



*The 20<sup>th</sup> International Scientific Conference*  
**“DEFENSE RESOURCES MANAGEMENT  
IN THE 21<sup>st</sup> CENTURY”**  
**Braşov, October 30<sup>th</sup>-31<sup>st</sup> 2025**



**TRANS-EUROPEAN TRANSPORT NETWORKS, A FACTOR OF  
CONNECTION, SECURITY AND REGIONAL DEVELOPMENT**

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**Abstract:**

*This paper considers the geopolitical, economic and security realities that oblige the Romanian state to apply new policies to ensure accessibility with its neighbours, with the member countries of the European Union, but also with the NATO member countries. Shortening the distances from the starting point to the destination means saving time, energy and road safety. Romania must develop and modernize its transport network according to the new European model. Through judicious planning of the road, railway and navigation infrastructure, European transport corridors will be created, with a strategic importance for economic, social and defence development in case of conflicts. By investing in transport infrastructure, it can become a pillar of Romania's economic development, as well as of the country's defence.*

**Key words:** *traffic safety, sustainable mobility, trans-European transport network, economic cohesion, cross-border connections, geopolitical context;*

## **1. Introduction**

Romania, as a member state of the European Union since 2007, must increase the speed of implementation of investment works on transport infrastructure. This is a priority for Romania's connection to national and international transport networks.

Transport networks represent increased access to all regions nationally and opportunities for economic development on the European Union and extra-EU markets.

In the current geopolitical context, with conflict situations up to the national border, intra-European transport networks represent opportunities for defence and security.

The European Union's transport policies provide for the implementation of integrated European networks with a completion date of 2030 (TEN-T Core) and global networks with a completion date of 2050 (TEN-T Comprehensive) [9].

In 2016, Romania adopted the General Transport Master Plan and the Implementation Strategy, which have been updated [3].

The European transport policy [1], implemented in the related Romanian legislative documents, prioritizes the development of the national transport network. The EU norms and standards refer to road, rail, air and naval transport, in compliance with the European Green Deal [4].



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The recovery of the gaps and deficits in the field of transport infrastructure in Romania represents national priorities; their non-compliance and non-realization slows down economic development. On an integrated level, it is an element of economic development but also a strategic element of NATO defence in the event of armed interventions (in case of necessity).

## 2. Trans-European transport networks

The Trans-European Transport Networks (TEN) have the well-defined purpose of connecting the regions of the European Union, in order to achieve the objectives of economic, social and territorial development and, in the current context regarding Ukraine, to defend the EU and NATO space. The aim is thus to achieve stability between sustainable economic development and the requirements of quality and balance in transport; the aim is to eliminate bottlenecks, develop safer and less polluting technologies, harmonize sanctions and coherent pro-active policies.

The opening of borders within the European Union has favoured unprecedented mobility possibilities for European citizens. Passenger and goods transport create jobs in the field, generating opportunities for economic development, dynamism and strengthening social cohesion and prosperity.

The European Commission aims to transform the system of roads, railways, airports and waterways into a single TEN-T transport network. For the 2014-2022 period, the TEN-T network envisaged projects for connection, materialized in:

- 83 main European ports with rail and road connections,
- 37 main airports with rail connections in large cities,
- 15,000 km of railway for high-speed traffic,
- 35 major cross-border projects to reduce congestion.

The map of trans-European transport corridors is presented as shown in Fig. 1 and Tab. 1.

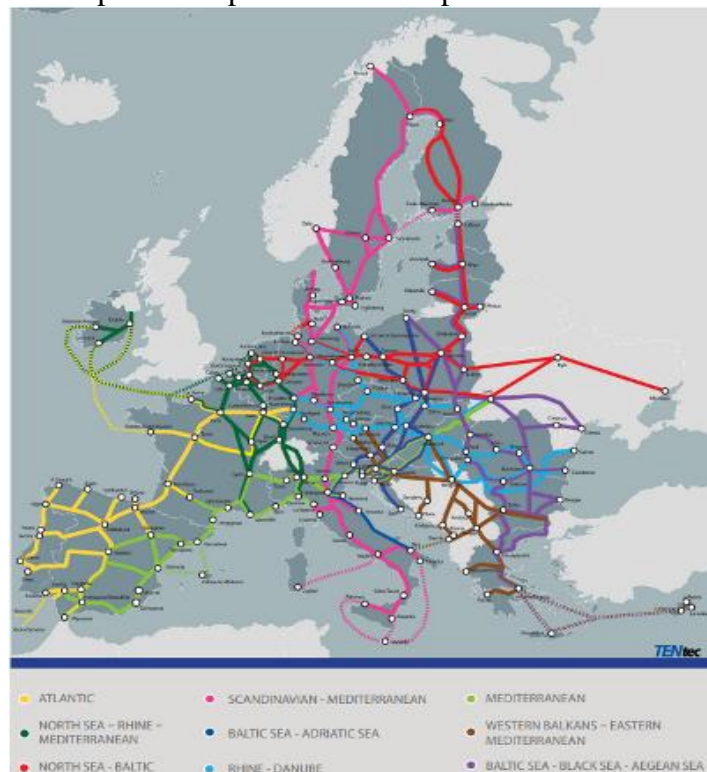


Fig.1. Map Finder Chart for European Transport Corridors [13]



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| Corridor | Name  | From       | Via                | To         | Length, km |
|----------|---|------------|--------------------|------------|------------|
| 1.       | Baltic Sea-Adriatic Sea Corridor              | Gdynia     | Viena              | Ravenna    | 2400       |
| 2.       | North Sea-Baltic Sea Corridor                 | Helsinki   | Warsaw             | Anvers     | 3200       |
| 3.       | Mediterranean Corridor                        | Algeciras  | Lyon-Venice        | Miskolc    | 3000       |
| 4.       | The Orient Corridor/Eastern-Mediterranean Sea | Hamburg    | Budapest-Sofia     | Nicosia    | 3700       |
| 5.       | Scandinavian-Mediterranean Corridor           | Helsinki   | Copenhagen-München | Valletta   | 4858       |
| 6.       | Rhine-Alpine Corridor                         | Genova     | Köln               | Rotterdam  | 1300       |
| 7.       | Atlantic Corridor                             | Lisbon     | Vitoria-Gasteiz    | Strasbourg | 8200       |
| 8.       | North Sea-Mediterranean Sea Corridor          | Dublin     | Cork-Le Havre      | Bruxelles  | 933        |
| 9.       | Rhine-Danube Corridor                         | Strasbourg | Budapest           | Constanța  | 2137       |

**Table 1.** The Main Corridors of the TEN-T Network [14]

In June 2024, the European Commission adopted a revised regulation on the construction of the trans-European transport network (TEN-T). The aim is to ensure sustainable, fast connectivity without physical blockages or interruptions.

It is a response to the mobility of citizens, the transport of components of productive units and mobilities in the event of problems of necessity and defence. In addition to the initially foreseen deadlines, namely 2030 for the core network and 2050 for the comprehensive transport network, an intermediate deadline of 2-4- was established for the implementation of the extended core network. This aims to complete major projects and works, especially in cross-border areas, such as the Budapest-Bucharest or Copenhagen-Hamburg railway connections.

Russia's war of aggression against Ukraine has determined the extension of the transport corridors (TEN-T) towards Ukraine and the Republic of Moldova [7].

The European Commission has taken measures to help Ukraine in the field of transport; "solidarity corridors" have been created for the export and transport of cereals from Ukraine, but also for the import of essential products, humanitarian aid and raw materials necessary for the production process.

The four transport corridors proposed between the EU and Ukraine and the Republic of Moldova will improve the connection of these countries to the EU, increase transport capacity and implicitly support their economic development, increasing competitiveness.

Given the current geopolitical context and the position of Belarus regarding the armed conflict provoked by Russia against Ukraine, it was decided that Russia and Belarus should be excluded from the TEN-T map network.



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Transport connections between the EU and Russia and Belarus have been downgraded from core networks to global networks with a completion date of 2050.

Until 2020, passenger and freight transport activity was experiencing constant growth. The figures forecast before the Covid 19 pandemic were different - decreasing - from what had been estimated by the European Commission's specialized committees. The most affected were air and rail passenger transport.

According to data published by Eurostat, in 2019, 11.6 million workers worked in the transport sector, in 2020 10.8 million workers worked, and in 2021 the EU transport sector only had 6 million workers [5].

After the Covid 19 pandemic, the EU economy entered a gradual recovery process, including the chapter on passenger and freight transport.

The European Commission has selected 94 projects [10, 11] under the Connecting Europe Facility (CEF) to promote sustainable mobility and better connect Europe's regions from east to west and from north to south (July 2025) [2].

The value allocated to these projects is 2.8 billion euros. Rail transport has been allocated 77% of the amount for modernization and high-speed railway lines. Part of the investments will be allocated to maritime transport and increasing the degree of interconnection on Europe's inland waterways. It is also aimed at creating urban mobility hubs and creating connections between different modes of transport. Solidarity corridors between the EU and Ukraine will be strengthened.

According to the European Commission's press release, the modernization and expansion of transport routes will increase the economic capacity of the EU internal market, minimize pollution sources, secure and ensure faster transport in case of urgent interventions in the context of current geopolitical realities; they are strategic and solidarity investments [6].

258 applications were submitted and 94 projects were selected. Romania qualified with 3 projects, namely:

- electrification of the Iasi-border (RO) - Ungheni railway line. It will increase cross-border transport capacity with the Republic of Moldova, reducing transport times;
- rehabilitation of the Ploiesti-Focsani railway route. It will increase transport safety and improve connections with neighbouring third countries, Moldova and Ukraine;
- construction of a secure parking lot on the E60 highway in Ploiesti.

The new European transport model obliges Romania to modernize its own network, which will lead to a positive evolution of the economy.

At European level, the strategy of redistributing traffic on certain lanes, shortening departure-destination distances, has been developed and partially implemented.

Romania, as part of the EU, is expanding and modernizing its transport networks:

-Corridor IV starts from Vienna-Budapest-Belgrade-Black Sea.  
-Pan European Transport Corridor No. IV runs through the Nadlac-Arad-Timisoara-Lugoj-Deva-Sibiu-Ploiesti-Bucharest-Cernavoda-Constanta areas in Romania.

-Pan European Transport Corridor No. IX, Giurgiu-Bucharest-Ploiesti-Buzau-Bacau-Iasi-Sculeni provides access to the Republic of Moldova, connecting the South-North area.

In 2021, the European Commission extended the European Master Plan for Transport (TEN-T). Romania is included in two corridors:

-Corridor VII: Rhine-Danube in expansion, which will connect Romania to the Black Sea and Germany, passing through Bulgaria-Serbia-Hungary-Slovakia-Austria-Czech Republic.

The Baltic Sea-Black Sea-Aegean Sea corridor in the North-South direction of the eastern EU states. It will connect Poland, Slovakia, Hungary, Romania, Bulgaria and Greece.

The national strategic transport plan provides for the development of road networks:



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-6641.1 km of motorway and expressway road network, bypasses,  
-2900.5 km of primary networks,  
-3723.6 secondary networks.

For railway networks, the following are proposed:

-3274.8 km of primary networks,  
-1228 km of secondary networks.

Romania, as a NATO member state, is part of the NATO defence exercises. For the smooth movement of military structures and equipment, the infrastructure on the movement route was inspected and it was found that portions of the infrastructure do not meet the requirements. The Ministry of National Defence concluded that some access roads and bridges require urgent repairs, works that were assumed by the Ministry of Development [12].

Also, considering that Romania is both an EU member state and NATO, it must ensure road infrastructure for economic development but also in case of its use, if necessary, by military structures. The European Commissioner for Transport announced that Europe "will modernize the transport network to facilitate military mobility" [15].

In the event of a military conflict with Russia, says Commissioner Apostolos Tzitzikostas, "over 500 infrastructures must be modernized, in consultation with the Atlantic Alliance, around four military corridors. This includes widening or building new bridges, adapting transport networks to become strategic roads."

### **3. Conclusion**

For the proper functioning of Romanian society, the economy and to guarantee safety in society, ensuring transport infrastructure is a vital resource.

All sectors of the economy, agriculture, public health, urban infrastructure, emergency and defence services, are also dependent on transport infrastructure. In the event of natural disasters or hostile actions, this component plays a crucial role.

In the current geopolitical context, coherence in the planning and execution of transport infrastructure is a necessity and an urgency for Romania. Recovering the deficit recorded in this area can be achieved by prioritizing investments, by concentrating institutional, financial and political efforts.

The Strategic Investment Plan in Transport Infrastructure [8] of Romania has been correlated with the European political framework and complies with the European Green Pact [4].

Romania must increase the efficiency of investments in transport infrastructure in European and national interest, oriented towards increasing national and international connectivity; it must catch up with the gap and delays in the development of transport infrastructure compared to other European countries to modernize European and national connectivity.

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