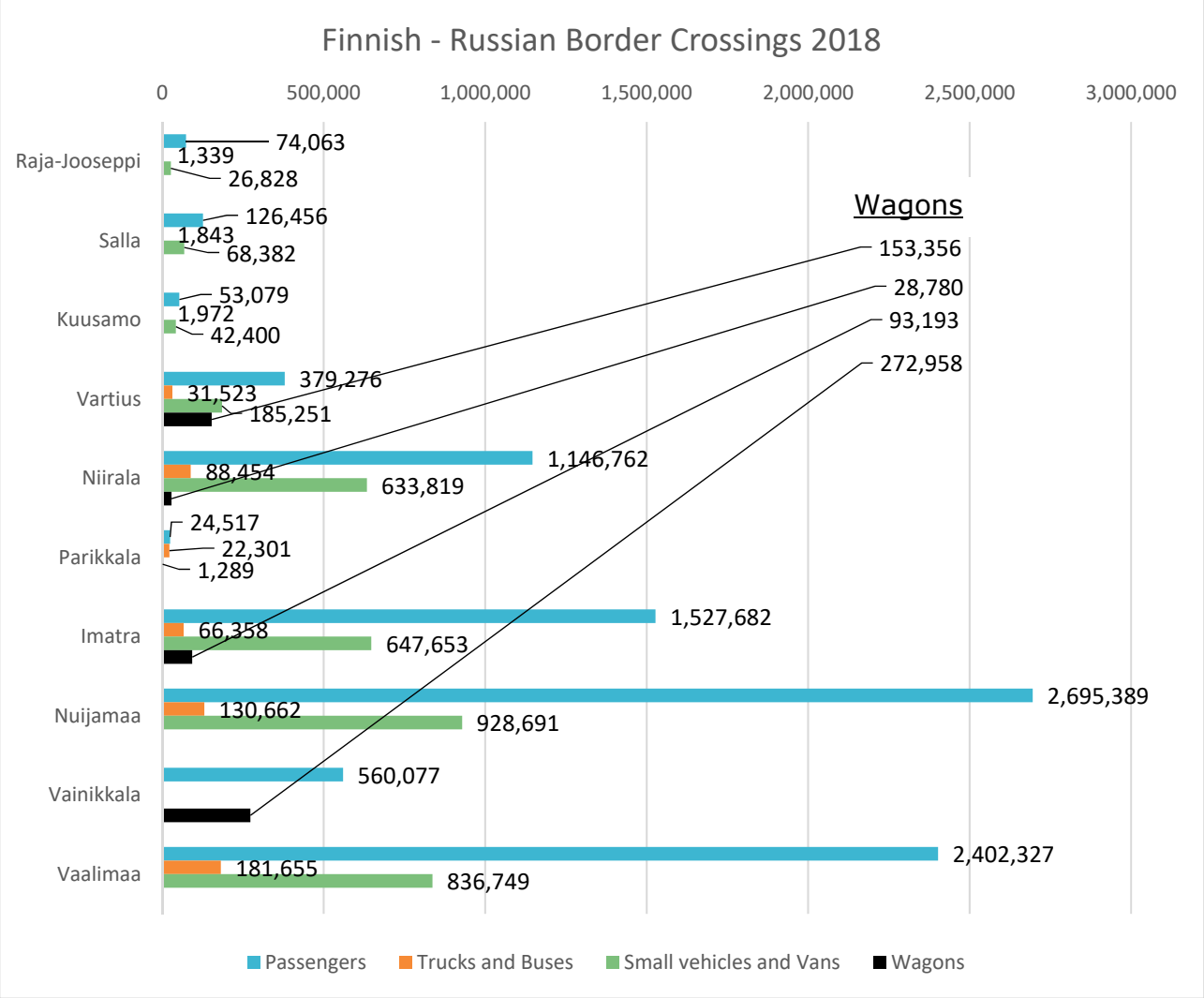
Table 1. All BCPs on Finnish-Russian border from north to south.

BCP name Finnish Side	BCP name Russian Side	Int'l Vehicles BCP МАПП	Int'l Railway BCP ЖДПП	International Rwy passenger BCP (*	Open	Established, notes
Raja-Jooseppi РаяЙоосеппи	Lotta Лотта	Since 1989	No Railway BCP		07:00-21:00	Since 1960, Bilateral BCP.
Salla Салла	Salla Салла	Since 2002	No Rail		07:00-21:00	Since 1971
Kuusamo Куусамо	Suoperä Суоперя	Since 2006	No Rail		09:00-20:00	Since 1960?
Vartius Вартиус	Lyttä Люття	Since 1992	Since 1992 Int. RwBCP	Since 1992 Int. Charter trains Occasionally	24/7 in Summer 07:30-21:30 in winter	Since 1976 www.raja.fi
Inari Инари	Inari Инари	BC SP	*No Rail*		*24/7* BC SP	*Bilateral BCP* *Open on need basis*
Niirala Ниирала	Värtsilä Вяртсиля	Since 1995	Since 1995 Int. RwBCP	Since 1995 Int. Rwy pax possible, chartered trains occasionally	24/7	1945 for bilateral rwy cargo traffic. 1964 for Bilateral road cargo. 1988 for bilateral passenger traffic.[1]
Parikkala Париккала	Syväoro Сювяоро	BC SP	*No Rail*		*09:00-20:00 on weekdays* BC SP	*Opened 2002* *Bilateral BCP* *Pls. check the www.raja.fi*
Imatra Иматра	Svetogorsk Светогорск	Since 2002 for vehicles	Bilater RwBCP, RUS/FIN cargo only by rail	Charter trains Occasionally	*24/7* *Rail: BC SP*	Since 1972 for bilateral traffic
Nuijamaa Нуйямаа	Brushnitšnoje Брусничное		No Rail		24/7	Since 1975 for bilateral
Vainikkala ваиниккала	Luzhaika Лужайка	No Vehicle BCP	Int. RwBCP	Lev Tolstoy ja Allegro regular train service	24/7	Since 1944 HKI-St.P. and HKI-MSW
Vaalimaa ваалимаа	Torfjanovka Торфяновка	Since 1945	No Rail		24/7	Since 1958 for bilateral traffic

- Railway passengers are not specially categorized to be allowed or not on International BCP, here the column used for expressing where and what kind of railway passengers there are.

- МАПП Международный автомобильный пункт пропуска – Inspection point for vehicles in international traffic
- ЖДПП железнодорожных пунктов пропуска – Inspection point for international railway traffic
- BC SP Bilateral BCP, trains crossing by border commissioners special permit only

[1] http://www.vartsi.net/2015/04/21/niiralan-raja-aseman-avautuminen-ja-matkailua-neuvostoliitossa-1970-ja-80-luvuilla/



Graph 2 BCP crossings in 2018: road and railway passengers and different types of road vehicles. Railway wagons include both cargo and passenger wagons. There are more wagon related data on graph of chapter 2.3.2. Source of BCP crossings in 2018: Finnish Customs.

In all, people made 9 million border crossings over the whole eastern border in 2018. On the road, there were 3,37 million crossings by small car or van, while trucks and busses crossed the border 525 thousand times. Railwagon crossings happened 548 thousand times. These figures contain numbers of movements on both directions. More detailed figures on cross-border traffic are shown in Chapters 2.4 and 2.5.

This brief list presents the six largest RwBCPs and RdBCPs out of 11 BCP's between Finland and Russia from north to south. All four RwBCP's are on the list underneath, additionally there are RdBCP's Vaalimaa-Torfjanovka and Nuijamaa-Brusnitšnoje listed as they are the two largest BCP's for travelers and tourists.

Vartius-Lyttä (RdBCP, **RwBCP**)

Vartius-Lyttä was opened as a bilateral RdBCP in 1976 and it has been an international RdBCP since 1992. BCP is the second largest RwBCP.

Niirala-Värtsilä (RdBCP, **RwBCP**)

Niirala-Värtsilä is an international RwBCP and it was opened in 1945. Since 1995 it has been operating with International BCP status.

Imatra-Svetogorsk (RdBCP, **RwBCP**)

Imatra-Svetogorsk was opened as a temporary RdBCP in 1972 and it has been an international RdBCP since 2002. RwBCP still has a temporary status, serving only freight. The third largest BCP for railwagons, small vehicles and passengers.

Nuijamaa-Brusnitšnoje (RdBCP)

Nuijamaa-Brusnitšnoje is an international RdBCP, located between Lappeenranta and Vyborg, close to Saimaa Canal. It was opened in 1975. The largest BCP for passengers and small vehicles.

Vainikkala–Buslovskaja (**RwBCP**)

Vainikkala-Buslovskaja RwBCP is situated on the old Riihimäki-Lahti-Vyborg-St.Petersburg main line built in 1870. In addition to cargo traffic, it also has regular passenger traffic with Allegro and Lev Tolstoy trains. The main BCP for railcargo, handling some 50 % of goods crossing the border by rail. It is the only BCP for dangerous goods on rail, as it is also equipped to cope with DG traffic.

Vaalimaa-Torfjanovka (RdBCP)

RdBCP at Vaalimaa-Torfjanovka was opened in 1958 as the first RdBCP between Finland and Soviet Union. It is located close to Finnish Bay. The main BCP for trucks and buses. The Second largest BCP for passengers and small vehicles.

2.2. Current actors on BCPs

There are several actors operating on the BCP territory. The following Key authorities list describes the overall situation on the border, further down there are more detailed description about each authority and their duties.

Key authorities and actors on developing the Finnish BCPs include:

- *Ministry of Economic Affairs and Employment:* Local Centre for Economic Development, Transport and the Environment
- *Ministry of Transport and Communications:* Finnish Transport Infrastructure Agency
- *Ministry of the Interior:* Finnish Border Guard, Police
- *Ministry of Finance:* Customs, Senate Properties

Additionally there are direct, indirect or "when needed"-basis presence of other actors such as Police, Finnish Food Agency[3] (former Evira and two other agencies at BCP's responsible for animal health and food transport related control and inspections), STUK (Radiation and Nuclear Safety Authority in Finland) and property maintenance and service subcontractors. Additionally there are service providers.

[3] Finnish Food Agency was formed on 1st of January 2019. Please check the terms and abbreviations in the beginning of this report.

The Border Guard has six core functions, border surveillance, border checks, crime prevention, maritime safety, international cooperation and national defence. At the BCP's the Border Guard is responsible for border inspections of all travellers and for border control on entire border area. On those BCP's where the Customs is not present,the Border Guard is responsible also for maintaining the public order and for the Customs control functions. The preconditions and right to travel will be verified of each arriving and departing traveller on each BCP.

The Customs does supervise and follow the border crossing movement of declared and non declared goods, vehicles, trains, aircrafts, ships, as well as drivers, crews and travellers on them. The client minded operations are carried out by questioning, through declaration analyses and risk assessment of goods and travellers. The task is enforced with random and risk analysis based inspections, and using human and canine sence analyses and technological analysing methods both for road and railway vehicles and goods and travellers on them. The Customs has essential responsibility in Custom duties collecting and has a significant role in hazmat, food and chemical trade and transport supervison according to consumer safety and food legislation. According to PTR-agreement the Police, Customs and Border Guard these three organizations do work by co-operating closely with each other, sometimes on roles of another of these tree authorities and when the need be, with powers of those authorities granted to these tasks by the law. This is an important functional feature on these EU Schengen BCPs.

Finnish Transport Infrastructure Agency together with the local ELY center are responsible for road and railway management. The tasks consist of management, maintenance responsibilities of both road and rail, their replacement and new investments, land acquisitions, traffic management and road management planning.

Senate property is the fourth main administrative and operative body to be involved in BCP development and management in Finland. The Senate property is a public business entity which belongs to the Ministry of Economic Affairs and Employment. The Senate property develops and manages the properties used by the governmental organisations, who are as tennants on the premises they occupy and use. The property and utility management of the premises is contracted from the private sector.

2.3. Current agreements on BCP's

EU level

REGULATION (EU) 2016/399 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on a Union Code on the rules governing the movement of persons across borders (Schengen Borders Code)

REGULATION (EU) 2016/1624 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 September 2016 on the European Border and Coast Guard and amending Regulation (EU) 2016/399 of the European Parliament and of the Council and repealing Regulation (EC) No 863/2007 of the European Parliament and of the Council, Council Regulation (EC) No 2007/2004 and Council Decision 2005/267/EC

State agreements between Finland and Russia, ratification in Finnish legal framework.

National laws and presidential degrees

SopS 72/2002 (Free translations, please refer to original Finnish text of 72/2002).

Presidential degree of partial enactment of in principal agreements made with Russian Federation concerning opening of certain border crossing points for international traffic 20.9.2002 (SopS 83/2002).

The Finnish presidential degree opened the Imatra BCP for International vehicle and rail traffic 26th September 2002.

SopS 66/1994 (Free translations, please refer to original text of Sops 66/1994).

Article 6

1.The timing of opening of, together with working sequence to be followed prior to opening of the Border crossing point will be agreed between border comissioneries of both countries after consultations with relevant authorities of their own country.

Article 4

1.The authorized officials of contractual partners shall keep each others informed about planning and construction projects of border crossing points bearing in mind the development outlook and growth of flows of goods and passengers crossing the border.

2.The border crossing points shall be opened for traffic as the border crossing points have been properly equipped and there has been created sufficient preconditions for working of the officials (conducting inspections) of these contractual partners.

85/2016 Rail transport agreement between Finland and Russia

A new rail transport agreement between Finland and Russia entered into force on 22 December 2016. Instruments of ratification concerning the agreement were exchanged in Moscow on 21 November 2016. The new agreement replaced the agreement, and its appendices, of 1997 on connecting railway transport.

IV Chapter
BORDER AREA RAILWAY TRAFFIC

58th Article
Border stations for railway traffic

Railway Border Crossing stations
The stations located on the Finnish Russian border assigned to direct international railway traffic are as follows:

1. Passenger and cargo transport
    a) On Finnish territory: Vainikkala, **Imatrankoski**, Niirala and Vartius
    b) On Russian territory: Buslovskaya, **Svetogorsk**, Värtsilä and Kivijärvi

The railway border crossing stations can be used for all kinds of cargo.

2. Fast passenger train traffic
a) On Finnish territory: Vainikkala
b) On Russian territory: Buslovskaya

Article 60

The handing over and returning of rolling stock

1. The handing over and returning of the rolling stock of passenger and cargo units used in traffic defined according to this agreement shall take place at the first railway border crossing station after crossing the border. The railway companies may agree that handing over and returning of rolling stock takes place at the station preceding the border crossing.

Agreements to be changed

Due to logistical and resource usage efficiency, Imatrankoski track geometry and surrounding land use and existing reserve area in Pelkola the BCP railyard development at Imatra BCP must be concentrated in Pelkola. The Pelkola railyard is located with close proximity to existing RdBCP, while Imatrankoski is some 2 km NW from the Imatra RdBCP. All Imatra BCP development plans are based on this general efficiency imporovement principle. Due to aforementioned, the station list in Rail transport agreement 85/2016, Article 58 has to be updated before the Imatra Svetogorsk BCP status can be changed to accommodate the locomotive change taking place at Pelkola instead of Imatrankoski.

This station list changing process is about changing an international state agreement in both countries and there are certain process phases before changes can be implemented. First, the need to change has to be recognised by both countries. The task should then be given to responsibility of appointed legal team with defined target schedule. New Rail Transport Agreement law text has to be prepared and consulted between Finnish and Russian counterparts. Perhaps in same occasion there is an opportunity to check for other necessary changes. Such needs might have been identified by cargo companies and railway operators and those change ideas have just been waiting for such opening of this state agreement. Finally after renewal process, after comment rounds, when it is ready for next phase, the renewed agreement has to be submitted to parliaments by the government or by single member of parliament for parliament approval process, for Eduskunta in Finland and for Duma in Russia. After approval by the parliament the renewed Rail Transport Agreement will be submitted to President for ratification.

According to Traficom, this process would take some 4 years before the new station list on this renewed state agreement can be legitimately valid. Therefore the station list changing process has to be commenced in 2019 to be completed by 2025.

2.4. Cargo traffic

2.4.1. Trade and cargo traffic between Finland and Russia

Trading between Finland and Russia has long traditions. The population centers of Helsinki and St.Petersburg are just 300 km apart, by train 3,5 hours. In both countries there are several industrial sites and trading terminals using materials and storing and sending manufactured goods to next client. Russia is Finland's second largest importer, straight after Germany. The ranking has varied over the years depending on exchange rates, world price of oil and economic circumstances.

FINLAND IMPORTS FROM TRADING PARTNERS, COUNTRIES OF ORIGIN 2017

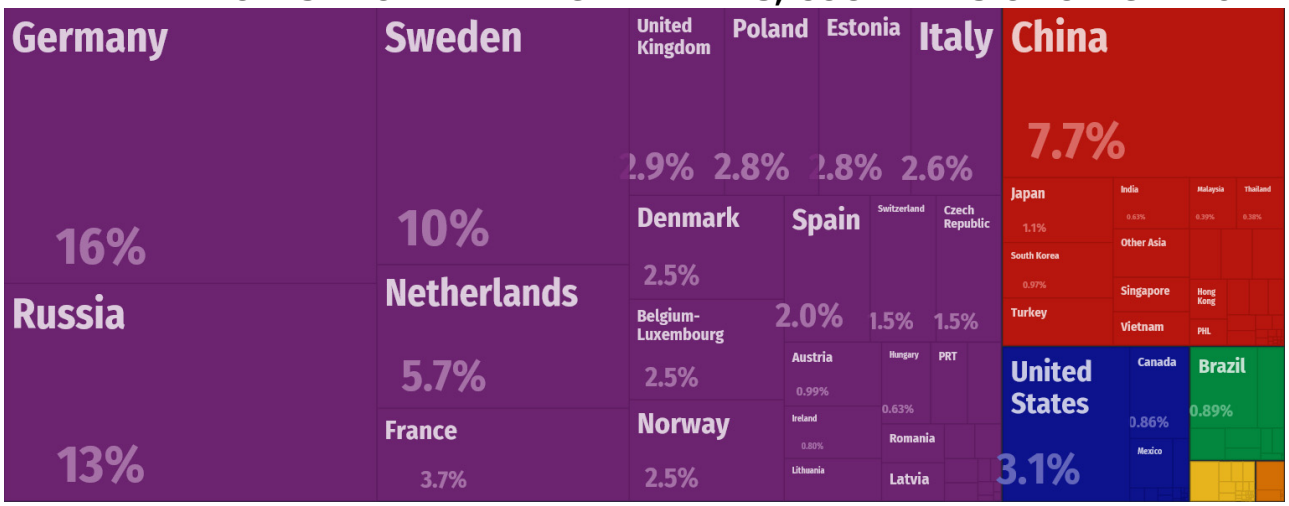


Figure 1 Imports to Finland in 2017 (58,1 Billion EUR[4]), and Russian Imports https://atlas.media.mit.edu/en/visualize/tree_map/hs92/import/fin/show/all/2017/

On destination country list of Finnish foreign trade in 2017, trade to Russia was the fourth largest after Germany, Sweden and Netherlands.

FINLAND EXPORTS TO TRADING PARTNERS, DESTINATION COUNTRIES 2017

Figure 2 Exports from Finland in 2017 (62,8 Billion EUR) , and Exports to Russia source:https://atlas.media.mit.edu/en/visualize/tree_map/hs92/export/fin/show/all/2017/

When the commodity groups in this Finnish Russian trade are analysed, we can see the weight of crude oil, other hydrocarbons, coal and which account more than half of total imports from Russia to Finland. More than fifth of Imports was generated from metals and metal products. A significant single group is the gas pipe imports to be used for

[4] EUR USD Exchange rate 1,125 for 2017 used.

Nordstream P2, which is about to be completed at the Finnish EEZ by the end of 2019. Chemicals industry products (pink) and the wood material (red) are significant flows for the Finnish industrial sector.

IMPORTED COMMODITIES FROM RUSSIA, BY VALUE 2017

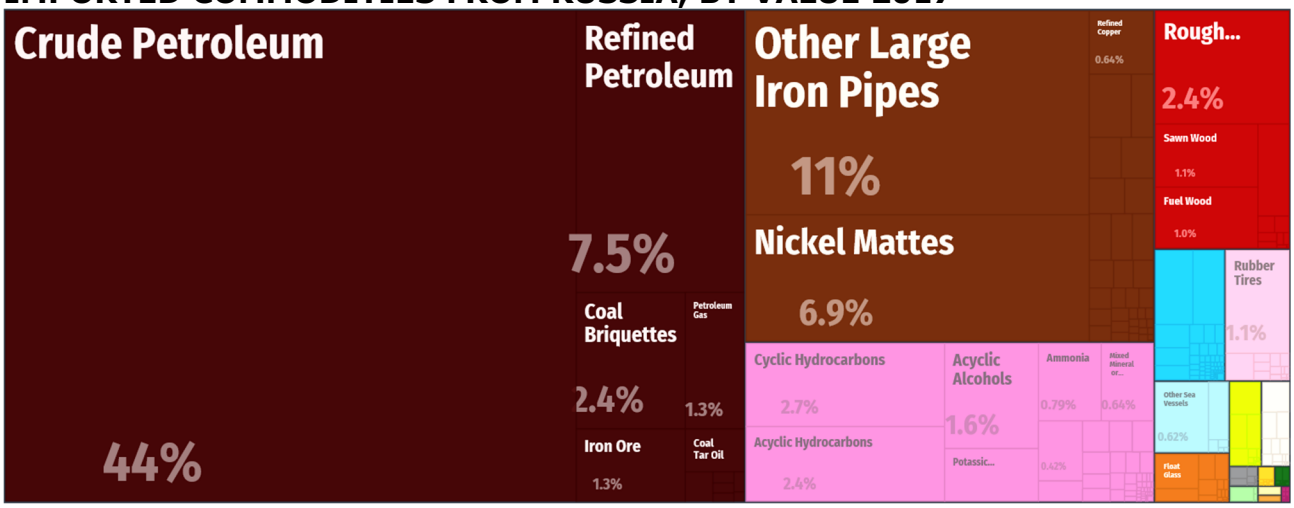


Figure 3 https://atlas.media.mit.edu/en/visualize/tree_map/hs92/import/fin/rus/show/2017/

On exports to Russia the trade structure is somewhat different, where the manufactured goods clearly stand out. Paper, ships, other sea vessels cars, refined liquids and agricultural machinery are some of the commodity groups one could notice from the table underneath.

EXPORTED COMMODITIES TO RUSSIA, BY VALUE 2017

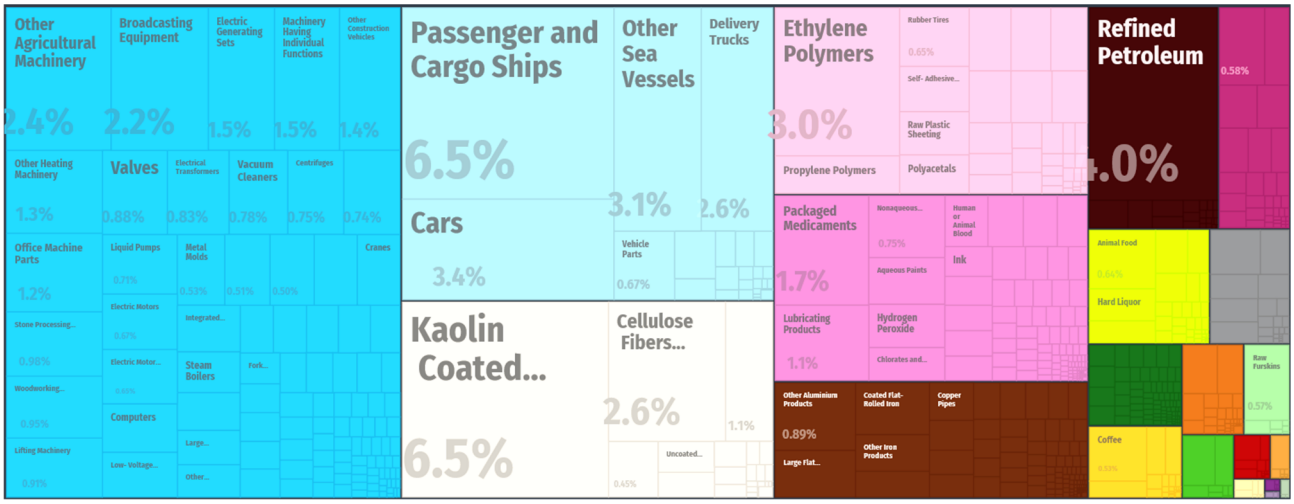


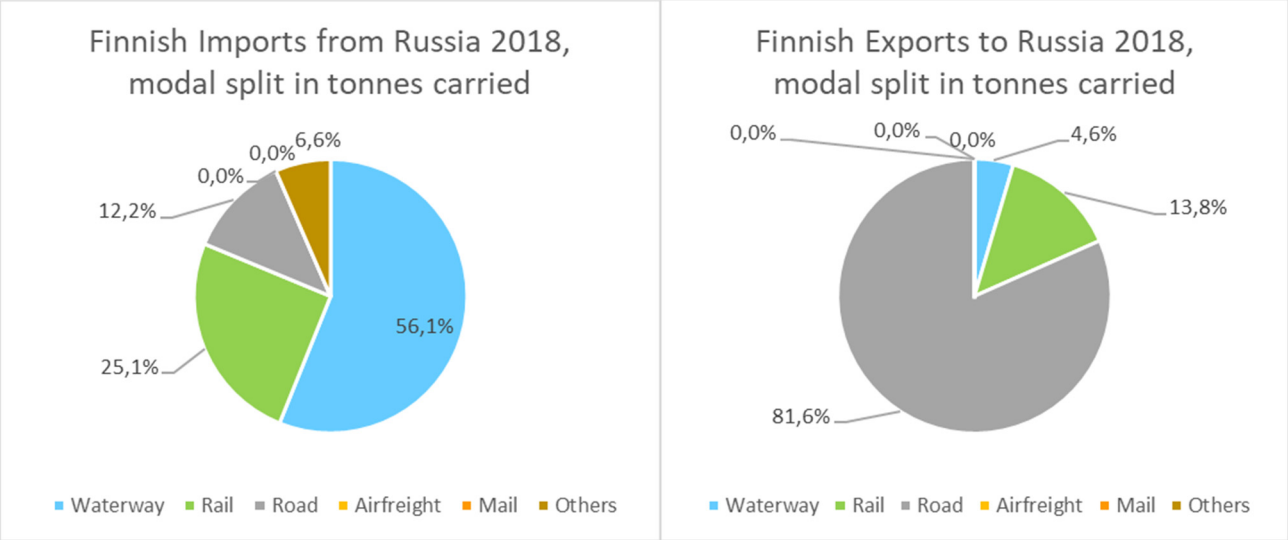
Figure 4 https://atlas.media.mit.edu/en/visualize/tree_map/hs92/export/fin/rus/show/2017/

The foreign trade of Finland has been heavily on deficit side with Russia on recent years. In 2017 it was -4,7 Billion Euros and last year, 2018 -5,3 Billion Euros on deficit.

This trade transformes to tonnes and modes of transport these tonnes has been carried. In Customs statistics, Finland traded some 108 million tonnes of goods in 2018, out of this trade, 84,5 % were carried by waterway transport. The 13,5 % was transported by

railway and trucks and the remaining 2 % were recorded in Customs statistics under other modes of transport (Air freight, mail and others).

In Russian trade the modal split is different than with Finnish foreign trade in general. The import tonnes from Russia 27,6 million tonnes make 46 % of all Imported tonnes to Finland. Out of that 56 % was carried by waterway transport, mainly crude from Primorsk and coal from various ports. Rail Imports made 25 % of all Imported tonnes from Russia.



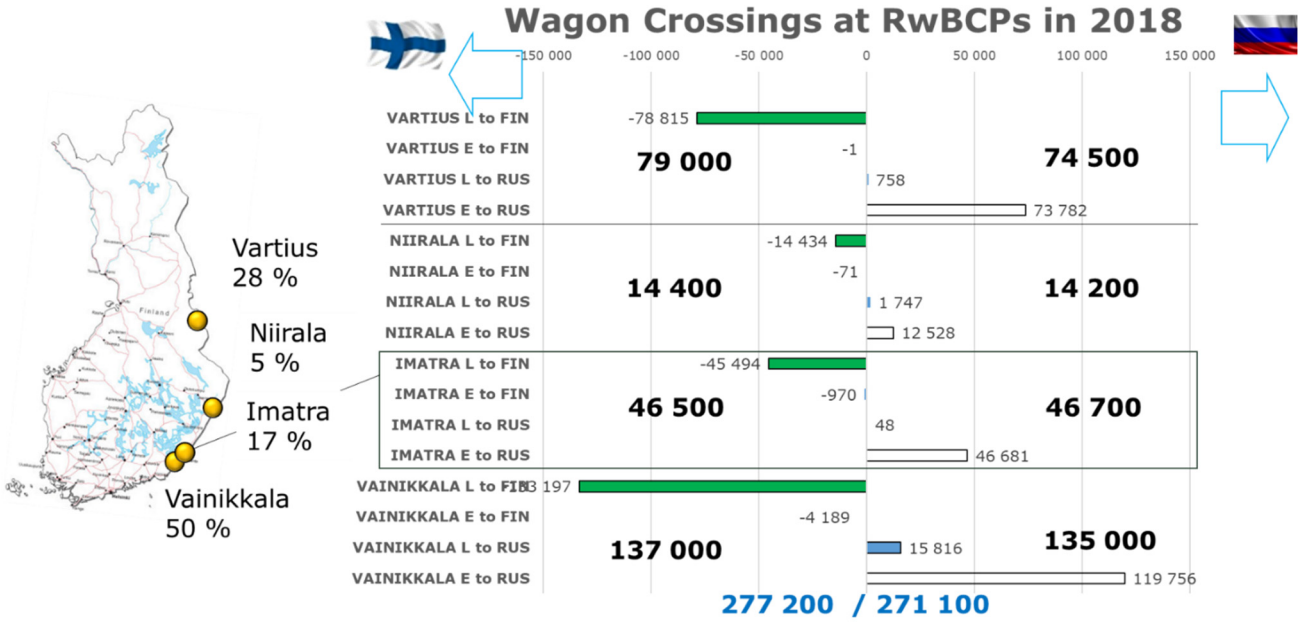
Graph 3 Modal split in Finnish Russian commerce according to tonnes carried. Please check the volumes to each direction on paragraphs immeadetely above and underneath of this graph.

The exports to Russia looks very different, they account in tonnage terms only 1,46 million tonnes (just 3%). Here the modal split is very much weighted for the road transport, with 1,2 million tonnes transported (81,6 % mode of choice with Finnish exports to Russia). Rail transport carried 200 thousand tonnes of exports to Russia (13,8 %) in 2018.

These figures and modal split graphs do not present the transit trade and modal split experienced in that.

2.4.2. Cargo traffic on railways between Finland and Russia

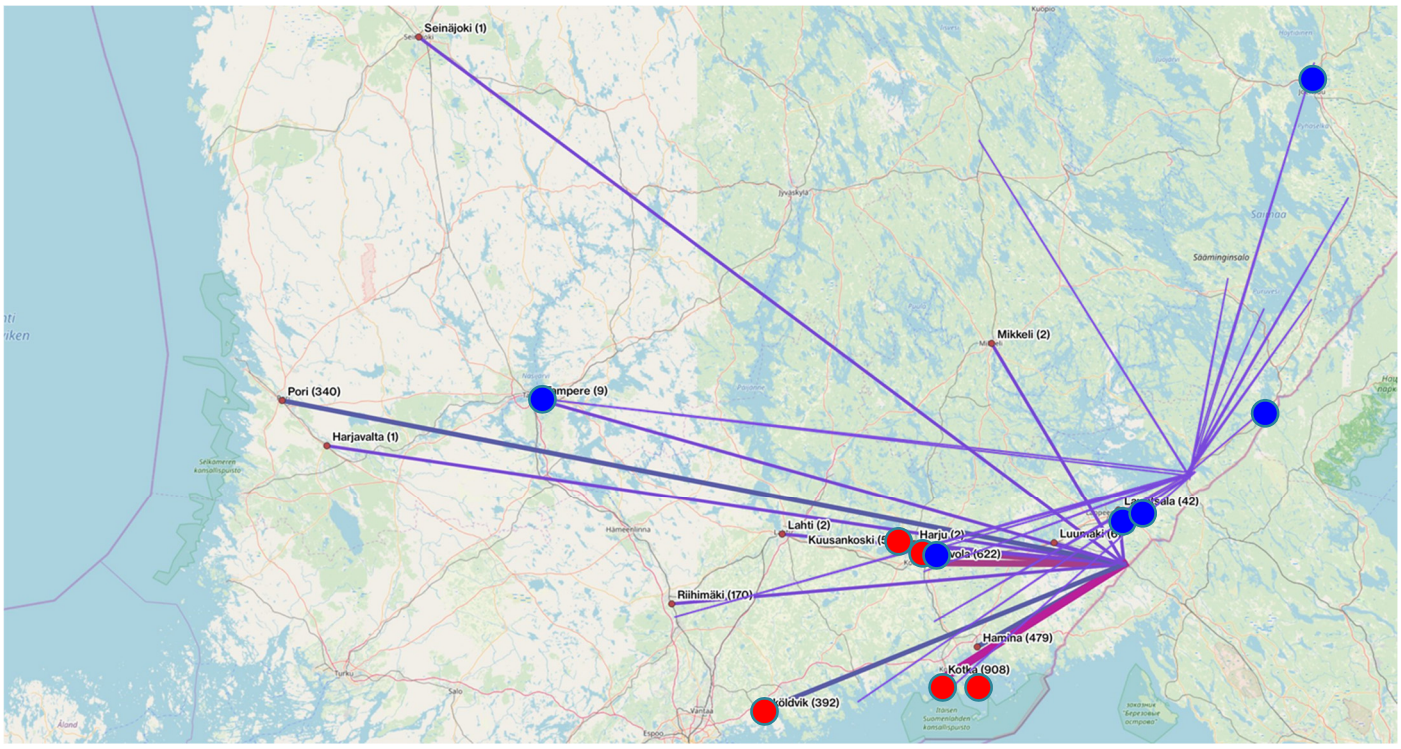
The amount of railway wagons on RwBCPs (and share of single RwBCPs from total) between Finland and Russia are shown in Graph 4. A large share of this traffic is petro-chemicals, other chemicals and bulk for the Finnish industry or transit.



Graph 4 Border crossings of railway wagons, Loaded and Empty wagons to each direction over the FIN/RUS border in 2018. (Finnish Customs)

It can be seen that in SE Finland, most cargo traffic uses the same corridor with current passenger trains, i.e. the high-speed train Allegro and conventional train Lev Tolstoy. During peak-demand situations, track maintenance and other exceptions such as snow-stroms there is a risk for congestion at the border stations Vainikkala/Buslovskaja if there is no alternative route for cargo traffic.

The Finnish destinations for trains coming from RwBCPs in SE Finland (that is, Vain-ikkala/Buslovskaja and Imatra tavara/Svetogorsk) are shown in Graph 5. The data is based on open data from Traffic Management Finland (TMF 2019). The most frequent destinations between 2014 and 2019 are shown in red circles (for Vainikkala), blue circles (for Imatra tavara). Table below shows the yearly totals and daily averages for these RwBCPs. For Imatra, there is no direct train data from Imatrankoski RwBCP be-cause there is no centralized interlocking which would record this data.



Graph 5. Most frequent train destinations from Vainikkala (red) and Imatra tavara (blue) between 2014-2019. (Finnish Transport Infrastructure Agency).

Table 2. Train destinations from SE Finland BCPs.

YEARLY TOTALS from Vainikkala

	Year				TOTAL /
Destination	2015	2016	2017	2018	**Destination**
Kotka	648	661	976	908	3193
Hamina	533	564	532	479	2108
Kouvola	431	476	534	622	2063
Sköldvik	535	510	418	392	1855
Kuusankoski	351	337	319	568	1575
TOTAL / YEAR	2498	2548	2779	2969	

DAILY AVERAGE from Vainikkala

	Year			
Destination	2015	2016	2017	2018
Kotka	1,8	1,8	2,7	2,5
Hamina	1,5	1,6	1,5	1,3
Kouvola	1,2	1,3	1,5	1,7
Sköldvik	1,5	1,4	1,2	1,1
Kuusankoski	1,0	0,9	0,9	1,6

YEARLY TOTALS from Imatra tavara

	Year				TOTAL /
Destination	2015	2016	2017	2018	**Destination**
Lauritsala	848	894	801	498	3041
Joutseno	638	508	554	566	2266
Joensuu	439	498	571	698	2206
Kouvola	445	382	355	360	1542
Kotka	360	359	357	357	1433
Simpele	339	339	344	337	1359
Tampere	232	188	185	214	819
TOTAL / YEAR	3301	3168	3167	3030	

DAILY AVERAGE from Imatra tavara

	Year			
Destination	2015	2016	2017	2018
Lauritsala	2,4	2,5	2,2	1,4
Joutseno	1,8	1,4	1,5	1,6
Joensuu	1,2	1,4	1,6	1,9
Kouvola	1,2	1,1	1,0	1,0
Kotka	1,0	1,0	1,0	1,0
Simpele	0,9	0,9	1,0	0,9
Tampere	0,6	0,5	0,5	0,6

Table above includes only trains from Russia to Finland. If the trains are returned in same composition, train amounts and daily averages would be doubled. However, in some cases, the Russian-bound, mostly empty wagons (cf. Graph 3) can be grouped into longer trains, which would reduce the amount of trains slightly.

2.5. Passenger traffic

2.5.1. Passenger traffic at southern BCPs

The busiest four BCPs between Russia and Finland from passenger perspective are the four most southern ones. Here their passenger flows are described in more detail from north to south.

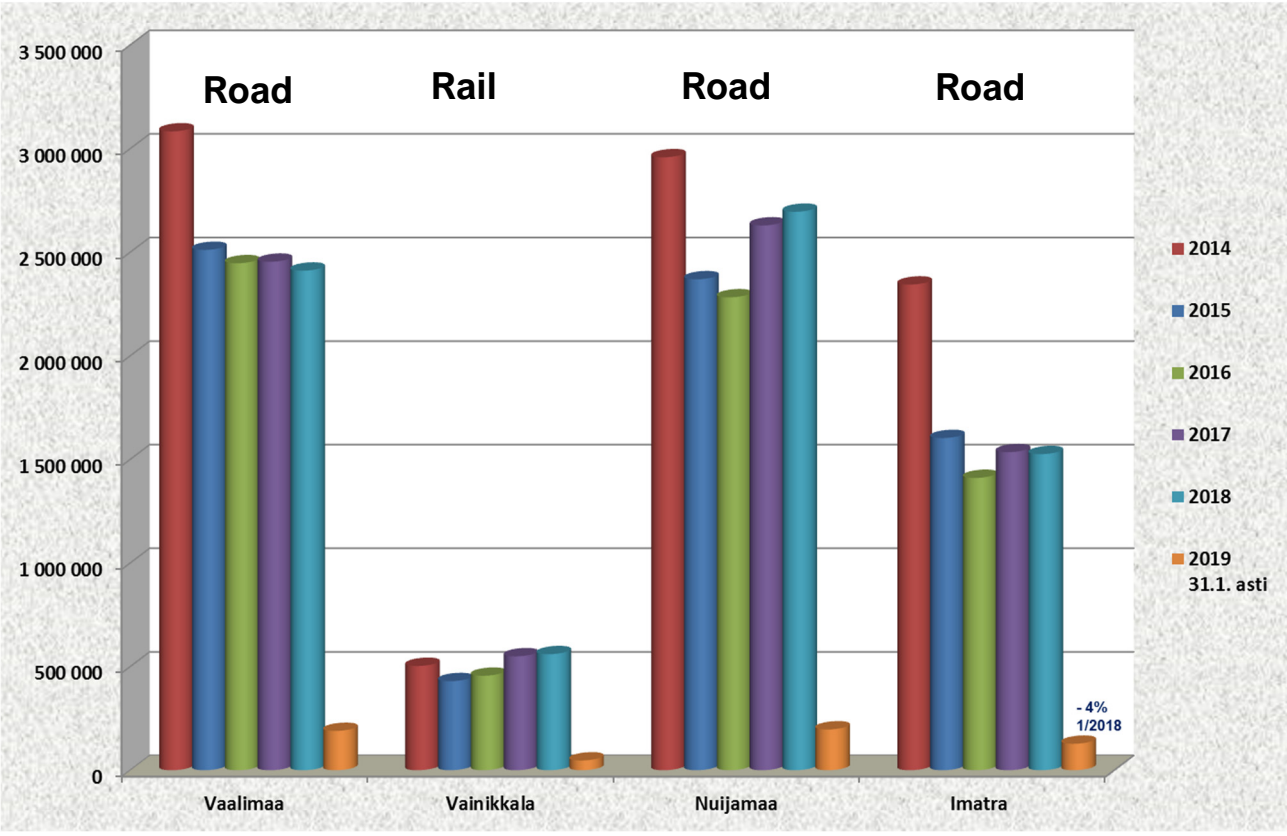
RdBCP Imatra-Svetogorsk has carried out about 0,9 – 2,2 million passport inspections between 2006 and 2018. The latest Finnish data shows 1,5 million passengers in 2018.

Nuijamaa-Brusnitšnoje RdBCP has carried out about 1,6 – 3,4 million passport inspections between 2006 and 2018. The latest Finnish data shows 2,6 million passengers in 2018.

RwBCP Vainikkala-Buslovskaja has international passenger traffic, with roughly 0,4 – 0,6 million passengers / year since 2006. The latest Finnish data shows 0,55 million passengers in 2017.

RdBCP at Vaalimaa-Torfjanovka is typically the busiest RdBCP between Finland and Russia, competing with Vaalimaa-Torfjanovka. This RdBCP has had about 2,4 – 3,5 million passport inspections / year between 2006 and 2018. The latest Finnish data shows 2,45 million passengers in 2018.

Passenger flows between 2014-January 2019 on different BCPs collected by the Finnish Border Guard are shown in Graph 6.



Graph 6. Passenger border crossings on BCPs in SE Finland, 2014-2018 and January 2019. (Finnish Customs)

2.5.2. Data from TAK on foreign travellers in Finland

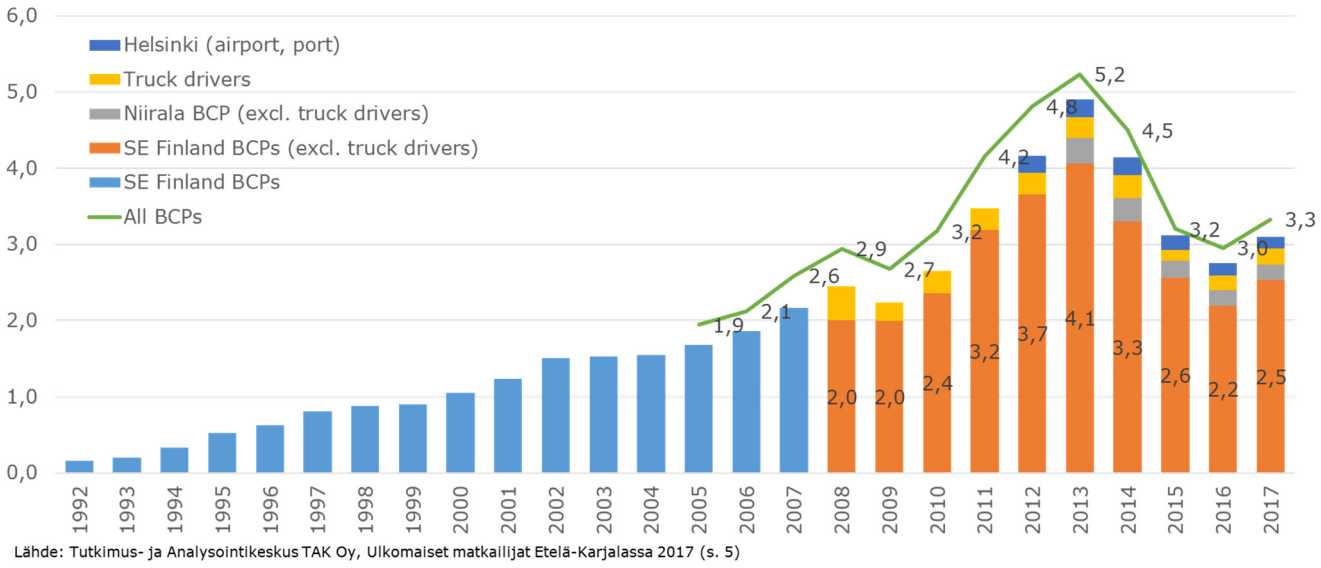
Research company TAK (Tutkimus- ja Analysointikeskus; "Research and Analysis Centre") has been collecting data *on foreign travellers in Finland, especially Russians, since 1990s*. Main collection methods are questionnaries and public data. The following charts show data on Russian passenger flows, their origins and passenger motivations. The data is mostly based on (TAK 2018a), (TAK 2018b) and (TAK 2018c).

It is worth remembering that there are many factors affecting Russian travels and spending abroad. The most significant factors include the economic trends (phase of the economic cycle), the exchange rate of Russian ruble and euro (RUB/EUR) and the Customs regulations imposed by EAEU.

The following graphs describe Russian travelling to Finland. More detailed data on South Karelia is discussed in Chapter 3.2.

Please note that the questionnaire and statistics methods for Russian travellers have become more fine-grained through the years. Therefore, the following graphs have different year ranges as the earlier data may not be comparable.

Graph 7 shows all Russian travels to Finland.

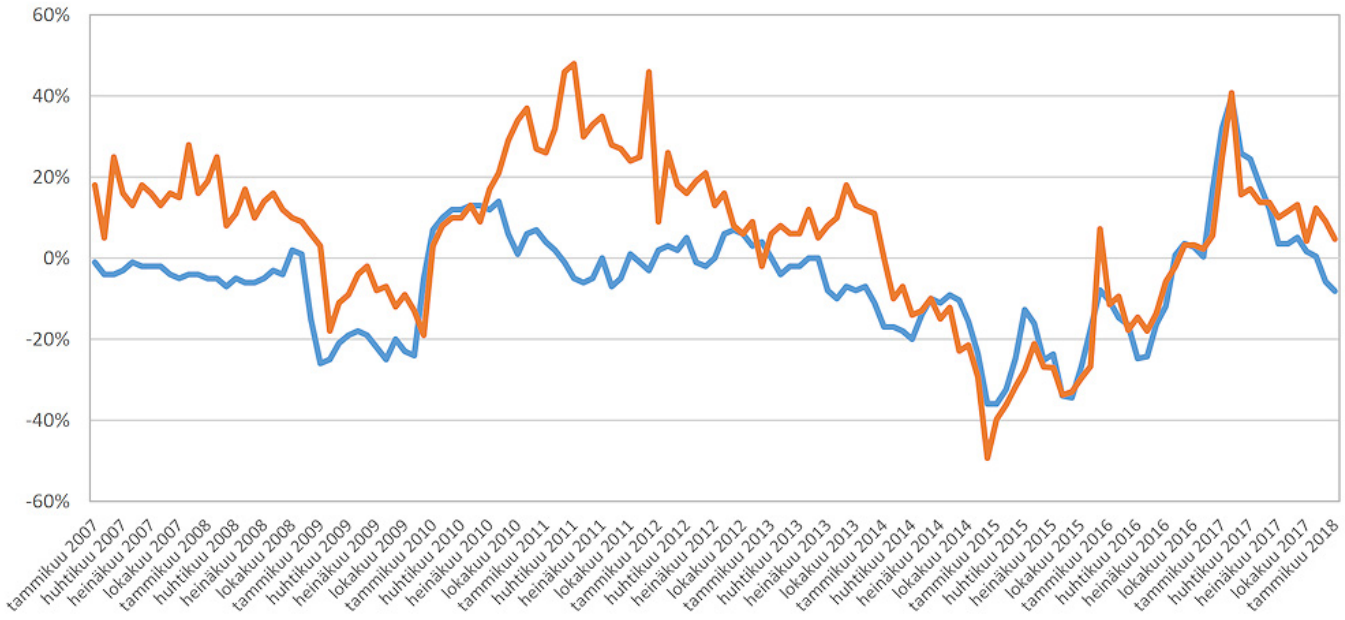


Lähde: Tutkimus- ja Analysointikeskus TAK Oy, Ulkomaiset matkailijat Etelä-Karjalassa 2017 (s. 5)

Graph 7. All Russian travellers to Finland, 1992-2017.

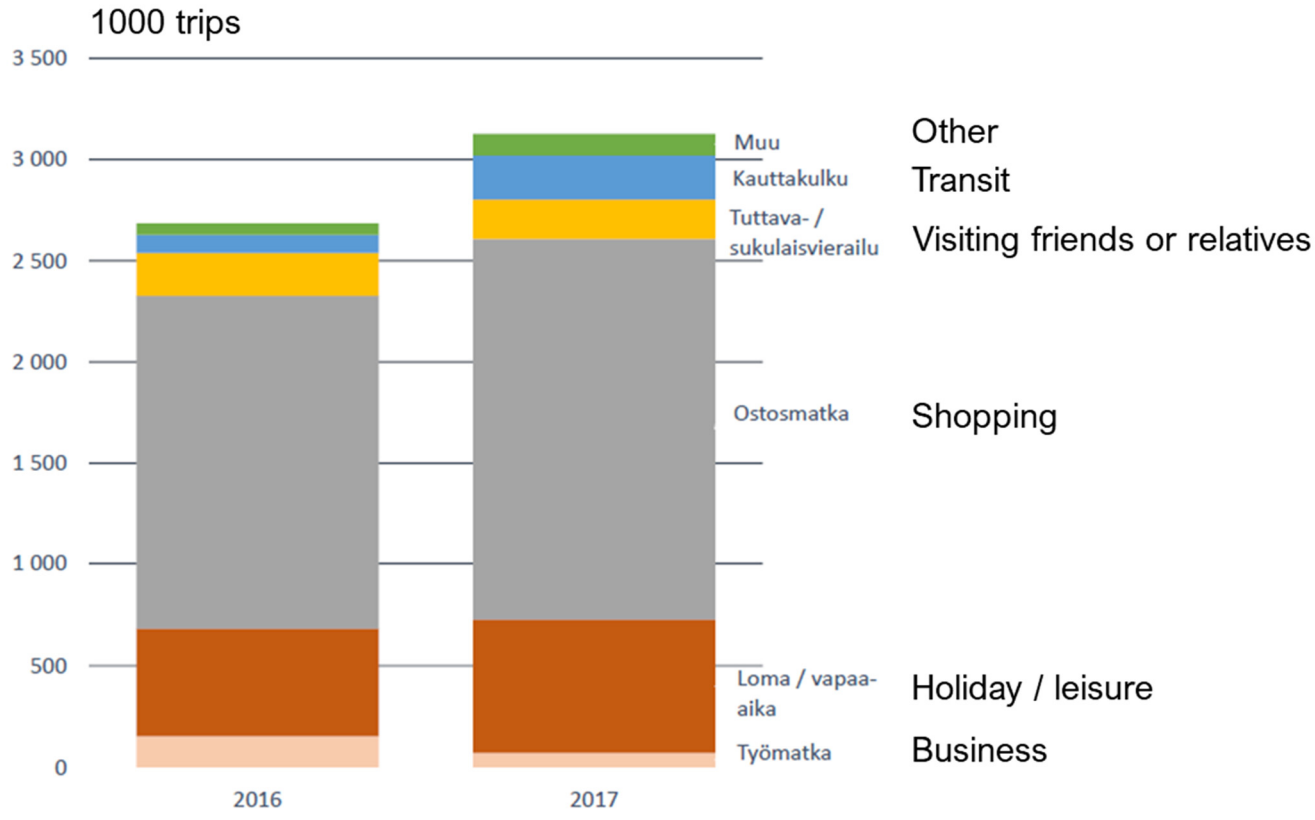
The most interesting column in this Graph is the orange one from SE Finland BCPs (excluding truck drivers), which shows an increase in 2017 after decline from 2014.

One of the major drivers for Russian travels abroad is the exchange rate of Russian ruble. Graph 8 shows the **change** of exchange rate RUB/EUR and its effect on travelling to SE Finland.



Graph 8. Changes in Exchange rate RUB/EUR (blue) vs. Russian trips through BCPs in SE Finland (orange), Q1/2007-Q1/2018.

Between 2010 and 2015 it can be seen that the stability of ruble has resulted in more trips than could be expected from previous years. Likewise, the sharp devaluation of ruble in late 2014 took away more trips than the actual change in exchange rate. Starting in 2015, there seems to be a strong correlation of trips and exchange rate.



Graph 9. Purpose of Russian travels to Finland, 2016-2017

With Graph 9, respondents were given only one main choice for travel purpose. The Graph shows that 60 % of Russian travels to Finland are shopping trips, 20 % holiday or leisure.

An interesting combination of data in Graph 10 shows both the residence, travel company, age group and the duration of stay of Russian travellers in Finland.

Graph 10. Data on travellers' origin, travel purpose, and travellers' age and nights stayed in Finland, 2017.

It is not surprising that people coming from Moscow stay longer in Finland than travellers living closer to Finland. About 60 % of travels are with family and nearly 30 % with friends. Middle-aged travellers form the largest groups. This may have something to do with the relative easiness and safety of travelling to Finland.

2.5.3. Data on Finnish and 3rd Country Travellers to Russia

Unfortunately, there are no detailed official statistics or questionnaires (in Finland) on travellers entering Russia from Finland.

The only official statistics is collected by the Finnish Border Guard, which only collects the number and nationality of travellers. These official statistics provide no data on, e.g., travel purpose.

To produce a passenger forecast for a possible local train connection over Imatra / Svetogorsk RwBCP, more detailed data was collected through expert and travel agent interviews in South-East Finland. We return to this in Chapter 4.

3. CURRENT TRAFFIC FLOWS IN SOUTH-EASTERN FINLAND

3.1. Freight traffic

3.1.1. RdBCPs of Vaalimaa, Nuijamaa and Imatra

The following data is from Finnish Customs (Border Traffic Statistics) in 2018.

Imatra RdBCP had 22 834 loaded trucks arriving from Russia and 20 431 loaded trucks leaving for Russia. With empty trucks and buses, the figures are 10 546 and 12 547, respectively.

Nuijamaa RdBCP had 40 609 loaded trucks arriving from Russia and only 5 090 loaded trucks leaving for Russia. With empty trucks and buses, the figures are 34 471 and 50 492, respectively.

Vaalimaa RdBCP had 27 410 loaded trucks arriving from Russia and 89 068 loaded trucks leaving for Russia. With empty trucks and buses, the figures are 52 746 and 12 701, respectively.

Totals for these three RdBCPs in 2018:

- loaded trucks to Finland: 90 583; from Finland: 114 589
- empty trucks and buses to Finland: 97 763; from Finland: 75 740
- all heavy vehicles to Finland: 188 346; from Finland: 190 329

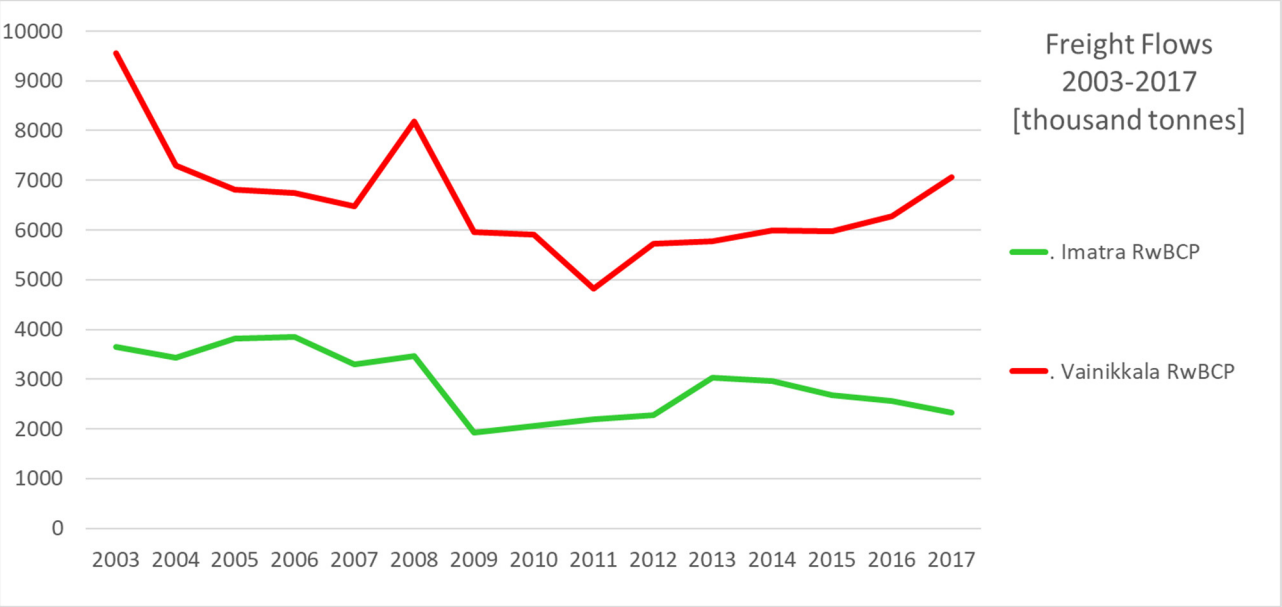
Sum of all vehicles has not changed much between 2016-18 the minimum being about 180 000. The largest change is in loaded trucks to Finland, which has increased from 74617 in 2016 to 90 583 in 2018. This is mostly due to increase in Nuijamaa, which has seen 84…172 % yearly growth in loaded trucks to Finland since August 2018. This growth has continued in 2019 (52…86 % until March).

3.1.2. RwBCPs of Vainikkala and Imatra

RwBCP Vainikkala-Buslovskaja has had 4,8 – 8,2 million tons of cargo / year since 2006. The latest Finnish data available shows 7,1 million tons for 2017.

RwBCP Imatra-Svetogorsk has had 1,9 – 3,8 million tons / year since 2006. The latest Finnish data available shows 7,1 million tons for 2017.

The development of cargo flows in South-Eastern Finland's RwBCPs is shown in Graph 11. The effect of global economic cycles is clear to see. Imatra/Svetogorsk only has one main type of goods, which is more easily affected by changes in market pricing and tariffs decisions.



Graph 11. Freight flows on SE Finland's RwBCPs [1000 tonnes], 2003-2017.

3.2. Passenger traffic

3.2.1. RdBCPs of Vaalimaa, Nuijamaa and Imatra

RdBCP at Vaalimaa-Torfjanovka is typically the busiest RdBCP between Finland and Russia, competing with Vaalimaa-Torfjanovka. This RdBCP has had about 2,4 – 3,5 million passport inspections / year between 2006 and 2018. The latest Finnish data shows 2,45 million passengers in 2018.

Nuijamaa-Brusnitšnoje RdBCP has carried out about 1,6 – 3,4 million passport inspections between 2006 and 2018. The latest Finnish data shows 2,6 million passengers in 2018.

RdBCP Imatra-Svetogorsk has carried out about 0,9 – 2,2 million passport inspections between 2006 and 2018. The latest Finnish data shows 1,5 million passengers in 2018.

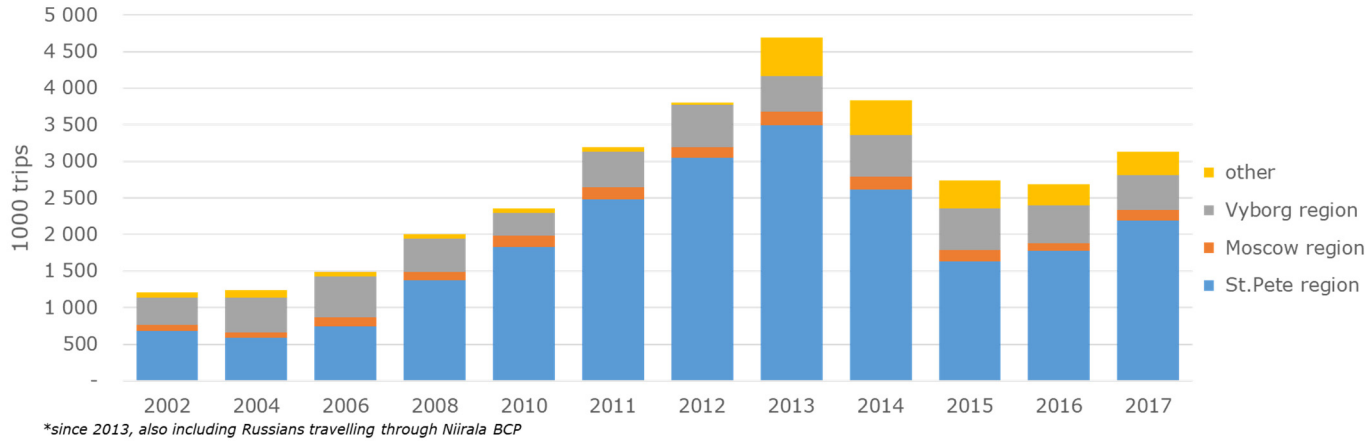
3.2.2. RwBCPs of Vainikkala and Imatra

RwBCP Vainikkala-Buslovskaja has international passenger traffic, with roughly 0,4 – 0,6 million passengers / year since 2006. The latest Finnish data shows 0,55 million passengers in 2017.

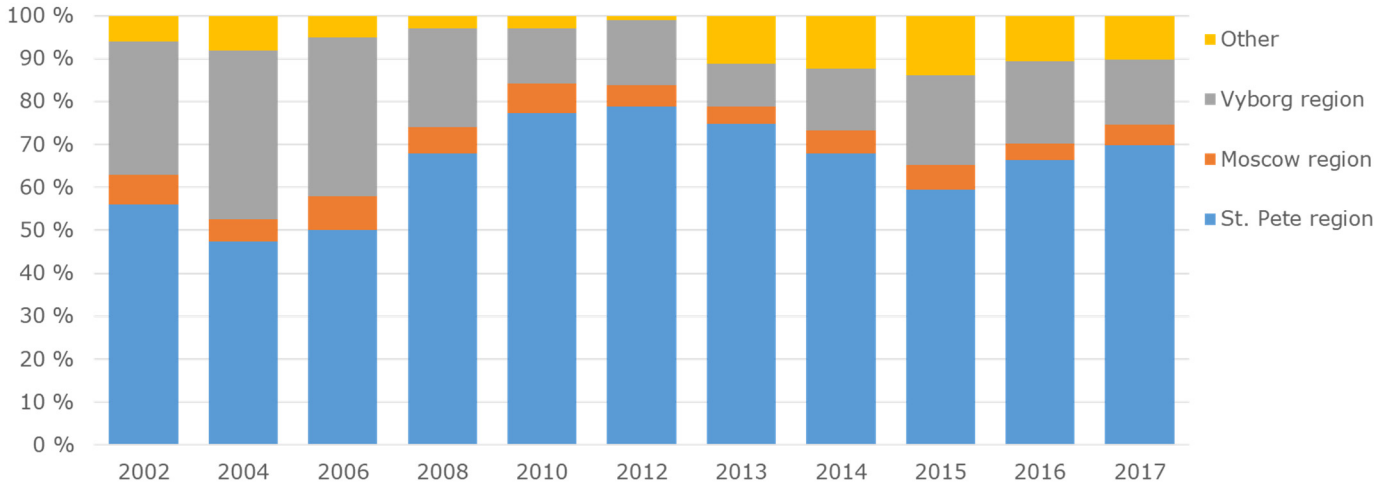
RwBCP Imatra/Svetogorsk currently lacks both international status and regular passenger traffic.

3.2.3. Data from TAK on Russian travellers in South Karelia

In Chapter 2.4.2 we studied data collected by research company TAK on Russian travellers to Finland. This section shows more detailed data concerning South Karelia, Graphs 12 and 13 show the place of residence of Russian travellers to South Karelia.



Graph 12. Place of Residence in Russia, travellers to South Karelia [1000 trips], 2002-2017

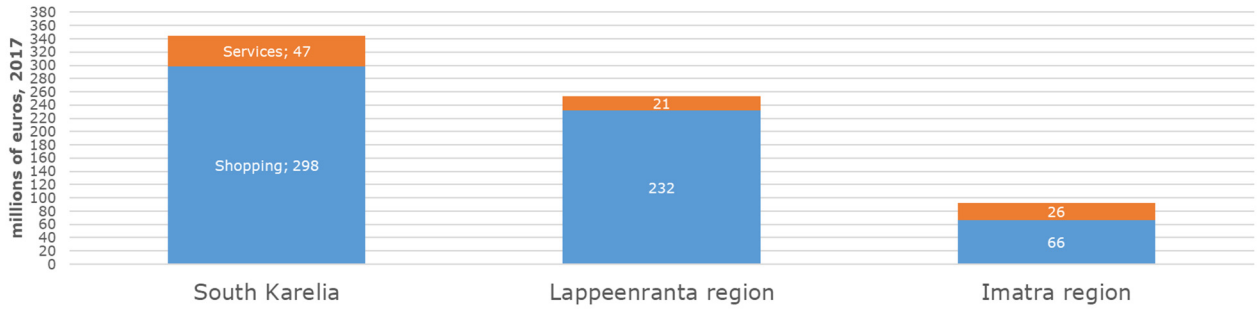


Graph 13. Place of Residence in Russia, travellers to South Karelia [%], 2002-2017

After 2014, the amount of Russian passengers is increasing steadily and it is now over 3 million passengers / year. The growth can be attributed to people living in St.Petersburg. People living in St.Petersburg and Vyborg constitute roughly 90 % of Russian passengers to the area.

In a more detailed look, of Russian visitors in Lappeenranta, 72 % came from St.Petersburg, 21 % from Vyborg. Of Russian visitors in Imatra, 64 % came from St.Petersburg, 27 % from Svetogorsk (Leningrad oblast, other) and 7 % from Vyborg.

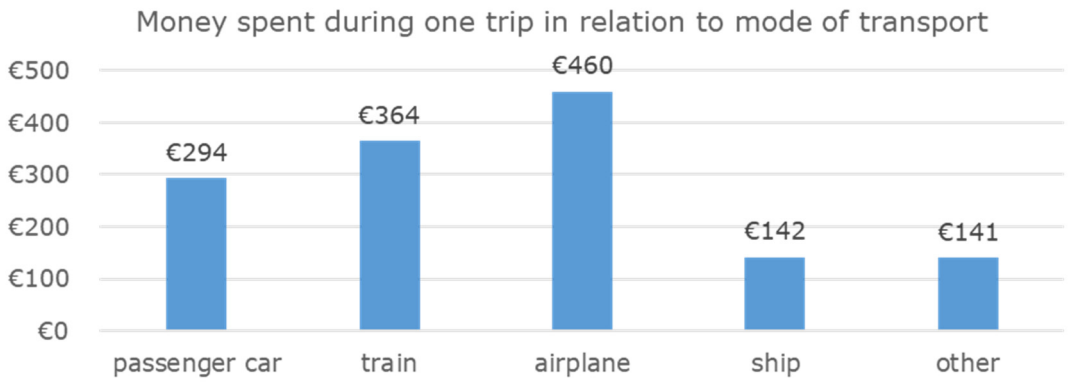
Graphs 14 and 15 describe Russian consumer spending in South Karelia.



	Total spending, M€ (including before-trip costs, 2015 - 2017)				Services in total, M€ (including before-trip costs, 2015 - 2017)				Product shopping, total, M€				Before-trip costs, total, M€		
	2017	2016	2015	2014	2017	2016	2015	2014	2017	2016	2015	2014	2017	2016	2015
Imatra	92	51	36	65	25	11	9	17	64	39	27	49	15	5	2
Lappeenranta	253	126	127	232	22	13	19	15	235	114	107	218	10	5	7
South Karelia	345	177	162	298	47	24	28	31	298	153	134	266	25	10	9

Graph 14. Russian consumer spending in South Karelia, millions of Euros, 2014-17

This graph shows that Lappeenranta is "the shopping hub" of South Karelia with more than 75 % product purchases done there. Imatra is stronger in services: about 55 % of services are purchased there.



Graph 15. Money spent during one trip to South Karelia, 2017

Travellers arriving by plane spend the most money in South Karelia, but, because of higher volumes, more interesting is the spending difference between those arriving by train and those arriving by car. Later we develop a passenger forecast for a new local train connection across Imatra/Svetogorsk RwBCP, which would improve the interaction and commerce on the border regions.

4. TRAFFIC FORECAST

4.1. General traffic forecast overview

The project team approached to traffic forecast and estimates in different ways. The new nationwide, allmodes of transport covering detailed forecast was published just in the end of 2018 by FTIA (Liikennevirasto 57/2018). This forecast forms our basic scenario. However, it does not make any reservations to possible new industrial investments or possible transportation pricing policy changes,if decisions were not made. It has built a GNP forecast, which forms one of the base factor under the forecast.

It does mention that these are perhaps the largest uncertainties with this forecast. Yet this series of forecast have scored remarkably well in earlier forecasts, there are still number of factors, that the project team decided to seek opinion from the market actors. On the basis of received cargo interests opinion and investment information the team made assumptions explained below and by that way forming two additional traffic and traveller projection scenarios in addition to the Livi 57/2018 base forecast.

4.2. Interviews and presentations

The project team identified the main operators on the Finnish-Russian railtraffic and carried out a range of interviews in order to have an industrial point of view in this report. Some of the companies did not have the time to participate but their feedback has been included on the basis of their public appearances and statements on behalf of Imatra status change. The companies and entities can be grouped as follows.

Group	Company/entity
Shippers (Cargo Interests)	• FinnCement • MetsäGroup • Metso • Neste Oil • NordKalk • Ovako • ST1 • StoraEnso • Suomen Karbonaatti • UPM • Yara
Forwarders and terminal operators	• HacklinHamiko • Kouvola Cargo Handling • Rauanheimo • Steveco
Train operators	• Fenniarail • VR Group • VR Transpoint • Aurora Rail • NR Rail
Authorities	• Finnish Border guard

	• Traficom, Customs • Finnish Transport Infrastructure Agency
Passenger traffic companies, actors, research facilities	• VR Group • City of Imatra • Imatra Region Development Company • Go Saimaa • Saimaa Travel • TAK

4.3. Development needs from interviews, reports and presentations

EU perspective, environment and competition

- According to EU's 2011 White paper on transport, EU has policy objectives to achieve modal shifts from road to more sustainable transport modes.
- The current objectives and situation are described in TRAN Committee paper "Modal shift in European transport: a way forward" (2018). There are still improvements to be made in, e.g., TEN-T networks completion, multimodal connectivity and cross-border interoperability.
- The modal shift from road is desirable as the main transport corridors in central Europe are heavily congested. Railway transportation produces less emissions than the road transport while accident risk is smaller. Efficient multimodal solutions with unitized cargo (e.g., containers) help with modal shift.

Finnish Ministry of Transport and Communication

- Increasing Railway competition in Finland is expected to pose a real challenge to new inland waterway cargo flows
- Reduction of emissions by increasing railway cargo (strict emission targets, electric traction)

Key points, why the industrial users, traders are willing to use a particular RwBCP

- The route must be the most efficient. This means it is reliable regarding the expected transit time, more economical by overall total costs, safe and environmentally acceptable to use
- There must be enough capacity available and schedule windows to be used for industrial logistics supported by the maximum train lengths, axle weights allowed.
- The route has enough service providers, who work with customer-focused attitude and are both willing and capable to develop their service.
- The route with associated branch routes is attractively priced, can offer acceptable transit time, may be supported with adequate storage yards along the route and the route as a whole is available when needed.

Imatra RwBCP development drivers

- HaminaKotka impact analysis underlined already in 2013 the need to divide the passenger and fast cargo segment of Rwy transports to go via Vainikkala Buslovskaya and the heavy and slow freight traffic to be routed via Imatra Svetogorsk.
- Same study called for investments in the safety equipment and signalling systems at Pelkola-Imatra section. They would improve the safety and increase the capacity available.
- Paper industry asked for 25 t railway capacity on Luumäki and Kouvola railway section from Imatra Border towards Kuusankoski in in HaminaKotka impact analysis in 2013, the same thing was raised now in 2019 interviews.
- Long trains in SE Finland do not have enough by-pass sidings. This leads to situation where trains must be parted to approved lengths and to be transported in as less economical units. This brings in inefficiencies to the Finnish transport system.
- Development of Imatrankoski border station is practically impossible because of steep hills and current land use, therefore all efforts should be concentrated to Pelkola railway yard.

Train operations: axle weight 25t

- Without infrastructure allowing 25 t axle load, maximum axle load of 22,5 t would result in reduction of payload as the tare weight of the new open gondola wagons is slightly more than with older ones. Without investments, 25 t axle load can be possible, but the trains would be able to run only with reduced speeds and that in turn brings in new railway capacity challenges in Finnish mainlines.
- At the same time, the HCT trucks are increasing payloads on roads and putting the pressure to increase the capacity on railway transportation

Train operations: Train length 1100 m

- The greatest need and, therefore, 1st phase route objective for 1100 m trains will be Imatra border/Vainikkala-Luumäki-Kouvola-KotkaHamina Port.

Industrial views

- The throughput capacity of current railway system is not good
- International status of Imatra BCP is important and necessary for the development needs of both export and import needs
- One has to ensure that the railway transportation system on both Finnish and on Russian side can serve reliably and durable way with least affected by disturbances
- The capacity improvements should be implemented without negative effects to current traffic

- The development of Imatra RwBCP is essential, it cannot be so that the foreign trade on railway originating from southern Finland, which forms 2/3 of the whole trade has only one route cross the Finnish Russian Border
- There are five new forest production mill projects on the drawing board at the moment. They shall have their own effect to overall raw material logistics of forest production plants in Finland even in cases when only one would be realized. (While writing this, the Metsä Fibre renewal -Kemi Investment and the FinnPulp are likely to go ahead. Their combined new net demand of round wood will be 8,67 Million tonnes).

Passenger traffic on Imatra/Svetogorsk RwBCP (based on interviews with Finnish actors)

- Despite having a strong forest industry cluster, SE Finland has a need for improved employment. By implementing new regular regional passenger train service on Lappeenranta-Imatra-Svetogorsk-Vyborg St.Petersburg route, tourism and related services would gain a significant benefit and strengthen the regional economy.

4.4. Freight traffic forecast

Before going into the forecast basis, it is good to have a look into the important rail-transportation sector, namely to the forest industry logistics, mill development and other large cargo flows transported over the border by rail.

There are large forest production mill projects under way in various phases and places around Finland. The national newspaper listed the main forest product project plans according to following table with their cost estimates and wood demand needs.

Table 3. Main forest product project plans.

Mill project	Investment Cost estimate	Wood material demand increase (Million Tonnes)
Finnpulp pulp mill Kuopio	1400 Million EUR	5,7
Boreal Bioref pulp mill Kemijärvi	950 Million EUR	2,0
Kaidi biorefinery Kemi	900 Million EUR	2,4
Kaicell Fibre pulp mill Paltamo	900 Million EUR	3,0
Metsä Fibre Kemi pulp mill renewal, decided	Not published	3,0
PLANNED MILLS ON DRAWING BOARD, TOTAL	**4,1 Billion Euros**	**16,1**

Today Finland imports approximately 10 million m3 of woodmaterial annually and this amount is likely to increase due to these new projects but also due to energy demand generated by the swift from coal to wood pellets in powerplants. These new project,

despite their location in northern Finland are each such large, that they will affect to wood logistics geography of whole Finland even if just the largest one or two smaller ones will be constructed. Currently the Kemi renewal project is the only one, which has been announced to be realized.

These are not the only investments planned and / or decided which will affect to demand for railway transportation. There are terminal investments underway in different parts of Finland which are based on handling of goods or cargoes of Russian origin. The volumes of such terminals have been identified during the Interview round but they have been omitted. Today the total volume of cargo transported by railway between Finland and Russia is some 15,5 million tonnes.

4.4.1. Scenario 0

This scenario is based on the Finnish official transportation volume forecast 2018 (Liikennevirasto 2018b). The forecast does not have reservation for new forest production or heavy industry investments. It assumes that in early years the railtransportation sector benefits from the new competition environment. However in mid term of forecast, the demand forest products is expected to decline, which means reduction of transportation services, both rawmaterials, wood and chemicals but also demand to transport pulp and paper will start to decline. The old mills are kept in running and gradually phased out when the time is right.

4.4.2. Scenario 1, conservative/baseline

In this scenario there has been made reservations to new forest production mill projects, which are additional to new production capacity. The forecast does not make and statement where these new mill project will will be realised. When asked from one of the forest company interviewed logistic director, he mentioned that these are such large projects that they will have a knock on effect to geography of the other round wood collection areas as these are self balancing through price and distance basis.

In his scenario it has been estimated that there will be a new mill decision by 2020 and it will be on the market on 2025, bringing to Imatra 2 million tonnes of new cargo, consisting of wood, chips and other raw materials. In 2025 a new mill Investment decision will be made and again it will increase cargo flows through Imatra, not by 2 million but gradually 1,3 million tonnes by 2035.

Scenario 1 = Official forecast + market survey + wood import increase by two mill projects, which of 25 % to Imatra by 2035 + the projected passengers with regional train

4.4.3. Scenario 2, “baseline” or “optimistic”

This scenario were formed on the basis of what has been the case on the busy BCP’s of Finland earlier. The forecast ends up with 9 million tonnes BCP throughput level. Cargo quantity which has been processed through single Finnish Russian RwBCP’s in past years.
Scenario 2 = Official forecast + market survey + wood import increase + the projected passengers with regional train (What cargo RwBCP Imatra can process with southern railway network)

Table 4 The three scenarios for the Imatra Svetogorsk BCP cargo traffic and passenger development until 2035.

	Scenario 0 (LiVi57/2018)		**Scenario 1 Conservative**		**Scenario 2 Baseline**	
Year	Cargo Million Tonnes	Passengers (Rus+Fin) Million Passengers	Cargo Million Tonnes	Passengers (Rus+Fin) Million Passengers	Cargo Million Tonnes	Passengers (Rus+Fin) Million Passengers
2018	2,4	NA	2,4	-	2,4	-
2020	2,8	NA	2,8	-	2,8	-
2025	3,3	Occasional Charter trains only	5,7	0,9+0,1	6,4	1,1+0,15
2030	3,5	Occasional Charter trains only	6,3	1,1+0,15	7,5	1,4+0,2
2035	3,0	Occasional Charter trains only	7,0	1,3+0,2	9,0	1,6+0,25

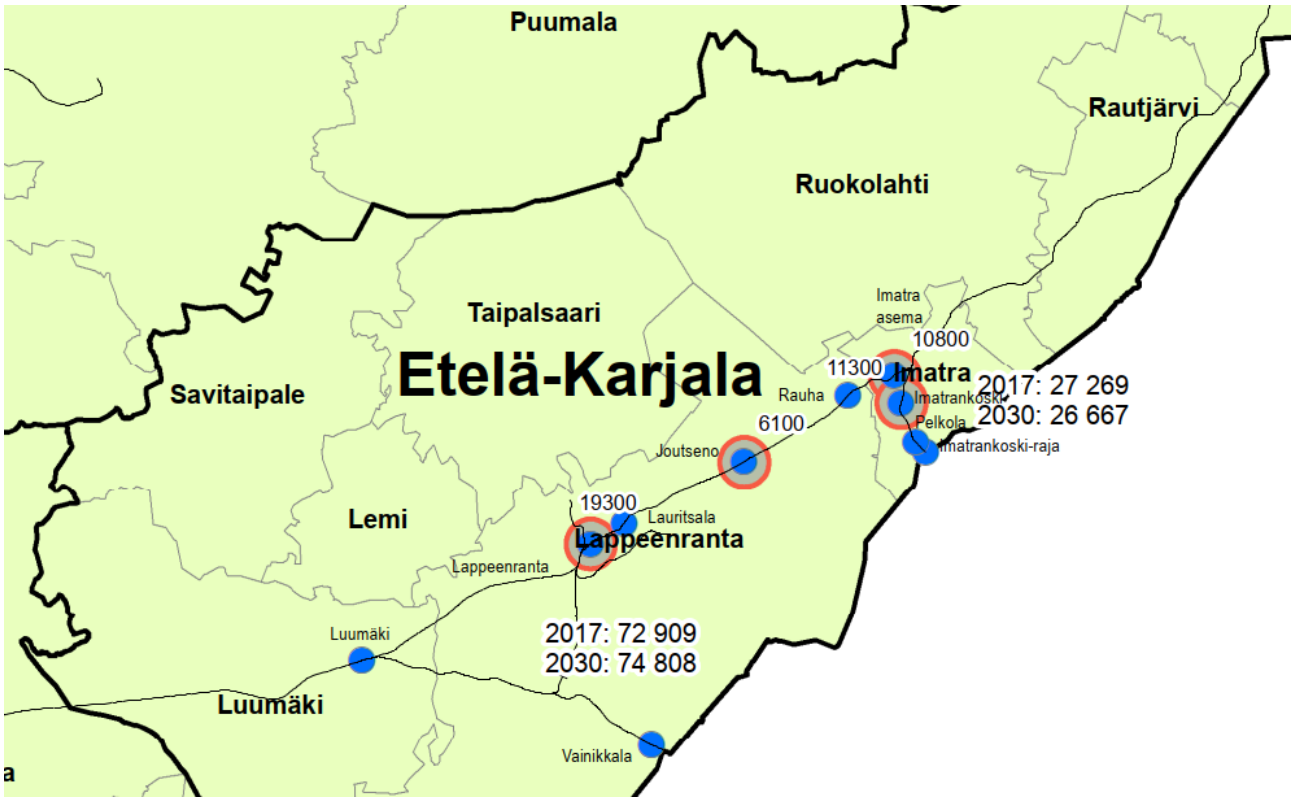
4.5. Passenger traffic forecast

In Finland, the population of South Karelia region was 129 865 in year 2017. In the city of Lappeenranta, the amount of people is 72 909 in year 2017 and forecast for year 2030 is 74 808. In Imatra the population is 27 269 in year 2017 and in year 2030 26 667.

Traffic model described in Chapter 4.5.4 proposes four passenger stations in Finland. In year 2017 there were approximately following amount of people inside 2,5 km radius from the station

- Imatrankoski 11300 (overlapping with Imatra station)
  - new possible station for the regional train
- Imatra station 10800 (overlapping with Imatrankoski)
- Joutseno 6100
- Lappeenranta 19300

Together inside Imatrankoski and Imatra station 2,5 km buffers are living 18232 citizens. Population is also presented in Graph 16.



Graph 16. Population in cities of Lappeenranta and Imatra and near proposed stations (2,5 km buffer).

On the Russian side, the Russian statistics show a combined population of Saint Petersburg, Leningrad Region and the border areas of Finland to be 7,63 million people in 2018, including:

- Saint Petersburg: 5,35 million people (70% of the total);
- Leningrad Region Petersburg: 1,81 million people (24% of the total);
- the border areas of Finland: 0,47 million people (6% of the total).

4.5.1. Scenario 0

Similar to freight traffic we start with the Finnish official transportation volume forecast 2018 (Liikennevirasto 2018b). The model used to forecast the passenger trips is based on the domestic land use and expected population change, so it works as intended only when forecasting domestic train trips. The model has an extension for current international railway traffic, i.e., Allegro and Tolstoi trains, but you can not use this model to make a forecast for new international traffic.

As this type of scenario typically implies that there is no or very little change in infrastructure, it is not possible to start regular passenger traffic on Imatra RwBCP. Therefore, only occasional charter traffic is assumed here.

4.5.2. Scenario 1, "conservative"

As the Finnish forecast model did not have components to estimate new passenger traffic, we started to evaluate the maximum potential for train passengers. As stated earlier, there are no detailed official statistics or questionnaires (in Finland) on travellers

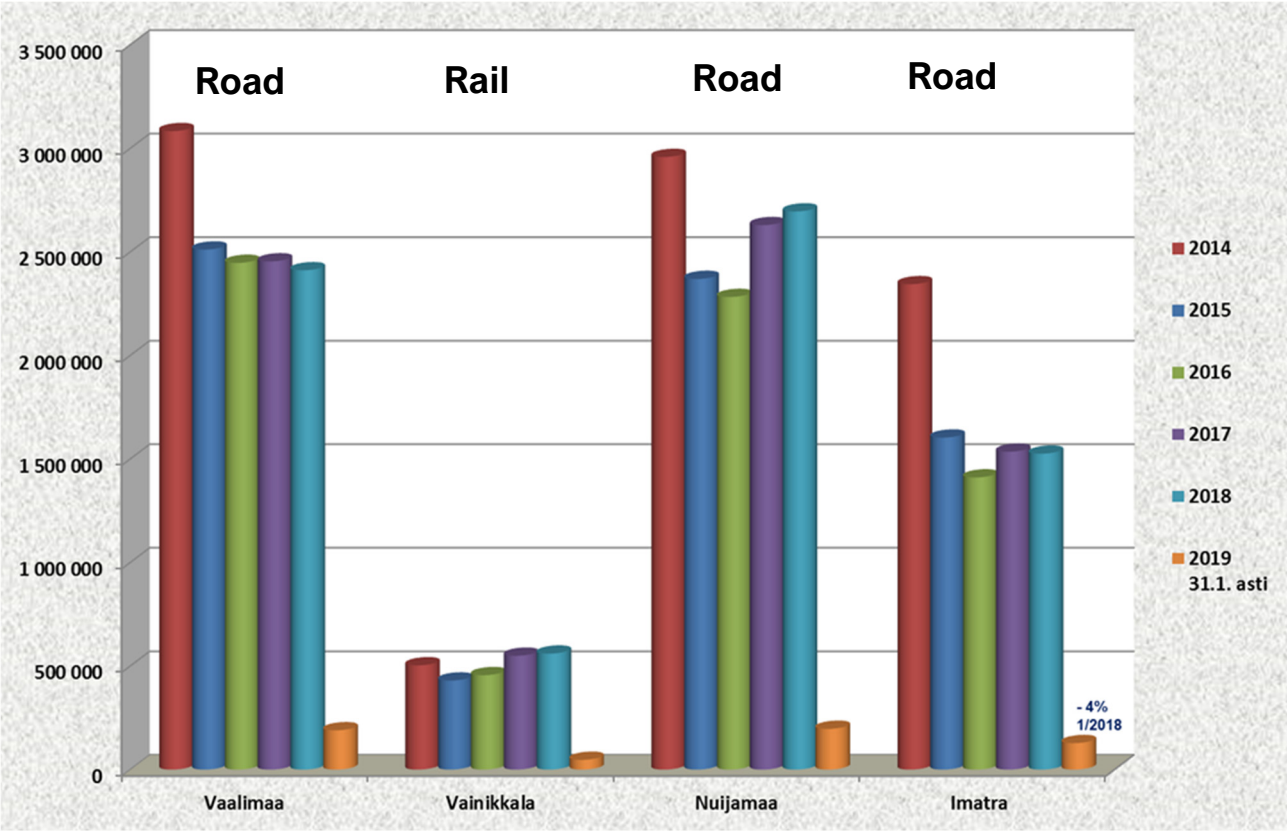
entering Russia from Finland. The Finnish Border Guard only collects the number and nationality of travellers.

We started with statistics collected by the Finnish Border Guard. Because Russian forecasts include only Russian travellers, the "maximum amount of train users from Finland" would be "Finnish and 3rd country border crossers using Imatra and Nuijamaa BCPs".

To estimate the share of potential train users from all border crossers, we organized expert and travel agent interviews in South-East Finland. In this way, we were able to produce an estimate on the amount of Finnish and foreign travellers that could use the new local train connection. This estimate is added to the forecast on Russian travellers produced by TiG.

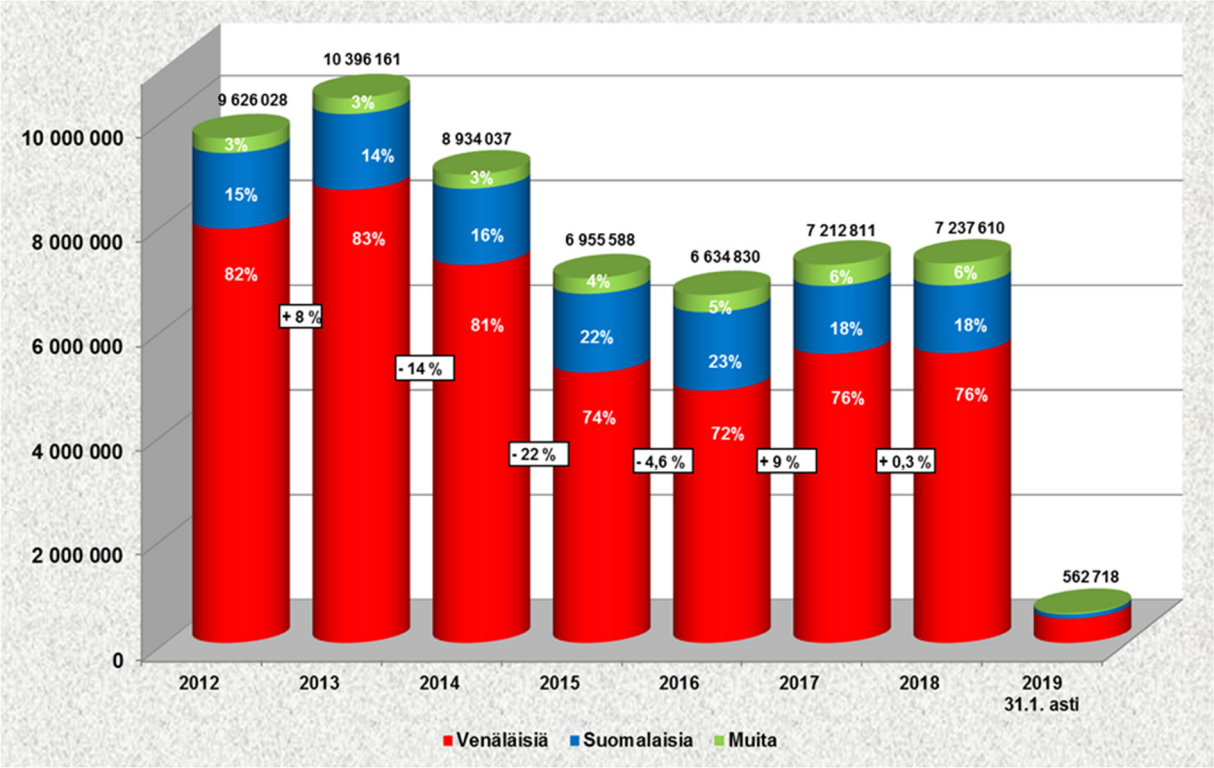
Total number of train passengers from Finland: [(all border crossers using Imatra and Nuijamaa BCPs) * (share of Finnish border crossers) * (share of potential Finnish train users)] + [(all border crossers using Imatra and Nuijamaa BCPs) * (share of 3rd country border crossers) * (share of potential 3rd country train users)]

The following graphs show the border crossings on individual BCPs and the nationality of border crossers.



Graph 17. All border crossings in SE Finland BCPs 2014-2018 (and January 2019), divided into individual BCPs. (Finnish Border Guard)

A moderate forecast for all border crossers in Imatra and Nuijamaa gives us 4,2 million border crossers in 2020. This is expected to increase to 4,8 million in 2030 and 5,5 million in 2035.



Graph 18. All border crossings in SE Finland BCPs, 2012-2018 (and January 2019). Red = Russian, Blue = Finnish, Green = other nationalities. (Finnish Border Guard)

The graph shows that the share of Finnish border crossers is 14…23 % and 3rd country border crossers 3…6 % between 2012-18. In our calculation, the share of Finnish border crossers would be 18 % and 3rd country 6 %.

Third component of the calculation is the share of potential train users. For Finns, it is estimated that 80 % of Finnish travellers across the border live in South Karelia. Their main motivation is shopping on short distances close to border for fuel and beverages. Therefore, we assumed that it is unlikely to expect this group to shift to trains as it is a short trip and buying fuel is key part in it.

A more likely group to use train is travellers coming from South Karelia and other parts of Finland. This group is 15 % in total. 8 % of them are part of a group, 7 % arrange their own trips. They mostly visit Viborg and St.Petersburg. Remaining 5 % are Finnish truck drivers and commuters working in Svetogorsk.

For the first year of traffic, we expect the share of potential Finnish train users to be 12 % of all Finnish border crossers. As the passenger traffic becomes established and more trains are introduced, the share could rise further. In baseline scenario, share of 3rd country travellers is assumed stable 10 %.

The results are shown in Table 5.

Table 5. Passenger potential from Finland to Russia, conservative scenario.

	Finnish potential train users				3rd countries train pass LOW				Forecast
Year	% of Finns	Finnish trips	% of train	**Finn total**	% of 3rd	3rd trips	% of train	**3rd total**	**Conser-vative**
2025	18 %	756000	12 %	**91000**	6 %	252000	10 %	**26000**	**117000**
2030	18 %	864000	15 %	**130000**	6 %	288000	10 %	**29000**	**159000**
2035	18 %	990000	18 %	**179000**	6 %	330000	10 %	**33000**	**212000**

These regional train trip levels in the starting year would correspond to levels on Finnish track sections of Lahti-Riihimäki and Karjaa-Hanko.

These demand levels require that the travel time and cost are competitive. According to a survey made by TiG, (see "The action plan for development of International Railway connection at Imatra Svetogorsk" by TiG, Figures 5.2.15 and 7.3.4), the most relevant factor on the Russian side would be ticket price. 92 % of respondents would use the train via Imatra/Svetogorsk if fare for a single trip was less than RUR 1000 (13 €). With a 40% higher rate, the demand is expected go down by 40%.

4.5.3. Scenario 2, "baseline/optimistic"

Scenario 2 differs from conservative only regarding 3rd country passengers, which would have a larger share of train users. This could be possible with, e.g., more marketing efforts for travellers both in groups and travelling individually. The results are shown in Table 6.

Table 6. Passenger potential from Finland to Russia, optimistic scenario.

	Finnish potential train users				3rd countries train pass HIGH				Forecast
Year	% of Finns	Finnish trips	% of train	**Finn total**	% of 3rd	3rd trips	% of train	**3rd total**	**Opti-mistic**
2025	18 %	756000	12 %	**91000**	6 %	252000	25 %	**63000**	**154000**
2030	18 %	864000	15 %	**130000**	6 %	288000	25 %	**72000**	**202000**
2035	18 %	990000	18 %	**179000**	6 %	330000	25 %	**83000**	**262000**

4.5.4. Passenger traffic: railway operator and rolling stock

To start regular passenger train operations via Imatra/Svetogorsk BCP there are infra-structure-related and process-related questions, which are covered in Chapters 5.3 and 5.5. There are also questions related to the railway operator itself and to the rolling stock. These issues are discussed below.

Railway operator

The following process is required for all new Railway Undertakings to start operations in EU and EEA. Starting passenger traffic described here is therefore easier with an existing RU registered in EU/EEA. This part of the process of starting new railway operations from scratch typically takes 1-2 years, if everything goes smoothly.

Starting the operation of railway services in the Finnish state-owned railway network requires that the railway undertaking meets the following conditions:

1. having an Operating Licence granted by the Finnish Transport and Communications Agency Traficom or a corresponding operating licence issued in the EEA.

2. having a Safety Certificate in accordance with the Rail Transport Act, issued or approved by the Finnish Transport and Communications Agency Traficom

3. Allocated railway capacity

4. Access agreement with the Infrastructure Manager.

5. Other conditions for operating railway traffic are in all respects fulfilled.

Rolling stock

In cross-border traffic between Finland and Russia, locomotives and diesel/electric multiple units (DMUs/EMUs) need both European authorization according to LOC&PAS TSI and Russian authorization.

Rolling stock with these authorizations can be used on the whole Finnish network. *Without authorization, rolling stock can be used no further than the 1st border station.*

Because of different electrification systems of Finland and Russia, all electric rolling stock crossing the border needs to have a dual-voltage power system.

In addition to current rolling stock (Allegro and Tolstoi), there are several options:

1. *Using Russian passenger wagons in Finland, change of locomotive on the border*

It is good to note that Rail Transport Agreement allows the use of Russian passenger wagons also in Finland, if other Finnish conditions such as the vehicle gauge FI1 are met. The locomotive could be changed in connection with the border checks.

2. *Changing existing Finnish passenger wagons to be interoperable with Russia*

This has been done previously, for instance, with the Sibelius trains to St.Petersburg as their wagons were modified from existing Finnish IC wagons.

3. *A new rolling stock type*

With new rolling stock, European and Russian authorization processes are accerelated by:

- existing European authorization of the chosen rolling stock type
- simultaneous use of two rolling stock units in both Finland and Russia

New rolling stock requires a wheelset suitable in both countries. Certain components such as train protection, radio/telecom, signals and lights need to be doubled. Rolling stock also needs to pass braking tests.

Total duration of authorization and delivery process is typically at least four years. The result of the authorization process is railway vehicle authorisation for the whole 1524 mm EU network.

4.5.5. Passenger traffic operating model

To have an efficient method of operation in regular passenger traffic, it would be necessary to have new infrastructure, including

- electrification from Kamennogorsk to Svetogorsk and further on from the border to Karelian main line in Imatra
- border check facilities in Pelkola (border facilities and checks described in more detail in Chapters 5.2 and 5.4)
- a triangle track from Imatrankoski to the west, towards Joutseno and Lappeenranta.

Capacity needed

Because the majority of travellers are expected to be Russians, Russian rolling stock was used as a basis for capacity calculation. One possibility is the "Lastochka" EMU, type ES-1 (Russian: "EC-1"). It is based on Siemens Desiro regional trains, and type ES-1 has a dual-voltage electric system, which makes it capable on running both Russian and Finnish networks (Picture 5).

Picture 5 Lastochka train type ES-2 (single-voltage), only minor differences to ES-1. Source: Wikipedia Russia.

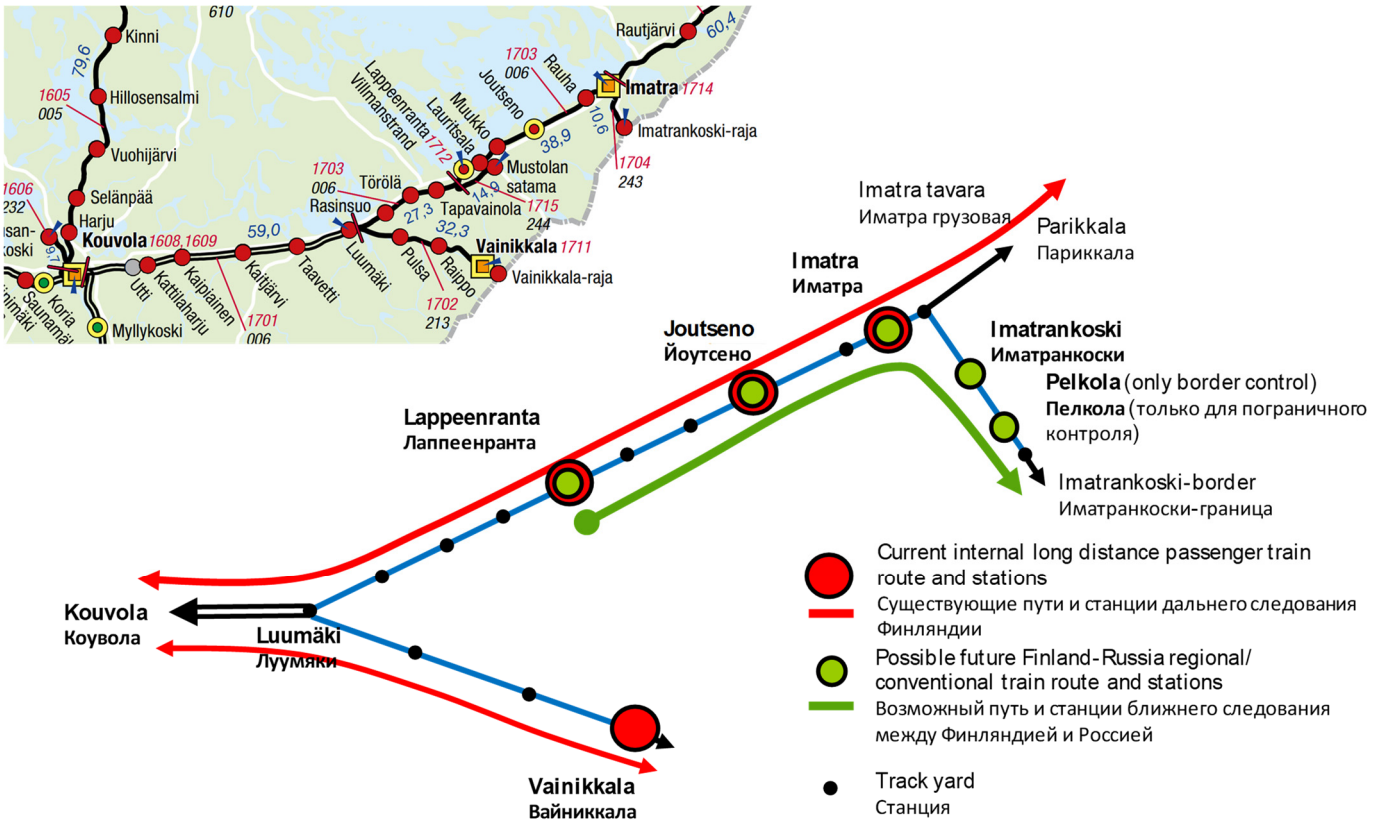
It was assumed that one Lastochka would carry 340 passengers and 75 % of capacity would be used. With these assumptions and 1 million yearly (2800 daily) passengers, 6 Lastochka units would be needed daily. This would mean three trains with two Lastochka units per day.

With a locomotive train (capacity 500 passengers = 9 wagons, Finnish type VEi, 75 % of capacity used) there would be two trains per day.

As one Lastochka unit is 130 metres long, a platform length of 250 metres would be needed. Locomotive trains of 9 wagons would need slightly shorter platforms, around 200 metres. Current stations in Imatra, Joutseno and Lappeenranta have a platform length of 450 metres, so the platforms would be suitable for this traffic. Platform lengths for border checks in Pelkola and possible new station in Imatrankoski should be designed according to need.

Preliminary Finnish stations

Graph 19 shows preliminary stations on the Finnish side of the border.



Graph 19. Possible stations on Finnish side of the border.

Locomotive drivers

The standard operating procedure in cross-border traffic includes the change of locomotive drivers on the border stations. Typically, a Russian driver takes the train to Finnish side.

Having a Russian locomotive driver in driving assignments elsewhere in Finland, it is required that the driver has a European locomotive driver education and a good command of Finnish language.

5. DESCRIPTION OF THE PROJECT AREA

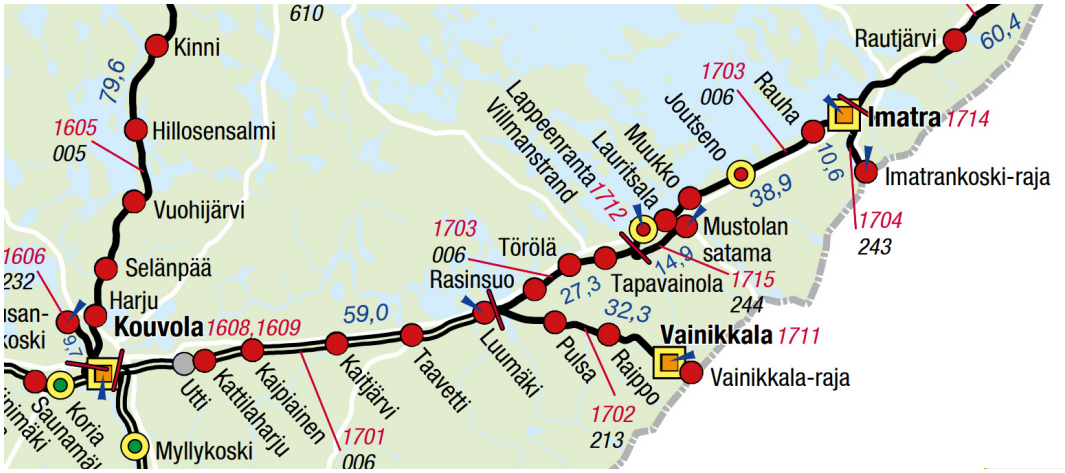
The larger impact area of the project in Finland is Kouvola-Luumäki-Vainikkala-Imatra and in Russia Svetogorsk-Kamennogorsk-Vyborg-St Petersburg.

In this report, the focus area in Finland is Imatra-Imatrankoski border and in Russia Svetogorsk-Kamennogorsk. The report is focused on the Finnish side, but the most important investments on the Russian side are also included. The Russian investments are described in more detail in Russian Report.

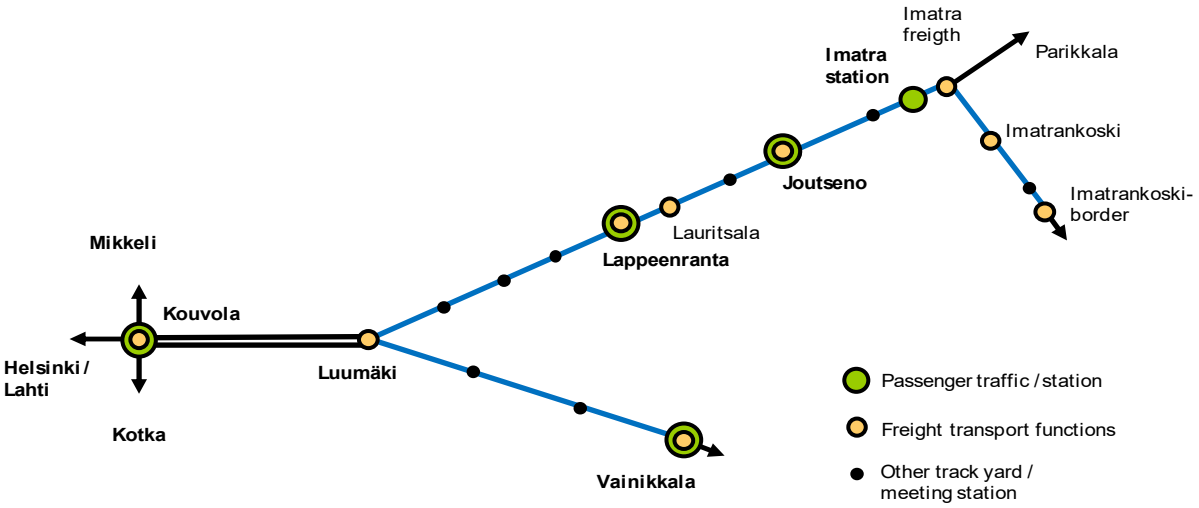
5.1. Track sections Kouvola-Luumäki-Vainikkala-Imatra

5.1.1. Current status

Study concerns mainly Imatra-Imatrankoski-border section and Pelkola track yard. Section is part of South-East Finland railway network which is presented with the main figures in following graphs and table. There are many production plants with track connection and train transportation in the Luumäki-Imatra-Imatrankoski-border section in Lappeenranta, Lauritsala, Joutseno and Imatra area. There is also Mustola harbor in Lappeenranta with track connection.



Graph 20. Railway network in South-East Finland.



Graph 21. Simplified railway network in South-East Finland.

In the following table it is presented basic information of the SE railway sections.

Table 7. Current status of the impact railway area of the project.

Railway section	Length (km)	Axle load (t)	Maximum train length (m)	Maximum speed for freight (km/h)	Maximum speed for passen-ger (km/h)	Passen-ger trains / day	Freight trains /day*
Kouvola-Lu-umäki, double track section	59	25	1100	100	200	15+15	16+16
Luumäki-Lap-peenranta	27,3	22,5	750 (→ 1100)	100	140	10+10	11+9
Lappeenranta-Lauritsala	4,2	22,5	750 (→ 1100)	100	140	8+8	10+7
Lauritsala-Jout-seno	13,9	22,5	750 (→ 1100)	100	140	8+8	10+8
Joutseno-Imatra	26,7	22,5	750 (→ 1100)	100	140	8+8	11+11
Imatra-Imatran-koski-border	10,6	22,5	880 (Imatra freight) 1100 (Imatranko-ski)	60	-	0	4+4
Luumäki-Vainik-kala border	32,3	25	1100	100	140	5+5	7+5

* Table shows the average regular train amount per day. There are also additional trains due to exceptional and ad-hoc situations, seasonal and trend fluctuation, demand and traffic peaks and also changes in regulations and policies.

5.1.2. Ongoing studies and design projects

Completed/ongoing design projects

Several studies and design projects have been completed in recent years for the South-East railway network and Imatra area, and some of them have proceeded already to implementation. The most essential studies in recent years are listed below:

- Luumäki-Imatra construction design – ongoing from the year 2018 (completion of the project in 2023)
- ENI Project (2019-2022)
- Imatra-Imatrankoski-Border Pre-engineering design, update (2019)
- Vainikkala Railway Yard extension, planning and construction (2018-2019)

- Imatra Railway Yard functionality study (2017)
- Luumäki-Imatra railway design (2017)
- Kouvola RRT: Long trains and cargo handling (2017)
- Luumäki-Imatra-Imatrankoski-Border project evaluation assessment (2015)
- South-Eastern Finland traffic study (2015)
- Imatra-Imatrankoski-Border Pre-engineering Design (2014)
- Imatra-Svetogorsk feasibility study (2013)

Table 8. Railway projects in South-East Finland

PROJECT	LEAD	CONTENT/NOTES	STATUS	TIME PERIOD	BUDGET
KOUVOLA RRT PLANNING	City of Kouvola	Intermodal terminal	Ready	2016-2018	3,5 M€
KOUVOLA RRT - CONSTRUCTION	City of Kouvola	OBOR project, cargoes between Finland and Russia, Kazakhstan, PRC and Far East Destinations	Under construction	2019-2022	40 M€
IMATRA ROAD AND RAIL BCP (KS1402)	Finnish Transport Infrastructure Agency	ENI (European Neighborghood Instrument) Finance, Large Infrastructure Project LIP Railway BCP: X-Ray system, improvements for security and border control	Granted, Underway	2019-2022	5,2 Million €
LUUMÄKI–IMATRA DEVELOPMENT PROJECT	Finnish Transport Infrastructure Agency	Luumäki-Joutseno section: two new 1100 m long track yards (Törölä & Muukko) Joutseno-Imatra tavara double track section, including three railway bridges Improves the functionality, and increases capacity and speed limits	Approved by Goverment and underway	2017-2023	189 M€
IMATRA-IMATRANKOSKI BORDER PRE-ENGINEERING DEVELOPMENT ACTIONS	Finnish Transport Infrastructure Agency	Imatra triangle track from Luumäki direction to Imatrankoski border Double track section, electrification and signaling system, 10 km Pelkola track yard development and status change to the international railway BCP Passenger platform in current Imatrankoski	In active development phase by the Agency	2019-2029 P1 2025 P2 after phase 1	85 M€

LUUMÄKI-JOUTSENO DOUBLE TRACK	Finnish Transport Infrastructure Agency	Luumäki-Joutseno double track section Improves capacity significantly	Pre-engineering design and EIA 2010		Estimation ~200 M€
VAINIKKALA TRACK YARD DEVELOPMENT ACTIONS	Finnish Transport Infrastructure Agency	Vainikkala track yard, extension of the track yard, three 1100 m long side tracks (one new and lengthen of two tracks)	Approved Underway	2016-2019	13 M€

The content of the latest projects

Luumäki-Imatra railway design (2017) and ongoing construction plan (2018-2023) – construction work underway

There is ongoing construction design project for the development of Luumäki-Imatra track section, including Joutseno-Imatra double track. The construction design will be compiled based on the 2017 railway design. Project includes following actions

- Double track between Joutseno and Imatra (freight track yard)
    - In the double-track section, new crossover locations are proposed to Joutseno, Rauha, and Imatra. The existing Rauha track yard will be demolished.
- The speed limit will increase to 180 km/h between Luumäki and Lappeenranta, and elsewhere mostly to 200 km/h.
- The axle load will be increased to 25 tonnes and the train length to 1100 metres.
- In Luumäki-Joutseno single-track section, Törölä and Muukko track yards will be developed for the 1100 m train length.
    - In Törölä, the new siding track is proposed on the South side of the main track, and in Muukko, the existing siding track is possible to be extended to 1100 m.
- New 750 m side track to the Lauritsala track yard.
- Additionally, there are development actions to the platforms and accesses of the Imatra railway station.

The implementation project includes reconstruction of Mansikkakoski and Saimaa Canal railway bridges and also Highway 6 (Valtatie 6) underpass.

ENI Project (2019-2022)

The ongoing ENI Project for the development of the Imatra border crossing has started in the spring of 2019, and the actions will be implemented by 2022. The project includes development activities for both road and railway border crossings.

The ENI Project includes several development activities for the Pelkola track yard that is located next to the existing border crossing point. During the project, the following actions will be implemented in Railway BCP:

- Train x-ray for freight train control

- X-ray bypass track for passenger traffic
- CCTV, video surveillance
- Fencing
- Step-in platforms for officials in border control (passenger and freight trains)
- Access roads from the existing border crossing buildings to the new platforms.

Graph 22 ENI CBC project, Imatra road and railway border crossing point

Imatra-Imatrankoski-Border Pre-engineering Design update (2019, based on the pre-engineering in year 2014)

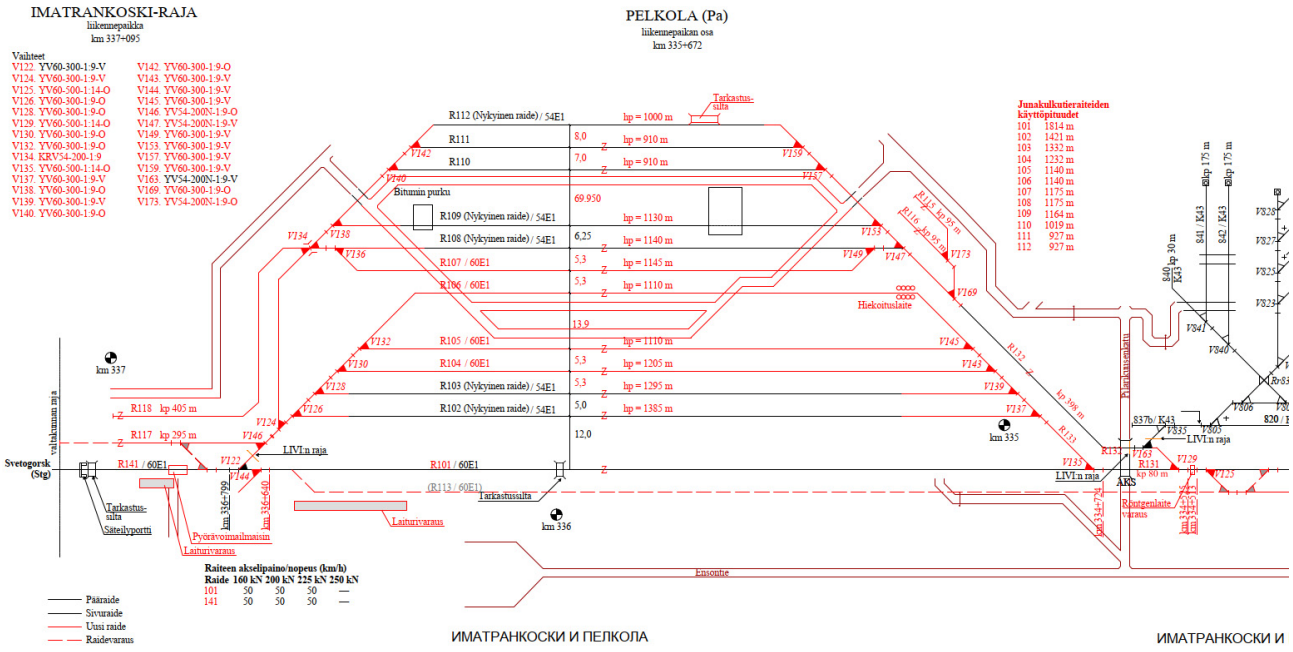
The content of the design update project correspond to the 2014 pre-engineering design, but the actions have been phased so that constructing them is possible in smaller parts. Design is also updated with development actions for passenger traffic.

The pre-engineering design contains:

- Triangle track from the Luumäki direction to Imatrankoski-border track
- Double track from the triangle track to the northern end of the Pelkola railway yard.
- Electrification and signaling system for the 10 km double track
- Pelkola track yard development into an international border crossing.
- Pelkola track yard development by increasing side tracks from the existing 5 to 11.

- After the development of Pelkola and the transferring of border activities, the siding rails of Imatrankoski track yard will be deconstructed.

In the updated pre-engineering design, the investments are proposed to be designed and constructed in phases. The phases in the pre-engineering update differ a little from the proposed development actions of this study, but the whole development entity is same in both projects. The content of the phases can be updated and modified when design continues to the railway design. Pre-engineering update will be completed in May 2019.



Graph 23 Designed layout of the Pelkola track yard as an international border crossing point in the Imatra-Imatrankoski-border pre-engineering including phases 1 and 2 (2014)

Vainikkala Track Yard extension, construction design and construction (2018-2019)

Three existing tracks are extended at the Vainikkala track yard, so that their net length enables a 1100 m train length. In addition to the new long tracks, a new 300-metre non-electrified loading track will be constructed next to them. Because of the changes in the new long tracks, also the existing side/shunting track will be extended towards the border.

In addition to the track changes, the construction design includes also changes in switches, and re-organization of the maintenance roads.

There has been simultaneously ongoing project for signalling development and commissioning of the Vainikkala track yard including renewal of the interlocking system.

All track and signalling construction works will be ready and finalized during year 2019.

Other ENI projects realised

ENI Finance has previously funded Large Infrastructure Projects (LIP) such as

- LIP 1602 Imatra BCP
- LIP 1604 Parikkala BCP
- LIP 1608 Vaalimaa BCP
- LIP 1612 Kotka Cruise terminal

In all, in Finland projects 24,6 Million €, ENI Funding 80 %.

On the Russian side this EU Funding has supported projects

- LIP 1601 Agricultural project
- LIP 1605 Border Checkpoint for seaport Passenger in St.P.
- LIP 1606 Russian Finnish Life Science Park
- LIP 1610 Vyborg Petrovsky district water supply system
- LIP 1611 Reconstruction of BCP Torfyanofka.

In all, in Russia projects 18 Million €, ENI Funding 80 %.

5.2. Specific description of Imatra BCP

5.2.1. Infrastructure

Imatra-Imatrankoski-Border / Imatra track yard, infrastructure

The Imatra-Imatrankoski-border is non-electrified 10,6 km long single track section. The speed limit is 50 km/h for all trains, and the largest permitted axle load is 22,5 tonnes. Imatra railway yard comprises of the following existing parts: Imatra Station, Imatra Cargo, Imatrankoski, and Pelkola (private). Additionally, the private track yard of Ovako Steel Oy is located between Imatrankoski and Pelkola.

Imatra Station

Imatra Station has a single main track with an adjacent passenger platform.

Imatra Freight track yard

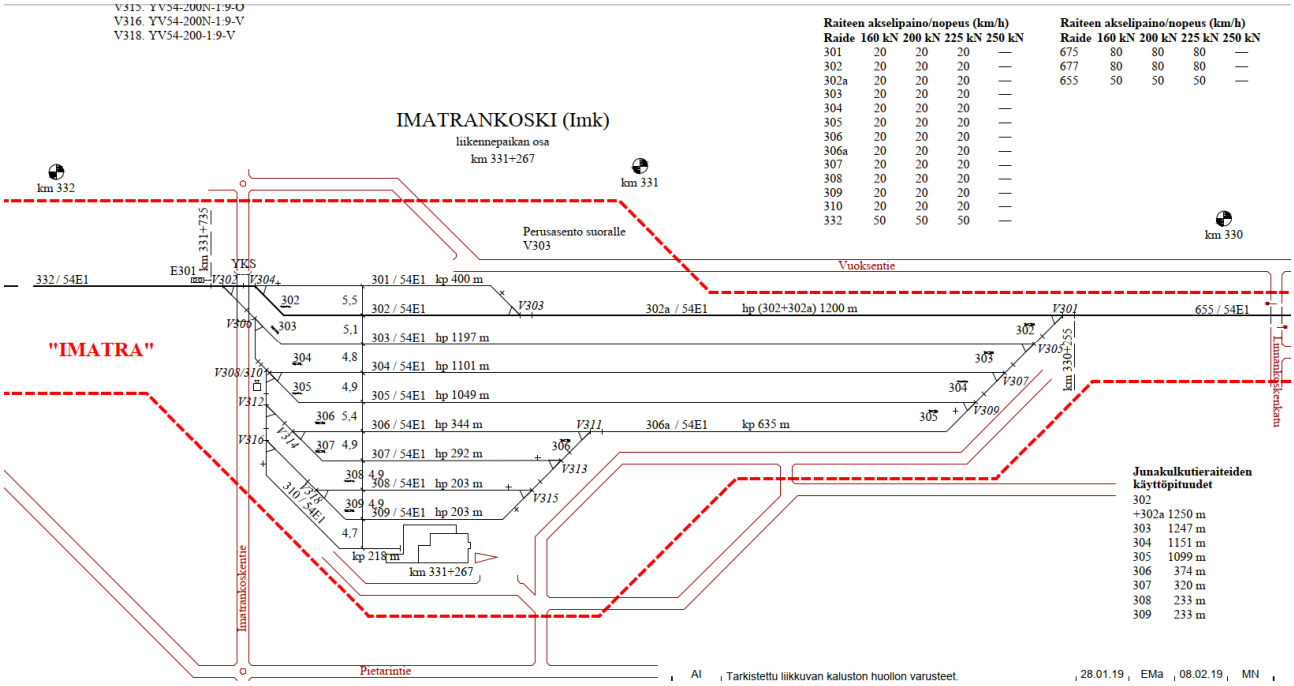
Imatra Freight track yard has 16 side tracks with a usable train length of 622-889 m. Five side tracks have over 750 m in net length. All tracks are electrified. From the track yard, there are track connections to the Stora Enso mill sites. Trains from Imatrankoski runs to the Imatra freight yard for switching locomotive and arranging trains.

Imatrankoski

Imatrankoski functions now as a two-way border crossing point between Finland and Russia. The trains that cross the border are moved with Russian locomotive to Imatrankoski from where the trains continue further into the Finnish railway network with Finnish locomotive. The track yard activities are focused on the shunting work of the locomotive and arranging of the train wagons.

Imatrankoski has one main track, and 9 siding tracks (Graph 24). In addition to the main track, seven siding tracks function as train route sections. The longest net length

is in the main track, 1200 m. The usable net length of two side tracks is over 1100 m, and one of the side tracks is 1049 m. All tracks are non-electrified.

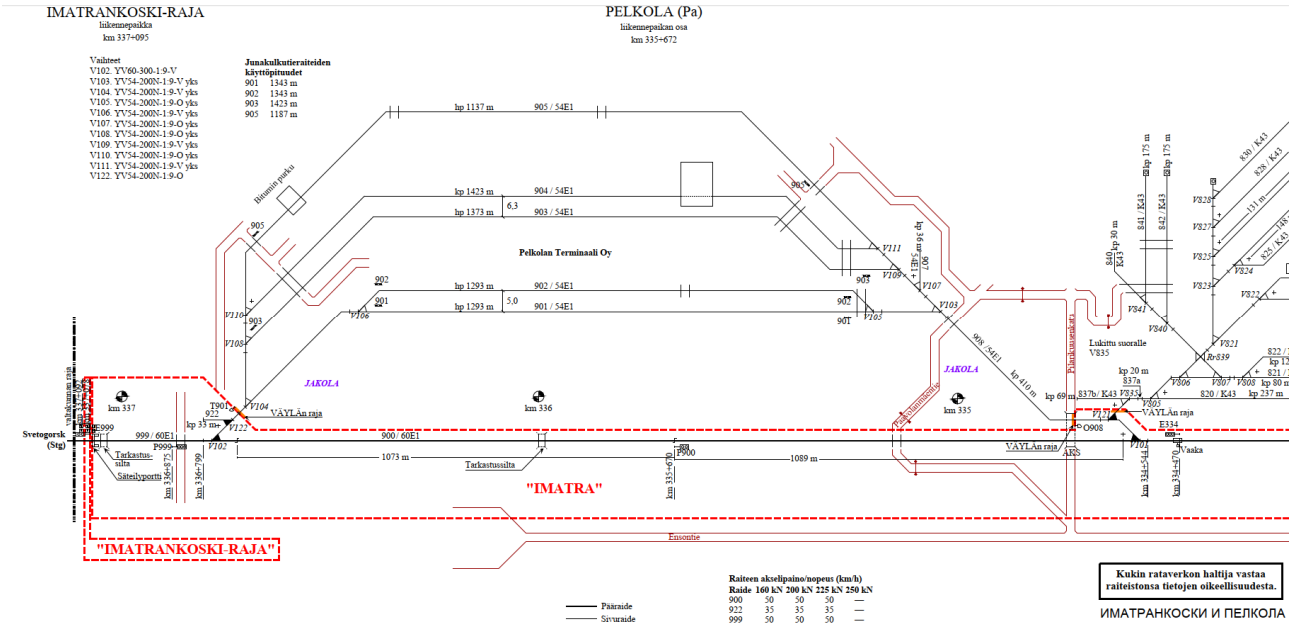


Graph 24 Current Imatrankoski track yard.

Pelkola

The tracks and buildings of Pelkola are owned by Pelkolan Terminaali Oy, but the land area is owned by the City of Imatra. Pelkola has previously functioned as the wood terminal and export stockpile for Stora Enso. Stora Enso has sold the land area to the City of Imatra between 2015 and 2016, but the City has no plans for the railway area. The City of Imatra is having negotiations with Väylä (FTIA; Finnish Transport Infrastructure Agency) regarding the selling of the land area to Väylä.

In Pelkola, in addition to the main track, there are 5 side tracks of which usable net lengths ranges from 1137 to 1423 m. In addition, there is one constructed track foundation for an additional track next to the track 905. One of the side tracks runs through a warehouse. The Pelkola railway yard is used from time to time as an interim storage and loading area for raw wood, and additionally cardboard is loaded occasionally from trains to trucks that transport it across the border. There is also an equipment for unloading bitumen on the track 905.



Graph 25 Current private Pelkola track yard.

5.2.2. Equipment

Current status

In its current state, the level of equipment does not meet the requirements of an international border crossing. There is no devices or equipment for border control in Imatrankoski track yard.

At the moment, in the border crossing point, there are following devices, which are all located on the main track:

- Radiation gate right next to the border
- Two inspection bridges that are perpendicular to the track (one right next to the border and one next to the Pelkola track yard)
- Train wagon scale (on the main track, north of the Pelkola track yard).

Observed deficiencies and needs

In connection with this study, such deficiencies and needs have risen, especially concerning the equipment in Pelkola track yard, that are required before the border crossing can function as an international railway border crossing. The partially ongoing ENI Project meets these needs (train x-ray, CCTV video surveillance, fencing, access road improvements, step-in platforms for the officials), but some of the actions are required after the ongoing ENI-project, so that the border checks by officials can be performed accordingly in the future.

An essential deficiency highlighted by the officials, in addition to the train x-ray, is the inspection bridge parallel to the track, which eases the inspections that are made to the train wagons. The inspection bridge has been proposed for the Pelkola track yard already in the 2014 pre-engineering design, but defining its location will still require more detailed design.

Other equipment that are required in the Pelkola track yard in the future due to its development, are sanding device for locomotives, brake testing system and wheel detection system.

5.3. Russian side current infrastructure and project status (mainly from Russian report)

5.3.1. Current infrastructure

The impact area of this project on Russian side is Svetogorsk/Buslovskaja-Kamennogorsk/Vyborg-Losevo-Saint Petersburg.

Railway sections Buslovskaja-Vyborg-Saint Petersburg and Vyborg-Kamennogorsk-Losevo-Saint Petersburg are double track electrified sections with 25 axle load. Vyborg-Kamennogorsk-Losevo section has maximum speed of 160 km/h.

The Russian side infrastructure and investments are described in more detail in Russian Report.

Graph 26. Impact area of the project on Russian side.

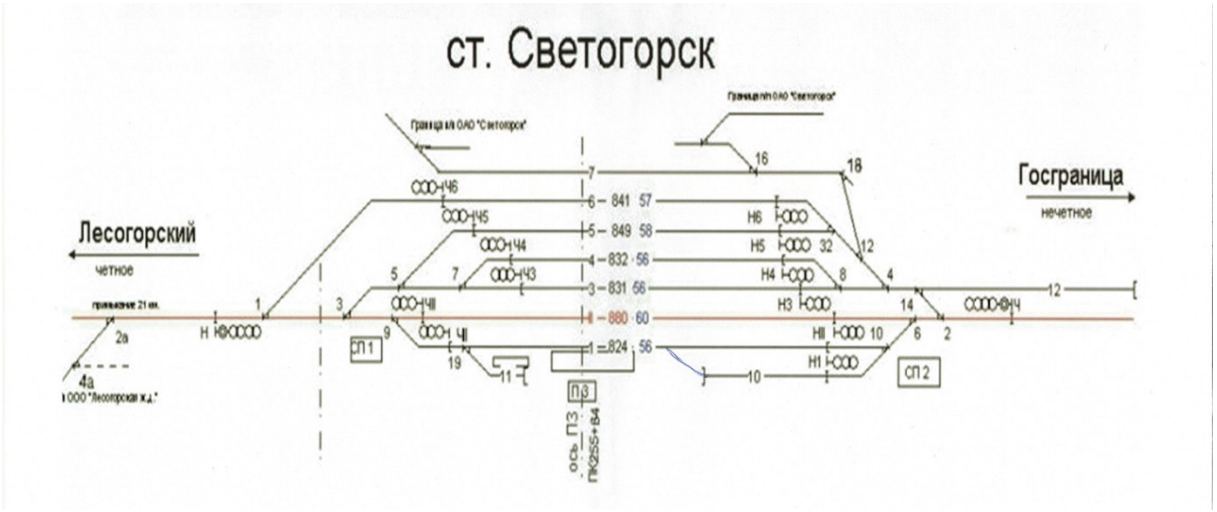
Kamennogorsk-Svetogorsk

Kamennogorsk-Svetogorsk single-track railway section is 24 km long, its has 22,5 axle load and mainly 60 km/h speed limit. The section is nonelectrified and has one track yard/station on the section, Lesogorsk.

A complete reconstruction of the track section was carried out between 2002-2007.

Svetogorsk track yard

Svetogorsk track yard is railway border crossing point to Imatra. Track yard has 13 tracks and has been partly reconstructed in years 2005-2006. There is old passenger platform but there is no regular passenger trains running at the time of this study.



Graph 27. Current Svetogorsk track yard.

5.3.2. Latest Projects

Svetogorsk development projects

With a view to further growth of the traffic, improvements were made for the Vyborg Customs in 2003-2005, namely – the construction of the administrative building and the yes fence of the border-crossing point. The paths in intertrack spaces were paved with asphalt; areas were equipped for loading/unloading and inspection of cargo; an optic fiber cable was installed and connected to the departmental automatic telephone exchange system of the October Railway and customs authorities; computers, communication and office equipment was purchased.

Within the framework of the South-East Finland – Russia CBC 2014-2020 program, the operations monitoring CCTV system was upgraded and the border-crossing point was equipped with thermal observation units and a technically sophisticated CCTV system which enables:

- complete monitoring of the entire border-crossing point with not "blind" zones
- monitoring of the border control zone
- inspection of trains from all sides from a distance of 150 m, and provide the general view of moving trains.

Thermal observation devices are used to detect illegal infiltrators hiding on arriving trains, the detection being possible where a train is moved at a speed up to 60 km/h.

Losevo-Kamennogorsk development construction project

On the Russian side of Carelian isthmus, a major railway project was completed in 2017. The project consisted of a 68 km railway section 3 km south of Losevo to Kamenogorsk

with double track, upgraded axle load to 25 tons and electrification. Project was worth of 122 billion rubles (1,9 Billion EUR on 2017 exchange rate 1 EUR/65 RUB). Since completion of the project, part of the Vainikkala routed cargo trains were transferred to this route to give more operative windows for the passenger trains between Vyborg St.Petersburg. This change actually lengthened the freight train voyage across the Carelian railway network.

Ongoign design project in Svetogorsk-Kamennogorsk

Reconstruction of the RwBCP "Svetogorsk" as a comprehensive project includes following

- reconstruction of the RwBCP "Svetogorsk"
- development of Svetogorsk Railway Station
- electrification of the single-track railway line "Kamennogorsk – Svetogorsk"
- construction of an overpass in the alignment of Zavodskaya St.

The cost estimate is 88,3 Million Euros and it is estimated it will take about 74 months from the start of the preparation of the proposal on the reconstruction of the RwBCP "Svetogorsk" as a comprehensive project.

The cost items that should be taken into account in order to produce a tentative cost estimate for the reconstruction of the RwBCP "Svetogorsk" are as follows:

- Land preparation costs.
- Land acquisition costs.
- The costs of construction and reconstruction of main facilities of the RwBCP "Svetogorsk" as per the requirements of the RF Federal Customs Service, the Border Service of the FSB of Russia, RosPotrebNadzor, and RosSelKhozNadzor.
- The costs of support and service facilities as per the requirements of the RF Federal Customs Service, the Border Service of the FSB of Russia, RosPotrebNadzor, and RosSelKhozNadzor.
- Costs of developing the station infrastructure of the Svetogorsk Railway Station, which are determined by the needs of RZD (Russian Railways).
- Costs of electrification of the railway branch "Kamennogorsk – Svetogorsk", which are determined by the needs of RZD (Russian Railways).
- Costs of building the overpass in the alignment of Zavodskaya Str.
- Costs of supporting and service facilities of the RwBCP "Svetogorsk" as a comprehensive project.
- Costs of energy infrastructure and equipment.
- Costs of transport and communications infrastructure and equipment.
- Costs of construction and reconstruction of outdoor water supply, sewage, and heat and gas supply structures.
- Costs of area improvement and landscaping.
- Costs of temporary buildings and structures.
- Other activities and costs.
- Maintenance costs of the Directorate of the Comprehensive Reconstruction Project "RwBCP Svetogorsk".
- Costs of design work and site surveys.

5.4. Border crossing process

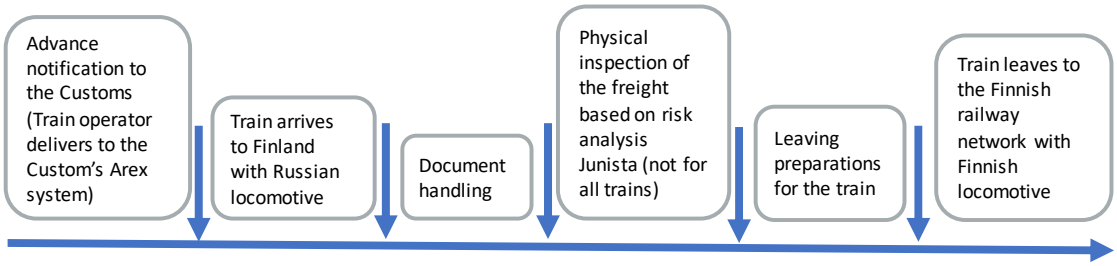
5.4.1. Freight train process

The process description of the Imatra border crossing point should take all different operators and the different phases of the process into consideration from their points of views.

In this context, the border crossing process is described from the officials' (Finnish Customs and Finnish Border Guard) and railway operators' point of view. Additionally, the process description takes into consideration all the devices and equipment required by different operators. The roles of different officials differ from each other regarding the border crossing process: the essential task of the Finnish Customs is to supervise all the goods that is entering or exiting the country, and the Finnish Border Guard supervises the people and traffic that is entering the country. The railway operator's role in border crossing is mainly related to the functions of the train and the equipment related to ensuring it.

The border crossing process in its whole from different parties' point of view is presented in Graph 28.

Needed equipment and functions for different parties in different phases in the border crossing process



Finnish border guard						
Current status		Radiation gate		~ 2-3 h		
International status	Advance notification	Radiation gate CCTV system Fencing Step-in platforms	Document handling	Inspection bridge parallel to the track		
Customs						
Current status	Advance notification	Radiation gate	Document handling	~ 2-3 h		
International status	Advance notification	Radiation gate Step-in platforms	Document handling	Inspection bridge parallel to the track		Train X-Ray (coming in ENI-project 2019-2022)
Railway operator						
Current status	Advance notification to the Customs				~ 1 h	Train wagon scale
International status		Wheel detection system			Brake testing system	Train wagon scale

Graph 28 Railway border crossing process for incoming freight train from Russia to Finland.

Customs

Before the train arrives in Finland, the Finnish Customs receives an advance notice to their Arex system of the train from the railway operator. The advance notice contains

the basic information of the train, such as the assembly, type of goods and the sender. It is possible that changes to the advance notice are made before the train arrives. The risk assessment of the train, which is used as the decision basis for a possible physical inspection, is also made based on the advance notice, but also complete later after the train has arrived. The goal for the duration of the physical inspection of a freight train is 2-3 hours.

After the advance notice, the train arrives in Finland with a Russian locomotive, at which point a document handling is made to the train in the Arex system. After the document handling, the physical inspection based on the risk assessment is committed or the train continues to the Finnish railway network with the Finnish locomotive.

Equipment needed in the inspections:

- Radiation gate
- Train x-ray
- Step-in platforms
- Inspection platform parallel to the track.

Finnish Border Guard

Currently, the Finnish Border Guard does not get advance notice of trains, but the advance notice is required also for the Finnish Border Guard if the Imatra border crossing point is changed to the international status. As an essential task, the Finnish Border Guard supervises the traffic and people that enters the country illegally at the Imatra border crossing point. Because there is no passenger traffic at the moment, border checks for people are rarely performed. There are currently no facilities, such as a border station or boarding platforms, to perform passenger traffic checks at the Imatra border crossing point. For cargo train traffic, also the Finnish Border Guard performs risk analysis of the arriving trains, which forms the decision basis for the possible physical inspections of the trains. The Finnish Border Guard performs their own physical inspection in the same time frame as the Customs, so all in all, the goal for the duration of the physical inspections of a freight train is about 2-3 hours.

Equipment needed in the inspections:

- Radiation gate
- Video surveillance CCTV
- Fencing
- Step-in platform
- An inspection platform parallel to the track

Railway operator

Operating model

A Russian railway operator runs the train from the Russian side with a Russian locomotive to the Imatrankoski track yard. Thereafter the locomotive disconnect the wagons to the track yard, and connects to an empty train on the track yard before leaving back to Russia. A Finnish locomotive connects to the full train in the Imatrankoski track yard

and operates it to its destination on the Finnish railway network. Respectively, the Finnish locomotive runs the empty trains back to Imatrankoski from the customers.

The Imatra freight track yard–Imatrankoski-border section is at the moment non-electrified, so operating is done on both sides (Imatra freight track yard-Imatrankoski-border-Svetogorsk-Kamennogorsk) with diesel engine locomotives. For example, at the Vainikkala border crossing the operating is done now mainly with the same model, as the Russian electric locomotives are so-called 'dual-voltage locomotives', which means they are able to operate on the electrified tracks in both countries. Thus, it is possible to keep the current operating model also in Imatra-Svetogorsk BCP after the electrification of the tracks.

Railway operator tasks & equipment

The role of the operator in the border crossing process is to supervise the condition of the rolling stock, when it enters to the country, and also when the train continues to the Finnish railway network.

Equipment needed in the inspections and operations:

- Wheel force indicator
- Train wagon scale
- Brake testing system
- Locomotive sanding equipment.

5.4.2. Passenger train process

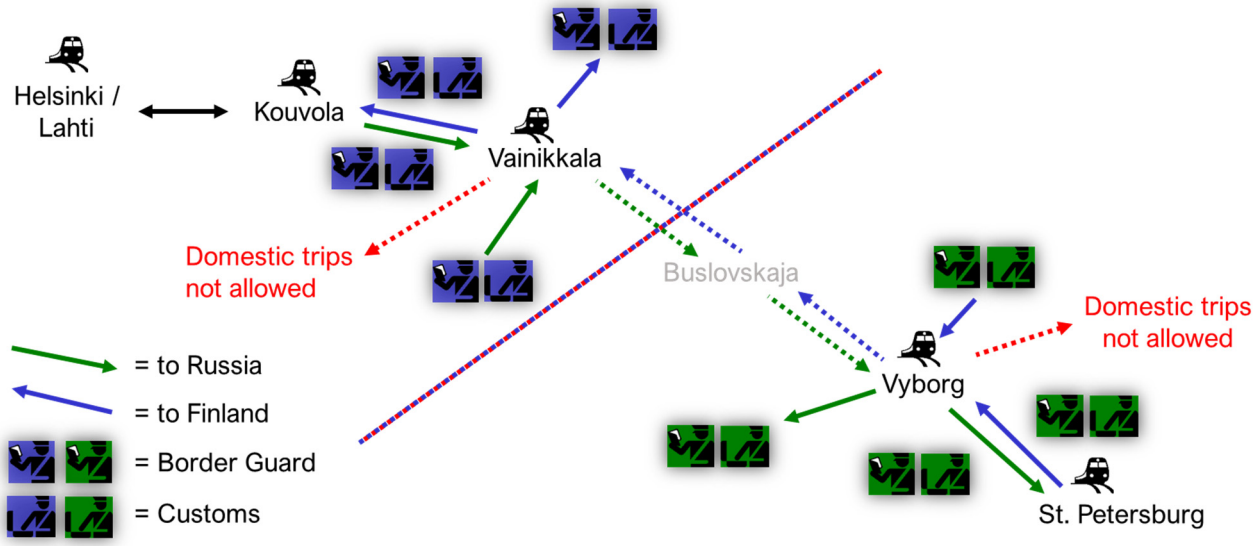
There are two types of passenger train processes depending on whether the Customs and Border Guard operations take place onboard a moving train (case high-speed passenger trains such as Allegro) or at the Border stations (conventional trains).

Finnish Border Guard

The main task of the Finnish Border Guard is to control the passenger flow across a Schengen Agreement border, which leads to 100 % obligation to check passports and other travel documents. To help with resourcing the border controls, advance notification on incoming passenger trains and passenger data would be necessary also for the Border Guard, if Imatra RwBCP would have an international status with passenger traffic.

To achieve 100 % obligation of checking travel documents and a fluent flow of traffic, it is required that the train is stopped in a closed area and if there are suspicions, a person can be detained and the train is allowed to continue.

Current process onboard the Allegro train allowed by the Schengen Borders Code (EURLEX 2016) for high-speed passenger trains is pictured in Graph 29.



Graph 29. Border checks process on Allegro train.

The steps are as follows:

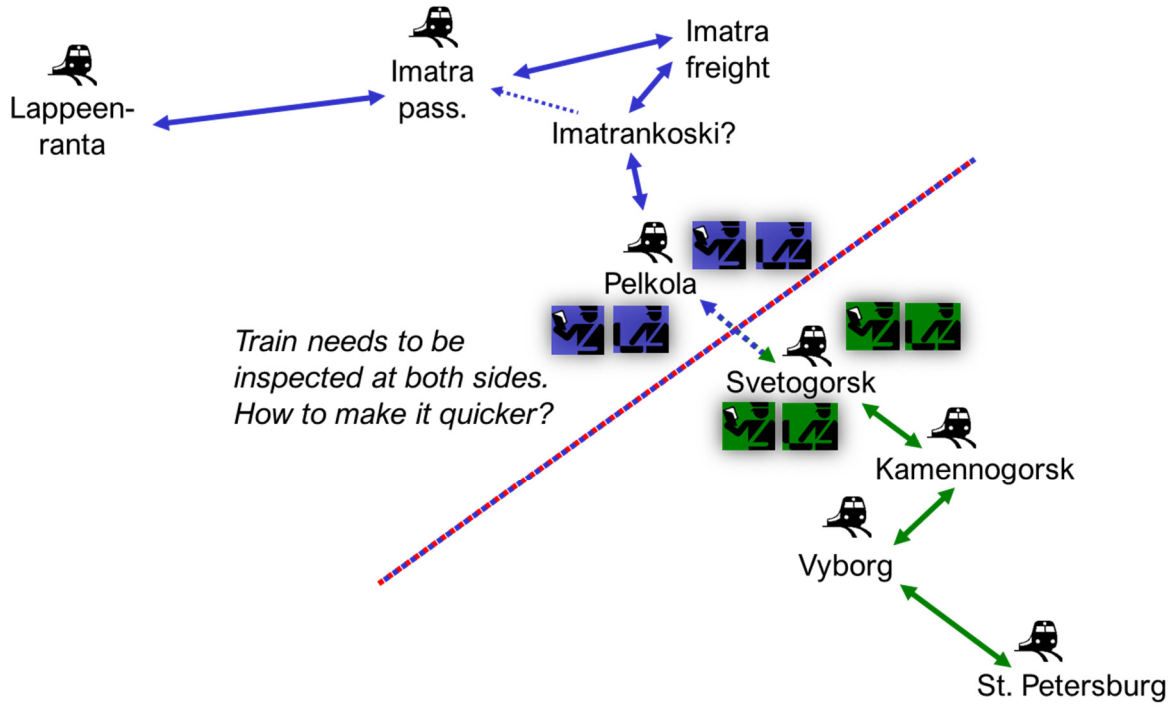
1. Allegro leaves Helsinki. There is no check on luggage, tickets or passports at Finnish stations prior to entering the train.
2. Tickets are inspected by the train personnel. The passenger fills in a form to enter Russia.
3. Finnish Border Guard and Customs start their checks after Kouvola. Passengers should remain seated during checks.
4. Finnish Border Guard and Customs step out of the train at Vainikkala RwBCP.
5. Passengers entering the train in Vainikkala are checked inside the station.
6. The Russian Border Guard and Customs perform their checks between Vyborg and St.Petersburg. Passengers leaving the train in Vyborg are checked inside the station.

The Schengen Borders Code (EURLEX 2016) states that onboard checks on train passengers and personnel *in conventional trains* are only possible between the last station of the 3rd country and the 1st station of the (EU) Member State. This would mean Svetogorsk and Pelkola, which are less than 2 km apart.

Therefore, the Customs and Border Guard checks would take place either on a stationary train on both RwBCPs **or** at the RwBCP stations prior to entering the train. It is estimated that the checks would take about 45 minutes on both sides of the border, but train trips are still more comfortable and provide a more predictable travel time for passengers than on RdBCPs.

It is worth noting that fluent and work-safe checks on regular passenger trains are not possible at the moment on Imatra Svetogorsk RwBCP. Regular passenger traffic requires ENI and other investments described in Chapter 5.2.2.

The process on conventional trains is pictured in Graph 30.



Graph 30. Border checks process on Allegro train.

Finnish Customs

The Customs does supervise and follow the border crossing movement of declared and non-declared goods, vehicles, trains, aircrafts, ships, as well as drivers, crews and travellers on them. The supervision is carried out by questioning, through declaration analyses and risk assessment of goods and travellers. Customs also monitors the import and export of prohibited goods.

The Customs has essential responsibility in Custom duties collecting and has a significant role in hazmat, food and chemical trade and transport supervision according to consumer safety and food legislation. According to PTR-agreement the Police, Customs and Border Guard these three organizations do work by co-operating closely with each other, sometimes on roles of another of these tree authorities and when the need be, with powers of those authorities granted to these tasks by the law. This is an important functional feature on these EU Schengen BCPs.

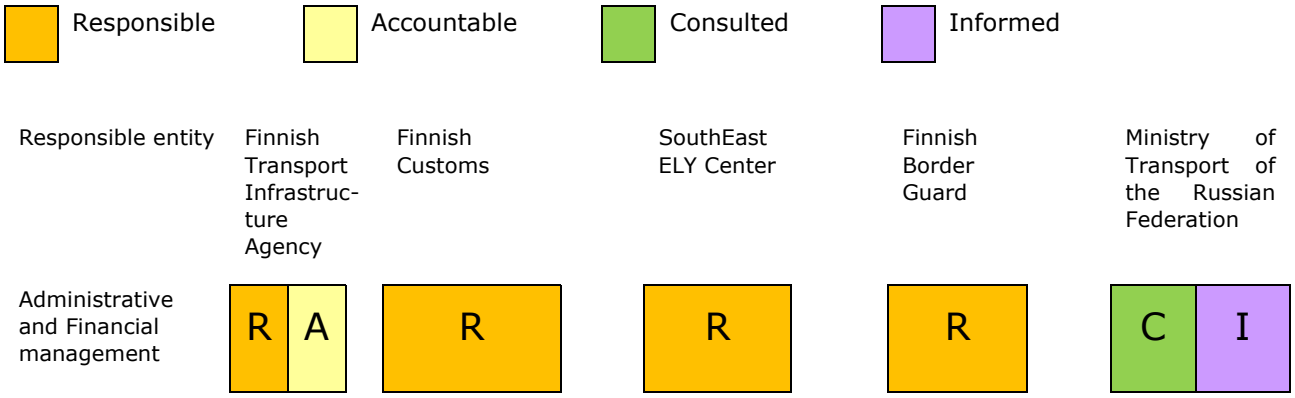
With passenger trains on Imatra Svetogorsk RwBCP, it is important to have the checks in Pelkola as it makes the resource use much more efficient, because they can be shared with RdBCP. It helps if the rolling stock is designed to be “easy to inspect”.

6. ROAD MAP, IMATRA-SVETOGORSK RWBCP DEVELOPMENT

The temporary status of Imatra RwBCP is mainly due to insufficient equipment, both technical but consequently also human resources on the both sides of Imatra-Svetogorsk BCP. The human resources need certain equipment to conduct duties defined to be on their responsibility by the International, national laws and statutes.

6.1. Schengen border minimum equipment

At Imatra BCP there are certain independent preconditions which have to be met before the Imatra BCP can be opened and operated as an International BCP for the railway traffic. In first phase the authorities must be able to carry out their responsibilities. The technical readiness of border authorities will be completed by the 5,2 million EUR ENI CBC project 2019-2022.



Graph 31. ENI-project responsibilities and roles.

These investments complete mainly the requirements of border authorities (the Customs and Border Guard) and will be carried out by the Council of South Karelia. However, as most of the RwBCP users are Industrial clients, the IT equipment alone will not improve the railway infrastructure and capacity needs of the current industrial users.

These needs have been addressed by the Finnish Transport Infrastructure Agency in their revised Imatra-Imatrankoski border development plan, completed in May 2019.

These investment actions are described in more detail in section 6.4.

The path toward the status change is not just about construction and Investment decisions. Neither it is about the municipality policy or about the bilateral decision making of Finland and or Russia. It is about many factors. The fact is that it will take at least three more years until the equipment and inspection facilities on this EU Schengen border are on sufficiently good level. This path of actions is described next.

6.2. Road map

1 Project presentation to the Finnish Ministry of transport and communication Target date to change the BCP status, 2025 from temporary to international one to be set.

The Imatra Svetogorsk BCP project presentation to ministerial working group nominated to prepare the new **Transport policy report to Parliament.**

2 Assembling the project team and establishing the Steering group of Finnish Transport Infrastructure Agency, ELY-Center, Border Guard, Customs and Senate properties to manage the project.

3 Assembling of International steering group on the Finnish side for the Development of Imatra RwBCP, for the working for changing the Imatra RwBCP status and for presenting this initiative to Russian Minister of transport and for the Transportation directorate of the Leningrad Oblast.

4 Initiate the geological survey on the RwBCP project area at Pelkola, Imatrankoski and on related adjacent areas.

5 Initiate detailed railway planning for Imatra – Imatrankoski-border/Pelkola project area.

6 Project co-operation with ENI CBC equipment implementation project

7 The TEN-T core network application process to be initiated with the Finnish Transportat Infrastructure Agency

8 Assembling the legal team to manage the legal process on EU, International and on national level. The planned status change requires the revision of 85/2016 Rail transport agreement between Finland and Russia, namely its station list. Additionally both countries should use this opportunity to critically look certain existing processes and propose changes to be adopted first on the opening of RwBCP Imatra Svetogorsk in 2025. Those may consist of Station security changes, new passenger train border inspection practices etc.

9 Initiate with Russian counterpart to prepare and define the terms how the passenger service provider (the Railway Undertaking) will be called to bid and contracted.

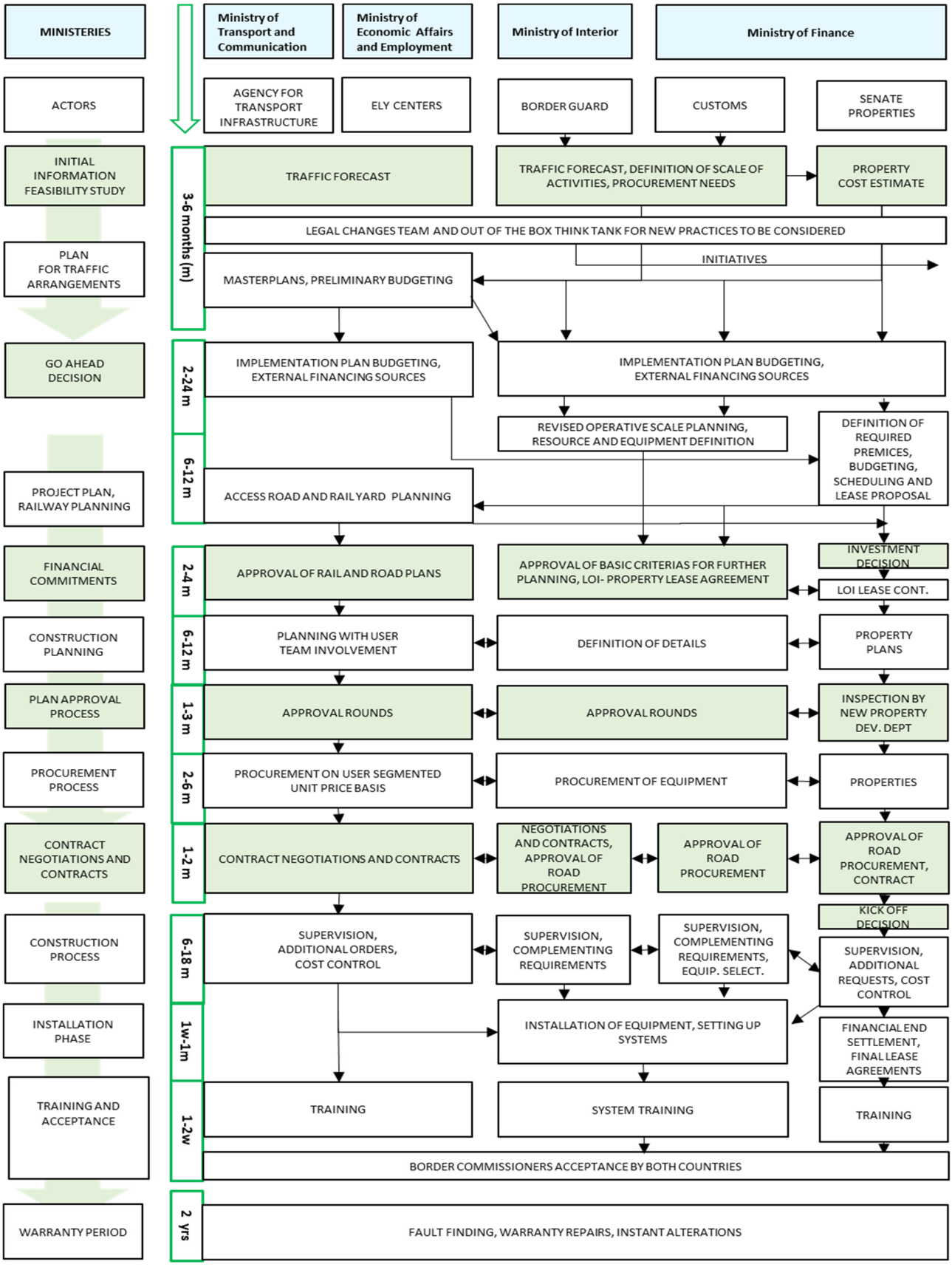
10 Project Management for the Imatra BCP for implementation, construction and installation, training of Investments needed to upgrade the Imatra BCP for the International BCP status.

11 Inspection and approval protocol to be drafted of the completed construction works, installed equipment, reception approval documents and training approved.

12 Presenting the approval protocol signed by border commissioners of both countries to Ministry of Interior of Finland for presenting the approval protocol to the Presidents office for issuing presidential degree of the Imatra Svetogorsk RwBCP status to be changed for use by International Railway traffic.

13 Opening of the Imatra RwBCP for International railway traffic on 2025.

6.3. Roadmap parties and phases involved in Finnish BCP development



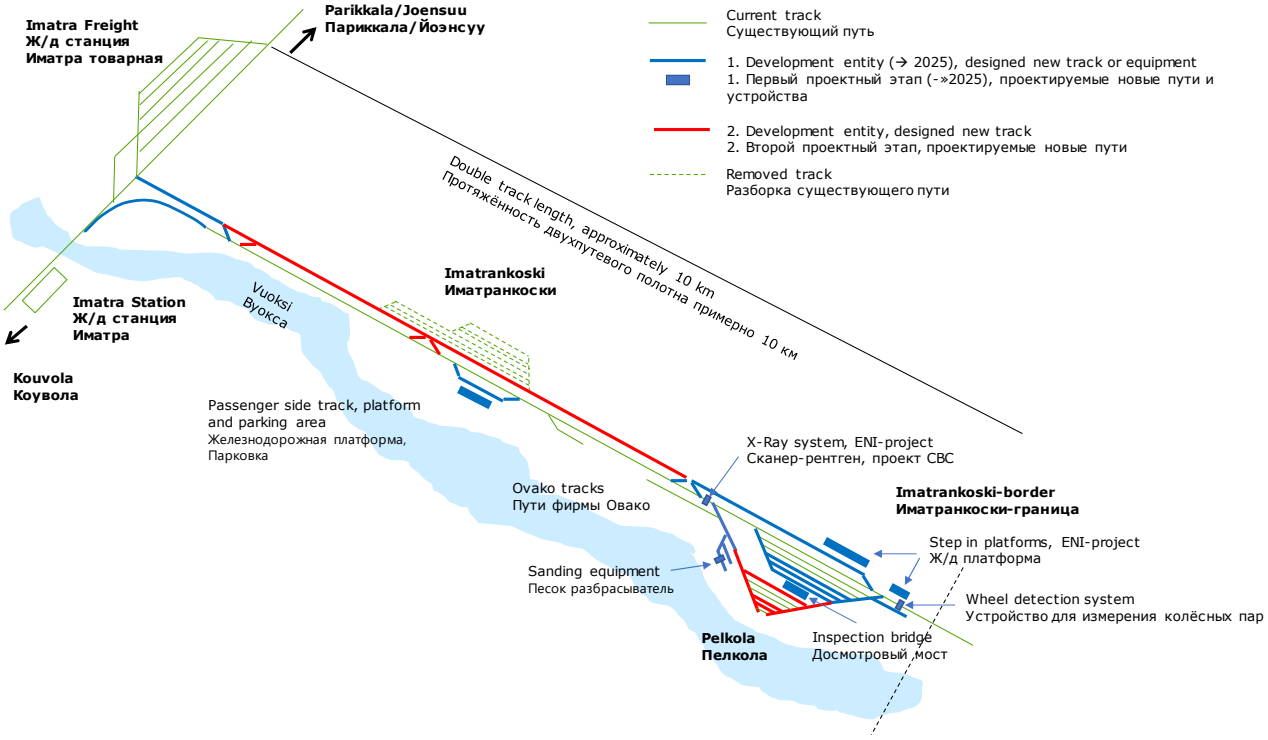
Graph 32 The roadmap for the BCP development work. The work diagram original on LiVi 37/2017 report; Rajanylityspaikat. Here with slight modifications.

6.4. Proposed development investments in phases 1 and 2

Investments in phases 1 and 2 are based on the results and goals of this study and also the updated Imatra-Imatrankoski-border pre-engineering design (2019). Phases in the updated pre-engineering differ a little from the proposed development actions of this study, but the whole development entity (phases 1 and 2 together) is same. The content of the phases can be updated and modified when design continues to the railway design.

In this study the phase 1 is combined from the approved ENI-project and the Imatra-Imatrankoski-border pre-engineering. ENI-project will be implemented in 2019-2022 and pre-engineering phase 1 actions are planned and proposed to implement until 2025. The phase 2 is based on the pre-engineering project and is planned and proposed to implement after the phase 2 until 2035.

In Graph 33 there are development actions in phases.



Graph 33 Imatra-Imatrankoski border development actions in phases 1 and 2.

Investments in phase 1 allow BCP status change to international railway BCP and both international passenger and freight trains to cross border. Investments enables traffic growth and it is estimated that there is enough capacity until year 2035 when phase 2 is needed if maximum traffic forecasts are realized. Phase 2 enables trains to meet between Pelkola track yard and triangle track, in phase 1 only one train can run at the time on the track section.

Investments also decreases the transportation costs significantly when enabling electrified trains and locomotives and due to the triangle track direct trains to the Luumäki direction. These actions increase the competitiveness of Imatra-Svetogorsk route and railway transport mode in general.

Table 9. Proposed investments in phases 1 and 2, cost and implementation estimations.

Investments		**Cost estimation**	**Implementation estimation**
Phase 1		~50,2 M€	2019-2025
ENI-project			
	Train x-ray control system Fencing CCTV system A new track for passenger trains passing the x-ray control system Step in platforms for the border authorities and road connections to the platforms/Pelkola railway yard from the current border crossing buildings (supporting structures)	5,2 M€ (EU funding 4,2 M€)	2019-2022
Pre-engineering actions			
	<u>Current main track</u> Signalling and interlocking system Electrification Reconstruction of the main track structures for 25 ton axle load - 2 km section superstructure and 1 railway bridge	~45 M€	2020-2025
	<u>Pelkola</u> Side track arrangements - 3 new side tracks (R104, R105, R106) and switches - Locomotive standing tracks (R115, R116) and shunting tracks (R117, R133+R131, R132) Track yard lighting and switch heating system Parallel inspection bridge for one side track Brake testing system and wheel defect measuring system Sanding equipment		
	<u>Imatrankoski</u>		

	Passenger traffic - new side track (450 m) and passenger platform (maximum 250 m) Removal of Imatrankoski side tracks		
	Triangle track from Luumäki direction to Imatrankoski border		
	Other development actions Advance notification system for arriving trains to the Finnish Border Guard Opening hours of the RwBCP and border control resources will be adjusted to the amount of trains and needed schedules		
Phase 2		~33 M€	After 2025 until 2035
	Double track between Imatra tavara and Imatrankoski border - Track structures (including bridges) - Signalling - Electrification - Noise protection	~33 M€	After 2025 until 2035
	Side track arrangements in Pelkola - 3 new side tracks (R107, R110, R111) and one shunting track R118 - Signalling, lighting and switch heating systems		

7. EFFECT EVALUATION OF THE IMATRA-SVETOGORSK BCP DEVELOPMENT

7.1. Benefits for freight transport and industry

Generic benefits of infrastructure investments

Proposed investments would increase throughput capacity, reduce the sensitivity to disturbances, improve train punctuality and make the operational viability of longer trains more reasonable.

Train operations: Axle load 25 t (vs. 22,5 t)

- Improves the competitiveness and effectiveness of railway system with cargo transport by
    - bringing more railway capacity
    - reducing time, resources and money used in shunting; this also reduces emissions of the transportation
    - lowers the overall freight / t expense paid out by cargo interests, increasing industrial competitiveness of companies, region and products made in Finland
- Allows the full utilisation of the payload of the new Russian open gondola bulk wagons (100t), which are now replacing older 90t wagons in Russian fleet.
- Axle weight 25 t improves the competitiveness against road transportation, where HCT trucks are becoming more common.
- Also allows the full utilisation of new round wood wagons (100t).

Train operations: Whole trains and train length 1100 m

- Whole trains in general mean less shunting operations, which improves efficiency and reduces wagon circulation times
- Longer trains with single Railway Bill, i.e. block trains, have a freight rate advantage and handling and unit costs will be further reduced
- The longer and heavier trains demand less railway capacity from the railway network to transport equal amount of cargo. (Same argument as pro HCT truck use).

Transportation chain: Benefits to Finland and South Karelia region

- The redundancy of railway transportation system close to Finnish Russian border areas will be improved, allowing better handling of demand peaks and disturbances.
- The existence of two actual BCP routing alternatives will have a positive indirect effect on Finnish main line capacity for passenger transport
- Enables new trading and delivery routing of goods transported between Finland and Russia, China, other parts of Far East, GCC area and to eastern Europe.

- Imatra RwBCP Development plans (Infrastructure, superstructure, safety- and management systems and new railway connections (triangular track) reduces the service times, improves the roundtrip times of the rolling stock and provides possibilities for freight rate reductions
- The Imatra development provides new routing alternatives by using shorter routes and cutting from current transit times
- Imatra RwBCP development is a sustainable development project

Main findings of Luumäki-Imatra-Imatrankoski-border project evaluation study and cost-benefit analysis

Luumäki-Imatra-Imatrankoski-border project evaluation study and cost-benefit analysis was carried out in 2015. In the study it was noted that freight traffic would benefit from triangle track, electrification, increased axle load and longer train length.

It was estimated that the investments would save up to 3,4 Million euros per year in transportation costs in the future. Calculations were made based on estimated forecast of 8+8 freight trains per day, forecast was estimated in the study based on the figures of the time. Transportation savings are also major for current freight traffic.

Triangle track shortens the transport route approximately 1,2 km from Pelkola to Luumäki direction compared to current route through Imatra freight track yard where the trains are divided and/or locomotive is switched to electric or run around. Train traffic savings are mostly formed from the possibility to drive straight trains without shunting actions in Imatra freight track yard. Electrification, axle load and train length development give major possibilities and benefits to the competitiveness through train configuration and utilization of heavy wagons and trains and electric locomotives.

After the Luumäki-Imatra implementation project and development of Imatra-Imatrankoski-border section and Pelkola track yard it is allowed 1100 m long trains and 25 axle load wagons through Imatra BCP to the route to Kouvola direction.

7.2. Benefits for passenger traffic and tourism

- The new international train service via Imatra Svetogorsk RwBCP would reduce congestion on road BCPs and provide punctual travel times especially during demand peaks. The service would also improve travel comfort and traffic safety.
- The new passenger train service is above all, beneficial, effective and long-term development co-operation work across the border at it’s best.
- This new service would improve the connectivity of Imatra area, and South Karelia region as a whole but one should not forget that it will improve accessibility throughout the region of Saimaa and the Lakeland area both internationally and domestically.
- The new passenger train service also benefits the travellers of third countries, whose visits at the region Saimaa-St.Petersburg will be logistically much easier to organize.

8. PROPOSALS & RECOMMENDATIONS

The action plan for Imatra Svetogorsk RwBCP status change, actions needed on Finnish side and by the Finnish side for co-operating with Russian project team of parallel project to develop, equip, approve and open the RwBCP for the International traffic in 2025.

No.	Activity	Expected outcome	Responsible entity
1.	Preparation of introducing letter and presentation of the project results to Finnish Transport Infrastructure Agency.	Parties agree to convey and present the Imatra BCP status change action plan to Minister and to Ministry of transport and communication and further to the Ministerial working group set by the new government to prepare **new transportation Policy work for the Goverment**	The Regional Council of South Carelia
2.	Creation of the working group at Finnish Transport Infrastructure Agency, ELY Center with Border Guard and Customs for activities connected to organize -presentation this action plan to Russian counterpart: - changing the classification of the border-crossing point (from a "permanent simplified" BCP to a "permanent" BCP);	Discussions between the representative the Ministry of Transport and Communications of Finland and of the Regional Council of South Karelia and, regarding the Ministry's support to the project and contacting the Ministry of Transport of the Russian Federation about the creation of the working group for activities connected to: - changing the classification of the border-crossing point (from a "permanent simplified" BCP to a "permanent" BCP);	The Regional Council of South Carelia
3.	Creation of the international steering group at Finnish Transport Infrastructure Agency, ELY Center with Border Guard and Customs -presentation this action plan to Russian counterpart:	Discussions between the representative the Ministry of Transport and Communications of Finland and of the Regional Council of South Karelia and, regarding the Ministry's support to the project and contacting the Ministry of Transport of the Russian Federation about the	The Regional Council of South Carelia

	- changing the classification of the border-crossing point (from a "permanent simplified" BCP to a "permanent" BCP);	creation of the working group for activities connected to: - changing the classification of the border-crossing point (from a "permanent simplified" BCP to a "permanent" BCP);	
4.	Finnish Transport Infrastructure Agency together with ELY-Center (Kouvola) -Intiate the geological survey on Imatra BCP Area.	To get more detailed information for construction and cost estimate purposes	Finnish Transport Infrastructure Agency together with ELY-Center (Kouvola)
5.	Finnish Transport Infrastructure Agency. Intiate the detailed railway planning for Imatra - Imatra BCP Area.	The decision to proceed with Imatra BCP status change, both by the Ministry of Interior and by the Ministry of Transport and Communication of Finland	Finnish Transport Infrastructure Agency together with ELY-Center (Kouvola)
6.	Finnish Transport Infrastructure Agency and ELY – Center with Senate properties	Implementation of the new ENI CBC equipment to be constructed in 2019-2022 at the Imatra BCP and in the vicinity of the BCP.	Finnish Transport Infrastructure Agency with ELY Center and City of Imatra
7.	Commencing the Preparation of the process for applying the Imatra BCP to beaccepted to be part of the future TEN-T Core network of the European union.	Working closely with national TEN-T responsible authority to ensure the fullest compliance to be accepted to be part of the ScanMed core network corrdor	Regional Council of South Karelia, Finnish Transport Infrastructure Agency together with ELY-Center (Kouvola) and Traficon Oy
8.	Establishing the legal change team to work nationally with authorities but also with 3. Poin international team.	Working to manage the preparation of the International, national legislation and statutes to be ready for the Imatra BCP status change. There is at least one point in Finnish Russian railway interconnection agreement, which requires international co-operation and approval by parliament on both countries, namely the station definition list of Imatra, where the locomotive interchange has been	Regional Council of South Karelia, City lawyer, Traficom, Finnish Transport Infrastructure Agency

		defined to take place at Imatrankoski.	
9.	Preparation and define terms how the passenger service provider (the Railway Undertaking) will called for bid and contracted.	Preparing the terms for the public tendering process in order to enable the chosen operator to define own service offering, recruit personnel, apply railway capacity and get approval on both countries concerned.	Sub working group of the International team, defined in 3rd point.
10.	Project management	Management of the implementation, construction and installation, training of necessary investments needed to upgrade the Imatra BCP for the International BCP status	ELY-Center, Senate Properties
11.	Inspection of Imatra BCP new facilities invested and constructed for the monitoring and inspection of International railwaytraffic	Inspection protocol drafted, approved for International railway traffic and signed by border Comissioners of both countries	South Carelia Border area. Border Comissioner of Finland, Border Cosmissioner of Russia
12.	Presenting the approved Inspection protocol for the president for approval	Signed Inspection and approval protocol ratified by the statute of the president of Republic of Finland	Ministry of Interior
13.	Changing the status of the Imatra RwBCP to International BCP	Opening of the Imatra RwBCP for the International traffic	Ministry of Interior with separtment of Border Guard

9. CONCLUSIONS

The International project team worked to define actions needed to change the status of Imatra Svetogorsk RwBCP from temporary BCP to an International one. When the BCP was opened for RdBCP in 2002 the RwBCP status was not approved unanimously by the border commissioners inspection. The reasons were that the Imatra Svetogorsk RwBCP was not sufficiently equipped for international railway traffic despite the International status was approved for the vehicle traffic at the time. Actually, there are two BCP's on each Finnish Russian RwBCP's and despite the international compliance of both countries the two BCP's are governed by their own legal system of each country, which are slightly different. Therefore, the requirements, operative processes and BCP's are slightly different on each side of the border.

The differences between Imatra and Svetogorsk BCP's regulatory framework are not significant, but they are good to recognize in order to reach better understanding in common development projects. Certain capacities and operative constraints such as train length, axle weight and electrification are good to harmonize for operative reasons. Apart of that, the differences are in a way insignificant as both countries do develop their own BCP's to comply in their own legal systems, yet the work should be done in good co-operation with their counterpart as BCPs are located very near one another.

TEAM WORK

The project Finnish-Russian team of this Action plan worked openly and by comparing the development needs on BCP's on both countries. Different ideas were tested within the project team, ideas were tested with national authorities and new initiatives were developed. Additionally, the teams worked in their own country to get grounds for the development plans, which were then drafted to two separate Action plans, one for each country and this report contains the Action plan for the Finnish side of the border.

The both teams worked to identify the development needs on their own BCP's and received good, positive participation from the authorities of both countries.

The both teams worked with cargo and passenger traffic development outlook, looking the situation from both their own country perspective but also from the project perspective. All this to develop the notes how to proceed and work together to change the Imatra Svetogorsk RwBCP status from Temporary BCP status to an International status.

BENEFITS OF STATUS CHANGE

Why is the status change needed, why it is necessary to push through? What are the benefits?

Currently there are 3 International RwBCP's on Finnish Russian Border and one, the Imatra Svetogorsk BCP, operating on Temporary BCP's status. Status of the BCP's has been that way since 2002. The International status would change the usability of Imatra Svetogorsk route for the cargo interests so that they could ask for re-routing and get freight offers more easily for different routes regardless do they use rolling stock or cargo units from international leasing company, from lessor based in Moscow, Frankfurth, Cyprus or Helsinki. The International status would give possibilities to re-route international trains via Imatra Svetogorsk BCP, if the other routes face temporarily congestions. The International status development would also mean that there would be

more infrastructure for inspecting trains, cargo units, for reloading in cases of heightened security situation.

With Imatra Svetogorsk RwBCP development, the BCP's as a whole, would have more capacity to carry out such inspections with smaller delays to cargo and passenger traffic on rail. The International BCP status would increase the terminal investment attractiveness of Imatra and Svetogorsk alike. The International companies would secure their presence on Imatra Svetogorsk BCP and create new terminal activity and employment opportunities.

The development of Railway transport and it's competition preconditions is a step towards right direction. The more environmental modes of transport must be developed in order that they can be the mode of choice by international dispatchers, shippers and forwarders. Otherwice the selections will be too often the truck transportation. The truck is inevitable in several cases, also with railway cargoes at least part of the journey, but still in long distances and big quantities the railway has the cost advantage over the trucks. The railway transportation requires larger volumes and for that purposes the railway infrastructure must be developed. The development of Imatra Svetogorsk BCP to the International status is step to achieve better position in emission reduction.

Both countries are working to find new methods to reduce emissions. In future we may see Vignette systems such as the Platon toll system for trucks (Pls. check the other Svetogorsk BCP report p.147) to be used for environmental grounds.

THE DRAWBACKS WITH TEMPORARY BCPs

If the International RwBCP status will not be applied or granted, it would mean that Imatra Svetogorsk RwBCP can hardly be regarded as part of the International transportation network. The Imatra Svetogorsk BCP will face more difficulties to attract international infrastructure investments and it will remain a route for few industrial actors. Same time the investments are directed more to TEN-T core network terminals, stations and BCP's. The major International BCP's on Finnish Russian border will have all the traffic concentrated on one congested route, handling cargoes and passengers such as, large bulk trains, dangerous liquids, intermodal long distance containers and high speed trains between Finland and Russia, all competing for the same railway capacity. This in turn leads that the higher axle loads are on the same route as passenger trains and the Industry do not have any commercial interest to use other rail leg with 10 t or 20 t lower permitted axle load than the what is available on single one main rail artery between these two countries.

During the project work it also came clear that with current infrastructure and Imatra Svetogorsk RwBCP status there are no practical possibilities to develop anything new for the regional passenger train sector. Therefore, if the International passenger train service will be developed through the Imatra Svetogorsk RwBCP, it must get the International status.

IMPORTANT STEPS TO BE TAKEN

The team identified the steps needed to make the BCP ready for the International status by 2025. There are important actions needed on several fronts

- There are investments to be made on both sides of the border ranging from 45 Million EUR on Finnish side to 88 Million EUR on Russian side.

- The Imatra BCP status change and investments involved should be presented and get listed to the new Transport policy report to Parliament.
- There are geological surveys and planning to be initiated.
- The council should assemble the international working group for this task.
- There are changes to be made in some international agreements, where the most time consuming can be the 85/2016 Rail transport agreement between Finland and Russia, which have a station list to be changed.

The full list for the BCP development on Finnish side has been presented on Chapter 6.3. and on Chapter 8. On Russian report about the SVETOGORSK BCP, the roadmap for the development has been listed on chapter 9.3.1. and on chapter 11.

Investments and development plans of Imatra or Svetogorsk RwBCP are not isolated. Both countries have invested very much on railway infrastructure and there are still large Investments underway on this very Region, in all more than 2 billion EUR. ENI CBC funding has ensured the development of BCP's on both sides of the border and currently there are 5,2 Million EUR investment underway in Imatra BCP. These development investments and plans have projected the possible status change year to be 2025.

In brief, the costs of needed development investments for track improvements and station rebuilding, will be:

45 Million EUR in Finland by 2025
88 Million EUR in Russia by 2025

The benefits of Imatra Svetogorsk BCP development are in brief:

- Brings the status of Imatra Svetogorsk RwBCP to same level as the three other International RwBCP's on Finnish Russian Border.
- International status would enchange the trading and routing possibilities for the companies engaged in making the trade between these two countries.
- Imatra Svetogorsk BCP development will improve the sustainability of the regional transport and improve the competitivness of railway transport on Imatra Svetogorsk route.
- The development of Imatra Svetogorsk BCP would decrease the carbon print of transports over the region, reduce emissions by creating a new, additional International fairway for railway transportation over the border.
- The Investments during the project duration (2019-2025) will mean employment opportunities in short term on both sides of the border, in medium term, there are additional works 2025-2030 to be done on the Finnish side. These in all will transfer the region to be more active logistic center and developing passenger hub for regional and international travellers alike.
- The International status and the work for it would contribute also in application of international network and infrastructure funding.

Finally two statements from the market players, first from cargo interests and the latter from active player working with regional travelling, how they see the Imatra Svetogorsk development.

International railway cargo Interests

It cannot be so that there are just one International RwBCP dedicated for International rail Logistics of Southern Finland, The development of Imatra and the International status for the route is essential.

Regional Travelling Interests

The regional passenger train service from St.Petersburg to Imatra would, with very high propability increase the attractiveness of regional travelling, both when viewed from Finland towards the Russia and likevice when viewed by the Russian travellers towards Finland. The passenger train service with St.Petersburg and Imatra has long common history, there has been several regular departures daily between these two cities.

The creation of new regional passenger train service is good example of productive, consequential and long-lasting cross border co-operation between two countries at it's best.

The connection from and through Imatra to St.Petersburg serve and improve the connectivity to Imatra and South Karelia Region and additionally to Saimaa region and the Lakeland area as a whole. Connectivity is always an important factor in travel region competition and this new passenger service would attract travllers arriving from third countries.

CONCLUDING REMARKS

Despite the relatively small actions needed for the status change to be realized by 2025, there are challenging steps to be made. The working groups on both countries should work with full steam to make things happen. There are certain project investment lists, where the project must be lifted and attached to ensure the development by 2025. In Finland there is an 11th hour underway. The new government is expected to swore their oath by the end of May 2019, which after there will be set a new Ministerial working group to prepare a new Transport policy report to Parliament. The Imatra RwBCP development should be part of this work and achieve it's position to be part of the funded project during this Government. That is the first goal of City of Imatra and the Regional Council of South Karelia and the Finnish Transport Infrastructure Agency.

In Helsinki 30th April 2019.

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