IMPACT OF THE RAILWAY LINE RAIL BALTICA ON THE LOGISTICAL INFRASTRUCTURE IN MAZOVIA REGION AND WARSAW METROPOLITAN AREA
(Part 1)
IMPACT OF THE RAIL BALTICA ON THE LOGISTICAL INFRASTRUCTURE IN MAZOVIA

Tomasz Sławiński Ph.D. Arch.

Rail Baltica Growth Corridor, St. Petersburg 24 October 2012
CHosen data from subregions of the Mazovia region in 2010

<table>
<thead>
<tr>
<th>SUBREGION</th>
<th>Ciechanow &amp; Plock</th>
<th>Ostroleka &amp; Siedlce</th>
<th>Radom</th>
<th>Warsaw</th>
<th>Warsaw East</th>
<th>Warsaw West</th>
<th>Mazovia Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIFICATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area (in km²)</td>
<td>7 780</td>
<td>12 090</td>
<td>5 763</td>
<td>517</td>
<td>5 104</td>
<td>4 304</td>
<td>35 558</td>
</tr>
<tr>
<td>Population - population in town</td>
<td>662 621</td>
<td>746 934</td>
<td>620 142</td>
<td>1 720 398</td>
<td>772 860</td>
<td>759 956</td>
<td>5 282 909</td>
</tr>
<tr>
<td>46,3%</td>
<td>38,2%</td>
<td>49,8%</td>
<td>100%</td>
<td>53,2%</td>
<td>48,9%</td>
<td>64,9%</td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Product (%)</td>
<td>6,6</td>
<td>8,3</td>
<td>7,6</td>
<td>50,4</td>
<td>12,0</td>
<td>15,1</td>
<td>100%</td>
</tr>
<tr>
<td>Density of the active railway system (km per 100 km²)</td>
<td>2,8</td>
<td>1,9</td>
<td>3,1</td>
<td>18,8</td>
<td>4,6</td>
<td>4,0</td>
<td>5,0</td>
</tr>
</tbody>
</table>
INTERNATIONAL TRANSPORT ROUTES

-Rail Baltica, Via Baltica

-Via Carpatia

-Baltic-Adriatic Transport Corridor
RAILWAY SYSTEM IN MAZOVIA REGION

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>YEAR</th>
<th>2000</th>
<th>2005</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL (km)</td>
<td></td>
<td>1947</td>
<td>1777</td>
<td>1766</td>
<td>1683</td>
</tr>
<tr>
<td>Regular railways (1435 mm)</td>
<td></td>
<td>1782</td>
<td>1710</td>
<td>1766</td>
<td>1683</td>
</tr>
<tr>
<td>In that:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- electrified railway lines</td>
<td></td>
<td>1375</td>
<td>1396</td>
<td>1412</td>
<td>1412</td>
</tr>
<tr>
<td>- single railway lines</td>
<td></td>
<td>791</td>
<td>694</td>
<td>751</td>
<td>667</td>
</tr>
<tr>
<td>- two or more tracks railways</td>
<td></td>
<td>991</td>
<td>1016</td>
<td>1015</td>
<td>1016</td>
</tr>
<tr>
<td>- per 100 km² total area</td>
<td></td>
<td>5,5</td>
<td>5,0</td>
<td>5,0</td>
<td>4,7</td>
</tr>
</tbody>
</table>
Poland → Lithuania

- 1.39% of Polish exports:
  - Agricultural goods (19%), Chemical products (23.5%), Electronics & machinery (19%), Metallurgical products (9.7%)
- 15th Polish EU business partners,
- 23rd Polish world business partners.

*Lithuania is one of the countries that Poland has a positive trade balance with.*

*The value of exports over imports was 60% in 2011*

Lithuania → Poland

- **Poland** is one of the most important business partners for Lithuania:
  - 3rd main exporter (10%) – after Russia and Germany,
  - 4th largest exporter (6%).
- 0.67% of Polish imports,
- **Imports from Lithuania to Poland:**
  - Mainly mineral oils and fuel (43.6%), Chemical industry products (17.5%), Agricultural goods (15%)
Poland → Latvia

- 0.61% of Poland’s export:
  - Machinery, mechanical products & vehicles (25%), Chemical products (19%), semi-precious stones (11.6%), Plastics (7.5%)
- 0.16% of Poland’s imports
- 18th Polish EU trade partners
- 30th Polish world trade partners (0.61% of Poland’s export and 0.16% of Poland’s imports)

  the balance of trade in favour of Poland

Latvia → Poland

- 7th position as exporter (3.6%),
- 4th position as importer (6.9%),

Structure of export goods has changed in the recent years, current imports:
- Minerals (32%), Semi-precious stones & finished products (18%) Timber and wood products (15%)
**POLAND – ESTONIA**

**Poland → Estonia**
- 7th largest import partners (5.65% of imports into Estonia)
- 16th export partner (1.76% of Estonia’s exports)
- Poland exports the following goods to Estonia:
  - Electrical and machineries (22%), Mineral products (20%), Chemicals (17%), Semi-precious stones and finished products (13%), Agricultural products (11%).

**Estonia → Poland**
- 21st Polish EU partners (0.56% of Polish export, 0.1% of Polish import)
- 34th Polish word trade partner for Poland
  
  *In all categories trade levels have improved.*

- Poland imports from Estonia:
  - Metallurgical products (34%), Electrical and machineries (24%), Pulp and paper products (15%), Chemicals (9%)
The mode of freight for goods between Poland and the Baltic countries is dominated by road transport - (95% freight)

Reason:

→ lack of competitiveness of the railway network which is caused by the poor state of railway infrastructure (especially E-75)
Rail Baltica – focused on transport of goods

EC research studies (2008) showed:
- 81% motorists/travelers between Riga and Tallin use road transport (incl. public mass transport),
- 76% travelers between Tallin and Warsaw use air transport.
RAIL BALTICA IN MAZOVIA REGION – CURRENT SITUATION

- Rail Baltica runs along side the existing and functioning railway lines only
- The segment is heavily utilized, worn out and poorly maintained
- Handles more passenger trains than cargo trains (*but the further you go away from Warsaw, the smaller number of passengers becomes*)
- As the trains get closer to Warsaw, the maximum speed is considerably slowed down (*freight handling capability as well*) – *reduces the attractiveness of railway transport*
- Existing container terminals (Warszawa-Praga, Warszawa Główna Towarowa) cannot be expanded – both located in heavily urbanized parts of Warsaw.
- No other terminals or logistic centers on the way of Rail Baltica.
The number of companies in Mazovia engaged in transport and warehousing businesses decreasing (about 6 % annually).

The current market conditions not conducive for small and medium freight enterprises.

Due to the tender system in the transport contracting, the current conditions favoured large scale freight companies with national/(at least) regional coverage.

Because of its geographical location and the strong economic position, Mazovia Region has large warehouse facilities, but mostly in its West and South parts of the region.
<table>
<thead>
<tr>
<th>Region (Capital)</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAZOVIA (Warsaw)</td>
<td>2 013 400</td>
<td>2 461 900</td>
</tr>
<tr>
<td></td>
<td>(44,75%)</td>
<td>(35,81%)</td>
</tr>
<tr>
<td>WIELKOPOLSKA (Poznan)</td>
<td>724 000</td>
<td>1 360 600</td>
</tr>
<tr>
<td></td>
<td>(16,09%)</td>
<td>(19,79%)</td>
</tr>
<tr>
<td>LODZ (Lodz)</td>
<td>690 000</td>
<td>885 280</td>
</tr>
<tr>
<td></td>
<td>(15,34%)</td>
<td>(12,88%)</td>
</tr>
<tr>
<td>SILESIA (Katowice)</td>
<td>545 000</td>
<td>1 158 500</td>
</tr>
<tr>
<td></td>
<td>(12,11%)</td>
<td>(16,85%)</td>
</tr>
<tr>
<td>LOWER SILESIA (Wroclaw)</td>
<td>271 900</td>
<td>536 900</td>
</tr>
<tr>
<td></td>
<td>(6,04%)</td>
<td>(7,81%)</td>
</tr>
<tr>
<td>WARMIA&amp;MAZURY (Olsztyn)</td>
<td>2 000</td>
<td>2 000</td>
</tr>
<tr>
<td></td>
<td>(0,04%)</td>
<td>(0,04%)</td>
</tr>
<tr>
<td>LUBLIN (Lublin)</td>
<td>3 000</td>
<td>3 000</td>
</tr>
<tr>
<td></td>
<td>(0,07%)</td>
<td>(0,07%)</td>
</tr>
</tbody>
</table>

**AREA OF WAREHOUSES IN POLISH REGIONS (square meters)**

*main warehousing areas*
THE SIGNIFICANCE OF RAIL BALTICA FOR MAZOVIA

• The value of both export & imports goods handled increasing, through difficult to ascertain the region origin of export goods to Baltic States.
• The Baltic corridor (Rail Baltica + Via Baltica) is not the main freight axis for goods produced in Mazovia.
• The agricultural produce from different regions of the country transported on Baltic corridor.
• The imported timber and wood products are mainly transported through this corridor for customers located all over the country.
• Importance of the transport of oil and oil products between Poland and the Baltic States plus the need of regular transportation between refineries in Plock (Mazovia) and Mazeikiai (Lithuania).
RAIL BALTICA (PHASE 1) WARSZAWA REMBERTOW – TŁUSZCZ – SADOWNE

- Modernization as per the Pan-European standards:
  - Change all infrastructure elements up to speeds 200 km/h,
  - Change most of ground level railway-road crossings to multilevel crossings,
  - Construct of three new passenger stations in Warsaw Metropolita Area,
  - Construct additional pair of tracks between stations Zielonka and Wolomin Słoneczna to separate commuter trains and intercity/cargo trains.
RAIL BALTICA (PHASE 2) MODERNIZATION:
SADOWNE – MAZOVIA/PODLASIE REGIONAL BORDER – TOWARDS BIALYSTOK

• Expected date of completion – 2018.
• The tender for phase 2 not awarded yet.
• However, modernization will be carried out according to the same plan assumptions, namely:
  – maximum speed of 160 km/h plus the possibility of increasing its up to 200 km/h,
  – complete elimination of level crossings across the region
**Observation:** In recent years, passengers gradually gave up the rail transport services for the bus or their own cars in any routes on Polish part of Rail Baltica

- Improving the technical parameters between Warsaw and Polish-Lithuanian border – raise the level of service provided to the AGC/AGTC corridors, thereby ensuring quality standards impossible to achieve by the other actions

**Result:** significant increase in passenger transport (to a greater degree than freight traffic without additional moves on governmental level)
Modernization of Rail Baltica driving force for the:

- realization of the idea of “Trucks on the Rail” - the development of the intermodal/combined transport (incl. the transportation of entire wheel sets and semi-trailers and interchangeable car bodies),

- purchase of specialized rolling stock to transport intermodal infrastructure to adapt to multi point operations. Terminal infrastructure requires urgent development investments, taking into account modern solutions.
BENEFITS FOR MAZOVIA REGION

• Main “added value” from Rail Baltica – acquisition of a railway line of European standards plus future interception from road to rail at least a part of the heavy transport (including transit)

• Significantly raise the standard of passenger service between the Warsaw agglomeration and the Eastern part of the region
CONDITIONS FOR FURTHER FULL USE OF RAIL BALTICA

• Providing the necessary point type infrastructure, enabling the integration of road and rail transport, by:
  – equipping most of the station in the cargo oversized loading tracks, ramps and loading yards on which cargo receive, preparation and other operations (eg. handling consignments of intermodal transport) are possible,
  – maintenance and modernization of loading-unloading infrastructure on the stations as the natural way for implementation „Trucks on the Rail” concept.

• The construction of container terminals and/or logistics centres to handle cargo destinations for Mazovia.
Currently, no logistics centres in East part of the region.

The terminals at the stations Warszawa Praga and Warszawa Głowna Towarowa – subject to realization of the transport needs of entities located in the capital city plus burdened with the consequences of the urban character of the neighbourhood.
EXPECTED IMPACT OF THE RAIL BALTICA FOR MAZOVIA

• Terminal in Mlawa natural destination – towards the Baltic Seaports.

• Terminal in Pruszkow – importance of the transport for the Western part of the region.

• Thus, particularly noticeable the lack of a terminal and/or logistic centre in Eastern part of Mazovia.
• The full use of the capacity of the Rail Baltica corridor for Mazovia,
• Development of intermodal/combined transport infrastructure
• The concept of „Trucks on the Rail“, needs creation of a new logistics center in:
  – LOCHOW
  and/or
  – OSTROW MAZOWIECKA
(Part 2)
IMPACT OF THE RAILWAY LINE RAIL BALTICA ON THE LOGISTICAL INFRASTRUCTURE IN THE WARSAW METROPOLITAN AREA
WARSAW AGGLOMERATION AND THE INTERNATIONAL AGC/AGTC CORRIDORS
Railways System –
Urban Railway Network

- Total railroad length used in passenger transportation in the Warsaw area amounts to 93 kilometers.
- The entire network consists of eight train stations and 40 stops.
- The City – via the SKM company – runs currently 5 lines as a client on the PLK tracks (competences).
The relationship between the Rail Baltica and the transport strategy of the Warsaw capital city and its agglomeration

Existing strategic documents for environmental policy of Warsaw Metropolitan Area equate sustainability with the development of rail transport.

Rail Baltica project can match some of the strategic objectives of the transport policy of the Warsaw capital city, especially:

- Study of conditions and directions of spatial development of the city of Warsaw, together with the Development Strategy of Warsaw until 2020 (Strategic Objective 1 and 3),

- Strategy for Sustainable Development of Transport System in Warsaw until 2015 (adopted in 2009),

- (also Mazovia Region Development Strategy to 2020 (Priority: 3, 4 and 5))
Rail Baltica in light of municipal policy around Warsaw (Warsaw Agglomeration)

Expectations for **improving rail traffic** as a factor according to the Sustainability in numerous policy documents, created by the municipalities located in the Warsaw agglomeration or related with Warsaw economically:

– *Strategy for sustainable development of the town and Wołomin District to 2020*,

– *City Development Strategy of Ząbki for the years 2007 – 2015*. 
Rail Baltica and the transport strategy of Warsaw capital city

Rail transport directly related to:

– ensure the development of transport infrastructure to be able to link Warsaw with the environment, regional, national and international levels,

– ensure effective internal and external communications of the metropolitan area of Warsaw,

– ensure high quality of public transport services,

– ensure the efficient and safe movement of people and goods in the city and agglomeration,

– integrate transport operator of the metropolitan area.
Modernization Rail Baltica opens up new communication possibilities in the part of the Warsaw Railway Junction.

Agglomeration efficient rail transport reduces congestion on the roads and lead to the effect of improving the environment.

Modernization of Rail Baltica can improve communication between Warsaw capital city and the Eastern parts of the region, provide a fast and unobstructed access from these suburban areas to the city center and inside of Warsaw Aglomeration Area.
Strategy for Sustainable Development of Transport System in Warsaw until 2015 and the following years:

The *Strategy* adopted by the City Council of Warsaw capital city on 9 July 2009 assumes:

- Revitalization of *suburban railway lines* (in Warsaw as well)
- Increasing the frequency of trains agglomeration,
- Coordination of municipal rail transport and other public transports,
- Operational integration, ticket office and railway tariff within the Warsaw Agglomeration and possibly other cities,
- Infrastructure integration: interchanges, parking systems caused by "Park and Ride",
- Integration of communication networks.
Rail Baltica value for passengers inside of Warsaw Agglomeration

• **Crucial time of journey shortcut** - the result of increasing the speed and elimination of its restrictions.

• **Reduce the intensity of road traffic** - due to increased competitiveness of railways.

• **Construction of three new passenger platforms** *(red mark on the diagram)*
THANK YOU FOR YOUR ATTENTION

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