

Advancing Intermodal Logistics: Rail Baltica's Role in Streamlining European Transport Corridors

Aki Kytölä

aki.kytola@intoseinajoki.fi

+358445573001



**Euroopan unionin
osarahoittama**



ETELÄ-POHJANMAAN LIITTO
Regional Council of South Ostrobothnia



Planned transport corridor

- Direct rail-ship-rail connection between Seinäjoki-Kaunas-Seinäjoki (without intermediate cargo handling)
- In Seinäjoki, large units (containers, trailers) are loaded onto freight wagons, and the train is transported to a port in Southern Finland
- At the port, the freight wagons are loaded onto the ship in their entirety (<https://www.youtube.com/watch?v=xh43olmCSEU>)
- In the Estonian port, the wagons are unloaded from the ship and they travel by train through the Baltic to Kaunas, Lithuania
- At the Kaunas Intermodal Terminal, transshipment is carried out to freight wagons operating on European 1435mm gauge tracks, and the journey continues by train/road transport
- There is a railway connection from Kaunas to the largest intermodal terminals/ports in Europe



Rail Baltica corridor - at this moment

- A European rail connection exists from Poland to Kaunas in Lithuania with a European gauge of 1435mm.
- In the Kaunas intermodal terminal, there are adjacent tracks of 1435mm and 1524mm, between which transshipment can be performed.
- Finnish freight wagons can be transported from Tallinn to Kaunas using the existing Baltic railway infrastructure of 1524mm gauge.



<https://www.suwalki24.pl/mobile/article/3,rail-baltica--tiry-na-tory-litewskie-koleje-ruszaja-do-niemiec-przez-trakiszki-i-suwalki->

Rail Baltica corridor to be completed in the 2030s

- Rail Baltica completed -> A railway connection with European track gauge is ready from Kaunas in Lithuania to Tallinn in Estonia.
- In the Muuga intermodal terminal in Tallinn, direct transshipment can be done from the Finnish wagons of 1524mm gauge to European gauge of 1435mm wagons - from Muuga Intermodal terminal, there are then direct train connections to the largest intermodal terminals/ports in Europe.
- Speed - freight transport between the Baltic countries and Central European destinations takes less than 2 days, whereas the same route by truck can take up to 4 days.
- Reliability - with predictable and regular schedules, limited stops, and high durability in adverse weather conditions, supply chains on rails can be arranged just in time, especially when they are effectively aligned with other parts of the intermodal supply chain (e.g., schedules of the Gulf of Finland ferry traffic).
- Full loads - Rail Baltica would connect several important hubs where full loads can be obtained, which would limit the number of empty kilometers.
- Costs - transport costs compared to road traffic decrease for medium and long distances, which expands the geographical coverage of the foreign trade markets of the Baltic countries and Finland and allows for the same price to be offered to more distant markets.
- Time savings in freight transport - environmental friendliness.



Key customer interviews 2023, in which the Rail Baltica corridor idea was presented

Company 1

- Exports include but are not limited to the Baltics, Poland, the Netherlands, and distant countries.
- Approximately 1-2 trailers and 10-15 containers per week for imports; individual containers per week. (what about empty containers?)
- The majority of goods are temperature-controlled and monitored. To distant countries, milk powder is shipped in bulk in containers that do not require refrigeration.
- Concerns and practical implementation of refrigerated transport?
- Container loading and unloading are done in-house. The need for interim storage of containers and potential interest in cold storage.
- The transport corridor seems interesting and the company would like to be involved in further investigations.
- An interest in sustainable and more eco-friendly modes of transportation.
- The reliability of schedules in transportation is of crucial importance.

Company 2

- All transported goods are temperature-controlled fresh products; there is doubt about being able to achieve cost-effectiveness and timeliness in practice.
- Previous experience/attempt to send goods to China via Russia was unsuccessful.
- The matter has been discussed with VR (Finnish Railways).
- Willing to participate in further discussions.

Company 3

- Mainly imports from abroad.
- Trailers come from Italy/Spain weekly but are only part-loads.
- If freight forwarders saw the possibility of sending combined loads via Seinäjoki, then possibly
- Containers arrive through the major ports of Germany/Netherlands, 50-80 per year; these could, considering schedule and cost factors, be transferred to rail.
- Definitely an interesting matter, and there's a desire to be involved in all new developments.

Company 4

- Transport to major European ports is of particular interest.
- Competitiveness of transportation = price is decisive, need to know how much it costs to send a 40" container to a major port.
- Around 400-500 containers are handled yearly.
- The transportation of empty containers also needs to be investigated.
- Market area includes Europe, Asia, America.

Company 5

- The transport corridor is indeed of interest; currently, goods are being transported to Estonia, Latvia, Germany, and Poland.
- There are 10-20 truck transports per week.
- The goods are bulk in big bags.
- There is a need for containerization at the terminal.

Interviews 1/2022 with companies, about the intermodal terminal idea in Seinäjoki

Company 1

- 10-15 containers per year to North America + 2-3 trucks per week for export.
- Interested in rail connections to major ports in the Netherlands and Germany where the "big" ships depart.

Company 2 (before the war)

- 100 tons per day in both directions. Train rides to Russia, loaded only in Kouvola or Vainikkala.
- Goods are dispatched 7 days a week. 90% of the freight goes to customers' silos, which do not have a rail connection.
- The company is trying to expand into Europe and Sweden.
- Rail transport is a possibility, provided that it is cost-effective and reliable in terms of scheduling.

Company 3

- The main market area is Finland, also Sweden, the Baltics, Poland.
- Strong growth strategy, internationalization plays a big role.
- Trucks leave daily.
- Quality management is a big part of the logistics center's operations.
- Logistics costs to be more affordable, profitability is questionable.
- Cost efficiency is important.

Company 4

- The intention is to expand the market area into Europe. Wheel traffic, meaning rubber-tired traffic, accounts for 99% of transportation.
- Small share of sea transportation.
- Could improve freight connections to Europe and Asia.
- Long-haul transportation could be expedited.
- Feeder freight to the logistics center needs to be smooth and cost-effective.

Interviews 1/2022 with companies, about the intermodal terminal idea in Seinäjoki

Company 5

- Exports around Finland to various machinery and equipment manufacturers. 20,000 kg/week.
- Approximately 14 million tons of raw materials are received per year.
- Currently, transportation is by rubber-tired vehicles in every direction.
- Potential reduction in delivery costs for incoming raw materials is of interest; could be brought directly by train from the port.
- Risks were seen if the train gets delayed in transit. It may be difficult to compensate for this.
- There is also potential on the delivery side if the container could be packed directly and sent to the customer.
- Cost benefits are seen as important for incoming goods. Environmental values are also considered important for the future.

Company 6

- Roughly one truck departs per day.
- We only do purchasing/selling and have finished products.
- Goods come in containers.
- Trains instead of trucks to Helsinki could be functional.
- The incoming side (arrival) could work and is of more interest. Would be more interested in rail instead of sea freight. Would need to see the plans finalized to make it easier to comment.
- Some small interim storage would indeed be necessary for incoming goods.

Company 7

- Our main market area is the entire world. The domestic share is about 10-20%. Approximately one truck per week.
- Parcel goods on pallets, ready for container shipping, no need for temperature-controlled transport.
- Interested in the growth of rail connections and the reduction of costs.
- Suitable schedules, the possibility of interim storage, logistical additional services, and pricing structures that suit us.

Company 8

- Bakery industry, 50% both export and domestic.
- Several loads for export every week. Growth is the goal, internationality has been strong for years.
- Piece goods packed in big bags on pallets, into IBC containers, etc.
- Opportunities for additional sales and deliveries of bulk goods.
- Transferring trailer transports to rail could affect schedules.
- Bulk goods deliveries for export could increase.
- It would be great if rail options were available and operational reliability was on a trustworthy level.
- The environmental perspective is a major factor in perception. If the service is available and correctly priced and the customers accept the operating model so that it doesn't affect sales.
- 15 years ago, there was an opportunity to load containers in Vaasa and the train went through Seinäjoki to Vainikkala and from there to Russia, a few years ago tried again but the supply for rail transports was no longer available and traffic shifted to rubber wheels and some deals were lost.

Interviews 1/2022 with companies, about the intermodal terminal idea in Seinäjoki

Company 9

- To foreign countries, domestically. Hundreds of loads per year. The cargo is transported on rubber wheels, with contracts with freight forwarders and transport companies.
- It likely wouldn't work, it slows down transportations, during busy times need to get to the port directly with the trailer, and before it's loaded onto a train, it's already far away by truck.
- In principle, some of the trailer traffic could be shifted to rails if it would fit into the operation of the freight forwarding business.

Company 10

- Domestic market (50%) Export markets (50%) to 30 countries, with Germany being the largest.
- Arriving (mainly from abroad):
- Pieces, on pallets
- IBC bulk
- Barrels in containers
- Departing (domestic 50%, abroad 50%):
- Alcoholic products, bottles/pieces, on pallets
- Alcoholic products, IBC, bulk, Dangerous Goods (VAK). Shipments through logistics partners directly to customers' warehouses on an order-by-order basis
- Opportunities for cost savings, opportunities for greener logistics.
- Requires a logistics center to have licenses for a duty-free alcohol warehouse.
- If there's an opportunity for longer-term storage and picking, this could better balance our own production from seasonal fluctuations
- Logistics from Isostakyrö onwards to the rail logistics center cost-effectively
- Cost efficiency, eco-friendliness, flexible operation, and service

Interviews 1/2022 with logistics operators, about the intermodal terminal in Seinäjoki

Company 1

- Big in Europe, really big. A lot of containers, even own 20 trucks, but mainly subcontractors.
- Challenges with fluctuating volumes, moving empty containers, etc. Certainly, part of the traffic could be shifted to rails, price level is decisive.
- It has not been possible to build a genuine intermodal chain in Finland, there is no supply.
- Could definitely feed containers by train to a subcontractor in Seinäjoki.
- It would be great to build intermodal chains, but for some reason, the price has been cheaper via road, regardless of distance.

Company 2

- International transport and logistics services. The largest private Finnish company in the Nordics, with nearly 100 million in production network, mainly in air and sea freight.
- The rail-ramp model has been proven to work and it compensates for driver shortages in the USA and Europe.
- No fundamental barriers. This model is in use elsewhere in the world, how the market operates if there is no supply.

Company 3

- Global logistics operator
- Suitable for long transfers, depending on schedules. Parts of the loose cargo and domestic mainlines could certainly be moved to rails
- Price level and reliability, regularity
- Cost benefit, transparency in pricing, and quality of operations measured and verified

Company 4

- Logistics services, bulk cargo transport. National operator, turnover of 80 million. Administrative organization.
- Seinäjoki is regionally and functionally important, although all inland cities are similar from an operational perspective. The measure is transported tons, 4 billion kilos/year.
- The main challenge is the balance of return trips, a typical pendulum traffic problem.
- For goods arriving from abroad and for export goods, good sea container transport of raw materials arriving from abroad would be ideal, especially if it could reach the destination with a single loading, for example, by sea container, that would be good.
- In principle, the goal is to use the optimal mode of transport. The same issue has also been discussed elsewhere in Finland, there would be demand if there was supply.

Interviews 1/2022 with logistics operators, about the intermodal terminal in Seinäjoki

Company 5

- International temperature-controlled food transport and storage services.
- All new interests are seen as an opportunity. All current services could also be sold there. We have a warehouse and terminal in Seinäjoki, and export and import activities are regionally significant, there is potential, but there must be long-term contracts and economically sensible pricing, schedules, and operational reliability.
- Moving trailers and containers to ports could be possible, but in the current model, distribution loads are on the rise in trailers.
- Temperature-controlled transports are practically possible only in large units without intermediate handling.

Company 6

- Nationally among the top five in temperature-controlled warehousing operations.
- Variation in export loadings from 50-120%.
- Container transport contracts are not under our control, but are individual agreements of each warehouse customer with freight carriers.
- A direct connection to ports would be good. Handling and loading of large units from our own warehouse onto trains, with 4-7 containers departing per day.
- Combining part loads and containerization for small batches.
- The rail transport operator must be reliable, infrastructure must be in place before anything can start.
- If there is a clear vision, there is no obstacle to invest or to be involved in the entirety.

Company 7

- Total logistics services. Turnover of 35 million. Family business, production with a partner network.
- Fleet now owned by a subcontractor. Production outsourced to partner companies.
- Cost benefit in trailer traffic, mainline transports by train, feeder traffic and depots at the destination.
- This is really an interesting issue, if the production were entirely our own, we could be actively involved.
- In European traffic, Switzerland, Austria, even Germany, a lot of travel is by train.

Company 8

- Logistics services for the food industry. Operation scale of 60 million euros.
- International traffic consists of 40 units per week, loads are handled at the customers' premises. Entirely subcontracted production.
- Transferring current services would be difficult because the rotation of containers would require them to leave the same day. Container hub, but agreements are made with shipping companies and freight forwarders.
- Must be competitively timed with road transport (4-6 hours to the southern harbor); ownership of the rolling stock is not held, trailers and containers are the property of the shipping company "Steveco's work."
- The quality of the cold chain must be secured and real-time information must be available. The project has potential but the technical implementation is doubtful. Many small details need to be resolved before the implementation can succeed.