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## THE EXPERIENCE OF TURKEY IN BLOCK TRAIN TRANSPORTATION

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**Key words:** Turkey, Block Train, Railway Freight Transport

**Abstract:** The importance of rail freight transport has increased with the development of intermodal transport worldwide and in Turkey. The application of block trains brings forward a more efficient, competitive, and secure service network.

A "National Combined Transportation Strategy Document Draft" has been prepared under the EU Twinning Project for Strengthening Intermodal Transport in Turkey. In this context, it is aimed to establish a safe, balanced, convenient, sustainable and environmentally friendly transportation infrastructure in Turkey. Considering the goals of Turkey in 2023, the development of the railway network in the direction of block train transportation is very promising for the future in the name of increasing the cargoes of countries such as Turkey and China.

In this paper, geographically intersecting countries such as Turkey are considered, aiming to prove that the application of block trains in freight movements from Turkey to Europe has increased the cargo diversity, the positive effects on the foreign trade of the country aiding the development of lines.

### 1. Introduction

The process of historical development of railways had a significant positive effect on transportation industry, commerce, and culture during the first half of the 19th century. The idea of integrated development of all modes of transport in a balanced way had an additional influence on the importance of railways in Turkey.

### 2. Turkish Railways

Worldwide, there are more than 400 companies in the field of railways, employing more than 50,000 people, with a turnover of more than 5 billion TL annually, with an average annual growth 3.60. China is among the countries with high investments in railway transport.

The Republic of Turkey inherited 4.136 kilometers railways from the Ottoman period. During the period of 1923-1950, totally 3,764 kilometers railway lines were further constructed, about 134 kilometers annually. In the period 2004 -2014, new 1,759 kilometers of railway lines were constructed, about 175 kilometers per year. At present, the construction of new 2,653 km railway lines is ongoing.

Considering the targets in the railway sector, set for 2023 in Turkey, the length of railway lines will reach 25.000 km, of which 3,500 km high-speed railway and 8,500 km fast railway. The share of railway transport will be increased to 10% in passenger and to 15% in freight traffic. Also, the liberalization period within the railway industry is completed, enhancing all possible geographic areas with railway connections. (TCDD, Railway Sector Report).

**Table.1 Transport Modes in the World**

Transport	Passenger %	Freight %	Total%
Road	83.5	10.4	34.8
Maritime	0.3	78	52.2
Railway	6.4	10.8	9.3
Air transport	9.8	0.8	3.7

**Source: IEA Mobility Model and UNCTAD, 2013**

In general, while the weight of maritime lines prevails over the other modes of transportation, the share of railways could not reach two-digit figures.

### **3. Block Freight Traffic**

Per definition, Block Freight Traffic is "a block train, moving directly without stopping between the departure and arrival stations, saving significant time".

The invested capital amounts at 27.500.000 TL with 117 partners. BALO CO., which was established with the participation of Turkish Chambers and Commodity Exchange Association, has other shareholders such as Chambers of Commerce and Industry, Commerce Stocks, Organized Industrial Zones, UMAT and UTIKAD as providers of logistic services as well as producer associations spread all over Turkey.

The aim is to provide railway-oriented intermodal transportation service for the purposes of the logistics' sector. As an independent intermodal train operator in the expanding service landscape, the company makes efforts towards the establishment of real values for the clients by means of suggestions, ideas, and strategies to support the investments of the service companies, sharing the risks and making profit with the partners, providing flexible structure to meet the needs of the customers.

There are 3 parallel block train departures per week between Anatolia and Europe targeting deliveries every week day. The trains reach the distribution Sopron terminal in Hungary, directed towards Duisburg terminal for deliveries to Northern Germany and Benelux countries, Ludwigshafen terminal for deliveries in Central Germany and Giengen terminal for Southern Germany, working 6 days for export and 5 days for import.

The advantages of BALO as an independent operator in the logistics' sector are enhanced volumes of freight, modern equipment, short transit time and traceability opportunity. Thus, the expectations of the clients are met at the same time providing an environmentally friendly, economical, punctual, and safe system of freight transportation.

The innovative aspects introduced by BALO are the following:

- Acquisition of freight from Anatolia transported by rail;
- As an alternative to the existing railway route, coming from Anatolia, and passing through the Bosphorus in Istanbul and reaching Europe, a new route is constructed, passing Marmara Sea with ferryboats between Bandirma and Tekirdağ.
- There are 10 different starting points of the scheduled block train services from Anatolia to Europe;

- Containers sized 45 'PW HC allowing increased freight turnover are used for the process of transportation

As far as the Customs Procedures are concerned, the transit document (T1 / T2) is used and the container is transported to the customs' office of destination before customs clearance. The same transit document will continue to be used in the case of changing the mode of transport on the route from land to sea, or from sea to rail. Once the container arrives at the destination, it is subject to customs' clearance and afterwards the cargo is ready for final delivery.

In BALO system, a reservation can be made under the online transaction menu, following the entire process in real time from the first loading until final unloading.

### 3.1. General Transport Conditions

Considering General Transport Conditions, block train carriages are not clearly specified; thus, the international RIV / COTIF and CIM regime applies to the railway track of the journey; in case of pre / final movements by trucks CMR is used, while cabotage rules are applied for the Marmara Sea corridor. The provisions of the national legislation are applied in different from the above-mentioned cases. The time free of charge in terminals, concerning arrival date of the trains will be accepted as follows: 1 day for freight arrivals to Europe, 3 days for freight arrivals to Turkey. On expiring the free of charge period, demurrage is collected in advance, amounting at € 5.00 per day per container, until the container is discharged. This price is valid only for the container, while the storage at the terminal is also invoiced.

### 3.1. Application

The Çerkezköy-Sopron Service is shown on the figures below:

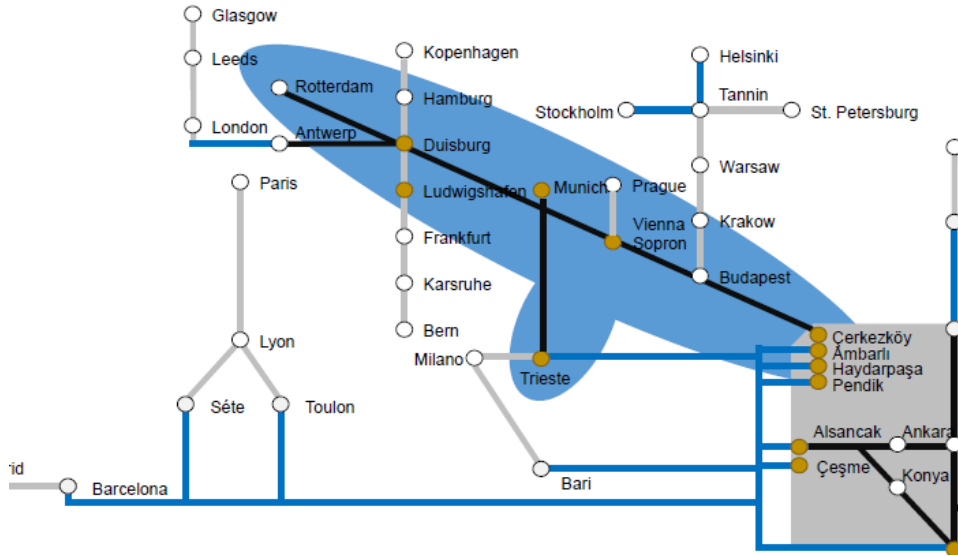


**Grafic:1**

Source: BALO

This is the main line for rail freight transportation from Turkey to Europe. Terminal Sopron is the transferring and merging point for Europe.

Arrival to Sopron-Duisburg terminal takes 2 days. The Sopron-Ludwigshafen connection takes 2 days for arrival at the relevant customs.



**Grafic:2**  
Source: BALO

Officials of the Duisburg Development Agency (GFW) announced the possibility to combine the Yuxinou block train line between China and Germany with the line of BALO.

The officials of the Duisburg Development Agency (GFW) who visited BALO AŞ stated that they wanted to combine the Yuxinou block train line between China and Germany with BALO. GFW General Manager Ralf Meurer said, "China and Turkey are our most important trading partners We believe that the combination of these two lines will provide significant advantages for all three countries."

It was stated that one of the main reasons for visiting Turkey is to develop the cooperation with BALO A.Ş and there is a big interest towards BALO, providing three trips to Duisburg per week with the opportunity to further explore this route. On the other hand, in the opinion of Meurer, combining Yuxinou line with BALO, coming from China to Duisburg is very important for Germany. "First, we encourage companies to use these lines by negotiating with them, since railways are more important than roads, also in terms of emission reduction. Turkey and China are our strong trading partners. We want to create the best conditions for Turkish goods or Chinese goods to reach Germany and reach from Germany to these countries as well. In this sense, we want the two routes to be merged. "

#### 4.Conclusions

Rail freight and freight transport in general play important role in public transportation during the 21st century. In this century, intercontinental dimension of the transport sector will increase, while the development of the transport relations between European and Asian countries will be comparable to those in other continents.

Investments for railways are directed towards the establishment of logistics centers, so that Turkey can grow in leading position for the region and be well-known worldwide. Up to now ,7 of the 20 logistic centers planned to be built have started operations. Construction work is going on at 6 institutions. In 2023, our 20 logistics centers will serve all sectors with a total cargo capacity of 34.2 million tons.

By means of scheduled block train service, there will be full control of departure and arrival times, besides Turkish exporting products in Europe will have more competitive in sales conditions due to the falling overall logistics' costs, continuous and regular traffic will be provided preventing problems arising with seasonal services, enabling the commercial activities with further efficient opportunities. The block trains will be organized to provide scheduled and cost-benefit transport to any desired point on a regular basis.

The share of railway traffic, which is now small due to the delays, driving and weather conditions, transit documents, etc., by providing the most advantageous service at time-price balance will be increased. These advantages will enable many business sectors to change their way of doing business.

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## **ОПИТЪТ НА ТЪРЦИЯ ПРИ ИЗВЪРШВАНЕТО НА ЖЕЛЕЗОПЪТНИ ПРЕВОЗИ С БЛОК ВЛАКОВЕ**

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**Ключови думи:** Турция, блок-влакове, железопътен транспорт

**Резюме:** През последните години значението на железопътния транспорт, като ключов вид транспорт при извършването на интермодални превози, се повишава, както по цял свят, така и в Турция. Използването на блок-влакове при тези превози води до създаването на по-ефективна, конкурентоспособна и сигурна транспортна мрежа. Проектът на националната стратегия за комбиниран транспорт на Турция е създаден в съответствие с Европейския проект за засилване ролята на интермодалния транспорт в Турция. В този смисъл се цели да бъде създадена сигурна, балансирана, удобна, устойчива и екологосъобразна транспортна инфраструктура в Турция. Вземайки предвид основните цели на правителството за развитието на държавата до 2023 г., развитието на железопътния транспорт чрез използването на блок-влакове е от съществено значение за увеличаване на товаропотоците от Турция и Китай.

В настоящия доклад е разгледано значението на Турция, в зависимост от нейното географско положение, за увеличаването на товаропотоците между Турция и Европа чрез приложението на блок-влакове, които оказват и положително въздействие върху развитието на търговията и създаването на редовни линии за превози на товари.